

Mr. McNally studied zoology at the University of California, Santa Barbara, and earned a Master of Science in Biology studying amphibian ecology and conservation at San Francisco State University. He has over 10 seasons of field work in wildlife surveying in addition to laboratory and academic research. He has a thorough knowledge of biodiversity and conservation issues in California and the Western United States, from oceans to deserts to alpine ecosystems.

He has broad field experience in surveying, monitoring, and research involving threatened, endangered, and special-status species. Species include California-red legged frog (CRLF), Yosemite toad, Sierra Nevada yellow-legged frog, southern mountain yellow-legged frog, California tiger salamander (CTS), Santa Cruz long-toed salamander, giant garter snake (GGS), San Francisco garter snake, western pond turtle, salt marsh harvest mouse, northern goshawk, northern and California spotted owl, sandhill crane, western bumblebee, Paiute cutthroat trout, Lahontan cutthroat trout, and western pearlshell mussel. **He has conducted work with 10(a)(1)(A) biologist: Sean Dexter (TE#09196C-0 – Branchiopod sp., CTS and CRLF), with CTS and CRLF coverboard and pitfall trapping at the Former Naval Weapons Station Seal Beach Detachment.** No CTS or CRLF were observed. Work was completed under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) **USFWS Biological Opinion (BO, #81420-2011-F-0313)** for the Environmental Investigations on the Concord (2012 BO and 2018 Amendment). Additionally, he has assisted USFWS biologists Christopher Caris, Chad Mitcham, and UC Santa Cruz PhD student Tina Cheng in and around Ellicott Slough NWR with surveying abundance and disease status of Santa Cruz long-toed salamanders (SCLTS), California tiger salamanders (CTS), and other amphibians. Checked contents of pitfall traps and swabbed animals to collect fungal or bacterial DNA. **Five CTS adults and subadult and nine SCLTS were observed.**

He is proficient in numerous field methods and equipment, including: Sherman traps, ear-tagging and biopsies for small mammals, pitfall trapping, minnow traps, PIT-tagging of amphibians and snakes, scale-branding, radio telemetry, freshwater invertebrate sampling (Surber sampling, dip-netting, snorkel surveys), gill-netting, avian acoustic playback surveys, camera traps, terrestrial invertebrate sampling (malaise traps, bait stations, hand collection), GPS/GIS mapping, and museum-quality specimen preservation. He has additional experience in electrofishing, mist-netting, and fence construction.

He has co-authored peer-reviewed articles and technical reports on marine fish, amphibian disease ecology, and Sierra Nevada herpetofauna, and has provided public outreach and education as an invited presenter, staff member, and graduate teaching assistant.

EDUCATION

Master of Science in Biology: Conservation Biology Emphasis, San Francisco State University (2008–2015)
Bachelor of Arts in Biology, Minor in Geological Sciences, University of California, Santa Barbara (2004–2006)

WORK HISTORY

- **Staff Biologist:** Condor Country Consulting (April 2023 - Present). Main responsibilities include sensitive species' biological surveys, monitoring, and maintenance of projects. Target species for animal surveys include California tiger salamander, burrowing owl, Swainson's hawk, golden eagle, California red-legged frog and nesting birds.
- **Wildlife Technician (GS-7):** Bureau of Land Management, Medford, OR (April 2020 – Nov. 2020; April 2019 – Nov. 2019; June 2018 – Nov. 2018). Primary duties included raptor and bat surveys. Target species included northern spotted owl, northern goshawk, western pond turtle, golden eagle, and bald eagle.

