



## 2017 Report to the Hawai'i Invasive Species Council

### Detection and control of Cane ti (*Tibouchina herbacea*) at Poamoho, O'ahu



*Surveying for Cane ti on the windward side of Poamoho*



**Summary:**

In 2017, HISC awarded the O‘ahu Invasive Species Committee (OISC), the Ko‘olau Mountain Watershed Partnership (KMWP) and DOFAW’s Native Ecosystems Protection Program (NEPM) \$15,000 for surveys and control of cane ti (*Tibouchina herbacea*) at the summit of the Poamoho trail. Cane ti is not known to be anywhere else on the island. Eradicating it at Poamoho would protect the entire Ko‘olau and Wai‘anae Ranges from this invasive, ecosystem altering weed.

OISC, KMWP and NEPM leveraged additional funds from the US Forest Service, the Watershed Partnerships Program, Kamehameha Schools and the Honolulu Board of Water Supply for this project. All HISC deliverables were met. In 2017, aerial and ground helped confirm the limits of the population. We are therefore confident that the population is restricted to the summit area of Poamoho. The deliverables and accomplishments described below include HISC funded activities and reflect the work of OISC, KMWP and NEPM.

**Deliverables and accomplishments**

**January 1 – December 31, 2017**

Cane ti threatens priority watershed habitat in Poamoho, an area in the northern Ko‘olau Range that hosts 11 animals and 18 plants with federal status, meaning these species are vulnerable to or have a high risk of extinction. The O‘ahu Army Natural Resources Program (OANRP) discovered the highly invasive cane ti (*Tibouchina herbacea*) in the Poamoho region in 2008. This aggressive weed was not known to be naturalized on O‘ahu, but it is widespread on both



*Above: Surveying through dense ground cover. Crews wear Tyvek in order to make sure seeds do not get spread from dirty gear or clothing.*

*Below: The new boardwalk at the summit of Poamoho trail.*



Hawai'i island and Maui where it is beyond the scope of eradication. On these islands, cane ti forms dense thickets that crowd out native plant growth and suppress regeneration of 'ōhi'a.

Cane ti poses a major threat to Ko'olau forests, especially the near-pristine summit regions, as it thrives in wet forest conditions, produces hundreds of tiny seeds and is spread by broken stems or via wind, birds, and pigs. We suspect that the population in Poamoho was accidentally introduced by hikers that had recently been hiking on Maui or Hawai'i Island. Plant material capable of reproducing can be carried on shoes, clothes, and backpacks. At Poamoho, the plant was believed to be confined to a small area near the summit that has been continuously monitored since 2008. However, it was discovered in fall of 2013 that plants had spread downstream, and had been present long enough to mature and set seed. OISC, KMWP and NARS began control efforts in 2014. Funds from the Hawai'i Invasive Species Council have sustained the eradication effort.

