

#### Lessons Learned

- We found Volutaria in 2011
- It is native to North Africa and the Mediterranean
- It is found in 4 sites in Southern California
  - 1 site has been extirpated
- What did we learn?



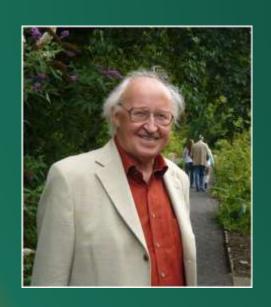
#### Lesson #1: Identification

Get an ID of a species you are unsure of, especially if there are several to many of them at your site



### Lesson #2: Don't trust the experts

- Photos were sent to Dr. Gerhard Wagenitz (RIP 2017)
- ID came back as *Volutaria canariensis*
- A Canary Island endemic, with no history of spreading



The real lesson is you are going to make mistakes, learn from ours, learn from yours

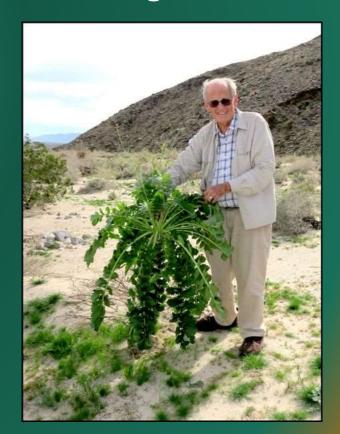


### Lesson #3 Attend Meetings

- You'll meet some great people at meetings
- If you can't find a meeting to attend, create your own meetings













- Find a team of interested people who want to help kill the weeds
- If you can't find a team then make your own team
- You might even have a team of one = You

Also, don't be afraid to merge teams, or admit that someone else's team might be better.

Just find a way to be on the best team, or on separate teams to get different jobs done



• Find a team of interested people who want to help kill your weeds









Volutaria tubuliflora in the Canary Islands

V. tubuliflora in US

V. tubuliflora in Chile

- Teams learn more than you can
- First known Borrego contact:
- In February 2010 two botanists on a hike notice an unusual plant growing in Alcoholic Pass in ABDSP
- Returning later in the season the plant was missing
  - RT Hawke, Tom Chester



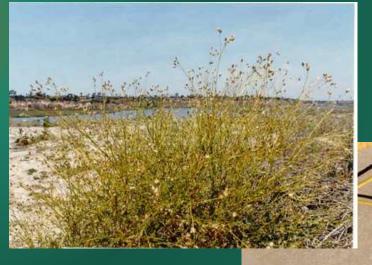
• Teams can do more than you can





- Teams learn more than you can
- First known California contact:
- In May 1987 Robert De Ruff took a photo of a plant *Centaurea muricata (mis-ID'd)*
- It's Volutaria!
- Ron Vanderhoff found Robert's webpage and cracked the case wide open!





## Lesson #6: Learn Something



Oh, you are going to have to learn so many things!



Possibly like, how to kill your weed



Where does it come from?



Who else has this weed?



How fast is it spreading?



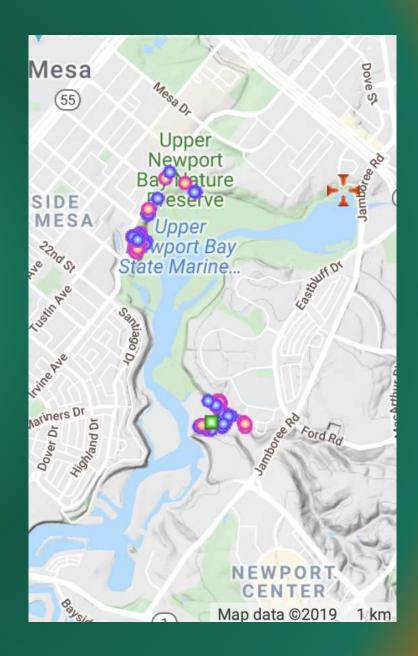
How long does the seed live?



What types of habitats is it found in?

### Lesson #6: Learn Something

 Once we learned the Newport population had been there for 30 years, we immediately realized its spreading slowly along the coast and faster in the desert



Lesson #7: Become the expert

 There is a chance no one else in your part of the world has seen this weed

 If you are learning something you are gaining expertise

 If you have more expertise with this species than everyone else around you, you are now an expert



