U.S. Fish & Wildlife Service

Report to Congress on the Recovery of Threatened and Endangered Species

Fiscal Years 2003-2004

From the Director

This 2004 report provides an update on the recovery of threatened and endangered species for the period between October 1, 2002, and September 30, 2004, and chronicles the progress of efforts by the Fish and Wildlife Service and the many partners involved in recovery efforts.

During this time, recovery efforts enabled three species to be removed from the Endangered and Threatened Species List. The Tinian monarch, a small forest bird found only in the Northern Mariana Islands, the Hoover's woolly-star, a flowering plant in California, and the Oregon population of the Columbian white-tailed deer were all delisted. Vital recovery efforts resulted in the conservation of viable habitat and caused populations to thrive. In addition, three species were proposed for delisting due to recovery: the Johnston's frankenia, Eggert's sunflower, and Eastern population of the gray wolf.

Substantial progress towards recovery has been made by many other species. For example, the Missouri bladderpod, a member of the mustard family, was reclassified from endangered to threatened after making significant progress towards recovery. As is the case in many of these actions, the success can be credited to individual landowners who voluntarily implemented best management practices on their lands.

This report also documents the percentage of recovery plans completed for listed species. Recovery plans outline the on-the-ground actions and tasks necessary for species to recover to the point they can be considered for delisting or reclassification. The Service has demonstrated a marked improvement in finalizing recovery plans for threatened and endangered species. For example, in 1994 only 54% of listed species had finalized plans, while by the end of this reporting period 82% of species had final recovery plans.

While implementing recovery actions and finalizing recovery plans is extremely important for recovery, we also recognize the challenges in addressing the needs of declining species and species whose population status is unknown. Thus, in 2005, the Service initiated 5-year reviews for listed species under the Act, with the goal to determine whether a species' current classification is still accurate in light of new information, as well as current research and monitoring programs.

In summary, this Recovery Report to Congress shows 413 species of the 1,251 listed are considered stable or improving, which means that recovery activities and conservation efforts have reduced the threats or reversed population declines in 33 percent of all listed species. It can take years, even decades, to reverse the declining trend of a species considered to be on the brink of extinction and facing overwhelming threats.

As we look back nearly 35 years since the passage of the ESA—one of the world's landmark environmental laws—we should be pleased with how far we've come, but recognize how far we still have to go. We are continuing to make strides in improving the status of listed species by implementing on-the-ground recovery activities and increasing partnerships in cooperative conservation efforts.

H Dale Hall

... recovery activities and conservation efforts have reduced the threats or reversed population declines in 33 percent of all listed species.

Recovery Report to Congress

Fiscal Years 2003-2004

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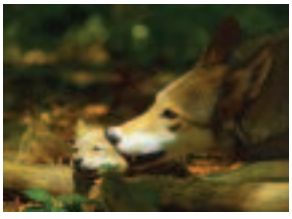


Cover photograph: A red wolf nibbles the ear of his six-week old pup that was born at the Museum of Life and Sciences in Durham, North Carolina.

Greg Koch, www.gkphotography.net

Report to Congress on the Recovery of Threatened and Endangered Species

John Carrington, Savannah Morning News

Fish and Wildlife Service biologists Billy Brooks and Willie Booker band endangered wood stork chicks at Harris Neck National Wildlife Refuge, Townsend, Georgia. These efforts continue a 15-year project with the Georgia Department of Natural Resources, University of Georgia, University of Florida, and Savannah River Ecology Laboratory to track the movement and survival of the birds. Partnerships with Ducks Unlimited and Bass Pro to build water control structures and nesting platforms, manage feeding areas, and create cypress-studded islands have provided prime nesting habitat for a range of wading bird species. Due to recovery activities, the wood stork has recently expanded its nesting range to North Carolina from South Carolina, Georgia, and Florida.

Background

Conservation of endangered and threatened species (listed species), and the ecosystems upon which they depend, is the primary purpose of the Endangered Species Act of 1973 [16 U.S.C. 1531 *et seq.*] (Act). The ultimate goal of such conservation efforts is the recovery of these species so that they no longer need the protective measures of the Act.

The Act requires the Secretaries of the Department of the Interior (DOI) and the Department of Commerce (DOC) to develop and implement plans for the conservation and survival of listed species ("recovery plans"). Recovery plans are required under section 4(f)(1) of the Act for all listed species, unless the plans will not promote their conservation.

The Act also requires that the Secretaries report to Congress every two years on the status of efforts to develop and implement recovery plans, and the status of all species for which recovery plans have been developed. This report satisfies these two requirements. We choose to report the status of all listed species regardless of whether or not they have a final recovery plan.

The U.S. Fish and Wildlife Service (Service), under the DOI, and the National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries) (formerly National Marine Fisheries Service), under the DOC, have been delegated the responsibility of administering the Act. In general, the Service has responsibility for freshwater and terrestrial species, while NOAA Fisheries has responsibility for most marine species and anadromous fish[1]. Currently, the Service and NOAA Fisheries share the responsibility for the following ten listed species: the Atlantic and Pacific populations of both the green and olive ridley sea turtles; the hawksbill, Kemp's ridley, leatherback, and loggerhead sea turtles; the Atlantic salmon; and the gulf sturgeon. Additional information on these joint species may be found in the NOAA Fisheries Office of Protected Resources' "Biennial Report to Congress on the Recovery Program for Threatened and Endangered Species: October 1, 2002 – September 30, 2004."

This report satisfies the Act's reporting requirement for October 1, 2002 to September 30, 2004, (reporting period) for U.S. species solely under the Service's jurisdiction, as well as those managed jointly with NOAA Fisheries.

Introduction

Under the Act, any species of fish, wildlife, or plants, except pest insects, can be added to the List (List) of Threatened and Endangered Species (listed) if they are in danger of extinction throughout all or a significant portion of their range (Endangered) or are likely to become an endangered species within the foreseeable future throughout all or a significant portion of their range (Threatened). Species are placed on the List due to one or more of the following five threat-based 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; and (e) other natural or manmade factors affecting its continued existence.

[1] Anadromous fish: fish born in fresh water that migrate to the ocean to grow into adults, and then return to fresh water to spawn.

Recovery Overview

Recovery is the process by which listed species and their ecosystems are restored to the point that they no longer meet the definitions of threatened or endangered in the Act (i.e., the threats are reduced or removed). A variety of actions may be necessary to achieve the goal of recovery, such as creation of new, or restoration of existing, habitat or reintroduction of the species into suitable habitat. **"Recovery plans"** [2] are central to the recovery of listed species, but are not regulatory documents. Recovery plans (using the best scientific and commercial data available) serve as the road map for the species' recovery, laying out where we need to go, how best to get there, and how long we think it will take. Only under certain circumstances (i.e., a recovery plan will not promote the species conservation) is a species exempt from the requirement to develop a recovery plan.

A recovery outline—developed soon after a species is listed—is the first step in recovery planning and establishes the initial direction for conservation efforts and guides the development of a recovery plan. Draft and final recovery plans are then developed and implemented, using stakeholder involvement to the greatest extent possible. The plans organize, prioritize, and guide the recovery process, and establish objective and measurable criteria by which to determine when a species can be removed from the List. The plans also identify who the responsible parties and partners are for implementing the on-the-ground recovery actions. Recovery plans may be amended, revised, or updated if and when new information that may impact the species' recovery (change in magnitude or immediacy of threats or new biological information, etc.) becomes available.

Paul Hartfield, USFWS

Dr. Paul Johnson of the Alabama Biodiversity Culture Center in Marion searches for previously released plicate rocksnails. Other collaborative efforts are underway to reestablish endangered mussels and snails into historically occupied river reaches. Partners include Alabama Power Company, The Nature Conservancy, World Wildlife Fund, and other non-government organizations.

Frank Parauka, USFWS

Fish and Wildlife Service biologists Caroline Stahala and Pam Thibodeaux hold a Gulf sturgeon before weighing and measuring it as part of a monitoring program for the threatened species. "They are gentle, big beauties—interesting and prehistoric," Thibodeaux said. The Service has collected sturgeon in the river for several years, although the numbers are quite low. Biologists have surgically implanted ultrasonic transmitters to assess the population and determine marine and freshwater movement and habitat use. The range of the sturgeon includes Alabama, Florida, Louisiana, and Mississippi. The fish in this photo weighed 55 pounds and was 65 inches long.

Paul Hartfield, USFWS

Plicate rocksnails, hatchery-reared for release into the Locust Fork, Jefferson County, Alabama. These juvenile snails resulted from a five-year collaborative effort between the Service, Alabama Department of Conservation and Natural Resources, and the Tennessee Aquarium Research Institute to develop life-history information and culture techniques for this endangered aquatic species.

[2] Bolded terms in quotation marks correspond to items for which information is reported in Appendix A.

Status of Listed Species

The first priority for the recovery of any listed species is to prevent its extinction. Species with the highest degree of threat have the highest priority for preparing and implementing recovery plans. These critically endangered species need immediate and often intensive intervention just to prevent extinction. These are the species for which captive breeding is sometimes the only measure enabling the species to persist until the threats in the wild are reduced or eliminated and the species can be reintroduced to formerly occupied habitat. We assign a **"recovery priority number"** to species to help guide the allocation of resources for recovery planning and implementation among all listed species. The recovery priority number is based on the degree of threat facing the species, along with the species' potential for recovery and taxonomic distinctness. A "C" following the recovery priority number indicates that there is the potential for conflicts between needed recovery actions and economic activities.

Generally, species' declines often occur over the course of decades or centuries prior to their listing. Addressing threats that have occurred over long periods of time typically requires substantial time and resources. Recovery plans estimate the time and costs associated with addressing these threats. Some species also may be faced with new threats after receiving protection under the Act (e.g., West Nile virus in birds). Therefore, most species still have declining population numbers for a period of time after listing, since enough time may not have passed to show a response to our efforts to reduce or remove the threats. Threats are easily magnified simply by the continued decline in species numbers (for example, disease may have a greater chance of eliminating a smaller population). Unfortunately some threats, such as the threat posed by invasive, non-native species, may continue to increase for some time following listing. Reaching recovery objectives, therefore, is likely to be far in the future, and the species status during this period is usually reported as **"declining."**

Jennifer Jenkins, USFWS

On the Alaskan tundra near Barrow, biologists Nora Rojek of the Fish and Wildlife Service and Bill O'Connell of the Alaska SeaLife Center band a Steller's eider, a threatened species. "There's still a lot we don't know. We know that some female eiders have come back to Barrow to nest. Banding will help us determine how many return," Rojek said.

Once a species is listed, development of a recovery plan is started. However, being able to fully address a species' threat in the recovery plan requires additional information. For example, some species' life history requirements (e.g., breeding is contingent upon rainfall), make monitoring the effects of a threat difficult because it may take several years of monitoring or surveys before enough information, under the right conditions, can be gathered. Given that some species may need additional survey work before a declining, improving, or stable determination can be made, these species are reported as **"uncertain."**

To be successful, recovery activities must reverse declines and reduce or eliminate threats. One indicator that a reversal may be underway is when the rate of decline slows or decline halts. Improvement may not be occurring or may not yet be detectable. Where the species numbers and threats remain constant, the species is reported as **"stable."**

Over time, as species begin benefiting from management and protection efforts aimed at reducing and/or eliminating their threats, and more information becomes available from surveys and research, increasing numbers of listed species are expected. Although the amount of time for response varies depending upon the species, the reduction and removal of threats should result in an increase in population

West Nile virus is a new threat for the northern spotted owl. A Pacific Northwest species, the owl was listed as threatened in 1990. The main threat was the loss and adverse modification of habitat following timber harvesting, exacerbated by catastrophic events such as fire, volcanic eruption, and wind storms. Old growth forests are home to most northern spotted owls, but the birds may also be found in younger forests.

USFWS

Draining wetlands has limited habitat for the Mitchell's satyr butterfly, listed as endangered in Indiana, Michigan, and Ohio. Protecting wetlands and their water sources from drainage and contamination conserves this insect and provides other benefits such as flood control.

USFWS

Over time, as species begin benefiting from management and protection efforts aimed at reducing and/or eliminating their threats, and more information becomes available from surveys and research, increasing numbers of listed species are expected.

numbers[3]. It must be noted, however, that the length of time it takes to see a response in species numbers following the threat reduction or removal is dependent upon some factors (such as the age at which the species starts to breed) that are beyond the control of the Act and is often unrelated to the amount of financial resources expended. Species that do show a positive response, however, are reported as **"improving."**

As recovery progresses, it is often possible to downlist the species (change listing classification from endangered to threatened). This determination means that the species is no longer in danger of extinction throughout all or a significant portion of its range. Downlisting objectives and criteria for endangered species are outlined in the species' recovery plan.

Delisting results in the removal of regulatory restrictions. To delist a species due to recovery, the Service must determine, based on the best scientific and commercial data available, that the species is not in danger of extinction and is not likely to become so in the foreseeable future. The determination is based on an assessment of the same five threat factors that caused the species to be listed in the first place: 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. When a species has been recovered and subsequently delisted, the Act requires the Service, in cooperation with the states, to monitor the species status for a minimum of five years.

Despite all our best efforts, some species may have declined to the point where they only occur now in **"captivity"** and do not exist anywhere in the wild, or they may be believed to be **"extinct,"** but remain on the list until extinction is confirmed after several years of intensive surveys and completion of formal rulemaking to delist.

Arizona hedgehog cactus, now a stable species.

G. A. Cooper @ USDA-NRCS PLANTS Database

[3] Some critically endangered species may not respond due to limiting factors such as small population size that has limited or suppressed reproduction. Herculean efforts may be needed before an increase in population numbers may be seen. It may even be that preventing extinction is the best that can be done with the current scientific information, although the future may bring advances enabling the population to improve.

Methods

The Service's Director has delegated responsibility for recovery of listed species to the Service's seven Regional Directors and the California/Nevada Operations Office Manager. Each listed species is the responsibility of at least one Region. When the distribution of a species crosses regional boundaries, the **"lead Region"** coordinates decisions regarding the species among other Regions. Regional Directors ensure that recovery plans are developed for those species that need plans, appoint recovery team members if a team is appropriate, direct recovery plan implementation, and coordinate these efforts with our partners and stakeholders. (The boundaries of the Service's Regions and the location of Regional Offices are illustrated on the inside back cover page—"Endangered Species Program Contacts.")

As required by the Act, our Field and Regional staff report on their efforts to develop and implement recovery plans and the status of listed species. To make these determinations they use the best available information from recovery planning and implementing efforts, our consultation process with other Federal agencies under section 7 of the Act, our permitting program under section 10 of the Act, our petition process under section 4 of the Act, our coordination with states, and other activities related to listed species.

The results should be viewed only in light of the Act's recovery reporting requirements. These results are not intended to provide status review results such as are available after a 12-month petition finding or a 5-year review. They are intended only to simplistically represent the relative progress that is being made on listed species. Progress is not solely in the purview of the Service, and therefore should not be used as the only measure of the effectiveness of the Recovery Program.

Master Sgt. Michael Burns, USAF

The U.S. Air Force and Marine Corps at the Barry M. Goldwater Range, along with the Mexican government, hunting clubs, zoo veterinarians, and volunteers from the University of Arizona, joined a partnership with the Fish and Wildlife Service and the Arizona Game and Fish Department to prevent the extinction of the critically endangered Sonoran pronghorn.

Regional Directors ensure that recovery plans are developed for those species that need plans, appoint recovery team members if a team is appropriate, direct recovery plan implementation, and coordinate these efforts with our partners and stakeholders.

Status of the Recovery Program: FY 2003-2004

Progress is not solely in the purview of the Service, and therefore, should not be used as the only measure of the effectiveness of the Recovery Program.

Frank Davis, UC - Santa Barbara

University of Idaho professor Michael Scott visits with Assistant Secretary Craig Manson during the conference on the Endangered Species Act at 30. Among the topics discussed was exploring ways to maintain biodiversity on working landscapes. Participating organizations included the National Cattlemen's Beef Association, Plum Creek Timber Company, Environmental Defense, University of Idaho, Columbia University, and UCLA School of Law.

The two years spanning this reporting period brought several significant milestones. The Endangered Species Act turned 30, and the National Wildlife Refuge System celebrated 100 years of benefiting wildlife while providing outdoor opportunities for people, to name a few. The Recovery Program also underwent a Government Accountability Office audit, worked on addressing the backlog of 5-year reviews, and worked more closely with the states on key recovery implementation efforts.

The ESA at 30

In December 2003, the Endangered Species Act (Act) celebrated its 30th anniversary. To celebrate the passage and implementation of this seminal piece of legislation, and to assess where there is room for improvement, the Donald Bren School of Environmental Science & Management at the University of California in Santa Barbara hosted an "Endangered Species Act at Thirty: Lessons and Prospects" conference. Then Governor Dirk Kempthorne and Craig Manson, Assistant Secretary for Fish and Wildlife and Parks in the Department of the Interior, were keynote speakers.

The conference was attended by a wide range of participants from federal and state governmental agencies, academia, environmental groups, and others. The three focal questions of the conference were: 1) ESA successes and failures: what have we learned; 2) What are we protecting and why; and 3) Where do we go from here? Participants came to consensus (Norris 2004, Scott 2004[4]) on a number of issues, including:

- The Act's goals are important;
- There is a valid federal regulatory role;
- The Act is still a young law that is evolving;
- There needs to be more realistic measures of success;
- There needs to be more funding of listing and recovery efforts;
- There should be an expanded role for state and local governments;
- Incentive programs should be streamlined;
- A more pro-active approach should be promoted;
- Monitoring should be improved; and
- Better access to agency data should be provided.

The issues that the participants did not agree on (Scott 2004) were:

- The role of critical habitat;
- The role of litigation;
- The amount of flexibility needed in implementation of the Act; and
- The willingness to take risks.

Based on the conference's conclusions, seven "ESA at 30" workshops were held to further develop the ideas that stemmed from the event. The seven workshop topics focused on: 1) speedy success stories; 2) conservation reliant species; 3) recovery management agreements; 4) one-stop shopping for ESA information; 5) state-based programs; 6) streamlining conservation plans; and 7) landowner incentives. Workshop participant diversity mirrored that of the conference. The outcome of each workshop was a consensus list of action items that could be forwarded to decision-makers in the Department of the Interior, if the recommendation involved changes to policies, or members of Congress in the case of legislation recommendations.

These recommendations are being reviewed by appropriate parties to evaluate their implementation feasibility.

[4]Norris, S. 2004. "Only 30: A Portrait of the Endangered Species Act as a Young Law." BioScience April 2004, vol. 54, No. 4; Scott, M. 2004. PowerPoint presentation to the USFWS Assistant Regional Directors for Ecological Services September 2004 meeting.

USFWS

Waubay National Wildlife Refuge's Jarrod Lee took this photograph at the refuge in Waubay, South Dakota, during the 2003 Klondike Derby. About 90 Boy Scouts and 20 adults took part in survival classes and festivities including snowshoe races, igloo-building, and ice-fishing. Afterwards, they helped celebrate the Refuge System's Centennial by spelling out "Happy Birthday Refuges 100" with their bodies.

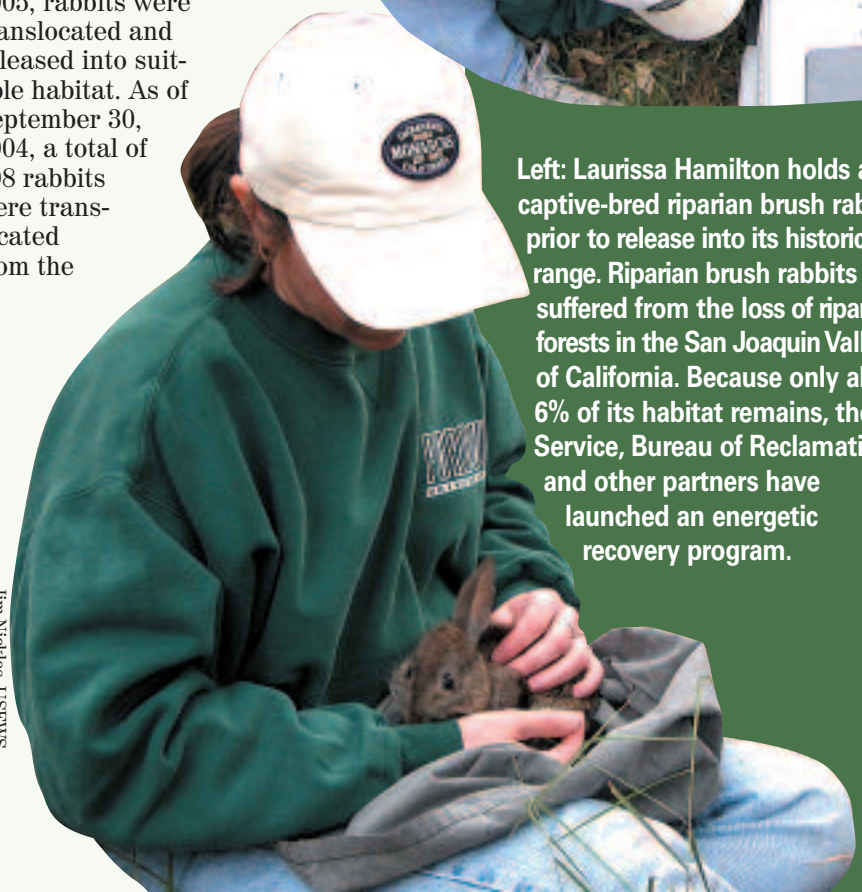
Refuge Centennial

March 14, 2003, marked the Centennial anniversary of the National Wildlife Refuge (NWR) System. In 1903, President Theodore Roosevelt signed an Executive Order declaring Pelican Island off the coast of Florida a National Bird Reservation for the protection of brown pelicans. President Roosevelt's action established the first unit of what was to become the National Wildlife Refuge System, which now includes more than 97 million acres in 545 National Wildlife Refuges and 37 Wetland Management Districts with at least one refuge in every state.

As of the end of this Report's reporting period, 58 refuges were established specifically for the benefit of threatened and endangered species. Listed mammals, birds, reptiles, amphibians, fish, invertebrates, and plants have all been the impetus for adding new units to the Refuge System. A list of all the refuges established specifically for listed species can be found at: http://www.fws.gov/refuges/habitats/endSpRefuges.html. As of September 30, 2004, 268 listed species (21%) occur on refuge lands, and approximately 499 refuge units (80%) have listed species.

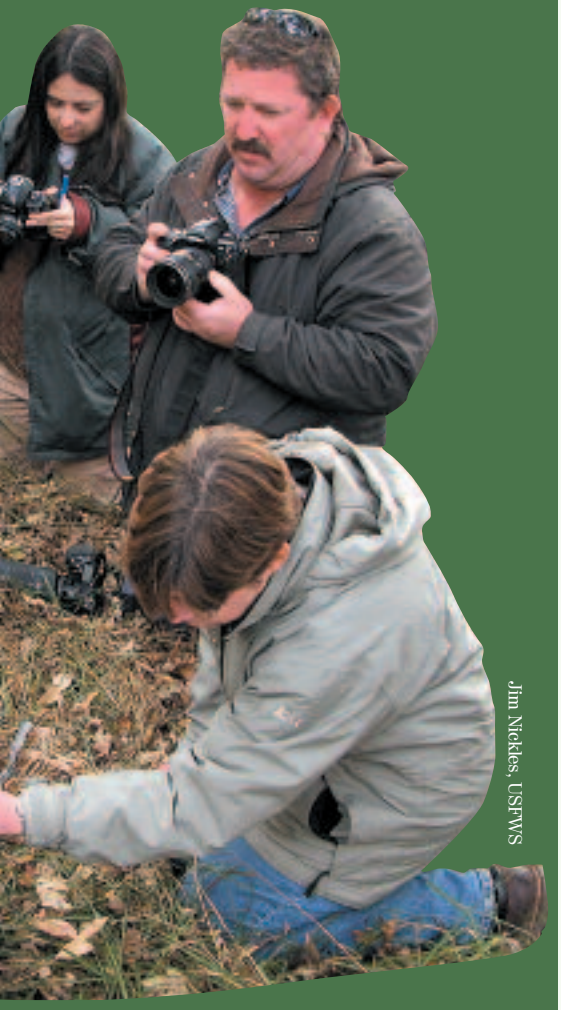
One refuge, the San Joaquin River NWR (part of the San Luis NWR Complex) in California, has shown tremendous conservation leadership in implementing recovery actions for the endangered riparian brush rabbit *(Sylvilagus bachmani riparius)*. The rabbit was listed as endangered on February 23, 2000, based primarily on threats from flooding, wildfire, clearing of riparian vegetation, disease, predation, rodenticide use, and loss of genetic variability from a very small population. The 1998 San Joaquin Upland Species Recovery Plan included the riparian brush rabbit, which was at that time a candidate species.

In late 2001/early 2002, a controlled propagation program was established, as identified in the recovery plan, to help increase the rabbit's population and to reintroduce the animals into previously occupied habitat outside of the only known current location in Caswell Memorial State Park in San Joaquin County, California. One of the sites selected was the San Joaquin River NWR. Beginning in August 2002, with plans to continue the reintroductions on the refuge through at least 2005, rabbits were translocated and released into suitable habitat. As of September 30, 2004, a total of 298 rabbits were translocated from the



Jim Nickles, USFWS

Left: Laurissa Hamilton holds a captive-bred riparian brush rabbit prior to release into its historic range. Riparian brush rabbits have suffered from the loss of riparian forests in the San Joaquin Valley of California. Because only about 6% of its habitat remains, the Service, Bureau of Reclamation, and other partners have launched an energetic recovery program.



Jim Nickles, USFWS

Top: Laurissa Hamilton, California State University- Stanislaus, and Margaret Kolar of the Service's California/Nevada Operations Office encourage a rabbit to leave the carrying case to a new home in the wild while news-media photographers wait for the right moment.

breeding site to soft release enclosures (1 acre pens containing suitable habitat where the rabbits could acclimate to the refuge and could be monitored prior to release) on the refuge (Lloyd and Kelly 2005)[5].

Although at this time it is not possible to estimate the total number of riparian brush rabbits at the refuge, there is evidence that the translocated rabbits are reproducing. As of the end of the reporting period, a total of 104 rabbits known to have been born on the refuge (Lloyd and Kelly 2005) have been captured and marked for further study. The recovery goal for the riparian brush rabbit is to establish three viable populations outside of Caswell Memorial State Park. With the first population established on San Joaquin River NWR, there are two more to go. (See below for more information about controlled/captive propagation.) In addition to being home to the riparian brush rabbit, the refuge also provides protection and enhancement of almost 100% of the wintering grounds for the Aleutian Canada goose. This protection substantially contributed to the goose's delisting due to recovery on March 20, 2001.

Highlighting Aquatic Species

The Service's Fisheries Program plays a crucial role in recovery planning and implementation of recovery actions for many aquatic species. In FY 2004, the Fisheries Program worked on final recovery plan actions for 59 species (42 fish species and 17 other species of mollusks, amphibians, and plants) and assessed the status and trends of listed fish. Some of the species highlighted during this period included: bull trout, Topeka shiner, greenback cutthroat trout, leopard darter, Arkansas River shiner, Gulf sturgeon, razorback sucker, shortnose sturgeon, and listed mussels in the eastern Gulf of Mexico, upper Mississippi, and Lake Champlain watersheds.

Department of the Interior

On March 14, 2003, the Secretary of the Interior addressed guests and staff members at the official celebration of the 100th birthday of the National Wildlife Refuge System at Pelican Island, Florida.

The Service's Fish and Wildlife Management Assistance Offices, National Fish Hatcheries, Fish Technology Centers, Fish Health Centers, and the Aquatic Animal Drug Approval Partnership Program also provide scientific and technical leadership to solve "on the ground" problems in support of these recovery efforts. Their contributions in genetic analyses, nutrition, population dynamics, cryopreservation (freezing specimens at low temperatures), biometrics (calculation of life expectancy and other biological events), culture technologies, disease diagnostics, and new approved drugs improves the quality and relevance of hatchery production programs, as well as broader fish management activities, for recovery.

As of the end of this Report's reporting period, 58 refuges were established specifically for the benefit of threatened and endangered species.

[5] Lloyd, M. and P., Kelly. 2005. Riparian Brush Rabbit Propagation and Translocation Summary (1 October 2001 through 30 September 2004). Endangered Species Recovery Program, Department of Biological Sciences, California State University—Stanislaus, Turlock, CA.

Richard Christian, USFWS

Hatchery-reared native Apache trout caught on the White Mountain Apache Indian Reservation, Arizona.

USFWS

At Genoa National Fish Hatchery in Wisconsin, biologist Roger Gordon checks for endangered mussel larvae on the gills of a host largemouth bass.

USFWS

Routine fish health inspection of endangered yearling pallid sturgeons at Neosho National Fish Hatchery, Missouri.

USFWS

Yearling pallid sturgeons in a rearing tank at Neosho National Fish Hatchery, Missouri.

The Fisheries offices also meet critical science needs for listed aquatic species. Examples include identifying the host fish required in the lifecycle of the winged mapleleaf mussel and identifying habitat needs of pallid sturgeon. Other pallid sturgeon activities in FY 2004 included the Bozeman, Montana Fish Health Center, in cooperation with the State of Montana, developing a specialized pallid sturgeon fish health assessment protocol. Fishery personnel throughout the country were trained to histologically (studying thin cross-sections of tissue under a microscope) evaluate pallid sturgeon tissues and conduct viral screens, thereby improving the health of captive populations held for recovery. Monitoring the health of captive populations is essential to prevent movement of diseases to non-endemic areas.

Fisheries offices often take the lead for recovery efforts for listed aquatic species. The New Mexico Fishery Resources Office is the primary station charged with field recovery efforts for the endangered Gila trout. During 2003-2004, successful removal of non-native trout from the upper West Fork Gila River provided protection to the relic Whiskey Creek population. Efforts were also successful in removing non-native trout from a tributary stream that will serve as an introduction site for the Whiskey Creek population. Mora National Fish Hatchery and Technology Centers in New Mexico also played a vital role in the recovery of the endangered Gila trout by providing temporary refugia for fish jeopardized by fires, refining captive propagation techniques, and producing captively-bred fish for reintroduction. Genetic analysis of remnant populations provided crucial information that aided in the recovery of genetically diverse populations. Captive propagation in concert with habitat restoration has been successful in restoring this native trout to historic habitat.

Fish Technology Centers also have developed new techniques that will significantly improve monitoring efforts for listed fish species. The Lamar Fish Technology Center in Pennsylvania developed a new mass marking technique and detection device using calcein, a substance which binds with bony tissues such as fin rays. Larval fish are marked in batches and non-lethally detected by UV light using a hand-held detector invented at Lamar FTC, facilitating the monitoring and evaluation of hatchery production programs for listed species. Abernathy Fish Technology Center developed an in-stream PIT (Passive Integrated Transponder) tag detection system that instantaneously receives and stores PIT tag data in a computer. This new technology allows continuous tracking and avoids handling, greatly enhancing the ability of fisheries managers to monitor and evaluate populations of listed salmonids, track seasonal movements, determine overwinter survival and migration timing, and identify micro-habitat use.

