

## 5-YEAR REVIEW

Short Form Summary

**Species Reviewed:** *Hibiscadelphus giffardianus* (hau kuahiwi)

**Current Classification:** Endangered

### **Federal Register Notice announcing initiation of this review:**

[USFWS] U.S. Fish and Wildlife Service. 2023. Endangered and Threatened Wildlife and Plants; Initiation of 5-Year Status reviews for 133 Species in Oregon, Washington, Idaho, Montana, California, Nevada, Hawaii, Guam, and the Commonwealth of the Northern Mariana Islands. Federal Register 88(56):17611–17614, March 23, 2023.

### **Lead Region/Field Office:**

Region 1/Pacific Islands Fish and Wildlife Office (PIFWO), Honolulu, Hawai'i

### **Name of Reviewer:**

Lauren Weisenberger, Plant Recovery Coordinator, PIFWO

Megan Laut, Recovery Program Manager, PIFWO

### **Methodology used to complete this 5-year review:**

This review was conducted by staff of the Pacific Islands Fish and Wildlife Office (PIFWO) of the U.S. Fish and Wildlife Service (Service) beginning in October 2023. The review was based on a review of current, available information since the last 5-year review for *Hibiscadelphus giffardianus* (USFWS 2020). The evaluation by Lauren Weisenberger, Plant Recovery Coordinator was reviewed by Megan Laut, Recovery Program Manager.

### **Background:**

For information regarding the species' listing history and other facts, please refer to the Fish and Wildlife Service's Environmental Conservation On-line System (ECOS) database for threatened and endangered species (<https://ecos.fws.gov/ecp/species/3458>).

### **Review Analysis:**

Please refer to the previous 5-year reviews for *Hibiscadelphus giffardianus* published in the Federal Register on January 18, 2008, August 3, 2015, and September 29, 2020 (available at [https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public\\_docs/species\\_nonpublish/1175.pdf](https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/species_nonpublish/1175.pdf) and [https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public\\_docs/species\\_nonpublish/2274.pdf](https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/species_nonpublish/2274.pdf) and [https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public\\_docs/species\\_nonpublish/3153.pdf](https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/species_nonpublish/3153.pdf)) for a complete review of the species' status, threats, management efforts, and references cited. We are not aware of any significant new information regarding the species' biological status since listing to warrant a change in the Federal listing status of *H. giffardianus*.

This long-lived perennial tree in the Malvaceae (mallow) family is endangered and known from the island of Hawai‘i. The status and trends for *Hibiscadelphus giffardianus* are provided in the tables below.

New Status Information:

- There are no wild individuals of *Hibiscadelphus giffardianus* known on the island of Hawai‘i.
- There was a single known individual and it is represented in *ex situ* storage.

New Threats:

- None reported.

New Management Actions:

- Monitoring and surveys—The Hawai‘i Volcanoes National Park (HVNP) monitors reintroduced populations of *Hibiscadelphus giffardianus* (Hawai‘i Volcanoes National Park [HVNP] 2025).
- Ungulate monitoring and management—
  - HVNP monitors and maintains fenced exclosures for the reintroductions of *H. giffardianus* at Kapapala Lower and Bird Park–Kīlauea Golf Course (HVNP 2024).
- Captive propagation for genetic storage and reintroduction—
  - Between 2020 and 2024, HVNP collected 1,595 seeds from reintroduced plants at Kīpuka Kī and Kīpuka Puauolu (HVNP 2021, 2022, 2023, 2024a, 2025).
  - There are currently 1,989 seeds in storage at HVNP (HVNP 2024b). The HVNP is planning to create a backup repository of seeds of *H. giffardianus* at the Lyon Arboretum Seed Conservation Laboratory (HVNP 2025).
- Reintroduction and translocation—Between 2020 and 2023, 37 individuals were reintroduced into Kīpuka Kī and Maunaloa Strip Road (HVNP 2012, 2022, 2023, 2024). In 2024, the HVNP reported a total of 8 individuals of *Hibiscadelphus giffardianus* were translocated to Kapapala Lower (Kīpuka Kī) (HVNP 2025).

