DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; 90-Day Finding on a Petition To List 16 Insect Species From the Algodones Sand Dunes, Imperial County, CA, as Threatened or Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of 90-day petition finding.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 90-day finding on a petition to list 16 insect species from the Algodones Sand Dunes, Imperial County, California, as threatened or endangered, under the Endangered Species Act of 1973, as amended. We find that the petition does not present substantial scientific or commercial information indicating that listing these species may be warranted. Therefore, we are not initiating a status review in response to this petition. We ask the public to submit to us any new information that becomes available concerning the status of these species or threats to them or their habitat at any time.

DATES: The finding announced in this document was made on August 18, 2006.

ADDRESSES: The complete file for this finding is available for public inspection, by appointment, during normal business hours at the Carlsbad Fish and Wildlife Office, U.S. Fish and Wildlife Service, 6010 Hidden Valley Road, Carlsbad, California 92011. Submit new information, materials, comments, or questions concerning these species to us at the address above.

FOR FURTHER INFORMATION CONTACT: Jim Bartel, Field Supervisor, Carlsbad Fish and Wildlife Office (see **ADDRESSES**); or 760–431–9440 (voice) or 760–431–9624 (fax).

SUPPLEMENTARY INFORMATION:

Background

Section 4(b)(3)(A) of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 et seq.), requires that the Service make a finding on whether a petition to list, delist, or reclassify a species presents substantial scientific or commercial information indicating that the petitioned action may be warranted. This finding is based on information contained in the petition and information otherwise available in our files at the time we make the determination. To the maximum extent practicable, we are to make this finding within 90 days of our receipt of the petition, and publish our notice of the finding promptly in the **Federal Register**.

In making this finding, we relied on information provided by the petitioners and otherwise available in our files at the time of the petition review. We also had access to California Department of Fish and Game's California Natural Diversity Database that we queried for all known records of each of the species that were identified in the petition for listing. We evaluated this information in accordance with our regulations at Title 50 of the Code of Federal Regulations (CFR), § 424.14(b). The process of making a 90-day finding under section 4(b)(3)(A) of the Act and § 424.14(b) of our regulations is based on a determination of whether the information in the petition meets the ''substantial scientific information'' threshold.

Our standard for substantial scientific or commercial information within the CFR with regard to a 90-day petition finding is ''that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted'' (50 CFR 424.14(b)). If we find that the petition presents substantial scientific or commercial information, we are required to promptly commence a status review of the species.

On July 19, 2004, we received a formal petition dated July 19, 2004, from the Center for Biological Diversity, Public Employees for Environmental Responsibility, and the Sierra Club (the petitioners) to list two sand wasps (*Microbembix elegans*) and (*Stictiella villegasi*); two bees (*Perdita algodones* and *Perdita glamis*); one vespid (*Euparagia* n. sp.); two velvet ants (*Dasymutilla nocturna* and *Dasymutilla imperialis*); Algodones sand jewel beetle (*Lepismadora algodones*); Algodones white wax jewel beetle (*Prasinalia imperialis*); Algodones croton jewel beetle (*Agrilus harenus*); Hardy's dune beetle (*Anomala hardyorum*); a scarab beetle (*Cyclocephala wandae*); and four subspecies of Roth's dune weevil (*Trigonoscuta rothi rothi*, *Trigonoscuta rothi algodones*, *Trigonoscuta rothi imperialis*, and *Trigonoscuta rothi punctata*), hereafter referred to as the 16 insect species, as threatened or endangered species in accordance with section 4 of the Act. On September 24, 2004, we received a letter and additional supporting documentation for the petition to list 16 insect species associated with the Algodones Dunes from the Center for Biological Diversity.

The petitioners requested listing of 16 insect species they believe to be endemic to the Algodones Dunes. This same area is alternately referred to as the Imperial Sand Dunes or the Glamis Dunes, and other geographic names are used to refer to portions of it. The Algodones Dunes is a desert located in eastern Imperial County in southern California. It is the largest mass of sand dunes in California, covering more than 40 miles (mi) (64 kilometers (km)) long and averaging 5 mi (8 km) wide (BLM 2003, p. 5). Most of this area is public land managed by the Bureau of Land Management (about 92 percent), and the rest is either private, U.S. Military, or State of California land (BLM 2003, p. 20). Most of the Algodones Dunes is in California, but a small portion extends southward into Mexico.

The petitioners also requested designation of critical habitat for the 16 insect species concurrent with their listing. The petition clearly identified itself as a petition and included the requisite identification information for the petitioners, as required in 50 CFR 424.14(a). In an October 5, 2004, letter to the petitioners, we responded that we reviewed the petition for the 16 insect species and determined that an emergency listing was not warranted, and that due to court orders and settlement agreements for other listing actions that required nearly all of our listing funds for fiscal year 2005, we would not be able to otherwise address the petition to list the 16 insect species at that time.

On December 1, 2005, the Center for Biological Diversity filed a Complaint for Declaratory and Injunctive Relief in United States District Court for the Southern District of California (*Center for Biological Diversity* v. *Norton et al.*, No. 05 CV 1988 BEN (BLM)) challenging our failure to issue a 90-day finding on the petition to list the 16 insect species. On January 12, 2006, we reached an agreement with the plaintiffs to submit to the **Federal Register** a completed 90-day finding by August 7, 2006, and if substantial, to complete the 12-month finding by June 15, 2007. This notice constitutes the 90-day finding for the July 19, 2004 petition.

