



## CAMILLA ALVES SOUTO, MS, PhD

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### APPOINTMENTS

- 2022–present** Assistant Professor of Marine Sciences, Stockton University
- 2022–present** Research Associate, National Museum of Natural History (NMNH)
- 2020–2022** Deep Time Peter Buck Fellow, National Museum of Natural History (NMNH)  
75% Research; 25% Education and Outreach; Mentor: Gene Hunt, PhD
- 2019** Lecturer, Integrative Biology Department, University of California, Berkeley (UCB)

### EDUCATION

- 2018** PhD Integrative Biology, **University of California, Berkeley**, U.S.A.  
Supervisor: Charles R. Marshall, PhD
- 2012** MSc Animal Diversity: Zoology, **Federal University of Bahia**, Brazil (UFBA)  
Supervisor: Carla Menegola, PhD (UFBA)  
Co-Supervisor: Rich Mooi, PhD, **California Academy of Sciences**, U.S.A.
- 2008** BSc Biology with emphasis in Ecology, **Federal University of Bahia**, Brazil (UFBA)  
Supervisor: Orane Falcão de Souza Alves, PhD

### RESEARCH INTERESTS

Invertebrate zoology and paleontology, especially of echinoderms; phylogenetic systematics; marine (paleo)biogeography; macroevolution; integrative taxonomy.

### PEER-REVIEWED PUBLICATIONS

**Published** (\* equal contribution; ‡ undergraduate research)

13. \*Martins L, \*Souto C, Tavares M. 2021. Exploring the macrostructural anatomy of dendrochirotid sea cucumber's (Echinodermata) calcareous rings under micro-computed tomography ( $\mu$ CT) and its bearing on phylogeny. *Journal of Anatomy*, 238(6), 1386-1403. [Available Here](#)
12. ‡Cunha R, Martins L, Menegola C, Souto C. 2021. Taxonomy of the sea stars (Echinodermata: Asteroidea) from Bahia State, including ontogenetic variations and an illustrated key to the Brazilian species. *Zootaxa*, 4955(1), 1–78. [Available Here](#)
11. \*Martins L, \*Souto C. 2020. Taxonomy of the Brazilian Apodida (Holothuroidea), with the description of two new genera. *Marine Biology Research*, 16(4), 219–255. [Available Here](#)
10. Souto C, Mooi R, Martins L, Menegola C, Marshall CR. 2019. Homoplasy and extinction: the phylogeny of the cassidulid echinoids (Echinodermata). *Zoological Journal of the Linnean Society*, 187, 622–660. [Available Here](#)

9. Martins L, **Souto C**. 2019. Taxonomic remarks on *Havelockia* and *Thyone* (Holothuroidea: Dendrochirotida), with descriptions of two new species from the Brazilian coast. *Journal of the Marine Biological Association of the United Kingdom*, 99, 1127–1134. Available [Here](#)
8. **Souto C**, Martins L. 2018. Synchrotron micro-CT scanning leads to the discovery of a new genus of morphologically conserved echinoid (Echinodermata: Cassiduloida). *Zootaxa*, 4457(1), 70–92. Available [Here](#)
7. **Souto C**, Martins L, Menegola C. 2018. Giving up on elaborate dermal ossicles: a new genus of ossicleless Apodida (Holothuroidea). *Journal of the Marine Biological Association of the United Kingdom*, 98(7), 1685–1688. Available [Here](#)
6. \*Martins L, \***Souto C**, Braga J, Tavares M. 2018. Echinoidea and Holothuroidea (Echinodermata) of the Trindade & Martin Vaz Archipelago, off Brazil, with new records and remarks on taxonomy and species composition. *Journal of the Marine Biological Association of the United Kingdom*, 98(3), 521–555. Available [Here](#)
5. \*Martins L, \***Souto C**. 2015 Taxonomic review of four western Atlantic dendrochirotids (Holothuroidea) with the description of a new Brazilian cucumariid species and designation of neotypes. *Zootaxa*, 3919(2), 362–374. Available [Here](#)
4. \*Martins L, \***Souto C**, \*Magalhães WF, Alves OFS, Rosa I, Sampaio CLS. 2012. Echinoderm harvesting in Todos-os-Santos Bay, Bahia state, Brazil: the aquarium trade. *Sitentibus*, 12, 53–59. Available [Here](#)
3. Martins L, **Souto C**, Menegola C. 2012. A new genus and new species of Sclerodactylidae (Holothuroidea) from the Southwestern Atlantic coast. *Zootaxa*, 3506, 54–62. Available [Here](#)
2. Martins L, **Souto C**, Menegola C. 2012. First record of *Holothuria* (*Theelothuria*) *princeps* and *Thyone pawsoni* [Echinodermata: Holothuroidea] in the South Atlantic Ocean. *Marine Biodiversity Records*, 5, e98. Available [Here](#)
1. **Souto C**, Manso CLC, Martins LR. 2011. Rediscovery and redescription of *Cassidulus infidus* (Echinoidea: Cassidulidae) from Northeastern Brazil. *Zootaxa*, 3095, 39–48. Available [Here](#)

