

# Curriculum Vitae: Alexandra Sumarli

San Diego State University  
5500 Campanile Dr.  
San Diego, CA 92182

Cell Phone: (909) 528-9566  
Email: [sumarli.alex@gmail.com](mailto:sumarli.alex@gmail.com)

---

## **EDUCATION:**

August 2016– May 2020: San Diego State University, San Diego, CA. *Master of Science in Biology* (Emphasis in Evolutionary Biology). Advisor: Dr. Tod W. Reeder.

September 2012– June 2016: La Sierra University, Riverside, CA. *Bachelor of Science in Biological Sciences*.

## **MASTERS THESIS RESEARCH:**

- **Thesis Objective:** Delimit the population genomic structure and species boundaries of Chuckwalla lizards (*Sauromalus*) including 4 island endemic species from the Gulf of California, Mexico.
- **Summary of Results:** The widespread Common Chuckwalla (*S. ater*) consists of two evolutionary distinct lineages, a continental and peninsular species, which diversify in northern Baja California.

**Sumarli, A.** Phylogenomics of Chuckwallas (*Sauromalus*) of the Baja California Peninsula: Using an integrative approach for species delimitation. (2020). [Masters thesis, San Diego State University]. <https://digitallibrary.sdsu.edu/islandora/object/sdsu%3A57716>

## **IN PREPARATION:**

**Sumarli, A.,** Hollingsworth, B. D., Garcia, A. P., Villavencio, J. H. V. & Reeder, T. W. (2021). Northern vicariance drives cryptic diversity and deep phylogeographic structure within the Common Chuckwalla, *Sauromalus ater* (Squamata: Iguanidae). *Target: Biological Journal of the Linnean Society*.

## **PEER-REVIEWED PUBLICATIONS:**

Davis, H. R., Grismer, L. L., Cobos, A. J., Murdoch, M. L., **Sumarli, A. X.**, Anuar, S., Muin, M.A., Wood, P. L. J. & Quah, E. S. H. (2018). Checklist of the herpetofauna of Hutan Lipur Gunung Senyum, Pahang, Peninsular Malaysia. *Russian Journal of Herpetology*, 25(3), 207–220.

**Sumarli, A.,** Grismer, L. L., Wood, P. L. J., Ahmad, A. B., Rizal, S., Ismail, L. H., Izam, N. A. M., Ahmad, N. & Linkem, C. W. (2016). The first riparian skink (Genus: *Sphenomorphus* Strauch, 1887) from Peninsular Malaysia and its relationship to other Indochinese and Sundaic species. *Zootaxa*, 4173(1), 29–44. doi: <http://doi.org/10.11646/zootaxa.4173.1.3>

**Sumarli, A. X.,** Grismer, L. L., Anuar, S., Muin, M. A., & Quah, E. S. H. (2015). First report on the amphibians and reptiles of a remote mountain, Gunung Tebu in northeastern Peninsular Malaysia. *Check List*, 11(4), 1679. doi: <https://doi.org/10.15560/11.4.1679>

Grismer, L. L., Wood, P. L., Anuar, S., Quah, E. S. H., Muin, M. A., Onn, C. K., **Sumarli, A.X.**, & Loredó, A. I. (2015). Repeated evolution of sympatric, palaeoendemic species in closely related, co-distributed lineages of *Hemiphyllodactylus* Bleeker, 1860 (Squamata: Gekkonidae) across a sky-island archipelago in Peninsular Malaysia. *Zoological Journal of the Linnean Society*, 174(4), 859–876. doi: <https://doi.org/10.1111/zoj.12254>

