Instituted by several landowners on the conservation efforts that have been collaborate with our partners to expand specifically addressing the needs of the Conservation Agreement that the Service and the National Park action is not warranted. Furthermore, information, we find that the petitioned amended (Act). After review of all Endangered Species Act of 1973, as ausonides insulanus the island marble butterfly (Euchloe ausonides and Plants; 12-Month Finding on a petition to list Endangered and Threatened Wildlife 50 CFR Part 17 DEPARTMENT OF THE INTERIOR Fish and Wildlife Service 50 CFR Part 17 Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition to List the Island Marble Butterfly (Euchloe ausonides insulanus) as Threatened or Endangered AGENCY: Fish and Wildlife Service, Interior. ACTION: Notice of 12-month petition finding. SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 12-month finding on a petition to list the island marble butterfly (Euchloe ausonides insulanus) under the Endangered Species Act of 1973, as amended (Act). After review of all available scientific and commercial information, we find that the petitioned action is not warranted. Furthermore, the Service and the National Park Service (NPS) have entered into a Conservation Agreement that implements conservation measures specifically addressing the needs of the island marble butterfly. We request that you submit any new information concerning the status of and threats to this subspecies whenever it becomes available. We will continue to collaborate with our partners to expand the conservation efforts that have been instituted by several landowners on currently occupied habitat. DATES: The finding announced in this document was made on November 14, 2006. ADDRESSES: You may send data, information, comments, or questions concerning this finding to Ken Berg, Attn: Island Marble Butterfly, Western Washington Fish and Wildlife Office, U.S. Fish and Wildlife Service, 510 Desmond Drive, SE., Suite 102, Lacey, WA 98503; or via fax to 360–753–9008. You may inspect the petition, administrative records, supporting information, and comments received by appointment during normal business hours at the above address. FOR FURTHER INFORMATION CONTACT: Ted Thomas or Jodi Bush at the Western Washington Fish and Wildlife Office (see ADDRESSES); or by telephone at 360–753–9440; or by fax at 360–753–9008; or by electronic mail at islandmarble@fws.gov. SUPPLEMENTARY INFORMATION: Background On December 11, 2002, we received a petition dated December 10, 2002, requesting that we emergency list the island marble butterfly (Euchloe ausonides insulanus) as an endangered species, and that we designate critical habitat concurrently with the listing. The petition, submitted by the Xerces Society, Center for Biological Diversity, Friends of the San Juan, and Northwest Ecosystem Alliance, was clearly identified as a petition for a listing rule and contained the names, signatures, and addresses of the requesting parties. Included in the petition was supporting information regarding the species’ taxonomy and ecology, historical and current distribution, present status, active imminent threats, and potential causes of decline. Section 4(b)(3)(B) of the Act (16 U.S.C. 1531 et seq.) requires that, for any petition to revise the Lists of Threatened and Endangered Wildlife and Plants that contains substantial scientific and commercial information that listing may be warranted, we make a finding within 12 months of the date of the receipt of the petition on whether the petitioned action is (a) Not warranted, (b) warranted, or (c) warranted, but the immediate proposal of a regulation implementing the petitioned action is precluded by other pending proposals to determine whether any species is threatened or endangered, and expeditious progress is being made to add or remove qualified species from the Lists of Endangered and Threatened Wildlife and Plants. Section 4(b)(3)(C) of the Act requires that a petition for which the requested action is found to be warranted but precluded be treated as though resubmitted on the date of such finding, i.e., requiring a subsequent finding to be made within 12 months. Each subsequent 12-month finding will be published in the Federal Register. Previous Federal Action On January 22, 2003, we sent a letter acknowledging receipt of the petition to Scott Hoffman Black, Executive Director of the Xerces Society. In our response, we advised the petitioners that we had insufficient funds to respond to the petition at that time and that we would not be able to begin processing the petition in a timely manner. On April 5, 2004, we received a 60-day notice of intent to sue for three butterfly species, the Taylor’s checkerspot (Euphydryas editha taylori), the mardon skipper (Polites mardon), and the island marble butterfly. On October 18, 2004, plaintiffs filed a complaint for declaratory and injunctive relief, which specifically addressed conservation actions needed for the island marble butterfly. Taylor’s checkerspot and mardon skipper butterflies were not addressed in that complaint and are not assessed in this petition finding. We negotiated a stipulated settlement agreement for the island marble butterfly, dated February 28, 2005, in which we agreed to work cooperatively with our conservation

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In the Town of Milton
Maps are available for inspection at The Caswell County Planning Department, 144 Main Street, Yanceyville, North Carolina. Send comments to The Honorable Walter L. Thomas, IV, Mayor of the Town of Milton, P.O. Box 248, Milton, North Carolina 27305.

In the Town of Yanceyville
Maps are available for inspection at The City of Yanceyville Planning Office, 200 East Church Street, Yanceyville, North Carolina. Send comments to The Honorable Daniel Printz, Mayor of the City of Yanceyville, P.O. Box 918, Yanceyville, North Carolina 27379.

