

What is Stinknet?

- *Oncosiphon piluliferum* (Asteraceae)
- Native to South Africa
- At high risk of becoming invasive in California
 - Widespread in Riverside, San Diego, Orange Counties

Why it's a problem

- Stinknet degrades foraging habitat for coastal cactus wrens, California gnatcatchers, and other native species
- Stinknet adds fine fuels to coastal sage scrub habitat, making it more fire prone.

Questions

1. Will seeds from sprayed plants germinate?
 - Treated once (Transline and Gallery SC)
 - Treated twice
 - Treated with Roundup
 - Malformed (Fig. 2)
2. Do seeds germinate more when exposed to smoke?

What did we do?

- Collected and cleaned seed (see Fig. 3)
- Processing: soaked for 24 hours, plated on petri dishes with agar
- Comparison groups: treated with herbicide, treated with smoke, untreated control groups

What did we find?

- Seeds treated with herbicide still germinated, but at lower rates than untreated control groups (Fig. 1)
- Smoke treatment seeds germinated at the highest rate of all groups (Fig. 4)

Conclusions

- Transline and Gallery SC are somewhat effective in the control of stinknet
- While stinknet is not a fire activated seed, it does have higher germination rates when exposed to the chemicals in smoke.
- In a recently burned habitat, stinknet could outcompete native species for space.

