DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R4–ES–2010–0092; MO 92210–0–0008–B2]

Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition To List Solanum conocarpum (marron bacora) as Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of 12-month petition finding.

SUMMARY: We, the Fish and Wildlife Service (Service), announce a 12-month finding on a petition to list the plant *Solanum conocarpum* (marron bacora) as endangered under the Endangered Species Act of 1973, as amended (Act). After review of all available scientific and commercial information, we find that listing *S. conocarpum* is warranted. Currently, however, listing *S. conocarpum* is precluded by higher priority actions to amend the Lists of Endangered and Threatened Wildlife and Plants. Upon publication of this 12-month petition finding, we will add *S. conocarpum* to our candidate species list. We will develop a proposed rule to list *S. conocarpum* as our priorities allow. We will make any determination on critical habitat during development of the proposed listing rule. In any interim period, the status of the candidate taxon will be addressed through our annual Candidate Notice of Review (CNOR).

DATES: The finding announced in this document was made on February 22, 2011.

ADDRESSES: This finding is available on the Internet at *http://www.regulations.gov* at Docket Number [FWS–R4–ES–2010–0092]. Supporting documentation we used in preparing this finding is available for public inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Caribbean Ecological Services Field Office, Road 301, Km. 5.1, Boquerón, PR 00622. Please submit any new information, materials, comments, or questions concerning this species or this finding to the above internet address or the mailing address listed under **FOR FURTHER INFORMATION CONTACT.**

FOR FURTHER INFORMATION CONTACT: Ms. Marelisa Rivera, Assistant Field Supervisor, Caribbean Ecological Services Field Office, P.O. Box 491, Boquerón, PR 00622; by telephone at (787) 851–7297; or by facsimile at (787) 851–7440. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Background

Section 4(b)(3)(A) of the Act (16 U.S.C. 1531 *et seq.*) requires that, for any petition to revise the Federal Lists of Threatened and Endangered Wildlife and Plants that contains substantial scientific or commercial information that listing a species may be warranted, we make a finding within 12 months of the date of receipt of the petition. In this finding, we determine whether the petitioned action is: (a) Not warranted, (b) warranted, or (c) warranted, but immediate proposal of a regulation implementing the petitioned action is precluded by other pending proposals to determine whether species are threatened or endangered, and expeditious progress is being made to add or remove qualified species from the Federal Lists of Endangered and Threatened Wildlife and Plants. Section 4(b)(3)(C) of the Act requires that we treat a petition for which the requested action is found to be warranted but precluded as though resubmitted on the date of such finding, that is, requiring a subsequent finding to be made within 12 months. We must publish these 12-month findings in the **Federal Register**.

Previous Federal Actions

On November 21, 1996, we received a petition from the U.S. Virgin Islands (VI) Department of Planning and Natural Resources (DPNR) requesting that we list *Agave eggersiana* and *Solanum conocarpum* as endangered. On November 16, 1998, we published in the **Federal Register** (63 FR 63659) our finding that the petition to list *A. eggersiana* and *S. conocarpum* presented substantial information indicating that the requested action may be warranted and initiated a status review on these two plants.

On September 1, 2004, the Center for Biological Diversity filed a lawsuit against the Department of the Interior and the Service alleging that the Service failed to publish a 12-month finding for *Agave eggersiana* and *Solanum conocarpum* (*Center for Biological Diversity* v. *Norton,* Civil Action No. 1:04–CV–2553 CAP). In a stipulated settlement agreement resolving that case, signed April 27, 2005, we agreed to submit our 12-month finding for *A. eggersiana* and *S. conocarpum* to the **Federal Register** by February 28, 2006. On March 7, 2006, we published our 12-month finding (71 FR 11367) that listing of *A. eggersiana* and *S. conocarpum* was not warranted, because we did not have sufficient information to determine the true status of either *A. eggersiana* or *S. conocarpum* in the wild. Further, we could not determine if either species met the definition of threatened or endangered according to one or more of the five listing factors because we did not have sufficient evidence of which threats, if any, were affecting these species.

On September 9, 2008, the Center for Biological Diversity filed another complaint challenging our 12-month finding (*Center for Biological Diversity* v. *Hamilton,* Case No. 1:08–CV–02830–CAP). In a settlement agreement approved by the Court on August 21, 2009, the Service agreed to submit to the **Federal Register** a new 12-month finding for *Solanum conocarpum* by February 15, 2011. This notice constitutes the 12-month finding on the 1996 petition to list *S. conocarpum* as endangered.

Species Information

Taxonomy and Species Description

Solanum conocarpum is a dry-forest shrub of the Solanaceae, or tomato, family that may attain 3 meters (m) (9.8 feet (ft)) in height. Its leaves are oblong-elliptic or oblanceolate (broader at the distal third than the middle), range in size from 3.5 to 7 centimeters (cm) (0.62 to 1.5 inches (in) wide, are coriaceous (leathery texture) and glabrous (no hairs), and have a conspicuous yellowish midvein. The flowers are usually paired in nearly sessile (not stalked) lateral or terminal cymes (flat-topped flower cluster). The corolla consists of five separate petals that are light violet, greenish at the base, and about 2 cm (0.78 in) wide. The fruit, a berry, is ovoid-conical (teardrop shaped), 2 to 3 cm (0.78 to 1.2 in) long, and turns from green with white striations to golden yellow when ripe (Acevedo-Rodríguez 1996, p. 415). Little is known about the natural history, reproductive biology, and effects of herbivory on the species (Ray and Stanford 2003, p. 3).

The petition suggests that *Solanum conocarpum* might be functionally dioecious (requiring male and female flowers from different plants to outcross). However, P. Acevedo-Rodríguez (pers. comm. 2002) documented flowers and fruits in a solitary wild plant he discovered in the White Cliff area (Reef Bay general area). He further suggested that *S. conocarpum* may have less reproductive fitness due to selfing (self-pollination). Later, Ray and Stanford (2005, p. 5)

conducted some pollination studies in a controlled environment that indicate that the species might be an obligate outcrosser (plant has both male and female parts, but it needs to outcross with other individuals to produce fruits due to self-incompatibility) with complete self-incompatibility. This study was conducted because, prior to 2003, a lack of natural recruitment was observed in the wild (Ray and Stanford 2003, p. 3; J. Saliva, Service, pers. obs. 2004; O. Monsegur, Service, pers. obs. 2010; Vilella and Palumbo 2010, pp. 4–7).

DNA sampling of the majority of the populations suggests that most populations have been long isolated (Ray and Stanford 2005, p. 18). Additionally, genetic work performed by Dr. A. Stanford at the University of the Virgin Islands has shown low heterozygosity (A measure of the allele frequency or genetic diversity) (Ray pers. comm. 2010). Further, when compared with its close relative *Solanum polyganum, Solanum conocarpum* appears to show a significant reduction in genetic diversity (Ray pers. comm. 2010).

Habitat and Distribution

Solanum conocarpum was originally known from a type specimen collected by L.C. Richard at Coral Bay, St. John (U.S. Virgin Islands, or VI), in 1787 (Acevedo-Rodríguez 1996, p. 415). No population estimates are available from Richard's discovery, nor are there any known population estimates prior to 1992. The species was rediscovered in 1992 by P. Acevedo-Rodríguez on the island of St. John (Ray and Stanford 2003, p. 4). The species was presumed to be near extinction, as two mature plants were believed to be the only specimens left in the wild: One on Virgin Islands National Park (VINP) land and one on private land (B. Kojis and R. Boulon pers. comm. 1996; Vilella and Palumbo 2010, p. 1). The habitat descriptions of these two localities are consistent with the localities reported by Acevedo-Rodríguez (1996, p. 415; pers. comm. 2002), who described the habitat as a dry, deciduous forest.

