CHRIS J. LAW, PHD cjlaw@uw.edu | chrisjlaw.com

Acting Instructor & Affiliate Curator | University of Washington & Burke Museum
Assistant Project Scientist | University of California, Berkeley

EDUCATION

2013–19 **Ph.D. Ecology and Evolutionary Biology**. University of California, Santa Cruz

2008–12 **B.S. Environmental Systems.** University of California, San Diego

2010 **Marine Biology and Terrestrial Ecology Program.** University of Queensland

ACADEMIC HISTORY

2024– **Assistant Project Scientist**, University of California, Berkeley

2024– **Affiliate Curator**, Burke Museum of Natural History

2021– **Acting Instructor**, University of Washington

2021–24 **Early Career Provost Fellow**, University of Texas, Austin

2021–24 **Visiting Scholar**, University of California, Berkeley

2019–23 **Gerstner Scholar**, American Museum of Natural History
Sponsors: Dr. John Flynn and Dr. Robert Voss

2019–22 **NSF Postdoctoral Fellow**, University of Washington
Sponsor: Dr. Sharlene Santana

2013–19 **PhD Student**, Ecology & Evolutionary Biology, University of California Santa Cruz
Advisor: Dr. Rita Mehta

2011–13 **Research Assistant/Associate**, Scripps Institution of Oceanography
Advisors: Dr. Kelly Dorgan & Dr. Greg Rouse

AWARDS

2024 **DVM Mentorship Award**, Society of Integrative and Comparative Biology.

2022 **Undergraduate Research Mentor Award**, University of Washington.

2022 **Postdoc Science Slam Best Presentation Award**, University of Washington.

2019 **Wake Award** (finalist), Society of Integrative and Comparative Biology.

2018 **D. Dwight Davis Award** (finalist), Society of Integrative and Comparative Biology.

2016 **James L. Patton Award,** American Society of Mammalogists.

2014 **Global Oceans Student Award,** Friends of Long Marine Laboratory.

FELLOWSHIPS

$720,950 in awarded fellowships

2021–24 **Early Career Provost Fellowship**, University of Texas, Austin. *$213,272*

2019–22 **Postdoctoral Fellowship**, National Science Foundation. (DBI–1906248) *$162,000*

2019–21 **Gerstner Scholars Postdoctoral Fellowship**, American History Museum of Natural. *Partially declined to accept NSF fellowship* *$127,030*

2018–19 **Chancellor's Dissertation Quarter Fellowship**, UC Santa Cruz. *$13,086*
ARCS Scholar Fellowship, ARCS Foundation. *$11,000*
EEB Departmental Quarter Fellowship, UC Santa Cruz. *$15,500*

2015–18 **NSF Graduate Research Fellowship**, National Science Foundation. *$138,000*

2013–15 **Regent's Fellowship,** UC Santa Cruz. *$30,812*

2013–18 **Fellowship in Marine Mammals,** Rebecca & Steve Sooy Endowment. *$10,250*

RESEARCH GRANTS

$877,939 in awarded funding for research

submitted **BCS: Biological Anthropology**, National Science Foundation. *Requested $396,153*
"Collaborative Research: Convergence of craniodental morphology and musculature in gummivorous primates." BCS–2418592. Lead-PI Law.

submitted **DEB: Evolutionary Processes**, National Science Foundation. *Requested $698,923*
"Investigating the ecomorphology and evolution of sexual dimorphism in mammalian skulls." DEB–2414866. PI Law.

2022-23 **Stengl-Wyer Endowment Grant**, University of Texas. *$59,370*
"The evolution of mammalian body plans: a case study in squirrels." SWG–22-02. PI: Law.

2021–24 **Integrative Research in Biology**, National Science Foundation. *$656,957*
"Disentangling the genetic, biomechanical, and deep-time factors underlying mammalian skeletal diversity." DBI–2128146. PI Tseng, co-PI Hlusko, co-PI Law - *Role: I conceived of the project idea and led writing efforts, but I could not technically submit as PI.*

2021–23 **Early Career Provost Fellow Research Funds**, University of Texas. *$20,000*
"Disentangling the genetic, biomechanical, and deep-time factors underlying mammalian skeletal diversity." PI Law.

2019–22 **Postdoctoral Fellowship Research Funds**, National Science Foundation. *$45,000*
"Ecomorphology and evolution of carnivoran body shapes." DBI–1906248. PI Law.

2019–23 **Gerstner Research Grant**. American Museum of Natural History. *$25,000*
"Ecomorphology and evolution of carnivoran body shapes." PI Law.

2017–19 **Dissertation Improvement Grant**, National Science Foundation. *$19,189*
"Dissertation Research: The effects of sexual dimorphism on morphological diversification of Musteloidea." DEB–1700989. PI Mehta, co-PI Law - *Role: I conceived of the project idea and led writing efforts, but I could not technically submit as PI.*

2017–18 **Packard Endowment Grant**, Packard Foundation. *$17,844*
"Linking feeding performance & energetics to dietary specialization & fitness in southern sea otters." PIs: Law and Mehta.

<u>Small grants (≤$5000)</u>

2024 **Ranges Imaging Mini-Award**, Ranges Digitization Network. *$2,252*

2023 **Division of Vertebrate Morphology Publication Award**, SICB. *$1,000*
Domino Award, University of Texas. *$1,500*

2022 **Arthur James Boucot Research Grant,** Paleontological Society. *$4,600*
Pathway to Research Independence Grant, University of Texas. *$5,000*

2021 **Research Exchange**, Research University Alliance. *$1,500*
Iuvo Postdoctoral Award, University of Washington. *$1,416*

2020 **Vertebrate Paleontology Collections Study Grant**, Burke Museum. *$1,400*

2019 **Student Travel Award,** Society of Marine Mammalogy. $250
Graduate Student Association Travel Grant, UC Santa Cruz. [2013–2019]. *$2,234*

2018 **Collections Study Award,** Natural History Museum of LA County. *$1,175*
Student Travel Award, American Society of Mammalogists. *$400*

2017 **Field Museum Visiting Scholarship**, Field Museum. *$1,520*
Grant-in-Aid of Research, Society of Integrative & Comparative Biology. *$1,894*
IMC-12 Travel Grant, American Society of Mammalogists. *$1,250*

