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50 CFR Part 17

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

**DEPARTMENT OF THE INTERIOR****Fish and Wildlife Service****50 CFR Part 17**

[Docket No. FWS-HQ-ES-2014-0032;  
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**Endangered and Threatened Wildlife  
and Plants; Review of Native Species  
That Are Candidates for Listing as  
Endangered or Threatened; Annual  
Notice of Findings on Resubmitted  
Petitions; Annual Description of  
Progress on Listing Actions**

**AGENCY:** Fish and Wildlife Service,  
Interior.

**ACTION:** Notice of review.

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

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

Overall, this CNOR recognizes 23 new candidates, changes the LPN for one candidate, and removes one species from candidate status. Combined with other decisions for individual species that were published separately from this CNOR in the past year, the current number of species that are candidates for listing is 146.

This document also includes our findings on resubmitted petitions and describes our progress in revising the Lists of Endangered and Threatened Wildlife and Plants (Lists) during the

period October 1, 2013, through September 30, 2014.

We request additional status information that may be available for the 146 candidate species identified in this CNOR.

**DATES:** We will accept information on any of the species in this Candidate Notice of Review at any time.

**ADDRESSES:** This notice is available on the Internet at <http://www.regulations.gov> and <http://www.fws.gov/endangered/what-we-do/cnor.html>. Species assessment forms with information and references on a particular candidate species' range, status, habitat needs, and listing priority assignment are available for review at the appropriate Regional Office listed below in **SUPPLEMENTARY INFORMATION** or at the Branch of Communications and Candidate Conservation, Falls Church, VA (see address under **FOR FURTHER INFORMATION CONTACT**), or on our Web site ([http://ecos.fws.gov/tess\\_public/pub/candidateSpecies.jsp](http://ecos.fws.gov/tess_public/pub/candidateSpecies.jsp)). Please submit any new information, materials, comments, or questions of a general nature on this notice to the Falls Church, VA, address listed under **FOR FURTHER INFORMATION CONTACT**. Please submit any new information, materials, comments, or questions pertaining to a particular species to the address of the Endangered Species Coordinator in the appropriate Regional Office listed in **SUPPLEMENTARY INFORMATION**. Species-specific information and materials we receive will be available for public inspection by appointment, during normal business hours, at the appropriate Regional Office listed below under Request for Information in **SUPPLEMENTARY INFORMATION**. General information we receive will be available at the Branch of Communications and Candidate Conservation, Falls Church, VA (see address under **FOR FURTHER INFORMATION CONTACT**).

**FOR FURTHER INFORMATION CONTACT:** Chief, Branch of Communications and Candidate Conservation, U.S. Fish and Wildlife Service Headquarters, MS: ES, 5275 Leesburg Pike, Falls Church, VA 22041-3803 (telephone 703-358-2171). Persons who use a telecommunications device for the deaf may call the Federal Information Relay Service at 800-877-8339.

**SUPPLEMENTARY INFORMATION:** We request additional status information that may be available for any of the candidate species identified in this CNOR. We will consider this information to monitor changes in the status or LPN of candidate species and to manage candidates as we prepare listing documents and future revisions

to the notice of review. We also request information on additional species to consider including as candidates as we prepare future updates of this notice.

**Candidate Notice of Review***Background*

The Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (ESA), requires that we identify species of wildlife and plants that are endangered or threatened based on the best available scientific and commercial information. As defined in section 3 of the ESA, an endangered species is any species that is in danger of extinction throughout all or a significant portion of its range, and a threatened species is any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Through the Federal rulemaking process, we add species that meet these definitions to the List of Endangered and Threatened Wildlife at 50 CFR 17.11 or the List of Endangered and Threatened Plants at 50 CFR 17.12. As part of this program, we maintain a list of species that we regard as candidates for listing. A candidate species is one for which we have on file sufficient information on biological vulnerability and threats to support a proposal for listing as endangered or threatened, but for which preparation and publication of a proposal is precluded by higher priority listing actions. We may identify a species as a candidate for listing after we have conducted an evaluation of its status on our own initiative, or resulting from a petition we have received. If we have made a positive finding on a petition to list a species, but we have found that listing is warranted but precluded by other higher priority listing actions, we will add the species to our list of candidates.

We maintain this list of candidates for a variety of reasons: (1) To notify the public that these species are facing threats to their survival; (2) to provide advance knowledge of potential listings that could affect decisions of environmental planners and developers; (3) to provide information that may stimulate and guide conservation efforts that will remove or reduce threats to these species and possibly make listing unnecessary; (4) to request input from interested parties to help us identify those candidate species that may not require protection under the ESA as well as additional species that may require the ESA's protections; and (5) to request necessary information for setting priorities for preparing listing proposals. We strongly encourage collaborative

conservation efforts for candidate species, and offer technical and financial assistance to facilitate such efforts. For additional information regarding such assistance, please contact the appropriate Regional Office listed under Request for Information or visit our Web site, <http://www.fws.gov/endangered/what-we-do/cca.html>.

#### *Previous Notices of Review*

We have been publishing candidate notices of review (CNOR) since 1975. The most recent CNOR (prior to this CNOR) was published on November 22, 2013 (78 FR 70104). CNORs published since 1994 are available on our Web site, <http://www.fws.gov/endangered/what-we-do/cnor.html>. For copies of CNORs published prior to 1994, please contact the Branch of Communications and Candidate Conservation (see **FOR FURTHER INFORMATION CONTACT** section above).

On September 21, 1983, we published guidance for assigning an LPN for each candidate species (48 FR 43098). Using this guidance, we assign each candidate an LPN of 1 to 12, depending on the magnitude of threats, immediacy of threats, and taxonomic status; the lower the LPN, the higher the listing priority (that is, a species with an LPN of 1 would have the highest listing priority). Section 4(h)(3) of the ESA (16 U.S.C. 1533(h)(3)) requires the Secretary to establish guidelines for such a priority-ranking guidance system. As explained below, in using this system, we first categorize based on the magnitude of the threat(s), then by the immediacy of the threat(s), and finally by taxonomic status.

Under this priority-ranking system, magnitude of threat can be either “high” or “moderate to low.” This criterion helps ensure that the species facing the greatest threats to their continued existence receive the highest listing priority. It is important to recognize that all candidate species face threats to their continued existence, so the magnitude of threats is in relative terms. For all candidate species, the threats are of sufficiently high magnitude to put them in danger of extinction, or make them likely to become in danger of extinction in the foreseeable future. But for species with higher magnitude threats, the threats have a greater likelihood of bringing about extinction or are expected to bring about extinction on a shorter timescale (once the threats are imminent) than for species with lower magnitude threats. Because we do not routinely quantify how likely or how soon extinction would be expected to occur absent listing, we must evaluate factors that contribute to the likelihood

and time scale for extinction. We therefore consider information such as: (1) The number of populations or extent of range of the species affected by the threat(s), or both; (2) the biological significance of the affected population(s), taking into consideration the life-history characteristics of the species and its current abundance and distribution; (3) whether the threats affect the species in only a portion of its range, and, if so, the likelihood of persistence of the species in the unaffected portions; (4) the severity of the effects and the rapidity with which they have caused or are likely to cause mortality to individuals and accompanying declines in population levels; (5) whether the effects are likely to be permanent; and (6) the extent to which any ongoing conservation efforts reduce the severity of the threat.

As used in our priority-ranking system, immediacy of threat is categorized as either “imminent” or “nonimminent,” and is based on when the threats will begin. If a threat is currently occurring or likely to occur in the very near future, we classify the threat as imminent. Determining the immediacy of threats helps ensure that species facing actual, identifiable threats are given priority for listing proposals over those for which threats are only potential or species that are intrinsically vulnerable to certain types of threats but are not known to be presently facing such threats.

Our priority ranking system has three categories for taxonomic status: Species that are the sole members of a genus; full species (in genera that have more than one species); and subspecies and distinct population segments of vertebrate species (DPS).

The result of the ranking system is that we assign each candidate a listing priority number of 1 to 12. For example, if the threats are of high magnitude, with immediacy classified as imminent, the listable entity is assigned an LPN of 1, 2, or 3 based on its taxonomic status (*i.e.*, a species that is the only member of its genus would be assigned to the LPN 1 category, a full species to LPN 2, and a subspecies or DPS would be assigned to LPN 3). In summary, the LPN ranking system provides a basis for making decisions about the relative priority for preparing a proposed rule to list a given species. No matter which LPN we assign to a species, each species included in this notice as a candidate is one for which we have sufficient information to prepare a proposed rule for listing because it is in danger of extinction or likely to become endangered within the foreseeable

future throughout all or a significant portion of its range.

For more information on the process and standards used in assigning LPNs, a copy of the 1983 guidance is available on our Web site at: <http://www.fws.gov/endangered/esa-library/pdf/48fr43098-43105.pdf>. Information on the LPN assigned to a particular species is summarized in this CNOR and the species assessment for each candidate contains the LPN chart and a rationale for the determination of the magnitude and immediacy of threat(s) and assignment of the LPN.

This revised notice supersedes all previous animal, plant, and combined candidate notices of review for native species and supersedes previous 12-month warranted-but-precluded petition findings for those candidate species that were petitioned for listing.

#### *Summary of This CNOR*

Since publication of the previous CNOR on November 22, 2013 (78 FR 70104), we reviewed the available information on candidate species to ensure that a proposed listing is justified for each species, and reevaluated the relative LPN assigned to each species. We also evaluated the need to emergency list any of these species, particularly species with higher priorities (*i.e.*, species with LPNs of 1, 2, or 3). This review and reevaluation ensures that we focus conservation efforts on those species at greatest risk.

In addition to reviewing candidate species since publication of the last CNOR, we have worked on findings in response to petitions to list species, and on proposed and final determinations for rules to list species under the ESA. Some of these findings and determinations have been completed and published in the **Federal Register**, while work on others is still under way (see *Preclusion and Expeditious Progress*, below, for details).

Based on our review of the best available scientific and commercial information, with this CNOR, we are identifying 23 new candidates, we change the LPN for one candidate, and determine that a listing proposal is not warranted for one species and thus remove it from candidate status (see Candidate Removals, below). Combined with the other decisions published separately from this CNOR, a total of 146 species (67 plant and 79 animal species) are now candidates awaiting preparation of rules proposing their listing. These 146 species, along with the 36 species currently proposed for listing (including 1 species proposed for listing due to similarity in appearance), are included in Table 1.



Table 2 lists the changes from the previous CNOR, and includes 49 species identified in the previous CNOR as either proposed for listing or classified as candidates that are no longer in those categories. This includes 33 species for which we published a final listing rule, 11 candidate species for which we published a separate not-warranted finding and removed from candidate status, 3 species for which we published a withdrawal of a proposed rule, 1 species for which we published a separate notice of removal from candidate status, and the 1 species in this notice that we have determined does not meet the definition of an endangered or threatened species and therefore does not warrant listing. We have removed this species from candidate status in this CNOR.

### New Candidates

We have identified 23 new candidate species through this notice discussed below.

#### Birds

Ma'oma'o (*Gymnomyza samoensis*)—The ma'oma'o is a large, dusky olive-green honeyeater that is known for making a variety of loud distinctive calls. The genus *Gymnomyza* consists of three honeyeaters restricted to a few islands in the southwestern Pacific. The ma'oma'o is endemic to Upolu and Savaii, Independent Samoa (Samoa), and Tutuila Island, American Samoa. The ma'oma'o is now believed to be extirpated from Tutuila Island, American Samoa. It is currently only found in small populations on the islands of Savaii and Upolu in Samoa. The ma'oma'o is primarily restricted to mature, well-developed, moist, mossy forests at upper elevations. Monitoring over the last decade has provided evidence of a decline in the relative abundance of the species. In 2007, the total population was estimated to be approximately 500 individuals.

Little mature forest remains in Samoa, and the loss of forested habitat due to logging, agricultural clearing, and catastrophic storms is the primary threat to the ma'oma'o. Two storms in the 1990s, Cyclones Ofa (1990) and Val (1991), destroyed much of the forested habitat in Samoa, reducing forest canopy cover by 73 percent. In 2012, Cyclone Evan caused additional severe forest damage. Loss of mature forest is likely to affect the ma'oma'o by reducing breeding and foraging habitat, increasing forest fragmentation, and increasing the abundance and diversity of invasive species. Other threats to the species include habitat degradation, predation by nonnative species, and

small population size. Habitat quality has degraded with the loss of closed forest space and the spread of nonnative invasive weeds. Nest predation by rats (*Rattus* spp.) and feral cats (*Felis catus*) is an important threat to many island birds, including the ma'oma'o, and may impede population growth. Small populations are more susceptible to inbreeding depression (reduced reproductive vigor) and extirpation from stochastic events (e.g., inclement weather, population demographics, and altered predation patterns). Based on our evaluation that these ongoing threats pose an imminent risk of a high magnitude, we assign a LPN of 2 for this species.

#### Flowering Plants

Eighteen Hawaiian flowering plants (*Cyanea kauaulaensis*, *Cyperus neokunthianus*, *Cyrtandra hematos*, *Exocarpos menziesii*, *Kadua haupuensis*, *Labordia lorenciana*, *Lepidium orbiculare*, *Phyllostegia brevidens*, *Phyllostegia helleri*, *Phyllostegia stachyoides*, *Portulaca villosa*, *Pritchardia bakeri*, *Sanicula sandwicensis*, *Santalum involutum*, *Schiedea diffusa* ssp. *diffusa*, *Sicyos lanceoloideus*, *Stenogyne kaalae* ssp. *sherffii*, *Wikstromoemia skottsbergiana*)—Each of these 18 species is endemic to one or more islands in the State of Hawaii ((*Cyanea kauaulaensis* (Maui), *Cyperus neokunthianus* (Maui), *Cyrtandra hematos* (Molokai), *Exocarpos menziesii* (Hawaii Island; extirpated from Lanai), *Kadua haupuensis* (Kauai), *Labordia lorenciana* (Kauai), *Lepidium orbiculare* (Kauai), *Phyllostegia brevidens* (Maui; extirpated from Hawaii Island), *Phyllostegia helleri* (Kauai), *Phyllostegia stachyoides* (Maui, Molokai, and Hawaii Island), *Portulaca villosa* (Maui and Nihoa), *Pritchardia bakeri* (Oahu), *Sanicula sandwicensis* (Maui and Hawaii Island), *Santalum involutum* (Kauai), *Schiedea diffusa* ssp. *diffusa* (Maui), *Sicyos lanceoloideus* (Kauai and Oahu), *Stenogyne kaalae* ssp. *sherffii* (Oahu), and *Wikstromoemia skottsbergiana* (Kauai)), and each is negatively affected by nonnative animals and plants.

Introduced, nonnative animals damage and destroy plants and seeds, modify habitat, create habitat more conducive to nonnative plant introductions, and spread nonnative plant seeds. Nonnative plants displace and outcompete native species. Introduced, nonnative plants and animals are serious and ongoing threats to these species rangewide, and these threats are increased by the continued inadequacy of existing protective

regulations. In addition, small population size (each species has fewer than 100 individuals) is a serious and ongoing threat to each of these species because (1) they may experience reduced reproductive vigor due to ineffective pollination or inbreeding depression; (2) they may experience reduced levels of genetic variability, leading to diminished capacity to adapt and respond to environmental changes, thereby lessening the probability of long-term persistence; and (3) a single catastrophic event may result in extirpation of remaining populations and extinction of the species. Climate change may pose a threat to the ecosystems that support these species, thus exacerbating the effects of the aforementioned threats. There are varying degrees of conservation efforts ongoing for these species; however, at a minimum, all of these species are listed on the Hawaii Plant Extinction Prevention Program (PEPP) species list. Species on the PEPP list are prioritized for monitoring, surveys, collection and storing of seeds, propagation, and outplanting. The threats to each of these species are imminent and of high magnitude, leading to a relatively high likelihood of extinction. Therefore, we assign a LPN of 2 for the above plants that are full species and a LPN of 3 for those that are subspecies or varieties.

#### Ferns and Allies

Four Hawaiian ferns (*Asplenium diellaciniatum*, *Deparia kaalaana*, *Dryopteris glabra* var. *pusilla*, *Hypolepis hawaiiensis* var. *mauiensis*)—Each of these four species is endemic to one or more islands in the State of Hawaii (*Asplenium diellaciniatum* (Kauai), *Deparia kaalaana* (Maui; extirpated from Kauai and Hawaii Island), *Dryopteris glabra* var. *pusilla* (Kauai), *Hypolepis hawaiiensis* var. *mauiensis* (Maui)); and each is negatively affected by nonnative animals and plants. Introduced, nonnative animals damage and destroy plants and seeds, modify habitat, create habitat more conducive to nonnative plant introductions, and spread nonnative plant seeds. Nonnative plants displace and outcompete native species. Introduced nonnative plants and animals are serious and ongoing threats to these species rangewide, and these threats are increased by the continued inadequacy of existing protective regulations. In addition, small population size (each species has fewer than 100 individuals) is a serious and ongoing threat to each of these species because (1) they may experience reduced reproductive vigor due to ineffective pollination or inbreeding depression; (2) they may

experience reduced levels of genetic variability, leading to diminished capacity to adapt and respond to environmental changes, thereby lessening the probability of long-term persistence; and (3) a single catastrophic event may result in extirpation of remaining populations and extinction of the species. Climate change may pose a threat to the ecosystems that support these species, thus exacerbating the effects of the aforementioned threats. There are varying degrees of conservation efforts ongoing for these species; however, at a minimum, all of these species are listed on the Hawaii Plant Extinction Prevention Program (PEPP) species list. Species on the PEPP list are prioritized for monitoring, surveys, collection and storing of seeds, propagation, and outplanting. The threats to each of these species are imminent and of high magnitude, leading to a relatively high likelihood of extinction. Therefore, we assign a LPN of 2 for *Asplenium diellaciniatum* and *Deparia kaalaana* and an LPN of 3 for *Dryopteris glabra* var. *pusilla* and *Hypolepis hawaiiensis* var. *mauiensis*.

#### Listing Priority Changes in Candidates

We reviewed the LPN for all candidate species and are changing the number for the following species discussed below.

#### Birds

Sprague's pipit (*Anthus spragueii*)—The Sprague's pipit is a small grassland bird characterized by its high breeding flight display and otherwise very secretive behavior. Sprague's pipits are strongly associated with native prairie (land that has never been plowed), especially on the breeding grounds. Its current breeding range includes portions of Montana, North Dakota, South Dakota, and Canada. The wintering range includes south-central and southeast Arizona, southern New Mexico, Texas, southern Oklahoma, southern Arkansas, northwest Mississippi, southern Louisiana, and northern Mexico; the vast majority of the U.S. winter sightings have been in Texas. During migration, the species has been sighted in areas outside of the direct flight path between its breeding and wintering sites, including Michigan, western Ontario, Ohio, Massachusetts, and Gulf and Atlantic States from Mississippi east and north to South Carolina. Sprague's pipits also have been sighted in California during fall migration.

The primary stressor to the species is habitat conversion on the breeding grounds. The Breeding Bird Survey shows a long-term decline from 1966

through 2012. From 2002 through 2012, however, the long-term population decline has leveled off and currently, there is no discernable trend. The Christmas Bird Count data also indicates that the population decline has stopped and the population trend has no direction, either increasing or decreasing between 2003 and 2012.

In the Service's 12-month finding published on September 15, 2010, we identified oil and gas development and associated infrastructure as having a strong negative influence on the species based upon the available information at that time. New information suggests that Sprague's pipit avoidance response of these features is highly variable across the range and thus the species' response to oil and gas development and roads does not indicate that these are a threat.

Landscape modelling to predict Sprague's pipit habitat use on the breeding range indicates the population is concentrated in north-central Montana, Alberta, and Saskatchewan, Canada. Analysis of the likelihood of prairie conversion in the area where most pipits occur suggests that the risk of widespread conversion is low, with the most likely risk scenario of future conversion to cropland predicting a relatively low proportion (10–15 percent) of the breeding population affected.

On the wintering range, conversion of prairie to cropland appears to be accelerating. The species is widely distributed and mobile during winter, but grassland conversion is ongoing and apparently widespread. At this time, we believe that the species' trends can be explained by the habitat changes that have occurred on the breeding range; however, we will be more closely assessing the changes to the wintering range and whether those changes threaten the Sprague's pipit.

The threats to the Sprague's pipit described above are moderate to low in magnitude. Because of the relatively large population remaining and the stable-to-uncertain (*i.e.* not showing a clear decline) trends shown by surveys on both the breeding and wintering grounds, the potential decline is nonimminent. In addition, the threat from conversion of habitat on the breeding grounds is now nonimminent. Therefore, we are revising the LPN from 8 to an 11.

#### Candidate Removals

As summarized below, we have evaluated the threats to the following species and considered factors that, individually and in combination, currently or potentially could pose a risk to the species and its habitats. After

a review of the best available scientific and commercial data, we conclude that listing this species under the Endangered Species Act is not warranted because this species is not likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Therefore, we no longer consider it to be a candidate species for listing. We will continue to monitor the status of this species and to accept additional information and comments concerning this finding. We will reconsider our determination in the event that new information indicates that the threats to the species are of a considerably greater magnitude or imminence than identified through assessments of information contained in our files, as summarized here.

#### Flowering Plants

*Astragalus cusickii* var. *packardiae* (Packard's milkvetch)—The following summary is based on information contained in our files. Packard's milkvetch is narrowly endemic to a specific group of light-colored sedimentary outcrops in southwestern Idaho. The total range of the species covers approximately 26 square kilometers (km<sup>2</sup>) (10 square miles (mi<sup>2</sup>)) in Payette County. Suboccurrences of Packard's milkvetch, which are typically represented by individual occupied outcrops, are found at elevations ranging from 793 to 915 meters (m) (2,600 to 3,000 feet (ft)). Occupied outcrops tend to be found on steep, south- to west-facing slopes, and are relatively sparsely vegetated.

Packard's milkvetch became a candidate species in 2010, based on the identified primary threat of habitat degradation due to off highway vehicles (OHVs). In response, on December 13, 2013, the Bureau of Land Management (BLM) made a decision that permanently closed 5,620 acres within and near Packard's milkvetch habitat to OHV use, covering 68 percent of the species' occurrences. Monitoring data collected since the closure was implemented in 2011 indicates that the OHV closure has been effective at eliminating the primary threat to the species throughout a large majority of the species' range.

Other natural and anthropogenic activities identified at the time it was designated a candidate included an altered wildfire regime due to invasive nonnative plant species and livestock use. There was little data at the time to suggest whether these potential threats were significant, but out of an abundance of caution, the Idaho Fish and Wildlife Office (IFWO) considered

these activities along with the OHV monitoring data from 2008–2010 when making the 2010 decision. However, by 2013, a 5-year monitoring dataset (2008–2013) suggested a stable population and no association between cover of nonnative plant species and wildfire and the abundance of Packard's milkvetch.

In 2010, the population of Packard's milkvetch was estimated at approximately 5,000 plants located within 26 suboccurrences with abundance ranges from 3 to approximately 500 plants per suboccurrence. Surveys in 2012 documented several additional occupied outcrops collectively totaling approximately 2,000 individuals, which revised the range-wide population estimate to 6,500 plants occurring within 28 suboccurrences. The 5-year monitoring dataset (2008–2013) has suggested a stable population overall.

Therefore, based on (1) the reduction of the species' primary threat (*i.e.*, OHV use), (2) the increase in number of known suboccurrences and resulting increase in the overall population, and (3) the species' overall stable population status over a 5-year monitoring period, we find that listing of Packard's milkvetch as threatened or endangered throughout all or a significant portion of its range is no longer warranted; the species no longer meets the definition of a candidate species, and we are removing it from candidate status.

In addition to the factors that led us to conclude that Packard's milkvetch no longer warrants candidate status, the BLM and IFWO signed a 20-year Candidate Conservation Agreement (CCA) on December 20, 2013, which further supports the BLM's OHV closure decision and commits to continued enforcement and monitoring of the OHV closure. The CCA also outlines the BLM's plans for long-term monitoring and future proactive conservation measures to address new potential threats that may arise.

### Petition Findings

The ESA provides two mechanisms for considering species for listing. One method allows the Secretary, on the Secretary's own initiative, to identify species for listing under the standards of section 4(a)(1). We implement this authority through the candidate program, discussed above. The second method for listing a species provides a mechanism for the public to petition us to add a species to the Lists. The CNOR serves several purposes as part of the petition process: (1) In some instances (in particular, for petitions to list species that the Service has already

identified as candidates on its own initiative), it serves as the initial petition finding; (2) for candidate species for which the Service has made a warranted-but-precluded petition finding, it serves as a "resubmitted" petition finding that the ESA requires the Service to make each year; and (3) it documents the Service's compliance with the statutory requirement to monitor the status of species for which listing is warranted but precluded, and to ascertain if they need emergency listing.

First, the CNOR serves as an initial petition finding in some instances. Under section 4(b)(3)(A), when we receive a listing petition, we must determine within 90 days, to the maximum extent practicable, whether the petition presents substantial information indicating that listing may be warranted (a "90-day finding"). If we make a positive 90-day finding, we must promptly commence a status review of the species under section 4(b)(3)(A); we must then make and publish one of three possible findings within 12 months of the receipt of the petition (a "12-month finding"):

(1) The petitioned action is not warranted;

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

(3) The petitioned action is warranted, but (a) the immediate proposal of a regulation and final promulgation of a regulation implementing the petitioned action is precluded by pending proposals to determine whether any species is endangered or threatened, and (b) expeditious progress is being made to add qualified species to the Lists. We refer to this third option as a "warranted-but-precluded finding."

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

Therefore, all candidate species identified through our own initiative already have received the equivalent of substantial 90-day and warranted-but-precluded 12-month findings. Nevertheless, we review the status of the newly petitioned candidate species and through this CNOR publish specific section 4(b)(3) findings (*i.e.*, substantial 90-day and warranted-but-precluded 12-month findings) in response to the petitions to list these candidate species. We publish these findings as part of the first CNOR following receipt of the petition. We have identified the candidate species for which we received petitions by the code "C\*" in the category column on the left side of Table 1 below.

Second, the CNOR serves as a "resubmitted" petition finding. Section 4(b)(3)(C)(i) of the ESA requires that when we make a warranted-but-precluded finding on a petition, we treat the petition as one that is resubmitted on the date of the finding. Thus, we must make a 12-month petition finding in compliance with section 4(b)(3)(B) of the ESA at least once a year, until we publish a proposal to list the species or make a final not-warranted finding. We make these annual findings for petitioned candidate species through the CNOR. These annual findings supercede any findings from previous CNORs and the initial 12-month warranted-but-precluded finding, although all previous findings are part of the administrative record for the new finding, and we may rely upon them or incorporate them by reference in the new finding as appropriate.

Third, through undertaking the analysis required to complete the CNOR, the Service determines if any candidate species needs emergency listing. Section 4(b)(3)(C)(iii) of the ESA requires us to "implement a system to monitor effectively the status of all species" for which we have made a warranted-but-precluded 12-month finding, and to "make prompt use of the [emergency listing] authority [under section 4(b)(7)] to prevent a significant risk to the well being of any such species." The CNOR plays a crucial role in the monitoring system that we have implemented for all candidate species by providing notice that we are actively seeking information regarding the status of those species. We review all new information on candidate species as it becomes available, prepare an annual species assessment form that reflects monitoring results and other new information, and identify any species for which emergency listing may be appropriate. If we determine that emergency listing is appropriate for any



candidate, we will make prompt use of the emergency listing authority under section 4(b)(7). For example, on August 10, 2011, we emergency listed the Miami blue butterfly (76 FR 49542). We have been reviewing and will continue to review, at least annually, the status of every candidate, whether or not we have received a petition to list it. Thus, the CNOR and accompanying species assessment forms constitute the Service's system for monitoring and making annual findings on the status of petitioned species under sections 4(b)(3)(C)(i) and 4(b)(3)(C)(iii) of the ESA.

A number of court decisions have elaborated on the nature and specificity of information that we must consider in making and describing the petition findings in the CNOR. The CNOR that published on November 9, 2009 (74 FR 57804), describes these court decisions in further detail. As with previous CNORs, we continue to incorporate information of the nature and specificity required by the courts. For example, we include a description of the reasons why the listing of every petitioned candidate species is both warranted and precluded at this time. We make our determinations of preclusion on a nationwide basis to ensure that the species most in need of listing will be addressed first and also because we allocate our listing budget on a nationwide basis (see below). Regional priorities can also be discerned from Table 1, below, which includes the lead region and the LPN for each species. Our preclusion determinations are further based upon our budget for listing activities for unlisted species only, and we explain the priority system and why the work we have accomplished does preclude action on listing candidate species.

In preparing this CNOR, we reviewed the current status of, and threats to, the 112 candidates for which we have received a petition to list and the 5 listed species for which we have received a petition to reclassify from threatened to endangered, where we found the petitioned action to be warranted but precluded. We find that the immediate issuance of a proposed rule and timely promulgation of a final rule for each of these species, except for the Selkirk ecosystem population and the Cabinet-Yaak ecosystem population of Grizzly bear (see *Petitions To Reclassify Species Already Listed*), has been, for the preceding months, and continues to be, precluded by higher priority listing actions. Additional information that is the basis for this finding is found in the species

assessments and our administrative record for each species.

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

The immediate publication of proposed rules to list these species was precluded by our work on higher priority listing actions, listed below, during the period from October 1, 2013, through September 30, 2014. Below we describe the actions that continue to preclude the immediate proposal and final promulgation of a regulation implementing each of the petitioned actions for which we have made a warranted-but-precluded finding, and we describe the expeditious progress we are making to add qualified species to, and remove species from, the Lists. We will continue to monitor the status of all candidate species, including petitioned species, as new information becomes available to determine if a change in status is warranted, including the need to emergency-list a species under section 4(b)(7) of the ESA.

In addition to identifying petitioned candidate species in Table 1 below, we also present brief summaries of why each of these candidates warrants listing. More complete information, including references, is found in the species assessment forms. You may obtain a copy of these forms from the Regional Office having the lead for the species, or from the Fish and Wildlife Service's Internet Web site: [http://ecos.fws.gov/tess\\_public/pub/candidateSpecies.jsp](http://ecos.fws.gov/tess_public/pub/candidateSpecies.jsp). As described above, under section 4 of the ESA, we identify and propose species for listing based on the factors identified in section 4(a)(1), and section 4 also provides a mechanism for the public to petition us to add species to the Lists of Endangered or Threatened Wildlife and Plants under the ESA.

#### *Preclusion and Expeditious Progress*

To make a finding that a particular action is warranted but precluded, the Service must make two determinations: (1) That the immediate proposal and timely promulgation of a final regulation is precluded by pending listing proposals and (2) that expeditious progress is being made to add qualified species to either of the lists and to remove species from the lists. 16 U.S.C. 1533(b)(3)(B)(iii).

#### *Preclusion*

A listing proposal is precluded if the Service does not have sufficient resources available to complete the proposal, because there are competing demands for those resources, and the relative priority of those competing demands is higher. Thus, in any given fiscal year (FY), multiple factors dictate whether it will be possible to undertake work on a listing proposal regulation or whether promulgation of such a proposal is precluded by higher priority listing actions—(1) The amount of resources available for completing the listing function, (2) the estimated cost of completing the proposed listing, and (3) the Service's workload and prioritization of the proposed listing in relation to other actions.

#### *Available Resources*

The resources available for listing actions are determined through the annual Congressional appropriations process. In FY 1998 and for each fiscal year since then, Congress has placed a statutory cap on funds that may be expended for the Listing Program. This spending cap was designed to prevent the listing function from depleting funds needed for other functions under the ESA (for example, recovery functions, such as removing species from the Lists), or for other Service programs (see House Report 105–163, 105th Congress, 1st Session, July 1, 1997). The funds within the spending cap are available to support work involving the following listing actions: Proposed and final listing rules; 90-day and 12-month findings on petitions to add species to the Lists or to change the status of a species from threatened to endangered; annual “resubmitted” petition findings on prior warranted-but-precluded petition findings as required under section 4(b)(3)(C)(i) of the ESA; critical habitat petition findings; proposed and final rules designating critical habitat; and litigation-related, administrative, and program-management functions (including preparing and allocating budgets, responding to Congressional and public inquiries, and conducting public outreach regarding listing and critical habitat).