- **Research Assistant:** Carroll-Loye Biological Research, Davis, CA (Oct. 2017 – Nov. 2017). Deployed mosquito traps for comparative studies of insect repellents and performed manuscript proofreading and journal-specific formatting.
- **Aquatic Biology Technician (GS-7):** U.S. Forest Service (USFS): Eldorado National Forest, Placerville, CA (May 2017 – Oct. 2017). Conducted surveying and construction monitoring for Sierra Nevada amphibians, reptiles, fish and mussels. Target species included California red-legged frog, Sierra Nevada yellow-legged frog, foothill yellow-legged frog, Yosemite toad, and western pond turtle.
- **Wildlife Technician (Crew Lead) (GS-7):** U.S. Forest Service: Lassen National Forest, Fall River Mills, CA (May 2016 – Sept. 2016). Lead a crew of four in primarily conducting northern goshawk surveys.
- **Wildlife Technician (GG-5):** U.S. Geological Survey (USGS): Western Ecological Research Center, Dixon, CA (April 2014 – Oct. 2014) Performed daily trapping, marking, and habitat assessment of giant garter snake.
- **Fisheries Technician (GS-5):** U.S. Forest Service: Humboldt-Toiyabe National Forest, Sparks, NV (May 2013 – Sept. 2013). Conducted fish and amphibian surveys in the Sierra Nevada and Great Basin ecosystems. Target species included Sierra Nevada yellow-legged frog, Columbia spotted frog, Lahontan cutthroat trout, and Paiute cutthroat trout.
- **Staff Biologist/Field Technician:** Questa Engineering Corporation, Richmond, CA (Aug. 2012 – May 2013).
- **Graduate Assistant:** San Francisco State University (Jan. 2012 – May 2012; Jan. 2011 – May 2011; Aug. 2010 – Dec. 2010; Jan. 2009 – Dec. 2009). Curated herpetology and ichthyology teaching collections, prepared laboratory materials (BIOL 240), and graded undergraduate papers for Biometry (BIOL 485) and Human Biology (BIOL 100).
- **Graduate Teaching Associate:** San Francisco State University (Aug. 2011 – Dec. 2011; Aug. 2010 – Dec. 2010; Jan. 2010 – May 2010). Lectured and supervised laboratory and field activities for Ecology (BIOL 482), Introductory Biology II (BIOL 240), and Supplemental Instruction in Biology (SCI 240).
- **Disease Ecology Research Assistant:** Department of Integrative Biology, University of California, Berkeley (March 2008 – May 2008).
- **Entomology Intern:** U.S. Geological Survey: Kilauea Field Station, Volcanoes National Park, HI (April 2007 – Aug. 2007).
- **Research Assistant:** National Center for Ecological Analysis and Synthesis: Santa Barbara, CA (Jan. 2005 – April 2005).
- **Fisheries Biology Intern:** National Marine Fisheries Service, Southwest Fisheries Science Center, Santa Cruz, CA (Oct. 2003 – Aug. 2004).

CERTIFICATION/TRAINING

- Hazardous Waste Operations and Emergency Response (40-hour) 39 CFR 1910.120(E) Certification (In progress)
- CPR/AED – American Heart Association (In progress)
- Yellow-billed Cuckoo Survey Protocol Workshop, Gridley, CA (August 2017)
- USFWS Endangered Species Act Overview (October 2016) Online Course. National Conservation Training Center
- Geographic Information Systems Professional Development Courses, San Francisco State University (2008–2009)

PROJECT EXPERIENCE

- **Biological Services for the former Naval Weapons Station, Seal Beach Detachment Concord, CA. US Navy Base Realignment and Closure Commission. April 2023 – ongoing.** In 5,000+ acre parcel, 7 wildlife exclusion fenced sites were surveyed according to the USFWS issued trapping protocol

for the collection and relocation of California red-legged frogs (CRLF) and California tiger salamanders (CTS, *Ambystoma californiense*). Duties include trap setting, checking, and the processing of target and non-target species. Pitfall traps were opened and checked daily during heavy rainfall events to collect and relocate CTS (at least 30 feet from the project area). Work completed under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) **USFWS Biological Opinion (BO, #81420-2011-F-0313)** for the Environmental Investigations on the Former Naval Weapons Station Seal Beach Detachment-Concord (2012 BO and 2018 Amendment).

