

September News from Sedgwick Reserve

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Event Announcement

In Person Event

Full Moon Hike

Saturday, October 8th

5:45PM-7:45PM



Join Sedgwick docents for a full moon* hike which begins and ends at Sedgwick's field station and provides beautiful views of the Reserve under a moonlit sky. Climb a set of steep steps to the Observatory Overlook in time to enjoy a view of the rising moon. Then enjoy a descent hike into Sedgwick's Bone Canyon as look for wandering tarantulas and fluttering bats. The hike is 1 mile and rated easy+ for a steep set of stairs to ascend and a 75-foot elevation decrease on the way back. Wear sturdy shoes. The walk back will be dark, so bring a flashlight or headlamp!

This program is family friendly. Space is limited, reserve your spot today!

**Technically, Saturday is the day before the full moon but at 98% it will still appear full to the naked eye!*

[Register for the Full Moon Hike Here](#)



October is peak tarantula season, so it is a great opportunity to see these amazing creatures in action

Virtual Seminar

Part of the UCSB Natural Reserve System Fall 2022 Seminar Series

"SHIFTing of the seasons: Tracking ecosystem phenology with airborne measurements."

***Tuesday, October 18th
7PM-8PM***



Dr. Dana Chadwick
Scientist
NASA Jet Propulsion Laboratory

Come hear Dr. Dana Chadwick share exciting new Sedgwick research testing instruments and algorithms for NASA's planned Surface Biology and Geology (SBG) mission

**Register for Dr. Chadwick's Talk
Here**

Save the Date

Sedgwick's Annual Barn Dance

Saturday November 5

3PM



Don your best Western wear, kick up your heels, and join us for the annual Barn Dance at Sedgwick Reserve. This is a special year as Sedgwick Reserve celebrates its 25th Anniversary.

Registration coming soon!

Research News

***The 'Cricket Crew' Returns to Sedgwick
for an eighth year of fieldwork***



Caroline Williams is a professor of Integrative Biology at UC Berkeley where she runs a lab on the evolution of metabolic physiology in ectotherms. In other words, the lab studies how energy-providing processes throughout the body evolve in cold-blooded species. Her lab is particularly interested in insects. At Sedgwick, they study the variable field cricket (*Gryllus lineaticeps*) to understand how insect flight evolves and is maintained despite being so costly.



Above: Gryllus lineaticeps, the Variable field cricket

The Sedgwick crickets are ideal to answer this question because they have what is known as a flight polymorphism, meaning that two different forms or morphs of crickets exist in the population: one with long wings that can fly, and one with short wings that cannot fly. The short-winged crickets benefit from being able to reproduce early, and the long-winged crickets benefit from being able to fly long distances to find food or mates. Williams' lab is looking at how the metabolism, physiology and genes differ between long-winged and short-winged crickets, so that we can understand how changing environmental conditions might impact

the loss or gain of flight.



Checking the pitfall traps

The team catches crickets using pitfall traps near the pond. Buckets are buried so that the open container is level with the ground in hopes of crickets falling in. To attract crickets, they put a small speaker that plays a mating song in the container, which then attracts crickets to the traps. The crew also walks transects with headlamps at night (along with the tarantulas and coyotes!) and collects cricket for experiments and to take back to their lab colonies at UC Berkeley.