We cannot spend more for the Listing Program than the amount of funds within the spending cap without violating the Anti-Deficiency Act (see 31 U.S.C. 1341(a)(1)(A)). In addition, since FY 2002, the Service's budget has included a critical habitat subcap to ensure that some funds are available for completing Listing Program actions other than critical habitat designations

(“The critical habitat designation subcap will ensure that some funding is available to address other listing activities” (House Report No. 107–103, 107th Congress, 1st Session. June 19, 2001)). In FY 2002 and each year until FY 2006, the Service had to use virtually the entire critical habitat subcap to address court-mandated designations of critical habitat, and consequently none of the critical habitat subcap funds were available for other listing activities. In some FYs since 2006, we have been able to use some of the critical habitat subcap funds to fund proposed listing determinations for high-priority candidate species. In other FYs, while we were unable to use any of the critical habitat subcap funds to fund proposed listing determinations, we did use some of this money to fund the critical habitat portion of some proposed listing determinations so that the proposed listing determination and proposed critical habitat designation could be combined into one rule, thereby being more efficient in our work. In FY 2014, based on the Service’s workload, we were able to use some of the critical habitat subcap funds to fund proposed listing determinations.

For FY 2012 Congress also put in place two additional subcaps within the listing cap: One for listing actions for foreign species and one for petition findings. As with the critical habitat subcap, if the Service does not need to use all of the funds within the subcap, we are able to use the remaining funds for completing proposed or final listing determinations. In FY 2014, based on the Service’s workload, we were able to use some of the funds within the foreign species subcap and the petitions subcap to fund proposed listing determinations.

We make our determinations of preclusion on a nationwide basis to ensure that the species most in need of listing will be addressed first, and also because we allocate our listing budget on a nationwide basis. Through the listing cap, the three subcaps, and the amount of funds needed to complete court-mandated actions within those subcaps, Congress and the courts have in effect determined the amount of money available for other listing activities nationwide. Therefore, the funds in the listing cap—other than those within the subcaps needed to comply with court orders or court-approved settlement agreements requiring critical habitat actions for already-listed species, listing actions for foreign species, and petition findings—set the framework within which we make our determinations of preclusion and expeditious progress.

For FY 2014, on January 17, 2014, Congress passed a Consolidated Appropriations Act, 2014 (Pub. L. 113–76), which provided funding through September 30, 2014. In particular, it included an overall spending cap of \$20,515,000 for the listing program. Of that, no more than \$1,504,000 could be used for listing actions for foreign species, and no more than \$1,501,000 could be used to make 90-day or 12-month findings on petitions. The Service thus had \$ 12,905,000 available to work on proposed and final listing determinations for domestic species. In addition, if the Service had funding available within the critical habitat, foreign species, or petition subcaps after those workloads had been completed, it could use those funds to work on listing actions other than critical habitat designations or foreign species.

*Costs of Listing Actions.* The work involved in preparing various listing documents can be extensive, and may include, but is not limited to: Gathering and assessing the best scientific and commercial data available and conducting analyses used as the basis for our decisions; writing and publishing documents; and obtaining, reviewing, and evaluating public comments and peer review comments on proposed rules and incorporating relevant information into final rules. The number of listing actions that we can undertake in a given year also is influenced by the complexity of those listing actions; that is, more complex actions generally are more costly. The median cost for preparing and publishing a 90-day finding is \$39,276; for a 12-month finding, \$100,690; for a proposed rule with critical habitat, \$345,000; and for a final listing rule with critical habitat, \$305,000.

*Prioritizing Listing Actions.* The Service’s Listing Program workload is broadly composed of four types of actions, which the Service prioritizes as follows: (1) Compliance with court orders and court-approved settlement agreements requiring that petition findings or listing or critical habitat determinations be completed by a specific date; (2) essential litigation-related, administrative, and listing program-management functions; (3) section 4 (of the Act) listing and critical habitat actions with absolute statutory deadlines; and (4) section 4 listing actions that do not have absolute statutory deadlines. In the last few years, the Service received many new petitions and a single petition to list 404 species, significantly increasing the number of actions within the second category of our workload—actions that have absolute statutory deadlines. As a

result of the petitions to list hundreds of species, we currently have over 450 12-month petition findings yet to be initiated and completed.

An additional way in which we prioritize work in the section 4 program is application of the listing priority guidelines (48 FR 43098; September 21, 1983). Under those guidelines, we assign each candidate an LPN of 1 to 12, depending on the magnitude of threats (high or moderate to low), immediacy of threats (imminent or nonimminent), and taxonomic status of the species (in order of priority: Monotypic genus (a species that is the sole member of a genus), species, or part of a species (subspecies or distinct population segment)). The lower the listing priority number, the higher the listing priority (that is, a species with an LPN of 1 would have the highest listing priority). A species with a higher LPN would generally be precluded from listing by species with lower LPNs, unless work on a proposed rule for the species with the higher LPN can be combined with work on a proposed rule for other high-priority species. In addition to prioritizing species with our 1983 guidance, because of the large number of high-priority species we have had in the recent past, we had further ranked the candidate species with an LPN of 2 by using the following extinction-risk type criteria: International Union for the Conservation of Nature and Natural Resources (IUCN) Red list status/rank, Heritage rank (provided by NatureServe), Heritage threat rank (provided by NatureServe), and species currently with fewer than 50 individuals, or 4 or fewer populations. Those species with the highest IUCN rank (critically endangered), the highest Heritage rank (G1), the highest Heritage threat rank (substantial, imminent threats), and currently with fewer than 50 individuals, or fewer than 4 populations, originally comprised a group of approximately 40 candidate species (“Top 40”). These 40 candidate species had the highest priority to receive funding to work on a proposed listing determination and we used this to formulate our work plan for FYs 2010 and 2011 that was included in the MDL Settlement Agreement (see below), as well as for work on proposed and final listing rules for the remaining candidate species with LPNs of 2 and 3.

Finally, proposed rules for reclassification of threatened species to endangered species are lower priority, because as listed species, they are already afforded the protections of the Act and implementing regulations. However, for efficiency reasons, we may choose to work on a proposed rule to



reclassify a species to endangered if we can combine this with work that is subject to a court order or court-approved deadline.

Since before Congress first established the spending cap for the Listing Program in 1998, the Listing Program workload has required considerably more resources than the amount of funds Congress has allowed for the Listing Program. It is therefore important that we be as efficient as possible in our listing process. As we implement our listing work plan and work on proposed rules for the highest priority species in the next several years, we are preparing multi-species proposals when appropriate, and these may include species with lower priority if they overlap geographically or have the same threats as one of the highest priority species. In addition, we take into consideration the availability of staff resources when we determine which high-priority species will receive funding to minimize the amount of time and resources required to complete each listing action.

*Listing Program Workload.* Each FY we determine, based on the amount of funding Congress has made available within the Listing Program spending cap, specifically which actions we will have the resources to work on in that FY. We then prepare Allocation Tables that identify the actions that we are funding for that FY, and how much we estimate it will cost to complete each action; these Allocation Tables are part of our record for this notice and the listing program. Our Allocation Table for FY 2012, which incorporated the Service's approach to prioritizing its workload, was adopted as part of a settlement agreement in a case before the U.S. District Court for the District of Columbia (Endangered Species Act Section 4 Deadline Litigation, No. 10–377 (EGS), MDL Docket No. 2165 (“MDL Litigation”), Document 31–1 (D.D.C. May 10, 2011) (“MDL Settlement Agreement”). The requirements of paragraphs 1 through 7 of that settlement agreement, combined with the work plan attached to the agreement as Exhibit B, reflected the Service's Allocation Tables for FY 2011 and FY 2012. In addition, paragraphs 2 through 7 of the agreement require the Service to take numerous other actions through FY 2017—in particular, complete either a proposed listing rule or a not-warranted finding for all 251 species designated as “candidates” in the 2010 candidate notice of review (“CNOR”) before the end of FY 2016, and complete final listing determinations for those species proposed for listing within the statutory deadline (usually one year

from the proposal). Paragraph 10 of that settlement agreement sets forth the Service's conclusion that “fulfilling the commitments set forth in this Agreement, along with other commitments required by court orders or court-approved settlement agreements already in existence at the signing of this Settlement Agreement (listed in Exhibit A), will require substantially all of the resources in the Listing Program.” As part of the same lawsuit, the court also approved a separate settlement agreement with the other plaintiff in the case; that settlement agreement requires the Service to complete additional actions in specific fiscal years—including 12-month petition findings for 11 species, 90-day petition findings for 477 species, and proposed listing determinations or not-warranted findings for 39 species.

These settlement agreements have led to a number of results that affect our preclusion analysis. First, the Service has been, and will continue to be, limited in the extent to which it can undertake additional actions within the Listing Program through FY 2017, beyond what is required by the MDL Settlement Agreements. Second, because the settlement is court approved, two broad categories of actions now fall within the Service's highest priority (compliance with a court order): (1) The actions required to be completed in FY 2014 by the MDL Settlement Agreements; and (2) completion, before the end of FY 2016, of proposed listings or not-warranted findings for most of the candidate species identified in this CNOR (in particular, for those candidate species that were included in the 2010 CNOR). Therefore, each year, one of the Service's highest priorities is to make steady progress towards completing by the end of 2017 proposed and final listing determinations for the 2010 candidate species—based on the Service's LPN prioritization system, preparing multi-species actions when appropriate, and taking into consideration the availability of staff resources.

Based on these prioritization factors, we continue to find that proposals to list the petitioned candidate species included in Table 1 are all precluded by higher priority listing actions including those with court-ordered and court-approved settlement agreements and listing actions with absolute statutory deadlines.

#### Expeditious Progress

As explained above, a determination that listing is warranted but precluded must also demonstrate that expeditious

progress is being made to add and remove qualified species to and from the Lists. As with our “precluded” finding, the evaluation of whether progress in adding qualified species to the Lists has been expeditious is a function of the resources available for listing and the competing demands for those funds. (Although we do not discuss it in detail here, we are also making expeditious progress in removing species from the list under the Recovery program in light of the resources available for delisting, which is funded by a separate line item in the budget of the Endangered Species Program. During FY 2014, we completed a delisting rule for one species.) As discussed below, given the limited resources available for listing, we find that we made expeditious progress in FY 2014 in the Listing Program.

We provide below tables cataloguing the work of the Service's Listing Program in FY 2014. This work includes all three of the steps necessary for adding species to the Lists: (1) Identifying species that warrant listing; (2) undertaking the evaluation of the best available scientific data about those species and the threats they face, and preparing proposed and final listing rules; and (3) adding species to the Lists by publishing proposed and final listing rules that include a summary of the data on which the rule is based and show the relationship of that data to the rule. After taking into consideration the limited resources available for listing, the competing demands for those funds, and the completed work catalogued in the tables below, we find that we made expeditious progress to add qualified species to the Lists in FY 2014.

First, we made expeditious progress in the third and final step: Listing qualified species. In FY 2014, we resolved the status of 35 species that we determined, or had previously determined, qualified for listing. Moreover, for 32 species, the resolution was to add them to the Lists, most with concurrent designations of critical habitat, and for 3 species we published a withdrawal of the proposed rule. We also proposed to list an additional 24 qualified species, most with concurrent critical habitat proposals.

Second, we are making expeditious progress in the second step: Working towards adding qualified species to the Lists. In FY 2014, we worked on developing proposed listing rules for 34 species (most of them with concurrent critical habitat proposals). Although we have not yet completed those actions, we are making expeditious progress towards doing so.

Third, we are making expeditious progress in the first step towards adding qualified species to the Lists: Identifying additional species that qualify for listing. In FY 2014, we completed two 90-day petition findings for two species.

Our accomplishments this year should also be considered in the broader context of our commitment to reduce the number of candidate species for which we have not made final determinations whether or not to list. On May 10, 2011, the Service filed in the MDL Litigation a settlement agreement that put in place an ambitious schedule for completing proposed and final listing determinations at least through FY 2016; the court approved that settlement

agreement on September 9, 2011. That agreement required, among other things, that for all 251 species that were included as candidates in the 2010 CNOR, the Service submit to the **Federal Register** proposed listing rules or not-warranted findings by the end of FY 2016, and for any proposed listing rules, the Service complete final listing determinations within the statutory time frame. Paragraph 6 of the agreement provided indicators that the Service is making adequate progress towards meeting that requirement: Completing proposed listing rules or not-warranted findings for at least 130 of the species by the end of FY 2013, at least 160 species by the end of FY 2014, and at least 200 species by the end of FY 2015.

The Service has completed proposed listing rules or not-warranted findings for 166 of the 2010 candidate species, as well as final listing rules for 118 of those proposed rules, and is therefore is making adequate progress towards meeting all of the requirements of the MDL settlement agreement. Both by entering into the settlement agreement and by making adequate progress towards making final listing determinations for the 251 species on the 2010 candidate, the Service is making expeditious progress to add qualified species to the lists.

The Service's progress in FY 2014 included completing and publishing the following determinations:

#### FY 2014 COMPLETED LISTING ACTIONS

Publication date	Title	Actions	FR Pages
11/14/2013 .....	12-Month Finding on a Petition To List the Gunnison's Prairie Dog as an Endangered or Threatened Species.	Notice of 12-month petition finding, Not warranted.	78 FR 68660–68685.
11/26/2013 .....	Initiation of Status Review of Arctic Grayling in the Upper Missouri River System.	Notice of Status Review .....	78 FR 70525–70527.
12/19/2013 .....	12-Month Finding on a Petition To List Coleman's Coralroot as an Endangered or Threatened Species.	Notice of 12-month petition finding, Not warranted.	78 FR 76795–76807.
12/20/2013 .....	Threatened Status for <i>Eriogonum codium</i> (Umtanum Desert Buckwheat) and <i>Physaria douglasii</i> subsp. <i>tuplashensis</i> (White Bluffs Bladderpod) and Designation of Critical Habitat.	Final Rule—Revision .....	78 FR 76995–77005.
2/24/2014 .....	Determination of Threatened Species Status for the Georgetown Salamander and Sado Salamander Throughout Their Ranges.	Final Listing Threatened .....	79 FR 10235–10293.
3/31/2014 .....	90-Day Finding on a Petition To List the Alexander Archipelago Wolf as Threatened or Endangered.	Notice of 90-day petition finding, Substantial	79 FR 17993–17995.
4/9/2014 .....	Threatened Species Status for the Olympia Pocket Gopher, Roy Prairie Pocket Gopher, Tenino Pocket Gopher, and Yelm Pocket Gopher, with Special Rule.	Final Listing Threatened, with Special Rule ...	79 FR 19759–19796.
4/10/2014 .....	Determination of Threatened Status for the Lesser Prairie-Chicken.	Final Listing Threatened .....	79 FR 19973–20071.
4/29/2014 .....	Endangered Species Status for Sierra Nevada Yellow-Legged Frog and Northern Distinct Population Segment of the Mountain Yellow-Legged Frog, and Threatened Species Status for Yosemite Toad.	Final Listing Threatened and Endangered .....	79 FR 24255–24310.
5/6/2014 .....	Determination of Threatened Status for <i>Leavenworthia exigua</i> var. <i>laciniata</i> (Kentucky Glade Cress).	Final Listing Threatened .....	79 FR 25683–25688.
6/3/2014 .....	Threatened Species Status for <i>Ivesia webberi</i>	Final Listing Threatened .....	79 FR 31878–31883.
6/10/2014 .....	Determination of Endangered Status for the New Mexico Meadow Jumping Mouse Throughout Its Range.	Final Listing Endangered .....	79 FR 33119–33137.
7/8/2014 .....	Threatened Status for the Northern Mexican Gartersnake and Narrow-Headed Gartersnake.	Final Listing Threatened .....	79 FR 38677–38746.
7/24/2014 .....	Endangered Species Status for the Zuni Bluehead Sucker.	Final Listing Endangered .....	79 FR 43131–43161.
8/1/2014 .....	Endangered Status for <i>Physaria globosa</i> (Short's bladderpod), <i>Helianthus verticillatus</i> (whorled sunflower), and <i>Leavenworthia crassa</i> (fleshy-fruit glaucous).	Final Listing Endangered .....	79 FR 44712–44718.
8/4/2014 .....	Determination of Endangered Status for the Sharpnose Shiner and Smalleye Shiner.	Final Listing Endangered .....	79 FR 45273–45286.

## FY 2014 COMPLETED LISTING ACTIONS—Continued

Publication date	Title	Actions	FR Pages
8/6/2014 .....	Withdrawal of the Proposed Rules To List Graham's Beardtongue ( <i>Penstemon grahamii</i> ) and White River Beardtongue ( <i>Penstemon scariosus</i> var. <i>albifluvis</i> ) and Designate Critical Habitat.	Proposed Listing Withdrawal .....	79 FR 46041–46087.
8/12/2014 .....	Endangered Status for the Florida Leafwing and Bartram's Scrub-Hairstreak Butterflies.	Final Listing Endangered .....	79 FR 47222–47244.
8/13/2014 .....	12-Month Finding on a Petition To List the Warton's Cave Meshweaver as Endangered or Threatened.	Notice of 12-month petition finding, Not warranted Candidate removal.	79 FR 47413–47415.
8/13/2014 .....	Threatened Status for the Distinct Population Segment of the North American Wolverine Occurring in the Contiguous United States; Establishment of a Nonessential Experimental Population of the North American Wolverine in Colorado, Wyoming, and New Mexico.	Proposed Listing Withdrawal .....	79 FR 47521–47545.
8/19/2014 .....	90-Day Finding on a Petition To List the Island Marble Butterfly as an Endangered Species.	Notice of 90-day petition finding, Substantial	79 FR 49045–49047.
8/20/2014 .....	Revised 12-Month Finding on a Petition To List the Upper Missouri River Distinct Population Segment of Arctic Grayling as an Endangered or Threatened Species.	Notice of 12-month petition finding, Not warranted Candidate removal.	79 FR 49383–49422.
8/26/2014 .....	12-Month Finding on the Petition To List Least Chub as an Endangered or Threatened Species.	Notice of 12-month petition finding, Not warranted Candidate removal.	79 FR 51041–51066.
8/26/2014 .....	Endangered Status for Vandenberg Monkeyflower.	Final Listing Endangered .....	79 FR 50844–50854.
8/29/2014 .....	Threatened Status for Oregon Spotted Frog ..	Final Listing Threatened .....	79 FR 51657–51710.
9/4/2014 .....	Endangered Species Status for <i>Brickellia mosieri</i> (Florida Brickell-bush) and <i>Linum carteri</i> var. <i>carteri</i> (Carter's Small-flowered Flax).	Final Listing Endangered .....	79 FR 52567–52575.
9/9/2014 .....	Endangered Species Status for <i>Agave eggersiana</i> and <i>Gonocalyx concolor</i> , and Threatened Species Status for <i>Varronia rupicola</i> .	Final Listing Endangered and Threatened .....	79 FR 53315–53344.
9/12/2014 .....	Threatened Status for <i>Arabis georgiana</i> (Georgia rockcress).	Final Listing Threatened .....	79 FR 54627–54635.
9/12/2014 .....	Revised Designation of Critical Habitat for the Contiguous United States Distinct Population Segment of the Canada Lynx and Revised Distinct Population Segment Boundary.	Final Critical Habitat Final Listing—adding New Mexico to DPS boundary.	79 FR 54781–54846.
9/18/2014 .....	12-Month Finding on a Petition To List <i>Eriogonum kelloggii</i> (Red Mountain buckwheat) and <i>Sedum eastwoodiae</i> (Red Mountain stonecrop) as Endangered or Threatened Species.	Notice of 12-month petition finding, Not warranted Candidate removal.	79 FR 56029–56040.
9/18/2014 .....	12-Month Finding on a Petition To List <i>Symphyotrichum georgianum</i> (Georgia aster) as Endangered or Threatened Species.	Notice of 12-month petition finding, Not warranted Candidate removal.	79 FR 56041–56047.
9/23/2014 .....	12-Month Finding on a Petition To List the Tucson Shovel-Nosed Snake.	Notice of 12-month petition finding, Not warranted Candidate removal.	79 FR 56730–56738.
9/24/2014 .....	12-Month Finding on a Petition To List <i>Eriogonum corymbosum</i> var. <i>nilesii</i> and <i>Eriogonum diatomaceum</i> .	Notice of 12-month petition finding, Not warranted Candidate removal.	79 FR 57032–57041.
10/1/2014 .....	12-Month Finding on a Petition To List Rio Grande Cutthroat Trout as an Endangered or Threatened Species.	Notice of 12-month petition finding, Not warranted Candidate removal.	79 FR 59140–59150.
10/1/2014 .....	12-Month Finding on a Petition To List Yellow-Billed Loon ( <i>Gavia adamsii</i> ) as an Endangered or Threatened Species.	Notice of 12-month petition finding, Not warranted Candidate removal.	79 FR 59195–59204.
10/1/2014 .....	Proposed Endangered Status for 21 Species and Proposed Threatened Status for 2 Species in Guam and the Commonwealth of the Northern Mariana Islands.	Proposed Listing Endangered and Threatened.	79 FR 59363–59413.



## FY 2014 COMPLETED LISTING ACTIONS—Continued

Publication date	Title	Actions	FR Pages
10/3/2014 .....	Threatened Species Status for the Western Distinct Population Segment of the Yellow-billed Cuckoo.	Final Listing Threatened .....	79 FR 59991–60038.
10/7/2014 .....	Threatened Species Status for Black Pinesnake.	Proposed Listing Threatened .....	79 FR 60406–60419.
10/7/2014 .....	Threatened Species Status for West Coast Distinct Population Segment of Fisher.	Proposed Listing Threatened .....	79 FR 60419–60443.
10/9/2014 .....	Endangered Species Status for <i>Trichomanes punctatum</i> ssp. <i>floridanum</i> (Florida Bristle Fern).	Proposed Listing Endangered .....	79 FR 61135–61161.

Our expeditious progress also included work on listing actions that we funded in previous fiscal years and in FY 2014 but did not complete in FY

2014. For these species, we have completed the first step, and have been working on the second step, necessary for adding species to the Lists. These

actions are listed below. All the actions in the table are being conducted under a deadline set by a court through a court order or settlement agreement.

## ACTIONS FUNDED IN PREVIOUS FYs AND FY 2014 BUT NOT COMPLETED IN FY 2014

Species	Action
<b>Actions Subject to Court Order/Settlement Agreement</b>	
Gunnison sage-grouse .....	Final listing.
Dakota skipper and Poweshiek skipperling .....	Final listing.
Red knot (rufa subspecies) .....	Final listing.
Northern long-eared bat .....	Final listing.
Greater sage-grouse—Bi-State DPS .....	Final listing.
Washington ground squirrel .....	Proposed listing.
Xantus's murrelet .....	Proposed listing.
Columbia spotted frog—Great Basin DPS .....	Proposed listing.
Sequatchie caddisfly .....	Proposed listing.
Four Florida Keys plants (sand flax, Big Pine partridge pea, Blodgett's silverbush, and wedge spurge) .....	Proposed listing.
Four Florida plants (Florida pineland crabgrass, Florida prairie clover, pineland sandmat, and Everglades bully) .....	Proposed listing.
White fringeless orchid .....	Proposed listing.
Black warrior waterdog .....	Proposed listing.
Black mudalia .....	Proposed listing.
Elfin-woods warbler .....	Proposed listing.
Kentucky arrow darter and Cumberland arrow darter .....	Proposed listing.
Six Cave beetles (Nobletts, Baker Station, Fowler's, Indian Grave Point, inquirer, and Coleman) .....	Proposed listing.
<i>Sicyos macrophyllus</i> .....	Proposed listing.
Highlands tiger beetle .....	Proposed listing.
Sicklefin redhorse .....	Proposed listing.
Headwater chub .....	Proposed listing.
Roundtail chub DPS .....	Proposed listing.
Page springsnail .....	Proposed listing.
Sonoran desert tortoise .....	Proposed listing.
Texas hornshell .....	Proposed listing.
New England cottontail .....	Proposed listing.
Eastern massasauga .....	Proposed listing.

We also funded work on resubmitted petitions findings for 112 candidate species (species petitioned prior to the last CNOR). In our resubmitted petition finding for the Columbia Basin population of the greater sage-grouse in this notice, although we completed a new analysis of the threats facing the species, we did not include new information, as the significance of the Columbia Basin DPS of the greater sage-grouse will require further review and we will update our finding when we resolve the status of the greater sage-grouse at a later date (see 75 FR 13910; March 23, 2010). We also did not

include an updated assessment form as part of our resubmitted petition findings for the 34 candidate species for which we are preparing proposed listing determinations. However, for both the Columbia Basin DPS of the greater sage-grouse and for the other resubmitted petition findings, in the course of preparing proposed listing determinations, we continue to monitor new information about their status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the well-being of any of these candidate species; see

summaries below regarding publication of these determinations (these species will remain on the candidate list until a proposed listing rule is published). We also funded a revised 12-month petition finding for the petitioned candidate species that we are removing from candidate status, which is being published as part of this CNOR (see Candidate Removals). Because the majority of these petitioned species were already candidate species prior to our receipt of a petition to list them, we had already assessed their status using funds from our Candidate Conservation Program, so we continue to monitor the

status of these species through our Candidate Conservation Program. The cost of updating the species assessment forms and publishing the joint publication of the CNOR and resubmitted petition findings is shared between the Listing Program and the Candidate Conservation Program.

During FY 2014, we also funded work on resubmitted petition findings for uplisting five listed species (three grizzly bear populations, Delta smelt, and *Sclerocactus brevispinus* (Pariette cactus)), for which we had previously received a petition and made a warranted-but-precluded finding.

Another way that we have been expeditious in making progress to add qualified species to the Lists is that we have endeavored to make our listing actions as efficient and timely as possible, given the requirements of the relevant law and regulations and constraints relating to workload and personnel. We are continually considering ways to streamline processes or achieve economies of scale, such as by batching related actions together. Given our limited budget for implementing section 4 of the ESA, these efforts also contribute towards finding that we are making expeditious progress to add qualified species to the Lists.

Although we have not been able to resolve the listing status of many of the candidates, we continue to contribute to the conservation of these species through several programs in the Service. In particular, the Candidate Conservation Program, which is separately budgeted, focuses on providing technical expertise for developing conservation strategies and agreements to guide voluntary on-the-ground conservation work for candidate and other at-risk species. The main goal of this program is to address the threats facing candidate species. Through this program, we work with our partners (other Federal agencies, State agencies, Tribes, local governments, private landowners, and private conservation organizations) to address the threats to candidate species and other species at risk. We are currently working with our partners to implement voluntary conservation agreements for more than 110 species covering 3.6 million ac of habitat. In some instances, the sustained implementation of strategically designed conservation efforts culminates in making listing unnecessary for species that are candidates for listing or for which listing has been proposed.

### Findings for Petitioned Candidate Species

Below are updated summaries for petitioned candidates for which we published findings under section 4(b)(3)(B). In accordance with section 4(b)(3)(C)(i), we treat any petitions for which we made warranted-but-precluded 12-month findings within the past year as having been resubmitted on the date of the warranted-but-precluded finding. We are making continued warranted-but-precluded 12-month findings on the petitions for these species (for 12-month findings on resubmitted petitions for species that we determined no longer meet the definition of “endangered species” or “threatened species,” see summaries above under Candidate Removals).

#### Mammals

Pacific sheath-tailed bat, American Samoa DPS (*Emballonura semicaudata semicaudata*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. This small insectivorous bat is a member of the Emballonuridae family, an Old World bat family that has an extensive distribution, primarily in the tropics. *Emballonura semicaudata semicaudata* was once common and widespread in Polynesia and Micronesia. The species as a whole (*E. semicaudata*) occurred on several of the Caroline Islands (Palau, Chuuk, and Pohnpei), Samoa (Independent and American), the Mariana Islands (Guam and the Commonwealth of the Northern Mariana Islands (CNMI)), Tonga, Fiji, and Vanuatu. While populations appear to be healthy in some locations, mainly in the Caroline Islands, they have declined substantially in other areas, including Independent and American Samoa, the Mariana Islands, Fiji, and possibly Tonga. Scientists recognize four subspecies: *E. s. rotensis*, endemic to the Mariana Islands (Guam and the Commonwealth of the Northern Mariana Islands (CNMI)); *E. s. sulcata*, occurring in Chuuk and Pohnpei; *E. s. palauensis*, found in Palau; and *E. s. semicaudata*, occurring in American and Independent Samoa, Tonga, Fiji, and Vanuatu. The candidate assessment form addresses the DPS of *E. s. semicaudata* that occurs in American Samoa.

*Emballonura semicaudata semicaudata* historically occurred in American and Independent Samoa, Tonga, Fiji, and Vanuatu. It is extant in Fiji and Tonga, but may be extirpated from Vanuatu and Independent Samoa. There is some concern that it is also extirpated from American Samoa, the

location of this DPS, where surveys are currently ongoing to ascertain its status. The factors that led to the decline of this subspecies and the DPS are poorly understood; however, current threats to this subspecies and the DPS include habitat loss, predation by introduced species, and its small population size and distribution, which make the taxon extremely vulnerable to extinction due to typhoons and similar natural catastrophes. The subspecies may also be susceptible to disturbance in its roosting caves. The threats are imminent and of high magnitude, since they are ongoing and severe enough to pose a relatively high likelihood of extinction. Therefore, we have retained an LPN of 3 for this DPS of a subspecies.

Peñasco least chipmunk (*Tamias minimus atristria*)—The following summary is based on information contained in our files. Peñasco least chipmunk is endemic to the White Mountains, Otero and Lincoln Counties, and the Sacramento Mountains, Otero County, New Mexico. The Peñasco least chipmunk historically had a broad distribution throughout the Sacramento Mountains within ponderosa pine forests. The last verification of persistence of the Sacramento Mountains population of Peñasco least chipmunk was in 1966, and the subspecies appears to be extirpated from the Sacramento Mountains. The only remaining known distribution of the least chipmunk is restricted to open, high-elevation talus slopes within a subalpine grassland, located in the Sierra Blanca area of the White Mountains in Lincoln and Otero Counties, New Mexico.

The Peñasco least chipmunk faces threats from present or threatened destruction, modification, and curtailment of its habitat from the alteration or loss of mature ponderosa pine forests in one of the two historically occupied areas. The documented decline in occupied localities, in conjunction with the small numbers of individuals captured, are linked to widespread habitat alteration. Moreover, the highly fragmented nature of its distribution is a significant contributor to the vulnerability of this subspecies and increases the likelihood of very small, isolated populations being extirpated. As a result of this fragmentation, even if suitable habitat exists (or is restored) in the Sacramento Mountains, the likelihood of natural recolonization of historical habitat or population expansion from the White Mountains is extremely remote. Considering the high magnitude and immediacy of these threats to the subspecies and its habitat, and the

vulnerability of the White Mountains population, we conclude that the least chipmunk is in danger of extinction throughout all of its known range now or in the foreseeable future.

The one known remaining extant population of Peñasco least chipmunk in the White Mountains is particularly susceptible to extinction as a result of small, reduced population sizes and its isolation. Because of the reduced population size and lack of contiguous habitat adjacent to the extant White Mountains population, even a small impact on the White Mountains could have a very large impact on the status of the species as a whole. As a result of its restricted range, apparent small population size, and fragmented historical habitat, the White Mountains population is inherently vulnerable to extinction due to effects of small, population sizes (e.g. loss of genetic diversity). These impacts are likely to be seen in the population at some point in the foreseeable future, but do not appear to be affecting this population currently as it appears to be stable at this time. Therefore, we conclude that the threats to this population are of high magnitude, but not imminent. Therefore, we assign an LPN of 6 to the subspecies.