Maps are available for inspection at the City of Yanceyville Planning Office, 200 East Church Street, Yanceyville, North Carolina. Send comments to The Honorable Daniel Printz, Mayor of the City of Yanceyville, P.O. Box 918, Yanceyville, North Carolina 27379.

Maps are available for inspection at the City of Yanceyville Planning Office, 200 East Church Street, Yanceyville, North Carolina. Send comments to The Honorable Daniel Printz, Mayor of the City of Yanceyville, P.O. Box 918, Yanceyville, North Carolina 27379.

Maps are available for inspection at the City of Yanceyville Planning Office, 200 East Church Street, Yanceyville, North Carolina. Send comments to The Honorable Daniel Printz, Mayor of the City of Yanceyville, P.O. Box 918, Yanceyville, North Carolina 27379.

Maps are available for inspection at the City of Yanceyville Planning Office, 200 East Church Street, Yanceyville, North Carolina. Send comments to The Honorable Daniel Printz, Mayor of the City of Yanceyville, P.O. Box 918, Yanceyville, North Carolina 27379.
A 90-day finding was published in the Federal Register on February 13, 2006 (71 FR 7497). We found that the petition presented substantial scientific information indicating that listing the island marble butterfly may be warranted. Therefore, we initiated a status review of the subspecies. A 60-day public comment period was opened, to allow the public to provide information for the status review. This document constitutes our 12-month finding on the island marble butterfly, and is submitted in fulfillment of the stipulated settlement agreement.

On October 31, 2006, the Service and the NPS entered into a “Conservation Agreement and Strategy for the Island Marble Butterfly (Euchloe ausonides insulans),” that implements measures within San Juan Islands National Historical Park specifically addressing the conservation needs of the island marble butterfly.

Species’ Description and Life History

The island marble butterfly is a member of the Pieridae family, subfamily Pierinae. The island marble butterfly is 1.75 inches (4.5 centimeters) long, creamy white (Pyle 2002, p. 142; Guppy and Sheppard 2001, p. 159), and is larger than other subspecies of the large marble butterfly (Euchloe ausonides). The yellow-green marbled pattern on the ventral hindwings and forewings characterizes adults of the subspecies (Pyle 2002, p. 142; Guppy and Sheppard 2001, p. 159).

The eggs of the island marble butterfly are bluish-greenish to cream when laid (Pyle 2002, p. 142; Guppy and Sheppard 2001, p. 159), and change to orange or red at maturity. Larvae have five instars (developmental stages between each molt) before over-wintering as pupae. Larvae are steely-blue above, transitioning to green below, with bright yellow stripes along the sides and back, and are peppered with small black spots (Pyle 2002, p. 142). Fifth-instar larvae walk about to find secure resting locations for pupation on the lower stem of food plants, where the pupae over-winter until emerging as adults the following spring. The island marble butterfly is univoltine (the subspecies has just one flight period per year) (Pyle 2002, p. 142; Pyle 2003, p. 34). The flight period of adult butterflies generally commences in early April and is completed by mid-June in the San Juan Islands, Washington (Miskelly 2005, p. 5). Eggs may be observed for a week beyond when adults are observed, and larvae have been observed until early July (Miskelly 2005, p. 5).

Distribution and Status

Historically, the island marble butterfly has always been rare (Guppy and Shepard 2001, p. 161). The subspecies was known from 14 museum records from collections made in British Columbia, Canada, from 1861 to 1908. The specimens are displayed in museum collections in British Columbia, Canada, and the Smithsonian Institution, Washington, DC. Historically, the island marble butterfly was only known from Vancouver Island and the Canadian Gulf Islands, which are part of the same geologic formation as the San Juan Archipelago. The island marble butterfly was last observed on Gabriola Island, Canada in 1908; has not been observed on Vancouver Island or the Canadian Gulf Islands since 1908; and was considered to be extirpated throughout its known range. The butterfly was discovered on San Juan Island, Washington, in 1998 by John Fleckenstein, a biologist with the Natural Heritage Program of the Washington Department of Natural Resources (WDNR); that discovery was published in 2001 by Guppy and Shepard (p. 160).

Taxonomy

The island marble butterfly is distinct from its nearest relative, the large marble butterfly (Euchloe ausonides), which is widespread in British Columbia east of the Coast Range, and in Washington and Oregon, where it is found exclusively east of the Cascade Mountains (Guppy and Shepard 2001, p. 160; Pyle 2002, p. 142). The large marble butterfly is not found in coastal or island locations. Because the island marble butterfly has distinct physical characteristics and its behavior is adapted to the mosaic of habitat conditions and plant assemblages specifically on the San Juan Islands, the subspecies has likely existed there for well over a century, and perhaps since the last glaciation (R. M. Pyle, pers. comm., June 2006).

