

CURRICULUM VITAE

Anja Schulze, Ph. D.

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Education

- Ph. D. 2001 Biology, University of Victoria, Canada.
Dissertation: *Phylogeny of Vestimentiferan Tubeworms* (Advisor: Dr. Verena Tunnicliffe)
- Diplom 1995 Biology, University of Bielefeld, Germany.
Thesis: *Histological Studies of the Flabellinidae (Opisthobranchia, Nudibranchia) with Aspects of Anatomy, Morphology and Phylogeny* (Advisor: Dr. Heike Wägele)

Academic Appointments

- 2012-present Associate Professor, Marine Biology (TAMUG) and Oceanography (TAMU)
2006-2012 Assistant Professor, Marine Biology (TAMUG) and Oceanography (TAMU)

Professional Development

- 2004-2006 Postdoctoral Fellow, Smithsonian Marine Station at Fort Pierce, FL.
Project: *Structure and Development of the Nervous System in Sipuncula*
- 2002-2004 Postdoctoral Fellow, Harvard University, Museum of Comparative Zoology and Department of Organismic and Evolutionary Biology.
Project: *Phylogeny, Biogeography and Systematics of the Sipuncula*
- 2001-2002 Postdoctoral Fellow, Smithsonian Institution, National Museum of Natural History and Laboratory of Molecular Systematics.
Project: *Phylogeography of Palolo Worms (Palola, Eunicidae, Polychaeta)*

Peer-Reviewed Publications

- Schulze, A.**, Hipes, J., Borda, E. and Rice, M. E. **2018**. Who's who in sipunculans: matching larvae and adults using DNA. *Smithsonian Contributions to the Marine Sciences* (in press)
- Wäge, J., Valvassori, G., Hardege, J. **Schulze, A.**, Gambi, M. C. **2017**. The sibling polychaetes *Platynereis dumerilii* and *Platynereis massiliensis* in the Mediterranean Sea: are phylogeographic patterns related to exposure to ocean acidification? *Marine Biology* 164: 199. <http://dx.doi.org/10.1007/s00227-017-3222-x>
- GIGA Community of Scientists. **2017**. Leveraging the power of community cooperation to advance invertebrate genomics - updates from the GIGA consortium. *Invertebrate Systematics* 31:1-7. <http://dx.doi.org/10.1071/IS16059>
- Schulze, A.**, Grimes, C. J., Rudek, T. E. **2017**. Tough, armed and omnivorous: *Hermodice carunculata* (Annelida: Amphinomidae) is prepared for ecological challenges. *Journal of the Marine Biological Association of the UK* 97: 1075-1080. <http://dx.doi.org/10.1017/S0025315417000091>
- Hilliard, J., Hajduk, M., **Schulze, A.** **2016**. Species delineation in the *Capitella* species complex: geographic and genetic variation. *Invertebrate Biology* 135: 415-422. <http://dx.doi.org/10.1111/ivb.12152>
- Johnson, N. D., **Schulze, A.** **2016**. Genetic structure of in two *Phascolosoma* species in the Pacific Ocean and implications for larval dispersal. *Marine Biology Research* 12: 739-747. <http://dx.doi.org/10.1080/17451000.2016.1196819>
- Magelhaes, W.F., Weidhase, M., **Schulze, A.** and Bailey-Brock, J. H. **2016**. Taxonomic remarks on the genus *Ctenodrilus* (Annelida: Cirratulidae) including description of a new species from the Pacific Ocean. *Zootaxa* 4103: 325-343. <http://doi.org/10.11646/zootaxa.4103.4.2>
- Johnson, N. D., Sanders, C., Maiorova, A. and **Schulze, A.** **2016**. Cryptic speciation in a Pacific sipunculan (Sipuncula: Phascolosomatidae): East-west divergence between non-sister taxa. *Zoologica Scripta* 45: 455-463. <http://dx.doi.org/10.1111/zsc.12158>
- Schulze, A.** **2015**. Six genetically distinct clades of *Palola* (Eunicidae, Annelida) from Lizard Island, Great Barrier Reef, Australia. *Zootaxa* 4019: 695-706. <http://dx.doi.org/10.11646/zootaxa.4019.1.23>

