

Looking back 20 years. Looking forward 20 more.

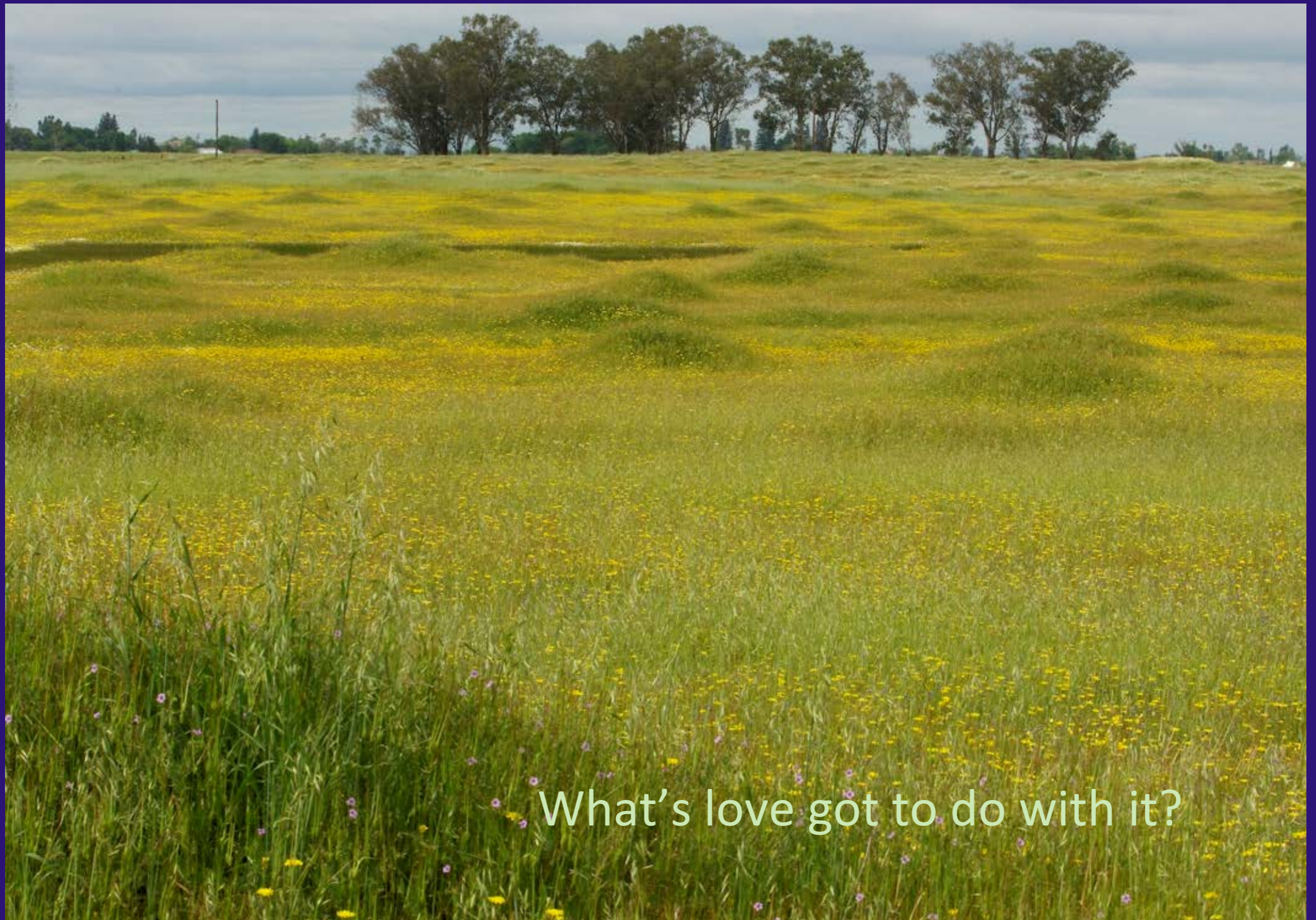


Helping children value their natural world through science education and outdoor exploration.