Regarding the petitioners' request to list the vespid wasp (*Euparagia* n. sp.), we note that this does not represent a listable taxonomic entity under our regulations. The petitioners only identified a genus, and to make a listing decision, a taxon must be described to at least the species level. With regard to the four petitioned subspecies of Roth's dune weevil (*Trigonoscuta rothi rothi*,

Trigonoscuta rothi algodones, *Trigonoscuta rothi imperialis*, and *Trigonoscuta rothi punctata*), we did find a published manuscript naming these subspecies (Pierce 1975, pp. 57, 73, and 74). However, Anderson (2002, p. 777) states that most of the taxa in the genus *Trigonoscuta* are of questionable validity and need reassessment. Because the petition did not provide any further substantiating evidence related to the taxonomy of these insects, we have determined that the petition does not provide substantial scientific information that the vespid wasp (*Euparagia* n. sp.) and the four subspecies of weevils (*Trigonoscuta rothi rothi*, *Trigonoscuta rothi algodones*, *Trigonoscuta rothi imperialis*, and *Trigonoscuta rothi punctata*) are scientifically accepted taxons. Under the Act, we can only list recognized invertebrate species and subspecies. Hence, the request to list *Euparagia* n. sp. and the four Trigonoscuta subspecies will not be further considered in this finding. Therefore, the remainder of this finding addresses the remaining 11 insect species identified in the petition.

Species Information

The following section is based on information in the petition and available to us at the time of petition review. Microbembix elegans, a sand wasp, was first described as a species by Griswold (1996) and is in the family Sphecidae. Species in the genus *Microbembix* are all found in North and South America and are recognized by their relatively small size and other features as described by Bohart and Horning (1971, p. 24). The male *M. elegans* is unique among *Microbembix* in the modifications to the middle and hind legs (Griswold 1996, p. 142). Males average 0.47 inches (in) (12 millimeters (mm)) long and females range from 0.35 to 0.39 in (9 to 10 mm) long (Griswold 1996, p 143). Habitat information is limited to the description of active slip faces within sand dune systems; all specimens have been found at the base of shrubs where detritus collects (Griswold 1996, p. 142). Abundance and population trend information is not available. Distribution knowledge is limited to two ''populations'' identified in the Algodones Dunes system in Imperial County, California (Griswold 1996, p. 142).

The other sand wasp, *Stictiella villegasi,* was first described by Bohart (1982, pp. 596–597) and is also in the family Sphecidae. Bohart (1982, p. 597) states the species can be recognized by its almost entirely yellow appearance and a combination of other specific physical characteristics. Males and females are approximately 0.47 in (12 mm) long (Bohart 1982, p. 596). Information on habitat use, abundance, and population trends is not available. All known collections of the species are from the Algodones Dunes system in Imperial County, California (Bohart 1982, p. 597).

Perdita algodones, a bee, was first described by Timberlake (1980, p. 26) and is in the family Andrenidae. The species ranges in length from 0.17 to 0.18 in (4.3 to 4.5 mm) and in width from 0.05 to 0.06 in (1.2 to 1.5 mm) (Timberlake 1980, p. 26). This species has a dark blue-green head and thorax, black abdomen, and ''whitish'' wings (Timberlake 1980, p. 26). Timberlake (1980, p. 26) provides a detailed description of distinguishing physical characteristics of this species and states that it was found in the vicinity of Glamis, in Imperial County, California. Information on habitat, abundance, and population trends is lacking. All known collections are from the vicinity of Glamis, in Imperial County, California (Timberlake 1980, p. 26).

The other bee, *Perdita glamis,* is also in the family Andrenidae and was described from the only two known specimens by Timberlake (1980, pp. 16 and 17). The physical dimensions as provided by Timberlake (1980, p. 17) are a length of 0.20 in (5 mm) and an abdomen width of 0.06 in (1.5 mm). The head and thorax are dark blue and the abdomen is ''dusky'' (Timberlake 1980, p. 17). Timberlake (1980, p. 17) provides a detailed description of distinguishing physical characteristics of this species and indicates it was discovered in the sand dunes area of Imperial County, California. Information on habitat, abundance, and population trends is lacking. All known collections of this species are from the vicinity of Glamis in Imperial County, California (Timberlake 1980; p. 17).

Dasymutilla nocturna, a velvet ant, is a wasp in the family Mutillidae. Female mutillids are hairy and wingless, resembling ants, while males have wings and fewer hairs (Foltz 2001, pp. 1–2). All mutillid wasp larvae are parasitic on other insects (Earthlife 2005, p. 1). Mickel (1928, pp. 279–281) first described *Dasymutilla nocturna* based on two female specimens and provided a detailed description of distinguishing physical characteristics. Females are dark mahogany red, and males are black. Body length given by Mickel (1928, p. 279 and 281) was 0.5 in (13 mm) for females, and 0.4 in (10 mm) for males. Manley (1999), who also collected this species, examined Mickel's (1928, pp. 279–281) specimens and compared them to specimens from other California desert region *Dasymutilla* species. Manley (1999, p. 21) synonymized the species *D. subhyalina* and some specimens of *D. paranocturna* with *D. nocturna* on the basis that: (1) All are nocturnal; (2) all share the same geographic range, the Colorado Desert; (3) numerous individuals have been collected at the same place and time; and (4) males were attracted to and tried to mate with caged females. Specific information on habitat use, abundance, and population trends is not available.