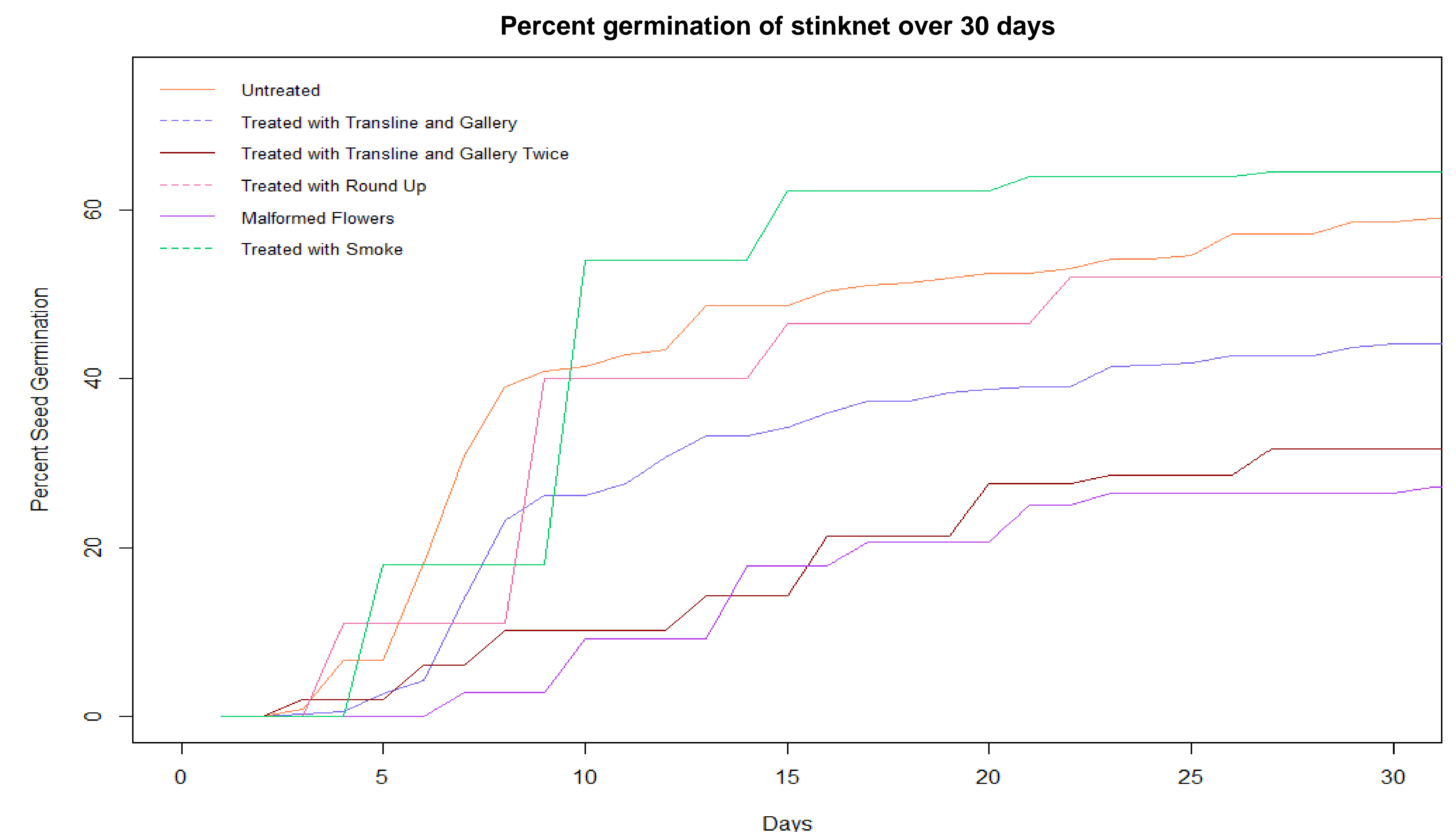


Fig. 1: Germination rates over time for experimental groups.

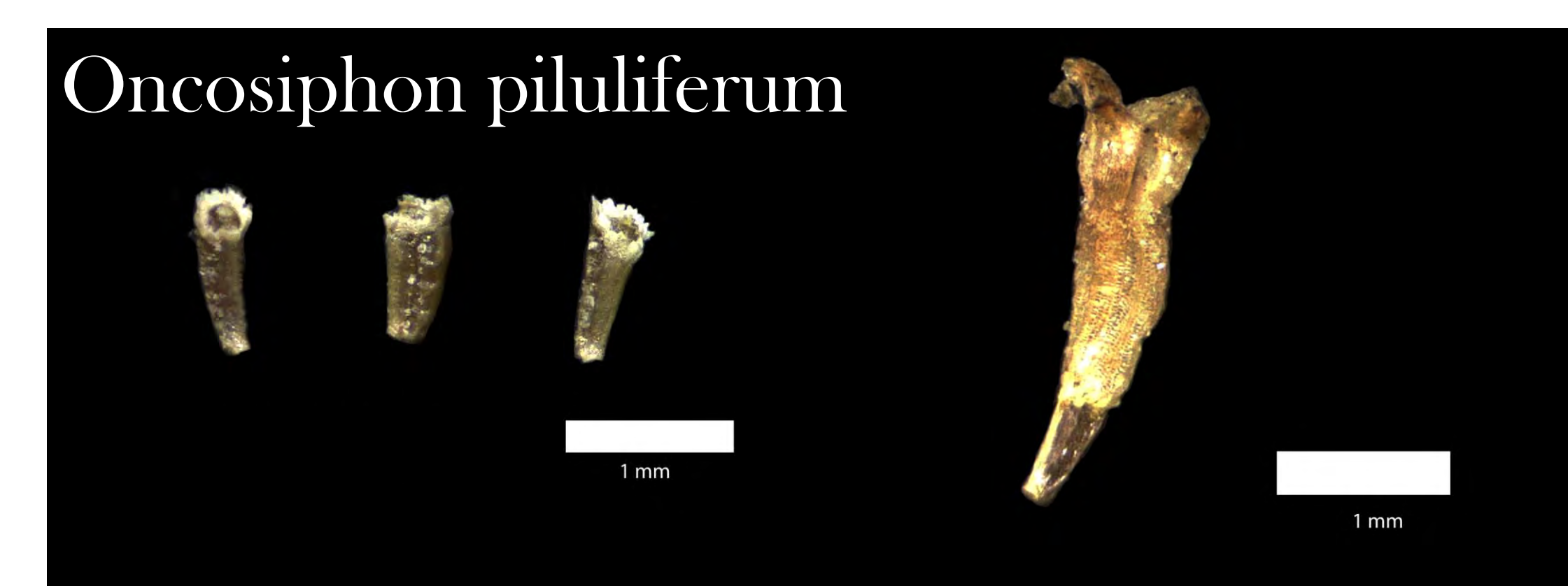


Fig. 2 Left: normal seeds. Right: malformed.