2016 **James L. Patton Award,** American Society of Mammalogists. *$5,000*

2015 **Research Grant,** American Cetacean Society—Monterey Bay Chapter. *$1,500*
Collection Study Grant, American Museum of Natural History. *$700*
Rosemary Grant Student Grant, Society for the Study of Evolution. *$1,800*
Grant-in-Aid of Research, Sigma Xi. *$700*

2014 **Lerner Gray Fund,** American Museum of Natural History. *$2,000*
Grant-in-Aid of Research, American Society of Mammalogists. *$1,500*
Myers Trust Grant, Myers Oceanographic & Marine Biology Trust. *$2,000*
Student Research Grant, Friends of Long Marine Laboratory. *$850*
**Chosen as one of the top two recipients*

PEER-REVIEWED PUBLICATIONS

Coauthors: † = high school student, ‡ = undergraduate student, * = equal contributions
26 first/senior authored papers

X) **Law CJ**, Linden T‡, & Flynn JJ. In revision. Skull evolution and lineage diversification in endemic Malagasy carnivorans. Target journal: ***Royal Society Open Science***. BioRxiv 2024.03.25.586658

X) **Law CJ**, Hlusko LJ, & Tseng ZJ. In review. The carnivoran adaptive landscape reveals trade-offs among functional traits in the skull, appendicular, and axial skeleton. Target journal: *Integrative Organismal Biology.* BioRxiv 2024.05.06.592620

X) **Law CJ**. In review. Growth patterns of theoretical bite force and jaw musculature in southern sea otters (Enhydra lutris nereis). Target journal: ***The Anatomical Records***. BioRxiv 2024.08.23.609377

X) Valenciano A, Jiangzuo Q, Abella J, Alcalá L, **Law CJ**, Morales J, & DeMiguel D. In prep. The oldest weasel from the fossil record reveals Mustelinae originates from the Miocene (Mammalia, Carnivora, Mustelidae). Target journal: ***Nature Ecology and Evolution***

X) Selig KR, López-Torres S, **Law CJ**, Burrows AM, & Silcox MT. In review. The evolution and development of molar size among exudate-feeding lorises and bushbabies. Target journal: ***Nature Ecology and Evolution***

36) **Law CJ**, Tinker MT, Fujii, JA, Nicholson T, Staedler M, Tomoleoni J, Young C, & Mehta RS. 2024. Tool use increases mechanical foraging success and tooth health in southern sea otters (*Enhydra lutris nereis*). ***Science***. 384:798-802. *doi.org/10.1126/science.adj6608*

Press: NPR: Morning Edition, The Guardian, The Hill, Reuters, Südwestrundfunk, Science News, KXAN, BBC

35) López-Torres S, Bertrand OC, Fostowicz-Frelik Ł, Lang MM, **Law CJ,** Martin-Flores GS, Schillaci MA, Silcox MT. 2024. The allometry of brain size in Euarchontoglires and an exploration of group-specific encephalization. ***Journal of Mammalogy***. *doi.org/10.1093/jmammal/gyae084*

34) **Burtner AE**‡, Grossnickle DM, Santana SE, & **Law CJ**. 2024. Gliding toward an understanding of the origin of flight in bats. ***PeerJ***. 12:e17824. *doi.org/10.7717/peerj.17824*

Press: phys.org

33) Grossnickle DM, Brightly WH, Pevsner SK, Polly PD, Roston RA, Stanchak KE, Stayton T, Weaver LN, & **Law CJ**. 2024. Challenges and advances in methods for measuring phenotypic convergence. ***Evolution***. 78:1355–1371. *doi.org/10.1093/evolut/qpae081*

32) Jiangzuo Q, Wang X, **Law CJ**, Jia Y, Li S, Fu J, Wang S, Deng T, & Ji X. 2024. Presence of *Cernictis* and *Lutravus* (Ictonychinae, Mustelidae, Carnivora) in eastern Asia and the dispersal of Ictonychinae during the Late Miocene. ***Journal of Systematic Paleontology***. 22:2348032. *doi.org/10.1080/14772019.2024.2348032*

31) **Law CJ**, Hlusko LJ, & Tseng ZJ. 2024. Uncovering the mosaic evolution of the carnivoran skeletal system. ***Biology Letters***. 20:20230526. *doi.org/10.1098/rsbl.2023.0526*

30) Kemp ME, Boville AE*, Carneiro CM*, Jacisin III JJ*, **Law CJ***, Ledesma DT*, Meza A*, Shields-Estrada A*, Xu T*. 2023. Looking back for the future: the ecology of terrestrial communities through the lens of conservation paleobiology. ***Annual Review of Ecology, Evolution, and Systematics***. 54:259-282. *doi.org/10.1146/annurev-ecolsys-110421-101343*

29) **Rickman J‡***, **Burtner A‡***, **Linden T‡**, Santana S, & **Law CJ***. 2023. Size and locomotor ecology have differing effects on the external and internal morphologies of squirrel (Rodentia: Sciuridae) limb bones. ***Integrative Organismal Biology.*** 5:obad017. *doi.org/10.1093/iob/obad017*

28) **Linden T‡***, **Burtner A‡**, **Rickman J‡**, **McFeely A‡**, Santana S, & **Law CJ***. 2023. Scaling patterns of body plans differ between squirrel ecotypes. ***PeerJ.*** e14800. *doi.org/10.7717/peerj.14800*

27) **Law CJ**, **Blackwell E‡**, Curtis AA, Dickinson E, Hartstone-Rose A, & Santana SE. 2022. Decoupled evolution of crania and mandibles in carnivoran mammals. ***Evolution***. 76:2959-2974. *doi.org/10.1111/evo.14578*

26) Lang MM, Bertrand OC, Flores GSM, **Law CJ**, Abdul-Sater JAD, Spakowski S, Silcox MT. 2022. Scaling patterns of cerebellar petrosal lobules in Euarchontoglires: impacts of ecology and phylogeny. ***Anatomical Records***. 305:3472-3503. *doi.org/10.1002/ar.24929*

25) **Law CJ**. 2022. Different evolutionary pathways lead to incomplete convergence of elongate body shapes in carnivoran mammals. ***Systematic Biology***. 71:788–796. *doi.org/10.1093/sysbio/syab091*

