



O'AHU INVASIVE SPECIES COMMITTEE

MICONIA

Crewmembers conducted 2,726 acres of aerial and 2,657 acres of ground surveys for miconia for a total of 5,383 acres surveyed in 17 watersheds.

Watershed	Aerial Acres Surveyed	Ground Acres Surveyed	Mature Controlled	Immature Controlled	Work Hours
Ahuimanu	32.47	151.85	0	4	123.08
Halawa	139.30	0.00	0	0	25.00
Heeia	181.52	165.59	0	0	168.00
Kaalaea	258.57	46.60	4	65	127.50
Kahaluu	358.83	22.89	0	22	140.60
Kalihi	0.00	380.23	1	43	734.32
Kaneohe	0.00	21.35	0	0	2.00
Kaukonahua	0.00	70.47	0	1	24.00
Kawainui	298.96	75.99	0	0	99.00
Keaahala	0.00	31.24	0	0	2.00
Makiki	0.00	76.46	0	1	253.50
Manoa	558.96	649.99	0	137	1243.50
Nuuanu	0.00	612.34	0	101	966.00
Waiahole	54.45	0.00	0	0	10.00
Waihee	0.00	81.73	0	0	102.00
Waimanalo	435.82	238.08	0	18	316.50
Waimea	407.79	32.63	0	0	36.00
Total	2726.68	2657.44	5	392	4373.00

BAY CEDAR

OISC conducted surveys for *Suriana maritima* in Kailua to confirm plant location. Three plants were found but not controlled. OISC has suspended management on this species for the time being.

Watershed	Acres Surveyed	Mature	Immature	Total Plants	Work Hours
Kawainui	4	0	0	0	3

CANE TI

OISC conducted surveys and treatments for *Tibouchina herbecea* in Poamoho in partnership with the Koolau Mountains Watershed Partnership and the DLNR DOFAW Natural Areas Reserves field staff.

Watershed	Acres Surveyed	Mature	Immature	Total Plants	Work Hours
Poamoho	15.69	11	104	115	108

CAPE IVY

Surveys and treatment of *Delairea odorata* were conducted over 57 acres in Kaloi watershed and a new population was detected and treated in Manoa. Surveys to delimit this population will begin in 2015.

Watershed	Acres Treated	Mature	Work Hours
Kaloi	57.58	Yes	644.00
Makiki	0.89	No	5.00
Total	58.46		649.00



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CISSUS

The OISC field crew conducted surveys for and treatment of *Cissus repens* in Makaha.

Watershed	Acres Surveyed	Mature	Immature	Total Plants	Work Hours
Makaha	8.06	0	5	5	12

DEVIL WEED

OISC staff continued management of *Chromoleana odorata* the Kahuku region of Oahu. A new population was detected in Kahana Valley last year and crews are conducting delimiting surveys.

Watershed	Acres Surveyed	Mature	Immature	Total Plants	Work Hours
Kahana	42.14	46	1930	1976	329.00
Paumalu	1430.80	426	2850	3267	2109.25
Total	1472.95	472	4780	5243	2438.25

FEATHERTOP FOUNTAIN GRASS

Survey and treatment for *Pennisetum villosum* was conducted in three (3) watershed.

Watershed	Acres Surveyed	Mature	Immature	Total Plants	Work Hours
Aiea	18.36	1	1	2	14.00
Ala Wai	14.56	0	0	0	6.00
Wailupe	0.02	0	0	0	0.50
Total	32.94	1	1	2	20.50

FEATHERY SENNA

OISC conducted surveys for *Senna artemisioides subsp. filifolia* in Kailua to confirm plant location. No plants were found.

Watershed	Acres Surveyed	Mature	Immature	Total Plants	Work Hours
Kawainui	0.22	0	0	0	3

FIREWEED

Survey and treatment for *Senecio madascariensis* was conducted in the Keamanea watershed.

Watershed	Acres Surveyed	Mature	Immature	Total Plants	Work Hours
Keamanea	168.97	27	250	277	260

FOUNTAIN GRASS

Survey for and treatment of *Pennisetum setaceum* were conducted over 464 acres.

Watershed	Acres Surveyed	Mature	Immature	Total Plants	Work Hours
Kaneohe	13.19	2	6	8	13.00
Kaupuni	129.26	1	15	16	67.00
Kawainui	0.00	0	0	0	0.00
Keaau	40.17	16	350	366	207.00
Mailili	107.17	0	0	0	16.00
Makaha	59.68	0	0	0	28.00
Makaiwa	44.05	0	0	0	9.00



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Nuuanu	6.65	1	5	6	36.00
Waimalu	64.53	0	1	1	20.00
Total	464.70	20	377	397	396.00

GLORY BUSH

Survey and treatment for *Tibouchina urvilleana* was conducted on close to eight (8) acres.