Sacramento Splash and Vernal Pools



Turning kids into conservationists

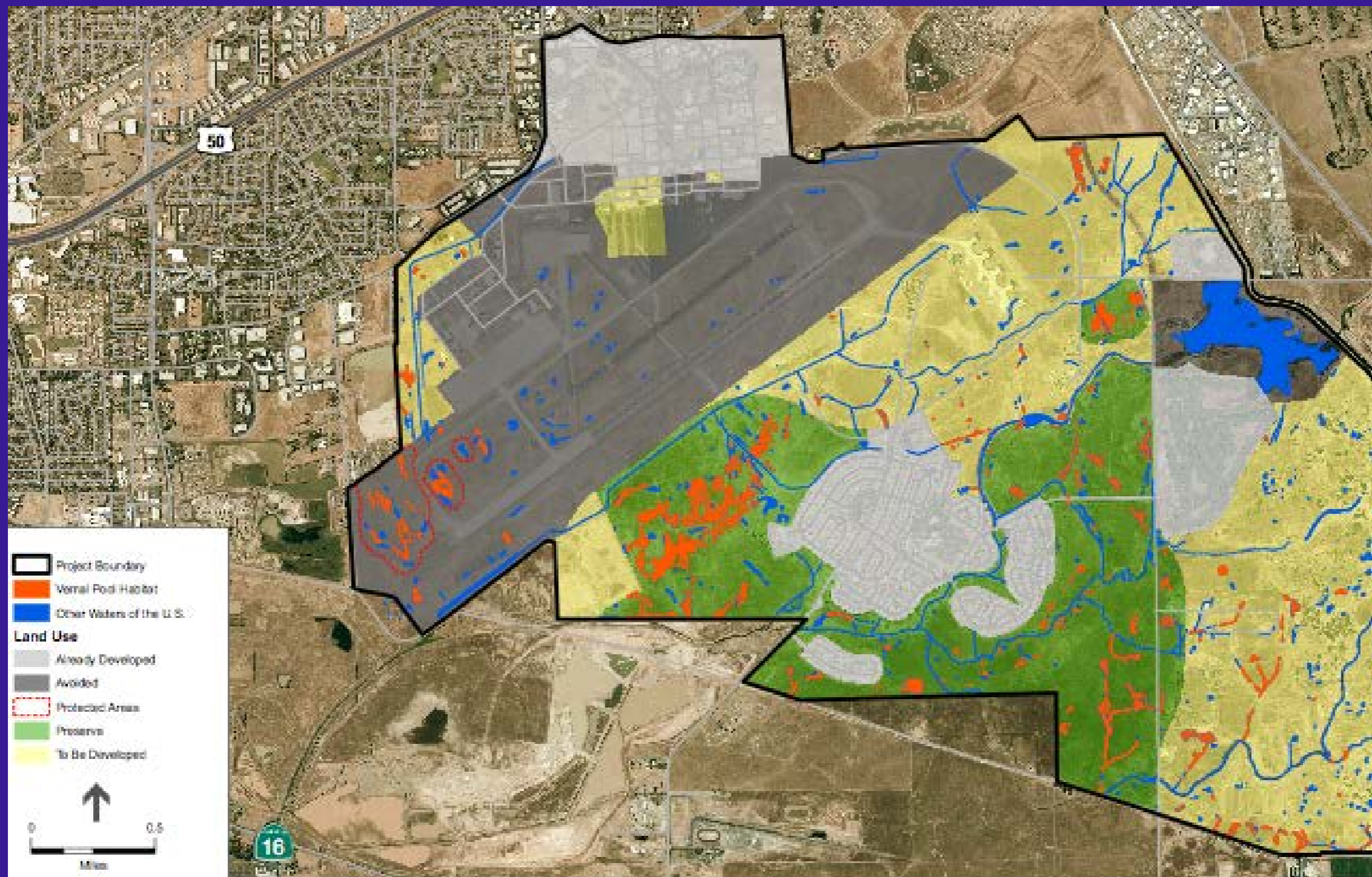


What's love got to do with it?