- Chan, K. O., Wood, P. L., Anuar, S., Muin, M. A., Quah, E. S. H., & **Sumarli, A. X. Y.** (2014). A new species of upland Stream Toad of the genus *Ansonia* Stoliczka, 1870 (Anura: Bufonidae) from northeastern Peninsular Malaysia. *Zootaxa*, 3764, 427–440. doi: <http://dx.doi.org/10.11646/zootaxa.3764.4.3>
- Grismer, L. L., Wood, P. L., Anuar, S., Quah, E. S. H., Muin, M. A., Mohamed, M., Onn, C. K., **Sumarli, A. X.**, Loredó, A. I. & Heinz, H. M. (2014). The phylogenetic relationships of three new species of the *Cyrtodactylus pulchellus* complex (Squamata: Gekkonidae) from poorly explored regions in northeastern Peninsular Malaysia. *Zootaxa*, 3786, 359–381. doi: <http://dx.doi.org/10.11646/zootaxa.3786.3.6>
- Grismer, L. L., Wood, P. L., Ahmad, A. B., **Sumarli, A. S.-I.**, Vazquez, J. J., Ismail, L. H. B., Nance, R., Mohd-Amin, M. A. B., Othman, M. N. A. B., Rizal, S. A., Kuss, M., Murdoch, M. & Cobos, A. (2014). A new species of insular Rock Gecko (Genus *Cnemaspis* Strauch, 1887) from the Bidong Archipelago, Terengganu, Peninsular Malaysia. *Zootaxa*, 3755, 447–456. doi: <http://dx.doi.org/10.11646/zootaxa.3755.5.4>
- Grismer, L. L., Wood, P. L., Mohamed, M., Chan, K. O., Heinz, H. M., **Sumarli, A. S.-I.**, Chan, J. A. & Loredó, A. I. (2013). A new species of karst-adapted *Cnemaspis* Strauch, 1887 (Squamata: Gekkonidae) from a threatened karst region in Pahang, Peninsular Malaysia. *Zootaxa*, 3746, 463–472. doi: <http://dx.doi.org/10.11646/zootaxa.3746.3.5>

#### **NATURAL HISTORY NOTES:**

- Sumarli, A. X.**, & Grismer, L. L. (2016). *Sphenomorphus praesignus* (Blotched Forest Skink). Reproduction. *Herpetological Review*, 47(4), 639–689.

#### **INVITED TALKS:**

- 2019 “**Genomic Insights into Chuckwalla Biodiversity**”  
A. Sumarli. Cornell University Herpetological Society Lecture, Ithaca, NY. 22 August 2019.
- 2018 “**Chuckwallas Big and Small: Genomic Insights into Diversity and the Origins of Body Size Differentiation on Islands in the Sea of Cortés**”  
A. Sumarli. San Diego Natural History Museum Brown Bag Lunch Seminar, San Diego, CA. 28 September 2018.
- “**Genomic Insights into Chuckwalla Biodiversity**”  
A. Sumarli. San Diego State University Evolutionary Biology Department Seminar on Phylogenetics and Biogeography, San Diego, CA. 18 October 2018.
- 2015 “**A New Riparian Skink (Genus *Sphenomorphus* Strauch, 1887) from Peninsular Malaysia Supports the Hypothesis That the Thai-Malay Peninsula is a Biogeographical Crossroad Between Indochina and Sundaland**”  
A. Sumarli, L.L. Grismer, P.L. Wood, A. Ahmad, and S. Rizal . La Sierra University Biology Department Colloquium Spring Quarter.

#### **CONFERENCE & POSTER PRESENTATIONS:**

- 2020 “**Genomic Insights into Chuckwalla Evolution and Diversification**”  
A. Sumarli. Iguana Specialist Group Virtual Meeting.
- 2019 “**Species Delimitation of the Common Chuckwalla (*Sauromalus ater*): Implementation of an Integrative Approach**”  
A. Sumarli, Bradford D. Hollingsworth, Annie Peralta Garcia, and Jorge H. Valdez Villavencio, and Tod W. Reeder. JMIH Snowbird, Utah.