### Book Chapter



- Souto C\***, Martins L\*. 2017. Os equinodermos. In: Nunes JMC, de Matos MRB (eds.) *Litoral Norte da Bahia: caracterização ambiental, biodiversidade e conservação*. Salvador, EDUFBA, p. 303–315. Available [Here](#)

### AWARDS, GRANTS, SCHOLARSHIPS

2020	Smithsonian Institution Peter Buck Postdoctoral Fellowship Award <b>\$151,400</b>
2020, 2016	LinnéSys: Systematics Research Fund <b>£1,967</b>
2018	Dissertation Completion Award, IB-UCB <b>\$2,500</b>
2017	Emily H. and Harold E. Vokes Grants-in-Aid <b>\$500</b>
2017	Robert and Nancy Beim Endowed Graduate Field Research Fund <b>\$1,750</b>
2017, 2014	North American Echinoderm Conference Scholarship <b>\$200</b>
2016–2017	Graduate Division, Conference Travel Grant <b>\$2,400</b>
2016	UCMP Annie Alexander Fund <b>\$20,000</b>
2016	NHM Invertebrate Paleontology Collections Study Grant <b>\$400</b>

- 2016, 2015 Summer Research and Travel Award **\$6,050**  
 2016 Synchrotron X-Ray  $\mu$ CT, Lawrence Berkeley National Laboratory (9 shifts at Beamline 8.3.2.)  
 2015 Sigma Xi Student Research Award, Berkeley Chapter **\$500**  
 2014–2017 GRAC Research and Travel Fund **\$1,650**  
 2014–2017 Palmer Research Fund **\$6,850**  
 2014–2016 UCMP graduate student travel award **\$2,500**  
 2014 Leeper Research Fund **\$1,700**  
 2014 CNPQ Postgraduate fellowship (fully funded PhD fellowship; declined).  
 2010 First place in the selection process for the MSc Program in Animal Diversity, UFBA.  
 Bahia State Research Support Foundation Fellowship Award **\$14,400**

### Teaching honors, awards and development

- 2018 Certificate of Teaching Excellence Award, IB–UCB  
 2017  Summer Institute for Preparing Future Faculty, Graduate Division, UCB  
 2017  Certificate in Teaching & Learning in Higher Education, Graduate Division, UCB  
 2016 Outstanding Graduate Student Instructor Award, Graduate Division, UCB, **\$250**

### Education and Outreach award


- 2021 The “Science Researcher Education Action Team” Award, NMNH

## TEACHING AND MENTORSHIP

### Instructor of Record (2018–2019, UCB)

- 2018, 2019 Invertebrate Zoology, 5 units  
 2019 Marine Biology, 4 units

### Graduate Student Instructor (2012–2017, UCB)

-  Biology and Geomorphology of Tropical Islands, 13 units, 1 semester  
 General Biology, 4 units, 2 semesters  
 Oceans, 3 units, 2017, 1 semester  
 Origins: From the Big Bang to the Emergence of Humans, 4 units, 2 semesters  
 Paleobiological Perspectives on Ecology and Evolution, 4 units, 4 semesters