- **Raptor Nesting Survey, Bureau of Land Management, Medford, OR. April 2020 – Nov. 2020; April 2019 – Nov. 2019; June 2018 – Nov. 2018.** Role: biological technician. Conducted acoustic surveys for northern spotted owl and northern goshawk, and visual surveys for nesting bald eagle, golden eagle, and peregrine falcon. Worked efficiently with a crew to perform assessments on over 4,000 acres of owl habitat. Conducted bat surveys, including mist-netting, species identification, colony counts, and health assessments. Conducted surveys for special status plants and animals, including western pond turtle, western bumblebee, Gentner's fritillary, Baker cypress, and Pacific lamprey. Reviewed and responded to formal public protests. Performed periodic status checks of 1 active golden eagle and 2 active bald eagle nests to assess nestling survival: nestlings and adults were observed at least once at all locations. Training and supervision provided by BLM Wildlife Biologists David Roelofs and Kim Thompson, and crew lead Emma McNeil.
- **Eldorado National Forest Fuel Reduction Projects (General Sherman, Reservoir, Upper Cole Creek). May 2017 – Oct. 2017.** Role: biological technician. Conducted visual encounter surveys in streams and ponds for federally endangered Sierra Nevada yellow-legged frogs (SNYLF) and fish in support of three fuel reduction projects. Detected 4 SNYLF adults, 8 subadults, and 4 tadpoles. Performed snorkel surveys for western pearlshell mussels. Demonstrated techniques in stream ecology to students and provided public outreach at youth fishing derby. Training and supervision provided by USFS biologists Jeff Mabe and Maura Santora.
- **Georgetown California Red-legged Frog Restoration Pond Surveys, Eldorado National Forest, Georgetown District. June 2017 – July 2017.** Conducted visual encounter surveys at 3 restoration ponds, observing 11 CRLF adults, 11 subadults, 5 tadpoles, and 1 metamorph.
- **Deer Valley OHV Trail Project, U.S. Forest Service: Eldorado National Forest, CA. Sept. 2017.** Role: biological monitor. Provided construction monitoring for Yosemite toad (YOTO) in critical habitat and educated construction personnel and volunteers on YOTO conservation. No YOTO observed.
- **Bat and Raptor Surveys, U.S. Forest Service: Lassen National Forest, Fall River Mills, CA. May 2016 – Sept. 2016.** Role: crew lead. Successfully led a 4-person wildlife crew in surveying northern goshawk and California spotted owl via acoustic playback, completing all major projects ahead of schedule. Performed QA/QC on data sheets. Performed nesting sandhill crane surveys. Assisted with bat monitoring in collaboration with regional federal biologists. Training and supervision provided by USFS wildlife biologist Aaron Rieffanaugh.
- **Giant Garter Snake Surveys, U.S. Geological Survey: Western Ecological Research Center, Dixon, CA. April 2014 – Oct. 2014.** Role: biological technician. Performed daily surveys of federally threatened giant garter snake (GGS), involving trapping (via minnow traps, dipnet, and hand), identifying, sexing, marking (with scale branding and/or PIT tags), radio telemetry, and habitat characterization. Over the field season I safely captured and processed 65 live GGS and provided care and feeding to captive GGS juveniles and adults for behavioral studies. Additionally, I caught several non-listed snake species, including valley garter snake, common kingsnakes, western yellow-bellied racer, and gopher snake. Training and supervision provided by USGS wildlife biologist, Shannon Skalos.
- **San Francisco Garter Snake Survey, Pescadero, CA. April 2014.** Constructed drift-fences and aided in USGS surveys for federally endangered San Francisco garter snake (SFGS). Detected 4 adult SFGS.
- **Fish and Amphibian Surveys, U.S. Forest Service: Humboldt-Toiyabe National Forest, Sparks, NV. May 2013 – Sept 2013.** Role: biological technician. Supported research and monitoring of amphibians and fish in the Sierra Nevada and Great Basin Desert. Performed visual and mark-recapture