Working with States

Listed species occur in all 50 states and 3 territories under the United States' jurisdiction. The Service cannot recover listed species alone, and therefore we rely on the state resource agencies for their help. The states are actively involved with both recovery planning and implementation. For example, in the Service's Southwest Region, the state agencies in Arizona, New Mexico, Oklahoma, and Texas are signatories on all approved recovery plans.

In addition, 43 states participate in the post-delisting monitoring (PDM) plan for the American peregrine falcon. The PDM plan monitors territory occupancy, nest success, and productivity. Some eggs and feathers are also collected for future contaminant analysis. All of the lower 48 states also participate in population monitoring, based on nest occupancy, for the bald eagle. This monitoring has taken place since the bald eagle was first listed. The states have collected the bald eagle information either by carrying out specific monitoring programs or by collating surveys of partner agencies and individual observations. The Service uses this information to evaluate whether the eagle has met its recovery criteria.

Another way the states and territories help with implementation of recovery actions is through the Recovery Land Acquisition (RLA) grant program. This grant program is authorized under

section 6 of the Act and funded through the Cooperative Endangered Species Conservation Fund. Grants are awarded to states and territories each fiscal year through a competitive ranking process. Requests for land acquisition funding must support conservation easements or fee simple acquisition of habitat identified in approved recovery plans for listed species. The grants have a 25% matching requirement, unless two or more states or territories are implementing a joint project, and then the matching requirement drops to 10%. Thirty-two RLA grants, totaling over $15 million, were awarded to 24 states in FY 2004. These grants supported habitat acquisition for the following listed species: 31 plants, 11 birds, 13 fish, 7 mammals, 10 clams or mussels, 6 other invertebrates, 1 reptile, and 1 amphibian.

One of the FY 2004 funded projects was for the acquisition of 7,785 acres, including 47 miles of lakeshore and 13 miles of stream frontage, in the Machias River watershed. The State of Maine, International Paper, and 11 other partners are involved in this project that benefits high quality spawning and rearing habitat of the Atlantic salmon, multiple bald eagle nests, and numerous other non-listed species, including the common loon. The Service's contribution to this project through the RLA program was $500,000, which was matched by $8.7 million in funding from the State and other partners.

The FY 2004 Machias River project was actually Phase II of a larger conservation vision. Phase I was funded in FY 2001, the very first year of the RLA grant program, and completed in FY 2004. Phase I acquired 24,844 acres (through a combination of fee simple acquisition and conservation easements), including over 210 river, stream, and lake-frontage miles in permanent protection. Combined, Phase I and Phase II (to be completed in 2006), will protect the entire Machias River system, one of the eight rivers identified in the Atlantic salmon distinct population segment listing, as an intact, functioning riparian unit.

Recovery Management Agreements

One of the ideas that came from the ESA at 30 conference (discussed previously) was the concept of achieving delisting more quickly by addressing certain threats, such as the need for ongoing management or the adequacy of existing regulatory mechanisms, which might be expected to recur some time after delisting. For example, for a species whose primary threat was human persecution (e.g., gray wolf), the primary recovery mechanism has been applying section 9 of the Act to stop the "take."[6] Thus, the Rocky Mountain gray wolf recovery plan requires development of long-term management plans to address this threat, among others, to be implemented by each state in which wolves occur, prior to and continuing after delisting, when section 9 of the Act will

Scott Smith, Maryland Department of Natural Resources

Scott Smith, Maryland Department of Natural Resources

Biologists from the Maryland Department of Natural Resources and the Service conduct surveys for the bog turtle as part of its recovery plan. Here, Lori Erb and John Frederick of the Maryland DNR hold bog turtles on the property of a private landowner participating in the recovery initiative. Since 95% of bog turtle habitat is privately owned, the recovery of the species and the wetlands in which it lives depends on these landowners. At home in open-canopy, spring-fed wetlands, bog turtles face threats of changes in hydrology and habitat.

[6] "Take" is defined in the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

no longer apply. This idea was further expanded at the Recovery Management Agreement workshop hosted by the National Cattlemen's Beef Association in May 2004.

Recovery Management Agreements (RMAs) are agreements between the Service and a local governmental entity (a state, county, or municipality) with regulatory powers that are sufficient to implement the RMA. The RMA is intended to facilitate the recovery of the species and to provide assurances of the species' continuing status following delisting. RMAs accomplish these objectives by providing for the transition of management authority from the federal wildlife agency (Service or NOAA-Fisheries) to the local governmental entity. RMAs include the following:

- Biological goals keyed to the recovery plan for the species. This will include a monitoring program that is sufficient to track the population of the species. For example, the agreement might specify three increasingly restrictive levels of management based on the recovery plan's delisting population: for a population greater than 50% above the delisting population; for a population between the delisting population and a population 50% greater than that population; and for a population less than the delisting population.
- Required management actions that reflect the identified risks facing the species as identified in the listing package and the recovery plan.
- Adaptive management strategies that provide for revisiting and revising the management agreement.
- The duration of the agreement.
- Assurances by the parties of their ability to implement the agreement.
- Signatures of the responsible parties.

Atlantic salmon eggs (enlarged) and young salmon

Edward Steenstra, USFWS

This concept of post-delisting management agreements is not new. Agreements are often the tool through which post-delisting monitoring, a requirement of the Act for species delisted due to recovery, is implemented. However, the Act requires post-delisting monitoring for a minimum of five years. But longer term management agreements do occur as well. For example, in 1994, the U.S. Forest Service entered into a Memorandum of Understanding (MOU) with the Service to protect and manage the habitat for Robbins' cinquefoil, an endangered flowering plant that occurs only in the White Mountain National Forest in New Hampshire. The Robbins' cinquefoil MOU estimated that, if all went as anticipated, the species would be ready for delisting in 2000, and indeed it was delisted due to recovery in 2002. The post delisting monitoring plan for this plant includes monitoring of population trends of both natural and transplanted populations through a continuing partnership with the Appalachian Mountain Club's Research Department and the U.S. Forest Service. Thus, while the concept of long-term management agreements that would continue to be implemented after delisting was not entirely new to the Service, the Recovery Management Agreement workshop investigated this approach more systematically.

Edward Steenstra, USFWS

These students are stocking Atlantic salmon fry into the West Branch of the Union River, which drains into Blue Hill Bay in eastern Maine. The children raised the fish in their classroom. To complement educational programs, partners such as Native American Tribes of Maine, the Maine Atlantic Salmon Commission, the Atlantic Salmon Federation, and Project SHARE (Salmon Habitat and River Enhancement) are working to improve river habitat, the key to the survival of the species.

Recovery Program Audit

In February 2004, the Government Accountability Office (GAO) initiated an audit of the Service's recovery program to assess how funds were allocated among listed species during FY 2000 through FY 2003. This audit was conducted at the request of Congressman Pombo, Chairman of the House Resources Committee. GAO interviewed staff at the Washington Office (WO), each of the Regional Offices (RO), and 10 field offices. WO staff explained how funds were allocated to the ROs, and RO staff explained how they allocated funds to their respective field offices. WO funds are allocated according to a workload based formula after initial items such as Congressional earmarks, Departmental cross-cut initiatives, and a small amount of "capability funding" are given to the respective regions.

ROs each have different methods of allocating funds to the field offices. WO staff also explained the Service's 1983 (48 FR 43098) guidelines for issuing listed species recovery priority numbers. GAO is analyzing how the Service allocates recovery funds compared to the recovery priority guidelines and looking at what factors influenced the Service's allocation decisions the most. GAO's final report is expected to be available in FY 2005.

Susi vonOettingen, USFWS

Recovery initiatives included propagating the endangered Robbins' cinquefoil in captivity, planting it in its historic range, and reconfiguring a hiking trail in New Hampshire, the only State in which the species is known to occur. Recovery partners include the U. S. Forest Service, New England Wild Flower Society, and the Appalachian Mountain Club.

5-Year Reviews

During FY 2004, 5-year reviews were completed for two species: marbled murrelet and delta smelt. The Act requires the Service to review the status of all listed species at least once every five years to determine whether any species should be delisted or reclassified (section 4(c)(2)). To date, the Service has not regularly conducted 5-year reviews because of other competing statutory requirements. However, recent lawsuits and notices of intent to sue have highlighted the need to undertake 5-year reviews. In FY 2004, we began to address this need and initiated 5-year reviews for an additional 12 species. We also began planning to expeditiously address the backlog of 5-year reviews. Future Recovery Reports to Congress will report on our progress and will indicate those species for which 5-year reviews have been initiated and completed.

Although we have recognized the need to undertake 5-year reviews for all listed species, there are many challenges to conducting and completing these reviews. A 5-year review requires that all current information on a species be compiled, analyzed, and compared to the species' last status review to determine whether its listing classification as threatened or endangered is accurate. The end result of a 5-year review is a recommendation on whether the listing classification (threatened or endangered) of the species should change (a 5-year review is not a rulemaking and does not by itself change the listing classification of a species; a separate proposed rule would be prepared if warranted). For many species, the last status review was the original listing determination.

The large volume of information generated since listing can require considerable time and resources to review and analyze. Additionally, the more than 100 species that were transferred onto the List from the Endangered Species Conservation Act of 1969 present special cases. These "grandfathered" species have no listing determination packages per se, and most have had no other status reviews. Although our files, including recovery plans and recent biological opinions, will likely have significant information on these species, analyzing large amounts of information without a status review or listing determination for comparison will add to the challenge. A number of species also were listed as distinct population segments (DPSs) prior to 1996 and will require added review for consistency with the Service's 1996 "Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act" joint policy with NOAA Fisheries.

The two 5-year reviews completed in 2004 have illustrated the challenges discussed above, and many additional ones. The delta smelt was listed in 1990, and the marbled murrelet in 1992, so both reviews required analyses of a considerable amount of information generated since the species' listings.

The initiation of the northern spotted owl 5-year review highlights a major on-going challenge to species recovery: the emergence of new threats. So far, the review has shown that invasive competitors and diseases are threats that were not present at the time of the owl's listing but will now likely require intensive management into the future.

The delta smelt 5-year review demonstrated the need to update recovery plans as we gain new information and as our understanding of the species changes. The 5-year review showed that delta smelt had for a short period met distribution and abundance recovery criteria but could not demonstrate that the threats to the species had been removed, as required to delist the species. Our understanding of the species had changed since the recovery plan was developed and the

Ken Kimball, Appalachian Mountain Club

Following the delisting of the Robbins' cinquefoil due to recovery, Service botanist Susi vonOettingen monitors the survival of the species at planting sites on the Presidential Range in the White Mountain National Forest of New Hampshire.

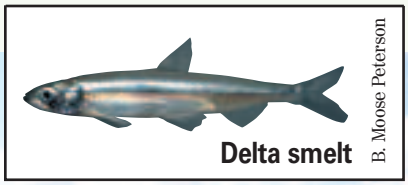
recovery criteria were no longer considered appropriate. The delta smelt review concluded that the species should remain listed as threatened. The 5-year review also recommended that the recovery criteria be revised.

The marbled murrelet was listed as a DPS in California, Oregon, and Washington prior to the 1996 DPS policy. The 5-year review for the marbled murrelet also served to determine whether the listing is consistent with the 1996 DPS policy. The 5-year review concluded that the marbled murrelet DPS is not consistent with the DPS policy with regard to discreteness. However, the 5-year review also concluded that threats to the marbled murrelet are continuing and that murrelets have not yet shown a response to ongoing management actions to reduce those threats. The 5-year review recommended that the marbled murrelet remain listed as threatened until a range-wide status review for the entire species is completed. The marbled murrelet 5-year review demonstrates the challenges associated with reviewing pre-1996 DPS listings for consistency with the DPS policy. Review of the listed DPS may precipitate the need to initiate additional review to determine whether the entire species or other DPSs warrant listing. The murrelet also serves as an example of why recovery is a long process; there is often a long lag period between implementing management actions to reduce threats and improvement in a species status.

Recovery On-line Activity Reporting (ROAR)

In FY 2004, the Service initiated development of a web-based system, the Recovery Online Activity Reporting (ROAR) system, to track implementation of recovery actions from approved and current recovery plans for endangered and threatened species. A recovery plan serves as a road map for the species' recovery. Plans identify, organize, coordinate, and prioritize the multitude of recovery actions that will likely lead to downlisting and delisting the species. ROAR is intended to track our progress in achieving the measurable and objective recovery criteria and site-specific management actions that are required by the Act and stated in each recovery plan. ROAR will facilitate more frequent reviews of recovery plan goals, objectives, and criteria to see if we have met the plan's downlisting/delisting criteria, or if the criteria need to change.

The Office of Management and Budget has strongly encouraged the development of this system to provide better information to our partners and the public on the status of recovery for listed species. The system is being pilot tested, and we hope to have it available for the public to view in FY 2007. We also intend to use the available ROAR data to assist in calculating and validating all recovery actions related to performance measures for FY 2006.



Angelo Garcia, Jr., California Department of Water Resources

Many delta smelt spend much of their life in the quiet waters of the Suisun Marsh. An important incubator for the tiny fish, the marsh is strategically located between the Sacramento-San Joaquin Delta and the San Francisco Bay.

Species Highlights

The following success stories of the Tinian monarch, Douglas County DPS of the Columbian white-tailed deer, and the Missouri bladderpod highlight not only the good news that species are being downlisted and delisted under the Act, but also the challenges they faced and the unique partnerships that developed to meet those challenges and implement recovery efforts.

Joel David, USFWS

Columbian white-tailed buck

Douglas County, Oregon, Distinct Population Segment of the Columbian white-tailed deer *(Odocoileus virginianus leucurus)*

On July 24, 2003, we published a final rule that split the Columbian white-tailed deer into two distinct population segments (DPS), and delisted the Douglas County, Oregon, DPS. The Columbia River DPS remained listed as endangered. A robust population growth to over 6,000 animals, an increase in range of the species, and habitat acquisition and protection led to delisting the Douglas County DPS due to recovery. This recovery was primarily the result of habitat acquisition and management for the deer, hunting restrictions, and the application of local ordinances designed to protect the Douglas County DPS.

The Oregon Department of Fish and Wildlife (ODFW) provided instrumental data which helped the Service decide that the Douglas County DPS was ready for delisting. Starting in 1978, the ODFW conducted spring and fall surveys to estimate population size, recruitment, and sex ratios. They also actively coordinated with the Service and Oregon State University to investigate deer habitat use and movement of radio-collared individuals. The Bureau of Land Management, The Nature Conservancy, and the Douglas County government all managed property to ensure secure populations of the deer. The Service continues to work closely with the state to develop and implement an effective post-delisting monitoring plan for the Douglas County DPS of the Columbian white-tailed deer.

The Bureau of Land Management, The Nature Conservancy, and the Douglas County government all managed property to ensure secure populations of the deer.

Yvonne Dettlaff, USFWS

A Columbian white-tailed deer is air-lifted to a protected habitat. Washington State's Julia Butler Hansen National Wildlife Refuge was established in 1972 to conserve the species.

USFWS

As a result of its improved status, the Missouri bladderpod was downlisted from endangered to threatened status.

Missouri bladderpod
(Lesquerella filiformis)
On October 15, 2003, we reclassified the Missouri bladderpod, a member of the mustard family, from endangered to threatened status. The reclassification was based on the plant's significant progress towards recovery. Since the time the species was listed in 1987, the number of known populations substantially increased and the threats to some of the larger populations decreased because of land acquisition, landowner contact programs, and beneficial management initiatives.

At the time of listing, the bladderpod was known to occur in only nine locations within two counties in Missouri. As of October 2003, the plant had been found in additional locations and was known to occur in 61 sites in 4 counties in Missouri and in 2 sites in 2 counties in Arkansas. Other sites might still be discovered. The National Park Service, the Missouri Department of Conservation, the Missouri Department of Natural Resources, and The Nature Conservancy all manage lands that benefit the bladderpod. Management activities have included prescribed burns to reduce threats from exotic invasive weeds, working with landowners to employ best management practices that reduce herbicide use and heavy grazing during the plant's flowering and fruiting periods, and mechanical cutting of invasive eastern red cedar trees to improve habitat.

Before delisting the species can be considered, the final rule reclassifying the species recommended that the following research and recovery actions may be needed: 1) investigating the pollination ecology of the species; 2) revising the recovery plan objectives established in 1988 to reflect the current knowledge of the species; 3) securing funding to provide necessary information essential to complete recovery and to facilitate the removal of the species from the List of federally protected species; 4) evaluating the efficacy of different management techniques; and 5) assuring that threats such as urban development and competition from exotic plants, both of which result from rapid urbanization, do not increase.

Since the time the species was listed in 1987, the number of known populations substantially increased and the threats to some of the larger populations decreased because of land acquisition, landowner contact programs, and beneficial management initiatives.

The Service, in cooperation with the U.S. Department of the Interior Office of Insular Affairs, the U.S. Department of Defense—Navy, U.S. Department of Agriculture Wildlife Services, the Government of Guam, the Commonwealth of Northern Mariana Islands, and the State of Hawaii are working together regionally to control brown treesnakes around transport centers.

Tim Sutterfield, US Navy

Tinian monarch chicks

Tinian monarch
(Monarcha takatsukasae)
The Tinian monarch is a small forest bird endemic to the island of Tinian in the Mariana Archipelago in the western Pacific Ocean. The Tinian monarch was listed as endangered on June 2, 1970, because its population was reported to be critically low due to the destruction of native forests by pre-World War II agricultural practices and by military activities during the war. On September 21, 2004, the Tinian was delisted due to recovery based primarily on information from population surveys and demographic research which indicated that the bird had increased in number (>50,000 birds) and that the primary listing factor, loss of habitat, had been ameliorated.

However, one lingering concern about long-term stability of the Tinian monarch was the potential threat of an accidental introduction of the brown treesnake *(Boiga irregularis)*. While there have been reports of possible BTS on Tinian, BTS are not known to be established on Tinian (should that happen, it would be disastrous for many species, not just the monarch). Nevertheless, effective methods for interdiction, monitoring, and control of incipient populations of BTS must be implemented on all the islands in the Marianas, including Tinian. The Service, in cooperation with the U.S. Department of the Interior Office of Insular Affairs, the U.S. Department of Defense—Navy, U.S. Department of Agriculture Wildlife Services, the Government of Guam, the Commonwealth of Northern Mariana Islands, and the State of Hawaii are working together regionally to control BTS around transport centers.

On Tinian, the Navy inspects all cargo originating on Guam (where the snake has become established) prior to loading and again before it is off-loaded in Tinian. In addition, the Service funded construction of a BTS barrier and quarantine yard at the commercial port on Tinian. This barrier facilitates inspection of high-risk cargo and will enhance BTS interdiction efforts. The final post-delisting monitoring plan for the Tinian monarch discusses these ongoing efforts, as well as biological monitoring of the monarch populations to ensure that the Tinian monarch will continue to remain delisted.

Tim Sutterfield, US Navy

Tinian, a South Pacific island, as seen from the air.

Results

Table 1. Total Number of Recovery Plans For All Listed Species
(data as of September 30, 2004)

Type of Plan	#	%
Exemptions from recovery plans	12	1
Plans in first stages of development	162	13
Draft plans	50	4
Final approved recovery plans	1,027	82
Total Species	1,251	
Final plans under revision	75	7

… recovery teams can be incredibly helpful in situations where the species occurs over a wide geographic area, uses a diversity of habitat types, there is significant controversy with the species' listing and/or management needs, or in instances where the recovery plan covers multiple species or an ecosystem.

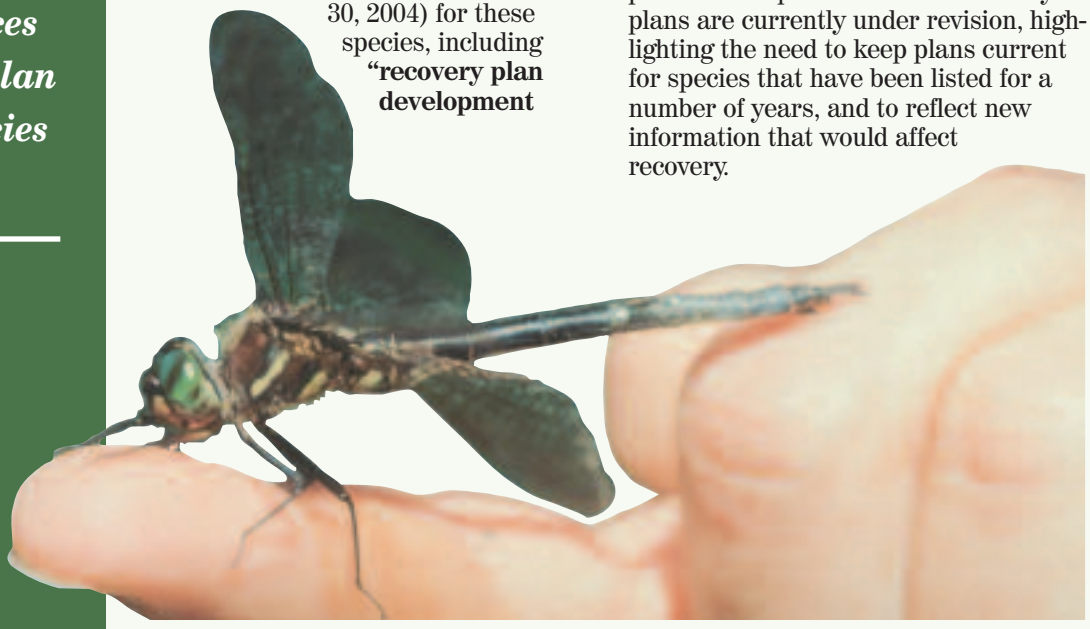
Appendix A shows the following information for each of the 1,251 species under the jurisdiction of the Fish and Wildlife Service (including the 10 species where we have joint jurisdiction with NOAA Fisheries): lead region, listing date, date of first final recovery plan, stage of the recovery plan (under development, draft, final, revision), date of the current plan, listing classification (threatened or endangered, and if there is critical habitat designated), recovery priority number, population status at the end of FY 2002 for comparison to the population status at the end of FY 2004, species numbers and threats trends for the FY 2004 population status, and recovery achieved. Below under the "Results" section are summarized statistics (as of September 30, 2004) for these species, including **"recovery plan development stage," "population status,"** and **"extent of recovery objectives achieved."**

Recovery Plans

Recovery plans organize and prioritize the actions necessary to bring about the species' recovery and provide the criteria that will be used to measure whether a species can be removed from the List. Recovery plans may be written for just one species, multiple species, or whole ecosystems. Recovery plans may be written by the Service, contracted out to an individual species' expert, or developed by a recovery team. Final plans are published after public comments have been incorporated. Plans are kept current through updates, amendments, and revisions[7].

During October 1, 2002, through September 30, 2004, the Service completed 15 draft, 16 final, and 13 revised recovery plans, which together cover 113 species. Table 1 shows the total number of recovery plans under development, as well as in draft, final, and revised form for all listed species.

Despite the 10 species added to the list between October 1, 2002, and September 30, 2004, the Service has maintained a marked improvement in the proportion of species with final recovery plans. For example, in 1994 only 54% of the 893 then listed species had final plans, while by the end of this reporting period 82% of 1,251 listed species had final plans. Seven percent of final recovery plans are currently under revision, highlighting the need to keep plans current for species that have been listed for a number of years, and to reflect new information that would affect recovery.



Hine's emerald dragonfly, USFWS

[7] Only revisions to final plans are tracked and reported here.

Recovery Teams

Establishing official[8] recovery teams to work on species' recovery planning and/or implementation is not required by the Act, nor are they necessary for every species. However, recovery teams can be incredibly helpful in situations where the species occurs over a wide geographic area, uses a diversity of habitat types, there is significant controversy with the species' listing and/or management needs, or in instances where the recovery plan covers multiple species or an ecosystem.

Some of the benefits to convening a recovery team include: increasing the depth of biological and management expertise contributing to the recovery plan development and/or implementation; resolving controversial issues early in the planning process; providing a mechanism for multiple agencies and stakeholders to interact; developing advocates for the species' recovery; and facilitating the implementation of recovery actions. However, there are also potential disadvantages to utilizing recovery teams, including the larger the team, the longer the planning process tends to take, and team management takes a considerable amount of resources (financial and otherwise).

Five hundred (40%) of the 1,251 listed species have an official recovery team. Another 175 (14%) species have some other informal team or group working with the Service on its recovery. However, 577 (46%) species currently do not have an official or informal group working with the Service. This does not mean that recovery planning or on-the-ground action is not taking place for these species. It is not necessary to establish a recovery team for all species. For example, a species that only occurs in one small, isolated place, with limited known information, would probably not need a recovery team. In this case, a species expert or the lead Service biologist would be more appropriate to write the recovery plan. Implementation of recovery actions for this species might only involve a handful of people and not an "informal" group if an advocacy group of some type does not exist.

Barry Stieglitz, USFWS

The haha plant *(Cyanea shipmanii),* an endangered species, was successfully outplanted at Hakalau Forest National Wildlife Refuge on the Big Island of Hawaii.

Gene Nieminen, USFWS

Left: An endangered swamp pink, a species that has a priority recovery number of 1C.

Far left: Conserving the Hine's emerald dragonfly helps protect rare wetlands or fens in the Chicago metro area. Fens are low-lying marshy areas, often drained and cultivated because of their rich soils.

[8] Official recovery teams are established by invitation from the Regional Director.

Table 2. Recovery Priority Number Chart

Degree of threat	Recovery potential	Taxonomy	Priority	Conflict
High	High	Monotypic genus	1	1C
High	High	Species	2	2C
High	High	Subspecies	3	3C
High	Low	Monotypic genus	4	4C
High	Low	Species	5	5C
High	Low	Subspecies	6	6C
Moderate	High	Monotypic genus	7	7C
Moderate	High	Species	8	8C
Moderate	High	Subspecies	9	9C
Moderate	Low	Monotypic genus	10	10C
Moderate	Low	Species	11	11C
Moderate	Low	Subspecies	12	12C
Low	High	Monotypic genus	13	13C
Low	High	Species	14	14C
Low	High	Subspecies	15	15C
Low	Low	Monotypic genus	16	16C
Low	Low	Species	17	17C
Low	Low	Subspecies	18	18C

Recovery Priority

The recovery priority number reflects the degree of threat faced by the species, along with the species' potential for recovery and genetic distinctness (i.e., whether it is a monotypic genus versus a subspecies). A "C" following the number identifies that there is the potential for conflicts between needed recovery actions and economic activities. Ranking ranges from a high of 1C down to 18 (as shown in Table 2). Recovery priorities do not change often. However, changes to the recovery priority number do sometimes occur because of increasing or decreasing threats and/or resolution of taxonomic questions (e.g., a species has been broken into two subspecies).

Status of Listed Species

All taxonomic groups are vulnerable to threats that lead to their being

The recovery priority number reflects the degree of threat faced by the species, along with the species' potential for recovery and genetic distinctness...

West Indian manatee

The Sirenia Project, USGS

listed as threatened or endangered (see Table 3).

For the period October 1, 2002, to September 30, 2004, 27% of listed species are reported as stable, 6% as improving, and 22% as declining (see Figure 1). We are uncertain of the status of 42% of the species. Additionally, 1% of listed species are only found in captivity, and 2% are believed to be extinct.

Species Status

Often, actions are needed immediately after listing just to prevent a species from becoming extinct. Recovery activities must first halt, then reverse, declines. Addressing the long-term threats that often have occurred over the course of decades or centuries typically requires substantial time and resources. In addition, the response time of a species to the implementation of actions is highly variable, mostly due to their life history (time to maturation, etc.). Therefore, we do not anticipate seeing stable or improving status for a species in the early years following its listing.

During the first few years after listing, most species populations have an uncertain or declining status. As mentioned above, as of September 30, 2004, the status of 42% of listed species is reported as uncertain.

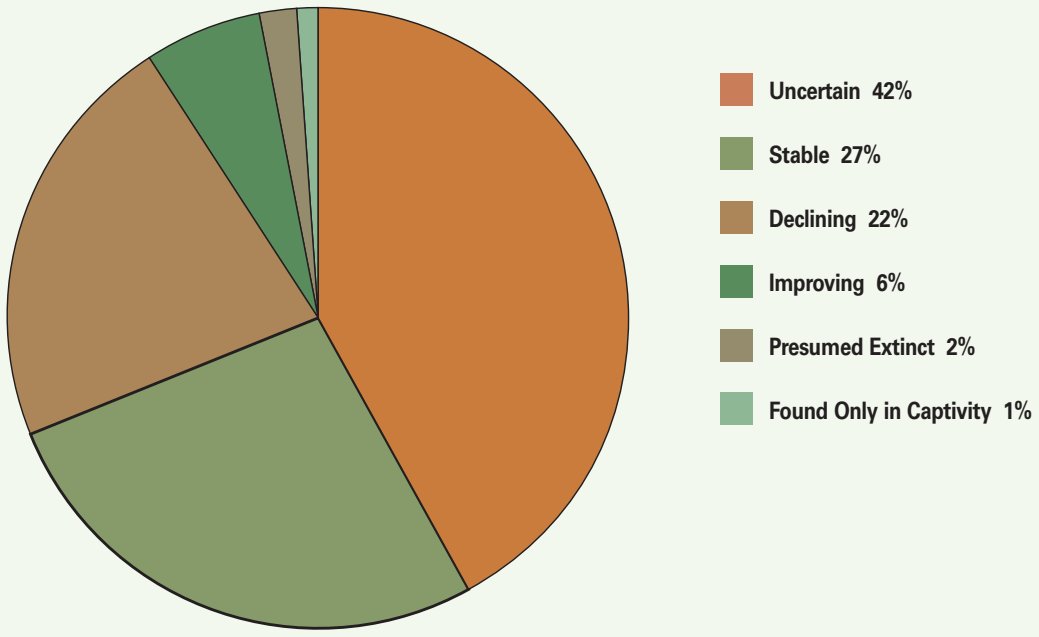
Dr. C. Riley Nelson, Brigham Young University

The City of Austin operates a captive breeding facility for the Barton Springs salamander. The captive breeding facility serves as a refugium for the species; provides opportunities for research on the salamander's biology, habitat requirements, and sensitivity to environmental disturbance; and promotes increased awareness of threats to this species and its habitat.

Table 3.
Listed Species by Taxonomic Group
(data as of September 30, 2004)

Taxonomic Group	# of Species	% of Total
Mammals	69	14
Birds	92	18
Reptiles	37	7
Amphibians	21	4
Fish	108	21
Invertebrates	179	35
Total Animals	*506*	*100*
Flowering Plants	707	95
Non-flowering Plants	38	5
Total Plants	*745*	*100*
Total Species	*1,251*	

Figure 1. Percentage of Listed Species Per Status Category*
(data as of September 30, 2004)



*One species is presumed extirpated in the U.S. but extant outside the U.S. (0.1%)

Jack Jeffrey

Native trees like the ohia provide important habitat for endangered Hawaiian forest birds.

Additional information on species population numbers or threats is needed before their status can be determined. Table 4 shows that in 30% of species, information regarding population numbers is uncertain, and in another 12.5% of species, information regarding both population numbers and threats are uncertain. Often the information analyzed and used for reporting is generated as the result of opportunities that arise from developing Habitat Conservation Plans (HCPs), biological assessments for section 7 consultations, and from the implementation of recovery activities.

