

San Francisco Bay Area Network Early Detection Program

Early Detection News July 2016

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



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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



Medusahead.
Photo by Eric Wrubel, NPS.

RED ALERT! **Medusahead** **(*Elymus caput-medusae*)**

Inventory and Monitoring staff discovered a gross acre of medusahead in late July in a grazed grassland on Bolinas Ridge, east of Olema. The Plant Community Monitoring crew found the population while scouting off-trail for vegetation plots. This opportunistic discovery follows last month's first record of medusahead in Golden Gate NRA, documented by the ISED team along Hwy 1 near Point Reyes Station. Given the close proximity of the two patches it is probable that there are more medusahead populations in the area. [Click here](#) to see a map of these occurrences in Calflora.

Medusahead is considered to be 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.

Increased surveillance is recommended to assess the distribution of medusahead in West Marin. Point Reyes Range staff will conduct additional surveys in the area between Olema and Point Reyes Station. 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. 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:

[Medusahead Management Guide](#)

[CDFA Encyclopedica](#)

[Cal-IPC Plant Profile](#)

[Calflora Distribution Map](#)

[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](#)



Yellow starthistle, Marin Headlands.
Photo by Jennifer Velasquez, NPS.

Yellow Starthistle **(*Centaurea solstitialis*)**

ISED interns discovered and removed a single yellow starthistle plant on the Coastal Trail above Battery Townsley in the Marin Headlands. This is the first recorded occurrence of yellow starthistle in the Marin Headlands west of Highway 101. Although widespread throughout California, yellow starthistle remains uncommon in Golden Gate NRA and Point Reyes NS.

Yellow starthistle is one of the most invasive and damaging grassland weeds in western North America. It is native to the Mediterranean Basin, and was first discovered in California in 1869. It now infests over 12 million acres in California, and continues to expand in the Sierras and the central-western region. Yellow starthistle displaces native plants, lowers forage quality on rangelands, and can deplete soil moisture in annual California grasslands. It reproduces rapidly by

seed, and is primarily dispersed by human activities. Large amounts of seed can adhere to vehicles and road maintenance equipment, and to humans and animals to a lesser degree.

Yellow starthistle is currently uncommon in moist coastal sites in Marin and San Mateo Counties. However its suitable climate range is projected to expand towards the coast over the next 30 years, in response to climate change.

Sources:

[Cal WeedMapper](#)

[Cal-IPC Plant Profile](#)

[Invasive Plants of California's Wildlands](#)



Tufted wallaby grass.
Photo by Eric Wrubel, NPS.

Tufted Wallaby Grass (*Rytidosperma caespitosum*)

In mid-July, the ISED Team discovered a small patch of tufted wallaby grass on Milagra Ridge, near the intersection of Milagra Summit and Creek Overlook trails. This is the first detection north of Sweeney Ridge in San Mateo County.

Since ISED discovered tufted wallaby grass on Sweeney Ridge in 2011, extensive populations have been observed in mowed road shoulders on Sweeney Ridge, Baquiano Ridge, and Mori Ridge, and in fuel breaks in the

SFPUC Crystal Springs Watershed. It is currently uncommon in California, and is limited to localized infestations in Alameda, San Mateo and San Diego Counties. [Click here](#) to see a Calflora map showing the known distribution of tufted wallaby grass in California.

Tufted wallaby grass is a perennial grass from southern Australia. It has naturalized in New Zealand and California. The closely related species, purple awned wallaby grass (*Rytidosperma penicillatum*) is more widespread in California, likely due to more intentional introductions as experimental forage, and it is expanding its range in coastal locations in Central and Northern California. Cal-IPC classifies the potential statewide impact of purple awned wallaby grass on California's native ecosystems as Limited, but the future impacts of this species in coastal regions could be medium to high. Wallaby grasses pose a threat to coastal rangelands, where they can spread rapidly with disturbances such as grazing, mowing, or fire. [Click here](#) for an illustrated identification guide to *Rytidosperma* species present in California.

Tufted wallaby grass is more robust than purple awned wallaby grass. It produces more seeds per plant, and has a wider natural range in Australia than purple awned wallaby grass. These characteristics indicate that tufted wallaby grass is potentially more invasive than purple awned wallaby grass. Best practices should be used while working in infested areas to contain the spread of this species.

