

2022 DELTA SCIENCE FELLOW **FACT SHEET**



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Focus Examining the species diversity, functional role and predator-prey dynamics of snakes along the Sacramento-San Joaquin River Delta

Award \$116,000

Research Mentor

Dr. Rita S. Mehta,
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Community Mentors

Dr. Brian Halstead,
US Geological Survey

PROJECT

This project seeks a thorough understanding of snakes along the Sacramento-San Joaquin River Delta, including species diversity, functional role, predator-prey dynamics, thermal physiology, and the thermal profiles of their microhabitats.

"As ectotherms in a warming world, the snakes of the Sacramento-San Joaquin River Delta may be living at the edge of their thermal optimum. This project aims to encourage public engagement and launch long-needed efforts to conserve some of the Delta's most complex and cryptic animals."

TIMELINE

2022-2023 Train team, prepare equipment and obtain necessary permits; place traplines at field sites for data collection, obtain thermal profiles of identified microhabitats and begin ongoing data collection.

2023-2024 Upload observations to iNaturalist to encourage public engagement; analyze and present preliminary data at a scientific conference; analyze final results and prepare for publication.

IMPACTS

Occupying a middle position in the Delta's food web, snakes play a role in controlling invasive pests. Yet some native snake species are threatened or in population decline. Since these vertebrates are understudied, insights from this project could both help conserve native species and control invasive ones from proliferating.

