DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Review of Native Species That Are Candidates or Proposed for Listing as Endangered or Threatened; Annual Notice of Findings on Resubmitted Petitions; Annual Description of Progress on Listing Actions

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of review.

SUMMARY: In this Candidate Notice of Review (CNOR), we, the U.S. Fish and Wildlife Service (Service), present an updated list of plant and animal species native to the United States that we regard as candidates or have proposed for addition to the Lists of Endangered and Threatened Wildlife and Plants under the Endangered Species Act of 1973, as amended. Identification of candidate species can assist environmental planning efforts by providing advance notice of potential listings, allowing resource managers to alleviate threats and thereby possibly remove the need to list species as endangered or threatened. Even if we subsequently list a candidate species, the early notice provided here could result in more options for species management and recovery by prompting candidate conservation measures to alleviate threats to the species.

The CNOR summarizes the status and threats that we evaluated in order to determine that species qualify as candidates and to assign a listing priority number to each species. Additional material that we relied on is available in the Species Assessment and Listing Priority Assignment Forms (species assessment forms, previously called candidate forms) for each candidate species.

We request additional status information that may be available for the 286 candidate species. We will consider this information in preparing listing documents and future revisions to the notice of review, as it will help us in monitoring changes in the status of candidate species and in management for conserving them. We also request information on additional species that we should include as candidates as we prepare future updates of this list.

This document also includes our findings on resubmitted petitions and describes our progress in revising the Lists of Endangered and Threatened Wildlife and Plants during the period May 5, 2004, through May 2, 2005.

DATES: We will accept comments on the Candidate Notice of Review at any time.

ADDRESSES: Submit your comments regarding a particular species to the Regional Director of the Region identified in **SUPPLEMENTARY INFORMATION** as having the lead responsibility for that species. You may submit comments of a more general nature to the Chief, Division of Conservation and Classification, U.S. Fish and Wildlife Service, 4401 N. Fairfax Drive, Room 420, Arlington, VA 22203 (703/358–2171). Written comments and materials received in response to this notice will be available for public inspection by appointment at the Division of Conservation and Classification (for comments of a general nature only) or at the appropriate Regional Office listed in **SUPPLEMENTARY INFORMATION.**

Species assessment forms with information and references on a particular candidate species' range, status, habitat needs, and listing priority assignment are available for review at the appropriate Regional Office listed below in **SUPPLEMENTARY INFORMATION** or at the Division of Conservation and Classification, Arlington, Virginia (see address above), or on our Internet Web site (*http://endangered.fws.gov/candidates/index.html*).

FOR FURTHER INFORMATION CONTACT: The Endangered Species Coordinator(s) in the appropriate Regional Office(s) or Chris Nolin, Chief, Division of Conservation and Classification (703–358–2171).

SUPPLEMENTARY INFORMATION:

Candidate Notice of Review

Background

The Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act), requires that we identify species of wildlife and plants that are endangered or threatened, based on the best available scientific and commercial information. Through the Federal rulemaking process, we add these species to the List of Endangered and Threatened Wildlife at 50 CFR 17.11 or the List of Endangered and Threatened Plants at 50 CFR 17.12. As part of this program, we maintain a list of species that we regard as candidates for listing. A candidate species is one for which we have on file sufficient information on biological vulnerability and threats to support a proposal to list as endangered or threatened, but for which preparation and publication of a proposal is precluded by higher-priority listing actions. We maintain this list for a variety of reasons: to notify the public that these species are facing threats to their survival; to provide advance knowledge of potential listings that could affect decisions of environmental planners and developers; to provide information that may stimulate conservation efforts that will remove or reduce threats to these species; to solicit input from interested parties to help us identify those candidate species that may not require protection under the Act or additional species that may require the Act's protections; and to solicit necessary information for setting priorities for preparing listing proposals.

Table 1 includes 286 species that we regard as candidates for addition to the Lists of Endangered and Threatened Wildlife and Plants (Lists), as well as 21 species for which we have published proposed rules to list as threatened or endangered species. Most of these proposed species were previously identified in the 2003 CNOR (69 FR 24876, May 4, 2004). We encourage consideration of these species in conservation planning, as well as other environmental planning, such as in environmental impact analysis done under the National Environmental Policy Act of 1969 (implemented at 40 CFR parts 1500–1508) and in local and statewide land use planning. Table 2 contains eight species we identified as candidates or as proposed species in the May 4, 2004, CNOR that we now no longer consider candidates. This includes two species that we listed as threatened since May 4, 2004, one species that we withdrew the proposed rule, one species that we removed from candidacy through a notice published on August 18, 2004 (69 FR 51217), and four species that we are removing from candidacy through this notice. The Region having lead responsibility for the particular species maintains updated records of information on candidate species.

Previous Notices of Review

The Act directed the Secretary of the Smithsonian Institution to prepare a report on endangered and threatened plant species, which was published as House Document No. 94–51. We published a notice in the **Federal Register** on July 1, 1975 (40 FR 27823), in which we announced that we would review more than 3,000 native plant species named in the Smithsonian's report and other species added by the 1975 notice for possible addition to the List of Endangered and Threatened Plants. A new comprehensive notice of review for native plants, which took into account the earlier Smithsonian

report and other accumulated information, superseded the 1975 notice on December 15, 1980 (45 FR 82479). On November 28, 1983 (48 FR 53640), a supplemental plant notice of review announced changes in the status of various species. We published complete updates of the plant notice on September 27, 1985 (50 FR 39526); February 21, 1990 (55 FR 6184); September 30, 1993 (58 FR 51144); and, as part of combined animal and plant notices, on February 28, 1996 (61 FR 7596); September 19, 1997 (62 FR 49398); October 25, 1999 (64 FR 57534); October 30, 2001 (66 FR 54808); June 13, 2002 (67 FR 40657); and May 4, 2004 (69 FR 24876). Additionally, on January 8, 2001 (66 FR 1295), we published our resubmitted petition finding for one plant species having an outstanding ''warranted-but-precluded finding'' on a petition to list.

We published earlier comprehensive reviews for vertebrate animals in the **Federal Register** on December 30, 1982 (47 FR 58454), and on September 18, 1985 (50 FR 37958). We published an initial comprehensive review for invertebrate animals on May 22, 1984 (49 FR 21664). We published a combined animal notice of review on January 6, 1989 (54 FR 554), and with minor corrections on August 10, 1989 (54 FR 32833). We again published comprehensive animal notices on November 21, 1991 (56 FR 58804); November 15, 1994 (59 FR 58982); and, as part of combined animal and plant notices, on February 28, 1996 (61 FR 7596); September 19, 1997 (62 FR 49398); October 25, 1999 (64 FR 57534); October 30, 2001 (66 FR 54808); June 13, 2002 (67 FR 40657); and May 4, 2004 (69 FR 24876). Additionally, on January 8, 2001 (66 FR 1295), we published our resubmitted petition findings for 25 animal species having outstanding ''warranted-but-precluded'' petition findings as well as notice of one candidate removal.

This revised notice supersedes all previous animal, plant, and combined notices of review.

Summary

Since publication of the 2003 CNOR on May 4, 2004 (69 FR 24876), we reviewed the available information on candidate species to ensure that a proposed listing is justified for each species and reevaluated the relative listing priority assignment of each species. A candidate species is assigned a listing priority number (LPN) of 1–12 depending on the magnitude of threats, the imminence of threats, and by its taxonomic status in accordance with our priority guidance as published on September 21, 1983 (48 FR 43098). We also evaluated the need to emergency-list any of these species, particularly species with high priorities (*i.e.*, species with listing priority numbers of 1, 2, or 3). This review and reevaluation ensures that we focus conservation efforts on those species at greatest risk. As of May 2, 2005, 18 animals are proposed for endangered status; 2 animals are proposed for threatened status (not including proposed reclassifications of endangered species); 1 animal is proposed for threatened-due-to-similarity-of-appearance status; and 145 plant and 141 animal candidates are awaiting preparation of proposed rules (see Table 1). Table 2 includes eight species we previously classified as either proposed for listing or candidates that we no longer classify in those categories.

Summary of New Candidates

Below we present brief summaries of five new candidates, including one species of fish, one insect, one crustacean, and two plants. Complete information, including references, can be found in the species assessment forms. You may obtain a copy of these forms from the Regional Office having the lead for the species, or from our Internet Web site (*http://endangered.fws.gov/candidates/index.html*).

Fish

Sicklefin redhorse (*Moxostoma sp.*)—The sicklefin redhorse is a medium-sized redhorse fish, reaching up to about 18 inches, with an elongate, somewhat compressed body and a highly falcate (sickle-shaped) dorsal fin and are found in North Carolina, Tennessee and Georgia. Detailed morphological and genetic studies have concluded that the sicklefin redhorse is a distinct species. The species is currently known to occupy cool to warm, moderate gradient creeks and rivers, and, during parts of its early life stages, large reservoirs. In streams, it is most often observed in riffles, runs, and well-flowing pools. It feeds and spawns in gravel, cobble, and boulder substrates with no, or very little, silt overlay.

Like many other redhorse species, the sicklefin redhorse is known mainly from flowing streams; however, also like many other redhorse species, the sicklefin redhorse appears to have adapted to spending at least part of its life in the near-shore areas of impounded streams where pre-spawning age sicklefins have been collected, mainly near the mouth of streams that feed the reservoirs. Current observations indicate that adults of the species are year-round residents of rivers and large creeks and that young, juveniles, and subadults occupy primarily the lower reaches of creeks and rivers and near-shore portions of certain reservoirs. It is likely that after emerging from the stream substrata, many of the larvae and postlarvae are carried downstream to the mouths of streams or into reservoirs. Newly mature fish (≥5 years of age) appear to migrate from the reservoirs to spawn and then remain in the streams with the other adults.

Based on an analysis of preserved specimens, the species is relatively long lived, with both sexes living at least to 17 years of age; however, based on the size of fish seen in the streams, some individuals probably live for over 20 years. Spawning typically occurs over cobble, with usually only a small portion of sand and gravel, in moderate to fast runs in open areas and pockets formed by boulders and outcrops. The spawning period for the sicklefin runs from late April through mid-May.

Past and recent collection records of the sicklefin redhorse, together with what is known about the habitat utilization of the species, indicate that the sicklefin redhorse once inhabited the majority, if not all, of the rivers and large creeks in the Blue Ridge portion of the Hiwassee and Little Tennessee River systems in North Carolina, Tennessee, and Georgia. Current estimates are that the species has apparently been eliminated from roughly 60 percent of its former range. This is a conservative estimate that: (1) Includes several miles of the Hiwassee and Fontana Reservoirs within the present range of the species (although portions of these reservoirs appear to provide survivable habitat for juvenile sicklefins, they do not provide foraging or spawning habitat for adults of the species); and (2) does not include some of the higher reaches of some of the creeks where the sicklefin redhorse currently occurs in their lowermost reaches. Additionally, the Cheoah River, Cullasaja River, Cartoogechaye Creek, Oconaluftee River, and several other large tributaries in the Hiwassee and Little Tennessee River systems may also have once been inhabited by the sicklefin redhorse.

Impacts associated with the construction and operation of dams for hydropower generation on the streams inhabited by the species is the primary cause of the extirpation of the sicklefin redhorse throughout the majority of its former range. These impoundments created by the dams eliminate spawning and foraging habitat of the adult sicklefin redhorse by changing the conditions from flowing to still water.

Water depth increases, flow decreases, and silt accumulates on the bottom. Impoundments not only destroy riverine habitat within the impounded portion of the stream, but they alter the quality and stability of the downstream reaches by adversely affecting water flow regimes, velocities, temperature, chemistry, and nutrient cycles. Dams that operate by releasing cold water from near the bottom of the reservoirs lower the water temperature downstream, changing downstream reaches from warm-or cool-water streams to cold-water streams and affecting their suitability for many of the native species historically inhabiting these stream reaches. The effects of impoundments result in changes in fish and macroinvertebrate communities (macroinvertebrates are the main prey items of the sicklefin), species requiring clean gravel and sand substrates are lost. In addition, dams result in the fragmentation and isolation of populations of remaining populations of the sicklefin redhorse, acting as effective barriers to the natural upstream and downstream expansion or recruitment of the species. Natural upstream and downstream population expansion and repopulation of the majority of the species' former range are restricted because of the barriers posed by the existing dams and impacts to the tailwaters associated with the current operation of the dams. As a result, the Hiwassee River system and Little Tennessee River system populations are isolated from each other. This isolation decreases their ability to respond to nature- and human-induced changes in their environment and increases their vulnerability to extirpation. Wastewater discharges, together with impacts to water and habitat quality associated with a variety of other land disturbance activities carried out without adequate measures to control storm water and erosion, also played a significant role in the decline of the species.

Many of the same factors believed to have contributed to the extirpation of the species from much of its former range potentially threaten these remaining populations. All of the surviving occurrences of the sicklefin redhorse are restricted to relatively short reaches of the streams they occupy, primarily due to existing dams. Their limited distributions make them extremely vulnerable to the effects from single catastrophic events (such as toxic chemical spills, major sedimentation events, channel modification, etc.) and/or the cumulative effects of lesser impacts to their habitat and numbers. Although the majority of the streams still occupied by the species occur in areas that are presently primarily rural, many of the communities within the watersheds of these streams are experiencing increasing development pressure, both commercial and residential, and are developing plans for upgrading and improving their infrastructure (*e.g.*, roads, water supplies, sewer/wastewater treatment systems, etc.) to provide for increased densities of development.

Because of the entire current range of the sickelefin redhorse is affected by the threats described above, the magnitude of the threat to the species is high. Although the threats faced by the sicklefin redhorse are significant, it is not anticipated that the species will be subject to these threats in the immediate future. Therefore, we assigned a listing priority of 5 to this species.

Insects

Miami blue butterfly (*Cyclargus thomasi bethunebakeri*)—The Miami blue is a coastal butterfly that occurs at the edges of tropical hardwood hammocks (forests) and occasionally in tropical pinelands and along trails, utilizing open sunny areas in southern Florida. The geographic range of this butterfly once extended from the Florida Keys north along the coasts to about St. Petersburg and Daytona, Florida. Although little specific historic information exists on the abundance and distribution patterns of the Miami blue, it is clear that the occurrence of this butterfly throughout its historic range has been significantly reduced, with only small remnants remaining. Despite extensive surveys of known suitable habitat and/or historical records, the species is now found only in a single metapopulation, located at Bahia Honda Key State Park (Park), with a few immature individuals on West Summerland Key. This metapopulation is comprised of thirteen distinct colonies in the Park.

In November 2002, the Service worked with researchers and the State to establish a captive propagation program for the Miami blue due to the low estimated population at its only known location. As of December 2004, the captive colony had numerous generations, with hundreds of individuals in captivity. Efforts have been undertaken to reintroduce captive-bred Miami blues to Federal lands (*i.e.*, Everglades National Park and Biscayne National Park) within the butterfly's historic range. However, subsequent monitoring has indicated an inconsistent or sporadic presence of only a small number of individuals of varying life stages at release sites. Monitoring results do not indicate that the Miami blue has become established at any of the release sites.

Extensive losses of the species' habitat and fragmentation of remaining patches, along with mosquito control activities, are the likely cause of the species' decline. Although many areas on public lands may offer suitable nectar and other host plants, the extremely limited dispersal ability of the species likely prevents these areas from becoming occupied and used. The Miami blue butterfly is threatened by the combined influences of habitat destruction and modification, mosquito control activities, and loss of genetic diversity associated with isolated populations. The possibility for catastrophic events (*e.g.*, hurricanes) also poses a threat to the survival of this butterfly. In addition to these threats, habitat loss and fragmentation, fire suppression, displacement of native host plants by invasive exotic species, detrimental land management practices, accidental harm from humans, and inadequate regulatory protection pose threats to the species throughout the species historic range. Predation, accidental harm or habitat destruction, and illegal collection may also pose a threat to the Miami blue due to the small population size at the known locations. Due to nonimminent threats of high magnitude as described above, we assigned a listing priority number of 6 to this subspecies.

Crustaceans

Diminutive amphipod (*Gammarus hyalleloides*)—The diminutive amphipod is a small amphipod that is ranked as ''critically endangered throughout its range'' (G1) by NatureServe and ''critically endangered throughout its range'' (S1) by the State of Texas. Based on surveys and genetic analysis, this species only occurs in four spring outflows in the Toyah Basin, Balmorhea area of Reeves and Jeff Davis Counties, Texas; these springs are all within about 8 miles (13 km) of each other within the San Solomon Spring System. In addition to being an important habitat for rare aquatic fauna, this spring system is also an important source of irrigation water for the farming communities in the Toyah Basin. The primary threat to the species is the loss of surface flows due to declining groundwater levels from drought and pumping for agricultural production. The natural cienega habitats (marshland communities associated with perennial springs and headwater streams) of the Balmorhea area have been mostly altered over time to accommodate agricultural irrigation. Most significant was the draining of wetland areas and the modification of spring outlets for

development of human use of the water resources. Although the land surrounding the amphibod's current habitat is owned and managed by The Nature Conservancy, Bureau of Reclamation, and Texas Parks and Wildlife Department, the water needed to maintain its habitat has declined due to a reduction in spring flows, possibly as result of private groundwater pumping in areas beyond that are controlled by these landowners. Pumping of the regional aquifer system for agricultural production of crops has resulted in the drying of other springs in this region, including Comanche Springs, which was once a large surface spring in Fort Stockton, Texas. Another example is Phantom Lake Spring, one of the sites of occurrence for the amphipod, which ceased flowing in 2000; aquatic habitat is now supported only by a pumping system. Another threat to amphipod habitat is the potential degradation of water quality from point and nonpoint pollutant sources. This pollution can occur either directly into surface water or indirectly through contamination of groundwater that discharges into spring run habitats used by the amphipod. The primary threat for contamination comes from herbicide and pesticide use in nearby agricultural areas.

Although the physical condition of the areas where this species is found has changed dramatically over time from human actions, at least a portion of the native biota remain. However, three of the four known current occurrences of the species are in degraded habitats (the exception is East Sandia Spring) because the natural conditions of the springs have been substantially modified for human use. Any additional modifications to the spring flow habitats will further threaten the species. Therefore, with imminent threats of high magnitude, we assign this species a listing priority number of 2.

Flowering Plants

Ipomopsis polyantha (Pagosa skyrocket)—Pagosa skyrocket is an extremely narrow endemic with a global distribution limited to a 13-mile range on outcrops of Pagosa-Winifred soils derived from mancos shale in Archuleta County, Colorado. The total population size is estimated to be between 2,246 and 10,626 plants. It is ranked as ''critically endangered throughout its range'' (G1) by NatureServe and ''critically endangered in the state'' (S1) by the Colorado Natural Heritage Program. Populations are on federal highway rights of way and private lands. Much of the occupied habitat on private lands has been subdivided and is being rapidly developed. There are no plans being implemented for the management, protection, or conservation of the species. The Colorado Rare Plant Technical Committee, including botanists from the Colorado Natural Heritage Program, has identified *I. polyantha* as the species most in need of protection and recovery efforts in 2005 in Colorado. We assign this species a listing priority number 2 based on imminent habitat destruction throughout its narrow range.

Solidago plumosa (Yadkin River goldenrod)—A member of the Asteraceae family, *Solidago plumosa* is endemic to the Yadkin River in North Carolina and was originally described from the Narrows Canyon and Falls area of this river in 1894. Currently, plants are know to exist in only two locations, located approximately 2 kilometers apart along the shoreline of the Yadkin River in North Carolina. This species is ranked as ''critically endangered throughout its range'' (G1) by NatureServe and ''critically endangered in the state'' (S1) by the North Carolina Natural Heritage Program. The historical and current impacts resulting from the construction and operation of reservoirs appear to be similar at each of these two surviving occurrences of the species, as does the threat posed by invasive, nonnative vegetation. The species appears to persist in areas subjected to periodic water scouring of a velocity sufficient to prevent the establishment of other species without eliminating previously established *Solidago plumosa* plants (the age of which is unknown). At the same time, although dependent upon some level of flood scouring, the species does not appear to be tolerant of prolonged inundation as it does not occur in frequently flooded habitats. Therefore, the availability of suitable habitat and the fate of all known populations of this species are primarily determined by the manner in which the Narrows and Falls Reservoirs are operated. To the extent that operation of hydroelectric facilities could be modified in the future to enhance conditions for *Solidago plumose*, the effects of reservoir construction and operation are not believed to be permanent or irreversible. Thus, the magnitude of these threats may be substantially reduced. In light of all of these considerations, the magnitude of threats to the species is estimated to be ''moderate to low.''

One of the primary threats that affected the species (construction of Narrows and Falls Reservoirs and the resulting inundation of suitable habitat) has already occurred. However, operation of these reservoirs continues to influence the habitat occupied by the species, and may be facilitating (via a reduction in the frequency and magnitude of scouring events) the establishment and spread of mimosa (*Albizia julibrissin*) (an invasive, nonnative shrub). Because mimosa is already shading established *Solidago plumosa* plants, it may potentially be competing for seed germination and seedling establishment sites. The threats posed by lack of scouring and the subsequent establishment and spread of mimosa are ongoing and, therefore, considered to be imminent. The threat posed by the nonnative hybrid bush honeysuckle (*Lonicera* x *bella*) is more remote, as the species has not yet established in habitats occupied by *Solidago plumosa.* We conclude that the threats affecting the species are of a moderate to low magnitude, but are imminent, leading to a listing priority number of 8.

Summary of Listing Priority Changes in Candidates

We reviewed the listing priority number for all candidate species and are changing the numbers for the following species. Some of the changes reflect actual changes in either the magnitude or imminence of the threats, and in two cases, reflect a change in the taxonomy of the species. For some species, our changes in the listing priority number reflect efforts to ensure national consistency as well as closer adherence to the 1983 guidelines in assigning these numbers, rather than a change in the nature of the threats.

Mammals

Mazama pocket gopher (*Thomomys mazama* ssp. *couchi, glacialis, louiei, melanops, pugetensis, tacomensis, tumuli*, and *yelmensis*)—Candidate status applies to each of these eight subspecies of *Thomomys mazama*, all of which are associated with glacial outwash prairies in western Washington. We do not include other *T. mazama* subspecies that occur in Oregon and California (commonly referred to as ''western pocket gophers'') as candidate species. Except as otherwise noted, the following description applies to each of the subspecies. Most populations are small, isolated, and patchily distributed. There are no historical data and scant quantitative data on current populations. Several populations are now extirpated. Two, and possibly three, of the subspecies may be extinct (*T. m. louiei, T. m. tacomensis*, and *T. m. tumuli*).

Threats include destruction and alteration of prairie habitat due to

development, altered fire regimes, and encroachment of native and nonnative plants; conflicts with military activities and airport development and maintenance activities; house cat predation; consideration as agricultural pests; and vulnerability to naturally occurring, random events. The magnitude of threats is high due to patchy and isolated population distributions in habitats highly desirable for development and subject to a wide variety of human activities that permanently alter the habitat. There are high and constant invasions of plant species altering the quality of remaining habitat. Loss of any of the subspecies will reduce the genetic diversity and likelihood of the continued existence of the species in Washington. Threats are imminent because many of those listed above are ongoing. It is likely that the extirpation of some populations and the extinction of two, and possibly three, subspecies are the result of one or more of these threats affecting each of these populations and subspecies. One subspecies is threatened by gravel pits, and two subspecies are located on airports with planned development. Because of the increased imminence of threats, we changed the listing priority number for each of the eight subspecies of the Mazama pocket gopher from a 6 to a 3.

Palm Springs (Coachella Valley) round-tailed ground squirrel (*Spermophilus tereticaudus chlorus*)—The Palm Springs round-tailed ground squirrel is one of four recognized subspecies of round-tailed ground squirrels. The range for the Palm Springs round-tailed ground squirrel corresponds to the Coachella Valley region in Riverside County, California. Primary habitat for the Palm Springs round-tailed ground squirrel in the Coachella Valley is the mesquite sand dune/hummock community. The species also is found in smaller numbers in creosote communities on sand dunes and hummocks. Approximately 90 percent of the mesquite hummock communities in the Coachella Valley are estimated to have been lost since 1939, a reduction from 3,363 hectares (8,309 acres) to 352 hectares (870 acres). Future development threatens more mesquite communities occupied by the Palm Springs round-tailed ground squirrel. The largest unprotected mesquite community in Indio Hills was recently developed, effectively eliminating a large ground squirrel population. The rapid growth of urban development in the Coachella Valley is threatening existing ground squirrel populations with habitat fragmentation.

A recent taxonomic study that examined the morphology of this subspecies as well as those of adjacent populations of another subspecies (*S. t. tereticaudus*) revealed that the original classification of this subspecies may be in question. Pelage (hair) color was found to be different among the two subspecies. In addition, this study also discovered that putative *S. t. tereticaudus* populations in Death Valley, the western central region of the Mojave Desert, and Borrego Valley were more similar in pelage color to *S. t. chlorus* in the Coachella Valley than other *S. t. tereticaudus* populations from the Colorado River region of eastern Imperial and Riverside Counties. We are awaiting peer review of this report before we take action to reconsider whether this subspecies is valid. In the meantime, we are seeking funding to pursue a genetic study that will determine this species' taxonomy based on DNA. Based on our evaluation that the threats pose an imminent risk of a high magnitude, we changed the listing priority number for this subspecies from a 6 to a 3.

Washington ground squirrel (*Spermophilus washingtoni*)—This species is one of the smallest members of the subgenus Spermophilus, and is found within the shrub-steppe habitat of the Columbia Basin ecosystem of Washington and Oregon. The soil types used by the squirrels are distributed sporadically within the species' range, and have been seriously fragmented by human development in the Columbia Basin, particularly by conversion to agricultural use. Where agriculture occurs, little evidence of ground squirrel use has been documented, and reports indicate that ongoing agricultural conversion eliminates Washington ground squirrel habitat. The most contiguous, least-disturbed expanse of suitable Washington ground squirrel habitat, and likely the densest distribution of colonies within the range of the species, occurs on the Boeing site and Boardman Bombing Range in Oregon, and on Federal and State-owned land in Washington. However, in Washington, recent declines in some colonies have been precipitous and the reasons for them are unknown. In 2001, for instance, entire colonies of ground squirrels were no longer occupied on the Columbia National Wildlife Refuge and Seep Lakes Management Area near Othello, Washington, despite the State protected status of the species in the area. Current and potential threats to the continuing survival of the species include the following: habitat loss from the conversion of potential and known habitat to agricultural use, predation, recreational shooting, disease, potential effects of pesticides, and potential effects of drought on forage quality and quantity. However, while the magnitude of threats remains high for the Washington ground squirrel, the immediacy of threats has declined in the past year. The majority of existing colonies (in Oregon and throughout the species' current range) are located on the Boardman Bombing Range and the Boeing tract, which contain the largest contiguous suitable Washington ground squirrel habitat. Although Boardman Bombing Range activities are not certain, they are not expected to change significantly in the foreseeable future.

In 2003, the largest threat to colonies in Oregon was the imminent conversion of the Boeing tract for agriculture. This would have resulted in the permanent loss of habitat for one of the largest contiguous blocks of Washington ground squirrels. However, in 2004, a 25-year Multi-Species Candidate Conservation Agreement with Assurances (CCAA) was signed by Threemile Canyon Farms, The Nature Conservancy, Portland General Electric, Oregon Department of Fish and Wildlife, and the Service. The parties will implement habitat management, operational modifications, and conservation measures for four non-listed species, including the Washington ground squirrel, on approximately 93,000 ac (37,636 ha) enrolled in the CCAA. Under this agreement, Threemile Canyon Farms placed 22,600 ac (9,146 ha) of the Boeing tract into a permanent Oregon Department of Fish and Wildlife Conservation Easement (Boardman Conservation Area). Also, Portland General Electric identified 888 ac (356 ha) for management as part of the Conservation Area for the duration of the CCAA. The Boardman Conservation Area will be managed by TNC with the goal to maintain and improve where feasible the integrity of existing native communities and associated species covered by the CCAA, including the Washington ground squirrel. All but two known sites and the majority of suitable habitat on the Boeing tract are located on the Boardman Conservation Area and therefore are protected from irreversible habitat modification. Based on our current evaluation of threats, we changed the listing priority number from 2 to 5 for this species as the threats are no longer imminent.

Birds

Spotless crake (*Porzana tabuensis*), American Samoa Distinct Population Segment (DPS)—The genus *Porzana* is widespread in the Pacific, where it is

represented by numerous island-endemic and flightless species (many of which are extinct as a result of anthropogenic disturbances) as well as several common and cosmopolitan species such as the common crake. The spotless crake is found in the Philippines, Australia, Fiji, Tonga, Society Islands, Marquesas, Independent Samoa, and American Samoa. No subspecies are currently recognized.

The status of populations in other areas is not well known, but the species is thought to be in decline throughout the oceanic Pacific, with at least one known extirpation (from the island of Futuna). In American Samoa, the population of the spotless crake is restricted to the summit of Tau Island.

The only known population in American Samoa co-occurs with Norway rats (*Rattus norvegicus*), which are known to prey on birds and their eggs and young. The spotless crake is particularly vulnerable because it is small, nests on the ground, and on Tau summit has no wetland refuge from predators. Finally, this single population, which existing survey data suggest is a small population, is at risk from stochastic occurrences such as typhoons and inbreeding depression. These threats affect the entire known population of this species in American Samoa, and are potentially lethal to individuals. The magnitude of threats facing the species is thus high, and these threats are more imminent than previously inferred because additional surveys indicate that this species occurs only as a single, small population in American Samoa.

Although this species may use a wide variety of habitats, wetland habitats may be necessary for self-sustaining populations of the crake to persist in the presence of predators. Wetland habitats are limited in American Samoa, and enforcement of their conservation under local and Federal law is not consistent. The listing priority number for the spotless crake is changed from 6 to 3 because surveys on Tau over the past several years have failed to yield evidence of this species in locations other than the summit, no observations of this species have been made during extensive, ongoing surveys of birds elsewhere in American Samoa, and the threat from rat predation is ongoing.

Friendly ground-dove (*Gallicolumba stairi stairi*)—The genus *Gallicolumba* is distributed throughout the Pacific and Southeast Asia. The genus is represented in the oceanic Pacific by six species. Three are endemic to Micronesian islands or archipelagos, two are endemic to island groups in French Polynesia, and *G. stairi* is endemic to Samoa, Tonga, and Fiji. All six species have some level of threatened status on the International Union for Conservation of Nature and Natural Resources (IUCN) Red List. Some authors recognize two subspecies of the friendly ground-dove, one, slightly smaller, in the Samoan archipelago (*G. s. stairi*), and one in Tonga and Fiji (*G. s. vitiensis*), but morphological differences between the two are minimal. In American Samoa, the friendly ground-dove has been found on the islands of Ofu and Olosega (Manua Group).

Of the primary threats to the subspecies (predation by nonnative species, poaching and habitat loss), only predation by nonnative species is thought to be occurring now, and likely has been occurring for several decades. This predation may be an important impediment to increases in the population. Predation by introduced species has played a significant role in reducing and limiting populations of island birds, especially ground-nesters, in the Pacific and other locations worldwide. Nonnative predators known or thought to occur in the range of the friendly ground-dove in American Samoa are feral cats (*Felis catus*), Polynesian rats (*Rattus exulans*), black rats (*R. rattus*), and Norway rats (*R. norvegicus*). Consistent monitoring using a variety of methods over the last 5 years yielded few observations of this taxon in American Samoa. The total population size is poorly known, but is unlikely to number more than a few hundred pairs. The distribution of the friendly ground-dove is limited to steep, rocky slopes; areas that are not common in American Samoa. Threats to this subspecies have not changed over the past year, but to better reflect the fact that threats due to small population size and nonnative predators are imminent, we revised the listing priority number from a 6 to a 3.

Kauai creeper (*Oreomystis bairdi*)—The Kauai creeper, or akikiki, is a small Hawaiian honeycreeper found only on the island of Kauai, Hawaii, with no described subspecies. The species is known to be presently facing the primary threats of disease (avian malaria) and habitat degradation and loss. These threats have persisted over several decades, and are affecting a large proportion of the population.

The mosquito vector of avian malaria has been found throughout the range of elevations over which the creeper occurs, and malaria transmission occurs at least periodically over the species' entire range. The area of forest where malaria is endemic is likely to increase with global climate change.

Efforts are underway to reduce habitat loss through control of invasive nonnative plants in some areas, but there is no weed control in most of the range of the Kauai creeper, and habitat loss is already occurring. Also, there are currently no efforts to control habitat damage by feral ungulates within the range of the Kauai creeper.

A large scale survey in 2000 showed that in the last 30 years the estimated population declined nearly 80 percent (from 6,832 ± 966 to 1,472 ± 680 birds), the range decreased approximately 60 percent (from 21,750 to 8,896 acres (8,800 to 3,600 hectares)), and the species has disappeared from much of the periphery of its range. The listing priority number for the Kauai creeper is changed from a 5 to a 2 because the threats facing the species are of a high magnitude and are imminent.

Yellow-billed cuckoo, Western Continental U.S. DPS (*Coccyzus americanus*)—While the cuckoo is still relatively common east of the crest of the Rocky Mountains, biologists estimate that more than 90 percent of the bird's riparian (streamside) habitat in the West has been lost or degraded. These modifications, and the resulting decline in the distribution and abundance of yellow-billed cuckoos throughout the western states, are believed to be due to conversion to agriculture; grazing; competition from nonnative plants, such as tamarisk; river management, including altered flow and sediment regime; and flood control practices, such as channelization and bank protection. Riparian habitat is continuing to be destroyed through land use conversion and grazing. Threats to the yellow-billed cuckoo have not changed over the past year, but to better reflect the fact that threats are imminent, we revised the listing priority number from a 6 to a 3 for this DPS.

Many-colored fruit-dove (*Ptilinopus perousii perousii*)—Two subspecies of the many-colored fruit-dove exist. One, *P. p. perousii*, is found in American Samoa, within the four main islands of Tutuila, Olosega, Ofu, and Tau, and Independent Samoa. Another subspecies, *P. p. mariae*, is found in Fiji and Tonga.

The primary threats to *P. p. perousii*, loss of the native banyan trees on which it depends, poaching, and predation by nonnative mammals, are thought to occur at levels insufficient to have a detrimental effect on the species' population in American Samoa. This is demonstrated by the fact that 5 years of extensive and intensive monitoring indicate an increase in the detected

relative abundance of many-colored fruit-doves in American Samoa. This trend may have been interrupted by Typhoon Heta in January of 2004, when damage to their primary food plants, the two species of native banyan trees, may have altered the doves' foraging to make them more vulnerable to the opportunistic poaching that typically takes place after typhoons (Craig *et al.* 1994).

At present, no disturbance other than typhoons is known to affect the abundance, distribution, or productivity of native banyans in American Samoa. Loss of native rainforest harboring these banyans and, presumably, the nesting habitat for the many-colored fruit-dove is not currently considered to be taking place at a rate that poses a severe or imminent risk to the many-colored fruit-dove, and poaching of this species is thought to be an extremely rare occurrence.

Predation by introduced species has played a significant role in limiting and extirpating populations of island birds in the Pacific and other locations worldwide (Atkinson 1977, 1985; Moors and Atkinson 1984). Nonnative predators known to occur in the range of the many-colored fruit-dove in American Samoa that could be a significant threat to this arboreal-nesting bird are black rats *(R. rattus)*, Norway rats *(R. norvegicus)*, and feral cats *(Felis catus)*. However the continued existence of this species and the recently documented increase in its abundance, suggest that predation, while a potential threat, is not of a high-magnitude. The total population size of the many-colored fruit-dove is unknown, but may number up to a few hundred pairs.

In Independent Samoa, the many-colored fruit-dove may be more abundant than it is in American Samoa, but this difference likely reflects difference in island size—the main islands of Independent Samoa are both an order of magnitude larger than the islands of American Samoa—and the greater abundance in Independent Samoa of the two native figs, *Ficus prolixa* and *F. obliqua,* that are the preferred food of this fruit-dove. However, ongoing deforestation (potentially exacerbated by severe storms) and hunting are considered to threaten the many-colored fruit-dove in Independent Samoa, and this subspecies' status there is described as ''Conservation Concern.'' We changed the listing priority number for the many-colored fruit-dove from 6 to 12 because the overall magnitude of threats is moderate to low and these threats are not imminent.

Xantus's murrelet *(Synthliboramphus hypoleucus)*—Xantus's murrelet is a small seabird of the Alcid family that occurs along the western coast of North America in the United States and Mexico. Xantus's murrelet populations in the United States and Mexico appear to have declined due to a wide variety of threats, with substantial declines evident at the largest known breeding population and extirpations on three of the Mexican islands. Data from the largest breeding population on Santa Barbara Island in the United States indicated a dramatic decline (as much as 70 percent from 1977 to the mid-1990s); data from other islands are scarce.

Although the decline in Xantus's murrelet populations appears to have been substantial, some of the largest threats are being addressed, and, to some degree, ameliorated in the United States. For example, although predation is a large contributor to the current low population numbers of the Xantus's murrelet, it does not pose as imminent a threat as it once did. Cats and rats have been removed from many of the islands where they once occurred. Anacapa Island implemented a rat eradication program in 2001 that seems to have been successful in removing that nonnative predator of the Xantus's murrelet. Rats were eradicated in 1994 from San Roque Island. Although the nonnative herbivores have been absent from Santa Barbara Island since the late 1950s, their presence facilitated the introduction of non-native grasses, which continue to exist and spread on that island. The conversion of native habitat to nonnative grassland that has occurred on Santa Barbara Island poses a threat to the population of Xantus's murrelet due to the fact that the island is only one square mile in size and holds the majority of the nesting population in California. Introduction of nonnative grasses has modified the habitat. Such habitat modification is thought to have increased the endemic deer mouse *(Peromyscus maniculatus elusus)* population, a native predator of Xantus's murrelet eggs.

The Service has been working with the State of California, National Park Service, and National Marine Fisheries Service to address the threats of light pollution and human disturbance. Many nocturnal birds are attracted to the lights of commercial fishing vessels and Xantus's murrelets and other seabirds become exhausted from continual attraction and fluttering near lights or collide with lighted vessels, the impact resulting in injury or death. Chicks have been documented to separate from their parents due to vessel lights, often resulting in death as chicks are dependent on parents for survival. Additionally, squid boats operate in shallow waters close to Xantus's murrelet breeding colonies in the California Channel Islands. Increased predation on Xantus's murrelets by Western gulls *(Larus occidentalis)* and barn owls *(Tyto alba)* as a result of lighting, particularly from squid boats, near breeding colonies has been documented. To address the threat from light pollution, the California Department of Fish and Game implemented regulations to require shielding and limit wattage of lights used by boats conducting nighttime fishing activities. Although these regulations do not remove the negative effects of this activity, they likely have resulted in a reduction of the impacts. Although not likely responsible for the species' current low numbers, oil pollution may pose a potential threat to the survival of the Xantus's murrelet population.

Despite actions to address some of the threats to this species, a recent proposal by ChevronTexaco Corporation to build a liquid natural gas (LNG) facility 600 meters offshore Islas Los Coronados in Baja California, Mexico, poses a threat to the survival of the Xantus's murrelet. The Los Coronados islands support the largest known breeding population of Xantus's murrelets in the world. The construction and operation of the proposed LNG facility at Islas Los Coronados would increase levels of disturbance to Xantus's murrelets. Sources of disturbance include: (1) Bright lights at night from the facility and visiting tanker vessels; (2) noise from the facility; (3) noise from helicopters visiting the facility; (4) ingress and egress of tanker vessels; and (5) other vessels transporting personnel and supplies. These factors would have a serious impact on the islands' population of Xantus's murrelets, and, taken together, the cumulative disturbance caused by this proposed facility would have substantial negative consequences for the colony.

Additionally, there are potential impacts to the Xantus's murrelet prey base due to increased seawater chlorination resulting from this facility. The ocean waters around Islas Los Coronados are highly productive and very important foraging areas for breeding, migrant, and wintering seabirds such as the Xantus's murrelet. The loss of large numbers of prey could be detrimental to seabirds that depend on Islas Los Coronados for foraging at various times of year. Degraded water quality around Islas Los Coronados may also result from this project, such as

from the seawater chlorination process. A gas spill from the facility or pipeline could have substantial negative effects on the Xantus's murrelet. Due to the now imminent threats from the proposed LNG facility, we changed the listing priority number for this species from a 5 to a 2.

Amphibians

Black Warrior waterdog *(Necturus alabamensis)*—The Black Warrior waterdog inhabits streams above the Fall Line within the Black Warrior River Basin in Alabama. There is very little specific locality information available on the historical distribution of the Black Warrior waterdog, however, as limited attention was given to this species between its description in 1937 and the 1980's. There are a total of 11 known historical records from 4 Alabama counties. Two of these sites have now been inundated by impoundments. Extensive survey work was conducted in the 1990's to look for additional populations. Currently, the species is known from 14 sites in 5 counties.

Water quality degradation is the biggest threat to the continued existence of the Black Warrior waterdog. Most streams that have been surveyed for the waterdog showed evidence of pollution and many appeared biologically depauperate. Sources of point and nonpoint pollution in the Black Warrior River Basin have been numerous and widespread. Pollution is generated from inadequately treated effluent from industrial plants, sanitary landfills, sewage treatment plants, poultry operations, and cattle feedlots. Surface mining represents another threat to the biological integrity of waterdog habitat. Runoff from old, abandoned coal mines generates pollution through acidification, increased mineralization, and sediment loading. An additional threat to the Black Warrior waterdog is the creation of large impoundments that have flooded thousands of acres of its habitat. These impoundments are likely marginal or unsuitable habitat for the salamander. Threats to the Black Warrior waterdog have not changed over the past year, but to better reflect the fact that threats from the pervasive water quality degradation in the Black Warrior Basin are imminent, we changed the listing priority number from a 5 to a 2 for this species.

Ozark hellbender *(Cryptobranchus alleganiensis bishopi)*—Since the species was elevated to candidate status in 2001 (66 FR 54808), the known threats have increased. In particular, recreational pressures on Ozark hellbender rivers have increased substantially on an annual basis. The Missouri Department of Conservation reports that gigging popularity and pressure has increased, which presents a significant threat to hellbenders during the breeding season as they tend to move greater distances and congregate in small groups where they are an easy target for giggers. Canoe, kayak, and motor/jet boat traffic has increased in recent years on the Jacks Fork, Current, Eleven Point, and North Fork Rivers. The popularity of these float streams has grown to the point that the National Park Service is considering alternatives to reducing the number of boats that can be launched daily by concessionaires, but no change has been adopted and even if one is, floating will still occur. Horse trail rides are extremely popular along both the Jacks Fork and Current National Scenic Rivers. In 2003, the Missouri Department of Natural Resources added a 7-mile stretch of the Jacks Fork River to the 303(d) list of impaired waters for organic wastes (fecal coliform) immediately downstream from a commercial horse trail ride outfitter.

To date, nothing has been done to reduce or ameliorate ongoing threats to Ozark hellbenders. The Ozarks region continues to experience rapid urbanization, expansion of industrial agricultural practices such as concentrated animal feeding operations (chickens, turkeys, hogs, cattle), and logging. No laws are in place that preclude livestock from grazing in riparian corridors and resting in or along streams and rivers. Missouri is the second largest beef cattle producing state in the nation, with the majority of animal units produced in the Ozarks. Both Arkansas and Missouri are the leading States in poultry production. The fact that the majority of the Ozarks region in Missouri and Arkansas is comprised of karst topography (caves, springs, sinkholes, and losing streams) further complicates the containment and transport of potential contaminants.

In short, the abundance of treatment facilities and lack of adequate treatment facilities or practices for both human and livestock waste poses a significant and ever increasing threat to aquatic ecosystems. The decrease in Ozark hellbender range and population size and the shift in age structure are likely caused by a variety of historic and ongoing activities. The primary cause of these trends is habitat destruction and modification through impoundment, channelization, siltation, and water quality degradation from a variety of sources, including industrialization, agricultural runoff, mine waste, and timber harvest. Overutilization of hellbenders for commerce and scientific purposes is also likely contributing to their decline. The regulations in place that could prevent these impacts, including the Clean Water Act and State laws, have been inadequate in preventing Ozark hellbender declines to this point. Finally, most of the remaining Ozark hellbender populations are small and isolated, making them vulnerable to individual catastrophic events and reducing the likelihood of recolonization after localized extinctions. Due to substantial increases in recreational pressures on Ozark hellbender rivers on an annual basis, we changed the listing priority number for this subspecies from a 6 to a 3.

Clams

Georgia pigtoe *(Pleurobema hanleyanum)*—The Georgia pigtoe was historically found in shallow runs and riffles in large creeks and rivers of the Coosa River drainage system in Alabama, Georgia, and Tennessee. The species is currently known to exist in localized portions of the upper Conasauga River in Murray and Whitfield Counties, Georgia, and in a short reach of the Coosa River below Terrapin Creek, Cherokee County, Alabama. The Georgia pigtoe is very rare, with only a few observations of living animals over the past 15 years. Impoundment and pollution are implicated in the decline and disappearance of the species. We changed the listing priority of the Georgia pigtoe from a 5 to a 2 due to rarity and continued lack of success into locating living animals.

