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**Hawaii's native species need protection:**  
A case for expanding the State Endangered Species List

**Submission by the Society of Conservation Biology, Hawai'i  
Chapter Policy Subcommittee**

**Executive Summary:**

On behalf of HISCB and the Society of Conservation Biology Oceania section (SCBO), we submit a statement proposing the listing of at-risk Hawaiian terrestrial flora and fauna species under the State Endangered Species Statute, [HRS 195D](#), to prevent further decline or extinction. Although the mechanism to list species as threatened or endangered under [HRS 195D](#) is clear in the statute, only two extant species are currently listed only by the state and these were listed over 30 years ago. All other species currently listed are because HRS 195D specifies that species listed under federal law are automatically listed under state law. Nearly one-third of the federally listed endangered species are from Hawai'i and there are an estimated 600 additional species that are not listed but considered endangered or imperiled by nationally- or internationally-based conservation organizations. Beginning the process to list species at highest risk under the State ESA, [HRS 195D](#), would raise the profile of these overlooked species and promote their protection.

Based on our evaluation of the current state of inadequate statutory designations and recognition of listed species, HISCB is alarmed that protections for native Hawaiian species are not being adequately formed. We put forward three clear priorities that can be viewed as first steps to enhance the protection of Hawai'i's unique biodiversity:

1. Department of Land and Natural Resources (DLNR), the State agency that is charged with overseeing the State Endangered Species List, initiates the State listing process for at-risk Hawaiian flora and fauna species under the State Endangered Species Statute, [HRS 195D](#), to prevent further decline or extinction,
2. DLNR convenes workshops and other collaborative engagement events with relevant biologists to further evaluate the

classifications of NatureServe and IUCN or other relevant analyses of Hawai'i species and consider them for state listing, and

3. Identify and engage interested individuals and organizations to petition the State for listing in lieu of action by DLNR through the described process above.

Adopting these actions that use existing, but underutilized, legal mechanisms for protecting vulnerable species, is an essential step in turning the tide on the decline of Hawaii's biodiversity.

### **Background:**

Today, an estimated one million animal and plant species worldwide are threatened with extinction, a figure unprecedented in human history [6]. Scientists predict that species loss will continue to accelerate over the next century if no immediate action is taken. The loss in global biodiversity is not only directly impacting nature but is also the foundations of human well-being as described by Sir Robert Watson, Chair of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) whose 2019 summary paints an ominous picture for the health of ecosystems worldwide [6].

***"The health of ecosystems on which we and all other species depend is deteriorating more rapidly than ever. We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide."***

***-- Sir Robert Watson***

Island ecosystems are deemed the most vulnerable to species extinction according to data from the International Union for the Conservation of Nature (IUCN). Although islands account for less than 5% of the world's land area almost half of the listed threatened species on the global IUCN Red List are from islands [7]. Habitat destruction and degradation is one factor, but the introduction of invasive species that prey on, out-compete and displace native species is one of the major drivers of population declines and extinctions in Hawai'i and many other island ecosystems [8,10]. In addition, native island species that have persisted in the face of these threats are now faced with the global impacts of climate change that increase both uncertainty and risk.

Hawaii's extreme geographic isolation created a unique array of native flora and fauna that evolved relatively undisturbed. Eventually, many early plant and animal colonizers lost their original defense mechanisms that were no longer needed in ecosystems lacking in any major predators. The exponential increase of invasive species introductions over the last 300 years to Hawai'i has dramatically decreased native species diversity. For example, an estimated 2% of the most diverse and only endemic family of Hawaiian land snails, Amastridae, is thought to still exist and with many other families of land snail [13]. Predation by introduced rats and the rosy wolf snail have decimated populations of Hawaiian land snails with only small pockets remaining in the upper-elevation forests [5].

More than 1,600 species are listed as endangered or threatened under the 1973 U.S. Endangered Species Act (ESA), with over 500 of those species being indigenous or endemic to Hawai'i [11], earning the title of "endangered species capital of the world". This number is shocking considering that Hawai'i comprises less than 0.2% of the U.S. landmass and receives just 8-10% of the funds appropriated for recovery [11].

The Federal ESA is a crucial tool for species protection, dedicating federal funding to implement management or species recovery plans until species are delisted. In addition to the federal ESA, some states have their own Endangered Species List. The Hawai'i Endangered Species Statute, Hawai'i Revised Statute (HRS) 195D, was established in the 1980s and automatically adds any species to the state endangered species list that are added to the federal list. The species listed are identified through Hawaii Administrative Rules in Title 13, Chapters 107 (plants) and 124 (wildlife) and the entire list for both groups is at Title 13, Chapter 124A.

While other states often list many additional species in State endangered species lists, in Hawai'i, only the O'ahu populations of the pueo, or Hawaiian short-eared owl (*Asio flammeus sandwichensis*), and Manu o kū, or white tern (*Gygis alba candida*), are listed under HRS 195D beyond those currently listed under the Federal ESA (based on a comparison of the current federal list (2020) and the state list of threatened and endangered species provided in Title 13, Chapter 124A) [3].