New England cottontail (*Sylvilagus transitionalis*)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing rule, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Southern Idaho ground squirrel (*Urocitellus endemicus*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The southern Idaho ground squirrel is endemic to four counties in southwest Idaho; its total known range is approximately 292,000 hectares (ha) (722,000 acres (ac)). The population declined significantly between 1985 and 2001, and approximately 37 percent of the historical known sites were occupied in 1999 by a relatively small number of individuals. More recently, southern Idaho ground squirrels have increased in abundance, and monitoring suggests that the population may now be stable.

Threats to southern Idaho ground squirrels include: Habitat degradation; direct killing from shooting, trapping, or poisoning; predation; and competition with other ground squirrel species. Habitat degradation appears to be the primary threat. Nonnative annuals such as *Bromus tectorum* (cheatgrass) and *Taeniatherum caput-medusae* (medusahead) now dominate much of this species' range and have altered the fire regime by increasing the frequency of wildfire. Nonnative annuals may provide inconsistent forage quality for southern Idaho ground squirrels compared to native vegetation. A programmatic Candidate Conservation Agreement with Assurances (CCAA) has been completed for this species and contains conservation measures that minimize ground disturbing activities, allow for the investigation of methods to restore currently degraded habitat, provide for additional protection to southern Idaho ground squirrels from recreational shooting and other direct killing on enrolled lands, and allow for the translocation of squirrels to or from enrolled lands, if necessary. The acreage enrolled through the CCAA encompasses approximately 9 percent of the known range of the species. While the ongoing conservation efforts have helped to reduce the magnitude of threats to a moderate level, habitat degradation remains the primary threat to the species throughout most of its range. This threat is imminent, due to the ongoing and increasing prevalence of nonnative vegetation. Therefore, we have retained an LPN of 8 for this species.

Washington ground squirrel (*Urocitellus washingtoni*)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing rule that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing determination, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Red tree vole, north Oregon coast DPS (*Arborimus longicaudus*)—The following summary is based on information contained in our files and in our initial warranted-but-precluded finding, published in the **Federal Register** on October 13, 2011 (76 FR 63720). Red tree voles are small, mouse-sized rodents that live in conifer forests and spend almost all of their time in the

tree canopy. They are one of the few animals that can persist on a diet of conifer needles, which is their principal food. Red tree voles are endemic to the humid, coniferous forests of western Oregon (generally west of the crest of the Cascade Range) and northwestern California (north of the Klamath River). The north Oregon coast DPS of the red tree vole comprises that portion of the Oregon Coast Range from the Columbia River south to the Siuslaw River. Red tree voles demonstrate strong selection for nesting in older conifer forests, which are now relatively rare across the DPS; they avoid nesting in younger forests.

Although data are not available to rigorously assess population trends, information from retrospective surveys indicates red tree voles have declined in the DPS and are largely absent in areas where they were once relatively abundant. Older forests that provide habitat for red tree voles are limited and highly fragmented, while ongoing forest practices in much of the DPS maintain the remnant patches of older forest in a highly fragmented and isolated condition. Modeling indicates that only 11 percent of the DPS currently contains tree vole habitat, largely restricted to the 22 percent of the DPS that is under Federal ownership.

Existing regulatory mechanisms on State and private lands are inadequate to prevent continued harvest of forest stands at a scale and extent that would be meaningful for conserving red tree voles. Biological characteristics of red tree voles, such as small home ranges, limited dispersal distances, and low reproductive potential, limit their ability to respond to and persist in areas of extensive habitat loss and alteration. These biological characteristics also make it difficult for the tree voles to recolonize isolated habitat patches. Due to its reduced distribution, the red tree vole is now vulnerable to random environmental disturbances that may remove or further isolate large blocks of already limited habitat, and to extirpation within the DPS from such factors as lack of genetic variability, inbreeding depression, and demographic stochasticity. Although the entire population is experiencing threats, the impact is less pronounced on Federal lands, where much of the red tree vole habitat remains. Hence, the magnitude of these threats is moderate to low. The threats are imminent because habitat loss and reduced distribution are currently occurring within the DPS. Therefore, we have retained an LPN of 9 for this DPS.

Pacific walrus (*Odobenus rosmarus divergens*)—The following information



is based on information in our files and our warranted-but-precluded 12-month petition finding published on February 10, 2011 (76 FR 7634). The Pacific walrus is an ice-dependent species found across the continental shelf waters of the northern Bering and Chukchi Seas. Unlike seals, which can remain in the water for extended periods, walrus must haul out onto ice or land periodically. Pacific walrus is a traditional and important source of food and products to native Alaskans, especially those living on Saint Lawrence Island, and to native Russians.

Annually, walrus migrate up to 1,500 kilometers (km) (932 miles (mi)) between winter breeding areas in the sub-Arctic (northern Bering Sea) and summer foraging areas in the Arctic. Historically, the females and calves remained on pack ice over the continental shelf of the Chukchi Sea throughout the summer, using it as a platform for resting after making shallow foraging dives for invertebrates on the sea floor. Sea ice also provides isolation from disturbance and terrestrial predators such as polar bears. Since 1979, the extent of summer Arctic sea ice has declined. The five lowest records of minimum sea ice extent occurred from 2007 to 2012. Based on the best scientific information available, we anticipate that sea ice will retreat northward off the Chukchi continental shelf for 1 to 5 months every year in the foreseeable future.

When the ice melts beyond the limits of the continental shelf (and the ability of the walrus to obtain food), thousands of walrus congregate at coastal haulouts. Although coastal haulouts have historically provided a place to rest, the aggregation of so many animals, in particular females and calves, at this time of year has increased in the last 5 years. Not only are the number of animals more concentrated at coastal haulouts than on widely dispersed sea ice, but also the probability of disturbance from humans and terrestrial animals is much higher. Disturbances at coastal haulouts can cause stampedes, leading to mortalities and injuries. In addition, there is also concern that the concentration of animals will cause local prey depletion, leading to longer foraging trips, increased energy costs, and potential effects on female condition and calf survival. We expect these effects to lead to a population decline.

We recognize that Pacific walrus face additional stressors from ocean warming, ocean acidification, disease, oil and gas exploration and development, increased shipping,

commercial fishing, and subsistence harvest, but none rise to the level of a threat except subsistence harvest. We found that subsistence harvest will rise to the level of a threat if the population declines but harvest levels remain the same. Because both the loss of sea ice habitat and the ongoing practice of subsistence harvest are presently occurring, these threats are imminent. However, these threats are not having significant population-level effects currently, but are projected to, we determined that the magnitude of the threats is moderate, not high. Thus, we assigned an LPN of 9 to this subspecies.

#### Birds

Spotless crane, American Samoa DPS (*Porzana tabuensis*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The spotless crane is a small, dark, cryptic bird found in wetlands and rank scrublands or forests in the Philippines, Australia, Fiji, Tonga, Society Islands, Marquesas, Independent Samoa, and American Samoa (Ofu, Tau). The genus *Porzana* is widespread in the Pacific, where it is represented by numerous island-endemic and flightless species (many of which are extinct as a result of anthropogenic disturbances), as well as several more cosmopolitan species, including *P. tabuensis*. No subspecies of *P. tabuensis* are recognized.

The American Samoa population is the only population of spotless cranes under U.S. jurisdiction. The available information indicates that distinct populations of the spotless crane, a species not noted for long-distance dispersal, are definable. The population of spotless cranes in American Samoa is discrete in relation to the remainder of the species as a whole, which is distributed in widely separated locations. Although the spotless crane (and other rails) have dispersed widely in the Pacific, flight in island rails has atrophied or been completely lost over evolutionary time, causing populations to become isolated (and vulnerable to terrestrial predators such as rats). The population of this species in American Samoa is therefore distinct based on geographic and distributional isolation from spotless crane populations on other islands in the oceanic Pacific, the Philippines, and Australia. The American Samoa population of the spotless crane links the Central and Eastern Pacific portions of the species' range. The loss of this population would result in an increase of roughly 500 mi (805 km) in the distance between the central and eastern Polynesian portions

of the spotless crane's range, and could result in the isolation of the Marquesas and Society Islands populations by further limiting the potential for even rare genetic exchange. Based on the discreteness and significance of the American Samoa population of the spotless crane, we consider this population to be a distinct vertebrate population segment.

Threats to this population have not changed over the past year. The population in American Samoa is threatened by small population size, limited distribution, predation by nonnative and native animals, continued development of wetland habitat, and natural catastrophes such as hurricanes. The co-occurrence of a known predator of ground-nesting birds, the Norway rat (*Rattus norvegicus*), and native predators, the Pacific boa (*Candoia bibroni*) and the Purple Swampphen (*Porphyrio porphyrio*), along with the extremely restricted observed distribution and low numbers, indicates that the threats to the American Samoa DPS of the spotless crane continue to be both imminent and high in magnitude because the ongoing threats have a high likelihood of affecting the ability of the species to survive in a relatively short time frame. Based on this assessment of existing information about the imminence and high magnitude of these threats, we have retained an LPN of 3 for this DPS.

Friendly ground-dove, American Samoa DPS (*Gallicolumba stairi*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The genus *Gallicolumba* is distributed throughout the Pacific and Southeast Asia. The genus is represented in the oceanic Pacific by six species: Three are endemic to Micronesian islands or archipelagos, two are endemic to island groups in French Polynesia, and *G. stairi* is endemic to Samoa, Tonga, and Fiji. Some authors recognize two subspecies of the friendly ground-dove, one, slightly smaller, in the Samoan archipelago (*G. s. stairi*), and one in Tonga and Fiji (*G. s. vitiensis*), but because morphological differences between the two are minimal, we are not recognizing separate subspecies at this time.

In American Samoa, the friendly ground-dove has been found on the islands of Ofu and Olosega (Manua Group). Threats to this species have not changed over the past year. Predation by nonnative species and natural catastrophes such as hurricanes are the primary threats to the DPS. Of these, predation by nonnative species is

thought to be occurring now and likely has been occurring for several decades. This predation may be an important impediment to population growth. Predation by introduced species has played a significant role in reducing, limiting, and extirpating populations of island birds, especially ground-nesters like the friendly ground-dove, in the Pacific and other locations worldwide. Nonnative predators known or thought to occur in the range of the friendly ground-dove in American Samoa include feral cats (*Felis catus*), Polynesian rats (*Rattus exulans*), black rats (*R. rattus*), and Norway rats (*R. norvegicus*).

In January 2004 and February of 2005, hurricanes virtually destroyed the habitat of *G. stairi* in the area on Olosega Island where the species had been most frequently recorded. Although this species has evolved on islands subject to severe storms, this example illustrates the potential for natural disturbance to exacerbate the effect of anthropogenic disturbance on small populations. Consistent monitoring using a variety of methods over the last 5 years yielded few observations and no change in the relative abundance of this taxon in American Samoa. The total population size remains poorly known but is unlikely to number more than a few hundred pairs. The distribution of the friendly ground-dove is limited to steep, forested slopes with an open understory and a substrate of fine scree or exposed earth; this habitat is not common in American Samoa. The threats are ongoing and therefore imminent, and the magnitude is moderate because relative abundance has remained unchanged for several years. Thus, we have retained an LPN of 9 for this DPS.

Xantus's murrelet (*Synthliboramphus hypoleucus*)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing rule, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Red-crowned parrot (*Amazona viridigenalis*)—The following summary is based on information contained in the notice of 12-month finding (76 FR 62016) as well as communication with the U.S. Fish and Wildlife Service (Service), Texas Parks and Wildlife Department, The Nature Conservancy,

Rio Grande Joint Venture, World Birding Center, Rio Grande Valley Birding Festival, and the Universidad Autónoma de Tamaulipas. As of April, 2014, there are no changes to the range or distribution of the red-crowned parrot. The red-crowned parrot is non-migratory, and occurs in fragmented isolated habitat in the Mexican States of Tamaulipas, Veracruz, San Luis Potosí, Nuevo León, and northeast Querétaro. The species also occurs within the southern tip of Texas, in the cities of Mission, McAllen, Pharr, and Edinburg (Hidalgo County), and in Brownsville, Los Fresnos, San Benito, and Harlingen (Cameron County). Feral populations also exist in southern California, Puerto Rico, Hawaii, and Florida and escaped birds have been reported in central Texas. As of 2004, half of the native population is believed to be found in the United States. The species is nomadic during the winter (non-breeding) season when large flocks range widely to forage, moving tens of kilometers during a single flight in Mexico. In Texas, red-crowned parrots are thought to move between urban areas in search of food and other available resources. There has not been systematic annual monitoring of red-crowned parrot populations in Texas's Lower Rio Grande Valley (LRGV), so no population trend information is available; instead, numbers of parrots are most often reported from more informal surveys including Christmas Bird Counts and E-bird; surveys with wide variation in observers' skill levels. Counts of nesting pairs have not been documented since McKinney's 1995 survey. In Mexico, the level of monitoring of red-crowned parrots within the last two decades is not well known; however, community groups did include the species in bird surveys in the Ejido El Sabinito, in Sierras of Tamaulipas, in 2012 and 2013, where they reported approximately 2,500 and 1,889 individuals, respectively. Anecdotal reports from Mexico suggest that the species may be increasing in numbers in urban areas of Tamaulipas and Nuevo León.

The primary threats within Mexico and Texas remain habitat destruction and modification from logging, deforestation, and conversion of suitable habitat for agricultural and urban development purposes. In addition, existing regulations do not adequately address the habitat or capture and trade threats to the species. Thus, the inadequacy of existing regulations and their enforcement continue to threaten the red-crowned parrot. Disease and predation are not documented to

threaten the species. Pesticide exposure is not known to affect the red-crowned parrot. Conservation efforts include the artificial nest structure projects, as well as habitat creation projects such as one initiated by the Service and the Rio Grande Joint Venture in the LRGV to understand and compare how birds are using revegetated tracts of land that were previously affected by flooding. The project is in its initial steps and no results are yet available. Threats to the species are imminent because habitat destruction and inadequate regulatory mechanisms are ongoing. In addition, the threats are high in magnitude, because they affect the species extensively at a population level; therefore, we have determined that a LPN of 2 remains appropriate for the species.

Sprague's pipit (*Anthus spragueii*)—See above in "Listing Priority Changes in Candidates."

Greater sage-grouse (*Centrocercus urophasianus*)—The following summary is based on information in our files and in the petition we received on January 30, 2002. Currently, greater sage-grouse occur in 11 States (Washington, Oregon, California, Nevada, Idaho, Montana, Wyoming, Colorado, Utah, South Dakota, and North Dakota) and 2 Canadian provinces (Alberta and Saskatchewan), occupying approximately 56 percent of their historical range. Greater sage-grouse depend on a variety of shrub-steppe habitats throughout their life cycle, and are obligate users of several species of sagebrush.

The primary threat to greater sage-grouse is ongoing fragmentation and loss of shrub-steppe habitats through a variety of mechanisms. Most importantly, increasing fire cycles and invasive plants (and the interaction between them) in more westerly parts of the range, along with energy development and related infrastructure in more easterly areas, are negatively affecting the species. In addition, direct loss of habitat and fragmentation is occurring due to agriculture, urbanization, and infrastructure such as roads and power lines built in support of several activities. We also have determined that currently existing regulatory mechanisms are inadequate to protect the species from these ongoing threats. However, many of these habitat impacts are being actively addressed through conservation actions taken by local working groups, and State and Federal agencies. Notably, the Natural Resources Conservation Service has committed significant financial and technical resources to address threats to this species on private lands through

their Sage-grouse Initiative. Also notably, the Bureau of Land Management and U.S. Forest Service are in the process of revising 98 Land Management Plans through 6 Environmental Impact Statements to provide adequate regulatory mechanisms. These efforts, when fully implemented, will potentially provide important conservation benefits to the greater sage-grouse and its habitats. We consider the threats to the greater sage-grouse to be of moderate magnitude, because the threats are not occurring with uniform intensity or distribution across the wide range of the species at this time, and substantial habitat still remains to support the species in many areas. The threats are imminent because the species is currently facing them in many portions of its range. Therefore, we assigned the greater sage-grouse an LPN of 8.

Greater sage-grouse, Columbia Basin DPS (*Centrocercus urophasianus*)—The following summary is based on information in our files and a petition, dated May 14, 1999, requesting the listing of the Washington population of the western sage-grouse (*C. u. phaios*). This population was historically found in northern Oregon and central Washington. On May 7, 2001, we concluded that listing the Columbia Basin DPS of the western sage-grouse was warranted, but precluded by higher priority listing actions (66 FR 22984). Following our May 7, 2001, finding, the Service received additional petitions requesting listing actions for various other greater sage-grouse populations, including one for the nominal western subspecies, dated January 24, 2002, and three for the entire species, dated June 18, 2002, and March 19 and December 22, 2003. The Service subsequently found that the petition for the western subspecies did not present substantial information indicating that listing may be warranted (68 FR 6500; February 7, 2003), and that listing the greater sage-grouse was not warranted (70 FR 2244; January 12, 2005). The court subsequently remanded these latter findings to the Service for further consideration. In response, we initiated a new rangewide status review for the entire species (73 FR 10218; February 26, 2008). On March 5, 2010, we found that listing of the greater sage-grouse was warranted but precluded by higher priority listing actions (75 FR 13909; March 23, 2010), and it was added to the list of candidates. We also found that the western subspecies of the greater sage-grouse, the taxonomic entity we relied on in our DPS analysis for the Columbia Basin population, was

no longer considered a valid subspecies. In light of our conclusions regarding the taxonomic invalidity of the western sage-grouse subspecies, the significance of the Columbia Basin DPS to the greater sage-grouse will require further review. The Service intends to complete an analysis to determine if this population continues to warrant recognition as a DPS in accordance with our Policy Regarding the Recognition of Distinct Vertebrate Population Segments (61 FR 4722; February 7, 1996) at the time we make a listing decision on the status of the greater sage-grouse. Until that time, the Columbia Basin DPS will remain a candidate for listing.

Band-rumped storm-petrel, Hawaii DPS (*Oceanodroma castro*)—The following summary is based on information contained in our files and the petition we received on May 8, 1989. No new information was provided in the second petition received on May 11, 2004. The band-rumped storm-petrel is a small seabird that is found in several areas of the subtropical Pacific and Atlantic Oceans. In the Pacific, there are three widely separated breeding populations—one in Japan, one in Hawaii, and one in the Galapagos. Populations in Japan and the Galapagos are comparatively large and number in the thousands, while the Hawaiian birds represent a small, remnant population of possibly only a few hundred pairs. Band-rumped storm-petrels are most commonly found in close proximity to breeding islands. The three populations in the Pacific are separated by long distances across the ocean where birds are not found. Extensive at-sea surveys of the Pacific have revealed a broad gap in distribution of the band-rumped storm-petrel to the east and west of the Hawaiian Islands, indicating that the distribution of birds in the central Pacific around Hawaii is disjunct from other nesting areas. The available information indicates that distinct populations of band-rumped storm-petrels are definable and that the Hawaiian population is distinct based on geographic and distributional isolation from other band-rumped storm-petrel populations in Japan, the Galapagos, and the Atlantic Ocean. Loss of the Hawaiian population would cause a significant gap in the distribution of the band-rumped storm-petrel in the Pacific, and could result in the complete isolation of the Galapagos and Japan populations without even occasional genetic exchange. Therefore, the population is both discrete and significant, and constitutes a DPS.

The band-rumped storm-petrel probably was common on all of the

main Hawaiian Islands when Polynesians arrived about 1,500 years ago, based on storm-petrel bones found in middens on the island of Hawaii and in excavation sites on Oahu and Molokai, Hawaii. Nesting colonies of this species in the Hawaiian Islands currently are restricted to remote cliffs on Kauai and Lehua Island and high-elevation lava fields on Hawaii. Vocalizations of the species were heard in Haleakala Crater on Maui as recently as 2006; however, no nesting sites have been located on the island to date. The significant reduction in numbers and range of the band-rumped storm-petrel is due primarily to predation by nonnative species introduced by humans, including the domestic cat (*Felis catus*), small Indian mongoose (*Herpestes auropunctatus*), common barn owl (*Tyto alba*), black rat (*Rattus rattus*), Polynesian rat (*R. exulans*), and Norway rat (*R. norvegicus*). These nonnative predators occur throughout the main Hawaiian Islands, with the exception of the mongoose, which is not established on Kauai. Attraction of fledglings to artificial lights, which disrupt their night-time navigation, resulting in collisions with buildings and other objects, and collisions with artificial structures such as communication towers and utility lines, are also threats. Erosion of nest sites caused by the actions of nonnative ungulates is a potential threat in some locations. Efforts are under way in some areas to reduce light pollution and mitigate the threat of collisions, as well as to control some of the nonnative predators in the Hawaiian Islands; however, the threats are ongoing and are therefore imminent. They are of a high magnitude, because they can severely affect the survival of this DPS, leading to a relatively high likelihood of extinction. Therefore, we have retained an LPN of 3 for this DPS.

Elfin-woods warbler (*Dendroica angelae*)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing rule, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

#### Reptiles

Eastern massasauga rattlesnake (*Sistrurus catenatus*)—We continue to



find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing rule, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

**Louisiana pine snake (*Pituophis ruthveni*)**—The following summary is based on information contained in our files and the petition we received on July 20, 2000, and updated through April 22, 2014. The Louisiana pine snake historically occurred in the fire-maintained longleaf pine ecosystem within west-central Louisiana and extreme east-central Texas. Most of the historical longleaf pine habitat of the Louisiana pine snake has been destroyed or degraded due to logging, fire suppression, roadways, short rotation silviculture, and grazing. Over time, the extensive loss, degradation, and fragmentation of the longleaf pine ecosystem, coupled with the disruption of natural fire regimes, have resulted in extant Louisiana pine snake populations that are isolated and small.

The Louisiana pine snake is currently restricted to six small, isolated naturally occupied areas; four of these areas occur on Federal lands, and two occur mainly on private industrial timberlands. All of these remnant individuals may be vulnerable to factors associated with low population sizes and demographic isolation, such as reduced genetic heterozygosity. The currently occupied area in Louisiana and Texas is estimated to be approximately 58,497 ha (144,549 ac). All remnant Louisiana pine snake habitats require active management to remain suitable. A Candidate Conservation Agreement (CCA) was completed in 2003 to maintain and enhance occupied and potential habitat on public lands, and to protect known Louisiana pine snake populations. This proactive habitat management has likely slowed or reversed the rate of Louisiana pine snake habitat degradation on many portions of Federal lands. The 2003 CCA was updated in 2013. The 2013 updated CCA directly links the specific conservation actions performed by the cooperators to the specific threats affecting the species. However, the historical and ongoing loss or unavailability of preferable habitat (via fire suppression, conversion to short rotation, dense-canopy, off-site pine

plantations, increases in the number and width of roads, and urbanization) on private lands in the matrix between these extant populations has eliminated dispersal among remnant populations and the natural recolonization of vacant habitat patches. Because corridors linking extant populations are extremely unlikely to be established, the loss of any extant population would be permanent without future reintroduction of captive-bred individuals.

All populations require active habitat management, and the lack of adequate amounts of suitable habitat remains a threat for several populations. The potential threats to nearly all extant Louisiana pine snake populations, coupled with the likely permanence of these effects and the species' low fecundity and low population sizes (based on capture rates and occurrence data), lead us to conclude that the threats have a relatively high likelihood of bringing about extinction and therefore remain high in magnitude. The threats are not imminent, because, while the extent of Louisiana pine snake habitat loss has been great in the past, the rate of habitat loss on Federal lands is declining and habitat conditions within occupied or preferable areas is improving due to proactive habitat management and other threat reduction through the CCA. Thus, based on nonimminent, high-magnitude threats, we assign an LPN of 5 to this species.

**Desert tortoise, Sonoran (*Gopherus morafkai*)**—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing rule, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

**Gopher tortoise, eastern population (*Gopherus polyphemus*)**—The following summary is based on information in our files. The gopher tortoise is a large, terrestrial, herbivorous turtle that reaches a total length up to 15 inches (in) (38 centimeters (cm)), and typically inhabits the sandhills, pine/scrub oak uplands, and pine flatwoods associated with the longleaf pine (*Pinus palustris*) ecosystem. A fossorial animal, the gopher tortoise is usually found in areas with well-drained, deep, sandy soils, an

open tree canopy, and a diverse, abundant herbaceous groundcover.

The gopher tortoise ranges from extreme southern South Carolina south through peninsular Florida, and west through southern Georgia, Florida, southern Alabama, and Mississippi, into extreme southeastern Louisiana. The eastern population of the gopher tortoise in South Carolina, Florida, Georgia, and Alabama (east of the Mobile and Tombigbee Rivers) is a candidate species; the gopher tortoise is federally listed as threatened in the western portion of its range, which includes Alabama (west of the Mobile and Tombigbee Rivers), Mississippi, and Louisiana.

The primary threat to the gopher tortoise is habitat fragmentation, destruction, and modification (either deliberately or from inattention), including conversion of longleaf pine forests to incompatible silvicultural or agricultural habitats, urbanization, shrub/hardwood encroachment (mainly from fire exclusion or insufficient fire management), and establishment and spread of invasive species. Other threats include disease, predation (mainly on nests and young tortoises), and inadequate regulatory mechanisms, specifically those needed to protect and enhance relocated tortoise populations in perpetuity. The magnitude of threats to the eastern range of the gopher tortoise is considered to be moderate to low, since populations extend over a broad geographic area and conservation measures are in place in some areas. However, since the species is currently being affected by a number of threats including destruction and modification of its habitat, disease, predation, exotics, and inadequate regulatory mechanisms, the threats are imminent. Thus, we have assigned a LPN of 8 for this species.

**Sonoyta mud turtle (*Kinosternon sonoriense longifemorale*)**—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The Sonoyta mud turtle occurs in a spring and pond at Quitobaquito Springs on Organ Pipe Cactus National Monument in Arizona, and in the Rio Sonoyta and Quitovac Spring of Sonora, Mexico. Loss and degradation of stream habitat from water diversion and groundwater pumping, along with its very limited distribution, are the primary threats to the Sonoyta mud turtle. Sonoyta mud turtles are highly aquatic and depend on permanent water for survival. The area of southwest Arizona and northern Sonora where the Sonoyta mud turtle occurs is one of the driest regions in the Southwest. While

currently there is sufficient water for the turtles, so the threats are not imminent we expect drought and irrigated agriculture in the region to cause surface water in the Rio Sonoyta and Quitobaquito Springs to dwindle further in the foreseeable future and negatively affect this species. National Park Service staff continue to implement actions to stabilize the water levels in the pond at Quitobaquito Springs. However, surface water use in the Rio Sonoyta, in Sonora Mexico, will have a significant impact on the survival of this water-dependent subspecies. We retained a LPN of 6 for Sonoyta mud turtle due to high-magnitude, nonimminent threats.

#### *Amphibians*

Columbia spotted frog, Great Basin DPS (*Rana luteiventris*)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing rule, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Relict leopard frog (*Lithobates onca*)—The following summary is based on information contained in our files. Natural relict leopard frog populations occur in two general areas in Nevada: near the Overton Arm area of Lake Mead and Black Canyon below Lake Mead. These two areas include a small fraction of the historical distribution of the species. Its historical range included springs, streams, and wetlands within the Virgin River drainage downstream from the vicinity of Hurricane, Utah; along the Muddy River in Nevada; and along the Colorado River in Nevada and Arizona, from its confluence with the Virgin River downstream to Black Canyon below Lake Mead.

Factors contributing to the decline of the species include alteration, loss, and degradation of aquatic habitat due to water developments and impoundments, and scouring and erosion; changes in plant communities that result in dense growth and the prevalence of vegetation; introduced predators; climate change; and stochastic events. The presence of chytrid fungus in relict leopard frogs at Lower Blue Point Spring is a concern and warrants further evaluation of the threat of disease to the relict leopard frog. The size of natural and

translocated populations is small and, therefore, these populations are vulnerable to stochastic events, such as floods and wildfire. Climate change that results in reduced spring flow, habitat loss, and increased prevalence of wildfire would adversely affect relict leopard frog populations.

In 2005, the National Park Service, in cooperation with the Fish and Wildlife Service and other Federal, State, and local partners, developed a conservation agreement and strategy, which is intended to improve the status of the species through prescribed management actions and protection. Conservation actions identified in the agreement and strategy include captive rearing of tadpoles for translocation and refugium populations, habitat and natural history studies, habitat enhancement, population and habitat monitoring, and translocation. New sites within the historical range of the species have been successfully established with captive-reared frogs. Conservation is proceeding under the agreement and strategy; however, additional time is needed to determine whether or not the agreement and strategy will be effective in eliminating or reducing the threats to the point that the relict leopard frog is no longer a candidate for listing. In consideration of these conservation efforts and the overall threat level to the species, we determined that the magnitude of existing threats is moderate to low. Potential water development and other habitat effects, presence of introduced predators, chytrid fungus, limited distribution, small population size, and climate change are ongoing, and thus, imminent threats. Therefore, we continue to assign a LPN of 8 to this species.

Striped newt (*Notophthalmus perstriatus*)—The following summary is based on information contained in our files. The striped newt is a small salamander that inhabits ephemeral ponds surrounded by upland habitats of high pine, scrubby flatwoods, and scrub. Longleaf pine-turkey oak stands with intact ground cover containing wiregrass are the preferred upland habitat for striped newts, followed by scrub, then flatwoods. Life-history stages of the striped newt are complex, and include the use of both aquatic and terrestrial habitats throughout their life cycle. Striped newts are opportunistic feeders that prey on a variety of items such as frog eggs, worms, snails, fairy shrimp, spiders, and insects (adult and larvae) that are of appropriate size. They occur in appropriate habitats from the Atlantic Coastal Plain of southeastern Georgia to the north-central peninsula of Florida and through the Florida

panhandle into portions of southwest Georgia. Prior to 2014, there was thought to be a 125-km (78-mile (mi)) separation between the western and eastern portions of the striped newt's range. However, the discovery of five adult striped newts in Taylor County, Florida, represents a significant possible range connection. The historical range of the striped newt was likely similar to the current range. However, loss of native longleaf habitat, fire suppression, and the natural patchy distribution of upland habitats used by striped newts have resulted in fragmentation of existing populations.

Other threats to the species include disease, drought, and inadequate regulatory mechanisms. Overall, we conclude that the magnitude of the threats is moderate because most of the known striped newt metapopulations are on conservation lands which reduces the threat from further habitat fragmentation, and currently no diseases have been found in striped newts. Since the majority of threats are ongoing, they are imminent. Therefore, we assigned an LPN of 8 to this species. However, due to recent information that suggests the striped newt is likely extirpated from Apalachicola National Forest, the LPN may warrant changing to a lower number in the future.

Berry Cave salamander (*Gyrinophilus gulolineatus*)—The following summary is based on information in our files. The Berry Cave salamander is recorded from Berry Cave in Roane County; from Mud Flats, Aycock Spring, Christian, Meades Quarry, Meades River, and Fifth caves in Knox County; from Blythe Ferry Cave in Meigs County; and from an unknown cave in Athens, McMinn County, Tennessee. In May of 2012, the species was also discovered in an additional cave, The Lost Puddle Cave, in Knox County. These cave systems are all located within the Upper Tennessee River and Clinch River drainages. A total of 113 caves in Middle and East Tennessee were surveyed from the time period of April 2004 through June 2007, resulting in observations of 63 Berry Cave salamanders. These surveys concluded that Berry Cave salamander populations are robust at Berry and Mudflats caves where population declines had been previously reported, and documented two new populations of Berry Cave salamanders at Aycock Spring and Christian caves. Three Berry Cave salamanders were spotted during the May, 2012, survey in The Lost Puddle, and local cavers also reported sighting one individual in August 2012. Surveys for new populations are planned along the Valley and Ridge

Province between Knoxville and Chattanooga.