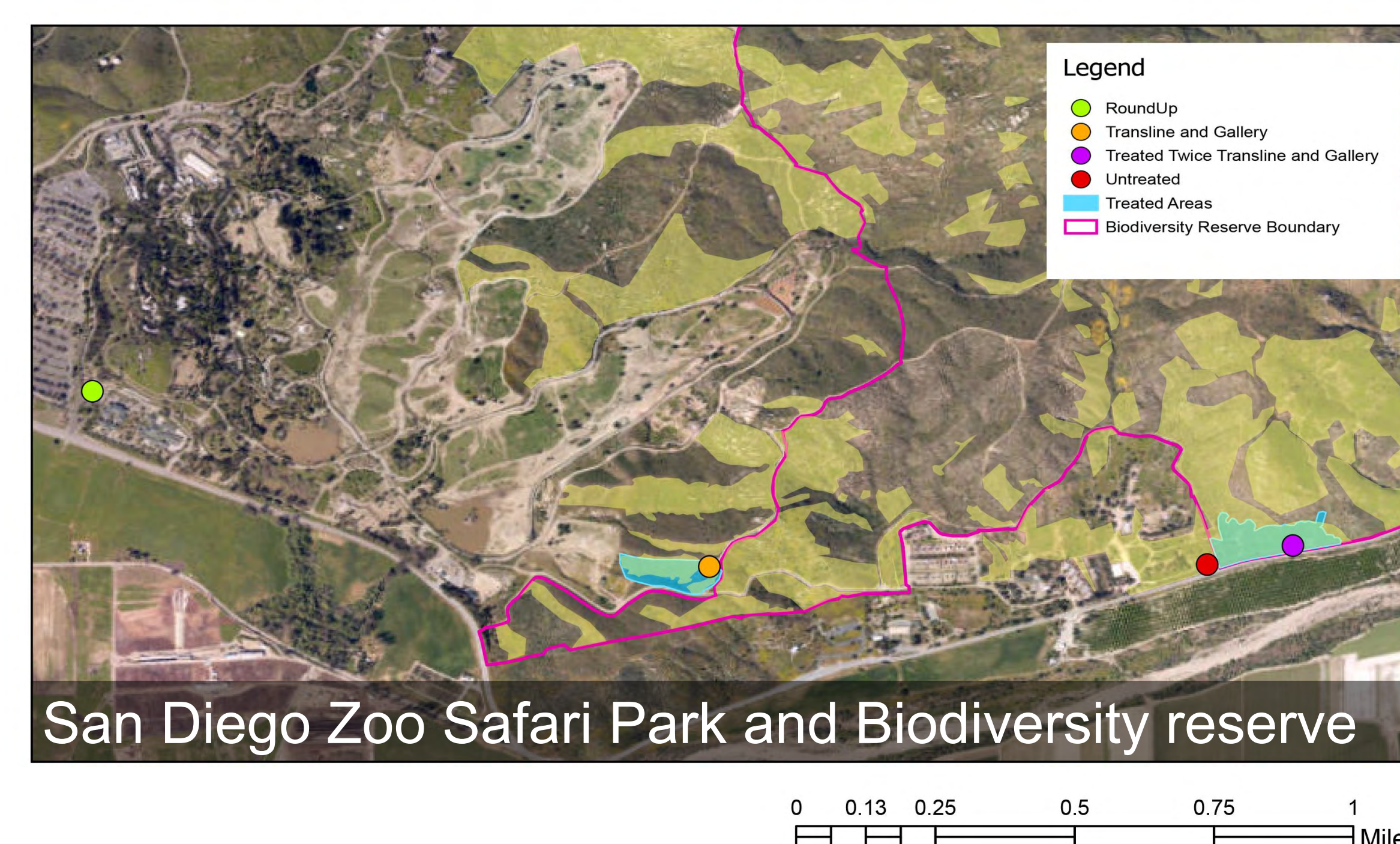


Fig. 3: Map of stinknet collection sites.

