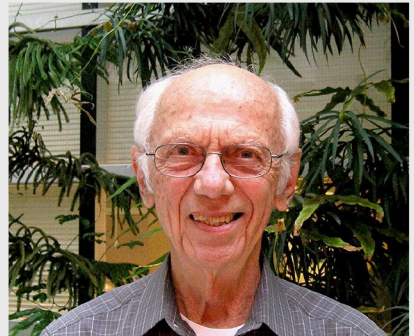




## In Memoriam - [William Lidicker 1932-2022](#)

UC Berkeley Emeritus Professor, MVZ Curator of Mammals

Our dear friend and colleague William (Bill) Lidicker passed away April 27, 2022. Bill received his BS from Cornell University in 1953 and his PhD from the University of Illinois in 1957. That same year, he took a position as Instructor in Zoology at UC Berkeley. He was subsequently hired as an Assistant Professor in Zoology and Assistant Curator of Mammals in the Museum of Vertebrate Zoology in 1959. He quickly rose through the ranks to Professor, and he remained at Berkeley for his entire career. He married his wife, Louise, in 1989. Bill was widely known for his work on mammals, and he made major contributions to ecology, population biology, and conservation. He served as President of the American Society of Mammalogists. [Details of Bill's contributions to science can be found in a biography published this spring in a special issue of \*Therya\*.](#) Bill was a kind and loved member of our community, and we will miss him deeply.



# Featured Publication

MVZ Graduate Student Emilie Richards and Assistant Professor Chris Martin  
**Adaptive Variation Provides Bridge to Novel Ecological Specialists**

In the spring issue of *Proceedings of the Royal Society B* former MVZ graduate student Dr. Emilie Richards and Assistant Professor Chris Martin describe a new 'intermediate' wide-mouth scale-eater ecomorph in the pupfish adaptive radiation in the Bahamas using morphological and dietary analyses, and use whole genome resequencing data to investigate their evolution. By comparing the timing of hard selective sweeps on shared and unique genetic variation in each specialist, they show how this variation can provide a bridge for multiple species to access novel ecological niches.