Although most *D. nocturna* specimens have been collected from the Algodones Dunes or nearby (Manley 1999, p. 20), current available scientific information does not support the hypothesis that this species is restricted to the Algodones Dunes. Manley (1999, p. 18) states that the specimen from which the synonymous taxon *D. paranocturna* was described (the holotype) was collected from Blythe, Riverside County, California (approximately 50 mi (80 km) north of the Algodones Dunes) and further states the holotype is ''undoubtedly a specimen of *D. nocturna*.'' Manley (1999, p. 20) also mentioned a *D. nocturna* specimen he said was correctly identified, but it was labeled Preston, Nevada. Manley states that this was likely mislabeled because ''* * * no other specimen of the species had been found within [683.5 mi] 1100 km of Preston, Nevada.'' However, expert wasp taxonomist Roy Snelling (2006) confirmed a wider species distribution, citing personally identified *D. nocturna* specimens collected from the town of Roll, in Pima County, Arizona; the town of Westmorland near the Salton Sea in Imperial County, California; and the village of Paredones, Baja California, Mexico, southwest of the Algodones Dunes. The towns of Roll in Arizona and Westmorland in California, and the village of Paredones in Baja California, Mexico, are approximately 75 mi (121 km), 19 mi (31 km), and 35 mi (56 km) from the Algodones Dunes, respectively. Based on this information, we do not believe that *D. nocturna* is endemic to the Algodones Dunes.

The other velvet ant, *Dasymutilla imperialis,* is also a wasp in the family Mutillidae. It was first described by Manley and Pitts (2004, pp. 646–648), who provide a detailed description of the species' distinguishing physical characteristics based on male specimens; no female specimens have been collected. The male is entirely black and the length is approximately 0.39 to 0.47 in (10 to 12 mm) (Manley and Pitts 2004, p. 646). Specific

information on habitat, abundance, and population trends is not available. All known collections are from the Algodones Dunes (Manley and Pitts 2004, p. 648) and extensive collecting in this area over many years has not yielded any additional specimens of this species (Manley and Pitts 2004, p. 649). Manley and Pitts (2004, pp. 646–649) do not discuss any searches of other sand dunes for this species.

The Algodones sand jewel beetle *Lepismadora algodones* is in the family Buprestidae. It was first described by Velten and Bellamy (1987, pp. 186, 188, and 190), who provide a detailed description of distinguishing physical characteristics of the species: it varies in length from 0.16 to 0.25 in (4.0 to 6.5 mm) and in width from 0.06 to 0.08 in (1.4 to 2.1 mm), with females generally larger than males. Color varies from cupreus (copper) to brassy green (Velten and Bellamy 1987, p. 190). Most specimens in association with the plant *Tiquilia plicata,* the species was observed feeding on flowers and foliage of *Tiquilia plicata,* or at rest on foliage or dead twigs on the soil surface (Velten and Bellamy 1987, p. 190). The petition provides information on habitat use, activity patterns, reproduction, and mortality that we were unable to confirm in any cited information sources or information in our files. Specific information on habitat use, abundance, and population trends of this species was not available. All known collections of the species are from the Algodones Dunes in Imperial County, California (Velten and Bellamy 1987, p. 190).

The Algodones white wax jewel beetle *Prasinalia imperialis* is also in the family Buprestidae. It was first described by Barr (1969, pp. 326–328), who provides the most detailed description of this species' distinguishing physical characteristics. It is most readily recognized by its coppery coloration. Male dimensions vary from 0.63 to 0.87 in (16.0 to 22.0 mm) in length, while females vary from 0.57 to 0.89 in (14.5 to 25.0 mm) in length (Nelson and Bellamy 1996, p. 899). Habitat information is limited to a host plant association and collection locations. Barr (1969, p. 328) and Nelson and Bellamy (1996, p. 899) note an association with the plant *Eriogonum deserticola.* Larvae develop in the roots and crown of *Eriogonum deserticola,* and adults have been observed feeding on the bark of live twigs of this plant (Nelson and Bellamy 1996, p. 899). Information on abundance and population trends is not available. All collections for this species are from sand dunes and nearby areas on the eastern slope of Imperial Valley in California (Barr 1969, p. 328; Nelson and Bellamy 1996, p. 899).

The Algodones Croton jewel beetle *Agrilus harenus* is another member of the family Buprestidae. This species was first described by Nelson (1994, pp. 261–262), who provides a detailed description of the physical characteristics of the species. Males are 0.18 to 0.27 in (4.5 to 6.9 mm) long, while females range from 0.19 to 0.27 in (4.8 to 6.9 mm) long (Nelson 1994, p. 263). The species has been collected in association with sand dune habitat, and all the adults were associated with Wiggin's croton (*Croton wigginsii*), the likely host plant (Nelson 1994, p. 263). Adults have been collected from mid-April to late September (Nelson 1994, p. 263). There is no information on abundance or population trends. All collections for this species were from the Algodones Dunes in Imperial County, California (Nelson 1994, p. 263).