### Research Mentorship

- 2021 Edward Spagnuolo, Paleobiology Department, NMNH  
 \*Received the 2021 Paleontological Society Poster Award  
 2021 Khel Gordham (high school, volunteer), Paleobiology Department, NMNH  
 2013–2014 Lauren K Miller, Integrative Biology Department, UCB  
 2011–2012 Alisson Santana, Biology Department, UFBA  
 2010–2012 Rosana F da Cunha, Biology Department, UFBA

### Career Mentorship

- 2020– Rosana F da Cunha, Zoology Museum, University of São Paulo, Brazil.  
 2020 Zoe Marsh, University of California, Berkeley

## WORKSHOPS, TALKS AND CONFERENCE PRESENTATIONS

### Workshop (design and instruction)

- 2011 **Integrative Taxonomy Workshop**, II Summer Course in Animal Diversity, UFBA, for undergraduate students, 16h

### Invited Talks

- 2022 Breaking Isolation series, Willi Hennig Society, U.S.A.  
 2020 NoBones Series, Smithsonian National Museum of Natural History, Washington, U.S.A.  
 2020 III Echinoderm Symposium, Brazilian Congress of Zoology, Águas de Lindoia, Brazil.  
 2019 University of California, Museum of Paleontology, Berkeley, U.S.A.

### Conference Presentations (‡ student mentee author; full list available upon request)

>40 Abstracts presented at scientific meetings since 2006 - the most recent are:

- 2021 **Souto C**, Martins L. The macrostructural anatomy and functional morphology of dendrochirotid sea cucumber's (Echinodermata) calcareous rings. The Society for Integrative and Comparative Biology Virtual Annual Meeting, 2021.  
 2021 ‡Spagnuolo E, ‡Gordhan K, **Souto C**, Hunt G. Exploring morphological disparity in the Cassiduloida (Echinodermata, Echinoidea) using geometric morphometrics. In: Geological Society of America Meeting, Oregon, USA, 2021. Available [Here](#).  
 2021 Guice G, Ackerson MR, Andrews BJ, Corrigan CM, Cottrell E, Farfan GA, Hale LJ, Pobiner BL, Rasmussen DJ, **Souto C**. Advancing diversity, equity, accessibility, and inclusion at the Smithsonian's National Museum of Natural History: unique opportunities and challenges. In: Geological Society of America Meeting, Oregon, USA, 2021. Available [Here](#).  
 2020 **Souto C**. Dispersal, endemism and extinction shaped the cassiduloid's evolutionary history. Young Systematists' Forum, London, U.K., 2020.  
 2019 **Souto C**. Why is dating morphological phylogenies a posteriori so challenging? NorCal Paleo 2019, Berkeley, U.S.A.

### Scientific Event Organizer

- 2015–2016 Geometric Morphometrics Workshop, co-organizer, UCB, 25 participants/year  
 2011 II Summer Workshop in Animal Diversity, co-organizer, UFBA, 100 participants  
 2005–2006 Week of Biology, coordinator, UFBA, 700 and 1000 participants, respectively

## RESEARCH AT NATURAL HISTORY COLLECTIONS

**Long-term affiliation:** **MZUFBA** Zoology Museum of the UFBA, Salvador, Brazil (2006–2012); **CAS** California Academy of Sciences, San Francisco, U.S.A. (2011–2016); **UCMP** University of California, Museum of Paleontology, Berkeley, U.S.A. (2011–2019); **NMNH** National Museum of Natural History, Washington, U.S.A. (2020–present).

**Short-term visits (2007–2017):** **AM** Australian Museum, Sydney, Australia; **FLMNH** Florida Museum of Natural History, Gainesville, U.S.A.; **LACM** Los Angeles County, Natural History Museum, U.S.A.; **MCZ** Museum of Comparative Zoology, Harvard, Cambridge, U.S.A.; **MNHN** National Museum of Natural History, Paris, France; **MNRJ** National Museum, Rio de Janeiro, Brazil; **MZUSP** Museum of Zoology, University of São Paulo, Brazil; **Naturalis** Biodiversity Center, Leiden, The Netherlands; **NHM-UK** Natural History Museum, London, United Kingdom; **NHMW** Natural History Museum, Vienna, Austria; **NMV** Museum Victoria, Melbourne, Australia;



**UFISITAB** Echinoderm Collection, Federal University of Sergipe, Itabaiana, Brazil; **ZMB** Natural History Museum, Berlin, Germany; **ZUEC** Zoology Museum, Campinas State University, Brazil.