Habitat

The island marble butterfly was known to occur exclusively in grassland habitat that historically was dominated by the grasses Festuca roemerii (native bunchgrass), Elymus glaucus (blue wildrye), Danthonia californica (California oat-grass), and native forbs including Camassia quamash (common camas), Fritillaria lanceolata (chocolate lily), Zygadenus venenosus (death camas), and Cerastium arvense (field chickweed) (Lambert 2005c, p. 7). Arabis spp. (rockcress species) were likely food plants for the island marble butterfly (Guppy and Shepard 2001, p. 160); however, they are currently rare in much of the San Juan Islands.

Island marble butterfly larvae are currently known to feed on plants of the Brassicaceae (mustard) family in three types of habitat: (1) Native Lepidium virginicum var. menziesii (tall or Puget Sound peppergrass) found at the edge of coastal lagoons just above the marine shoreline of Griffin Bay, north of American Camp, a National Historic Park on San Juan Island (Lambert 2005c, p. 7; Miskelly 2005, p. 7); (2) nonnative, annual mustards such as Brassica campestris (field mustard) and Sisymbrium altissimum (tall-tumble-mustard) in upland habitat; and (3) tall-tumble-mustard in sand dune habitat.

Adult island marble butterflies were most commonly observed nectaring on Lepidium virginicum var. menziesii, Brassica campestris, Sisymbrium altissimum, Hypochaeris radicata (haary cat’s ear), Taraxacum officinale (dandelion), and Cakile edentula (sea rocket) (Miskelly 2005, p. 6).

The use of native and non-native mustards by the island marble butterfly is likely a shift from the preferred larval food plants used historically. Guppy and Shepard (2001, p. 160) discuss several species of Arabis, Descurainia, and Barbarea all members of the Brassicaceae (mustard) family that were likely used by the island marble butterfly. Most of these plants are absent from San Juan and Lopez Islands, possibly due to the shift in dominance to pasture grasses and other sod-forming grasses associated with agricultural practices, which reduce the establishment and maintenance of native forb species. The island marble butterfly appears to have shifted its larval food preference to the nonnative species Brassica campestris and Sisymbrium altissimum, although the native Lepidium virginicum var. menziesii is currently used by island marble butterfly larvae in lagoon habitat. A similar shift to nonnative plants in situations where the preferred larval host plants no longer exist has been observed in long-term studies of checkerspot butterflies (Ehrlich and Hanski 2004, p. 131; Stinson 2005, p. 88). It is not known whether this shift to using nonnative plants by butterflies was brought on by butterfly preference or plant availability. Nonnative mustard species are able to colonize disturbed areas. Many
temporary ground-disturbing activities have short-term effects that do not appear to result in long-term changes to island marble butterfly population numbers or distribution. Regardless of how this shift in host plants occurred, the use of nonnative plants such as *Brassica* and *Sisymbrium* has likely contributed to the survival of the island marble butterfly on grassland habitat found within San Juan County, Washington, and is expected to continue to play a significant role in the species’ continued existence.

**Surveys**

In 2005 and 2006, we partnered with Washington Departments of Fish and Wildlife and Natural Resources (WDFW and WDNR), the NPS, the University of Washington, and the Xerces Society to survey for the presence of the island marble butterfly during the adult flight period and while eggs were being laid and larvae were active (early April through late June). Qualified observers conducted approximately 325 surveys at more than 150 distinct locations in 6 counties and on 16 islands. Surveys were conducted for adult butterflies from mid-April to mid-June; eggs and larvae were surveyed during an additional 2-week period after the primary adult flight period (A. Potter, Wildlife Biologist, WDFW, pers. comm. 2006; A. Lambert 2005c, p. 14; Miskelly 2006, p. 14). The survey period was initiated on April 10 in both survey years, and was timed to commence with the flight period of the three previous springs. Both surveys were conducted until the flight period was finished, which was June 26, 2005, and June 17, 2006. Based on an analysis of potential habitat using Geographic Information System (GIS) mapping, site visits, and field verification during 2005 and 2006, we surveyed 85 to 90 percent of the potential available island marble butterfly habitat.

All surveys were conducted using an Intuitive Controlled survey method (Thomas and Carey 1996, p. 152), in which the surveyor walks at a leisurely speed (about 200 meters (m) per 10 minutes), sweeping the grasses for hidden butterflies and closely examining specific areas of suitable habitat. A thorough search is also made in areas between suitable habitat and at the perimeter of the habitat patch.

The ability to detect the island marble butterfly, as with most butterflies, depends on the distribution and availability of host plants for egg laying, larval development, and maturation to adult. Island marble butterflies were found only where the host mustards were found. Recent research by Dorazio et al. (2006, p. 842, 852) predicted that species’ occurrence and butterfly diversity could be predicted accurately through the careful location of surveys. They concluded that a reasonable estimate of abundance would be attained through a reduced survey effort when the plant community sampled was selected based on the known occurrence of the target butterfly species.