Hardy's dune beetle *Anomala hardyorum* is a member of the family Scarabaeidae. This species was first described by Potts (1976, pp. 221–222), who provides a detailed description of the species' distinguishing physical characteristics. Members of this species have a light tan coloration with males ranging from 0.28 to 0.39 in (7 to 10 mm) in length, and females from 0.28 to 0.35 in (7 to 9 mm) (Potts 1976, pp. 223 and 224). The species has most often been found on north- or east-facing dune slip faces. There is no known association between adults and any plant species (Hardy and Andrews 1980, p. 14). Adults are known to be active at dusk (Hardy and Andrews 1980, p. 14). There are no quantified estimates of abundance or population trends and information on distribution is limited. Hardy and Andrews (1980, p. 38–39) provided a map of collection locations in the Algodones Dunes, and concluded that the Hardy's June beetle was widespread in the dune system (Hardy and Andrews 1980, p. 17). All known collections are from the Algodones Dunes in Imperial County, California (Potts 1976, p. 222; Hardy and Andrews 1980, p. 14).

The scarab beetle *Cyclocephala wandae* is also a member of the family Scarabaeidae. This scarab beetle was first described by Hardy (pp. 160–161), who provides a detailed description of the species' distinguishing physical characteristics. The beetle is light brown, similar to *Pseudocatalpa andrewsii,* and ranges in length from 0.26 to 0.30 in. (6.6 to 7.5 mm) (Hardy 1974, p. 160). We were not able to locate information on abundance, distribution, or population trends. Other than the fact that the species inhabits sand dunes (Hardy 1974, pp. 160–161; Andrews *et al.* 1979, p. 40) habitat use information is lacking, and distribution information is limited to known collections from the Algodones Dunes in Imperial County, California (Hardy 1974, p. 161; Andrews *et al.* 1979, p. 40).

Threats Analysis

Section 4 of the Act and its implementing regulations (50 CFR 424) set forth the procedures for adding species to the Federal List of Endangered and Threatened Wildlife and Plants. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1) of the Act: (A) Present or threatened destruction, modification, or curtailment of habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. In making this 90-day finding, we evaluated whether threats to the 11 scientifically accepted taxons presented in the petition may pose a concern with respect to their survival, such that listing under the Act may be warranted. Our evaluation of these threats is presented below.

A. Present or Threatened Destruction, Modification, or Curtailment of the Species' Habitat or Range

The petitioners state that the 11 insect species are endemic to the Algodones Dunes system and are habitat specialists with restricted geographic ranges, making them more prone to extinction than more widespread species. The petitioners also cite statements by Hardy and Andrews (1976, p. 21) that Coleoptera species endemic to several California dune systems face possible extinction or population decline if habitat destruction by human activity continues or escalates. The petitioners further assert that the 11 petitioned insect species have no colonization source should their known populations be eliminated.

The petitioners state that several published studies have documented deleterious effects of Off-Road-Vehicles (ORVs) on desert arthropods, mammals, birds, amphibians, reptiles, and vegetation (Busack and Bury 1974; Hardy and Andrews 1976; Bury *et al.* 1977; Berry 1980; Bury and Luckenbach 1983; Luckenbach and Bury 1983; Schultz 1988; Brooks 1995; Stebbins 1995; Brooks 1999). The petitioners

indicate that Hardy and Andrews (1976) reported ORVs could damage sand dune surfaces and destroy pockets of accumulated vegetative material or crusted deposits, which may be larval nurseries for endemic insects. The petitioners cite Carpelan (1995) as stating that ORVs can eliminate ''entire generations'' by obliterating accumulated vegetable matter in which larvae develop; as well as the findings of Luckenbach and Bury (1983) that arthropod tracks (mostly beetle) were 24 times more abundant in control areas than they were in ORV-impacted areas. The petitioners also cite Luckenbach and Bury's (1983) overall study conclusion that ORV activities in the Algodones Dunes are highly detrimental to dune biota. The petitioners cite several studies that discuss loss of vegetative cover due to ORV activity (Bury *et al.* 1977; Berry 1980; Lathrop 1983; Luckenbach and Bury 1983) and assert any activities resulting in the decline of general plant cover and host plants would threaten survival of rare endemic insect species with highly restricted geographical ranges and highly specific habitat needs.

The petitioners discuss concerns for Andrews' dune scarab beetle (*Pseudocotalpa andrewsi*), including lack of proposed monitoring of this species and impacts from ORVs in areas where it was known to be most abundant. Please refer to the **Federal Register** notice at 71 FR 2644 for our 90-day finding on the petition to list the Andrews' dune scarab beetle species. The petitioners conclude that current and projected ORV use and lack of adequate management by the Bureau of Land Management (BLM) threaten the continued existence of this and other endemic Algodones Dunes species. The petitioners also mention the temporary ORV closures for portions of the Algodones Dunes to protect the Peirson's milk-vetch (*Astragalus magdalenae*) in effect since November 2000, which encompass about 49,000 acres (ac) (19,838 hectares (ha)) (65 FR 69324, November 16, 2000). The petitioners also describe proposed management for the Algodones Dunes under the BLM Draft 2002 Recreation Area Management Plan (RAMP), and how the RAMP would greatly increase the area open to ORVs compared to the current situation. The petitioners assert that if currently protected areas in the Algodones Dunes are re-opened to ORV traffic, and other areas supporting rare endemic insects are not also protected, then habitat for the petitioned insect species will be modified or destroyed and their ranges curtailed.