**Material examined through loans:** **MPEG** Museu Paraense Emílio Goeldi, Belém, Brazil; **MP MNHWU** Museum of Natural History, Wrocław University, Poland; **NMB** Natural History Museum, Basel, Switzerland; **MHNG** National Museum of Natural History, Geneva, Switzerland; **YPM** Yale Peabody Museum of Natural History, New Haven, U.S.A.; **ZMUC** Zoological Museum, University of Copenhagen, Denmark.

## ECHINODERM TAXA NAMED

<i>Chantalia conandae</i>	Martins & Souto, 2020	New genus and new species
<i>Yemoja</i>	Martins & Souto, 2020	New genus
Eurhodiidae	Souto et al., 2019	New family
<i>Havelockia oranae</i>	Martins & Souto, 2019	New species
<i>Thyone waltinboi</i>	Martins & Souto, 2019	New species
<i>Cassidulus briareus</i>	Souto & Martins, 2018	New species
<i>Gymnopipina ikamiaba</i>	Souto & Martins, 2018	New genus and new species
<i>Kassandrina</i>	Souto & Martins, 2018	New genus
<i>Cucumaria solangeae</i>	Martins & Souto, 2015	New species
<i>Coronatum baiensis</i>	Martins & Souto, 2012	New genus and new species

## CURATORIAL PROFESSIONAL EXPERIENCE

2017	<b>Taxonomic Specialist</b> ,  EPICC project, UC Museum of Paleontology, Berkeley. Supervisor: Erica Clites, MSc
2014	<b>Collections Assistant</b> , UC Museum of Paleontology, Berkeley. Supervisor: Erica Clites, MSc
2013	<b>Collections Assistant</b> , UC Museum of Paleontology, Berkeley. Supervisor: Mark Goodwin, PhD
2006–2012	<b>Curatorial Assistant</b> ,  Museum of Zoology, UFBA. Supervisors: Orane F.S. Alves, PhD and Carla Menegola, PhD

## ACADEMIC SERVICE AND OUTREACH EXPERIENCE

### Academic committee and department service

- 2021 Senate of Science Onboarding committee, NMNH.
- 2021 Organization of departmental seminars and journal club, NMNH.

### Efforts towards diversity inclusion in STEM

- 2022 **Speaker** in event as Boolean Girl Ambassador to inspire girls by talking about career paths, education and life skills. By Boolean Girl.
- 2022 **Speaker** in panel about the internationalization of Brazilian universities, undergraduates and graduates, UFBA. Available [Here](#).
- 2021 **Featured** in the series “The PalAss Mentor Scheme”, The Palaeontology Association Newsletter, vol. 108, p. 27–28. Available [Here](#)

- 2021 **Researcher** interviewed at the webinar “Challenging the Face of Science: Women Scientists Share Their Stories” Available [Here](#).
- 2020 **Facilitator** in workshop titled “Fostering Critical Conversations about Equity in the Sciences: The Bearded Lady Project”, American Women of Science: Recovering History, Defining the Future virtual symposium, NMNH.
- 2020 **Featured** in the series “A Palaeontologist abroad”, The Palaeontology Association Newsletter, vol. 104, p. 53–54. Available [Here](#)
- 2020 **Speaker** in panel about my career path for undergraduates from Bahrain, NMNH.
- 2018 **Designer and instructor** of workshop for female 5<sup>th</sup>–8<sup>th</sup> graders, Expanding Your Horizons Conference, UCB.
- 2018 **Volunteer facilitator** in activities with LiMPETS: Long-term monitoring program and experiential training for students, San Francisco Bay Area, CA.
- 2018 **Translator** of education and outreach activity “Evolve or Perish” to Portuguese. Evolution of Terrestrial Ecosystems Program, NMNH. Available [Here](#)
- 2018 **Speaker** in panel about graduate school for international undergraduates, UCB.
- 2016 **Speaker** in panel about graduate school for international undergraduates, UCB.
- 2015 **Researcher** portrayed in the Bearded Lady Project. Available [Here](#)