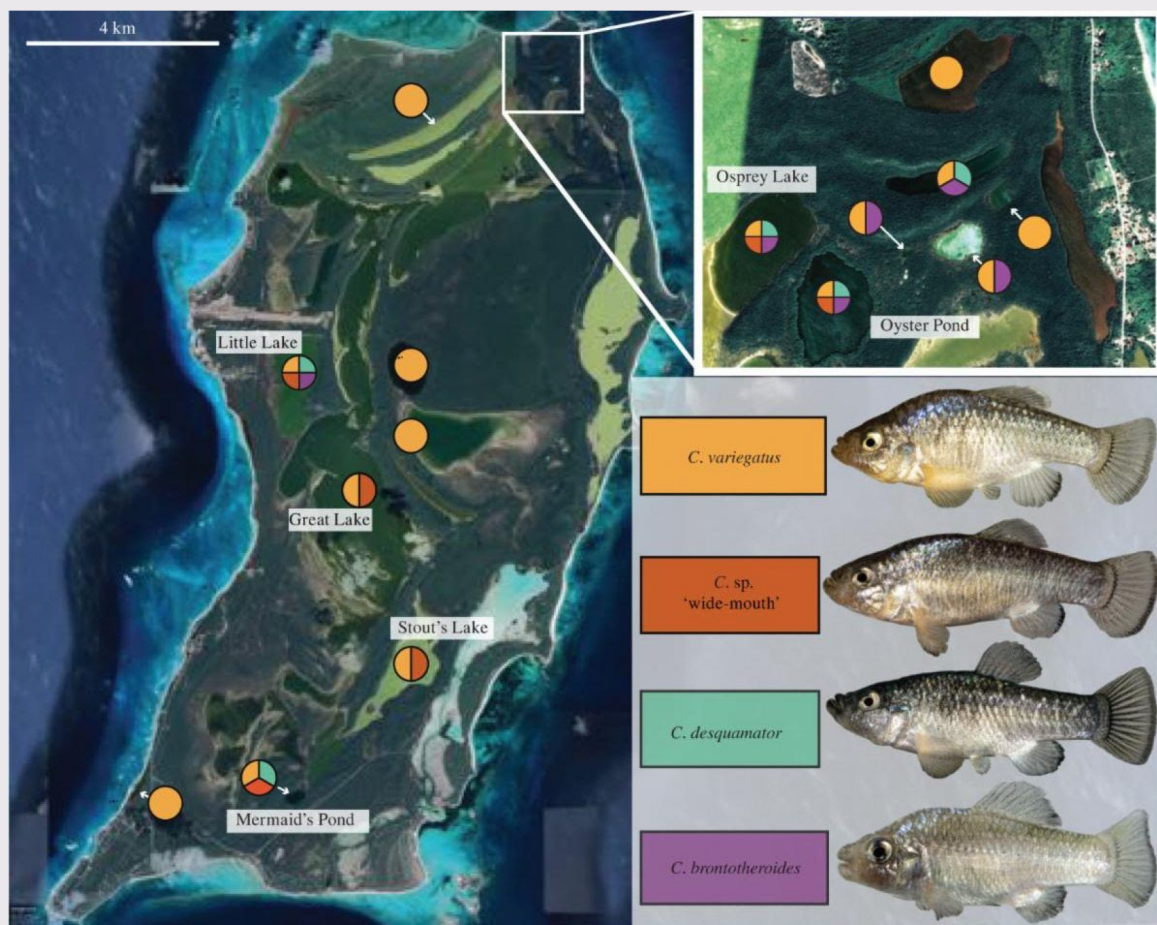


Figure 1. The SSI radiation of pupfish. Pie charts indicate the presence of sympatric *Cyprinodon* species in each lake and are colour coded with representative pictures of generalist *C. variegatus* (gold), recently discovered *C. sp. 'wide-mouth'* ecomorph (red-orange) with intermediate jaws, scale-eater *C. desquamator* (teal) with the largest oral jaws, and molluscivore *C. brontotheroides* (purple) with characteristic nasal protrusion. Labelled lakes contain all known *Cyprinodon* populations on the island that were sampled for this study. Satellite image from Google Earth.

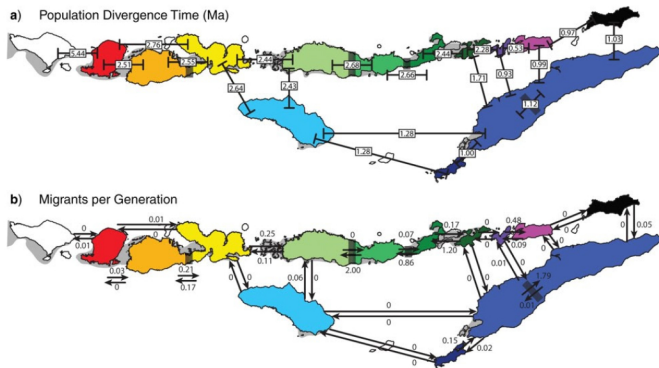


# Recent Publications by MVZ Researchers

Former MVZ Graduate Students Sean B. Reilly and Alexander Stubbs, Graduate Student Benjamin Karin, Postdoc Umilaela Arifin, Researcher Ke Bi and Professor Jim McGuire  
**Effect of Historic Geological and Oceanographic Conditions on Lesser Sunda Flying Lizards**

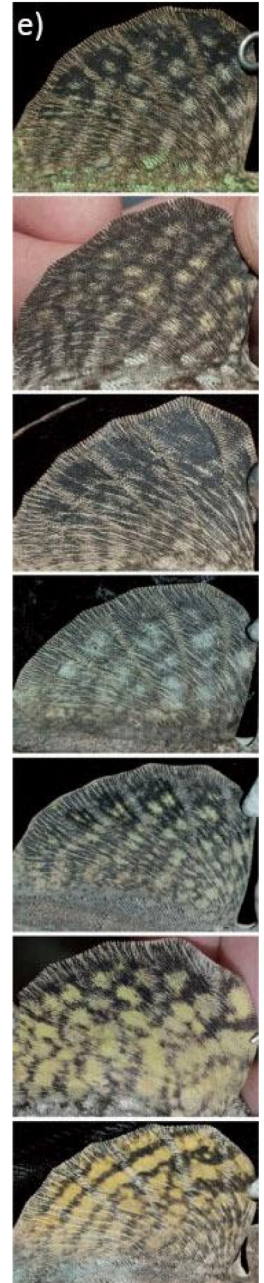
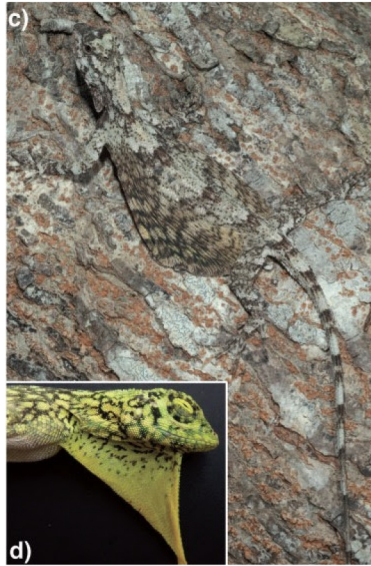
In a recent paper in *Systematic Biology*, current and former members of Dr. Jim McGuire's lab present the results of their phylogenomic and biogeographical analysis of flying lizards (genus *Draco*) endemic to the Lesser Sundas Archipelago of eastern Indonesia. The team analyzed a 1200-locus genomic data set together with complete mitochondrial genome data for more than 100 flying lizards sampled across every major island in the Lesser Sundas. They found that there are several additional