The petitioners do not provide any scientific or commercial information on the distribution, habitat use, abundance, or population status of any of the 11 insect species in the part of the dune system that includes the Yuma Dunes in southwestern Arizona and dunes within the Gran Desierto Altar in Sonora, Mexico.

Evaluation of Information in the Petition

Based on the distribution information previously presented for *D. nocturna,* we believe this species is not endemic to the Algodones Dunes. However, we acknowledge it is possible the other 10 insect species could be endemic to the Algodones Dunes. Information provided in the petition and in our files on distribution of the 10 insect species is very limited. This information indicates these insects have only been found in the Algodones Dunes, but no information provided with the petition or in our files indicates whether other potential dune habitats, such as the Yuma Dunes or dune systems within the 5,000 square mi (12,950 square km) area of the Gran Desierto de Altar, have been surveyed for the 10 insect species. Only two studies cited by the petitioners, Hardy and Andrews (1976) and Andrews *et al.* (1979), sampled more than one dune area in southern California, and they only surveyed for beetles. Andrews *et al.* (1979) does provide some evidence that the two petitioned scarab beetles (*Cyclocephala wandae* and *Anomala hardyorum*) are endemic to Algodones Dunes; out of the five dune systems sampled, they found these two species only at the Algodones Dunes. But their conclusions are limited to the five dune systems and do not include all dune systems in the southwestern United States and Mexico, where these two species could potentially occur. Hence, it is unclear how widely scientists have searched for these two insect species. Without comprehensive surveys throughout sand dunes areas of southern California, Arizona, and northern Mexico, our understanding of these species' distributions and ranges is incomplete. An apparent host-plant relationship has been documented for the three jewel beetle species (Barr 1969, page 328; Velten and Bellamy 1987, page 190; Nelson 1994, page 263), but beyond this and the association of all the petitioned species with sand dunes, habitat requirements for the three jewel beetle species are inconclusive. The host plants for the three jewel beetles species are not endemic to the Algodones dunes. *Tiquila plicata* ranges into Arizona and Nevada (Hickman 1996, p. 392), *E. deserticola* is also found in Arizona and northwest Sonora, Mexico (Hickman 1996, p. 870), and *C. wigginsii* is also found in Arizona and northwestern Mexico (Hickman 1996, p. 572). Also, the petition does not provide significant information on the abundance of the 11 insect species, nor does it provide any population trend information. Given the extreme paucity of information on distribution (for example, *D. nocturna*; Snelling 2006), habitat requirements, abundance, and population trends, it cannot be determined how rare these 11 species are, how restricted they are geographically, how specialized they are in their habitat requirements, or if they lack colonization sources if known populations are eliminated.

The petitioners cite Busack and Bury (1974), Hardy and Andrews (1976), Bury *et al.* (1977), Berry (1980), Bury and Luckenbach (1983), Luckenbach and Bury (1983), Schultz (1988), Brooks (1995), Stebbins (1995), and Brooks (1999) as reporting negative effects of ORVs on desert species. However, most of these studies reported effects of ORV activity on vegetative cover and vertebrates, not insects. Schultz (1988) reported some negative effects of ORV activity on riparian tiger beetle (Cicindelidae) habitat, but this work was not in a sand dune system, and it did not involve any of the 11 insect species. Only Bury and Luckenbach (1983) and Luchenbach and Bury (1983) provided Algodones Dunes arthropod information, and both discuss the same data. Luckenbach and Bury (1983, p. 275) reported ''arthropod (mostly beetle) tracks were twenty-four times more abundant in control plots [not impacted by ORV use] than in ORV-impacted plots.'' However, this work was focused mostly on vegetation and vertebrates, and arthropod (invertebrate) data was not species-specific. Furthermore, the observed tracks may not have represented any of the petitioned insects and were only identified as ''mostly beetles.''

Although Griswold (1996, p. 142) states that the sand wasp *Microbembix elegans* may be threatened by ORV activity, he did not provide data to substantiate this claim. Griswold (1996, p. 142) also stated that, while areas where this species was found were open to ORV activity, they were not currently receiving a high level of disturbance. Similarly, Evans and Bellamy (2000, p. 184) provided a list of threats to beetle populations that includes ORV traffic but do not provide data to document beetle impacts. Despite the petitioners' claim that Hardy and Andrews (1976) concluded that ORVs could destroy areas in the Algodones Dunes with

pockets of accumulated vegetative material or crusted deposits, Hardy and Andrews (1976, p. 2) did not have any study sites in the Algodones Dunes. Hardy and Andrews (1976, p. 19) summarized ways in which ORV activity may adversely affect dune restricted or adapted insects, but they did not provide data to support these hypotheses. Andrews *et al.* (1979, pp. 4–9) provided inventories of five dune areas in California, including the Algodones Dunes. However, only beetle species were inventoried, only the two petitioned scarab beetles and Roth's dune weevil were collected, and no information was provided on the effects of ORVs on insect species. Carpelan (1995, pp. 275–283) provided information on sand dune ecosystems focused on dune stabilization and dune insect adaptation and speciation. However, Carpelan's (1995, pp. 276–277) work was largely derived from Hardy and Andrews (1976) beetle study, and expressed general concern about adverse effects of ORVs on invertebrates.