+1



Mather Field













Bruce J. Russell
BioMEDIA ASSOCIATES



larva





SENSITIVE HABITAT
Protect Our
Vernal Pool Grasslands



S.C.O. 9.36.065(a) - No Motor Vehicles
S.C.O. 9.36.066(7) - No Bicycles Off Trail



Science is Our Stories



Experiential Learning



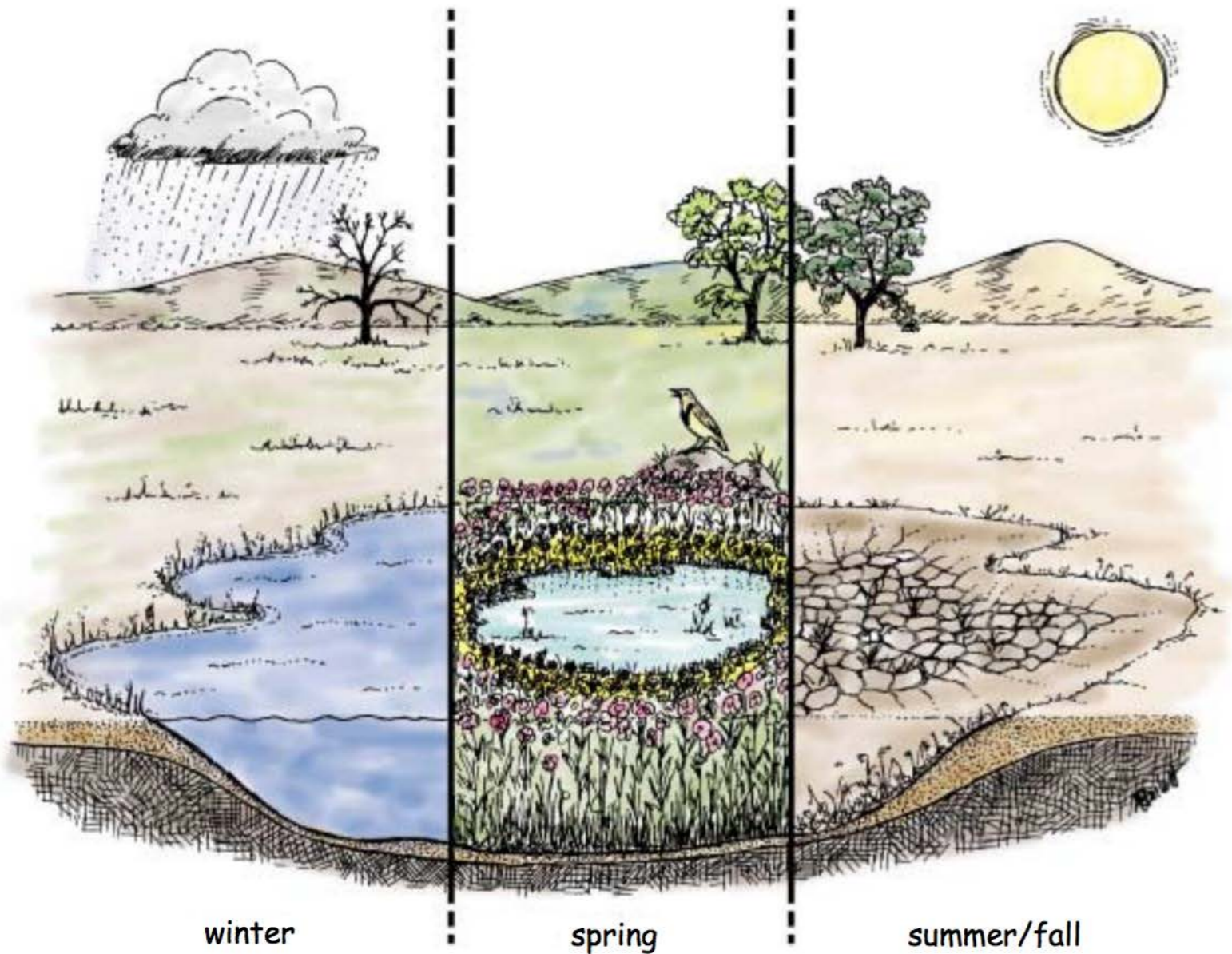


Stories Weave
Together



Life in Our Watershed

Investigating Vernal Pools



Critter Catalog

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Special Illustrations

Arthropod Body 16

Water Mite



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© David Rosen

common name: Water Mite

scientific name: *Hydrachna* species

phylum: Arthropoda

subphylum: Chelicerata

class: Arachnida

order: Acarina

family: Hydrachenellae

habitat: vernal pools, other ponds and slow moving streams

size: 2 to 3 mm long

description: Several species of Water Mites live in vernal pools. The most obvious one looks like a fat spider with a bright red, round body. It has eight small legs attached near the front end of its body. You can find the adult swimming on the surface of the pools, or scrambling around eating plants underwater.