After 1992, six additional populations of *Solanum conocarpum* were identified. Among these newly discovered populations, the species has been reported to occur on dry, poor soils (Ray and Stanford 2005, p. 6). It can be locally abundant in exposed topography on sites disturbed by erosion (depositional zones at the toe of the slopes), areas that have received moderate grazing, and around ridgelines as an understory component in diverse woodland communities (Carper and Ray 2008, p. 1). A habitat suitability model suggests that the vast majority of *S. conocarpum* habitat is found in the lower elevation coastal scrub forest (Vilella and Palumbo 2010, p. 10).

Acevedo-Rodríguez (1996, p. 415) referenced the possibility of the species being present on St. Thomas, and mentioned a collection of a sterile specimen from Virgin Gorda (British Virgin Islands (BVI)). Pedro Acevedo-Rodríguez (pers. comm. 2002) believes that the specimen from Virgin Gorda belongs to a different species, *Cestrum laurifolium.* Omar Monsegur, Service biologist, recently conducted a site visit to the John Folly population and identified several *Cestrum laurifolium* adjacent to individuals of *Solanum conocarpum.* Both plants (*Cestrum laurifolium* and *S. conocarpum*) look very similar, and it is common to confuse the two species (O. Monsegur, pers. comm. 2010). Appropriate surveys should be conducted in St. Thomas and the British Virgin Islands to determine the presence or absence of the species on the islands (O. Monsegur, pers. comm. 2010).

Several efforts have been conducted to propagate *Solanum conocarpum* in the last decade. B. Kojis and R. Boulon (pers. comm. 1996) reported that a local horticulturist, E. Gibney, was able to propagate the species by cuttings (asexually) collected from the two individuals known from the wild and to get them to reproduce sexually by dusting the flowers. Ray and Stanford (2005, p. 6) reported that Gibney successfully reproduced *S. conocarpum* and distributed specimens to various places in the Virgin Islands. P. Acevedo-Rodríguez (pers. comm. 2002) reported planted individuals (cultivars) on the Campus of the University of Virgin Islands in St. Thomas that are sexually reproducing. He also reported a few individuals in the St. George Botanical Garden in St. Croix, on the island of Tortola, at Cannel Bay Hotel on St. John, and in the New York Botanical Garden, the National Botanical Garden in Dominican Republic, and the Puerto Rico Botanical Garden.

Current Status

Currently, *Solanum conocarpum* is known from eight localities on St. John Island, VI (*see* Table 1): Two found on the north side of the island (Base Hill and Brown Bay Trail) and six toward the southeast side (Nanny Point, Friis Bay, Reef Bay, John Folly, Sabbat Point, and Europa Ridge). All of the eight known localities of *S. conocarpum* are wild populations each ranging from 1 to 144 individuals. The majority of the individuals are found within the VINP boundaries, leaving only two populations on private lands (Friis Bay and Sabbat Point).

The largest population of *Solanum conocarpum* is located at Nanny Point. As a result of potential urban and tourism development at Nanny Point, most of the natural population has been transferred to the VINP. About 22 percent of the *S. conocarpum* population at Nanny Point was located within a 30-ft access corridor to a private property (Carper, pers. comm. 2005); however, these adult plants were transplanted to an adjacent location on the VINP to avoid potential impacts from development (Carper, pers. comm. 2010). A site visit to the population in May 2010 showed that approximately 90 percent of the transplanted (adult plants) were dead or stressed due to lack of water (Monsegur, Service, unpublished data 2010). Additionally, observation of other *S. conocarpum* deaths appears to result from competition with edge vegetation (vines). The original population size at Nanny Point was estimated at approximately 184 natural plants. As a result of the combined deaths (transplants and competition), it is now estimated that this population has decreased by 25 percent.

The owners of the private properties that harbor the Nanny Point natural population agreed to protect an additional area corresponding to Parcel 30–3 by donating it to the National Park Service (NPS) (Carper and Selengut 2003, p. 1; Ray and Carper 2009, p. 2). Therefore, the entire Nanny Point population, which is the largest known population, now lies within a protected area managed by the VINP. Additionally, one of the Nanny Point landowners has implemented an active propagation program through germination and cloning of adult individuals to enhance the Nanny Point population and other natural populations (Brown Bay Trail and John Folly) (Ray and Carper 2009, p. 3). The aim of this program is to safeguard the genetic diversity of the species and to enhance the existing populations (Ray and Carper 2009, p. 2; Carper 2010, p. 2). The transplanting efforts of seedlings and cuttings (clones) seem to be successful (Monsegur, Service, unpublished data 2010). Ray and Stanford (2005, p. 3) reported a 95-percent seedling survival rate after a reintroduction at Reef Bay. Further planting efforts conducted at Brown Bay Trail, John Folly, and Nanny Point showed a 97-percent survival rate after 2 months (Ray and Carper 2009, p. 5).

Populations located on Base Hill (one individual), Brown Bay Trail (one

individual), Europa Ridge (one individual) and Reef Bay (six individuals) lie within NPS lands. Recent evidence suggests that the Reef Bay population was apparently extirpated, but there are no further details about the causes for the extirpation (G. Ray, pers. comm. 2010). The Brown Bay individual is located on the edge of the Brown Bay Trail, and shows evidence of damage due to trail maintenance. A new population was recently recorded just along the boundaries of the NPS (John Folly Bay) (M. Carper, pers. comm. 2010). This population is composed of approximately 11 adult individuals and shows signs of human disturbance within the area (Monsegur, Service, unpublished data 2010). It is highly probable that they were pruned in the past, as there is a small trail that goes across the population. Also the area was used as a junkyard in the past, and there is debris on the area indicating former use as a housing area (Monsegur, Service, unpublished data 2010). The John Folly Bay population is adjacent to Road 107, making the population vulnerable to habitat degradation (deforestation and soil erosion) due to road maintenance and potential future road expansion. The second largest population, Friis Bay (33 individuals), is found on privately owned property (Ray and Stanford 2005, p. 16). Another private property site composed of a single individual is located on Sabbat Point, an area adjacent to Friis Bay.

Ray and Stanford (2003, p. 4) developed an implementation plan to conduct shade-house propagation, which used both seedlings and cuttings, to reintroduce *Solanum conocarpum* seedlings within the VINP on St. John. The plants responded well in shade-house conditions, where seed germination and survivorship have been very successful, almost 100 percent and 95 percent, respectively. On the other hand, the survival rate for the cutting technique (cutting a piece of a plant and inducing root growth) is less than 10 percent under nursery conditions (Ray and Carper 2009, p. 6). As observed during a site visit by a Service biologist, the transplanting of seedlings and cuttings to the wild seems to be successful (Monsegur, Service, unpublished data 2010). Approximately 240 seedlings and propagules have been planted around several of the wild individuals to enhance and augment the natural populations of *S. conocarpum* (providing new genetic inflow to several of the wild populations, especially to the populations consisting of only one individual).

