

San Francisco Bay Area Network Early Detection Program

Early Detection News June 2017

National Park Service
U.S. Department of the Interior
S.F. Bay Area Network
Inventory and Monitoring Program



Contents

[Noteworthy Early
Detections](#)

[Survey Results](#)

[What We Do](#)

Links

[Weed Watchers](#)

[Bay Area Early Detection
Network](#)

[California Invasive Plant
Council](#)

[SFNPS Invasive Plant
Page](#)

[Weed Manager](#)

Volunteer Opportunities

[Weed Watchers](#)

[Invasive Plant Patrol](#)

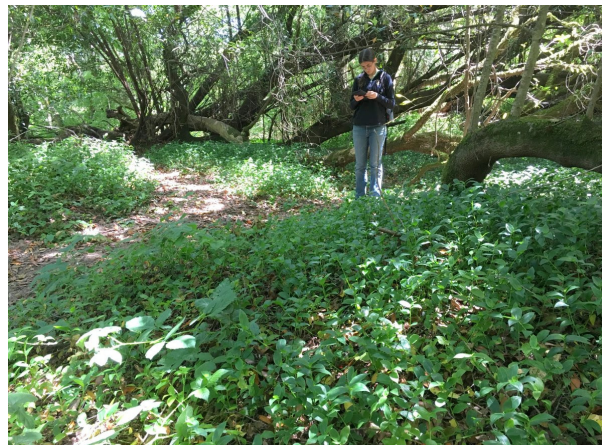
[Habitat Restoration Team](#)

The Invasive Species Early Detection Program (ISED) surveys roads and trails in the San Francisco Bay Area Network of National Parks. We detect, map, and remove new populations of invasive plants before they can spread.

Do you have early detections to report, or need more information? Contact the Early Detection Coordinator, Eric Wrubel, Eric_Wrubel@nps.gov (415) 289-1849.

To see the newsletter archives, visit www.sfnps.org/weed_watchers/newsletters

Noteworthy Early Detections



Amber Antonison maps small-leaf spiderwort.
Photo by Eric Wrubel, NPS.

Small-leaf Spiderwort (*Tradescantia fluminensis*)

On June 5, ISED mapped a dense population of small-leaf spiderwort spanning both shores of Pine Gulch Creek at the Olema Valley Trail. This is the first report we know of in Point Reyes National Seashore, although there are known populations in Bolinas County Park and in Stinson Beach.

Small-leaf spiderwort is native to South America and is considered invasive in Florida, South Africa, Australia and New Zealand. It is a rhizomatous perennial that can form carpet-like monocultures up to 90cm

deep in moist and shady habitats. Small-leaf spiderwort is dispersed by vegetative fragments along streams or in yard waste and rubbish.

In New Zealand, small leaf spiderwort has significantly degraded native forest remnants, preventing establishment of native plants, decreasing species richness and abundance, and altering plant community structure and composition. Control is difficult. Hand-pulling is exceptionally time-consuming because small fragments can regrow. It is somewhat resistant to chemical control due to the plant's smooth and waxy surfaces. In New Zealand forests, neither hand-pulling or herbicide application prevented regrowth even over repeated treatments. Currently, artificial shading is the most successful treatment.

Small-leaf spiderwort is uncommon in GGNRA, but is frequent in Redwood Creek. Click [here](#) to see the Marin County observations of small-leaf spiderwort.

Sources:

[USDA PLANTS Profile](#)

Standish R. J. 2002. Experimenting with methods to control *Tradescantia fluminensis*, an invasive weed of native forest remnants in New Zealand. *New Zealand Journal of Ecology* 26: 161-170.

Standish R. J., Robertson A. W. & Williams P. A. 2001. The impact of an invasive weed *Tradescantia fluminensis* on native forest regeneration. *Journal of Applied Ecology* 38: 1253-1263.

Medusahead **(*Elymus caput-medusae*)**

ISED teamed up with staff from the Point Reyes Range Program to conduct targeted surveys for medusahead grass along Bolinas Ridge east of Olema. A large medusahead population was discovered in this area last year by the I&M Plant Community Monitoring Program.



Medusahead
Photo by Eric Wrubel, NPS.

Medusahead is a barley-like annual grass with long-awns that is native to Western Europe. It was introduced to the United States in 1884 and was first found in Marin County in 1959 in Chilen Valley. Medusahead is considered to be one of the most impactful invasive annual grass species in rangelands of California and the western United States. It spreads rapidly and can infest disturbed or undisturbed habitats. Once established, it is difficult and costly to control without causing further impacts to grasslands. The long awns and high silica content of medusahead result in very poor forage value for livestock and wildlife. Dense infestations build up a thick layer of thatch, altering nutrient cycling, preventing establishment of native species and increasing wildfire hazard. The California Invasive Plant Council (Cal-IPC) classifies the potential impact of medusahead on California's native ecosystems as HIGH.

Landowners, land management agencies and members of the public are encouraged to keep an eye out for new infestations. Medusahead is an annual grass with long, twisting awns of two lengths, longer at the top of the inflorescence and shorter at the base. The inflorescence axis of medusahead does not break apart in age, which distinguishes it from foxtail grasses (*Hordeum* spp.), and squirreltail (*Elymus multisetus*) which both have inflorescences that break apart. Dense medusahead infestations also form mats of undecomposed dead vegetation.

Sources:

[Medusahea Management Guide](#)

[CDFA Encycloweed](#)

[Cal-IPC Plant Profile](#)

Duncan, C.A., et al. (2004). Assessing the economic, environmental, and societal losses from invasive plants on rangeland and wildlands. *Weed Technology* 18:1411-1416



Sweet vernal grass.
Photo: ©2017 Steve Matson.