- 2018 **“Phylogeography of the Unisexual Whiptail *Aspidoscelis velox* from the Colorado Plateau: A Spatial Diffusion and Ecological Niche Modeling Approach”**  
A. Sumarli and T. W. Reeder. JMIH Rochester, New York.
- “Species Delimitation of the Common Chuckwalla (*Sauromalus ater*) using ddRADSeq Data, Morphology, and Ecological Niche Modeling: Implementation of an Integrative Approach”**  
A. Sumarli. Society of Systematic Biologist Standalone Meetings, Ohio State University, Ohio.
- “Phylogenetic Relationships Among Iguanid Genera and the Evaluation of Discordance Between the Mitochondrial and Nuclear Genomes”. (Poster Presentation)**  
K. Cole\*, A. Sumarli, and T.W. Reeder. San Diego State University Student Research Symposium.
- 2017 **“Comparing Ecological Niche Models Within the Common Chuckwalla (*Sauromalus ater*)”**  
A. Sumarli. Southwest HerpFest, University of California, Riverside.
- 2015 **“A New Riparian Skink (Genus *Sphenomorphus* Strauch, 1887) from Peninsular Malaysia Supports the Hypothesis That the Thai-Malay Peninsula is a Biogeographical Crossroad Between Indochina and Sundaland”**  
A. Sumarli, L.L. Grismer, P.L. Wood, A. Ahmad, and S. Rizal . SSAR Herpetology Meetings, University of Kansas, Kansas.
- 2014 **“First Report on the Amphibians and Reptiles of a Remote Mountain, Gunung Tebu, in Northeastern Peninsular Malaysia”**  
A. Sumarli, L.L. Grismer, P. L. Wood, and E. S. H. Quah (Poster Presentation). La Sierra University Research Emphasis Week.

#### **GRANTS, AWARDS, & SCHOLARSHIPS:**

- 2018 Harold & June Grant Memorial Scholarship, *San Diego State University* **\$2,900.00**
- 2017 Graduate Student Research Award, *Society of Systematic Biologists* **\$1,600.00**  
Gauge Fund Award, *American Society of Ichthyologists and Herpetologists* **\$500.00**  
Theodore Roosevelt Memorial Grant, *American Museum of Natural History* **\$3,419.00**  
Honorable Mention, *Herpetologists' League E.E. Williams Research Grant*  
Howie Wier Memorial Conservation Grant, *Anza-Borrego Foundation* **\$1,500.00**  
Harold & June Grant Memorial Scholarship, *San Diego State University* **\$2,700.00**
- 2015 Ryckman Undergraduate Research Endowment, *La Sierra University* **\$750.00**  
Edmund C. Jaeger Undergraduate Research Endowment, *La Sierra University* **\$500.00**  
Student Researcher of the Year Award, *La Sierra University Department of Biology*
- 2013 East Texas Herpetological Society Grant **\$500.00**

#### **FIELD RESEARCH EXPERIENCE\*:**

- 2018 Field research to collect and sample Common Chuckwallas (*Sauromalus ater*) in Baja California, Mexico (Sierra de los Cucapás) (6/28) and Sonora, Mexico (Guaymas, Isla Pájaros, Bahía Kino, Puerto Lobos, and Sierra San Nicolas) (8/13–8/17).
- 2017 Field research to collect and sample Common Chuckwallas (*Sauromalus ater*) in Arizona (Tinajas Altas Mountains, Pinal Co., Maricopa Co., and Pima Co.) (3/26–3/31) and California (Riverside Co. and Imperial Co.) (6/1–6/4).
- 2015 Field research to survey biodiversity of reptiles and amphibians of Peninsular Malaysia (Gunung Senyum and Pulau Lang Tengah) (8/5–8/25 weeks).
- 2013 Field research to survey biodiversity of reptiles and amphibians of Peninsular Malaysia (Merapoh, Gunung Stong, Lata Tembaka, Gunung Tebu, Bukit Larut, Pulau Bidong, Hutan Lipur Sekayo, Penang, Pulau Langkawi) (6/30–7/3 and 8/21–9/8)

\* Responsibilities: Acquiring permitting for field collection, project/sampling scheme design, hiking long distances/backpacking in remote areas, backcountry camping, operating AWD, specimen preparation for museum collection and tissue extraction, teamwork.