Surveys conducted in 2005 focused on areas with suitable habitat, which was defined by the presence of the three known larval food plants, *Brassica campestris*, *Sisymbrium altissimum*, and *Lepidium virginicum* var. *menziesii*. Sites with island marble butterfly detections in 2005 were revisited by survey teams more than 5 times in 2006.

Our survey efforts during 2006 focused on previously unsurveyed islands and suitable habitat patches composed of host mustards. An additional objective in 2006 was to survey appropriate habitat adjacent to sites on San Juan and Lopez Islands that were documented to be occupied by island marble butterflies in 2005. The 2005 survey sites were used as focal points, and surveys were expanded outward into adjacent suitable habitat with landowner permission. Only a few new subpopulations were documented in 2006.

During the 2-year survey period, 26 distinct locations occupied by the island marble butterfly were documented. Based on these surveys and the efforts of interested landowners, we have determined that up to five populations may exist on the two islands. These populations are identified as:

1. **American Camp and vicinity**, which includes upland grassland habitat, lagoon, and sand dune habitat located on southern San Juan Island. The American Camp population is made up of lands managed by WDNR and NPS (566 acres (ac) (229 hectares (ha)) of occupied habitat), privately owned lands managed as rural residential that are relatively highly developed (199 ac (81 ha) of occupied habitat), and privately owned lands managed as rural farm and forest (66 ac (27 ha) of occupied habitat). This population is considered the core island marble butterfly population.

2. **The San Juan Valley subpopulation** is located on privately owned lands managed for agricultural resources (33 ac (13 ha) of occupied habitat).

3. **The Northwest San Juan Island subpopulation** is located on privately owned lands managed as rural farm and forest (6.5 ac (3 ha) of occupied habitat).

4. **The Central Lopez Island subpopulation** is located on privately owned lands and lands owned by the local school district managed as rural farm and forest (241 ac (98 ha) of occupied habitat).

5. **The West Central Lopez Island subpopulation** is located on private lands managed for agricultural resources (11 ac (5 ha) of occupied habitat).

Several other observations of dispersed or isolated individuals were made on Lopez and San Juan Islands. Because of the relatively low number of individuals found (compared to the sites identified above) and the distance from the populations identified above, these isolated individuals are not considered separate populations in the population count. Isolated sites, outside the locations described above, comprise an additional 2.5 ac (1 ha) of occupied habitat.

After two seasons of intensive survey effort, we concluded that many types of habitat that we originally suspected to be potentially suitable habitat are not being utilized because they do not provide the conditions necessary for the larval food plants. Areas occupied by trees, areas above approximately 300 feet (92 m) elevation, and barrens occupied by European rabbits (*Oryctolagus cuniculus*) did not provide suitable habitat conditions, and it is unlikely that they would be occupied by island marble butterflies in the future unless the rabbits were removed. Each of these habitat types has been surveyed and there have been no detections of island marble butterflies.

One habitat that may be suitable, but where we did not observe island marble butterflies, is grassland bald habitat (landforms with shallow soils, generally on south-facing, dry, often steep slopes and dominated by herbaceous vegetation, dwarf shrubs, or mosses and lichens) (WDNR 2006, p. 5). This habitat is found on many of the islands, and currently contains an assemblage of food plants used as adult nectar sources by the island marble butterfly. More importantly, grassland balds may be an appropriate habitat for native mustards such as rockcress (*Arabis* spp.), and particularly hairy rockcress (*Arabis hirsuta*), a larval food plant (Guppy and Shepard 2001, p. 158). *A. hirsuta* is now uncommon on many of the San Juan County islands and was not observed in any location where we found island marble butterflies. Despite our current lack of documented occupation, we believe that more study is needed before we can understand the value of grassland bald habitat to the island marble butterfly.
Population Size

The known population size for island marble butterflies is probably less than 500 butterflies, and possibly as low as 300 individuals, based on counts of adult butterflies from transect information collected over multiple years at American Camp, the core population. The transect counts completed at American Camp documented 270 adult butterflies in 2004, and 194 adult butterflies in 2005. Individual butterflies observed outside transects were added to the transect totals to give an estimate of the number of butterflies found at all American Camp locations, including private and public properties.

The populations found on San Juan Island appear to display classic metapopulation dynamics where a core population exists (American Camp) with several outlier subpopulations connected to it by migration (Ehrlich and Hanski 2004, p. 59). The peripheral subpopulations are made up of a few individuals that become established periodically in suitable habitat as individuals disperse from the core, and this habitat may or may not be occupied at all times. Peripheral locations of island marble butterflies appear to be connected to the core by habitat corridors that allow for dispersal and colonization.

During 2005 and 2006, when extensive searches were made to locate new populations, we found individuals at only a few locations outside of the core population at American Camp on San Juan Island. Most of these locations had fewer than 5 adults, and one was composed of only a few eggs and larvae. In 2006, new locations with individuals were found; however, no island marble butterfly adults, eggs, or larvae were detected at several of the outlier locations identified in 2005 (e.g., Lopez School and other private land holdings).