Watershed	Acres Surveyed	Mature	Immature	Total Plants	Work Hours
Manoa	7.91	1	0	1	18

HIMALAYAN BLACKBERRY

Survey and treatment for *Rubis discolor* was conducted in Palolo over 63 acres.

Watershed	Acres Surveyed	Mature	Immature	Total Plants	Work Hours
Palolo	63.01	1	495	496	550.50

JERUSALEM THORN

OISC conducted surveys and treatments for *Parkinsonia aculeata* in Waimea Valley.

Watershed	Acres Surveyed	Mature	Immature	Total Plants	Work Hours
Waimea	0.02	0	0	0	1.25

MELOCHIA

OISC conducted surveys and treatments for *Melochia umbellata* in Kahuku for the Oahu Army Natural Resource Program.

Watershed	Acres Surveyed	Mature	Immature	Total Plants	Work Hours
Paumalu	335	54	126	180	238

MEXICAN FEATHER GRASS

Survey and treatment for *Nassella tenuissima* was conducted in the Wailupe watershed.

Watershed	Acres Surveyed	Mature	Immature	Total Plants	Work Hours
Wailupe	38	0	0	0	12.5

PAMPAS GRASS

Survey and treatment for *Cortaderia selloana* was conducted in four (4) watersheds.

Watershed	Aerial Acres Surveyed	Ground Acres Surveyed	Mature Plants	Immature Plants	Total Plants	Work Hours
Halawa	108.19	0.00	0	0	0	17.50
Heeia	181.52	0.00	0	0	0	20.00
Kahaluu	100.07	0.00	0	0	0	15.00
Waikele	0.00	288.13	0	0	0	24.00
Total	389.78	288.13	0	0	0	76.50



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RUBY GRASS

Survey and treatment for *Melinus nerviglumis* was conducted in the Wailupe watershed.

Watershed	Acres Surveyed	Mature	Immature	Total Plants	Work Hours
Wailupe	27.4	0	0	0	12.50

SMOKE BUSH

OISC staff responded to a report of *Buddleja madagascariensis* in Waimanalo. The plant turned out to be another melastome commonly found throughout Oahu.

Watershed	Acres Surveyed	Mature	Immature	Total Plants	Work Hours
Waimanalo	0.001	0	0	0	1

SPIKED PEPPER

Surveys and treatments for *Piper aduncum* were conducted in two (2) watersheds.

Watershed	Acres Surveyed	Mature	Immature	Total Plants	Work Hours
Manoa	37.24	0	2	2	52.00
Waimea	57.87	0	0	0	56.00
	95.11	0	2	2	108.00

PEST RESPONSE

COCONUT RHINOCEROS BEETLE (*ORYCTES RHINOCEROS*)

OISC is working in partnership with the U.S. and Hawaii Department of Agriculture to survey for a new pest species on Oahu, the coconut rhinoceros beetle. This pest beetle is only known to occur on Oahu in the State of Hawaii. It is a pest of a variety of palm and pandanus tree species. OISC conducted 177 surveys for coconut rhinoceros beetle (CRB) across thirty-one (31) watersheds across the island. OISC staff detected an adult CRB in Kalihi within the original two (2) mile buffer area.

	Watersheds	Acres Surveyed	# of surveys	# of CRB detected	Work Hours
1	Ala Wai	15.042	1	0	16
2	Haiamoa	449.761	1	0	15
3	Halawa	6.008	2	0	5
4	Halehaa	62.032	1	0	1.16
5	Heeia	1706.199	21	0	58.5
6	Honouliuli	3.167	1	0	4
7	Kaaawa	112.421	1	0	1.44
8	Kaelepulu	2732.939	19	0	104
9	Kahana	222.876	2	0	7
10	Kahawai	70.917	15	0	47
11	Kalihi	515.572	3	1	35.5
12	Kaloi	775.625	2	0	20
13	Kaneohe	171.881	18	0	38



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14	Kapalama	961	3	0	29
15	Kawa	790.807	7	0	37
16	Kawainui	3719.964	27	0	138.5
17	Keaahala	1037.622	14	0	34.5
18	Keehi	7	1	0	5
19	Koko Crater	982.843	2	0	14
20	Kualoa	77.948	1	0	2.08
21	Makaha	0	1	0	0
22	Makaua	139.962	1	0	2.6
23	Manoa	592.972	1	0	16
24	Manuwai	40	1	0	17
25	Moanalua	653	3	0	29
26	Nuuanu	0	1	0	16
27	Papaakoko	42.232	1	0	0.78
28	Punaluu	206.468	1	0	3.84
29	Puu Hawaiiiloa	531.784	6	0	25
30	Salt Lake	16	1	0	8
31	Waimanalo	20011.428	195	0	861
CRB Total		18327.735	177	1	796.5

Coqui Frog (*Eleutherodactylus coqui*) Early Detection Surveys

In coordination and collaboration with the Hawaii Department of Agriculture, OISC conducted twenty-four (24) surveys for coqui frog in five (5) watersheds across the island. Fourteen coqui frogs were captured across the island.