Sources:

Darbyshire et al. 2010. [The genus *Rytidosperma* \(Poaceae\) in the United States of America](#). *Journal of the Botanical Research Institute of Texas*

Vol. 4, No. 2, pp. 663-676

[Jepson eFlora](#)

[CalFlora Distribution Map](#)

[Cal-IPC Watchlist](#)

[Cal-IPC Species ID Card](#)



Cheatgrass.
Photo by USDA-ARS.

Cheatgrass (*Bromus tectorum*)

The ISED Team discovered and removed a small population of cheatgrass in Point Reyes NS growing at a cattle guard on the road to Chimney Rock. Although cheatgrass is widespread in California it is rare in Marin County. This is one of only three records in Calflora for Point Reyes - the other two are collections dated 1945 and 1960. Several large populations have recently been discovered near the summit of Mount Tamalpais, and are under surveillance and treatment by the One Tam Early Detection Team.

Cheatgrass is short-statured winter annual grass with long awns and nodding inflorescences. It is native to the Mediterranean Basin, Africa and Asia, and was introduced to North America in the late 19th century. It is an aggressive invader that has changed the fire ecology of rangelands throughout the West. Cheatgrass colonizes

the interstices between shrubs in arid plant communities, increasing fuel loads and expanding the range and frequency of wildfires, resulting in type conversion from shrublands to annual grasslands. It is common in croplands and areas with livestock and seeds easily spread by wind, fur/clothing and rodents. Cal-IPC classifies the potential impact of cheatgrass on California's native ecosystems as HIGH.

This species is uncommon in coastal California, where it is a poor competitor with more robust plant species that are adapted to cooler, wetter climates. Cheatgrass is also less likely to cause dramatic changes to fire-adapted coastal shrublands than in fire sensitive shrublands of the deserts and Great Basin. However, the suitable climatic range of cheatgrass is projected to expand towards the coast over the next 30 years, in response to the warming climate, so it may become more abundant in Marin County.

Sources:

[Cal WeedMapper](#)

[Cal-IPC Plant Profile](#)

[CalFlora Distribution Map](#)

[Columbia University Species Summary](#)

Dishonorable mention

This month's surveys included observations of many other species besides those described above. Check out the survey results below in Calflora to see what we found, including:

Narrow leaved clover (*Trifolium angustifolium*)

New Zealand nightshade (*Solanum aviculare*)

Pincushions (*Scabiosa atropurpurea*)

Purple awned wallaby grass (*Rytidosperma penicillatum*)

Scotch broom (*Cytisus scoparius*)

Sweet vernal grass (*Anthoxanthum odoratum*)

and more!

Survey Results

July 2016 ISED survey results

The June 2016 surveys were conducted in:

**Golden Gate National Recreation Area
Point Reyes National Seashore**

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 (Highest Priority Plants)	 Fertile capeweed	List 1 plants are highly invasive and are typically not widespread. Control or even eradication is often feasible.	<i>Point occurrences*</i> and <i>polygon assessments**</i> are recorded for all patches, regardless of their size.
List 2 (High Priority Plants)	 Cape ivy	List 2 plants are highly invasive and usually more common than List 1 species, but are still feasible to control in many places.	<i>Point occurrences</i> are recorded for all patches regardless of their size, and <i>polygon assessments</i> are recorded for all patches smaller than 100 square meters.
List 3 (Medium Priority Plants)	 Sweet fennel	List 3 plants are usually widespread and difficult to control at the scale of the park. Uncommon species of concern are also listed here to improve our understanding of their distribution in the park.	<i>Point occurrences</i> are recorded for all patches smaller than 100 square meters.
List 4 (Lower Priority Plants)	 Rattlesnake grass	List 4 plants include all other exotic species that are not captured by Lists 1 – 3. Typically, these are ubiquitous invasive plants and are beyond control, or they are waifs.	These plants are not mapped. Skilled observers may record presence/absence.
*Point occurrences are individual points recorded to represent an entire patch of invasive plants **Polygon assessments describe the size, shape and coverage of a patch			