## Lesson #8: Think Big

This was the extent of the known populations in 2013

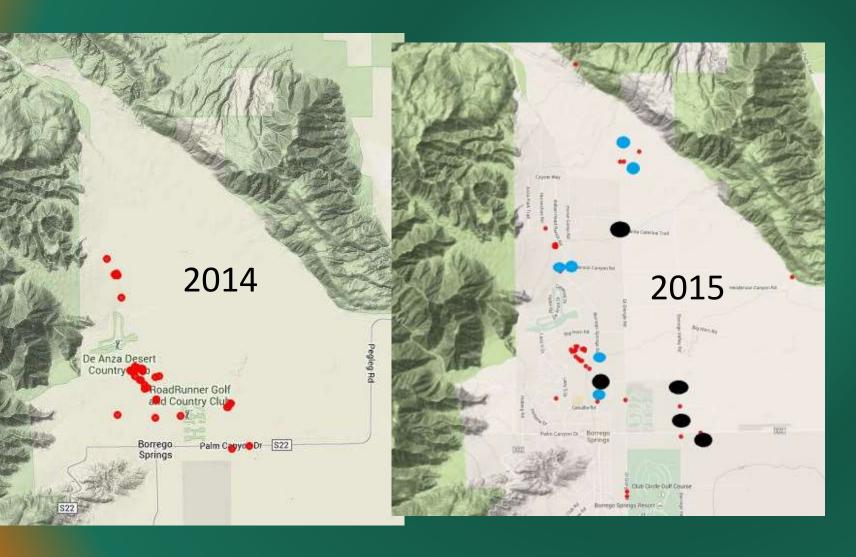
We hadn't even gone digital yet!

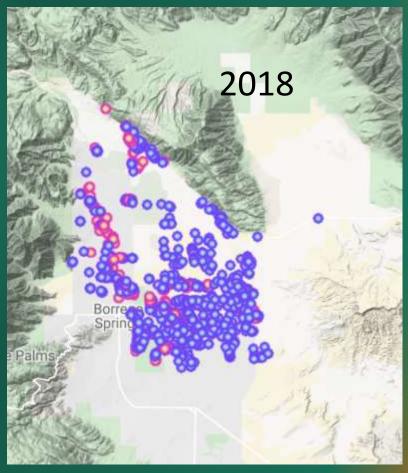
I hadn't found Frank or Ron yet!

We didn't know about the Newport population yet!