24) Shrestha MB, Shrestha G, Reule S, Oli S, Ghartimagar TB, Singh G, Tripathi DM, **Law CJ**, Shah KB, & Savage M. 2021. First evidence of Eurasian otter in Nepal in three decades. ***IUCN-SSC Otter Specialist Group Bulletin***. 38:279–291. *iucnosgbull.org*

23) Higham TE, Ferry LA, Schmitz L, Irschick DJ, Starko S, Anderson PSL, Bergmann PJ, Jamniczky HA, Monteiro LR, Navon D, Messier J, Carrington E, Farina SC, Feilich KL, Hernandez LP, Johnson MA, Kawano SM, **Law CJ**, Longo SJ, Martin CH, Martone PT, Rico-Guevara A, Santana SE, and Niklas KJ. In press. Linking biomechanical models and functional traits to investigate phenotypic diversity. ***Trends in Ecology and Evolution.*** 36:860-873. *doi.org/10.1016/j.tree.2021.05.009*

22) **Law CJ**. 2021. Ecological drivers of carnivoran body shape evolution. ***The American Naturalist.*** 198:406–420. *doi.org/10.1086/715588*

21) **Law CJ**. 2021. Evolutionary and morphological patterns underlying carnivoran body shape diversity. ***Evolution***. 75:365–375. *doi.org/10.1111/evo.14143*

20) **Law CJ**. 2020. Sex-specific ontogenetic patterns of cranial morphology, theoretical bite force, and underlying jaw musculature in fishers and American martens. ***Journal of Anatomy***. 237:727-740. *doi.org/10.1111/joa.13231*

19) **Law CJ**. 2019. Solitary meat-eaters: solitary, carnivorous carnivorans exhibit the highest degree of sexual size dimorphism. ***Scientific Reports***. 9:15344. doi.org/10.1038/s41598-019-51943-x

18) **Law CJ** & Mehta RS. 2019. Dry versus wet and gross: Comparisons between the dry skull method and gross dissection-based modeling in bite force estimations. ***Journal of Morphology***. 280:1706–1713. doi.org/10.1002/jmor.21061

17) **Law CJ**. 2019. Evolutionary shifts in extant mustelid (Mustelidae: Carnivora) cranial shape, body size, and body shape coincides with the Mid-Miocene Climate Transition. ***Biology Letters***. 15:20190155. doi.org/10.1098/rsbl.2019.0155

16) **Law CJ**, Slater GJ, & Mehta RS. 2019. Shared extremes by ectotherms and endotherms: body elongation in mustelids is associated with small size and reduced limbs. ***Evolution.*** 73:735–749. doi.org/10.1111/evo.13702

15) **Law CJ**, **Duran E**[†], **Hung N**[†], **Richards E**[‡], **Santillan I**[†], & Mehta RS. 2018. Effects of diet on cranial morphology and biting ability in musteloid mammals. ***Journal of Evolutionary Biology.*** 31:1918-1931. doi.org/10.1111/jeb.13385

14) Higgins BA, **Law CJ**, & Mehta RS. 2018. Eat whole and less often: ontogenetic shift reveals size specialization on kelp bass by the California moray eel*, Gymnothorax mordax*. ***Oecologia***. 188:875–887. doi.org/10.1007/s00442-018-4260-x

13) **Law CJ** & Mehta RS. 2018. Carnivory maintains cranial dimorphism between males and females: Evidence for niche divergence in extant Musteloidea. ***Evolution.*** 72:1950–1961. doi.org/10.1111/evo.13514

12) **Law CJ**, Slater G, & Mehta RS. 2018. Lineage diversity and size disparity in Musteloidea: testing patterns of adaptive radiation using molecular and fossil-based methods. ***Systematic Biology.*** 67:127–144. doi.org/10.1093/sysbio/syx047

11) **Jones K**[‡]* & **Law CJ***. 2018. Differentiation of craniomandibular morphology in two sympatric *Peromyscus* mice (Cricetidae: Rodentia). ***Mammal Research***. 63:277–283. doi.org/10.1007/s13364-018-0364-2 [†]Joint first authors

10) **Law CJ**. 2018. *Mustela sibirica* (Carnivora: Mustelidae). ***Mammalian Species***. 50:109–118. doi.org/10.1093/mspecies/sey013

9) Kienle SS, **Law CJ**, Costa DP, Berta A, & Mehta RS. 2017. Revisiting the behavioural framework of feeding in predatory aquatic mammals. ***Proceedings of the Royal Society B***. 284:20171035. doi.org/10.1098/rspb.2017.1035

8) **Law CJ**, Baliga VB, Tinker MT, & Mehta RS. 2017. Asynchrony in craniomandibular development and growth in *Enhydra lutris nereis* (Carnivora: Mustelidae): Are southern sea otters born to bite? ***Biological Journal of Linnean Society***. 121:420-438. doi.org/10.1093/biolinnean/blw050

7) **Hung N**[†]* & **Law CJ***. 2016. *Lutra lutra* (Carnivora: Mustelidae). ***Mammalian Species***. 48:109–122. doi.org/10.1093/mspecies/sew011

6) **Law CJ**, Young C, & Mehta RS. 2016. Ontogenetic scaling of theoretical bite forces in southern sea otters (*Enhydra lutris nereis*). ***Physiological and Biochemical Zoology.*** 89:347-363. *doi.org/10.1086/688313*

5) **Law CJ**, **Venkatram V**[†], & Mehta RS. 2016. Sexual dimorphism of craniomandibular morphology in southern sea otters (*Enhydra lutris nereis*). ***Journal of Mammalogy***. 97:1764-1773. *doi.org/10.1093/jmammal/qyw148*

4) Baliga VB & **Law CJ**. 2016. Cleaners amongst wrasses: phylogenetics and evolutionary patterns of cleaning behavior within Labridae. ***Molecular Phylogenetics and Evolution***. 94:424-435. *doi.org/10.1016/j.ympev.2015.09.006*

3) **Law CJ**, Dorgan KM, & Rouse GW. 2014. Relating divergence in polychaete musculature to different burrowing behaviors: A study using Opheliidae (Annelida). ***Journal of Morphology***. 571:548–571. *doi.org/10.1002/jmor.20237*

2) Dorgan KM, **Law CJ**, & Rouse GW. 2013. Meandering worms: Mechanics of undulatory burrowing in muds. ***Proceedings of the Royal Society B***. 280:20122948. *doi.org/10.1098/rspb.2012.2948*

1) **Law CJ**, Dorgan KM, & Rouse GW. 2013. Validation of three sympatric *Thoracophelia* species (Annelida: Opheliidae) from Dillon Beach, California using mitochondrial and nuclear DNA sequence data. ***Zootaxa***. 3608:67–74. *doi.org/10.11646/zootaxa.3608.1.4*

INVITED BOOK REVIEWS

1) **Law CJ**. 2019. Book review of *Biology and Conservation of Musteloids* by David W. Macdonald, Chris Newman, and Lauren A. Harrington. ***The Quarterly Review of Biology***. 94:297–298. *doi.org/10.1086/705063*

INVITED SEMINARS

2024 **Texas State University.** *Ecomorphological diversity of carnivoran mammals*. Biology Department Seminar. 01.26.24.