TABLE 1—CURRENTLY KNOWN POPULATIONS OF SOLANUM CONOCARPUM (MARRON BACORA) ON ST. JOHN

Locality	Estimated number of individuals in natural population	Estimated number of introduced individuals reported	Ownership	Source of information
Nanny Point	144**	50	Public–NPS	Ray and Stanford 2005, p. 16; Ray and Carper 2009, pp. 3 and 5; Vilella and Palumbo 2010, p. 1; Monsegur, Service, pers. obs. 2010.
Friis Bay	33		Private	Ray and Stanford 2005, p. 16.
John Folly	11	37	Public–NPS (Boundary)	Ray and Carper 2009, pp. 3 and 5; Monsegur, Service, pers. obs. 2010; Vilella and Palumbo 2010, p. 6.
Reef Bay	6*	60	Public–NPS	Ray and Stanford 2005, p. 16; Monsegur, Service, pers. obs. 2010.
Brown Bay Trail	1	36	Public–NPS	Ray and Stanford 2005, p. 16; Ray & Carper 2009, pp. 3 and 5; Monsegur, Service, pers. obs. 2010.
Europa Ridge	1	60	Public–NPS	Ray and Stanford 2005, p. 16; Monsegur, Service, pers. obs. 2010.
Sabbat Point	1		Private	Ray and Stanford 2005, p. 16.
Base Hill	1		Public–NPS	Ray and Stanford 2005, p. 16.
	198	243		

* Indicates that, based on Ray (pers. comm. 2010), this population is probably extirpated.
** This number does not include the 40 adult plants that died as a result of translocation.

Summary of Information Pertaining to the Five Factors

Section 4 of the Act (16 U.S.C. 1533), and implementing regulations (50 CFR 424), set forth procedures for adding species to the Federal Lists of Endangered and Threatened Wildlife and Plants. Under section 4(a)(1) of the Act, a species may be determined to be endangered or threatened based on any of the following five factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. In making this finding, information pertaining to *Solanum conocarpum,* in relation to the five factors provided in section 4(a)(1) of the Act, is discussed below.

In considering what factors might constitute threats to a species; we must look beyond the exposure of the species to a factor to evaluate whether the species may respond to the factor in a way that causes actual impacts to the species. If there is exposure to a factor and the species responds negatively, the factor may be a threat, and we would therefore attempt to determine how

significant a threat it is. The threat is significant if it drives, or contributes to, the risk of extinction of the species such that the species warrants listing as endangered or threatened as those terms are defined in the Act.

Factor A: The Present or Threatened Destruction, Modification, or Curtailment of the Species' Habitat or Range

Of the currently known *Solanum conocarpum* populations, only two populations (Friis Bay and Sabbat Point) remain on private lands; however, currently unsurveyed habitat suitable for *S. conocarpum,* exists on additional private lands. All other known populations are located on VINP lands. The populations that occur on private lands as well as the ones bordering the VINP are subject to intense pressure from urban development (Vilella and Palumbo 2010, p. 1). At present time, the upper slopes and the drainage areas that surround the largest population (Nanny Point) are privately owned. These private lands are planned for housing development and have been divided for smaller housing lots that are currently advertised for sale (Carper and Selengut 2003, p. 1; Ray and Carper 2009, p. 2). The same pattern (private lands divided for housing lots) is observed at the Johns Folly drainage (Monsegur, pers. obs. 2010), where small housing developments may jeopardize undetected populations. In addition, habitat suitability models conducted by Vilella and Palumbo (2010, p. 7) indicate that a good portion of the high-quality (39 percent) and moderate quality (38 percent) habitat for *S. conocarpum* is located within private lands subject to urban development. The relative abundance of the species at some sites (Nanny Point and Friis Bay) may indicate that the species was once more common and that it was an important component of the vegetation of the dry forest of St. John. Even though the majority of the known populations lie within federally protected areas, the likely destruction or modification of the high-quality habitat within St. John may imply the extirpation of undetected populations and the irreversible damage to areas with suitable habitat for the reintroduction of the species.

Based on the above information, we consider the present or threatened destruction, modification, or curtailment of the species' habitat or range as a low-to-moderate, not imminent threat to populations of *Solanum conocarpum.* Despite the majority of known *S. conocarpum* individuals occurring within protected areas, a large part of the suitable habitat for the species is under pressure from future development, which could result in the extirpation of unknown populations.

Factor B: Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

The current available information on the species does not suggest that over-utilization for commercial, recreational, scientific, or educational purposes has contributed to a decline of *Solanum conocarpum.* In recent years, *S. conocarpum* has been propagated from seeds and cuttings obtained from wild populations; however, collection for these purposes is not thought to affect survivability of individuals or negatively affect the status of the species. In fact, this practice has significantly enhanced the existing populations, and continues to safeguard the genetic diversity of the species (Ray and Stanford 2005, p. 3; Ray and Carper 2009, p. 2). This is the only known use of the species, and it is strictly for scientific purposes. Therefore, we do not have any evidence that suggests overutilization as a threat to *S. conocarpum.*

Factor C: Disease or Predation

It has been hypothesized that hermit crabs act as predators of the fruits and seeds of *Solanum conocarpum* (Ray 2005, p. 2). Hermit crabs have been observed feeding on the fruit where shrub densities are high (Ray and Carper, 2008, p. 1; Ray, 2005, p. 2). Fruit and seed production in the Nanny Point and John Folly populations has been reported as ample and copious (Ray 2005, p. 6; Carper, pers. comm. 2010). While hermit crabs may consume fallen fruit in large quantities (Ray 2005, p. 2), it is not known at this time if fruit consumption prevents seed germination (*e.g.,* potentially crushing seed embryos as the crabs feed), or if this consumption is in any way responsible for the lack of seedling recruitment in the wild. Another observation of *S. conocarpum* predation was reported by Vilella and Palumbo (2010, p. 14) and was presumed to be by insects feeding on the leaves. This observation concurs with the reports by Ray and Stanford (2005, p. 15) indicating bite marks of an herbivore insect on *S. conocarpum* leaves. Nevertheless, there is no clear evidence indicating that seed or plant predation is adversely affecting the status of the species. Based on the above, we do not consider disease or predation as a current threat to the species.

Factor D: The Inadequacy of Existing Regulatory Mechanisms

The Territory of the U.S. Virgin Islands currently considers *Solanum conocarpum* to be endangered under the Virgin Islands Indigenous and Endangered Species Act (V.I. Code, Title 12, Chapter 2), and has amended an existing regulation (Bill No. 18–0403) to provide for protection of endangered and threatened wildlife and plants by prohibiting the take, injury, or possession of indigenous plants. However, Rothenberger *et al.* (2008, p. 68) mentioned that the lack of management and enforcement capacity continues to be a significant challenge for the U.S. Virgin Islands, since enforcement agencies are chronically understaffed and territorial resource management offices experience significant staff turnover. Despite this, however, we do not consider the inadequacy of Territorial regulatory mechanisms to be a threat, because at this time we have not identified any adverse effect to the populations or the species related to collection or take of *S. conocarpum.*

The National Park Service, under its Organic Act, is responsible for managing the national parks to conserve the scenery and the natural and historic objects and the wildlife. 16 U.S.C. 1. The National Parks Omnibus Management Act of 1998 requires the NPS to inventory and monitor its natural resources. 16 U.S.C. 5934. NPS has implemented its resource management responsibilities through its Management Policies, Section 4.4, which states that "it will maintain as parts of the natural ecosystems of parks all plants and animals native to park ecosystems."

Section 207 of the Omnibus Management Act of 1998 allows NPS to withhold from the public information related to the nature and specific location of endangered, threatened, or rare species unless disclosure would not create an unreasonable risk of harm to the species. 16 U.S.C. 5937.

Pursuant to many of these authorities, VINP does not allow cutting of vegetation and all natural resource activities must be permitted by the park (Boulon, pers. comm. 2010).