Snails

Bonneville pondsnail *(Stagnicola bonnevillensis)*—The Bonneville pondsnail occupies four spring pools north of the Great Salt Lake in Box Elder County, Utah (Horse Spring B, Horse Spring B South, Pipe Spring, and Shotgun Spring). While the total number of individuals is unknown, the total occupied habitat is less than one hectare. Two previous threats to this species now appear to have been resolved. Leaks from petroleum pipelines in the area have occurred in 2000 and 2002; however, Chevron Pipeline (which has responsibility for operation and maintenance of the pipelines) has addressed potential threats from pipeline leaks with internal integrity inspections and alerts prior to leakage. Consequently, potential pipeline leaks are not a current threat. Intensive, unregulated grazing can degrade the habitat of aquatic species, including *Stagnicola bonnevillensis,* but the springs where this species occurs

have been fenced to restrict livestock use and this is not a current threat.

Current threats to this species include perchlorate and trichloroethelene (TCE) contamination from ATK Thiokol, Inc. (Thiokol). Until recently, Thiokol disposed of waste products such as perchlorate and TCE in an area 6.5 km (4 mi) upstream from the pondsnail's habitat, within the same hydrologic ground water gradient as the occupied snail habitat. Contaminated soils have been removed and the area capped to prevent further contamination. Groundwater sampling indicates that the 10 µg/l isoline of the TCE plume is 0.5 km (0.3 mi) north of Shotgun and Pipe Springs. The 100 µg/l isoline of the TCE plume is 2.4 km (1.5 mi) northwest of Shotgun Spring. The 1000 µg/l isoline of the TCE plume is 3.5 km (2.2 miles) northwest of Shotgun Spring. Levels of percholate measured in June 2004 range from 6.6 µg/liter in Fish Spring to 287 µg/liter in Pipe Spring. The acute toxicity of TCE and perchlorate to *Stagnicola bonnevillensis* is under investigation, but both substances are potentially lethal to most wildlife species. The current levels of TCE and perchlorate in the occupied springs and the approaching groundwater plume are of concern for the future of this species and its habitat. Thiokol is taking corrective action to identify and remediate groundwater contamination through a Corrective Action Plan (an updated groundwater model and risk assessments are to be completed in May 2005 under this plan). Bioassay studies are being initiated to determine the effect of these contaminants on the snail and its habitat.

Although the range of this species is highly restricted and the only known habitat is currently threatened by chemical contamination of the ground water, we consider the following actions that are addressing these threats to be significant enough to have reduced the magnitude of threats from high to moderate: discontinued disposal of wastes in an unlined impoundment, removal of contaminated soil, installation of a cap to prevent infiltration of water into soils beneath impoundment, monitoring of downgradient groundwater for contamination, implementation of a Corrective Action Plan to characterize and remediate groundwater contamination, implementation of a site management plan, and development of a groundwater model and risk assessment. Thus, we changed the listing priority from a 2 to an 8. Additionally, the Utah Division of Wildlife Resources is currently drafting a Conservation Agreement and Strategy for this species.

Interrupted (Georgia) rocksnail *(Leptoxis foremani (downei))*—Interrupted rocksnails historically occurred in shoals, riffles, and reefs of small to large rivers in the Coosa River Basin of Alabama and Georgia. Today, only a single surviving natural population is known from a short reach of the Coosawattee River, Georgia. During a 1999 census, 10–45 interrupted rocksnail snails per square meter were found in this reach. In 2004, a 6 man-hour search was required to find 20 individuals. Water quality is suspected as the cause of decline. A captive colony of approximately 200 snails was established at the Tennessee Aquarium Research Institute (TNARI) in 2000 for study and propagation. During the winter of 2003, the Alabama Department of Conservation and Natural Resources released about 3000 juvenile interrupted rocksnails from the TNARI colony into the Coosa River above Wetumpka, Elmore County, Alabama. The status of this reintroduction is currently unknown. We changed the listing priority number for the interrupted rocksnail from a 5 to a 2 due to the recent precipitous decline of the only known naturally surviving population in the Oostanaula River.

Newcomb's tree snail (*Newcombia cumingi*)—A tree-dwelling species, Newcomb's tree snail belongs to the snail family, Achatinellidae. The species is endemic to the island of Maui, where it is currently known from a single remaining population. This species is currently threatened by habitat loss and modification and by predation from nonnative predatorial snails. Because the threats are of a high magnitude and are now considered imminent because they are ongoing, we changed the listing priority number from a 5 to a 2.

Crustaceans

Anchialine pool shrimp (*Vetericaris chaceorum*)—*Vetericaris chaceorum* is an anchialine pool-inhabiting species of shrimp belonging to the family Procarididae. This species is endemic to the Hawaiian Islands and is currently known from one population on the island of Hawaii. The primary threats to this species are habitat loss and predation from nonnative fish species. We changed the listing priority number for this species from a 2 to a 1 as this species is in a monotypic genus. The threats remain imminent and of a high magnitude.

Flowering Plants

Bidens amplectens (Kookooalu)—This species is an erect perennial or facultatively annual herb found in mixed lowland dry shrubland/grassland on Oahu, Hawaii. This species is known from one population of 500 to 1,000 individuals in the Waianae Mountains. Threats to the species include nonnative plants that increase the fuel load and fire threat, and compete for habitat. We have changed the listing priority number for this species from 5 to 2 because the threats are ongoing, and therefore, imminent.

Bidens campylotheca ssp. *pentamera* (Kookooalu)—This species is an erect, perennial herb found in *Cheirodendron-Metrosideros polymorpha* montane wet forest on Maui, Hawaii. This subspecies is known from 11 populations with a total of approximately 500 individuals, and is restricted to the island of Maui. Threats to the species include ungulates that eat this plant and degrade and destroy habitat, and by nonnative plants that compete for habitat. We have changed the listing priority number for this species from 6 to 3 because the threats are ongoing, and therefore, imminent.

Bidens micrantha ssp. *ctenophylla* (Kookooalu)—This species is an erect, perennial herb found in open mixed shrubland to dry *Metrosideros* forest on the island of Hawaii, Hawaii. This species is endemic to the island of Hawaii, where it is restricted to an area of less than 10 square miles (26 square kilometers). This species is known from four populations totaling approximately 3,000 individuals, the majority of which occur in only two populations. Threats to the species include land development and nonnative plants such as *Pennisetum setaceum* and *Leucana leucocephala*, which degrade habitat, possibly contributing to fire. We have changed the listing priority number for this species from 6 to 3 because the threats are ongoing, and therefore, imminent.

Brickellia mosieri (Florida brickell-bush)—This white-flowered, narrow-leaved herb in the aster family occurs in central and southern Miami-Dade County, Florida, from Southwest 120th Street to Florida City. It is found exclusively in pine rocklands, where it tends to occur in areas within open shrub canopy and exposed limestone with minimal organic litter. Approximately 99 percent of the former habitat has been converted to urban areas or farmland. Seventeen occurrences currently are confirmed in remnant blocks of habitat; thirteen are owned or managed by Miami-Dade

County and the others are privately owned. Of the known occurrences most contain a low density of plants; only two occurrences are believed to contain more than 1,000 individuals and the total population is estimated to be no more than 10,000 individuals, but more likely to be 5,000 to 7,000 individuals. There is little likelihood of finding significantly more populations. Fire suppression is one of the greatest threats to this species. Fire is required to maintain the pine rockland community but with fire suppression, hardwoods eventually increase and shade out understory species such as *Brickellia mosieri.* The other most significant threat is exotic plants. Throughout its range the species also is threatened by invasive exotic plants, and even if effective control methods are found for existing invasive exotic plants, additional invasive exotic plants are expected to emerge since areas near the managed pine rockland contain exotic species and can act as a seed source of exotics allowing them to continue to invade the pine rockland. However, 13 of the 17 sites are on conservation lands where control of invasive exotic species is being implemented, as well as controlled burns. Overall, the magnitude of threats to the Florida brickell-bush is moderate. The threats are also ongoing and therefore, imminent. Thus, we have revised the listing priority number from a 5 to an 8.

Calamagrostis expansa (no common name)—This species is a robust, short-rhizomatous perennial found in wet forest, open bogs, and bog margins on the islands of Maui and Hawaii, Hawaii. Historically rare, *Calamagrostis expansa* was restricted to wet forest and bogs on Maui. Currently, this species is known from 100 populations of 1 or 2 individuals each on Maui, and was recently discovered in 5 populations totaling approximately 300 individuals on the island of Hawaii. The species is currently threatened by pigs that degrade and destroy habitat and nonnative plants that outcompete and displace them. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Calamagrostis hillebrandii (no common name)—This species is a slender, short-rhizomatous perennial found in *Metrosideros-Machaerina* montane wet bog or *ohia-kuolohia-Oreobolus (Metrosideros-Rhynchospora-Oreobolus)* mixed bog on Maui, Hawaii. This species is known from two populations of about 500 individuals, restricted to the bogs of West Maui, although it was formerly found on the island of Molokai as well. This species is currently threatened by pigs that degrade and destroy habitat and nonnative plants that outcompete and displace them. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Calochortus persistens (Siskiyou mariposa lily)—The Siskiyou mariposa lily is a narrow endemic that is restricted to two disjunct ridge tops in the Klamath-Siskiyou Range on the California-Oregon border. In California, this species is currently found at nine separate sites on approximately 10 hectares (ha) (24.7 acres (ac)) of Klamath National Forest and privately owned lands that stretch for 6 kilometers (km) (3.7 miles (mi)) along the Gunsight-Humbug Ridge. In 1998, five Siskiyou mariposa lily plants were discovered on Bald Mountain, west of Ashland, Jackson County, Oregon.

Major threats include competition and shading by native and nonnative species fostered by suppression of wild fire; increased fuel loading and subsequent risk of wild fire; fragmentation by roads, fire breaks, tree plantations, and radio-tower facilities; maintenance and construction around radio towers and telephone relay stations located on Gunsight Peak and Mahogany Point; and soil disturbance and exotic weed and grass species introduction as a result of heavy recreational use and construction of fire breaks. Dyer's woad (*Isatis tinctoria*), an invasive, nonnative plant that may prevent germination of Siskiyou mariposa lily seedlings, is now found throughout the California population, affecting 90 percent of the known lily habitat. Forest Service staff and the Klamath-Siskiyou Wildlands Center cite competition with dyer's woad as a significant and chronic threat to the survival of Siskiyou mariposa lily.

The combination of restricted range, extremely low numbers (five plants) in one of two disjunct populations, poor competitive ability, short seed dispersal distance, slow growth rates, low seed production, apparently poor survival rates in some years, and competition from exotic plants threaten the continued existence of this species. However, as a result of information gained during the 2003 field season, the listing priority number has been changed from 2 to 5. Our previous rating was based on the reported results of unpublished demographic research that showed an absence of reproduction, leading the Service to rate the immediacy of threats as imminent. However, during last season's extensive survey, Klamath National Forest staff observed juvenile plants across the California range of *C. persistens.* For this reason, we have revised the immediacy of threats to nonimminent. Because none of the threats to *C. persistens* are anticipated to cause extinction in the immediate future and because the nonimminent threats are of a high magnitude, we assigned a listing priority number of 5 to this species.

Canavalia napaliensis (Awikiwiki)—This species is a perennial climber found in open dry sites and coastal strand, diverse lowland dryland/mesic forest to mixed mesophytic forest on Kauai, Hawaii. *Canavalia napaliensis* is known from three populations totaling several hundred individuals in a small section of the Na Pali coast. This species is currently threatened by goats that eat this plant and degrade and destroy habitat, and by nonnative plants that outcompete and displace them. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Chamaesyce deltoidea ssp. *pinetorum* (Pineland sandmat)—This small, upright, round-leaved herb belonging to the spurge family is known only from the southern portion of the Miami Rock Ridge in Southern Miami-Dade County, Florida. This species occurs in tropical pine woods on limestone rock (rock pinelands). It is shade intolerant and requires periodic prescribed fires to reduce competition from woody vegetation. The total number of plants has been estimated to be fewer than 10,000. Plants occur on conservation lands at Everglades National Park and seven relatively small pinelands owned by Miami-Dade County, one private preserve, and a governmental non-conservation site. Additionally, fewer than 1,000 plants are estimated to occur at less than 10 privately owned unprotected sites. The most serious threats are lack of fire in small urban or near-urban preserves and invasive pest plants. Despite effective exotic pest plant management in Everglades National Park and on Miami-Dade County lands, the pest plant threats remain, and new problems, such as Old World climbing fern, are emerging. While there are inherent difficulties in maintaining small pinelands and the exotic pest plant threats are serious, overall, the threats are moderate in magnitude; the largest population occurs on Everglades National Park where invasive species are being actively controlled and fire is being used to maintain habitat for this species. The threats are imminent since they are ongoing. Therefore, we are revising the listing priority number for the pineland sandmat from 6 to 9.

Chamaesyce eleanoriae (Akoko)—This species is a small shrub found on

steep slopes and cliffs, in *Metrosideros-Diospyros* lowland mesic forest and *Eragrostis variabilis* coastal dry cliffs on Kauai, Hawaii. This species is known from 10 populations totaling less than 500 individuals. Described in 1996, it is found only in and around Kalalau Valley rim, along the Na Pali Coast on the island of Kauai. Although it was only discovered in 1992, a decline in numbers has already been observed. The species is threatened by goats and rats that eat this plant and degrade and destroy habitat, and by nonnative plants that outcompete and displace it. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Chamaesyce remyi var. *kauaiensis* (Akoko)—This species is a shrub found in wind-swept shrubland and adjacent forest patches dominated by *Metrosideros* and *Syzygium* on Kauai, Hawaii. *Chamaesyce remyi* var. *kauaiensis* is known from four or five populations totaling 300 to 400 individuals. This variety is found only in the Wahiawa and Blue Hole areas on the island of Kauai. This species is threatened by goats and pigs that eat this plant and degrade and destroy habitat, by the two-spotted leafhopper that damages leaves and may spread plant viruses, and by nonnative plants that outcompete and displace it. We have changed the listing priority number for this species from 6 to 3 since the threats are ongoing, and therefore, imminent.

Chamaesyce remyi var. *remyi* (Akoko)—This species is a perennial shrub found in wet *Metrosideros polymorpha-Dicranopteris linearis* montane mesic forest on Kauai, Hawaii. *Chamaesyce remyi* var. *remyi* is known from at least 10 populations totaling 500 to 1,000 individuals. Hybrids of *C. remyi* and *C. sparsiflora* have been found near the margins of Wahiawa Bog, Kauai. This species is threatened by goats and pigs that eat this plant and degrade and destroy habitat, by the two-spotted leafhopper that causes leaf damage and may spread viruses, and by nonnative plants that outcompete and displace it. We have changed the listing priority number for this plant variety from 6 to 3 since the threats are ongoing, and therefore, imminent.

Charpentiera densiflora (Papala)—This species is a tree found in *Diosporus sandwicensis*-dominated lowland mesic forest, extending into diverse mesic forest on Kauai, Hawaii. *Charpentiera densiflora* is known from 10 populations totaling approximately 200 individuals, restricted to an area of less than 10 square miles (26 square kilometers) in the Na Pali coast area on the island of Kauai. The threat to the species is feral goats that degrade and destroy habitat. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Chromolaena frustrata (Cape Sable thoroughwort)—This blue-flowered herb of the aster family presently occurs in Monroe County, Florida, at scattered locations in the Florida Keys and Everglades National Park near the Flamingo Visitors Center. Within the past 30 years, it was also observed slightly farther east in Everglades National Park in Miami-Dade County. In the Florida Keys (Monroe County), Cape Sable thoroughwort occupies rock barrens and edges of tropical hardwood hammocks. Populations of Cape Sable thoroughwort on public conservation lands are small. Everglades National Park has fewer than 150 plants (remote areas have not yet been surveyed); Boca Grande Key, Lignumvitae Key, Long Key, Upper Matecumbe Key have approximately 25, 81, 200, and 18 plants respectively. The species is also present at two privately owned sites (Long Key and Big Munson Island) in the Keys. Approximately 162 plants are on private land at Long Key. The only large population of Cape Sable thoroughwort (consisting of thousands of plants) is on a privately owned island near Big Pine Key. The abundance of Cape Sable thoroughwort here is probably due to Hurricane Georges in 1998, which opened the island's tree canopy. While the 1998 hurricane benefited one population, a more severe storm could have very different effects. The listing priority has been increased to reflect the high and imminent risk of extinction due to small population size, combined with the risk of loss of populations from exotic pest plants (especially Brazilian pepper) through changes in community structure and competition, hurricanes, and other disturbances (*e.g.* from trail construction). Therefore, we changed the listing priority number for the Cape Sable thoroughwort from a 5 to a 2.

Cyanea calycina (Haha)—This species is an unbranched shrub found in *Metrosideros-Dicranopteris* montane wet forest and wet gulches and streambanks on Oahu, Hawaii. This species is known from about 20 populations with a combined total of 200 or more individuals. Threats to the species include pigs and goats that degrade and destroy habitat, rats and slugs that directly prey upon it, and nonnative plants that outcompete and displace it. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Cyanea kunthiana (Haha)—This species is a shrub found in closed *Metrosideros polymorpha* montane wet forest on Maui, Hawaii. The historic range of *Cyanea kunthiana* was wet forest on the island of Maui. While there are no historic records of numbers of populations or individuals, qualitative accounts indicate that the species was not uncommon. Currently, this species is declining throughout its range and is known from approximately 20 populations with a combined total of several hundred individuals. Threats to the species include pigs, rats, and slugs that eat this plant and degrade and destroy habitat, and nonnative plants that outcompete and displace it. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Cyanea lanceolata (Haha)—This species is a shrub found in *Acacia koa-Metrosideros polymorpha* lowland mesic forest on Oahu, Hawaii. This species is known from 20 populations with a combined total of less than 300 individuals. Threats to the species include pigs, rats, and slugs that prey upon, degrade and destroy habitat, and nonnative plants that outcompete and displace it. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Cyanea tritomantha (Aku)—This species is a palm-like tree found in closed *Metrosideros-Cibotium* montane wet forest on the island of Hawaii, Hawaii. This species is known from four to five populations with a total of 100 to 500 individuals in Olaa and Kau on the island of Hawaii. Threats to the species include pigs, rats, and slugs that eat this plant and degrade and destroy habitat, and nonnative plants that outcompete and displace it. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Cyrtandra kaulantha (Haiwale)—This species is a shrub found in moist wooded gulches in dense shade on Oahu, Hawaii. This species is known from seven populations with a total of 37 individuals along the Waiahole Ditch Trail on the island of Oahu. Threats to the species include pigs and slugs that eat this plant and degrade and destroy habitat. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Cyrtandra oenobarba (Haiwale)—This species is a low, decumbent, fleshy, subshrub found in *Metrosideros*

polymorpha-Dicranopteris linearis lowland wet forest on Kauai, Hawaii. The historic range of this species was throughout the island of Kauai. While there are no historic records of numbers of populations or individuals, qualitative accounts indicate that the species was relatively widespread and abundant. Recent surveys show that the species is now limited to 10 or more populations with a combined total of 200 to 500 individuals in only three small areas on the island of Kauai. Threats to the species include pigs that eat this plant and degrade and destroy habitat, and nonnative plants that outcompete and displace it. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Dalea carthagenensis var. *floridana* (Florida prairie clover)—This shrubby pea is restricted to south Florida, where it is found in edges of rockland hammock and pine rockland, coastal upland, and marl prairie. Fire is likely very important for this species since Florida prairie clover probably does not tolerate shading by hardwoods in the absence of periodic fires. Two colonies occur in the Big Cypress National Preserve (Collier and Monroe Counties), two colonies occur at the Deering Estate at Cutler (managed by Miami-Dade County), and one colony exists at the R. Hardy Matheson Preserve (Miami-Dade County). Although this species potentially might be rediscovered at still existing Miami area sites where it was once collected (such as Crandon Park on Key Biscayne, the Castellow Hammock Environmental Education Center, and the edge of Everglades National Park), species experts believe this is unlikely. The estimated total population of Florida prairie clover is 200 to 300 plants. Even if all the plants were in a single locality, they probably would not constitute a viable population. The State has designated the species as endangered, but this listing provides little or no habitat protection beyond disclosure of impacts. Threats to this plant developed over the course of the twentieth century as most of its geographic range in Miami-Dade County became urbanized, leaving only small remnants of pine rocklands. Fire suppression and invasive exotic plants are the greatest threats to this species. In the absence of fire, hardwoods eventually shade out understory species like *Dalea carthagenesis* var. *floridana.* Conducting prescribed fires in urban areas where the small sites exist is difficult but there has been some success at the Charles Deering Estate and R. Hardy Matheson Preserve. Exotic (*i.e.,* nonnative) plants are widespread and difficult to control. There have been some efforts to remove the exotic plants at the smaller sites, but the methods used are not feasible at the large Big Cypress National Preserve. The small remaining populations of the species also are extremely vulnerable to the effects of hurricanes. Overall, our review of the status of this species shows that the magnitude of threats is moderate and threats are ongoing, and therefore, imminent. Therefore, we have changed the listing priority number for this plant variety from a 6 to a 9.

Dubautia imbricata ssp. *imbricata* (Naenae)—This species is a shrub found in wet forest and bogs on Kauai, Hawaii. This subspecies is known from three populations totaling 1,000 or more individuals in the Wahiawa Mountains. Threats to the species include pigs that degrade and destroy habitat and nonnative plants that outcompete and displace it. We have changed the listing priority number for this subspecies from 6 to 3 since the threats are ongoing, and therefore, imminent.

Dubautia waialealae (Naenae)—This species is a shrub found in bogs and diverse mesic to wet forest on the Kauai, Hawaii. This species is known from one population totaling fewer than 800 individuals near the summit of Waialeale and one individual at the opposite end of the Alakai Plateau. Threats to the species include pigs that degrade and destroy habitat, and nonnative plants that outcompete and displace it. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Festuca hawaiiensis (no common name)—This species is a cespitose (grows in dense clumps) annual found in dry forest on the islands of Hawaii and Maui, Hawaii. This species is known from more than 20 populations totaling approximately 1,000 individuals in and around the Pohakuloa Training Area on the island of Hawaii. Historically, this species was also found on Hualali and Puu Huluhulu on Hawaii and possibly Ulupalakua on Maui, but it no longer occurs at these sites. The species is threatened by pigs, goats, and sheep that eat this plant and degrade, and destroy habitat, by nonnative plants that outcompete and displace it, and by fire from military training. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Gardenia remyi (Nanu)—This species is a tree found in mesic to wet forest on the islands of Kauai, Molokai, Maui, and Hawaii, Hawaii. *Gardenia remyi* is known from several populations totaling a few hundred individuals throughout its range. The species is threatened by pigs and goats that eat this plant and degrade and destroy habitat, and by nonnative plants that outcompete and displace it. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Geranium hanaense (Nohoanu)—This species is a decumbent (growing along the ground) shrub found in bogs on Maui, Hawaii. First described in 1988, *Geranium* hanaense was known from only two adjacent montane bogs on the northeast outer rift of Haleakala, East Maui. At that time the species was represented by 500 to 700 individuals. By 1996, the species population had significantly declined according to State biologists. Threats to the species include pigs that degrade and destroy habitat, and nonnative plants that outcompete and displace it. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Hazardia orcuttii (Orcutt's Hazardia)—*Hazardia orcuttii* is a shrubby species in the Asteraceae (sunflower family). Although once described as fairly common in open habitats along coastal plains from Colonet to Tijuana in Baja California, Mexico, only one occurrence has been confirmed in Mexico since 1975. There is only one known extant native occurrence of this species in the United States; it is in the Manchester Conservation Area (MCA), managed by the Center for Natural Lands Management in the City of Encinitas. Apparent threats to the species include direct impacts from unauthorized access and use of the MCA. Impacts include pedestrian trespass, creation, and use of bicycle trails, and use of the area for unauthorized fire suppression methods training. Introduced invasive exotic plants may also pose a significant threat to the species. Monitoring has not recorded seedling recruitment at the site. This species has a narrow geographical range in the United States, but the site is managed. Because this species is State-listed and occurs in a managed, protected area, the threats are now nonimminent, but remain high in magnitude. Therefore, we changed the listing priority number for this species from a 2 to a 5.

Hedyotis fluviatilis (Kamapuaa)—This species is a scandent shrub found in mesic to wet forest on Oahu and Kauai, Hawaii. This species is known from six populations totaling 500 to 1,000 individuals throughout its range. This species is threatened by pigs that

degrade and destroy habitat, and by nonnative plants that outcompete and displace it. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Indigofera mucronata var. *keyensis* (Florida indigo)—This small, perennial pea is found at edges of tropical rockland hammock (forest), coastal berm, and rock barren communities in the upper Florida Keys (Monroe County, Florida). Florida Keys indigo is currently known only from Crawl Key (private), Key Largo (John Pennekamp Coral Reef State Park), Long Key State Park, Long Point Key (private), Plantation Key (private), and Windley Key Fossil Coral Reef State Geological Park. A population has been seen at Snake Creek Hammocks, Florida Keys Wildlife and Environmental Area, managed by the Florida Fish and Wildlife Conservation Commission. This species appears to have been extirpated from the Lower and Upper Matecumbe Keys. Perhaps no more than 1,000 individuals exist. The coastal rock barrens at two sites are being invaded by native and exotic hardwoods, and the exotic Brazilian pepper (*Schinus terebinthifolius*) is a special concern as the pepper is very competitive. For example, on Long Point Key, encroaching Brazilian pepper threatens to close over the opening where a small population of Florida indigo occurs. It is unlikely this population will survive another decade under current conditions. The overall status of this plant appears to be stable on public conservation lands in the Keys due to land acquisition by the State, monitoring by the Florida Park Service, and effective control of exotic pest plants in some areas. Because the threats to this plant are moderate and are ongoing, and therefore, imminent, we have changed the listing priority number from 6 to 9.

Keysseria erici (no common name)—This species is a short, rhizomatous perennial herb found in montane bogs on Kauai, Hawaii. *Keysseria erici* is known from several populations in bogs within the Alakai swamp region of Kauai, totaling approximately 1,000 individuals. While the species has always been restricted to the bogs of the Alakai, it may have occurred in more bogs in the area in the past. Threats to the species include pigs that degrade and destroy habitat, and nonnative plants that outcompete and displace it. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Keysseria helenae (no common name)—This species is a rhizomatous perennial herb found in montane bogs on Kauai, Hawaii. *Keysseria helenae* is known from three or four populations in bogs within the Alakai swamp region of Kauai, totaling approximately 300 individuals. While the species has always been restricted to the bogs of the Alakai, it may have occurred in more bogs in the area in the past. Threats to the species include pigs that degrade and destroy habitat, and nonnative plants that outcompete and displace it. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Korthalsella degeneri (Hulumoa)—This species is a parasitic subshrub found on two species of native trees, *Sapindus oahuensis* and *Nestigis sandwicensis,* only in diverse mesic forests on Oahu, Hawaii. Recent surveys indicate that the species is known only from one population of 1,000 individuals in Makua Valley. Threats to the species include goats that eat this plant and degrade and destroy habitat, by nonnative plants that outcompete and displace it, and by fire. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Labordia helleri (Kamakahala)—This species is a shrub found in diverse mesic forest and mesic valleys on Kauai, Hawaii. This species is known from eight or more populations totaling 500 individuals from Makaha to Honopu. This species is threatened by goats and deer that eat this plant and degrade and destroy habitat, and by nonnative plants that outcompete and displace it. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Labordia pumila (Kamakahala)—This species is a sparingly branched shrub found in hummocks in bogs and in bog margins on Kauai, Hawaii. This species is known from three populations totaling 500 to 700 individuals in the Alakai and Waialeale areas. This species is threatened by pigs that eat this plant and degrade and destroy habitat, and by nonnative plants that outcompete and displace it. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Lysimachia daphnoides (Lehua makanoe)—This species is a small shrub found in bogs on Kauai, Hawaii. This species is known from nine populations totaling 180 to 300 individuals in the Alakai area. Threats to the species include pigs and hikers that degrade and destroy habitat, and nonnative plants that outcompete and displace it. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Melicope christophersenii (Alani)—This species is a long-lived perennial shrub or tree found in wet forest on Oahu, Hawaii. *Melicope christophersenii* was historically known from the southern Waianae Mountains on the island of Oahu. Currently, this species is known from several populations totaling less than 300 individuals. This species is threatened by feral pigs and goats that eat this plant and degrade habitat, competition from nonnative plants, and predation by the black twig borer. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Melicope puberula (Alani)—This species is a shrub or small tree found in mesic and wet forest on Kauai, Hawaii. This species is known from 1,000 individuals in the Kalalau area to Wainiha Pali on the island of Kauai. Threats to the species include feral pigs and goats, nonnative plants, the black twig borer, and naturally occurring events. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Myrsine fosbergii (Kolea)—This species is a branched shrub or small tree found in cloudswept ridges and wet forest on Kauai and Oahu, Hawaii. This species is known from at least five populations totaling 150 to 175 individuals from Kauai and the southeastern end of Castle Trail on Oahu. This species is threatened by feral pigs and nonnative plants. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Myrsine vaccinioides (Kolea)—This species is a small branched shrub found in shrubby bogs on Maui, Hawaii. This species is found scattered throughout the bogs of west Maui, totaling approximately 500 individuals, but regeneration is not occurring. This species is found in the Puu Kukui area of West Maui. Threats to the species include feral pigs and nonnative plants. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Nothocestrum latifolium (Aiea)—This species is a small tree found in dry to mesic forest and diverse mesic forests on Kauai, Oahu, Maui, Molokai and Lanai, Hawaii. *Nothocestrum latifolium* is known from approximately a dozen

populations totaling less than 300 individuals. While the species has not been extirpated from any island, its range on each island has decreased dramatically. Threats to the species include feral pigs, goats and cattle, nonnative plants, and the loss of pollinators. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Penstemon debilis (Parachute beardtoungue)—*Penstemon debilis* is endemic to oil shale outcrops on the Roan Plateau escarpment in Garfield County, Colorado. The total estimated number of plants is 450 to 750 individuals. Approximately 90 percent of the plants are on private land owned by Occidental Petroleum; the remaining 10 percent are on Bureau of Land Management land that is proposed to be open to leasing under a new Resource Management Plan in 2005. Pressure to develop energy reserves in this area is intense. Threats also include habitat destruction caused by road and communication tower maintenance and recreational use. A listing priority number change from 5 to 2 is based on a dramatic increase in the intensity of energy exploration along the Roan Plateau escarpment, making the threats to the species imminent.

Phacelia submutica (DeBeque phacelia)—*Phacelia submutica* is an ephemeral annual flowering plant and is endemic to clay soils derived from the Atwell Gulch and Shire members of the Wasatch Formation in Mesa and Garfield Counties, Colorado. There are about 40 populations; all are smaller than 5 acres. The numbers of plants vary from none to thousands each year, depending on precipitation. The habitat coincides with high quality oil and gas reserves of the Piceance Basin, mostly on Federal lands. The primary threats to this species are gas field development and associated construction and transportation activities, as well as increased access to all-terrain vehicles. Substantial surface disturbance alters the unique soil structure and destroys seed banks that are crucial to the survival of this species. We changed the listing priority number from an 11 to an 8 primarily in response to a dramatic increase in the intensity of energy exploration and development on the habitat, which make the low to moderate threats imminent.

Phyllostegia floribunda (no common name)—This species is an erect subshrub found in mesic to wet forest on the island of Hawaii, Hawaii. This species is known from 4 populations with a combined total of between 100 to 500 individuals in Laupahoehoe Natural Area Reserve and Hawaii Volcanoes National Park. Threats to the species include feral pigs, and nonnative plants. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Pittosporum napaliense (Hoawa)—This species is a small tree found in *Pandanus* forest and mesic valleys on Kauai, Hawaii. This species is known from about six populations, with a combined total of several hundred individuals on the eastern portion of the Na Pali coast. Threats to the species include feral pigs and nonnative plants. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Platydesma cornuta var. *cornuta* (no common name)—This species is an erect palmoid shrub found in mesic forest on Oahu, Hawaii. This variety is known from three to four populations, with a combined total of approximately 100 individuals in the Koolau Mountains on the island of Oahu. Limited monitoring has shown that this population is declining. Threats to the species include feral pigs and nonnative plants. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Platydesma cornuta var. *decurrens* (no common name)—This species is an erect palmoid shrub found in mesic forest on Oahu, Hawaii. This variety is known from a few populations, with a combined total of a few hundred individuals in the Waianae Mountains. Threats to the species include feral pigs, goats, and nonnative plants. We have changed the listing priority number for this variety from 6 to 3 since the threats are ongoing, and therefore, imminent.

Platydesma rostrata (Pilo kea lau lii)—This species is erect palmoid shrub found in diverse mesic forest and valleys on Kauai, Hawaii. This species is known from about 20 populations with a combined total of several hundred individuals in Kokee and Kuia. This species is threatened by feral goats and nonnative plants. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Pleomele fernaldii (Hala pepe)—This species is a tree found in dry forest habitat on Lanai, Hawaii, which has become dramatically reduced due to agriculture and habitat degradation. Three populations of this species are currently found on the island of Lanai in the few remnant dry forests on the leeward side of the island, with a combined total of 200 individuals. Threats to the species include axis deer and nonnative plants. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Pleomele forbesii (Hala pepe)—This species is a tree found in diverse mesic and dry forests on Oahu, Hawaii. Although previously thought to be more common, this species is currently known from 16 populations that have a combined total of 500 individuals. This species is threatened by feral pigs and goats, nonnative plants, fire, and rats. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Pritchardia hardyi (Loulu)—This species is a medium-sized palm tree found in open wet forest on Kauai, Hawaii. This species is known from three populations with a combined total of 300 individuals in the Power Line Road area. This species is threatened by feral pigs, rats, vandalism/collection, and nonnative plants. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Pseudognaphalium (=Gnaphalium) *sandwicensium* var. *molokaiense* (Enaena)—This species is a perennial herb found in strand vegetation in dry consolidated dunes on Molokai, Hawaii. This variety is known from two populations, one totaling a few hundred individuals in the Moomomi area and one population of 25 individuals on west Maui at Puu Kahulianapa. Threats to the species include predation by feral deer, competition with nonnative plants, collection by lei makers, and destruction by off road vehicles. We have changed the listing priority number for this variety from 6 to 3 since the threats are ongoing, and therefore, imminent.

Pteralyxia macrocarpa (Kaulu)—This species is a tree found in valleys and slopes in diverse mesic forest on Oahu, Hawaii. This species is known from 20 populations with a combined total of less than 500 individuals. Threats to the species include feral pigs, rats, the two-spotted leafhopper, and nonnative plants. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Ranunculus hawaiensis (Makou)—This species is an erect or ascending perennial herb found in mesic to wet forest, dominated by *Metrosideros polymorpha* (ohia) and *Acacia koa* (koa) with scree substrate on Maui and the island of Hawaii, Hawaii. Its range on these two islands has declined. Populations formerly within Haleakala

National Park have been extirpated. It is known from fewer than 300 individuals in five populations. However, the majority of these individuals are seedlings, less than 1 inch (2.5 centimeters) tall. Species experts expect the rate of survival to be very low due to trampling by feral pigs, goats, cattle, and sheep. Other threats to the species include competition from nonnative plants, and damage from slugs. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Sicyos macrophyllus (Anunu)—This species is a perennial vine found in wet *Metrosideros polymorpha* (ohia) forest and subalpine *Sophora chrysophylla-Myoporum sandwicense* (mamane/naio) forest on the island of Hawaii, Hawaii. This species is known from several populations with a combined total of a few hundred individuals in the Kohala and Mauna Kea areas. This species is threatened by feral pigs, sheep and nonnative plants. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Solanum nelsonii (Popolo)—This species is a sprawling or trailing shrub found in coral rubble or sand in coastal sites on the islands of Hawaii, Molokai, Maui, Niihau, Nihoa, Pearl, and Hermes, Hawaii. This species is known from ten populations with a combined total of fewer than 300 individuals and is declining rapidly on all islands, including the Remote Islands National Wildlife Refuge. In the past, this species was also found on the islands of Oahu, Kauai, Midway, and Laysan, but is believed to be extirpated from these locations, due primarily to coastal development and competition with nonnative plant species. This species is threatened by nonnative plants, development, off road vehicles, and trampling. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Ferns and Allies

Christella boydiae (no common name)—This species is a small to medium sized fern found in mesic to wet forest along streambanks on Oahu and Maui, Hawaii. Historically, this species was also found on the island of Hawaii; however, the species has been extirpated from that location. This species is known from three populations with a combined total of 362 to 412 individuals. The three populations are found in Kipahulu Valley and Waihoi Valley of Maui and the Koolau Mountains of Oahu. Current populations survive only at the extreme upper elevations of streambanks. This species is threatened by feral ungulates, nonnative plants, stream diversion, and erosion. We have changed the listing priority number for this species from 5 to 2 since the threats are ongoing, and therefore, imminent.

Microlepia strigosa var. *mauiensis* (Palapalai)—This fern is found in mesic to wet forests. The species was historically found on the islands of Maui and Hawaii, Hawaii, but is currently found only on the island of Maui, where it is known from three populations with a combined total of 100 to 200 individuals. This species is threatened by feral pigs that eat this plant and degrade and/or destroy habitat, by nonnative plants that compete for light and nutrients, and reduce this species' vigor; and by stochastic extinction due to naturally occurring events. We have changed the listing priority number for this species from 2 to 3 because this entity is now recognized as a variety of another species. The threats to this variety remain imminent and of a high magnitude.

Other Taxonomic Changes in Candidates

Flowering Plants

Keysseria erici (C.N. Forbes) Cabrera—This species has no common name and is in the Asteraceae (Sunflower family). *Keysseria erici* was originally described as *Lagenophora erici* by C.N. Forbes in 1918. The currently recognized Latin name, *Keysseria erici,* was published by Cabrera in 1967. This name is accepted in the 2003 supplement to the *Manual of the Flowering Plants of Hawaii* (Wagner and Herbst 2003). Thus, with this current CNOR and accompanying species assessment form, we recognize the candidate entity as *Keysseria erici* (rather than the name we previously used, Lagenophora erici). Also, see above in ''*Summary of Listing Priority Changes in Candidates*.''

Keysseria helenae (C.N. Forbes & Lydgate) Cabrera—This species has no common name and is in the Asteraceae (Sunflower family). *Keysseria helenae* was originally described as *Lagenophora helenae* by C.N. Forbes and J. Lydgate in 1918, and in previous CNORs we showed *L. helenae* as a candidate. The currently recognized Latin name, *Keysseria helenae,* was published by Cabrera. This name is accepted in the 2003 supplement to the *Manual of the Flowering Plants of Hawaii* (Wagner and Herbst 2003). Thus, with this current CNOR and accompanying species assessment form, we recognize the candidate entity as *Keysseria helenae.* Also, see above in ''*Summary of Listing Priority Changes in Candidates*.''

Ferns and Allies

Christella boydiae (D.C.Eaton) Holttum—This species has no common name and is in the family Thelypteridaceae. *Christella boydiae* was originally described as *Aspidium boydiae* by D.C. Eaton in 1897, and in previous CNORs we showed *A. boydiae* as a candidate. The currently recognized Latin name, *Christella boydiae,* was published by R.E. Holttum in 1966. This name is accepted by a recent treatment of the fern flora of Hawaii (Palmer 2003). Thus, with this current CNOR and accompanying species assessment form, we are recognizing the candidate entity as *Christella boydiae.* Also, see above in ''*Summary of Listing Priority Changes in Candidates*.''

Huperzia stemmermanniae (A.C. Medeiros & W.H. Wagner) Kartesz—This species has no common name but is a type of hanging firmoss in the Lycopodiaceae (Club-moss family). *Huperzia stemmermanniae* was originally described as *Phlegmariurus stemmermanniae* by A.C. Medeiros and W.H. Wagner (Medeiros *et al.* 1996) based on specimens collected on Haleakala, Maui, Hawaii, by Medeiros and Chimera in 1995. The currently recognized Latin name, *Huperzia stemmermanniae,* was published in 1999 (Kartez 1999). This name is accepted by a recent treatment of the fern flora of Hawaii (Palmer 2003). Thus, with this current CNOR and accompanying species assessment form, we are recognizing the candidate entity as *Huperzia stemmermanniae* (rather than the name we previously used, *Phlegmariurus stemmermanniae). Huperzia stemmermanniae* is found in mesic *Metrosideros polymorpha* (ohia)/*Acacia koa* (koa) forests on the islands of Maui and Hawaii, Hawaii. This species was historically known only from east Maui. Additional populations are found in Laupahoehoe on the island of Hawaii. Only four populations are known, totaling less than 20 individuals on Hawaii and Maui. This species is threatened by feral pigs, goats, and cattle, which eat this plant and degrade and/or destroy habitat; fire that also destroys habitat and plants; and, nonnative plants that outcompete it for light and nutrients. Because the threats are of a high magnitude and are imminent, we are continuing to assign this species a listing priority number of 2.

Microlepia strigosa var. *mauiensis* (palapalai) is in the family Dennstaedtiaceae. *Microlepia strigosa*

var. *mauiensis* was originally described as *Microlepia mauiensis* by W.H. Wagner and in previous CNORs we showed *M. mauiensis* as a candidate. The currently recognized Latin name, *Microlepia strigosa* var. *mauiensis,* was published by D. Palmer in 2002. This name is accepted in his recent treatment of the fern flora of Hawaii Palmer (2003). Also, see above in ''*Summary of Listing Priority Changes in Candidates*.''

Candidate Removals

Clams

Alabama clubshell (*Pleurobema troshelianum*) and painted clubshell (*Pleurobema chattanoogaense*)—Based on recent genetic and morphological studies by Williams *et al.* and Campbell (see the species assessment forms for references and details), these two taxa are no longer considered valid, and do not meet the Act's definition of a species. Therefore, we are removing both species from candidate status.

Insects

Holsinger's Cave beetle (*Pseudamophthalmus holsingeri*)—Holsinger's cave beetle is a cave-dependent predatory ground beetle found in a single cave, Young-Fugate Cave, located in Lee County, Virginia. Through conservation efforts, two previous major threats have been eliminated: (1) A highway widening project proposed to be constructed near the cave has been modified to avoid impacts to the cave, and, (2) a leaking underground fuel tank from a gas station located over the cave has been removed. Additionally, the cave entrance is located on private land where the landowners strictly prohibit entry into the cave. Although water entering Young-Fugate cave is somewhat affected by sources of non-point source pollution, results of monitoring the cave beetle population have shown no evidence that current surrounding land use has negatively impacted the cave beetle. Thus, threats to this species have been eliminated and the species no longer meets the definition of a candidate species.

Crustaceans

Camp Shelby burrowing crayfish (*Fallicambarus gordoni*)—The Camp Shelby burrowing crayfish (CSBC) is found in pitcher plant wetlands of southern Mississippi. CSBC has a small, naturally limited range in a localized portion of the Leaf River watershed in central Perry County, Mississippi, within the Desoto National Forest. All of this area is currently under lease to the Mississippi Army National Guard's Camp Shelby for troop and tank training grounds. A Candidate Conservation Agreement (CCA) was developed and is being implemented by the Mississippi Army National Guard, U.S. Forest Service, Mississippi Department of Wildlife, Fisheries and Parks, and the Service. This CCA addresses all threats known to the species (silviculture, troop and tank maneuvers, and ATV use) and implements an aggressive habitat management and monitoring program. This signed CCA has removed threats to the CSBC and its habitat to the point that the species no longer meets the criteria for candidate status. We are removing this species from the candidate list primarily as a result of the conservation efforts outlined in the CCA.

Petition Findings for Candidate Species

The Act provides two mechanisms for considering species for listing. One method allows the Secretary, on her own initiative, to identify species for listing under the standards of section 4(a)(1). We implement this through the candidate program, discussed above. The second method for listing a species provides a mechanism for the public to petition us to add a species to the Lists. Under section 4(b)(3)(A), when we receive such a petition, we must determine within 90 days, to the maximum extent practicable, whether the petition presents substantial information that listing may be warranted (a ''90-day finding''). If we make a positive 90-day finding, we must promptly commence a status review of the species under section 4(b)(3)(A); we must then make and publish one of three possible findings within 12 months of the receipt of the petition (a ''12-month finding''):

1. The petitioned action is not warranted;

2. The petitioned action is warranted (in which case we are required to promptly publish a proposed regulation to implement the petitioned action. Once we publish a proposed rule for a species, section 4(b)(5) and 4(b)(6) govern further procedures regardless of whether we issued the proposal in response to a petition.); or

3. The petitioned action is warranted but that (a) the immediate proposal of a regulation and final promulgation of regulation implementing the petitioned action is precluded by pending proposals, and (b) expeditious progress is being made to add qualified species to the lists of endangered or threatened species. (We refer to this as a ''warranted but precluded'' finding.)

Section 4(b)(3)(C) of the Act requires that when we make a warranted but precluded finding on a petition, we are to treat such a petition as one that is resubmitted on the date of such a finding. Thus, we are required to publish new 12-month findings on these ''resubmitted'' petitions on an annual basis.

On December 5, 1996, we made a final decision to redefine ''candidate species'' to mean those species for which the Service has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposed rule to list, but for which issuance of the proposed rule is precluded (61 FR 64481, December 6, 1996). Therefore, the standard for making a species a candidate through our own initiative is identical to the standard for making a warranted-but-precluded 12-month petition finding on a petition to list, and we add all petitioned species for which we have made a warranted-but-precluded 12-month finding to the candidate list.