2023 **Baylor University.** *Linking phenotypic diversity to individual fitness and species diversification*. Biology Department Seminar. 03.31.23.

2022 **The University of Texas.** *Linking phenotypic diversity to individual fitness and species diversification*. Integrative Biology Department Seminar. 12.05.22.

Western Washington University. *Ecomorphological mechanisms underlying individual fitness and species survival*. Biology Department Seminar. 11.30.22.

Washington State University. *Linking phenotypic diversity to individual fitness and species diversification*. Biological Science Department Seminar. 11.14.22.

Natural History Museum of Los Angeles County. *Linking phenotypic diversity to individual fitness and species diversification*. Research & Collections Department Seminar. 11.10.22.

University of California Riverside. *Linking phenotypic diversity to individual fitness and species diversification*. Evolution, Ecology, & Organismal Department Biology Seminar. 5.23.22.

The University of Texas. *Body elongation and diversification in carnivoran mammals*. Paleontology Seminar. 3.31.22.

California State University, East Bay. *Linking phenotypic diversity to individual fitness and species diversification*. Biological Sciences Department Seminar. 2.01.22

2021 **University of Michigan.** *Linking phenotypic diversity to individual fitness and species diversification*. Ecology and Evolutionary Biology Department Seminar. 11.08.22

University of California Museum of Paleontology. *Carnivoran body shape evolution*. Paleo Seminar. 10.12.22

University of Washington. *Foraging benefits of tool using behavior in sea otters.* Biology Department Seminar.

American Museum of Natural History. *Linking phenotypic diversity to individual fitness and species diversification.* Comparative Biology Department Seminar. 3.1.21.

2020 **University of Washington.** *Musteloid diversification and body shape evolution*. Paleobiology Seminar. 2.27.20.

Cornell University. *Linking natural history to species diversification and individual fitness.* Ecology and Evolutionary Biology Seminar. 2.6.20.

New York Institute of Technology. Anatomy Department Seminar (*covid, cancelled*).

Adelphi University. *Linking natural history to species diversification and individual fitness.* Biology Seminar. 1.31.20.

2019 **University of California, Santa Cruz.** *Patterns of intraspecific and interspecific variation in sea otters and other musteloids*. Ecology and Evolutionary Biology Seminar. 5.31.19.

Santa Clara University. *Patterns of intraspecific and interspecific variation in sea otters and other musteloids.* Biology Department Seminar. 5.29.19.

University of California, Davis. *Ecomorphology and evolution of sea otters and other musteloids.* Center for Population Biology Seminar. 1.22.19.

TEACHING EXPERIENCE

University of Washington

Guest lecturer/speaker: **Mammalogy** (Fall 2021, Winter 2021, Fall 2023); **Functional Morphology** (Fall 2024)

University of California, Santa Cruz

Co-instructor: **Comparative Vertebrate Anatomy Lab** (Fall 2017); **Comparative Vertebrate Anatomy Lab** (Summer 2017). Developed lectures and labs focused on anatomy, morphology, and biomechanics underlying vertebrate locomotion and feeding, and its evolution

Guest lecturer: **Comparative Vertebrate Anatomy Lab** (Spring 2019); **Functional Anatomy** (Spring 2017); **Mammalogy** (Fall 2015); **Development and Physiology** (Fall 2015); **Biology of Marine Mammals** (Spring 2015); **Comparative Vertebrate Anatomy Lab** (Fall 2014)

Teaching Assistant: **Marine Mammals** (Spring 2015); **Comparative Vertebrate Anatomy Lab** (Fall 2014); **Development & Physiology** (Spring 2014)

Invited Panelist: **Creating Active and Inclusive Section Experiences Workshop** (Fall 2017)

Biological Collections Ecology and Evolution Network (BCEENET)

Collaborating Developer: (Summer 2020). Provided consultation in the development of Course-based Undergraduate Research Experiences (CUREs) that used online natural history collection data records**.**

STUDENTS MENTORED

Graduate Student Committees.

1. **William Zang** (West Chester University, Jan 2021–Oct 2022). *Maternal drivers of reproductive output in the lizard family Scincidae*

Undergraduate Researchers (36). 7 student co-authors*

University of Washington (second stint)

36. **Ana Luisa Gutierrez** (LSAMP; May 2024–August 2024): *Body shape allometry in rodents*
35. **Anna Ostrem** (Sept 2023–June 2023): *Ecomorphology of mustelid jaw morphology*
34. **Ariyanna Haygood** (Sept 2023–present): *Brain evolution in primates*
33. **Coby Huizenga** (Sept 2023– June 2023): *Body shape allometry in rabbits and hares*
32. **Crystal Khem** (Sept 2023– June 2023): *Primate skull ecomorphology*
31. **Furkan Cardakli** (Sept 2023–present): *Sexual dimorphism in jaw performance*
30. **Gomathy Shunmugapriyan** (Sept 2023–present): *Climatic effects on mustelid jaws*
29. **Kanika Saravanan** (Sept 2023–June 2023): *Ecomorphology of mustelid jaw morphology*
28. **Milli Tripathi** (Sept 2023–June 2023): *Sexual dimorphism in mustelid jaws*
27. **Mirra Chinta** (Sept 2023–June 2023): *Ecological correlates to limb morphology in rabbits*
26. **Nia Brice** (Sept 2023–present): *Ecological correlates to limb morphology in rabbits*
25. **Simran Gupta** (Sept 2023–present): *Primate skull ecomorphology*
24. **Suhyeon Kim** (Sept 2023–June 2023): *Body shape evolution in rabbits and hares*