fun facts: The larva of this red species of Water Mite is a **parasite** on the Water Boatman. The Water Boatman is a common insect in vernal pools. The Water Boatman helps the Water Mite larva in two ways. It shares its energy and provides a free taxi service. The Water Mite larva attaches to a Water Boatman and sucks out some of its body fluids for energy. When a Water Boatman flies to other vernal pools, it carries the Water Mite larva along. One Sacramento scientist collected 100 Water Boatmen from a vernal pool. He marked each one with a tiny drop of nail polish. Two weeks later, he found two of the marked bugs in a vernal pool 70 miles away! Any Water Mite larvae on those two Water Boatmen got a long ride to a new vernal pool.

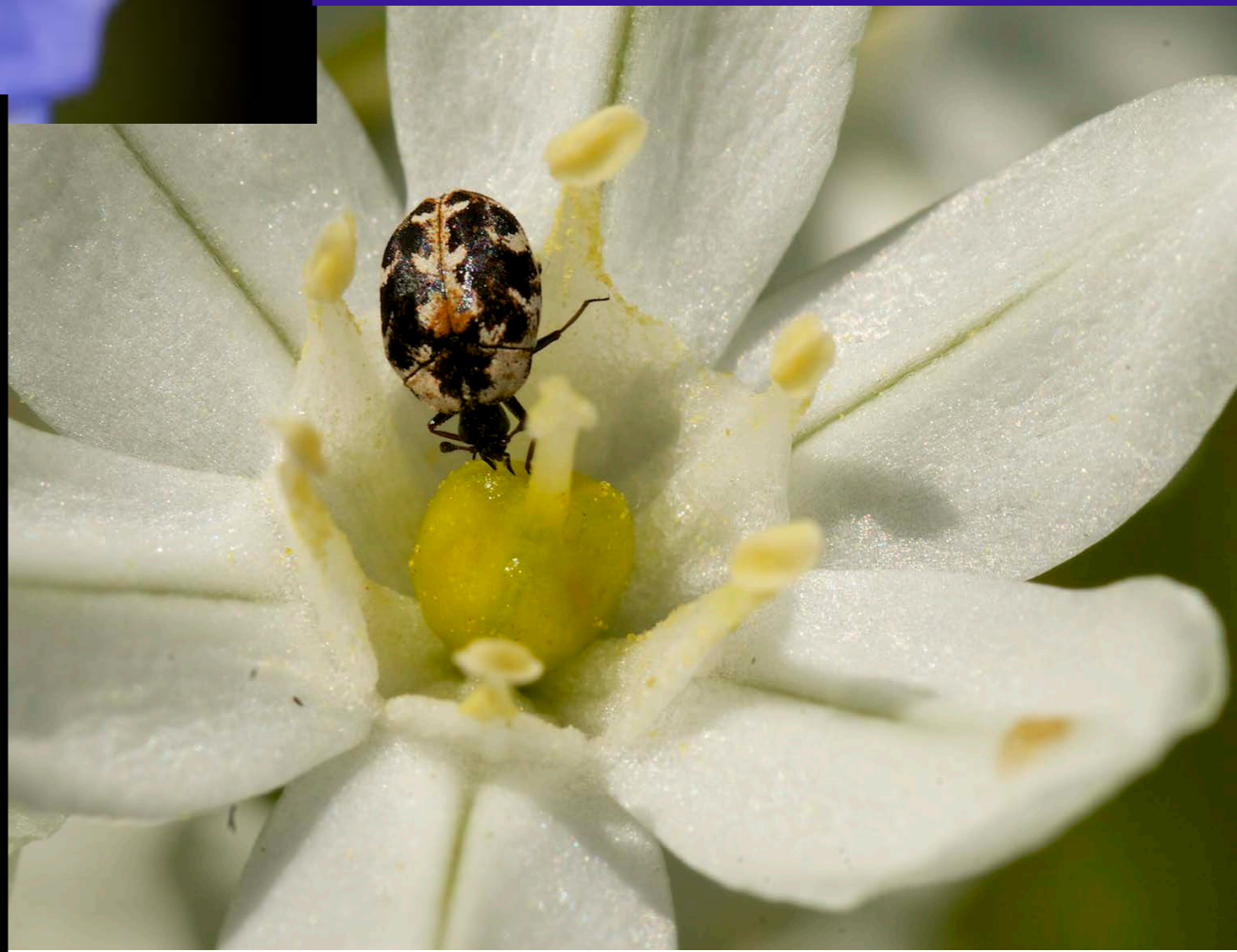
Christopher Rogers

Carol Witham





Alvin Ludtke



Bruce Russell

Flatworms

common name: Flatworms

scientific name: many species

phylum: Platyhelminthes

class: Turbellaria

habitat: vernal pools, vernal swales and freshwater marshes

size: 0.5 mm to 1 cm long

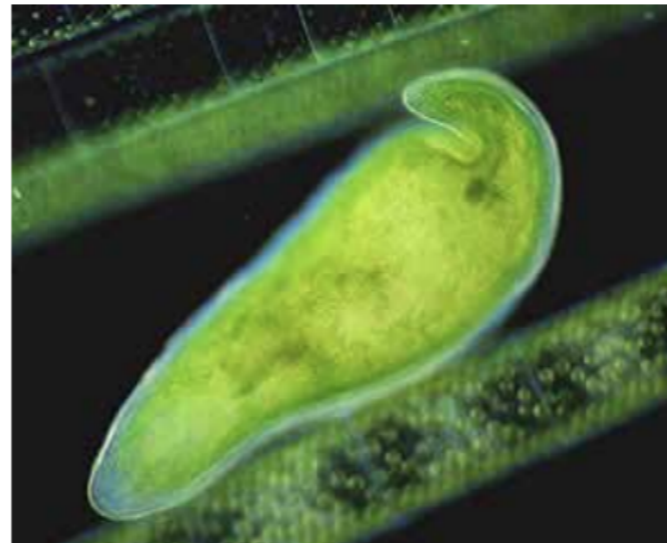
description: Although they are called Flatworms, these invertebrates are not flat. They are round-bodied with a flat belly. They are longer than they are wide. They are pointed at each end. Most Flatworms have at least two eyespots close to the head end of the body.

At least 20 species of Flatworms live in vernal pools. Three species are easy to find in the Sacramento's vernal pools. The first Flatworm, *Mesostoma*, is **translucent** and white. The second Flatworm is translucent and green. It has green algae living in its body. The third Flatworm is dark brown and blotchy or **mottled** on its upper side.