**Table 1. Status and trends of *Hibiscadelphus giffardianus* from listing through current 5-year review. Table 1a shows progress according to Interim Stabilization Goals; Table 1b show progress according to Preventing Extinction Goals.**

**Table 1a.**

<b>Date</b>	<b>No. Wild Individuals</b>	<b>No. Outplanted</b>	<b>Stabilization Criteria Identified in Recovery Plan</b>	<b>Stabilization Criteria Completed?</b>
<b>1994 (listing)</b>	0	9	All threats managed in all 3 populations	No
			Complete genetic storage	<b>Yes</b>
			3 populations with 25 mature individuals each	No
<b>2008 (5-year review)</b>	0	440	All threats managed in all 3 populations	Partial, all reintroductions fenced
			Complete genetic storage	Yes
			3 populations with 25 mature individuals each	Partial, 2 populations with >25 individuals
<b>2015 (5-year review)</b>	0	443	All threats managed in all 3 populations	Partial, all reintroductions fenced
			Complete genetic storage	Yes
			3 populations with 25 mature individuals each	Partial, 2 populations with >25 individuals

**Table 1b.**

<b>Date</b>	<b>No. wild individuals</b>	<b>No. Outplanted</b>	<b>Preventing Extinction Criteria Identified by HPPRCC*</b>	<b>Preventing Extinction Criteria* Completed?</b>
<b>2020 (5-year review)</b>	0	~181 in 2017 (67 planted since 2012)	All threats managed in all 3 populations	Partial, reintroduced populations fenced
			Complete genetic storage	Yes
			Reproduction (i.e., viable seeds, seedlings) at all 3 populations	Partial, 2 naturally recruiting seedlings observed
			3 populations with 25 mature individuals each	Partial, 2 populations >25 individuals
<b>2025 (5-year review)</b>	0	45 planted	All threats managed in all 3 populations	Partially, reintroduced populations fenced
			Complete genetic storage	Yes
			Natural reproduction at all 3 populations	Partial, observed once in 2015
			3 populations with 25 mature individuals each	Partial

\*The Preventing Extinction Stage was established in 2011. Prior to 2011, the Interim Stabilization Stage was the first stage towards recovery (now it is the second stage after Preventing Extinction).

**Table 2. Threats to *Hibiscadelphus giffardianus* and ongoing conservation efforts.**

Threat	Listing factor	Current Status	Conservation/ Management Efforts
Degradation and destruction of habitat by fire	A	Ongoing	HVNP fire management plan
Climate change degradation or loss of habitat	A	Ongoing	None
Predation and herbivory by rodents	C	Ongoing	Partial, some attempts made for rat control
Predation by nonnative birds	C	Ongoing	None
Reduced viability due to low numbers	E	Ongoing	Partial, collection, propagation, and reintroduction

**Synthesis:**

Currently, there are no wild individuals of *Hibiscadelphus giffardianus*. There are at least two reintroduced populations, but little to no recruitment. There are seeds in storage that represent the last known wild plants, and propagation and reintroduction are ongoing.

Interim Stabilization targets, and Downlisting and Delisting objectives are provided in the Big Island II: Addendum to the Recovery Plan for the Big Island Plant Cluster, and have been updated according to the draft revised recovery objective guidelines developed by the Hawai‘i and Pacific Plants Recovery Coordinating Committee (HPPRCC 2011, USFWS 1998). The HPPRCC identifies an additional initial objective, the Preventing Extinction Stage, in addition to the Interim Stabilization, Downlisting, and Delisting objectives. Furthermore, life history traits such as breeding system, population size fluctuation or decline, and reproduction type (sexual or vegetative), have been included in the calculation of goals for the number of populations and reproducing individuals for each stage. The goals for each stage remain grouped by life span defined as annual, short-lived perennial (fewer than 10 years), or long-lived perennial.

*Hibiscadelphus giffardianus* is a long-lived perennial tree. To prevent extinction, which is the first milestone in recovering the species, the taxon must be managed to control threats (e.g., fenced) and have 50 individuals (or the total number of individuals if fewer than 50 exist) from each of three populations represented in *ex situ* (secured off-site, such as a nursery or seed bank) collections that are well managed. In addition, a minimum of a total of three populations should be documented on the island of Hawai‘i where the species occurred historically and each of these populations must be naturally reproducing (i.e., viable seeds, seedlings) with a minimum of 25 mature, reproducing individuals per population.

The preventing extinction goals for this species have not been met. There are not three populations of 25 reproducing individuals with recruitment. Genetic storage is complete, but not all threats are being controlled, including loss of habitat from climate change and predation by nonnative birds (Tables 1a, 1b, Table 2). Therefore, *H. giffardianus* meets the definition of Endangered as it remains in danger of extinction throughout its range.

**Recommendations for Future Actions:**

No significant new information regarding the species' biological status has been reported since the last 5-year review in 2020. Thus, the following recommendations for future actions are updated or reiterated for the 5-year review for 2025.

