Arizona joins California in battling stinknet

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Summary

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Maricopa County

Stinknet, an introduced weed in Southern California, has rapidly proliferated in Arizona and is newly added to the Arizona State Noxious Weed List.



Stinknet lifecyle in Arizona

- A cool-season annual
- Germinates with the first significant cool-season rains
- Additional germination from the soil seed bank may occur during rainfall episodes through the winter
- After approximately two months small flower heads are initiated at the tips of bolting stems

Blooming stinknet plants

Introduction

Stinknet, *Oncosiphon pilulifer* (= *O. piluliferum*) is a winter-growing annual weed from South Africa. First documented in the United States in Riverside County, California in 1981, stinknet has spread to become a troublesome invasive plant in coastal Southern California. Dispersal into desert areas has been limited.

- It may require another month or more before the first flowers on these heads begin to open
- Seed maturation occurs as the yellow spherical flower heads dry out into tan spheres of equal size and shape
- The seed heads remain intact as the plants dry out and die at the end of the growing season
- Flower and seed phenology can be expected to be variable depending on germination date, temperature and rainfall at the site
- Seeds are tiny and lightweight, with the dried corolla often attached
- The dried corolla may aid seed dispersal in ways which are not obvious
- Wind, animals, vehicles and water all have potential to disperse the tiny seeds
- Stinknet seed heads are delicately held together
- Surprisingly, seed heads may remain attached and intact for many months, through wind and rain, and even into the next winter rainy cycle without dispersing seeds

Stinknet was documented in Arizona in 1997 and has quickly spread across Maricopa County in both urban and wild areas. In 2019, heavy winter rains caused a massive outbreak of stinknet in and around Phoenix, Arizona. This largely unfamiliar weed rose to public attention. Maricopa County Cooperative Extension has endeavored to learn more about stinknet's biology, avenues of spread, and methods for control.



Stinknet infestation north of Tonopah, Maricopa County, Arizona

 Stinknet's range of spread in Arizona is not contiguous with the plant's range in California, but range expansion continues in the Sonoran Desert region



Methods

Stinknet populations in Phoenix, AZ were monitored to track stinknet life cycle. Seed germination was studied under controlled conditions. Stinknet occurrence is being mapped by the SEINet Portal Network though observations and herbarium specimen documentation.

Stinknet distribution in Arizona (SEINet Portal Network, 2020)

References

Oncosiphon. SEINet Portal Network. <u>http://swbiodiversity.org/seinet/taxa/index.php?taxon=16250</u> Accessed 14 June 2020.

Stinknet: A Weed Advancing in Southern Arizona. 2020. M. Chamberland. August 2020, AZ1827. <u>https://extension.arizona.edu/pubs/stinknet-weed-advancing-southern-arizona</u>

Stinknet flower heads

Stinknet dry seed heads

Stinknet seeds