University of Texas

23. **Brenda Chavez** (Aug 2022–May 2023): *Sexual dimorphism in mustelid jaw morphology*
22. **Vedika Shirtekar** (Aug 2022–May 2023): *Sexual dimorphism in mustelid jaw morphology*
21. **Rodrigo Andrade Luna** (Angelo State University/UT INSTINCT REU; Jun 2022–Jan 2023): *Evaluating mandible size and shape using Rensch's rule in Felidae*

University of Washington (first stint)

20. **Fletcher Levy** (Wesleyan University; Jun–Aug 2022): *Evaluating mandible size and shape using Rensch's rule in Felidae*
19. **Tate Linden*** (Jan 2022–present): *Scaling patterns of body plans in squirrels*
18. **Alise Newman** (Jan 2022–present): *Sexual dimorphism in bobcat craniodental morphology*
17. **Rada Soonthonvan** (Jan 2022–Jun 2022): *Sexual dimorphism in canid jaw morphology*
16. **Anna Heeter** (Jan 2022–Jun 2022): *Sexual dimorphism in canid jaw morphology*

15. **Abby Burtner*** (Jan 2021–present): *Gliding towards an understanding of the origin of flight in bats*
14. **Hannah Rickman*** (Jan 2021–Jun 2023): *Effects of locomotion on external and internal forelimb structure: a case study in Sciuridae*
13. **Annika McFeely*** (Jan 2021–Jun 2022): *Scaling patterns of body plans differ between squirrel ecotypes*

American Museum of Natural History

12. **Julia Padro** (Smith College/AMNH REU; Jun 2022–Jan 2023): *Sexual dimorphism in carnivoran jaw morphology*
11. **Emily Blackwell*** (Smith College/ AMNH REU; Jun 2021–Jan 2023): *Craniomandibular evolution in carnivoran mammals*
10. **Bennett Slibeck** (Columbia/ AMNH REU; Nov 2019–Jan 2021): *Effects of morphology on species range size*

UC Santa Cruz

9. **Ana Moreland** (Jun 2018–Apr 2019): *Physical performance of southern alligator lizards in a changing climate*
8. **Carly Sanchez** (Jun–Sept 2018): *Quantifying kinematics of sea otter tool use behavior*
7. **Parker Kaye (**Sept 2017–Mar 2018): *Small mammal population survey of Younger Lagoon Natural Reserve*
6. **Jennilyn Stenske** (June 2017–June 2019): *Population dynamics of small mammals at UC Santa Cruz FERP*
5. **Ekai Richards*** (Jan–Aug 2017): *Effects of diet on the scaling of bite forces in Musteloidea*
4. **Sam Sambado** (Jan–Apr 2017): *Population dynamics of small mammals at UC Santa Cruz FERP*
3. **Kaz Jones*** (Sept 2016–Jun 2017): *Differentiation of craniomandibular morphology in two sympatric Peromyscus mice*
2. **Meghan Yap-Chiongco** (Aug 2016–Jun 2017): *Phylogenetics of Ophelidiformes*
1. **Shohei Burns** (Mar–Aug 2014): *Ecological variation in musteloids*

High School Students (5). 4 student co-authors

UC Santa Cruz

1. **Emma Duran*** (June–Aug 2017): *Effects of diet on the scaling of bite forces in Musteloidea*
4. **Isaac Santillan*** (June–Aug 2017): *Effects of diet on the scaling of bite forces in Musteloidea*
3. **Anna Wadhwa** (June–Aug 2016): *Sexual dimorphism of North American river otters*
2. **Vikram Venkatram*** (June–Aug 2015): *Craniodental sexual dimorphism in sea otters*
1. **Nancy Hung*** (June–Aug 2014): *Craniodental variation in Procyonidae*

***Cultivamos Excelencia* Program – Community College Program**

2. **Jasmin Lara** (San Jose City College; Sept 2018–June 2019): *The Limitations of recycling in the community*
1. **Joanna Gonzalez Lugo** (San Jose City College; Sept 2018–June 2019): *The values and impact of Mexican American Studies on Latinx students in San Jose City College*

Small Mammal Undergraduate Research in the Forest (SMURF) Program (2015–2019)

Trained and supervised 52 SMURF interns in mammal trapping: **Jasmin Regalado** (Apr–June 2019), **Filippa Erixon** (Apr–June 2019), **Jamie Becher** (Apr–June 2019), **Olivia Wilms** (Apr–June 2019), **Josue Lopez** (Apr–June 2019), **Maria Zepeda** (Apr–June 2019), **Marie Gredell** (Apr–June 2019), **Christina Olague** (Apr–June 2019), **Amanda Smith** (Jan–Mar 2019), **Ari Statler** (Jan–Mar 2019), **Giselle Wendt** (Jan–Mar 2019), **Ishana Shukla** (Jan–Mar 2019), **Linnea Gullikson** (Jan–Mar 2019), **Lucy Malamud-Roam** (Jan–Mar 2019), **Nicholas Bergeron** (Jan–Mar 2019), **Vanessa Cortez** (Jan–Mar 2019), **Gabby Reynosa** (Sept–Jun 2019); **Maggie Choi (**Sept–Dec 2018); **Ray Hunter** (Sept–Dec 2018); **Benji Le** (Sept–Dec 2018); **Freddy Manzarez** (Sept–Dec 2018); **Shelby Thompson** (Sept–Jun 2019); **Jingyun Wu** (Sept–Dec 2018); **Samantha Abarca** (Apr–June 2018); **Lia Del Vecchio** (Apr–June 2018); **Maggy Feng** (Apr–June 2018); **Esmeralda Reyes** (Apr–June 2018); **Ciera Castillo** (Jan–Apr 2018); **Noelle Duerwald** (Jan–Apr 2018); **Shaun Kehrmeyer** (Jan–Apr 2018); **Samuel Sacco** (Jan–Apr 2018); **Samantha Gautreaux** (Jan–Apr 2018); **Jazmin Rios** (Jan–Apr 2018); **David Castaneda** (Sept–Dec 2017); **Aaron Gormley** (Sept–Dec 2017); **Sabrina Sanchez** (Sept–Dec 2017); **Kaz Jones** (Sept 2016–June 2017); **Jessica Elgersma** (Sept 2016–June 2017); **Deanna Rhoades** (Sept 2016–June 2017); **Carly Sanchez** (Sept 2016–June 2018); **Jazzmin Ilas** (Sept 2016–June 2017); **Sami Akiba** (Sept 2016–June 2017); **Isabelle Panza** (Sept 2016–June 2017); **Megan Pasternak** (Sept 2016–June 2017); **Erin Huntsinger** (Sept 2016–June 2017); **Ilona Wilde** (Sept 2016–June 2017); **Tatiana Delgadillo** (Sept 2016–Dec 2016); **Ana Moreland** (Sept 2016–Dec 2016); **Aliya Cacanindin** (Sept 2016–Dec 2016); **Ethan Slattery** (Sept 2016–Dec 2016); **John Ahrens** (Sept 2016–Dec 2016); **Natalie Neff** (Sept 2015–June 2017)