Ongoing threats to this species are in the form of lye leaching in the Meades Quarry Cave as a result of past quarrying activities, the possible development of a roadway with potential to impact the recharge area for the Meades Quarry Cave system, urban development in Knox County, water quality impacts despite existing State and Federal laws, and hybridization between spring salamanders and Berry Cave salamanders in Meades Quarry Cave. These threats, coupled with confined distribution of the species and apparent low population densities, are all factors that leave the Berry Cave salamander vulnerable to extirpation. We have determined that the Berry Cave salamander faces imminent threats of moderate magnitude. The threats are moderate because the species still occurs in several different cave systems, and existing populations appear stable. Based on moderate-magnitude imminent threats, we continue to assign this species a LPN of 8.

Black Warrior waterdog (*Necturus alabamensis*)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing rule, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

#### Fishes

Headwater chub (*Gila nigra*)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing rule, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Roundtail chub (*Gila robusta*), Lower Colorado River DPS—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish

prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing rule, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Arkansas darter (*Etheostoma cragini*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. This fish species occurs in Arkansas, Colorado, Kansas, Missouri, and Oklahoma. The species is found most often in sand- or pebble-bottomed pools of small, spring-fed streams and marshes, with cool water and broadleaved aquatic vegetation. Its current distribution is indicative of a species that once was widely dispersed throughout its range, but has been relegated to isolated areas separated by unsuitable habitat that prevents dispersal.

Factors influencing the current distribution include: Surface and groundwater irrigation resulting in decreased flows or stream dewatering; the dewatering of long reaches of riverine habitat; conversion of prairie to cropland, which influences groundwater recharge and spring flows; water quality degradation from a variety of sources; and the construction of dams, which act as barriers preventing emigration upstream and downstream through the reservoir pool. A current drought in the western portions of the species' range is also a threat. If drought conditions continue into the future, these conditions are likely to have a severe impact on many of these isolated populations. However, at present, the magnitude of threats facing this species is still moderate to low, given the number of different locations where the species occurs, and the fact that no single threat or combination of threats affects more than a portion of the species' widely distributed range. The immediacy of threats varies across the species' range; groundwater pumping is an ongoing concern in the western portion of the species range, although it has declined in some portions, and groundwater levels continue to support surface spring and stream flow in the majority of the species' range. Development, spills, and runoff are not currently affecting the species on a rangewide basis. Overall, the threats are nonimminent. Thus, we are retaining an LPN of 11 for the Arkansas darter.

Pearl darter (*Percina aurora*)—The following summary is based on

information contained in our files. Little is known about the specific habitat requirements or natural history of the Pearl darter. Pearl darters have been collected from a variety of river/stream attributes, mainly over gravel bottom substrate. This species is historically known only from localized sites within the Pascagoula and Pearl River drainages in Mississippi and Louisiana. Currently, the Pearl darter is considered extirpated from the Pearl River drainage and rare in the Pascagoula River drainage. Since 1983, the range of the Pearl darter has decreased by 55 percent.

The Pearl darter is vulnerable to non-point source pollution caused by urbanization and other land use activities; gravel mining and resultant changes in river geomorphology, especially head cutting; and the possibility of water quantity decline from the proposed Department of Energy Strategic Petroleum Reserve project and a proposed dam on the Bouie River. Additional threats are posed by the apparent lack of adequate State and Federal water quality regulations resulting in the continued degradation of water quality within the species' habitat. The Pearl darter's localized distribution and apparent low population numbers may indicate a species with lower genetic diversity; this would also make this species more vulnerable to catastrophic events. Threats affecting the Pearl darter are localized in nature, affecting only portions of the population within the drainage having only a localized impact on the species and its' habitat. While water quality degradation is the most pervasive threat, it is not significant within the areas protected through The Nature Conservancy ownership and other areas where best management practices are routinely practiced. Thus, we assigned a threat magnitude of moderate to low to this species. In addition, the threats are imminent since the identified threats are currently impacting this species in some portions of its range. Therefore, we have assigned an LPN of 8 for this species.

Sicklefin redhorse (*Moxostoma* sp.)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing rule, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an



emergency posing a significant risk to the species.

Longfin smelt (*Spirinchus thaleichthys*), Bay-Delta DPS—The following summary is based on information contained in our files and the petition we received on August 8, 2007. On April 2, 2012 (77 FR19756), we determined that listing the longfin smelt San Francisco Bay-Delta distinct population segment (Bay-Delta DPS) was warranted but precluded. Longfin smelt measure 9–11 cm (3.5–4.3 in) standard length. Longfin smelt are considered pelagic and anadromous, although anadromy in longfin smelt is poorly understood, and certain populations in other parts of the species' range are not anadromous and complete their entire life cycle in freshwater lakes and streams. Longfin smelt usually live for 2 years, spawn, and then die, although some individuals may spawn as 1- or 3-year-old fish before dying. In the Bay-Delta, longfin smelt are believed to spawn primarily in freshwater in the lower reaches of the Sacramento River and San Joaquin River.

Longfin smelt numbers in the Bay-Delta have declined significantly since the 1980s. Abundance indices derived from the Fall Midwater Trawl (FMWT), Bay Study Midwater Trawl (BSMT), and Bay Study Otter Trawl (BSOT) all show marked declines in Bay-Delta longfin smelt populations from 2002 to 2012. Longfin smelt abundance over the last decade is the lowest recorded in the 40-year history of CDFG's FMWT monitoring surveys.

The primary threat to the DPS is from reduced freshwater flows. Freshwater flows, especially winter-spring flows, are significantly correlated with longfin smelt abundance—longfin smelt abundance is lower when winter-spring flows are lower. The long-term decline in abundance of longfin smelt in the Bay-Delta has been partially attributed to reductions in food availability and disruptions of the Bay-Delta food web caused by establishment of the nonnative overbite clam and likely by increasing ammonium concentrations. In the 2012, 12-month finding, we determined that threats were high in magnitude and imminent, resulting in an LPN of 3. The threats still remain high in magnitude since they pose a significant risk to the DPS throughout its range. The threats are ongoing, and thus are imminent. We are maintaining an LPN of 3 for this population.

#### Clams

Texas fatmucket (*Lampsilis bracteata*)—The following summary is based on information contained in our

files. The Texas fatmucket is a large, elongated freshwater mussel that is endemic to central Texas. Its shell can be moderately thick, smooth, and rhomboidal to oval in shape. Its external coloration varies from tan to brown with continuous dark brown, green-brown, or black rays, and internally it is pearly white, with some having a light salmon tint. This species historically occurred throughout the Colorado and Guadalupe-San Antonio River basins but is now known to occur only in nine streams within these basins in very limited numbers. All existing populations are represented by only one or two individuals and are not likely to be stable or recruiting.

The Texas fatmucket is primarily threatened by habitat destruction and modification from impoundments, which scour river beds, thereby removing mussel habitat; decrease water quality; modify stream flows; and prevent fish host migration and distribution of freshwater mussels. This species is also threatened by sedimentation, dewatering, sand and gravel mining, and chemical contaminants. Additionally, these threats may be exacerbated by the current and projected effects of climate change, population fragmentation and isolation, and the anticipated threat of nonnative species. Threats to the Texas fatmucket and its habitat are not being adequately addressed through existing regulatory mechanisms. Because of the limited distribution of this endemic species and its lack of mobility, these threats are likely to result in the extinction of the Texas fatmucket in the foreseeable future.

The threats to the Texas fatmucket are high in magnitude, because habitat loss and degradation from impoundments, sedimentation, sand and gravel mining, and chemical contaminants are widespread throughout the range of the Texas fatmucket and profoundly affect its survival and recruitment. These threats are exacerbated by climate change, which will increase the frequency and magnitude of droughts. Remaining populations are small, isolated, and highly vulnerable to stochastic events, which could lead to extirpation or extinction. These threats are imminent because they are ongoing and will continue in the foreseeable future. Habitat loss and degradation have already occurred and will continue as the human population continues to grow in central Texas. Texas fatmucket populations may already be below the minimum viable population requirement, which causes a reduction in the number of populations and an increase in the species' vulnerability to

extinction. Based on imminent, high-magnitude threats, we maintained an LPN of 2 for the Texas fatmucket.

Texas fawnsfoot (*Truncilla macrodon*)—The following summary is based on information contained in our files. The Texas fawnsfoot is a small, relatively thin-shelled freshwater mussel that is endemic to central Texas. Its shell is long and oval, generally free of external sculpturing, with external coloration that varies from yellowish- or orangish-tan, brown, reddish-brown, to smoky-green with a pattern of broken rays or irregular blotches. The internal color is bluish-white or white and iridescent posteriorly. This species historically occurred throughout the Colorado and Brazos River basins and is now known from only five locations. The Texas fawnsfoot has been extirpated from nearly all of the Colorado River basin and from much of the Brazos River basin. Of the populations that remain, only three are likely to be stable and recruiting; the remaining populations are disjunct and restricted to short stream reaches.

The Texas fawnsfoot is primarily threatened by habitat destruction and modification from impoundments, which scour river beds, thereby removing mussel habitat; decrease water quality; modify stream flows; and prevent fish host migration and distribution of freshwater mussels, as well as by sedimentation, dewatering, sand and gravel mining, and chemical contaminants. Additionally, these threats may be exacerbated by the current and projected effects of climate change, population fragmentation and isolation, and the anticipated threat of nonnative species. Threats to the Texas fawnsfoot and its habitat are not being adequately addressed through existing regulatory mechanisms. Because of the limited distribution of this endemic species and its lack of mobility, these threats are likely to result in the extinction of the Texas fawnsfoot in the foreseeable future.

The threats to the Texas fawnsfoot are high in magnitude. Habitat loss and degradation from impoundments, sedimentation, sand and gravel mining, and chemical contaminants are widespread throughout the range of the Texas fawnsfoot and profoundly affect its habitat. These threats are exacerbated by climate change, which will increase the frequency and magnitude of droughts. Remaining populations are small, isolated, and highly vulnerable to stochastic events. These threats are imminent because they are ongoing and will continue in the foreseeable future. Habitat loss and degradation has already occurred and will continue as the

human population continues to grow in central Texas. The Texas fawnsfoot populations may already be below the minimum viable population requirement, which causes a reduction in the number of populations and an increase in the species' vulnerability to extinction. Based on imminent, high-magnitude threats, we assigned the Texas fawnsfoot an LPN of 2.

Texas hornshell (*Popenaias popei*)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing rule, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Golden orb (*Quadrula aurea*)—The following summary is based on information contained in our files. The golden orb is a small, round-shaped freshwater mussel that is endemic to central Texas. This species historically occurred throughout the Nueces-Frio and Guadalupe-San Antonio River basins and is now known from only nine locations in four rivers. The golden orb has been eliminated from nearly the entire Nueces-Frio River basin. Four of these populations appear to be stable and reproducing, and the remaining five populations are small and isolated and show no evidence of recruitment. It appears that the populations in the middle Guadalupe and lower San Marcos Rivers are likely connected. The remaining extant populations are highly fragmented and restricted to short reaches.

The golden orb is primarily threatened by habitat destruction and modification from impoundments, which scour river beds (thereby removing mussel habitat), decrease water quality, modify stream flows, and prevent fish host migration and distribution of freshwater mussels. The species is also threatened by sedimentation, dewatering, sand and gravel mining, and chemical contaminants. Additionally, these threats may be exacerbated by the current and projected effects of climate change, population fragmentation and isolation, and the anticipated threat of nonnative species. Threats to the golden orb and its habitat are not being adequately addressed through existing regulatory mechanisms. Because of the limited distribution of this endemic

species and its lack of mobility, these threats may be likely to result in the golden orb becoming in danger of extinction in the foreseeable future.

The threats to the golden orb are moderate in magnitude. Although habitat loss and degradation from impoundments, sedimentation, sand and gravel mining, and chemical contaminants are widespread throughout the range of the golden orb, and are likely to be exacerbated by climate change, which will increase the frequency and magnitude of droughts, four large populations remain, including one that was recently discovered, suggesting that the threats are not high in magnitude. The threats from habitat loss and degradation are imminent because habitat loss and degradation have already occurred and will likely continue as the human population continues to grow in central Texas. Several golden orb populations may already be below the minimum viable population requirement, which causes a reduction in the number of populations and an increase in the species' vulnerability to extinction. Based on imminent, moderate threats, we maintain an LPN of 8 for the golden orb.

Smooth pimpleback (*Quadrula houstonensis*)—The following summary is based on information contained in our files. The smooth pimpleback is a small, round-shaped freshwater mussel that is endemic to central Texas. This species historically occurred throughout the Colorado and Brazos River basins and is now known from only nine locations. The smooth pimpleback has been eliminated from nearly the entire Colorado River and all but one of its tributaries, and has been limited to the central and lower Brazos River drainage. Five of the populations are represented by no more than a few individuals and are small and isolated. Six of the existing populations appear to be relatively stable and recruiting.

The smooth pimpleback is primarily threatened by habitat destruction and modification from impoundments, which scour river beds (thereby removing mussel habitat), decrease water quality, modify stream flows, and prevent fish host migration and distribution of freshwater mussels. The species is also threatened by sedimentation, dewatering, sand and gravel mining, and chemical contaminants. Additionally, these threats may be exacerbated by the current and projected effects of climate change, population fragmentation and isolation, and the anticipated threat of nonnative species. Threats to the smooth pimpleback and its habitat are not being adequately addressed through

existing regulatory mechanisms. Because of the limited distribution of this endemic species and its lack of mobility, these threats may be likely to result in the smooth pimpleback becoming in danger of extinction in the foreseeable future.

The threats to the smooth pimpleback are moderate in magnitude. Although habitat loss and degradation from impoundments, sedimentation, sand and gravel mining, and chemical contaminants are widespread throughout the range of the smooth pimpleback, and may be exacerbated by climate change, which will increase the frequency and magnitude of droughts, several large populations remain, including one that was recently discovered, suggesting that the threats are not high in magnitude. The threats from habitat loss and degradation are imminent because they have already occurred and will continue as the human population continues to grow in central Texas. Several smooth pimpleback populations may already be below the minimum viable population requirement, which causes a reduction in the number of populations and an increase in the species' vulnerability to extinction. Based on imminent, moderate threats, we maintain an LPN of 8 for the smooth pimpleback.

Texas pimpleback (*Quadrula petrina*)—The following summary is based on information contained in our files. The Texas pimpleback is a large, freshwater mussel that is endemic to central Texas. This species historically occurred throughout the Colorado and Guadalupe-San Antonio River basins, but is now known to only occur in four streams within these basins. Only two populations appear large enough to be stable, but evidence of recruitment is limited in the Concho River population and is present in the San Saba River population, which may be the only remaining recruiting populations of Texas pimpleback. The remaining two populations are represented by one or two individuals and are highly disjunct.

The Texas pimpleback is primarily threatened by habitat destruction and modification from impoundments, which scour river beds (thereby removing mussel habitat), decrease water quality, modify stream flows, and prevent fish host migration and distribution of freshwater mussels. This species is also threatened by sedimentation, dewatering, sand and gravel mining, and chemical contaminants. Additionally, these threats may be exacerbated by the current and projected effects of climate change (which will increase the frequency and magnitude of droughts),

population fragmentation and isolation, and the anticipated threat of nonnative species. Threats to the Texas pimpleback and its habitat are not being adequately addressed through existing regulatory mechanisms. Because of the limited distribution of this endemic species and its lack of mobility, these threats may be likely to result in the Texas pimpleback becoming in danger of extinction in the foreseeable future.

The threats to the Texas pimpleback are high in magnitude, because habitat loss and degradation from impoundments, sedimentation, sand and gravel mining, and chemical contaminants are widespread throughout the entire range of the Texas pimpleback and profoundly affect its survival and recruitment. The only remaining populations are small, isolated, and highly vulnerable to stochastic events, which could lead to extirpation or extinction. The threats are imminent because habitat loss and degradation have already occurred and will continue as the human population continues to grow in central Texas. All Texas pimpleback populations may already be below the minimum viable population requirement, which causes a reduction in the number of populations and an increase in the species' vulnerability to extinction. Based on imminent, high-magnitude threats, we assigned the Texas pimpleback an LPN of 2.

#### Snails

Black mudalia (*Elimia melanoides*)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing rule, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Magnificent ramshorn (*Planorbella magnifica*)—Magnificent ramshorn, is the largest North American air-breathing freshwater snail in the family Planorbidae. It has a relatively thin discoidal (*i.e.*, coiling in one plane) shell that reaches a diameter commonly exceeding 35mm and heights exceeding 20mm. The great width of its shell, in relation to the diameter, makes it easily identifiable at all ages. The shell is brown colored (often with leopard-like spots) and fragile, thus indicating it is adapted to still or slow-flowing aquatic

habitats. The magnificent ramshorn is believed to be a southeastern North Carolina endemic. The species is known from only four sites in the lower Cape Fear River Basin in North Carolina. Although the complete historical range of the species is unknown, the size of the species and the fact that it was not reported until 1903 are indications that the species may have always been rare and localized.

Salinity and pH are major factors limiting the distribution of the magnificent ramshorn, as the snail prefers freshwater bodies with circumneutral pH (*i.e.*, pH within the range of 6.8–7.5). While members of the family Planorbidae are hermaphroditic, it is currently unknown whether magnificent ramshorns self-fertilize their eggs, mate with other individuals of the species, or both. Like other members of the Planorbidae family, the magnificent ramshorn is believed to be primarily a vegetarian, feeding on submerged aquatic plants, algae, and detritus. While several factors likely have contributed to the possible extirpation of the magnificent ramshorn in the wild, the primary factors include loss of habitat associated with the extirpation of beavers (and their impoundments) in the early 20th century and increased salinity and alteration of flow patterns, as well as increased input of nutrients and other pollutants.

The magnificent ramshorn appears to be extirpated from the wild due to habitat loss and degradation resulting from a variety of human-induced and natural factors. The only known surviving individuals of the species are presently being held and propagated at a private residence, a lab at North Carolina State University's Veterinary School, and the North Carolina Wildlife Resources Commission's Watha State Fish Hatchery. While efforts have been made to restore habitat for the magnificent ramshorn at one of the sites known to have previously supported the species, all of the sites continue to be affected or threatened by the same factors (*i.e.*, salt water intrusion and other water-quality degradation, nuisance aquatic plant control, storms, sea level rise, etc.) believed to have resulted in extirpation of the species from the wild. Currently, only three captive populations exist; a single robust captive population of the species comprised of greater than 200 adults, and two small populations of 50 or more individuals. Although the robust captive population of the species has been maintained since 1993, a single catastrophic event affecting this captive population, such as a severe storm,

disease, or predator infestation, could result in the near extinction of the species. Therefore, we assigned this species a LPN of 2.

Sisi snail (*Ostodes strigatus*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The sisi snail is a ground-dwelling species in the Potaridae family, and is endemic to American Samoa. The species is now known from a single population on the island of Tutuila, American Samoa.

This species is currently threatened by habitat loss and modification and by predation from nonnative predatory snails. The decline of the sisi snail in American Samoa has resulted, in part, from loss of habitat to logging and agriculture, and loss of forest structure to hurricanes and nonnative weeds that become established after these storms. All live sisi snails have been found in the leaf litter beneath remaining intact forest canopy. No snails were found in areas bordering agricultural plots or in forested areas that were severely damaged by hurricanes. Under natural historical conditions, loss of forest canopy to storms did not pose a great threat to the long-term survival of these snails; enough intact forest with healthy populations of snails would support dispersal back into newly regrown forest canopy. However, the presence of nonnative weeds such as mile-a-minute vine (*Mikania micrantha*) may reduce the likelihood that native forests will re-establish in areas damaged by hurricanes. This loss of habitat to storms is greatly exacerbated by expanding agriculture. Agricultural plots on Tutuila have spread from low elevation up to middle and some high elevations, greatly reducing the forested area and thus reducing the resilience of native forests and populations of native snails. These reductions also increase the likelihood that future storms will lead to the extinction of populations or species that rely on the remaining forest canopy. In an effort to eradicate the nonnative giant African snail (*Achatina fulica*), the nonnative rosy carnivore snail (*Euglandina rosea*) was introduced in 1980. The rosy carnivore snail has spread throughout the main island of Tutuila. Numerous studies show that the rosy carnivore snail feeds on endemic island snails, including the sisi snail, and is a major agent in their declines and extirpations. At present, the major threat to the long-term survival of the native snail fauna in American Samoa, including the sisi snail, is predation by nonnative predatory snails. The threats are



imminent and of high magnitude, since they are severe enough to affect the continued existence of the species, leading to a relatively high likelihood of extinction. Therefore, we have retained an LPN of 2 for this species.

**Tutuila tree snail (*Eua zebrina*)**—A tree-dwelling species, the Tutuila tree snail is a member of the Partulidae family of snails and is endemic to American Samoa. The species is known from 32 populations on the islands of Tutuila, Manua, and Ofu.

This species is currently threatened by habitat loss and modification and by predation from nonnative predatory snails and rats (*Rattus* spp.). All live Tutuila tree snails were found on understory vegetation beneath remaining intact forest canopy. No snails were found in areas bordering agricultural plots or in forested areas that were severely damaged by three hurricanes (1987, 1990, and 1991). (See summary for the sisi snail, above, regarding impacts of nonnative weeds and of the rosy carnivore snail.) Rats have also been shown to devastate snail populations, and rat-damaged snail shells have been found at sites where the Tutuila snail occurs. At present, the major threat to the long-term survival of the native snail fauna in American Samoa is ongoing predation by nonnative predatory snails and rats. The magnitude of threats is high because they result in direct mortality leading to significant population declines to the Tutuila tree snail rangewide. Therefore, we have retained an LPN of 2 for this species.

**Huachuca springsnail (*Pyrgulopsis thompsoni*)**—The following is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. The Huachuca springsnail is endemic to Santa Cruz and Cochise Counties in southeastern Arizona and adjacent portions of northern Sonora, Mexico. Currently, the Huachuca springsnail inhabits at least 21 spring sites in southeastern Arizona and northern Sonora, Mexico. The species is most commonly found in shallow water habitats, often in rocky seeps at the spring source. Threats include habitat modification and destruction through catastrophic wildfire, unmanaged grazing at the landscape scale, and the inadequacy of regulatory mechanisms. Overall, the threats are low in magnitude, because threats are not occurring throughout the range of the species uniformly and not all populations would likely be affected simultaneously by the known threats. We have no site-specific information indicating that grazing is currently

ongoing in or adjacent to occupied habitats, and catastrophic wildfire is not known to be an imminent threat. Accordingly, threats are nonimminent. Therefore, we retain an LPN of 11 for the Huachuca springsnail.

**Page springsnail (*Pyrgulopsis morrisoni*)**—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing rule, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

#### Insects

**Hawaiian yellow-faced bee (*Hylaeus anthracinus*)**—The following summary is based on information contained in our files and in the petition that we received for this species on March 23, 2009. *Hylaeus anthracinus* is a species of Hawaiian yellow-faced bee (family Colletidae) found in certain coastal areas and dry lowland forests containing native plant communities on the islands of Hawaii, Kahoolawe, Lanai, Maui, Molokai, and Oahu, Hawaii. *Hylaeus anthracinus* is currently known from 16 populations containing an unknown number of individuals. This species is threatened by ongoing habitat loss and modification due to the effects of feral ungulates, nonnative plants, wildfire, and climate change. *Hylaeus anthracinus* is directly threatened by predation from yellow jacket wasps (*Vespula pensylvanica*) and several species of nonnative ants. Additional indirect threats to the species include the limited number and small size of populations, competition from European honey bees (*Apis mellifera*), the possibility of habitat destruction from stochastic and catastrophic events, and a lack of regulatory mechanisms affording protection to the species.

Some *H. anthracinus* populations occur in areas that are managed for one or more of the threats affecting habitat; however, no population is entirely protected from impacts to habitat, and predation on the species is not currently managed at any population site. Because the ongoing threats adversely affect *H. anthracinus* throughout its entire range, and cause impacts that are sufficiently severe that they could lead to population declines, the threats are high in magnitude and are imminent.

Therefore, we have retained an LPN of 2 for this species.

**Hawaiian yellow-faced bee (*Hylaeus assimulans*)**—The following summary is based on information contained in our files and in the petition that we received for this species on March 23, 2009. *Hylaeus assimulans* is a species of Hawaiian yellow-faced bee (family Colletidae) found in certain coastal areas and dry lowland forests containing native plant communities on the islands of Hawaii, Kahoolawe, Lanai, Maui, Molokai, and Oahu, Hawaii. *Hylaeus assimulans* is currently known from five populations containing an unknown number of individuals. This species is threatened by ongoing habitat loss and modification due to the effects of feral ungulates, nonnative plants, wildfire, and climate change. *Hylaeus assimulans* is directly threatened by predation from yellow jacket wasps (*Vespula pensylvanica*) and several species of nonnative ants. Additional indirect threats to the species include the limited number and small size of populations, competition from European honey bees (*Apis mellifera*), the possibility of habitat destruction from stochastic and catastrophic events, and a lack of regulatory mechanisms affording protection to the species.

Some *H. assimulans* populations occur in areas that are managed for one or more of the threats affecting habitat; however, no population is entirely protected from impacts to habitat, and predation on the species is not currently managed at any population site. Because the ongoing threats adversely affect *H. assimulans* throughout its entire range, and cause impacts that are sufficiently severe that they could lead to population declines, the threats are high in magnitude and are imminent. Therefore, we have retained an LPN of 2 for this species.

**Hawaiian yellow-faced bee (*Hylaeus facilis*)**—The following summary is based on information contained in our files and in the petition that we received for this species on March 23, 2009. *Hylaeus facilis* is a species of Hawaiian yellow-faced bee (family Colletidae) with a wide historical range of native plant community habitat including coastal areas, lowland dry and wet forests, and montane mesic forests on the islands of Lanai, Maui, Molokai, and Oahu, Hawaii. Now extirpated from the islands of Lanai and Maui, *H. facilis* is currently known from two populations containing an unknown number of individuals. This species is threatened by ongoing habitat loss and modification due to the effects of feral ungulates, nonnative plants, wildfire, and climate change. *H. facilis* is directly

threatened by predation from yellow jacket wasps (*Vespula pensylvanica*) and several species of nonnative ants. Additional indirect threats to the species include the limited number and small size of populations, competition from European honey bees (*Apis mellifera*), the possibility of habitat destruction from stochastic and catastrophic events, and a lack of regulatory mechanisms affording protection to the species.

Both of the *Hylaeus facilis* populations occur in areas that are managed for one or more of the threats affecting habitat; however, neither population is entirely protected from impacts to habitat and predation upon the species is not currently managed within either population site. The threats to *H. facilis* are high in magnitude because their severity endangers the species with a relatively high likelihood of extinction throughout its entire range. The threats are ongoing throughout its entire range, thus the threats are imminent. Therefore, we have retained an LPN of 2 for this species.

Hawaiian yellow-faced bee (*Hylaeus hiliaris*)—The following summary is based on information contained in our files and in the petition that we received for this species on March 23, 2009. *Hylaeus hiliaris* is a cleptoparasitic species of Hawaiian yellow-faced bee (family Colletidae) with a historical range in coastal habitat on the islands of Lanai, Maui, and Molokai, Hawaii. Now extirpated from the islands of Lanai and Maui, *H. hiliaris* is currently known from a single population on Molokai containing an unknown number of individuals. This species is threatened by ongoing habitat loss and modification due to the effects of feral ungulates, nonnative plants, wildfire, and climate change. *H. hiliaris* is directly threatened by predation from yellow jacket wasps (*Vespula pensylvanica*) and several species of nonnative ants. Additional indirect threats to the species include the small size of its remaining population, lack of additional populations, competition from European honey bees (*Apis mellifera*), possibility of habitat destruction from stochastic and catastrophic events, and a lack of regulatory mechanisms affording protection to the species.

The *Hylaeus hiliaris* population occurs within a private preserve that is managed for some of the threats affecting habitat; however, the population is not entirely protected from impacts to habitat, and predation upon the species is not currently managed at all. The threats to *H. hiliaris* are high in magnitude because their

severity presents a relatively high likelihood of extinction throughout its entire range. The threats to *H. hiliaris* are imminent, since they are ongoing. Therefore, we have retained an LPN of 2 for this species.

Hawaiian yellow-faced bee (*Hylaeus kuakea*)—The following summary is based on information contained in our files and in the petition that we received for this species on March 23, 2009. *Hylaeus kuakea* is a species of Hawaiian yellow-faced bee (family Colletidae) found in lowland mesic forests on the island of Oahu, Hawaii. *H. kuakea* is currently known from two populations containing an unknown number of individuals. This species is threatened by ongoing habitat loss and modification due to the effects of feral ungulates, nonnative plants, wildfire, and climate change. *H. kuakea* is directly threatened by predation from yellow jacket wasps (*Vespula pensylvanica*) and several species of nonnative ants. Additional indirect threats to the species include the limited number and small size of populations, competition from European honey bees (*Apis mellifera*), the possibility of habitat destruction from stochastic and catastrophic events, and a lack of regulatory mechanisms affording protection to the species.

Both *Hylaeus kuakea* populations occur in areas that are managed for one or more of the threats affecting habitat; however, neither population is entirely protected from impacts to habitat, and predation on the species is not currently managed within either population site. The threats to *H. kuakea* are high in magnitude because their severity presents a relatively high likelihood of extinction throughout its entire range. The threats to *H. kuakea* are imminent, since they are ongoing. Therefore, we have retained an LPN of 2 for this species.

Hawaiian yellow-faced bee (*Hylaeus longiceps*)—The following summary is based on information contained in our files and in the petition that we received for this species on March 23, 2009. *Hylaeus longiceps* is a species of Hawaiian yellow-faced bee (family Colletidae) found in certain coastal areas and dry lowland forest containing native plant communities on the islands of Lanai, Maui, Molokai, and Oahu, Hawaii. *H. longiceps* is currently known from six populations containing an unknown number of individuals. This species is threatened by ongoing habitat loss and modification due to the effects of feral ungulates, nonnative plants, wildfire, and climate change. *H. longiceps* is directly threatened by predation from yellow jacket wasps

(*Vespula pensylvanica*) and several species of nonnative ants. Additional indirect threats to the species include the limited number and small size of populations, competition from European honey bees (*Apis mellifera*), the possibility of habitat destruction from stochastic and catastrophic events, and a lack of regulatory mechanisms affording protection to the species.

Some *Hylaeus longiceps* populations occur in areas that are managed for one or more of the threats affecting habitat; however, no population is entirely protected from impacts to habitat, and predation on the species is not currently managed within any population site. The threats to *H. longiceps* are high in magnitude because their severity presents a relatively high likelihood of extinction throughout its entire range. The threats to *H. longiceps* are imminent, since they are ongoing. Therefore, we have retained an LPN of 2 for this species.

Hawaiian yellow-faced bee (*Hylaeus mana*)—The following summary is based on information contained in our files and in the petition that we received for this species on March 23, 2009. *Hylaeus mana* is a species of Hawaiian yellow-faced bee (family Colletidae) found in lowland mesic forests on the island of Oahu, Hawaii. *H. mana* is currently known from four populations containing an unknown number of individuals. This species is threatened by ongoing habitat loss and modification due to the effects of feral ungulates, nonnative plants, wildfire, and climate change. *H. mana* is directly threatened by predation from yellow jacket wasps (*Vespula pensylvanica*) and several species of nonnative ants. Additional indirect threats to the species include the limited number and small size of populations, competition from European honey bees (*Apis mellifera*), the possibility of habitat destruction from stochastic and catastrophic events, and a lack of regulatory mechanisms affording protection to the species.

The *Hylaeus mana* populations occur in areas that are managed for one or more of the threats affecting habitat; however, the population is not entirely protected from impacts to habitat, and predation on the species is not currently managed at all. The threats to *H. mana* are high in magnitude because their severity presents a relatively high likelihood of extinction throughout its entire range. The threats to *H. mana* are imminent, since they are ongoing. Therefore, we have retained an LPN of 2 for this species.