This publication also provides notice of substantial 90-day findings and the warranted-but-precluded 12-month findings pursuant to section 4(b)(3) for candidate species listed on Table 1 that we identified on our own initiative, and that subsequently have been the subject of a petition to list. Even though all candidate species identified through our own initiative already have received the equivalent of substantial 90-day and warranted-but-precluded 12-month finding, we reviewed the status of the newly petitioned candidate species and through this CNOR are publishing specific section 4(b)(3) findings (*i.e.*, substantial 90-day and warranted-but-precluded 12-month findings) in response to the petitions to list these candidate species. We publish these findings as part of the first CNOR following receipt of the petition.

Pursuant to section 4(b)(3)(C)(i) of the Act, once a petition is filed regarding a candidate species, we must make a 12-month petition finding in compliance with section 4(b)(3)(B) of the Act at least once a year, until we publish a proposal to list the species or make a final not-warranted finding. We make this annual finding for petitioned candidate species through the CNOR.

Section 4(b)(3)(C)(iii) of the Act requires us to ''implement a system to monitor effectively the status of all species'' for which we have made a warranted-but-precluded 12-month finding, and to ''make prompt use of the [emergency listing] authority [under section 4(b)(7)] to prevent a significant risk to the well being of any such species.'' The CNOR plays a crucial role in the monitoring system that we have implemented for all candidate species

by providing notice that we are actively seeking information regarding the status of those species. We review all new information on candidate species as it becomes available, prepare annually a species assessment form that reflects monitoring results and other new information, and identify any species for which emergency listing may be appropriate. If we determine that emergency listing is appropriate for any candidate, whether it was identified through our own initiative or through the petition process, we will make prompt use of the emergency listing authority under section 4(b)(7). We have been reviewing and will continue to review, at least annually, the status of every candidate whether or not we have received a petition to list it. Thus, the CNOR and accompanying species assessment forms also constitute the Service's annual finding on the status of petitioned species pursuant to section 4(b)(3)(C)(i).

On June 20, 2001, the United States Court of Appeals for the Ninth Circuit held that the 1999 CNOR (64 FR 57534, October 25, 1999) did not demonstrate that we fulfilled the second component of the warranted-but-precluded 12-month petition findings for the Gila chub and Chiracahua leopard frog (*Center for Biological Diversity* v. *Norton*, 254 F.3d 833 (9th Cir. 2001)). The court found that the one-line designation in the table of candidates in the 1999 CNOR, with no further explanation, did not satisfy section 4(b)(3)(B)(iii)'s requirement that the Service publish a finding ''together with a description and evaluation of the reasons and data on which the finding is based.'' The court suggested that this one-line statement of candidate status also precluded meaningful judicial review.

On June 21, 2004, the United States District Court for Oregon agreed that we can use the CNOR as a vehicle for making petition findings and that our reasoning for why listing is precluded does not need to be based on an assessment at a regional level (as opposed to a national level) (*Center for Biological Diversity* v. *Norton* Civ. No. 03–1111–AA (D. Or.)). However, this court found that our discussion on why listing the candidate species were precluded by other actions lacked specificity; in the list of species that were the subject of listing actions that precluded us from proposing to list candidate species, we did not state the specific action at issue for each species in the list and we did not indicate which actions were court-ordered.

On June 22, 2004, in a similar case, the United States District Court for the Eastern District of California also concluded that our determination of preclusion may appropriately be based on a national analysis (*Center for Biological Diversity* v. *Norton* No. CV S–03–1758 GEB/DAD (E.D. Cal.)). This court also found that the Act's imperative that listing decisions be based solely on science applies only to the determination about whether listing is warranted, not the question of when listing is precluded.

On March 24, 2005, the United States District Court for the District of Columbia held that we may not consider critical habitat activities in justifying our inability to list candidate species, requiring that we justify both our preclusion findings and our demonstration of expeditious progress by reference to listing proceedings for unlisted species (*California Native Plant Society* v. *Norton*, Civ. No. 03–1540 (JR) (D.D.C.)). The court further found that we must adequately itemize priority listings, explain why certain species are of high priority, and explain why actions on these high priority species preclude listing species of lower priority. The court approved our reliance on national rather than regional priorities and workload in establishing preclusion and approved our basic explanation that listing candidate species may be precluded by statutorily mandated deadlines, court-ordered actions, higher priority listing activities, and a limited budget.

We have drafted this CNOR to address the concerns of these courts. We include a description of the reasons why the listing of every petitioned candidate species is both warranted and precluded at this time. We make our determinations of preclusion on a nationwide basis to ensure that the species most in need of listing will be addressed first and also because we allocate our listing budget on a nationwide basis (see below). Regional priorities can also be discerned from Table 1, which includes the lead region and the listing priority number for each species. Our preclusion determinations are further based upon our budget for listing activities for unlisted species and we explain the priority system and why the work we have accomplished does preclude action on candidate species.

Pursuant to section 4(b)(3)(C)(ii) and the Administrative Procedure Act (5 U.S.C. 206), any party with standing may challenge the merits of any not-warranted or warranted-but-precluded petition finding incorporated in this CNOR. The analysis included herein, together with the administrative record for the decision at issue (particularly the supporting species assessment form), will provide an adequate basis for a court to review the petition finding.

Nothing in this document or any of our policies should be construed as in any way modifying the Act's requirement that we make a resubmitted 12-month petition finding for each petitioned candidate within one year of the date of publication of this CNOR. If we fail to make any such finding on a timely basis, whether through publication of a new CNOR or some other form of notice, any party with standing may seek judicial review.

In this CNOR, we are addressing the concerns of the courts by adding more specific information into our discussion on preclusion (see below). In preparing this CNOR, we reviewed the current status of and threats to the 262 candidates and 5 listed species for which we have received a petition and for which we have found listing or reclassification from threatened to endangered to be warranted-but-precluded. We find that the immediate issuance of a proposed rule and timely promulgation of a final rule for each of these species has been, for the preceding months, and continues to be, precluded by higher priority listing actions. Additional information that is the basis for this finding is found in the species assessments and our administrative record for each species. This is the first 12-month petition finding for those candidate species that were petitioned since the last CNOR (225 species), as well as for one new candidate species, the Miami blue butterfly, that was petitioned prior to this CNOR but for which we have not already published a separate warranted-but-precluded 12-month finding (we have previously published a separate substantial 90-day petition finding for this species).

Our review included updating the status of and threats to petitioned candidate or listed species for which we published findings, pursuant to section 4(b)(3)(B), in the previous CNOR (for the Columbian Basin DPS of the greater sage-grouse, see below). We have incorporated new information we gathered since the prior finding and, as a result of this review, we are making continued warranted-but-precluded 12-month findings on the petitions for these species.

We have identified the candidate species for which we received petitions by the code ''C*'' in the category column on the left side of Table 1. As discussed above, the immediate publication of proposed rules to list these species was precluded by our work on higher priority listing actions, listed below, during the period from April 19, 2004, through May 2, 2005.

We will continue to monitor the status of all candidate species, including petitioned species, as new information becomes available. This review will determine if a change in status is warranted, including the need to emergency-list a species under section 4(b)(7) of the Act.

In addition to identifying petitioned candidate species in Table 1 below, we also present brief summaries of why these particular candidates warrant listing. More complete information, including references, is found in the species assessment forms. You may obtain a copy of these forms from the Regional Office having the lead for the species, or from the Fish and Wildlife Service's Internet Web site: *http://endangered.fws.gov/*. As described above, under section 4 of the Act we may identify and propose species for listing based on the factors identified in section 4(a)(1), and section 4 also provides a mechanism for the public to petition us to add a species to the lists of species determined to be threatened species or endangered species pursuant to the Act. Below we describe the actions that continue to preclude the immediate proposal of a regulation and final promulgation of a regulation implementing the petitioned action, and we describe the expeditious progress we are making to add qualified species to the lists of endangered or threatened species.

Preclusion and Expeditious Progress

Preclusion is a function of a species' listing priority in relation to the resources that are available and competing demands for those resources. (As described above in the Summary, the listing priority of a species is represented by the listing priority number we assign to it.) Thus, in any given fiscal year (FY), multiple factors dictate whether it will be possible to undertake work on a proposed listing regulation or whether promulgation of such a proposal is warranted but precluded by higher priority listing actions.

The resources available for listing actions are determined through the annual appropriations process, and we cannot spend more than is appropriated for the Listing Program without violating the Anti-Deficiency Act. The number of listing actions that we can undertake in a given year also is influenced by the complexity of those listing actions, *i.e.*, more complex actions generally are more costly. For example, for FY 2002 to FY 2004, the costs (excluding publication costs) for conducting a 12-month finding, without a proposed rule, ranged from approximately $9,600 for one species with a restricted range and involving a relatively uncomplicated analysis, to $305,000 for another species that was wide-ranging and involved a complex analysis.

In FY 1998 and for each fiscal year since then, Congress placed a statutory cap on funds which may be expended for listing and critical habitat actions (*i.e.*, the Listing Program), equal to the amount expressly appropriated for that purpose in that fiscal year. This cap was designed to prevent funds appropriated for other ESA functions, or for other Service programs, from being used for listing or critical habitat actions (see House Report 105–163, 105th Congress, 1st Session).

Beginning in FY 2002, Congress also put in place the critical habitat ''subcap,'' which put an upper limit on the Listing Program funds that could be spent on work related to critical habitat designations for already listed species. Recognizing that designation of critical habitat for species already listed would consume most of the overall Listing Program appropriation, Congress put the subcap in place to ensure that some funds would be available to make other listing determinations: ''The critical habitat designation subcap will ensure that some funding is available to address other listing activities'' (H.R. Rep. No. 103, 107th Cong., 1st Sess. 2001 at 30, 2001 WL 695998). Because the Service has had to use virtually the entire critical habitat subcap to address court-mandated designations of critical habitat, Congress in effect determined, through the listing cap and the critical habitat subcap, the amount available for other listing activities. It is this amount (*i.e.*, the funds in the listing cap other than those covered by the critical habitat subcap) that is used in the determination here of preclusion and expeditious progress.

Congress also has recognized that the availability of resources was the key element in deciding whether we would issue a listing proposal or make a ''warranted but precluded'' finding for a given species. The Conference Report accompanying Public Law 97–304, which established the current statutory deadlines and the warranted-but-precluded finding, states (in a discussion on 90-day petition findings that by its own terms also covers 12-month findings) that the deadlines were ''not intended to allow the Secretary to delay commencing the rulemaking process for any reason other than that the existence of pending or imminent proposals to list species subject to a greater degree of threat would make allocation of resources to such a petition [*i.e.* for a lower-ranking species] unwise.'' Therefore, in fiscal year 2004, the outer parameter within which ''expeditious progress'' must be measured is that amount of progress that could be achieved by spending $3.38 million, which was the amount available in the Listing Program appropriation not within the critical habitat subcap (*i.e.*, all funds within the critical habitat subcap were used to comply with court orders or court-approved settlement agreements, and thus were not available for other listing activities).

Our process is to make our determinations of preclusion on a nationwide basis to ensure that the species most in need of listing will be addressed first and also because we allocate our listing budget on a nationwide basis. However, through court orders and court-approved settlements, federal district courts have mandated that we must complete certain listing activities with respect to specified species and have established the schedules by which we must complete those activities. The species involved in these court-mandated listing activities are not always those that we have identified as being most in need of listing. A large majority of the appropriation available for new listings of species (of the $3.38 million) was consumed by such court-mandated listing activities in FY 2004, and by ordering or sanctioning these actions the courts essentially determined that these were the highest priority actions to be undertaken with available funding. Accordingly, in FY 2004, FWS had little discretion to determine what listing activities to undertake and what species to address. Copies of all of the court orders and settlement agreements referred to below are available from the Service and are part of the administrative record for these resubmitted petition findings.

On November 10, 2003, the President signed the 2004 Interior and Related Agencies Appropriations Act (Pub. L. 108–108), which, as a result of the subcap, in effect included $3,386,000 for listing activities not related to critical habitat designations for species that already are listed. This appropriation was fully allocated to fund the following categories of actions in the Listing Program: emergency listings; essential litigation-related, administrative and program management functions; compliance with court orders and court-approved settlement agreements requiring that petition findings or listing determinations be completed by a specific date; section 4 listing actions

with absolute statutory deadlines; and high-priority listing actions. Based on the available funds and their allocation for these purposes, no FY 2004 funds were available for listing actions for any of the candidate species included in Table 1 of this notice, except for some funds that were used for work on the Southwest Alaska population of the northern sea otter, boreal toad, and salt creek tiger beetle. Specific details regarding the individual actions taken using the FY 2004 funding, which precluded our ability to undertake listing proposals for any of the candidate species, except these three species noted above, are provided below.

We note here that the category of ''high-priority listing actions'' mentioned above refers to actions for which no timeline has been established by a court order or settlement agreement, and that also are not subject to an absolute statutory deadline. Our ability to work on such listing actions is quite limited. In recent years, our allocation of Listing Program funds has included a limited amount of funding ($100,000) to each Regional office to ensure that the office maintains minimal core capacity for listing actions (*e.g.*, evaluating the status of species to help ensure that emergency listing action can be taken if necessary, participating in work to meet the statutory requirement to annually review and make findings on resubmitted petitions). In a Region that faces a relatively limited workload in the Listing Program with regard to deadlines resulting from court orders or settlement agreements, and a relatively limited workload related to meeting statutory deadlines, some of this ''capability'' funding may be available to address high priority listing actions. However, in most Regions the limited amount of capability funding for Regional offices included in an allocation is used for work associated with supporting listing actions related to court orders or settlement agreements, and for meeting statutory deadlines (*i.e.*, there are no funds available for high priority listing actions).

The overall Listing Program situation in FY 2005 is similar to that in FY 2004. For FY 2005, Congress appropriated $4,043,000 to the listing program that cannot be spent on critical habitat for already listed species (Pub.L. 108–447, signed on December 8, 2004). We have recently prepared the allocation of this appropriation. The $4,043,000 is fully allocated to fund the following listing actions: any emergency listings; essential litigation-related, administrative, and program management functions; compliance with court orders or court-approved settlement agreements requiring petition findings or listing determinations; and high-priority listing actions. While being similar to FY 2004, the Listing Program situation for FY 2005 is different in that we estimate that we have approximately $1.7 million from the critical habitat subcap that is not needed, at this time, to fund critical habitat designations that are the subject of court order or court-approved settlement agreements. We are currently working on allocating this money to our Regions for work on statutorily-required petition findings and potential work on proposed listing determinations for some high-priority candidate species. During the current fiscal year, we will issue proposed listing rules for the highest priority candidate species only if doing so does not jeopardize our ability to comply with court orders, court-approved settlement agreements, or unqualified statutory deadlines. Consequently, as of the date of the publication of this CNOR, we anticipate that we will have only limited FY 2005 funds available to work on proposals to list any of the candidate species included in Table 1 (with the exception of the Salt Creek tiger beetle which is work that was done per a court-approved settlement agreement and the Gunnison sage-grouse, which is a high priority listing action, as explained below), and consequently we continue to find that proposals to list these species are warranted but precluded. We note also that all of the actions that demonstrate our expeditious progress on listing that we have completed to date or will complete in FY 2005 (see below) contribute to the preclusion of work on listing proposals for these candidate species.

In addition to being precluded by lack of available funds, work on proposed rules for candidates with lower priority (*i.e.*, those that have listing priority numbers of 4–12) is also precluded by the need to issue proposed rules for higher priority species facing high-magnitude, imminent threats (*i.e.*, listing priority numbers of 1–3). Table 1 shows the listing priority number for each candidate species. Finally, 12-month ''warranted but precluded'' petition findings for reclassification of threatened species to endangered are lower priority, since the listing of the species already affords the protection of the Act and implementing regulations.

As explained above, part of the basis for making a warranted-but-precluded finding is that expeditious progress is being made to add qualified species to the Lists. Our progress in FY 2004 includes work in the following categories: (1) Evaluation of the potential need for emergency listing of 1 species; (2) preparation and publication of final listing determinations involving 10 species; (3) preparation and publication of a proposed listing action for 1 species; (4) preparation of proposed or final listing actions (not yet completed so not yet published) for 6 species; (5) and petition findings for 55 species (11 completed findings; 40 resubmitted; 4 findings not yet completed). Specific information regarding each of these categories for FY 2004 is provided below.

(1) Emergency listings—We worked on a proposed rule to list the Miami blue butterfly. The Miami blue butterfly is restricted to one isolated population on Bahia Honda Key in Florida and is threatened by the combined influences of catastrophic environmental events, habitat destruction or modification, mosquito control activities, potential illegal collection, potential loss of genetic heterogeneity, and potential predation. Work on assessing the status of the species and preparing a listing rule originally was approved for funding and was initiated in FY 2004 because at the time, the Region considered that it was an emergency. We later decided not to exercise our discretion under section 4(b)(7) to emergency list the species (based in part on the existence of a captive-bred population). However, because a review of the species had been conducted and the emergency rule already was drafted, and because it was a high priority species, continued work on the proposed listing was approved. Recently, however, we decided that the limited funds that were available to work on a proposed rule for this species should instead be used to work on higher priority candidate species (*i.e.*, species with a LPN of 2). Therefore, rather than completing and issuing a proposed rule to list this species, we are including it in the CNOR as a new candidate.

(2) Final listing determinations—We prepared and published in the **Federal Register** final listing determinations for ten species, all of which had deadlines mandated by court orders or court-approved settlement agreements, in addition to the absolute statutory deadline imposed by section 4(b)(6). These included final regulations listing eight species and final decisions to withdraw the proposed listing rules for two species. The eight species we listed were: Rota bridled white-eye (69 FR 3022; January 22, 2004; LPN = 2), Santa Catalina Island fox, Santa Rosa Island fox, San Miguel Island fox, and Santa Cruz Island fox (69 FR 10335 for all four

fox subspecies; March 5, 2004; LPN = 3); two plant species (*Nesogenes rotensis* and *Osmoxylon mariannense*) from the Commonwealth of the Northern Mariana Islands (69 FR 18499; April 8, 2004; LPN = 1 and 2, respectively); and the California tiger salamander (69 FR 47211; August 4, 2004; LPN = 3). (We note that the work on the salamander included funding for the designation of critical habitat for the central California distinct population segment (DPS). The critical habitat subcap pertains to critical habitat designations for species already listed; we may use listing funds for critical habitat designation work conducted in conjunction with a listing action, as was the case with this DPS. This work was necessary to comply with the Act's deadline for designating critical habitat: concurrent with listing or within one year thereafter if concurrent designation is not determinable). The two species for which we withdrew proposed listing rules were: the slickspot peppergrass (69 FR 3094; January 22, 2004; previously LPN = 2); and *Tabernaemontana rotensis* (a plant species with LPN = 2); the decision to not list this species was included as part of the **Federal Register** publication of the final rules listing the two plant species from the Commonwealth of the Northern Mariana Islands, mentioned above (69 FR 18499).

(3) We prepared and published a proposed regulation to list the southwest Alaska distinct population segment of the northern sea otter, which has an LPN = 3 (69 FR 6600; February 11, 2004)). This DPS occurs in nearshore locations from Attu Island in the west to Kamishak Bay in the east, including waters along the Aleutian Islands, the Alaska Peninsula, and the Kodiak archipelago. Although its range has not been curtailed, this population has declined by 56–68 percent since the mid-1980's and the decline shows no evidence of abating (see proposed rule for additional information). This proposal was not the result of a deadline established by a court order or a court-approved settlement agreement. Rather, this was the highest priority listing action for the Alaska Region. (Initially we determined that the Aleutian Islands DPS of the northern sea otter was a candidate with LPN = 3 (66 FR 54807), and subsequently determined that the DPS encompasses southwest Alaska.) The Alaska Region generally has not faced the relatively heavy Listing Program workload experienced by several other Regions, and consequently was able to use their limited Regional office capability funding in FY 2004 to support the completion of this proposed listing regulation. We could not have utilized this capability funding to complete listing actions in other Regions without eliminating the ability of this Region to monitor the status of candidate species and address any emergency situations that might arise.

(4) We funded work on proposed or final listing actions for 6 species for which work was not completed in FY 2004. This included work on final listing actions for the Sacramento Mountains checkerspot butterfly, the Mariana fruit bat (LPN = 3), and the southwest Alaska DPS of the northern sea otter (LPN = 3). It also included work on proposed listing actions for the boreal toad (LPN = 3), Salt Creek tiger beetle (LPN = 3), and Miami blue butterfly. The work on all these species, except on the northern sea otter (see (3) above) and Miami blue butterfly (see (1) above), was in response to a court order or a court-approved settlement agreement, and all of the final listing determinations are subject to absolute statutory deadlines under section 4(b)(6).

(5) We funded work on 55 petition findings. This involved 90-day findings, initial 12-month findings, and findings on resubmitted petitions. As explained below, in some instances, the work has been based on meeting deadlines established by court order or by settlement agreements. In other instances, the work has been done in order to meet statutory deadlines. All 12-month findings are subject to an unqualified statutory deadline. With regard to 90-day findings, the decision in *Biodiversity Legal Foundation* v. *Badgley,* 309 F. 3d 1166 (9th Cir. 2002), held that the Act requires that 90-day petition findings (*i.e.*, the initial finding as to whether a petition contains substantial information, which the Act directs us to make within 90 days of receipt of a petition, if practicable) must be made no later than 12 months after receipt of the petition, regardless of whether it is practicable to do so. Thus, all 90-day findings are arguably subject to an absolute statutory deadline. As a result of this ruling, which changed our interpretation of section 4(b)(3) of the Act, we have been working to issue petition findings on most of the outstanding petitions for those species that we have not previously determined to warrant candidate status.

Some petition findings are ''complete'' actions. This includes 12-month petition findings in which we determine that listing was not warranted and 90-day petition findings in which we determine that the petition did not present substantial information. In these cases, our listing work is complete.

In FY 2004, we funded work on and published 11 petition findings for the following species: wolverine (not-substantial 90-day finding) (68 FR 60112; October 21, 2003); eastern subspecies of the greater sage-grouse (not-substantial 90-day finding) (69 FR 933; January 7, 2004); Midvalley fairy shrimp (not-warranted 12-month finding) (69 FR 3592; January 26, 2004); *Cymopterus deserticola* (desert cymopterus—substantial 90-day finding) (69 FR 6240; February 10, 2004); fisher (West coast DPS) (warranted-but-precluded 12-month finding) (69 FR 18769; April 8, 2004); Florida black bear (partial remand of not-warranted 12-month finding) (69 FR 2100; January 14, 2004); greater sage-grouse (substantial 90-day finding) (69 FR 21484; April 21, 2004); Colorado river cutthroat trout (not-substantial 90-day finding) (69 FR 21151; April 20, 2004); New England cottontail (substantial 90-day finding) (69 FR 39395; June 30, 2004), black-tailed prairie dog (not-warranted 12-month resubmitted petition finding) (69 FR 51217; August 18, 2004); and, western gray squirrel (not substantial 90-day finding) (69 FR 58115). All 12-month findings have absolute statutory deadlines. Because of *Badgley,* all 90-day findings arguably also have absolute statutory deadlines. In addition, the work on all these species, with the following exceptions, was in response to court orders or court-approved settlement agreements. The New England cottontail was the highest priority listing action for the Northeast Region. The Northeast Region generally has not faced the relatively heavy Listing Program workload experienced by several other Regions, and consequently was able to use their limited Regional office capability funding in FY 2004 to support the completion of this petition finding. We could not have utilized this capability funding to complete listing actions in other Regions without eliminating the ability of this Region to monitor the status of candidate species and address any emergency situations that might arise. Work on the greater sage-grouse was a high priority action since we were already working on sage-grouse issues related to the court-ordered petition finding for the eastern sage-grouse. In our 90-day finding for the eastern sage-grouse, we committed to respond to the listing petitions for the greater sage-grouse within 90 days, and to make a 12-month finding within 12 months, if required. Having made this public commitment, and given the history of litigation involving various populations

of sage-grouse, we accorded the same priority to these petition findings as we would to a court-ordered petition finding. Work on the black-tailed prairie dog was a high priority listing action; we had previously funded much of the work on this species in 2000 when we made the initial 12-month warranted-but-precluded petition finding and in 2001–2003 when we made resubmitted petition findings that listing was still warranted but precluded. The Mountain-Prairie Region was able to use some of their capability funds from FY 2004 to make the not-warranted petition finding for the black-tailed prairie dog.

The allocated funds also supported work on petition findings that were not completed in FY 2004, which involved work on findings for the following 4 species: white-tailed prairie dog (90-day finding), greater sage-grouse (12-month finding), *Bromus arizonicus* (Arizona brome ''90-day finding), and *Nassella cernua* (nodding needlegrass—90-day finding). Work on the white-tailed prairie dog was in response to a court order, while the work on the sage-grouse was a high priority listing action with a statutory deadline (see above). Work on the statutorily-required petition findings for Arizona brome and nodding needlegrass was done using a small amount of capability funds that was left at the end of the fiscal year; this was a high priority for the Pacific Region.

In addition, we completed resubmitted petition findings required by statute for 40 petitioned species that are candidates. We published these findings on May 4, 2004, as part of the previous Candidate Notice of Review (CNOR) (69 FR 24876). Since we had identified many of these species as candidates prior to receiving a petition to list them, we had already assessed their status using funds from our Candidate Conservation Program (a separate budget item within the Endangered Species Program).

Our anticipated progress in FY 2005 includes work in the following categories: (1) Preparation and publication of final listing actions for 9 species; (2) initial work toward preparation and publication of proposed listing actions for 4 species; (3) and work on petition findings for 17 species that are not candidate species, initial petition findings for 225 candidate species that were petitioned since the last CNOR, and resubmitted petition findings for 37 candidate species that were petitioned prior to the last CNOR. Specific information regarding each of these categories for FY 2005 is provided below. We note also that Regions will continue to monitor the status of candidates and prepare emergency listing packages as needed.

(1) We are funding work on the final listing determinations for the following species: Mariana fruit bat (final listing rule was published on January 6, 2005 (70 FR 1190)), southwest Alaska DPS of the northern sea otter, Gila chub, Salt Creek tiger beetle, Sacramento Mountains checkerspot butterfly (withdrawal of the proposed rule was published on December 21, 2004 (69 FR 76428)), and four Southwestern invertebrates (Koster's tryonia snail, Pecos assiminea snail, Roswell springsnail, and Noel's amphipod). All of these final listing determinations are responding to court orders or court-approved settlement agreements, with the exception of the work on the final listing determination for the southwest Alaska DPS of the northern sea otter (see above for explanation on why this work was funded). Now that the sea otter is proposed for listing, a final listing determination is subject to an absolute statutory deadline.

(2) We are funding proposed listing determinations for the boreal toad and the Salt Creek tiger beetle, and a remanded final listing determination for the cactus ferruginous pygmy owl, pursuant to court-approved settlement agreements and a court order. The proposed listing rule for the Salt Creek tiger beetle was published on February 1, 2005 (70 FR 5101). The work on a proposed listing determination for the boreal toad has not been completed and, thus, we are making a resubmitted petition finding for this species within this CNOR. Additionally, we are funding a proposed listing determination for the Gunnison sage-grouse, which is a high priority listing action (LPN = 2) and the subject of litigation.

(3) We also are funding work on petition findings for the following species: white-tailed prairie dog (not-substantial 90-day finding published on November 9, 2004 (69 FR 64889)), Queen Charlotte goshawk (remanded not-warranted 12-month finding), pygmy rabbit (rangewide 90-day and 12-month findings), greater sage-grouse (entire range) (12-month not-warranted finding published January 12, 2005 (70 FR 2273)), California spotted owl (90-day finding), Yellowstone cutthroat trout (12-month finding), *Cicurina cueva* (cave spider—90-day and 12-month findings) (substantial 90-day finding published on February 1, 2005 (70 FR 5123)), four species of Pacific lamprey (not-substantial 90-day findings published on December 27, 2004 (69 FR 77152 and 69 FR 77158)), three species of springsnail (substantial 90-day finding published on April 20, 2005 (70 FR 20512)) (*Cymopterus deserticola* (desert cymopterus—12-month finding), *Dalea tentaculoides* (Gentry's indigobush ''90-day and 12-month findings) (substantial 90-day finding published on February 2, 2005 (70 FR 5401)), *Ptilagrostis porteri* (porter feathergrass) (not-substantial 90-day finding published on February 4, 2005 (70 FR 5959)). The work on all of the above species is pursuant to court orders or court-approved settlement agreements, except for work on the greater sage-grouse (see 5) above under FY 2004 work) and the California spotted owl, which is being done in relation to ligtigation. We also funded work on initial petitions findings for 225 candidate species (species petitioned after the last CNOR) and resubmitted petition findings for 37 petitioned candidate species (species petitioned prior to the last CNOR). As explained above, these initial and resubmitted petition findings are required by statute and findings for 261 of them are being published as part of this CNOR (the resubmitted petition finding for the Columbia Basin DPS of the greater sage-grouse will be completed later, as we have new information that needs to be evaluated). We are also funding work on the next annual review of those resubmitted petition findings which will be published as part of the next CNOR. Because the majority of these species were already candidate species prior to our receipt of a petition to list them, we had already assessed their status using funds from our Candidate Conservation Program. We also continue to monitor the status of these species through our Candidate Conservation Program. The cost of updating the species assessment forms and publishing the joint publication of the CNOR and resubmitted petition findings is shared between the Listing Program and the Candidate Conservation Program.

As with our ''precluded'' finding, ''expeditious progress'' is a function of the resources that are available and the competing demands for those funds. As discussed above, the funds in the Listing Program that would be otherwise available for adding other qualified species to the Lists in FY 2004 and FY 2005 have been spent or must be spent on complying with court orders and court-approved settlement agreements to make petition findings, court orders and court-approved settlement agreements to make final listing determinations for other species, meeting statutory deadlines for petition findings or listing determinations, a few

high-priority Service-initiated listing determinations, essential litigation support, and administrative and management tasks.

Because virtually all of the money to add qualified species to the list is consumed in complying with court orders or court-approved settlement agreements requiring petition findings or listing determinations, and essential litigation-related, administrative, and program management functions related to these findings and determinations, we have endeavored to make our listing actions as efficient and timely as possible, given the requirements of the relevant law and regulations, and constraints relating to workload and personnel. We are continually considering ways to streamline processes or achieve economies of scale, such as by batching related actions together. Given our limited budget for implementing section 4 of the Act, these actions described above collectively constitute expeditious progress.

Findings for Petitioned Candidate Species

Mammals

Pacific Sheath-tailed Bat (*Emballonura semicaudata semicaudata*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. The Pacific sheath-tailed bat was once common and widespread in Polynesia and Micronesia and is the only insectivorous bat recorded from a large part of this area. Historically, the Pacific Sheath-tailed bat occurred in American and Independent Samoa, Guam, Commonwealth of the Northern Mariana Islands (CNMI), Caroline Islands, Tonga, Fiji, and Vanuatu. Four subspecies are recognized: *E. s. rotensis,* endemic to the Mariana Islands; *E. s. sulcata,* occurring in Chuuk and Pohnpei; *E. s. palauensis,* found in Palau; and *E. s. semicaudata,* occurring in American and Independent Samoa, Tonga, Fiji, and Vanuatu.

The primary threats to the species as a whole include the loss of roosting caves (through various means), the loss of foraging habitat due to deforestation, disturbance by feral ungulates, natural disasters, and possibly pesticide use in the Mariana Islands. Disturbances to caves and burning of forests have contributed to the decline of bats in Fiji. These threats are occurring already, have been occurring for several decades, and are affecting a large proportion of the population.

This subspecies on American Samoa declined from around 11,000 bats in 1982 to only 200 in 1998. Since that time, few bats have been observed; however, the reasons for the decline of the subspecies are unclear. Two caves at Anapeapea Cove were reported as roosting sites for most of the bats estimated in 1976 and 1977. Both caves were severely damaged during several typhoons between 1987 and 1992, and no bats were reported in either cave during 1993 surveys. Only small numbers of bats have been observed in other caves during past surveys, but there is no information on how many other caves exist or how many bats they could support. Predation by rats (*Rattus sp.*) and other introduced species may also be significant. Surveys of roost caves and sweeps in various locations in American Samoa over the past year indicate the Pacific sheath-tailed bat may be there, however, no bats were detected in 80 percent of the caves on Tutuila. The listing priority number for the Pacific sheath-tailed bat remains at 3, because the magnitude of the threats facing the species is high, the threats are imminent, and the taxon in question is a subspecies.

Pacific Sheath-tailed Bat (*Emballonura semicaudata rotensis*), Guam and the Commonwealth of the Northern Mariana Islands—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. See the information provided above (for the Pacific sheath-tailed bat, *semicaudata* subspecies) regarding the former range, other subspecies, and threat the species as a whole.

This subspecies formerly occurred on Guam, and in the CNMI on Rota, Aguiguan, Tinian, Saipan, and possibly Anatahan and Maug. The Pacific sheath-tailed bat is believed to be extirpated from all islands in the Mariana Islands, except Aguiguan. Predation by the introduced brown treesnake (*Boiga irregularis)* may have played a significant role in the extirpation of the species on Guam, and predation by rats (*Rattus sp.*) and monitor lizards (*Varanus indicus)* may also have been significant factors in extirpations on Guam and other islands. The 2003 surveys on Aguiguan, the only island that still has a population of Pacific sheath-tailed bats in the Marianas, indicate the population is about 400–500 animals. The Listing Priority Number for the Pacific sheath-tailed bat remains at 3, because the magnitude of the threats facing the species is high, the threats are imminent, and the taxon in question is a subspecies.

Fisher, West Coast DPS (*Martes pennanti*)—The following summary is based on information in our files and in the Service's initial ''warranted-but-precluded'' finding published in the **Federal Register** on April 8, 2004 (68 FR 18770). The fisher is a carnivore in the family Mustelidae and is the largest member of the genus *Martes.* Historically, the West Coast population of the fisher extended south from British Columbia into western Washington and Oregon, and in the North Coast Ranges, Klamath-Siskiyou Mountains and Sierra Nevada in California. The fisher is believed to be extirpated or reduced to scattered individuals from the lower mainland of British Columbia through Washington, and in the central and northern Sierra Nevada range in California. Natural populations of the fisher currently occur in the North Coast Ranges of California, the Klamath-Siskiyou Mountains of northern California and southern Oregon, and in isolated populations occurring in the southern Sierra Nevada in California. They also occur in the southern Cascade Range in Oregon as descendants through a reintroduction effort. There is a lack of precise empirical data on West Coast DPS fisher numbers. However, the lack of detections over much of its historic range, the high degree of genetic relatedness within some populations, and the fact that populations of native fisher in California are separated by four times the species' maximum dispersal distance, indicate that the likely extant fisher populations are small and apparently isolated from one another.

Major threats that fragment or remove key elements of fisher habitat include various forest vegetation management practices, such as timber harvest and fuels reduction treatments; stand-replacing fire; Sudden Oak Death Phytophthora; urban and rural development; recreation development; and roads. Major threats to fisher that lead to direct mortality and injury include collisions with vehicles, incidental trapping of fisher during trapping for other species, predation and viral diseases such as rabies and canine and feline distemper. Existing regulatory mechanisms on Federal, State, and private lands affect key elements of fisher habitat, yet they provide insufficient certainty that conservation efforts will be implemented or that they will be effective in reducing the level of threats to the West Coast DPS of the fisher. However, the threats are nonimminent as the remaining areas containing fisher populations appear to be stable or not rapidly declining. The greatest threats to these remaining fisher populations are issues related to small isolated

populations and the potential for further loss and fragmentation of habitat over time. The listing priority number for this DPS remains a 6 (threats are of a high magnitude but are nonimminent).

Mazama pocket gopher (*Thomomys mazama* (ssp. *couchi, glacialis, louiei, melanops, pugetensis, tacomensis, tumuli, yelmensis*)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files and the petition received on January 7, 2003.

Palm Springs round-tailed ground squirrel (*Spermophilus tereticaudus chlorus*)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information in our files. No new information was provided in the petition received on May 11, 2004.

Southern Idaho ground squirrel (*Spermophilus brunneus endemicus*)—See resubmitted petition finding published in the **Federal Register** on December 27, 2004 (69 FR 77167).

Washington ground squirrel (*Spermophilus washingtoni*)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files and the petition received on March 2, 2000.

Birds

Spotless crake, American Samoa DPS (*Porzana tabuensis*)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Kauai creeper (*Oreomystis bairdi*)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Yellow-billed cuckoo, western U.S. DPS (*Coccyzus americanus*)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files and the petition received on February 9, 1998. See also our 12-month petition finding published on July 25, 2001 (66 FR 38611).

Many-colored fruit-dove (*Ptilinopus perousii perousii*)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Friendly ground-dove (*Gallicolumba stairi stairi*)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Streaked horned lark (*Eremophila alpestris strigata*)—The following summary is based on information contained in our files and the petition received on January 7, 2003. The streaked horned lark is one of 21 subspecies of North American horned larks. According to recent genetic analyses, this subspecies is unique, isolated, and has little genetic diversity, indicating it has been evolving independently for some time. Historically, the breeding range extended from southern British Columbia, south through the Puget lowlands and along the Washington coast, and through the Willamette Valley of Oregon. Currently, the subspecies is extirpated in British Columbia. Only 11 breeding sites are known in Washington, and the breeding population in Oregon is estimated to include less than 300 birds. Threats include loss and degradation of habitat due to conversion of native grassland to other uses, encroachment of woody vegetation due to fire suppression, invasion of habitat by nonnative plants and animals, human disturbance, nest predation, deposition of dredge spoil, and conflict with airport development and maintenance activities. The magnitude of threats is high because few individuals are found in a small number of populations having patchy, isolated distributions in habitats highly desirable for development and threatened by invasive plant species. Populations occur in suitable habitat on airports and military bases, where management and training activities can affect breeding. Specific threats are not known to be imminent, and some conservation measures have been initiated by land managers. The LPN for this subspecies remains a 6.

Kittlitz's murrelet (*Brachyramphus brevirostris*)—The following summary is based on information contained in our files and the petition received on May 9, 2001. Kittlitz's murrelet is a small diving seabird whose entire North American population, and most of the world's population, inhabits Alaskan coastal waters discontinuously from Point Lay south to northern portions of Southeast Alaska. Most recent population estimates (9,500–26,700 birds) indicate that it has the smallest population of any seabird considered a regular breeder in Alaska. This species appears to have undergone significant population declines in four of its core population centers—Prince William Sound, Malaspina Forelands, Glacier Bay, and Kenai Fjords. As populations become smaller, they become increasingly vulnerable to events that may result in local extirpation. Causes for the declines in populations are not well known, but we believe that glacial retreat and oceanic regime shifts are the most likely causes. Kittlitz's murrelets seem to prefer areas near stable or advancing tidewater glacier faces as these areas have higher primary productivity compared to siltier, less saline fjords with receding glaciers, but the ecological mechanisms linking Kittlitz's murrelets to their preferred habitats remains a topic for further research. Other causes of decline may include: habitat loss or degradation, increased adult and juvenile mortality, and low recruitment. Existing regulatory mechanisms appear inadequate to stop or reverse population declines or to reduce the threats to this species. Due to the nonimminent threats of high magnitude, we are retaining a listing priority number of 5 for this species.

Xantus's murrelet (*Synthliboramphus hypoleucus*)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files and the petition received on April 16, 2002.

Lesser prairie-chicken (*Tympanuchus pallidicinctus*)—The following summary is based on information contained in our files and the petition received on October 5, 1995. Additional information can be found in the 12-month finding published on June 7, 1998 (63 FR 31400). Biologists estimate that the occupied range has declined by 92 percent since the 1800s. The most serious threats to the lesser prairie-chicken are loss of habitat from conversion of native rangelands to introduced forages and cultivation, cumulative habitat degradation caused by severe grazing, woody plant invasion of open prairies, fire suppression, herbicides, and habitat fragmentation caused by structural and transportation developments. Many of these threats may exacerbate the normal effects of periodic drought on lesser prairie-chicken populations. In many cases, the remaining suitable habitat has become fragmented by the spatial arrangement of properties affected by these individual threats. We view current and continued habitat fragmentation to be a serious ongoing threat that facilitates the extinction process through several mechanisms: remaining habitat patches may become smaller than necessary to meet the yearlong requirements of

individuals and populations, necessary habitat heterogeneity may be lost to large areas of monoculture vegetation and/or homogenous habitat structure, areas between habitat patches may harbor high levels of predators or brood parasites, and the probability of recolonization decreases as the distance between suitable habitat patches expands.

The Service is currently working to quantify the ongoing level of habitat fragmentation throughout the species range. Although Federal lands comprise only five percent of currently occupied habitat, these tracts are located in areas essential to population recovery and dispersal. As a result, the Service views habitat management considerations on Federal lands within current and historic range as very important. Due to their potential magnitude to affect the species, current planning efforts for grazing and wind, oil, and gas development on public lands is of particular relevance to the future listing status of the species.

Based on all currently available information, we find that ongoing threats to the lesser prairie-chicken, as outlined in the 12-month finding, remain unchanged and lesser prairie-chickens continue to warrant Federal listing as threatened. We have determined that the overall magnitude of threats to the lesser prairie-chicken throughout its range are moderate, and that the threats are ongoing; thus, they are considered imminent. Consequently, a listing priority number of 8 remains appropriate for the species. Greater sage-grouse, Columbia Basin DPS (*Centrocercus urophasianus*)—We have not updated our finding with regard to the Columbian Basin DPS of the greater sage-grouse in this notice. In the previous CNOR, we found that a listing proposal for this DPS was still warranted but precluded by higher priorities, and we assigned the DPS a listing priority number of 6. Since that time, new information has become available through the status review of the greater sage-grouse (range-wide). We will use the best scientific and commercial information available (including, but not limited to information that became available during the rangewide status review) to reevaluate whether the Columbia Basin population still qualifies as a DPS under our DPS policy, and if it does, whether the DPS still warrants a listing proposal. Once that evaluation is completed we will publish an updated finding for this DPS in the **Federal Register** either in the next CNOR or in a separate notice.

Gunnison sage-grouse (*Centrocercus minimus*)—The following summary is based on information contained in our files and the petition received on January 25, 2000. For greater detail, also see 65 FR 82310 (December 28, 2000). The range of the Gunnison sage-grouse has been reduced to less than 25 percent of it historical range, distributed across 8 populations. Size of the range and quality of its habitat have been reduced by direct habitat loss, habitat fragmentation, and habitat degradation from building development, road and utility corridors, fences, energy development, conversion of native habitat to hay or other crop fields, alteration or destruction of wetland and riparian areas, inappropriate livestock management, and creation of large reservoirs. Numerous conservation actions have occurred and funding and plans for additional conservation actions are in place or ongoing. Despite these actions, sage-grouse numbers declined significantly in 2003 (likely due to the 2002 drought) and remained at a low level in 2004. Given ongoing and potential individual and cumulative threats, we are leaving the listing priority at a 2 at this time.

Band-rumped storm-petrel, Hawaii DPS (*Oceanodroma castro*)—The following summary is based on information contained in our files and the petition received on May 8, 1989. No new information was provided in the second petition received on May 11, 2004. The band-rumped storm-petrel is a small, widespread seabird found in the subtropics of the Pacific and Atlantic Oceans. In the Pacific, there are three widely separated breeding populations—one in Japan, one in Hawaii and one in the Galapagos. Populations in Japan and the Galapagos are comparatively large and number in the thousands, while the Hawaiian birds represent a small, remnant population of possibly only a few hundred pairs. The species is currently known to nest only on Kauai but is suspected to nest on Hawaii. Although small populations do occur on Maui and Hawaii, we have been unable to determine if they are viable; certainly they are not large and they represent a fraction of prehistoric distribution. The current primary threats to the species, predation by nonnative species and mortality associated with disorientation by lights, have been occurring for several decades, and are affecting a large proportion of the population.

Predation by introduced species has played a significant role in reducing storm-petrel numbers and exterminating colonies in the Pacific and other locations worldwide. Several alien predators are found throughout the main Hawaiian Islands, including Polynesian rats (*Rattus exulans*), black rats (*R. rattus*), Norway rats (*R. norvegicus*), feral and domestic cats (*Felis catus*), small Indian mongooses (*Herpestes auropunctatus*), and barn owls (*Tyto alba*). Band-rumped storm-petrels nest only in remote, steep, rocky areas, probably because these areas are less accessible to predators. Artificial lighting of roadways, resorts, ballparks, residences and other developments attracts and confuses night-flying, storm-petrel fledglings, resulting in ''fall-out'' and collisions with buildings and other objects. ''Fall-out'' is a term used to describe when fledglings are attracted to lights, become disoriented and fall to the ground where they are often killed by cars or predators. Over a 12-year period from 1978 to 1990, Harrison et. al. reported that 15 band-rumped storm-petrels, 13 of which were young, were recovered on Kauai as a result of fall-out. The impact from artificial lighting is expected to increase as human population grows and development continues on Kauai and other Hawaiian Islands. The total population size is poorly known, but is unlikely to number more than a few hundred pairs. The listing priority number for the band-rumped storm-petrel remains at 3, because the magnitude of the threats facing the species is high, the threats are imminent, and the taxon in question is a distinct population segment.