Table 4. Population Status Descriptors
(data as of September 30, 2004)

	# of Species	% of Species
Population Increasing/Threats Continuing at the Same Rate	47	3.8
Population Increasing/Threats Increasing	13	1.0
Population Increasing/Threats Being Managed	28	2.2
Population Stable/Threats Continuing at the Same Rate	260	20.8
Population Stable/Threats Increasing	15	1.2
Population Stable/Threats Being Managed	65	5.2
Population Stable/Threats Uncertain	1	0.1
Population Declining/Threats Continuing at the Same Rate	211	16.9
Population Declining/Threats Increasing	30	2.4
Population Declining/Threats Being Managed	3	0.2
Population Declining/Threats Uncertain	7	0.6
Population Uncertain/Threats Continuing at the Same Rate	341	27.3
Population Uncertain/Threats Increasing	12	1.0
Population Uncertain/Threats Being Managed	21	1.7
Population Uncertain/Threats Uncertain	156	12.5
Not applicable—population and threat information not calculated for species presumed extinct, extirpated in the U.S., or found only in captivity	41	3.3
Total	*1251*	*100.0*

These opportunities are not equal for all listed species, even those species that have been listed for a number of years. Table 4 also quantitatively shows the population and threat descriptors that were included in determining the population status for all species, as reported in Appendix A.

Downlisting and Delisting Actions

Successful implementation of recovery actions over time leads to improvement in a species status and eventual downlisting (reclassification from endangered to threatened) and delisting. Recovery plan criteria are the measurements by which recovery progress is judged. When an endangered species has successfully met its criteria, it is downlisted. During the reporting period October 1, 2002, to September 30, 2004, the Eastern and Western Distinct Population Segments (DPS) of the gray wolf, the Missouri bladderpod, and the California tiger salamander were downlisted from endangered to threatened.

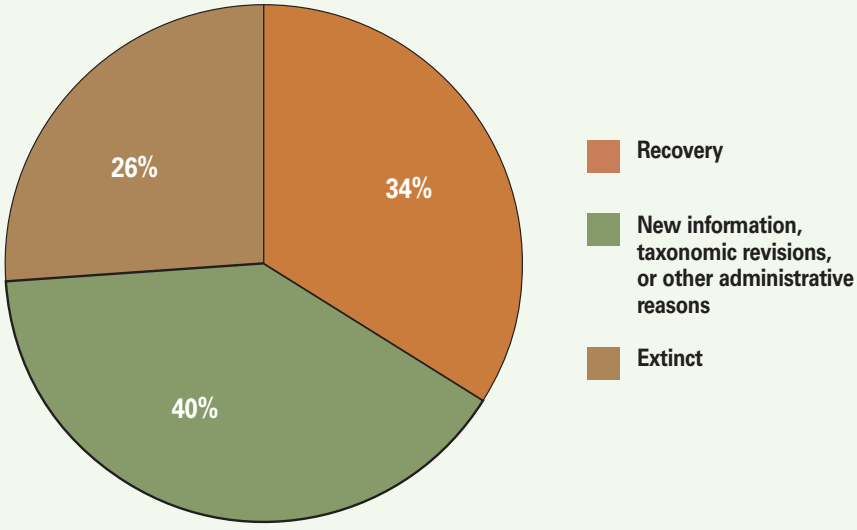
The Code of Federal Regulations (50 CFR 424.11) specifies three situations in which the protections of the Act may be completely removed (delisting) for a species: because it has been recovered; and/or because of new information, taxonomic revisions, or other administrative reasons; or because it has gone extinct.

Twenty-eight of the 1,251 species (2%) in Appendix A are believed to be extinct. Reporting species as possibly extinct does not necessarily reflect a failing of the Act as some of these species may already have been extinct at the time of listing. Surveying for species that may be in such small populations that they are believed extinct is highly difficult. In the past, species may have been listed without confirmation of presence. Confirmation of extinction can be equally problematic, and species may remain reported as possibly extinct for a number of years before sufficient surveys are conducted to confirm extinction and rulemaking to

Jay Boykin, U.S. Forest Service

Conducting controlled burns in longleaf pine forests like this one in De Soto National Forest, Mississippi, removes undergrowth to create open areas for listed species such as gopher tortoises, red-cockaded woodpeckers, and Mississippi gopher frogs.

Figure 2. Summary of Delisting Actions
(data as of September 30, 2004)



Robyn Cobb, USFWS

Johnston's frankenia

Richard Wass, USFWS

In the Hakalau Forest National Wildlife Refuge greenhouse, Fish and Wildlife Service horticulturist Baron Horiuchi shows Lynn Scarlett, Deputy Secretary of the Department of the Interior, controlled propagation initiatives for the ohia (see page 22 for an enlarged photo of ohia blossom), a tree whose year-round blossoms are food for a range of endangered Hawaiian bird species.

With 317 listed species, Hawaii leads the nation. Of those species, 273 are plants, endangered largely because of habitat destruction by feral pigs and cattle, competition from non-native plants, and predation by rats, slugs, and leafhoppers.

remove them from the List is completed. A species cannot be declared extinct until the rulemaking process (proposed rule—public comment—final rule) is completed. Two species, the Guam broadbill *(Myiagra freycineti)* and Mariana mallard *(Anas oustaleti)*, were delisted due to extinction during the reporting period. The final rule delisting the Guam broadbill and Mariana mallard was published in the *Federal Register* on February 23, 2004 (69 FR 8116).

Although downlistings and delistings due to recovery have been infrequent (see Figure 2), they do occur. As of September 30, 2004, 34% (12) of the total number of delistings (35) have been due to recovery, 40% (14) due to new information, taxonomic revisions, or other administrative reasons, and 26% (9) due to extinction (see Figure 2).

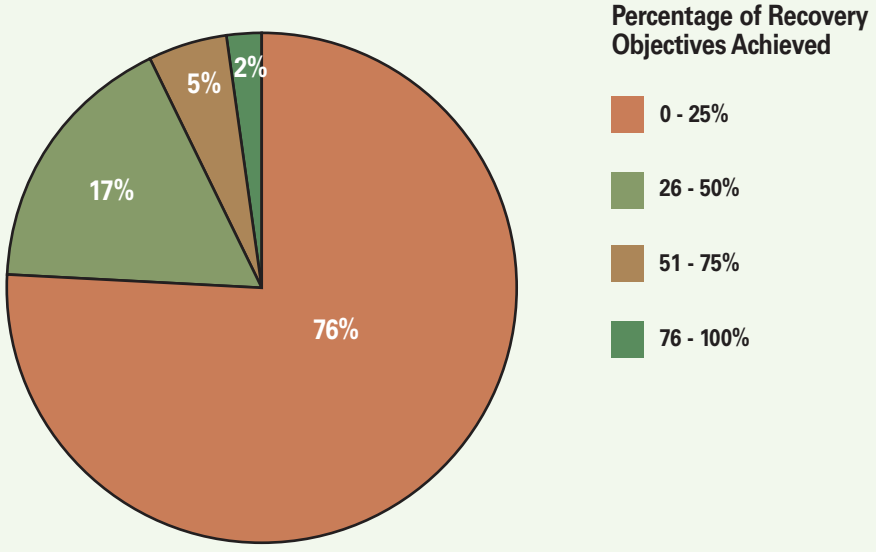
The number of delistings due to recovery may be on the rise, however. For example, during the reporting period October 1, 2002, to September 30, 2004, three species, the Douglas County DPS of the Columbian white-tailed deer *(Odocoileus virginianus leucurus)*, Hoover's woolly-star *(Eriastrum hooveri)* and Tinian monarch *(Monarcha takatsukasae)* were delisted due to recovery. The final rules announcing the delisting of the Douglas County DPS of the Columbian white-tailed deer, Hoover's woolly-star, and Tinian monarch were published in the *Federal Register* on July 24, 2003 (68 FR 43647); October 7, 2003 (68 FR 57829); and September 21, 2004 (69 FR 56367), respectively.

In addition, three other species were proposed for delisting. The Johnston's frankenia *(Frankenia johnstonii)*, Eggert's sunflower *(Helianthus eggertii)*, and the Eastern DPS of the gray wolf *(Canis lupus)* were all proposed for delisting due to recovery.

Recovery Achieved

The goal of all but a few recovery plans is to delist the species[9]. We know when a species may be ready for downlisting or delisting by measuring its status against the tangible objectives and criteria developed in its recovery plan. For example, the Atlantic coast piping plover recovery plan has two objectives[10], one of which is to increase breeding pair numbers and productivity across the Atlantic coast.

Figure 3. Summary of Recovery Achieved
(data as of September 30, 2004)



[9] Some endangered species may only be recovered to the point of downlisting them to a threatened classification. Other species did not have enough information to sufficiently develop recovery criteria at the time the first recovery plan was written. These plans will include downlisting and delisting criteria when the plans are revised to incorporate new information.

[10] Ideally, the objectives and criteria should be threat-based, but older plans may not have threats explicitly stated in their objectives and criteria. As plans are revised, criteria will be evaluated and revised as necessary to include threats-based criteria.

Achieving a five-year average productivity of 1.5 fledged chicks per pair in each of the four recovery units is one of the five criteria by which attainment of the plover's two objectives will be measured. Specific recovery actions, such as fencing nest sites to reduce predation and nest disturbance, support the productivity objective. Both objectives must be met before the goal of recovery can be considered achieved.

The **"Recovery Achieved"** number discussed in Figure 3 is reported individually in Appendix A for each species. This category estimates the extent to which the recovery objectives have been achieved for each species. This percentage is not the proportion of the number of discrete actions in the recovery plan that have been completed (e.g., 33 actions out of 100), and it does not mean that one of four objectives have been met. Rather, it reflects the overall progress towards the recovery goal of downlisting or delisting. For example, the first species in Appendix A (the gray bat) has a recovery achieved number of three, meaning that it is approaching the criteria set for recovery. As discussed above, ROAR will facilitate tracking and reporting a species "recovery achieved" status, once it becomes fully operational.

As summarized in Figure 3, most listed species (76%) only had 0 to 25% of their recovery objectives achieved and only 2% of the species had 76 to 100% of their recovery objectives achieved.

Table 5. Listed Species Under Controlled Propagation by Taxonomic Group
(data as of September 30, 2004)

Taxonomic Group	# Species under controlled prop
Mammals	13
Birds	23
Reptiles	3
Amphibians	9
Fish	49
Invertebrates	46
Total Animals	*143*
Flowering Plants	346
Non-flowering Plants	9
Total Plants	*355*
Total Species	*498*

Gene Nieminen, USFWS

The piping plover has a "recovery achieved" number of 2, indicating that 26 to 50% of the recovery objectives have been achieved.

Controlled Propagation

In October 2000, we and NOAA Fisheries (NMFS) published our joint Policy (Policy) Regarding Controlled Propagation of Species Listed Under the Endangered Species Act (65 FR 56916). The controlled propagation of plants and animals in certain situations is an essential tool for conservation and recovery of listed species. However, the intent of the Act is "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved." The Policy provides guidance and establishes consistency for use of controlled propagation[11] as a component of a listed species' recovery strategy. Information on implementation of the policy and on controlled propagation efforts as a recovery tool during the reporting period is reported below.

The Policy also addresses species maintained in refugia or for research purposes. During the reporting period, 498 species were maintained in refugia, research, pre-propagation research, or under active propagation for release into the wild. Of these, 438 (88%) species are listed as endangered and 60 (12%) are listed as threatened, consistent with the Policy's emphasis that every effort should be made to recover wild populations in their natural habitats before resorting to controlled propagation. Species listed as

Dr. Patricia Tomlinson, Berry College

Imported from Asia to create natural fences and to provide ornamental landscaping, the multiflora rose has become invasive, displacing native vegetation. After the loss and degradation of habitat, the introduction of exotic plants and animals that complete with or prey upon our native species is the second major cause of endangerment.

[11] Controlled propagation: production of individuals, generally within a controlled environment, for the purpose of supplementing or augmenting a wild population, or reintroduction to the wild to establish a new population.

Joel Sartore

The Attwater's prairie-chicken is a critically endangered grouse with about 50 individuals in the wild. The last two surviving populations at Attwater Prairie Chicken National Wildlife Refuge and Texas City Prairie Preserve are currently dependent upon release of captive-bred birds into the wild. Controlled propagation is critical to preventing extinction of the species while we work to identify the factors contributing to poor brood survival and improve the recruitment of wild chicks into the population.

endangered are much more likely to require controlled propagation as a means to prevent extinction.

Species in all taxonomic groups may need controlled propagation as a necessary component of their recovery strategy (see Table 5).

However, because storage of genetic materials (i.e., seeds) is much more easily accomplished for plants than for animals, plants make up the majority of species (345 of the 498 species (69%)) maintained in controlled propagation. For many of these plants, maintenance of the species in controlled propagation consists of long-term storage of seeds as refugia (often referred to as seed-banking) in the event of extirpation in the wild or of locally adapted populations.

The purposes for maintaining species in controlled propagation vary among species (see Table 6), and for most species, it serves multiple purposes. A species may be maintained in controlled propagation as a refugium in case populations become extirpated in the wild through a catastrophic event (e.g., fire, hurricane, or disease). At the same time, research can also be conducted, to further our understanding of the species' biology and life history and assist in recovery, such that it may

Table 6. Purposes of Controlled Propagation

Purpose	# species	% of species*	# species propagated for only one purpose
Refugium	331	66	158
Research	128	26	25
Reintroduction	238	48	40
Population augmentation	108	22	30
Other	23	5	9

* percentages do not add to 100 because many species are maintained in controlled propagation for multiple purposes.

never be necessary to utilize the refugial population. The controlled propagation program for the endangered Barton Springs salamander is a good example of this situation. In addition, populations may be maintained as refugia while individuals are simultaneously introduced into the wild to augment existing populations or to establish new populations, like the black-footed ferret. Some species are currently being maintained as refugial populations or for research purposes while techniques and plans for reintroduction are developed or habitat is protected or restored.

Considering the number and diversity of species currently being maintained under controlled propagation, our partners are equally numerous and diverse (see Table 7). The Policy envisioned that our primary partners would be botanical gardens, zoos, aquaria, national fish hatcheries, and national wildlife refuges. While all these institutions are major partners in controlled propagation efforts, other groups and organizations are playing much more prominent roles than we originally anticipated. Some of the other partners include other federal agencies (National Park Service, Department of Defense, Bureau of Land Management, U.S. Forest Service, U.S. Geological Survey, and the U.S. Bureau of Reclamation), state/territory government agencies, universities, and private non-governmental organizations. Local and municipal government agencies, private landowners, and individuals are partners for a number of species. Tribal agencies and government agencies of Mexico and Canada are also counted among our partners. Over half the species (254) have more than one partner participating in controlled propagation efforts, and many species have multiple partners. For example, the red wolf controlled propagation program involves 40 facilities around the United States. There are almost a thousand partnerships with the Service's Recovery Program represented by the FY 2004 controlled propagation efforts.

In FY 2004, the Service's controlled propagation expenditures totaled $11,509,358. This averages about $23,000 per species under captive propagation (median of $500). However, it is notable that 122 species had no Service expenditures for controlled propagation efforts. Service expenditures were $1,000 or less for an additional 154 species. The greatest expenditures for the Service were for

Ryan Hagerty, USFWS

Service biologist Paul Marinari releases a black-footed ferret into a preconditioning pen at the new captive breeding facility in Colorado.

Table 7. Partners in Controlled Propagation of Listed Species

Partners	# Species
Botanical Garden	312
Zoo or Aquarium	63
National Wildlife Refuge	29
Fish Hatchery/Tech Center	43
Other Federal Agency	106
State/Territory Agency	85
Local/Municipal Agency	15
University	120
Non-governmental Organization	50
Private Individual/Landowner	7
Other	8
Tribal/Foreign Government Agency	5

* numbers total greater than the number of species under controlled propagation because most species have multiple partners.

... the stable or improving status of many species is directly attributable to controlled propagation programs.

Table 8. Examples of Controlled Propagation Expenditures by Service Partners
(data as of September 30, 2004)

Species	USFWS expenditures	Partners expenditures
Whooping crane	$1.8 million	$1.7 million by USGS and zoos (does not include other partners' contributions)
Attwater's prairie-chicken	$110,000	$110,000
Red wolf	$191,000	$400,000
Columbia Basin pygmy rabbit	$75,000	$225,000
White sturgeon	$0	$1.5 million (tribal hatchery and private organization)
Riparian brush rabbit	$0	$585,700
Bighorn sheep (CA peninsular ranges)	$0	$300,000
Oregon silverspot butterfly	$17,500	$30,000 by Oregon Zoo (does not include other partners' contributions)

species propagated primarily by National Fish Hatcheries or National Wildlife Refuges. These figures demonstrate the enormous contribution and commitment of our partners to endangered species recovery. Expenditures of our partners are not available for all species, but we do have some information. Table 8 illustrates the invaluable contributions of just a few of our partners.

Recognizing our own and our partners' commitment to recovering listed species, and the need to establish consistency in the use of controlled propagation, the Policy outlines 14 criteria for the establishment and implementation of controlled propagation programs. Meeting all criteria is not specifically required, but is strongly encouraged. For instance, information may not be available for developing detailed genetics conservation management, or acute conservation needs (such as imminent risk of extinction) may outweigh any delays that would be incurred to meet all of the criteria.

Finelined pocketbook mussel

Dick Biggins, USFWS

Table 9. Compliance with Controlled Propagation Policy Criteria

Criteria not met	Brief description of criteria	# of species for which criterion has not been met
None	All criteria met.	369
3	Based on specific recommendations of recovery strategies identified in approved recovery plans, whenever practical.	4
5	Based on sound scientific principles to conserve genetic variation and species integrity (Intercrossing may only be used if supported by a recovery plan, genetics management plan or to compensate for loss of genetic viability; must be approved by FWS Director).	1
6	Preceded, when practical, by the development of a genetics management plan based on accepted scientific principles and procedures.	11
8	Conducted in a manner that will prevent the escape or accidental introduction of individuals outside their historic range.	1
9	Conducted, when feasible, at more than one location in order to reduce the potential for catastrophic loss at a single facility when a substantial fraction of a species or important population is brought into captivity.	79
12	With limited exceptions, implemented only after a commitment of funding is secure.	1
13	Release of propagated individuals should be preceded by development of a controlled propagation and reintroduction plan (unless already contained in a recovery plan).	19
Unknown	Maintained for research or educational purposes, commercially cultivated, or carried out by private individuals (plants).	13
N/A	Pre-propagation research with no propagation, maintained for research purposes with no intent to reintroduce in the wild, propagation in refugia with no immediate intent to reintroduce in the wild.	6
all	Private individual maintaining a population of imported snakes for zoological exhibition and educational purposes.	1
*Total**		*505*

* Total is greater than total number of species under controlled propagation because some species do not meet more than one criterion.

During the reporting period, approximately three-quarters of controlled propagation programs for listed species meet all 14 of the criteria (see Table 9). Of the 119 controlled propagation programs that do not meet all 14 criteria, most are only lacking in meeting a single criterion.

For example, 79 controlled propagation programs are not being conducted at more than one location to minimize potential for catastrophic loss of captive populations (i.e., due to disease, equipment failure, etc.). The Policy states that activities should be carried out in more than one location "when feasible," in recognition that meeting this criterion may be difficult for some species, such as when numbers of individuals are too small to maintain more than one population, or facilities, equipment, and expertise necessary for controlled propagation are very limited or specialized. Many species do not yet have genetics management plans (11), controlled propagation and reintroduction plans (19), or controlled propagation identified as a recovery strategy in an approved recovery plan or recovery plan revision (4). For a number of these species, their controlled

Anne Walker, USFWS

Oregon silverspot butterfly on a thistle on Hebo Mountain. The Oregon Zoo is a partner in propagating this species.

Dr. James Stubbendieck, Director, Center for Great Plains Studies, University of Nebraska

Native to the Nebraska Sandhills, blowout penstemon live in "blowouts," depressions caused by wind erosion. Wind is always present in the Sandhills, the largest sand dune area in the Western Hemisphere. Virtually eliminating fire enabled other plants to grow and resulted in a decline in habitat for this endangered species. Creating new populations of blowout penstemons is one aspect of the recovery program.

propagation programs pre-date the Policy. For these species, completing the recommended planning documents is a high priority.

The goal of using controlled propagation programs as a recovery tool is to improve the status of listed species in the wild and, along with other recovery actions, to recover a species to the point that it can be delisted. The status in the wild of species under controlled propagation is reported in Table 10.

The proportions of species in each category roughly mirror those reported for all species in Figure 1 (see page 21). This is not surprising given that controlled propagation programs are generally long-term commitments that require many years to see results. However, the stable or improving status of many species is directly attributable to controlled propagation programs. A number of well-known listed species such as the black-footed ferret, California condor, Mexican gray wolf, and red wolf (all reported as improving) would no longer be found in the wild were it not for the efforts of controlled propagation programs.

Table 10. Status in the Wild of Species in Controlled Propagation

Status	*# species*
Captive	11
Declining	101
Improving	29
Stable	114
Unknown	243

Less well known species also have benefited from controlled propagation programs:

Excerpt From Florida Manatee Recovery Plan [Third Revision, October 30, 2001]

The Fish and Wildlife Service gratefully acknowledges the dedication of the following people to the recovery of the Florida manatee. Without their assistance and the dynamic discussions at recovery team meetings, this revision would not have been possible.

David Arnold,* Florida Fish and Wildlife Conservation Commission
Kipp Frohlich, Florida Fish and Wildlife Conservation Commission
Jack Jackson,* Vero's tackle and Sport
Elmar Kurzbach,* U.S. Army Corps of Engineers
David Laist*, Marine Mammal Commission
Lynn Lefebvre,* U.S. Geological Service
Tom Linley,* Florida Department of Environmental Protection
Liz Manners, U.S. Army Corps of Engineers
Dave Murphy,* Lowry Park Zoological Park and Gardens
Winifred Perkins,* Florida Power and Light Company
Duncan Powell,* U.S. Environmental Protection Agency
Buddy Powell,* Florida Fish and Wildlife Conservation Commission (now with the Wildlife Trust)
John Reynolds,* Eckerd College Marine Mammal Commission (now with Mote Marine Laboratory)
Pat Riley,* Southwest Florida Marine Industry Association and Centennial Harbor Marina
Pat Rose,* Save the Manatee Club
Patti Thompson, Save the Manatee Club
Andy VanOs,* Florida Citizen
Leslie Ward, Florida Fish and Wildlife Conservation Commission
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Barb Zoodsma,* Georgia Department of Natural Resources

Additional thanks go to the following for their technical assistance and drafting initiatives: Bruce Ackerman, Karen Ausley, Cathy Beck, Heather Carolan, Lt. Bob Clarke, Karen Essock, Dean Eastou, Derek Fagone, Cathy Lingtimm, Ron Mezich, Tom Pitchford, Sara Shapiro, and Kent Smith

And to the U.S. Fish and Wildlife Service staff: Gloria Bell, Pete Benjamin, Bill Brooks,* Cindy Dohner, Dave Flemming, Dave Hankla, Joyce Kleem, Jim Kraus,* Elizabeth Souheaver, Cam Shaw, Jay Slack, Linda Walker, Jim Valade, Noreen Walsh, Grant Webber,* and Dawn Zattau.

**Appointed Recovery Team members have an asterisk by their name*

Sirenia Project, USGS

West Indian manatee

Bruce Rosenlund, USFWS

A greenback cutthroat trout with a fly in its mouth at Odessa Lake, Rocky Mountain National Park.

- Populations of blowout penstemons have increased from 12 to 17 since 1993, primarily as a result of the reintroduction program, and have brought the species closer to its downlisting goals.
- The San Clemente loggerhead shrike population is increasing as a result of the Navy's recovery program, which includes a captive propagation program. Over 80% of wild shrikes were raised in captivity or are descended from captive birds that were released.
- Captive propagation efforts for the finelined pocketbook mussel have resulted in augmentation of existing populations and reintroductions of the species within its historical range. The species now appears to be stable throughout most of its range.
- The greenback cutthroat trout status is improving due to a combination of recovery actions, including reintroductions. Removal of non-native fish and installation of barriers that prevent the movement of whirling disease and non-native fish into greenback populations have contributed to improving the status of both historic and restored populations. As pure greenbacks are introduced into habitats where non-native fish were removed from 2002 to 2004, this species could meet recovery goals in both the South Platte and Arkansas drainages by 2010.

Conclusion

The Service's Recovery Program is constantly evolving to address the many challenges and opportunities that present themselves throughout the year. By looking at the data presented for this reporting period and paying attention to the events of FY 2003 and FY 2004, our take home messages and "homework assignments" can be summarized:

Top: A condor-safe power line—a yellow diverter coiled onto an insulated wire.

Bottom: Sumner, the loggerhead sea turtle, returns to the Atlantic Ocean after nesting on a North Carolina beach. With their cameras or morning coffee, residents watch at a respectful distance.

Pacific Gas and Electric Company

Common sense and listed species recovery—A July 2005 Google web search of the terms "endangered species" and "common sense"combined came up with well over 90,000 hits for links to news articles, opinion-editorials from around the nations' newspapers, etc. Not all of those "hits" are articles about the Endangered Species Act or our domestically listed species, but the message is clear. From the presentations at the ESA at 30 conference to discussions around the kitchen table, the Service has heard the message that we need to come up with more flexible solutions to protect and recover listed species.

With responsibility for 1,251 listed species (a majority of which occur on private land), we rely on all of our partners to help us achieve recovery and remove species from the List. We can't do the job on our own, but without more flexible tools and an understanding of how our recovery planning and implementation actions impact our partners, they won't be willing to help. We will continue to involve our stakeholders and partners up front in the planning process so that we end up with more common sense, implementable recovery plans.

Strategic prioritization—The initiation of the Government Accountability Office's (GAO) audit of the Service's recovery program to assess how funds were allocated among listed species, gave us the opportunity to view our program more objectively. While we are confident that we follow our own recovery priority guidance to the maximum extent possible, we also know that we must take advantage of opportunities to implement actions for lower priority species as they arise. This is especially true as our discretionary budgets decrease and our resources are becoming more wrapped up in litigation-driven actions. For example, we have received a notice of intent to sue on our failure to conduct 5-year reviews for almost 200 species. However, we also know that we should do a better job at self-assessment and be more strategic in developing recovery opportunities with our partners for all of our species. We are currently

Matthew Godfrey, North Carolina Wildlife Resources Commission

Pacific Gas and Electric Company

Left: A Pacific Gas and Electric Company technician attaches a flight diverter to a new power line to help deter California condors and other birds from landing on high-voltage cables. The yellow diverter increases the visibility of the line, while the protective tree wire that surrounds the conduit inside serves as insulation to reduce the effect of any collision.

Bottom: Thanks to the efforts of our recovery partners, the status of the California condor is improving.

engaged in a number of landscape level strategic planning projects with other Service programs, the National Wildlife Refuge System, Migratory Birds, and Fisheries, to name a few.

Streamline our business practices—To help our staff more effectively manage their increasing recovery workload and still provide good customer service to our internal and external partners, we need to provide internal guidance on how to streamline recovery planning and permitting processes. We have a team working on identifying which areas can benefit the most from more efficient business practices. We are also working on writing clearer policies and regulations. For example, in April 2004, we published revised regulations for Candidate Conservation Agreements with Assurances (CCAA) and Safe Harbor Agreements (SHA). These regulation revisions provide clearer definitions of a non-Federal landowner, among others, and realign some inconsistencies between the previous CCAA/SHA regulations and policies published in 1999.

USFWS

Data

Data are presented in Appendix A for each U.S. listed species under the jurisdiction of the Service, organized by major taxonomic groupings. Data include:

- Species' inverted common name;
- Lead Service Region;
- Date the species was listed;
- Date of the species' first final recovery plan (if there is one);
- Stage of development of the recovery plan;
- Date of the species' most current recovery plan;
- Species' current listing classification;
- Species' recovery priority number;
- Value for the percentage of recovery objective(s) that have been met;
- Species' population status at the end of FY 2002 for comparison with the species' population status at the end of FY 2004; and
- Species' trends in numbers and threats for the FY 2004 species population status.

Common Name

Species are listed in the table by inverted common name within their respective taxonomic groups. Where a species has more than one commonly accepted common name, the alternate name is indicated in parentheses with an "equals" symbol followed by the alternate name. For plants, the scientific name is also given. Many plants and some invertebrates have no common name and only the scientific name is given. In this case, [NCN] indicates the species has no common name.

Lead Region

This indicates which Service Region has the lead responsibility for the species (see Map on inside back cover). A number "8" in Appendix A indicates species for which the California-Nevada Operations Office has lead responsibility. Some species are wide ranging and may be found in more than one region.

Date Listed

This indicates the date the species was added to the List of Endangered and Threatened Species.

Date of First Final Plan

This indicates the date by which the first, final recovery plan was approved (signed by the Regional Director or Director). An N/A in this column indicates that the species does not yet have a final recovery plan. "Exempt" in this column indicates that this species is exempt from needing a recovery plan. Species are "Exempt" if we determine that developing a recovery plan will not promote the conservation of the species. For example, species that are presumed extinct are not likely to benefit from recovery planning.

Plan Stage

The status of recovery plan development is reported as indicated below:

F = Final Plan that has been approved[12]

F1 = Final Plan with a draft revision

F2 = Final Plan with an approved revision(s)

D = Draft

U = Under Development

Exempt = Species is exempt from needing a recovery plan

Date of Current Plan

This indicates the date of the species' most current recovery plan. An "N/A" in this column indicates that a recovery plan for the species is still under development. "Exempt" in this column indicates that this species is exempt from needing a recovery plan. A date in this column that is different from the date in the "Date of First Final Recovery Plan" column indicates that the plan has undergone a revision (or is currently undergoing a revision) or that earlier drafts and final plans for some individual species may have been incorporated into later multi-species or ecosystem plans.

Current Listing Classification

The species' listing classification, as of September 30, 2004, is identified as threatened (T) or endangered (E). If critical habitat (CH) is designated, it is also listed in the table with the species' status.

Recovery Priority Number

The first step for the conservation of any species is to prevent its extinction. Thus the species with the highest degree of threat have the highest priority for preparing and implementing recovery plans. Additionally, appropriate use of the limited resources available to implement the Act must be considered. To this end, each species is assigned a recovery priority from 1 to 18 according to the degree of threats, recovery potential, and taxonomic distinctness. In addition, a species' rank may be elevated by adding a "C" designation to its numerical rank to indicate that it is, or may be, in conflict with construction or other development projects, or other forms of economic activity. Species with a high priority

B. Moose Peterson

A grassland species with a range limited to three southern California counties, the Stephens' kangaroo rat lives in burrows and feeds at night on seeds. More closely related to a squirrel than a rat or mouse, the species was listed in 1988 as endangered, largely as a result of urban development. Agricultural disking and the use of rodenticides are also threats. The core range is western Riverside County, a relatively dry inland valley in the shadow of the Santa Ana Mountains.

[12] Approved means the plan/revision has been signed by the Regional Director or Director, as appropriate.

rank (1, 1C, 2, 2C) are those that are the most threatened and have the highest potential for recovery. Species with a low rank (16, 17, 18) are the least threatened and have low recovery potentials. See Table 2 on page 13 of 48 FR 43102 (Sept. 21, 1983) for additional information on this prioritization system.