Hermes copper butterfly (*Hermelycaena* [Lycaena] *hermes*)—

Hermes copper butterfly primarily occurs in San Diego County, California, and a few records of the species have been documented in Baja California, Mexico. The species inhabits coastal sage scrub and southern mixed chaparral, and is dependent on its larval host plant, *Rhamnus crocea* (spiny redberry), to complete its lifecycle. Adult Hermes copper butterflies lay single eggs on spiny redberry stems where they hatch and feed until pupation occurs at the base of the plant. Hermes copper butterflies have one flight period occurring in mid-May to early-July, depending on weather conditions and elevation. We estimate there were at least 59 known separate historical populations throughout the species' range since the species was first described. Of the 59 known Hermes copper butterfly populations, 21 are extant, 27 are believed to have been extirpated, and 11 are of unknown status.

Primary threats to Hermes copper butterfly are megafires (large wildfires), and small and isolated populations. Secondary threats include increased wildfire frequency that results in habitat loss, and combined impacts of existing development, possible future (limited) development, existing dispersal barriers, and fires that fragment habitat. Hermes copper butterfly occupies scattered areas of sage scrub and chaparral habitat in an arid region susceptible to wildfires of increasing frequency and size. The likelihood that individuals of the species will be burned as a result of catastrophic wildfires, combined with the isolation and small size of extant populations, makes Hermes copper butterfly particularly vulnerable to population extirpation rangewide. Overall, the threats that Hermes copper butterfly faces are high in magnitude, because the major threats (particularly mortality due to wildfire and increased wildfire frequency) occur throughout all of the species' range and are likely to result in significant adverse impacts to the status of the species. The threats are nonimminent overall, because the impact of wildfire to Hermes copper butterfly and its habitat occurs on a sporadic basis, and we do not have the ability to predict when wildfires will occur. This species faces high-magnitude nonimminent threats; therefore, we assigned this species a LPN of 5.

Puerto Rican harlequin butterfly (*Atlantea tulita*)—The following summary is based on information in our files and in the petition we received on February 29, 2009. The Puerto Rican harlequin butterfly is endemic to Puerto Rico, and one of the four species

endemic to the Greater Antilles within the genus *Atlantea*. This species occurs within the subtropical moist forest life zone in the northern karst region (*i.e.*, municipality of Quebradillas) of Puerto Rico, and in the subtropical wet forest (*i.e.*, Maricao Commonwealth Forest, municipality of Maricao). The Puerto Rican harlequin butterfly has only been found utilizing *Oplonia spinosa* (prickly bush) as its host plant (*i.e.*, a plant that is used for laying the eggs, and also serves as a food source for development of the larvae).

The primary threats to the Puerto Rican harlequin butterfly are development, habitat fragmentation, and other natural or manmade factors such as human-induced fires, use of herbicides and pesticides, vegetation management, and climate change. These threats would substantially affect the distribution and abundance of the species, as well as its habitat. In addition, the lack of effective enforcement makes the existing policies and regulations inadequate for the protection of the species' habitat. Activities leading to habitat modification and destruction are expected to continue and potentially increase in the foreseeable future. These threats are high in magnitude and imminent because known populations occur in areas that are subject to ongoing development, increased traffic, and increased road maintenance and construction and they directly affect populations during all life stages throughout the range of the species. Therefore, we assigned a LPN of 2 to this species.

Sequatchie caddisfly (*Glyphopsyche sequatchie*)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing rule, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species..

Clifton Cave beetle (*Pseudanophthalmus caecus*)—The following summary is based upon information contained in our files. No new information was provided in the petition we received on May 11, 2004. Clifton Cave beetle is a small, eyeless, reddish-brown, predatory insect that feeds upon small cave invertebrates. It is cave dependent and is not found outside the cave environment. Clifton

Cave beetle is known only from two privately owned caves in Woodford County, Kentucky. Soon after the species was first observed in 1963, the cave entrance was blocked due to road construction and placement of fill material along KY Highway 1964. We do not know whether the species still occurs at the original location or if it has been extirpated from the site by the closure of the cave entrance. A 2008 attempt to re-open the cave was unsuccessful. Other caves in the vicinity of this cave were surveyed for the species during 1995 and 1996, and only one additional site (Richardson's Spring) was found to support the Clifton Cave beetle.

The limestone caves in which the Clifton Cave beetle is found provide a unique and fragile environment that supports a variety of species that have evolved to survive and reproduce under the demanding conditions found in cave ecosystems. The limited distribution of the species makes it vulnerable to isolated events that would only have a minimal effect on more wide-ranging insects. Events such as toxic chemical spills, discharges of large amounts of polluted water or indirect impacts from off-site construction activities, closure of entrances, alteration of entrances, or the creation of new entrances could have serious adverse impacts on the survival of this species. Therefore, the magnitude of threat is high for this species. The threats are nonimminent because there are no known projects that would affect the species in the near future. We therefore have assigned an LPN of 5 to this species.

Coleman cave beetle (*Pseudanophthalmus colemanensis*)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing rule, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

Icebox Cave beetle (*Pseudanophthalmus frigidus*)—The following summary is based upon information contained in our files. No new information was provided in the petition we received on May 11, 2004. Icebox Cave beetle is a small, eyeless, reddish-brown, predatory insect that feeds upon small cave invertebrates. It is not found outside the cave



environment, and is only known from one privately owned Kentucky cave in Bell County.

The limestone cave in which this species is found provides a unique and fragile environment that supports a variety of species that have evolved to survive and reproduce under the demanding conditions found in cave ecosystems. The species has not been observed since it was originally collected, but species experts believe that it may still exist in the cave in low numbers. The limited distribution of the species makes it vulnerable to isolated events that would only have a minimal effect on more wide-ranging insects. Events such as toxic chemical spills or discharges of large amounts of polluted water, or indirect impacts from off-site construction activities, closure of entrances, alteration of entrances, or the creation of new entrances, could have serious adverse impacts on the survival of this species. The magnitude of threat is high for this species because it is limited in distribution and the threats would result in a high level of mortality or reduced reproductive capacity. The threats are nonimminent because there are no known projects that would affect the species in the near future. We therefore have assigned an LPN of 5 to this species.

**Inquirer Cave beetle**  
(*Pseudanophthalmus inquisitor*)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing rule, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

**Louisville Cave beetle**  
(*Pseudanophthalmus troglodytes*)—The following summary is based upon information contained in our files. No new information was provided in the petition we received on May 11, 2004. The Louisville cave beetle is a small, eyeless, reddish-brown, predatory insect that feeds upon cave invertebrates. It is not found outside the cave environment and is only known from two privately owned Kentucky caves in Jefferson County. The cave entrance at the species' original location (Oxmoor, also called Highbaugh Cave) was closed due to residential development and placement of fill in the early 1990s. We do not know whether the species still

occurs at the original location or if it has been extirpated from the site by the closure of the cave entrance. Several other caves in Jefferson County were surveyed for the species in 1994, but individuals of the species were observed at only one additional location, Eleven Jones Cave. This cave is located on the southeast bank of Beargrass Creek near Cave Hill Cemetery and Arboretum. Due to pollution and reportedly high carbon dioxide levels in the cave, additional searches of the cave have not been possible.

The limestone caves in which this species is found provide a unique and fragile environment that supports a variety of species that have evolved to survive and reproduce under the demanding conditions found in cave ecosystems. The limited distribution of the species makes it vulnerable to isolated events that would only have a minimal effect on more wide-ranging insects. Events such as toxic chemical spills, discharges of large amounts of polluted water, or indirect impacts from off-site construction activities, closure of entrances, alteration of entrances, or the creation of new entrances, could have serious adverse impacts on the survival of this species. The magnitude of threat is high for this species, because it is limited in distribution and the threats would have severe negative impacts on the species. The threats are non-imminent because there are no known projects that would affect the species in the near future. We therefore have assigned an LPN of 5 to this species.

**Tatum Cave beetle**  
(*Pseudanophthalmus parvus*)—The following summary is based upon information contained in our files. No new information was provided in the petition we received on May 11, 2004. Tatum Cave beetle is a small, eyeless, reddish-brown predatory insect that feeds upon cave invertebrates. It is not found outside the cave environment and is only known from one privately owned Kentucky cave (Tatum Cave) in Marion County. Despite searches in 1980, 1996, 2004, and 2005, the species has not been observed in Tatum Cave since 1965.

The limestone cave in which this species is found provides a unique and fragile environment that supports a variety of species that have evolved to survive and reproduce under the demanding conditions found in cave ecosystems. The species has not been observed since 1965, but species experts believe that it still exists in low numbers. The limited distribution of the species makes it vulnerable to isolated events that would only have a minimal

effect on more wide-ranging insects. Events such as toxic chemical spills, discharges of large amounts of polluted water, or indirect impacts from off-site construction activities, closure of entrances, alteration of entrances, or the creation of new entrances, could have serious adverse impacts on this species. The magnitude of threat is high for this species, because its limited numbers mean that any threats could severely affect its continued existence. The threats are nonimminent, because there are no known projects that would affect the species in the near future. We therefore have assigned an LPN of 5 to this species.

**Orangeblack Hawaiian damselfly**  
(*Megalagrion xanthomelas*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. The orangeblack Hawaiian damselfly is a stream- and pool-dwelling species endemic to the Hawaiian Islands of Kauai, Oahu, Molokai, Maui, Lanai, and Hawaii. The species no longer is found on Kauai, and is now restricted to a total of 16 populations distributed across the islands of Oahu, Maui, Molokai, Lanai, and Hawaii. This species is threatened by predation from nonnative aquatic species such as fish and predacious insects, and habitat loss through dewatering of streams and invasion by nonnative plants. Nonnative fish and insects prey on the larval-stage naiads of the damselfly, and loss of water reduces the amount of suitable habitat for the naiad life stage. Invasive plants (e.g., California grass (*Brachiaria mutica*)) also contribute to loss of habitat by forming dense, monotypic stands that completely eliminate open water. Nonnative fish and plants are found in all the streams where orangeblack Hawaiian damselflies occur, except at the single Oahu population, where there are no nonnative fish. We have retained an LPN of 8 for this species because, although the threats are ongoing and therefore imminent, they affect the different populations of the species to varying degrees throughout the species' range and are thus of moderate magnitude.

**Rattlesnake-master borer moth**  
(*Papaipema eryngii*)—The following information is based on information in our files. Rattlesnake-master borer moths are obligate residents of undisturbed prairie remnants, savanna, and pine barrens that contain their only food plant—rattlesnake-master (*Eryngium yuccifolium*). The rattlesnake-master borer moth is known from 16 sites distributed over 5 States: Illinois, Arkansas, Kentucky, Oklahoma,

and North Carolina. Currently 12 of the sites contain extant populations, 3 contain populations with unknown status, and 1 contains a population that is considered extirpated.

Although the rattlesnake-master plant is widely distributed across 26 States and is a common plant in remnant prairies, it is a conservative species, meaning it is not found in disturbed areas, with relative frequencies of less than 1 percent. The habitat range for the rattlesnake-master borer moth is very narrow and appears to be limiting for the species. The ongoing effects of habitat loss, fragmentation, degradation, and modification from agriculture, development, flooding, invasive species, and secondary succession have resulted in fragmented populations and population declines. Rattlesnake-master borer moths are affected by habitat fragmentation and population isolation. Almost all of the sites with extant populations of the rattlesnake-master borer moth are isolated from one another, with the populations in Kentucky, North Carolina, and Oklahoma occurring within a single site for each State, thus precluding recolonization from other populations. These small, isolated populations are likely to become unviable over time due to lower genetic diversity reducing their ability to adapt to environmental change, effects of stochastic events, and inability to recolonize areas where they are extirpated.

Rattlesnake-master borer moths have life-history traits that make them more susceptible to outside stressors. They are univoltine (having a single flight per year), do not disperse widely, and are monophagous (have only one food source). The life history of the species makes it particularly sensitive to fire, which is the primary practice used in prairie management. The species is only safe from fire once it bores into the root of the host plant, which makes adult, egg, and first larval stages subject to mortality during prescribed burns and wildfires. Fire and grazing cause direct mortality to the moth and destroy food plants if the intensity, extent, or timing is not conducive to the species' biology. Although fire management is a threat to the species, lack of management is also a threat, and at least one site has become extirpated likely because of the succession to woody habitat. The species is sought after by collectors, and the host plant is very easy to identify, making the moth susceptible to collection, and thus many sites are kept undisclosed to the public.

Existing regulatory mechanisms provide protection for 12 of the 16 sites containing rattlesnake-master borer

moth populations. Illinois' endangered species statute provides regulatory mechanisms to protect the species from potential impacts from actions such as development and collecting on the 10 Illinois sites; however, illegal collections of the species have occurred at two sites. A permit is required for collection by site managers within the sites in North Carolina and Oklahoma. The rattlesnake-master borer moth is also listed as endangered in Kentucky by the State's Nature Preserves Commission, although at this time the Kentucky legislature has not enacted any statute that provides legal protection for species listed as threatened or endangered. There are no statutory mechanisms in place to protect the populations in North Carolina, Arkansas, or Oklahoma.

Some threats that the rattlesnake-master moth faces are high in magnitude, such as habitat conversion and fragmentation, and population isolation. These threats with the highest magnitude occur in many of the populations throughout the species' range, but although they are likely to affect each population at some time, they are not likely to affect all of the populations at any one time. Other threats, such as agricultural and nonagricultural development, mortality from implementation of some prairie management tools (such as fire), flooding, succession, and climate change are of moderate to low magnitude. For example, the life history of rattlesnake-master borer moths makes them highly sensitive to fire, which can cause mortality of individuals through most of the year and can affect entire populations. Conversely, complete fire suppression can also be a threat to rattlesnake-master borer moths as prairie habitat declines and woody or invasive species become established such that the species' only food plant is not found in disturbed prairies. Although these threats can cause direct and indirect mortality of the species, they are of moderate or low magnitude because they affect only some populations throughout the range and to varying degrees. Overall, the threats are moderate. The threats are imminent because they are ongoing; every known population of rattlesnake-master borer moth has at least one ongoing threat, and some have several working in tandem. Thus, we assigned a LPN of 8 to this species.

Stephan's riffle beetle (*Heterelmis stephani*)—The following summary is based on information contained in our files. No new information was provided in the petition received on May 11, 2004. The Stephan's riffle beetle is an

endemic riffle beetle historically found in limited spring environments within the Santa Rita Mountains, Pima County, Arizona. In the most recent surveys conducted in 1993, the Stephan's riffle beetle was documented only in Sylvester Spring in Madera Canyon, Santa Cruz County, within the Coronado National Forest. Suspected potential threats to that spring are largely from habitat modification, and potential changes in water quality and quantity due to catastrophic natural events (such as wildfire or flooding from storms). The threats are of low to moderate magnitude because the Forest Service has no plans to modify the springs where this species occurs. In addition, the effects of the other threats are unlikely to be permanent, as they stem from occasional natural events that do not result in permanent water quality degradation. In addition, because of the physical habitat structure (large boulders surrounding the springs) and the location of the springs (on hillsides above the stream or in the headwaters where there is little watershed to generate large flood flows), flooding, resulting from thunderstorms or post-fire runoff is not a factor affecting this species at this time. Additionally, there is a higher likelihood that the species will persist in areas that are unaffected by the threats; it is unlikely that all areas of the spring would be simultaneously be affected. Threats from habitat modification have already occurred and are no longer ongoing. Therefore, the threats are not imminent. Thus, we retain an LPN of 11 for the Stephan's riffle beetle.

Arapahoe snowfly (*Capnia arapahoe*)—The following summary is based on information contained in our files. This insect is a winter stonefly associated with clean, cool, running waters. Adult snowflies emerge in late winter from the space underneath stream ice. The Arapahoe snowfly is known to be found only in a short section of Elkhorn Creek, a small tributary of the Cache la Poudre River in the Roosevelt National Forest, Larimer County, Colorado. New surveys completed in 2013 indicate that the Arapahoe snowfly may occur in additional drainages other than Elkhorn Creek; however, the results are preliminary, and surveys are continuing in 2014. We will evaluate and incorporate the results of these new surveys into our review when they become available. The species previously occurred downriver at Young Gulch, but it is likely that either habitat became unsuitable or other unknown causes extirpated the species. Habitats

at Young Gulch were further degraded by the High Park Fire in 2012, and potentially by a flash flood disaster in September 2013.

Climate change is a threat to the Arapahoe snowfly, and modifies its habitats by reducing snowpacks, increasing temperatures, fostering mountain pine beetle outbreaks, and increasing the frequency of destructive wildfires. Limited dispersal capabilities, an extremely restricted range, dependence on pristine habitats, and a small population size make the Arapahoe snowfly vulnerable to demographic stochasticity, environmental stochasticity, and random catastrophes. Furthermore, regulatory mechanisms inadequately reduce these threats, which may act cumulatively to affect the species. The threats to the Arapahoe snowfly are high in magnitude because they occur throughout the species' limited range. However, the threats are nonimminent. While limited dispersal capabilities, restricted range, dependence on pristine habitats, and small population size are characteristics that make this species vulnerable to stochastic events and catastrophes (and potential impacts from climate change), these events are not currently occurring and increased temperatures will adversely affect the species in the future. Therefore, we have assigned the Arapahoe snowfly an LPN of 5.

Meltwater lednian stonefly (*Lednia tumana*)—The following summary is based on information contained in our files and in the petition we received on July 30, 2007. This species is an aquatic insect in the order Plecoptera (stoneflies). Stoneflies are primarily associated with clean, cool streams and rivers. Eggs and nymphs (juveniles) of the meltwater lednian stonefly are found in high-elevation, alpine, and subalpine streams, most typically in locations closely linked to glacial runoff. The species is generally restricted to streams with mean summer water temperature less than 10 °C (50 °F). The only known meltwater lednian stonefly occurrences are within Glacier National Park (NP), Montana.

Climate change, and the associated effects of glacier loss (with glaciers predicted to be gone by 2030)—including reduced streamflows, and increased water temperatures—are expected to significantly reduce the occurrence of populations and extent of suitable habitat for the species in Glacier NP. In addition, the existing regulatory mechanisms are not adequate to address these environmental changes due to global climate change. We determined that the meltwater lednian

stonefly was a candidate for listing in a warranted-but-precluded 12-month petition finding published on April 5, 2011 (76 FR 18684). We have assigned the species an LPN of 5, based on three criteria: (1) The high magnitude of threat, which is projected to substantially reduce the amount of suitable habitat relative to the species' current range; (2) the low immediacy of the threat based on the lack of documented evidence that climate change is affecting stonefly habitat; and (3) the taxonomic status of the species, which is a full species.

Highlands tiger beetle (*Cicindela highlandensis*)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing rule, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

#### Crustaceans

Anchialine pool shrimp (*Metabetaeus lohena*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Metabetaeus lohena* is a species of shrimp belonging to the family Alpheidae that inhabits anchialine pools. This species is endemic to the Hawaiian Islands, with populations on the islands of Oahu, Maui, and Hawaii. The primary threats to this species are predation by fish (*i.e.*, fish species that do not naturally occur in the pools inhabited by this species) and habitat loss from degradation (primarily from illegal trash dumping). Populations of *M. lohena* on the islands of Maui and Hawaii are located within State Natural Area Reserves (NARs) and in a National Park. Both the State NARs and the National Park prohibit the collection of the species and the disturbance of the pools. However, enforcement of collection and disturbance prohibitions is difficult, and the negative effects from the introduction of fish can occur suddenly and could quickly decimate a population. On Oahu, four pools containing this species are located in a National Wildlife Refuge and are protected from collection and disturbance to the pool; however, on State-owned land where the species occurs, there is no protection from collection or disturbance of the pools.

Threats to this species could have a significant adverse effect on the survival of the species, leading to a relatively high likelihood of extinction, and are thus of a high magnitude. The primary threats of predation from fish and loss of habitat due to degradation are nonimminent, because on the islands of Maui and Hawaii no fish were observed in any of the pools where this species occurs, and there has been no documented trash dumping in these pools. Therefore, we have retained an LPN of 5 for this species.

Anchialine pool shrimp (*Palaemonella burnsi*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Palaemonella burnsi* is a species of shrimp belonging to the family Palaemonidae, that inhabits anchialine pools. This species is endemic to the Hawaiian Islands with populations on the islands of Maui and Hawaii. The primary threats to this species are predation by nonnative fish (*i.e.*, fish species that do not naturally occur in the pools inhabited by this species) and habitat loss due to degradation (primarily from illegal trash dumping). This species' populations on Maui are located within a State Natural Area Reserve (NAR). Hawaii's State statutes prohibit the collection of the species and the disturbance of the pools in State NARs. On the island of Hawaii, the species occurs within a State NAR and a National Park, where collection and disturbance are also prohibited. However, enforcement of these prohibitions is difficult, and the negative effects from the introduction of fish can occur suddenly and could quickly decimate a population. Therefore, threats to this species could have a significant adverse effect on the survival of the species, leading to a relatively high likelihood of extinction, and thus are of a high magnitude. The threats are nonimminent, because surveys in 2004 and 2007 did not find fish in the pools where these shrimp occur on Maui or the island of Hawaii. Also, there was no evidence of recent habitat degradation at those pools. Therefore, we have retained an LPN of 5 for this species.

Anchialine pool shrimp (*Procaris hawaiiiana*)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Procaris hawaiiiana* is a species of shrimp belonging to the family Procarididae that inhabits anchialine pools. This species is endemic to the Hawaiian Islands, and is currently



known from 2 pools on the island of Maui and 12 pools on the island of Hawaii. The primary threats to this species are predation from nonnative fish (*i.e.*, fish species that do not naturally occur in the pools inhabited by this species) and habitat loss due to degradation (primarily from illegal trash dumping). This species' populations on Maui are located within a State Natural Area Reserve (NAR). Twelve pools containing this species on the island of Hawaii are also located within a State NAR. Hawaii's State statutes prohibit the collection of the species and the disturbance of the pools in State NARs. However, enforcement of these prohibitions is difficult, and the negative effects from the introduction of fish can occur suddenly and could quickly decimate a population. In addition, there are no prohibitions for either removal of the species or disturbance to one pool containing this species located outside a NAR on the island of Hawaii. Therefore, threats to this species could have a significant adverse effect on the survival of the species, leading to a relatively high likelihood of extinction, and thus remain at a high magnitude. The threats to the species are nonimminent, because, during 2004 and 2007 surveys, no nonnative fish were observed in the pools where these shrimp occur on Maui, nor were they observed in the one pool on the island of Hawaii that was surveyed in 2005. In addition, there were no signs of dumping or fill in any of the pools where the species occurs. Therefore, we have retained an LPN of 5 for this species.

#### Flowering Plants

*Abronia alpina* (Ramshaw Meadows sand-verbena)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Abronia alpina* is a small perennial herb in the Nyctaginaceae (four-o'clock) family, 2.5 to 15.2 cm (1 to 6 in) across, forming compact mats with lavender-pink, trumpet-shaped, and generally fragrant flowers. *Abronia alpina* is known from one main population center at Ramshaw Meadow and a smaller population at the adjacent Templeton Meadow. The meadows are located on the Kern River Plateau in the Sierra Nevada, on lands administered by the Inyo National Forest, in Tulare County, California. The total estimated area occupied is approximately 6 hectares (15 acres). The population fluctuates from year to year without any clear trends. Population estimates for the years from 1985 up to, but not including, 2012 range from a high of

approximately 130,000 plants in 1997 to a low of approximately 40,000 plants in 2003. In 2012, when the population was last monitored, the estimated total population increased to approximately 156,000 plants.

The factors currently threatening *Abronia alpina* include natural and human habitat alteration, lowering of the water table due to erosion within the meadow system, and recreational use within meadow habitats. Lodgepole pines are encroaching upon meadow habitat with trees germinating within *A. alpina* habitat, occupying up to 20 percent of two *A. alpina* subpopulations. Lodgepole pine encroachment may alter soil characteristics by increasing organic matter levels, decreasing porosity, and moderating diurnal temperature fluctuations thus reducing the competitive ability of *A. alpina* to persist in an environment more hospitable to other plant species. The habitat occupied by *Abronia alpina* directly borders the meadow system, which is supported by the South Fork of the Kern River. The river flows through the meadow, at times coming within 15 m (50 ft) of *Abronia alpina* habitat, particularly in the vicinity of five subpopulations. Past livestock trampling and past removal of bank-stabilizing vegetation by grazing livestock have contributed to down-cutting of the river channel through the meadow, leaving the meadow subject to potential alteration by lowering of the water table. In 2001, the Forest Service began resting the grazing allotment for 10 years, thereby eliminating cattle use. The allotment is still being rested while the Forest Service assesses the data collected on the rested allotment for eventual inclusion in an environmental analysis to consider resumption of grazing. Established hiker, packstock, and cattle trails pass through *A. alpina* subpopulations. Two main hiker trails pass through Ramshaw Meadow, but in 1988 and 1997, they were rerouted out of *A. alpina* subpopulations. Occasional incidental use by horses and hikers sometimes occurs on the remnants of cattle trails that pass through subpopulations in several places.

The Service has funded studies to determine appropriate conservation measures for the species and is working with the U.S. Forest Service on developing a conservation strategy for the species. The remaining threats affect individuals in the population and have not appeared to have population-level effects. Therefore, the threats are low in magnitude. In addition, because the grazing activities have been eliminated for the time being and the hiking trails

have been rerouted, the threats are not imminent. The LPN for *A. alpina* remains an 11 due to the presence of moderate-to-low threats, and the determination that the threats are not imminent at this point in time.

*Argythamnia blodgettii* (Blodgett's silverbush)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing determination, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

*Artemisia borealis* var. *wormskioldii* (Northern wormwood)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. Historically known from eight sites, *Artemisia campestris* var. *wormskioldii* (formerly *A. borealis* var. *wormskioldii*) is currently known from two natural populations (one in Klickitat County and one in Grant County, Washington) and four outplanted populations in Oregon and Washington. This plant is restricted to exposed basalt, cobbly-sandy terraces, and sand habitat along the shore of, and on islands within, the Columbia River. Annual monitoring indicates that the two natural populations have declined from historical numbers and now total roughly 550 individuals. Two populations were outplanted with approximately 3,000 individuals, and when monitored in 2012, approximately 900 individuals still remained; the other two outplanted populations have not been monitored since 120 individuals were outplanted at the sites in 2013. It is possible that additional natural populations of the species exist as there are relatively large stretches of the mid-Columbia River and its tributaries that have not been surveyed specifically for this plant; however, we currently know of the species only from the above six locations. The species is also cultivated *ex situ* for future translocation projects.

Habitat loss from inundation behind hydroelectric dams and placement of riprap along the Columbia River is thought to be the cause of historical population loss. Current threats to northern wormwood include possible direct loss of habitat through regulation of water levels in the Columbia River;

human trampling of plants from recreation; competition with nonnative invasive species; burial by wind- and water-borne sediments; small population sizes; susceptibility to genetic drift and inbreeding; and the potential for hybridization with two other species of *Artemisia*. At the Grant County site, ongoing conservation actions have reduced trampling, but have not eliminated or reduced the other threats. At the Klickitat County site (Miller Island), active conservation measures are not currently in place. The magnitude of these threats is high, as the remaining populations are small, isolated, and each could be eliminated by a single disturbance. The threats are imminent because recreational use is ongoing, invasive nonnative species occur at both sites, erosion of the substrate is ongoing at the Klickitat County site, and high water flows may occur unpredictably in any year. Therefore, we have retained an LPN of 3 for this variety.

*Astragalus anserinus* (Goose Creek milkvetch)—The following summary is based on information in our files and in the petition received on February 3, 2004. The majority (over 80 percent) of Goose Creek milkvetch sites in Idaho, Utah, and Nevada occur on Federal lands managed by the Bureau of Land Management. The rest of the sites occur as small populations on private and State lands in Utah and on private land in Idaho and Nevada. Goose Creek milkvetch occurs in a variety of habitats, but is typically associated with dry, tuffaceous soils (made up of rock consisting of smaller kinds of volcanic detritus) from the Salt Lake Formation. The species grows on steep or flat sites, with soil textures ranging from silty to sandy to somewhat gravelly. The species tolerates some level of disturbance, based on its occurrence on steep slopes, where downhill movement of soil is common.

The primary threat to Goose Creek milkvetch is habitat degradation and modification resulting from an altered wildfire regime, fire suppression activities, and rehabilitation efforts to recover lands that have burned. Other factors that also appear to threaten Goose Creek milkvetch include livestock use and invasive nonnative species. The existing regulatory mechanisms are not adequate to address these threats. Climate change effects to Goose Creek drainage habitats are possible, but we are unable to predict the specific impacts of this change to Goose Creek milkvetch at this time.

The magnitude of threats is high as available monitoring data indicate declines in excess of 70 percent within

the perimeter of wildfires that occurred in 2007 which negatively affected nearly 50 percent of the known occurrences in Nevada and Utah. In addition, livestock use impacts were observed at all sites visited in Utah in 2011 with 25 percent of the sites (containing 73 percent of the individuals) being directly affected. The threats to the species are imminent, or currently occurring, largely as a result of land management actions taken since fires initially altered the habitat. The threats associated with livestock grazing and invasive species are occurring throughout a large portion of the species' range. The high magnitude and immediacy of threats leave the species and its small populations more vulnerable to stochastic events. Therefore, we have assigned the Goose Creek milkvetch an LPN of 2.

*Astragalus microcymbus* (Skiff milkvetch)—The following summary is based on information contained in our files and in the petition we received on July 30, 2007. Skiff milkvetch is a perennial forb that dies back to the ground every year. It has a very limited range and a spotty distribution within Gunnison and Saguache Counties in Colorado, where it is found in open, park-like landscapes in the sagebrush-steppe ecosystem on rocky or cobbly, moderate-to-steep slopes of hills and draws.

The most significant threats to skiff milkvetch are recreation, roads, trails, and habitat fragmentation and degradation. Existing regulatory mechanisms are not adequate to protect the species from these threats. Recreational impacts are likely to increase, given the close proximity of skiff milkvetch to the town of Gunnison and the increasing popularity of mountain biking, motorcycling, and all-terrain vehicles. Furthermore, the Hartman Rocks Recreation Area draws users, and contains over 40 percent of the skiff milkvetch units. Other threats to the species include residential and urban development; livestock, deer, and elk use; climate change; increasing periodic drought; nonnative invasive cheatgrass; and wildfire. The threats to skiff milkvetch are moderate in magnitude, because, while serious and occurring rangewide, they do not collectively result in population declines on a short time scale. The threats are imminent, because the species is currently facing them in many portions of its range. Therefore, we have assigned skiff milkvetch an LPN of 8.

*Astragalus schmolliae* (Schmoll milkvetch)—The following summary is based on information contained in our files and in the petition we received on July 30, 2007. Schmoll milkvetch is a

narrow endemic perennial plant that grows in the mature pinyon-juniper woodland of mesa tops in the Mesa Verde National Park area and in the Ute Mountain Ute Tribal Park in Colorado.

The most significant threats to the species are degradation of habitat by fire, followed by invasion by nonnative cheatgrass and subsequent increase in fire frequency. These threats currently affect about 40 percent of the species' entire known range, and cheatgrass is likely to increase, given (1) its rapid spread and persistence in habitat disturbed by wildfires, fire and fuels management and development of infrastructure, and (2) the inability of land managers to control it on a landscape scale. Other threats to Schmoll milkvetch include fire break clearings, drought, and feral livestock grazing; existing regulatory mechanisms are not adequate to address these threats. The threats to the species overall are imminent, because they are ongoing, and moderate in magnitude, because the species is currently facing them in many portions of its range, but the threats do not collectively result in population declines on a short time scale. Therefore, we have assigned Schmoll milkvetch an LPN of 8.

*Astragalus tortipes* (sleeping Ute milkvetch)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. Sleeping Ute milkvetch is a perennial plant that grows only on the Smokey Hills layer of the Mancos Shale Formation on the Ute Mountain Ute Indian Reservation in Montezuma County, Colorado.