Population Structure

The core population of the Island Marble butterfly at American Camp on San Juan Island makes up the majority of the population. It contains as much as 75 percent of the total population, and 74 percent (832 ac (337 ha)) of the habitat occupied by the island marble butterfly. The remaining island marble butterflies are dispersed in subpopulations found on private lands on San Juan Island and in two subpopulations on Lopez Island. These peripheral subpopulations comprise approximately 20 percent of the total population. These peripheral subpopulations, along with isolated individual areas (5 percent of the total population), include an additional 294 ac (118 ha) of occupied habitat (26 percent of the total occupied habitat).

All subpopulations outside of the American Camp core population are small, and are found on mostly rural farms that are actively managed by the landowner and have suitable habitat containing the larval food plants. Because small-scale farming regularly disturbs the soil and creates habitat for host plants, these farms provide suitable habitat for the butterfly. The pattern of disturbances on public and private properties are expected to ensure that a mosaic of larval host plants and adult nectar sources will continue to be present within the core area for the butterfly and at dispersed locations on the islands.

In coordination with the WDFW, the WDNR, and NPS, and with support from Washington State University Extension Service, we held meetings with local communities on San Juan and Lopez Islands in March 2006. More than 50 people attended these workshops, during which the biology of the island marble butterfly and conservation actions that could be implemented to promote suitable habitat were discussed. These meetings provided opportunities for surveying additional areas and provided habitat enhancement guidance for those landowners wanting to share in the conservation of the butterfly.

Summary of Factors Affecting the Species

Section 4 of the Act (16 U.S.C. 1533), and implementing regulations at 50 CFR part 424, set forth procedures for adding species to the Federal Lists of Endangered and Threatened Wildlife and Plants. Under section 4(a) of the Act, we may list a species on the basis of any of five factors, as follows: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. In making this finding, information regarding the status of, and threats to, the island marble butterfly in relation to the five factors provided in section 4(a)(1) of the Act follows.

A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

Residential development, road construction and decommissioning, road maintenance activities, the use of herbicides, prescribed fire, and European rabbits may impact the island marble butterfly in its current range on San Juan and Lopez Islands of San Juan County, Washington.

Development

Residential development occurs on both San Juan and Lopez Islands. In particular, the Cattle Point Estate and Eagle Cove developments on private lands adjacent to NPS lands at American Camp threaten Island Marble butterfly habitat and increase mortality by increasing roads and traffic. These residential areas contain approximately 199 ac (81 ha) of the habitat occupied by island marble butterfly, constituting 18 percent of the total estimated occupied habitat. Approximately 50 percent of the habitat at American Camp proper (566 ac (229 ha)), including the NPS and WDNR lands will be managed in a natural condition, which is compatible with the conservation of the island marble butterfly. Development is occurring less rapidly to the north and west of American Camp and on Lopez Island, where small, rural farms with pastures and low-density private residences exist. Current management in these areas is compatible with management of the island marble butterfly habitat. These areas contain about 361 ac (146 ha), constituting 32 percent of habitat known to be occupied by island marble butterflies.

Road Construction

A planned road relocation project by the Federal Highway Administration (FHA) will result in short-term adverse affects to the island marble butterfly. This project is planned for Cattle Point Road, the single access to American Camp, the Cattle Point Estates (a residential area east of American Camp), and a WDNR parcel known as the Cattle Point Natural Resource Conservation Area. The existing road, which covers about 3 ac (1 ha) is eroding. The slumping (deep-seated rotational failure) of the sandy soil is displacing the high bluff directly below the current road grade.

Impacts of the road relocation could include temporary loss of as much as 13 ac (5 ha) of island marble butterfly habitat due to road construction activities and clearing, and removal of the subspecies’ larval food plants and adult nectar sources. Approximately 3 ac (1 ha) of habitat could be lost in the short term, if the preferred alternative is implemented. The NPS is planning to restore the decommissioned area using native grasses and forbs (P. Dederich, NPS Superintendent, pers. comm. 2006;
NPS Pacific West Region Directive 063), and as a result there would be no net loss of habitat from the road relocation over the long term.

Consistent with their resource management policy, the NPS will require the use of native grasses and forbs for restoration of any disturbed areas (NPS Management Policy 1988, Section 4.4.1.2). The nonnative field mustard and tumble-mustard, which are primary larval host plants and adult nectar plants of the island marble butterfly in upland habitat, will likely become established on the disturbed ground because their plentiful seed will germinate the first year after ground disturbance (mustards are generally annual species with high seed production).

Construction of the road will require the completion of an Environmental Impact Statement (EIS) under the National Environmental Policy Act (42 U.S.C. 4321 et seq.), and funding from the FHA. No schedule for the EIS or expected funding was available at the time this notice was written. However, based on information from the FHA, a draft EIS is expected by 2007. There appears to be no island marble butterfly breeding habitat along the proposed route for the Cattle Point highway realignment in the Park (Pyle 2006). While some individuals and host plants may occur, the road-building planning process and construction may proceed with little likelihood of mortality to these butterflies.