In short, we do not consider the inadequacy of Federal regulatory mechanisms to be a threat to the populations of *S. conocarpum* located in VINP. The regulatory mechanisms discussed above allow NPS to prevent collection or take of *S. conocarpum* on NPS property. Furthermore, we do not consider development outside VINP to

be a threat to *S. conocarpum* populations inside VINP.

Factor E: Other Natural or Manmade Factors Affecting the Continued Existence of the Species

Human-Induced Fires

In the Caribbean, native plant species, particularly endemics with limited distribution, may be vulnerable to natural or manmade events such as hurricanes and human-induced fires. Fire is not a natural component of subtropical dry forest in Puerto Rico and the Virgin Islands; thus, most species found in this type of forest are not fire adapted (Monsegur 2009, p. 26). *Solanum conocarpum* is associated with lower elevation dry forests. This habitat may be susceptible to forest fires, particularly on private lands, where fire could be accidentally ignited. Furthermore, regenerating forests, such as the ones prevalent in St. John, are prone to wildfires that promote a decrease in the stature of the vegetation and allow for the development of persistent shrubland dominated by introduced tree species and grasses (Wiley and Vilella 1998, p. 340). Studies conducted within the Guánica Forest in southern Puerto Rico indicate that some exotic tree species can remain as a dominant canopy species for at least 80 years (Wolfe 2009, p. 2). Given the growth habit of *S. conocarpum,* it is unlikely that mature individuals would survive a fire even of moderate intensity (Vilella and Palumbo 2010, p. 15), and, therefore, the species might be outcompeted by exotics. However, a site visit to St. John to evaluate the threats to the species, found no substantial evidence that fires posed as an imminent threat to the species (Monsegur, pers. obs. 2010). The only site that is vulnerable to fires is the John Folly site, due to its proximity to a road and the accumulation of debris associated with a former house (Monsegur, pers. obs. 2010). In addition, the VINP has a fire prevention plan that includes the protection of native species, including *S. conocarpum.* Therefore, we conclude that this species is not currently threatened by human-induced fires.

Hurricanes and Climate Change

Hurricanes frequently affect the islands of the Caribbean. Successional responses to hurricanes can influence the structure and composition of plant communities in the Caribbean islands (Van Bloem *et al.* 2005, p. 576). Within natural conditions, it is likely that *Solanum conocarpum* is well adapted to these tropical storms. However, the cumulative effect of severe tropical storms and increased sediment runoff may jeopardize the establishment of seedlings along drainage areas usually associated with suitable habitat for *S. conocarpum* (Ray 2005, p. 2; Monsegur, pers. obs. 2010). Due to the low number of adult individuals and the problems regarding the natural recruitment of the species, severe tropical storms may have an adverse impact on the species. However, based on the available information, we consider hurricanes as a low and not imminent threat to the species.

Solanum conocarpum may be further threatened by climate change, which is predicted to increase the frequency and strength of tropical storms and can cause severe droughts (Hopkinson *et al.* 2008, p. 260). The cumulative effect of coastal erosion due to severe hurricanes plus the habitat modification for urban and tourist development can further diminish the availability of suitable habitat and, therefore, limit population expansion and colonization of new areas. In addition, the possibility of severe droughts may contribute to an increase in the quantity and frequency of fires on the island. These cumulative factors may reduce the number of individuals and further reduce populations. As a result, we consider the threat of climate change to be moderate and imminent. We do not anticipate any changes that would appreciably reduce this threat in the foreseeable future.

Lack of Natural Recruitment

Lack of natural recruitment represents one of the major threats to the *Solanum conocarpum.* Based on the structure of the populations of Nanny Point and John Folly, these populations are predominantly composed of old individuals. This is also true for the Brown Bay Trail individual. Seedling and sapling stages are missing in these populations, and old individuals are dying due to competition with other species such as vines. Without natural recruitment or successful augmentation from captive propagated individuals, these populations are likely to become extirpated as older *S. conocarpum* individuals die. Despite the efforts to enhance the natural populations by planting seedlings and saplings, it is unknown if the planted individuals will develop as mature plants capable of reproduction. Flowering or fruit production of individuals planted in the wild has not been reported to date. Additionally, the structure of the existing wild population indicates that they are mostly composed of old individuals (Monsegur, pers. obs. 2010). Hermit crab consumption of fruit is currently the only factor suspected in the lack of natural recruitment; however, as both species coevolved in the same habitat, this consumption is unlikely to explain the complete lack of recruitment. Plant sterility is also not a viable theory for the lack of recruitment, as germination under greenhouse conditions is highly successful, with almost 100-percent germination (Ray and Stanford, 2005, p. 6). Although the cause of *Solanum conocarpum's* unsuccessful recruitment is unknown, it is not the only species within the Solanaceae family facing this threat. Matabuey (*Goetzea elegans*) is an example of another species endemic to the Caribbean that shows a conspicuous flowering with showy fruits, but faces problems with its dispersion and recruitment. Similar to *Solanum conocarpum,* matabuey shows an outstanding germination under greenhouse conditions. Based on the above, we consider lack of natural recruitment as a high and imminent threat to the species.

Reproductive Biology

The nature of the relationships between *Solanum conocarpum* and the different pollinators and seed dispersers that have interacted with this species over its evolutionary history is important to consider. Controlled pollination studies concluded that this species is an obligate outcrosser (reproduction requires pollen from another plant) with complete self-incompatibility (Ray and Stanford 2005, p. 5). As plant populations become reduced and spatially segregated, important life-history needs provided by pollinators and seed dispersers may be compromised (Kearns and Inouye 1997, p. 299). It is possible that the natural fruit dispersers of *S. conocarpum* focused on other food sources as the populations of this shrub became increasingly patchy, due to changes in the structure and composition of the vegetation because of deforestation and introduction of exotic plant species. The absence of a fruit disperser may indicate that the disperser of a species is extinct or that the populations are too small to attract the disperser (Roman, 2006, p. 50). The loss of potential breeding partners, reduction or loss of pollinators, and the loss of seed dispersers are examples of negative impacts due to habitat fragmentation (Kearns and Inouye 1997, p. 299; Murren 2002, p. 101). As an obligate outcrosser, *S. conocarpum* encounters another challenge, in that isolated and relic individuals may no longer reproduce unless enhancement and

artificial propagation projects are conducted. We consider the absence of natural dispersion to be a high and imminent threat.

Genetic Variation

Along with a decreasing population size, negative impacts of habitat fragmentation may result in erosion of genetic variation through the loss of alleles by random genetic drift (Honnay and Jacquemyn, 2007, p. 824). Habitat fragmentation may also limit the ability of a species to respond to a changing environment (Booy *et al.* 2000, p. 385). Research conducted on *Solanum conocarpum* shows a reduction in its genetic diversity (Ray and Stanford 2005, p. 18). The population with the greatest genetic diversity is the one located at Nanny Point, which also has the largest number of individuals. In addition to attempts to safeguard the genetic diversity of the species, the survival of reintroduced individuals needs to be monitored, as well as their development into mature individuals capable of contributing to the natural recruitment of the species. Consequently, the protection and monitoring of known adult individuals should be considered as a high priority for the conservation of the species. Based on the above, we consider the lack of genetic variation as a moderate but imminent threat to the species.