In 2000, a total of 3,744 plants were recorded at 24 locations covering 500 acres within an overall range of 6,400 acres. Available information from 2000 and 2009 indicated that the species' status was stable at that time. However, previous and ongoing threats from borrow pit excavation, off-highway vehicles, irrigation canal construction, and a prairie dog colony have had minor impacts that reduced the range and number of plants by small amounts. Off road-vehicle use of the habitat has reportedly been controlled by fencing. Oil and gas development is active in the general area, but the Service has received no information to indicate that there is development within plant habitat. In 2011, the tribal Environmental Programs Department reported habitat disturbance by vehicles and activity at the shooting range located within the plant habitat. The Tribe reported that the status of the species remained unchanged. The Tribe has been working on a management

plan that will include a monitoring program for this species, among others. We had expected the final plan to be released in 2010, but it still has not been completed. We have no documentation concerning the current status of the plants, condition of habitat, and terms of the species management plan being drafted by the Tribe. Thus, at this time, we cannot accurately assess whether populations are being adequately protected from previously existing threats. The threats are moderate in magnitude, since they have had only minor impacts. Until the management plan is completed there are no regulatory mechanisms in place to protect the species from the threats described above. Overall, we conclude that threats are moderate to low and nonimminent. Therefore, we assigned an LPN of 11 to this species.

*Boechea pusilla* (Fremont County rockcress)—The following summary is based on information in our files and in the petition received on July 24, 2007. *Boechea pusilla* is a perennial herb that occupies sparsely vegetated, coarse granite soil pockets in exposed granite-pegmatite outcrops, with slopes generally less than 10 degrees, at an elevation between 2,438 and 2,469 m (8,000 and 8,100 ft). The only known population of *B. pusilla* is located in Wyoming on lands administered by the Bureau of Land Management in the southern foothills of the Wind River Range. *B. pusilla* is likely restricted in distribution by the limited occurrence of pegmatite (a very coarse-grained rock formed from magma or lava) in the area. The specialized habitat requirements of *B. pusilla* have allowed the plant to persist without competition from other herbaceous plants or sagebrush-grassland species that are present in the surrounding landscape.

*Boechea pusilla* has a threat that is not identified, but that is indicated by the small and overall declining population size. Although the threat is not fully understood, we know it exists as indicated by the declining population. The population size may be declining from a variety of unknown causes, with drought or disease possibly contributing to the trend. The downward trend may have been leveled off somewhat recently, but without improved population numbers, the species may reach a population level at which other stressors become threats. We are unable to determine how climate change may affect the species in the future. To the extent that we understand the species, other potential habitat-related threats have been removed through the implementation of Federal regulatory mechanisms and associated

actions. Overutilization, predation, and the inadequacy of regulatory mechanisms are likely threats to the species. The threats that *B. pusilla* faces are moderate in magnitude, primarily because of the recent leveling off of the population decline. The threat to *B. pusilla* is imminent, because we have evidence that the species is currently facing a threat indicated by reduced population size. The threat appears to be ongoing, although we are unsure of the extent and timing of its effects on the species. Thus, we have assigned *B. pusilla* an LPN of 8.

*Calamagrostis expansa* (Maui reedgrass)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Calamagrostis expansa* is a perennial grass found in wet forests and bogs, and in bog margins, on the Hawaiian Islands of Maui and Hawaii. This species is known from 13 populations collectively totaling fewer than 750 individuals.

*Calamagrostis expansa* is threatened by habitat degradation and loss by feral pigs (*Sus scrofa*), and by competition with nonnative plants. All of the known populations of *C. expansa* on Maui occur in managed areas. Pig exclusion fences have been constructed, and control of nonnative plants is ongoing within the exclosures but still pose a threat to the species. On the island of Hawaii, the population in the Upper Waiakea Forest Reserve has been fenced entirely. This species is not represented in an *ex situ* collection. Threats to this species from feral pigs and nonnative plants are still ongoing despite the conservation actions, and are thus imminent and of high magnitude, given the limited number of individuals, leading to a relatively high likelihood of extinction. Therefore, we have retained an LPN of 2 for this species.

*Calochortus persistens* (Siskiyou mariposa lily)—The following summary is based on information contained in our files and the petition we received on September 10, 2001. The Siskiyou mariposa lily is a narrow endemic that is restricted to three disjunct ridge tops in the Klamath-Siskiyou Range near the California-Oregon border. The southernmost occurrence of this species is composed of nine separate sites on approximately 17.6 ha (43.4 ac) of Klamath National Forest and privately owned lands that stretch for 10 km (6 mi) along the Gunsight-Humbug Ridge, Siskiyou County, California. In 2007, a new occurrence was confirmed in the locality of Cottonwood Peak and Little Cottonwood Peak, Siskiyou County, where several populations are

distributed over 164 ha (405 ac) on three individual mountain peaks in the Klamath National Forest and on private lands. The northernmost occurrence consists of not more than five Siskiyou mariposa lily plants that were discovered in 1998, on Bald Mountain, west of Ashland, Jackson County, Oregon.

Major threats include competition and shading by native and nonnative species fostered by suppression of wildfire; increased fuel loading and subsequent risk of wildfire; fragmentation by roads, fire breaks, tree plantations, and radio-tower facilities; maintenance and construction around radio towers and telephone relay stations located on Gunsight Peak and Mahogany Point; and soil disturbance, direct damage, and nonnative weed and grass species introduction as a result of heavy recreational use and construction of fire breaks. Dyer's woad (*Isatis tinctoria*), an invasive, nonnative plant that may prevent germination of Siskiyou mariposa lily seedlings, has invaded 75 percent of the known lily habitat on Gunsight-Humbug Ridge, the southernmost California occurrence. Forest Service staff and the Klamath-Siskiyou Wildlands Center cite competition with dyer's woad as a significant and chronic threat to the survival of Siskiyou mariposa lily.

The combination of restricted range, extremely low numbers (five plants) in one of three disjunct populations, poor competitive ability, short seed dispersal distance, slow growth rates, low seed production, apparently poor survival rates in some years, herbivory, habitat disturbance, and competition from nonnative invasive plants threatens the continued existence of this species. The main threat is competition by dyer's woad. However, because efforts are under way to reduce the threat of dyer's woad where it is found and there is no evidence of a decline in *C. persistens* populations where this weed has become most widely distributed, the magnitude of existing threats is moderate. Overall, the threats are nonimminent since the threats of competition from nonnative invasive plants has been reduced to localized areas and are not anticipated to overwhelm a large portion of the species' range in the immediate future. The likelihood that a large proportion of the Gunsight-Humbug Ridge range would be affected by disturbance, and therefore invaded by dyer's woad at the same time, is low. Therefore, we have assigned an LPN of 11 to this species.

*Chamaecrista lineata* var. *keyensis* (Big Pine partridge pea)—We continue to find that listing this species is



warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing determination, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

*Chamaesyce deltoidea* ssp. *pinetorum* (Pineland sandmat)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing determination, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

*Chamaesyce deltoidea* ssp. *serpyllum* (Wedge spurge)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing determination, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

*Chorizanthe parryi* var. *fernandina* (San Fernando Valley spineflower)—The following summary is based on information contained in our files and the petition received on December 14, 1999. *Chorizanthe parryi* var. *fernandina* is a low-growing herbaceous annual plant in the buckwheat family. Germination occurs following the onset of late-fall and winter rains and typically represents different cohorts from the seed bank. Flowering occurs in the spring, generally between April and June. The plant currently is known from two disjunct localities: The first is in the southeastern portion of Ventura County on a site within the Upper Las Virgenes Canyon Open Space Preserve, formerly known as Ahmanson Ranch, and the second is in an area of southwestern Los Angeles County known as Newhall

Ranch. Investigations of historical locations and seemingly suitable habitat within the range of the species have not revealed any other occurrences.

The threats facing *C. parryi* var. *fernandina* include threatened destruction, modification, or curtailment of its habitat or range (Factor A), inadequacy of existing regulatory mechanisms (Factor D), and other natural or manmade factors (Factor E). The threats to *C. parryi* var. *fernandina* from habitat destruction or modification are lower in magnitude than they were 9 years ago when we originally determined that the species was a candidate for listing. One of the two populations (Upper Las Virgenes Canyon Open Space Preserve) is now in permanent public ownership and is being managed by an agency that is working to conserve the plant; however, the use of adjacent habitat for Hollywood film productions was brought to our attention in 2007, and the potential impacts to *C. parryi* var. *fernandina* are not yet clear. During a site visit to the Preserve in April 2012, we noted an abundance of nonnative species that, if not managed, could degrade the quality of the habitat for *C. parryi* var. *fernandina* over time. We will be working with the landowners to manage the site for the benefit of *C. parryi* var. *fernandina*.

The other population (Newhall Ranch) is under the threat of development. A CCA was being developed with the landowner to address conservation of the plants; however, as of 2014, work on the CCA has been suspended. Until such an agreement is finalized, the threat of development and the potential damage to the Newhall Ranch population still exist, as shown by the destruction of some plants during installation of an agave farm. Furthermore, cattle grazing on Newhall Ranch may be a current threat. Cattle grazing may harm *C. parryi* var. *fernandina* by trampling and soil compaction. Grazing activity could also alter the nutrient (e.g., elevated organic material levels) content of the soils for *C. parryi* var. *fernandina* habitat through fecal inputs, which in turn may favor the growth of other plant species that would otherwise not grow so readily on the mineral-based soils. Over time, changes in species composition may render the sites less favorable for the persistence of *C. parryi* var. *fernandina*. *Chorizanthe parryi* var. *fernandina* may be threatened by invasive nonnative plants, including grasses, which could potentially displace it from available habitat; compete for light, water, and nutrients; and reduce survival and establishment.

*Chorizanthe parryi* var. *fernandina* is particularly vulnerable to extinction due to its concentration in two isolated areas. The existence of only two areas of occurrence, and a relatively small range, makes the variety highly susceptible to extinction or extirpation from a significant portion of its range due to random events such as fire, drought, and erosion. We retained an LPN of 6 for this species due to high-magnitude, nonimminent threats.

*Cirsium wrightii* (Wright's marsh thistle)—The following summary is based on information from the 12-month warranted-but-precluded finding published November 4, 2010 (75 FR 67925), as well as any new information gathered since then. Wright's marsh thistle is a flowering plant in the sunflower family. It is prickly with short black spines and a 3- to 8-foot (ft) (0.9- to 2.4-meter (m)) single stalk covered with succulent leaves. Flowers are white to pale pink in areas of the Sacramento Mountains, but are vivid pink in all the Pecos Valley locations. There are eight general confirmed locations of Wright's marsh thistle in New Mexico: Santa Rosa, Guadalupe County; Bitter Lake National Wildlife Refuge, Chaves County; Blue Spring, Eddy County; La Luz Canyon, Kerr Canyon, Silver Springs, and Tularosa Creek, Otero County; and Alamosa Creek, Socorro County. Wright's marsh thistle has been extirpated from all previously known locations in Arizona, and was misidentified and likely not ever present in Texas. The status of the species in Mexico is uncertain, with few verified collections.

Wright's marsh thistle faces threats primarily from natural and human-caused modifications of its habitat due to ground and surface water depletion, drought, invasion of *Phragmites australis*, and from the inadequacy of existing regulatory mechanisms. The species occupies relatively small areas of seeps, springs, and wetland habitat in an arid region plagued by drought and ongoing and future water withdrawals. The species' highly specific requirements of saturated soils with surface or subsurface water flow make it particularly vulnerable.

Long-term drought, in combination with ground and surface water withdrawal, pose a current and future threat to Wright's marsh thistle and its habitat. In addition, we expect that these threats will likely intensify in the foreseeable future. However, the threats are moderate in magnitude because the majority of the threats (habitat loss and degradation due to alteration of the hydrology of its rare wetland habitat), while serious and

occurring rangewide, do not at this time collectively and significantly adversely affect the species at a population level. All of the threats are ongoing and therefore imminent. Thus, we continue to assign an LPN of 8 to Wright's marsh thistle.

*Dalea carthagenensis* ssp. *floridana* (Florida prairie-clover)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing rule, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

*Dichanthelium hirstii* (Hirst Brothers' panic grass)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Dichanthelium hirstii* is a perennial grass that produces erect, leafy, flowering stems from May to October. The species occurs in coastal plain intermittent ponds, usually in wet savanna or pine barren habitats, and is known to occur at only three sites in New Jersey, one site in Delaware, and two sites in North Carolina. While all six extant *D. hirstii* populations are located on public land, threats to the species from encroachment of woody and herbaceous vegetation, competition from rhizomatous perennials, fluctuations in hydrology, and threats associated with small population number and size are significant. Given the naturally fluctuating number of plants found at each site, and the isolated nature of the wetlands (limiting dispersal opportunities), even small changes in the species' habitat could result in local extirpation. With so few populations, the loss of any known sites would constitute a significant contraction of the species' range and increase the risk of extinction of the species. Because most of the significant threats to *D. hirstii* affect the species over a period of years and, in some cases, are being managed to some extent, the threats are nonimminent. Based on nonimminent threats of a high magnitude, we retain a LPN of 5 for this species.

*Digitaria pauciflora* (Florida pineland crabgrass)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working

on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing determination, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

*Eriogonum soredium* (Frisco buckwheat)—The following summary is based on information in our files and the petition we received on July 30, 2007. Frisco buckwheat is a narrow endemic perennial plant restricted to soils derived from Ordovician limestone outcrops. The range of the species is less than 5 sq mi (13 sq km), with four known populations. All four populations occur exclusively on private lands in Beaver County, Utah, and each population occupies a very small area with high densities of plants. Available population estimates are highly variable and inaccurate due to the limited access for surveys associated with private lands.

The primary threat to Frisco buckwheat is habitat destruction from precious metal and gravel mining. Mining for precious metals historically occurred within the vicinity of all four populations. Three of the populations are currently in the immediate vicinity of active limestone quarries. Ongoing mining in the species' habitat has the potential to extirpate one population in the near future and extirpate all populations in the foreseeable future. Ongoing exploration for precious metals and gravel indicate that mining will continue, but will take time for the mining operations to be put into place. This will result in the loss and fragmentation of Frisco buckwheat populations over a longer time scale. Other threats to the species include nonnative species, vulnerability associated with small population size, and climate change. Existing regulatory mechanisms are inadequate to protect the species from these threats. The threats that Frisco buckwheat faces are moderate in magnitude, because while serious and occurring rangewide, the threats do not significantly reduce populations on a short time scale. The threats are imminent, because three of the populations are currently in the immediate vicinity of active limestone quarries. Therefore, we have assigned Frisco buckwheat an LPN of 8.

*Festuca hawaiiensis* (no common name)—The following summary is based on information contained in our files. No new information was provided

in the petition we received on May 11, 2004. This species is a caespitose (growing in dense, low tufts) annual found in dry forests on Hawaii Island. *Festuca hawaiiensis* is known from four populations collectively totaling approximately 1,000 individuals in and around the Pohakuloa Training Area. Historically, this species was also found on Hualalai and Puu Huluhulu, but it no longer occurs at these sites. In addition, the historical range of *F. hawaiiensis* may have included Maui.

This species is threatened by pigs (*Sus scrofa*), goats (*Capra hircus*), mouflon (*Ovis musimon*), and feral sheep (*O. aries*) that degrade and destroy habitat; fire; military training activities; and nonnative plants that outcompete and displace it. Feral pigs, goats, mouflon, and feral sheep have been fenced out of a portion of the populations of *F. hawaiiensis* and nonnative plants have been reduced in the fenced area, but the majority of the populations are still affected by threats from ungulates. The threats are imminent because they are not controlled and are ongoing in the remaining, unfenced populations. Firebreaks have been established to protect two populations, but fire is an imminent threat to the remaining populations that have no firebreaks. There are no *ex situ* collections. The threats are of a high magnitude because they could adversely affect the majority of *F. hawaiiensis* populations resulting in direct mortality or reduced reproductive capacity which could bring about extinction on a relatively short time scale. Therefore, we have retained an LPN of 2 for this species.

*Festuca ligulata* (Guadalupe fescue)—The following summary is based on information obtained from the original species petition, received in 1975, and from our files, on-line herbarium databases, and scientific publications. Six small populations of Guadalupe fescue, a member of the Poaceae (grass family), have been documented in mountains of the Chihuahuan desert in Texas and in Coahuila, Mexico. Only two extant populations have been confirmed in the last 5 years: One in the Chisos Mountains, Big Bend National Park (BIBE), Texas, and one in the privately owned *Area de Protección de Flora y Fauna* (APFF, Protected Area for Flora and Fauna) Maderas del Carmen in northern Coahuila. Despite intensive searches, a population known from Guadalupe Mountains National Park, Texas, has not been found since 1952, and is presumed extirpated. In 2009, botanists confirmed Guadalupe fescue at one site in APFF Maderas del Carmen, but could not find the species at the

original site, known as Sierra El Jardín, which was first reported in 1973. Two additional Mexican populations, near Fraile in southern Coahuila, and the Sierra de la Madera in central Coahuila, have not been monitored since 1941 and 1977, respectively. A great amount of potentially suitable habitat in Coahuila and adjacent Mexican States has never been surveyed; due to prevailing security issues in northern Mexico. We do not know if or when these sites can be safely monitored. The BIBE site was monitored in September 2013; at that time the total population was estimated to be less than 200 individual plants.

The potential threats to Guadalupe fescue include changes in the wildfire cycle and vegetation structure, trampling from humans and pack animals, possible grazing, trail runoff, fungal infection of seeds, small sizes and isolation of populations, and limited genetic diversity. A historically unprecedented period of exceptional drought and high temperatures prevailed throughout the species' range from October 2010 until November 2011. The Service and the National Park Service established a candidate conservation agreement (CCA) in 2008 to provide additional protection for the Chisos Mountains population and to promote cooperative conservation efforts with U.S. and Mexican partners. The threats to Guadalupe fescue are of moderate magnitude and are not imminent due to the provisions of the CCA and other conservation efforts that address threats from trampling, grazing, trail runoff, and genetic diversity. Thus, we maintained an LPN of 11 for this species.

*Gardenia remyi* (Nanu)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Gardenia remyi* is a tree found in mesic to wet forests on the Hawaiian Islands of Kauai, Molokai, Maui, and Hawaii. *Gardenia remyi* is known from 19 populations collectively totaling between 85 and 87 individuals. This species is threatened by pigs (*Sus scrofa*), goats (*Capra hircus*), and deer (*Axis axis* and *Odocoileus hemionus*), which degrade and destroy habitat and possibly forage upon the species, and by nonnative plants that outcompete and displace it. *G. remyi* is also threatened by landslides and reduced reproductive vigor on the island of Hawaii. This species is represented in *ex situ* collections. On Kauai, *G. remyi* individuals have been outplanted within ungulate-proof exclosures in two locations. Feral pigs have been fenced out of the west Maui populations of *G.*

*remyi*, and nonnative plants have been reduced in those areas. However, these threats are ongoing in the remaining, unfenced populations, and are therefore imminent. In addition, the threat from goats and deer is ongoing and imminent throughout the range of the species, because no goat or deer control measures have been undertaken for any of the populations of *G. remyi*. All of the threats are of a high magnitude, because habitat destruction, predation, and landslides could significantly affect the entire species, resulting in direct mortality or reduced reproductive capacity, leading to a relatively high likelihood of extinction. Therefore, we have retained an LPN of 2 for this species.

*Joinvillea ascendens* ssp. *ascendens* (Ohe)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Joinvillea ascendens* ssp. *ascendens* is an erect herb found in wet to mesic *Metrosideros polymorpha*-*Acacia koa* (ohia-koa) lowland and montane forests on the Hawaiian Islands of Kauai, Oahu, Molokai, Maui, and Hawaii. This subspecies is known from 44 widely scattered populations collectively totaling approximately 200 individuals. Many of the populations, which are widely separated, include only one or two individuals. This subspecies is threatened by destruction or modification of habitat by pigs (*Sus scrofa*), goats (*Capra hircus*), and deer (*Axis axis* and *Odocoileus hemionus*), and by nonnative plants that outcompete and displace native plants. Herbivory by pigs, goats, deer, and rats (*Rattus exulans*, *R. norvegicus*, and *R. rattus*) is a likely threat to this species. Landslides are a potential threat to populations on Kauai and Molokai. Seedlings have rarely been observed in the wild. Seeds germinate in cultivation, but most die soon thereafter. It is uncertain if the apparent low seedling recruitment is typical of this subspecies, or if it is related to habitat disturbance. Feral pigs have been fenced out of a few of the populations of this subspecies, and nonnative plants have been reduced in those populations that are fenced. However, these threats are not controlled and are ongoing in the remaining, unfenced populations. This species is represented in *ex situ* collections. The threats are imminent because they are ongoing and are of high magnitude because habitat degradation, nonnative plants, and predation result in mortality and may severely affect the reproductive capacity of the majority of populations of this species, leading to a

relatively high probability of extinction. Therefore, we have retained an LPN of 3 for this subspecies.

*Kadua* (= *Hedyotis*) *fluviatilis* (Kamapuaa)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Kadua fluviatilis* (formerly *Hedyotis fluviatilis*) is a scandent (climbing) shrub found in mixed shrubland to wet lowland forests on the islands of Oahu and Kauai, Hawaii. This species is known from 11 populations collectively totaling between 400 and 900 individuals. *Kadua fluviatilis* is threatened by pigs (*Sus scrofa*) and goats (*Capra hircus*) that degrade and destroy habitat, and by nonnative plants that outcompete and displace it. Landslides and hurricanes are a potential threat to populations on Kauai. Herbivory by pigs and goats is a likely threat. This species is not represented in an *ex situ* collection. Threats to this species are imminent because they are ongoing, and are of high magnitude, leading to a relatively high likelihood of extinction. Therefore, we have retained an LPN of 2 for this species.

*Lepidium ostleri* (Ostler's peppergrass)—The following summary is based on information in our files and the petition we received on July 30, 2007. Ostler's peppergrass is a long-lived perennial herb in the mustard family that grows in dense, cushion-like tufts. Ostler's peppergrass is a narrow endemic restricted to soils derived from Ordovician limestone outcrops. The range of the species is less than 5 sq mi (13 sq km), with only four known populations. All four populations occur exclusively on private lands in the southern San Francisco Mountains of Beaver County, Utah. Available population estimates are highly variable and inaccurate due largely to the limited access for surveys associated with private lands.

The primary threat to Ostler's peppergrass is habitat destruction from precious metal and gravel mining. Mining for precious metals historically occurred within the vicinity of all four populations. Three of the populations are currently in the immediate vicinity of active limestone quarries, but mining is only currently occurring in the area of one population. Ongoing mining in the species' habitat has the potential to extirpate one population in the near future. Ongoing exploration for precious metals and gravel indicate that mining will continue, but will take time for the mining operations to be put into place. This will result in the loss and fragmentation of Ostler's peppergrass populations over a longer time scale.



Other threats to the species include nonnative species, vulnerability associated with small population size, climate change, and the overall inadequacy of existing regulatory mechanisms. The threats that Ostler's peppergrass faces are moderate in magnitude, because, while serious and occurring rangewide, the threats do not collectively result in significant population declines on a short time scale. The threats are imminent because the species is currently facing them across its entire range. Therefore, we have assigned Ostler's peppergrass an LPN of 8.

*Linum arenicola* (Sand flax)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing determination, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

*Myrsine fosbergii* (Kolea)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Myrsine fosbergii* is a branched shrub or small tree found in lowland mesic and wet forests, on watercourses or stream banks, on the islands of Kauai and Oahu, Hawaii. This species is currently known from 14 populations collectively totaling a little more than 100 individuals. *Myrsine fosbergii* is threatened by feral pigs (*Sus scrofa*) and goats (*Capra hircus*) that degrade and destroy habitat and may forage upon the plant, and by nonnative plants that compete for light and nutrients. This species is represented in an *ex situ* collection. Although there are plans to fence and remove ungulates from the Helemano area of Oahu, which may benefit this species, no conservation measures have yet been taken to protect this species from nonnative herbivores. Feral pigs and goats are found throughout the known range of *M. fosbergii*, as are nonnative plants. The threats from feral pigs, goats, and nonnative plants are imminent and of high magnitude because they are ongoing and they pose a severe threat throughout the limited range of this species leading to a relatively high likelihood of extinction. Therefore, we have retained an LPN of 2 for this species.

*Nothocestrum latifolium* ('Aiea)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Nothocestrum latifolium* is a small tree found in dry to mesic forests on the islands of Kauai, Oahu, Maui, Molokai, and Lanai, Hawaii. *N. latifolium* is known from 17 declining populations collectively totaling fewer than 1,200 individuals. This species is threatened by feral pigs (*Sus scrofa*), goats (*Capra hircus*), and deer (*Axis axis* and *Odocoileus hemionus*) that degrade and destroy habitat and may forage upon it; by nonnative plants that compete for light and nutrients; and by decreased reproductive viability through the loss of pollinators. This species is represented in an *ex situ* collection. Ungulates have been fenced out of four areas where *N. latifolium* currently occurs, hundreds of *N. latifolium* individuals have been outplanted in fenced areas, and nonnative plants have been reduced in some populations that are fenced. However, these ongoing conservation efforts for this species benefit only a few of the known populations. The threats are not controlled and are ongoing in the remaining unfenced populations. In addition, little natural regeneration has been observed in this species. The threats are imminent because they are ongoing and of high magnitude, since they are severe enough to affect the continued existence of the species, leading to a relatively high likelihood of extinction. Therefore, we have retained an LPN of 2 for this species.

*Ochrosia haleakalae* (Holei)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Ochrosia haleakalae* is a tree found in dry to mesic forests, often on lava, on the islands of Hawaii and Maui, Hawaii. This species is currently known from 8 populations collectively totaling between 64 and 76 individuals. *Ochrosia haleakalae* is threatened by fire; by feral pigs (*Sus scrofa*), goats (*Capra hircus*), and cattle (*Bos taurus*) that degrade and destroy habitat and may directly forage upon it; and, by nonnative plants that compete for light and nutrients. This species is represented in *ex situ* collections. Feral pigs, goats, and cattle have been fenced out of one wild and one outplanted population on private lands on the island of Maui and one outplanted population in Hawaii Volcanoes National Park on the island of Hawaii. Nonnative plants have been reduced in

the fenced areas. The threat from fire is of a high magnitude and imminent because no control measures have been undertaken to address this threat that could adversely affect most *O. haleakalae* population sites. The threats from feral pigs, goats, and cattle are ongoing to the unfenced populations of *O. haleakalae*. The threat from nonnative plants is imminent and of a high magnitude to the wild populations on both islands, because it is ongoing and adversely affects the survival and reproductive capacity of the majority of the individuals of this species, leading to a relatively high likelihood of extinction. Therefore, we have retained an LPN of 2 for this species.

*Pinus albicaulis* (Whitebark pine)—The following summary is based on information in our files and in the petition received on December 9, 2008. *Pinus albicaulis* is a hardy conifer found at alpine tree line and subalpine elevations in Washington, Oregon, Nevada, California, Idaho, Montana, and Wyoming, and in British Columbia and Alberta, Canada. In the United States, approximately 96 percent of land where the species occurs is federally owned or managed, primarily by the U.S. Forest Service. *Pinus albicaulis* is a slow-growing, long-lived tree that often lives for 500 and sometimes more than 1,000 years. It is considered a keystone, or foundation, species in western North America, where it increases biodiversity and contributes to critical ecosystem functions.

The primary threat to the species is from disease in the form of the nonnative white pine blister rust and its interaction with other threats. *Pinus albicaulis* also is currently experiencing significant mortality from predation by the native mountain pine beetle. We also anticipate that continuing environmental effects resulting from climate change will result in direct habitat loss for *P. albicaulis*. Models predict that suitable habitat for *P. albicaulis* will decline precipitously within the next 100 years. Past and ongoing fire suppression is also negatively affecting populations of *P. albicaulis* through direct habitat loss. Additionally, environmental changes resulting from changing climatic conditions are acting alone and in combination with the effects of fire suppression to increase the frequency and severity of wildfires. Lastly, the existing regulatory mechanisms are inadequate to address the threats presented above. The threats that face *P. albicaulis* are high in magnitude, because the major threats occur throughout all of the species' range and are having a major population-level

effect on the species. The threats are imminent, because rangewide disease, predation, fire and fire suppression, and environmental effects of climate change are affecting *P. albicaulis* currently and are expected to continue and likely intensify in the foreseeable future. Thus, we have assigned *P. albicaulis* an LPN of 2.

*Platanthera integrilabia* (Correll) Leur (White fringeless orchid)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing rule, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

*Pseudognaphalium* (= *Gnaphalium*) *sandwicensium* var. *molokaiense* (Enaena)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Pseudognaphalium sandwicensium* var. *molokaiense* is a perennial herb found in strand vegetation in dry consolidated dunes on the islands of Molokai and Maui, Hawaii. Historically, this variety was also found on Oahu and Lanai. This variety is known from five populations collectively totaling approximately 200 to 20,000 individuals (depending upon rainfall) in the Moomomi area on the island of Molokai, and from 2 populations of a few individuals at Waiehu dunes and at Puu Kahulianapa on west Maui. *Pseudognaphalium* s. var. *molokaiense* is threatened by feral goats (*Capra hircus*) and axis deer (*Axis axis*) that degrade and destroy habitat and possibly browse upon it, and by nonnative plants that compete for light and nutrients. Potential threats also include collection for cultural use, and off-road vehicles that directly damage plants and degrade habitat. Weed control is conducted for one population on Molokai; however, no conservation efforts have been initiated to date for the other populations on Molokai or for the individuals on Maui. This species is represented in an *ex situ* collection. The ongoing threats from feral goats, axis deer, nonnative plants, collection, and off-road vehicles are of a high magnitude, because no control measures have been undertaken for the Maui population or for the four of the five Molokai populations, and the threats

result in direct mortality or significantly reduce reproductive capacity for the majority of the populations, leading to a relatively high likelihood of extinction. Therefore, we have retained an LPN of 3 for this plant variety.

*Ranunculus hawaiiensis* (Makou)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Ranunculus hawaiiensis* is an erect or ascending perennial herb found in mesic to wet forests dominated by *Metrosideros polymorpha* (ohia) and *Acacia koa* (koa) with scree substrate (loose stones or rocky debris on a slope) on the Hawaiian Islands of Maui and Hawaii. This species is currently known from 6 populations collectively totaling 14 individuals on the island of Hawaii. On Maui, it was historically known from an area in east Maui, but individuals have not been seen at this location since 1995. *Ranunculus hawaiiensis* is threatened by direct predation by feral pigs (*Sus scrofa*), goats (*Capra hircus*), cattle (*Bos taurus*), mouflon (*Ovis musimon*), feral sheep (*O. aries*), and slugs (*Limax maximus*, *Milax gagates*, and *Vaginulus plebeius*); by degradation and destruction of habitat by feral ungulates; and by nonnative plants that compete for light and nutrients. This species is represented in *ex situ* collections, and three populations have been outplanted into protected enclosures; however, feral ungulates and nonnative plants are not controlled in the remaining, unfenced populations. In addition, the threat from introduced slugs is of a high magnitude because slugs occur throughout the limited range of this species and no effective measures have been undertaken to control them or prevent them from predating on the plants which can result in death or reduction in reproductive capacity. Overall, the threats to the species from pigs, goats, cattle, mouflon, feral sheep, slugs, and nonnative plants are imminent and of high magnitude. Therefore, we have retained an LPN of 2 for this species.

*Ranunculus mauensis* (Makou)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Ranunculus mauensis* is an erect to weakly ascending perennial herb found in open sites in mesic to wet forests and along streams on the islands of Maui, Kauai, and Molokai, Hawaii. This species is currently known from 14 populations collectively totaling 198 individuals. *Ranunculus mauensis* is threatened by direct predation by feral pigs (*Sus scrofa*), goats (*Capra hircus*),

mule deer (*Odocoileus hemionus*), axis deer (*Axis axis*), and slugs (*Limax maximus*, *Milax gagates*, and *Vaginulus plebeius*); by habitat degradation and destruction by feral ungulates; and by nonnative plants that compete for light and nutrients. This species is represented in an *ex situ* collection. Feral pigs have been fenced out of one Maui population of *R. mauensis*, and nonnative plants have been reduced in the fenced area. One individual occurs in the Kamakou Preserve on Molokai, managed by The Nature Conservancy. However, ongoing conservation efforts benefit only two populations. The threats are imminent and of high magnitude, since they are severe enough to affect the continued existence of the species, leading to a relatively high likelihood of extinction. Therefore, we have retained an LPN of 2 for this species.