fun facts: A Flatworm has a single opening to its stomach, in the middle of its underside. The Flatworms in vernal pools can stick this pharynx (throat/mouth) into their prey. Like a short vacuum cleaner hose, it sucks out the insides of their prey. They also use it to push wastes out of their bodies.



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Dragonflies and Damselflies

common name: Dragonflies and Damselflies

scientific name: many different species

phylum: Arthropoda

subphylum: Insecta

class: Odonata

order: Anisoptera (Dragonflies), Zygoptera (Damselflies)

habitat: all freshwater wetlands including lakes, ponds, marshes, streams, rivers and vernal pools

size: 2.2 to 8.0 cm long (adults)

description: The adult Dragonfly has a long narrow body. It holds its wings out to its sides when perched. Dragonflies also have very large eyes that touch each other in the center. Different species may be different colors: red, green, blue or brown.

The adult Damselfly is similar, but holds its wings together over its back (like a butterfly) when perched. Its eyes do not meet in the middle of its head. Damselflies are also much smaller than Dragonflies. The Damselflies at Mather Field are usually blue or blue-green.

Both Dragonfly and Damselfly **larvae** are aquatic. The larvae have large eyes similar to the adults. The Damselfly larva has a long narrow body with three feather-like tails which are its gills. The Dragonfly larva has a fatter body and no external gills.