Road Maintenance Activities

Adults, eggs, and larvae of the island marble butterfly were observed in 2005, at the Fisherman’s Bay tombolo (a narrow beach landform that connects the mainland to an island) on Lopez Island. In July 2005, the habitat was buried by sand by the road maintenance crews to make the vegetation less flammable for a July 4th fireworks display, likely killing any larvae or eggs that may have been present. When the larval food plants subsequently resprouted, they were mowed during routine road maintenance, likely removing habitat for eggs and larval development in 2006. This site was visited four times in 2005, and six times in 2006, and no adult butterflies, eggs, or larvae were observed. After discussions with San Juan County highway officials at the March 2006 workshop, and again in June 2006, the County agreed to address our concerns regarding their road maintenance activities and management of habitat for the island marble butterfly (Ruth Milner, WDFW, in litt. 2006).

Grassland Restoration

Grassland restoration activities being implemented by NPS to restore historic grassland conditions in San Juan Islands National Historical Park (SJINHP) have improved habitat for island marble butterflies. Nonnative vegetation targeted for removal includes pasture grasses and woody shrubs. In 2005, NPS implemented grassland restoration activities that included the planting of native species and the removal of invasive vegetation through the application of herbicides and prescribed fire. Based on these activities, especially the successful combination of herbicide and prescribed fire at American Camp, we anticipate that long-term positive effects of habitat restoration will significantly outweigh short-term impacts. A more robust island marble butterfly population is expected as a result of restoration activities due to an increase in the establishment of larval food plants and native nectar sources, and a reduction in competing weedy forb vegetation and encroaching woody shrubs and trees. The results of the restoration efforts implemented in 2005 at American Camp have produced high quality habitat for the island marble butterfly, increasing by approximately four times the number of host plants in the restoration area.

Herbicides have been used in small experimental applications to test methods for reducing the distribution and spread of nonnative grasses at American Camp. In July 2005, herbicides were applied to approximately 3.7 ac (1.5 ha) of the 600 ac (243 ha) of grassland habitat at American Camp (William Gleason, Chief, Resource Management, SJINHP, pers. comm. 2005). Herbicide treatment was followed by a prescribed fire on the same footprint of land. Because these activities occurred prior to the end of the flight period, they likely harmed eggs, larvae, and adult island marble butterflies that were utilizing the food plants and grassland ecosystem. While many of the plants occupied by larvae were removed from the site prior to the herbicide treatment by volunteers and NPS personnel and relocated elsewhere (Lambert 2005b, p. 11), some may have been missed because of the difficulty in locating larvae.

The herbicide and prescribed fire treatments were conducted in a test area as preparation for a larger scale restoration project that NPS plans for restoring the native grassland plant community at American Camp. Disturbance produced by the herbicides and fire treatments also create suitable areas for the establishment of mustards. Based on discussions with us and other interested parties, NPS has agreed to implement restoration activities at a time outside of the flight period of the island marble butterfly. In 2006, a year after the experimental treatment, the grassland area was recovering and providing significantly higher-quality habitat for the island marble butterfly than was present prior to the management action. More than 480 tumble-mustard plants were counted in May 2006, and nearly 20 percent (91 plants) of the plants had island marble butterfly eggs or larvae attached. This is approximately four times the number of mustard plants found previously at this same location (T. Thomas, pers. observation, 2006).

Grassland restoration activities can have short-term detrimental effects to the island marble butterfly; however, they appear insignificant when compared to the long-term benefits.

European Rabbits

The European rabbit is a nonnative, burrowing species common on San Juan Island, and at American Camp in San Juan Island National Historical Park. Hall (1977, p. 293) summarized the history of the European rabbit on San Juan Island. Currently, more than 1,000 rabbits (Agee and West 2002, p. 3) consume all vegetation within approximately 180 ac (73 ha) of formerly grassland habitat at American Camp. However, the rabbit population does not appear to be expanding, and planning is underway by NPS to reduce its population size over time.

Summary of Factor A

The core of the population at American Camp is protected from development. Road construction and maintenance activities are not considered to be current threats to the island marble butterfly or its habitat. Grassland restoration activities (including herbicide treatments and prescribed fire) have shown success in increasing habitat and host plants and European rabbits do not appear to be a threat to the subspecies. Thus, we have determined that the present or threatened destruction, modification, or curtailment of the island marbled butterfly’s habitat or range do not constitute a threat to the subspecies such that listing under the Act is warranted.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

The NPS has not observed butterfly collecting at American Camp, or other locations where the island marble
butterfly is present. Under NPS regulations, the collection of living or dead wildlife, fish, or plants, or the parts or products thereof, is prohibited on lands under NPS jurisdiction without a permit (36 CFR 2.1(a)(1)(i) and (a)(1)(ii)). A verbal request was made by one individual for permission to collect this species (Rolfs, pers. comm. 2004). After discussions with conservation partners, the individual agreed to withdraw his request. Given the small number of island marble butterflies that remain in the wild, any collection of butterflies is likely to increase its extinction risk. However, at this time we do not believe that overutilization for commercial, recreational, scientific, or educational purposes is a significant threat to the island marble butterfly such that listing under the Act is warranted.

