

## *News from Sedgwick Reserve*

Greetings!

I am reminded of autumn's arrival as every acorn falls on a tin roof of Sedgwick's maintenance yard, sending a resounding "knock" across the field station. Fall is in the air. It is my favorite time of the year at Sedgwick.

Despite the pandemic that has quieted much of the human activities normally taking place at the Reserve in fall quarter (such as the barn dance, which we will all miss very much!), I am comforted by sights and sounds of the natural world carrying on. Tarantulas are making their slow and deliberate annual forays to look for mates, four-legged animals from mice to black bears are busy hoarding acorns and preparing for the winter ahead,



*Nikki and her pup Murphy*

We are ecstatic to announce the addition of Dr. Nicole Evans to the Sedgwick staff. You'll pick up on Nikki's zeal for science in this and future newsletters, which Nikki is excited to send out seasonally.



and the fall migration of white crowned sparrows and other songbirds enliven the landscape.

We look forward to seeing you again soon - whether at a Zoom lecture, volunteer work day, or out relishing in nature - all socially distancing of course.

All best,  
Kate McCurdy  
Sedgwick Reserve Director

While there remains no certainty about the future and what it holds for any of us, we are planning 2021 with optimism. Stayed tuned for news on future programs, ways to stay engaged and opportunities for continued education!

## *Research Burn at Sedgwick*

On October 21, a one-day research burn was conducted at Sedgwick Reserve. The lead researchers, Matthew Shapiro, Livestock and Range Advisor with UC Agricultural and Natural Resources Extension, and Frank Davis, Director of La Kretz Research Center, are seeking to understand how fire behavior is affected by the type and density of rangeland vegetation. In other words, “How low is low enough to reduce wildfire risk on grazed lands?” The answer to this question can provide the opportunity for more precise and effective land management. Research conducted after the burn will look at how fire intensity affects the health of microbial organisms in the soil, the building blocks of healthy soil and hence healthy plant and animal life. Research on fire behavior is vital to help reduce fire hazards and improve ecological resilience for the working lands of central California.

The prescribed burn was planned and coordinated by the Santa Barbara County Fire Department with Santa Barbara County APCD, San Luis Obispo County APCD, San Joaquin Valley APCD, Ventura County APCD, and the California Air Resources Board in order to minimize impacts on air quality on surrounding communities.

### **Measuring Fire**

Some of you might be wondering: How do you measure fire? Here are a few ingredients:



*Camera-equipped drones helped capture data for the recent fire study*



***TOMORROW!***  
***Thursday,***  
***October 29th at***  
***7PM PT***

UCSB Natural Reserve System's

Drones, thermal paints, stopwatches, cameras, tape measures, and a *lot* of research assistants.

Drones were flown overhead during the fire to document the rate and severity of the burn.

Placed in the plots were aluminum tags painted with thermal paints (e.g. Temilaq) that degrade at specific temperatures in order to correlate the fire severity results from drone imagery with on the ground temperature maximums. The study site was divided into plots of varying grassland heights, and separated by mineral soil buffers to isolate fire effects to specific plots.

As each plot burned, assistants with stopwatches timed how long it took the fire to reach the next ten meter post. Photos were also taken at each ten meter post. Additional data such as wind speed and direction, and relative humidity were collected throughout the burn. The result is a robust picture of fire behavior that can begin to shed light on patterns.

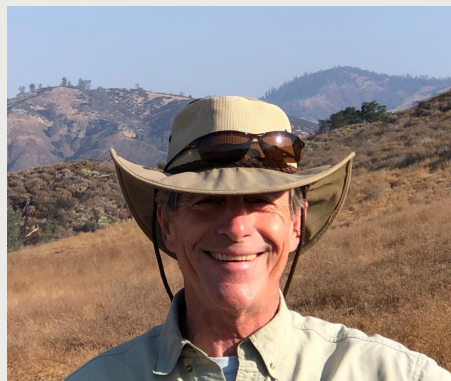
In a landscape of increasing fire potential in the wildland-urban interface, we need more than the existing anecdotal evidence to learn to safely co-exist. Despite the familiarity and firsthand experience many people in this part of the country have with fire, anecdote cannot replace the information revealed by systematic measurement about possible causes and preventative measures in the spread of wildfire. Ultimately, the multiple projects that constitute this research will help land managers and livestock operators by furnishing them with precise, quantified recommendations for reducing fire risk through optimal grazing levels, while also supporting the ecological health of their lands.

Fall Seminar Series presents some of the latest research and findings from across UCSB's seven Natural Reserve System sites.

On Thursday, October 29th **Dr. Frank Davis**, Director of La Kretz Research Center located at Sedgwick Reserve will be presenting, "***The Recent Past and Projected Future of Oak Savannas of the Santa Ynez Valley.***"

Join us on Zoom for this free, informative and suitable-for scholars-of-all-ages lecture. If you have never attended a lecture by Frank Davis, you are in for a treat!

[Register Here](#)



---

## ***Paving the Way for Future Fire Researchers***

The future of fire research relies on the minds and perseverance of the younger generations. The recent research burn has helped to support multiple young professionals and academics who work on agroecosystems and fire ecology. Neighbors and stakeholders around Sedgwick have been very supportive in seeing this project through, as it has implications for improving all of our lives. We would like to provide a special thanks to Sedgwick supporters for their contributions to graduate student fellowship funds, and in helping to provide this opportunity for the future generation of land managers and scientists.





## *Preventing Window Collisions at Sedgwick*



**Between 365 million and 988 million birds are killed each year in the United States due to window collisions.** Most of these collisions occur during the daytime, when birds fly towards reflections of the landscape (sky, trees, etc.). It can also happen when birds see potted plants inside a building or they see straight through to sky on the other side. At night, they may fly into a window because they are attracted to the light inside. Anyone who has seen the aftermath of a window strike knows it is not a pretty sight. Because of their high speed, many birds do not survive a window strike.



All of us can play a role in protecting our avian friends, and the solutions are actually quite simple! Placing markers, such as decals, images, and blinds help signal to the birds that they cannot fly through. Many options exist and the **American Bird Conservancy** has rated most: (<https://abcbirds.org/get-involved/bird-smart-glass/>)





At Sedgwick, the energy efficient windows of the Tipton Meeting House and large pane windows in the ranch house have proven to be difficult for the birds to navigate around.

Plans are underway to install decorative film over the windows but it will cost several hundred dollars each. If you would like to donate to this cause, we'd be appreciative! Please click on the **Give to Sedgwick** button to below to make an online donation, or mail us a check made out to the UC Regents / Sedgwick Reserve /Bird Safety in the memo line.

***Give to Sedgwick***

## ***The Phainopepla***



A small group of dedicated birders continue to contribute to Sedgwick's eBird database. In honor of Halloween, we are sharing this image of a Phainopepla (*Phainopepla nitens*) taken by Peter Schneekloth on October 7. The phainopepla (pronounced *fay-no-pep-luh*) is best identified by its large crest, the glossy black coloration of the males, and its bright red irises. While this bird

has a Halloween feel, it lives year-round in this part of California, where it thrives primarily on berries of the parasitic mistletoe, eating hundreds a day, and supplementing with other berries and insects.

*Sedgwick Reserve depends on the support of our donors to fund our **docent program**, support **researchers**, and offer community-focused **public events**. Your gift ensures our ability to continue supporting world-class research and education with global impact. Click **here** to support Sedgwick today!*