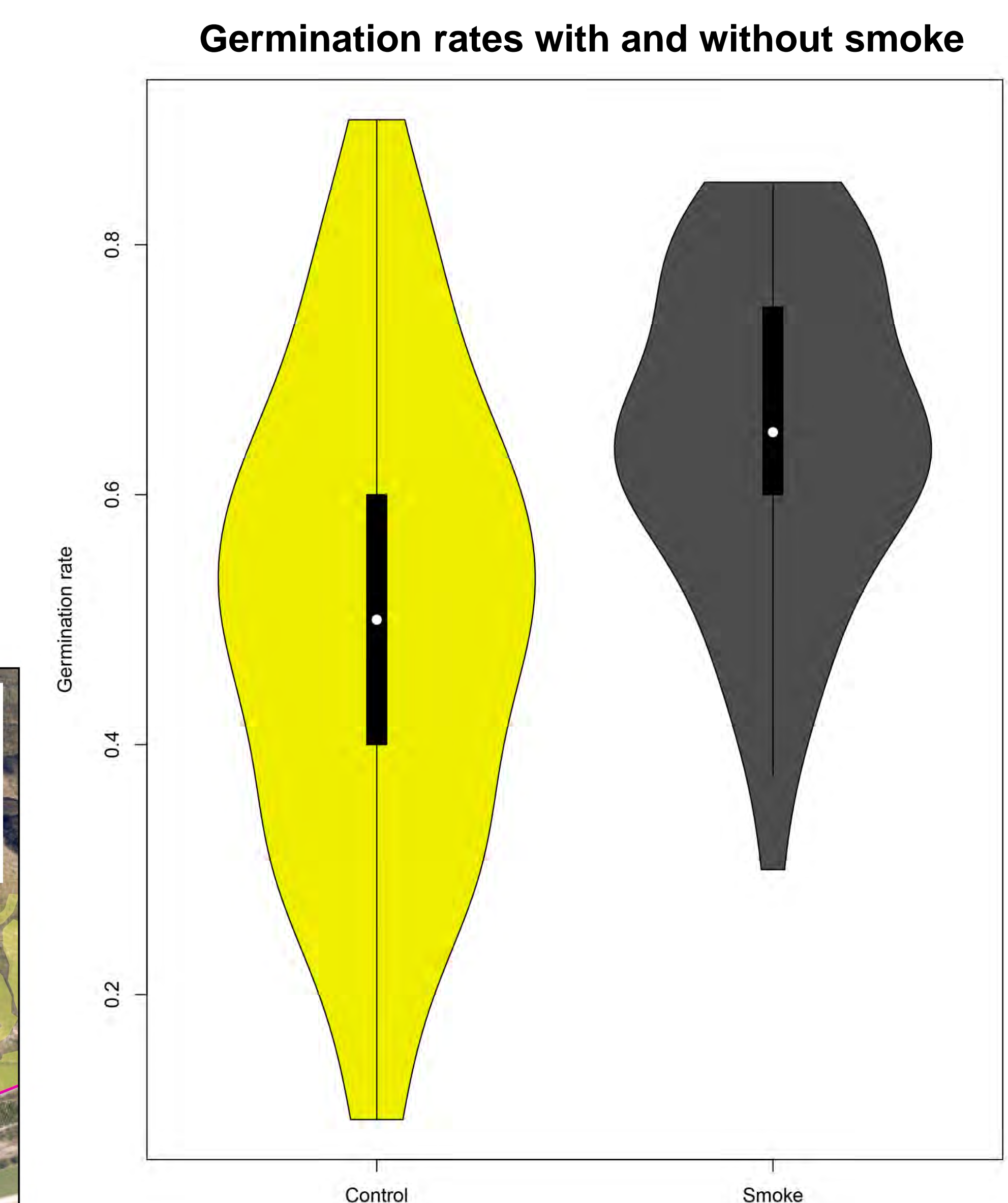


Fig. 4: Smoke treated seeds germinated significantly more than control seeds.