undescribed cryptic species in this assemblage beyond the two currently named taxa, and that flying lizards colonized the archipelago via a series of independent overwater dispersal events including an initial jump across the famous Wallace Line. Furthermore, while they made the expected discovery that many islands are inhabited by distinct species, they also found species boundaries within islands - suggesting that these islands represent composites assembled by the amalgamation of once-isolated paleo-islands, and that it was the paleo-islands that were first colonized by *Draco* lizards.



c) Female *D. boschmai* from Sumba Island. d) Male *D. boschmai* from West Flores.

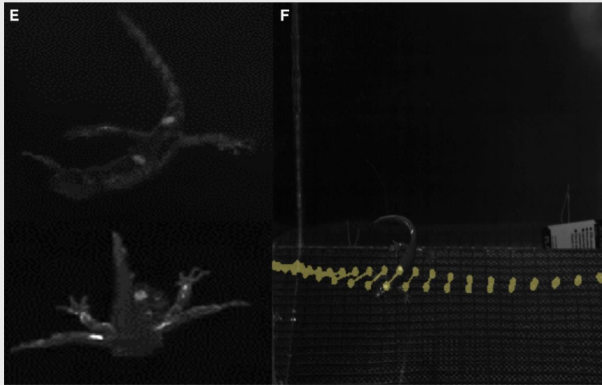
e) Variation in male dorsal patagia pattern and coloration. Top to Bottom: Lombok, East Sumbawa, Sumba, West Flores, Alor, Wetar, West Timor. Map: Demographic estimates of a) population divergence time in millions of years, and b) migrants per generation.



MVZ Affiliated Professor Robert Dudley and Graduate Student Erik Sathe

## Skydiving Salamanders of the Redwoods

Wandering salamanders (*Aneides vagrans*) live their entire lives in the crowns of California's coast redwoods, and have adapted to the dangers of falling from high places by honing their ability to parachute, glide and maneuver in mid-air. In a recent paper in [\*Current Biology\*](#) MVZ Affiliated Graduate Student Erik Sathe and Affiliated Professor Robert Dudley reveal the aerial dexterity of the salamander by using high-speed video footage taken in a wind tunnel at the UC Berkeley Flight Lab.



e) Stereotypical skydiving posture exhibited by *A. vagrans* while parachuting from frontal (top) and side (bottom) views. (f) Image of *A. vagrans* gliding in the vertical wind tunnel.



Wandering salamander, *Aneides vagrans*, is about 4 inches long and lives its entire life in the crowns of redwood trees more than 150 feet above the ground. Photo by Christian Brown.



Video of a wandering salamander leaping from perches in the crowns of redwood trees. Video courtesy of Christian Brown.



# MVZ Community News

MVZ Staff Curator Carla Cicero

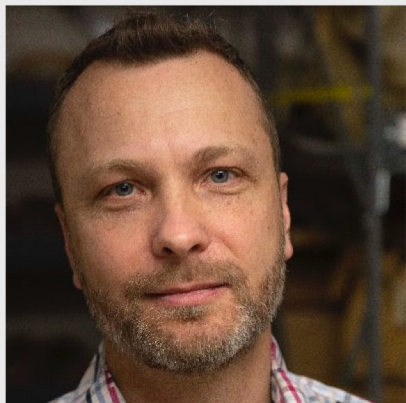
## **After 30 Years Staff Curator of Birds Carla Cicero is Flying the Coop**

Staff Curator of Birds Carla Cicero started her career at the MVZ in 1993 after completing both her BS and PhD at UC Berkeley. Over the course of her career at the MVZ, Carla has prepared over **5,000 bird specimens for the museum**, mentored hundreds of students and pursued her own research on populations of birds and how they vary in morphology, genetics, song, and/or ecology. In this next chapter Carla will continue her research and service with organizations like the American Ornithological Society. We will miss Carla and wish her all the best in her retirement.