Recovery Achieved

The percentage of species recovery objective(s) achieved is indicated with a value of 1 to 4, as defined below:

1 = 0% to 25% achieved

2 = 26% to 50% achieved

3 = 51% to 75% achieved

4 = 76% to 100% achieved

Note: This number does not necessarily correspond with the percentage of recovery tasks achieved. For example, stabilization of a formerly declining species through completion of two or three of the most important tasks may be considered achievement of more than 25% of the recovery objective.

Population Status (FY 2002 and FY 2004)

The population status of each species is identified as:

I = Improving: species whose population numbers have increased and whose threats have either been constant or reduced since the last reporting period; or, a species whose numbers have been constant and whose threats have been reduced since the last reporting period.

S = Stable: species whose population numbers and threats have been constant since the last reporting period. A designation as stable means that there has been no change for the species' numbers and threats since the last reporting period. Stable, as used for this purpose, does not mean secure.

D = Declining: species known to be decreasing in population numbers and/or whose threats to their continued existence are increasing in the wild.

U = Uncertain: species for which the information available is not sufficient to determine their status since the last reporting period.

C = Captivity: species currently known to only survive in captivity (e.g., zoos, botanical gardens, or in other controlled conditions); species not currently known to exist in the wild.

E = Presumed Extinct: species that are currently believed to be extinct. Species presumed extinct may be retained on the List for a number of years because of the potential that an unknown remnant population remains in the wild. This is particularly true for species occurring in areas that are difficult to survey thoroughly.

X = Presumed Extirpated in the U.S. and Extant outside the U.S.: species believed or confirmed to no longer exist in the U.S., but still occurs elsewhere within its range outside of the U.S.

We also have included the population status as reported in 2002. A status of N/A is indicated for those species listed after the 2002 reporting period. In the past, we sometimes reported separately on the status of different populations of a listed species. In these cases, more than one status may be reported for 2002. We now report only on the status of the entire species as it appears on the List.

2004 Species number and threats information

The population status of each species is determined by considering both trends in species numbers and trends in threats. The "Species/Threats Info" column identifies the trends in numbers and trends in threats that were used to determine overall species population status. Several combinations of species numbers and threats may be possible for each population status category. The resulting species status may depend on the magnitude of the trends in numbers and threats. Trends in species numbers and threats are not reported for species that are presumed extinct or found only in captivity.

The trends in species population numbers are reported as:

I = Increasing: numbers of individuals or populations increased or other demographic characteristics indicate an increase.

S = Stable: numbers of individuals or populations remain stable or other demographic characteristics indicate populations remain stable.

D = Decreasing: numbers of individuals or populations decreased or other demographic characteristics indicate a decrease.

U = Unknown: numbers of individuals or populations is unknown, and no other information is available to indicate trends.

The trends in threats are reported as:

I = Increasing: threats to the species have increased. Increases in threats include: increase in threat intensity, increase in rate at which the threat affects the species, or identification of a new threat.

C = Continuing: Threats continue at the same level or rate.

M = Managed or reduced: Some or all threats have been managed or reduced.

U = Unknown: Trends in threats are unknown, and no information is available to indicate trends.

The population status of each species is determined by considering both trends in species numbers and trends in threats.

Appendix A—Data as of September 30, 2004

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GENERAL SPECIES INFORMATION			RECOVERY PLAN STATUS			SPECIES/RECOVERY STATUS					
Common Name	**Lead Region**	**Date Listed**	**Date of First Final Plan**	**Plan Stage ***	**Date of Current Plan**	**Current Listing Classification**	**Recovery Priority Number**	**Recovery Achieved**	**FY 2002 RRC Population Status**	**FY 2004 RRC Population Status**	**2004 Species/ Threats Info**
Mammals											
Bat, gray	3	1976	1982	F	1982	E, CH	8	3	I	I	I/C
Bat, Hawaiian hoary	1	1970	1998	F	1998	E	9	1	U	U	U/C
Bat, Indiana	3	1967	1983	F_1	1999	E	8	2	D	S	S/C
Bat, lesser long-nosed	2	1988	1997	F	1997	E	8	1	I	I	I/C
Bat, little Mariana fruit	1	1984	1990	F	1990	E	5	1	E	E	N/A
Bat, Mariana fruit (=Mariana flying fox)	1	1984	1990	F	1990	E, CH	3	1	D	D	D/C
Bat, Mexican long-nosed	2	1988	1994	F	1994	E	5	1	U	U	U/U
Bat, Ozark big-eared	2	1979	1984	F_2	1995	E	3	2	S	S	S/C
Bat, Virginia big-eared	5	1979	1984	F	1984	E, CH	9c	3	I	I	I/C
Bear, grizzly	6	1967	1982	F_2	1993	T	3c	2	S	S	S/C
Bear, Louisiana black	4	1992	1995	F	1995	T	9	2	I	S	S/M
Caribou, woodland	1	1983	1985	F_2	1994	E	3c	1	D	D	D/C
Deer, Columbian white-tailed Columbia River DPS)	1	1967	1976	F_2	1983	E	9c	4	I	I	I/M
Deer, key	4	1967	1980	F_2	1999	E	6c	4	I	S	S/C
Ferret, black-footed	6	1967	1978	F_2	1988	E	2	1	I	I	I/M
Fox, San Joaquin kit	8	1967	1983	F_2	1998	E	3c	1	D	D	D/C
Fox, San Miguel Island	8	2004	N/A	none	N/A	E	3	1	N/A	C	N/A
Fox, Santa Catalina Island	8	2004	N/A	none	N/A	E	9	1	N/A	I	I/M
Fox, Santa Cruz Island	8	2004	N/A	none	N/A	E	3	1	N/A	S	S/M
Fox, Santa Rosa Island	8	2004	N/A	none	N/A	E	3	1	N/A	S	S/M
Jaguar	2	1972	1990	F	1990	E	6	1	U	S	U/M
Jaguarundi, Gulf Coast	2	1976	1990	F	1990	E	6	1	U	U	U/C
Jaguarundi, Sinaloan	2	1976	N/A	none	N/A	E	6	1	N/A	U	U/U
Kangaroo rat, Fresno	8	1985	1998	F	1998	E, CH	3c	1	U	U	U/C
Kangaroo rat, giant	8	1987	1998	F	1998	E	2c	1	D	D	D/C
Kangaroo rat, Morro Bay	8	1970	1982	F_1	2000	E, CH	6c	1	U	U	U/C
Kangaroo rat, San Bernardino Merriam's	8	1998	N/A	none	N/A	E, CH	3c	1	D	D	D/C

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GENERAL SPECIES INFORMATION			RECOVERY PLAN STATUS			SPECIES/RECOVERY STATUS					
Common Name	**Lead Region**	**Date Listed**	**Date of First Final Plan**	**Plan Stage ***	**Date of Current Plan**	**Current Listing Classification**	**Recovery Priority Number**	**Recovery Achieved**	**FY 2002 RRC Population Status**	**FY 2004 RRC Population Status**	**2004 Species/ Threats Info**
Kangaroo rat, Stephens'	8	1988	N/A	D	1997	E	2c	1	D	U	U/C
Kangaroo rat, Tipton	8	1988	1998	F	1998	E	3c	1	D	D	U/C
Lynx, Canada	6	2000	N/A	none	N/A	T	15	2	U	S	S/C
Manatee, West Indian	4	1967	1980	F_2	2001	E, CH	5c	1	U	U	U/C
Mountain beaver, Point Arena	8	1991	1998	F	1998	E	9c	1	U	U	U/C
Mouse, Alabama beach	4	1985	1987	F	1987	E, CH	3c	2	I	U	U/C
Mouse, Anastasia Island beach	4	1989	1993	F	1993	E	6c	2	S	S	S/M
Mouse, Choctawhatchee beach	4	1985	1987	F	1987	E, CH	3c	3	I	U	U/U
Mouse, Key Largo cotton	4	1983	1999	F	1999	E	3c	2	D	U	U/U
Mouse, Pacific pocket	8	1994	1998	F	1998	E	3c	1	D	D	D/I
Mouse, Perdido Key beach	4	1985	1987	F	1987	E, CH	3c	2	I	U	U/U
Mouse, Preble's meadow jumping	6	1998	N/A	none	N/A	T, CH	9c	1	D	D	D/C
Mouse, salt marsh harvest	8	1970	1984	F	1984	E	2c	1	U	I	I/C
Mouse, southeastern beach	4	1989	1993	F	1993	T	9c	1	U	U	U/M
Mouse, St. Andrew beach	4	1998	N/A	none	N/A	E	3c	1	S	S	S/C
Ocelot	2	1972	1990	F	1990	E	5	1	D	S	S/C
Otter, southern sea	8	1977	1982	F_2	2003	T	9c	3	S	I	I/C
Panther, Florida	4	1967	1981	F	1995	E	6c	1	S	D	D/I
Prairie dog, Utah	6	1973	1991	F	1991	T	8c	2	S	S	S/C
Pronghorn, Sonoran	2	1967	1982	F_2	1998	E	3	1	D	D	D/C
Puma (=cougar), eastern	5	1973	1982	F	1982	E	18	1	E	E	N/A
Rabbit, Lower Keys marsh	4	1990	1994	F_2	1999	E	6c	2	S	D	D/C
Rabbit, pygmy	1	2001	N/A	none	N/A	E	3	1	D	D	D/C
Rabbit, riparian brush	8	2000	1998	F	1998	E	6c	2	D	U	U/U
Rice rat	4	1991	1999	F	1999	E, CH	3c	1	U	S	I/M
Sheep, bighorn (CA Pennisula Ranges pop.)	8	1998	2000	F	2000	E, CH	3c	1	I	S	S/C
Sheep, bighorn (Sierra Nevada pop.)	8	1999	N/A	D	2003	E	3	2	I	I	I/C
Shrew, Buena Vista Lake ornate	8	2002	1998	F	1998	E, CH	3c	1	D	U	U/U

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Squirrel, Carolina northern flying	4	1985	1990	F	1990	E	6c	2	S	S	S/C
Squirrel, Delmarva Peninsula fox	5	1967	1979	F_2	1993	E	9c	3	S	I	I/C
Squirrel, Mount Graham red	2	1987	1993	F	1993	E, CH	3c	1	D	D	D/I
Squirrel, northern Idaho ground	1	2000	2003	F	2003	T	3c	1	S	I	I/C
Squirrel, Virginia northern flying	5	1985	1990	F	1990	E	9c	3	S	S	S/C
Vole, Amargosa	8	1984	1997	F	1997	E, CH	6	1	U	U	U/U
Vole, Florida salt marsh	4	1991	1997	F	1997	E	6	1	U	U	U/C
Vole, Hualapai Mexican	2	1987	1991	F	1991	E	3	1	U	U	U/U
Wolf, gray (Eastern DPS)	3	1967	1978	F_2	1992	T, CH	14c	4	I	I	I/M
Wolf, gray (Southwestern DPS)	2	1967	1982	F	1982	E	2c	2	I	I	I/M
Wolf, gray (Western DPS)	6	1967	1980	F_2	1987	T	3c	4	I	I	I/M
Wolf, red	4	1967	1982	F_2	1990	E	5c	3	I	I	I/M
Woodrat, Key Largo	4	1983	1999	F	1999	E	3c	1	D	D	D/M
Woodrat, riparian (=San Joaquin Valley)	8	2000	1998	F	1998	E	6c	1	D	S	S/C
Birds											
Akepa, Hawaii (honeycreeper)	1	1970	1983	F_1	2003	E	1	1	S	S	S/C
Akepa, Maui (honeycreeper)	1	1970	1984	F_1	2003	E	6	1	E	E	N/A
Akialoa, Kauai (honeycreeper)	1	1967	1983	F_1	2003	E	5	1	E	E	N/A
Akiapola`au (honeycreeper)	1	1967	1983	F_1	2003	E	2	2	S	S	S/C
Albatross, short-tailed	7	1970	N/A	none	N/A	E	8	1	I	I	I/C
Blackbird, yellow-shouldered	4	1976	1983	F_2	1996	E, CH	2	2	I	I	I/C
Bobwhite, masked (quail)	2	1967	1978	F_2	1995	E	6	2	S	D	D/C
Caracara, Audubon's crested	4	1987	1989	F	1999	T	9c	1	S	U	U/U
Cahow	4	1970	N/A	none	N/A	E	1	1	N/A	U	U/U
Condor, California	8	1967	1975	F_2	1996	E, CH	4c	2	I	I	I/C
Coot, Hawaiian	1	1970	1978	F_1	1999	E	14	3	S	S	S/C
Crane, Mississippi sandhill	4	1973	1976	F_2	1991	E, CH	6c	1	S	S	S/C
Crane, whooping	2	1967	1980	F_2	1994	E, CH	2c	1	S	I	I/C

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Creeper, Hawaii	1	1975	1983	F_1	2003	E	8	2	S	S	S/C
Creeper, Molokai	1	1970	1984	F_1	2003	E	5	1	E	E	N/A
Creeper, Oahu	1	1970	2003	F_1	2003	E	5	1	E	E	N/A
Crow, Hawaiian (='alala)	1	1967	1982	F_1	2003	E	2c	1	D	C	N/A
Crow, Mariana (=aga)	1	1984	1990	F	1990	E, CH	2c	1	D	D	D/C
Crow, white-necked	4	1991	N/A	none	N/A	E	11	1	N/A	X	U/U
Curlew, Eskimo	7	1967	Exempt	Exempt	Exempt	E	5	1	E	E	N/A
Duck, Hawaiian (=koloa)	1	1967	1985	F_1	1999	E	2	2	S	S	S/C
Duck, Laysan	1	1967	1982	F	1982	E	2	1	S	S	S/C
Eagle, bald	3	1967	1982	F_2	1989	T	14c	4	I	I	I/M
Eider, spectacled	7	1993	1996	F	1996	T, CH	5	2	S	U	U/C
Eider, Steller's	7	1997	2002	F	2002	T, CH	9	2	U	U	U/C
Elepaio, Oahu	1	2000	2003	F_1	2003	E, CH	3	2	D	D	D/C
Falcon, northern aplomado	2	1986	1990	F	1990	E	3	2	I	U	U/C
Finch, Laysan (honeycreeper)	1	1967	1984	F	1984	E	8	1	S	S	S/C
Finch, Nihoa (honeycreeper)	1	1967	1984	F	1984	E	8	1	U	U	U/C
Flycatcher, southwestern willow	2	1995	2002	F	2002	E, CH	3c	1	U	U	U/C
Gnatcatcher, coastal California	8	1993	Exempt	Exempt	Exempt	T, CH	3c	2	D	D	D/C
Goose, Hawaiian	1	1967	1983	F_1	2004	E	2	2	S	I	I/M
Hawk, Hawaiian (='io)	1	1967	1984	F	1984	E	14	4	S	S	S/C
Hawk, Puerto Rican broad-winged	4	1994	1997	F	1997	E	6	1	U	U	U/U
Hawk, Puerto Rican sharp-shinned	4	1994	1997	F	1997	E	3	1	U	U	U/U
Honeycreeper, crested	1	1967	1984	F_1	2003	E	7	2	S	S	S/C
Jay, Florida scrub	4	1987	1990	F	1990	T	2c	2	D	D	D/C
Kingfisher, Guam Micronesian	1	1984	1990	F_1	2004	E, CH	3	1	C	C	N/A
Kite, Everglade snail	4	1967	1983	F	1999	E, CH	3c	2	S	D	D/I
Megapode, Micronesian	1	1970	1998	F	1998	E	9	2	U	U	U/C
Millerbird, Nihoa (old world warbler)	1	1967	1984	F	1984	E	8	1	U	U	U/C

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Moorhen, Hawaiian common	1	1967	1978	F_1	1999	E	9	2	S	S	S/C
Moorhen, Mariana common	1	1984	1991	F	1991	E	9c	1	S	S	S/C
Murrelet, marbled	1	1992	1997	F	1997	T, CH	3	1	D	D	D/C
Nightjar, Puerto Rican	4	1973	1984	F	1984	E	5c	2	S	S	S/C
Nukupu`u (honeycreeper)	1	1967	1983	F_1	2003	E	5	1	D	E	N/A
O`o, Kauai (honeyeater)	1	1967	1983	F_1	2003	E	4	1	E	E	N/A
O`u (honeycreeper)	1	1967	1983	F_1	1983	E	4	1	E	E	N/A
Owl, Mexican spotted	2	1993	1995	F	1995	T, CH	9c	2	U	S	S/C
Owl, northern spotted	1	1990	N/A	D	1992	T, CH	3c	1	D	D	D/C
Palila (honeycreeper)	1	1967	1978	F_1	2003	E, CH	1	3	S	S	S/C
Parrot, Puerto Rican	4	1967	1982	F_1	1999	E	2	1	D	S	S/C
Parrotbill, Maui (honeycreeper)	1	1967	1984	F_1	2003	E	1	1	S	S	S/C
Pelican, brown	8	1970	1980	F	1980	E	9	3	S	S	S/C
Petrel, Hawaiian dark-rumped	1	1967	1983	F	1983	E	2	1	U	U	U/C
Pigeon, Puerto Rican plain	4	1970	1982	F	1982	E	3c	3	D	D	S/I
Plover, piping (Atlantic Coast pop.)	3	1985	1988	D	1996	E, CH	2c	2	S	I	I/C
Plover, piping (Northern Plains pop.)	5	1985	1988	F	1988	T, CH	2c	2	D	D	D/I
Plover, western snowy	8	1993	N/A	D	2001	T, CH	3c	1	D	I	I/M
Po`ouli (honeycreeper)	1	1975	1984	F_1	2003	E	4	1	D	D	D/C
Prairie-chicken, Attwater's greater	2	1967	1983	F_2	1993	E	3	1	D	D	I/I
Pygmy-owl, cactus ferruginous	2	1997	N/A	D	2003	E, CH	3c	1	D	D	S/I
Rail, California clapper	8	1970	1984	F	1984	E	3c	1	U	D	D/C
Rail, Guam	1	1984	1990	F	1990	E	2	1	U	U	U/U
Rail, light-footed clapper	8	1970	1979	F_2	1985	E	6	2	S	S	I/I
Rail, Yuma clapper	2	1967	1983	F	1983	E	6	3	S	S	S/C
Shearwater, Newell's Townsend's	1	1975	1983	F	1983	T	3	1	D	D	D/C
Shrike, San Clemente loggerhead	8	1977	1984	F	1984	E	9	2	I	I	I/M
Sparrow, Cape Sable seaside	4	1967	1983	F	1999	E, CH	3c	2	D	D	D/C

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Sparrow, Florida grasshopper	4	1986	1999	F	1999	E	3c	2	S	D	D/C
Sparrow, San Clemente sage	8	1977	1984	F	1984	T	9	2	S	S	S/C
Stilt, Hawaiian	1	1970	1978	F_1	1999	E	9	3	S	S	S/C
Stork, wood	4	1984	1986	F	1997	E	5c	3	I	S	S/C
Swiftlet, Mariana gray	1	1984	1991	F	1991	E	8	1	S	S	S/C
Tern, California least	8	1970	1980	F_2	1985	E	3c	3	D	D	D/C
Tern, least	3	1985	1990	F	1990	E	3c	1	U	S	S/C
Tern, roseate (Caribbean pop.)	5	1987	1993	F	1993	T	3	1	U	S	S/C
Tern, roseate (Northeast U.S./Canada pop.)	5	1987	1989	F_2	1998	E	3	2	U	D	D/C
Thrush, large Kauai (=kamao)	1	1970	1983	F_1	2003	E	5	1	E	E	N/A
Thrush, Molokai	1	1970	1984	F_1	2003	E	5	1	E	E	N/A
Thrush, small Kauai (=puaiohi)	1	1967	1983	F_1	2003	E	2	1	S	S	S/C
Towhee, Inyo California	8	1987	1998	F	1998	T, CH	9c	1	U	U	U/U
Vireo, black-capped	2	1987	1991	F	1991	E	2c	1	D	U	U/U
Vireo, least Bell's	8	1986	N/A	D	1998	E, CH	3c	3	I	I	I/C
Warbler (=wood), Bachman's	4	1967	Exempt	Exempt	Exempt	E	5	1	E	E	N/A
Warbler (=wood), golden-cheeked	2	1990	1992	F	1992	E	2c	1	D	D	I/I
Warbler (=wood), Kirtland's	3	1967	1978	F	1978	E	2c	3	S	I	I/M
Warbler, nightingale reed (old world warbler)	1	1970	1998	F	1998	E	8c	1	D	D	D/C
White-eye, bridled	1	1984	1990	F	1990	E	6	1	E	E	N/A
White-eye, Rota bridled	1	2004	N/A	none	N/A	E	2	1	N/A	D	D/C
Woodpecker, ivory-billed	4	1967	N/A	none	N/A	E	17	1	E	E	N/A
Woodpecker, red-cockaded	4	1970	1979	F_2	2003	E	8c	1	I	I	I/M
Reptiles											
Anole, Culebra Island giant	4	1977	1983	F	1983	E, CH	5	1	U	E	N/A
Boa, Mona	4	1978	1984	F	1984	T, CH	3	1	I	I	I/C
Boa, Puerto Rican	4	1970	1986	F	1986	E	11c	1	D	D	D/C
Boa, Virgin Islands tree	4	1970	1986	F	1986	E	3c	3	I	I	I/C

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Cooter (=turtle), northern redbelly (=Plymouth)	5	1980	1981	F_2	1994	E, CH	9	3	I	S	S/M
Crocodile, American	4	1975	1979	F	1999	E, CH	2c	4	I	I	I/M
Gecko, Monito	4	1982	1986	F	1986	E, CH	5	2	U	U	U/M
Iguana, Mona ground	4	1978	1984	F	1984	T, CH	3	3	S	S	S/M
Lizard, blunt-nosed leopard	8	1967	1980	F	1998	E	2c	1	D	D	D/C
Lizard, Coachella Valley fringe-toed	8	1980	1985	F	1985	T, CH	5c	2	D	D	D/C
Lizard, Island night	8	1977	1984	F	1984	T	8	2	U	S	S/C
Lizard, St. Croix ground	4	1977	1984	F	1984	E, CH	2c	1	U	U	U/M
Rattlesnake, New Mexican ridge-nosed	2	1978	1985	F	1985	T, CH	3	2	S	U	U/U
Sea turtle, green (U.S. Atlantic populations and individuals foraging in U.S. territorial waters/ U.S. East Pacific populations on the west coasts of the U.S., Central America and Mexico)	4	1978	1984	F_2	1991	E	1c	1	I/D	U	U/U
Sea turtle, green (U.S. Pacific populations in Hawaii, Guam, Northern Mariana Islands, American Samoa and other unincorporated U.S. Pacific islands/atolls)	4	1978	1984	F_2	1998	T, CH	1c	1	D	U	U/U
Sea turtle, hawksbill	4	1970	1984	F	1984	E, CH	1c	3	D	U	U/U
Sea turtle, Kemp's ridley	2	1970	1984	F_2	1992	E	2c	1	I	I	I/M
Sea turtle, leatherback	4	1970	1984	F	1984	E, CH	1	1	D	D	D/C
Sea turtle, loggerhead	4	1978	1984	F	1984	T	7c	1	U	U	U/U
Sea turtle, olive ridley (U.S. Pacific pops.)	4	1978	1984	F_2	1998	E	8c	2	I	I	I/C
Skink, bluetail mole	4	1987	1993	F	1999	T	3	1	U	U	U/U
Skink, sand	4	1987	1993	F	1999	T	1	1	U	U	U/U
Snake, Atlantic salt marsh	4	1977	1993	F	1993	T	12	1	U	U	U/C
Snake, Concho water	2	1986	1993	F	1993	T, CH	9c	2	S	U	U/I
Snake, copperbelly water	3	1997	N/A	none	N/A	T	3c	1	D	D	D/C
Snake, eastern indigo	4	1978	1982	F	1982	T	12c	1	U	U	U/U
Snake, giant garter	8	1993	N/A	D	1999	T	2c	1	U	D	D/I
Snake, Lake Erie water	3	1999	2003	F	2003	T	3c	1	D	S	S/C
Snake, San Francisco garter	8	1967	1985	F	1985	E	3c	1	D	S	S/C

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Common Name	**Lead Region**	**Date Listed**	**Date of First Final Plan**	**Plan Stage ***	**Date of Current Plan**	**Current Listing Classification**	**Recovery Priority Number**	**Recovery Achieved**	**FY 2002 RRC Population Status**	**FY 2004 RRC Population Status**	**2004 Species/ Threats Info**
Tortoise, desert	8	1980	1994	F	1994	T, CH	8c	1	U	D	D/C
Tortoise, gopher	4	1987	1990	F	1990	T	9	1	D	D	D/C
Turtle, Alabama red-belly	4	1987	1990	F	1990	E	5	1	U	U	U/U
Turtle, bog (=Muhlenberg)	5	1997	2001	F	2001	T	6c	1	D	D	I/I
Turtle, flattened musk	4	1987	1990	F	1990	T	14	1	S	S	S/C
Turtle, ringed map	4	1986	1988	F	1988	T	14	2	S	S	S/C
Turtle, yellow-blotched map	4	1991	1993	F	1993	T	14	1	U	U	U/U
Whipsnake (=striped racer), Alameda	8	1997	N/A	D	2003	T, CH	9c	1	D	S	S/M
Amphibians											
Coqui, golden	4	1977	1984	F	1984	T, CH	5c	1	U	E	N/A
Frog, California red-legged	8	1996	2002	F	2002	T, CH	6c	1	D	U	U/C
Frog, Chiricahua leopard	2	2002	N/A	none	N/A	T	3	1	D	D	D/C
Frog, Mississippi gopher	4	2001	N/A	none	N/A	E	5	1	D	D	D/C
Frog, mountain yellow-legged	8	2002	N/A	none	N/A	E	6	1	D	D	D/C
Guajon	4	1997	2004	F	2004	T	11	1	U	U	U/C
Salamander, Barton Springs	2	1997	N/A	none	N/A	E	2c	1	D	S	I/I
Salamander, California tiger	8	2000	N/A	none	N/A	T	8c	1	D	D	D/I
Salamander, Cheat Mountain	5	1989	1991	F	1991	T	8c	3	S	D	S/I
Salamander, desert slender	8	1973	1982	F	1982	E	8	1	S	S	S/C
Salamander, flatwoods	4	1999	N/A	none	N/A	T	8	1	D	U	U/C
Salamander, Red Hills	4	1976	1983	F	1983	T	7	1	S	S	S/C
Salamander, San Marcos	2	1980	1985	F_2	1996	T, CH	2c	1	D	S	S/C
Salamander, Santa Cruz long-toed	8	1967	1977	F_1	1999	E	6c	1	D	D	D/C
Salamander, Shenandoah	5	1989	1994	F	1994	E	8	1	U	U	U/U
Salamander, Sonora tiger	2	1997	2002	F	2002	E	3	1	U	U	D/U
Salamander, Texas blind	2	1967	1985	F_2	1996	E	5	1	D	U	U/U
Toad, arroyo (=arroyo southwestern)	8	1994	1999	F	1999	E, CH	8	1	D	D	D/C
Toad, Houston	2	1970	1984	F	1984	E, CH	2c	1	D	D	D/I

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Toad, Puerto Rican crested	4	1987	1992	F	1992	T	2c	1	S	D	D/C
Toad, Wyoming	6	1984	1991	F	1991	E	2	1	D	D	D/C
Fish											
Catfish, Yaqui	2	1984	1995	F	1995	T, CH	8	1	D	D	D/M
Cavefish, Alabama	4	1977	1982	F_2	1990	E, CH	1	1	S	S	S/C
Cavefish, Ozark	4	1984	1986	F	1986	T	8	2	S	S	S/C
Chub, bonytail	6	1980	1984	F_2	2002	E, CH	5c	1	U	U	U/M
Chub, Borax Lake	1	1980	1987	F	1987	E, CH	2	4	S	S	S/M
Chub, Chihuahua	2	1983	1986	F	1986	T	2	1	I	S	S/C
Chub, humpback	6	1967	1979	F_2	2002	E, CH	2c	3	S	D	D/I
Chub, Hutton tui	1	1985	1998	F	1998	T	9	2	S	S	U/M
Chub, Mohave tui	8	1970	1984	F	1984	E	9	1	S	D	D/C
Chub, Oregon	1	1993	1998	F	1998	E	8	3	S	S	S/C
Chub, Owens tui	8	1985	1998	F	1998	E, CH	9	1	U	D	D/C
Chub, Pahranagat roundtail	8	1970	1986	F	1998	E	3c	1	D	U	U/C
Chub, slender	4	1977	1983	F	1983	T, CH	5	1	D	D	D/U
Chub, Sonora	2	1986	1992	F	1992	T, CH	2c	1	S	S	S/C
Chub, spotfin	4	1977	1983	F	1983	T, CH	11	1	U	S	S/C
Chub, Virgin River	6	1989	1995	F_2	1995	E, CH	2c	1	S	S	S/C
Chub, Yaqui	2	1984	1995	F	1995	E, CH	5	1	S	S	S/M
Cui-ui	8	1967	1978	F_2	1992	E	14	4	I	S	S/M
Dace, Ash Meadows speckled	8	1982	1990	F	1990	E, CH	9	2	S	U	U/M
Dace, blackside	4	1987	1988	F	1988	T	11	2	S	S	S/C
Dace, Clover Valley speckled	8	1989	1998	F	1998	E	9c	1	U	U	U/C
Dace, desert	8	1967	1997	F	1997	T, CH	7c	2	U	D	D/C
Dace, Foskett speckled	1	1985	1998	F	1998	T	9	2	S	S	U/M
Dace, Independence Valley speckled	8	1989	1998	F	1998	E	6c	2	U	U	U/U
Dace, Kendall Warm Springs	6	1970	1982	F	1982	E	12	3	S	U	U/C

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Dace, Moapa	8	1967	1983	F_2	1996	E	1	2	S	U	D/C
Darter, amber	4	1985	1986	F	1986	E, CH	5	1	S	U	U/C
Darter, bayou	4	1975	1983	F_2	1990	T	8c	1	S	S	S/C
Darter, bluemask (=jewel)	4	1993	1997	F	1997	E	5	1	S	S	S/C
Darter, boulder	4	1988	1989	F	1989	E	5	1	S	S	S/M
Darter, Cherokee	4	1994	2000	F	2000	T	2c	1	D	D	D/C
Darter, duskytail	4	1993	1994	F	1994	E	2	1	I	S	S/C
Darter, Etowah	4	1994	2000	F	2000	E	2	1	S	U	U/C
Darter, fountain	2	1970	1985	F_2	1996	E, CH	2c	1	D	S	S/C
Darter, goldline	4	1992	2000	F	2000	T	8	1	S	S	S/C
Darter, leopard	2	1978	1984	F_1	1993	T, CH	11c	2	D	D	D/C
Darter, Maryland	5	1967	1982	F	1982	E, CH	5	1	U	U	U/U
Darter, Niangua	3	1985	1989	F	1989	T, CH	8	2	S	S	S/C
Darter, Okaloosa	4	1973	1981	F_2	1998	E	11	3	S	S	S/C
Darter, relict	4	1993	N/A	D	1994	E	5	1	S	S	S/M
Darter, slackwater	4	1977	1984	F	1984	T, CH	8	1	D	D	D/I
Darter, snail	4	1975	1983	F	1983	T	11	3	S	S	S/M
Darter, vermilion	4	2001	N/A	none	N/A	E	2	1	S	D	D/I
Darter, watercress	4	1970	1980	F_2	1993	E	2	1	I	I	I/C
Gambusia, Big Bend	2	1967	1984	F	1984	E	2	2	U	S	S/M
Gambusia, Clear Creek	2	1967	1982	F	1982	E	2	2	U	S	S/C
Gambusia, Pecos	2	1970	1985	F	1985	E	2	2	D	S	S/C
Gambusia, San Marcos	2	1980	1985	F_2	1996	E, CH	2c	1	E	E	N/A
Goby, tidewater	8	1994	N/A	none	N/A	E, CH	7c	3	S	S	S/C
Logperch, Conasauga	4	1985	1986	F	1986	E, CH	5	1	S	U	U/C
Logperch, Roanoke	5	1989	1992	F	1992	E	5c	1	U	U	U/U
Madtom, Neosho	6	1990	1991	F	1991	T	11c	1	D	D	D/C
Madtom, pygmy	4	1993	1994	F	1994	E	5	1	U	U	U/C