Watersheds	Acres Surveyed	# of surveys	# of frogs detected	# of frogs captured	Work Hours
Kahawai	4.235	4	0	0	2.8
Kaloi	.143	1	1	1	3.5
Kamilonui	5.203	5	2	2	13.5
Manoa	1.89	1	0	0	16
Waimanalo	24.284	13	12	11	35.2
Total	35.755	24	15	14	71

Little Fire Ant (*Wasmannia auropunctata*) Surveys

In coordination and collaboration with the Hawaii Department of Agriculture and the Hawaii Ant Lab, OISC conducted seventy-eight (78) surveys for little fire ant in twenty-three (23) watersheds across the island. Little fire ant were detected in Kahawai, Waialeale and Waimanalo watersheds.

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LFA	Watersheds	Acres Surveyed	# of surveys	LFA detected (y/n)	Work Hours
1	Ahuimanu	2.472	1	N	16
2	Ala Wai	1.245	3	N	16
3	Halawa	1.695	1	N	10
4	Heeia	2.147	1	N	16
5	Honouliuli	6.617	3	N	24
6	Kahawai	15.604	7	Y	106
7	Kaloi	15.958	13	N	70
8	Kamiloiki	.455	2	N	8
9	Kamilonui	4.791	2	N	16
10	Kaneohe	0.356	1	N	8
11	Kapakahi	0.12	1	N	3
12	Kapalama	0.33	1	N	6
13	Kawainui	0.132	2	N	18
14	Koko Crater	3.048	1	N	7
15	Makapuu	2.606	1	N	8
16	Makaua	0.876	1	N	4
17	Manuwai	0.012	2	N	5
18	Palolo	1.511	1	N	12
19	Waianu	1.065	1	N	4
20	Waiawa	23.674	6	N	54
21	Waikele	5.753	3	Y	23
22	Waimalu	4.676	2	N	8
23	Waimanalo	33.548	22	Y	283
	Total	128.691	78		725

Naio Thrips (*Klambothrips myopori*) Early Detection Surveys

In coordination and collaboration with the Hawaii Department of Land and Natural Resources Division of Forestry and Wildlife, OISC monitors naio (*Myoporum sandwicense*) plants for signs of naio thrips, which are not known to be present on Oahu. Sixteen (16) early detection surveys were conducted in eight (8) watersheds across the island. No thrips were detected.

Watersheds	Acres Surveyed	# of surveys	Thrips detected (y/n)	Work Hours
Ala Wai	1.14	6	N	8.4
Kaloi	12.457	3	N	14
Koko Crater	11.631	1	N	4
Manoa	0.19	1	N	1.4
Nuuanu	0.359	1	N	1.4
Palolo	0.19	1	N	1.4
Waialaenui	0.549	2	N	3.4
Waimalu	.179	1	N	.5
Total	26.695	16		34.5



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OUTREACH

MONTHLY VOLUNTEER TRIP

The volunteer trip to Lyon Arboretum surveyed and controlled 2,273 *Ardisia virens* and 2,713 *Stromanthe tonckat* over 83 acres.

OISC Volunteer Trip Control Results

Plant Species	Acres Surveyed	Mature Plants	Immature Plants	Total Plants	Volunteer Hours	OISC Hours
<i>Ardisia virens</i>	83.12	12	2261	2273	416	147
<i>Stromanthe tonckat</i>		154	2559	2713		

2014 FUNDING

BOARD OF WATER SUPPLY	\$20,000
DOFAW GENERAL FUND	\$114,430
HAWAII COMMUNITY FOUNDATION	\$8,000
HAWAII TOURISM AUTHORITY	\$40,000
HISC - CONTROL	\$300,000
HISC - OUTREACH	\$38,000
HONOLULU BOTANICAL GARDENS	\$2,400
NAVFAC (OISC PORTION)	\$18,128
OANRP	\$118,251
USFS	\$75,000
USFWS	\$30,000
WPPG	\$100,000
TOTAL	\$1,075,518

2015 FUNDING

BOARD OF WATER SUPPLY	\$20,000
HAWAII TOURISM AUTHORITY	\$40,000
HISC - CONTROL	\$700,000
HISC - CRB	\$33,746
HISC - OUTREACH	\$100,000
HISC - TIBHER (OISC PORTION)	\$24,319
NAVFAC (OISC PORTION)	\$18,128
NFWF (OISC PORTION)	\$29,818
OANRP	\$228,976
USFS	\$75,000
USFWS	\$10,000
TOTAL	\$1,279,987