Elfin woods warbler (*Dendroica angelae*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. The elfin woods warbler has been documented from four locations in Puerto Rico: Luquillo Mountains, Sierra de Cayey, and the Commonwealth forests of Maricao and Toro Negro. Habitat destruction from expansion of public facilities, sun coffee plantations, timber management, disruption of breeding activities, potential predators, and catastrophic natural events threaten this species. These threats are not imminent because most of the range of this species is within protected lands. The listing priority number remains a 5 for this species.

Reptiles

Sand dune lizard (*Sceloporus arenicolus*)—see resubmitted petition finding published in the **Federal Register** on December 27, 2004 (69 FR 77167).

Eastern massasauga (*Sistrurus catenatus catenatus*)—The following summary is based on information contained in our files. No new information was provided in the

petition received on May 11, 2004. The eastern massasauga is one of three recognized subspecies of massasauga. It is a small, thick-bodied rattlesnake that occupies shallow wetlands and adjacent upland habitat in portions of Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, New York, Ohio, Pennsylvania, Wisconsin, and Ontario. Although the current range of *S. c. catenatus* resembles the subspecies' historical range, the geographic distribution has been restricted by the loss of the subspecies from much of the area within the boundaries of that range. Approximately 40 percent of the counties that were historically occupied by *S. c. catenatus* no longer support the subspecies. *S. c. catenatus* is currently considered imperiled in every state and province it occupies. Each state and Canadian province across the range of *S. c. catenatus* has lost more than 30 percent, and for the majority more than 50 percent of their historical populations. Furthermore, less than 35 percent of the remaining populations are considered secure.

Approximately 59 percent of the remaining *S. c. catenatus* populations occur wholly or in part on public land, and State-wide and/or site-specific Candidate Conservation Agreements with Assurances (CCAAs) are currently being developed for many of these areas in Iowa, Illinois, Michigan, Missouri, Ohio, and Wisconsin. Populations soon to be under CCAs and CCAAs are expected to have a high likelihood of persisting and remaining viable. Other populations are likely to suffer additional losses in abundance and genetic diversity and some will likely be extirpated unless threats are removed in the near future. Therefore, the magnitude of threats from habitat modification, habitat succession, incompatible land management practices, illegal collection for the pet trade, and human persecution is moderate overall with most imminent threats occurring to remaining populations on private lands. Due in large part to the numerous CCAAs currently being developed and implemented, we do not believe emergency listing is warranted and have kept the listing priority number at 9 for this eastern massasauga subspecies.

Black pine snake (*Pituophis melanoleucus lodingi*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. There are historical records for the black pine snake from one parish in Louisiana, 14 counties in Mississippi, and 3 counties in Alabama west of the Mobile River Delta. Black pine snake surveys and trapping indicate that this species has been extirpated from Louisiana and from two counties in Mississippi. Moreover, the distribution of remaining populations has become highly restricted due to the destruction and fragmentation of the remaining longleaf pine habitat within the range of the species. Most of the known Mississippi populations are concentrated in the DeSoto National Forest. Populations in Alabama occupy private, nonindustrial timberland where they have an uncertain future due to habitat loss and degradation. Other factors affecting the black pine snake include vehicular mortality and low reproductive rates which magnify other threats and increase the likelihood of local extinctions. Due to nonimminent threats of high magnitude caused by the past destruction of most of the longleaf pine habitat of the black pine snake, and persistent degradation of what remains, we are retaining a listing priority number of 6 for this subspecies.

Louisiana pine snake (*Pituophis ruthveni*)—The following summary is based on information contained in our files and the petition received on July 19, 2000. The Louisiana pine snake historically occurred in fire-maintained longleaf pine ecosystems of west-central Louisiana and extreme east-central Texas. Louisiana pine snakes are closely associated with Baird's pocket gophers (*Geomys breviceps*) and make extensive use of their burrow systems for foraging, nocturnal and diurnal retreats, escape from predators and fire, and for hibernation sites. Within some of the best remaining habitat in their historic range, Louisiana pine snakes have not been documented in over a decade. Results of Louisiana pine snake trapping and radiotelemetry surveys suggest that extensive population declines and local extirpations have occurred during the last 50 to 80 years.

Most of the historical longleaf pine habitat of the Louisiana pine snake has been destroyed, and the habitat quality of that which remains has been degraded due to logging, fire suppression, roadways, short-rotation silviculture, and grazing. Louisiana pine snake habitat loss is continuing, albeit at a slower rate than in the past. The best remaining Louisiana pine snake habitat occurs on lands where periodic burning has continued. Other factors affecting Louisiana pine snakes include low fecundity (reproductive output), which magnifies other threats and increases the likelihood of local extinctions, and vehicular mortality, which may significantly effect Louisiana pine snake population and community structure.

The Candidate Conservation Agreement for the Louisiana pine snake, a comprehensive and voluntary partnership encompassing all Federal lands where pine snake occurrences are known, was recently completed in order to protect known Louisiana pine snake populations and maintain the ecosystem upon which it depends. Several private landowners with known Louisiana pine snake populations are interested in joining that partnership or developing a similar one. Nevertheless, while the magnitude of Louisiana pine snake habitat loss is great and the remaining habitat is degraded, continued habitat loss does not represent an imminent threat, because the rate of habitat loss appears to be declining, and pro-active partnerships to address key management concerns and research needs are growing. Due to nonimminent threats of a high magnitude, we continue to assign a listing priority number of 5 to this species.

Cagle's map turtle (*Graptemys caglei*)—The following summary is based on information contained in our files and the petition received on April 26, 1991. Cagle's map turtle occurs in scattered population sites within seven counties in Texas along the Guadalupe, San Marcos, and Blanco Rivers. Loss and degradation of riverine habitat from large and/or small impoundments (dams or reservoirs) is the primary threat to the Cagle's map turtle. One effect of impoundment is the loss of riffle and riffle/pool transition areas used by males for foraging. Depending on its size, a dam itself may be a partial or complete barrier to Cagle's map turtle movement and could fragment populations. Construction of smaller impoundments and human activities on rivers occupied by the Cagle's map turtle have likely eliminated or reduced foraging and basking habitats in the past. Although the water plan in development by the State of Texas is considering reservoirs that have the potential to alter or destroy habitat for this species, firm plans for new reservoir construction have not been made. Cagle's map turtle is also vulnerable to overcollecting and target shooting. Based on the high magnitude of nonimminent threats, we retain a listing priority of 5 for this species.

Sonoyta mud turtle (*Kinosternon sonoriense longifemorale Iverson*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. The Sonoyta mud turtle occurs in a spring and pond at Quitobaquito Springs on Organ Pipe Cactus National Monument in Arizona, and in the Rio Sonoyta and

Quitovac Spring of Sonora, Mexico. Loss and degradation of stream habitat from water diversion and groundwater pumping, along with its very limited distribution, is the primary threat to the Sonoyta mud turtle. Sonoyta mud turtles are highly aquatic and depend on permanent water for survival. The area of southwest Arizona and northern Sonora where the turtle occurs is one of the driest regions of the southwest. Due to continuing irrigated agriculture and development in the region, surface water in the Rio Sonoyta can be expected to dwindle further. This species may also be vulnerable to aerial spraying of pesticides on nearby agricultural fields. Due to imminent threats of a high magnitude, we are keeping the listing priority number of 3 for this subspecies.

Amphibians

Columbia spotted frog, Great Basin DPS (*Rana luteiventris*)—The following summary is based on information contained in our files and the petition received on May 1, 1989. Currently, Columbia spotted frogs appear to be widely distributed throughout southwestern Idaho, eastern Oregon, northeastern and central Nevada, and southeastern Washington, but local populations within this general area appear to be small and isolated from each other. Recent work by researchers in Idaho and Nevada has documented the loss of historically known sites, reduced numbers of individuals within local populations, and declines in the reproduction of those individuals. Habitat degradation and fragmentation is probably a combined result of past and current influences of heavy livestock grazing, spring alterations, agricultural development, urbanization, beaver control, and mining activities. Fragmentation of habitat may be one of the most significant barriers to Columbia spotted frog recovery and population persistence. Loss of vegetation and/or lowering of the water table as a result of the above mentioned activities can significantly threaten frogs moving from one area to another. Likewise, fragmentation and loss of habitat can prevent frogs from colonizing suitable sites elsewhere.

Two conservation agreements and strategies were signed by Federal, State, County, and university representatives on September 30, 2003, for the central and northeast Nevada subpopulations. The goals of the conservation agreements are to reduce threats to Columbia spotted frogs and their habitat to the extent necessary to prevent populations from becoming extirpated throughout all or a significant portion of their historic range and to maintain, enhance, and restore a sufficient number of populations of Columbia spotted frogs and their habitat to ensure their continued existence throughout their historic range within those areas. Although these agreements may reduce threats in the future, we retained a listing priority number of 3 for this DPS of the Columbia spotted frog because the threats are imminent and of a high magnitude.

Mountain yellow-legged frog, Sierra Nevada DPS (*Rana muscosa*)—The following summary is based on information contained in our files and the petition received on February 8, 2000. Also see our 12-month petition finding published on January 16, 2003 (68 FR 2283). The mountain yellow-legged frog is restricted to two disjunct areas in California and a portion of Nevada. One area is in the Sierra Nevada and the other area is in southern California (Los Angeles, San Bernardino, Riverside, and San Diego Counties). The distribution of the Sierra Nevada mountain yellow-legged frog is restricted primarily to publicly managed lands at high elevations, including streams, lakes, ponds, and meadow wetlands located in national forests and national parks. Rangewide, it is estimated that the number of mountain yellow-legged frog populations has undergone a 50 to 80 percent reduction.

Direct predation by nonnative fishes has resulted in rangewide population declines and local extirpations. Furthermore, the result of these extirpations is that the remaining populations are fragmented and isolated, making them vulnerable to further declines and local extirpations caused by other factors such as disease. In a recent study, from 1996 to 2003, introduced trout were removed from 5 lakes in a remote area of the Sierra Nevada, with 16 nearby lakes used as controls. The experiment concluded that introduced trout are effective predators on mountain yellow-legged frog tadpoles, and suggested ''(i) that the introduction of trout is the most likely mechanism responsible for the decline of this mountain frog and (ii) that these negative effects can be reversed.'' To help reverse the decline of the mountain yellow-legged frog, the Sequoia and Kings Canyon National Parks have been removing introduced trout since 2001, and efforts are continuing through the 2004 season. It is likely that disease, specifically chytrid fungus, has also caused the recently observed declines in the species. Although the life history and modes of transmission of chytrid fungus are not well understood, it appears that this pathogen is widespread throughout the range of the mountain yellow-legged frog within the Sierra Nevada, it is persistent in ecosystems, and it is resilient to environmental conditions such as drought and freezing.

We conclude that all remaining mountain yellow-legged frog populations within the Sierra Nevada are at risk of declines and extirpation primarily as a result of predation by introduced trout and infection by pathogens. We conclude that the overall magnitude and immediacy of threats to the Sierra Nevada distinct population segment of the mountain yellow-legged frog is high. Therefore, we retain a listing priority of 3 for this DPS.

Oregon spotted frog (*Rana pretiosa*)—The following summary is based on information contained in our files and the petition received on May 4, 1989. Historically, the Oregon spotted frog ranged from British Columbia to the Pit River drainage in northeastern California. Based on surveys of historical sites, the Oregon spotted frog is now absent from at least 76 percent of its former range.

The threats to the species' habitat include development, livestock grazing, introduction of nonnative plant species, changes in hydrology due to construction of dams and alterations to seasonal flooding, and poor water quality. Additional threats to the species are predation by nonnative fish and introduced bullfrogs. The high magnitude of threat is due to small populations with patchy and isolated distributions and the wide range of threats to both individuals and their habitats. Habitat restoration and management actions have not prevented a decline in the reproductive rates in some populations. Each population is faced with multiple actual and potential threats that could seriously reduce or eliminate any of these isolated populations and further reduce the range of the species. Based on these threats, we retain a listing priority of 2 for the Oregon spotted frog.

Relict leopard frog (*Rana onca*)—The following summary is based on information contained in our files and the petition received on May 9, 2002. Relict leopard frogs are currently known to occur naturally in two general areas of Nevada—near the Overton Arm area of Lake Mead and Black Canyon below Lake Mead. In addition to these natural sites, three translocation sites have been established, two in Nevada and one in Arizona. We estimate that the current distribution is less than 20 percent of the historical distribution. As habitat generalists, relict leopard frogs likely occupied a variety of habitats including

springs, streams, and wetlands characterized by clean, clear water, in both deep and shallow water, and cover/forage such as submerged, emergent, and perimeter vegetation.

The causes for the population declines of this species are not entirely clear, but suggested factors include alteration of aquatic habitat due to agriculture and water development, and the introduction of exotic predators and competitors. The magnitude of threats to the relict leopard frog are high based on its limited numbers and distribution, the presence of nonnative predators, potential alteration of remaining habitat including groundwater pumping, and diversion of surface water. We do not consider threats to be imminent at this time. Although the numbers are low and distribution is limited, efforts are underway to improve habitat and increase numbers through captive rearing and translocation. There are no proposed projects that may result in further habitat degradation. In addition, a conservation agreement and strategy is being developed which is intended to improve the status of the species through prescribed management actions and protection. The effectiveness of the plan in achieving adequate conservation for the relict leopard frog will remain unknown until the plan is completed and implementation is initiated. Therefore, we retain a listing priority of 5 for the relict leopard frog.

Ozark hellbender (*Cryptobranchus alleganiensis bishopi*)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Austin blind salamander (*Eurycea waterlooensis*)—The following summary is based on information in our files. No new information was provided in the petition received on May 11, 2004. The Austin blind salamander is known to occur in and around three of the four spring sites that comprise the Barton Springs complex in the City of Austin, Travis County, Texas.

Primary threats to this species are degradation of water quality and quantity due to expanding urbanization. The Austin blind salamander depends upon a constant discharge of clean water from the Edwards Aquifer for its survival. Urbanization can dramatically alter the normal hydrologic regime and water quality of an area. An increase in impervious cover (*i.e.* impervious to normal drainage) as a result of development increases the quantity and velocity of runoff that leads to erosion and greater pollution transport. Pollutants and contaminants that enter the Edwards Aquifer are discharged in salamander habitat at Barton Springs and may have serious morphological and physiological effects to the salamander. As the human population increases in central Texas, the demand on groundwater sources increases. Increased pumping of the Edwards Aquifer can result in reduced springflows that may also detrimentally impact the salamander. Based on the high magnitude of the imminent threats imposed on this species, we are retaining a listing priority number of 2 for this species.

Georgetown salamander (*Eurycea naufragia*)—The following summary is based on information in our files. No new information was provided in the petition received on May 11, 2004. The Georgetown salamander is known from spring outlets along five tributaries to the San Gabriel River and one cave in the City of Georgetown, Williamson County, Texas. The Georgetown salamander has a very limited distribution and depends upon a constant discharge of clean water from the Edwards Aquifer for its survival. Primary threats to this species are the same as for the Austin blind salamander above. With imminent threats of high magnitude, we retain a listing priority of 2 for this species.

Salado salamander (*Eurycea chisolmensis*)—The following summary is based on information in our files. No new information was provided in the petition received on May 11, 2004. The Salado salamander is historically known from two spring sites, Big Boiling Springs and Robertson Springs, near Salado, Bell County, Texas. Salamanders have not been located at Robertson Springs since 1991. Primary threats to this species are habitat modification and degradation of water quality and quantity due to expanding urbanization. Many of the spring outlets in the City of Salado have been modified by dam construction. Because Big Boiling Springs is located near Interstate 35 and in the center of the city, increasing traffic and urbanization bring increased threats of contamination spills, higher levels of impervious cover, and subsequent impacts to groundwater. The Salado salamander depends upon a constant discharge of clean water from the Edwards Aquifer for its survival. Pollutants and contaminants that enter the Edwards Aquifer can be discharged in salamander habitat, and may cause serious morphological and physiological effects to the salamander. As the human population increases in central Texas, greater demand on groundwater sources occurs. Increased pumping of the Edwards Aquifer can result in reduced springflows that may also detrimentally impact the salamander. With imminent threats of high magnitude, we are retaining a listing priority number of 2 for this salamander species.

Boreal toad, Southern Rocky Mountains DPS (*Bufo boreas boreas*)—The following summary is based on information contained in our files and the petition received on September 30, 1993. See also our 12-month petition finding published on March 23, 1995 (60 FR 15281). The boreal toad (*Bufo boreas*) can be found throughout most of the mountainous regions of the western United States and was considered common throughout the southern Rocky Mountains (southeastern Wyoming to northern New Mexico). The abundance of the species in the southern Rocky Mountains has declined significantly in the past few decades. While there are 32 populations, only one population in Colorado is considered viable. In the southern Rocky Mountains, the disease chytridiomycosis, resulting from the chytrid fungus *Batrachochytrium dendrobatidis,* is the primary threat to the boreal toad. This fungus is only known to infect amphibians and is the primary suspect in the decline of numerous amphibian species around the world. It is unknown why this fungus has become a problem over the past few decades, or how it moves from one population to another. We continue to give the toad a listing priority of 3, because chytrid fungus infection is an ongoing threat of high magnitude and is likely to extirpate additional infected boreal toad populations.

Yosemite toad (*Bufo canorus*)—The following summary is based on information contained in our files and the petition received on April 3, 2000. See also our 12-month petition finding published on December 10, 2002 (67 FR 75834). The historical range of Yosemite toads in the Sierra Nevada occurs from the Blue Lakes region north of Ebbetts Pass to 5 kilometers (km) (3.1 miles (mi)) south of Kaiser Pass in the Evolution Lake/Darwin Canyon area. Alteration and loss of habitat due to grazing, timber management, water diversion, recreation, and vegetative/fire management are threats. The decline of some populations of the Yosemite toad has been attributed to the effects of poorly managed livestock grazing. The levels of timber harvest and road construction have declined substantially since implementation of the California Spotted Owl Sierran Province Interim Guidelines in 1993, and some existing roads have been, or are scheduled for, decommissioning. Therefore, the risks posed by new roads and timber harvests

have declined, but those already existing still pose risks to the species and its habitat through erosion, vehicular mortality, and contaminant introduction. Due to their water depth, reservoirs represent both a loss of habitat and a barrier to dispersal. In addition, the evidence of an adverse physiological effect of pesticides on Sierra Nevada amphibians in the field indicates that contaminants may be a risk to the Yosemite toad and may have contributed to the species' decline. These factors have probably contributed to the decline of Yosemite toads and currently pose a risk to the species. We determined the magnitude of threats to be moderate, rather than high, because almost all of the species' range occurs on Federal land, which facilitates management of the species by Federal agencies. We determined the threats to the Yosemite toad to be nonimminent. Therefore, we retain a listing priority number of 11 for the Yosemite toad.

Black Warrior waterdog (*Necturus alabamensis*)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Fishes

Arkansas darter (*Etheostoma cragini*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Arkansas darter is a fish with widespread distribution throughout the Arkansas River basin in Arkansas, Kansas, Colorado, Missouri, and Oklahoma. Threats to this species include water quantity depletion such as withdrawal of groundwater within the Arkansas River basin in Kansas, water quality degradation resulting from increased urbanization and agricultural activities, and genetic isolation. The most recent survey data indicate the Arkansas darter still persists at numerous locations which are widely distributed, providing some measure of protection against extirpation resulting from a single randomly occurring event. Data also indicate groundwater withdrawal in a significant portion of the species' range has declined in the last decade. The overall impacts facing this species have been reduced to the point where they represent a low to moderate magnitude threat. Because of these factors, we retain a listing priority of 11 for this species.

Cumberland Johnny darter (*Etheostoma nigrum susanae*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Cumberland Johnny darter is a small (approximately 3 inches) member of the family Percidae. The Cumberland Johnny darter is endemic to the upper Cumberland River system, above Cumberland Falls, in Kentucky, and Tennessee. According to recent surveys, it appears that the subspecies is restricted to 16 small streams in Whitley and McCreary Counties, Kentucky, and 2 streams in Scott and Campbell Counties, Tennessee. Based on these surveys, formerly reported populations in Little Wolf Creek, Whitely County, Kentucky, Gum Fork, Scott County, Tennessee, and the mainstem of the Cumberland River appear to have been extirpated.

The Cumberland Johnny darter inhabits shallow water in low velocity shoals or riffles and backwater areas of moderate to low gradient stream reaches with stable sand or sandy-gravel substrates. Existing populations of Cumberland Johnny darter are small in size and range and are geographically isolated from one another. This patchy distribution makes them more susceptible to extirpation from single events of large impact. It also reduces their ability to recover from smaller impacts to their habitat or population size. This level of isolation makes natural repopulation of any extirpated population impossible without human intervention. Population isolation also inhibits the natural interchange of genetic material between populations; some of the Cumberland Johnny darter populations are likely below the effective population size required to maintain long-term genetic and population viability.

Siltation, primarily from coal mining activities but also from forestry and agricultural activities, road construction, and urban development, appears to be the major factor contributing to the decline of the Cumberland Johnny darter. Federal and State water quality laws have reduced water quality threats to some degree, but non-point pollution threats and modification of instream habitat and hydrology are cumulative and gradual. Consequently, we continue to assign the Cumberland Johnny darter a listing priority number of 6, reflecting a threat magnitude and immediacy of high and nonimminent, respectively.

Pearl darter (*Percina aurora*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. Little is known about the specific habitat requirements of the pearl darter. Pearl darters have been collected from gravel riffles and rock outcrops; deep runs over gravel and sand pools below shallow riffles; swift, shallow water over firm gravel and cobble in mid-river channels; swift water near brush piles and scour holes. The pearl darter is historically known only from localized sites within the Pearl and Pascagoula River drainages in Mississippi and Louisiana. The pearl darter is very rare in the Pascagoula River system and is extinct in the Pearl River system. Since 1983, pearl darters have only been found in scattered sites within the Pascagoula drainage, including the Pascagoula, Chickasawhay, Chunky, Leaf, and Bouie Rivers and Okatoma and Black Creeks, resulting in a 66 percent decrease of range. The pearl darter is vulnerable to nonpoint source pollution, changes in river and stream geomorphology, and other human-induced threats to its environment. The magnitudes of threats to the pearl darter are high based on its limited numbers and distribution. However, we do not consider threats to be imminent at this time. Although the numbers are low and distribution is disjunct, efforts are underway to improve habitat by reducing sedimentation and increase numbers of pearl darters through husbandry. There are no known proposed projects that may result in further habitat degradation at this time. Therefore, we retain a listing priority number of 5 for the pearl darter.

Rush darter (*Etheostoma phytophilum*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The life history of the rush darter is poorly known. Rush darters have been collected in vegetation from very shallow, clear, cool and flowing water. Rush darters appear to prefer relatively low-gradient small streams, not necessarily spring influenced. Historically, rush darters have been found in three distinct watersheds in Alabama: Clear Creek drainage in Winston County; Turkey Creek drainage in Jefferson County; and Little Cove and Bristow Creek in Etowah County. Cumulatively, the rush darter is only known from localized collection sites within approximately 14 km (9 miles) of streams in the mentioned counties.

The rush darter is currently known to have one of the most restricted distributions of any vertebrate in Alabama and all are located above the Fall Line in the Tombigbee-Black Warrior drainage. There are only two known extant rush darter populations: the Clear Creek drainage in Winston

County and the Beaver Creek and Penny Springs areas in the Turkey Creek drainage in Jefferson County. The rush darter is vulnerable to non-point source pollution, urbanization, and changes in stream geomorphology due to its localized distribution in parts of two unconnected stream drainages and its apparent low population sizes. Sedimentation has been identified as the greatest threat to the rush darter. Industrialization is extensive throughout the rush darter's habitat, particularly near the type locality for the rush darter in Jefferson County. Although efforts are underway to improve habitat by reducing sedimentation and increase numbers of rush darters through husbandry, the magnitude of threats to the rush darter are high based on its limited numbers and distribution. We do not consider the threats to be imminent at this time, however, as we know of no proposed projects that may result in further habitat degradation. Therefore, we retain a listing priority number of 5 for the rush darter.

Yellowcheek darter (*Etheostoma moorei*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Yellowcheek darter is endemic to only four headwater tributaries of the Little Red River, Arkansas. It is vulnerable to alterations in physical habitat characteristics such as the impoundment of Greers Ferry Reservoir, channel maintenance in the Archey Fork tributary, increased sedimentation from eroding stream banks and poor riparian management (*e.g.* livestock grazing in and along tributaries resulting in higher sediment loads), and illegal gravel mining. Factors affecting the remaining populations include loss of suitable breeding habitat, habitat and water quality degradation, population isolation, and severe population declines.

The Middle Fork tributary was listed as an impaired waterbody by the Arkansas Department of Environmental Quality in 2004 due to excessive bacteria and low dissolved oxygen. Recent studies have documented significant declines in the numbers (60,000 in 1981 compared to 10,300 in 2000) of this fish in the remaining populations and further range restriction within the tributaries (130.4 to 65.0 stream km). As a result, yellowcheek darter numbers have declined by 83 percent in both the Middle Fork and South Fork, and by 60 percent in the Archey Fork during the past 20 years. No yellowcheek darters were found in the Devils Fork during a 2000 status survey; the species has apparently been extirpated in that reach. A comparison of inhabited stream reaches in a 1981 survey versus the 2000 survey reveals that the largest decline occurred in the South Fork, where reaches formerly inhabited by the yellowcheek darter declined by 70 percent. The second largest decline occurred in the Archey Fork, where there was a 60 percent reduction in inhabited stream reach. The Middle Fork showed the least decline in inhabited stream reach, at 22 percent. Due to imminent threats of a high magnitude, we retain a listing priority number of 2 for this species.

Fluvial arctic grayling, upper Missouri River DPS (*Thymallus arcticus*)—The following summary is based on information contained in our files and the petition received on October 2, 1992. See also our 12-month petition finding published on July 25, 1994 (59 FR 37738). The distinct vertebrate population segment (DPS) of fluvial Arctic grayling (*Thymallus arcticus*) of the upper Missouri River once ranged throughout the streams and rivers of the upper Missouri River drainage above Great Falls. Currently, the only confirmed fluvial population is restricted to the upper Big Hole River in Montana, an area estimated to be less than 5 percent of the population segment's historical range. Attempts since 1997 to re-establish additional populations in historic waters have not yet produced any self-sustaining populations.

The primary threats facing the fluvial Arctic grayling are hydrologic alterations and stream dewatering from irrigation withdrawals, thermal stress, degradation and loss of riparian habitat, entrainment in irrigation ditches, lack of fish passage, and encroachment by nonnative trout species. Since 1999, persistent drought in southwestern Montana has exacerbated the effects of these primary threats, and corresponding survey data do not suggest a secure fluvial Arctic population in the Big Hole River. Consequently, we elevated the listing priority for fluvial Arctic grayling from a 9 to a 3 in the 2003 CNOR.

In May 2004, stream flows in the upper Big Hole River reached critically low levels because of early snowmelt runoff and irrigation withdrawals. On May 18, 2004, the Center for Biodiversity (CBD) sent a letter to us requesting we emergency list the grayling based on the ''critical situation'' caused by low streamflows. Federal agencies, State agencies, and private landowners addressed the low streamflows with a collaborative effort to improve flows by withdrawing land from irrigation and installing off-stream livestock watering facilities. Timely precipitation, supplemented by the above voluntary conservation actions, helped maintain discharge above minimum ''survival'' levels for fluvial Arctic grayling in the upper Big Hole River through the remainder of 2004, so the ''critical situation'' cited in CBD's emergency listing request did not persist. Fluvial Arctic grayling persist at low abundance in the Big Hole River and a number of associated tributary streams, and recent spawning success observed in 2003–04 is consistent with a functional, albeit depressed, population. Thus, emergency listing is not warranted at this time (see also the 2003 CNOR published on May 4, 2004, for our determination that emergency listing was not warranted at that time); however, a listing priority of 3 continues to be warranted because the threats facing the DPS remain high in magnitude and imminent. We are closely monitoring the status of this DPS and ongoing efforts to secure the Big Hole River population and expand its range into historic waters in the upper Missouri River basin.

Chucky madtom (*Noturus sp.* cf. *N. elegans*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The chucky madtom is a rare, undescribed catfish known from only 14 specimens collected from two Tennessee streams. A lone individual was collected in 1940 from Dunn Creek (a Little Pigeon River tributary) in Sevier County, and 13 specimens have been encountered since 1991 in Little Chucky Creek (a Nolichucky River tributary) in Greene County. Only 3 specimens have been encountered since 1994 from two riffle areas in a short reach of Little Chucky Creek. All Little Chucky Creek specimens have been collected from stream runs with slow to moderate current over pea gravel, cobble, or slab-rock substrates.

The majority of the Little Chucky Creek watershed is privately owned and managed for beef cattle production, tobacco cultivation, and row crops, especially corn and soybeans. The Dunn Creek watershed shares these same agricultural practices. Nonpoint source sediment and agrochemical inputs from local agricultural and other sources may adversely affect the chucky madtom by altering the physical characteristics of its habitat, thus potentially impeding its ability to feed, seek shelter from predators, and successfully reproduce. The Service believes that potential demographic effects of inbreeding,

restricted distribution, and low number of individuals pose imminent threats to the chucky madtom in its only known extant and historic locations. We are retaining a listing priority number of 2 for the chucky madtom.

Grotto sculpin (*Cottus* sp., sp. nov.)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Grotto sculpin is a small fish within the banded sculpin taxonomic complex that exhibits cave-adapted features, including nearly nonfunctional eyes, reduced skin pigmentation, and smaller optic nerves. The species inhabits pools and riffles within cave systems in two karst (cave) areas in Perry County, Missouri. Only a few thousand individuals are thought to exist. The species is threatened by water quality contamination as a result of point and nonpoint pollution sources. A large die-off of all Grotto sculpins in one of the five known occupied cave systems known to have the species was likely a result of pollution. The species is also threatened by predatory fish that likely prey upon Grotto sculpin and are known from all locations occupied by the species. These predators, normally excluded from cave environments, escape surface farm ponds that unexpectedly drain through sinkholes into the underground cave systems and enter grotto sculpin habitat. Currently no State or Federal regulations provide protection for the Grotto sculpin. Due to imminent threats of a high magnitude, a listing priority number of 2 remains appropriate for this species.

Sharpnose shiner (*Notropis oxyrhynchus*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The sharpnose shiner is a small, slender minnow, endemic to the Brazos River Basin in Texas. Historically, the sharpnose shiner existed throughout the Brazos River and several of its major tributaries within the watershed. Current information indicates that the population within the Upper Brazos River drainage (upstream of Possum Kingdom Reservoir) is apparently stable, while the population within the Middle and Lower Brazos River Basins may only exist in remnant areas of suitable habitat, or may be completely extirpated, representing a reduction of approximately 64 percent of its historical range.

The most significant threat to the existence of the sharpnose shiner is the modification of its habitat by reservoir construction, irrigation and water diversion, sedimentation, industrial and municipal discharges, and agricultural activities. The current limited distribution of the sharpnose shiner within the Upper Brazos River Basin makes it vulnerable to events such as the introduction of competitive species or prolonged drought. Other possible threats include toxins released by blooms of golden algae, and sand and gravel operations in the Lower Brazos River. The effects of these last two possible threats may be insignificant, but further information is necessary before ruling them out as threats to this species. State law does not provide protection for the sharpnose shiner. Because the threats are nonimminent but of a high magnitude, a listing priority number of 5 remains appropriate for this species.

Smalleye shiner (*Notropis buccula*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The smalleye shiner is a small, pallid minnow endemic to the Brazos River Basin in Texas. The population of smalleye shiners within the Upper Brazos River drainage (upstream of Possum Kingdom Reservoir) is apparently stable. However, the shiner has not been collected since 1976 downstream from the reservoir, and in all likelihood the species is completely extirpated from this area, representing a reduction of approximately 64 percent of its historical range. The most significant threat to the existence of the smalleye shiner is the modification of its habitat by reservoir construction, irrigation and water diversion, sedimentation, industrial and municipal discharges, and agricultural activities. Because these threats continue to be nonimminent and of a high magnitude, we retain a listing priority number of 5 for this species.

Zuni bluehead sucker (*Catostomus discobolus yarrowi*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. The range of the Zuni bluehead sucker has been reduced by over 90 percent. The Zuni bluehead sucker currently occupies 9 river miles in 4 areas of New Mexico, and approximately 6 miles in one stream of Arizona. Zuni bluehead sucker range reduction and fragmentation is caused by discontinuous surface water flow, separation of inhabited reaches by reservoirs, and habitat degradation from fine sediment deposition. The principal uses of surface and ground water within the Zuni River watershed are human consumption, livestock, and irrigation. Diverting water for agricultural use is the primary purpose of at least five impoundments, and several other reservoirs act as flood-control structures. Degradation of the upper watershed has led to increased sedimentation, and many of the reservoirs are now only shallow, eutrophic ponds or wetlands with little or no storage capacity. The impoundments have also changed the downstream channel morphology and substrate composition of streams. Another major impact to populations of Zuni bluehead sucker was the application of fish toxicants through at least two dozen treatments in the Nutria and Pescado Rivers between 1960 and 1975. Large numbers of Zuni bluehead suckers were killed during these treatments.

For several years, the New Mexico Department of Game and Fish (NMDGF) has been the lead agency to develop a conservation plan for Zuni bluehead sucker. A study funded through section 6 of the ESA was initiated in 2000, and will continue through 2005. The grant includes funding for development and implementation of a Zuni Bluehead Sucker Conservation Plan and the acquisition of additional information on distribution, life history, and species associations. A draft conservation plan was completed in 2004, but the plan is not yet final. At this time, the potential cooperators for the conservation effort are the Silva Family, Zuni Pueblo, U.S. Forest Service, The Nature Conservancy, NMDGF, and U.S. Fish and Wildlife Service. Because of the loss of habitat, degradation of remaining habitat, and ongoing threats (*i.e.*, drought and fire), we continue to assign this subspecies a listing priority number of 3.

Clams

Texas hornshell (*Popenaias popei*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. Historically, Texas hornshell, a freshwater mussel, occurred in the lower Pecos River of New Mexico, downstream throughout the Lower Rio Grande (Brownsville, Texas) and major tributaries in Texas, southward to the Reo Pánuco drainage of San Luis Potosí, Mexico. Texas hornshell has declined notably throughout its historic range and can only be confirmed as extant in the Black River of New Mexico and, possibly, the Big Bend reach of the Rio Grande in Texas. The primary threats are ongoing habitat alterations such as stream bank channelization, impoundments, and diversions for agriculture and flood control;

contamination of water from the oil and gas industry; alterations in the natural riverine hydrology; and increased sedimentation from prolonged overgrazing and loss of native vegetation. Thus, a listing priority number of 2 remains appropriate for the Texas hornshell.

Fluted kidneyshell (*Ptychobranchus subtentum*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The fluted kidneyshell is a freshwater mussel (Unionidae) endemic to the Cumberland and Tennessee River systems (Cumberlandian Region) in Alabama, Kentucky, Tennessee, and Virginia. It requires shoal habitats in free-flowing rivers to survive and successfully recruit new individuals into its populations. Habitat destruction and alteration (*e.g.*, impoundments, sedimentation, and pollutants) are the chief factors contributing to its decline. This species has been extirpated from numerous regional streams and is no longer found in the State of Alabama. The fluted kidneyshell was historically known from at least 37 streams but is currently restricted to no more than 14 isolated stream segments, of which only 1 (upper Clinch River) appears to be stable and viable. Although the threats faced by this species are significant, we do not anticipate that they will eliminate the species in the immediate future (next 1–3 years). Because the threats are high in magnitude and nonimminent at this time, we retain a listing priority number of 5 for this mussel.

Neosho mucket (*Lampsilis rafinesqueana*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Neosho mucket is a freshwater mussel native to Arkansas, Kansas, Missouri, and Oklahoma. The species has been extirpated from approximately 70 percent of its range, and very low or no recruitment is occurring in all of the extant populations. Most of this extirpation has occurred in Kansas and Oklahoma. The Neosho mucket survives in four river drainages; however, only two of these, the Spring and Illinois Rivers, currently support relatively large numbers of individuals and thus might be self-sustaining populations. Range restriction and population declines have occurred in the past due to habitat degradation attributed to impoundments, mining, sedimentation, and agricultural pollutants. These threats have led to the species being intrinsically vulnerable to extirpation. Although State regulations limit harvest of this species, there is little protection for habitat. However, populations are stable in the Illinois River despite rapid urbanization and development within the watershed. Due to nonimminent threats of a high magnitude, we retain a listing priority number of 5 for this species.

Alabama pearlshell (*Margaritifera marrianae*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Alabama pearlshell inhabits shallow riffles and pool margins of small creeks and streams of southwest Alabama. Only three populations of Alabama pearlshell have been confirmed to survive during the past 15 years. The species has not been found at one of these sites since 1998; observations of increased sedimentation at this location suggest nonpoint source pollution may be implicated in the disappearance of Alabama pearlshell from this stream. The other two populations appear to be stable and recruiting. We continue to assign the Alabama pearlshell a listing priority number of 2, due to the vulnerability of small stream habitat to nonpoint source pollution, and the decline or loss of one of three known populations.

Slabside pearlymussel *(Lexingtonia dolabelloidesy*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The slabside pearlymussel is a freshwater mussel (Unionidae) endemic to the Cumberland and Tennessee River systems (Cumberlandian Region) in Alabama, Kentucky, Tennessee, and Virginia. It requires shoal habitats in free-flowing rivers to survive and successfully recruit new individuals into its populations. Habitat destruction and alteration (*e.g.*, impoundments, sedimentation, and pollutants) are the chief factors contributing to its decline. This species has been extirpated from numerous regional streams and is no longer found in the State of Kentucky. The slabside pearlymussel was historically known from at least 32 streams but is currently restricted to no more than 9 isolated stream segments. Only 3 populations appear to be significant and viable (Middle Fork Holston River, Paint Rock River system, and Duck River within the Tennessee River system). Although the threats faced by this species are significant, we do not anticipate that they will eliminate the species in the immediate future (next 1–3 years). We continue to assign a listing priority number of 5 to this mussel due to nonimminent threats of a high magnitude.

Georgia pigtoe (*Pleurobema hanleyanum*)—See above in *''Summary of Listing Priority Changes in Candidates.''* The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Altamaha spinymussel (*Elliptio spinosa*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Altamaha spinymussel is a freshwater mussel endemic to the Altamaha River drainage of southeastern Georgia. The historical range of the Altamaha spinymussel was restricted to the Coastal Plain portion of the Altamaha River and the lower portions of its three major tributaries, the Ohoopee, Ocmulgee, and Oconee Rivers. The Altamaha River is formed by the confluence of the Ocmulgee and Oconee rivers and lies entirely within the State of Georgia.

Comprehensive surveys revealed that only 14 live spinymussels have been found and only from an isolated portion of their range, limited to a half mile reach of the Altamaha River. The species appears to be extirpated from the Ohoopee, Ocmulgee, and Oconee Rivers, and its numbers are greatly reduced in the Altamaha River. Altamaha spinymussels face severe habitat degradation from a number of sources. Among these are threats from sedimentation, contaminants (from municipal wastewater treatment plants, agricultural sources, kaolin mining and pulp mills), and the operations of the Edwin I. Hatch Nuclear Power Plant within the rivers that the Altamaha spinymussel inhabits. Water withdrawal and drought have intensified the impacts from contaminants, the resulting low-flow rates provide lower volumes of water to dilute potential contaminants and, therefore, effectively increase the concentrations of contaminants in streams. In 1990, the total amount of surface water withdrawn from the Altamaha River basin was 1315.88 MGD, and development pressures continue to grow, which will lead to increased water withdrawals. Prolonged drought has resulted in other negative effects to the Altamaha spinymussel. For instance, the drought has opened the stream beds to all-terrain and four-wheel drive vehicle access, so mussels that might have survived the drought are now in danger of being crushed by heavy vehicular traffic in the river bed itself. These threats to the Altamaha

spinymussel are further compounded by its limited distribution and the low populations sizes identified in recent survey efforts. However, the immediacy of these threats is not imminent. The Altamaha River Cooperative for Stewardship and Research has been formed with the main objective of identifying critical research and conservation needs in the lower Altamaha Basin with a particular emphasis on relationships between forestry practices and native biological diversity. The Cooperative is comprised of representatives from Plum Creek, International Paper, The Nature Conservancy, and the Georgia Dept. of Natural Resources. Other stakeholders including other industrial forestry companies, Georgia Power, paper mills and university researchers have also participated in the Cooperative, but are not formal members. As part of the agreement the Altamaha River Scenic Easement was established with industry representatives to the Cooperative contributing funds to support research and conservation activities in the lower Altamaha Basin. The Altamaha River Scenic Easement is a 91.4 m (300-ft) wide buffer strip along 45 km (28 mi) of the Altamaha River proper comprised of several non-contiguous parcels, most of which occur on one but not both sides of the river. The easement protects over 480 hectares (1200 acres) of river shoreline and floodplain from development, surface mining, and logging activities. Based on consideration of all of these conditions, we continue to assign a listing priority of 5 to this mussel based on nonimminent threats of a high magnitude.

Snails

Ogden mountainsnail (*Oreohelix peripherica wasatchensis*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Ogden mountain snail is known from a single population near the mouth of Ogden Canyon, Weber County, Utah. The total occupied habitat is an area approximating 100 meters (328 ft wide by 1 kilometer (0.5 miles) long. The last population estimates were taken in 1999, when snail numbers ranged from approximately 9,520 in fall to 18,724 in the spring. Based on measurement of snail size, there appears to be little recruitment to the population. Threats to the colony have not substantially changed or increased over the past year. The habitat receives heavy recreational use and utility roads and ORV trails are significant barriers to dispersal and interconnection among subpopulations. Based on moderate, nonimmenent threats, we retain a listing priority number of 9 for this subspecies.

Bonneville pondsnail (*Stagnicola bonnevillensis*)—See above in *''Summary of Listing Priority Changes in Candidates.''* The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Interrupted rocksnail (*Leptoxis foremani* (= *downei*)—See above in *''Summary of Listing Priority Changes in Candidates.''* The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Sisi snail (*Ostodes strigatus*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. Belonging to the snail family, Potaridae, the sisi snail is a ground-dwelling species and endemic to American Samoa. The species is now known only from a single population on the island of Tutuila, American Samoa. This species is currently threatened by habitat loss and modification and by predation from nonnative snails. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Diamond Y Spring snail (*Pseudotryonia adamantina*) and Gonzales springsnail (*Tryonia circumstriata*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Diamond Y Spring snail and Gonzales springsnail are small aquatic snails endemic to Diamond Y Spring in Pecos County, Texas. The spring and its outflow channel are owned and managed by The Nature Conservancy. These snails are primarily threatened with habitat loss due to springflow declines from drought and from pumping of groundwater. Additional threats include the possibility of water contamination from accidental releases of petroleum products, as their habitat is in an active oil and gas field. Also, a nonnative aquatic snail (*Melanoides* sp.) was recently introduced into the native snails' habitat and may compete with endemic snails for space and resources. With imminent threats of high magnitude, we retain a listing priority number of 2 for this species.

Fragile tree snail *(Samoana fragilis)*—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. A tree-dwelling species, the fragile tree snail belongs to the snail family, Partulidae, and is endemic to the islands of Guam and Rota (Mariana Islands). Requiring cool and shaded native forest habitat, the species is now known only from a single population on Rota. This species is currently threatened by habitat loss and modification and by predation from nonnative snails. Because the threats are of a high magnitude and are considered imminent, we retain a listing priority number of 2 for this species.

Gonzales springsnail (*Tryonia circumstriata*)—See paragraph above under Diamond Y Spring snail (*Pseudotryonia adamantina*).

Guam tree snail (*Partula radiolata*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. A tree-dwelling species, the Guam tree snail belongs to the snail family, Partulidae, and is endemic to the island of Guam. Requiring cool and shaded native forest habitat, the species is now known only from eleven populations on Guam. This species is currently threatened by habitat loss and modification and by predation from nonnative snails. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Humped tree snail (*Partula gibba*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. A tree-dwelling species, the humped tree snail belongs to the snail family, Partulidae, and was originally known from the island of Guam and the Commonwealth of the Northern Mariana Islands (islands of Rota, Aguijan, Tinian, Saipan, Anatahan, Sarigan, Alamagan, and Pagan). Most recent surveys revealed a total of 28 populations on the islands of Guam, Rota, Aguijan, Tinian, Anatahan, Sarigan, Alamagan, and Pagan. Although still the most widely-distributed tree snail endemic in the Mariana Islands, most of the remaining populations are small. This species is currently threatened by habitat loss and modification and by predation from nonnative snails. Because the threats are of a high magnitude and are considered imminent, we retain a listing priority number of 2 for this species.