### Efforts towards environment management and conservation

- 2015–present **Taxonomic specialist** for the Brazilian Fauna Taxonomic Catalog (CTFB), Brazilian Society of Zoology. Available [Here](#)
- 2019 **Member of committee** to evaluate the status of endangered Brazilian wildlife, The Chico Mendes Institute for Biodiversity Conservation, Brazil (ICMBio)
- 2006–2012 **Taxonomic specialist** for environmental consulting agencies, UFBA. Project coordinator: Marlene Peso, PhD

### 🌐 Online science communication

- 2020 NMNH Fossil Friday webinar: “Living and fossil sea urchins”. Available [Here](#)
- 2019 **Souto C.** Educational post “Stromatoporoids”. Available [Here](#)
- 2018 **Souto C.** Blog post “Russell Waines’ stromatoporoid collection”. Available [Here](#)
- 2017 **Souto C.** Blog post “Understanding the evolutionary history of the cassiduloid echinoids”. Available [Here](#)

### Scientific enrichment seminars for NMNH volunteers

- 2022 (Mass) Extinctions: evolutionary resilience, failure and luck
- 2021 Navigating science conversations when you don’t know the answer
- 2020 Marine Paleobiology
- 2020 The Bearded Lady Project
- 2020 The Marine Mesozoic Revolution and the evolution of irregular sea urchins

### Organizer and participant of scientific exhibitions

- 2020 Expert is In at NMNH, Washington (2 events)
- 2016 California Academy of Science Nightlife, San Francisco (3 events)
- 2014–2018 CalDay at UC Museum of Paleontology, Berkeley (5 events)
- 2013 Bay Area Science Festival at AT&T Park, San Francisco
- 2008 National Week of Science and Technology: Evolution and Diversity, Brazil

2005–2008      Week of Biology, Brazil (3 events)

**Ad hoc peer-reviews (15 manuscripts):** Journal of Paleontology, Marine Biodiversity, Nature Ecology & Evolution, New Zealand Journal of Geology and Geophysics, Palaeontologia Electronica, Revista de Biología Tropical, Royal Society Open Science, ZooKeys, Zootaxa.

## TECHNICAL SKILLS

### Data Analysis

- 2017    Workshop in Applied Phylogenetics, University of California, Davis
- 2017    Digital Data in Paleontological Research Workshop, UCB, sponsored by IDIGBIO
- 2015    Intensive Workshop in Analytical Palaeobiology, Macquarie University, Sydney, Australia
- 2013    Geometric Morphometrics Workshop, Integrative Biology Department, UCB
- 2011    Workshop in Cladistics, Zoology Department, UFBA

### Technique and Equipment Training

- 2022    ZEISS EVO MA15 Scanning Electron Microscope, NMNH
- 2018    DNA Library Preparation, Evolutionary Genetics Lab, UCB
- 2016    Data Carpentry Workshop: OpenRefine, R and SQL, UCMP
- 2016    Synchrotron-based Hard X-ray Micro-Tomography, Advance Light Source, Lawrence Berkeley National Laboratory, Berkeley
- 2016    Hitachi TM-1000 Scanning Electron Microscope, Electron Microscope Lab, UCB
- 2010    JEOL JSM-6390LV Scanning Electron Microscope, Gonçalo Moniz Institute, Oswaldo Cruz Foundation (FIOCRUZ), Salvador, Brazil

## LANGUAGES

Portuguese (native speaker), English (fluent), Spanish (conversational).

## SOCIETY MEMBERSHIPS

Paleontological Society, Society for Advancement of Chicanos/Hispanics & Native Americans in Science (SACNAS), Society of Systematic Biologists, The Palaeontological Association, The Systematics Association.