Nonnative Species

Exotic mammal browsers are found throughout the range of *Solanum conocarpum* on St. John Island. These include feral goats (*Capra aegagrus hircus*), pigs (*Sus scrofa*), Key deer (*Odocoileus virginianus clavium*), and donkeys (*Equus asinus*) (Vilella and Palumbo 2010, p. 5; Monsegur, pers. obs. 2010). Feral donkeys, pigs, deer, and goats could directly and indirectly affect *S. conocarpum* populations by uprooting and eating seedlings, destabilizing slopes, and dispersing exotic plant species, thus preventing or reducing sustainability of populations of *S. conocarpum.* However, the extent of such threats to the species is "speculative" (NPS 2003, p. 37) and "imprecise" (NPS 2004, p. 43). There is no available information on the role these exotic species may play as a limiting factor to *S. conocarpum* population dynamics in general, and to recruitment in particular (Schemske *et al.* 1994, p. 592). VINP is implementing plans to control the populations of nonnative feral hogs, goats, and sheep within VINP (NPS 2003, 2004). Feral hog populations in VINP are low, and reduction efforts have been targeted to problem areas such as Reef Bay Valley (NPS 2008, p. 2).

However, hogs continue to be a problem at the Reef Bay area as they uproot the vegetation searching for food and water (Monsegur, Service, unpublished data 2010). The Service conducted a field assessment that confirmed the presence of exotic mammal species within *Solanum conocarpum* habitat, and which highlighted the abundance of the Key deer and herds of feral goats (Monsegur, Service, unpublished data 2010). The observations by Monsegur (2010) coincide with reports of a high abundance of key deer within the range of *S. conocarpum* by Ray and Stanford (2005, p. 19), and also with reports from the NPS that describe deer populations as increasing (NPS 2008, p. 4). Despite the reports of the intrusion of free-roaming ungulates within *S. conocarpum* natural populations (Ray and Stanford, 2005, p. 5), there is a lack of information regarding the specific adverse effects of these exotic animals on the species. It is expected that, due to their abundance, exotic mammal species are modifying the structure of the vegetation and, therefore, the environmental conditions on these areas. This may imply changes to microhabitat conditions that are necessary for seed germination and seedling recruitment of *S. conocarpum.* Apparently, the distribution of the species seems to be more correlated with abiotic or environmental factors, than with composition or structure of the vegetation, as *S. conocarpum* shows little fidelity to any particular suite of community associates (Ray and Stanford 2005, p. 5).

At this time, there is no clear evidence that donkeys, deer, pigs, or goats constitute a specific threat to *Solanum conocarpum* by feeding on young or adult, wild or reintroduced individuals, and fruits of the species. However, the impacts of introduced herbivores on the species include modifying the structure of the vegetation and the environmental conditions in which *S. conocarpum* evolved and that are required for their natural recruitment. Based on the above, we consider the effects of ungulates as a moderate but imminent threat to the species.

In summary, we consider that *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, any or all of which may result in an increased risk of genetic drift. Thus, we consider threats under this factor to be high in magnitude and imminent.

Finding

As required by the Act, we conducted a review of the status of the species and considered the five factors in assessing whether *Solanum conocarpum* is threatened or endangered throughout all or a significant portion of its range. We examined the best scientific and commercial information available regarding the past, present, and future threats faced by the species. We reviewed the petition, information available in our files, and other available published and unpublished information; consulted with species and habitat experts and other Federal and State agencies; and conducted field surveys on the island of St. John.

This status review identified threats to the species attributable to Factors A and E. Of the currently known eight populations, two are located on private lands, and six are located in the Virgin Islands National Park System. Habitat modification may result in irreversible damage to the species' natural habitat, decreasing the number of individuals in already small populations. In addition, the current sale of private housing lots adjacent to currently known populations may suggest future urban developments that could lead to the extirpation of unknown populations (see Factor A).

Solanum conocarpum is also threatened by the lack of natural recruitment, absence of dispersers, fragmented distribution, lack of genetic variation, and habitat destruction or modification by exotic mammal species. These threats are evidenced by the predominance of old individuals in the populations, reduced number of individuals, low number of populations, and lack of connectivity between populations, any or all of which may result in an increased risk of genetic drift. Furthermore, four of the currently known localities consist of a single individual, which may not be sustainable, as the species has been identified as an obligate outcrosser. One natural population has been reported as extirpated, the largest population has suffered a reduction of approximately 25 percent of the natural individuals, and low genetic variability has been reported for the species. In addition, the abundance of feral animals may modify the structure of vegetation and may change the conditions necessary for

seed germination or seedling recruitment (see Factor E).

The Service does not have any substantial evidence to suggest that overutilization (Factor B), predation or disease (Factor C) or inadequacy of regulatory mechanisms (Factor D) is a threat for *Solanum conocarpum* at this time.

On the basis of the best scientific and commercial information available, we find that listing *Solanum conocarpum* is warranted. We will make a determination on the status of the species as threatened or endangered when we develop a proposed listing determination. However, as explained in more detail below, an immediate proposal of a regulation implementing this action is precluded by higher priority listing actions, and the need to make progress on adding or removing already qualified species from the Lists of Endangered and Threatened Wildlife and Plants.

We reviewed the available information to determine if the existing and foreseeable threats render the species at risk of extinction now such that issuing an emergency regulation temporarily listing the species under section 4(b)(7) of the Act is warranted. We determined that issuing an emergency regulation temporarily listing this species is not warranted at this time, since approximately 198 individuals in natural populations are known to occur in 8 localities where the majority of the individuals (86 percent) are located within protected areas (Table 1). However, if at any time we determine that issuing an emergency regulation temporarily listing the species is warranted, we will initiate this action at that time.

Listing Priority Number

The Service adopted guidelines on September 21, 1983 (48 FR 43098), to establish a rational system for utilizing available resources for the highest priority species when adding species to the Lists of Endangered or Threatened Wildlife and Plants or reclassifying species listed as threatened to endangered status. The system places greatest importance on the immediacy and magnitude of threats, but also factors in the level of taxonomic distinctiveness by assigning priority in descending order to monotypic genera, full species, and subspecies (or equivalently, distinct population segments of vertebrates).

Using this guidance, we assign each candidate an LPN of 1 to 12, depending on the magnitude of threats (high vs. 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, distinct population segment, or significant portion of the range)). 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).

Under the Service's guidelines, the magnitude of threat is the first criterion we look at when establishing a listing priority. The guidance indicates that species with the highest magnitude of threat are those species facing the greatest threats to their existence. These species receive the highest listing priority. We consider the threats to *Solanum conocarpum* to be high in magnitude because many of the threats that we analyzed are present throughout the range and are likely to result in adverse impact to the status of the species.

Under our LPN guidelines, the second criterion we consider in assigning a listing priority is the immediacy of threats. This criterion is intended to ensure that species facing actual, identifiable threats are given priority over those for which threats are will likely occur in the future, or species that are intrinsically vulnerable but are not known to be presently facing threats. Not all threats to *Solanum conocarpum* are imminent, but we do have evidence of some currently ongoing threats. Studies show that *S. conocarpum* is limited by its lack of recruitment and low reproductive capacity, both of which are likely due to habitat fragmentation.

Threats under Factor A are low-to-moderate, but not imminent because of protections provided through conservation agreements within private lands and management of the populations on VINP lands. The majority of the threats to Factor E are high in magnitude and imminent because they are currently occurring throughout the range of the species and result in the lack of successful recruitment. Threats under Factor E have occurred in the past and are clearly a threat today and in the near future. These impacts directly affect the species ability to produce new plants and the older plants are dying due to competition with other vegetation. Additionally, the pollinators and seed dispersers are unknown and may be focused on other food sources as the species population became fragmented. The U.S. Virgin Island and the IUCN have already classified this species as endangered according to their criteria.