Lanai tree snail (*Partulina semicarinata*)—The following summary is based on information contained in our files. No new information was

provided in the petition received on May 11, 2004. A tree-dwelling species, *Partulina semicarinata* belongs to the snail family, Achatinellidae. Endemic to the island of Lanai, the species is currently known from 12 populations. This species is currently threatened by habitat loss and modification and by predation from nonnative snails. Because the threats are of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Lanai tree snail (*Partulina variabilis*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. A tree-dwelling species, *Partulina variabilis* belongs to the snail family, Achatinellidae. Endemic to the island of Lanai, the species is currently known from 16 populations. This species is currently threatened by habitat loss and modification and by predation from nonnative snails. Because the threats are of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Langford's tree snail (*Partula langfordi*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. A tree-dwelling species, Langford's tree snail belongs to the snail family, Partulidae, and is known from one population on the island of Aguijan. This species is currently threatened by habitat loss and modification and by predation from nonnative snails. Because the threats are of a high magnitude and are considered imminent, we retain a listing priority number of 2 for this species.

Phantom Cave snail (*Cochliopa texana*) and Phantom springsnail (*Tryonia cheatumi*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Phantom Cave snail and Phantom springsnail are small aquatic snails that occur in only three spring outflows in the Toyah Basin in Reeves and Jeff Davis Counties, Texas. The primary threat to both species is the loss of surface flows due to declining groundwater levels from drought and pumping for agricultural production. Although the land surrounding their habitat is owned and managed by The Nature Conservancy, Bureau of Reclamation, and Texas Parks and Wildlife Department, the water needed to maintain the habitat of both species has declined due to a reduction in the spring flows, possibly as a result of private groundwater pumping in areas beyond that controlled by these landowners. As an example, Phantom Lake Spring is undergoing drying and declining spring flows in San Solomon Spring are also becoming evident (both of these springs are sites of occurrence for these springsnails). Since these threats continue to be imminent and of a high magnitude, we retain a priority listing number of 2 for these species.

Tutuila tree snail (*Eua zebrina*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. A tree-dwelling species, the Tutuila tree snail belongs to the snail family, Partulidae, and is endemic to American Samoa. The species is now known only from two populations on the island of Tutuila. This species is currently threatened by habitat loss and modification and by predation from nonnative snails. Because the threats are of a high magnitude and are considered imminent, we retain a listing priority number of 2 for this species.

Chupadera springsnail (*Pyrgulopsis chupaderae*)—The following summary is based on information contained in our files and the petition received on November 20, 1985. See also our 12-month petition finding published on October 4, 1988 (53 FR 38969). This aquatic species is endemic to Willow Spring on the Willow Spring Ranch (formerly Cienega Ranch) at the south end of the Chupadera Mountains in Socorro County, New Mexico. The Chupadera springsnail has been documented from two hillside groundwater discharges that flow through grazed areas among rhyolitic gravels containing sand, mud, and hydrophytic plants. Regional and local groundwater depletion, springrun dewatering, and riparian habitat degradation represent the principal threats. The survival and recovery of the Chupadera springsnail is contingent upon protection of the riparian corridor immediately adjacent to Willow Spring and the availability of perennial, oxygenated flowing water within the species' thermal range. Due to several factors including the extremely localized distribution of the snail, its occurrence only on private property, the lack of regulatory protection of its habitat, and the inability of land managers to participate in its management, the magnitude of the threats to this species is high. There is an imminent threat to this species because either human-caused disturbance (grazing of cattle, water withdrawal, and fire) or natural disturbance (drought or fire) could eliminate this species in the near future. Therefore, due to the continuing magnitude and imminence of threats to this species, we retain a listing priority number of 2 for this species.

Elongate mud meadows springsnail (*Pyrgulopsis notidicola*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Pyrgulopsis notidicola* is endemic to Soldier Meadow, which is located at the northern extreme of the western arm of the Black Rock Desert, in the transition zone between the Basin and Range Physiographic Province and the Columbia Plateau Province, Humboldt County, Nevada. The type locality, and the only known location of the species, occurs in a stretch of thermal (between 45° Celsius (C) (113° Fahrenheit (F)) and 32° C (90° F)) aquatic habitat that is approximately 300 m (984 ft) long and 2 m (6.7 ft) wide. *Pyrgulopsis notidicola* occurs only in shallow, flowing water on gravel substrate. The species does not occur in deep water (*i.e.*, impoundments) where water velocity is low, gravel substrate is absent, and sediment levels are high. The present or threatened destruction, modification, or curtailment of its habitat or range by recreational bathers in the thermal waters is the greatest threat to the species. The small size of their habitat and their limited range makes them highly susceptible to any factors that negatively impact their habitat. Regulatory mechanisms are beginning to be put in place, but few actions have been implemented to date. Based on imminent threats of high magnitude, we retain a listing priority number of 2 for this species.

Gila springsnail (*Pyrgulopsis gilae*)—The following summary is based on information contained in our files and the petition received on November 20, 1985. Also see our 12-month petition finding published on October 4, 1988 (53 FR 38969). The Gila springsnail is an aquatic species known from 13 populations in New Mexico. The long-term persistence of the Gila springsnail is contingent upon protection of the riparian corridor immediately adjacent to springhead and springrun habitats (habitat at the springhead and along the watercourse running from the springhead), thereby ensuring the maintenance of perennial, oxygenated flowing water within the species' required thermal range. Sites on both private and Federal lands are subject to levels of recreational use and livestock grazing that negatively affect this species, thus placing the longterm survival of the Gila springsnail at risk. Natural events such as drought, forest

fire, sedimentation, and flooding; wetland habitat degradation by recreational bathing in thermal springs; and poor watershed management practices represent the primary threats to the Gila springsnail. Fire suppression activities and fire retardant chemicals have potentially deleterious effects on this species. Because several of the springs occur on Forest Service land, management options for the protection of the snail should be possible. However, randomly occurring events, especially fire and drought, could have a major impact on the species. Moderate use by recreationalists and livestock is ongoing. If these uses remain at current or lower levels, they will not pose an imminent threat to the species. Of greater concern is the current drought that could impact spring discharge and which increases the potential for fire. Significant fires have occurred in the Gila National Forest, and subsequent floods and ash flows have severely impacted aquatic life in streams. If the drought continues or worsens, the imminence of threat (decreased discharge, fire) will increase. Based on these nonimminent threats that are currently of a low magnitude, we retain a listing priority number of 11 for this species.

Huachuca springsnail (*Pyrgulopsis thompsoni*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Huachuca springsnail inhabits 13 springs and cienegas at elevations of 4,500 to 7,200 feet in southeastern Arizona (11 sites) and adjacent portions of Sonora, Mexico (2 sites). The springsnail is typically found in the shallower areas of springs or cienegas, often in rocky seeps at the spring source. Potential threats include habitat modification, wildfire, cattle grazing, and groundwater pumping. Recent communication with personnel from Fort Huachuca indicates they are in the process of evaluating the status of species on Department of Defense lands and developing conservation strategies; this may result in a reduction or elimination of threats in the future. Currently, however, due to the high magnitude and nonimminent threats, we continue to assign a listing priority number of 5 for this species.

New Mexico springsnail (*Pyrgulopsis thermalis*)—The following summary is based on information contained in our files and the petition received on November 20, 1985. Also see our 12-month petition finding published on October 4, 1988 (53 FR 38969). The New Mexico springsnail is an aquatic species known from only two separate populations associated with a series of spring-brook systems along the Gila River in the Gila National Forest in Grant County, New Mexico. The longterm persistence of the New Mexico springsnail is contingent upon protection of the riparian corridor immediately adjacent to springhead and springrun habitats, thereby ensuring the maintenance of perennial, oxygenated flowing water within the species' required thermal range.

While the New Mexico springsnail populations may be stable, the sites inhabited by the species are subject to levels of recreational use and livestock grazing that negatively affect this species. Wetland habitat degradation by recreational use and overgrazing in or near the thermal springs and/or inadequate watershed management practices represent the primary threats to the New Mexico springsnail. Moderate use by recreationalists and livestock is ongoing. If these uses remain at the current or lower levels, they will not pose an imminent threat to the species. Of greater concern is the current drought, which could impact spring discharge and increases the potential for fire. Significant fires have occurred in the Gila National Forest and subsequent floods and ash flows have severely impacted aquatic life in streams. If the drought continues or worsens, the imminence of threat (decreased discharge, fire) will increase. Based on these nonimminent threats of a low magnitude, we retain a listing priority number of 11 for this springsnail.

Page springsnail (*Pyrgulopsis morrisoni*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Page springsnail is known to exist only within a complex of springs located within an approximately 1.5-kilometer (0.93-mile) stretch along the west side of Oak Creek around the community of Page Springs, Yavapai County, Arizona. Many of the springs where the springsnail occurs have been subjected to some level of modification for domestic, agricultural, ranching, fish hatchery, and recreational activities. Arizona Game and Fish Department (AGFD) management plans for the Bubbling Ponds and Page Springs fish hatcheries include commitments to replace lost habitat and to monitor remaining populations of invertebrates such as the Page springsnail. Based on recent survey data, it appears that the Page springsnail is abundant within its habitats and is more widely distributed than previously known. Monitoring by AGFD and Service biologists no longer entails snail removal, which appears to have had a temporary positive impact on population numbers. The threat of ground water withdrawal is not considered imminent because recent studies indicate that the groundwater system of the Verde Valley has not yet been affected by development, and base flow in the Verde River Valley has remained virtually unchanged since 1915. Because these threats are nonimminent but continue to be of a high magnitude, we retain a listing priority number of 5 for this species.

Three Forks springsnail (*Pyrgulopsis trivialis*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Three Forks springsnail is an endemic species with distribution limited to the Three Forks Springs and Boneyard Springs spring complexes in the North Fork East Fork Black River Watershed of east-central Arizona. The springsnail is known from free-flowing spring heads, concrete boxed spring heads, spring runs, and spring seepage at these sites. The primary threats include habitat modification from recreational activities, damage from elk wallowing, and predation from nonnative crayfish. The Arizona Game and Fish Department currently maintains an active monitoring program for the Three Forks springsnail in cooperation with the Fish and Wildlife Service and Forest Service. This program includes population monitoring, habitat sampling, and removal of nonnative predatory crayfish. However, in the absence of a management strategy to effectively address the threat from both elk and crayfish in a longterm fashion, we believe the immediacy of threats to be imminent. Therefore, we retain a listing priority number of 2 for the Three Forks springsnail.

Newcomb's tree snail (*Newcombia cumingi*)—See above in ''Summary of Listing Priority Changes in Candidates.'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Insects

Warm Springs Zaitzevian riffle beetle (**COM044*Zaitzevia thermae*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Warm Springs Zaitzevian riffle beetle is a small, flightless beetle. It is globally endemic to a single, small warm spring along a creek in southwestern Montana. A concrete box has been constructed to protect the spring from contaminants

that may enter the adjacent creek. As a result, the beetle habitat is protected from contamination or trampling, although the possibility for breaching of the cement box exists if extreme events were to occur. The most recent survey indicates the beetle is abundant both within the cement box and in seeps outside the box. Because of its naturally limited distribution, the species is vulnerable to randomly occurring natural and human-caused events. However, because of the protection of the habitat, the magnitude of threats is low and threats are nonimminent, resulting in our retention of a listing priority number of 11 for this species.

Wekiu bug (*Nysius wekiuicola*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. The Wekiu bug belongs to the true bug family, Lygaeidae, and is endemic to the island of Hawaii. Originally and currently known from one widespread population on the summit of Mauna Kea, the species feeds upon other insect species that are blown to the summit of this large volcano. This species is currently threatened by competition with and predation by nonnative arthropods, impacts from recreational and astronomy activities on the summit, and loss of habitat from astronomy development. Because the threats are of a high magnitude and are considered imminent, we retain a listing priority number of 2 for this species.

Mariana eight spot butterfly (*Hypolimnas octucula mariannensis*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. The Mariana eight spot butterfly is a nymphalid butterfly species which feeds upon two host plants, *Procris pedunculata* and *Elatostema calcareum.* Endemic to the island of Guam and the Mariana Islands, the species is now known from ten populations on Guam. This species is currently threatened by predation and parasitism from nonnative species and impacts to its host plants by browsing ungulates. Because the threats are of a high magnitude and are considered imminent, we retain a listing priority number of 3 for this subspecies.

Mariana wandering butterfly (*Vagrans egestina*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. The Mariana wandering butterfly is a nymphalid butterfly species which feeds upon a single host plant species, *Maytenus thompsonii.* Originally known from and endemic to the islands of Guam and Rota (of the Mariana Islands), the species is now known only from one population on Rota. This species is currently threatened by predation and parasitism from nonnative species, and impacts to its host plants by browsing ungulates. Because the threats continue to be of a high magnitude and are considered imminent, we retain a listing priority number of 2 for this species.

Miami blue butterfly (*Cyclargus thomasi bethunebakeri*)—See above in *''Summary of New Candidates.''* The above summary is based on information contained in our files and in the petition received on June 15, 2000.

Sequatchie caddisfly (*Glyphopsyche sequatchie*)—The following summary is based on information in our files. No new information was provided in the petition received on May 11, 2004. The Sequatchie caddisfly is known from two spring runs that emerge from caves in Marion County, Tennessee: Owen Spring Branch (the type locality) and Martin Spring run in the Battle Creek system. The Owen Spring Branch population occurs within Sequatchie Cave Park, which is a Class II Natural-Scientific State Natural Area, thus providing statutory protection from collection for the population in Owen Spring Branch. Estimated population sizes are 500 to 5000 individuals for Owen Spring Branch and 2 to 10 times higher at Martin Spring, due to the greater amount of apparently suitable habitat. Threats to the species include siltation; agricultural, municipal, and industrial chemical runoff (both direct and from subsurface flows); vandalism, and pollution from trash thrown into the springs. This species is vulnerable to extinction due to its restricted distribution and small population sizes. These threats are gradual and/or not necessarily imminent but are of a high magnitude; therefore, we retain a listing priority number of 5 for this species.

Inquirer cave beetle (*Pseudanophthalmus inquistor* Barr), Beaver cave beetle (*Pseudanophthalmus major* Krekeler), Tatum Cave beetle (*Pseudanophthalmus parvus* Krekeler), and Louisville cave beetle (*Pseudanophthalmus troglodytes* Krekeler)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. Cave beetles in the genus *Pseudanophthalmus* are fairly small, eyeless, reddish-brown insects. The limestone caves in which these cave beetles are found provide a unique and fragile environment that supports a variety of species that have evolved to survive and reproduce under the demanding conditions found in cave ecosystems.

The inquirer cave beetle was described in 1980, from specimens collected in Sheals's Cave, Clay County, Tennessee. The species is not known from any other caves. During a 1997 survey of the cave, three inquirer cave beetles were observed. The Beaver Cave beetle was described in 1973, from 3 specimens collected from Beaver Cave, Harrison County, Kentucky. No additional caves that could provide habitat for the Beaver Cave beetle were found during a 1996 survey of Beaver Cave and the surrounding area. One specimen of the species was observed in Beaver Cave during the 1996 survey. The Tatum Cave beetle was described in 1973 from material collected from Tatum Cave, Marion County, Kentucky. No individuals were observed during surveys in 1980 and in 1996. The species has not been observed in Tatum Cave since 1965. There are no other known caves in the vicinity of Tatum Cave that could support the species. The Louisville cave beetle was described in 1973 from specimens collected from Oxmoor Cave, Jefferson County, Kentucky. During 1994, surveys of other caves that could potentially support the species were conducted and the species was found in only one additional cave (Eleven Jones Cave).

All of these cave beetles are currently known from only one or two caves. Their limited distributions make them vulnerable to isolated events that would only have a minimal effect on the more wide-ranging members of the genus. Events such as toxic chemical spills, discharges of large amounts of polluted water, closure of entrances, alteration of entrances, or the creation of new entrances can have serious adverse impacts on these cave beetles and could result in their extinction. No formal protection is currently provided to these species. The threats faced by these species are significant; however, it is not anticipated that they will be subject to these threats in the immediate future (next 1–2 years). Therefore, we retain a listing priority of 5 for these cave beetles.

Clifton Cave beetle (*Pseudanophthalmus caecus* Krekeler), Lesser Adams Cave beetle (*Pseudanophthalmus cataryctos* Krekeler), Greater Adams Cave beetle (*Pseudanophthalmus pholeter* Krekeler), and Icebox Cave beetle (*Pseudanophthalmus frigidus* Barr)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. Cave beetles in the genus

Pseudanophthalmus are fairly small, eyeless, reddish-brown insects. The limestone caves in which these cave beetles are found provide a unique and fragile environment that supports a variety of species that have evolved to survive and reproduce under the demanding conditions found in cave ecosystems.

The Clifton Cave beetle was described in 1973 by Krekeler based upon material collected in 1963. The cave supporting this species is near Versailles, Woodford County, Kentucky. Soon after the species was first collected, the entrance to the cave was enclosed due to road construction. Other caves in the vicinity of Clifton Cave were surveyed for the species in 1995–1996. Most contained other species of *Pseudanophthalmus,* but only one additional site was found for the Clifton Cave beetle. Four specimens were found in a very small, 30 foot (9 meters) long cave about 1 mile (1.61 kilometers) from Clifton Cave. It can not be determined at this time if the species still occurs in Clifton Cave or if the species has been extirpated from its type locality by the closure of the cave entrance.

The Lesser Adams Cave beetle was described in 1973 based upon material collected from Adams Cave, Madison County, Kentucky. This cave also supports the Greater Adams Cave beetle, which also was described in 1973. During a 1995 visit to the cave, one of the original collectors observed one specimen of the Lesser Adams Cave beetle, but the Greater Adams Cave beetle was not observed. In 2002, one lesser Adams Cave beetle and two greater Adams Cave beetles were found during a biological survey conducted by the Service and the Kentucky State Nature Preserves Commission. There are no other caves in the vicinity of Adams Cave, and this species has not been found at any other locations. A gate to control access to the cave was constructed in 2002. On March 1, 2005, a Candidate Conservation Agreement was signed which will provide for long-term protection for Adams Cave and the species that depend upon it.

Icebox Cave beetle was described in 1981 based upon two specimens collected from Icebox Cave, Bell County, Kentucky. Despite searches of caves in the vicinity of this cave and several later visits to Icebox Cave, no additional specimens of Icebox Cave beetle have been found.

All of these cave beetles are currently known from only one or two caves. Their limited distributions make them vulnerable to isolated events that would only have a minimal effect on the more wide-ranging members of the genus. Events such as toxic chemical spills, discharges of large amounts of polluted water, closure of entrances, alteration of entrances, or the creation of new entrances can have serious adverse impacts on these cave beetles and could result in their extinction. No formal protection is currently provided to these species. The threats faced by these species are significant; however, it is not anticipated that they will be subject to these threats in the immediate future (next 1–2 years). We retain a listing priority number of 5 for these species.

Surprising cave beetle (*Pseudanophthalmus inexpectatus* Barr)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. Cave beetles in the genus *Pseudanophthalmus* are fairly small, eyeless, reddish-brown insects. The limestone caves in which these cave beetles are found provide a unique and fragile environment that supports a variety of species that have evolved to survive and reproduce under the demanding conditions found in cave ecosystems. The surprising cave beetle was described from specimens collected in the historic section of Mammoth Cave and White Cave, Mammoth Cave National Park (MCNP), Edmonston County, Kentucky. Subsequent to these original discoveries, the species was also found in MCNP's Great Onyx Cave. Recently, an additional population has been discovered in a cave some distance from the previously known sites. Its limited distribution makes this species vulnerable to isolated events that would only have a minimal effect on the more wide-ranging members of the genus. Events such as toxic chemical spills, discharges of large amounts of polluted water, closure of entrances, alteration of entrances, or the creation of new entrances can have serious adverse impacts on this species and could result in its extinction. The magnitude of the threat to the surprising cave beetle is reduced because of its location on Federal land and the formal commitment through a Candidate Conservation Agreement between MCNP and the Service to protect the species. Therefore we retain a listing priority number of 11 for this species.

Taylor's (Whulge, Edith's) checkerspot butterfly (*Euphydryas editha taylori*)—The following summary is based on information from our files and in the petition received on December 11, 2002. Historically, Taylor's checkerspot butterflies were known from 70 locations: 23 in British Columbia, 34 in Washington, and 13 in Oregon. By spring 2004, only 14 populations, with a total of about 2,000 individuals, were known: 12 in Washington and 2 in the Willamette Valley of Oregon. The species may be extirpated in British Columbia. Threats include degradation and destruction of native grasslands through conversion to agriculture; residential development and commercial development; encroachment by nonnative plants; succession from grasslands to native shrubs and trees; and fire. The application of *Bacillus thuringiensis* var. *kurstaki* for Asian gypsy moth control likely contributed to extirpations of the subspecies at three locations in Pierce County, Washington. The magnitude of threats is high because of the extremely small size of remaining populations and reduction in distribution from the historical range. Sizes and locations of the populations shift from year to year. The ecosystem on which this subspecies depends requires annual management to maintain grassland habitat. Threats are imminent because any of the numerous threats could occur at any time. We retain a listing priority number of 3 for Taylor's checkerspot.

Blackline Hawaiian damselfly (*Megalagrion nigrohamatum nigrolineatum*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Megalagrion nigrohamatum nigrolineatum* is a stream-dwelling damselfly species endemic to the island of Oahu, Hawaii. Once known from throughout Oahu, the species is now restricted to 11 populations within the windward Koolau Mountains. This species is threatened by predation from nonnative aquatic species such as fish and predacious insects and habitat loss through dewatering of streams. Because the threats are of a moderate magnitude and are considered imminent, we retain a listing priority number of 9 for this subspecies.

Crimson Hawaiian damselfly (*Megalagrion leptodemas*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Megalagrion leptodemas* is a stream-dwelling damselfly species endemic to the island of Oahu, Hawaii. Once known from throughout Oahu, the species is now restricted to four populations. This species is threatened by predation from nonnative aquatic species such as fish and predacious insects, and habitat loss through dewatering of streams. Because the threats continue to be of a high magnitude and are considered

imminent, we retain a listing priority number of 2 for this species.

Flying earwig Hawaiian damselfly (*Megalagrion nesiotes*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Megalagrion nesiotes* is a terrestrial or semi-terrestrial damselfly species endemic to the islands of Hawaii and Maui, Hawaii. Despite extensive surveys to locate extant populations, the species is now known to be restricted to a single population in windward east Maui. This species is threatened by predation from ants and other nonnative arthropods, and habitat loss due to disturbance by feral ungulates. Because the threats continue to be of a high magnitude and are considered imminent, we retain a listing priority number of 2 for this species.

Oceanic Hawaiian damselfly (*Megalagrion oceanicum*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Megalagrion oceanicum* is a stream-dwelling damselfly species endemic to the island of Oahu, Hawaii. Once known from throughout Oahu, the species is now restricted to seven populations within the windward Koolau Mountains. This species is threatened by predation from nonnative aquatic species such as fish and predacious insects, and habitat loss through dewatering of streams. Because the threats continue to be of a high magnitude and are considered imminent, we retain a listing priority number of 2 for this species.

Orangeblack Hawaiian damselfly (*Megalagrion xanthomelas*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Megalagrion xanthomelas* is a stream-dwelling damselfly species endemic to the Hawaiian Islands of Kauai, Oahu, Molokai, Maui, Lanai, and Hawaii. The species is now restricted to 16 populations on the islands of Oahu, Molokai, Lanai, and Hawaii. This species is threatened by predation from nonnative aquatic species such as fish and predacious insects and habitat loss through dewatering of streams. Because the threats continue to be of a moderate magnitude and are considered imminent, we retain a listing priority number of 8 for this species.

Pacific Hawaiian damselfly (*Megalagrion pacificum*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Megalagrion pacificum* is a slow-moving stream-, pool-, and pond-dwelling damselfly species endemic to the Hawaiian Islands of Kauai, Oahu, Molokai, Maui, Lanai, and Hawaii. The species is now restricted to seven populations on the islands of Maui and Molokai. This species is threatened by predation from nonnative aquatic species such as fish and predacious insects, and habitat loss through dewatering of streams. Because the threats continue to be of a high magnitude and are considered imminent, we retain a listing priority number of 2 for this species.

Poolanui gall fly (*Phaeogramma* sp.)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. The poolanui gall fly belongs to the fly family, Tephritidae, and forms galls on its host plant, *Bidens cosmoides,* upon which it also breeds and feeds. The fly is endemic to the Hawaiian Island of Kauai, where it is currently known from seven populations. This species is threatened throughout its limited range by the loss and modification of its host plant's habitat through the uncontrolled growth of nonnative plants. Additionally, the species is highly threatened by parasitism by nonnative wasp species. However, threats to the Poolanui gall fly from nonnative weeds and parasitoids are considered nonimminent because they are not ongoing. Because the threats continue to be of a high magnitude and are considered nonimminent, we retain a listing priority number of 5 for this species.

Picture wing fly (*Drosophila attigua*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. This picture wing fly belongs to the fly family, Drosophilidae, and feeds and breeds upon a single host plant, *Cheirodendron* sp. The fly is endemic to the Hawaiian Island of Kauai, where it is currently known from two populations. This species is currently threatened by loss and modification of its host plant's habitat by browsing ungulates and through the uncontrolled growth of nonnative plants. Additionally, the species is threatened by predation and parasitism by nonnative insect species. Because the threats continue to be of a high magnitude and are considered imminent, we retain a listing priority number of 2 for this species.

Picture wing fly (*Drosophila digressa*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. This picture wing fly belongs to the fly family, Drosophilidae, and feeds and breeds upon a single host plant, *Charpentiera* sp. The fly is endemic to the island of Hawaii, where it is currently known from three populations. This species is currently threatened by loss and modification of its host plant's habitat by browsing ungulates and through the uncontrolled growth of nonnative plants. Additionally, the species is threatened by predation and parasitism by nonnative insect species. Because the threats continue to be of a high magnitude and are considered imminent, we retain a listing priority number of 2 for this species.

Stephan's riffle beetle (*Heterelmis stephani*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Stephan's riffle beetle is an endemic riffle beetle found in limited spring environments within the Santa Rita Mountains, Pima County, Arizona. The beetle is known from Bog Spring and Sylvester Spring in Madera Canyon, within the Coronado National Forest. These springs are typical isolated, mid-elevation, permanently saturated, spring-fed aquatic climax communities commonly referred to as ciénegas. Threats are largely from habitat modification. However, because the Forest Service has no current plans to modify remaining habitat, the threats are not imminent. Due to the continued high magnitude of nonimminent threats, we retain a listing priority number of 5 for Stephan's riffle beetle.

Dakota skipper (*Hesperia dacotae*)—The following summary is based on information contained in our files, including information from the petition received on May 12, 2003. The Dakota skipper is a small-to mid-sized butterfly that inhabits high-quality tallgrass and mixed grass prairie in Minnesota, North Dakota, South Dakota, and the provinces of Manitoba and Saskatchewan in Canada. The species is presumed to be extirpated from Iowa and Illinois and from many sites within States with extant locations. The species is threatened by conversion of its native prairie habitat for agricultural purposes, overgrazing, invasive species, gravel mining, and inbreeding. In addition, prairie is converted to shrubland or forest without periodic fire, grazing, or mowing; thus, the species is also threatened at sites where such

disturbance is not allowed. Although the species is listed as threatened by the State of Minnesota, this designation lacks the habitat protections needed for long-term conservation. The species is also listed as endangered by the province of Manitoba. The U.S. Fish and Wildlife Service, other agencies, and private organizations (*e.g.*, The Nature Conservancy) protect and manage some Dakota skipper sites; although proper management is always necessary to ensure its persistence, it is generally secure at these sites. The species is also secure at some sites where private landowners manage native prairie in ways that conserve the Dakota skipper. Therefore, the threats to the species continue to be relatively moderate and generally nonimminent, although some sites are imminently threatened. Therefore, we retain a listing priority number of 11 for this species.

Mardon skipper (*Polites mardon*)—The following summary is based on information contained in our files and the petition received on December 24, 2002. The Mardon skipper is a northwestern butterfly with a disjunct range. Currently, this species is known from four widely separated locations: south Puget Sound region, southern Washington Cascades, Siskiyou Mountains of southern Oregon, and coastal California. The Mardon skipper spends its entire life cycle in one location, and its dispersal ability is probably limited. Threats include habitat loss and degradation due to development, overgrazing, use of herbicides and pesticides, encroachment of nonnative and native vegetation, succession from grassland to forest, fire suppression; direct loss of individuals due to fire; recreational activities; insect collecting; and random, naturally occurring events. Limited dispersal ability limits the likelihood of recolonization once a population is lost. The magnitude of threats is high because of the small population sizes and disjunct distributions that limit dispersal. Loss of any of the populations could threaten the continued existence of the species. Threats are nonimminent because the number of documented locations for the species has increased from less than 10 in 1998 to greater than 50 rangewide in 2004. However, only 10 locations have more than 50 individuals. We retain a listing priority number of 5 for the Mardon skipper.

Coral Pink Sand Dunes tiger beetle (*Cicindela limbata albissima*)—The following summary is based on information contained in our files, including information from the petition received on April 21, 1994. The Coral Pink Sand Dunes tiger beetle is known to occur only at Coral Pink Sand Dunes, about 7 miles west of Kanab, Kane County, in south-central Utah. It is restricted mostly to a small part of the approximately 13-kilometer (8-mile) long dune field, situated at an elevation of about 1,820 m (6,000 ft). The beetle's habitat is being adversely affected by ongoing recreational off-road vehicle (ORV) use. The ORV activity is destroying and degrading the beetle's habitat, especially the interdunal swales used by the larval population. Having the greatest abundance of suitable prey species, the interdunal swales are the most biologically productive areas in this ecosystem. The continued survival of the beetle depends on the preservation of its habitat at its only breeding site and probably requires the establishment or reestablishment of additional reproductive subpopulations in other suitable habitat sites. The beetle's population is also vulnerable to overcollecting by professional and hobby tiger beetle collectors, although quantification of this threat is difficult without continuous monitoring of the beetle's population. The recreational ORV use threat is currently managed by active measures taken by both the Utah Department of Parks and Recreation and the BLM, which reduces the threat from high to moderate. The subspecies population is still at low levels and has only recently improved. Based on continued imminent threats of a low to moderate magnitude, we retain a listing priority number of 9 for this subspecies.

Highlands tiger beetle (*Cicindela highlandensis*)—The following summary is based on information in our files. No new information was provided in the petition received on May 11, 2004. This is a small, relatively plain tiger beetle. It is narrowly distributed and is restricted to areas of bare sand within upland oak scrub and longleaf pine vegetation on the ancient sand dunes of the Lake Wales Ridge in Polk and Highlands Counties, Florida. The Highlands tiger beetle has been found at 40 sites from near Haines City south to Josephine Creek. It is found near (and possibly in) the Snell Creek unit of Lake Wales Ridge National Wildlife Refuge (LWRNWR), in the Allen David Broussard Catfish Creek Preserve (Florida State Parks), The Nature Conservancy's Tiger Creek Preserve, the Lake Wales Ridge State Forest's Walk-in-Water tract Lake Weohyakapka and the west side of Lake Arbuckle (Lake Wales Ridge State Forest), Carter Creek (Lake Wales Ridge Wildlife and Environmental Area, Florida Fish and Wildlife Conservation Commission), the Flamingo Villas tract of LWRNWR, to the vicinity of Josephine Creek (tracts managed by the Southwest Florida Water Management District and the Lake Wales Ridge Wildlife and Environmental Area). A large portion of the good Highlands tiger beetle sites are protected and managers are implementing prescribed fire programs that should restore tiger beetle habitat in some areas. Lack of fire to create open sand is a serious threat to this species. Because this is a very narrowly distributed species with exacting habitat requirements and small populations, the magnitude of threats continues to be high. Therefore, we retain a listing priority number of 5 for the Highlands tiger beetle.

Arachnids

Warton's cave meshweaver (*Cicurina wartoni*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. Warton's cave meshweaver occurs in one cave in northeastern Travis County, Texas. Competition and predation from imported red fire ants, runoff from roads and homesites, and unauthorized human activities are the primary threats to this karst invertebrate. These activities are imminent because they are known to occur or are highly likely around the only cave known to be occupied by the species. Because of the single location, threats to the species from fire ants, pollution from nearby activities, and unauthorized activities near the feature, we consider the threat magnitude to be high. Because these threats continue to be imminent and are of a high magnitude, we retain a listing priority number of 2 for this species.

Crustaceans

Anchialine pool shrimp (*Antecaridina lauensis*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Antecaridina lauensis* is an anchialine pool-inhabiting species of shrimp belonging to the family, Atyidae. This species has a disjunct, Indo-Pacific distribution and is indigenous to the Hawaiian Islands. In Hawaii, the species is currently known from two populations on the island of Maui and two populations on the island of Hawaii. The primary threats to this species are habitat loss and predation from nonnative fish species. These threats are ongoing. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Anchialine pool shrimp (*Calliasmata pholidota*)—The following summary is

based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Calliasmata pholidota* is an anchialine pool-inhabiting species of shrimp belonging to the family, Alpheidae. This species has a disjunct, Indo-Pacific distribution and is indigenous to the Hawaiian Islands. In Hawaii, the species is currently known from six populations on the island of Maui and one population on the island of Hawaii. The primary threats to this species are habitat loss and predation from nonnative fish species; these threats are ongoing. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Anchialine pool shrimp (*Metabetaeus lohena*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Metabetaeus lohena* is an anchialine pool-inhabiting species of shrimp belonging to the family, Alpheidae. This species is endemic to the Hawaiian Islands and is currently known from populations on the islands of Maui and Hawaii. The primary threats to this species are habitat loss and predation from nonnative fish species; these threats are ongoing. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Anchialine pool shrimp (*Palaemonella burnsi*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Palaemonella burnsi* is an anchialine pool-inhabiting species of shrimp belonging to the family, Palaemonidae. This species is endemic to the Hawaiian Islands and is currently known from three populations on the island of Maui and one population on the island of Hawaii. The primary threats to this species are habitat loss and predation from nonnative fish species; these threats are ongoing. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Anchialine pool shrimp (*Procaris hawaiana*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Procaris hawaiana* is an anchialine pool-inhabiting species of shrimp belonging to the family, Procarididae. This species is endemic to the Hawaiian Islands and is currently known from two populations on the island of Maui and one population on the island of Hawaii. The primary threats to this species are habitat loss and predation from nonnative fish species; these threats are ongoing. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Anchialine pool shrimp (*Vetericaris chaceorum*)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Troglobitic groundwater shrimp (*Typhlatya monae*)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. *Typhlatya monae* is a subterranean small shrimp known from Puerto Rico, Barbuda, and Dominican Republic. Although in Puerto Rico it was previously found at Mona Island, currently the species is known from only three caves within the Guánica Commonwealth Forest in the municipalities of Guánica, Yauco, and Guayanilla. The species may still be found in the reef deposit aquifers in Mona Island that have not yet been surveyed. Little is known concerning the status of *Typhlatya monae* in either Barbuda or Dominican Republic. Changes in groundwater quality, collection, predation, development projects, and its limited distribution and population numbers threaten this species. These threats are not imminent. Although the known populations are found within protected lands, the threats are of a high magnitude due to the limited distribution of the species. We retain a listing priority number of 5 for this species.

Flowering Plants

Abronia alpina (Ramshaw Meadows sand-verbena)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Abronia alpina* is a small, generally glandular, deeply-rooted perennial herb, 2.5 to 15.2 centimeters (1 to 6 inches) across forming compact mats found on gravel meadow margins between lodgepole pine forest and sagebrush scrub communities at an elevation between 2,621 to 2,652 meters (m) (8,600 to 8,700 feet (ft)). *Abronia alpina* is known from one main population center in Ramshaw Meadow on the Kern Plateau of the Sierra Nevada (California) and from one subpopulation found in adjacent Templeton Meadow. Population estimates from 1985 through 1994 ranged from a low of 69,652 plants in 1986 to 132,215 plants in 1987. Surveys conducted since 1994 indicate that no significant changes have occurred in population size or location. Threats include encroachment of lodgepole pine into the meadow habitat, changes in hydrology of the meadow, and trampling of habitat due to recreational activities. Disease is not known to be a factor for the species at this time; however, gopher activity may result in significant destruction of *Abronia alpina* through collection or burrowing activities. Significant trampling of *Abronia alpina* subpopulations by cattle has occurred in the past; however, in 2001, the U.S. Forest Service (USFS) made the decision to discontinue grazing on the Templeton allotment, which includes Ramshaw Meadow, for a period of 10 years. In January 2004, the USFS determined, as a result of the Sierra Nevada Forest Plan Amendment and the final supplemental environmental impact statement (FSEIS), that livestock grazing posed a threat to this species. However, the FSEIS notes that future decisions to allow livestock grazing will consider effects to this species and this may require updating the 2001 draft Conservation Agreement which the USFS has been using as their management strategy.

Due to the extremely limited geographic range of the species, biological factors such as disease, pest outbreak, and random chance events associated with the highly variable climate can pose a serious threat to the species. *Abronia alpina* apparently is slow to recover from disturbance because of reproductive and dispersal limitations, short life span, and high annual fluctuation in population numbers. Nonadaptive forces such as inbreeding depression may also threaten the species when combined with the fragmented distribution of the species. We conclude that the magnitude of threats to *Abronia alpina* continue to be moderate, rather than high, because all of the species' range occurs on Federal land, which protects the species from private development and facilitates management of the species by Federal agencies. We also conclude these threats continue to be nonimminent, since the threats are not expected to change in the foreseeable future. Therefore, we retain a listing priority of 11 for this species.

Aliciella (Gilia) cespitosa (Wonderland alice-flower)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Wonderland alice-flower or Rabbit

Valley gilia is a plant within the Polemoniaceae or Phlox family found in Wayne County, Utah. The species is primarily associated with sand-filled pockets and crevices of Navajo sandstone on detrital slopes produced by mechanical weathering or erosion of rock in pinyon-juniper/mountain mahogany communities between 5,200 and 9,000 feet in elevation. Surveys from 2000 to 2003 resulted in estimated numbers of 27,000 individual plants. Current threats include recreational trails; off-road vehicle use; collection by rock garden enthusiasts; livestock trampling; and low natural recruitment. Though localized threats exist, the magnitude of threats is low to moderate with none of them considered imminent, as the majority of sites are not easily accessible. Based on these factors, we retain a listing priority of 11 for this species.

Arabis georgiana (Georgia rockcress)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. The Georgia rockcress grows in a variety of dry situations, including shallow soil accumulations on rocky bluffs, ecotones of gently sloping rock outcrops, and in sandy loam along eroding river banks. It is occasionally found in adjacent mesic woods, but it will not persist in heavily shaded conditions. Currently a total of 18 populations are known from the Gulf Coastal Plain, Piedmont, and Ridge and Valley physiographic provinces of Alabama and Georgia. Populations of this species typically have a limited number of individuals over a small area. Habitat degradation, more than outright habitat destruction, is the most serious threat to this species' continued existence. Disturbance associated with timber harvesting, road building, and grazing has created favorable conditions for the invasion of exotic weeds, especially Japanese honeysuckle (*Lonicera japonica*), in this species' habitat. Eight populations are currently or potentially threatened by the presence of exotics. The Natural Heritage programs in Alabama and Georgia have initiated plans for exotic control at several populations; nonnative plant removal has taken place at several sites. The magnitudes of threats to this species continue to be moderate to low due to the number of populations (18) across multiple counties in 2 states. The primary threat to the species of invading exotics is nonimminent. Thus, we retain a listing priority number of 11 for this species.

Argythamnia blodgettii (Blodgett's silverbush)—The following summary is based on information in our files. No new information was provided in the petition received on May 11, 2004. This member of the spurge family is currently known from tropical pinelands on limestone rock (pine rocklands) at 18 sites in Miami-Dade and Monroe Counties in Florida. Its range extends from Coral Gables (near central Miami) and southern Miami-Dade County westward to southwestern Long Pine Key, a pineland within Everglades National Park. It is also present in the lower Florida Keys from Windley Key southwest to Big Pine Key. Blodgett's silverbush is protected at Biscayne and Everglades National Parks, the Florida Keys Wildlife and Environmental Area, six Miami-Dade County conservation areas, Lignumvitae Key Botanical State Park, Long Key State Park, National Key Deer Refuge, Pine Ridge Sanctuary (private), and Windley Key Fossil Reef Geological State Park. It is also present at Florida Power and Light's Everglades Mitigation Bank. The species could be present at John Pennekamp Coral Reef State Park. The largest population, up to 10,000 plants, is at Larry and Penny Thompson Park and adjoining publicly owned properties at Richmond Field.

Given the species' narrow range and the small number of individuals that exist where it occurs, Blodgett's silverbush is vulnerable to natural disturbance events such as hurricanes and tropical storms. Other threats include fire suppression and invasive exotic pest plants. However, intensive management and biological control efforts are aimed at eradicating Old World climbing fern (*Lygodium microphyllum*) and improving the overall quality of management on conservation lands. Therefore, based on continuing nonimminent threats of a moderate magnitude, we retain a listing priority number of 11 for Blodgett's silverbush.

Artemisia campestris ssp. *borealis* var. *wormskioldii* (Northern wormwood)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. Historically known from eight sites, northern wormwood is currently known from only two populations in Klickitat and Grant Counties, Washington. This plant is restricted to exposed basalt, cobbly-sandy terraces, and sand habitat along the shore and on islands in the Columbia River. The two sites are separated by 200 miles (322 kilometers) of the Columbia River and three large hydroelectric dams. The Klickitat County population is apparently declining; the Grant County population is stable or declining. Surveys of apparently suitable habitat along 55 miles of the Hanford Reach (the wild flowing reach of the Columbia River) have not detected any additional plants. Threats to Northern wormwood include habitat loss due to dam, railroad, and highway construction; recreational use; manipulation of waterflows by hydroelectric dams resulting in flooding and alteration of historic waterflows; nonnative plants; vulnerability to ecological and genetic factors and naturally occurring, random events; and hybridization with two other species of *Artemisia.* The magnitude of threats continues to be high because the only two remaining populations are widely separated and occur in a dynamic habitat affected by frequently changing water levels. Threats continue to be imminent due to small population sizes and the potential for the elimination of one or both populations by a single disturbance. We retain a listing priority number of 3 for this subspecies.

Astelia waialealae (Painiu)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. Painiu is a perennial herb found in *Metrosideros polymorpha* dominated mixed montane bog on Kauai, Hawaii. *Astelia waialealae* is known from 3 populations in three bogs within the Alakai swamp region of Kauai, totaling 35 clumps which may only represent 10 to 15 genetically distinct individuals. Thirty clumps are found in one bog. While the species has always been restricted to the bogs of the Alakai, it may have occurred in more bogs in the past and in greater numbers. The largest individual, less than 12 inches (30 centimeters) in diameter, is not reproducing, and no regeneration has been observed from 1995 to the present. This species is threatened by pigs that prey upon and trample plants and seedlings, degrade and/or destroy habitat, and spread the nonnative plants *Juncus planifolius* and *Andropogon virginicus,* which compete with *Astelia waialealae.* Because the threats continue to be of a high magnitude and are considered imminent, we retain a listing priority number of 2 for this species.

Astragalus equisolensis (Horseshoe milkvetch)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Horseshoe milkvetch, *Astragalus equisolensis,* is a plant within the Fabaceae or Leguminosae (Pea family) only found in Uintah County, Utah. Horseshoe milkvetch is associated with the mixed desert and salt desert shrub

communities that are generally dominated by sagebrush (*Artemisia* sp.), shadscale (*Atriplex confertiolia*) and horsebrush (*Tetradymia nuttallii*). Horseshoe milkvetch is found on the Duchesne River Formation at elevations between 4,800 and 5,200 feet. Based on surveys in 1992, the population was estimated at approximately 10,000 individuals. Threats continue to be habitat degradation and fragmentation associated with oil and gas exploration; road development; off-road vehicle use; and species instability due to low numbers. Currently the threats are low to moderate as only a few wells have been drilled in Horseshoe milkvetch habitat; however, these threats continue to be imminent as oil and gas development is foreseeable in the near future. Because of these factors, we retain a listing priority of 8 for this species.

Astragalus tortipes (Sleeping Ute milkvetch)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. *Astragalus tortipes* is a perennial plant that grows only on the Smokey Hills layer of the Mancos Shale Formation on the Ute Mountain Ute Indian Reservation in Montezuma County, Colorado. In 2000, a total of 3,744 plants were recorded at 24 locations covering 500 acres on a specific substrate within an overall range of 64,000 acres. Available information from 2000 indicates that the species remains stable. Previous and ongoing threats from borrow pit excavation, off-highway vehicles, an expanding junkyard, irrigation canal construction, and a prairie dog colony have had minor impacts that reduced the range and number of plants by small amounts. Oil and gas development may occur in the future within the species' range, but is not likely within the substrate that supports occupied habitat. Therefore, we retain a listing priority number of 8 for *A. tortipes.*

Bidens amplectens (Kookooalu)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Bidens campylotheca ssp. *pentamera* (Kookooalu)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Bidens campylotheca ssp. *waihoiensis* (Kookooalu)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. Kookooalu is an erect, perennial found in wet *Acacia-Metrosideros* forest on Maui, Hawaii. This subspecies is known from one population of 200 individuals, restricted to the island of Maui. This subspecies is highly threatened by ongoing cattle grazing that degrades and destroys habitat. Because the threats continue to be of a high magnitude and are considered imminent, we retain a listing priority number of 3 for this subspecies.