C. Disease or Predation

While predation by paper wasps (members of the Ichneumonidae, Vespidae, and Thomisidae families) and by crab spiders (Diaea spp.) has been documented for the island marble butterfly (A. Lambert, NPS Science Day Conference, June 23, 2006), neither is considered to be a significant threat to the subspecies.

D. The Inadequacy of Existing Regulatory Mechanisms

As mentioned previously in this finding, under NPS regulations, the collection of living or dead wildlife, fish, or plants, or the parts or products thereof, is prohibited on lands under NPS jurisdiction without a permit (36 CFR 2.1(a)(1)(i) and (a)(1)(ii)).

Washington State has designated the island marble butterfly as a candidate species, and identified the species as critically imperiled in its Comprehensive Wildlife Conservation Strategy (WDFW 2005, pp. 219, 314, 336–337). In this strategy, the WDFW identified several specific conservation actions for island marble butterfly management, including continuing to search for new populations and monitoring known sites, and protecting and restoring island marble butterfly habitat.

Under San Juan County’s Critical Area Ordinance, or San Juan County Code (SJCC 18.30.160.B.2.c and SJCC 18.30.160.D.b.iv.), the County defers to State guidance for management recommendations for any State-designated priority habitat or species. However, the comprehensive plan for San Juan County requires concentration of development in urban areas and maintains a rural farm landscape elsewhere on the islands. This has been relatively successful in concentrating the high-density development outside of island marble butterfly population areas, and maintaining suitable habitat on Lopez and San Juan Islands.

Based on the aforementioned regulatory protections, we have determined that the inadequacy of existing regulatory mechanisms does not constitute a threat to the island marble butterfly such that listing under the Act is warranted.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

Natural threats to the island marble butterfly include the browsing of larval food plants by deer, and impacts of storm tides and tidal surges. Recreational trail use was identified in the petition as a threat; however, there is no evidence that this activity affects island marble butterflies. Black-tailed deer (Odocoileus columbianus) browse larval food plants and adult nectar plants at most locations occupied by island marble butterflies (Miskelly 2005, p. 16), but the browsing does not appear to be at a level that significantly affects the butterflies.

On February 4, 2006, a storm event with high tides and strong, gusty winds from the north created tidal surges in Griffin Bay, and the coastal lagoon habitat of the island marble butterfly was inundated with water. Logs that had been cast ashore in previous storms, and that provided anchors and structure for the establishment of vegetation, were floated and displaced, and coarse sediments were deposited on the beach, burying food plants and winter pugation sites for the island marble butterfly. Approximately 5 percent of the habitat available to the subspecies was buried, killing any pupae that were present. During the spring of 2006, several adult island marble butterflies were observed in this area (A. Lambert, pers. comm. 2006). Although the new substrate, deposited in February 2006, has become populated by a high density of Puget Sound peppergrass (R.M. Pyle, pers. comm. 2006), no butterfly reproduction was documented in the lagoon habitat during 2006, possibly due to the timing of the revegetation, which occurred after the flight period of the island marble butterfly. The tidal surge was measured as a typical 5- to 10-year event based on a 100-year record; however, the combination of tidal surge and wind gusts greater than 34 mph (54 km/h) created beach-altering conditions that were relatively uncommon. We expect that this site will be colonized by island marble butterflies in 2007.

The natural factors listed above likely do not significantly impact the island marble butterfly population. Therefore, we have determined that there are no other natural or manmade factors that threatened the island marble butterfly such that its listing under the Act is warranted.

Finding

We assessed the best scientific and commercial information available regarding the threats faced by the island marble butterfly. We have reviewed the petition, information available in our files, and information submitted to us during the public comment period following our 90-day petition finding (71 FR 7497; February 13, 2006). We also consulted with recognized butterfly experts, Federal and State resource agencies, and non-governmental organizations with butterfly expertise, and we collected additional survey data.

Actions that may impact island marble butterflies include development for housing, road construction, road maintenance, collisions with vehicles, storm and tidal surges that inundate and bury habitat, herbivory of host plants by deer, loss of habitat to nonnative rabbits, and succession of grassland habitat to shrubs and trees. However, most, if not all, of these impacts are localized. Due to the island marble butterfly’s reliance on nonnative mustard species that experience resurgence after ground-disturbing activities, many temporary ground-disturbing activities have short-term effects that do not appear to result in negative long-term impacts to population numbers or distribution.