surveys for Columbia spotted frog and Sierra Nevada yellow-legged frog. Deployed and monitored gill-nets to eradicate invasive trout in high mountain lakes. Led a small crew of volunteers during a one-week amphibian survey, demonstrating field techniques. Other duties included constructing and inspecting fish weirs, collecting quantitative aquatic invertebrate samples, monitoring impacts of roads on streams, and constructing fences. Training and supervision provided by USFS fisheries biologists Jim Harvey and Rachel Van Horne.

- **Paiute Cutthroat Trout Restoration Project. Humboldt-Toiyabe National Forest. July 2013 – August 2013.** Role: biological technician. Performed pre-treatment fish and amphibian surveys in Silver King Creek and removed beaver dams prior to piscicide (rotenone) application. Quantified rainbow trout mortality after piscicide application. Collected benthic invertebrate samples before and after treatment. Worked with personnel from CDFW, USFWS, and USFS.
- **Mowry Slough (Zone 6 Line N1) Flood Control Channel Desilting, Fremont, CA. Aug. 2012.** Role: biological monitor. As part of a flood channel desilting project adjacent to Mowry Slough (Zone 6 Line N1), manual removal of vegetation (habitat) along the banks and levees was required to displace salt marsh harvest mouse (SMHM) prior to mechanical excavation. I monitored progress to ensure compliance with permit and Biological Opinion and avoid take to listed SMHM. I surveyed for SMHM nests and identified rodents and other mammals on-site. SMHM was observed on three occasions: on two occasions I halted activity until the mouse safely left the project area, and on the occasion a SMHM did not flee, I contacted consulting wildlife biologist Dr. Sam McGinnis to manually relocate the individual. As a result, no mammals were injured or killed during operations.
- **Sierra Nevada Amphibian Disease Ecology Research, San Francisco State University. May 2008 – May 2013.** Role: graduate researcher. Advisor: Dr. Vance Vredenburg. As a student focusing on the distribution of the amphibian chytrid fungus (*Batrachochytrium dendrobatidis*, or Bd) in California, I took part in intensive seasonal field work from 2008 to 2010, as well as various laboratory and museum-based projects. Field work conducted under the Vredenburg permit involved backpacking to high-elevation sites in the Sierra Nevada (Yosemite and Kings Canyon National Parks), performing Visual Encounter Surveys for Sierra Nevada yellow-legged frog (*Rana sierrae*), Southern Mountain Yellow-legged frog (*Rana muscosa*), Yosemite toad (*Anaxyrus canorus*), and Pacific treefrog (*Pseudacris sierra*), identifying adults and larvae of all species. I captured individuals by net, determined size, sex, and life stage, marked animals with subdermal Passive Integrated Transponder (PIT) tags. I swabbed animals to assay presence of Bd, and safely released animals. I also participated in field relocation efforts, antifungal treatments, as well as a project to inoculate wild frogs with antifungal bacteria. In the lab I assisted in the design and construction of experimental enclosures, monitored disease status of amphibians via swabbing, and euthanized animals as needed. Euthanized animals were preserved in formalin and stored in ethanol, and tissue samples were archived for genetic or histological studies. I also examined over 1,200 amphibian specimens housed in several natural history museums to examine historic patterns of Bd prevalence. I assayed Bd presence on swabs from museum, lab, and field sampling via DNA extraction and quantitative PCR. I trained volunteers in all laboratory techniques and developed protocols and instructional materials. Findings from my research were published in *PLOS One* and *Journal of the American Association for Laboratory Animal Science*.
- **Disease Ecology Research Assistant: Department of Integrative Biology, University of California, Berkeley. March 2008 – May 2008.** Conducted ecological research in Marin County (China Camp State Park and Marin Municipal Watershed Sky Oak headquarters) and Monterey County (Big Sur) in support of PhD research of UC Berkeley student Andrew Swei (now Associate Professor of Biology at San Francisco State University). Collected data on population density, distribution, habitat use, and tick burden of lizards and small mammals, including dusky-footed woodrats (*Neotoma fuscipes*), deer mice (*Peromyscus* sp.), harvest mice (*Reithrodontomys megalotis*), and shrews. Routinely trapped and anesthetized small mammals, applied ear-tags, and collected skin samples via ear punches. Surveyed, captured, marked, and relocated lizards (primarily western fence lizards and western skinks). Utilized tick dragging to sample ticks from ground and preserved them for identification and molecular analysis.