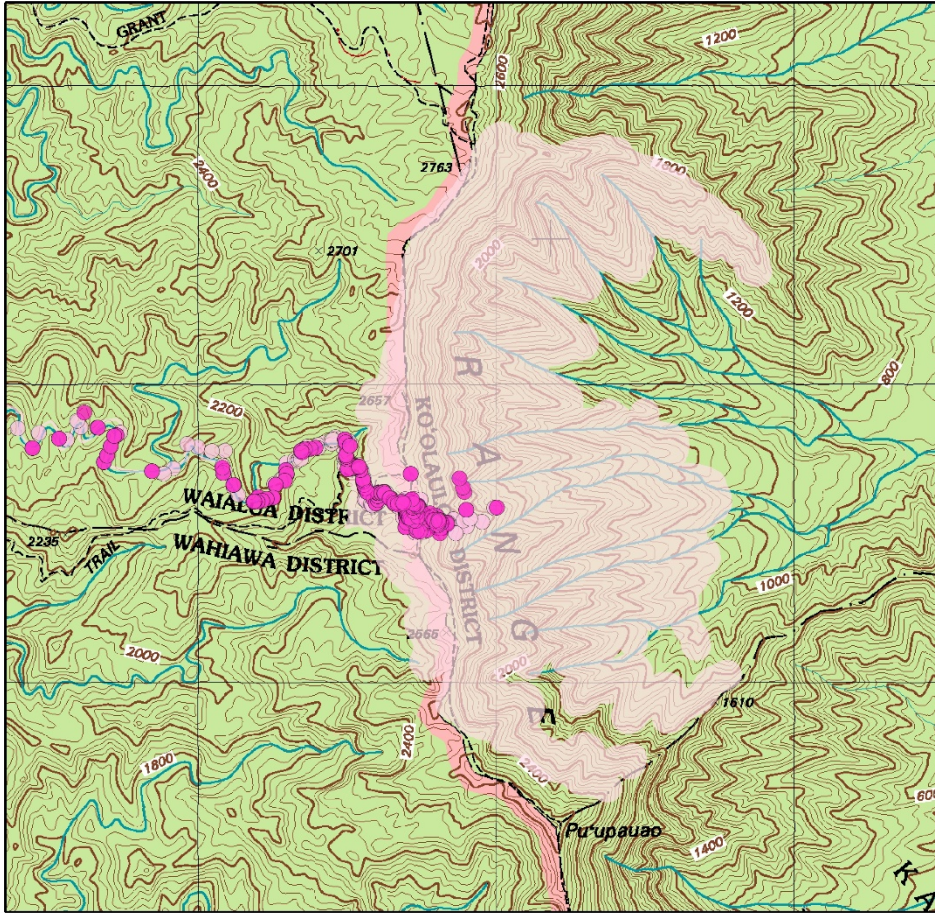
In 2017, OISC, KMWP and NEPM together surveyed 139 acres by ground and 920 acres by air. Crews removed or treated 1,607 immature and 96 mature plants. This is a rise in plants found from last year (40 mature and 1,420 immature in 2016), but to be expected since crews have been able to survey more acres by air. Using a camera with a long telephoto range during helicopter surveys proved useful in distinguishing cane ti from another common weed with bright pink flowers, *Arthrostemma ciliatum*. Forty-seven of the mature plants were found with binoculars or helicopter. A helicopter was required to treat the plants because the terrain was too steep for crews to safely reach them by ground. Follow-up surveys along the 'Aiea Ridge Trail in response to two immature plants found there did not find any plants.

The first step to a plant eradication program is to determine the extent of the species being controlled. The extensive aerial surveys that OISC conducted were very useful in confirming that cane ti is not widespread at Poamoho and we have mapped the entire population. In addition, KMWP & NEPM has been doing surveys for other species to the south of the main control area and has not found any large patches. This has helped us feel confident that we know where the cane ti is. However, a very popular trail runs through the area infested with cane ti and so there is still a chance this species could spread farther if seeds hitchhike on boots or gear. In order to minimize the amount of dirt, and therefore seeds, that comes into contact with hiking boots, KMWP used leveraged funds to install a boardwalk through the cane ti area.

OISC, KMWP and NARS crews decontaminate their gear to prevent spreading plants to areas not currently infested. Inside the core infestation, crews wear Tyvek suits that can be bagged and later incinerated to ensure seeds and vegetative material are not spread. Plants are either treated on site with herbicide or hand-pulled, bagged and then later incinerated.

<b>Deliverables/Expected Outcome</b>	<b>Deliverable met?</b>
2.6 acres of surveys and 2,000 meters of stream surveyed.	Yes: OISC and partners surveyed 139 acres by ground and 920 acres by air in Poamoho and Punalu'u watersheds.



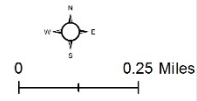


OAHU INVASIVE SPECIES COMMITTEE

*Tibouchina herbacea*  
survey and control  
in Poamoho and  
Punalu'u watersheds

Jan. 1, 2017 - Dec. 31, 2017

- Tibouchina controlled
- Historic tibouchina location
- Tibouchina area surveyed



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