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Madtom, Scioto	3	1975	Exempt	Exempt	Exempt	E	5	1	E	E	N/A
Madtom, smoky	4	1984	1985	F	1985	E, CH	5	2	I	S	S/C
Madtom, yellowfin	4	1977	1983	F	1983	T, CH	11	1	S	S	S/C
Minnow, Devils River	2	1999	N/A	none	N/A	T	2	1	S	D	D/I
Minnow, loach	2	1986	1991	F	1991	T, CH	4c	1	D	D	D/I
Minnow, Rio Grande silvery	2	1994	1999	F	1999	E, CH	2c	1	D	D	D/C
Pikeminnow (=squawfish), Colorado	6	1967	1978	F_2	2002	E, CH	8c	3	I	D	D/I
Poolfish, Pahrump	8	1967	1980	F	1980	E	11	2	S	S	S/C
Pupfish, Ash Meadows Amargosa	8	1982	1990	F	1990	E, CH	15	4	I	S	S/M
Pupfish, Comanche Springs	2	1967	1981	F	1981	E	2	1	D	S	S/M
Pupfish, desert	2	1986	1993	F	1993	E, CH	2c	1	S	S	S/M
Pupfish, Devils Hole	8	1967	1980	F	1990	E	11	2	D	S	S/C
Pupfish, Leon Springs	2	1980	1985	F	1985	E, CH	2	2	S	S	S/C
Pupfish, Owens	8	1967	1984	F	1998	E	2	1	S	S	S/C
Pupfish, Warm Springs	8	1970	1976	F_2	1990	E	9	2	D	U	U/U
Salmon, Atlantic	5	2000	N/A	D	2004	E	6c	1	D	I	I/M
Sculpin, pygmy	4	1989	1991	F	1991	T	8	1	S	S	S/C
Shiner, Arkansas River	2	1998	N/A	none	N/A	T, CH	5c	1	D	D	D/C
Shiner, beautiful	2	1984	1995	F	1995	T, CH	2	1	U	U	U/U
Shiner, blue	4	1992	1995	F	1995	T	8	1	D	D	D/I
Shiner, Cahaba	4	1990	1992	F	1992	E	2	1	I	S	I/I
Shiner, Cape Fear	4	1987	1988	F	1988	E, CH	5	2	S	S	S/C
Shiner, palezone	4	1993	1997	F	1997	E	5	1	S	S	S/C
Shiner, Pecos bluntnose	2	1987	1992	F	1992	T, CH	3	2	U	D	D/C
Shiner, Topeka	6	1998	N/A	none	N/A	E, CH	8c	2	D	U	U/U
Silverside, Waccamaw	4	1987	1993	F	1993	T, CH	8	1	S	S	S/C
Smelt, delta	8	1993	1996	F	1996	T, CH	2c	2	U	U	U/C
Spikedace	2	1986	1991	F	1991	T, CH	4c	1	D	D	D/C

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Spinedace, Big Spring	8	1985	1994	F	1994	T, CH	3	1	S	D	D/C
Spinedace, Little Colorado	2	1967	1998	F	1998	T, CH	2	1	D	D	D/C
Spinedace, White River	8	1985	1994	F	1994	E, CH	2c	2	S	S	S/C
Springfish, Hiko White River	8	1985	1998	F	1998	E, CH	3c	1	S	S	S/C
Springfish, Railroad Valley	8	1986	1997	F	1997	T, CH	2c	1	D	S	S/C
Springfish, White River	8	1985	1998	F	1998	E, CH	3c	1	U	U	U/U
Stickleback, unarmored threespine	8	1970	1977	F_2	1985	E	3	1	D	D	D/I
Sturgeon, Alabama	4	2000	N/A	none	N/A	E	5	1	U	U	U/U
Sturgeon, gulf	4	1991	1995	F	1995	T, CH	12	2	S	S	S/C
Sturgeon, pallid	6	1990	1993	F	1993	E	2c	1	D	D	D/C
Sturgeon, white	1	1994	1999	F	1999	E, CH	3c	2	D	D	D/C
Sucker, June	6	1986	1999	F	1999	E, CH	5c	1	D	D	D/C
Sucker, Lost River	8	1988	1993	F	1993	E	4c	2	U	U	U/U
Sucker, Modoc	8	1985	N/A	N/A	N/A	E, CH	8	3	I	I	I/M
Sucker, razorback	6	1991	1998	F_2	2002	E, CH	1c	1	U	I	I/M
Sucker, Santa Ana	8	2000	N/A	none	N/A	T, CH	5	1	S	S	S/C
Sucker, shortnose	8	1988	1993	F	1993	E	8c	2	U	U	U/U
Sucker, Warner	1	1985	1998	F	1998	T, CH	2c	1	U	U	U/U
Topminnow, Gila (incl. Yaqui) (Gila/Yaqui)	2	1967	1984	F_1	1999	E	3c	1	D/S	S	S/C
Trout, Apache	2	1967	1979	F_2	1983	T	8	3	I	S	S/C
Trout, bull	1	1998	N/A	D	2004	T, CH	9c	2	S	S	S/M
Trout, Gila	2	1967	1979	F_2	2003	E	2	3	S	S	S/M
Trout, greenback cutthroat	6	1967	1977	F_2	1998	T	15	3	D	I	I/M
Trout, Lahontan cutthroat	8	1970	1995	F	1995	T	3c	1	D	D	S/I
Trout, Little Kern golden	8	1978	Exempt	Exempt	Exempt	T, CH	9	2	U	U	U/U
Trout, Paiute cutthroat	8	1967	1985	F_2	2004	T	9	2	S	S	S/M
Woundfin	6	1970	1979	F_2	1995	E, CH	1	1	D	D	D/C

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Clams											
Acornshell, southern	4	1993	2000	F	2000	E, CH	5	1	E	E	N/A
Bankclimber, purple (mussel)	4	1998	2003	F	2003	T	11	1	U	S	S/C
Bean, Cumberland (pearlymussel)	4	1976	1984	F	1984	E	5c	1	D	D	D/U
Bean, purple	5	1997	2004	F	2004	E, CH	5	1	D	D	D/C
Blossom, green (pearlymussel)	4	1976	1984	F	1984	E	6	1	E	E	N/A
Blossom, tubercled (pearlymussel)	4	1976	1985	F	1985	E	6	1	E	E	N/A
Blossom, turgid (pearlymussel)	4	1976	1985	F	1985	E	5	1	E	E	N/A
Blossom, yellow (pearlymussel)	4	1976	1985	F	1985	E	6	1	E	E	N/A
Catspaw (=purple cat's paw pearlymussel)	3	1990	1992	F	1992	E	6	1	D	D	D/C
Catspaw, white (pearlymussel)	3	1976	1990	F	1990	E	6c	1	D	D	N/A
Clubshell	5	1993	1994	F	1994	E	5	1	U	D	D/C
Clubshell, black	4	1987	1989	F	1989	E	5c	1	E	E	N/A
Clubshell, ovate	4	1993	2000	F	2000	E, CH	5	1	S	S	S/C
Clubshell, southern	4	1993	2000	F	2000	E, CH	5	1	S	S	S/C
Combshell, Cumberlandian	4	1997	2004	F	2004	E, CH	5	1	D	D	D/C
Combshell, southern	4	1987	1989	F	1989	E	2c	1	S	S	S/C
Combshell, upland	4	1993	2000	F	2000	E, CH	5	1	E	E	N/A
Elktoe, Appalachian	4	1994	1996	F	1996	E, CH	5	1	S	S	S/C
Elktoe, Cumberland	4	1997	2004	F	2004	E, CH	5	1	U	U	U/C
Fanshell	4	1990	1991	F	1991	E	5	1	D	D	D/C
Fatmucket, Arkansas	4	1990	1992	F	1992	T	8	2	U	D	D/C
Heelsplitter, Alabama (=inflated)	4	1990	1993	F	1993	T	8c	1	S	S	S/C
Heelsplitter, Carolina	4	1993	1997	F	1997	E, CH	5c	1	D	D	D/C
Higgins eye (pearlymussel)	3	1976	1983	F_2	2004	E	5c	2	D	D	D/I
Kidneyshell, triangular	4	1993	2000	F	2000	E, CH	5	1	S	S	S/M
Lampmussel, Alabama	4	1976	1985	F	1985	E	5	1	D	U	U/C
Lilliput, pale (pearlymussel)	4	1976	1984	F	1984	E	5	1	S	S	S/C

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Mapleleaf, winged (mussel)	3	1991	1997	F	1997	E	2c	1	D	D	U/I
Moccasinshell, Alabama	4	1993	2000	F	2000	T, CH	8	1	S	D	D/C
Moccasinshell, Coosa	4	1993	2000	F	2000	E, CH	5	1	D	D	D/U
Moccasinshell, Gulf	4	1998	2003	F	2003	E	5	1	U	U	U/C
Moccasinshell, Ochlockonee	4	1998	2003	F	2003	E	5	1	U	U	U/C
Monkeyface, Appalachian (pearlymussel)	5	1976	1984	F	1984	E	5	1	D	D	D/C
Monkeyface, Cumberland (pearlymussel)	4	1976	1984	F	1984	E	5c	1	D	S	S/C
Mucket, orangenacre	4	1993	2000	F	2000	T, CH	8	1	S	D	D/C
Mucket, pink (pearlymussel)	4	1976	1985	F	1985	E	5	1	U	D	D/C
Mussel, oyster	4	1997	2004	F	2004	E, CH	5	1	D	D	D/C
Mussel, scaleshell	3	2001	N/A	D	2004	E	2	1	D	D	D/C
Pearlshell, Louisiana	4	1988	1990	F	1990	T	8	2	U	U	U/C
Pearlymussel, birdwing	4	1976	1984	F	1984	E	4c	1	D	S	S/C
Pearlymussel, cracking	4	1989	1991	F	1991	E	4	1	D	D	D/C
Pearlymussel, Curtis	3	1976	1986	F	1986	E	6	1	D	D	D/C
Pearlymussel, dromedary	4	1976	1984	F	1984	E	4c	1	D	D	D/C
Pearlymussel, littlewing	4	1988	1989	F	1989	E	4	1	D	D	D/C
Pigtoe, Cumberland	4	1991	1992	F	1992	E	5	1	S	S	S/C
Pigtoe, dark	4	1993	2000	F	2000	E, CH	5	1	S	D	D/C
Pigtoe, finerayed	4	1976	1984	F	1984	E	5	1	U	D	D/C
Pigtoe, flat	4	1987	1989	F	1989	E	5	1	E	E	N/A
Pigtoe, heavy	4	1987	1989	F	1989	E	5c	1	S	D	D/C
Pigtoe, oval	4	1998	2003	F	2003	E	5	1	D	D	D/C
Pigtoe, rough	4	1976	1984	F	1984	E	5	1	U	U	U/U
Pigtoe, shiny	4	1976	1984	F	1984	E	5	1	U	D	D/C
Pigtoe, southern	4	1993	2000	F	2000	E, CH	5	1	S	S	S/C
Pimpleback, orangefoot (pearlymussel)	4	1976	1984	F	1984	E	5	1	U	U	U/U
Pocketbook, fat	4	1976	1985	F_2	1989	E	8	2	I	I	I/C

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Pocketbook, finelined	4	1993	2000	F	2000	T, CH	8	1	S	S	S/C
Pocketbook, Ouachita rock	2	1991	2002	F	2002	E	4c	1	D	D	D/C
Pocketbook, shinyrayed	4	1998	2003	F	2003	E	5	1	U	D	D/C
Pocketbook, speckled	4	1989	1992	F	1992	E	5	2	S	I	I/C
Rabbitsfoot, rough	5	1997	2004	F	2004	E, CH	6	1	U	U	U/U
Riffleshell, northern	5	1993	1994	F	1994	E	6	1	D	S	S/C
Riffleshell, tan	4	1977	1984	F	1984	E	5	1	U	D	D/C
Ring pink (mussel)	4	1989	1991	F	1991	E	5	1	U	U	U/C
Slabshell, Chipola	4	1998	2003	F	2003	T	11	1	U	U	U/U
Spinymussel, James	5	1988	1990	F	1990	E	5	1	U	U	U/U
Spinymussel, Tar River	4	1985	1987	F_2	1992	E	5	2	U	U	U/U
Stirrupshell	4	1987	1989	F	1989	E	5	1	E	E	N/A
Three-ridge, fat (mussel)	4	1998	2003	F	2003	E	5	1	U	S	S/C
Wartyback, white (pearlymussel)	4	1976	1984	F	1984	E	5	1	U	U	U/U
Wedgemussel, dwarf	5	1990	1993	F	1993	E	5	2	S	U	U/C
Snails											
Ambersnail, Kanab	6	1991	1995	F	1995	E	6c	2	U	S	S/C
Campeloma, slender	4	2000	N/A	none	N/A	E	5	1	U	U	U/U
Cavesnail, Tumbling Creek	3	2002	2003	F	2003	E	4	1	D	D	D/C
Elimia, lacy (snail)	4	1998	N/A	none	N/A	T	8	1	S	S	S/C
Limpet, Banbury Springs	1	1992	1995	F	1995	E	8	1	S	S	S/C
Lioplax, cylindrical (snail)	4	1998	N/A	none	N/A	E	8	1	S	S	S/C
Marstonia, royal (snail)	4	1994	1995	F	1995	E	5	2	S	S	S/C
Pebblesnail, flat	4	1998	N/A	none	N/A	E	5	1	S	S	S/C
Riversnail, Anthony's	4	1994	1997	F	1997	E	5	1	S	S	S/C
Rocksnail, painted	4	1998	N/A	none	N/A	T	8	1	S	S	S/C
Rocksnail, plicate	4	1998	N/A	none	N/A	E	5c	1	S	S	S/C
Rocksnail, round	4	1998	N/A	none	N/A	T	8	1	S	S	S/C

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Shagreen, Magazine Mountain	4	1989	1994	F	1994	T	8	4	S	S	S/C
Snail, armored	4	2000	N/A	D	1994	E	5	1	U	U	U/U
Snail, Bliss Rapids	1	1992	1995	F	1995	T	7c	1	S	S	S/C
Snail, Chittenango ovate amber	5	1978	1983	F_1	2003	T	5	1	D	I	I/C
Snail, flat-spired three-toothed	5	1978	1983	F	1983	T	8c	3	S	D	S/I
Snail, Iowa Pleistocene	3	1978	1984	F	1984	E	14	3	S	S	S/M
Snail, Morro shoulderband (=Banded dune)	8	1994	1998	F	1998	E, CH	8c	1	S	S	S/C
Snail, Newcomb's	1	2000	N/A	D	2004	T, CH	1	1	U	U	U/C
Snail, noonday	4	1978	1984	F	1984	T	9	1	S	S	S/C
Snail, painted snake coiled forest	4	1978	1982	F	1982	T	8	2	U	S	S/C
Snail, Snake River physa	1	1992	1995	F	1995	E	5c	1	D	U	U/U
Snail, Stock Island tree	4	1978	1983	F	1999	T	3	1	U	U	U/U
Snail, tulotoma	4	1991	2000	F	2000	E	8	3	I	I	I/C
Snail, Utah valvata	1	1992	1995	F	1995	E	5c	1	S	S	S/C
Snail, Virginia fringed mountain	5	1978	1983	F	1983	E	4	1	S	U	U/U
Snails, Oahu tree	1	1981	1992	F	1992	E	2	1	U	U	U/I
Springsnail, Alamosa	2	1991	1994	F	1994	E	14	1	S	S	S/C
Springsnail, Bruneau Hot	1	1993	2002	F	2002	E	2c	1	D	S	S/C
Springsnail, Idaho	1	1992	1995	F	1995	E	5c	1	S	S	S/C
Springsnail, Socorro	2	1991	1994	F	1994	E	5	1	U	U	U/I
Insects											
Beetle, American burying	5	1989	1991	F	1991	E	5c	2	S	S	S/C
Beetle, Coffin Cave mold	2	1988	1994	F	1994	E	2c	1	D	U	U/U
Beetle, Comal Springs dryopid	2	1997	N/A	none	N/A	E	1c	1	D	U	U/C
Beetle, Comal Springs riffle	2	1997	N/A	none	N/A	E	2c	2	D	I	I/C
Beetle, delta green ground	8	1980	1985	F	1985	T, CH	8	1	U	U	U/C
Beetle, Helotes mold	2	2000	N/A	none	N/A	E, CH	2c	1	D	U	U/U
Beetle, Hungerford's crawling water	3	1994	N/A	D	2004	E	5	1	U	S	S/C

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Beetle, Kretschmarr Cave mold	2	1988	1994	F	1994	E	2c	1	D	U	U/U
Beetle, Mount Hermon June	8	1997	1998	F	1998	E	8c	1	D	D	D/C
Beetle, Tooth Cave ground	2	1988	1994	F	1994	E	2c	1	D	U	U/U
Beetle, valley elderberry longhorn	8	1980	1984	F	1984	T, CH	9	1	U	D	D/C
Butterfly, bay checkerspot	8	1987	1998	F	1998	T, CH	3c	1	D	D	D/C
Butterfly, Behren's silverspot	8	1997	N/A	D	2004	E	3c	1	U	U	U/C
Butterfly, callippe silverspot	8	1997	N/A	none	N/A	E	9c	1	U	U	U/I
Butterfly, El Segundo blue	8	1976	1998	F	1998	E	12	2	S	S	S/C
Butterfly, Fender's blue	1	2000	N/A	none	N/A	E	3c	1	D	D	D/C
Butterfly, Karner blue	3	1992	2003	F	2003	E	5	2	S	S	S/C
Butterfly, Lange's metalmark	8	1976	1980	F_2	1984	E	9	3	D	D	D/C
Butterfly, lotis blue	8	1976	1985	F	1985	E	6c	1	U	U	U/U
Butterfly, mission blue	8	1976	1984	F	1984	E	9	2	U	S	S/C
Butterfly, Mitchell's satyr	3	1991	1998	F	1998	E	3	2	S	S	S/M
Butterfly, Myrtle's silverspot	8	1992	1998	F	1998	E	9	1	U	U	U/U
Butterfly, Oregon silverspot	1	1980	1982	F_2	2001	T, CH	3c	2	D	D	D/C
Butterfly, Palos Verdes blue	8	1980	1984	F	1984	E, CH	6	1	D	S	S/C
Butterfly, Quino checkerspot	8	1997	2003	F	2003	E, CH	3c	1	D	D	D/C
Butterfly, Saint Francis' satyr	4	1994	1996	F	1996	E	3	1	S	S	S/C
Butterfly, San Bruno elfin	8	1976	1984	F	1984	E	9	2	U	U	U/C
Butterfly, Schaus swallowtail	4	1976	1982	F	1999	E	3c	2	D	S	I/C
Butterfly, Smith's blue	8	1976	1984	F	1984	E	9	1	U	U	U/C
Butterfly, Uncompahgre fritillary	6	1991	1994	F	1994	E	8c	4	S	S	S/C
Dragonfly, Hine's emerald	3	1995	2001	F	2001	E	5c	1	D	D	D/I
Fly, Delhi Sands flower-loving	8	1993	1997	F	1997	E	6c	1	D	U	U/C
Grasshopper, Zayante band-winged	8	1997	1998	F	1998	E, CH	5	1	D	D	D/C
Moth, Blackburn's sphinx	1	2000	N/A	D	2003	E, CH	2c	1	U	U	U/C
Moth, Kern primrose sphinx	8	1980	1984	F	1984	T	2	1	U	U	U/C

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Naucorid, Ash Meadows	8	1985	1990	F	1990	T, CH	8	2	S	S	S/C
Rhadine exilis [NCN]	2	2000	N/A	none	N/A	E, CH	2c	1	D	U	U/U
Rhadine infernalis [NCN]	2	2000	N/A	none	N/A	E, CH	2c	1	D	U	U/U
Skipper, Carson wandering	8	2001	N/A	none	N/A	E	3c	1	U	U	U/U
Skipper, Laguna Mountains	8	1997	N/A	none	N/A	E	3c	1	D	U	U/U
Skipper, Pawnee montane	6	1987	1998	F	1998	T	9c	1	D	I	I/C
Tiger beetle, northeastern beach	5	1990	1994	F	1994	T	6	1	S	D	D/C
Tiger beetle, Ohlone	8	2001	N/A	none	N/A	E	2	1	D	U	U/U
Tiger beetle, Puritan	5	1990	1993	F	1993	T	5	1	S	D	D/C
Arachnids											
Harvestman, Bee Creek Cave	2	1988	1994	F	1994	E	2c	1	D	U	U/M
Harvestman, Bone Cave	2	1988	1994	F	1994	E	2c	1	D	D	D/C
Harvestman, Cokendolpher Cave (Texella cokendolpheri)	2	2000	N/A	none	N/A	E, CH	2c	1	D	D	U/I
Meshweaver, Braken Bat Cave (Cicurina venii)	2	2000	N/A	none	N/A	E, CH	2c	1	D	D	U/C
Meshweaver, Government Canyon Bat Cave (Cicurina vespera)	2	2000	N/A	none	N/A	E	2c	1	D	S	S/M
Meshweaver, Madla's Cave (Cicurina madla)	2	2000	N/A	none	N/A	E, CH	2c	1	D	U	U/U
Meshweaver, Robber Baron Cave (Cicurina baronia)	2	2000	N/A	none	N/A	E, CH	2c	1	D	D	U/I
Pseudoscorpion, Tooth Cave	2	1988	1994	F	1994	E	2c	1	D	U	U/U
Spider, Government Canyon Bat Cave (Neoleptoneta microps)	2	2000	N/A	none	N/A	E	2c	1	D	S	S/M
Spider, Kauai cave wolf or pe'e pe'e maka 'ole	1	2000	N/A	none	N/A	E, CH	1c	1	S	S	S/C
Spider, spruce-fir moss	4	1995	1998	F	1998	E, CH	5	1	U	U	U/U
Spider, Tooth Cave	2	1988	1994	F	1994	E	2c	1	D	U	U/U
Crustaceans											
Amphipod, Hay's Spring	5	1982	Exempt	Exempt	Exempt	E	5	3	S	S	S/C
Amphipod, Illinois cave	3	1998	2002	F	2002	E	2	1	D	D	D/I
Amphipod, Kauai cave	1	2000	N/A	none	N/A	E, CH	1c	1	S	S	S/C

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Amphipod, Peck's cave	2	1997	N/A	none	N/A	E	2c	1	D	S	S/C
Crayfish, cave (Cambarus aculabrum)	4	1993	1996	F	1996	E	5	1	S	S	S/M
Crayfish, cave (Cambarus zophonastes)	4	1987	1988	F	1988	E	5	2	S	S	S/C
Crayfish, Nashville	4	1986	1987	F_2	1989	E	11c	1	S	S	S/C
Crayfish, Shasta	8	1988	1998	F	1998	E	5	1	D	D	D/I
Fairy shrimp, Conservancy	8	1994	N/A	none	N/A	E, CH	8	1	U	D	D/C
Fairy shrimp, longhorn	8	1994	N/A	none	N/A	E, CH	8	1	U	D	D/C
Fairy shrimp, Riverside	8	1993	1998	F	1998	E, CH	6c	1	S	D	D/C
Fairy shrimp, San Diego	8	1997	1998	F	1998	E, CH	2c	1	S	D	D/C
Fairy shrimp, vernal pool	8	1994	N/A	none	N/A	T, CH	2c	1	D	D	D/C
Isopod, Lee County cave	5	1992	1997	F	1997	E	8	1	U	U	U/C
Isopod, Madison Cave	5	1982	1996	F	1996	T	4	2	S	I	I/C
Isopod, Socorro	2	1978	1982	F	1982	E	2	4	S	S	S/C
Shrimp, Alabama cave	4	1988	1997	F	1997	E	5	1	S	S	S/C
Shrimp, California freshwater	8	1988	1998	F	1998	E	8c	1	U	U	U/U
Shrimp, Kentucky cave	4	1983	1988	F	1988	E, CH	5	1	U	U	U/U
Shrimp, Squirrel Chimney Cave	4	1990	Exempt	Exempt	Exempt	T	5c	1	U	U	U/U
Tadpole shrimp, vernal pool	8	1994	N/A	none	N/A	E, CH	2c	1	D	D	U/C
Flowering Plants											
A`e (Zanthoxylum dipetalum var. tomentosum)	1	1996	1998	F	1998	E, CH	6	1	U	U	U/C
A`e (Zanthoxylum hawaiiense)	1	1994	1996	F	1996	E, CH	2	1	U	U	U/C
Abutilon eremitopetalum [NCN]	1	1991	1995	F	1995	E, CH	2	1	U	U	U/C
Abutilon sandwicense [NCN]	1	1991	1995	F	1998	E, CH	8	1	U	U	U/C
Achyranthes mutica [NCN]	1	1996	1999	F	1999	E, CH	2	1	U	U	U/C
Agave, Arizona (Agave arizonica)	2	1984	N/A	none	N/A	E	17	1	U	U	U/U
Ahinahina (Argyroxiphium sandwicense ssp. macrocephalum)	1	1992	1997	F	1997	T, CH	9	3	S	S	S/M
Ahinahina (Argyroxiphium sandwicense ssp. sandwicense)	1	1986	1993	F	1993	E	6	2	S	S	S/C

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Aiakeakua, popolo (Solanum sandwicense)	1	1994	1995	F	1995	E, CH	2	1	U	U	U/C
Aiea (Nothocestrum breviflorum)	1	1994	1996	F	1996	E, CH	5	1	U	U	U/C
Aiea (Nothocestrum peltatum)	1	1994	1995	F	1995	E, CH	5	1	U	U	U/C
Akoko (Chamaesyce celastroides var. kaenana)	1	1991	1995	F	1998	E, CH	9	1	U	U	U/C
Akoko (Chamaesyce deppeana)	1	1994	1996	F	1998	E, CH	5	1	I	U	U/C
Akoko (Chamaesyce herbstii)	1	1996	1998	F	1998	E, CH	8	1	U	U	U/C
Akoko (Chamaesyce kuwaleana)	1	1991	1995	F	1998	E, CH	8	1	U	U	U/C
Akoko (Chamaesyce rockii)	1	1996	1998	F	1998	E, CH	8	1	U	U	U/C
Akoko (Euphorbia haeleeleana)	1	1996	1999	F	1999	E, CH	5	1	U	U	U/C
Akoko, Ewa Plains (Chamaesyce skottsbergii var. kalaeloana)	1	1982	N/A	D	1993	E	6	1	S	D	D/I
Alani (Melicope adscendens)	1	1994	1997	F	1997	E, CH	5	1	U	U	U/C
Alani (Melicope balloui)	1	1994	1997	F	1997	E, CH	5	1	E	U	U/C
Alani (Melicope haupuensis)	1	1994	1995	F	1995	E, CH	5	1	U	U	U/C
Alani (Melicope knudsenii)	1	1994	1995	F	1995	E, CH	5	1	U	U	U/C
Alani (Melicope lydgatei)	1	1994	1996	F	1998	E, CH	5	1	U	D	D/C
Alani (Melicope mucronulata)	1	1992	1997	F	1997	E, CH	5	1	U	U	U/C
Alani (Melicope munroi)	1	1999	2002	F	2002	E	5	1	U	U	U/C
Alani (Melicope ovalis)	1	1994	1997	F	1997	E, CH	5	1	U	U	U/C
Alani (Melicope pallida)	1	1994	1995	F	1995	E, CH	5	1	U	U	U/C
Alani (Melicope quadrangularis)	1	1994	1995	F	1995	E	5	1	E	U	U/C
Alani (Melicope reflexa)	1	1992	1996	F	1996	E, CH	8	1	U	U	U/C
Alani (Melicope saint-johnii)	1	1996	1998	F	1998	E, CH	8	1	U	U	U/C
Alani (Melicope zahlbruckneri)	1	1996	1998	F	1998	E, CH	2	1	S	U	U/C
Allocarya, Calistoga (Plagiobothrys strictus)	8	1997	N/A	none	N/A	E	2c	1	U	D	D/C
Alopecurus, Sonoma (Alopecurus aequalis var. sonomensis)	8	1997	N/A	none	N/A	E	9	1	S	U	U/U
Alsinidendron obovatum [NCN]	1	1991	1995	F	1998	E, CH	5	1	C	C	N/A
Alsinidendron trinerve [NCN]	1	1991	1995	F	1998	E, CH	5	1	U	U	U/C

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Alsinidendron viscosum [NCN]	1	1996	1998	F	1998	E, CH	2	1	U	U	U/C
Amaranth, seabeach (Amaranthus pumilus)	4	1993	1996	F	1996	T	8c	1	S	S	S/C
Amaranthus brownii [NCN]	1	1996	1998	F	1998	E, CH	5	1	U	U	U/C
Ambrosia, San Diego (Ambrosia pumila)	8	2002	N/A	none	N/A	E	5	1	D	D	D/C
Ambrosia, south Texas (Ambrosia cheiranthifolia)	2	1994	N/A	none	N/A	E	8	2	D	S	S/C
Amole, purple (Chlorogalum purpureum)	8	2000	N/A	none	N/A	T, CH	8	1	U	U	U/C
Amphianthus, little (Amphianthus pusillus)	4	1988	1993	F	1993	T	13	1	S	S	S/C
Anaunau (Lepidium arbuscula)	1	1996	1998	F	1998	E, CH	8	1	U	U	U/C
Anunu (Sicyos alba)	1	1996	1998	F	1998	E, CH	2	1	U	U	U/C
Aristida chaseae [NCN]	4	1993	1995	F	1995	E	5c	1	S	S	S/C
Arrowhead, bunched (Sagittaria fasciculata)	4	1979	1983	F	1983	E	2c	1	D	D	D/C
Aster, decurrent false (Boltonia decurrens)	3	1988	1990	F	1990	T	8	3	S	S	S/C
Aster, Florida golden (Chrysopsis floridana)	4	1986	1988	F	1988	E	5	1	I	U	U/C
Aster, Ruth's golden (Pityopsis ruthii)	4	1985	1992	F	1992	E	5c	2	S	S	S/C
Auerodendron pauciflorum [NCN]	4	1994	1997	F	1997	E	5	1	S	S	S/C
Aupaka (Isodendrion hosakae)	1	1991	1994	F	1994	E, CH	5	1	U	U	U/C
Aupaka (Isodendrion laurifolium)	1	1996	1999	F	1999	E, CH	8	1	U	U	U/C
Aupaka (Isodendrion longifolium)	1	1996	1999	F	1999	T, CH	8	1	U	U	U/C
Avens, spreading (Geum radiatum)	4	1990	1993	F	1993	E	2	1	S	S	S/M
Awikiwiki (Canavalia molokaiensis)	1	1992	1996	F	1996	E, CH	2	1	U	U	U/C
Awiwi (Centaurium sebaeoides)	1	1991	1995	F	1999	E, CH	2	1	U	U	U/C
Awiwi (Hedyotis cookiana)	1	1994	1995	F	1995	E, CH	5	1	U	D	D/C
Ayenia, Texas (Ayenia limitaris)	2	1994	N/A	none	N/A	E	5	1	S	U	U/C
Baccharis, Encinitas (Baccharis vanessae)	8	1996	N/A	none	N/A	T	5c	1	D	D	D/C
Barberry, island (Berberis pinnata ssp. insularis)	8	1997	2000	F	2000	E	2	1	D	D	D/C
Barberry, Nevin's (Berberis nevinii)	8	1998	N/A	none	N/A	E	2	1	S	S	S/C
Bariaco (Trichilia triacantha)	4	1988	1991	F	1991	E	11	1	S	S	S/C
Beaked-rush, Knieskern's (Rhynchospora knieskernii)	5	1991	1993	F	1993	T	14	2	S	U	U/C