*Manu o kū, or white tern (Gygis alba), and the pueo, or Hawaiian short-eared owl (Asio flammeus), are currently the only two species that are listed only under the Hawai'i ESA. Photo credit: ebird.org and alohapueo.org.*

## Current Situation:

The Endangered Species Act has been the most powerful tool for protecting plant and animal species in the U.S. since its adoption in 1966. In 2019, amendments that weaken the regulations guiding the implementation of the ESA were proposed including, “revisions to the regulations for interagency cooperation, revisions related to listing species and designating critical habitat, and the recession of the 4(d) regulations for threatened wildlife and plants” [2,4]. Under the weakened ESA, for the first time, agencies could include economic costs of protection into the discussions over a species' listing rather than basing protection decisions strictly on scientific data [12]. In 2020, revisions were made once again under Section 4(b)(2) to allow for more flexibility in critical habitat protection [4]. These rollbacks also reduce the ability to establish critical habitat for species at risk from climate change and weaken protections for species recently designated as threatened—a status less dire than endangered, but nonetheless requiring urgent action to stem population loss before it becomes irreversible [1,12]. **With decreased protections for vulnerable species at the Federal level, now is the time for state governments to strengthen their protections.**

There are a considerable number of species in Hawai'i that are experiencing population declines and threatened with extinction but are not protected by law. The IUCN and NatureServe are two non-governmental organizations that work to evaluate the degree to which species are at risk. Data from these organizations in April 2020 show an additional 594 species classified as “imperiled” or “critically imperiled” by NatureServe and 147 species identified by IUCN as “endangered” or “critically endangered” that are not

currently listed as threatened or endangered at the State or Federal levels [7,9]. Sixty eight of the 147 IUCN listed species are not found on the NatureServe list. **This results in over 600 imperiled or endangered species (as defined by IUCN and NatureServe), which have no formal recognition or protection under state or federal law (see graphics 1-3).**

The Hawaiian land snails are some of the most threatened species on Earth. With over 700 species across 10 families, Hawaiian land snails were some of the most prolific creatures in the islands. Invasive species, habitat destruction, and climate change have taken their toll, reducing species per family by 60-90%.

State Biologist David Sischo stated in an interview about the current state of Hawaiian land snails **"They're not going extinct tomorrow — it's happening now."** Currently only the O'ahu genus *Achatinella* is federally, and therefore also concurrently state-listed, as endangered.

Photo credit: David Sischo, DLNR-DOFAW



The lack of recognition and protections have numerous implications. These include a lack of public awareness of the magnitude of the problem, insufficient programs and funding for protection, and no requirement to evaluate human impacts to these unlisted species through Environmental Impact Statements and Environmental Assessments under state or federal law.

### **A way forward:**

The Department of Land and Natural Resources (DLNR) is the state agency responsible for the protection and management of state-listed endangered species. The State mechanism to propose and list species not currently protected under Hawaiian law as threatened or endangered is clearly specified in [HRS 195D-4](#). It is important to inform interested individuals and organizations that a mechanism is available to propose the listing of species. The specific process for listing is as follows:

“The department [DLNR], upon its own recommendation or upon the petition of three interested persons who have presented to the department substantial evidence that warrants review, shall conduct a review of any listed or unlisted indigenous species proposed to be removed from or added to the lists published pursuant to this subsection”.

An additional provision under HRS 195D-4(c) states,

“The department [DLNR] shall make determinations... on the basis of all available scientific, commercial, and other data after consultation, as appropriate, with federal agencies, other interested state and county agencies, and interested persons and organizations”.

Based on our evaluation of the current state of inadequate statutory designations and recognition of listed species, HISCB is alarmed that protections for native Hawaiian species are not being adequately formed. We put forward three clear priorities that can be viewed as first steps to enhance the protection of Hawaii’s unique biodiversity:

1. DLNR initiates the State listing process for at-risk Hawaiian flora and fauna species under the State Endangered Species Statute, HRS 195D, to prevent further decline or extinction,
2. DLNR convenes workshops and other collaborative engagement events with relevant biologists to further evaluate the classifications of NatureServe and IUCN or other relevant analyses of Hawai’i species and consider them for state listing, and
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HISCB welcomes the opportunity to provide further information, address questions, and to discuss the above policy statement in more detail. The chapter may be contacted via email; [hiscb@hawaii.edu](mailto:hiscb@hawaii.edu). Learn more about the chapter at [www.hiscb.org](http://www.hiscb.org).

ESA:

This submission was approved for publication on March 2, 2021 and prepared on behalf of HISCB by the following Policy Committee members:

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[The Society for Conservation Biology Oceania Section \(SCBO\)](#) encompasses Australia, New Zealand and the Pacific Islands (including Hawaii), and to increase the impact and influence of conservation science on management, education, and policy within Oceania. through two programmatic themes: Conservation Science & Education, and Policy.



[The Society for Conservation Biology North America \(SCBNA\)](#) represents the North American continent north of Mexico, including Canada and the United States and strives to serve as a 'boundary organization' for the North American community of conservation practitioners that can assist members in bridging the gap between research and practice, and make their work more effective in facilitating on-the-ground conservation successes.



[The Hawai'i Chapter of the Society of Conservation Biology \(HISCB\)](#) is the statewide chapter of this international organization working to advance the science and practice of conservation by promoting scientific research, dialogue, and policy at a local level.



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