The third criterion in our LPN guidelines is intended to devote resources to those species representing highly distinctive or isolated gene pools as reflected by taxonomy. We determined that *Solanum conocarpum* is a full species, and as noted above, it faces threats of a high magnitude and nonimmediacy.

As a result of our analysis of the best available scientific and commercial information, we assigned *Solanum conocarpum* a Listing Priority Number 2, based on the high magnitude and imminent threats described under Factor E. At least two of the threats discussed above are occurring now, and we anticipate they will still occur in the near future in St. John. These threats are ongoing and in some cases are considered irreversible. While we conclude that listing the species is warranted, an immediate proposal to list this species is precluded by work on higher priority listing actions with absolute statutory, court-ordered, or court-approved deadlines and final listing determinations for those species that were proposed for listing with funds from Fiscal Year 2011. This work includes all the actions listed in the tables below under expeditious progress.

We will continue to monitor the threats to *Solanum conocarpum,* and the species' status on an annual basis, and should the magnitude or the imminence of the threats change, we will revisit our assessment of the LPN.

Preclusion and Expeditious Progress

Preclusion is a function of the listing priority of a species in relation to the resources that are available and the cost and relative priority of competing demands for those resources. 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.

The resources available for listing actions are determined through the annual Congressional appropriations process. The appropriation for the Listing Program is 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 of Endangered and Threatened Wildlife and Plants (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 Act; 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). 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, the median cost is $305,000.

We cannot spend more than is appropriated for the Listing Program without violating the Anti-Deficiency Act (see 31 U.S.C. 1341(a)(1)(A)). In addition, in FY 1998 and for each fiscal year since then, Congress has placed a statutory cap on funds which may be expended for the Listing Program, equal to the amount expressly appropriated for that purpose in that fiscal year. This cap was designed to prevent funds appropriated for other functions under the Act (for example, recovery funds for removing species from the Lists), or for other Service programs, from being used for Listing Program actions (see House Report 105–163, 105th Congress, 1st Session, July 1, 1997).

Since FY 2002, the Service's budget has included a critical habitat subcap to ensure that some funds are available for other work in the Listing Program ("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 has 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 have been 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. At this time, for FY 2011, we do not know if we will be able to use some of the critical habitat subcap funds 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 critical habitat subcap, and the amount of funds needed to address court-mandated critical habitat designations, 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 needed to address court-mandated critical habitat for already listed species, set the limits on our determinations of preclusion and expeditious progress.

Congress identified the availability of resources as the only basis for deferring the initiation of a rulemaking that is warranted. The Conference Report accompanying Public Law 97–304 (Endangered Species Act Amendments of 1982), which established the current statutory deadlines and the warranted-but-precluded finding, states that the amendments were "not intended to allow the Secretary to delay commencing the rulemaking process for any reason other than that the existence of pending or imminent proposals to list species subject to a greater degree of threat would make allocation of resources to such a petition [that is, for a lower-ranking species] unwise." Although that statement appeared to refer specifically to the "to the maximum extent practicable" limitation on the 90-day deadline for making a "substantial information" finding, that finding is made at the point when the Service is deciding whether or not to commence a status review that will determine the degree of threats facing the species, and therefore the analysis underlying the statement is more relevant to the use of the warranted-but-precluded finding, which is made when the Service has already determined the degree of threats facing the species and is deciding whether or not to commence a rulemaking.

In FY 2011, on December 22, 2010, Congress passed a continuing resolution which provides funding at the FY 2010 enacted level through March 4, 2011. Until Congress appropriates funds for FY 2011 at a different level, we will fund listing work based on the FY 2010 amount. Thus, at this time in FY 2011, the Service anticipates an appropriation of $22,103,000 based on FY 2010 appropriations. Of that, the Service must dedicate $11,632,000 for determinations of critical habitat for already listed species. Also $500,000 is appropriated for foreign species listings under the Act. The Service thus has $9,971,000 available to fund work in the following categories: Compliance with court orders and court-approved settlement agreements requiring that petition findings or listing determinations be completed by a specific date; section 4 (of the Act) listing actions with absolute statutory deadlines; essential litigation-related, administrative, and listing program-management functions; and high-priority listing actions for some of our candidate species. In FY 2010 the Service received many new petitions and a single petition to list 404 species. The receipt of petitions for a large number of species is consuming the Service's listing funding that is not dedicated to meeting court-ordered commitments. Absent some ability to balance effort among listing duties under existing funding levels, it is unlikely that the Service will be able to initiate any new listing determination for candidate species in FY 2011.

In 2009, the responsibility for listing foreign species under the Act was transferred from the Division of Scientific Authority, International Affairs Program, to the Endangered Species Program. Therefore, starting in FY 2010, we used a portion of our funding to work on the actions described above for listing actions related to foreign species. In FY 2011, we anticipate using $1,500,000 for work on listing actions for foreign species which reduces funding available for domestic listing actions, however, currently only $500,000 has been allocated. Although there are currently no foreign species issues included in our high-priority listing actions at this time, many actions have statutory or court-approved settlement deadlines, thus increasing their priority. The budget allocations for each specific listing action are identified in the Service's FY 2011 Allocation Table (part of our record).

For the above reasons, funding a proposed listing determination for *Solanum conocarpum* is precluded by court-ordered and court-approved settlement agreements, listing actions with absolute statutory deadlines, and work on proposed listing determinations for those candidate species with a higher listing priority (i.e., candidate species with LPNs of 1).

As discussed under Listing Priority Number above, based on our September 21, 1983, guidance for assigning an LPN for each candidate species (48 FR 43098), we have a significant number of species with a LPN of 2. Because of the large number of high-priority species, we have 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 have had the highest priority to receive funding to work on a proposed listing determination. As we work on proposed and final listing rules for those 40 candidates, we apply the ranking criteria to the next group of candidates with an LPN of 2 and 3 to determine the next set of highest priority candidate species. Finally, proposed rules for reclassification of threatened species to endangered are lower priority, since as listed species, they are already afforded the protection 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-determined deadline.

With our workload so much bigger than the amount of funds we have to accomplish it, it is important that we be as efficient as possible in our listing process. Therefore, as we 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 a species with an LPN of 2. 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.

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 of Endangered and Threatened Wildlife and Plants. 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 resource available for delisting, which is funded by a separate line item in the budget of the Endangered Species Program. So far during FY 2011, we have completed one delisting rule.) Given the limited resources available for listing, we find that we are making expeditious progress in FY 2011 in the Listing. This progress included preparing and publishing the following determinations:

FY 2011 COMPLETED LISTING ACTIONS

Publication date	Title	Actions	FR Pages
10/6/2010	Endangered Status for the Altamaha Spinymussel and Designation of Critical Habitat.	Proposed Listing Endangered.	75 FR 61664–61690
10/7/2010	12-month Finding on a Petition To List the Sacramento Splittail as Endangered or Threatened.	Notice of 12-month petition finding, Not warranted.	75 FR 62070–62095
10/28/2010	Endangered Status and Designation of Critical Habitat for Spikedace and Loach Minnow.	Proposed Listing Endangered (uplisting).	75 FR 66481–66552
11/2/2010	90-Day Finding on a Petition To List the Bay Springs Salamander as Endangered.	Notice of 90-day Petition Finding, Not substantial.	75 FR 67341–67343
11/2/2010	Determination of Endangered Status for the Georgia Pigtoe Mussel, Interrupted Rocksnail, and Rough Hornsnail and Designation of Critical Habitat.	Final Listing Endangered.	75 FR 67511–67550
11/2/2010	Listing the Rayed Bean and Snuffbox as Endangered	Proposed Listing Endangered.	75 FR 67551–67583
11/4/2010	12-Month Finding on a Petition To List *Cirsium wrightii* (Wright's Marsh Thistle) as Endangered or Threatened.	Notice of 12-month petition finding, Warranted but precluded.	75 FR 67925–67944
12/14/2010	Endangered Status for Dunes Sagebrush Lizard	Proposed Listing Endangered.	75 FR 77801–77817
12/14/2010	12-month Finding on a Petition To List the North American Wolverine as Endangered or Threatened.	Notice of 12-month petition finding, Warranted but precluded.	75 FR 78029–78061
12/14/2010	12-Month Finding on a Petition To List the Sonoran Population of the Desert Tortoise as Endangered or Threatened.	Notice of 12-month petition finding, Warranted but precluded.	75 FR 78093–78146