Bidens conjuncta (Kookooalu)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. Kookooalu is an erect perennial herb found in *Metrosideros-Dicronopteris* lowland to montane wet forest and shrubland on Maui, Hawaii. Six populations are known, and the number of individual plants totals approximately 2,200 scattered throughout upper elevation drainages of west Maui. Although the overall range of the species has not changed, the number of remaining individuals has declined over the last decade or so. This species is moderately threatened by pigs and rats that degrade and destroy habitat, and that eat vegetative parts and fruit of *B. conjuncta,* and by nonnative plants that outcompete and displace it. Because the threats continue to be of a moderate magnitude and are considered imminent, we retain a listing priority number of 8 for this species.

Bidens micrantha ssp. *ctenophylla* (Kookooalu)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Brickellia mosieri (Florida brickell-bush)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Calamagrostis expansa (no common name)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Calamagrostis hillebrandii (no common name)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Calliandra locoensis (no common name)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. *Calliandra locoensis* is currently known from only two localities in the municipalities of Yauco and Sabana Grande, in southwestern Puerto Rico. The restricted distribution, urban development, management practices, small number of individuals in the two populations, and catastrophic natural events are high threats to this species. These threats are not imminent because both localities fall within protected lands, but they continue to be of a high magnitude since they affect both of this plant's known populations. Therefore, we retain a listing priority of 5 for this species.

Calochortus persistens (Siskiyou mariposa lily)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files and the petition received on September 10, 2001.

Calyptranthes estremerae (no common name)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. *Calyptranthes estremerae* is a small tree from the subtropical moist forest of northwestern Puerto Rico, in the municipalities of Camuy, Utuado, and Arecibo. The small number of individuals in the two populations, the species' limited distribution, catastrophic natural events, and the potential destruction of specimens due to expansion of recreational facilities threaten the species. These threats, while continuing to be a high magnitude, are not imminent, because the largest known population is found within protected lands. We retain a listing priority of 5 for this species.

Canavalia napaliensis (Awikiwiki)—*See above* in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Canavalia pubescens (Awikiwiki)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. Awikiwiki is a perennial climber found in lowland dryland forest on Maui, Lanai, Kauai, and is possibly on the island of Niihau, Hawaii. This species is known from 10 populations totaling less than 200 individuals. This species is

highly threatened by development; goats that eat this plant and degrade and destroy habitat, and by nonnative plants that outcompete and displace them. Because the threats continue to be of a high magnitude and are considered imminent, we retain a listing priority number of 2 for this species.

Castilleja aquariensis (Aquarius paintbrush)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Aquarius paintbrush is a plant, within the Scrophulariaceae or Figwort family, found only on the Aquarius plateau of south central Utah. Habitat characteristics are meadow openings and open spruce-fir stands at 9,800 to 11,300 feet in elevation. Trends for this species appear to be cyclic with individual plants ranging from 15,000 to 45,000 depending on the year. A correlation may exist between precipitation and plant numbers. Threats to the Aquarius paintbrush are wildlife and domestic livestock grazing that adversely affects this species by trampling and consumption of plants; concentration of livestock associated with water sources; grasshopper, cricket or aphid infestations; road construction for access to recreational and timber harvesting areas; unauthorized off-road vehicle activity; drought conditions; and reduction of genetic diversity due to low population numbers and fragmentation. Monitoring data suggests that in good years, Aquarius paintbrush are able to regenerate and survive under domestic livestock grazing, but the species appears to be more affected by grazing during drought conditions. The overall impacts to this species continue to be of a moderate to low magnitude of threat. Because livestock and wildlife associated with Aquarius paintbrush are present, grazing threats continue to be imminent. Because of these factors, we retain a listing priority number of 8 for this species.

Castilleja christii (Christ's paintbrush)—The following summary is based on information contained in our files and the petition received on January 2, 2001. Christ's paintbrush is endemic to subalpine meadow and sagebrush habitats in the upper elevations of the Albion Mountains, Cassia County, Idaho. The single population of this species, which covers only 81 ha (200 ac), is restricted to the summit of Mount Harrison. The population appears to be stable, although the species is threatened by a variety of activities. Most threats involve seasonal impacts, including unauthorized ORV use that results in erosion of the plant's habitat and mortality of individual plants; livestock grazing that adversely affects Christ's paintbrush by trampling and consumption of plants, which results in reduced reproductive success; trampling by hikers and road maintenance activities. Also, road maintenance activities threaten the species through the introduction of exotic plants. For example, in 1997 smooth brome (*Bromus inermis*) was planted along a road after a paving project. By 2004, the smooth brome had expanded from the roadside several hundred feet into the Christ's paintbrush population and may pose a significant threat to the species.

The Forest Service has constructed fencing that will largely reduce the threat of seasonal livestock trespass impacts for most of the Mt. Harrison summit area. The Forest Service has and continues to build rock barriers along roads within Christ's paintbrush habitat to further discourage off-road vehicle use. Most recently, the Forest Service designated a large portion of the population as a Botanical Special Interest Area and, in conjunction with our Field Office, installed conservation signs that provide information about the species. Due to these efforts, the threats continue to be nonimminent and are of a low to moderate magnitude. Therefore, we retain a listing priority number of 11 for this species.

Chamaecrista lineata var. *keyensis* (Big Pine partridge pea)—The following summary is based on information in our files. No new information was provided in the petition received on May 11, 2004. This pea is endemic to the lower Florida Keys. Historically, it was known from Big Pine, No Name, Ramrod, and Cudjoe Keys (Monroe County, Florida). It is now believed to be restricted to Big Pine Key. Roughly 90 percent of its current range is within the National Key Deer Refuge. The Big Pine partridge pea is well distributed on Big Pine Key, with a population estimate of roughly 10,000 individuals. It is restricted to pine rockland communities and hardwood hammock edges. Pine rocklands encompass approximately 582 hectares (1,438 acres) on Big Pine Key. Pine rockland communities are maintained by relatively frequent fires. In the absence of fire, woody encroachment ensues and shades out the pea. Lack of fire poses the greatest threat to the pea. The Refuge has an active prescribed fire program, though with many constraints. Sea level rise constitutes another threat somewhat less imminent, although of greater magnitude. Based on nonimminent threats that continue to be of high magnitude, we retain a listing priority number of 6 for the Big Pine partridge pea.

Chamaesyce deltoidea pinetorum (Pineland sandmat)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Chamaesyce deltoidea ssp. *serpyllum* (Wedge spurge)—The following summary is based on information in our files. No new information was provided in the petition received on May 11, 2004. Wedge spurge is a small herb, flat to the ground, forming patches of rounded or wedge-shaped leaves among the limestone rocks. It has always been restricted to Big Pine Key in Monroe County, Florida. Roughly 90 percent of the range falls within the National Key Deer Refuge. It is not widely or evenly distributed, occurring within 22 percent of 145 sample plots in pine rockland. The total population is on the order of 1,001 to 10,000 plants. It is restricted to pinelands on limestone rock (pine rockland), at sites with extensive exposed rock at the surface, low total understory cover and low hardwood density. Pine rocklands encompass approximately 582 hectares (1,438 acres) on Big Pine Key. These communities are maintained by relatively frequent fires; without fire, tropical shrubs and trees encroach and the spurge is eventually shaded out. Fire restrictions pose the greatest measurable threat. The National Key Deer Refuge has an active prescribed fire program, though with many constraints. Sea level rise during the twentieth century was shown to have affected upland vegetation in the lower Keys. This threat, though less imminent, is ultimately of greater magnitude. Hurricanes pose additional threats. Therefore, we assign the wedge spurge a listing priority number of 6 due to continuing nonimminent threats of a high magnitude.

Chamaesyce eleanoriae (Akoko)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Chamaesyce remyi var. *kauaiensis* (Akoko)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Chamaesyce remyi var. *remyi* (Akoko)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No

new information was provided in the petition received on May 11, 2004.

Charpentiera densiflora (Papala)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Chorizanthe parryi var. *fernandina* (San Fernando Valley spineflower)—The following summary is based on information contained in our files and the petition received on December 14, 1999. San Fernando Valley spineflower is currently known from only two populations. The plants are threatened by habitat loss due to residential development, competition from nonnative plants (*e.g.*, several nonnative grasses), random events such as erosion and fire, and the potential loss of the native pollinator community due to competition with and predation by the nonnative Argentine ants (*Linepithema humilis*).

The site in Los Angeles County, the Newhall Ranch, is proposed for residential development that has the potential to cause the loss of most, if not all, of the remaining plants at that site. Representatives of Newhall Ranch informed us that they intended to pursue a Candidate Conservation Agreement (CCA) for the plant, and, in 2004, presented us with a preliminary plan that would avoid removing approximately 74 percent of the area the plant is believed to occupy. However, the level of detail available was not sufficient for us to conclude that the preserved populations would be appropriately buffered from adjacent land uses, or that sufficient native vegetation would remain in proximity to the preserved areas to support a pollinator community. We received a draft CCA in early February 2005 but have not yet thoroughly reviewed it.

The site in Ventura County, the former Ahmanson Ranch, is now under the auspices of the Santa Monica Mountains Conservancy, a joint powers authority operated by the State to conserve lands within the Conservancy's sphere of influence. As a result, the direct threats to the species from the former Ahmanson Ranch development plan have been eliminated, and we are working with the new landowners to manage the site for the benefit of *Chorizanthe parryi* var. *fernandina*. Since the threats continue to be of a high magnitude but are nonimminent, we retain a listing priority number of a 6 for this plant variety.

Chromolaena frustrata (Cape Sable thoroughwort)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Consolea corallicola (Florida semaphore cactus)—The following summary is based on information in our files. No new information was provided in the petition received on May 11, 2004. This species is endemic to the Florida Keys and is known to naturally occur only at Little Torch Key and Swan Key. It was discovered on Big Pine Key in 1919 but has since been extirpated there as a result of road building and poaching. The Florida semaphore cactus grows close to salt water on bare rock with a minimum of humus-soil cover in or along the edges of hammocks near sea level. About seven mature plants exist in the population at The Nature Conservancy's Torchwood Hammock Preserve on Little Torch Key. Two sexual morphs (males and weak hermaphrodites) comprise the extant population on Little Torch Key. The female sex morph is absent from the population and sexual reproduction at this site without human intervention is not possible. Regeneration in this population is restricted to clonal propagation. At least 629 plants were discovered on Swan Key, Biscayne National Park in November of 2001. The reproductive biology of the population found on Swan Key is yet to be determined. Outplanting has resulted in the reestablishment of a population in Dagny Johnson Key Largo Hammock Botanical State Park in North Key Largo. The causes for the population decline of this species include destruction or modification of habitat, predation from nonnative *Cactoblastis cactorum* moths, unauthorized collection, and the occurrence of hurricanes and other significant natural disturbance events. Based on imminent threats that continue to be of a high magnitude, we retain a listing priority number of 2 for the Florida semaphore cactus.

Cordia rupicola (no common name)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. *Cordia rupicola* is a small shrub that is found in the municipalities of Peñuelas and Guánica in southern Puerto Rico, as well as the island of Anegada in the British Virgin Islands. The current status of the Anegada population is not known. The restricted distribution, urban expansion, and significant natural disturbance events are threats to the Puerto Rico population. Because the threats to this species continue to be imminent and of a high magnitude, due to only a small fraction of the species' known population occurring within protected lands, we retain a listing priority of 2.

Cyanea asplenifolia (Haha)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Cyanea asplenifolia* is a shrub found in *Acacia-Metrosideros* forest on Maui, Hawaii. *Cyanea asplenifolia* was thought to be extinct following collections in 1920 on west Maui until it was rediscovered in 1995 on east Maui. Two additional populations of approximately 30 individuals total have been rediscovered on west Maui, but the largest population is found in Kipahulu Valley on east Maui. Until 1991, when flowering occurred, the Kipahulu population was thought to be *Cyanea grimesiana* ssp. *grimesiana.* Flowers and fruits led to a valid identification of this population as *Cyanea asplenifolia.* In 1991, 350 individuals were counted. During a return visit in 1995, the population was estimated to be only approximately 200 individuals, showing a decline in the population for reasons not determined. Currently, this population has declined to a few individuals. An additional 25 individuals have been found in Makawao and Koolau forest reserves on east Maui. This species is threatened by pigs and goats that eat this plant and degrade and destroy its habitat, by rats and slugs that directly prey upon and defoliate the species, and by nonnative plants that outcompete and displace it. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Cyanea calycina (Haha)—*See above* in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Cyanea eleeleensis (Haha)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Cyanea eleeleensis* is a shrub found in wet forest on Kauai, Hawaii. This species was discovered in 1977, known from one population totaling less than ten individuals in Wainiha Valley on Kauai. This species is highly threatened by pigs that degrade and destroy habitat, by rats and slugs that eat this plant, and by nonnative plants that outcompete and displace it. Because the threats continue to be of a high magnitude and

are considered imminent, we retain a listing priority number of 2 for this species.

Cyanea kuhihewa (Haha)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Cyanea kuhihewa* is a shrub found in *Metrosideros polymorpha-Dicranopteris linearis* lowland wet forest on Kauai, Hawaii. This recently discovered species is known from one population totaling 6 individuals in Limahuli Valley on Kauai. This species was originally included in the proposed rulemaking for Kauai II plant species submitted to the Regional Office but was removed from the proposed rule published in 60 FR 49359 on October 2, 1995, because the species had not yet been described and published at that time. In 2003, the last known individual in the wild died, but prior to that time, seeds were collected for genetic storage, and the species is still found in cultivation. This species is highly threatened by pigs that degrade and destroy habitat, by rats and slugs that eat this plant, and by nonnative plants that outcompete and displace it. Because the threats continue to be of a high magnitude and are considered imminent, we retain a listing priority number of 2 for this species.

Cyanea kunthiana (Haha)—*See above* in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Cyanea lanceolata (Haha)—*See above* in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Cyanea obtusa (Haha)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Cyanea obtusa* is a shrub found in *Metrosideros polymorpha* mixed mesic forest on Maui, Hawaii. *Cyanea obtusa* was thought to be extinct following the initial collections from 1841 to 1919 on east and west Maui until it was rediscovered in 1981 on east Maui. The one known population was extirpated by 1989. In 1996, the species was rediscovered on east Maui, in a population of only four individuals. In 1999, additional plants were found, increasing the known populations to six and the known number of individuals to approximately 30. This species is highly threatened by goats, pigs, cattle, rats, and slugs that eat this plant and degrade and destroy habitat, and by nonnative plants that outcompete and displace it. Because the threats continue to be of a high magnitude and are considered imminent, we retain a listing priority number of 2 for this species.

Cyanea tritomantha (Aku)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Cyrtandra filipes (Haiwale)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. Haiwale is a shrub found in lowland wet and mesic forest on Maui and Molokai, Hawaii. Historically rare, *Cyrtandra filipes* was typically found in southeastern Molokai and west Maui. Currently, this species is known from three populations, one on Molokai and two on Maui, totaling approximately 2,200 individuals. There is some question as to the taxonomic identity of the Maui populations, which do not fit the description of the species precisely. If, upon further taxonomic study, the Maui populations are determined not to be this species, then it is even rarer, with only the Molokai population of a few individuals remaining. This species is highly threatened by pigs and rats that degrade and destroy habitat, by deer that eat this plant, and by nonnative plants that outcompete and displace it. Because the threats continue to be of a high magnitude and are considered imminent, we retain a listing priority number of 2 for this species.

Cyrtandra kaulantha (Haiwale)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Cyrtandra oenobarba (Haiwale)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Cyrtandra oxybapha (Haiwale)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Cyrtandra oxybapha* is a shrub found in *Metrosideros polymorpha-Cheirodendron trigynum* montane wet forest to mesic *Acacia-Metrosideros* forest on Maui, Hawaii. Historically rare, *Cyrtandra oxybapha* was typically found in wet forest on the island of Maui. Currently, this species is known only from one population totaling 250 to 300 individuals in the Kahikinui area of east Maui. This species is highly threatened by pigs that degrade and destroy habitat, and by nonnative plants that outcompete and displace it. Because the threats continue to be of a high magnitude and are considered imminent, we retain a listing priority number of 2 for this species.

Cyrtandra sessilis (Haiwale)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Cyrtandra sessilis* is a shrub found in wet gulch bottoms and slopes of mesic valleys and wet forests on Oahu, Hawaii. This species is known from two populations totaling approximately 50 individuals in the Waikane area of the Koolau Mountains. This species is highly threatened by pigs that degrade and or destroy habitat and by nonnative plants that outcompete and displace it. Because the threats continue to be of a high magnitude and are considered imminent, we retain a listing priority number of 2 for this species.

Dalea carthagenensis floridana (Florida prairie-clover)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Dichanthelium hirstii (Hirsts' panic grass)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. *Dichanthelium hirstii,* a perennial grass, produces erect leafy flowering stems from May to October. *Dichanthelium hirstii* occurs in coastal plain intermittent ponds, usually in wet savanna or pine barren habitats and is found at only one site in New Jersey, one site in Delaware, and two sites in North Carolina. While all four extant *Dichanthelium hirstii* populations are located on public land or privately owned conservation lands, natural threats to the species from encroaching vegetation and fluctuations in climatic conditions remain of concern and may be exacerbated by anthropomorphic factors occurring adjacent to the species' wetland habitat. Given the low numbers of plants found at each site, even minor changes in the species' habitat could result in local extirpation. Loss of any known sites could result in a serious protraction of the species range. However, the most immediate and

severe of the threats to this species (*i.e.*, ditching of the Labounsky Pond site, and encroachment of aggressive vegetative competitors) have been curtailed or are being actively managed by The Nature Conservancy at the New Jersey site, the Delaware Division of Fish and Wildlife, and Delaware Natural Heritage Program at the Assawoman Pond site, and the Marine Corps at the Camp Lejeune site in North Carolina. Based on continued threats of a high magnitude but low imminence, we retain a listing priority number of 5 for this species.

Digitaria pauciflora (Florida pineland crabgrass)—The following summary is based on information in our files. No new information was provided in the petition received on May 11, 2004. This perennial grass grows up to 3 feet tall. It is almost entirely restricted to Long Pine Key, an island of pineland and marl prairies surrounded by wetlands in Everglades National Park, Miami-Dade County, Florida. It was observed once in a ''transverse glade'' at a site now managed by Miami-Dade County at the Richmond pine rocklands. Florida pineland crabgrass occurs most commonly at the margin between pine rockland and marl prairie, overlapping somewhat into both of these ecosystems. These habitats, particularly marl prairie, flood for one to several months during the wet season. Pine rocklands and their associated prairies are fire-maintained, with a natural fire frequency of 3 to 7 years for pine rocklands and perhaps slightly more frequent for marl prairies. In the absence of fire, tropical hardwoods quickly encroach. This grass may once have occurred in pinelands of what is now the Miami urban area, based on a specimen collected in 1903. Essentially no suitable habitat appears to remain outside of Everglades National Park. Threats to Florida pineland crabgrass from invasive exotic plants have been managed by the National Park Service, but the threat of Old World climbing fern and other new exotic plants within the decade are likely to be realized. Based on nonimminent threats that continue to be of a high magnitude, we retain a listing priority number of 5 for the Florida pineland crabgrass.

Dubautia imbricata ssp. *imbricata* (Naenae)—See above in ''*Summary of Listing Priority Changes in Candidates*.'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Dubautia plantaginea ssp. *magnifolia* (Naenae)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Dubautia plantaginea* ssp. *magnifolia* is a shrub found in bogs and wet forest on Kauai, Hawaii. This recently rediscovered species is known from two populations totaling 100 individuals near the summit of Waialeale on the island of Kauai. This species is highly threatened by pigs that degrade and destroy habitat and by nonnative plants that outcompete and displace it. Because the threats continue to be of a high magnitude and are ongoing (*i.e.*, imminent), we retain a listing priority number of 3 for this subspecies.

Dubautia waialealae (Naenae)—See above in ''*Summary of Listing Priority Changes in Candidates*.'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Echinomastus erectocentrus var. *acunensis* (Acuna cactus)—The following summary is based on information contained in our files and the petition received on October 30, 2002. The acuna cactus is known from six sites on well-drained gravel ridges and knolls on granite soils in Sonoran Desert scrub association at 1300–2000 feet elevation. Habitat destruction has been a threat in the past and is a potential future threat to this species. New roads and illegal activities have not yet directly affected the cactus populations at Organ Pipe Cactus National Monument (OPCNM), but areas in close proximity to these known populations have been altered. Cactus populations located in the Florence area have not been monitored and these populations may be in danger of habitat loss due to recent urban growth in the area. Urban development near Ajo, Arizona, as well as that near Sonoyta, Mexico, is a significant threat to the acuna cactus. Populations of the acuna cactus within the OPCNM have shown a 50 percent mortality rate in recent years. The reason(s) for the mortality are not known, but continuing drought conditions are thought to play a role. The Arizona Plant Law and the Convention on International Trade in Endangered Species of Wild Fauna and Flora provide some protection for the acuna cactus. However, illegal collection is a primary threat to this cactus variety and has been documented on the OPCNM in the past. While the threats continue to be of a high magnitude, they are currently nonimminent. Thus, we retain a listing priority number of 6 for this cactus variety.

Erigeron basalticus (Basalt daisy)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. This is a small, herbaceous, perennial plant in the Asteraceae (sunflower) family. The species is endemic to Yakima and Kittitas Counties, Washington, and occurs on canyon walls along the Yakima River and Selah Creek, a tributary of the Yakima River. The species occupies approximately 165 ac (67 ha) within its known distribution of approximately 20 mi^2 (52 km^2). Basalt daisy only grows in small crevices on basalt cliffs. The total population of roughly 7,000 plants is distributed among 8 potentially interbreeding subpopulations. The overall size of the population, both in numbers of plants and total area occupied, has remained relatively stable since at least 1988. However, the numbers of individuals in the four smallest subpopulations have decreased substantially, and two subpopulations currently support fewer than 20 plants each. The causes of these declines, or whether they represent a recent or longterm trend in the subpopulations, are unknown. The extremely limited range and specific habitat requirements of basalt daisy make it vulnerable to localized impacts, including threats from adjacent herbicide and pesticide spraying from agricultural activities and highway/railroad maintenance. In addition, quarrying in the vicinity of several subpopulations may destroy individual plants or negatively impact the species' habitat. While some threats to the species have been identified, it is likely not susceptible to other potential impacts (*e.g.*, conversion, grazing), primarily due to the inaccessibility of the near-vertical basalt cliffs it occupies. Based on the available information, we consider the magnitude of threat to basalt daisy to be moderate-to-low, and the identified threats continue to be nonimminent. Therefore, we retain a listing priority of 11 for this species.

Erigeron lemmonii (Lemmon fleabane)—The following summary is based on information contained in our files and the petition received in July 1975. The species is known from one site on the Fort Huachuca Military Reservation of southeastern Arizona. Approximately 70 individual plants are at this site. The single largest threat to the species is from significant wildfire in the canyon where the plant occurs. An intense wildfire in the narrow canyon would almost certainly desiccate plants on the cliff face, possibly directly killing individuals or stressing plants, and, thereby leading to lower reproductive output. Fort Huachuca is willing to develop a

conservation agreement for this species. Measures have been taken to reduce the threat of wildfire and also the threats from recreational rappelling, which is not allowed on the cliff faces occupied by the plant. Due to these nonimminent threats of a high magnitude, we retain a listing priority number of 5 for this species.

Eriogonum codium (Umtanum Desert buckwheat)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. This is a long-lived woody perennial plant in the Polygonaceae (buckwheat) family that forms low mats. Individual plants may exceed 100 years of age. The only known population of the species occurs exclusively on exposed basalt from the Lolo Flow of the Wanapum Basalt Formation in Benton County, Washington. The population has a discontinuous distribution along a narrow, 1.0 mi (1.6 km) long mountain ridge top. It is unknown if the historical distribution of Umtanum desert buckwheat was different from the species' current distribution. There are a number of ongoing threats to Umtanum desert buckwheat. The species is not well adapted to fire, and negative impacts to the species from past fires have been significant. In addition, Umtanum desert buckwheat plants are easily damaged by trampling or crushing by off-road vehicles. Digging activities and soil disturbance as a result of prospecting and collecting of petrified rock may also threaten Umtanum desert buckwheat as a result of. Finally, the species appears to have a very low reproductive rate. The factors responsible for the lower-than-expected number of seedlings in the population are unknown. Possible factors include low seed production, low seed or pollen viability, low seedling vigor and survival, impacts to plant pollinators or dispersal mechanisms, and insect predation of seeds. The only known population of Umtanum desert buckwheat is small and limited to a single site. Based on the available information, we continue to consider the magnitude of threat to Umtanum desert buckwheat to be high, and the identified threats to be imminent. We retain a listing priority of 2 for Umtanum desert buckwheat.

Eriogonum kelloggii (Red Mountain buckwheat)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. Red Mountain buckwheat is a perennial herb that is endemic to serpentine habitat of lower montane forests found between 1,900 and 4,100 feet. Its distribution is limited to the Red Mountain and Little Red Mountain areas of Mendocino County, California, where it occupies 50 acres and 900 square feet, respectively. Occupied habitat at Red Mountain is scattered over 4 square miles. Total population size is estimated at between 20,000 and 30,000 plants, which occur in 44 polygons. Intensive monitoring of permanent plots on three study sites in Red Mountain suggests considerable annual variation in plant density and reproduction, but no discernable population trend was evident in two of three study sites. One study site showed a 65 percent decline in plant density over 11 years. The primary threat to the species is the potential for mining; the species distribution overlaps a number of mining claims, none of which are currently active. Surface mining, which would destroy all habitat suitability in affected areas, would be used to extract chromium and nickel. The species distribution by ownership is described as follows: Federal (Bureau of Land Management), 69 percent; State of California, 1 percent; and private, 30 percent. Given the continued high magnitude but nonimminent threats to the small, scattered populations, we retain a listing priority number of 5 for this species.

Festuca hawaiiensis (no common name)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Festuca ligulata (Guadalupe fescue)—The following summary is based on information from our files and in the petition received in 1975. Guadalupe fescue occurs in Big Bend National Park, Texas, along a trail near Boot Springs. One of the two Mexican populations previously known was verified to persist in 2004. The single known U.S. population is bisected by a trail and subject to occasional trampling by horses and hikers. New trails are planned that may affect this species, but plans have not been finalized. The effect of fire on the species is uncertain. The magnitude of these threats to Guadalupe fescue continue to be moderate to low and nonimminent because Big Bend National Park is committed to species management through a conservation agreement to reduce threats which is yet to be fully implemented. Based on these threats imposed on the species, we retain a listing priority number of 11.

Gardenia remyi (Nanu)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Geranium hanaense (Nohoanu)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Geranium hillebrandii (Nohoanu)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Geranium hillebrandii* is a decumbent subshrub found in bogs on Maui, Hawaii. Previously known from two populations totaling approximately 500 individuals, it is currently known from over 2,000 individuals, the result of more thorough surveys. This species is moderately threatened by pigs that degrade and destroy habitat, and by nonnative plants that outcompete and displace it. Because the threats continue to be of a moderate magnitude and are considered imminent, we retain a listing priority number of 8 for this species.

Geranium kauaiense (Nohoanu)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Geranium kauaiense* is a decumbent subshrub found in bogs and bog margins on Kauai, Hawaii. This species is known from three populations totaling 100 to 200 individuals in the Alakai Swamp area. This species is highly threatened by pigs that eat this plant and degrade and destroy habitat, and by nonnative plants that outcompete and displace it. Because the threats continue to be of a high magnitude and are considered imminent, we retain a listing priority number of 2 for this species.

Gonocalyx concolor (no common name)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. *Gonocalyx concolor* is a small evergreen epiphytic shrub found within the dwarf or elfin forest type in the Carite Commonwealth Forest in the municipalities of Guayama, Cayey, Caguas, San Lorenzo, and Patillas of southeastern Puerto Rico. The population previously reported from the Luquillo Mountains is apparently no longer extant. The construction of roads and telecommunication towers, certain forest management practices, lower number of specific pollinators, significant natural disturbance events, and its limited distribution and population numbers threaten this species. Although the magnitude of

these threats continues to be high, they are not imminent because the known populations are found within protected lands, and initial efforts at propagation have been successful. Therefore, we retain a listing priority of 5 for this species.

Hazardia orcuttii (Orcutt's hazardia)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files and the petition received on March 8, 2001.

Hedyotis fluviatilis (Kamapuaa)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Helianthus verticillatus (Whorled sunflower)—The following information is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. The whorled sunflower is found in moist, prairie-like openings in woodlands and along adjacent creeks. Despite extensive surveys throughout its range, only six sites are known for this species. There are two sites documented for Cherokee County, Alabama; three in Floyd County, Georgia; and a single site in Madison County, Tennessee. This species appears to have restricted ecological requirements and is dependent upon the maintenance of prairie-like openings for its survival. Active management of habitat is needed to keep competition and shading under control. Much of its habitat has been degraded or destroyed for agricultural, silvicultural, and residential purposes. The largest population is in Georgia and is under a conservation easement of 600 acres to The Nature Conservancy. We continue to assign a listing priority number of 11 to this species as the magnitude of threats is considered ''moderate'' since the largest site is under permanent protection and the threats are considered ''nonimminent'' since the whorled sunflower appears to withstand some disturbance and there are no known immediate threats to the sites.

Hibiscus dasycalyx (Neches River rose-mallow)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Neches River rose-mallow is a perennial woody herb growing 3–7 feet tall with one or more stems per clump and white flowers 3–6 inches wide, consisting of five 2–4-inch-long white petals with deep red or purple at the base. The Neches River rose-mallow appears to be restricted to wetlands, or those portions of wetlands that are exposed to open sun and normally hold standing water early in the growing season, with water levels dropping during late summer and fall. This species appears to have community dominance within that narrow band between high and low water levels in wetlands exposed to open sun. However, historical habitat has been affected by drainage or filling of floodplain depressions and oxbows, stream channelization, road construction, timber harvesting, agricultural activities (primarily mowing and grazing), and herbicide use. Threats that continue to potentially affect the species' habitat include wetland alteration, herbicide use, grazing, and mowing during the species' growing and flowering period.

A 1995 status survey of 10 counties resulted in confirmation or discovery of the species in only three sites, but in three separate counties and three different watersheds, suggesting a relatively wide historical range. These three populations are within highway rights-of-way (ROW) (Ponta site in Cherokee County; Lovelady in Houston County; and Highway 94 in Trinity County) and are monitored by the Texas Parks and Wildlife Department and are somewhat protected by a management agreement with the Texas Department of Transportation. Because these sites are still vulnerable to adjacent agricultural activities such as herbicide spraying, they support relatively low population numbers: Ponta (Highway 204) has ranged from 1 to 5 plants; Lovelady (Highway 230), 3–14 plants; and Highway 94, 15–49 plants. Continued surveys for *H. dasycalyx* have resulted in identifying several new populations. About 300 plants were found on land owned by the Temple-Inland Corporation in east Trinity County. A Candidate Conservation Agreement now covers this site, but smaller numbers have been seen in recent years, possibly due to changes in the wetland's hydrology. Another site was discovered on land owned by the Champion International Corporation (near White Rock Creek in west Trinity County). A Candidate Conservation Agreement was also established for this site, which generally supported 300–400 plants. However, the status of this population is currently unknown due to a recent change in ownership.

In west Houston County, a population of 300–400 plants discovered on private land has been purchased by the Natural Area Preservation Association, a land trust organization, in order to protect this land in perpetuity. In east Houston County, a population was recently discovered in Compartment 55 in Davy Crockett National Forest (DCNF) at the south end of Forest Road 503. This population is large, but has not yet been fully tallied. DCNF represents the only public land within the range of the rose-mallow. In 2000, nearly 800 plants were introduced into Compartments 16 and 20 of the forest as part of a reintroduction effort. One population has retained high numbers, but the second has been impacted by a change in hydrology. A small dam may be installed to restore original wetland conditions. Three more sites in DCNF have been identified as potential sites for reintroduction efforts.

Some populations of this species are at risk of genetic swamping by other *Hibiscus* species. Hybridization has occurred at both the Ponta and Highway 94 sites. Stephen F. Austin State University (SFASU) is carrying out a genetic analysis of *H. dasycalyx* and similar species to better define morphological characteristics. SFASU is also carrying out a habitat study of *H. dasycalyx* and developing plants for reintroduction purposes. Because the threats continue to be of a high magnitude and are nonimminent, we retain a listing priority number of 5 for the Neches River rose-mallow.

Indigofera mucronata keyensis (Florida indigo)—See above in *''Summary of Listing Priority Changes in Candidates.''* The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Ivesia webberi (Webber ivesia)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Ivesia webberi* is a low, spreading, perennial herb that occurs very infrequently in Lassen, Plumas, and Sierra Counties in California, and in Douglas and Washoe Counties, Nevada. The species is restricted to sites with sparse vegetation and shallow, rocky soils composed of volcanic ash or derived from andesitic rock. Occupied sites generally occur on mid-elevation flats, benches, or terraces on mountain slopes above large valleys along the transition zone between the eastern edge of the northern Sierra Nevada and the northwestern edge of the Great Basin Desert. Currently, the global population is estimated at approximately 4.8 million individuals at 15 known sites. The Nevada sites support nearly 98 percent of the total number of individuals (4.7 million) on about 30 acres of occupied habitat. The California sites are larger in area, totaling about

156 acres, but support fewer individuals (approximately 115,000).

The primary threats to Webber ivesia include urban development, authorized and unauthorized roads, off-road vehicle activities and other dispersed recreation, livestock grazing and trampling, fire and fire suppression activities including fuels reduction and prescribed fires, and displacement by noxious weeds. Despite the high numbers of individuals, observations in 2002 and 2004 confirmed that direct and indirect impacts to the species and its habitat, specifically from urban development and off-highway vehicle activity, remain high and are likely to increase. However, the U.S. Forest Service has committed to develop a conservation strategy and monitoring program to protect this species on National Forest lands, and the State of Nevada has recently listed the species as critically endangered, which provides a mechanism to track future impacts on private lands. In addition, both the Forest Service and State of Nevada have agreed to coordinate closely on all activities that may affect this species. For these reasons, we have determined that the threats to Webber ivesia continue to be of a high magnitude and nonimminent and are maintaining the listing priority number of 5.

Joinvillea ascendens ssp. *ascendens* (Ohe)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. Ohe is an erect herb found in wet *Metrosideros polymorpha* forest on the islands of Kauai, Oahu, Molokai, Maui, and Hawaii, Hawaii. *Joinvillea ascendens* ssp. *ascendens* is known from 50 to 100 populations totaling 100 to 200 individuals throughout its range. Plants are typically found as only one or two individuals, with miles between populations. This subspecies is the only representative of this monotypic species in Hawaii. This subspecies is highly threatened by pigs that degrade and destroy habitat, by an unknown fungus, and by nonnative plants that outcompete and displace it. Because the threats continue to be of a high magnitude and are considered imminent, we retain a listing priority number of 3 for this subspecies.

Keysseria erici (no common name)—See above in *''Summary of Listing Priority Changes in Candidates* and *Other Taxonomic Changes in Candidates.''* The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Keysseria helenae (no common name)—See above in *''Summary of Listing Priority Changes in Candidates* and *Other Taxonomic Changes in Candidates.''* The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Korthalsella degeneri (Hulumoa)—See above in *''Summary of Listing Priority Changes in Candidates.''* The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Labordia helleri (Kamakahala)—See above in *''Summary of Listing Priority Changes in Candidates.''* The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Labordia pumila (Kamakahala)—See above in *''Summary of Listing Priority Changes in Candidates.''* The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Leavenworthia crassa (Gladecress)—The following information is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. This species of gladecress is a component of glade flora, occurring in association with limestone outcroppings. *Leavenworthia crassa* is endemic to a 13-mile radius area in north central Alabama in Lawrence and Morgan Counties, Alabama, where only six populations of this species are documented. Glade habitats today have been reduced to remnants fragmented by agriculture and development. Populations of this species are now located in glade-like areas exhibiting various degrees of disturbance including pastureland, roadside rights-of-way, and cultivated or plowed fields. The most vigorous populations of this species are located in areas which receive full or near full sunlight with limited herbaceous competition. The magnitude of threat continues to be high for this species particularly with the limited number of populations, and the immediacy of threat is nonimminent since there are no known projects planned that would destroy any sites and the species is able to withstand some disturbance. Thus, we retain a listing priority number of 5 for this species.

Leavenworthia texana (Texas golden gladecress)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Texas golden gladecress is a small annual member of the mustard family, with deep, yellow petals only 7–10 mm long; flowering is February through March. The gladecress occurs only on the Weches outcrops of east Texas in San Augustine County and, historically, Sabine County. The Weches geologic formation consists of a layer of calcareous sediment, lying above a layer of glauconite clay deposited up to 50 million years ago. Erosion of this fossil-rich complex has produced a rugged topography of steep, flat-topped hills and escarpments along Highway 21 through north San Augustine County and west Sabine County. It has also created the unique ecology of Weches glades: islands of thin, loamy, seepy, alkaline soils that support open-sun, herbaceous, and highly diverse and specialized plant communities.

More than 100 species representing at least 39 plant families, including the federally endangered white bladderpod (*Lesquerella pallida*), have been documented on Weches glades. The gladecress was historically recorded at eight sites, all in a narrow line along north San Augustine County and west Sabine County, following the Weches formation. All sites are on private land. Habitat of the species at two of these locations has since been eliminated due to glauconite mining. Two more sites are currently closed to visitors and the status of the gladecress at these sites is unknown. However, a large, currently closed glauconite mine was created just adjacent to these sites 6 years ago, and may have altered the area's hydrology. One historic site in Sabine County (east of San Augustine County) was rediscovered in 1998 and found to support over 300 plants. However, this site has since been modified by the landowner and may no longer support gladecresses. Only two known populations remain in San Augustine County. The Chapel Hill site is less than 0.1 ha (less than ¼ ac) in size and supports population numbers of 67–200. The Kardell site is less than 9 m^2 (less than 100 ft^2) in size and supports 96–490 plants. An introduced population in Nacogdoches County has numbered about 270–300 within an area of about 18 m^2 (200 ft^2). A ninth site may have been discovered in 1995 but has not been confirmed in recent years.

Historic gladecress habitat has been affected by highway construction, residential development, conversion to pasture and cropland, widespread use of herbicide, overgrazing, and glauconite mining. However, the primary current threat to existing gladecress populations is the invasion of nonnative and weedy

shrubs and vines (primarily Macartney rose (*Rosa bracteata*) and Japanese honeysuckle (*Lonicera japonica*). All known sites are undergoing severe degradation by the incursion of nonnative shrubs and vines, which restrict both growth and reproduction of the gladecress. Special funding allowed brushclearing to be carried out in 1995 at several white bladderpod sites (where gladecress is also located). The project resulted in large increases in bladderpod numbers, and also resulted in the reappearance of gladecress after a 10-year absence at one historic site, and a possible discovery at a second site. However, nonnative shrubs have again invaded these areas. More effective control measures, such as burning and selective herbicide use, need to be tested and monitored.

The small number of known sites also makes the gladecress vulnerable to extreme natural disturbance events. A severe drought in 1999 and 2000 had a pronounced adverse effect on gladecress reproduction. Prelisting efforts for the gladecress include: The collection of seeds and placement in three State horticultural labs for possible reintroduction efforts, a Cooperative Agreement (now complete) with The Nature Conservancy of Texas, and development of a ''Conservation Area Plan for the San Augustine Glades,'' which identifies the size and configuration of conservation units that will restore and maintain long-term viability of Weches communities. The next step is to secure adequate funding to initiate protection measures. Landowners of the Chapel Hill and Kardell sites are aware of the gladecress and are maintaining current land-use conditions. Efforts to find additional sites, and management of known sites, should be the focus for this species. Due to the continuing overall high magnitude and immediacy of the threats, we retain a listing priority number of 2 for the Texas golden gladecress.

Lesquerella globosa (Desvaux) Watson (Short's bladderpod)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. Short's bladderpod occurs in Indiana, Kentucky, and Tennessee. The species is closely associated with outcrops of calcareous rock and is found on steep, rocky, wooded slopes and talus areas, and along cliff tops and bases and cliff ledges. Historically, there were at least 57 sites supporting Short's bladderpod. Of these 57 sites, only 33 are currently extant. All remaining populations are small and vulnerable to extirpation. Populations vary in size from 2 to about 1,500 individuals; most contain fewer than 50 plants. Road construction and road maintenance have played a significant role in the decline of the species. These activities continue to pose threats to the continued existence of most populations. Impoundments and artificial water level manipulation threatened and, in some cases, have destroyed sites supporting the species. Many of the Short's bladderpod locations are adjacent to rivers and streams, and impoundment and water level manipulation still threaten the species. Invasive nonnative vegetation is a significant threat at most sites. Most of the sites (91 percent) for this species are under private ownership or within the rights-of-way of State and county roads. Of the other sites, two of the Tennessee sites are on lands managed by the U.S. Army Corps of Engineers, Nashville District. One Tennessee site is on State-owned lands. The Indiana site is on land owned and managed by The Nature Conservancy. The threats faced by these species continue to be significant (*i.e.*, high in magnitude); however, it is not anticipated that they will be subject to these threats in the immediate future (next 1–2 years). Therefore, we retain a listing priority of 5 for this species.

Lesquerella tuplashensis (White Bluffs bladder-pod)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. This is a low-growing, herbaceous, short-lived, perennial plant in the Brassicaceae (mustard) family. Specimens of White Bluffs bladder-pod were first collected in 1883, although they were not taxonomically identified at the time. The same population was rediscovered in 1994 and formally described as a distinct species in 1996. Historically and currently, White Bluffs bladder-pod has only been known from this single population that occurs along the White Bluffs of the Columbia River in Franklin County, Washington. The species has a discontinuous distribution along a narrow band, approximately 33 feet (10 meters) wide by 10.6 miles (17 kilometers) long, at the upper edge of the bluffs. The species occurs on cemented, highly alkaline, calcium carbonate, paleosol (a ''caliche'' soil). Eighty-five percent of the population is on Federal land within the Hanford Reach National Monument/Saddle Mountain National Wildlife Refuge, which is jointly managed by the Service and U.S. Department of Energy. The balance of the species' distribution is on adjacent private land. White Bluffs bladder-pod is vulnerable to localized impacts because of its extremely limited distribution and specific habitat requirements. Water seepage from adjacent, up-slope agricultural irrigation causes mass failures and landslides throughout the length of the White Bluffs. Approximately 35 percent of the species' known range has been moderately to severely impacted by landslides. All mass-failures occurring along the White Bluffs, with one exception, are found in association with water seepage. Water, particularly water from irrigated agriculture adjacent to the bluffs, is the primary factor triggering the mass-failures. The entire population of *Lesquerella tuplashensis* is down-slope of irrigated agricultural land, and is at risk of landslides induced by water-seepage. The threat is greater in the southern portion of the species distribution where irrigated agriculture is closest, and in several locations directly adjacent to, the bluffs. Other threats to White Bluffs bladder-pod include direct damage of plants by off-road vehicles and recreational activities (*e.g.*, hiking, bicycling, wildflower collecting). Based on the available information, the magnitude of threats to White Bluffs bladder-pod continue to be high while these identified threats are nonimminent. Thus, we retain a listing priority of 5 for this species.

Linum arenicola (Sand flax)—The following summary is based on information in our files. No new information was provided in the petition received on May 11, 2004. This wiry, yellow-flowered perennial herb with linear leaves is found in tropical pinelands on limestone rock (pine rockland), marl prairie, and disturbed areas on limestone. These habitats are maintained by periodic fires that control shrubs and remove leaf litter. Sand flax is currently known from four sites in Miami-Dade County, Florida: Camp Owaissa Bauer (owned by Miami-Dade County), a private preserve, the Luis Martinez U.S. Army Reserve Station Richmond Pine Rocklands (managed by Miami-Dade County), and Homestead Bayfront Park (on a limestone canal levee). In Monroe County (the Florida Keys), it is present on Big Pine Key (National Key Deer Refuge; the Terrestris Preserve, operated by The Nature Conservancy; and on private land). It is also present in the Sugarloaf Hammocks of Florida Keys Wildlife and Environmental Area on Sugarloaf Key, operated by the Florida Fish and Wildlife Conservation Commission. The total population is about 10,000 plants, with 1,000 to 3,000 occurring in completely artificial environments. The only population exceeding 1,000 plants

is believed to be the one on Big Pine Key. The small sizes of the existing populations and ongoing threats from exotic pest plants continue to create a serious risk of extinction for this species. Therefore, we retain a listing priority number of 2 for the sand flax.

Linum carteri var. *carteri* (Carter's small-flowered flax)—The following summary is based on information in our files. No new information was provided in the petition received on May 11, 2004. Carter's small-flowered flax is found only on the Miami Rock Ridge in Miami-Dade County, Florida. It is an erect, annual, or short-lived perennial herb, often with several stems roughly 1 foot tall. Fewer than 1,000 individuals were estimated to exist as of 1999. About that time, a population disappeared from the Deering Estate at Cutler, a county-managed conservation tract. Carter's small-flowered flax is currently known from three occurrences on conservation lands and perhaps six other locations. It is protected at three conservation areas owned by Miami-Dade County: Camp Owaissa Bauer, R. Hardy Matheson Preserve, and Rockdale Pineland. It is present at the U.S. Department of Agriculture's Subtropical Horticulture Research Station (Chapman Field). It was reported from Homestead Air Reserve Base, but we do not have recent confirmation that it is still present there. It is also present at three privately owned locations. Residential and commercial development and agriculture have substantially reduced the habitat for this plant, which now exists in such small numbers that it is highly vulnerable. Based on imminent threats that continue to be of a high magnitude, we retain a listing priority number of 3 for Carter's small-flowered flax.