Because Andrews' dune scarab beetle was evaluated separately under another listing petition, discussion of this species in this petition finding has limited relevancy. However, the Andrews' dune scarab beetle does face similar possible threats in the same geographic area, and the petition for Andrews' dune scarab beetle lacked similar substantial information, for example, a lack of distribution information from dune systems in Mexico (71 FR 26444; May 5, 2006). We acknowledge that BLM management of the Algodones Dunes could potentially affect the 11 insect species, because BLM does permit ORV use in parts of this dune system. However, about 49,000 ac (19,838 ha) of BLM managed lands are under temporary ORV closure to protect the Peirson's milk-vetch (65 FR 69324; November 16, 2000). In addition, the North Algodones Dunes Wilderness Area, of which BLM manages about 26,000 ac (10,526 ha), is permanently closed to ORV activity (BLM 2003; p. 71). BLM manages 159,000 acres (64,372 hectares) of the Algodones Dunes (BLM 2003; p. 5) so about 47 percent of the BLM-managed lands in the Algodones Dunes are currently closed to ORV activity. These interim closures are still in effect. Current management of the Imperial Sand Dunes Recreation Area (ISDRA) is discussed under Factor D below.

We compared a map of the interim ORV closures with the map of Hardy's dune beetle distribution in the Algodones Dunes from Hardy and Andrews (1980; appendix map). This was the only one of the petitioned insect species for which we had a collection location map. Fifteen of the 20 locations where Hardy's dune beetle was found (Hardy and Andrews 1980; appendix map) occurred outside of interim closure areas. One interim closure area, which BLM designated as the Adaptive Management Area in the 2003 RAMP (BLM 2003), had multiple Hardy's dune beetle collection locations. With regard to ORV use this area is designated as ''Limited'' in the 2003 RAMP (BLM 2003; page 84). The Adaptive Management Area would be open to motor vehicle entry only from October 15 to March 31 of each year, and only by permit (BLM 2003). Biological resources and public use would be monitored, and BLM would adjust public use to conserve habitats and species of concern (BLM 2003; pp. 84–86). Also BLM (2003; page 84) indicates current visitor use of the Adaptive Management Area is low compared to the remainder of the ISDRA. In addition, more location records (Hardy and Andrews 1980; appendix map) fall within the North Algodones Dunes Wilderness Area permanently closed to ORVs, than within the Adaptive Management Area. Regardless of the potential for negative ORV impacts, there is no information in the petition documenting what the magnitude of ORV impacts would be to Hardy's dune beetle or any of the other petitioned insect species.

Information in the petition regarding impacts to the 11 insect species in the Algodones Dunes from ORV use is inadequate, incomplete, or nonexistent. Therefore, we find the petition does not provide substantial scientific or commercial information to document that ORV use may be a factor threatening the 11 insect species.

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

The petition does not provide any information pertaining to Factor B. We acknowledge that scientific collection of insect species will continue in the Algodones Dunes area, but we do not have any information indicating current levels of collecting activity will harm populations.

C. Disease or Predation

The petitioners state that natural predation and disease, including fungal pathogens, affects populations; however, specific data are not available. Since the petition does not provide any data on natural predation or disease for the 11 insect species, we find that the petition does not contain substantial scientific or commercial information to document disease or predation may be a factor that threaten the petitioned insect species.

D. Inadequacy of Existing Regulatory Mechanisms

The petitioners assert that inadequate existing regulatory mechanisms endanger the continued existence of the petitioned insect species of the Algodones Dunes. The petitioners claim administrative plans and legal requirements to monitor and conserve endemic insects have not been implemented by BLM, while ORV use in the Algodones Dunes has increased by an order of magnitude in the last 30 years, resulting in direct mortality of endemic insect species and loss of host plants. The petitioners state that current management plans allow ORV use in the majority of habitat supporting the rare endemic insects (94 percent of creosote scrub, 84 percent of psammophytic scrub, and 88 percent of microphyll woodland). They also claim that pending plans to open currently protected areas of the dune system to ORVs are one of the most immediate threats to the existence of these insects. The petitioners further assert that BLM has been aware of concerns regarding the adverse impacts of ORVs on endemic insect species on the dunes for at least 30 years. They cite work by Hardy and Andrews (1976) describing deleterious effects of ORV activity on sand dune insects and claim ORV impacts discussed in that report are relevant to the Algodones Dunes, while acknowledging that Hardy and Andrews (1976) study did not focus on this area. The petitioners additionally claim that published peer-reviewed scientific literature is replete with studies documenting serious negative impacts of ORVs on desert systems (see discussion under Factor A). They also assert ORV use throughout the Algodones Dunes continued unabated in sensitive habitat until BLM was sued and forced to implement interim closures to protect the threatened Peirson's milk-vetch and desert tortoise.

The petition notes three planning documents for the Algodones Dunes Wildlife Habitat Area addressed management of biological resources prior to BLM's 2002 Draft Environmental Impact Statement (DEIS) for managing the ISDRA. These include the 1972 Recreation Management Plan, the 1980 California Desert Conservation Area Plan, and the 1987 RAMP (BLM and CDFG 1987). According to the petitioners, the 1987 RAMP called for reduction in the proposed level of recreation development and dispersal of

intensive recreational use within Class I areas (an intensive-use category where the management objective is to enhance opportunities for ORV recreation). The 1987 RAMP also included the Algodones Dunes Wildlife Habitat Management Plan (HMP), implemented under the authority of the Sikes Act (16 U.S.C. 670a-670o). The petitioners state that the HMP mandated biennial surveys for Andrew's dune scarab beetle and action that should be taken to determine distribution and status of other endemic invertebrates. They further assert that permanent monitoring of endemic dune insects was mandated in the HMP, but surveys have not been conducted.

