

## CalIPPC Annual Grassland Notes

(Note taker, John Gerlach with a few notes by Carla D'Antonio. Note that it was difficult to keep track of the discussion because of the large group size so John and Carla apologize if comments were missed or anyone was miscited).

Question initially posed...

- 1) Should exotic grass research be separated by habitat? For example shrublands vs. valley grassland vs coastal grassland? Would this make it easier to have a good discussion given the large number of people in this working group?

(response...most respondents said they would rather stay in a large group and focus on bigger conceptual or management issues)

- 2) Example of one of these over arching issues...How important are the effects of atmospheric nitrogen deposition for successful invasions by annual grasses? This is clearly important in serpentine grasslands in CA and also in drier so. California shrublands (E. Allen's work) and Mojave desert (M. Brooks' work) where N deposition is causing increases in annual grasses and loss of native forbs and perennials. maybe it is an overarching issue that affects a large part of the west? (how do you manage or restore in face of all this N? Stu Weiss—done lots of work on this issue in serpentine grasslands in south Bay Area—with some successes...mowing can reduce biomass of the exotic grasses and help to promote the natives).
- 3) Will the elimination of exotic annual grasses from an ecosystem lead to invasion of the ecosystem by exotic perennial grasses or exotic forbs? i.e. it was suggested that maybe exotic annual grasses aren't as bad as many exotic forbs or exotic perennial grasses...so if we are going to manage against one group we need to know what we are possibly going to end up with.
- 4) Are invasions by exotic perennial grasses only an issue in coastal areas? (folks representing the coast region stated that *Holcus lanatus*, *Festuca arundinacea* and *Phalaris aquatica* are huge problems for them. Kim Cooper at Pt Reyes finds that in areas where they have been trying to control broom they are increasingly getting these exotic perennial grasses and they appear to be very bad for native species. A group from Sonoma and Marin counties voiced that these exotic perennial grasses are some of their biggest threats. Matt Brooks shared that exotic perennial grasses such as fountain grass are increasingly a problem in the sonoran desert and may be moving into some parts of southern California. we shouldn't write them off as just a coastal problem. One of these grasses is *Cenchrus ciliaris* – buffle grass...destroying the Sonoran desert through fire...will it be restricted to warmer regions with summer rain or will it spread further north into colder or drier deserts? John Gerlach has found they are an increasing problem in

Yosemite. Maybe we need more networking among folks trying to deal with exotic perennial grasses (web chat page??).

- 5) How can the management of exotics be streamlined among governmental agencies to prevent disconnects?
- 6) Folks from several coastal areas (Jake Sigg from San Francisco and others from southern California) have noted a large expansion of the annual grass *Brachypodium distachyon*. Are the recent observations of increased densities of *Brachypodium distachyon* indicative of a recent increase in invasiveness? Is this grass a threat to native biodiversity? It can become quite dense and some participants noted that it forms very dense litter and lies thick on the soil surface...suggesting it would not be good for native species. It was suggested that managers interested in this grass try to conduct similar experiments aimed at controlling it in different regions of the state to see how control varies with environment.
- 7) Shouldn't goal of controlling exotics be restoring with natives that have some sort of resistance to invasion? Can native communities be resistant to exotic species or will we sometimes need to use exotics to limit the impact of other exotics that we consider to be worse. Example, crested wheat grass has long been used in reveg of shrublands burned in *Bromus tectorum* fires. It does suppress *B. tectorum*. But can we get natives to do this instead?  
This lead into a long discussion on how to establish native grasses with reporting of successful approaches and workshops available to learn about this from CNGA (California Native Grass Association)-see participant Kent Reeves. Lots of questions though about almost single minded focus of restoration on native grasses with little attention to forbs (or even woody species).
- 8) Do we need better data to address issue of benefits of native perennial grasses over exotic perennial grasses in terms of long-term sustainability of production? ability to support native diversity (in forbs) and so forth? John Gerlach suggested that such data exist and have existed for a long time and they show that exotic perennial grasses don't have long terms sustainability.
- 9) Can management tools such as livestock grazing push a community towards a particular goal? How can grazing be managed to achieve more than one goal (reduction in bad exotics at same time as promoting certain natives or sets of natives)? Are we too single minded in our goal setting? Several recent studies (G. Hayes-Conservation Biology) and an in progress review by C. D'Antonio (and collaborators) suggests that grazing can promote some native species but not others and may also promote some exotic forbs. It does not appear to successfully reduce exotic annual grasses. So effects are very group or even species specific—no easy solutions. Careful work across sites needs to be done and setting of management objectives probably should not be focused on single species.

- 10) What can be done to reduce the cost and increase the available of native grass seed? This led to a long discussion about native seed production (including native forb seed production) including where is it being done? how to do it on a local or regional scale? how to make it cost effective? role of different agencies?
- 11) Can comprehensive cost benefit analyses be used to set management priorities and thresholds?
- 12) Do approaches to managing natives and exotics need to be more site specific? Factors to consider might be precipitation, soils, and other attributes.
- 13) How do we acquire more basic biological information for natives and exotics?
- 14) NRCS is conducting research using different genotypes of native species and in some cases such as *Panicum virgatum*, they are spreading invasive genotypes. How do we resolve these sorts of conflicts? Examples of current research are the BLM Greatbasin restoration project, the IAFAS project, field trials through NRCS, and the CNGA.
- 15) What are the risks due to potential genetic pollution of seed production? This might occur in cases where farmland is removed from production and the owner is required to enter into a native species seed production contract. Should seed production be decentralized? Is there federal support through the BLM for seed production? How do we get more support for services rendered by native seed producers even in years when BLM or other agencies don't need to reveg a lot of land?
- 16) How do we encourage support for these issues? People were reminded that weeds are a bipartisan issue and that representatives and senators are fairly interested in these issues right now. write to your local reps and encourage funding for research and control efforts. Plus working on consortia, or region wide groups is effective.
- 17) One of final questions raised was specific request for information on scraping...Does scraping a thin layer of soil from the surface of sites benefit natives more than exotics? several people reported very positive effects on native perennial grasses when thin layer of surface soil was scraped from weed infested spot...Jaimee Marty working on this in Central Valley, a person from Santa Cruz reported great stimulation of desired tarweed species with this technique.