DIVERSITY, EQUITY, INCLUSION, & JUSTICE INITIATIVES AND TRAINING

Founding committee member

2021-22 Femme2STEM Outreach Committee. *University of Washington*

Mentor

2024– Louis Stokes Alliance for Minority Participation (LSAMP) Program
2022–23 Texas Excellence in Jobs and Service (TEJAS) Program
2023 SICB Broadening Participation Mentor-Mentee Program
2022 UT Austin Inclusive Student Training in Collections Topics (INSTINCT) Program
2022 SICB Broadening Participation Mentor-Mentee Program
2018–19 *Cultivamos Excelencia* Community College Research Program

Attendee

2021 Mentoring Graduate Students Workshop. *The University of Texas*
2021 Inclusive Classroom Management Workshop. *The University of Texas*
2021 Research Mentor Training Workshop. *University of Wisconsin-Madison*
2020 Empowering Prevention & Inclusivity Community (EPIC) Training. *University of Washington*
2016 Creating Active & Inclusive Section Experiences Workshop. *UC Santa Cruz*

Panelist

2023 Opening the Door to Letters of Recommendation. *University of Washington*
2017 Creating Active & Inclusive Section Experiences Workshop. *UC Santa Cruz*

Member

2015 Graduate Student Committee for Diversity Enhancement. *UC Santa Cruz*

RELEVANT RESEARCH EXPERIENCE

Museum Collections Work

***Collection visits (18 institutions)**:* American Museum of Natural History; Beaty Biodiversity Museum; Burke Museum of Natural History and Culture; California Academy of Sciences; Field Museum; John Day Fossil Beds National Monument; Kansas University Natural History Museum; Museum of Vertebrate Zoology at UC Berkeley; National Museum of Natural History; Natural History Museum at London; Natural History Museum of Los Angeles County; Norris Center for Natural History at UC Santa Cruz; University of California Museum of Paleontology; University of Oregon Museum of Natural and Cultural History; University of Puget Sound Museum of Natural History; University of Texas Vertebrate Paleontology Collection; Yale Peabody Museum of Natural History.

Field Experience

UC Santa Cruz Natural Reserve, CA, USA. Trapped and tagged small mammals for long-term population study. [2015–2019].

Fort Ord Natural Reserve, CA, USA. Trapped and tagged small mammals for long-term population study. [2015–2019].

Catalina Island, CA, USA. Trapped, tagged, and collected moray eels for morphological analyses and long-term population. [2015, 2016, 2018, 2019].

Rancho los Pinos, Baja California, Mexico. Trapped, tagged, and collected moray eels for morphological analyses and long-term population. [2019].

San Juan Island, WA, USA. Trapped and collected marine invertebrates for biomechanical analyses and accession in Scripps Institution of Oceanography collection [2010–2012].

San Diego, CA, USA. Trapped and collected marine invertebrates for biomechanical analyses and accession in Scripps Institution of Oceanography collection [2010–2012].

INVITED WORKING GROUPS

2019 **National Science Foundation Rules of Life: Forecasting and Emergence in Living Systems (RoL:FELS) Working Group**. *Reciprocal illumination between ecology and biomechanics: evolution, integration, and constraint*. PIs: Tim Higham and Lara Ferry.

CONTRIBUTED PRESENTATIONS

Mentored coauthors: † = high school student, ‡ = undergraduate student, * = equal contributions

2024 **Paläontologische Gesellschaft**, Warsaw, Poland.

1. López-Torres S, Bertrand OC, Fostowicz-Frelik Ł, Lang MM, **Law CJ**, Martin-Flores GS, Schillaci MA, Silcox MT. *Clade-specific patterns of brain size in glires and euarchonta: implications for the calculation of encephalization quotients*. Talk.

European Association of Vertebrate Palaeontologists, Longyearbyen, Svalbard.

2. López-Torres S, Bertrand OC, Fostowicz-Frelik Ł, Lang MM, **Law CJ**, Martin-Flores GS, Schillaci MA, Silcox MT. *The allometry of brain size in Euarchontoglires and an exploration of group-specific encephalization*. Poster.

Society for Integrative and Comparative Biology Annual Meeting, Seattle, WA.

3. **Law CJ**, Hlusko L, & Tseng ZJ. *Uncovering the mosaic evolution of carnivoran skeletal systems*. Talk.
4. Linden T‡, Flynn JJ, & **Law CJ**. *Quantifying skull shape convergence between Eupleridae and other feliform carnivorans.* Poster.
5. Grossnickle DM, Brightly WH, Pevsner SK, Polly PD, Roston RA, Stanchak KE, Stayton T, Weaver LN, & **Law CJ**. *A novel method for measuring phenotypic convergence*. Talk.

2023 **Society of Vertebrate Paleontology Annual Meeting**, Cincinnati, Ohio, USA.

1. López-Torres S, Bertrand OC, Fostowicz-Frelik Ł, Lang MM, **Law CJ**, Martin-Flores GS, Schillaci MA, Silcox MT. *The allometry of brain size in Euarchontoglires and an exploration of group-specific encephalization*. Poster.

International Congress of Vertebrate Morphology, Cairns, Queensland, Australia.

2. **Law CJ**, Hlusko L, & Tseng ZJ. *Evolutionary convergence and integration among carnivoran skeletal systems.* Talk.