Adult Dragonfly © Ken Davis



Dragonfly larva © Ken Davis



Adult Damselfly © David Rosen



Damselfly larva © David Rosen

Greg Kareofelas



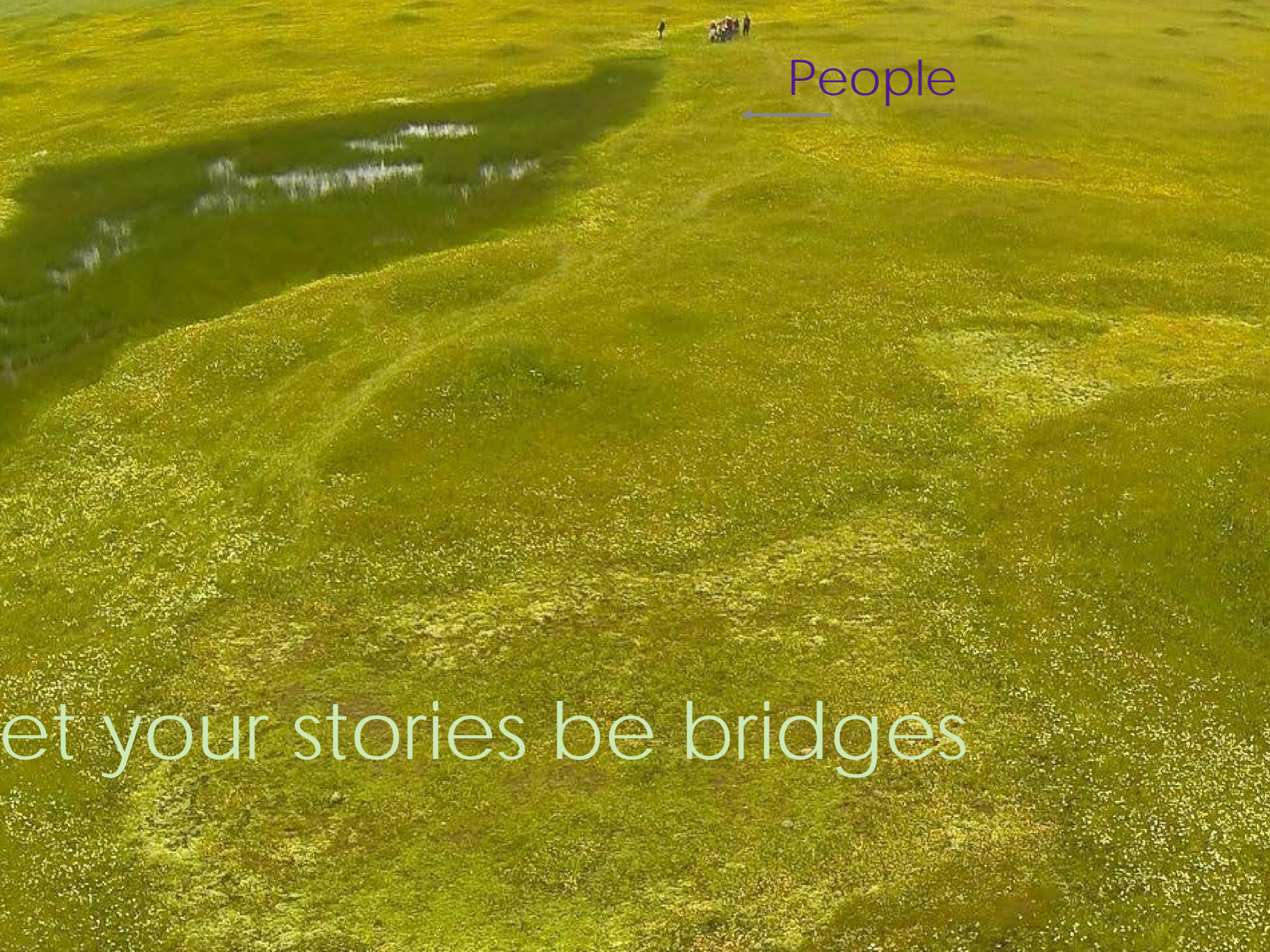
Share
New Discoveries



All connection starts with one.



Eastern Tiger Salamander



People



et your stories be bridges



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