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Bear-poppy, dwarf (Arctomecon humilis)	6	1979	1985	F	1985	E	5c	1	D	D	D/I
Beardtongue, Penland (Penstemon penlandii)	6	1989	1992	F	1992	E	14c	1	U	S	S/C
Beargrass, Britton's (Nolina brittoniana)	4	1993	1996	F_2	1996	E	8	2	S	U	U/M
Beauty, Harper's (Harperocallis flava)	4	1979	1983	F	1983	E	7	2	I	I	I/M
Bedstraw, El Dorado (Galium californicum ssp. sierrae)	8	1996	2002	F	2002	E	6c	1	U	U	U/C
Bedstraw, island (Galium buxifolium)	8	1997	2000	F	2000	E	2	1	U	D	D/C
Bellflower, Brooksville (Campanula robinsiae)	4	1989	1994	F	1994	E	8	1	U	U	U/C
Birch, Virginia round-leaf (Betula uber)	5	1978	1982	F_2	1990	T	14	4	I	S	S/C
Bird's beak, palmate-bracted (Cordylanthus palmatus)	8	1986	1998	F	1998	E	2c	1	S	S	S/C
Bird's-beak, Pennell's (Cordylanthus tenuis ssp. capillaris)	8	1995	1998	F	1998	E	6	1	U	D	D/C
Bird's-beak, salt marsh (Cordylanthus maritimus ssp. maritimus)	8	1978	1985	F	1985	E	6	2	S	U	U/C
Bird's-beak, soft (Cordylanthus mollis ssp. mollis)	8	1997	No data	none	N/A	E	9c	1	S	U	U/C
Birds-in-a-nest, white (Macbridea alba)	4	1992	1994	F	1994	T	8	2	U	S	S/M
Bittercress, small-anthered (Cardamine micranthera)	4	1989	1991	F	1991	E	5	1	U	I	I/C
Bladderpod, Dudley Bluffs (Lesquerella congesta)	6	1990	1993	F	1993	T	2c	2	S	U	U/C
Bladderpod, kodachrome (Lesquerella tumulosa)	6	1993	N/A	none	N/A	E	11	2	S	U	U/C
Bladderpod, lyrate (Lesquerella lyrata)	4	1990	1996	F	1996	T	8	1	S	S	S/C
Bladderpod, Missouri (Lesquerella filiformis)	3	1987	1988	F	1988	T	8	3	I	S	S/M
Bladderpod, San Bernardino Mountains (Lesquerella kingii ssp. bernardina)	8	1994	N/A	D	1997	E, CH	9	1	D	D	D/C
Bladderpod, Spring Creek (Lesquerella perforata)	4	1996	N/A	none	N/A	E	2	1	S	S	S/C
Bladderpod, white (Lesquerella pallida)	2	1987	1992	F	1992	E	2	1	S	S	S/M
Bladderpod, Zapata (Lesquerella thamnophila)	2	1999	2004	F	2004	E, CH	5c	2	I	S	S/M
Blazingstar, Ash Meadows (Mentzelia leucophylla)	8	1985	1990	F	1990	T, CH	8	2	U	U	U/M
Blazingstar, Heller's (Liatris helleri)	4	1987	1989	F_2	2000	T	8	2	I	S	S/C
Blazingstar, scrub (Liatris ohlingerae)	4	1989	1990	F	1999	E	2	2	S	S	S/M
Blue-star, Kearney's (Amsonia kearneyana)	2	1989	1993	F	1993	E	2	1	S	S	S/C

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Bluecurls, Hidden Lake (Trichostema austromontanum ssp. compactum)	8	1998	N/A	none	N/A	T	9	1	S	S	S/C
Bluegrass, Hawaiian (Poa sandvicensis)	1	1992	1995	F	1995	E, CH	5	1	U	U	U/C
Bluegrass, Mann's (Poa mannii)	1	1994	1995	F	1995	E, CH	5	1	U	U	U/C
Bluegrass, Napa (Poa napensis)	8	1997	N/A	none	N/A	E	2c	1	U	D	D/C
Bluegrass, San Bernardino (Poa atropurpurea)	8	1998	N/A	none	N/A	E	2	1	D	D	D/C
Bluet, Roan Mountain (Hedyotis purpurea var. montana)	4	1990	1996	F	1996	E	6	1	S	S	S/M
Bonamia, Florida (Bonamia grandiflora)	4	1987	1990	F_2	1996	T	8	3	I	U	U/M
Bonamia menziesii [NCN]	1	1994	1999	F	1999	E, CH	5	1	U	U	U/C
Boxwood, Vahl's (Buxus vahlii)	4	1985	1987	F	1987	E	5	2	S	S	S/C
Brodiaea, Chinese Camp (Brodiaea pallida)	8	1998	N/A	none	N/A	T	2c	1	U	U	U/U
Brodiaea, thread-leaved (Brodiaea filifolia)	8	1998	N/A	none	N/A	T	2	1	D	D	D/C
Broom, San Clemente Island (Lotus dendroideus ssp.traskiae)	8	1977	1984	F	1984	E	9	2	I	I	I/C
Buckwheat, cushenbury (Eriogonum ovalifolium var. vineum)	8	1994	N/A	D	1997	E, CH	3	1	D	D	D/C
Buckwheat, Ione (incl. Irish Hill) (Eriogonum apricum (incl. var. prostratum))	8	1999	N/A	none	N/A	E	2c	1	U	S	S/C
Buckwheat, scrub (Eriogonum longifolium var. gnaphalifolium)	4	1993	1990	F_2	1996	T	15	2	S	U	U/M
Buckwheat, steamboat (Eriogonum ovalifolium var. williamsiae)	8	1986	1995	F	1995	E	6c	3	U	D	D/C
Bulrush, Northeastern (Scirpus ancistrochaetus)	5	1991	1993	F	1993	E	14	3	S	S	S/M
Bush-clover, prairie (Lespedeza leptostachya)	3	1987	1988	F	1988	T	8	4	S	S	I/I
Bush-mallow, San Clemente Island (Malacothamnus clementinus)	8	1977	1984	F	1984	E	8	2	S	S	S/C
Bush-mallow, Santa Cruz Island (Malacothamnus fasciculatus var. nesioticus)	8	1997	2000	F	2000	E	3	1	S	S	S/C
Buttercup, autumn (Ranunculus aestivalis (=acriformis))	6	1989	1991	F	1991	E	5	2	D	U	U/M

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Butterfly plant, Colorado (Gaura neomexicana var. coloradensis)	6	2000	N/A	none	N/A	T, CH	15	1	U	D	D/C
Butterweed, Layne's (Senecio layneae)	8	1996	2002	F	2002	T	5c	1	U	U	U/U
Butterwort, Godfrey's (Pinguicula ionantha)	4	1993	1994	F	1994	T	14	1	S	U	U/M
Button, Mohr's Barbara (Marshallia mohrii)	4	1988	1991	F	1991	T	14	2	S	I	I/M
Button-celery, San Diego (Eryngium aristulatum var. parishii)	8	1993	1998	F	1998	E	3c	1	S	S	S/C
Cactus, Arizona hedgehog (Echinocereus triglochidiatus var. arizonicus)	2	1979	N/A	D	1984	E	3	1	S	S	S/C
Cactus, Bakersfield (Opuntia treleasei)	8	1990	1998	F	1998	E	3c	1	S	S	S/C
Cactus, black lace (Echinocereus reichenbachii var. albertii)	2	1979	1987	F	1987	E	3	1	U	U	U/M
Cactus, Brady pincushion (Pediocactus bradyi)	2	1979	1985	F	1985	E	2	1	U	U	U/C
Cactus, Chisos Mountain hedgehog (Echinocereus chisoensis var. chisoensis)	2	1988	1993	F	1993	T	9	1	U	S	S/M
Cactus, Cochise pincushion (Coryphantha robbinsorum)	2	1986	1993	F	1993	T	8	1	D	D	D/C
Cactus, Key tree (Pilosocereus robinii)	4	1984	1986	F_2	1999	E	5c	2	S	U	U/U
Cactus, Knowlton (Pediocactus knowltonii)	2	1979	1985	F	1985	E	2	2	S	S	S/C
Cactus, Kuenzler hedgehog (Echinocereus fendleri var. kuenzleri)	2	1979	1985	F	1985	E	3	2	S	S	S/C
Cactus, Lee pincushion (Coryphantha sneedii var. leei)	2	1979	1986	F	1986	T	3	2	S	S	S/C
Cactus, Lloyd's Mariposa (Echinomastus mariposensis)	2	1979	1990	F	1990	T	2	1	U	D	D/I
Cactus, Mesa Verde (Sclerocactus mesae-verdae)	2	1979	1984	F	1984	T	8c	1	U	D	D/C
Cactus, Nellie cory (Coryphantha minima)	2	1979	1984	F	1984	E	2	1	U	U	U/U
Cactus, Nichol's Turk's head (Echinocactus horizonthalonius var. nicholii)	2	1979	1986	F	1986	E	3	1	U	U	U/C
Cactus, Peebles Navajo (Pediocactus peeblesianus peeblesianus)	2	1979	1984	F	1984	E	3	1	D	S	S/C

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Cactus, Pima pineapple (Coryphantha scheeri var. robustispina)	2	1993	N/A	none	N/A	E	3	1	U	U	U/C
Cactus, San Rafael (Pediocactus despainii)	6	1987	N/A	D	1995	E	11	1	S	S	S/C
Cactus, Siler pincushion (Pediocactus (=Echinocactus,=Utahia) sileri)	2	1979	1986	F	1986	T	8	1	U	U	U/C
Cactus, Sneed pincushion (Coryphantha sneedii var. sneedii)	2	1979	1986	F	1986	E	9	2	S	S	S/C
Cactus, star (Astrophytum asterias)	2	1993	2003	F	2003	E	2c	2	I	S	S/C
Cactus, Tobusch fishhook (Ancistrocactus tobuschii)	2	1979	1987	F	1987	E	2	1	D	U	U/U
Cactus, Uinta Basin hookless (Sclerocactus glaucus)	6	1979	1990	F	1990	T	14c	3	S	U	U/U
Cactus, Winkler (Pediocactus winkleri)	6	1998	N/A	D	1995	T	11	1	D	D	D/U
Cactus, Wright fishhook (Sclerocactus wrightiae)	6	1979	1985	F	1985	E	17	2	S	D	D/C
Calyptranthes thomasiana [NCN]	4	1994	1997	F	1997	E	11	1	U	U	U/U
Campion, fringed (Silene polypetala)	4	1991	N/A	D	1996	E	8	1	S	S	S/M
Capa rosa (Callicarpa ampla)	4	1992	1995	F	1995	E	11	1	S	S	S/C
Catesbaea melanocarpa [NCN]	4	1999	N/A	D	2004	E	5	1	U	U	U/U
Catchfly, Spalding's (Silene spaldingii)	1	2001	N/A	none	N/A	T	8c	1	D	U	U/I
Cat's-eye, Terlingua Creek (Cryptantha crassipes)	2	1991	1994	F	1994	E	5c	1	D	U	U/C
Ceanothus, coyote (Ceanothus ferrisae)	8	1995	1998	F	1998	E	14	1	U	U	U/U
Ceanothus, Pine Hill (Ceanothus roderickii)	8	1996	2002	F	2002	E	5c	1	U	D	D/C
Ceanothus, Vail Lake (Ceanothus ophiochilus)	8	1998	N/A	none	N/A	T	2	1	U	U	U/C
Centaury, spring-loving (Centaurium namophilum)	8	1985	1990	F	1990	T, CH	14	4	S	S	S/M
Chaff-flower, round-leaved (Achyranthes splendens var. rotundata)	1	1986	N/A	D	1993	E	3	1	U	U	U/C
Chaffseed, American (Schwalbea americana)	5	1992	1995	F	1995	E	7	1	S	U	U/U
Chamaecrista glandulosa var. mirabilis [NCN]	4	1990	1994	F	1994	E	2c	1	U	U	U/U
Chamaesyce halemanui [NCN]	1	1992	1995	F	1995	E, CH	5	1	U	U	U/C
Checker-mallow, Keck's (Sidalcea keckii)	8	2000	N/A	none	N/A	E, CH	8	2	U	D	D/C
Checker-mallow, Kenwood Marsh (Sidalcea oregana ssp. valida)	8	1997	N/A	none	N/A	E	3c	1	U	D	D/C

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Checker-mallow, Nelson's (Sidalcea nelsoniana)	1	1993	1998	F	1998	T	5	1	D	U	U/C
Checker-mallow, pedate (Sidalcea pedata)	8	1984	1998	F	1998	E	5c	1	D	D	D/C
Checkermallow, Wenatchee Mountains (Sidalcea oregana var. calva)	1	1999	2004	F	2004	E, CH	3	1	I	I	I/M
Chupacallos (Pleodendron macranthum)	4	1994	1998	F	1998	E	8	1	S	S	S/C
Clarkia, Pismo (Clarkia speciosa ssp. immaculata)	8	1994	1998	F	1998	E	3c	1	U	U	S/C
Clarkia, Presidio (Clarkia franciscana)	8	1995	1998	F	1998	E	5	1	U	U	U/C
Clarkia, Springville (Clarkia springvillensis)	8	1998	N/A	none	N/A	T	8	1	U	S	I/C
Clarkia, Vine Hill (Clarkia imbricata)	8	1997	N/A	none	N/A	E	5	1	U	D	D/C
Cliff-rose, Arizona (Purshia (=Cowania) subintegra)	2	1984	1995	F	1995	E	2	1	U	U	U/C
Clover, Monterey (Trifolium trichocalyx)	8	1998	N/A	D	2002	E	5c	1	U	U	U/C
Clover, running buffalo (Trifolium stoloniferum)	3	1987	1989	F	1989	E	2	3	I	S	S/C
Clover, showy Indian (Trifolium amoenum)	8	1997	N/A	none	N/A	E	2	1	S	S	S/C
Cobana negra (Stahlia monosperma)	4	1990	1996	F	1996	T	5	2	S	S	S/C
Coneflower, smooth (Echinacea laevigata)	4	1992	1995	F	1995	E	5	1	U	D	D/C
Coneflower, Tennessee purple (Echinacea tennesseensis)	4	1979	1983	F_2	1989	E	8	4	S	S	S/M
Cordia bellonis [NCN]	4	1997	1999	F	1999	E	5	1	S	U	U/U
Cory cactus, bunched (Coryphantha ramillosa)	2	1979	1990	F	1990	T	8	1	D	U	U/U
Cranichis ricartii [NCN]	4	1991	1996	F	1996	E	5	1	U	U	U/U
Crownbeard, big-leaved (Verbesina dissita)	8	1996	N/A	none	N/A	T	3c	1	D	D	D/C
Crownscale, San Jacinto Valley (Atriplex coronata var. notatior)	8	1998	N/A	none	N/A	E	3	1	D	D	D/C
Cyanea (=Rollandia) crispa [NCN]	1	1994	1998	F	1998	E, CH	5	1	U	U	U/U
Cycladenia, Jones (Cycladenia jonesii (=humilis))	6	1986	N/A	none	N/A	T	8	1	S	U	U/U
Daisy, lakeside (Hymenoxys herbacea)	3	1988	1990	F	1990	T	8	3	S	S	S/C
Daisy, Maguire (Erigeron maguirei)	6	1985	1995	F	1995	T	14	4	S	I	I/M
Daisy, Parish's (Erigeron parishii)	8	1994	N/A	D	1997	T, CH	8	1	D	D	D/C
Daisy, Willamette (Erigeron decumbens var. decumbens)	1	2000	N/A	none	N/A	E	3c	1	D	D	D/C

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Daphnopsis hellerana [NCN]	4	1988	1992	F	1992	E	5	1	U	U	U/U
Dawn-flower, Texas prairie (Hymenoxys texana)	2	1986	1990	F	1990	E	5c	1	S	S	S/C
Delissea rhytidosperma [NCN]	1	1994	1995	F	1995	E, CH	5	1	U	D	D/C
Delissea undulata [NCN]	1	1996	1996	F	1996	E, CH	5	1	U	U	U/C
Desert-parsley, Bradshaw's (Lomatium bradshawii)	1	1988	1993	F	1993	E	2	2	S	S	S/M
Dogweed, ashy (Thymophylla tephroleuca)	2	1984	1988	F	1988	E	5	1	I	S	S/I
Dropwort, Canby's (Oxypolis canbyi)	4	1986	1990	F	1990	E	5	2	D	S	S/C
Dudleya, Conejo (Dudleya abramsii ssp. parva)	8	1997	1999	F	1999	T	3c	1	U	U	U/C
Dudleya, marcescent (Dudleya cymosa ssp. marcescens)	8	1997	1999	F	1999	T	9	1	U	U	U/C
Dudleya, Santa Clara Valley (Dudleya setchellii)	8	1995	1998	F	1998	E	2c	1	D	U	U/U
Dudleya, Santa Cruz Island (Dudleya nesiotica)	8	1997	2000	F	2000	T	8	1	S	S	S/C
Dudleya, Verity's (Dudleya verityi)	8	1997	1999	F	1999	T	2c	1	D	U	U/C
Dudleyea, Santa Monica Mountains (Dudleya cymosa ssp. ovatifolia)	8	1997	1999	F	1999	T	6	1	U	U	U/C
Dwarf-flax, Marin (Hesperolinon congestum)	8	1995	1998	F	1998	T	8c	1	U	U	U/C
Erubia (Solanum drymophilum)	4	1988	1992	F	1992	E	2c	2	S	U	U/C
Eugenia woodburyana [NCN]	4	1994	1998	F	1998	E	5	1	S	U	U/U
Evening-primrose, Antioch Dunes (Oenothera deltoides ssp. howellii)	8	1978	1980	F_2	1984	E, CH	9	1	S	D	D/C
Evening-primrose, Eureka Valley (Oenothera avita ssp. eurekensis)	8	1978	1982	F	1982	E	9	2	S	U	U/C
Evening-primrose, San Benito (Camissonia benitensis)	8	1985	N/A	D	1999	T	5	1	S	U	U/C
Fiddleneck, large-flowered (Amsinckia grandiflora)	8	1985	1997	F	1997	E, CH	5	2	D	D	D/C
Flannelbush, Mexican (Fremontodendron mexicanum)	8	1998	N/A	none	N/A	E	2	1	S	U	U/C
Flannelbush, Pine Hill (Fremontodendron californicum ssp. decumbens)	8	1996	2002	F	2002	E	6c	1	U	D	D/C
Fleabane, Zuni (Erigeron rhizomatus)	2	1985	1988	F	1988	T	8	2	S	I	I/C
Four-o'clock, MacFarlane's (Mirabilis macfarlanei)	1	1979	1985	F_2	2000	T	2	2	S	U	U/I

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Frankenia, Johnston's (Frankenia johnstonii)	2	1984	1988	F	1988	E	5	4	I	I	I/M
Fringe-tree, pygmy (Chionanthus pygmaeus)	4	1987	1990	F	1999	E	2	2	U	U	U/U
Fringepod, Santa Cruz Island (Thysanocarpus conchuliferus)	8	1997	2000	F	2000	E	2	1	D	D	D/C
Fritillary, Gentner's (Fritillaria gentneri)	1	1999	2003	F	2003	E	2	1	D	S	S/C
Gahnia lanaiensis [NCN]	1	1991	1995	F	1995	E	5	1	U	U	U/C
Gardenia (=Na`u), Hawaiian (Gardenia brighamii)	1	1985	1993	F	1993	E	2	1	U	D	D/C
Geocarpon minimum [NCN]	4	1987	1993	F	1993	T	13	1	S	I	I/C
Geranium, Hawaiian red-flowered (Geranium arboreum)	1	1992	1997	F	1997	E, CH	2	1	U	U	U/C
Gerardia, sandplain (Agalinis acuta)	5	1988	1989	F	1989	E	5c	2	S	S	S/C
Gesneria pauciflora [NCN]	4	1995	1998	F	1998	T	11	1	U	U	U/U
Gilia, Hoffmann's slender-flowered (Gilia tenuiflora ssp. hoffmannii)	8	1997	2000	F	2000	E	8	1	S	S	S/C
Gilia, Monterey (Gilia tenuiflora ssp. arenaria)	8	1992	1998	F	1998	E	9	2	S	I	I/M
Goetzea, beautiful (Goetzea elegans)	4	1985	1987	F	1987	E	5	2	S	S	S/C
Goldenrod, Blue Ridge (Solidago spithamaea)	4	1985	1987	F	1987	T	8	1	S	S	S/M
Goldenrod, Houghton's (Solidago houghtonii)	3	1988	1997	F	1997	T	8c	2	S	S	S/C
Goldenrod, Short's (Solidago shortii)	4	1985	1988	F	1988	E	8	2	S	S	S/C
Goldenrod, white-haired (Solidago albopilosa)	4	1988	1993	F	1993	T	8	2	S	S	S/C
Goldfields, Burke's (Lasthenia burkei)	8	1991	N/A	none	N/A	E	2c	1	D	D	U/C
Goldfields, Contra Costa (Lasthenia conjugens)	8	1997	N/A	none	N/A	E, CH	5c	1	D	D	U/C
Gooseberry, Miccosukee (Ribes echinellum)	4	1985	Exempt	Exempt	Exempt	T	14	1	S	S	S/M
Gouania hillebrandii [NCN]	1	1984	1990	F	1990	E, CH	8	1	U	U	U/C
Gouania meyenii [NCN]	1	1991	1995	F	1998	E, CH	8	1	U	U	U/C
Gouania vitifolia [NCN]	1	1994	1995	F	1998	E, CH	5	1	U	U	U/C
Gourd, Okeechobee (Cucurbita okeechobeensis ssp. okeechobeensis)	4	1993	1999	F	1999	E	3	1	S	S	S/C
Grass, Colusa (Neostapfia colusana)	8	1997	N/A	none	N/A	T	2c	1	D	D	D/C
Grass, Eureka Dune (Swallenia alexandrae)	8	1978	1982	F	1982	E	7	1	S	U	U/M

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GENERAL SPECIES INFORMATION			RECOVERY PLAN STATUS			SPECIES/RECOVERY STATUS					
Common Name	**Lead Region**	**Date Listed**	**Date of First Final Plan**	**Plan Stage ***	**Date of Current Plan**	**Current Listing Classification**	**Recovery Priority Number**	**Recovery Achieved**	**FY 2002 RRC Population Status**	**FY 2004 RRC Population Status**	**2004 Species/ Threats Info**
Grass, Solano (Tuctoria mucronata)	8	1978	1985	F	1985	E, CH	2	1	D	D	D/C
Grass, Tennessee yellow-eyed (Xyris tennesseensis)	4	1991	1994	F	1994	E	8	1	S	S	S/M
Ground-plum, Guthrie's (=Pyne's) (Astragalus bibullatus)	4	1991	N/A	none	N/A	E	2	2	S	S	S/M
Groundsel, San Francisco Peaks (Senecio franciscanus)	2	1983	1987	F	1987	T, CH	8	1	U	U	U/C
Gumplant, Ash Meadows (Grindelia fraxino-pratensis)	8	1985	1990	F	1990	T, CH	14	4	S	S	S/M
Ha`iwale (Cyrtandra crenata)	1	1994	1996	F	1998	E	5	1	E	U	U/C
Ha`iwale (Cyrtandra dentata)	1	1996	1998	F	1998	E, CH	8	1	U	U	U/C
Ha`iwale (Cyrtandra giffardii)	1	1994	1996	F	1996	E, CH	2	1	U	U	U/C
Ha`iwale (Cyrtandra limahuliensis)	1	1994	1995	F	1995	T, CH	14	1	U	U	U/C
Ha`iwale (Cyrtandra munroi)	1	1992	1995	F	1995	E, CH	5	1	U	U	U/C
Ha`iwale (Cyrtandra polyantha)	1	1994	1996	F	1998	E, CH	5	1	I	U	U/C
Ha`iwale (Cyrtandra subumbellata)	1	1996	1998	F	1998	E, CH	8	1	U	U	U/C
Ha`iwale (Cyrtandra tintinnabula)	1	1994	1996	F	1996	E, CH	5	1	U	U	U/C
Ha`iwale (Cyrtandra viridiflora)	1	1996	1998	F	1998	E, CH	5	1	U	U	U/C
Haha (Cyanea acuminata)	1	1996	1998	F	1998	E, CH	11	1	U	U	U/C
Haha (Cyanea asarifolia)	1	1994	1995	F	1995	E, CH	5	1	U	U	U/C
Haha (Cyanea copelandii ssp. copelandii)	1	1994	1996	F	1996	E	6	1	E	U	U/C
Haha (Cyanea copelandii ssp. haleakalaensis)	1	1999	2002	F	2002	E, CH	6	1	U	U	U/C
Haha (Cyanea dunbarii)	1	1996	1998	F	1998	E, CH	5	1	U	U	U/C
Haha (Cyanea glabra)	1	1999	2002	F	2002	E, CH	5	1	U	U	U/C
Haha (Cyanea grimesiana ssp. grimesiana)	1	1996	1999	F	1999	E, CH	6	1	U	U	U/C
Haha (Cyanea grimesiana ssp. obatae)	1	1994	1995	F	1998	E, CH	6	1	U	U	U/C
Haha (Cyanea hamatiflora carlsonii)	1	1994	1996	F	1996	E, CH	6	1	U	U	U/C
Haha (Cyanea hamatiflora ssp. hamatiflora)	1	1999	2002	F	2002	E, CH	6	1	D	U	U/C
Haha (Cyanea humboldtiana)	1	1996	1998	F	1998	E, CH	5	1	U	U	U/C
Haha (Cyanea koolauensis)	1	1996	1998	F	1998	E, CH	5	1	U	U	U/C

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Haha (Cyanea lobata)	1	1992	1997	F	1997	E, CH	5	1	U	U	U/C
Haha (Cyanea longiflora)	1	1996	1998	F	1998	E, CH	11	1	U	U	U/C
Haha (Cyanea macrostegia ssp. gibsonii)	1	1991	1995	F	1995	E	6	1	U	U	U/C
Haha (Cyanea mannii)	1	1992	1996	F	1996	E, CH	2	1	U	U	U/C
Haha (Cyanea mceldowneyi)	1	1992	1997	F	1997	E, CH	2	1	U	U	U/C
Haha (Cyanea pinnatifida)	1	1991	1995	F	1998	E, CH	5	1	C	C	N/A
Haha (Cyanea platyphylla)	1	1996	1998	F	1998	E, CH	2	1	U	U	U/C
Haha (Cyanea procera)	1	1992	1996	F	1996	E, CH	5	1	U	U	U/C
Haha (Cyanea recta)	1	1996	1998	F	1998	T, CH	2	1	U	U	U/C
Haha (Cyanea remyi)	1	1996	1998	F	1998	E, CH	2	1	U	U	U/C
Haha (Cyanea shipmannii)	1	1994	1996	F	1996	E, CH	2	1	U	U	U/C
Haha (Cyanea st-johnii)	1	1996	1998	F	1998	E, CH	5	1	U	U	U/C
Haha (Cyanea stictophylla)	1	1994	1996	F	1996	E, CH	2	1	U	U	U/C
Haha (Cyanea superba)	1	1991	1995	F	1998	E, CH	5	1	S	C	N/A
Haha (Cyanea truncata)	1	1994	1996	F	1998	E, CH	5	1	U	I	I/C
Haha (Cyanea undulata)	1	1991	1994	F	1994	E, CH	11	1	U	D	D/C
Hala pepe (Pleomele hawaiiensis)	1	1996	1998	F	1998	E, CH	2	1	U	U	U/C
Harebells, Avon Park (Crotalaria avonensis)	4	1993	1996	F_2	1999	E	2c	1	U	U	U/C
Harperella (Ptilimnium nodosum)	5	1988	1991	F	1991	E	8	2	D	D	D/I
Hau kuahiwi (Hibiscadelphus giffardianus)	1	1996	1998	F	1998	E, CH	5	1	C	C	N/A
Hau kuahiwi (Hibiscadelphus hualalaiensis)	1	1996	1998	F	1998	E, CH	5	1	C	C	N/A
Hau kuahiwi (Hibiscadelphus woodii)	1	1996	1998	F	1998	E, CH	5	1	D	D	D/C
Heartleaf, dwarf-flowered (Hexastylis naniflora)	4	1989	N/A	none	N/A	T	14	4	I	I	I/C
Heather, mountain golden (Hudsonia montana)	4	1980	1983	F	1983	T, CH	8	3	I	I	I/C
Heau (Exocarpos luteolus)	1	1994	1995	F	1995	E, CH	5	1	U	U	U/C
Hedyotis degeneri [NCN]	1	1991	1995	F	1998	E, CH	5	1	U	U	S/C
Hedyotis, Na Pali beach (Hedyotis st.-johnii)	1	1991	1995	F	1995	E, CH	8	1	U	D	D/C
Hedyotis parvula [NCN]	1	1991	1995	F	1998	E, CH	5	1	U	D	D/C