*Rorippa subumbellata* (Tahoe yellow cress)—The following summary is based on information contained in our files and the petition received on December 27, 2000. *Rorippa subumbellata* is a small, branching perennial herb known only from the shores of Lake Tahoe in California and Nevada.

Data collected over the last 25 years generally indicate that species occurrence fluctuates yearly as a function of both lake level and the amount of exposed habitat. Records kept since 1900 show a preponderance of years with high lake levels that would isolate and reduce *R. subumbellata* occurrences at higher beach elevations. From the standpoint of the species, less favorable peak years have occurred almost twice as often as more favorable low-level years. Annual surveys are conducted to determine population numbers, site occupancy, and general disturbance regime. At least within a certain range, the data clearly show that more individuals are present when lake levels are low and fewer when lake levels are high.

Many *Rorippa subumbellata* sites are intensively used for commercial and public purposes, and are subject to various activities such as erosion control, marina developments, pier construction, and recreation. The U.S. Forest Service, California Tahoe Conservancy, and California Department of Parks and Recreation have management programs for *R. subumbellata* that include monitoring, fenced enclosures, and transplanting efforts when funds and staff are available. Public agencies (including the Service), private landowners, and environmental groups collaborated to develop a Conservation Strategy coupled with a Memorandum of



Understanding—Conservation Agreement. The Conservation Strategy, completed in 2003, contains goals and objectives for recovery and survival and a research and monitoring agenda, and serves as the foundation for an adaptive management program. Because of the continued commitments to conservation demonstrated by regulatory and land management agencies participating in the conservation strategy, the threats to *R. subumbellata* from various land uses have been reduced to a moderate magnitude. In high lake level years such as 2011 and 2013, however, recreational use is concentrated within *R. subumbellata* habitat, and we consider this threat in particular to be ongoing and imminent. Therefore, we are maintaining an LPN of 8 for this species.

*Schiedea pubescens* (Maolioli)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Schiedea pubescens* is a reclining or weakly climbing vine found in diverse mesic to wet forests on the Hawaiian Islands of Maui, Molokai, and Hawaii. It is presumed extirpated from Lanai. Currently, this species is known from 8 populations collectively totaling between 30 and 32 individuals on Maui, from 4 populations collectively totaling between 21 and 22 individuals on Molokai, and from 1 population of 4 to 6 individuals on the island of Hawaii. *Schiedea pubescens* is threatened by feral pigs (*Sus scrofa*) and goats (*Capra hircus*) that consume it and degrade and destroy habitat, and by nonnative plants that compete for light and nutrients. Feral ungulates have been fenced out of the population of *S. pubescens* on the island of Hawaii. Feral goats have been fenced out of a few of the west Maui populations of *S. pubescens*. Nonnative plants have been reduced in the populations that are fenced on Maui. However, the threats are not controlled and are ongoing in the remaining unfenced populations on Maui and the four populations on Molokai. Additional fenced areas are planned for the Hawaii Island population at Pohakuloa Training Area. Nonnative feral ungulates and nonnative plants will be controlled within these fenced areas. Fire is a potential threat to the Hawaii Island population. This species is not represented in an *ex situ* collection. Due to the extremely low number of individuals of this species, the ongoing threats from goats and nonnative plants are imminent and of high magnitude. These threats cause mortality and reduced reproductive capacity for the majority of the

populations, leading to a relatively high likelihood of extinction. Therefore, we have retained an LPN of 2 for this species.

*Sicyos macrophyllus* ('Anunu)—We continue to find that listing this species is warranted but precluded as of the date of publication of this notice. However, we are working on a proposed listing determination that we expect to publish prior to making the next annual resubmitted petition 12-month finding. In the course of preparing the proposed listing determination, we are continuing to monitor new information about this species' status so that we can make prompt use of our authority under section 4(b)(7) in the case of an emergency posing a significant risk to the species.

*Solanum conocarpum* (marron bacora)—The following summary is based on information in our files and in the petition we received on November 21, 1996. *Solanum conocarpum* is a dry-forest shrub in the island of St. John, U.S. Virgin Islands. Its current distribution includes eight localities in the island of St. John, each ranging from 1 to 144 individuals. The species has been reported to occur on dry, poor soils. It can be locally abundant in exposed topography on sites disturbed by erosion, areas that have received moderate grazing, and around ridgelines as an understory component in diverse woodland communities. A habitat suitability model suggests that the vast majority of *Solanum conocarpum* habitat is found in the lower elevation coastal scrub forest. Efforts have been conducted to propagate the species to enhance natural populations, and planting of seedlings has been conducted in the island of St. John.

*Solanum conocarpum* is threatened by the lack of natural recruitment, absence of dispersers, fragmented distribution, lack of genetic variation, climate change, and habitat destruction or modification by exotic mammal species. These threats are evidenced by the reduced number of individuals, low number of populations, and lack of connectivity between populations. Overall, the threats are of high magnitude because they are leading to populations declines for a species that already has low population numbers and fragmented distribution; the threats are also ongoing and therefore imminent. Therefore, we assigned a LPN of 2 to *Solanum conocarpum*.

*Solanum nelsonii* (popolo)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Solanum nelsonii* is a sprawling or

trailing shrub found in coral rubble or sand in coastal sites. This species is known from populations on Molokai (approximately 300 individuals), the island of Hawaii (5 individuals), and the northwestern Hawaiian Islands (NWHI), Hawaii. The current populations in the NWHI are found on Kure (unknown number of individuals), Midway (approximately 260 individuals), Laysan (approximately 490 individuals), Pearl and Hermes (unknown number of individuals), and Nihoa (8,000 to 15,000 individuals). On Molokai, *S. nelsonii* is moderately threatened by ungulates which degrade and destroy habitat and which may eat individuals. On Molokai and the NWHI, this species is exposed to threats from nonnative plants that outcompete and displace it. *Solanum nelsonii* is exposed to threats by herbivory by a nonnative grasshopper (*Schistocera nitens*) in the NWHI. On Kure, Midway, Laysan, and Pearl and Hermes in the NWHI, tsunamis are also a potential threat to *S. nelsonii*. This species is represented in *ex situ* collections. Ungulate exclusion fences, routine fence monitoring and maintenance, and weed control protect the population of *S. nelsonii* on Molokai. Limited weed control is conducted in the NWHI. However, the threats are ongoing and are not being controlled in the majority of sites, they are therefore imminent. These threats are of moderate magnitude because of the relatively large number of plants, and the fact that this species is found on more than one island. Therefore, we have retained an LPN of 8 for this species.

*Trifolium friscanum* (Frisco clover)—The following summary is based on information in our files and the petition we received on July 30, 2007. Frisco clover is a narrow endemic perennial herb found only in Utah, with five known populations restricted to sparsely vegetated, pinion-juniper sagebrush communities and shallow, gravel soils derived from volcanic gravels, Ordovician limestone, and dolomite outcrops. The majority (68 percent) of Frisco clover plants occur on private lands, with the remaining plants found on Federal and State lands.

On the private and State lands, the most significant threat to Frisco clover is habitat destruction from mining for precious metals and gravel. Active mining claims, recent prospecting, and an increasing demand for precious metals and gravel indicate that mining in Frisco clover habitats will increase in the foreseeable future, likely resulting in the loss of large numbers of plants. Other threats to Frisco clover include nonnative, invasive species;



vulnerability associated with small population size; and drought associated with climate change. Existing regulatory mechanisms are inadequate to protect the species from these threats. The threats to Frisco clover are moderate in magnitude because, while serious and occurring rangewide, they are not acting independently or cumulatively to have a highly significant negative impact on its survival or reproductive capacity. For example, although mining for precious metals and gravel historically occurred throughout Frisco clover's range, and mining operations may eventually expand into occupied habitats, there are no active mines within the immediate vicinity of any known population. The threats are imminent because the species is currently facing them across its entire range. Therefore, we have assigned Frisco clover an LPN of 8.

#### *Ferns and Allies*

*Cyclosorus boydiae* (no common name)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Cyclosorus boydiae* is a small- to medium-sized fern found in mesic to wet forests along stream banks on the Hawaiian Islands of Oahu and Maui. It has been extirpated from the island of Hawaii. Currently, *C. boydiae* is known from seven populations collectively totaling approximately 400 individuals. This species is threatened by feral pigs that degrade and destroy habitat and may eat this plant, and by nonnative plants that compete for light and nutrients. Feral pigs have been fenced out of the largest population on Maui, and nonnative plants have been reduced in the fenced area. No conservation efforts are under way to alleviate threats to the other two populations on Maui, or the two populations on Oahu. This species is represented in an *ex situ* collection. The threats are imminent because they are ongoing, and of moderate magnitude because pigs no longer threaten the largest population and nonnative plants have been reduced. Therefore, we have retained an LPN of 8 for this species.

*Huperzia stemmermanniae* (Waewaeiole)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Huperzia stemmermanniae* is an epiphytic, pendant clubmoss found in mesic-to-wet *Metrosideros polymorpha*-*Acacia koa* (ohia-koa) forests on the Hawaiian Islands of Maui and Hawaii. Only 3 populations are known, collectively

totaling approximately 20 individuals. The Maui population has not been observed since 1995. *Huperzia stemmermanniae* is threatened by feral pigs (*Sus scrofa*), goats (*Capra hircus*), cattle (*Bos taurus*), and axis deer (*Axis axis*) that degrade and destroy habitat, and by nonnative plants that compete for light, space, and nutrients. *Huperzia stemmermanniae* is also threatened by randomly occurring natural events due to its small population size. One individual at Waikamoi Preserve may benefit from fencing for axis deer and pigs. This species is represented in *ex situ* collections. The threats from pigs, goats, cattle, axis deer, and nonnative plants are imminent and of a high magnitude because they are sufficiently severe to adversely affect the species throughout its limited range, resulting in direct mortality or significantly reducing reproductive capacity and leading to a relatively high likelihood of extinction. Therefore, we have retained an LPN of 2 for this species.

*Microlepia strigosa* var. *mauiensis* (Palapalai)—The following summary is based on information contained in our files. No new information was provided in the petition we received on May 11, 2004. *Microlepia strigosa* var. *mauiensis* is a terrestrial fern found in mesic-to-wet forests. It is currently found on the Hawaiian Islands of Maui, Oahu, and Hawaii in 9 known populations collectively totaling at least 50 individuals. *M. s.* var. *mauiensis* is threatened by feral pigs (*Sus scrofa*) that degrade and destroy habitat, and by nonnative plants that compete for light and nutrients. Pigs have been fenced out of some areas on east and west Maui, Oahu, and on Hawaii, where *M. s.* var. *mauiensis* currently occurs and nonnative plants have been reduced in the fenced areas. However, the threats are not controlled and are ongoing in the remaining unfenced populations on Maui, Oahu, and Hawaii. Therefore, the threats from feral pigs and nonnative plants are imminent. The threats are of a high magnitude because they are sufficiently severe to adversely affect the species throughout its range, resulting in direct mortality or significantly reducing reproductive capacity and leading to a relatively high likelihood of extinction. Therefore, we have retained an LPN of 3 for this plant variety.

#### **Petitions To Reclassify Species Already Listed**

We previously made warranted-but-precluded findings on five petitions seeking to reclassify threatened species to endangered status. The taxa involved in the reclassification petitions are three

populations of the grizzly bear (*Ursus arctos horribilis*), delta smelt (*Hypomesus transpacificus*), and *Sclerocactus brevispinus* (Pariette cactus). Because these species are already listed under the ESA, they are not candidates for listing and are not included in Table 1. However, this notice and associated species assessment forms or 5-year review documents also constitute the findings for the resubmitted petitions to reclassify these species. Our updated assessments for these species are provided below. We find that reclassification to endangered status for one grizzly bear ecosystem population, delta smelt, and *Sclerocactus brevispinus* are all currently warranted but precluded by work identified above (see Findings for Petitioned Candidate Species). We find that uplisting the Selkirk ecosystem population and the Cabinet-Yaak ecosystem population of grizzly bear is no longer warranted; the species remains listed as threatened. One of the primary reasons that the work identified above is considered to have higher priority is that the grizzly bear population, delta smelt, and *Sclerocactus brevispinus* are currently listed as threatened, and therefore already receive certain protections under the ESA. We promulgated regulations extending take prohibitions for wildlife and plants under section 9 to threatened species (50 CFR 17.31 and 50 CFR 17.71, respectively). Prohibited actions under section 9 for wildlife include, but are not limited to, take (*i.e.*, to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in such activity). For plants, prohibited actions under section 9 include removing or reducing to possession any listed plant from an area under Federal jurisdiction (50 CFR 17.61). Other protections that apply to these threatened species even before we complete proposed and final reclassification rules include those under section 7(a)(2) of the ESA, whereby Federal agencies must insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any endangered or threatened species.

Grizzly bear (*Ursus arctos horribilis*)—North Cascades ecosystem population (Region 6)—Since 1990, we have received and reviewed five petitions requesting a change in status for the North Cascades grizzly bear population (55 FR 32103, August 7, 1990; 56 FR 33892, July 24, 1991; 57 FR 14372, April 20, 1992; 58 FR 43856, August 18, 1993; 63 FR 30453, June 4, 1998). In response to these petitions, we

determined that grizzly bears in the North Cascade ecosystem warrant a change to endangered status. In 2014, we continue to find that reclassifying this population as endangered is warranted but precluded and we continue to assign a LPN of 3 for the uplisting of the North Cascades population based on high magnitude threats that are ongoing, thus imminent. However, higher priority listing actions, including court-approved settlements, court-ordered and statutory deadlines for petition findings and listing determinations, emergency listing determinations, and responses to litigation, continue to preclude reclassifying grizzly bears in this ecosystem. Furthermore, proposed rules to reclassify threatened species to endangered are a lower priority than listing currently unprotected species (*i.e.*, candidate species), since species currently listed as threatened are already afforded the protection of the ESA and the implementing regulations. We continue to monitor this population and will change its status or implement an emergency uplisting if necessary.

Grizzly bear (*Ursus arctos horribilis*)—Cabinet-Yaak ecosystem population (Region 6)—Since 1992, we have received and reviewed six petitions requesting a change in status for the Cabinet-Yaak grizzly bear population (57 FR 14372, April 20, 1992; 58 FR 8250, February 12, 1993; 58 FR 43856, August 18, 1993; 58 FR 43856, August 18, 1993; 63 FR 30453, June 4, 1998; 64 FR 26725, May 17, 1999). In response to these petitions, we previously determined that grizzly bears in the Cabinet-Yaak ecosystem warranted a change to endangered status. However, for several years, this population's status has been improving. The population trend has now changed from declining to stable. The U.S. Forest Service has established regulatory mechanisms for motorized access management and attractant storage, and researchers have documented some movement between the Cabinet-Yaak and other populations in Canada. Together, these improvements have reduced the threats to this population. Until the Record of Decision for motorized access management is more fully implemented and we have several more years of a positive population trend, we remain cautious in our interpretation. We conclude that the Cabinet-Yaak ecosystem population continues to face several threats, and retain this population's threatened status, but we no longer find that the population is warranted for uplisting to endangered status (*i.e.*, “on the brink of

extinction”). This constitutes our not-warranted finding on the six uplisting petitions we received.

Grizzly bear (*Ursus arctos horribilis*)—Selkirk ecosystem population (Region 6)—Since 1992, we have received and reviewed four petitions requesting a change in status for individual grizzly bear populations (57 FR 14372, April 20, 1992; 58 FR 8250, February 12, 1993; 58 FR 43856, August 18, 1993; 64 FR 26725, May 17, 1999). In response to these petitions, we previously determined that grizzly bears within the Selkirk ecosystem warranted a change to endangered status but reclassification was precluded by higher priority listing actions. However, improvements to habitat and the institutionalization of those improvements in National Forest Land Management Plans, as well as new information about population size have significantly reduced threats to this population from habitat destruction, and improved the adequacy of regulatory mechanisms. Population estimates indicate that the population is approaching recovery goals of 90 bears, and levels of human-caused mortality have been low in recent years. Additionally, food storage orders have been implemented and some movement between the Selkirk Mountains and other populations in Canada has been documented. However, until there are significant improvements to regulatory mechanisms in Canada, full implementation of motorized access management by the U.S. Forest Service, and improved population connectivity, we remain cautious in our interpretation. We conclude that the Selkirk ecosystem population continues to face several threats and will retain this population's threatened status, but we no longer find that the population is warranted for uplisting to endangered status (*i.e.*, “on the brink of extinction”). This constitutes our not-warranted finding on the four uplisting petitions we received.

Delta smelt (*Hypomesus transpacificus*) (Region 8) (see 75 FR 17667, April 7, 2010, for additional information on why reclassification to endangered is warranted but precluded)—The following summary is based on information contained in our files. In April, 2010 we completed a 12-month finding for delta smelt in which we determined that a change in status from threatened to endangered was warranted, although precluded by other high priority listings. The primary rationale for reclassifying delta smelt from threatened to endangered was the significant declines in delta smelt abundance that have occurred since

2001. Delta smelt abundance, as indicated by the Fall Mid-Water Trawl survey, was exceptionally low between 2004 and 2010, increased during the wet year of 2011, and decreased again to a very low level in 2012.

The primary threats to the delta smelt are direct entrainments by State and Federal water export facilities, summer and fall increases in salinity and water clarity resulting from decreases in freshwater flow into the estuary, and effects from introduced species. Ammonia in the form of ammonium may also be a significant threat to the survival of the delta smelt. Additional potential threats are predation by striped and largemouth bass and inland silversides, entrainment into power plants, contaminants, and small population size. Existing regulatory mechanisms have not proven adequate to halt the decline of delta smelt since the time of listing as a threatened species.

As a result of our analysis of the best available scientific and commercial data, we have retained the recommendation of uplisting the delta smelt to an endangered species with a LPN of 2, based on high magnitude and imminent threats. The magnitude of the threats is high, because the threats occur rangewide and result in mortality at a population level, or significantly reduce the reproductive capacity of the species. Threats are imminent because they are ongoing and, in some cases (*e.g.*, nonnative species), considered irreversible.

*Sclerocactus brevispinus* (Pariette cactus) (Region 6) (see 72 FR 53211, September 18, 2007, and the species assessment form (see ADDRESSES) for additional information on why reclassification to endangered is warranted but precluded)—*Sclerocactus brevispinus* is restricted to clay badlands of the Uinta geologic formation in the Uinta Basin of northeastern Utah. The species is restricted to one population with an overall range of approximately 16 mi by 5 mi in extent. The species' entire population is within a developed and expanding oil and gas field. The location of the species' habitat exposes it to destruction from road, pipeline, and well-site construction in connection with oil and gas development. The species may be collected as a specimen plant for horticultural use. Recreational off-road vehicle use and livestock trampling are additional potential threats. The species is currently federally listed as threatened by its previous inclusion within the species *Sclerocactus glaucus*. The threats are of a high magnitude because any one of the

threats has the potential to severely affect the survival of this species, a narrow endemic with a highly limited range and distribution. Threats are ongoing and, therefore, are imminent. Thus, we assigned an LPN of 2 to this species for uplisting.

#### Current Notice of Review

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

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

Table 1 lists all candidate species, plus species currently proposed for listing under the ESA. We emphasize that in this notice we are not proposing to list any of the candidate species; rather, we will develop and publish proposed listing rules for these species in the future. We encourage State agencies, other Federal agencies, and other parties to give consideration to these species in environmental planning.

In Table 1, the “category” column on the left side of the table identifies the

status of each species according to the following codes:

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

PT—Species proposed for listing as threatened.

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

C—Candidates: Species for which we have on file sufficient information on biological vulnerability and threats to support proposals to list them as endangered or threatened. Issuance of proposed rules for these species is precluded at present by other higher priority listing actions. This category includes species for which we made a 12-month warranted-but-precluded finding on a petition to list. We made new findings on all petitions for which we previously made “warranted-but-precluded” findings. We identify the species for which we made a continued warranted-but-precluded finding on a resubmitted petition by the code “C\*” in the category column (see the *Findings for Petitioned Candidate Species* section for additional information).

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

The third column, “Lead Region,” identifies the Regional Office to which you should direct information, comments, or questions (see addresses under Request for Information at the end of the **SUPPLEMENTARY INFORMATION** section).

Following the scientific name (fourth column) and the family designation (fifth column) is the common name (sixth column). The seventh column provides the known historical range for the species or vertebrate population (for vertebrate populations, this is the historical range for the entire species or subspecies and not just the historical range for the distinct population segment), indicated by postal code abbreviations for States and U.S.

territories. Many species no longer occur in all of the areas listed.

Species in Table 2 of this notice are those we included either as proposed species or as candidates in the previous CNOR (published November 22, 2013, at 78 FR 70104) that are no longer proposed species or candidates for listing. Since November 22, 2013, we listed 33 species, withdrew 3 species from proposed status, and removed 13 species from the candidate list. The first column indicates the present status of each species, using the following codes (not all of these codes may have been used in this CNOR):

E—Species we listed as endangered.

T—Species we listed as threatened.

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

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

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

A—Species that are more abundant or widespread than previously believed and species that are not subject to the degree of threats sufficient that the species is a candidate for listing (for reasons other than that conservation efforts have removed or reduced the threats to the species).

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

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

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

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

N—Species that are not listable entities based on the ESA’s definition of “species” and current taxonomic understanding.

U—Species that are not subject to the degree of threats sufficient to warrant issuance of a proposed listing and therefore are not candidates for listing, due, in part or totally, to conservation efforts that remove or reduce the threats to the species.

X—Species we believe to be extinct.

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



**Request for Information**

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

- (1) Indicating that we should add a species to the list of candidate species;
- (2) Indicating that we should remove a species from candidate status;
- (3) Recommending areas that we should designate as critical habitat for a species, or indicating that designation of critical habitat would not be prudent for a species;
- (4) Documenting threats to any of the included species;
- (5) Describing the immediacy or magnitude of threats facing candidate species;
- (6) Pointing out taxonomic or nomenclature changes for any of the species;
- (7) Suggesting appropriate common names; and
- (8) Noting any mistakes, such as errors in the indicated historical ranges.

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

Region 1. Hawaii, Idaho, Oregon, Washington, American Samoa, Guam, and Commonwealth of the Northern Mariana Islands. Regional Director (TE), U.S. Fish and Wildlife Service, Eastside Federal Complex, 911 NE. 11th Avenue, Portland, OR 97232–4181 (503/231–6158).  
 Region 2. Arizona, New Mexico, Oklahoma, and Texas. Regional

Director (TE), U.S. Fish and Wildlife Service, 500 Gold Avenue SW., Room 4012, Albuquerque, NM 87102 (505/248–6920).

Region 3. Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. Regional Director (TE), U.S. Fish and Wildlife Service, 5600 American Blvd. West, Suite 990, Bloomington, MN 55437–1458 (612/713–5334).

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

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

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

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

Region 8. California and Nevada. Regional Director (TE), U.S. Fish and Wildlife Service, 2800 Cottage Way,

Suite W2606, Sacramento, CA 95825 (916/414–6464).

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

**Public Availability of Comments**

Before including your address, phone number, email address, or other personal identifying information in your submission, be advised that your entire submission—including your personal identifying information—may be made publicly available at any time. Although you can ask us in your submission to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

**Authority**

This notice is published under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Dated: November 18, 2014.

**David Cottingham,**

*Acting Director, Fish and Wildlife Service.*

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

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

Status		Lead region	Scientific name	Family	Common name	Historical range
Category	Priority					
MAMMALS						
PE .....	.....	R3 .....	<i>Myotis septentrionalis</i> ....	.....	Bat, northern long-eared	U.S.A. (AL, AR, CT, DE, DC, FL, GA, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NH, NJ, NY, NC, ND, OH, OK, PA, RI, SC, SD, TN, VT, VA, WV, WI, WY); Canada (AB, BC, LB, MB, NB, NF, NS, NT, ON, PE, QC, SK, YT).
PE .....	3 .....	R1 .....	<i>Emballonura semicaudata rotensis</i> .	Emballonuridae .....	Bat, Pacific sheath-tailed (Mariana Islands sub-species).	U.S.A. (GU, CNMI).
C * .....	3 .....	R1 .....	<i>Emballonura semicaudata semicaudata</i> .	Emballonuridae .....	Bat, Pacific sheath-tailed (American Samoa DPS).	U.S.A. (AS), Fiji, Independent Samoa, Tonga, Vanuatu.

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

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

Status		Lead region	Scientific name	Family	Common name	Historical range
Category	Priority					
C *	6	R2	<i>Tamias minimus atristriatus</i> .	Sciuridae	Chipmunk, Peñasco least.	U.S.A. (NM).
C *	2	R5	<i>Sylvilagus transitionalis</i> ..	Leporidae	Cottontail, New England	U.S.A. (CT, MA, ME, NH, NY, RI, VT).
PT	6	R8	<i>Martes pennanti</i> .....	Mustelidae	Fisher (west coast DPS)	U.S.A. (CA, CT, IA, ID, IL, IN, KY, MA, MD, ME, MI, MN, MT, ND, NH, NJ, NY, OH, OR, PA, RI, TN, UT, VA, VT, WA, WI, WV, WY), Canada.
C *	8	R1	<i>Urocitellus endemicus</i> ....	Sciuridae	Squirrel, Southern Idaho ground.	U.S.A. (ID).
C *	5	R1	<i>Urocitellus washingtoni</i> ..	Sciuridae	Squirrel, Washington ground.	U.S.A. (WA, OR).
C *	9	R1	<i>Arborimus longicaudus</i> ..	Cricetidae	Vole, Red (north Oregon coast DPS).	U.S.A. (OR).
C *	9	R7	<i>Odobenus rosmarus divergens</i> .	Odobenidae	Walrus, Pacific	U.S.A. (AK), Russian Federation (Kamchatka and Chukotka).
PE		R2	<i>Canis lupus baileyi</i> .....	Canidae	Wolf, Mexican gray	U.S.A. (AZ, NM).

## BIRDS

C *	3	R1	<i>Porzana tabuensis</i> .....	Rallidae	Crake, spotless (American Samoa DPS).	U.S.A. (AS), Australia, Fiji, Independent Samoa, Marquesas, Philippines, Society Islands, Tonga.
C *	9	R1	<i>Gallicolumba stairi</i> .....	Columbidae	Ground-dove, friendly (American Samoa DPS).	U.S.A. (AS), Independent Samoa.
PT	3	R5	<i>Calidris canutus rufa</i> .....	Scolopacidae	Knot, red	U.S.A. (Atlantic coast), Canada, South America.
C	2	R1	<i>Gymnomyza samoensis</i>	Meliphagidae	Ma'oma'o	U.S.A. (AS), Independent Samoa.
C *	5	R8	<i>Synthliboramphus hypoleucus</i> .	Alcidae	Murrelet, Xantus's	U.S.A. (CA), Mexico.
C *	2	R2	<i>Amazona viridigenalis</i> ....	Psittacidae	Parrot, red-crowned	U.S.A. (TX), Mexico.
C *	8	R6	<i>Anthus spragueii</i> .....	Motacillidae	Pipit, Sprague's	U.S.A. (AR, AZ, CO, KS, LA, MN, MS, MT, ND, NE, NM, OK, SD, TX), Canada, Mexico.
C *	8	R6	<i>Centrocercus urophasianus</i> .	Phasianidae	Sage-grouse, greater	U.S.A. (AZ, CA, CO, ID, MT, ND, NE, NV, OR, SD, UT, WA, WY), Canada (AB, BC, SK).
PT	3	R8	<i>Centrocercus urophasianus</i> .	Phasianidae	Sage-grouse, greater (Bi-State DPS).	U.S.A. (AZ, CA, CO, ID, MT, ND, NE, NV, OR, SD, UT, WA, WY), Canada (AB, BC, SK).
C *	6	R1	<i>Centrocercus urophasianus</i> .	Phasianidae	Sage-grouse, greater (Columbia Basin DPS).	U.S.A. (AZ, CA, CO, ID, MT, ND, NE, NV, OR, SD, UT, WA, WY), Canada (AB, BC, SK).
PE	2	R6	<i>Centrocercus minimus</i> ...	Phasianidae	Sage-grouse, Gunnison	U.S.A. (AZ, CO, NM, UT).
C *	3	R1	<i>Oceanodroma castro</i> ....	Hydrobatidae	Storm-petrel, band-rumped (Hawaii DPS).	U.S.A. (HI), Atlantic Ocean, Ecuador (Galapagos Islands), Japan.
C *	11	R4	<i>Dendroica angelae</i> .....	Emberizidae	Warbler, elfin-woods	U.S.A. (PR).

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

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

Status		Lead region	Scientific name	Family	Common name	Historical range
Category	Priority					
REPTILES						
C *	8	R3	<i>Sistrurus catenatus</i>	Viperidae	Massasauga (=rattlesnake), eastern.	U.S.A. (IA, IL, IN, MI, MN, MO, NY, OH, PA, WI), Canada.
PE		R1	<i>Emoia slevini</i>	Scincidae	Skink, Slevin's (Guali'ek Halom Tano).	U.S.A. (Guam, Mariana Islands).
PT	3	R4	<i>Pituophis melanoleucus lodingi</i> .	Colubridae	Snake, black pine	U.S.A. (AL, LA, MS).
C *	5	R4	<i>Pituophis ruthveni</i>	Colubridae	Snake, Louisiana pine	U.S.A. (LA, TX).
C *	5	R2	<i>Gopherus morafkai</i>	Testudinidae	Tortoise, Sonoran desert	U.S.A. (AZ, CA, NV, UT).
C *	8	R4	<i>Gopherus polyphemus</i>	Testudinidae	Tortoise, gopher (east-ern population).	U.S.A. (AL, FL, GA, LA, MS, SC).
C *	6	R2	<i>Kinosternon sonoriense longifemorale</i> .	Kinosternidae	Turtle, Sonoyta mud	U.S.A. (AZ), Mexico.
AMPHIBIANS						
C *	9	R8	<i>Rana luteiventris</i>	Ranidae	Frog, Columbia spotted (Great Basin DPS).	U.S.A. (AK, ID, MT, NV, OR, UT, WA, WY), Canada (BC).
C *	8	R8	<i>Lithobates onca</i>	Ranidae	Frog, relict leopard	U.S.A. (AZ, NV, UT).
C *	8	R4	<i>Notophthalmus perstriatus</i> .	Salamandridae	Newt, striped	U.S.A. (FL, GA).
C *	8	R4	<i>Gyrinophilus gulolineatus</i>	Plethodontidae	Salamander, Berry Cave	U.S.A. (TN).
C	3	R2	<i>Hyla wrightorum</i>	Hylidae	Treefrog, Arizona (Huachuca/Canelo DPS).	U.S.A. (AZ), Mexico (Sonora).
C *	2	R4	<i>Necturus alabamensis</i>	Proteidae	Waterdog, black warrior (=Sipsey Fork).	U.S.A. (AL).
FISHES						
C *	8	R2	<i>Gila nigra</i>	Cyprinidae	Chub, headwater	U.S.A. (AZ, NM).
C *	9	R2	<i>Gila robusta</i>	Cyprinidae	Chub, roundtail (Lower Colorado River Basin DPS).	U.S.A. (AZ, CO, NM, UT, WY).
C *	11	R6	<i>Etheostoma cragini</i>	Percidae	Darter, Arkansas	U.S.A. (AR, CO, KS, MO, OK).
C	8	R4	<i>Etheostoma sagitta</i>	Percidae	Darter, Cumberland arrow.	U.S.A. (KY, TN).
PE	2	R5	<i>Crystallaria cincotta</i>	Percidae	Darter, diamond	U.S.A. (KY, OH, TN, WV).
C	2	R4	<i>Etheostoma spilotum</i>	Percidae	Darter, Kentucky arrow	U.S.A. (KY).
C *	8	R4	<i>Percina aurora</i>	Percidae	Darter, Pearl	U.S.A. (LA, MS).
C *	5	R4	<i>Moxostoma</i> sp	Catostomidae	Redhorse, sicklefin	U.S.A. (GA, NC, TN).
C *	3	R8	<i>Spirinchus thaleichthys</i>	Osmeridae	Smelt, longfin (San Francisco bay-delta DPS).	U.S.A. (AK, CA, OR, WA), Canada.
PSAT	N/A	R1	<i>Salvelinus malma</i>	Salmonidae	Trout, Dolly Varden	U.S.A. (AK, WA), Canada, East Asia.
CLAMS						
C *	2	R2	<i>Lampsilis bracteata</i>	Unionidae	Fatmucket, Texas	U.S.A. (TX).
C *	2	R2	<i>Truncilla macrodon</i>	Unionidae	Fawnsfoot, Texas	U.S.A. (TX).
C *	8	R2	<i>Popenaias popei</i>	Unionidae	Hornshell, Texas	U.S.A. (NM, TX), Mexico.
C *	8	R2	<i>Quadrula aurea</i>	Unionidae	Orb, golden	U.S.A. (TX).
C *	8	R2	<i>Quadrula houstonensis</i>	Unionidae	Pimpleback, smooth	U.S.A. (TX).
C *	2	R2	<i>Quadrula petrina</i>	Unionidae	Pimpleback, Texas	U.S.A. (TX).
SNAILS						
C *	8	R4	<i>Elimia melanoides</i>	Pleuroceridae	Mudalia, black	U.S.A. (AL).
C *	2	R4	<i>Planorbella magnifica</i>	Planorbidae	Ramshorn, magnificent	U.S.A. (NC).
C *	2	R1	<i>Ostodes strigatus</i>	Potaridae	Sisi snail	U.S.A. (AS).
PE	2	R1	<i>Samoana fragilis</i>	Partulidae	Snail, fragile tree	U.S.A. (GU, MP).
PE	2	R1	<i>Partula radiolata</i>	Partulidae	Snail, Guam tree	U.S.A. (GU).