Sweet Vernal Grass (*Anthoxanthum odoratum*)

ISED mapped several extensive patches of sweet vernal grass along the Olema Valley Trail, south of the Pacific Coast Learning Center. At Point Reyes sweet vernal grass is frequent on Limantour, Mount Vision, and Pierce Point roads, and is found elsewhere in the park, but has not been reported south of Five Brooks until now. Sweet vernal grass remains uncommon in GGNRA. The largest populations are located along the Marincello Trail. A satellite population near Point Bonita is nearly gone after several years of treatment. Park Stewardship discovered a new

population at Langdon Court in the Presidio in May of this year. Sweet vernal grass has also been reported in checklists from the Presidio from [1994](#) and [2009](#).

Sweet vernal grass is a 30-60 cm tall perennial grass with a tufted spike-like inflorescence. It is named for its distinctive sweet smell. The acute florets give the inflorescence a jagged appearance, compared to the superficially similar native junegrass (*Koeleria macrantha*).

Native to northwestern Africa, Europe, and northern Asia, sweet vernal grass is naturalized across the globe, including North and South America, Australia, and New Zealand. It is a strong competitor with native plants and has been shown to be particularly effective at suppressing germination of other grasses. Small patches of sweet vernal grass can be treated by hand pulling if the rhizome is fully removed; larger patches generally require herbicide treatment to achieve full control.

Sources:

Weed Control in Natural Areas in the Western United States

Scott D. 1975. Allelopathic interactions of resident tussock grassland species on germination of oversown seed. *New Zealand Journal of Experimental Agriculture* 3: 135-141

Fact Sheet: Queensland Government

Bristly needlegrass (*Stipa purpurata*)

In early June, ISED mapped extensive populations of bristly needlegrass in the vicinity of the McCurdy Trail. This area has long been known as the only site where bristly needlegrass is naturalized in North America. However, new populations have been reported in recent years in the Marin Headlands and along the Estero Trail in Point Reyes.

Little information is available about the ecology of this grass, which is native to central Chile. Marin County is the only known location in the United States. The southwest slope of Bolinas Ridge was long known to be the only location of bristly needlegrass, but populations have been documented in recent years in the Marin Headlands and along the Estero trail in Point Reyes. This perennial grass species may pose a threat to coastal prairie habitats. Populations can form a dense thatch, excluding other prairie species. Bristly needlegrass has been found in



Bristly needlegrass
Photo by Nicolas Graver, NPS.

Plant Community monitoring plots in the Marin Headlands far from roads or trails, indicating that it may be capable of long-distance dispersal.

Bristly needlegrass is difficult to distinguish from its close relative, Stipoid ricegrass (*Stipa chaetophora*), another South American grass, which has narrower leaves and longer awns. Both grasses grow intermingled in the vicinity of the McCurdy Trail, which is the only known location of stipoid ricegrass in North America. Both grasses are abundant in this area, and may have been introduced for forage.

Sources:

[Jepson eFlora](#)
[Grass Manual on the Web](#)
[Global Biodiversity Information Facility](#)
Howell et al. 2007. Marin Flora.



Yellow Parentucellia **(*Parentucellia viscosa*)**

We have received numerous reports this year about exponential expansions of yellow parentucellia in grasslands from Lake County to San Mateo County. Most alarming at Point Reyes, yellow parentucellia has expanded into the unique wetlands near the historic AT&T Radio Station, where there is sensitive habitat for numerous rare plants.

Yellow parentucellia is a relative newcomer in the Bay Area. It was first collected in Marin County in 1974, and has not been reported in great abundance until recently, but could be moving past the lag phase of introduction. It has a Cal-IPC rating of Limited, and is especially invasive in coastal wetlands in Humboldt County, where it has been present for over 100 years.

Yellow parentucellia at the AT&T Wetlands.

Photo by Cody Ender, NPS.

Sources:

[Cal-IPC Plant Profile](#)

Personal communications: Amelia Ryan, Christina Crooker, Patrick Nicholson, Wende Rehlander

Survey Results

June 2017 ISED survey results

The June 2017 surveys were conducted in:

Golden Gate National Recreation Area
Point Reyes National Seashore
Pinnacles National Park

The link above will take you to the Calflora Observation Hotline, where ISED records can be viewed in an interactive map. [Click here](#) for help using the Observation Hotline.

What We Do

The ISED team maps, assesses, and reports occurrences of priority invasive plants along trails and roads in the San Francisco Bay Area network of National Parks, treating localized infestations when feasible.

The monthly survey results presented in this newsletter represent only new observations of patches of priority invasive plant species. A patch is defined as a group of individuals that is at least 20 meters from the next nearest group. Some patches may not be mapped in a given month if they have already been recorded in previous years, or if the patch is too large (see below).

Priority Species Lists

Golden Gate National Recreation Area
John Muir National Historic Site
Pinnacles National Park
Point Reyes National Seashore

See the table below for more information about our priority invasive species and the data that we collect:

Our Priorities	Example	Explanation	Data Collected
List 1 (High Priority Plants)	 Fertile capeweed	List 1 plants are highly invasive and are typically not widespread. Control or even eradication is often feasible.	Polygon assessments are recorded for all patches, regardless of their size.
List 2 (Medium Priority Plants)	 Cape ivy	List 2 plants are highly invasive and usually more common than List 1 species. Small, outlier patches may be targeted for eradication or control. Uncommon species of concern are also listed here to improve our understanding of their distribution in the park.	Point occurrences are recorded for all patches, and buffered point assessments are recorded for patches smaller than 100 square meters.
List 3 (Lower Priority Plants)	 Sweet fennel	This category includes all other non-native plants. These may be widespread invasives that are difficult to control at the scale of the park, or less common species that do not cause significant ecological harm.	Presence/absence is recorded by subwatershed. No points or polygons are mapped.