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Hesperomannia arborescens [NCN]	1	1994	1996	F	1998	E, CH	5	1	U	U	U/C
Hesperomannia arbuscula [NCN]	1	1991	1995	F	1998	E, CH	5	1	U	D	D/C
Hesperomannia lydgatei [NCN]	1	1991	1994	F	1994	E, CH	11	1	U	U	U/C
Hibiscus, Clay's (Hibiscus clayi)	1	1994	1995	F	1995	E, CH	5	1	U	D	D/C
Higo, chumbo (Harrisia portoricensis)	4	1990	1996	F	1996	T	14	2	S	S	S/C
Higuero de sierra (Crescentia portoricensis)	4	1987	1991	F	1991	E	5	1	S	U	U/C
Holei (Ochrosia kilaueaensis0	1	1994	1996	F	1996	E	5	1	E	U	U/C
Holly, Cook's (Ilex cookii)	4	1987	1991	F	1991	E	5	1	U	U	U/C
Honohono (Haplostachys haplostachya)	1	1979	N/A	D	1993	E	2	1	S	U	U/C
Howellia, water (Howellia aquatilis)	6	1994	N/A	D	1996	T	7	4	I	S	S/C
Hypericum, highlands scrub (Hypericum cumulicola)	4	1987	1990	F	1999	E	2	2	U	S	U/M
Iagu, Hayun (=(Guam), Tronkon guafi (Rota)) (Serianthes nelsonii)	1	1987	1994	F	1994	E	2	1	U	U	U/C
Ilex sintenisii [NCN]	4	1992	1995	F	1995	E	11	1	S	S	S/C
Iliau, dwarf (Wilkesia hobdyi)	1	1992	1995	F	1995	E, CH	2	1	U	U	U/C
Indian paintbrush, San Clemente Island (Castilleja grisea)	8	1977	1984	F	1984	E	8	1	S	S	S/C
Ipomopsis, Holy Ghost (Ipomopsis sancti-spiritus)	2	1994	2002	F	2002	E	5c	1	S	S	S/C
Iris, dwarf lake (Iris lacustris)	3	1988	N/A	none	N/A	T	8c	2	S	S	S/C
Irisette, white (Sisyrinchium dichotomum)	4	1991	1995	F	1995	E	8	1	U	U	U/C
Ischaemum, Hilo (Ischaemum byrone)	1	1994	1996	F	1996	E, CH	5	1	U	U	U/C
Ivesia, Ash Meadows (Ivesia kingii var. eremica)	8	1985	1990	F	1990	T, CH	8	3	S	S	S/M
Jacquemontia, beach (Jacquemontia reclinata)	4	1993	1996	F	1999	E	2	3	S	D	D/U
Jewelflower, California (Caulanthus californicus)	8	1990	1998	F	1998	E	2	2	S	D	D/C
Jewelflower, Metcalf Canyon (Streptanthus albidus ssp. albidus)	8	1995	1998	F	1998	E	3c	1	D	U	U/U
Jewelflower, Tiburon (Streptanthus niger)	8	1995	1998	F	1998	E	5c	1	U	U	U/U
Joint-vetch, sensitive (Aeschynomene virginica)	5	1992	1995	F	1995	T	2	1	U	U	U/C
Kamakahala (Labordia cyrtandrae)	1	1996	1998	F	1998	E, CH	5	1	U	U	U/C

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Kamakahala (Labordia lydgatei)	1	1991	1994	F	1994	E, CH	11	1	U	U	U/C
Kamakahala (Labordia tinifolia var. lanaiensis)	1	1999	2002	F	2002	E	6	1	U	U	U/C
Kamakahala (Labordia tinifolia var. wahiawaensis)	1	1996	1998	F	1998	E, CH	6	1	U	U	U/C
Kamakahala (Labordia triflora)	1	1999	2002	F	2002	E	5	1	U	U	U/C
Kamanomano (Cenchrus agrimonioides)	1	1996	1999	F	1999	E, CH	5	1	U	U	U/C
Kauai hau kuahiwi (Hibiscadelphus distans)	1	1986	1996	F	1996	E	2	1	U	U	U/C
Kauila (Colubrina oppositifolia)	1	1994	1996	F	1996	E, CH	5	1	U	U	U/C
Kaulu (Pteralyxia kauaiensis)	1	1994	1995	F	1995	E, CH	8	1	U	U	U/C
Kio`ele (Hedyotis coriacea)	1	1992	1997	F	1997	E, CH	2	1	U	U	U/C
Kiponapona (Phyllostegia racemosa)	1	1996	1998	F	1998	E, CH	2	1	U	U	U/C
Ko`oko`olau (Bidens micrantha ssp. kalealaha)	1	1992	1997	F	1997	E, CH	9	1	U	U	U/C
Ko`oko`olau (Bidens wiebkei)	1	1992	1996	F	1996	E, CH	2	1	U	U	U/C
Ko`oloa`ula (Abutilon menziesii)	1	1986	1995	F	1995	E	2	1	U	U	U/C
Kohe malama malama o kanaloa (Kanaloa kahoolawensis)	1	1999	2002	F	2002	E, CH	1	1	S	D	D/C
Koki`o (Kokia drynarioides)	1	1984	1994	F	1994	E, CH	2	1	S	U	U/C
Koki`o (Kokia kauaiensis)	1	1996	1998	F	1998	E, CH	5	1	U	U	U/C
Koki`o, Cooke's (Kokia cookei)	1	1979	1998	F	1998	E	5	1	C	C	N/A
Koki`o ke`oke`o (Hibiscus arnottianus ssp. immaculatus)	1	1992	1996	F	1996	E, CH	3	1	U	U	U/C
Koki`o ke`oke`o (Hibiscus waimeae ssp. hannerae)	1	1996	1998	F	1998	E, CH	3	1	U	U	U/C
Kolea (Myrsine juddii)	1	1996	1998	F	1998	E, CH	8	1	U	U	U/C
Kolea (Myrsine linearifolia)	1	1996	1998	F	1998	T, CH	2	1	U	U	U/C
Kopa (Hedyotis schlechtendahliana var. remyi)	1	1999	2002	F	2002	E	6	1	D	U	U/C
Kuahiwi laukahi (Plantago hawaiensis)	1	1994	1996	F	1996	E, CH	5	1	U	U	U/C
Kuahiwi laukahi (Plantago princeps)	1	1994	1999	F	1999	E, CH	5	1	U	U	U/C
Kuawawaenohu (Alsinidendron lychnoides)	1	1996	1998	F	1998	E, CH	2	1	I	U	U/C
Kula wahine noho (Isodendrion pyrifolium)	1	1994	1996	F	1996	E, CH	2	1	S	U	U/C
Kulu`i (Nototrichium humile)	1	1991	1995	F	1998	E, CH	8	1	U	D	S/C

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Common Name	Lead Region	Date Listed	Date of First Final Plan	Plan Stage *	Date of Current Plan	Current Listing Classification	Recovery Priority Number	Recovery Achieved	FY 2002 RRC Population Status	FY 2004 RRC Population Status	2004 Species/ Threats Info
Ladies'-tresses, Canelo Hills (Spiranthes delitescens)	2	1997	N/A	none	N/A	E	2c	1	S	S	S/C
Ladies'-tresses, Navasota (Spiranthes parksii)	2	1982	1984	F	1984	E	2	1	D	D	D/I
Ladies'-tresses, Ute (Spiranthes diluvialis)	6	1992	N/A	D	1995	T	2c	1	U	S	S/C
Larkspur, Baker's (Delphinium bakeri)	8	2000	N/A	none	N/A	E, CH	5	1	D	D	D/C
Larkspur, San Clemente Island (Delphinium variegatum ssp. kinkiense)	8	1977	1984	F	1984	E	8	2	S	S	S/C
Larkspur, yellow (Delphinium luteum)	8	2000	N/A	none	N/A	E, CH	8c	1	D	D	U/C
Lau `ehu (Panicum niihauense)	1	1996	1999	F	1999	E, CH	2	1	U	D	D/C
Laulihilihi (Schiedea stellarioides)	1	1996	1998	F	1998	E, CH	2	1	U	U	U/C
Layia, beach (Layia carnosa)	8	1992	1998	F	1998	E	8	1	U	U	U/C
Lead-plant, Crenulate (Amorpha crenulata)	4	1985	1988	F	1999	E	5c	1	D	S	I/C
Leather flower, Alabama (Clematis socialis)	4	1986	1989	F	1989	E	2	2	S	S	S/C
Leather flower, Morefield's (Clematis morefieldii)	4	1992	1994	F	1994	E	5	1	S	S	S/C
Lepanthes eltoroensis [NCN]	4	1991	1996	F	1996	E	5	2	S	S	S/C
Leptocereus grantianus [NCN]	4	1993	1995	F	1995	E	5c	1	S	S	S/C
Lessingia, San Francisco (Lessingia germanorum (=L.g. var. germanorum))	8	1997	2003	F	2003	E	2c	1	D	S	S/C
Liliwai (Acaena exigua)	1	1992	1997	F	1997	E, CH	5	1	E	U	U/C
Lily, Minnesota dwarf trout (Erythronium propullans)	3	1986	1987	F	1987	E	8c	4	S	D	D/I
Lily, Pitkin Marsh (Lilium pardalinum ssp. pitkinense)	8	1997	N/A	none	N/A	E	5c	1	U	D	D/I
Lily, Western (Lilium occidentale)	8	1994	1998	F	1998	E	2	1	U	D	D/C
Lipochaeta venosa [NCN]	1	1979	1994	F	1994	E	5	1	U	U	U/C
Liveforever, Laguna Beach (Dudleya stolonifera)	8	1998	N/A	none	N/A	T	8	1	S	S	S/C
Liveforever, Santa Barbara Island (Dudleya traskiae)	8	1978	1985	F	1985	E	8	2	S	S	S/C
Lobelia gaudichaudii ssp. koolauensis [NCN]	1	1996	1998	F	1998	E, CH	6	1	U	U	U/C
Lobelia monostachya [NCN]	1	1996	1998	F	1998	E, CH	5	1	U	D	D/C
Lobelia niihauensis [NCN]	1	1991	1995	F	1998	E, CH	8	1	U	U	U/C
Lobelia oahuensis [NCN]	1	1994	1996	F	1998	E, CH	5	1	U	U	U/C

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Locoweed, Fassett's (Oxytropis campestris var. chartacea)	3	1988	1991	F	1991	T	9	2	S	S	S/C
Loosestrife, rough-leaved (Lysimachia asperulaefolia)	4	1987	1995	F	1995	E	8	1	S	S	S/C
Lo`ulu (Pritchardia affinis)	1	1994	1996	F	1996	E	5	1	C	U	U/C
Lo`ulu (Pritchardia kaalae)	1	1996	1998	F	1998	E	5	1	U	D	D/C
Lo`ulu (Pritchardia munroi)	1	1992	1996	F	1996	E, CH	5	1	U	U	U/C
Lo`ulu (Pritchardia napaliensis)	1	1996	1998	F	1998	E	5	1	U	U	U/C
Lo`ulu (Pritchardia remota)	1	1996	1998	F	1998	E, CH	2	1	U	U	U/C
Lo`ulu (Pritchardia schattaueri)	1	1996	1998	F	1998	E	5	1	S	U	U/C
Lo`ulu (Pritchardia viscosa)	1	1996	1998	F	1998	E	5	1	U	D	D/C
Lomatium, Cook's (Lomatium cookii)	1	2002	N/A	none	N/A	E	2c	1	N/A	S	S/C
Lousewort, Furbish (Pedicularis furbishiae)	5	1978	1983	F_2	1991	E	14	2	S	I	I/I
Love grass, Fosberg's (Eragrostis fosbergii)	1	1996	1998	F	1998	E, CH	5	1	E	U	U/C
Lupine, clover (Lupinus tidestromii)	8	1992	1998	F	1998	E	5	1	S	U	U/C
Lupine, Kincaid's (Lupinus sulphureus (=oreganus) ssp. kincaidii (=var. kincaidii))	1	2000	N/A	none	N/A	T	3c	1	S	D	D/C
Lupine, Nipomo Mesa (Lupinus nipomensis)	8	2000	N/A	none	N/A	E	5	1	U	U	U/C
Lupine, scrub (Lupinus aridorum)	4	1987	1990	F_2	1996	E	2c	2	S	U	U/M
Lyonia truncata var. proctorii [NCN]	4	1993	1995	F	1995	E	6	2	S	U	U/U
Lysimachia filifolia [NCN]	1	1994	1995	F	1995	E, CH	2	1	U	U	U/C
Lysimachia lydgatei [NCN]	1	1992	1997	F	1997	E, CH	2	1	U	U	U/C
Lysimachia maxima [NCN]	1	1996	1998	F	1998	E, CH	5	1	U	U	U/C
Mahoe (Alectryon macrococcus)	1	1992	1997	F	1997	E, CH	5	1	U	U	U/C
Makou (Peucedanum sandwicense)	1	1994	1995	F	1995	T, CH	8	1	U	U	U/C
Malacothrix, island (Malacothrix squalida)	8	1997	2000	F	2000	E	2	1	S	U	U/C
Malacothrix, Santa Cruz Island (Malacothrix indecora)	8	1997	2000	F	2000	E	2	1	U	D	D/C
Mallow, Kern (Eremalche kernensis)	8	1990	1998	F	1998	E	2	2	U	S	S/C
Mallow, Peter's Mountain (Iliamna corei)	5	1986	1990	F	1990	E	5	2	S	I	I/M

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Manaca, palma de (Calyptronoma rivalis)	4	1990	1992	F	1992	T	8	2	S	U	U/C
Manioc, Walker's (Manihot walkerae)	2	1991	1993	F	1993	E	5	2	I	U	U/C
Manzanita, Del Mar (Arctostaphylos glandulosa ssp. crassifolia)	8	1996	N/A	none	N/A	E	3c	1	D	D	D/C
Manzanita, Ione (Arctostaphylos myrtifolia)	8	1999	N/A	none	N/A	T	5c	1	D	D	D/C
Manzanita, Morro (Arctostaphylos morroensis)	8	1994	1998	F	1998	T	2c	1	U	U	U/C
Manzanita, pallid (Arctostaphylos pallida)	8	1998	N/A	D	2003	T	11c	1	U	S	S/C
Manzanita, Presidio (Arctostaphylos hookeri var. ravenii)	8	1979	2003	F	2003	E	12	1	D	U	U/C
Manzanita, Santa Rosa Island (Arctostaphylos confertiflora)	8	1997	2000	F	2000	E	2	1	S	D	D/C
Ma`o hau hele, (=native yellow hibiscus) (Hibiscus brackenridgei)	1	1994	1999	F	1999	E, CH	2	1	U	I	I/C
Ma`oli`oli (Schiedea apokremnos)	1	1991	1995	F	1995	E, CH	8	1	U	U	U/C
Ma`oli`oli (Schiedea kealiae)	1	1996	1998	F	1998	E, CH	8	1	U	U	U/C
Mapele (Cyrtandra cyaneoides)	1	1996	1998	F	1998	E, CH	2	1	U	U	U/C
Mariposa lily, Tiburon (Calochortus tiburonensis)	8	1995	1998	F	1998	T	17	1	U	U	U/U
Mariscus fauriei [NCN]	1	1994	1996	F	1996	E, CH	14	1	U	U	U/C
Mariscus pennatiformis [NCN]	1	1994	1999	F	1999	E, CH	5	1	U	U	U/C
Meadowfoam, Butte County (Limnanthes floccosa ssp. californica)	8	1992	N/A	none	N/A	E, CH	2c	1	D	D	D/C
Meadowfoam, large-flowered wooly (Limnanthes floccosa grandiflora)	1	2002	N/A	none	N/A	E	3c	1	N/A	S	S/C
Meadowfoam, Sebastopol (Limnanthes vinculans)	8	1991	N/A	none	N/A	E	2c	1	D	D	D/C
Meadowrue, Cooley's (Thalictrum cooleyi)	4	1989	1994	F	1994	E	2	2	S	U	U/C
Mehamehame (Flueggea neowawraea)	1	1994	1999	F	1999	E, CH	5	1	U	U	U/C
Mesa-mint, Otay (Pogogyne nudiuscula)	8	1993	1998	F	1998	E	2c	1	D	D	U/C
Mesa-mint, San Diego (Pogogyne abramsii)	8	1978	1984	F	1998	E	5	1	S	S	S/C
Milk-vetch, Applegate's (Astragalus applegatei)	8	1993	1998	F	1998	E	5	2	D	U	U/C
Milk-vetch, Ash meadows (Astragalus phoenix)	8	1985	1990	F	1990	T, CH	8	2	D	U	U/M

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Milk-vetch, Braunton's (Astragalus brauntonii)	8	1997	1999	F	1999	E	8	1	D	D	D/C
Milk-vetch, Clara Hunt's (Astragalus clarianus)	8	1997	N/A	none	N/A	E	5c	1	U	D	D/C
Milk-vetch, Coachella Valley (Astragalus lentiginosus var. coachellae)	8	1998	N/A	none	N/A	E	6	1	D	U	U/C
Milk-vetch, coastal dunes (Astragalus tener var. titi)	8	1998	N/A	D	2002	E	6c	1	S	U	U/C
Milk-vetch, Cushenbury (Astragalus albens)	8	1994	N/A	D	1997	E, CH	2	1	D	D	D/C
Milk-vetch, Deseret (Astragalus desereticus)	6	1999	N/A	none	N/A	T	8	1	U	U	U/U
Milk-vetch, Fish Slough (Astragalus lentiginosus var. piscinensis)	8	1998	1998	F	1998	T	9c	1	D	U	U/C
Milk-vetch, heliotrope (Astragalus montii)	6	1987	N/A	D	1995	T, CH	8	3	U	S	S/C
Milk-vetch, Holmgren (Astragalus holmgreniorum)	6	2001	N/A	none	N/A	E	5c	1	D	D	D/C
Milk-vetch, Jesup's (Astragalus robbinsii var. jesupi)	5	1987	1989	F	1989	E	6	1	S	D	D/C
Milk-vetch, Lane Mountain (Astragalus jaegerianus)	8	1998	N/A	none	N/A	E, CH	2c	1	U	U	U/C
Milk-vetch, Mancos (Astragalus humillimus)	2	1985	1989	F	1989	E	5c	2	S	S	S/C
Milk-vetch, Osterhout (Astragalus osterhoutii)	6	1989	1992	F	1992	E	2	1	U	D	D/C
Milk-vetch, Peirson's (Astragalus magdalenae var. peirsonii)	8	1998	N/A	none	N/A	T, CH	3	1	U	U	U/C
Milk-vetch, Sentry (Astragalus cremnophylax var. cremnophylax)	2	1990	N/A	D	2004	E	3	1	S	D	D/C
Milk-vetch, Shivwitz (Astragalus ampullarioides)	6	2001	N/A	none	N/A	E	5	1	D	D	D/C
Milk-vetch, triple-ribbed (Astragalus tricarinatus)	8	1998	N/A	none	N/A	E	2	1	D	D	D/C
Milk-vetch, Ventura Marsh (Astragalus pycnostachyus var. lanosissimus)	8	2001	N/A	none	N/A	E, CH	6c	1	D	I	I/C
Milkpea, Small's (Galactia smallii)	4	1985	1988	F	1999	E	5c	1	U	U	U/U
Milkweed, Mead's (Asclepias meadii)	3	1988	2003	F	2003	T	8	1	D	U	U/C
Milkweed, Welsh's (Asclepias welshii)	6	1987	1992	F	1992	T, CH	11	2	S	S	S/C
Mint, Garrett's (Dicerandra christmanii)	4	1985	1999	F	1999	E	2c	1	U	U	U/C
Mint, Lakela's (Dicerandra immaculata)	4	1985	1999	F	1999	E	2c	2	S	U	U/C
Mint, longspurred (Dicerandra cornutissima)	4	1985	1987	F	1987	E	2c	1	U	U	U/C
Mint, scrub (Dicerandra frutescens)	4	1985	1999	F	1999	E	2	1	U	U	U/C

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Mitracarpus maxwelliae [NCN]	4	1994	1998	F	1998	E	5	1	S	U	U/U
Mitracarpus polycladus [NCN]	4	1994	1998	F	1998	E	5	1	S	U	U/U
Monardella, willowy (Monardella linoides ssp. viminea)	8	1998	N/A	none	N/A	E	6	1	D	U	U/C
Monkey-flower, Michigan (Mimulus glabratus var. michiganensis)	3	1990	1997	F	1997	E	9c	2	S	S	S/M
Monkshood, northern wild (Aconitum noveboracense)	3	1978	1983	F	1983	T	8	3	D	S	S/C
Morning-glory, Stebbins' (Calystegia stebbinsii)	8	1996	2002	F	2002	E	5c	1	U	D	D/C
Mountain balm, Indian Knob (Eriodictyon altissimum)	8	1994	1998	F	1998	E	8c	2	U	U	U/C
Mountain-mahogany, Catalina Island (Cercocarpus traskiae)	8	1997	N/A	none	N/A	E	2	1	S	S	S/M
Munroidendron racemosum [NCN]	1	1994	1995	F	1995	E, CH	5	1	U	U	U/C
Mustard, Carter's (Warea carteri)	4	1987	1990	F	1999	E	2	1	U	U	U/U
Mustard, Penland alpine fen (Eutrema penlandii)	6	1993	N/A	none	N/A	T	11c	1	S	S	S/C
Mustard, slender-petaled (Thelypodium stenopetalum)	8	1984	1998	F	1998	E	5c	1	D	D	D/C
Myrcia paganii [NCN]	4	1994	1997	F	1997	E	8	1	U	U	U/U
Na`ena`e (Dubautia herbstobatae)	1	1991	1995	F	1998	E, CH	8	1	U	U	U/C
Na`ena`e (Dubautia latifolia)	1	1992	1995	F	1995	E, CH	5	1	U	U	U/C
Na`ena`e (Dubautia pauciflorula)	1	1991	1994	F	1994	E, CH	8	1	U	U	U/C
Na`ena`e (Dubautia plantaginea ssp. humilis)	1	1999	2002	F	2002	E, CH	8	1	D	U	U/C
Nani wai`ale`ale (Viola kauaiensis var. wahiawaensis)	1	1996	1998	F	1998	E, CH	6	1	U	U	U/C
Nanu (Gardenia mannii)	1	1996	1998	F	1998	E, CH	5	1	U	U	U/C
Naupaka, dwarf (Scaevola coriacea)	1	1986	1997	F	1997	E	2	1	U	U	U/C
Navarretia, few-flowered (Navarretia leucocephala ssp. pauciflora (=N. pauciflora))	8	1997	N/A	none	N/A	E	3	1	U	U	U/U
Navarretia, many-flowered (Navarretia leucocephala ssp. plieantha)	8	1997	N/A	none	N/A	E	3	1	U	D	D/C
Navarretia, spreading (Navarretia fossalis)	8	1998	1998	F	1998	T	2	1	D	D	D/C

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Nehe (Lipochaeta fauriei)	1	1994	1995	F	1995	E, CH	5	1	U	U	U/C
Nehe (Lipochaeta kamolensis)	1	1992	1997	F	1997	E, CH	2	1	U	U	U/C
Nehe (Lipochaeta lobata var. leptophylla)	1	1991	1995	F	1998	E, CH	3	1	U	U	U/C
Nehe (Lipochaeta micrantha)	1	1994	1995	F	1995	E, CH	8	1	U	U	U/C
Nehe (Lipochaeta tenuifolia)	1	1991	1995	F	1998	E, CH	8	1	U	D	D/C
Nehe (Lipochaeta waimeaensis)	1	1994	1995	F	1995	E, CH	2	1	U	D	D/C
Neraudia angulata [NCN]	1	1991	1995	F	1998	E, CH	5	1	U	I	I/C
Neraudia ovata [NCN]	1	1996	1998	F	1998	E, CH	5	1	U	D	D/C
Neraudia sericea [NCN]	1	1994	1999	F	1999	E, CH	5	1	U	U	U/C
Nioi (Eugenia koolauensis)	1	1994	1996	F	1998	E, CH	5	1	U	U	U/C
Niterwort, Amargosa (Nitrophila mohavensis)	8	1985	1990	F	1990	E, CH	8	1	U	S	S/M
Nesogenes rotensis [NCN]	1	2004	N/A	none	N/A	E	2	1	N/A	D	D/C
Nohoanu (Geranium multiflorum)	1	1992	1997	F	1997	E, CH	8	1	U	U	U/C
Oak, Hinckley (Quercus hinckleyi)	2	1988	1992	F	1992	T	8	1	U	U	U/U
Oha (Delissea rivularis)	1	1996	1998	F	1998	E, CH	5	1	U	U	U/C
Oha (Delissea subcordata)	1	1996	1998	F	1998	E, CH	5	1	U	D	D/C
Ohai (Sesbania tomentosa)	1	1994	1999	F	1999	E, CH	8	1	U	U	U/C
Ohe`ohe (Tetraplasandra gymnocarpa)	1	1994	1996	F	1998	E, CH	5	1	U	U	U/C
Olulu (Brighamia insignis)	1	1994	1995	F	1995	E, CH	2	1	U	U	U/C
Onion, Munz's (Allium munzii)	8	1998	N/A	none	N/A	E	2	1	D	D	D/C
Opuhe (Urera kaalae)	1	1991	1995	F	1998	E, CH	5	1	U	U	U/C
Orchid, eastern prairie fringed (Platanthera leucophaea)	3	1989	1999	F	1999	T	8	1	S	S	S/C
Orchid, western prairie fringed (Platanthera praeclara)	3	1989	1996	F	1996	T	8c	2	S	S	S/C
Orcutt grass, California (Orcuttia californica)	8	1993	1998	F	1998	E	5c	1	D	D	D/C
Orcutt grass, hairy (Orcuttia pilosa)	8	1997	N/A	none	N/A	E, CH	2c	1	D	D	S/I
Orcutt grass, Sacramento (Orcuttia viscida)	8	1997	N/A	none	N/A	E, CH	5c	1	D	U	U/C
Orcutt grass, San Joaquin (Orcuttia inaequalis)	8	1997	N/A	none	N/A	T, CH	8	1	D	D	S/I
Orcutt grass, slender (Orcuttia tenuis)	8	1997	N/A	none	N/A	T, CH	8	1	S	D	S/I

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Osmoxylon mariannense [NCN]	1	2004	N/A	none	N/A	E	2	1	N/A	D	D/C
Owl's-clover, fleshy (Castilleja campestris ssp. succulenta)	8	1997	N/A	none	N/A	T, CH	9	1	D	D	D/C
Oxytheca, cushenbury (Oxytheca parishii var. goodmaniana)	8	1994	N/A	D	1997	E, CH	3c	1	D	D	S/I
Paintbrush, ash-grey (Castilleja cinerea)	8	1998	N/A	none	N/A	T	8	1	D	D	S/I
Paintbrush, golden (Castilleja levisecta)	1	1997	2000	F	2000	T	2	1	D	S	S/M
Paintbrush, soft-leaved (Castilleja mollis)	8	1997	2000	F	2000	E	2	1	S	S	S/M
Paintbrush, Tiburon (Castilleja affinis ssp. neglecta)	8	1995	1998	F	1998	E	9c	1	U	U	U/U
Palo colorado (Ternstroemia luquillensis)	4	1992	1995	F	1995	E	11	1	S	S	S/C
Palo de jazmin (Styrax portoricensis)	4	1992	1995	F	1995	E	5	1	S	S	S/C
Palo de nigua (Cornutia obovata)	4	1988	1992	F	1992	E	5	1	S	U	U/U
Palo de ramon (Banara vanderbiltii)	4	1987	1991	F	1991	E	5	1	U	U	U/U
Palo de rosa (Ottoschulzia rhodoxylon)	4	1990	1994	F	1994	E	8	2	S	U	U/U
Pamakani (Tetramolopium capillare)	1	1994	1997	F	1997	E, CH	2	1	U	U	U/C
Pamakani (Viola chamissoniana ssp. chamissoniana)	1	1991	1995	F	1998	E, CH	3	1	U	D	I/I
Panicgrass, Carter's (Panicum fauriei var. carteri)	1	1983	1994	F	1994	E, CH	9	1	U	U	U/C
Pawpaw, beautiful (Deeringothamnus pulchellus)	4	1986	1999	F	1999	E	2	1	U	U	U/U
Pawpaw, four-petal (Asimina tetramera)	4	1986	1999	F	1999	E	11	2	S	S	S/C
Pawpaw, Rugel's (Deeringothamnus rugelii)	4	1986	1988	F	1988	E	2	1	U	U	U/U
Pelos del diablo (Aristida portoricensis)	4	1990	1994	F	1994	E	5c	1	U	U	U/I
Penny-cress, Kneeland Prairie (Thlaspi californicum)	8	2000	2003	F	2003	E, CH	2c	1	S	U	U/U
Pennyroyal, Todsen's (Hedeoma todsenii)	2	1981	1985	F_2	2001	E, CH	8	2	S	S	S/M
Penstemon, blowout (Penstemon haydenii)	6	1987	1992	F	1992	E	11c	3	I	I	I/C
Pentachaeta, Lyon's (Pentachaeta lyonii)	8	1997	1999	F	1999	E	2c	1	D	D	D/C
Pentachaeta, white-rayed (Pentachaeta bellidiflora)	8	1995	1998	F	1998	E	8	1	U	U	U/U
Peperomia, Wheeler's (Peperomia wheeleri)	4	1987	1990	F	1990	E	5	1	S	U	U/U
Phacelia, clay (Phacelia argillacea)	6	1978	1982	F	1982	E	2	1	D	D	I/I
Phacelia, island (Phacelia insularis ssp. insularis)	8	1997	2000	F	2000	E	3	1	S	D	D/C

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Phacelia, North Park (Phacelia formosula)	6	1982	1986	F	1986	E	8	2	U	S	S/C
Phlox, Texas trailing (Phlox nivalis ssp. texensis)	2	1991	1995	F	1995	E	3	1	S	S	S/M
Phlox, Yreka (Phlox hirsuta)	8	2000	N/A	D	2004	E	5c	1	U	U	U/U
Phyllostegia glabra var. lanaiensis [NCN]	1	1991	1995	F	1995	E	6	1	E	U	U/C
Phyllostegia hirsuta [NCN]	1	1996	1998	F	1998	E, CH	5	1	U	U	U/C
Phyllostegia kaalaensis [NCN]	1	1996	1998	F	1998	E, CH	5	1	U	U	U/C
Phyllostegia knudsenii [NCN]	1	1996	1998	F	1998	E, CH	5	1	U	U	U/C
Phyllostegia mannii [NCN]	1	1992	1996	F	1996	E, CH	5	1	U	U	U/C
Phyllostegia mollis [NCN]	1	1991	1995	F	1998	E, CH	5	1	U	U	U/C
Phyllostegia parviflora [NCN]	1	1996	1999	F	1999	E, CH	5	1	U	U	U/C
Phyllostegia velutina [NCN]	1	1996	1998	F	1998	E, CH	2	1	U	U	U/C
Phyllostegia waimeae [NCN]	1	1994	1995	F	1995	E, CH	5	1	C	I	I/C
Phyllostegia warshaueri [NCN]	1	1996	1998	F	1998	E, CH	5	1	U	U	U/C
Phyllostegia wawrana [NCN]	1	1996	1998	F	1998	E, CH	5	1	U	U	U/C
Pigeon wings (Clitoria fragrans)	4	1993	1999	F	1999	T	14	1	U	U	U/U
Pilo (Hedyotis mannii)	1	1992	1996	F	1996	E, CH	5	1	U	U	U/C
Pink, swamp (Helonias bullata)	5	1988	1991	F	1991	T	1c	1	S	S	S/C
Pinkroot, gentian (Spigelia gentianoides)	4	1990	N/A	none	N/A	E	2	1	D	D	D/M
Piperia, Yadon's (Piperia yadonii)	8	1998	N/A	D	2002	E	2c	1	S	D	I/I
Pitaya, Davis' green (Echinocereus viridiflorus var. davisii)	2	1979	1984	F	1984	E	3	1	U	D	D/I
Pitcher-plant, Alabama canebrake (Sarracenia rubra alabamensis)	4	1989	1992	F	1992	E	6	2	S	S	S/M
Pitcher-plant, green (Sarracenia oreophila)	4	1979	1983	F_2	1994	E	8	2	S	S	S/M
Pitcher-plant, mountain sweet (Sarracenia rubra ssp. jonesii)	4	1988	1990	F	1990	E	3	1	U	U	U/U
Platanthera holochila [NCN]	1	1996	1999	F	1999	E, CH	5	1	U	U	U/C
Plum, scrub (Prunus geniculata)	4	1987	1990	F_2	1996	E	2	3	S	U	U/C
Poa siphonoglossa [NCN]	1	1992	1995	F	1995	E, CH	5	1	U	I	I/C