The petitioners quote statements in the DEIS (BLM 2002) about biology, distribution, and threats to Andrews' dune scarab beetle, Hardy's dune beetle, and Carlson's dune beetle (*Anomala carlsoni*). They also claim BLM's assessment (BLM 2002) of these three beetle species is inadequate and inaccurate given the information presented in their petition. The petitioners state the DEIS lists only five insect species as ''known to occur or having the potential to occur'' at Algodones Dunes, and BLM ignored nearly two dozen other endemic insects in this area for which scientific information is available. The petition notes the HMP mandated collection of demographic and distributional information would have provided data regarding population growth rates, survival, reproduction, and habitat use that would have been useful in developing the BLM management plan. The petitioners also state that no data were presented in the DEIS (BLM 2002) regarding distribution of endemic insect species in the Algodones Dunes, although such data are required before land-use decisions are made to ensure species are not jeopardized by Federal actions.

The petitioners state that, in light of known ORV impacts on endemic desert insects, regulatory mechanisms to protect these species should include permanent protection of habitats throughout the Algodones Dunes, including stringent enforcement closures. The petitioners also state all four 2002 DEIS alternatives would result in relaxed conservation measures compared to current levels of protection, including reopening thousands of acres currently protected from ORV use, and the DEIS specifically rejected an alternative that would have maintained the interim closures. According to the petitioners, three of the four alternatives in the DEIS (BLM 2002) would permit ORVs on 198,220 ac (80,251 ha), and only protect 27,695 ac (11,213 ha) which is already protected as designated wilderness. The petitioners included a table with the petition summarizing four 2002 DEIS allowed ORV activity level alternatives for three desert habitat types (creosote bush scrub, psammophytic scrub, and microphyll woodland). The information suggests that even the most protective alternative (Alternative 3) would allow ORV use in more than half the psammophytic scrub, one-third the creosote bush scrub, and one-fourth the microphyll woodland. The information also suggests that visitation rates by 2012 to 2013 are projected to increase 82 percent above the 1999 to 2000 levels, and sensitive dune habitats will be increasingly impacted.

Evaluation of Information in the Petition

We acknowledge that the 1980 California Desert Conservation Area Plan called for monitoring effects of vehicle use on wildlife habitats and populations, and identifying and protecting sensitive species in management decisions (BLM 1980, pp. 20 and 28). Also, the Algodones Dunes Wildlife HMP (BLM and CDFG 1987, pp. 16 and 18) had action items for determining distribution and status of endemic invertebrates, and biological resource trends of special management concern in relation to implementing resource allocation decisions. BLM has funded some inventory and status work on insects at the Algodones Dunes (Andrews *et al.* 1979; Hardy and Andrews 1980; Scarabaeus Associates 1991), but whether all the monitoring work outlined in historic management plans has been completed is unknown. Information on insect species in the Algodones Dunes is lacking, as previously discussed. We acknowledge that, if this information was available, it would better inform BLM management decisions.

The petitioners did not substantiate their claim that published peer-reviewed scientific literature is ''replete'' with studies documenting serious negative impacts of ORVs in desert systems. The petition cites primarily Busack and Bury (1974), Hardy and Andrews (1976), Bury *et al.* (1977), Berry (1980), Bury and Luckenbach (1983), Luckenbach and Bury (1983), Schultz (1988), Brooks (1995 and 1999), and Stebbins (1995), regarding this threat. We find these works to be credible sources, but only four investigated desert systems and were published as peer-reviewed scientific literature (Busack and Bury 1974; Luckenbach and Bury 1983; Brooks 1995 and 1999). The other references are either book chapters summarizing studies done by others, or agency reports. From our evaluation of the petition it appears that the petition overstated the amount of peer-reviewed scientific information regarding the effects of ORVs on desert systems.

Of the scientific peer-reviewed literature cited, only Luckenbach and Bury (1983) reported impacts to invertebrates. Luckenbach and Bury (1983) did study the Algodones Dunes, and reported ''arthropod (mostly beetle) tracks were twenty-four times more abundant in control plots than in ORV impacted plots.'' However, Luckenbach and Bury's (1983) data was limited to the central dunes (near State Highway 78), and was not species-specific (observed tracks may not have included any of the petitioned species or reflect species abundance). Scarabeaus Associates' (1991) study was intended to investigate impacts of ORV use on Andrews' dune scarab beetle. However, results were inconclusive (Scarabeaus Associates 1991), partly because ORV use levels were not documented at sample sites for correlation with beetle abundance.

