

Testimony – H.R. 2918  
State of Hawaii  
Department of Land and Natural Resources  
Division of Forestry and Wildlife

Hawaii is often referred to as the “Endangered Species Capital of the World.” While comprising 0.2 percent of the United States land mass, Hawaii contains 45 percent of the nation’s federally listed threatened and endangered (T&E) plant species, more than any other state in the nation. More than 100 plant taxa have already gone extinct, and over 200 plant species have 50 or fewer individuals remaining in the wild. 366 of the Hawaiian plant taxa are listed as threatened and endangered by Federal and State governments, and an additional 48 species are proposed as endangered.

Not a single listed Hawaiian plant species has been taken off the list.

The scope and scale of the challenges to endangered species in Hawaii are enormous, but most plants are threatened mainly by invasive species and habitat loss.

Between 1990 and 2003, an average of one plant species went extinct each year. In 2003, the Plant Extinction Prevention Program (PEPP) began with support from the U.S. Fish and Wildlife Service and the State of Hawaii’s Department of Land and Natural Resources. This program targets plant species on the verge of extinction (less than 50 individual plants), with the goal to assure their continued survival. There have been no plant species extinctions since the inception of the PEPP, but federal funds for the program have dried up, and the state is struggling to keep the program going with continuing support from federal, state, and private donors. Additional funds are badly needed to turn the program from a rearguard action, to one capable of actually recovering listed species.

H.R. 2918, Title II - Pacific Islands Plant Conservation Fund Act of 2019, establishes the Pacific Islands Plant Conservation fund, which would promote conservation projects that are designed to ensure effective, long-term conservation of plants and their ecosystems – this is exactly what we need.

The fund would provide resources needed to recover federally listed threatened and endangered plants in the Pacific Islands through protection, restoration and management of ecosystems.

Specific actions would include:

- Development and implementation of management plans;
- Onsite monitoring of populations, ecosystems, reproduction and species’ level population trends;
- Enforcement of conservation laws; and
- Community outreach and education.

The act would establish a mechanism for competitive financial assistance to agencies, individuals or entities with the expertise required for the conservation of plant species on the Pacific Islands; Federal agencies may be partners in projects, which is good because in Hawaii, state and federal agencies work in close collaboration on species protection and management programs.

The act provides preference to projects for which matching funds are available., and the State of Hawaii has been investing heavily in native ecosystem protection and has ample match available.

Hawaii also has a robust network of partners including the Watershed Partnership Program and the Invasive Species Council, which allows a wide cooperative and voluntary reach across land jurisdictions.

Hawaii also chairs the Pacific Islands Forestry Committee of the Western Forestry Leadership Coalition, which works with our Pacific Island Territories to help build capacity to meet the Pacific Islands' forest management challenges, including endangered species protection and recovery. As such, Hawaii provides a bridge to the Pacific Islands and their conservation efforts.

Hawaii strongly supports the passage of H.R. 2918, and looks forward to working closely with federal government agencies on the recovery of Hawaii and the Pacific's endangered plant species.

---

- Nearly all of Hawaii's native plants are found nowhere else in the world. Over tens of millions of years, new species evolved in new habitats as island after island emerged from the sea through volcanic eruptions, and then and then transformed over time through erosion and subsidence. Isolated far from any other landmass, 89 percent of Hawaii's native flowering plants are unique to Hawaii.
- Due to the Hawaiian archipelago's extreme isolation, the ecosystems of Hawaii have evolved in relative solitude, free from many of the competitive forces which characterize continental ecosystems. Thus, despite tremendous diversity and high rates of endemism, the native biota of Hawaii are very sensitive to changes in their environment, and many species have declined since the arrival of humans, due to clearing of land for agriculture, and the introduction of non-native plants and animals. These threats have escalated dramatically in modern times, leading to the widespread loss of many native organisms and their habitats.
- Hawaii's native plants are the foundation for complex terrestrial ecosystems that support more than 8,000 native species of plants, insects, bats, snails, and birds. Healthy forests absorb the rain that recharges our only source of fresh water, protect reefs from being smothered in silt, and prevent dangerous flooding that can harm our communities. Native plants inform Hawaiian culture, and their traditional use teaches us much about sustaining life on the islands.
- Hawaii's plants evolved without any of the invasive species that dominate 60% of Hawaii's landscape today. As a result, they are vulnerable to the rapid introduction of thousands of new plants and animals over the last century. While much of the land-use changes and development that had caused initial declines has slowed, native plants now face increasing competition from a host of introduced diseases and pests, ongoing invasive plant introductions, wildfire exacerbated by the spread of fire-tolerant non-native grasses, and the consequences of losing the insects and birds that form a complex web of interdependence with our native plant communities.
- Our rainforests play a critical role in the capture and storage of water. Our forests capture moisture from the trade winds and allow it to soak into our streams and aquifers. When the forests are healthy, our water source is sustainable. When damaged by invasive species, fire or disease, the water-capturing capability of our forests is degraded. Our forests are also an important carbon sink.
- Partnerships are the key to success in natural resource management, including protection and restoration of endangered species. Hawaii has a diverse set of expertise assembled in university, federal, state, and private non-profit groups where funds can be leveraged for maximum impact. The Hawaii Department of Land and Natural Resources' Rare Plant Program is the central hub for this partnership with long-standing working relationships with land managers, researchers, and experts in the Hawaiian flora. Specialized nurseries are operating on four of the main Hawaiian