- **Entomology Intern: U.S. Geological Survey: Kilauea Field Station, Volcanoes National Park, HI. April 2007 – Aug. 2007.** Collected terrestrial arthropods using pitfall traps, malaise traps, beat sheets, and foliage sampling in montane tropical forests for ongoing dietary studies of endangered endemic forest birds. Reared caterpillars in lab for parasitism studies. Set up video recorders and monitored pollination behavior of insects on rare and endangered plants.
- **Temperature Control of Larval Dispersal: National Center for Ecological Analysis and Synthesis, Santa Barbara, CA. Jan. 2005 – April 2005.** Role: research assistant. Conducted literature reviews to compile a database of temperature-dependent pelagic larval duration for 72 species of marine fish and invertebrates. A unified, parameterized model for the temperature dependence of larval development in marine animals based on my database was presented in *Proceedings of the National Academy of Sciences* (doi: 10.1073/pnas.0603422104).
- **Groundfish Age and Growth, National Marine Fisheries Service, Southwest Fisheries Science Center, Santa Cruz, CA. Oct. 2003 – Aug. 2004.** Processed trawl samples of marine groundfish (including rockfish and flatfish) for ongoing demographic studies. Determined species, sex, and reproductive status, and extracted organs and otoliths for archival. Performed age & growth study on Pacific sand sole otoliths, results published in *Marine Fisheries Review*. Participated in a marine collection trawl. Training and supervision provided by NMFS fisheries biologist Donald E. Pearson.

RELATED VOLUNTEER EXPERIENCE

- **Research Volunteer, Virginia Tech/Independent Research** (October 2020 – Present). Collected and preserved unlisted terrestrial invertebrates in Southern Oregon for chemical analysis, collaborated with biochemists from Virginia Tech and Virginia Military Institute, and co-authored a manuscript on chemical defenses of millipedes.
- **The Nature Conservancy (TNC), Southwest Oregon Field Office, Ashland, OR** (April 2019 – July 2021). Assisted in surveys for vernal pool fairy shrimp (8 hours, under permit-holding TNC preserve manager Molly Morison, no listed fairy shrimp observed). Lead nature hikes and citizen science events and assisted in invasive plant removal, native vegetation replanting, and greenhouse construction.
- **Restoration Volunteer, Elkhorn Slough Foundation, Watsonville, CA** (February 2016). Planted over 30 seedlings of native wetland plants in support of sand dune and riparian restoration.
- **Small Mammal Research Assistant, University of California, Santa Cruz** (May 2015). Working with UC Santa Cruz PhD student Tina Cheng I demonstrated field techniques in small mammal ecology to undergraduate students in support of long-term ecological studies at the UCSC Forest Ecology Research Plot. I identified, measured, ear-tagged, and collected skin and parasite samples from deer mice, harvest mice, and woodrats.
- **Volunteer Biologist, Ellicott Slough National Wildlife Refuge, Watsonville, CA** (Feb. 2015). Assisted USFWS biologists Christopher Caris, Chad Mitcham, and UC Santa Cruz PhD student Tina Cheng in and around Ellicott Slough NWR with surveying abundance and disease status of Santa Cruz long-toed salamanders (SCLTS), California tiger salamanders (CTS), and other amphibians. Checked contents of pitfall traps and swabbed animals to collect fungal or bacterial DNA. Five CTS adults and subadult and nine SCLTS were observed.
- **Volunteer Biologist, Wild Equity Institute, San Francisco, CA** (Sept. 2011 – Mar. 2012). Sharp Park is a public golf course in Pacifica, CA, but owned by the City of San Francisco. There I performed biological and environmental monitoring on behalf of Wild Equity Institute: conducting observational surveys for California red-legged frogs (adults and egg masses were observed) and San Francisco garter snakes (not observed). I monitored environmental conditions and course maintenance activities to assess adherence to City of San Francisco Compliance Plan. Specific activities and conditions monitored included time and location of mowing, pumping/drainage activity, water levels, presence of nonnative plant and animal species, exposure or disturbance of CRLF egg masses. I also collected scientific literature relevant to CRLF conservation.