13th International Mammalogical Congress, Anchorage, AK.

3. **Law CJ**, Hlusko L, & Tseng ZJ. *Evolutionary convergence and integration among carnivoran skeletal systems.* Talk.

American Association of Biological Anthropologists Annual Meeting, Reno, NV.

4. Burrows AM, **Law CJ**, Lopez-Torres S, Selig KR, & Silcox MT. *Strepsirrhine gum-feeders have short skulls: searching for the evolutionary morphology of gummivory.* Talk.

Society for Integrative and Comparative Biology Annual Meeting, Austin, TX.

5. **Law CJ**, Blackwell E‡, Curtis AA, Dickinson E, Hartstone-Rose A, & Santana SE. *Decoupled evolution of crania and mandibles in carnivoran mammals*. Poster.
6. Linden T‡, Pardo J‡, Blackwell E‡, & **Law CJ**. *Mandibular sexual dimorphism in mongooses (herpestids) and civets (viverrids).* Poster.
7. Blackwell E‡, Newman A‡, & **Law CJ**. Mandibular sexual dimorphism in canids. Poster.
8. Andrade Luna R‡, Levy F‡, and **Law CJ**. *Evaluating mandible size and shape*
9. *using Rensch's rule in the family Felidae*. Poster.
10. Rickman J‡, Burtner A‡, Linden T‡, Santana S, & **Law CJ**. *Differences in limb bone micro-anatomy across ecotypes in Sciuridae.* Poster.

2022 **World Marine Mammal Conference**, West Palm Beach, FL.

1. Maresh J, **Law CJ**, Kerr S, Costa D, & Adams D. *Maternal investment strategies in marine mammals: a phylogenetic comparative approach*. Talk.

Society for Integrative and Comparative Biology Annual Meeting, Phoenix, AZ.

2. **Law CJ.** *Different evolutionary pathways lead to incomplete convergence of elongate body shapes*. Poster.
3. Blackwell E‡, **Law CJ**, Curtis AA, Dickinson E, Hartstone-Rose A, & Santana SE. *Ecomorphology of the carnivoran skull*. Poster.
4. Burtner A‡, Grossnickle D, Santana S, & **Law CJ**. *Understanding the origin of bat flight*. Poster.
5. Rickman J‡, Burtner A‡, McFeely A‡, Santana S, & **Law CJ**. *Effects of locomotion on external and internal forelimb structure in Sciuridae*. Poster.

2021 **Society for the Study of Evolution Annual Meeting**. Virtual.

1. **Law CJ**. *Ecological drivers of carnivoran body shape evolution*. Talk.
2. Grossnickle DM, Brightly WH, **Law CJ**, Pevsner SK, Roston RA, Stanchak KE, & Weaver LN. *Testing the prevalence of morphological convergence among mammalian forelimb skeletons.* Talk.

American Society of Mammalogists Conference. Virtual.

3. **Law CJ**. *Ecological drivers of carnivoran body shape evolution*. Talk.
4. Burtner A, McFeely A, Rickman J, Santana SE, & **Law CJ**. *Evolution of body shape diversity in squirrels*. Talk.

Sea Otter Research and Conservation Symposium. Virtual.

5. **Law CJ**, Tinker MT, Fujii, JA, Nicholson T, Staedler M, Tomoleoni J, Young C, & Mehta RS. *Tool use increases biomechanical and bioenergetic foraging success in southern sea otters*. Talk. 1.4.20.

Society for Integrative and Comparative Biology Annual Meeting. Virtual.

6. Slibeck B‡ & **Law CJ**. *Effects of morphology on species range size*. Talk.
7. **Law CJ**. *Evolutionary and morphological patterns underlying carnivoran body shape diversity.* Talk.
8. Grossnickle DM, Brightly WH, **Law CJ**, Pevsner SK, Roston RA, Stanchak KE, & Weaver LN. *Testing the prevalence of morphological convergence among mammalian forelimb skeletons.* Talk.

2020 **Western Society of Naturalists Conference.** Virtual.

1. **Law CJ**, Tinker MT, Fujii, JA, Nicholson T, Staedler M, Tomoleoni J, Young C, & Mehta RS. *Tool use increases foraging success in southern sea otters*. Talk.

Animal Behavior Society Annual Meeting. Virtual.

2. **Law CJ**, Tinker MT, Fujii, JA, Nicholson T, Staedler M, Tomoleoni J, Young C, & Mehta RS. *Tool use increases foraging success in southern sea otters*. Talk.

Society for Integrative and Comparative Biology Annual Meeting, Austin, TX.

3. **Law CJ**, Tinker MT, Fujii, JA, Nicholson T, Staedler M, Tomoleoni J, Young C, & Mehta RS. *Tool use increases biomechanical and bioenergetic foraging success in southern sea otters*. Talk. 1.4.20.
4. **Law CJ**. *Morphological and evolutionary patterns underlying carnivoran body shape diversification*. Poster. 1.4.20.

2019 **World Marine Mammal Conference**, Barcelona, Spain.

1. **Law CJ**, Tinker MT, Fujii, JA, Nicholson T, Staedler M, Tomoleoni J, Young C, & Mehta RS. *Tool use increases foraging success in southern sea otters*. 12.12.19.

International Congress of Vertebrate Morphology, Prague, Czech Republic.

2. **Law CJ**. *Ecomorphology and evolution of carnivoran body plans*. Talk. 7.23.19.

Society for Integrative and Comparative Biology Annual Meeting, Tampa, FL.

3. **Law CJ** & Mehta RS. *Carnivory maintains cranial dimorphism between males and females: Evidence for niche divergence in extant Musteloidea*. 1.4.19.
4. **Law CJ**, Duran E†, Hung N†, Richards E‡, Santillan I†, & Mehta RS. *Cranial shape differences do not translate to bite force differences between musteloids with distinct dietary ecologies.* 1.4.19.

2018 **American Society of Mammalogists Annual Meeting**, Manhattan, KS.

1. **Law CJ**, Slater G, & Mehta RS. *Shared extremes by ectotherms and endotherms: body elongation in mustelids is associated with small size and reduced limbs*. Talk. 6.27.18.
2. Maresh JL, Corl A, Costa DP, & **Law CJ**. *Predictors of metabolic rates in aquatic mammals*. Poster. 6.26.18.