FY 2011 COMPLETED LISTING ACTIONS—Continued

Publication date	Title	Actions	FR Pages
12/15/2010	12-Month Finding on a Petition To List *Astragalus microcymbus* and *Astragalus schmolliae* as Endangered or Threatened.	Notice of 12-month petition finding, Warranted but precluded.	75 FR 78513–78556
12/28/2010	Listing Seven Brazilian Bird Species as Endangered Throughout Their Range.	Final Listing Endangered.	75 FR 81793–81815
1/4/2011	90-Day Finding on a Petition To List the Red Knot subspecies *Calidris canutus roselaari* as Endangered.	Notice of 90-day Petition Finding, Not substantial.	76 FR 304–311
1/19/2011	Endangered Status for the Sheepnose and Spectaclecase Mussels	Proposed Listing Endangered.	76 FR 3392–3420
2/10/2011	12-Month Finding on a Petition To List the Pacific Walrus as Endangered or Threatened.	Notice of 12-month petition finding, Warranted but precluded.	76 FR 7634–7679

Our expeditious progress also includes work on listing actions that we funded in FY 2010 and FY 2011 but have not yet been completed to date. These actions are listed below. Actions in the top section of the table are being conducted under a deadline set by a court. Actions in the middle section of the table are being conducted to meet statutory timelines, that is, timelines required under the Act. Actions in the bottom section of the table are high-priority listing actions. These actions include work primarily on species with an LPN of 2, and, as discussed above, selection of these species is partially based on available staff resources, and when appropriate, include species with a lower priority if they overlap geographically or have the same threats as the species with the high priority. Including these species together in the same proposed rule results in considerable savings in time and funding, as compared to preparing separate proposed rules for each of them in the future.

ACTIONS FUNDED IN FY 2010 AND FY 2011 BUT NOT YET COMPLETED

Species	Action
Actions Subject to Court Order/Settlement Agreement	
Flat-tailed horned lizard	Final listing determination.
Mountain plover [4]	Final listing determination.
Thorne's Hairstreak butterfly [3]	12-month petition finding.
Hermes copper butterfly [3]	12-month petition finding.
4 parrot species (military macaw, yellow-billed parrot, red-crowned parrot, scarlet macaw) [5]	12-month petition finding.
4 parrot species (blue-headed macaw, great green macaw, grey-cheeked parakeet, hyacinth macaw)[5].	12-month petition finding.
4 parrot species (crimson shining parrot, white cockatoo, Philippine cockatoo, yellow-crested cockatoo)[5].	12-month petition finding.
Utah prairie dog (uplisting)	90-day petition finding.
Actions with Statutory Deadlines	
Casey's june beetle	Final listing determination.
Southern rockhopper penguin—Campbell Plateau population	Final listing determination.
6 Birds from Eurasia	Final listing determination.
5 Bird species from Colombia and Ecuador	Final listing determination.
Queen Charlotte goshawk	Final listing determination.
5 species southeast fish (Cumberland darter, rush darter, yellowcheek darter, chucky madtom, and laurel dace)[4].	Final listing determination.
Ozark hellbender [4]	Final listing determination.
Altamaha spinymussel [3]	Final listing determination.
3 Colorado plants (*Ipomopsis polyantha* (Pagosa Skyrocket), *Penstemon debilis* (Parachute Beardtongue), and *Phacelia submutica* (DeBeque Phacelia))[4].	Final listing determination.
Salmon crested cockatoo	Final listing determination.
6 Birds from Peru and Bolivia	Final listing determination.
Loggerhead sea turtle (assist National Marine Fisheries Service) [5]	Final listing determination.
2 mussels (rayed bean (LPN = 2), snuffbox No LPN) [5]	Final listing determination.
CA golden trout [4]	12-month petition finding.
Black-footed albatross	12-month petition finding.
Mount Charleston blue butterfly	12-month petition finding.
Mojave fringe-toed lizard [1]	12-month petition finding.
Kokanee—Lake Sammamish population [1]	12-month petition finding.
Cactus ferruginous pygmy-owl [1]	12-month petition finding.
Northern leopard frog	12-month petition finding.
Tehachapi slender salamander	12-month petition finding.
Coqui Llanero	12-month petition finding/Proposed listing.

ACTIONS FUNDED IN FY 2010 AND FY 2011 BUT NOT YET COMPLETED—Continued

Species	Action
Dusky tree vole	12-month petition finding.
3 MT invertebrates (mist forestfly (*Lednia tumana*), *Oreohelix* sp. 3, *Oreohelix* sp. 31) from 206 species petition.	12-month petition finding.
5 UT plants (*Astragalus hamiltonii, Eriogonum soredium, Lepidium ostleri, Penstemon flowersii, Trifolium friscanum*) from 206 species petition.	12-month petition finding.
5 WY plants (*Abronia ammophila, Agrostis rossiae, Astragalus proimanthus, Boechere* (*Arabis*) *pusilla, Penstemon gibbensii*) from 206 species petition.	12-month petition finding.
Leatherside chub (from 206 species petition)	12-month petition finding.
Frigid ambersnail (from 206 species petition) [3]	12-month petition finding.
Platte River caddisfly (from 206 species petition) [5]	12-month petition finding.
Gopher tortoise—eastern population	12-month petition finding.
Grand Canyon scorpion (from 475 species petition)	12-month petition finding.
Anacroneuria wipukupa (a stonefly from 475 species petition) [4]	12-month petition finding.
Rattlesnake-master borer moth (from 475 species petition) [3]	12-month petition finding.
3 Texas moths (*Ursia furtiva, Sphingicampa blanchardi, Agapema galbina*) (from 475 species petition).	12-month petition finding.
2 Texas shiners (*Cyprinella* sp., *Cyprinella lepida*) (from 475 species petition)	12-month petition finding.
3 South Arizona plants (*Erigeron piscaticus, Astragalus hypoxylus, Amoreuxia gonzalezii*) (from 475 species petition).	12-month petition finding.
5 Central Texas mussel species (3 from 475 species petition)	12-month petition finding.
14 parrots (foreign species)	12-month petition finding.
Berry Cave salamander [1]	12-month petition finding.
Striped Newt [1]	12-month petition finding.
Fisher—Northern Rocky Mountain Range [1]	12-month petition finding.
Mohave Ground Squirrel [1]	12-month petition finding.
Puerto Rico Harlequin Butterfly [3]	12-month petition finding.
Western gull-billed tern	12-month petition finding.
Ozark chinquapin (*Castanea pumila* var. *ozarkensis*) [4]	12-month petition finding.
HI yellow-faced bees	12-month petition finding.
Giant Palouse earthworm	12-month petition finding.
Whitebark pine	12-month petition finding.
OK grass pink (*Calopogon oklahomensis*) [1]	12-month petition finding.
Ashy storm-petrel [5]	12-month petition finding.
Honduran emerald	12-month petition finding.
Southeastern pop. snowy plover and wintering pop. of piping plover [1]	90-day petition finding.
Eagle Lake trout [1]	90-day petition finding.
Smooth-billed ani [1]	90-day petition finding.
32 Pacific Northwest mollusks species (snails and slugs) [1]	90-day petition finding.
42 snail species (Nevada and Utah)	90-day petition finding.
Peary caribou	90-day petition finding.
Plains bison	90-day petition finding.
Spring Mountains checkerspot butterfly	90-day petition finding.
Spring pygmy sunfish	90-day petition finding.
Bay skipper	90-day petition finding.
Unsilvered fritillary	90-day petition finding.
Texas kangaroo rat	90-day petition finding.
Spot-tailed earless lizard	90-day petition finding.
Eastern small-footed bat	90-day petition finding.
Northern long-eared bat	90-day petition finding.
Prairie chub	90-day petition finding.
10 species of Great Basin butterfly	90-day petition finding.
6 sand dune (scarab) beetles	90-day petition finding.
Golden-winged warbler [4]	90-day petition finding.
Sand-verbena moth	90-day petition finding.
404 Southeast species	90-day petition finding.
Franklin's bumble bee [4]	90-day petition finding.
2 Idaho snowflies (straight snowfly and Idaho snowfly) [4]	90-day petition finding.
American eel [4]	90-day petition finding.
Gila monster (Utah population) [4]	90-day petition finding.
Arapahoe snowfly [4]	90-day petition finding.
Leona's little blue [4]	90-day petition finding.
Aztec gilia [5]	90-day petition finding.
White-tailed ptarmigan [5]	90-day petition finding.
San Bernardino flying squirrel [5]	90-day petition finding.
Bicknell's thrush [5]	90-day petition finding.
Chimpanzee	90-day petition finding.
Sonoran talussnail [5]	90-day petition finding.
2 AZ Sky Island plants (*Graptopetalum bartrami* and *Pectis imberbis*) [5]	90-day petition finding.
I'iwi [5]	90-day petition finding.