Lysimachia daphnoides (Lehua makanoe)—*See above* in *''Summary of Listing Priority Changes in Candidates.''* The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Melicope christophersenii (Alani)—*See above* in *''Summary of Listing Priority Changes in Candidates.''* The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Melicope degeneri (Alani)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Melicope degeneri* is a small, long-lived perennial shrub found in mesic to wet forest on Kauai, Hawaii. *Melicope degeneri* was thought to be extinct, having only been collected from the type location along Kokee Stream on the island of Kauai. Ten individuals of this species were rediscovered in Hanakoa Valley in 1993, at a site 4 mi (6 km) from the type location, one individual in Koaie Canyon, and one individual at Pohakuao. Since then, three additional plants were found in Hanakoa Valley, bringing the total number of individuals to 15. This species is threatened by feral goats, nonnative plants, the black twig borer, reduced reproductive vigor, and extinction due to naturally occurring random events. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Melicope hiiakae (Alani)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Melicope hiiakae* is a small tree found in mesic to wet forest and shrubland on Oahu, Hawaii. Currently, *M. hiiakae* is known from four or five populations of about 20 individuals in the Koolau Mountains. This species is threatened by feral pigs that eat this plant and degrade and or destroy its habitat, nonnative plants that outcompete it, and the black twig borer that potentially preys upon it. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Melicope makahae (Alani)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Melicope makahae* is a shrub or shrubby tree found in mesic forest on Oahu, Hawaii. *Melicope makahae* was historically found throughout the central Waianae Mountains. Currently *M. makahae* is known from three populations on three discrete ridges, totaling approximately 200 individuals. This species is threatened by goats that eat this plant and degrade and/or destroy habitat, nonnative plants that outcompete it, and the black twig borer that potentially preys upon it. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2.

Melicope paniculata (Alani)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Melicope paniculata* is a small tree found in wet forest dominated by *Metrosideros polymorpha* on Kauai, Hawaii. Historically known from four scattered populations within central Kauai, *M. paniculata* is currently known from four populations totaling 110 individuals. This species is threatened by feral pigs that eat this plant and degrade and/or destroy habitat, nonnative plants that outcompete it, and the black twig borer that potentially preys upon it. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Melicope puberula (Alani)—See above in *''Summary of Listing Priority Changes in Candidates.''* The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Myrsine fosbergii (Kolea)—See above in *''Summary of Listing Priority Changes in Candidates.''* The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Myrsine mezii (Kolea)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Myrsine mezii* is a small many-branched tree found in mesic forest on Kauai, Hawaii. This recently rediscovered species is known from two populations of only five individuals in Koaie Canyon. This species is threatened by feral pigs that eat this plant and degrade and/or destroy habitat, reduced reproductive vigor, and by extinction due to naturally occurring events (*e.g.* hurricanes and landslides). Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Myrsine vaccinioides (Kolea)—See above in *''Summary of Listing Priority Changes in Candidates.''* The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Narthecium americanum (Bog asphodel)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. Bog asphodel is a perennial herb that is found in savannah areas, usually with water moving through the substrate, as well as in sandy bogs along streams and rivers. The historic range of bog asphodel included New York, New Jersey, Delaware, North Carolina, and South Carolina, but is now only found within the Pine Barrens region of New Jersey.

As an obligate wetland species, *N. americanum* is threatened by changes in hydrology, loss of habitat due to filling

or draining of wetlands, flooding as a result of reservoir construction, and conversion of natural wetlands to commercial cranberry bogs. This species occurs in the Pine Barrens region, and the Pinelands Commission issues the State-assumed Clean Water Act Section 404 permits. The Pinelands Commission grants wetland exemptions to cranberry production and other agricultural uses. Illegal wetland filling is occurring. For example, a cranberry expansion was illegally completed without a State permit. In addition, activities not needing State or federal permits are occurring in uplands that are indirectly affecting the wetlands. Natural succession of vegetation in wetlands supporting bog asphodel from emergent (herbaceous) to forested wetlands may also be contributing to the species' decline. Suppression of natural wildfires that would retard succession or create open wetland savannahs may be a factor in the decline of the species.

Other factors adversely affecting *N. americanum* include trampling, erosion, and siltation caused by recreationists on foot or using off-road vehicles. Approximately 70 percent of known extant populations occur on State-owned lands. We are working with the New Jersey Department of Environmental Protection to abate known moderate threats at these sites from recreational use and erosion. Approximately 30 percent of the known extant sites are on privately owned lands, many of which are threatened by habitat degradation from on-site or adjacent residential or commercial development. Overall, based on these imminent, moderate threats, we retain a listing priority number of 8 for this species.

Nothocestrum latifolium (Aiea)—See above in *''Summary of Listing Priority Changes in Candidates.''* The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Ochrosia haleakalae (Holei)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. Holei is a tree found often on lava in dry-to-mesic forest on the islands of Hawaii and Maui, Hawaii. This species is currently known from three populations totaling 150 to 250 individuals on east Maui and the island of Hawaii. This species is threatened by feral pigs, goats, and cattle that eat this plant and degrade and/or destroy habitat, nonnative plants that outcompete it, and fire. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Paronychia congesta (Bushy whitlow-wort)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. Bushy whitlow-wort is endemic to Jim Hogg County, Texas. The species is known from only two population sites, which occur within 2 miles of each other, and within the drainage of two tributaries of the Arroyo Grande. The bushy whitlow-wort was historically known only from the type locality where 2,000 individual plants were documented. In 1987, a second small population of 100 individuals was found 2 miles north-northeast of the type locality. The limited available data suggest that the current range and distribution of the species has not changed from the historical information described above. The two known populations occur on small areas that cover approximately 5 and 15 acres; whether populations have expanded or contracted is unknown.

Threats include destruction, modification, and fragmentation of habitat, as well as eradication of individual plants. Destruction of habitat due to the conversion of rangeland to residential development is considered not imminent, nor of high magnitude since this part of southern Texas is not undergoing rapid residential or industrial development. The alteration of whitlow-wort habitat by brush clearing and replanting to nonnative forage grasses may be declining, as this type of land conversion has fallen out of favor across many parts of the Rio Grande Plains as wildlife-related income has gained importance in the regional economy. Currently, the bushy whitlow-wort is primarily threatened by the displacement or destruction of individual plants by construction activities associated with highways, pipeline installation, oil and gas exploration, and well-pad construction. Right-of-way maintenance activities may also have negative effects on the species, and both bushy whitlow-wort populations are dissected by rights-of-way. At this time, we do not know the status of oil and gas exploration and production activities in this area, nor do we have information on right-of-way maintenance. With regard to highway construction and maintenance, the closest highway is a Farm/Ranch road that has not been expanded or rebuilt recently.

The lack of imminent threats to this plant from habitat conversion is born out by observations that land use has not changed in this area in the past 10 years. No imminent threats have been identified for this species. All habitats are located on private land, which continues to be used for ranching. We do not have any information to indicate that a high level of disturbance has occurred as a result of these activities; however, access to the property has been discouraged. Thus, based on nonimminent threats that continue to be of a moderate-to-low magnitude, we retain a listing priority number for this species is 11.

Pediocactus peeblesianus var. *fickeiseniae* (Fickeisen plains cactus)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. The Fickeisen plains cactus is a small cactus known from the Gray Mountain vicinity to the Arizona Strip in Coconino and Mohave Counties, Arizona. The cactus grows on exposed layers of Kaibab limestone on canyon margins and well-drained hills in Navajoan desert or grasslands. In 1998, the Arizona Game and Fish Department noted 23 element occurrences for the species, including historical ones. Specific population sizes are unavailable, because demographic monitoring does not include individual plant counts and the species tends to shrink into the ground during times of drought, making accurate counts difficult. The major potential human-induced threats to this cactus are damage by off-road vehicles and trampling associated with livestock grazing. While this cactus is protected from collection by the Arizona Native Plant Law, illegal collection is also a threat for species in the genus Pediocactus. Because of the continuing high magnitude of nonimminent threats, we retain a listing priority number of 6.

Penstemon debilis (Parachute beardtongue)—See above in *''Summary of Listing Priority Changes in Candidates.''* The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Penstemon grahamii (Graham beardtongue)—The following summary is based on information contained in our files and the petition received on October 8, 2002. *Penstemon grahamii* is restricted to calcareous soils derived from oil shale barrens of the Green River Formation in the Uinta Basin of northeastern Utah and adjacent Colorado. The species population is estimated at about 7,000 individuals with 36 known occurrences. Most of the occupied habitat of *P. grahamii* is within developed and expanding oil

and gas fields with several wells and access roads within the species' occupied habitat. The location of *P. grahamii* habitat exposes it to possibility of habitat destruction from off-road vehicle use, as well as road, pipeline, and well-site construction in connection with oil and gas development. Collection of plants and seeds is a significant threat due to the actions of rock-garden enthusiasts to obtain this very attractive plant. The species is heavily grazed by wildlife (rodents, rabbits, and possibly deer) and by livestock (primarily sheep). Livestock trampling is affecting some populations. The threats associated with oil and gas development within the habitat of *P. grahamii* are imminent in light of the increased seismic survey and petroleum leasing. Therefore, we retain a listing priority number of 2 for this species because the threats continue to be of high magnitude, and are imminent.

Penstemon scariosus var. *albifluvis* (White River beardtongue)—The following summary is based on information contained in our files and the petition received on October 27, 1983. The White River beardtongue is restricted to calcareous soils derived from oil shale barrens of the Green River Formation in the Uinta Basin of northeastern Utah and adjacent Colorado. There are three known populations. Most of the occupied habitat of the White River beardtongue is within developed and expanding oil and gas fields. The location of the species' habitat exposes it to destruction from ORV use, and road, pipeline, and well-site construction in connection with oil and gas development. With such a small population and limited occupied habitat, any substantial destruction, modification, or curtailment of the habitat could have a highly negative impact on the species. Additionally, the species is heavily grazed by wildlife and livestock and is vulnerable to livestock trampling. Based on current information, we are retaining the listing priority number of 6.

Peperomia subpetiolata (Ala ala wai nui)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. Ala ala wai nui is a short-lived perennial herb found in mesic forest on Maui, Hawaii. This species is known from a few scattered and declining populations on windward east Maui, totaling 100 individuals. Further study of the population indicates that the 100 individuals may actually represent clones of only 6 genetically distinct individuals. This species is threatened by feral pigs that eat this plant and degrade and/or destroy habitat, and by nonnative plants. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Phacelia submutica (DeBeque phacelia)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Phyllostegia bracteata (no common name)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Phyllostegia bracteata* is a scandent (climbing) perennial herb. Apparently rare and endemic to the island of Maui, *P. bracteata* is known from three populations totaling no more than 100 individuals in wet forest habitat of east Maui. This species is threatened by feral pigs that eat this plant and degrade and/or destroy habitat, nonnative plants that compete for light and nutrients, and reduced reproductive vigor and extinction from naturally occurring events due to small population sizes. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Phyllostegia floribunda (no common name)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Phyllostegia hispida (no common name)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Phyllostegia hispida* is a loosely spreading many-branched vine found in wet forest on Molokai, Hawaii. The historic range of this species was eastern Molokai. Currently, *P. hispida* is known from only two plants, one in The Nature Conservancy's Kamakou Preserve and one in Puu Alii Natural Area Reserve. This species is threatened by feral pigs that eat this plant and degrade and/or destroy habitat, erosion, reduced reproductive vigor, and extinction due to naturally occurring events. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Pittosporum napaliense (Hoawa)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Platanthera integrilabia (Correll) Leur (White fringeless orchid)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. White fringeless orchid occurs in Alabama, Georgia, Kentucky, South Carolina, and Tennessee. Historically, it also occurred in Georgia, Mississippi, North Carolina, and Virginia. It grows in wet, boggy areas at the head of streams and on seepage slopes. It is often associated with *Sphagnum* in partially, but not fully, shaded areas. Historically, there were at least 90 populations of white fringeless orchid. Currently there are only 53 extant sites supporting the species. Threats to the species include habitat modification activities such as road construction, all-terrain vehicles, residential and commercial construction, and soil and site hydrology altering projects that reduce site suitability for the species. Timber management is not necessarily incompatible with the protection and management of white fringeless orchid. However, care must be taken during timber management to ensure that the hydrology of the bogs that support the species is not altered, that any heavy equipment used is kept out of the species' habitat, and that the vegetation is managed in a manner that maintains suitable light and moisture conditions. Collecting for commercial and other purposes, herbivory, and disease all threatened this species. Invasive nonnative plants threaten several sites. The threats faced by this species are significant; however, it is not anticipated that it be subject to these threats in the immediate future (next 1–2 years). Therefore we retain a listing priority of 5 for this species.

Platydesma cornuta var. *cornuta* (no common name)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Platydesma cornuta var. *decurrens* (no common name)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Platydesma remyi (no common name)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11,

2004. *Platydesma remyi* is a shrub or shrubby tree found scattered in wet, low statured forest on the island of Hawaii, Hawaii. This species is known from two populations (one each in the Kohala Mountains and Hamakua) totaling less than 100 individuals. This species is threatened by feral pigs and cattle, nonnative plants, and reduced reproductive vigor and extinction from naturally occurring events due to small population sizes. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Platydesma rostrata (Pilo kea lau lii)—See above in ''*Summary of Listing Priority Changes in Candidates*.'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Pleomele forbesii (Hala pepe)—See above in ''*Summary of Listing Priority Changes in Candidates*.'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Potentilla basaltica (Soldier Meadow cinquefoil or basalt cinquefoil)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. Soldier Meadow cinquefoil is a low-growing, rhizomatous, herbaceous perennial that is associated with alkali meadows, seeps, and occasionally marsh habitats bordering perennial thermal springs, outflows, and meadow depressions. In Humboldt County, Nevada, the species is known only from Soldier Meadow, which is located at the northern extreme of the western arm of the Black Rock Desert in the transition zone between the Basin and Range Physiographic Province and the Columbia Plateau Province. In northeastern California, the species is known from Ash Valley near Ash Creek in Lassen County. In Nevada, Soldier Meadow cinquefoil has been documented from 10 discrete occurrences within an area of about 70 acres that supports about 130,000 individuals. On private lands, the population occupies less than an acre and supports fewer than 1,000 plants. The species and its habitat are threatened by increasing recreational use in the areas where the species occurs, livestock grazing, and activities associated with the use of authorized and unauthorized roads. Despite the relatively high number of individuals observed and the apparently stable population trend, concern over increasing and intense recreational use has prompted the Service to maintain the magnitude of threats to the species as high. However, the threats to Soldier Meadow cinquefoil from various land uses are currently considered nonimminent because of the commitments to conservation made by the BLM through implementation of a regional resource management plan. Based on this information, we are maintaining a listing priority number of 5.

Pritchardia hardyi (Loulu)—See above in ''*Summary of Listing Priority Changes in Candidates*.'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Pseudognaphalium (*Gnaphalium*) *sandwicensium* var. *molokaiense* (Enaena)—See above in ''*Summary of Listing Priority Changes in Candidates*.'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Psychotria grandiflora (Kopiko)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Psychotria grandiflora* is a small tree or shrub found in mesic to sometimes wet forest on Kauai, Hawaii. This species is found only in the Kokee area on the island of Kauai. The historic range of this species was throughout Kauai's mesic and wet forests. While there are no historic records of numbers of populations or individuals, qualitative accounts indicate that the species was relatively widespread and abundant. Mesic and wet forest habitats have been significantly degraded by human activities and natural events. Recent surveys show that the species is now limited to four populations, totaling 18 individuals. This species is highly threatened by feral pigs and goats that eat this plant and degrade and/or destroy habitat, and nonnative plants that compete for light and nutrients. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Psychotria hexandra var. *oahuensis* (Kopiko)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Psychotria hexandra* var. *oahuensis* is a tree or shrub found in mesic and wet forests on Oahu, Hawaii. This subspecies is known from three populations of eight individuals of the variety *oahuensis.* The other varieties of this subspecies, *hoskana* and *rockii*, are extinct. The historic range of this subspecies was throughout the mesic and wet forests on the island of Oahu. While there are no historic records of numbers of populations or individuals, mesic and wet forests were once abundant on Oahu and it is assumed that the subspecies was relatively widespread. This species is now restricted to the Koolau Mountains. This species is threatened by feral pigs that eat it and degrade and/or destroy habitat, and by nonnative plants that compete for light and nutrients. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 3 for this plant variety.

Psychotria hobdyi (Kopiko)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Psychotria hobdyi* is a tree found in mesic forest habitat on Kauai, Hawaii. This species is known from three populations totaling approximately 85 individuals. This species is threatened by feral goats that eat this plant and degrade and/or destroy habitat, nonnative plants that compete for light and nutrients, reduced reproductive vigor, and stochastic extinction due to naturally occurring events. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Pteralyxia macrocarpa (Kaulu)—See above in ''*Summary of Listing Priority Changes in Candidates*.'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Ranunculus hawaiensis (Makou)—See above in ''*Summary of Listing Priority Changes in Candidates*.'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Ranunculus mauiensis (Makou)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Ranunculus mauiensis* is an erect to weakly ascending perennial herb found in open sites in mesic-to-wet forest and along streams on Maui and Kauai, Hawaii. *Ranunculus mauiensis* was historically known from the islands of Hawaii, Maui, Molokai, Oahu, and Kauai. It is currently known from less than 30 individuals on Maui and 30 individuals on Kauai. This species is threatened by feral pigs and slugs that eat this plant and degrade and/or

destroy habitat, and by nonnative plants that compete for light and nutrients. Because the threats continue to be of a high magnitude and are ongoing and therefore imminent, we retain a listing priority number of 2.

Rorippa subumbellata (Tahoe yellow cress)—see resubmitted petition finding published in the **Federal Register** on December 27, 2004 (69 FR 77167).

Schiedea attenuata (no common name)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Schiedea attenuata* is an erect, sparingly branched shrub found on cliffs in diverse mesic forest habitat on Kauai, Hawaii. This recently discovered species is known from one population of less than 20 individuals on the cliffs of Kalalau Valley. This species is threatened by feral goats that eat this plant and degrade and/or destroy habitat, and by nonnative plants that compete for light and nutrients. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Schiedea pubescens (Maolioli)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. Maolioli is a reclining or weakly climbing vine found in diverse mesic-to-wet forest on Maui and Molokai, Hawaii. *Schiedea pubescens* was historically found scattered in mesic-to-wet forest habitat on the islands of Molokai, Lanai, and Maui. Currently, this species, which is declining, is known from 6 populations totaling approximately 100 individuals on Maui and Molokai. This species is threatened by feral goats that eat this plant and degrade and/or destroy habitat, and by nonnative plants that compete for light and nutrients. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Schiedea salicaria (no common name)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Schiedea salicaria* is an erect subshrub or shrub found on ridges and steep slopes in dry shrubland on Maui, Hawaii. While there are no historic records of numbers of populations or individuals, qualitative accounts indicate that this species was not uncommon on west Maui. Currently, this species is declining throughout its range, and it is known from several populations totaling 100 to 300 individuals, typically of 25 individuals per population. This species is threatened by cattle that eat this plant and degrade and/or destroy habitat, fire, and nonnative plants that compete for light and nutrients. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Sedum eastwoodiae (Red Mountain stonecrop)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. Red Mountain stonecrop is a perennial succulent which occupies relatively barren, rocky openings and cliffs in lower montane coniferous forests which occur between 1,900 and 4,000 feet. Its distribution is limited to Red Mountain, Mendocino County, California, where it occupies 30 ac scattered over 4 mi^2. Total population size is estimated as 5,300 to 23,000 plants, which occur in 27 polygons. Intensive monitoring suggests considerable annual variation in plant seedling success and inflorescence production; stonecrop density varied from year to year. The primary threat to the species is the potential for mining; the species distribution overlaps a number of mining claims, none of which are currently active. Surface mining, which would destroy all habitat suitability in affected areas, would be used to extract chromium and nickel. The species distribution by ownership is described as follows: Federal (Bureau of Land Management), 95 percent; and private, 5 percent. Given the magnitude (high) and immediacy (nonimminent) of the threat to the small, scattered populations, and its taxonomy (species), we retain a listing priority number of 5 for this species.

Sicyos macrophyllus (Anunu)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Sidalcea hickmanii ssp. *parishii* (Parish's checkerbloom)—The following summary is based on information contained in our files and the petition received in 1975. Parish's checkerbloom is known from San Bernardino, Santa Barbara, and San Luis Obispo counties in southern California. Two populations occur in San Bernardino County. No more than a dozen plants have been found in one of these populations in the last decade. Populations of this plant have been reduced by habitat loss from road construction, expansion of recreational and communication facilities; trampling from recreational activities; and grazing impacts from cattle and wildlife. Fire suppression and alteration of natural fire regimes are also a potential threat to this plant. The first location is within a 2-hour drive of 14 million people and is popular with recreationalists. Recreational use and development in San Bernardino National Forest and adjacent private inholdings continues in a manner that is likely to preclude the opportunity to preserve existing plants and conduct prescribed burns to promote the persistence of this species. The second population of 4 individuals was recently discovered on the north slope of the San Bernardino Mountains the year following a fire. This location is a notably drier location than any of the others found to date and expands the model of what constitutes suitable habitat for the species. The populations in Santa Barbara and San Luis Obispo Counties are more remote from developed recreational areas. In these locations, opportunities still exist to conduct prescribed burns in a manner that would promote the persistence of this species. Because this portion of the species' range is exposed to less severe threats, we conclude that the magnitude of threat to the species as a whole is moderate to low. Although we believe the threat to this species is higher in the southernmost portion of its range, the discovery of another population there and the potential broadening of what might be considered suitable habitat has slightly reduced the overall threat of extinction of the species. Additionally, we have new information indicating the threat situation of *Sidalcea hickmanii* ssp. *parishii* has improved in previous years. However, we have not yet completed our analysis of the current plant information, and consequently have not made a determination as to whether candidate status is still warranted in light of this new information. We expect to complete the analysis of the data within the next 12 months. Until we complete this analysis, we are retaining a listing priority number of 9 for this subspecies.

Solanum nelsonii (Popolo)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Stenogyne cranwelliae (no common name)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Stenogyne cranwelliae* is a creeping vine found in wet forest dominated by *Metrosideros polymorpha*

on the island of Hawaii, Hawaii. *Stenogyne cranwelliae* is known from 6 populations of 100 individuals. Historically found in the Kohala Mountains, this species was thought to be extinct until rediscovered during surveys of the Kohala Mountains in 1995. This species is threatened by feral pigs and rats that eat this plant and degrade and/or destroy habitat, and nonnative plants that complete for light and nutrients. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Stenogyne kealiae (no common name)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Stenogyne kealiae* is a trailing or scandent vine found in wet forest habitat on Kauai, Hawaii. This species is known from 5 populations totaling 100–200 individuals in the northwestern section of the island of Kauai. This species is threatened by feral pigs, goats and deer that eat this plant and degrade and/or destroy habitat, and by nonnative plants that complete for light and nutrients. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Symphyotrichum georgianum (Georgia aster)—The following summary is based on information from our files. No new information was provided in the petition received on May 11, 2004. Georgia aster is a relict species of post oak savanna/prairie communities that existed in the southeast prior to widespread fire suppression and extirpation of large native grazing animals. Most populations are small, and since the species' main mode of reproduction is vegetative, each isolated population probably represents just a few genotypes. Many populations are threatened by woody succession due to fire suppression, development, highway expansion/improvement, and herbicide application. Historically, 97 populations of Georgia aster were known to exist; 34 of these have apparently been destroyed. The species appears to have been eliminated from Florida, one of the five States in which it originally occurred. It remains in 31 counties in 4 States (North Carolina, South Carolina, Alabama, and Georgia). In most cases the exact cause of extirpation was not documented, but herbicides, highway construction, fire suppression, and residential and industrial development have all altered the historic landscape in which Georgia aster once flourished. Most remaining populations of this species survive adjacent to roads, railroads, utility rights-of-way and other openings where land management mimics natural disturbance regimes. However, at these sites the species is inherently vulnerable to accidental destruction from herbicide application, road shoulder grading, and other maintenance activities. Many populations are threatened also by development (several are within planned residential subdivisions), highway expansion/improvement, and woody succession due to fire suppression. Two of the remaining populations are located adjacent to active quarries, which could eliminate the plants as the quarries expand. One population has been lost to competition with kudzu (*Pueraria lobata*), a nonnative plant. The threats faced by this species are significant; however, they continue to be nonimminent, leading to us to retain a listing priority number of 5 for this species.

Zanthoxylum oahuense (Ae)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. Ae is small tree found in mesic-to-wet forest habitat on Oahu, Hawaii. The historic range of *Zanthoxylum oahuense* was throughout mesic or, rarely, wet forest in the Koolau Mountains on the island of Oahu. While there are no historic records of numbers of populations or individuals, qualitative accounts indicate that the species was not uncommon. Currently this species is known from several populations totaling approximately 500 individuals on Oahu. This species is threatened by feral pigs that eat this plant and degrade and/or destroy habitat, the nonnative two spotted leaf hopper that eats this plant species, and nonnative plants that compete for light and nutrients. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Ferns and Allies

Botrychium lineare (Slender moonwort)—The following summary is based on information contained in our files and the petition received on July 28, 1999. See also the 12-month petition finding published on June 6, 2002 (67 FR 39035). The slender moonwort is currently known from a total of 12 widely disjunct populations in 6 states: 3 in Colorado (El Paso and Lake Counties), 1 in Idaho (Custer County), 2 in Oregon (Wallowa County), 3 in Montana (Glacier County), 2 in Nevada (Clark County) and 1 in Washington (Ferry County). Historic populations, previously known from Idaho (Boundary County), Montana (Lake County), California (Fresno County), Colorado (Boulder County), and Canada (Quebec and New Brunswick), have not been seen for several years and may be extirpated. The total number of individuals observed at the 12 extant population sites varies, with observations ranging from 2 to 162 individuals. Identifiable threats to various populations of this species include road maintenance activities, herbicide application, recreation, timber harvest, trampling, and development. The slender moonwort may also be affected by grazing from livestock or wildlife, but specific effects of grazing on the species are unknown. However, if grazing by livestock or wildlife species occurs prior to the maturation and release of spores, the capacity for sexual reproduction of affected plants may be compromised.

The slender moonwort is considered a sensitive species in Regions 2, 5, and 6 of the U.S. Forest Service, where National Forest system lands include extant and historical slender moonwort sites found in Colorado, Oregon, Washington, and California. Regional sensitive species lists fall under Forest Service policies that address land use planning and management with regard to sensitive species. Forest Service Regions 1 and 4, which include extant and historical sites found in Montana and Idaho, do not have slender moonwort on their regional sensitive species lists and it is, therefore, not given any special consideration by the Forest Service in those regions. Although the slender moonwort is considered to be rare and imperiled by the State Natural Heritage Programs in Colorado, Montana, Oregon, and Washington, the State Natural Heritage Program rankings are not legal designations and do not confer State regulatory protection to this species. Because the overall magnitude of threats to the slender moonwort throughout its range continues to moderate and the overall immediacy of these threats is nonimminent, we retain a listing priority number of 11.

Christella boydiae (no common name)—See above in ''*Summary of Listing Priority Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Doryopteris takeuchii (no common name)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. *Doryopteris takeuchii* is a small

fern found in dry shrubland and grassland on Oahu, Hawaii. This newly described species is found only on the island of Oahu on the slopes of Diamond Head Crater in one population totaling hundreds of individuals. It is suspected that this species evolved relatively recently and never had a wide historic distribution on Oahu, but the magnitude of the threats facing the species has increased dramatically. This species is threatened by nonnative plants, fire, trampling, and erosion, which degrade and/or destroy habitat. Because the threats continue to be of a high magnitude and are imminent, we retain a listing priority number of 2 for this species.

Huperzia stemmermanniae (no common name)—See above in ''*Other Taxonomic Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Microlepia strigosa var. *mauiensis* (no common name)—See above in ''*Summary of Listing Priority Changes in Candidates* and *Other Taxonomic Changes in Candidates.*'' The above summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004.

Petitions To Reclassify Species Already Listed

We previously made warranted-but-precluded findings on five petitions seeking to reclassify threatened species to endangered status. Because these species are already listed, they are not technically candidates for listing and are not included in Table 1. However, this notice and associated species assessment forms also constitute the resubmitted petition findings for these species. We find that reclassification to endangered status for the species listed below is currently warranted but precluded by work identified above (*see ''Petition Findings for Candidate Species''* above). In addition, these species are currently listed as threatened under the Act, and therefore they receive certain protections under the Act. The Service promulgated regulations extending take prohibitions for endangered species under section 9 to threatened species (50 CFR 17.31). Prohibited actions under section 9 include, but are not limited to, take (*i.e.*, harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in such activity). Other protections include those under section 7(a)(2) of the Act whereby Federal agencies must insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any endangered or threatened species.

(1) North Cascades ecosystem population of the grizzly bear (*Ursus arctos horribilis*) (Region 6) (also see 63 FR 30453, June 4, 1998, and the species assessment form (*see* **ADDRESSES**) for additional information on why reclassification to endangered is warranted-but-precluded)—Current grizzly bear distribution has been reduced to 5 areas in the western United States, including the North Cascades in north central Washington. Populations are estimated to be fewer than 20 animals within the 9,500-square-mile (sq-mi) (25,000-square-kilometer (sq-km)) North Cascades recovery zone. Threats to the species in this recovery zone include incomplete habitat protection measures (motorized access management) and small population size and population fragmentation that produce genetic isolation. We assigned a listing priority number of 3 for this population because of very low population numbers as evidenced by continuing lack of credible sightings and little success identifying animals through hair snagging and genetic analysis. Information indicating isolation of the population in British Columbia and the United States limits the chance of natural recovery given the small population size. Population augmentation may be the only way to recover this population.

(2) Cabinet-Yaak population of the grizzly bear (Region 6) (see also 64 FR 26725, May 17, 1999, and the species assessment form (*see* **ADDRESSES**) for additional information on why reclassification to endangered is warranted-but-precluded)—Current grizzly bear distribution has been reduced to 5 areas in the western United States, including the Cabinet-Yaak in northern Idaho and northwest Montana. Populations are estimated to be 30–40 animals within the 2,600-sq-mi (6,700-sq-km) Cabinet-Yaak recovery zone. Threats to the species in this recovery zone include incomplete habitat protection measures in the form of motorized access management, overutilization by human-caused mortality, and small population size and population fragmentation that produce genetic isolation. We assign a listing priority number of 3 to this population due to continuing high levels of human-caused mortality, new threats to habitat in the form of large scale mine development proposals in the Cabinet Mountains, and the high potential for further fragmentation of populations within the recovery zone.

(3) Selkirk grizzly population of the grizzly bear (Region 6) (*see also* 64 FR 26725, May 17, 1999, and the species assessment form (*see* **ADDRESSES**) for additional information on why reclassification is warranted-but-precluded)—Current grizzly bear distribution has been reduced to 5 areas in the western United States, including the Selkirk Mountains in northern Idaho, northeast Washington, and Southeast British Columbia. Populations are estimated to be 40–50 animals within the 2,200 mi^2 (5,700 km^2) Selkirk Mountains recovery zone. Threats to the species in this recovery zone include incomplete habitat protection measures in the form of motorized access management, overutilization in the form of human-caused mortality, and small population size and population fragmentation that produce genetic isolation. We assign a listing priority number of 3 to this population because of continuing high levels of human-caused mortality in British Columbia and new genetic information indicating the population is isolated and has declined in genetic diversity relative to both adjacent populations.

(4) Spikedace (*Meda fulgida*) (Region 2) (*see* 59 FR 35303, July 11, 1994, and the species assessment form (*see* **ADDRESSES**) for additional information on why reclassification to endangered is warranted-but-precluded)—The spikedace, a small fish species in a monotypic genus, is found in moderate-to-large perennial waters, where it inhabits shallow riffles with sand, gravel, and rubble substrates, and moderate-to-swift currents and swift pools over sand or gravel substrates. Specific habitat for this species consists of shear zones where rapid flow borders slower flow; areas of sheet flow at the upper ends of mid-channel sand/gravel bars; and eddies at downstream riffle edges. Recurrent flooding and a natural hydrograph are very important in maintaining the habitat of spikedace and in helping maintain a competitive edge over invading nonnative aquatic species.

The spikedace was once common throughout much of the Gila River basin, but it is now restricted to approximately 466 km (289 mi) of stream in portions of the upper Gila River (Grant, Catron, and Hidalgo Counties, NM); middle Gila River (Pinal County, AZ); lower San Pedro River (Pinal County, AZ); Aravaipa Creek (Graham and Pinal Counties, AZ); Eagle Creek (Graham and Greenlee Counties, AZ); and the Verde River (Yavaipai County, AZ). Its present range is only about 10 to 15 percent of the historic range, and the status of the species

within occupied areas ranges from common to very rare. The species is now common only in Aravaipa Creek in Arizona and some parts of the upper Gila River in New Mexico. The reduction in the historical distribution of spikedace is largely attributable to the continued modification of its habitat and continued interactions with nonnative species. These threats occur over the majority of their range, to varying degrees. Each of the individual spikedace complexes may face unique threats as well. For example, the San Pedro River area is experiencing groundwater depletion which is affecting surface flows within the river channel, whereas Tonto Creek faces continued grazing pressure, recreational use, and dewatering due to diversions. Proposals have been made for water exchanges affecting the Verde River in order to provide water for growing urban areas. Currently, threats are exacerbated by the ongoing drought. While some areas are subjected to fewer disturbances or pressures, there are no known habitat areas that are completely free of disturbance. Effects from nonnative species introductions are permanent, unless streams are actively renovated and/or barriers installed to preclude further recolonization by nonnatives. Grazing pressures have eased somewhat as Federal agencies remove cattle from streams directly, but upland conditions continue to degrade watersheds in general. Groundwater withdrawals or exchanges that affect streamflow are not reversible. Because these high magnitude threats have gone on for many years in the past, are associated with irreversible commitments (*i.e.*, water exchanges), or are not easily reversed (*i.e.*, nonnative stocking and impacts from grazing), the threats are imminent. Therefore, we assign this species a listing priority of 1 for uplisting to endangered.

(5) Loach minnow (*Tiaroga cobitis*) (Region 2) (*see* 59 FR 35303, July 11, 1994, and the species assessment form (*see* **ADDRESSES**) for additional information on why reclassification to endangered is warranted-but-precluded)—This small fish, the only species within the genus, is found in small-to-large perennial streams and uses shallow, turbulent riffles with primarily cobble substrate and swift currents. The loach minnow uses the spaces between, and in the lee of, larger substrate for resting and spawning. It is rare or absent from habitats where fine sediments fill the interstitial spaces. Recurrent flooding and a natural hydrograph are very important in maintaining the habitat of loach minnow and in helping the species maintain a competitive edge over invading nonnative aquatic species.

The loach minnow was once locally common throughout much of the Gila River basin, including the mainstem Gila River upstream of Phoenix, and the Verde, Salt, San Pedro, and San Francisco subbasins. The present range is only 15 to 20 percent of its historic range, and the status of the species within occupied areas ranges from common to rare. The species is now common only in Aravaipa Creek and the Blue River in Arizona, and limited portions of the San Francisco, upper Gila, and Tularosa rivers in New Mexico. The reduction in the historical distribution of loach minnow is largely attributable to the continued modification of its habitat and continued interactions with nonnative species. These threats occur over the majority of the range, to varying degrees. Each of the individual loach minnow complexes may face unique threats as well. For example, the San Pedro River area is experiencing groundwater depletion which is affecting surface flows within the river channel, whereas Tonto Creek faces continued grazing pressure, recreational use, and dewatering due to diversions. Proposals have been made for water exchanges affecting the Verde River in order to provide water for growing urban areas. Currently, threats are exacerbated by the ongoing drought. While some areas are subjected to fewer disturbances or pressures, there are no known habitat areas that are completely free of disturbance. Effects from nonnative species introductions are permanent unless streams are actively renovated and/or barriers installed to preclude further recolonization by nonnatives. Grazing pressures have eased somewhat as Federal agencies remove cattle from streams directly, but upland conditions continue to degrade watersheds in general. Groundwater withdrawals or exchanges that affect streamflow are not reversible. Most of these high-magnitude threats to the loach minnow are already ongoing, in particular grazing, water withdrawals, nonnative stocking programs, recreational use, and drought. Because threats have gone on for many years in the past, are associated with irreversible commitments (*i.e.*, water exchanges), or are not easily reversed (*i.e.*, nonnative stocking and impacts from grazing), the threats are imminent. Therefore, we assign this species a listing priority number of 1 for uplisting to endangered.

Current Notice of Review

We gather data on plants and animals native to the United States that appear to merit consideration for addition to the Lists of Endangered and Threatened Wildlife and Plants. This notice identifies those species that we currently regard as candidates for addition to the Lists. These candidates include species and subspecies of fish, wildlife, or plants and DPSs of vertebrate animals. This compilation relies on information from status surveys conducted for candidate assessment and on information from State Natural Heritage Programs, other State and Federal agencies, knowledgeable scientists, public and private natural resource interests, and comments received in response to previous notices of review.

Tables 1 and 2 list animals arranged alphabetically by common names under the major group headings and list plants alphabetically by names of genera, species, and relevant subspecies and varieties. Animals are grouped by class or order. Plants are subdivided into two groups: (1) Flowering plants and (2) ferns and their allies. Useful synonyms and subgeneric scientific names appear in parentheses with the synonyms preceded by an ''equals'' sign. Several species that have not yet been formally described in the scientific literature are included; such species are identified by a generic or specific name (in italics), followed by ''sp.'' or ''ssp.'' We incorporate standardized common names in these notices as they become available. We sorted plants by scientific name due to the inconsistencies in common names, the inclusion of vernacular and composite subspecific names, and the fact that many plants still lack a standardized common name.

Table 1 lists all candidate species and all species proposed for listing under the Act. We emphasize that we are not proposing these candidate species for listing by this notice, but we anticipate developing and publishing proposed listing rules for these species in the future. We encourage State agencies, other Federal agencies, and other parties to give consideration to these species in environmental planning.

In Table 1, the ''category'' column on the left side of the table identifies the status of each species according to the following codes:

PE—Species proposed for listing as endangered. Proposed species are those species for which we have published a proposed rule to list as endangered or threatened in the **Federal Register**. This category does not include species for

which we have withdrawn or finalized the proposed rule.

PT—Species proposed for listing as threatened.

PSAT—Species proposed for listing as threatened due to similarity of appearance.

C—Candidates: Species for which we have on file sufficient information on biological vulnerability and threats to support proposals to list them as endangered or threatened. Issuance of proposed rules for these species is precluded at present by other higher-priority listing actions. This category includes species for which we made a 12-month warranted-but-precluded finding on a petition to list. We made new findings on all petitions for which we previously made ''warranted-but-precluded'' findings. We identify the species for which we made a continued warranted-but-precluded finding on a resubmitted petition by the code ''C*'' in the category column (see ''Findings on Resubmitted Petitions'' section for additional information). We identify the species for which we are not making a ''warranted-but-precluded'' finding on a resubmitted petition by the code ''C+'' in the category column. We have not updated our finding with regard to these species since we have received important new information that we are currently analyzing.

The ''Priority'' column indicates the listing priority number (LPN) for each candidate species which we use to determine the most appropriate use of our available resources. The lowest numbers have the highest priority. We assign LPNs based on the immediacy and magnitude of threats as well as on taxonomic status. We published a complete description of our listing priority system in the **Federal Register** (48 FR 43098, September 21, 1983).

The third column, ''Lead Region,'' identifies the Regional Office to which you should direct comments or questions (*see* **ADDRESSES** at the end of the **SUPPLEMENTARY INFORMATION** section).

Following the scientific name (fourth column) and the family designation (fifth column) is the common name (sixth column). The seventh column provides the known historical range for the species or vertebrate population (for vertebrate populations, this is the historical range for the entire species or subspecies and not just the historical range for the distinct population segment), indicated by postal code abbreviations for States and U.S. territories. Many species no longer occur in all of the areas listed.

Species in Table 2 of this notice are species we included either as proposed species or as candidates in the previous CNOR (published May 4, 2004). Since May 4, 2004, we added two of these species to the Lists of Endangered and Threatened Wildlife and Plants, withdrew one species from proposed status, and removed five species from candidate status for the reasons indicated by the codes. The first column indicates the present status of the species, using the following codes (not all of these codes may have been used in this CNOR):

E—Species we listed as endangered.

T—Species we listed as threatened.

Rc—Species we removed from the candidate list because currently available information does not support a proposed listing.

Rp—Species we removed from the candidate list because we have withdrawn the proposed listing.

The second column indicates why we no longer regard the species as a candidate or proposed species using the following codes (not all of these codes may have been used in this CNOR):

A—Species that are more abundant or widespread than previously believed and species that are not subject to the degree of threats sufficient to warrant continuing candidate status, or issuing a proposed or final listing. The reduction in threats could be due, in part or entirely, to actions taken under a conservation agreement.

F—Species whose range no longer includes a U.S. territory.

I—Species for which we have insufficient information on biological vulnerability and threats to support issuance of a proposed rule to list.

L—Species we added to the Lists of Endangered and Threatened Wildlife and Plants.

M—Species we mistakenly included as candidates or proposed species in the last notice of review.

N—Species that are not listable entities based on the Act's definition of ''species'' and current taxonomic understanding.

X—Species we believe to be extinct.

The columns describing lead region, scientific name, family, common name, and historical range include information as previously described for Table 1.

Request for Information

We request you submit any further information on the species named in this notice as soon as possible or whenever it becomes available. We are particularly interested in any information:

(1) Indicating that we should add a species to the list of candidate species;

(2) Indicating that we should remove a species from candidate status;

(3) Recommending areas that we should designate as critical habitat for a species, or indicating that designation of critical habitat would not be prudent for a species;

(4) Documenting threats to any of the included species;

(5) Describing the immediacy or magnitude of threats facing candidate species;

(6) Pointing out taxonomic or nomenclature changes for any of the species;

(7) Suggesting appropriate common names; and

(8) Noting any mistakes, such as errors in the indicated historical ranges.

Submit your comments regarding a particular species to the Regional Director of the Region identified as having the lead responsibility for that species. The regional addresses follow:

Region 1. California, Hawaii, Idaho, Nevada, Oregon, Washington, American Samoa, Guam, and Commonwealth of the Northern Mariana Islands. Regional Director (TE), U.S. Fish and Wildlife Service, Eastside Federal Complex, 911 N.E. 11th Avenue, Portland, Oregon 97232–4181 (503/231–6158).

Region 2. Arizona, New Mexico, Oklahoma, and Texas. Regional Director (TE), U.S. Fish and Wildlife Service, 500 Gold Avenue SW., Room 4012, Albuquerque, New Mexico 87102 (505/248–6920).

Region 3. Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. Regional Director (TE), U.S. Fish and Wildlife Service, Bishop Henry Whipple Federal Building, One Federal Drive, Fort Snelling, Minnesota 55111–4056 (612/713–5334).

Region 4. Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Puerto Rico, and the U.S. Virgin Islands. Regional Director (TE), U.S. Fish and Wildlife Service, 1875 Century Boulevard, Suite 200, Atlanta, Georgia 30345 (404/679–4156).

Region 5. Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, and West Virginia. Regional Director (TE), U.S. Fish and Wildlife Service, 300 Westgate Center Drive, Hadley, Massachusetts 01035–9589 (413/253–8615).

Region 6. Colorado, Kansas, Montana, Nebraska, North Dakota, South Dakota, Utah, and Wyoming. Regional Director (TE), U.S. Fish and Wildlife Service, P.O. Box 25486, Denver Federal Center, Denver, Colorado 80225–0486 (303/236–7400).

Region 7. Alaska. Regional Director (TE), U.S. Fish and Wildlife Service, 1011 East Tudor Road, Anchorage, Alaska 99503–6199 (907/786–3505).

We provided comments received in response to the previous CNOR to the Region having lead responsibility for each candidate species mentioned in the comment. We will likewise consider all information provided in response to this CNOR in deciding whether to propose species for listing and when to undertake necessary listing actions (including whether emergency listing pursuant to section 4(b)(7) of the Act is appropriate). Comments we receive will become part of the administrative record for the species, which we maintain at the appropriate Regional Office.

Our practice is to make comments, including names and home addresses of respondents, available for public inspection. Individual respondents may request that we withhold their home address from the public record, which we will honor to the extent allowable by law. In some circumstances, we can also withhold from the public record a respondent's identity, as allowable by law. If you wish for us to withhold your name and/or address, you must state this request prominently at the beginning of your comments. However, we will not consider anonymous comments. We will make all submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety.

Authority

This document is published under the authority of the Endangered Species Act (16 U.S.C. 1531 *et seq.*).

Dated: May 2, 2005.

Matt Hogan,

Acting Director, Fish and Wildlife Service.