Sea Otter Research Update Meeting, Santa Cruz, CA.

3. **Law CJ**, Tinker T, & Mehta RS. *Strike force in tool using otters*. Talk. 3.20.18.

Society for Integrative and Comparative Biology Annual Meeting, San Francisco, CA.

4. **Law CJ**, Slater G, & Mehta RS. *Small and slender: evolutionary shifts towards elongate body plans within Mustelidae*. 1.4.18.
5. Mehta RS, **Law CJ**, Duran E†, Hung N†, Richards E‡, Santillan I†. *Effects of diet on the evolution of bite force in adult musteloids*. 1.6.18.
6. Higgins BA, **Law CJ**, & Mehta RS. *Functional ecology of the California moray eel (Gymnothorax mordax): dietary breadth and bite force over ontogeny*. Talk. 1.6.18.
7. Maresh JL, Corl A, Costa DP, & **Law CJ**. *Predictors of metabolic rates in aquatic mammals*. Poster. 1.5.18.

2017 **12th International Mammalogical Congress**, Perth, Western Australia.

1. **Law CJ**, Slater G, & Mehta RS. *Lineage diversity and size disparity in Musteloidea: testing patterns of adaptive radiation using molecular and fossil-based methods*. Talk. 7.14.17.
2. **Law CJ** & Mehta RS. *Evolution of sexual dimorphism in musteloid crania*. Poster. 7.10.17.

Society for Integrative and Comparative Biology Annual Meeting, New Orleans, LA.

3. **Law CJ**, Young C, & Mehta RS. *Ontogenetic scaling of theoretical bite forces in southern sea otters (Enhydra lutris nereis).* Talk. 1.8.17.

2016 **Southern Sea Otter Research Update Meeting**, Santa Cruz, CA.

1. **Law CJ**. *Sexual dimorphism in cranial form and function of southern sea otters*. Talk. 2.19.16.

Society for Integrative and Comparative Biology Annual Meeting, Portland, OR.

2. **Law CJ**, Baliga VB, Tinker MT, & Mehta RS. *Sexual dimorphism in the cranial morphology of southern sea otters*. Talk. 1.6.16.

2015 **Society for Integrative and Comparative Biology Annual Meeting**, West Palm Beach, FL.
1. **Law CJ** & Mehta RS. *Divergent times and diversification rates of Musteloidea (Mammalia:Carnivora)*. Talk. 1.4.15.

2013 **Society for Integrative and Comparative Biology Annual Meeting**, San Francisco, CA.
1. **Law CJ**, Dorgan KM, & Rouse GW. *Differences in polychaete musculature lead to distinctive burrowing behaviors*. Poster.

2012 **Society for Integrative and Comparative Biology Annual Meeting**, Charleston, SC.
1. **Law CJ**, Dorgan KM, & Rouse GW. *The anatomical features and kinematics of undulatory burrowing in the polychaete Armandia brevis*. Poster.

PROFESSIONAL SERVICE

Reviewer for the National Science Foundation

2024 **Ad Hoc Reviewer.** Integrative Organismal Systems (IOS)–Developmental Systems

Research Mentor

2024– Louis Stokes Alliance for Minority Participation (LSAMP) Program
2023–24 NSF DBI–2128146 Research Experience for Undergraduates (REU) Program
2022–23 Texas Excellence in Jobs and Service (TEJAS) Program
2022 Wesleyan University College of the Environment Summer Research Fellowship
2022 UT Austin Inclusive Student Training in Collections Topics (INSTINCT) Program
2022 AMNH Research Experience for Undergraduates (REU) Program
2021 NSF PRFP Research Experience for Undergraduates (REU) Program
2021 AMNH Research Experience for Undergraduates (REU) Program
2020 AMNH Research Experience for Undergraduates (REU) Program
2018–19 *Cultivamos Excelencia* Community College Research Program
2015–19 Small Mammal Undergrad Research in Forest (SMURF) Program
2014–17 Science Internship Program (SIP)

Reviewer for Scientific Journals

American Naturalist, Anatomical Records, Biological Journal of the Linnean Society, Biology Letters, Evolution, Functional Ecology, Integrative Organismal Biology, Journal of Anatomy, Journal of Evolutionary Biology, Journal of Experimental Biology, Journal of Mammalian Biology, Journal of Mammalogy, Journal of Zoology, Nature Communications, PeerJ, PLOS One, Proceedings of the National Academy of Sciences, Proceedings of the Royal Society B

Reviewer for Professional Societies

2021 **Reviewer.** Abstracts for SACNAS Research Presentation

SCIENCE COMMUNICATION

K–12

2024 **Presenter.** Math Science Upward Bound Program, Seattle, WA.

2024 **Presenter.** Gulf of Maine Research Institute's Scientist To Go Program, Portland, ME.
2021 **Presenter.** California State Summer School for Mathematics and Science, (COSMOS), Santa Cruz, CA.
2021 **Presenter.** K–5 Science & Nature Program, American Museum of Natural History
2019 **Presenter.** Watsonville Wetlands Watch, CA.
2018 **Presenter.** Boys and Girls Clubs of Santa Cruz County, CA.
2017 **Presenter.** Ocean Explorers Summer Camp, Seymour Center, CA.
2016 **Presenter.** Ocean Explorers Summer Camp, Seymour Center, CA.
2014 **Presenter.** Science Alive Workshop, Gavilan College, Gilroy, CA.

Public Talks

2021 **Speaker.** Curated Conversations at the Burke Museum.
2018 **Speaker.** Coastal Student Awards Celebration.
2015 **Speaker.** Citizen Science at the Santa Cruz Public Libraries.
Speaker. Annual Sea Otter Awareness Week.

Outreach

2024 **Interviewee.** Quirks & Quarks – Sea otters
Judge. University of Washington Art in Science Symposium
Interviewee. NPR Morning Edition, The Guardian, The Hill, Reuters, Südwestrundfunk, Science News
2023 **Consultant.** True Facts - The Rise of the Kitten Snake
2022 **Interviewee.** Ologies - Lutrinology
2021 **Interviewee.** KSQDFM Santa Cruz Naturalist segment
2020 **Exhibit Presenter.** Burke Museum Member's Night