ACTIONS FUNDED IN FY 2010 AND FY 2011 BUT NOT YET COMPLETED—Continued

Species	Action
High-Priority Listing Actions	
19 Oahu candidate species [2] (16 plants, 3 damselflies) (15 with LPN = 2, 3 with LPN = 3, 1 with LPN = 9).	Proposed listing.
19 Maui-Nui candidate species [2] (16 plants, 3 tree snails) (14 with LPN = 2, 2 with LPN = 3, 3 with LPN = 8).	Proposed listing.
2 Arizona springsnails [2] (*Pyrgulopsis bernadina* (LPN = 2), *Pyrgulopsis trivialis* (LPN = 2))	Proposed listing.
Chupadera springsnail [2] (*Pyrgulopsis chupaderae* (LPN = 2)	Proposed listing.
8 Gulf Coast mussels (southern kidneyshell (LPN = 2), round ebonyshell (LPN = 2), Alabama pearlshell (LPN = 2), southern sandshell (LPN = 5), fuzzy pigtoe (LPN = 5), Choctaw bean (LPN = 5), narrow pigtoe (LPN = 5), and tapered pigtoe (LPN = 11)) [4].	Proposed listing.
Umtanum buckwheat (LPN = 2) and white bluffs bladderpod (LPN = 9) [4]	Proposed listing.
Grotto sculpin (LPN = 2) [4]	Proposed listing.
2 Arkansas mussels (Neosho mucket (LPN = 2) and Rabbitsfoot (LPN = 9)) [4]	Proposed listing.
Diamond darter (LPN = 2) [4]	Proposed listing.
Gunnison sage-grouse (LPN = 2) [4]	Proposed listing.
Miami blue (LPN = 3) [3]	Proposed listing.
4 Texas salamanders (Austin blind salamander (LPN = 2), Salado salamander (LPN = 2), Georgetown salamander (LPN = 8), Jollyville Plateau (LPN = 8)) [3].	Proposed listing.
5 SW aquatics (Gonzales Spring Snail (LPN = 2), Diamond Y springsnail (LPN = 2), Phantom springsnail (LPN = 2), Phantom Cave snail (LPN = 2), Diminutive amphipod (LPN = 2))[3].	Proposed listing.
2 Texas plants (Texas golden gladecress (*Leavenworthia texana*) (LPN = 2), Neches River rose-mallow (*Hibiscus dasycalyx*) (LPN = 2))[3].	Proposed listing.
FL bonneted bat (LPN = 2) [3]	Proposed listing.
21 Big Island (HI) species [5] (includes 8 candidate species—5 plants and 3 animals; 4 with LPN = 2, 1 with LPN = 3, 1 with LPN = 4, 2 with LPN = 8).	Proposed listing.
12 Puget Sound prairie species (9 subspecies of pocket gopher (*Thomomys mazama* ssp.) (LPN = 3), streaked horned lark (LPN = 3), Taylor's checkerspot (LPN = 3), Mardon skipper (LPN = 8))[3].	Proposed listing.
2 TN River mussels (fluted kidneyshell (LPN = 2), slabside pearlymussel (LPN = 2) [5]	Proposed listing.
Jemez Mountain salamander (LPN = 2) [5]	Proposed listing.

[1] Funds for listing actions for these species were provided in previous FYs.
[2] Although funds for these high-priority listing actions were provided in FY 2008 or 2009, due to the complexity of these actions and competing priorities, these actions are still being developed.
[3] Partially funded with FY 2010 funds and FY 2011 funds.
[4] Funded with FY 2010 funds.
[5] Funded with FY 2011 funds.

We have endeavored to make our listing actions as efficient and timely as possible, given the requirements of the relevant law and regulations, and constraints relating to workload and personnel. We are continually considering ways to streamline processes or achieve economies of scale, such as by batching related actions together. Given our limited budget for implementing section 4 of the Act, these actions described above collectively constitute expeditious progress.

We intend that any proposed reclassification of *Solanum conocarpum* will be as accurate as possible. Therefore, we will continue to accept additional information and comments from all concerned governmental agencies, the scientific community, industry, or any other interested party concerning this finding.

Solanum conocarpum will be added to the list of candidate species upon publication of this 12-month finding. We will continue to evaluate this species as new information becomes available. This review will determine if a change in status is warranted, including the need to make prompt use of emergency listing procedures.

References Cited

A complete list of references cited is available on the Internet at *http://www.regulations.gov* and upon request from the Caribbean Ecological Services Field Office (*see* **ADDRESSES** section).

Authors

The primary authors of this notice are the staff members of the Caribbean Ecological Services Field Office.

Authority

The authority for this section is section 4 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Dated: February 10, 2011.

Rowan W. Gould,

Acting Director, Fish and Wildlife Service.

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 223

[Docket No. 101126590–0589–01]

RIN 0648–XZ59

Endangered and Threatened Species; Proposed Threatened Status for Subspecies of the Ringed Seal

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

ACTION: Notice of public hearings.

SUMMARY: On December 10, 2010, we, NMFS, published a proposed rule to list the Arctic (*Phoca hispida hispida*), Okhotsk (*Phoca hispida ochotensis*), Baltic (*Phoca hispida botnica*), and Ladoga (*Phoca hispida ladogensis*) subspecies of the ringed seal as threatened under the Endangered Species Act of 1973, as amended (ESA). As part of that proposal, we announced a public comment period to end on