MVZ Affiliated Professor Rasmus Nielsen

## **Nielsen Elected to Academy of Sciences**

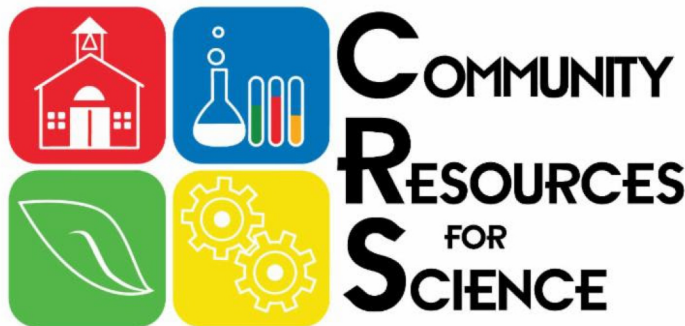


MVZ Affiliated Faculty Rasmus Nielsen was one of six UC Berkeley faculty members elected this spring to the National Academy of Sciences (NAS) in recognition of their distinguished and continuing achievements in original research. Nielsen's lab works on the development and application of statistical and computational methods for analyzing genomic data in the context of evolutionary genetics, population genetics and medical genetics. The NAS has a total of 2,512 active members and 517 international members.

# MVZ Graduate Student News

MVZ Postdoc Umilaela Arifin

## Inspiring the Next Generation of Scientists



This past spring MVZ postdoc Umilaela Arifin participated in the Community Resources for Science (CRS) "Be a Scientist" program in two middle schools in Berkeley. CRS's goal is to help teachers give students more opportunities to "do science" - to ask questions, test ideas, get their hands on real science activities in the classroom. The program specifically targets elementary and middle school children, particularly in schools serving underrepresented minority and low-income communities in East Bay. Umilaela's role was to guide a small group of 7th grade students in designing and running a science experiment of their choosing. One group of students conducted the "Elephant Toothpaste" experiment to learn how different concentrations of hydrogen peroxide could influence the height, volume, and time of a reaction. For Umilaela the program offered an opportunity to improve her outreach and communication skills and most importantly inspire the next generation of scientists!





## In Memoriam



### Marshall White (1939-2022)

Generous friend, colleague, and longtime MVZ supporter Marshall White of Kensington passed away May 11, 2022. Marshall graduated from Humboldt State with a BS and a Master's in Wildlife Management. His PhD from Purdue University focused on growth & survival rates of white-tail fawns in South Texas. He was a Lecturer in the U.C. Berkeley Wildlife Management group led by A. Starker Leopold and a Research Associate in the Museum of Vertebrate Zoology. For 14 years he was Assistant Director of the University's Sagehen Creek Wildlife Station in the central Sierra Nevada, where grad students and faculty conducted ecological research. Marshall served as editor of the California Department of Fish and Wildlife's five-volume California Wildlife Habitat Relationships System, which is still available online. He helped to establish and served on the MVZ's external advisory board. Marshall was a stalwart supporter of the museum and its mission and he will be deeply missed.



### Support the MVZ

To sustain our leadership in discovery and understanding of vertebrate diversity, and to protect the collection for future generations, we depend on donations. Any gifts, large or small, make a difference.

**MAKE A GIFT**

[Museum of Vertebrate Zoology](#) | [mvz@berkeley.edu](mailto:mvz@berkeley.edu) | [Newsletter Archives](#)

Banner Image by Jackie Childers, 2022.

*During a visit to Pinnacles National Park this past spring, Dr. Rauri Bowie and the Ornithology class (IB174) got to see one of the rarest birds in the world, the California Condor. Here a male Green No.00 (middle) chases off a rival suitor, male Pink No.27 (left), away from his mate Female 726, a.k.a. "Little Stinker" (right).*