- Surveys and monitoring—
  - Continue to monitor reintroductions of *Hibiscadelphus giffardianus*, especially for population structure, reproduction, and health.
  - Determine sites that have the highest likelihood of successful reintroductions.
- Ungulate monitoring and control—Construct and maintain exclosures and strategic fencing to protect individuals from the negative impacts of feral ungulates.
- Invasive nonnative plant monitoring and control—Control established ecosystem-altering nonnative invasive plants and those that compete with *Hibiscadelphus giffardianus* at all populations.
- Climate change adaptation strategy—Assess the modeled effects of climate change on this species and use to determine future landscape needed for its recovery.
- Predator and herbivore monitoring and control—Implement effective controls against predation and herbivory by rodents and nonnative birds.
- Captive propagation for genetic storage and reintroduction—
  - Continue collection and propagation efforts
  - Secure collections at another facility to provide redundancy in *ex situ* collections.
- Reintroduction and translocation—
  - Continue to reintroduce individuals into suitable habitat within historic range that is being managed for known threats.
- Build resiliency, redundancy, and representation—Increase species' viability through habitat restoration, threat control, and translocations into suitable habitat that is being managed for known threats.
- Alliance and partnership development—Continue to work with partners in planning and implementation of ecosystem-level restoration and management to benefit this species.

## References:

- [HVNP] Hawai‘i Volcanoes National Park. 2021. Annual report to the U.S. Fish and Wildlife Service threatened and endangered plants Hawai‘i Volcanoes National Park ES019078 2020. 31 pp.
- [HVNP] Hawai‘i Volcanoes National Park. 2022. Annual report to the U.S. Fish and Wildlife Service threatened and endangered plants Hawai‘i Volcanoes National Park ES019078 2021. 36 pp.
- [HVNP] Hawai‘i Volcanoes National Park. 2023. Annual report to the U.S. Fish and Wildlife Service threatened and endangered plants Hawai‘i Volcanoes National Park ES019078 2022. 38 pp.
- [HVNP] Hawai‘i Volcanoes National Park. 2024a. Annual report to the U.S. Fish and Wildlife Service threatened and endangered plants Hawai‘i Volcanoes National Park ES019078 2023. 36 pp.
- [HVNP] 2024b. Report on controlled propagation of listed species, as designated under the U.S. Endangered Species Act. Unpublished report submitted to the U.S. Fish and Wildlife Service, Pacific Islands Fish and Wildlife Office, Honolulu, Hawai‘i.
- [HVNP] Hawai‘i Volcanoes National Park. 2025. Annual report to the U.S. Fish and Wildlife Service threatened and endangered plants Hawai‘i Volcanoes National Park ES019078 2024. 39 pp.
- [HPPRCC] Hawai‘i and Pacific Plants Recovery Coordinating Committee. 2011. Revised recovery objective guidelines. 8 pp.
- [USFWS] U.S. Fish and Wildlife Service. 1998. Big Island II: Addendum to the recovery plan for the Big Island plant cluster. Portland, OR. 69 pp. + appendices.
- [USFWS] 2008. *Hibiscadelphus giffardianus* (hau kuahiwi) 5-year review summary and evaluation. Pacific Islands Fish and Wildlife Office, Honolulu. 7 pp.  
[https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public\\_docs/species\\_nonpublish/1175.pdf](https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/species_nonpublish/1175.pdf)
- [USFWS] 2015. *Hibiscadelphus giffardianus* (hau kuahiwi) 5-year review summary and evaluation. USFWS Pacific Islands Fish and Wildlife Office, Honolulu, HI. 7 pp.  
[https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public\\_docs/species\\_nonpublish/2274.pdf](https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/species_nonpublish/2274.pdf)

[USFWS] 2020. *Hibiscadelphus giffardianus* (hau kuahiwi) 5-year review summary and evaluation. USFWS Pacific Islands Fish and Wildlife Office, Honolulu, HI. 8 pp.  
[https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public\\_docs/species\\_nonpublish/3153.pdf](https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/species_nonpublish/3153.pdf)

[USFWS] 2023. Endangered and Threatened Wildlife and Plants; Initiation of 5-Year Status reviews for 133 Species in Oregon, Washington, Idaho, Montana, California, Nevada, Hawaii, Guam, and the Commonwealth of the Northern Mariana Islands. Federal Register 88(56):17611–17614, March 23, 2023.

**U.S. FISH AND WILDLIFE SERVICE**  
SIGNATURE PAGE for 5-YEAR REVIEW of *Hibiscadelphus giffardianus* (hau  
kuahiwi)

**Pre-1996 DPS listing still considered a listable entity?**   N/A  

**Recommendation resulting from the 5-year review:**

- Delisting
- Reclassify from Endangered to Threatened status
- Reclassify from Threatened to Endangered status
- No Change in listing status

**For Field Supervisor, Pacific Islands Fish and Wildlife Office**

\_\_\_\_\_

Date \_\_\_\_\_