TABLE 1.—CANDIDATE NOTICE OF REVIEW (ANIMALS AND PLANTS)

[**Note:** See end of **SUPPLEMENTARY INFORMATION** for an explanation of symbols used in this table.]

Status		Lead region	Scientific name	Family	Commom name	Historic range
Category	Priority					
Mammals						
C*	3	R1	*Emballonura semicaudata rotensis.*	Emballonuridae	Bat, Pacific sheath-tailed	U.S.A. (GU, CNMI).
C*	3	R1	*Emballonura semicaudata semicaudata.*	Emballonuridae	Bat, Pacific sheath-tailed	U.S.A. (AS), Fiji, Independent Samoa, Tonga, Vanuatu.
C*	6	R1	*Martes pennanti*	Mustelidae	Fisher (west coast DPS)	U.S.A. (CA, CT, IA, ID, IL, IN, KY, MA, MD, ME, MI, MN, MT, ND, NH, NJ, NY, OH, OR, PA, RI, TN, UT, VA, VT, WA, WI, WV, WY), Canada.
PT	3	R7	*Enhydra lutris kenyoni*	Mustelidae	Otter, Northern Sea (southwest Alaska DPS).	Species range: Pacific Rim coastal waters, from Northern Japan to Baja, Mexico.
C*	3	R1	*Thomomys mazama couchi*	Geomyidae	Pocket gopher, Mazama (Shelton).	U.S.A. (WA).
C*	3	R1	*Thomomys mazama glacialis.*	Geomyidae	Pocket gopher, Mazama (Roy Prairie).	U.S.A. (WA).
C*	3	R1	*Thomomys mazama louiei*	Geomyidae	Pocket gopher, Mazama (Cathlamet).	U.S.A. (WA).
C*	3	R1	*Thomomys mazama melanops.*	Geomyidae	Pocket gopher, Mazama (Olympic).	U.S.A. (WA).
C*	3	R1	*Thomomys mazama pugetensis.*	Geomyidae	Pocket gopher, Mazama (Olympia).	U.S.A. (WA).
C*	3	R1	*Thomomys mazama tacomensis.*	Geomyidae	Pocket gopher, Mazama (Tacoma).	U.S.A. (WA).
C*	3	R1	*Thomomys mazama tumuli*	Geomyidae	Pocket gopher, Mazama (Tenino).	U.S.A. (WA).
C*	3	R1	*Thomomys mazama yelmensis.*	Geomyidae	Pocket gopher, Mazama (Yelm).	U.S.A. (WA).
C*	3	R1	*Spermophilus tereticaudus chlorus.*	Sciuridae	Squirrel, Palm Springs (=Coachella Valley) round-tailed ground.	U.S.A. (CA).
C*	9	R1	*Spermophilus brunneus endemicus.*	Sciuridae	Squirrel, Southern Idaho ground.	U.S.A. (ID).
C*	5	R1	*Spermophilus washingtoni*	Sciuridae	Squirrel, Washington ground	U.S.A. (WA, OR).
Birds						
C*	3	R1	*Porzana tabuensis*	Rallidae	Crake, spotless (American Samoa DPS).	U.S.A. (AS), Australia, Fiji, Independent Samoa, Marquesas, Philippines, Society Islands, Tonga.
C*	2	R1	*Oreomystis bairdi*	Fringillidae	Creeper, Kauai	U.S.A. (HI).
C*	3	R1	*Coccyzus americanus*	Cuculidae	Cuckoo, yellow-billed (Western U.S. DPS).	U.S.A. (Lower 48 States), Canada, Mexico, Central and South America.
C*	12	R1	*Ptilinopus perousii perousii*	Columbidae	Fruit-dove, many-colored	U.S.A. (AS), Independent Samoa.
C*	6	R1	*Gallicolumba stairi stairi*	Columbidae	Ground-dove, friendly	U.S.A. (AS), Independent Samoa.
C*	6	R1	*Eremophila alpestris strigata*	Alaudidae	Horned lark, streaked	U.S.A. (OR, WA), Canada (BC).
C*	5	R7	*Brachyramphus brevirostris*	Alcidae	Murrelet, Kittlitz's	U.S.A. (AK), Russia.

TABLE 1.—CANDIDATE NOTICE OF REVIEW (ANIMALS AND PLANTS)—Continued

[**Note:** See end of **SUPPLEMENTARY INFORMATION** for an explanation of symbols used in this table.]

Status		Lead region	Scientific name	Family	Commom name	Historic range
Category	Priority					
C*	2	R1	*Synthliboramphus hypoleucus.*	Alcidae	Murrelet, Xantus's	U.S.A. (CA), Mexico.
C*	8	R2	*Tympanuchus pallidicinctus*	Phasianidae	Prairie-chicken, lesser	U.S.A. (CO, KA, NM, OK, TX).
C+	6	R1	*Centrocercus urophasianus*	Phasianidae	Sage-grouse, greater (Columbia Basin DPS).	U.S.A. (AZ, CA, CO, ID, MT, ND, NE, NV, OR, SD, UT, WA, WY), Canada (AB, BC, SK).
C*	2	R6	*Centrocercus minimus*	Phasianidae	Sage-grouse, Gunnison	U.S.A (AZ, CO, KS, OK, NM, UT).
C*	3	R1	*Oceanodroma castro*	Hydrobatidae	Storm-petrel, band-rumped (Hawaii DPS).	U.S.A. (HI), Atlantic Ocean, Ecuador (Galapagos Islands), Japan.
C*	5	R4	*Dendroica angelae*	Emberizidae	Warbler, elfin woods	U.S.A. (PR).
			REPTILES			
C*	2	R2	*Sceloporus arenicolus*	Iguanidae	Lizard, sand dune	U.S.A. (TX, NM).
C*	9	R3	*Sistrurus catenatus catenatus.*	Viperidae	Massasauga (= rattlesnake), eastern.	U.S.A. (IA, IL, IN, MI, MO, MN, NY, OH, PA, WI), Canada.
C*	6	R4	*Pituophis melanoleucus lodingi.*	Colubridae	Snake, black pine	U.S.A. (AL, LA, MS).
C*	5	R4	*Pituophis ruthveni*	Colubridae	Snake, Louisiana pine	U.S.A. (LA, TX).
C*	5	R2	*Graptemys caglei*	Emydidae	Turtle, Cagle's map	U.S.A. (TX).
C*	3	R2	*Kinosternon sonoriense longifemorale.*	Kinosternidae	Turtle, Sonoyta mud	U.S.A. (AZ), Mexico.
			Amphibians			
C*	3	R1	*Rana luteiventris*	Ranidae	Frog, Columbia spotted (Great Basin DPS).	U.S.A. (AK, ID, MT, NV, OR, UT, WA, WY), Canada (BC).
C*	3	R1	*Rana muscosa*	Ranidae	Frog, mountain yellow-legged (Sierra Nevada DPS).	U.S.A (CA, NV).
C*	2	R1	*Rana pretiosa*	Ranidae	Frog, Oregon spotted	U.S.A. (CA, OR, WA), Canada (BC).
C*	5	R1	*Rana onca*	Ranidae	Frog, relict leopart	U.S.A. (AZ, NV, UT).
C*	3	R3	*Cryptobranchus alleganiensis bishopi.*	Crytobranchidae	Hellbender, Ozark	U.S.A. (AR, MO).
C*	2	R2	*Eurycea waterlooensis*	Plethodontidae	Salamander, Austin blind	U.S.A. (TX).
C*	2	R2	*Eurycea naufragia*	Plethodontidae	Salamander, Georgetown	U.S.A. (TX).
C*	2	R2	*Eurycea chisholmensis*	Plethodontidae	Salamander, Salado	U.S.A. (TX).
C*	3	R6	*Bufo boreas boreas*	Bufonidae	Toad, boreal (Southern Rocky Mountains DPS).	U.S.A. (AK, CA, CO, ID, MT, NM, OR, UT, WA, WY), Canada (BC).
C*	11	R1	*Bufo canorus*	Bufonidae	Toad, Yosemite	U.S.A. (CA).
C*	2	R4	*Necturus alabamensis*	Proteidae	Waterdog, black warrior (= Sipsey Fork).	U.S.A. (AL).
			Fishes			
PE	3	R1	*Gila bicolor vaccaceps*	Cyprinidae	Chub, Cowhead Lake tui	U.S.A. (CA).
PE	2	R2	*Gila intermedia*	Cyprinidae	Chub, Gila	U.S.A. (AZ, NM), Mexico.
C*	11	R6	*Etheostoma cragini*	Percidae	Darter, Arkansas	U.S.A. (AR, CO, KS, MO, OK).
C*	6	R4	*Etheostoma nigrum susanae.*	Percidae	Darter, Cumberland johnny	U.S.A. (KY, TN).
C*	5	R4	*Percina aurora*	Percidae	Darter, Pearl	U.S.A. (LA, MS).
C*	5	R4	*Etheostoma phytophilum*	Percidae	Darter, rush	U.S.A. (AL).
C*	2	R4	*Etheostoma moorei*	Percidae	Darter, yellowcheek	U.S.A (AR).
C*	3	R6	*Thymallus arcticus*	Salmonidae	Grayling, Fluvial arctic (upper Missouri River DPS).	U.S.A. (MT, WY).
C*	2	R4	*Noturus* sp.	Ictaluridae	Madtom, chucky	U.S.A. (TN).
C	5	R4	*Moxostoma* sp.	Catostomidae	Redhorse, sicklefin	U.S.A. (GA, NC, TN).
C*	2	R3	*Cottus* sp.	Cottidae	Sculpin, grotto	U.S.A. (MO).
C*	5	R2	*Notropis oxyrhynchus*	Cyprinidae	Shiner, sharpnose	U.S.A. (TX).
C*	5	R2	*Notropis buccula*	Cyprinidae	Shiner, smalleye	U.S.A. (TX).
C*	3	R2	*Catostomus discobolus yarrowi.*	Catostomidae	Sucker, Zuni bluehead	U.S.A. (AZ, NM).
PSAT	N/A	R1	*Salvelinus malma*	Salmonidae	Trout, Dolly Varden	U.S.A. (AK, WA), Canada, East Asia.
			Clams			
C	5	R4	*Villosa choctawensis*	Unionidae	Bean, Choctaw	U.S.A. (AL, FL).

TABLE 1.—CANDIDATE NOTICE OF REVIEW (ANIMALS AND PLANTS)—Continued

[**Note:** See end of **SUPPLEMENTARY INFORMATION** for an explanation of symbols used in this table.]

Status		Lead region	Scientific name	Family	Commom name	Historic range
Category	Priority					
C	2	R3	*Villosa fabalis*	Unionidae	Bean, rayed	U.S.A. (IL, IN, KY, MI, NY, OH, TN, PA, VA, WV), Canada (ON).
C	2	R4	*Fusconaia (= Obovaria) rotulata.*	Unionidae	Ebonyshell, round	U.S.A. (AL, FL).
C*	2	R2	*Popenaias popei*	Unionidae	Hornshell, Texas	U.S.A. (NM, TX), Mexico.
C*	5	R4	*Ptychobranchus subtentum*	Unionidae	Kidneyshell, fluted	U.S.A. (AL, KY, TN, VA).
C	2	R4	*Ptychobranchus jonesi*	Unionidae	Kidneyshell, southern	U.S.A. (AL, FL).
C*	5	R4	*Lampsilis rafinesqueana*	Unionidae	Mucket, Neosho	U.S.A. (AR, KS, MO, OK).
C	2	R3	*Plethobasus cyphyus*	Unionidae	Mussel, sheepnose	U.S.A. (AL, IA, IL, IN, KY, MN, MO, MS, OH, PA, TN, VA, WI, WV).
C*	2	R4	*Margaritifera marrianae*	Margaritiferidae	Pearlshell, Alabama	U.S.A. (AL)
C*	5	R4	*Lexingtonia dolabelloides*	Unionidae	Pearlymussel, slabside	U.S.A. (AL, KY, TN, VA)
C	5	R4	*Pleurobema strodeanum*	Unionidae	Pigtoe, fuzzy	U.S.A. (AL, FL).
C*	2	R4	*Pleurobema hanleyanum*	Unionidae	Pigtoe, Georgia	U.S.A. (AL, GA, TN)
C	5	R4	*Fusconaia escambia*	Unionidae	Pigtoe, narrow	U.S.A. (AL, FL).
C	11	R4	*Quincuncina burkei*	Unionidae	Pigtoe, tapered	U.S.A. (AL, FL).
C	5	R4	*Lampsilis australis*	Unionidae	Sandshell, southern	U.S.A. (AL, FL).
C	4	R3	*Cumberlandia monodonta*	Margaritiferidae	Spectaclecase	U.S.A. (AL, AR, IA, IN, IL, KS, KY, MO, MN, NE, OH, TN, VA, WI, WV).
C*	5	R4	*Elliptio spinosa*	Unionidae	Spinymussel, Altamaha	U.S.A. (GA).
			Snails			
C*	9	R6	*Oreohelix peripherica wasatchensis.*	Oreohelicidae	Mountainsnail, Ogden	U.S.A. (UT)
C*	8	R6	*Stagnicola bonnevillensis*	Lymnaeidae	Pondsnail, Bonneville	U.S.A. (UT).
C*	2	R4	*Leptoxis foremani(= downei)*	Pleuroceridae	Rocksnail, Interrupted (= Georgia).	U.S.A. (GA, AL).
C*	2	R1	*Ostodes strigatus*	Potaridae	Sisi snail	U.S.A. (AS).
C*	2	R2	*Pseudotryonia adamantina*	Hydrobiidae	Snail, Diamond Y Spring	U.S.A. (TX).
C*	2	R1	*Samoana fragilis*	Partulidae	Snail, fragile tree	U.S.A. (GU, MP).
C*	2	R1	*Partula radiolata*	Partulidae	Snail, Guam tree	U.S.A. (GU).
C*	2	R1	*Partula gibba*	Partulidae	Snail, Humped tree	U.S.A. (GU, MP)
PE	2	R2	*Tryonia kosteri*	Hydrobiidae	Snail, Koster's tryonia	U.S.A. (NM).
C*	2	R1	*Partulina semicarinata*	Achatinellidae	Snail, Lanai tree	U.S.A. (HI).
C*	2	R1	*Partulina variabilis*	Achatinellidae	Snail, Lanai tree	U.S.A. (HI).
C*	2	R1	*Partula langfordi*	Partulidae	Snail, Langford's tree	U.S.A. (MP).
PE	2	R2	*Assiminea pecos*	Assimineidae	Snail, Pecos assiminea	U.S.A. (NM, TX), Mexico
C*	2	R2	*Cochliopa texana*	Hydrobiidae	Snail, Phantom cave	U.S.A. (TX).
C*	2	R1	*Eua zebrina*	Partulidae	Snail, Tutuila tree	U.S.A. (AS).
C*	2	R2	*Pyrgulopsis chupaderae*	Hydrobiidae	Springsnail, Chupadera	U.S.A. (NM).
C*	2	R1	*Pyrgulopsis notidicola*	Hydrobiidae	Springsnail, elongate mud meadows.	U.S.A. (NV).
C*	11	R2	*Pyrgulopsis gilae*	Hydrobiidae	Springsnail, Gila	U.S.A. (NM).
C*	2	R2	*Tryonia circumstriata (= stocktonensis).*	*Hydrobiidae*	Springsnail, Gonzales	U.S.A. (TX).
C*	5	R2	*Pyrgulopsis thompsoni*	Hydrobiidae	Springsnail, Huachuca	U.S.A. (AZ), Mexico
C*	11	R2	*Pyrgulopsis thermalis*	Hydrobiidae	Springsnail, New Mexico	U.S.A. (NM).
C*	5	R2	*Pyrgulopsis morrisoni*	Hydrobiidae	Springsnail, Page	U.S.A. (AZ).
C*	2	R2	*Tryonia cheatumi*	Hydrobiidae	Springsnail (= Tryonia), Phantom.	U.S.A. (TX).
PE	2	R2	*Pyrgulopsis roswellensis*	lHydrobiidae	Springsnail, Roswell	U.S.A. (NM).
C*	2	R2	*Pyrgulopsis trivialis*	Hydrobiidae	Springsnail, Three Forks	U.S.A. (AZ).
C*	2	R1	*Newcombia cumingi*	Achatinellidae	Tree snail, Newcomb's	U.S.A. (HI).
			Insects			
C*	11	R6	*Zaitzevia thermae*	Elmidae	Beetle, Warm Springs Zaitzevian riffle.	U.S.A. (MT).
C*	2	R1	*Nysius wekiuicola*	Lygaeidae	Bug, Wekiu	U.S.A. (HI).
C*	3	R1	*Hypolimnas octucula mariannensis.*	Nymphalidae	Butterfly, Mariana eight-spot	U.S.A. (GU, MP).
C*	2	R1	*Vagrans egestina*	Nymphalidae	Butterfly, Mariana wandering.	U.S.A. (GU, MP).
C*	6	R4	*Cyclargus thomasi bethunebakeri.*	Lycaenidae	Butterfly, Miami blue	U.S.A. (FL), Bahamas.
C*	5	R4	*Glyphopsyche sequatchie*	Limnephilidae	Caddisfly, Sequatchie	U.S.A. (TN).
C	5	R4	*Pseudanophthalmus insularis.*	Carabidae	Cave beetle, Baker Station (= insular).	U.S.A. (TN).
C*	5	R4	*Pseudanophthalmus major*	Carabidae	Cave beetle, beaver	U.S.A. (KY).
C*	5	R4	*Pseudanophthalmus caecus*	Carabidae	Cave beetle, Clifton	U.S.A. (KY).
C	11	R4	*Pseudanophthalmus colemanensis.*	Carabidae	Cave beetle, Coleman	U.S.A. (TN).
C	5	R4	*Pseudanophthalmus fowlerae.*	Carabidae	Cave beetle, Fowler's	U.S.A. (TN).

TABLE 1.—CANDIDATE NOTICE OF REVIEW (ANIMALS AND PLANTS)—Continued

[**Note:** See end of **SUPPLEMENTARY INFORMATION** for an explanation of symbols used in this table.]

Status		Lead region	Scientific name	Family	Commom name	Historic range
Category	Priority					
C*	5	R4	*Pseudanophthalmus pholeter.*	Carabidae	Cave beetle, greater Adams	U.S.A. (KY).
C*	5	R4	*Pseudanophthalmus frigidus*	Carabidae	Cave beetle, icebox	U.S.A. (KY).
C	5	R4	*Pseudanophthalmus tiresias*	Carabidae	Cave beetle, Indian Grave Point (= Soothsayer).	U.S.A. (TN).
C*	5	R4	*Pseudanophthalmus inquisitor.*	Carabidae	Cave beetle, inquirer	U.S.A. (TN).
C*	5	R4	*Pseudanophthalmus cataryctos.*	Carabidae	Cave beetle, lesser Adams	U.S.A. (KY).
C*	5	R4	*Pseudanophthalmus troglodytes.*	Carabidae	Cave beetle, Louisville	U.S.A. (KY).
C	5	R4	*Pseudanophthalmus paulus*	Carabidae	Cave beetle, Noblett's	U.S.A. (TN).
C*	11	R4	*Pseudanophthalmus inexpectatus.*	Carabidae	Cave beetle, surprising	U.S.A. (KY).
C*	5	R4	*Pseudanophthalmus parvus*	Carabidae	Cave beetle, Tatum	U.S.A. (KY).
C*	3	R1	*Euphydryas editha taylori*	Nymphalidae	Checkerspot, Taylor's (= Whulge).	U.S.A. (OR, WA), Canada (BC).
C*	9	R1	*Megalagrion nigrohamatum nigrolineatum.*	Coenagrionidae	Damselfly, blackline Hawaiian.	U.S.A. (HI).
C*	2	R1	*Megalagrion leptodemas*	Coenagrionidae	Damselfly, crimson Hawaiian.	U.S.A. (HI).
C*	2	R1	*Megalagrion nesiotes*	Coenagrionidae	Damselfly, flying earwig Hawaiian.	U.S.A. (HI).
C*	2	R1	*Megalagrion oceanicum*	Coenagrionidae	Damselfly, oceanic Hawaiian.	U.S.A. (HI).
C*	8	R1	*Megalagrion xanthomelas*	Coenagrionidae	Damselfly, orangeblack Hawaiian.	U.S.A. (HI).
C*	2	R1	*Megalagrion pacificum*	Coenagrionidae	Damselfly, Pacific Hawaiian	U.S.A. (HI).
C*	5	R1	*Phaeogramma sp.*	Tephritidae	Gall fly, Po'olanui	U.S.A. (HI).
C	5	R1	*Ambrysus funebris*	Naucoridae	Naucorid bug (= Furnace Creek), Nevares Spring.	U.S.A. (CA).
PE	2	R1	*Drosophila aglaia*	Drosophilidae	Fly, Picture wing [unnamed]	U.S.A. (HI).
C*	2	R1	*Drosophila attigua*	Drosophilidae	Fly, Picture wing [unnamed]	U.S.A. (HI).
PE	2	R1	*Drosophila differens*	Drosophilidae	Fly, Picture wing [unnamed]	U.S.A. (HI).
C*	2	R1	*Drosophila digressa*	Drosophilidae	Fly, Picture wing [unnamed]	U.S.A. (HI).
PE	2	R1	*Drosophila hemipeza*	Drosophilidae	Fly, Picture wing [unnamed]	U.S.A. (HI).
PE	2	R1	*Drosophila heteroneura*	Drosophilidae	Fly, Picture wing [unnamed]	U.S.A. (HI).
PE	2	R1	*Drosophila montgomeryi*	Drosophilidae	Fly, Picture wing [unnamed]	U.S.A. (HI).
PE	2	R1	*Drosophila mulli*	Drosophilidae	Fly, Picture wing [unnamed]	U.S.A. (HI).
PE	2	R1	*Drosophila musaphila*	Drosophilidae	Fly, Picture wing [unnamed]	U.S.A. (HI).
PE	2	R1	*Drosophila neoclavisetae*	Drosophilidae	Fly, Picture wing [unnamed]	U.S.A. (HI).
PE	2	R1	*Drosophila obatai*	Drosophilidae	Fly, Picture wing [unnamed]	U.S.A. (HI).
PE	2	R1	*Drosophila ochrobasis*	Drosophilidae	Fly, Picture wing [unnamed]	U.S.A. (HI).
PE	2	R1	*Drosophila substenoptera*	Drosophilidae	Fly, Picture wing [unnamed]	U.S.A. (HI).
PE	2	R1	*Drosophila tarphytrichia*	Drosophilidae	fly, Picture wing [unnamed]	U.S.A. (HI).
C*	5	R2	*Heterelmis stephani*	Elmidae	Riffle beetle, Stephan's	U.S.A. (AZ).
C*	11	R3	*Hesperia dacotae*	Hesperiidae	Skipper, Dakota	U.S.A. (MN, IA, SD, ND, IL), Canada.
C*	5	R1	*Polites mardon*	Hesperiidae	Skipper, Mardon	U.S.A. (CA, OR, WA).
C*	9	R6	*Cicindela limbata albissima*	Cicindelidae	Tiger beetle, Coral Pink Sand Dunes.	U.S.A. (UT).
C*	5	R4	*Cicindela highlandensis*	Cicindelidae	Tiger beetle, highlands	U.S.A. (FL).
PE	3	R6	*Cicindela nevadica lincolniana.*	Cicindelidae	Tiger beetle, Salt Creek	U.S.A. (NE).
Arachnids						
C*	2	R2	*Cicurina wartoni*	Dictynidae	Meshweaver, Warton's cave	U.S.A. (TX).
CRUSTACEANS						
C	2	R2	*Gammarus hyalleloides*	Gammaridae	Amphipod, diminutive	U.S.A. (TX).
PE	N/A	R2	*Gammarus desperatus*	Gammaridae	Amphipod, Noel's	U.S.A. (NM).
C*	2	R1	*Antecaridina lauensis*	Atyidae	Shrimp, anchialine pool	U.S.A. (HI), Mozambique, Saudi Arabia, Japan.
C*	2	R1	*Calliasmata pholidota*	Alpheidae	Shrimp, anchialine pool	U.S.A. (HI), Funafuti Atoll, Saudi Arabia, Sinai Peninsula, Tuvalu.
C*	2	R1	*Metabetaeus lohena*	Alpheidae	Shrimp, anchialine pool	U.S.A. (HI).
C*	2	R1	*Palaemonella burnsi*	Palaemonidae	Shrimp, anchialine pool	U.S.A. (HI).
C*	2	R1	*Procaris hawaiana*	Procarididae	Shrimp, anchialine pool	U.S.A. (HI).
C*	1	R1	*Vetericaris chaceorum*	Procaridae	Shrimp, anchialine pool	U.S.A. (HI).
C*	5	R4	*Typhlatya monae*	Atyidae	Shrimp, troglobitic groundwater.	U.S.A. (PR), Barbuda, Dominican Republic.
Flowering Plants						
C*	11	R1	*Abronia alpina*	Nyctaginaceae	Sand-verbena, Ramshaw Meadows.	U.S.A. (CA).

TABLE 1.—CANDIDATE NOTICE OF REVIEW (ANIMALS AND PLANTS)—Continued

[**Note:** See end of **SUPPLEMENTARY INFORMATION** for an explanation of symbols used in this table.]

Status		Lead region	Scientific name	Family	Commom name	Historic range
Category	Priority					
C*	11	R6	*Aliciella cespitosa*	Polemoniaceae	Alice-flower, wonderland	U.S.A. (UT).
C*	11	R4	*Arabis georgiana*	Brassicaceae	Rockcress, Georgia	U.S.A. (AL, GA).
C*	11	R4	*Argythamnia blodgettii*	Euphorbiaceae	Silverbush, Blodgett's	U.S.A. (FL).
C*	3	R1	*Artemisia campestris ssp. borealis* var. *wormskioldii.*	Asteraceae	Wormwood, northern	U.S.A. (OR, WA).
C*	2	R1	*Astelia waialealae*	Liliaceae	Pa'iniu	U.S.A. (HI).
C*	8	R6	*Astragalus equisolensis*	Fabaceae	Milk-vetch, horseshoe	U.S.A. (UT).
C*	8	R6	*Astragalus tortipes*	Fabaceae	Milk-vetch, Sleeping Ute	U.S.A. (CO).
C*	2	R1	*Bidens amplectens*	Asteraceae	Ko'oko'olau	U.S.A. (HI).
C*	3	R1	*Bidens campylotheca pentamera.*	Asteraceae	Ko'oko'olau	U.S.A. (HI).
C*	3	R1	*Bidens campylotheca waihoiensis.*	Asteraceae	Ko'oko'olau	U.S.A. (HI).
C*	8	R1	*Bidens conjuncta*	Asteraceae	Ko'oko'olau	U.S.A. (HI).
C*	3	R1	*Bidens micrantha ctenophylla.*	Asteraceae	Ko'oko'olau	U.S.A. (HI).
C*	8	R4	*Brickellia mosieri*	Asteraceae	Brickell-bush, Florida	U.S.A. (FL).
C*	2	R1	*Calamagrostis expansa*	Poaceae	No common name	U.S.A. (HI).
C*	2	R1	*Calamagrostis hillebrandii*	Poaceae	No common name	U.S.A. (HI).
C*	5	R4	*Calliandra locoensis*	Mimosaceae	No common name	U.S.A. (PR).
C*	5	R1	*Calochortus persistens*	Liliaceae	Mariposa lily, Siskiyou	U.S.A. (CA, OR).
C*	5	R4	*Calyptranthes estremerae*	Myrtaceae	No common name	U.S.A. (PR).
C*	2	R1	*Canavalia napaliensis*	Fabaceae	'Awikiwiki	U.S.A. (HI).
C*	2	R1	*Canavalia pubescens*	Fabaceae	'Awikiwiki	U.S.A. (HI).
C*	8	R6	*Castilleja aquariensis*	Scrophulariaceae	Paintbrush, Aquarius	U.S.A. (UT).
C*	11	R1	*Castilleja christii*	Scrophulariaceae	Paintbrush, Christ's	U.S.A. (ID).
C*	6	R4	*Chamaecrista lineata* var. *keyensis.*	Fabaceae	Pea, Big Pine partridge	U.S.A. (FL).
C*	9	R4	*Chamaesyce deltoidea pinetorum.*	Euphorbiaceae	Sandmat, pineland	U.S.A. (FL).
C*	6	R4	*Chamaesyce deltoidea serpyllum.*	Euphorbiaceae	Spurge, wedge	U.S.A. (FL).
C*	2	R1	*Chamaesyce eleanoriae*	Euphorbiaceae	Àkoko	U.S.A. (HI).
C*	3	R1	*Chamaesyce remyi* var. *kauaiensis.*	Euphorbiaceae	Àkoko	U.S.A. (HI).
C*	3	R1	*Chamaesyce remyi* var. *remyi.*	Euphorbiaceae	Àkoko	U.S.A. (HI).
C*	2	R1	*Charpentiera densiflora*	Amaranthaceae	Papala	U.S.A. (HI).
C*	6	R1	*Chorizanthe parryi* var. *fernandina.*	Polygonaceae	Spineflower, San Fernando Valley.	U.S.A. (CA).
C*	2	R4	*Chromolaena frustrata*	Asteraceae	Thoroughwort, Cape Sable	U.S.A. (FL).
C*	2	R4	*Consolea corallicola*	Cactaceae	Cactus, Florida semaphore	U.S.A. (FL).
C*	2	R4	*Cordia rupicola*	Boraginaceae	No common name	U.S.A. (PR), Anegada.
C*	2	R1	*Cyanea asplenifolia*	Campanulaceae	Haha	U.S.A. (HI).
C*	2	R1	*Cyanea calycina*	Campanulaceae	Haha	U.S.A. (HI).
C*	2	R1	*Cyanea eleeleensis*	Campanulaceae	Haha	U.S.A. (HI).
C*	2	R1	*Cyanea kuhihewa*	Campanulaceae	Haha	U.S.A. (HI).
C*	2	R1	*Cyanea kunthiana*	Campanulaceae	Haha	U.S.A. (HI).
C*	2	R1	*Cyanea lanceolata*	Campanulaceae	Haha	U.S.A. (HI).
C*	2	R1	*Cyanea obtusa*	Campanulaceae	Haha	U.S.A. (HI).
C*	2	R1	*Cyanea tritomantha*	Campanulaceae	Aku	U.S.A. (HI).
C*	2	R1	*Cyrtandra filipes*	Gesneriaceae	Haìwale	U.S.A. (HI).
C*	2	R1	*Cyrtandra kaulantha*	Gesneriaceae	Haìwale	U.S.A. (HI).
C*	2	R1	*Cyrtandra oenobarba*	Gesneriaceae	Haìwale	U.S.A. (HI).
C*	2	R1	*Cyrtandra oxybapha*	Gesneriaceae	Haìwale	U.S.A. (HI).
C*	2	R1	*Cyrtandra sessilis*	Gesneriaceae	Haìwale	U.S.A. (HI).
C*	9	R4	*Dalea carthagenensis floridana.*	Fabaceae	Prairie-clover, Florida	U.S.A. (FL).
C*	5	R5	*Dichanthelium hirstii*	Poaceae	Panic grass, Hirsts'	U.S.A. (DE, GA, NC, NJ).
C*	5	R4	*Digitaria pauciflora*	Poaceae	Crabgrass, Florida pineland	U.S.A. (FL).
C*	3	R1	*Dubautia imbricata imbricata*	Asteraceae	Naènaè	U.S.A. (HI).
C*	3	R1	*Dubautia plantaginea magnifolia.*	Asteraceae	Naènaè	U.S.A. (HI).
C*	2	R1	*Dubautia waialealae*	Asteraceae	Naènaè	U.S.A. (HI).
C*	6	R2	*Echinomastus erectocentrus* var. *acunensis.*	Cactaceae	Cactus, Acuna	U.S.A. (AZ), Mexico.
C*	11	R1	*Erigeron basalticus*	Asteraceae	Daisy, basalt	U.S.A. (WA).
C*	5	R2	*Erigeron lemmonii*	Asteraceae	Fleabane, Lemmon	U.S.A. (AZ).
C*	2	R1	*Eriogonum codium*	Polygonaceae	Buckwheat, Umtanum Desert.	U.S.A. (WA).
C	2	R1	*Eriogonum diatomaceum*	Polygonaceae	Buckwheat, Churchill Narrows.	U.S.A (NV).
C*	5	R1	*Eriogonum kelloggii*	Polygonaceae	Buckwheat, Red Mountain	U.S.A. (CA).
C*	2	R1	*Festuca hawaiiensis*	Poaceae	No common name	U.S.A. (HI).
C*	11	R2	*Festuca ligulata*	Poaceae	Guadalupe fescue	U.S.A. (TX), Mexico.
C*	2	R1	*Gardenia remyi*	Rubiaceae	Nanu	U.S.A. (HI).
C*	2	R1	*Geranium hanaense*	Geraniaceae	Nohoanu	U.S.A. (HI).
C*	8	R1	*Geranium hillebrandii*	Geraniaceae	Nohoanu	U.S.A. (HI).
C*	2	R1	*Geranium kauaiense*	Geraniaceae	Nohoanu	U.S.A. (HI).

TABLE 1.—CANDIDATE NOTICE OF REVIEW (ANIMALS AND PLANTS)—Continued

[**Note:** See end of **SUPPLEMENTARY INFORMATION** for an explanation of symbols used in this table.]

Status		Lead region	Scientific name	Family	Commom name	Historic range
Category	Priority					
C*	5	R4	*Gonocalyx concolor*	Ericaceae	No common name	U.S.A. (PR).
C*	5	R1	*Hazardia orcuttii*	Asteraceae	Orcutt's hazardia	U.S.A. (CA), Mexico
C*	2	R1	*Hedyotis fluviatilis*	Rubiaceae	Kampuaá	U.S.A. (HI).
C*	11	R4	*Helianthus verticillatus*	Asteraceae	Sunflower, whorle	U.S.A. (AL, GA, TN).
C*	5	R2	*Hibiscus dasycalyx*	Malvaceae	Rose-mallow, Neches River	U.S.A. (TX).
C*	9	R4	*Indigofera mucronata keyensis.*	Fabaceae	Indigo, Florida	U.S.A. (FL).
C	2	R6	*Ipomopsis polyantha*	Polemoniaceae	Skyrocket, Pagosa	U.S.A. (CO).
C*	5	R1	*Ivesia webberi*	Rosaceae	Ivesia, Webber	U.S.A. (CA, NV).
C*	3	R1	*Joinvillea ascendens ascendens.*	Joinvilleaceae	'Ohe	U.S.A. (HI).
C*	2	R1	*Keysseria (= Lagenifera) erici.*	Asteraceae	No common name	U.S.A. (HI).
C*	2	R1	*Keysseria (= Lagenifera) helenae.*	Asteraceae	No common name	U.S.A. (HI).
C*	2	R1	*Korthalsella degeneri*	Viscaceae	Hulumoa	U.S.A. (HI).
C*	2	R1	*Labordia helleri*	Loganiaceae	Kamakahala	U.S.A. (HI).
C*	2	R1	*Labordia pumila*	Loganiaceae	Kamakahala	U.S.A. (HI).
C*	5	R4	*Leavenworthia crassa*	Brassicaceae	Gladecress, unnamed	U.S.A. (AL).
C*	2	R2	*Leavenworthia texana*	Brassicaceae	Gladecress, Texas golden	U.S.A. (TX).
C*	5	R4	*Lesquerella globosa*	Brassicaceae	Bladderpod, Short's	U.S.A. (IN, KY, TN).
C*	5	R1	*Lesquerella tuplashensis*	Brassicaceae	Bladderpod, White Bluffs	U.S.A. (WA).
C*	2	R4	*Linum arenicola*	Linaceae	Flax, sand	U.S.A. (FL).
C*	3	R4	*Linum carteri* var. *carteri*	Linaceae	Flax, Carter's small-flowered	U.S.A. (FL).
C*	2	R1	*Lysimachia daphnoides*	Primulaceae	Lehua makanoe	U.S.A. (HI).
C*	2	R1	*Melicope christophersenii*	Rutaceae	Alani	U.S.A. (HI).
C*	2	R1	*Melicope degeneri*	Rutaceae	Alani	U.S.A. (HI).
C*	2	R1	*Melicope hiiakae*	Rutaceae	Alani	U.S.A. (HI).
C*	2	R1	*Melicope makahae*	Rutaceae	Alani	U.S.A. (HI).
C*	2	R1	*Melicope paniculata*	Rutaceae	Alani	U.S.A. (HI).
C*	2	R1	*Melicope puberula*	Rutaceae	Alani	U.S.A. (HI).
C*	2	R1	*Myrsine fosbergii*	Myrsinaceae	Kolea	U.S.A. (HI).
C*	2	R1	*Myrsine mezii*	Myrsinaceae	Kolea	U.S.A. (HI).
C*	2	R1	*Myrsine vaccinioides*	Myrsinaceae	Kolea	U.S.A. (HI).
C*	8	R5	*Narthecium americanum*	Liliaceae	Asphodel, bog	U.S.A. (DE, NC, NJ, NY, SC).
C*	2	R1	*Nothocestrum latifolium*	Solanaceae	'Aiea	U.S.A. (HI).
C*	2	R1	*Ochrosia haleakalae*	Apocynaceae	Holei	U.S.A. (HI).
C*	11	R2	*Paronychia congesta*	Caryophyllaceae	Whitlow-wort, bushy	U.S.A. (TX).
C*	6	R2	*Pediocactus peeblesianus fickeiseniae.*	Cactaceae	Cactus, Fickeisen plains	U.S.A. (AZ).
C*	2	R6	*Penstemon debilis*	Scrophulariaceae	Beardtongue, Parachute	U.S.A. (CO).
C*	2	R6	*Penstemon grahamii*	Scrophulariaceae	Beardtongue, Graham	U.S.A. (CO, UT).
C*	6	R6	*Penstemon scariosus* var. *albifluvis.*	Scrophulariaceae	Beardtongue, White River	U.S.A. (CO, UT).
C*	2	R1	*Peperomia subpetiolata*	Piperaceae	'Ala 'ala wai nui	U.S.A. (HI).
C	2	R1	*Phacelia stellaris*	Hydrophyllaceae	Brand's phacelia	U.S.A. (CA), Mexico.
C*	8	R6	*Phacelia submutica*	Hydrophyllaceae	Phacelia, DeBeque	U.S.A. (CO).
C*	2	R1	*Phyllostegia bracteata*	Lamiaceae	No common name	U.S.A. (HI).
C*	2	R1	*Phyllostegia floribunda*	Lamiaceae	No common name	U.S.A. (HI).
C*	2	R1	*Phyllostegia hispida*	Lamiaceae	No common name	U.S.A. (HI).
C*	2	R1	*Pittosporum napaliense*	Pittosporaceae	Ho'awa	U.S.A. (HI).
C*	5	R4	*Platanthera integrilabia*	Orchidaceae	Orchid, white fringeless	U.S.A. (AL, GA, KY, MS, NC, SC, TN, VA).
C*	3	R1	*Platydesma cornuta* var. *cornuta.*	Rutaceae	No common name	U.S.A. (HI).
C*	3	R1	*Platydesma cornuta* var. *decurrens.*	Rutaceae	No common name	U.S.A. (HI).
C*	2	R1	*Platydesma remyi*	Rutaceae	No common name	U.S.A. (HI).
C*	2	R1	*Platydesma rostrata*	Rutaceae	Pilo kea lau li'i	U.S.A. (HI).
C	2	R1	*Pleomele fernaldii*	Agavaceae	Hala pepe	U.S.A. (HI).
C*	2	R1	*Pleomele forbesii*	Agavaceae	Hala pepe	U.S.A. (HI).
C*	5	R1	*Potentilla basaltica*	Rosaceae	Cinquefoil, Soldier Meadow	U.S.A. (NV).
C*	2	R1	*Pritchardia hardyi*	Asteraceae	Lo'ulu	U.S.A. (HI).
C*	3	R1	*Pseudognaphalium (=Gnaphalium) sandwicensium* var. *molokaiense.*	Asteraceae	'Ena'ena	U.S.A. (HI).
C*	2	R1	*Psychotria grandiflora*	Rubiaceae	Kopiko	U.S.A. (HI).
C*	3	R1	*Psychotria hexandra* var. *oahuensis.*	Rubiaceae	Kopiko	U.S.A. (HI).
C*	2	R1	*Psychotria hobdyi*	Rubiaceae	Kopiko	U.S.A. (HI).
C*	2	R1	*Pteralyxia macrocarpa*	Apocynaceae	Kaulu	U.S.A. (HI).
C*	2	R1	*Ranunculus hawaiensis*	Ranunculaceae	Makou	U.S.A. (HI).
C*	2	R1	*Ranunculus mauiensis*	Ranunculaceae	Makou	U.S.A. (HI).
C*	8	R1	*Rorippa subumbellata*	Brassicaceae	Cress, Tahoe yellow	U.S.A. (CA, NV).
C*	2	R1	*Schiedea attenuata*	Caryophyllaceae	No common name	U.S.A. (HI).
C*	2	R1	*Schiedea pubescens*	Caryophyllaceae	Ma'oli'oli	U.S.A. (HI).
C*	2	R1	*Schiedea salicaria*	Caryophyllaceae	No common name	U.S.A. (HI).

TABLE 1.—CANDIDATE NOTICE OF REVIEW (ANIMALS AND PLANTS)—Continued

[**Note:** See end of **SUPPLEMENTARY INFORMATION** for an explanation of symbols used in this table.]

Status		Lead region	Scientific name	Family	Commom name	Historic range
Category	Priority					
C*	5	R1	*Sedum eastwoodiae*	Crassulaceae	Stonecrop, Red Mountain	U.S.A. (CA).
C*	2	R1	*Sicyos macrophyllus*	Cucurbitaceae	‘Anunu	U.S.A. (HI).
C*	9	R1	*Sidalcea hickmanii parishii*	Malvaceae	Checkerbloom, Parish’s	U.S.A. (CA).
C	9	R4	*Sideroxylon reclinatum ssp. austrofloridense.*	Sapotaceae	Bully, Everglades	U.S.A. (FL).
C*	2	R1	*Solanum nelsonii*	Solanaceae	Popolo	U.S.A. (HI).
C	8	R4	*Solidago plumosa*	Asteraceae	Goldenrod, Yadkin River	U.S.A. (NC)
C*	2	R1	*Stenogyne cranwelliae*	Lamiaceae	No common name	U.S.A. (HI).
C*	2	R1	*Stenogyne kealiae*	Lamiaceae	No common name	U.S.A. (HI).
C*	5	R4	*Symphyotrichum georgianum.*	Asteraceae	Aster, Georgia	U.S.A. (AL, FL, GA, NC, SC).
C*	2	R1	*Zanthoxylum oahuense*	Rutaceae	A‘e	U.S.A. (HI).
Ferns and Allies						
C*	11	R1	*Botrychium lineare*	Ophioglossaceae	Moonwort, slender	U.S.A. (CA, CO, ID, MT, OR, WA), Canada (AB, BC, NB, QC).
C*	2	R1	*Christella boydiae (= Cyclosorus boydiae* var. *boydiae + Cyclosorus boydiae kipahuluensis).*	Thelypteridaceae	No common name	U.S.A. (HI).
C*	2	R1	*Doryopteris takeuchii*	Pteridaceae	No common name	U.S.A. (HI).
C*	2	R1	*Huperzia (= Phlegmariurus) stemmermanniae.*	Lycopodiaceae	Wawae‘iole	U.S.A. (HI).
C*	3	R1	*Microlepia strigosa* var. *mauiensis (= Microlepia mauiensis).*	Dennstaedtiaceae	Palapali	U.S.A. (HI).

TABLE 2.—ANIMALS AND PLANTS FORMERLY CANDIDATES OR FORMERLY PROPOSED FOR LISTING

[**Note:** See end of **SUPPLEMENTARY INFORMATION** for an explanation of symbols used in this table.]

Status		Lead region	Scientific name	Family	Commom name	Historic range
Code	Expl.					
Mammals						
T	L	R1	*Pteropus mariannus mariannus.*	Pteropodidae	Bat, Mariana fruit (= Mariana flying fox) (Aguijan, etc.).	Western Pacific Ocean, U.S.A. (GU, MP).
Rc	A	6	*Cynomys ludovicianus*	Sciuridae	Prairie dog, black-tailed	U.S.A. (AZ, CO, KS, MT, NE, NM, ND, OK, SD, TX, WY), Canada, Mexico.
Amphibians						
T	L	R1	*Ambystoma californiense*	Ambystomatidae	Salamander, California tiger	U.S.A. (CA).
Clams						
Rc	N	R4	*Pleurobema troschelianum*	Unionidae	Clubshell, Alabama	U.S.A. (AL, GA, TN).
Rc	N	R4	*Pleurobema chattanoogaense.*	Unionidae	Clubshell, painted	U.S.A. (AL, GA, TN).
Insects						
Rp	A	R2	*Euphydryas anicia cloudcrofti.*	Nymphalidae	Butterfly, Sacramento Mountains checkerspot.	U.S.A. (NM).
Rc	A	R5	*Pseudanophthalmus holsingeri.*	Carabidae	Cave Beetle, Holsinger’s	U.S.A. (VA).
Crustaceans						
Rc	A	R4	*Fallicambarus gordoni*	Cambaridae	Crayfish, Camp Shelby burrowing.	U.S.A. (MS).

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