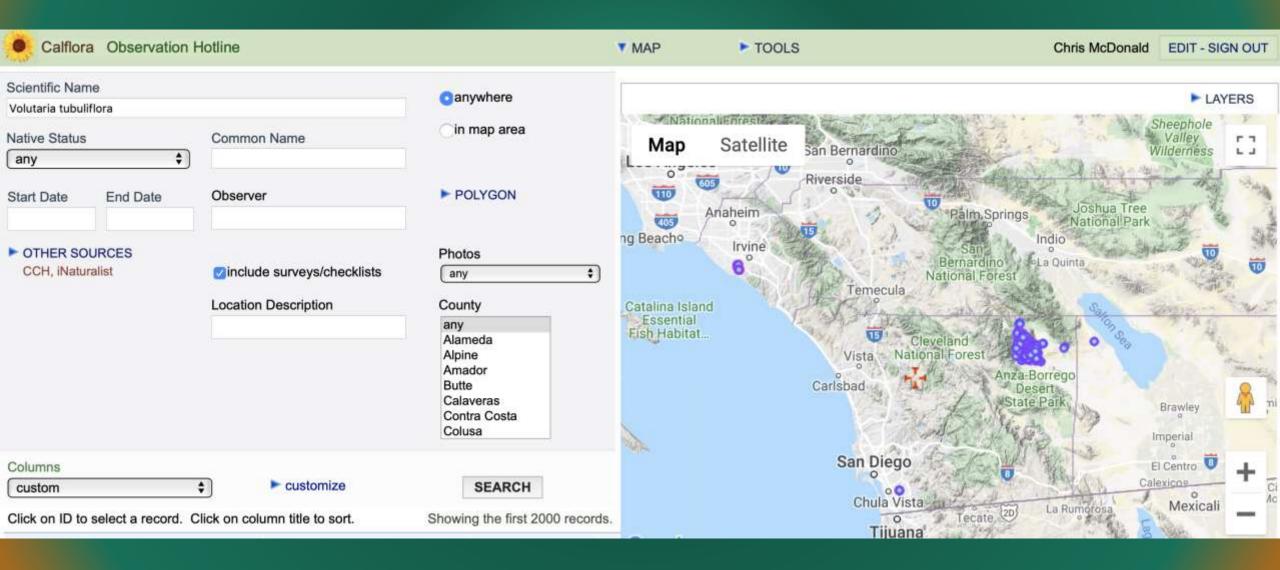


# Lesson #8: Think Big





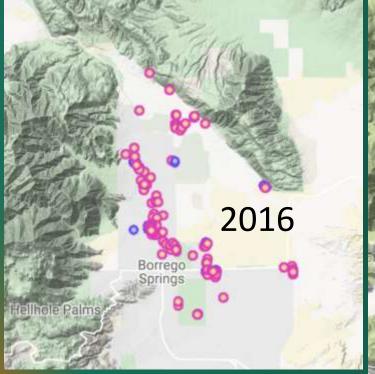
## Lesson #9: Get Digital

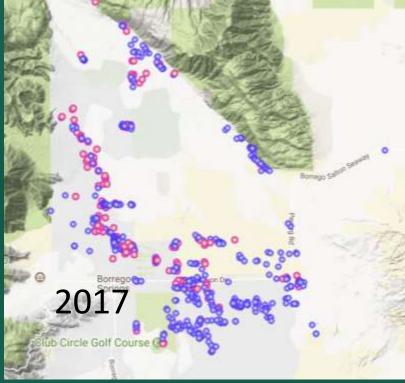


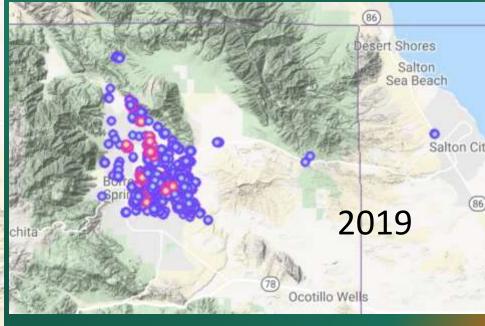
### Lesson #10: Scale UP



Cal-IPC received a grant from National Fish and Wildlife Foundation,
 San Diego County has grants from CDFA and WMA funding to monitor and manage Volutaria in Southern California







### Lesson #11: Predict the future

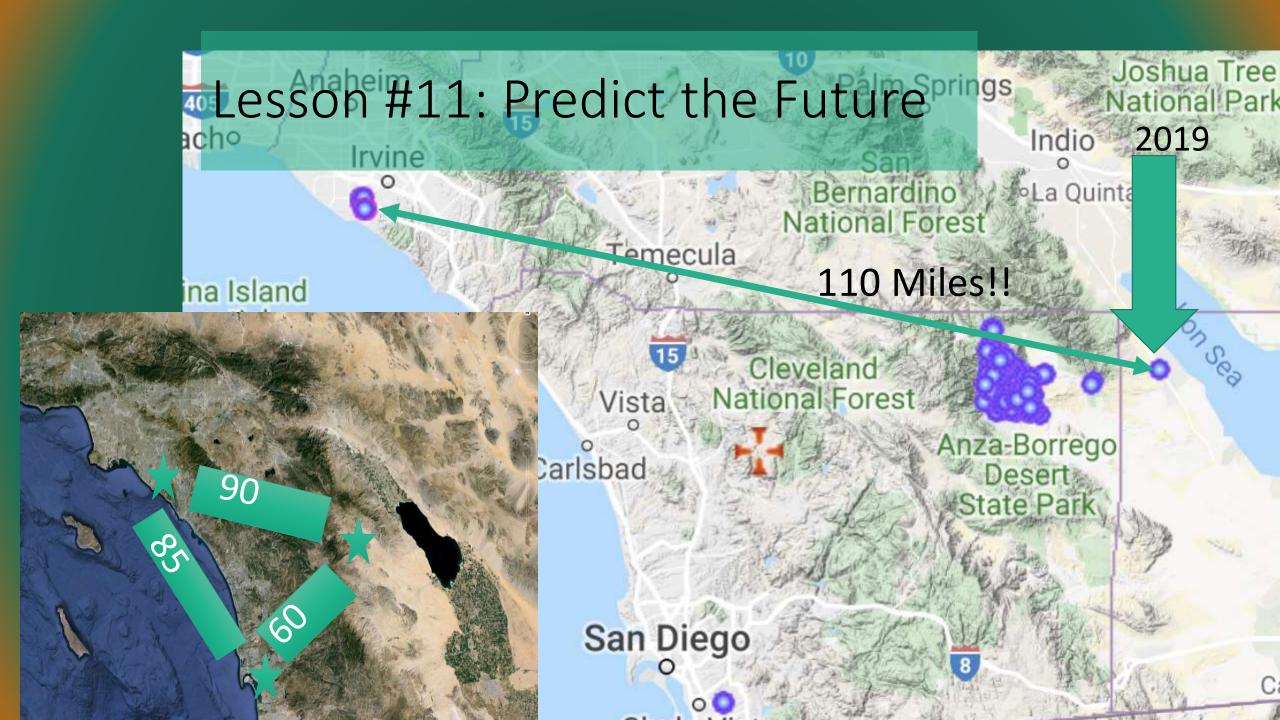


## Lesson #11: Predict the future

• 2027







### Lesson #12: Trust the experts

- In the beginning there was a lot to learn, we knew so little, we made mistakes!
- We now know just enough to manage this species
- Learning is not a straightforward path
- Life does not follow the straight and narrow path