- **Volunteer Field Instructor, San Francisco State University, Sierra Nevada Field Campus, Sierra County, CA** (June 2011). Presented amphibian conservation lectures and demonstrated field methods to undergraduate students.
- **Volunteer Research Assistant, Elkhorn Slough National Estuarine Research Reserve, Watsonville, CA** (Feb. 2007). Participated in diurnal and nocturnal amphibian surveys for CRLF and bullfrogs as an assistant to Valentine Hemingway, a permitted PhD student at University of California, Santa Cruz. I captured, measured, and swabbed adult amphibians for disease assay and ran molecular assays in lab. Approx. 12 CRLF captured and handled. I also recorded individual tadpole lengths from photographs and conducted literature searches.
- **Laboratory Assistant, Marine Science Institute: University of California, Santa Barbara** (Sept. 2004 – Dec. 2004). Identified, sorted, labeled, and preserved benthic marine invertebrates in the laboratory of Dr. Mark Page.

PUBLICATIONS

In review: Menegatti C, K Knott, **SVG McNally**, TH Jones, and E Mevers. Neuromodulating alkaloids from defensive secretions.

Vredenburg VT, **SVG McNally**, H Sulaeman, HM Butler, T Yap, MS Koo, DS Schmeller, C Dodge, T Cheng, G Lau, and CJ Briggs. 2019. Pathogen invasion history elucidates contemporary host pathogen dynamics. *PLOS One*, 14(9): e0219981. [10.1371/journal.pone.0219981](https://doi.org/10.1371/journal.pone.0219981)

McNally SVG, and Lane, Ally. October 2017. Annual Herpetofauna Monitoring Report. Eldorado National Forest.

Vredenburg VT, SA Felt, EC Morgan, **SVG McNally**, S Wilson, and SL Green. 2013. Prevalence of *Batrachochytrium dendrobatidis* in *Xenopus* collected in Africa (1871-2000) and in California (2001-2010). *PLOS One*, 8(5): e63791 [10.1371/journal.pone.0063791](https://doi.org/10.1371/journal.pone.0063791)

Green SL, S Felt, **SVG McNally**, EC Morgan, S Wilson, and VT Vredenburg. 2012. Chytrid-positive wild-caught *Xenopus laevis* from California: Implications for laboratory animal medicine. *Journal of the American Association for Laboratory Animal Science*, 51(5): 683

Pearson, DE and **SVG McNally**. 2005. Age, growth, life history and fisheries of the sand sole, *Psettichthys melanostictus*. *Marine Fisheries Review*, 67(4): 9-18 <https://swfsc.noaa.gov/publications/FED/00774.pdf>

Contributed illustrations: *Mopalia muscosa* and *Protothaca staminea* (pp. 104-105) in: Kuris AM, *et al.* 2005. EEMB 112 Invertebrate Zoology Laboratory Manual. University of California, Santa Barbara