While the island marble butterfly population has likely always been low (having not been observed prior to 1998), the subspecies has evidently been present on San Juan Island, and possibly Lopez Island, for the past century. This persistence has occurred without deliberate management meant to sustain the butterfly. This suggests that the butterfly has managed to either persist as several small populations or as one core population in the American Camp area for many years, with individual butterflies migrating and establishing satellite populations elsewhere on San Juan Island and on Lopez Island.

Long-term threats are limited to less than 18 percent of the occupied area. The remaining 82 percent of the area occupied by the island marble butterfly is subject to short-term impacts that typically result in increased habitat of non-native mustards through ground disturbance, and increased use by island marble butterflies. This pattern of periodic disturbances is generally
compatible with sustaining the subspecies in the longterm.

The current threats analysis supports a determination that listing the island marble butterfly under the Act is not warranted. We will continue to assess the status of the butterfly by working with NPS, WDFW, conservation organizations, faculty and students from the University of Washington, the Washington State University Extension Service, and all private landowners with an interest in contributing to the conservation of this species. In addition, we will continue to work with the NPS on implementation of the Conservation Agreement for the butterfly. Although we did not rely on efforts identified in this new agreement as a basis for our determination, we anticipate that these efforts will enhance the conservation of the subspecies.

Based on an analysis of the current status and threats to the subspecies, we find that listing the island marble butterfly under the Act is not warranted. We request that you submit any new information concerning the status of or threats to this species to our Western Washington Fish and Wildlife Office (see ADDRESSES section) whenever it becomes available. New information will help us monitor the species and encourage its conservation. If an emergency situation develops for this or any other candidate species or species of concern, we will act to provide immediate protection.

References Cited

A complete list of all references cited herein, as well as others, is available upon request from the Western Washington Fish and Wildlife Office (see ADDRESSES section).

Author

The primary author of this document is Ted Thomas, U.S. Fish and Wildlife Service, Western Washington Fish and Wildlife Office (see ADDRESSES section).

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
50 CFR Part 224
[Docket No. 060621175–6175–01; I.D. 101805A]

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration, Commerce.

ACTION: Notice of 90–day petition finding; request for information.

SUMMARY: We, NMFS, announce a 90–day finding on a petition to list the Kennebec River population of anadromous Atlantic salmon (Salmo salar) as endangered under the Endangered Species Act (ESA) of 1973, as amended. We find that the petition presents substantial scientific or commercial information indicating that the petitioned action may be warranted. This normally initiates a formal status review, but as described below under Summary of Previous ESA Actions, in this case, we and the U.S. Fish and Wildlife Service (USFWS) had already initiated a status review of this and other populations, resulting in NMFS’ announcement of the completed status review report on September 22, 2006.

DATES: The finding announced in this document was made on November 14, 2006.


SUPPLEMENTARY INFORMATION:

Background

Section 4(b)(3)(A) of the ESA requires that we make a finding on whether a petition to list, delist, or reclassify a species presents substantial information to indicate that the petitioned action may be warranted. To the maximum extent practicable, this finding is to be made within 90 days of receipt of the petition, and the finding is to be published promptly in the Federal Register.

In determining whether a petition contains substantial information, we take into account information submitted with and referenced in the petition and all other information readily available in our files. We do not conduct additional research at this point, nor do we subject the petition to critical review. Our ESA implementing regulations at 50 CFR 424.14(b)(1) define ‘‘substantial information’’ as the amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted. If the petition is found to present such information, the Secretary of Commerce (Secretary) must conduct a status review of the involved species. In making a finding on a petition to list a species, the Secretary must consider whether such a petition (i) clearly indicates the administrative measure recommended and gives the scientific and any common name of the species involved; (ii) contains detailed narrative justification for the recommended measure, describing, based on available information, past and present numbers and distribution of the species involved and any threats faced by the species; (iii) provides information regarding the status of the species over all or a significant portion of its range; and (iv) is accompanied by the appropriate supporting documentation in the form of bibliographic references, reprints of pertinent publications, copies of reports or letters from authorities, and maps (50 CFR 424.14(b)(2)).

In a petition submitted on May 11, 2005, Timothy Watts, Douglas Watts, Ed Friedman, and Kathleen McGee requested that we and the USFWS declare the Kennebec River population of anadromous Atlantic salmon endangered under the ESA and presented the following three main areas of evidence to support their request: (1) historic information on the presence of Atlantic salmon; (2) information on other native migratory fish populations in the Kennebec; and (3) microsatellite DNA analysis of Atlantic salmon in the Kennebec. It is the petitioners’ contention that historic observations of Kennebec River Atlantic salmon from the 18th century to the present demonstrate that there was no period in the 19th and 20th centuries during which Atlantic salmon were absent from the Kennebec River. The petition states that populations of native migratory fish species have also persisted in the Kennebec despite being subjected to the same environmental pressures as Atlantic salmon. The petition also contends that microsatellite DNA analysis of tissue samples from 180 wild Atlantic salmon captured in the Kennebec River by the USFWS from 1994 to the present show that wild Kennebec River salmon are