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

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

Status		Lead region	Scientific name	Family	Common name	Historical range
Category	Priority					
PE .....	2 .....	R1 .....	<i>Partula gibba</i> .....	Partulidae .....	Snail, Humped tree .....	U.S.A. (GU, MP).
PE .....	2 .....	R1 .....	<i>Partula langfordi</i> .....	Partulidae .....	Snail, Langford's tree .....	U.S.A. (MP).
C* .....	2 .....	R1 .....	<i>Eua zebrina</i> .....	Partulidae .....	Snail, Tutuila tree .....	U.S.A. (AS).
C* .....	11 .....	R2 .....	<i>Pyrgulopsis thompsoni</i> .....	Hydrobiidae .....	Springsnail, Huachuca .....	U.S.A. (AZ), Mexico.
C* .....	11 .....	R2 .....	<i>Pyrgulopsis morrisoni</i> .....	Hydrobiidae .....	Springsnail, Page .....	U.S.A. (AZ).
<b>INSECTS</b>						
C* .....	2 .....	R1 .....	<i>Hylaeus anthracinus</i> .....	Colletidae .....	Bee, Hawaiian yellow-faced.	U.S.A. (HI).
C* .....	2 .....	R1 .....	<i>Hylaeus assimulans</i> .....	Colletidae .....	Bee, Hawaiian yellow-faced.	U.S.A. (HI).
C* .....	2 .....	R1 .....	<i>Hylaeus facilis</i> .....	Colletidae .....	Bee, Hawaiian yellow-faced.	U.S.A. (HI).
C* .....	2 .....	R1 .....	<i>Hylaeus hilaris</i> .....	Colletidae .....	Bee, Hawaiian yellow-faced.	U.S.A. (HI).
C* .....	2 .....	R1 .....	<i>Hylaeus kuakea</i> .....	Colletidae .....	Bee, Hawaiian yellow-faced.	U.S.A. (HI).
C* .....	2 .....	R1 .....	<i>Hylaeus longiceps</i> .....	Colletidae .....	Bee, Hawaiian yellow-faced.	U.S.A. (HI).
C* .....	2 .....	R1 .....	<i>Hylaeus mana</i> .....	Colletidae .....	Bee, Hawaiian yellow-faced.	U.S.A. (HI).
C* .....	5 .....	R8 .....	<i>Hermelycaena</i> [ <i>Lycaena</i> ] <i>hermes</i> .	Lycaenidae .....	Butterfly, Hermes copper	U.S.A. (CA).
PE .....	3 .....	R1 .....	<i>Hypolimnias octocula mariannensis</i> .	Nymphalidae .....	Butterfly, Mariana eight-spot.	U.S.A. (GU, MP).
PE .....	2 .....	R1 .....	<i>Vagrans egistina</i> .....	Nymphalidae .....	Butterfly, Mariana wandering.	U.S.A. (GU, MP).
C* .....	2 .....	R4 .....	<i>Atlantea tulita</i> .....	Nymphalidae .....	Butterfly, Puerto Rican harlequin.	U.S.A. (PR).
C* .....	5 .....	R4 .....	<i>Glyphopsyche sequatchie</i> .	Limnephilidae .....	Caddisfly, Sequatchie .....	U.S.A. (TN).
C .....	5 .....	R4 .....	<i>Pseudanophthalmus insularis</i> .	Carabidae .....	Cave beetle, Baker Station (=insular).	U.S.A. (TN).
C* .....	5 .....	R4 .....	<i>Pseudanophthalmus caecus</i> .	Carabidae .....	Cave beetle, Clifton .....	U.S.A. (KY).
C* .....	11 .....	R4 .....	<i>Pseudanophthalmus colemanensis</i> .	Carabidae .....	Cave beetle, Coleman .....	U.S.A. (TN).
C .....	5 .....	R4 .....	<i>Pseudanophthalmus fowlerae</i> .	Carabidae .....	Cave beetle, Fowler's .....	U.S.A. (TN).
C* .....	5 .....	R4 .....	<i>Pseudanophthalmus frigidus</i> .	Carabidae .....	Cave beetle, icebox .....	U.S.A. (KY).
C .....	5 .....	R4 .....	<i>Pseudanophthalmus tiresias</i> .	Carabidae .....	Cave beetle, Indian Grave Point (= Soothsayer).	U.S.A. (TN).
C* .....	5 .....	R4 .....	<i>Pseudanophthalmus inquisitor</i> .	Carabidae .....	Cave beetle, inquirer .....	U.S.A. (TN).
C* .....	5 .....	R4 .....	<i>Pseudanophthalmus troglodytes</i> .	Carabidae .....	Cave beetle, Louisville .....	U.S.A. (KY).
C .....	5 .....	R4 .....	<i>Pseudanophthalmus paulus</i> .	Carabidae .....	Cave beetle, Noblett's .....	U.S.A. (TN).
C* .....	5 .....	R4 .....	<i>Pseudanophthalmus parvus</i> .	Carabidae .....	Cave beetle, Tatum .....	U.S.A. (KY).
C* .....	8 .....	R1 .....	<i>Megalagrion xanthomelas</i> .	Coenagrionidae .....	Damselfly, orangeblack Hawaiian.	U.S.A. (HI).
PE .....	.....	R1 .....	<i>Ischnura luta</i> .....	Coenagrionidae .....	Damselfly, Rota blue .....	U.S.A. (Mariana Islands).
C .....	2 .....	R8 .....	<i>Ambrysus funebris</i> .....	Naucoridae .....	Naucorid bug (=Furnace Creek), Nevares Spring.	U.S.A. (CA).
C* .....	8 .....	R3 .....	<i>Papaipema eryngii</i> .....	Noctuidae .....	Moth, rattlesnake-master borer.	U.S.A. (AR, IL, KY, NC, OK).
C* .....	11 .....	R2 .....	<i>Heterelmis stephani</i> .....	Elmidae .....	Rifle beetle, Stephan's .....	U.S.A. (AZ).
PT .....	8 .....	R3 .....	<i>Hesperia dacotae</i> .....	Hesperiidae .....	Skipper, Dakota .....	U.S.A. (MN, IA, SD, ND, IL), Canada.
PE .....	2 .....	R3 .....	<i>Oarisma poweshiek</i> .....	Hesperiidae .....	Skipperling, Poweshiek .....	U.S.A. (IA, IL, IN, MI, MN, ND, SD, WI), Canada (MB).
C* .....	5 .....	R6 .....	<i>Capnia arapahoe</i> .....	Capniidae .....	Snowfly, Arapahoe .....	U.S.A. (CO).

TABLE 1—CANDIDATE NOTICE OF REVIEW (ANIMALS AND PLANTS)—Continued  
 [Note: See end of **SUPPLEMENTARY INFORMATION** for an explanation of symbols used in this table]

Status		Lead region	Scientific name	Family	Common name	Historical range
Category	Priority					
C *	5	R6	<i>Lednia tumana</i>	Nemouridae	Stonefly, meltwater lednian.	U.S.A. (MT).
C *	5	R4	<i>Cicindela highlandensis</i>	Cicindelidae	Tiger beetle, highlands ..	U.S.A. (FL).
<b>CRUSTACEANS</b>						
C	8	R5	<i>Stygobromus kenki</i>	Crangonyctidae	Amphipod, Kenk's	U.S.A. (DC).
C *	5	R1	<i>Metabetaeus lohena</i>	Alpheidae	Shrimp, anchialine pool	U.S.A. (HI).
C *	5	R1	<i>Palaemonella burnsi</i>	Palaemonidae	Shrimp, anchialine pool	U.S.A. (HI).
C *	5	R1	<i>Procaris hawaiana</i>	Procarididae	Shrimp, anchialine pool	U.S.A. (HI).
<b>FLOWERING PLANTS</b>						
C *	11	R8	<i>Abronia alpina</i>	Nyctaginaceae	Sand-verbena, Ramshaw Meadows.	U.S.A. (CA).
C *	11	R4	<i>Argythamnia blodgettii</i>	Euphorbiaceae	Silverbush, Blodgett's	U.S.A. (FL).
C *	3	R1	<i>Artemisia borealis</i> var. <i>wormskioldii</i> .	Asteraceae	Wormwood, northern	U.S.A. (OR, WA).
C *	2	R6	<i>Astragalus anserinus</i>	Fabaceae	Milkvetch, Goose Creek	U.S.A. (ID, NV, UT).
C *	8	R6	<i>Astragalus microcymbus</i>	Fabaceae	Milkvetch, skiff	U.S.A. (CO).
C *	8	R6	<i>Astragalus schmolliae</i>	Fabaceae	Milkvetch, Schmoll	U.S.A. (CO).
C *	11	R6	<i>Astragalus tortipes</i>	Fabaceae	Milkvetch, Sleeping Ute	U.S.A. (CO).
C *	8	R6	<i>Boechera (Arabis) pusilla</i>	Brassicaceae	Rockcress, Fremont County or small.	U.S.A. (WY).
PE		R1	<i>Bulbophyllum guamense</i>	Orchidaceae	Cebello halumtano	U.S.A. (Guam, Mariana Islands).
C *	2	R1	<i>Calamagrostis expansa</i>	Poaceae	Reedgrass, Maui	U.S.A. (HI).
C *	11	R8	<i>Calochortus persistens</i>	Liliaceae	Mariposa lily, Siskiyou	U.S.A. (CA, OR).
C *	9	R4	<i>Chamaecrista lineata</i> var. <i>keyensis</i> .	Fabaceae	Pea, Big Pine partridge	U.S.A. (FL).
C *	12	R4	<i>Chamaesyce deltoidea pinetorum</i> .	Euphorbiaceae	Sandmat, pineland	U.S.A. (FL).
C *	9	R4	<i>Chamaesyce deltoidea serpyllum</i> .	Euphorbiaceae	Spurge, wedge	U.S.A. (FL).
C *	6	R8	<i>Chorizanthe parryi</i> var. <i>fernandina</i> .	Polygonaceae	Spineflower, San Fernando Valley.	U.S.A. (CA).
C *	8	R2	<i>Cirsium wrightii</i>	Asteraceae	Thistle, Wright's	U.S.A. (AZ, NM), Mexico.
C	2	R1	<i>Cyanea kauaulaensis</i>	Campanulaceae	No common name	U.S.A. (HI).
PT		R1	<i>Cycas micronesica</i>	Cycadaceae	Fadang	U.S.A. (Guam, Mariana Islands).
C	2	R1	<i>Cyperus neokunthianus</i>	Cyperaceae	No common name	U.S.A. (HI).
C	2	R1	<i>Cyrtandra hematos</i>	Gesneriaceae	Ha'i'wale	U.S.A. (HI).
C *	3	R4	<i>Dalea carthagenensis</i> var. <i>floridana</i> .	Fabaceae	Prairie-clover, Florida	U.S.A. (FL).
PE		R1	<i>Dendrobium guamens</i>	Orchidaceae	No common name	U.S.A. (Guam, Mariana Islands).
C *	5	R5	<i>Dichantherium hirstii</i>	Poaceae	Panic grass, Hirst Brothers'.	U.S.A. (DE, GA, NC, NJ).
C *	5	R4	<i>Digitaria pauciflora</i>	Poaceae	Crabgrass, Florida pine-land.	U.S.A. (FL).
C *	8	R6	<i>Eriogonum soredium</i>	Polygonaceae	Buckwheat, Frisco	U.S.A. (UT).
PE		R1	<i>Eugenia bryanii</i>	Myrtaceae	No common name	U.S.A. (Guam).
C	2	R1	<i>Exocarpos menziesii</i>	Santalaceae	Menzies ballart	U.S.A. (HI).
C *	2	R1	<i>Festuca hawaiiensis</i>	Poaceae	No common name	U.S.A. (HI).
C *	11	R2	<i>Festuca ligulata</i>	Poaceae	Fescue, Guadalupe	U.S.A. (TX), Mexico.
C *	2	R1	<i>Gardenia remyi</i>	Rubiaceae	Nanu	U.S.A. (HI).
PE		R1	<i>Hedyotis megalantha</i>	Rubiaceae	Paudedo	U.S.A. (Guam).
PE		R1	<i>Heritiera longipetiolata</i>	Malvaceae	Ufa-halomtano	U.S.A. (Guam, Mariana Islands).
C *	3	R1	<i>Joinvillea ascendens ascendens</i> .	Joinvilleaceae	'Ohe	U.S.A. (HI).
C *	2	R1	<i>Kadua (=Hedyotis) fluviatilis</i> .	Rubiaceae	Kampua'a	U.S.A. (HI).
C	2	R1	<i>Kadua haupuensis</i>	Rubiaceae	No common name	U.S.A. (HI).
C	2	R1	<i>Labordia lorenciana</i>	Loganiaceae	No common name	U.S.A. (HI).
C	2	R1	<i>Lepidium orbiculare</i>	Brassicaceae	No common name	U.S.A. (HI).
C *	8	R6	<i>Lepidium ostleri</i>	Brassicaceae	Peppergrass, Ostler's	U.S.A. (UT).
C *	5	R4	<i>Linum arenicola</i>	Linaceae	Flax, sand	U.S.A. (FL).

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

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

Status		Lead region	Scientific name	Family	Common name	Historical range
Category	Priority					
PE .....	.....	R1 .....	<i>Maesa walkeri</i> .....	Primulaceae .....	No common name .....	U.S.A. (Guam, Mariana Islands).
C* .....	2 .....	R1 .....	<i>Myrsine fosbergii</i> .....	Myrsinaceae .....	Kolea .....	U.S.A. (HI).
PE .....	.....	R1 .....	<i>Nervilia jacksoniae</i> .....	Orchidaceae .....	No common name .....	U.S.A. (Guam, Mariana Islands).
C* .....	2 .....	R1 .....	<i>Nothocestrum latifolium</i> .....	Solanaceae .....	'Aiea .....	U.S.A. (HI).
C* .....	2 .....	R1 .....	<i>Ochrosia haleakalae</i> .....	Apocynaceae .....	Holei .....	U.S.A. (HI).
PE .....	.....	R1 .....	<i>Phyllanthus saffordii</i> .....	Phyllanthaceae .....	No common name .....	U.S.A. (Guam).
C .....	2 .....	R1 .....	<i>Phyllostegia brevidens</i> .....	Lamiaceae .....	No common name .....	U.S.A. (HI).
C .....	2 .....	R1 .....	<i>Phyllostegia helleri</i> .....	Lamiaceae .....	No common name .....	U.S.A. (HI).
C .....	2 .....	R1 .....	<i>Phyllostegia stachyoides</i> .....	Lamiaceae .....	No common name .....	U.S.A. (HI).
C* .....	2 .....	R6 .....	<i>Pinus albicaulis</i> .....	Pinaceae .....	Pine, whitebark .....	U.S.A. (CA, ID, MT, NV, OR, WA, WY), Canada (AB, BC).
C* .....	8 .....	R4 .....	<i>Platanthera integrilabia</i> ..	Orchidaceae .....	Orchid, white fringeless .....	U.S.A. (AL, GA, KY, MS, NC, SC, TN, VA).
C .....	2 .....	R1 .....	<i>Portulaca villosa</i> .....	Portulacaceae .....	Ihi .....	U.S.A. (HI).
C .....	2 .....	R1 .....	<i>Pritchardia bakeri</i> .....	Arecaceae .....	Lo'ulu (=Lo'ulu lelo) .....	U.S.A. (HI).
C* .....	3 .....	R1 .....	<i>Pseudognaphalium</i> (=Gnaphalium) <i>sandwicensium</i> var. <i>molokaiense</i> .	Asteraceae .....	'Ena'ena .....	U.S.A. (HI).
PE .....	.....	R1 .....	<i>Psychotria malaspiniae</i> ..	Rubiaceae .....	Aplokating-palaoan .....	U.S.A. (Guam).
C* .....	2 .....	R1 .....	<i>Ranunculus hawaiiensis</i> ..	Ranunculaceae .....	Makou .....	U.S.A. (HI).
C* .....	2 .....	R1 .....	<i>Ranunculus mauensis</i> ..	Ranunculaceae .....	Makou .....	U.S.A. (HI).
C* .....	8 .....	R8 .....	<i>Rorippa subumbellata</i> ..	Brassicaceae .....	Cress, Tahoe yellow .....	U.S.A. (CA, NV).
C .....	2 .....	R1 .....	<i>Sanicula sandwicensis</i> ..	Apiaceae .....	No common name .....	U.S.A. (HI).
C .....	2 .....	R1 .....	<i>Santalum involutum</i> .....	Santalaceae .....	No common name .....	U.S.A. (HI).
C .....	3 .....	R1 .....	<i>Schiedea diffusa</i> ssp. <i>diffusa</i> .	Caryophyllaceae .....	No common name .....	U.S.A. (HI).
C* .....	2 .....	R1 .....	<i>Schiedea pubescens</i> .....	Caryophyllaceae .....	Ma'oli'oli .....	U.S.A. (HI).
C .....	2 .....	R1 .....	<i>Sicyos lanceoloides</i> .....	Cucurbitaceae .....	No common name .....	U.S.A. (HI).
C* .....	2 .....	R1 .....	<i>Sicyos macrophyllus</i> .....	Cucurbitaceae .....	'Anunu .....	U.S.A. (HI).
C .....	12 .....	R4 .....	<i>Sideroxylon reclinatum</i> <i>austrofloridense</i> .	Sapotaceae .....	Bully, Everglades .....	U.S.A. (FL).
C* .....	2 .....	R4 .....	<i>Solanum conocarpum</i> .....	Solanaceae .....	Bacora, marron .....	U.S.A. (PR).
PE .....	.....	R1 .....	<i>Solanum guamense</i> .....	Solanaceae .....	Bereng-henas halomtano .....	U.S.A. (Guam, Mariana Islands).
C* .....	8 .....	R1 .....	<i>Solanum nelsonii</i> .....	Solanaceae .....	Popolo .....	U.S.A. (HI).
C .....	3 .....	R1 .....	<i>Stenogyne kaalae</i> ssp. <i>sherffii</i> .	Lamiaceae .....	No common name .....	U.S.A. (HI).
C .....	8 .....	R2 .....	<i>Streptanthus bracteatus</i> ..	Brassicaceae .....	Twistflower, bracted .....	U.S.A. (TX).
PT .....	.....	R1 .....	<i>Tabernaemontana</i> <i>rotensis</i> .	Apocynaceae .....	No common name .....	U.S.A. (Guam, Mariana Islands).
PE .....	.....	R1 .....	<i>Tinospora homosepala</i> ..	Menispermaceae .....	No common name .....	U.S.A. (Guam).
C* .....	8 .....	R6 .....	<i>Trifolium friscanum</i> .....	Fabaceae .....	Clover, Frisco .....	U.S.A. (UT).
PE .....	.....	R1 .....	<i>Tuberolabium guamense</i> ..	Orchidaceae .....	No common name .....	U.S.A. (Guam, Mariana Islands).
C .....	2 .....	R1 .....	<i>Wikstroemia</i> <i>skottsbergiana</i> .	Thymelaeaceae .....	No common name .....	U.S.A. (HI).

## FERNS AND ALLIES

C .....	2 .....	R1 .....	<i>Asplenium diellaciniatum</i> ..	Aspleniaceae .....	No common name .....	U.S.A. (HI).
C* .....	8 .....	R1 .....	<i>Cyclosorus boydiae</i> .....	Thelypteridaceae .....	No common name .....	U.S.A. (HI).
C .....	2 .....	R1 .....	<i>Deparia kaalaana</i> .....	Woodsiaceae .....	No common name .....	U.S.A. (HI).
C .....	3 .....	R1 .....	<i>Dryopteris glabra</i> var. <i>pusilla</i> .	Dryopteridaceae .....	Kilau .....	U.S.A. (HI).
C .....	3 .....	R1 .....	<i>Hypolepis hawaiiensis</i> var. <i>mauiensis</i> .	Dennstaedtiaceae .....	Olua .....	U.S.A. (HI).
C* .....	2 .....	R1 .....	<i>Huperzia</i> (=Phlegmariurus) <i>stemmermanniae</i> .	Lycopodiaceae .....	Wawae'iole .....	U.S.A. (HI).
C* .....	3 .....	R1 .....	<i>Microlepia strigosa</i> var. <i>mauiensis</i> (=Microlepia <i>mauiensis</i> ).	Dennstaedtiaceae .....	Palapalai .....	U.S.A. (HI).
PE .....	3 .....	R4 .....	<i>Trichomanes punctatum</i> <i>floridanum</i> .	Hymenophyllaceae .....	Florida bristle fern .....	U.S.A. (FL).



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

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

Status		Lead region	Scientific name	Family	Common name	Historical range
Code	Expl.					
MAMMALS						
T .....	L .....	R6 .....	<i>Lynx canadensis</i> .....	Felidae .....	Lynx, Canada (New Mexico population).	U.S.A. (CO, ID, ME, MI, MN, MT, NH, NY, OR, UT, VT, WA, WI, WY), Canada.
E .....	L .....	R2 .....	<i>Zapus hudsonius luteus</i>	Zapodidae .....	Mouse, New Mexico meadow jumping.	U.S.A. (AZ, CO, NM).
T .....	L .....	R1 .....	<i>Thomomys mazama glacialis</i> .	Geomyidae .....	Pocket gopher, Roy Prairie.	U.S.A. (WA).
T .....	L .....	R1 .....	<i>Thomomys mazama pugetensis</i> .	Geomyidae .....	Pocket gopher, Olympia	U.S.A. (WA).
T .....	L .....	R1 .....	<i>Thomomys mazama tumuli</i> .	Geomyidae .....	Pocket gopher, Tenino ..	U.S.A. (WA).
T .....	L .....	R1 .....	<i>Thomomys mazama yelmensis</i> .	Geomyidae .....	Pocket gopher, Yelm .....	U.S.A. (WA).
Rc .....	A .....	R6 .....	<i>Cynomys gunnisoni</i> .....	Sciuridae .....	Prairie dog, Gunnison's (populations in central and south-central Colorado, north-central New Mexico).	U.S.A. (CO, NM).
Rp .....	A .....	R6 .....	<i>Gulo gulo luscus</i> .....	Mustelidae .....	Wolverine, North American (Contiguous U.S. DPS).	U.S.A. (CA, CO, ID, MT, OR, UT, WA, WY).
BIRDS						
T .....	L .....	R8 .....	<i>Coccyzus americanus</i> ....	Cuculidae .....	Cuckoo, yellow-billed (Western U.S. DPS).	U.S.A. (Lower 48 States), Canada, Mexico, Central and South America.
Rc .....	A .....	R7 .....	<i>Gavia adamsii</i> .....	Gaviidae .....	Loon, yellow-billed .....	U.S.A. (AK), Canada, Norway, Russia, coastal waters of southern Pacific and North Sea.
T .....	L .....	R2 .....	<i>Tympanuchus pallidicinctus</i> .	Phasianidae .....	Prairie-chicken, lesser ...	U.S.A. (CO, KA, NM, OK, TX).
REPTILES						
T .....	L .....	R2 .....	<i>Thamnophis rufipunctatus</i> .	Colubridae .....	Gartersnake, narrow-headed.	U.S.A. (AZ, NM).
T .....	L .....	R2 .....	<i>Thamnophis eques megalops</i> .	Colubridae .....	Gartersnake, northern Mexican.	U.S.A. (AZ, NM, NV), Mexico.
Rc .....	A .....	R2 .....	<i>Chionactis occipitalis klauberi</i> .	Colubridae .....	Snake, Tucson shovel-nosed.	U.S.A. (AZ).
AMPHIBIANS						
E .....	L .....	R8 .....	<i>Rana muscosa</i> .....	Ranidae .....	Frog, mountain yellow-legged (northern California DPS).	U.S.A (CA, NV).
T .....	L .....	R1 .....	<i>Rana pretiosa</i> .....	Ranidae .....	Frog, Oregon spotted ...	U.S.A. (CA, OR, WA), Canada (BC).
E .....	L .....	R8 .....	<i>Rana sierrae</i> .....	Ranidae .....	Frog, Sierra Nevada yellow-legged frog.	U.S.A. (CA, NV).
T .....	L .....	R2 .....	<i>Eurycea naufragia</i> .....	Plethodontidae .....	Salamander, Georgetown.	U.S.A. (TX).
T .....	L .....	R2 .....	<i>Eurycea chisholmensis</i> ..	Plethodontidae .....	Salamander, Salado .....	U.S.A. (TX).
T .....	L .....	R8 .....	<i>Anaxyrus canorus</i> .....	Bufonidae .....	Toad, Yosemite .....	U.S.A. (CA).
FISHES						
Rc .....	A .....	R6 .....	<i>lotichthys phlegethontis</i>	Cyprinidae .....	Chub, least .....	U.S.A. (UT).
Rc .....	A .....	R6 .....	<i>Thymallus arcticus</i> .....	Salmonidae .....	Grayling, Arctic (upper Missouri River DPS).	U.S.A. (AK, MI, MT, WY), Canada, northern Asia, northern Europe.

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

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

Status		Lead region	Scientific name	Family	Common name	Historical range
Code	Expl.					
E .....	L .....	R2 .....	<i>Notropis oxyrhynchus</i> ....	Cyprinidae .....	Shiner, sharpnose .....	U.S.A. (TX).
E .....	L .....	R2 .....	<i>Notropis buccula</i> .....	Cyprinidae .....	Shiner, smalleye .....	U.S.A. (TX).
E .....	L .....	R2 .....	<i>Catostomus discobolus yarrowi</i> .	Catostomidae .....	Sucker, Zuni bluehead ...	U.S.A. (AZ, NM).
Rc .....	U .....	R2 .....	<i>Oncorhynchus clarki virginalis</i> .	Salmonidae .....	Trout, Rio Grande cut-throat.	U.S.A. (CO, NM).
<b>INSECTS</b>						
E .....	L .....	R4 .....	<i>Strymon acis bartrami</i> ....	Lycaenidae .....	Butterfly, Bartram's scrub-hairstreak.	U.S.A. (FL).
E .....	L .....	R4 .....	<i>Anaea troglodyta floralis</i> .	Nymphalidae .....	Butterfly, Florida leafwing.	U.S.A. (FL).
<b>ARACHNIDS</b>						
Rc .....	N .....	R2 .....	<i>Cicurina wartoni</i> .....	Dictynidae .....	Meshweaver, Warton's cave.	U.S.A. (TX).
<b>FLOWERING PLANTS</b>						
E .....	L .....	R4 .....	<i>Agave eggersiana</i> .....	Agavaceae .....	No common name .....	U.S.A. (VI).
T .....	L .....	R4 .....	<i>Arabis georgiana</i> .....	Brassicaceae .....	Rockcress, Georgia .....	U.S.A. (AL, GA).
Rc .....	A .....	R1 .....	<i>Astragalus cusickii</i> var. <i>packardiae</i> .	Fabaceae .....	Milkvetch, Packard's .....	U.S.A. (ID).
E .....	L .....	R4 .....	<i>Brickellia mosieri</i> .....	Asteraceae .....	Brickell-bush, Florida .....	U.S.A. (FL).
Rc .....	A .....	R8 .....	<i>Eriogonum corymbosum</i> var. <i>nilesii</i> .	Polygonaceae .....	Buckwheat, Las Vegas ..	U.S.A. (NV).
Rc .....	A .....	R8 .....	<i>Eriogonum diatomaceum</i>	Polygonaceae .....	Buckwheat, Churchill Narrows.	U.S.A. (NV).
Rc .....	A .....	R8 .....	<i>Eriogonum kelloggii</i> .....	Polygonaceae .....	Buckwheat, Red Mountain.	U.S.A. (CA).
E .....	L .....	R4 .....	<i>Gonocalyx concolor</i> .....	Ericaceae .....	No common name .....	U.S.A. (PR).
E .....	L .....	R4 .....	<i>Helianthus verticillatus</i> ...	Asteraceae .....	Sunflower, whorled .....	U.S.A. (AL, GA, TN).
T .....	L .....	R8 .....	<i>Ivesia webberi</i> .....	Rosaceae .....	Ivesia, Webber .....	U.S.A. (CA, NV).
E .....	L .....	R4 .....	<i>Leavenworthia crassa</i> ...	Brassicaceae .....	Gladeccress, fleshy-fruit ..	U.S.A. (AL).
T .....	L .....	R4 .....	<i>Leavenworthia exigua</i> var. <i>laciniata</i> .	Brassicaceae .....	Gladeccress, Kentucky ...	U.S.A. (KY).
E .....	L .....	R4 .....	<i>Linum carteri</i> var. <i>carteri</i>	Linaceae .....	Flax, Carter's small-flow-ered.	U.S.A. (FL).
E .....	L .....	R8 .....	<i>Mimulus fremontii</i> var. <i>vandenbergensis</i> .	Phrymaceae .....	Monkeyflower, Vandenberg.	U.S.A. (CA).
Rp .....	A .....	R6 .....	<i>Penstemon grahamii</i> .....	Scrophulariaceae .....	Beardtongue, Graham's	U.S.A. (CO, UT).
Rp .....	A .....	R6 .....	<i>Penstemon scariosus</i> var. <i>albifluvis</i> .	Scrophulariaceae .....	Beardtongue, White River.	U.S.A. (CO, UT).
E .....	L .....	R4 .....	<i>Physaria globosa</i> .....	Brassicaceae .....	Bladderpod, Short's .....	U.S.A. (IN, KY, TN).
Rc .....	A .....	R8 .....	<i>Sedum eastwoodiae</i> .....	Crassulaceae .....	Stoncrop, Red Mountain.	U.S.A. (CA).
Rc .....	U .....	R4 .....	<i>Symphyotrichum georgianum</i> .	Asteraceae .....	Aster, Georgia .....	U.S.A. (AL, FL, GA, NC, SC).
T .....	L .....	R4 .....	<i>Varronia (=Cordia) rupicola</i> .	Boraginaceae .....	No common name .....	U.S.A. (PR), Anegada.

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