Islands to cultivate rare plants for their eventual return to natural areas. Over 50,000 T&E species have been outplanted into natural areas since 2003. This effort has reduced the extinction risk for hundreds of plant species, but more work is needed. Seed banks and micropropagation at the Lyon Arboretum has saved an additional eight plant species from extinction. Additional funding from this bill will be leveraged with non-Federal support for these partnerships. There is a coordinated effort to restore T&E plants across public and private lands through the Watershed Partnership Program and other cooperative programs.

- The Hawaii Department of Land and Natural Resources is well-positioned to expand these efforts. Additional funding will support additional staff to work at existing facilities, field crews for more surveys and threat management, and investing in operational efficiency by upgrading infrastructure at rare plant nurseries and seed banks. Because the extinction crisis is so extreme in Hawaii, existing funding is quickly absorbed by projects that prevent extinction. With additional funding, we can begin to restore populations and achieve Department of the Interior recovery objectives.
- Over forty million seeds from hundreds of native plant species, most of them T&E, are secured in seed banks across the state.
- This funding will help us innovate and scale restoration solutions.
- A 50 percent increase in staff is needed for both field botanists and nursery/seed banks on each island, and for statewide botanical projects. Facilities and infrastructure are partially in place, and state agencies and partners have the capacity to support increased staff.
- In the past decade, the State of Hawaii has greatly increased funding for native plant and ecosystem protection. \$38 million above the base budgets of the forestry program has been added to watershed protection in that time period. This State funding has been matched by \$25 million in private, local, and federal sources. This has resulted in the protection of over 50,000 acres of native forest from introduced and invasive species, and the planting of hundreds of thousands of trees. Governor Ige has made an ambitious commitment to the global community to protect 30 percent of Hawaii's priority watershed forests by 2030. Currently, 17 percent of these priority watershed forests are protected.
- Federal funding for on-the-ground forest protection by or through the Fish and Wildlife Service, Forest Service, Natural Resources Conservation Service, and the National Park Service, along with research conducted by the United States Geological Service, is absolutely critical to these efforts. We sincerely appreciate the support of the federal agencies that allows us to stay on track to fund and accomplish watershed forest protection.
- We are also grateful to our congressmembers, who have urged the Department of Interior to match the increased funding provided by the State of Hawaii. HR 2918 is another example of the high priority our congressional delegation places on the importance of our forests for the livelihood of our community, and for perpetuating what makes Hawaii unique ecologically.
- Hawaii is a leader in forest protection. Our fresh water supply, coral reefs, visitor industry, and indigenous culture depend closely on the unique plants and animals that make up our forests. There is a native Hawaiian proverb that says "*Hahai nō ka ua, I ka ulu lā'au*" ("the rain follows the forest"), showing how early Hawaiians clearly understood that water – and their survival – depended on the forests. In the late 1800s, this proverb was proven true after widespread clearing and herds of wild cattle, goats, sheep, and pigs destroyed vast tracts of forests. The result: rivers and springs dried up, followed by water shortages, devastating droughts, and fires. In response, King David Kalakaua passed "an act for the preservation of woods and forests" in 1876 to begin a long tradition of public forest protection. Hawaii established one of the first territorial forestry agencies in the nation in 1903. HR 2918 would continue that tradition in a time of increased urgency and need.