Cricket racetrack on the Sedgwick Patio

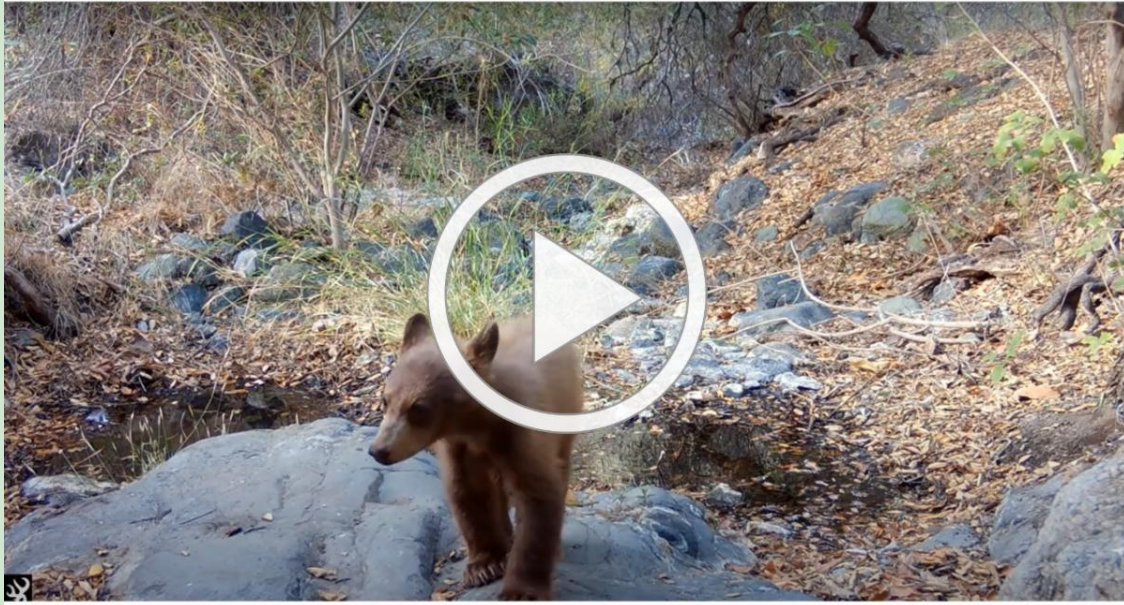
This year, they also compared the running speeds of crickets at different temperatures using a "cricket racetrack" on the Sedgwick patio. The patio transformed into a "red-light district" at night, as they watched cricket behavior under red head lamps.

It is fascinating research and we were thrilled to host the eighth year of this international, multi-university collaboration at Sedgwick Reserve!

Wildlife News

Female resident black bear returns to

Sedgwick with cub



Researcher Grant Canova-Parker recently shared an amazing clip of a cub and mama bear taken from a trail camera at Sedgwick Reserve.

This resident female black bear brings her cub to Sedgwick in even numbered years. Why only in even years? Female black bears generally give birth every two years to litters of one to four cubs. The cub(s) will stay with the mother for about a year and a half, during which time the female will not produce another litter.

As you may notice in the video, the mama bear's coat looks patchy. This is typical in late spring and into the summer. Her coat will continue to fill out over the course of the year and by late fall she will look much better.

Little is known about the black bears of Sedgwick Reserve outside of the long-term camera monitoring undertaken by Grant as part of the *Where's the Bear* project spearheaded by Dr. Chandra Krintz, trail cameras installed by Alicia Fox as part of a Zoology Field Study Methods course at Alan Hancock College, and a series of trail cameras installed by Sedgwick staff. We welcome researchers to help us better understand the population and their behaviors!



Welcome to all the new research projects that began at Sedgwick this Summer:

"AVIRIS-NG SHIFT Plant Disease Validation." Kaitlin Gold, Ryan Pavlick, Fernando Romero Galvan, Ertai Liu, and Kathleen Kanley. Cornell and Jet Propulsion Laboratory.

"Behavioral observation of *veromessor andrei* colonies." Noa Pinter-Wollman and Robert Kunst. UC LA.

"**CALeDNA Wildfire Risk: Pre Fire Season Soil Sampling.**" Cali Gallardo, Rachel Meyer, Wendy Bussiere, and Dora Rasch. UC Santa Cruz.

"**Climate Sensitivity and Source Water Use by Riparian Groundwater Dependent Ecosystems in Coastal California.**" John Stella, Yun Zhao, Koa Nguyen, and Rachel Pentico. SUNY and UC Santa Barbara

"**Grassland drought strategies.**" Jennifer Funk and Brooke Wainright. UC Davis.

"**Investigating effects of grazing on grassland root production and soil carbon.**" Jacob Weverka, Josh Schimel, Ruby Harris-Gavin, and Maximilian Ochoa. UC Santa Barbara.

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