### **EMPLOYMENT HISTORY:**

- **Biological Science Technician** (*40 hours/week*), U. S. Geological Survey. May 2021 – *current*
- **Assistant Biologist** (On call/As-needed), Chambers Groups, Inc. August 2020 – May 2021
- **Research Assistant** (*10 hours/week*), San Diego State University. Fall 2017 (8/22–12/29), Spring 2018 (1/16–5/17), Fall 2019 (8/26–12/31), Spring 2020 (1/22–5/15)
- **Graduate Laboratory Instructor** (*20 hours/week*), San Diego State University. Fall 2016 (8/22–12/30), Spring 2017 (1/23–5/19), Fall 2018 (8/22–12/31), Spring 2019 (1/22–5/24), Spring 2020 (1/22–5/22), Human Anatomy, (BIO 251)
- **Teaching Assistant and Grader** (*10 hours/week*), La Sierra University. Spring 2016 (3/28–6/9). Developmental Biology, (BIO 303)
- **Grader** (*5 hours/week*), La Sierra University. Fall 2015 (9/21–12/10). General Biology 1, (BIO 111)
- **Teaching Assistant and Grader** (*10 hours/week*), La Sierra University. Fall 2015 (9/21–12/10). Systems Physiology, (BIO 466)
- **Grader** (*5 hours/week*), La Sierra University, Winter 2014 (1/6–3/19) & 2015 (1/5–3/18). Vertebrate Natural History (BIO 477)
- **Grader** (*5 hours/week*), La Sierra University. Spring 2015 (3/30–6/17). Herpetology (BIO 467)
- **Grader** (*5 hours/week*), La Sierra University. Winter 2013 (1/7–3/21), Spring 2014 (3/30–6/17). Anatomy and Physiology, (BIO 131 & 132)

### **OUTREACH, LEADERSHIP EXPERIENCE, & PROFESSIONAL DEVELOPMENT:**

- Volunteer for SDSU Science and Engineering Sampler, *Spring 2017 and 2019*
- Volunteer for Salk Institute Science Expo at Petco Park, San Diego *Spring 2017, 2019, and Fall 2020*
- Ocean Discovery Institute Career Discovery Volunteer *Fall 2018, Spring 2020*
- Vice President of SDSU Natural History Club *Fall 2017, Spring 2018*
- Student Search Committee for SDSU Computational Evolutionary Biologist Faculty Position *Fall 2017*
- SDSU Natural History Club Lightning Talks *Fall 2017* (Talk Title: “Maternal Ancestry and Biogeography of a Parthenogenetic Lizard from the Colorado Plateau”)
- Volunteer Science Fair Judge for JCS San Diego Academy Middle School *Fall 2016 and 2017*
- Member of SDSU Natural History Club *Fall 2016–2018*
- Substitute Secretary for La Sierra University Biology Department from 30 November–23 December 2015
- President of La Sierra University Environmental Club from 2014–2015
- Public Relations Officer of La Sierra University Environmental Club in *Spring 2014*

### **WORKSHOPS ATTENDED**

2018 La Kretz Workshop in Conservation Genomics, University of California, Los Angeles

### **JOURNAL REVIEWER:**

*Herpetological Review* - 2015, 2016

### **ADDITIONAL SKILLS AND QUALIFICATIONS:**

- DNA Extraction and Genomic Library Preparation (e.g. ddRADSeq)
- DNA quantification (e.g. Qubit) and PCR
- Bioinformatics (e.g. ipyrad, VCFtools)

- Proficiency in R and Python
- Population genomic analysis (e.g. STRUCTURE)
- Species Distribution Modeling (e.g. MAXENT)
- Proficiency in using Computer Clusters
- Multivariate Statistical Analysis (e.g. Principal Component Analysis; PCA)
- Phylogenetic Analysis (e.g. Maximum Likelihood and Bayesian methods)
- Morphology (e.g. meristic scale counts)
- Maintenance of specimens and frozen tissues
- Teaching/mentorship and public engagement
- Proficiency in Adobe Photoshop/Illustrator and Microsoft Excel/Word

### **REFERENCES:**

**1) Dr. Tod W. Reeder:** Department of Biology Professor and Associate Dean, San Diego State University. [twreeder@sdsu.edu](mailto:twreeder@sdsu.edu)

**2) Dr. Bradford D. Hollingsworth:** Curator, San Diego Natural History Museum.  
[bhollingsworth@sdnhm.org](mailto:bhollingsworth@sdnhm.org)

**3) Dr. Lluvia Flores-Rentería:** Department of Biology Professor, San Diego State University.  
[lfloresreneria@sdsu.edu](mailto:lfloresreneria@sdsu.edu)

**4) Sandra Garver:** Department of Biology Lecturer, San Diego State University.  
[sgarver@sdsu.edu](mailto:sgarver@sdsu.edu)