Background

1984 first collection in Bay Area
From Bay Area spread to Central Valley
San Diego is separate introduction
Also invasive in Australia, New Zealand and South Africa
Likes disturbed areas
Unstudied up until recently, not much information available
Behavior in native range?
Weedy ruderal plants, seem to be expanding range through human-mediated spread

Impacts

Livestock mortality and contact dermatitis (humans)
Number of counties with Dittrichia rising rapidly
Where will Dittrichia spread?
Cal-IPC has done some modeling based on different climate change scenarios, see cal-ipc.org for updates
Still a lot of California with potential to spread

Copy of powerpoint presentation is available.
Lifecycle and management

*See powerpoint for graphic of life cycle and best treatment timing*

Plants last 1 year based on field studies by UC Davis
Germination November to March
Rosette March to May
Moderate growth June to July, exponential growth July to September
Flowering August to December
Flowering starts in September and goes through December

Trigger for flowering seems to be day length, which should mean the timing is consistent from year to year.

Seed dispersal mechanism?
Has a bristly seed pappus so falls to ground and blows along the ground
Attaches to vehicles and shoes
Spread by water, around rivers and reservoirs
Establishes well along roadsides with low competition
Could be a relationship with higher soil moisture next to roads

Control timing
Pre-emergent, October to December. Should be done earlier than March when most managers are starting.
Hand pull, May to July
Post-emergent, March to June

Rachel Brownsey study with rhizotron (root probe)
Compared root growth to annual grasses
Roots similar to yellow starthistle and Holocarpha, but grow later in season
This could be why it can’t compete well with annual grasses for early season moisture

Does not tolerate shade

Management considerations (from powerpoint)

- Seedling emergence throughout fall, winter, early spring
- Seed production and viability are high; primary dormancy is very low or absent
- Seed longevity is 2+ years with the majority of viable seeds germinating in the same year as dispersal
- Early season detection of new populations is challenging
- Resprouting if cut in spring and early summer
- Seed production on cut material with flowers
- Flowering starts in early- mid September
- Sticky-oily leaf surface affects the activity of herbicides and causes contact-dermatitis

Where does it establish away from disturbance?

Found recently in Mid-Peninsula Open Space District in Santa Cruz Mountains
In shrub and chaparral areas without disturbance
Also in bare zones around Baccharis
East Bay riparian areas and saltmarsh upland transition zone (habitat where it was first collected)
In Australia it occurs in open riparian areas
Dave Bakke discussion on regional Dittrichia management

When should we shift from local eradication to regional management?
What do we do differently at the regional level?
Are there different strategies for different places?
Dave sent out survey to some list-serves, received 6 responses
  Strategies being used are: eradication, containment, treatment of outliers, keeping it off property
  Types of management, everything
  Combinations of herbicides, mechanical
What should we do as a state to manage this weed?
What do we need to know?
What should our strategies be based on location?

Why should we care about this plant? Is it only along roadsides?
Also occurs in riparian areas (mentioned as such in San Diego Co.)
Production of biomass is an issue, it crowds out other species; represents a fire risk along roads
Seems to be spreading outside roads into disturbed rangeland in San Mateo/Santa Clara county border area
Moved into vineyards in Alexander Valley which were not sprayed one year
Would help to document areas where it is invading away from roadsides

Management strategies
One goal is to keep it out of a watershed
Tracking it along roads where it crosses a disturbed firebreak and could move along there.

Roadside management
Current management promotes spread of Dittrichia
Need better coordination with Caltrans and other roadside managers
Problem is the timing needed for Dittrichia management does not work with their current practices
In Sacramento County hard to coordinate with Caltrans, County road maintenance and cities.
Sacramento and Elk Grove and doing nothing in their cities to control it along roadsides. Some come to WMA meetings, but the group is currently inactive. Only way to get action is to constantly contact them about it.
Alameda County, problem along roads and power lines. Also comes in to areas with cattle grazing after cows are removed for the year.
Big issue for roadside management -- Biology is different than what we are used to
Roadside spray or mow in May or June removes competition, then management agencies are not prepared to do another late season spray.

Management notes
East Bay Regional Parks uses a torch on it in July and August after mowing
Mowing in August, sprouts after that
Mowing in June works better, also weed whacker works well at that time
After mowing growth is more prostrate (like yellow starthistle)
Additional control ideas:
  Milestone partially successful, 75%
Mulch should be tried or weed mats

Need more site-specific distribution to determine leading edge and unoccupied habitat, as well as what types of occupied habitats outside of road edges

Please add more details to current distribution in Calflora
Rachel B. was aware of a location at 3,000 feet; group participant reported an area at 4,500 feet in Plumas County
Orange county observation in construction site
May be present in Los Angeles and Ventura counties, someone needs to look for it

Next step, make a plan for statewide strategy
Form a Dittrichia taskforce to gather/disseminate information, organize our thoughts as a framework to an eventual state-wide strategy document
Dave Bakke can be email contact, dbakke@fs.fed.us; he will send out e-mail to group asking for information, suggestions, along with notes from meeting.
High priority areas, do education
Need some educational materials to distribute, especially for early detection in counties where it may not yet be (e.g., “Have you seen this plant? flyers”).
Need additional distribution data, especially at higher elevations, off roadways, counties on edge of existing Cal-IPC maps (inside and outside current distribution).
Be proactive, don’t wait for it to infest additional areas
Are there additional research needs? Those should be identified in the strategy