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Po`e (Portulaca sclerocarpa)	1	1994	1996	F	1996	E, CH	2	1	U	U	U/C
Pogonia, small whorled (Isotria medeoloides)	5	1982	1985	F_2	1992	T	14	3	I	S	S/C
Polygala, Lewton's (Polygala lewtonii)	4	1993	1999	F	1999	E	8	1	U	U	U/U
Polygala, tiny (Polygala smallii)	4	1985	1988	F	1999	E	5c	2	S	U	U/C
Polygonum, Scotts Valley (Polygonum hickmanii)	8	2003	N/A	none	N/A	E, CH	5	1	N/A	U	U/C
Pondberry (Lindera melissifolia)	4	1986	1993	F	1993	E	8	1	D	D	S/I
Pondweed, Little Aguja (=Creek) (Potamogeton clystocarpus)	2	1991	1994	F	1994	E	5	1	I	U	U/U
Popcornflower, rough (Plagiobothrys hirtus)	1	2000	2003	F	2003	E	2c	2	S	S	S/C
Popolo ku mai (Solanum incompletum)	1	1994	1999	F	1999	E, CH	5	1	U	U	U/C
Poppy, Sacramento prickly (Argemone pleiacantha ssp. pinnatisecta)	2	1989	1994	F	1994	E	3	2	D	D	D/C
Poppy-mallow, Texas (Callirhoe scabriuscula)	2	1981	1985	F	1985	E	5c	1	D	I	I/C
Potato-bean, Price's (Apios priceana)	4	1990	1993	F	1993	T	8	2	I	S	S/M
Potentilla, Hickman's (Potentilla hickmanii)	8	1998	N/A	D	2002	E	5c	1	D	D	D/C
Prairie-clover, leafy (Dalea foliosa)	4	1991	1996	F	1996	E	5	2	S	D	D/C
Prickly-apple, fragrant (Cereus eriophorus var. fragrans)	4	1985	1988	F	1999	E	3	1	S	S	S/C
Prickly-ash, St. Thomas (Zanthoxylum thomasianum)	4	1985	1988	F	1988	E	2c	1	S	S	S/C
Primrose, Maguire (Primula maguirei)	6	1985	1990	F	1990	T	5	3	S	S	S/C
Pua `ala (Brighamia rockii)	1	1992	1996	F	1996	E, CH	2	1	U	U	U/C
Pu`uka`a (Cyperus trachysanthos)	1	1996	1999	F	1999	E, CH	5	1	U	I	I/C
Pussypaws, Mariposa (Calyptridium pulchellum)	8	1998	N/A	none	N/A	T	8	1	D	D	D/U
Rattleweed, hairy (Baptisia arachnifera)	4	1978	1984	F	1984	E	8	1	S	S	S/C
Reed-mustard, Barneby (Schoenocrambe barnebyi)	6	1992	1994	F	1994	E	11	1	S	U	U/U
Reed-mustard, clay (Schoenocrambe argillacea)	6	1992	1994	F	1994	T	17	1	U	U	U/U
Reed-mustard, shrubby (Schoenocrambe suffrutescens)	6	1987	1994	F	1994	E	4c	1	D	U	U/U
Remya kauaiensis [NCN]	1	1991	1995	F	1995	E, CH	5	1	U	U	U/C
Remya, Maui (Remya mauiensis)	1	1991	1997	F	1997	E, CH	5	1	U	U	U/C

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Common Name	**Lead Region**	**Date Listed**	**Date of First Final Plan**	**Plan Stage ***	**Date of Current Plan**	**Current Listing Classification**	**Recovery Priority Number**	**Recovery Achieved**	**FY 2002 RRC Population Status**	**FY 2004 RRC Population Status**	**2004 Species/ Threats Info**
Remya montgomeryi [NCN]	1	1991	1995	F	1995	E, CH	5	1	U	U	U/C
Rhododendron, Chapman (Rhododendron chapmanii)	4	1979	1983	F	1983	E	8c	1	S	S	S/C
Ridge-cress, Barneby (Lepidium barnebyanum)	6	1990	1993	F	1993	E	5c	1	U	U	U/U
Rock-cress, Braun's (Arabis perstellata)	4	1995	1997	F	1997	E, CH	5	1	S	S	S/C
Rock-cress, Hoffmann's (Arabis hoffmannii)	8	1997	2000	F	2000	E	2	1	S	D	D/C
Rock-cress, McDonald's (Arabis mcdonaldiana)	8	1978	1984	F	1984	E	14c	1	U	U	U/U
Rockcress, Santa Cruz Island (Sibara filifolia)	8	1997	N/A	none	N/A	E	2	1	S	I	I/C
Rock-cress, shale barren (Arabis serotina)	5	1989	1991	F	1991	E	11	2	S	U	U/U
Rosemary, Apalachicola (Conradina glabra)	4	1993	1994	F	1994	E	8	2	S	S	S/M
Rosemary, Cumberland (Conradina verticillata)	4	1991	1996	F	1996	T	8	1	S	S	S/C
Rosemary, Etonia (Conradina etonia)	4	1993	1994	F	1994	E	2c	1	S	S	S/C
Rosemary, short-leaved (Conradina brevifolia)	4	1993	1999	F	1999	E	8c	1	U	U	U/U
Roseroot, Leedy's (Sedum integrifolium ssp. leedyi)	3	1992	1998	F	1998	T	9	1	S	D	D/C
Rush-pea, slender (Hoffmannseggia tenella)	2	1985	1988	F	1988	E	2	1	S	D	D/C
Rush-rose, island (Helianthemum greenei)	8	1997	2000	F	2000	T	8	1	S	S	I/I
Sandalwood, Lanai (=`iliahi) (Santalum freycinetianum var. lanaiense)	1	1986	1995	F	1995	E	3	1	U	U	U/C
Sandlace (Polygonella myriophylla)	4	1993	1996	F_2	1999	E	8	2	U	U	U/U
Sand-verbena, large-fruited (Abronia macrocarpa)	2	1988	1992	F	1992	E	2	1	S	S	S/C
Sandwort, Bear Valley (Arenaria ursina)	8	1998	N/A	none	N/A	T	8	1	D	D	D/C
Sandwort, Cumberland (Arenaria cumberlandensis)	4	1988	1996	F	1996	E	8	2	I	S	S/C
Sandwort, Marsh (Arenaria paludicola)	8	1993	1998	F	1998	E	5	1	S	D	D/C
Sanicula mariversa [NCN]	1	1991	1995	F	1998	E, CH	5	1	U	D	D/C
Sanicula purpurea [NCN]	1	1996	1999	F	1999	E, CH	5	1	U	U	U/C
Schiedea, Diamond Head (Schiedea adamantis)	1	1984	1994	F	1994	E	5	1	U	D	D/C
Schiedea haleakalensis [NCN]	1	1992	1997	F	1997	E, CH	2	1	U	U	U/C
Schiedea helleri [NCN]	1	1996	1998	F	1998	E, CH	5	1	U	U	U/C
Schiedea hookeri [NCN]	1	1996	1999	F	1999	E, CH	8	1	U	U	U/C
Schiedea kaalae [NCN]	1	1991	1995	F	1998	E, CH	2	1	U	D	D/C

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Schiedea kauaiensis [NCN]	1	1996	1998	F	1998	E, CH	5	1	U	D	D/C
Schiedea lydgatei [NCN]	1	1992	1996	F	1996	E, CH	8	1	UU	U	U/C
Schiedea membranacea [NCN]	1	1996	1998	F	1998	E, CH	2	1	U	U	U/C
Schiedea nuttallii [NCN]	1	1996	1999	F	1999	E, CH	5	1	U	D	D/C
Schiedea sarmentosa [NCN]	1	1996	1998	F	1998	E, CH	8	1	U	U	U/C
Schiedea spergulina var. leiopoda [NCN]	1	1994	1995	F	1995	E, CH	6	1	U	U	U/C
Schiedea spergulina var. spergulina [NCN]	1	1994	1995	F	1995	T, CH	9	1	U	U	U/C
Schiedea verticillata [NCN]	1	1996	1998	F	1998	E, CH	2	1	U	U	U/C
Schoepfia arenaria [NCN]	4	1991	1992	F	1992	T	5c	1	U	U	U/C
Seablite, California (Suaeda californica)	8	1994	N/A	none	N/A	E	8	1	U	U	U/U
Sedge, golden (Carex lutea)	4	2002	N/A	none	N/A	E	5	1	U	U	U/U
Sedge, Navajo (Carex specuicola)	2	1985	1987	F	1987	T, CH	8	1	D	D	D/I
Sedge, white (Carex albida)	8	1997	N/A	none	N/A	E	5c	1	U	D	D/C
Silene alexandri [NCN]	1	1992	1996	F	1996	E, CH	5	1	C	C	N/A
Silene hawaiiensis [NCN]	1	1994	1996	F	1996	T, CH	8	1	U	U	S/U
Silene lanceolata [NCN]	1	1992	1996	F	1996	E, CH	2	1	U	U	U/C
Silene perlmanii [NCN]	1	1991	1995	F	1998	E, CH	5	1	C	C	N/A
Silversword, Mauna Loa (=Ka'u) (Argyroxiphium kauense)	1	1993	1995	F	1995	E, CH	2	2	I	I	I/C
Skullcap, Florida (Scutellaria floridana)	4	1992	1994	F	1994	T	2	1	U	U	U/M
Skullcap, large-flowered (Scutellaria montana)	4	1986	1996	F	1996	T	8	3	I	S	S/C
Snakeroot (Eryngium cuneifolium)	4	1987	1990	F_2	1999	E	2	2	S	S	S/M
Sneezeweed, Virginia (Helenium virginicum)	5	1998	N/A	D	2000	T	2	2	S	I	I/C
Snowbells, Texas (Styrax texanus)	2	1984	1987	F	1987	E	2	1	S	S	S/M
Spermolepis hawaiiensis [NCN]	1	1994	1999	F	1999	E, CH	5	1	U	U	U/C
Spineflower, Ben Lomond (Chorizanthe pungens var. hartwegiana)	8	1994	1998	F	1998	E	9	1	U	U	U/U
Spineflower, Howell's (Chorizanthe howellii)	8	1992	1998	F	1998	E	8	1	U	U	U/C

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Spineflower, Monterey (Chorizanthe pungens var. pungens)	8	1994	1998	F	1998	T, CH	15	2	S	S	S/C
Spineflower, Orcutt's (Chorizanthe orcuttiana)	8	1996	N/A	none	N/A	E	2	1	D	D	D/C
Spineflower, Robust (incl. Scotts Valley) (Chorizanthe robusta (incl. vars. robusta and hartwegii))	8	1994	1998	F	1998	E, CH	3	1	U	S	S/C
Spineflower, slender-horned (Dodecahema leptoceras)	8	1987	N/A	none	N/A	E	1c	1	D	D	D/C
Spineflower, Sonoma (Chorizanthe valida)	8	1992	1998	F	1998	E	5	1	S	U	U/U
Spiraea, Virginia (Spiraea virginiana)	5	1990	1992	F	1992	T	9	3	D	D	D/I
Spurge, deltoid (Chamaesyce deltoidea ssp. deltoidea)	4	1985	1988	F	1999	E	6c	2	U	U	U/U
Spurge, Garber's (Chamaesyce garberi)	4	1985	1988	F	1999	T	8	1	U	U	U/U
Spurge, Hoover's (Chamaesyce hooveri)	8	1997	N/A	none	N/A	T, CH	2c	1	U	D	D/C
Spurge, telephus (Euphorbia telephioides)	4	1992	1994	F	1994	T	2	1	U	I	I/M
Stenogyne angustifolia var. angustifolia [NCN]	1	1979	N/A	D	1993	E	2	1	U	U	U/C
Stenogyne bifida [NCN]	1	1992	1996	F	1996	E, CH	2	1	U	U	U/C
Stenogyne campanulata [NCN]	1	1992	1995	F	1995	E, CH	5	1	U	U	U/C
Stenogyne kanehoana [NCN]	1	1992	1995	F	1998	E, CH	5	1	U	U	U/C
Stickseed, showy (Hackelia venusta)	1	2002	N/A	none	N/A	E	5	1	S	S	S/C
Stonecrop, Lake County (Parvisedum leiocarpum)	8	1997	N/A	none	N/A	E	2c	1	U	D	D/C
Sumac, Michaux's (Rhus michauxii)	4	1989	1993	F	1993	E	2	1	S	S	I/I
Sunburst, Hartweg's golden (Pseudobahia bahiifolia)	8	1997	N/A	none	N/A	E	2	1	U	U	U/U
Sunburst, San Joaquin adobe (Pseudobahia peirsonii)	8	1997	N/A	none	N/A	T	2	1	U	U	U/U
Sunflower, Eggert's (Helianthus eggertii)	4	1997	1999	F	1999	T	14	4	I	S	S/C
Sunflower, Pecos (=puzzle, =paradox) (Helianthus paradoxus)	2	1999	N/A	D	2004	T	8	1	U	S	S/M
Sunflower, San Mateo woolly (Eriophyllum latilobum)	8	1995	1998	F	1998	E	11	1	U	U	U/U
Sunflower, Schweinitz's (Helianthus schweinitzii)	4	1991	1994	F	1994	E	5	2	S	S	S/C

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Sunray, Ash Meadows (Enceliopsis nudicaulis var. corrugata)	8	1985	1990	F	1990	T, CH	15	4	S	S	S/M
Sunshine, Sonoma (Blennosperma bakeri)	8	1991	N/A	none	N/A	E	5c	1	D	D	D/C
Taraxacum, California (Taraxacum californicum)	8	1998	N/A	none	N/A	E	5	1	D	D	D/C
Tarplant, Gaviota (Hemizonia increscens ssp. villosa)	8	2000	N/A	none	N/A	E, CH	3	1	U	S	S/C
Tarplant, Otay (Deinandra (=Hemizonia) conjugens)	8	1998	N/A	D	2003	T, CH	5	1	D	D	D/C
Tarplant, Santa Cruz (Holocarpha macradenia)	8	2000	N/A	none	N/A	T, CH	8	1	D	D	D/C
Ternstroemia subsessilis [NCN]	4	1992	1995	F	1995	E	5	1	S	S	S/C
Tetramolopium arenarium [NCN]	1	1994	1996	F	1996	E	5	1	U	U	U/C
Tetramolopium filiforme [NCN]	1	1991	1995	F	1998	E, CH	2	1	I	D	S/I
Tetramolopium lepidotum ssp. lepidotum [NCN]	1	1991	1995	F	1998	E, CH	3	1	I	U	U/C
Tetramolopium remyi [NCN]	1	1991	1995	F	1995	E, CH	2	1	I	U	U/C
Tetramolopium rockii [NCN]	1	1992	1996	F	1996	T, CH	14	1	I	U	U/C
Thelypody, Howell's spectacular (Thelypodium howellii spectabilis)	1	1999	2002	F	2002	T	8	1	S	U	U/I
Thistle, Chorro Creek bog (Cirsium fontinale var. obispoense)	8	1994	1998	F	1998	E	9	2	S	S	S/M
Thistle, fountain (Cirsium fontinale var. fontinale)	8	1995	1998	F	1998	E	6	1	U	U	U/U
Thistle, La Graciosa (Cirsium loncholepis)	8	2000	N/A	none	N/A	E, CH	2	1	I	U	U/U
Thistle, Loch Lomond coyote (Eryngium constancei)	8	1985	N/A	none	N/A	E	14	2	D	D	D/C
Thistle, Pitcher's (Cirsium pitcheri)	3	1988	2002	F	2002	T	8c	1	S	S	S/C
Thistle, Sacramento Mountains (Cirsium vinaceum)	2	1987	1993	F	1993	T	2	2	S	S	S/C
Thistle, Suisun (Cirsium hydrophilum var. hydrophilum)	8	1997	N/A	none	N/A	E	3c	1	D	U	U/C
Thornmint, San Diego (Acanthomintha ilicifolia)	8	1998	N/A	none	N/A	T	2	1	S	S	S/C
Thornmint, San Mateo (Acanthomintha obovata ssp. duttonii)	8	1985	1998	F	1998	E	6c	1	D	U	U/U
Trematolobelia singularis [NCN]	1	1996	1998	F	1998	E, CH	5	1	U	U	U/C
Townsendia, Last Chance (Townsendia aprica)	6	1985	1993	F	1993	T	11c	2	S	S	S/C
Trillium, persistent (Trillium persistens)	4	1978	1984	F	1984	E	8	2	S	S	S/C

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Trillium, relict (Trillium reliquum)	4	1988	1991	F	1991	E	8c	2	U	U	U/U
Tuctoria, Greene's (Tuctoria greenei)	8	1997	N/A	none	N/A	E, CH	2c	1	D	D	S/I
Twinpod, Dudley Bluffs (Physaria obcordata)	6	1990	1993	F	1993	T	2c	2	S	U	U/I
Uhiuhi (Caesalpinia kavaiense)	1	1986	1994	F	1994	E	2	1	U	U	U/C
Uvillo (Eugenia haematocarpa)	4	1994	1998	F	1998	E	8	1	S	S	S/C
Vernonia proctorii [NCN]	4	1993	1995	F	1995	E	5c	2	S	S	S/C
Vigna o-wahuensis [NCN]	1	1994	1999	F	1999	E, CH	5	1	U	U	U/C
Viola helenae [NCN]	1	1991	1994	F	1994	E, CH	2	1	U	U	U/C
Viola lanaiensis [NCN]	1	1991	1995	F	1995	E	2	1	U	U	U/C
Viola oahuensis [NCN]	1	1996	1998	F	1998	E, CH	5	1	U	U	U/C
Vervain, Red Hills (Verbena californica)	8	1998	N/A	none	N/A	T	8	1	U	U	U/U
Vetch, Hawaiian (Vicia menziesii)	1	1978	1984	F	1984	E	2c	1	U	U	U/C
Wahane (Pritchardia aylmer-robinsonii)	1	1996	Exempt	Exempt	Exempt	E	5	1	U	U	U/C
Wallflower, Ben Lomond (Erysimum teretifolium)	8	1994	1998	F	1998	E	8	1	U	U	U/U
Wallflower, Contra Costa (Erysimum capitatum var. angustatum)	8	1978	1980	F_2	1984	E, CH	6	1	D	D	D/C
Wallflower, Menzies' (Erysimum menziesii)	8	1992	1998	F	1998	E	2c	1	S	S	S/M
Walnut, West Indian or nogal (Juglans jamaicensis)	4	1997	1999	F	1999	E	5	1	U	U	U/U
Warea, wide-leaf (Warea amplexifolia)	4	1987	1993	F	1993	E	2c	1	U	U	U/U
Water-plantain, Kral's (Sagittaria secundifolia)	4	1990	1991	F	1991	T	5	2	S	S	S/C
Water-umbel, Huachuca (Lilaeopsis schaffneriana var. recurva)	2	1997	N/A	none	N/A	E, CH	3c	1	S	I	I/C
Water-willow, Cooley's (Justicia cooleyi)	4	1989	1994	F	1994	E	8	1	U	U	U/U
Watercress, Gambel's (Rorippa gambellii)	8	1993	1998	F	1998	E	2	1	U	U	U/C
Whitlow-wort, papery (Paronychia chartacea)	4	1987	1990	F	1999	T	8	4	I	U	U/U
Wild-buckwheat, clay-loving (Eriogonum pelinophilum)	6	1984	1988	F	1988	E, CH	8c	2	D	S	S/C
Wild-buckwheat, gypsum (Eriogonum gypsophilum)	2	1981	1984	F	1984	T, CH	8	2	S	S	S/C
Wild-buckwheat, southern mountain (Eriogonum kennedyi var. austromontanum)	8	1998	N/A	none	N/A	T	3	1	D	D	D/C

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Wild-rice, Texas (Zizania texana)	2	1978	1985	F_2	1996	E, CH	2c	1	D	S	S/M
Wire-lettuce, Malheur (Stephanomeria malheurensis)	1	1982	1991	F	1991	E, CH	2	2	S	D	D/C
Wireweed (Polygonella basiramia)	4	1987	1990	F	1999	E	2	3	I	U	U/U
Woodland-star, San Clemente Island (Lithophragma maximum)	8	1997	N/A	none	N/A	E	2	1	S	S	S/C
Woolly-star, Santa Ana River (Eriastrum densifolium ssp. sanctorum)	8	1987	N/A	none	N/A	E	6c	1	D	D	D/C
Wooly-threads, San Joaquin (Monolopia (=Lembertia) congdonii)	8	1990	1998	F	1998	E	1	1	S	U	U/U
Xylosma crenatum [NCN]	1	1992	1995	F	1995	E, CH	5	1	U	U	U/C
Yellowhead, desert (Yermo xanthocephalus)	6	2002	N/A	none	N/A	T, CH	7	1	S	S	S/C
Yerba santa, Lompoc (Eriodictyon capitatum)	8	2000	N/A	none	N/A	E, CH	11	1	S	S	S/C
Ziziphus, Florida (Ziziphus celata)	4	1989	1990	F	1999	E	5	2	S	U	U/U
Non-Flowering Plants											
Adiantum vivesii [NCN]	4	1993	1995	F	1995	E	5	1	S	S	S/C
Asplenium fragile var. insulare [NCN]	1	1994	1998	F	1998	E, CH	6	1	U	U	U/C
Cladonia, Florida perforate (Cladonia perforata)	4	1993	1999	F	1999	E	2	1	U	U	U/C
Cypress, Gowen (Cupressus goveniana ssp. goveniana)	8	1998	N/A	D	2002	T	9c	1	S	S	S/C
Cypress, Santa Cruz (Cupressus abramsiana)	8	1987	1998	F	1998	E	14	2	S	S	S/M
Diellia, asplenium-leaved (Diellia erecta)	1	1994	1999	F	1999	E, CH	2	1	U	U	U/C
Diellia falcata [NCN]	1	1991	1995	F	1998	E, CH	8	1	U	U	U/C
Diellia pallida [NCN]	1	1994	1995	F	1995	E, CH	5	1	U	D	D/C
Diellia unisora [NCN]	1	1994	1995	F	1998	E, CH	11	1	U	U	U/C
Diplazium molokaiense [NCN]	1	1994	1998	F	1998	E, CH	5	1	U	U	U/C
Elaphoglossum serpens [NCN]	4	1993	1995	F	1995	E	5	1	U	U	U/U
Fern, Alabama streak-sorus (Thelypteris pilosa var. alabamensis)	4	1992	1996	F	1996	T	9	1	S	S	S/C
Fern, Aleutian shield (Polystichum aleuticum)	7	1988	1992	F	1992	E	8	2	S	S	S/C

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Fern, American hart's-tongue (Asplenium scolopendrium var. americanum)	4	1989	1993	F	1993	T	9	2	S	S	S/I
Fern, Elfin tree (Cyathea dryopteroides)	4	1987	1991	F	1991	E	5	1	U	U	S/C
Fern, pendant kihi (Adenophorus periens)	1	1994	1999	F	1999	E, CH	11	1	U	U	U/C
Ihi`ihi (Marsilea villosa)	1	1992	1996	F	1996	E, CH	8	1	D	D	D/C
Lichen, rock gnome (Gymnoderma lineare)	4	1995	1997	F	1997	E	5	1	U	S	S/C
Oha wai (Clermontia drepanomorpha)	1	1996	1998	F	1998	E, CH	2	1	U	U	U/C
Oha wai (Clermontia lindseyana)	1	1994	1996	F	1996	E, CH	2	1	U	U	U/C
Oha wai (Clermontia oblongifolia ssp. brevipes)	1	1992	1996	F	1996	E, CH	6	1	U	U	U/C
Oha wai (Clermontia oblongifolia ssp. mauiensis)	1	1992	1997	F	1997	E, CH	6	1	U	U	U/C
Oha wai (Clermontia peleana)	1	1994	1996	F	1996	E, CH	5	1	C	C	N/A
Oha wai (Clermontia pyrularia)	1	1994	1996	F	1996	E, CH	2	1	U	U	U/C
Oha wai (Clermontia samuelii)	1	1999	2002	F	2002	E, CH	5	1	D	U	U/C
Pauoa (Ctenitis squamigera)	1	1994	1998	F	1998	E, CH	5	1	U	U	U/C
Polystichum calderonense [NCN]	4	1993	1995	F	1995	E	5	1	U	U	U/U
Pteris lidgatei [NCN]	1	1994	1998	F	1998	E, CH	5	1	U	D	D/C
Quillwort, black spored (Isoetes melanospora)	4	1988	1993	F	1993	E	5	1	S	S	S/C
Quillwort, Louisiana (Isoetes louisianensis)	4	1992	1996	F	1996	E	14	2	I	S	S/C
Quillwort, mat-forming (Isoetes tegetiformans)	4	1988	1993	F	1993	E	8	1	S	S	S/C
Tectaria estremerana [NCN]	4	1993	1995	F	1995	E	8	1	S	U	U/U
Thelypteris inabonensis [NCN]	4	1993	1995	F	1995	E	5	1	U	U	U/U
Thelypteris verecunda [NCN]	4	1993	1995	F	1995	E	5	1	U	U	U/U
Thelypteris yaucoensis [NCN]	4	1993	1995	F	1995	E	5	1	U	U	U/U
Torreya, Florida (Torreya taxifolia)	4	1984	1986	F	1986	E	5	1	D	D	D/C
Wawae`iole (Huperzia mannii)	1	1992	1997	F	1997	E, CH	2	1	U	U	U/C
Wawae`iole (Lycopodium (=Phlegmariurus) nutans)	1	1994	1996	F	1996	E, CH	5	1	U	U	U/C

* Earlier drafts and final plans for some individual species may have become incorporated into later multi-species or ecosystem plans.

Endangered Species Program Contacts

Do you want more information on a particular threatened or endangered species or recovery effort near you? Please contact the Regional Office that covers the State(s) you are interested in. If they cannot help you, they will gladly direct you to the nearest Service office.

Washington D.C. Office
Endangered Species Program
4401 N. Fairfax Drive, Room 420
Arlington, VA 22203
http://www.fws.gov/endangered

Chief, Division of Conservation and Classification:
Christine Nolin; 703/358 2105

Chief, Division of Consultation, HCPs, Recovery, and State Grants:
Rick Sayers; 703/358 2106

Chief, Division of Partnerships and Outreach:
Claire Cassel; 703/358 2390

Region One — Pacific
Eastside Federal Complex
911 N.E. 11th Avenue
Portland, OR 97232-4181
http://www.fws.gov/pacific/ecoservices/

Chief, Division of Endangered Species:
Patrick Sousa; 503/231 6158

Jurisdiction: Hawaii, Idaho, Oregon, Washington, American Samoa, Commonwealth of the Northern Mariana Islands, Guam and the Pacific Trust Territories

Region Two — Southwest
P.O. Box 1306, Rm 4012
Albuquerque, NM 87102
http://ifw2es.fws.gov/EndangeredSpecies

Acting Chief, Division of Endangered Species:
Susan Jacobsen; 505/248 6641

Jurisdiction: Arizona, New Mexico, Oklahoma, and Texas

Region Three —Great Lakes, Big Rivers
Bishop Henry Whipple Federal Building
One Federal Drive
Ft. Snelling, MN 55111-4056
http://www.fws.gov/midwest/endangered/

Chief, Division of Endangered Species:
T.J. Miller; 612/713 5334

Jurisdiction: Illinois, Indiana, Iowa, Ohio, Michigan, Minnesota, Missouri, and Wisconsin

Region Four — Southeast
1875 Century Boulevard, Suite 200
Atlanta, GA 30345
http://www.fws.gov/southeast/es/

Chief, Endangered Species:
Gloria Bell; 404/679 7100

Jurisdiction: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Puerto Rico, and the U.S. Virgin Islands

Region Five — Northeast
300 Westgate Center Drive
Hadley, MA 01035-9589
http://www.fws.gov/northeast/endangered/

Chief, Division of Endangered Species:
Marty Miller; 413/253 8615

Jurisdiction: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, and West Virginia

Region Six — Mountain-Prairie
134 Union Boulevard, Suite 650
Lakewood, CO 80228
http://mountain-prairie.fws.gov/endspp

Chief, Division of Ecological Services:
Julie Lyke; 303/236 4213

Jurisdiction: Colorado, Kansas, Montana, Nebraska, North Dakota, South Dakota, Utah, and Wyoming

Region Seven — Alaska
1011 E. Tudor Road
Anchorage, AK 99503-6199
http://alaska.fws.gov/fisheries/endangered/

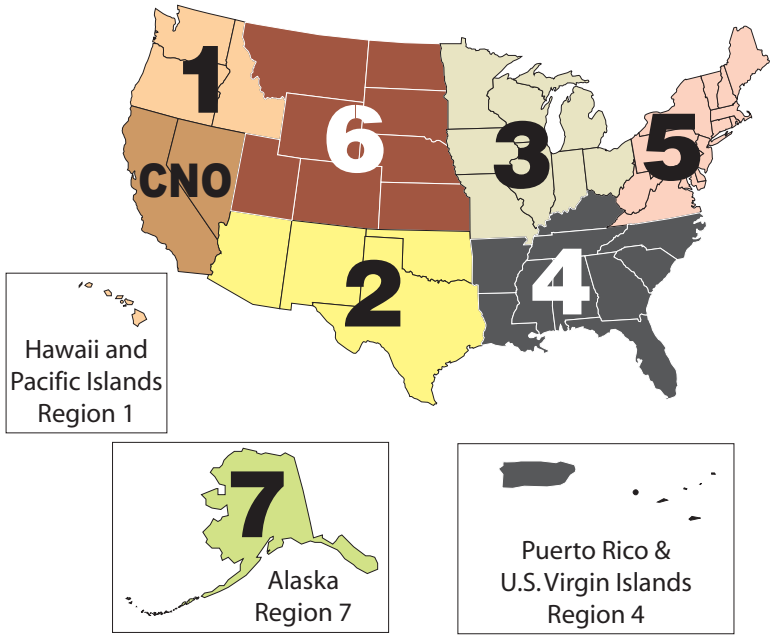
Chief, Division of Endangered Species:
Michael Roy; 907/786 3925

Jurisdiction: Alaska

California/Nevada Operations Office
2800 Cottage Way, Suite W2606
Sacramento, CA 95825
http://www.fws.gov/pacific/cno.htm

Chief, Division of Endangered Species:
Mike Fris; 916/414 6464

Jurisdiction: California and Nevada



U.S. Fish & Wildlife Service
Endangered Species Program
www.fws.gov/endangered
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The U.S. Fish and Wildlife Service is responsible under the Endangered Species Act for conserving and recovering our nation's rarest plant and animal species and their habitats, working in cooperation with other public and private partners.