Regarding concerns expressed by petitioners, the final 2003 RAMP (BLM 2003) for the Imperial Sand Dunes Recreation Area does not address specific conservation, research, or monitoring of the insects identified in the petition. The only mention in the BLM 2003 RAMP of any of the insect species was for Hardy's dune beetle, recognizing this beetle is a ''poorly known'' BLM sensitive species (Issues, Concerns, and Opportunities section). The final 2003 RAMP utilizes the preferred alternative in the DEIS (Alternative 2, BLM 2002) referenced by petitioners. Under the final 2003 RAMP all-terrain vehicle, motorcycle, truck, and dune buggy ORV use will be prohibited in the 26,202-ac (10,608-ha) North Algodones Dunes Wilderness Management Area (BLM 2003; p. 71). This represents about 16 percent of the area of the ISDRA managed by BLM. It is true that interim vehicle use closure areas designated for the threatened Peirson's milk-vetch plant and desert tortoise (*Gopherus agassizii*) through legal stipulation (BLM 2002) would not be maintained (would be opened to ORV use) under the final 2003 RAMP (BLM 2003). However, these interim ORV closures are still in effect, and, as a result of a March 13, 2006 U.S. District Court ruling (*Center for Biological Diversity et al.* v. *Bureau of Land Management et al.* and *American Sand Association et al.*, No. C 03–02509 SI), BLM is not currently able to fully implement the 2003 RAMP. Therefore,

the petitioners' contention that implementation of the 2003 RAMP, which would then open currently closed areas to ORV use, poses an immediate threat to the 11 insect species is not accurate.

Regardless of the specific management and monitoring actions implemented by BLM at the Algodones Dunes, the central issue here is whether such management is inadequate because the associated ORV activity has or will adversely affect the 11 insect species such that listing may be warranted. Though the petitioners claim they ''were unable to find a single study documenting positive or even neutral effects of ORVs,'' the petition does not contain substantial information that ORV activity adversely affects any of the 11 insect species. The final 2003 RAMP also specifies some positive management actions that would help conserve dune habitat and species, such as monitoring of ORV use and species and habitats of concern (BLM 2003; Appendix 1).

Because there is a lack of information on ORV effects on the 11 insect species and species-specific threats, there is no basis for finding existing regulatory protections are inadequate. Therefore, we find that the petition does not present substantial scientific or commercial information that lack of regulatory mechanisms may present a threat to any of the 11 insect species.

E. Other Natural or Manmade Factors Affecting the Species' Continued Existence

The petitioners state that pesticide use in agricultural areas of Imperial Valley may be having negative impacts on these species through pesticide drift into the Algodones Dunes. The petitioners also state that spraying programs for the curly top leafhopper virus are likely to directly impact the species. However, the petitioners do not provide data or cite published studies to support these claims. Additionally, no information provided in the petition or in our files indicates that direct mortality from ORV use currently threatens any of the petitioned insect species. Therefore, we find the petition does not contain substantial scientific or commercial information that other natural or manmade factors may be a factor threatening the continued existence of the petitioned insect species.

Finding

We evaluated each of the five listing factors individually, and because the threats to the 11 insect species are not mutually exclusive, we also evaluated the collective effect of these threats. The petition focused primarily on two listing factors: Factor A (the Present or Threatened Destruction, Modification, or Curtailment of the Species' Habitat or Range) and Factor D (Inadequacy of Existing Regulatory Mechanisms). More specifically, information in the petition suggests that ORV activity within the Algodones dunes has disturbed dune surfaces and underlying accumulated organic debris that could act as larval nurseries for endemic insects. Additionally, the petitioners assert any activities resulting in the decline of general plant cover and host plants would threaten survival of rare endemic insect species with highly restricted geographical ranges and highly specific habitat needs. However, the petition does not present specific information regarding impacts to any of the 11 insect species and we are not aware of specific information regarding the impacts of ORV activities on the 11 insect species.

Furthermore, the petition cites the inadequacy of mechanisms, specifically BLM management, as threatening the continued existence of the 16 insect species. Additionally, interim court-ordered closures are currently in effect in over 16 percent of the ISDRA; therefore, the petitioners' contention that implementation of the 2003 RAMP, which would open the currently closed areas to ORV use, poses an immediate threat to the 11 insect species is not accurate. However, the central issue is whether ORV activity will adversely affect the 11 insect species. As stated above, the petition did not present substantial information, nor are we aware of any information regarding the adverse effects of ORV on any of the 11 insect species.

We reviewed the petition and supporting information provided by the petitioners and evaluated that information in relation to other pertinent literature and information available at the time of the petition review. After this review and evaluation, we find (1) The vespid wasp (*Euparagia* n. sp.) is not a listable entity as defined by the Act since it is only identified by the petitioners to the genus level; (2) the petition does not provide substantial scientific information that the four subspecies of weevils (*Trigonoscuta rothi rothi*, *Trigonoscuta rothi algodones*, *Trigonoscuta rothi imperialis*, and *Trigonoscuta rothi punctata*) are scientifically accepted taxons; and (3) the petition does not present substantial scientific or commercial information to demonstrate listing the remaining 11 petitioned 16 insect species of the Algodones Dunes area as threatened or endangered may be warranted at this time. We encourage interested parties to continue gathering data that will assist with conservation of these species. Information regarding the 16 insect species may be submitted to the Field Supervisor, Carlsbad Fish and Wildlife Office (see **ADDRESSES** section) at any time.

References Cited

A complete list of all references cited herein is available, upon request, from the Carlsbad Fish and Wildlife Office (see **ADDRESSES**).

Author

The authors of this document are the staff of the Carlsbad Fish and Wildlife Office.

Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Dated: August 1, 2006.

H. Dale Hall,

Director, U.S. Fish and Wildlife Service.

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