- Lucey, N. M., Lombardi, C., De Marchi, L., **Schulze, A.**, Gambi, M. C., Calosi, P. **2015**. To brood or not to brood: are marine organisms that protect their offspring more resilient to ocean acidification? *Scientific Reports* 5: 12009. <http://dx.doi.org/10.1038/srep12009>
- Borda, E., Yañez-Rivera, B., Ochoa, G., Sánchez-Ortiz, C, **Schulze, A.** and Rouse, G. W. **2015**. Revamping Amphinomidae (Annelida: Amphinomida) with a description of a new species of *Notopygos* from the Gulf of California. *Zoologica Scripta* 44: 324-333. <http://dx.doi.org/10.1111/zsc.12099>
- Steichen, J. L., Brinkmeyer, R., **Schulze, A.** and Quigg, A. **2014**. All aboard! A biological survey of ballast water onboard vessels entering the Port of Houston, Texas (USA). *Marine Pollution Bulletin* 87:201-210. <http://dx.doi.org/10.1016/j.marpolbul.2014.07.058>
- Ahrens, J. B., Kudenov, J., Marshall, C. D., **Schulze, A.** **2014**. A histological analysis of the bearded fireworm, *Hermodice carunculata* (Annelida: Amphinomidae): Regeneration of posterior segments and terminal structures. *Journal of Morphology* 275: 1103-1112. <http://dx.doi.org/10.1002/jmor.20287>
- GIGA Community of Scientists. **2014**. The Global Invertebrate Genomics Alliance (GIGA): Developing community resources to study diverse invertebrate genomes. *Journal of Heredity* 105: 1-18. <http://dx.doi.org/10.1093/jhered/est084>
- Borda, E., Kudenov, J., Blake, J. A., Chevaldonné, P., Desbruyères, D., Hourdez, S., Fabri, M-C, Pleijel, F., **Schulze, A.**, Shank, T., Wilson, N. G. and Rouse, G. W. **2013**. Cryptic species of *Archinome* (Annelida: Amphinomida) from hydrothermal vents and cold seeps. *Proceedings of the Royal Society of London B: Biological Sciences* 280, 20131876. <http://dx.doi.org/10.1098/rspb.2013.1876>
- Calosi, P., Rastrick, S. P. S., Lombardi, C., de Guzman, H. J., Davidson, L., Jahnke, M., Giangrande, A., Hardege, J.D., **Schulze, A.**, Spicer, J. I., Gambi, M.C. **2013**. Acclimatization to ocean acidification in marine ectotherms: an in situ transplant experiment at a shallow CO₂ vent system. *Philosophical Transactions of the Royal Society B* 368, 20120444. <http://dx.doi.org/10.1098/rstb.2012.0444>
- Carvalho, R. G., Wei, C.-L., Rowe, G. and **Schulze, A.** **2013**. Complex depth-related patterns in the taxonomic and functional diversity of polychaetes in the Gulf of Mexico. *Deep Sea Research I* 80: 66-77. <http://dx.doi.org/10.1016/j.dsr.2013.07.002>
- Ahrens, J. B., Borda, E., Barroso, R., Paiva, P. C., *Campbell, A. M., Wolf, A., Nugues, M. M., Rouse, G. W. and **Schulze, A.** **2013**. The curious case of *Hermodice carunculata*: evidence for genetic homogeneity throughout the Atlantic Ocean and adjacent basins. *Molecular Ecology* 22: 2280-2291. <http://dx.doi.org/10.1111/mec.12263>. **COVER ARTICLE**
- Schulze, A.**, Maiorova, A., Timm, L. E. and Rice, M. E. **2012**. Sipunculan larvae and “cosmopolitan” species. *Integrative and Comparative Biology* 52: 497-510. <http://dx.doi.org/10.1093/icb/ics082>
- Schulze, A.** and Timm, L. **2012**. *Palolo* and *un*: distinct clades in the genus *Palola* (Eunicidae, Polychaeta). *Marine Biodiversity* 42: 161-171. <http://dx.doi.org/10.1007/s12526-011-0100-5>
- Gonzalez, B. C., Borda, E., Carvalho, R. G. and **Schulze, A.** **2012**. Polychaetes from the Mayan underworld: phylogeny, evolution, and cryptic diversity. *Natura Croatica* 21: 51-53 (extended abstract).
- Schulze, A.** **2011**. The Bobbit worm dilemma: a case for DNA. Reply to Salazar-Vallejo et al. 2011: Giant eunicid polychaetes (Annelida) in shallow tropical and temperate seas. *Revista de Biología Tropical* 59: 1475-1477. http://www.scielo.sa.cr/scielo.php?script=sci_arttext&pid=S0034-77442011000400003&lng=en&nrm=iso
- Gambi, M. C., **Schulze, A.** and Amato, E. **2011**. Record of *Lamellibrachia* (Annelida, Siboglinidae, Vestimentifera) from a deep shipwreck in the Western Mediterranean Sea (Italy). *JMBA2 - Marine Biodiversity Records* 4: e24. <http://dx.doi.org/10.1017/S1755267211000261>.
- Adkins, M. & **Schulze, A.** **2011**. Development of *Capitella* sp. G from Galveston Bay, Texas. *Marine Biology Research* 7: 202-207. <http://dx.doi.org/10.1080/17451000.2010.489612>
- Schulze, A.** & Rice, M. E. **2009**. *Nephasoma pellucidum* – a model species for sipunculan development? *Smithsonian Contributions to Marine Science* 38:209-217. <https://repository.si.edu/handle/10088/8299>
- Schulze, A.** & Rice, M. E. **2009**. Musculature in sipunculan worms: ontogeny and ancestral states. *Evolution & Development*, 11: 97-108. <http://dx.doi.org/10.1111/j.1525-142X.2008.00306.x>
- Varela, C. and **Schulze, A.** **2008**. Updated checklist of sipunculans (Phylum Sipuncula) of Cuba. *Cocuyo*, 17: 9-10. http://www.caribbeanahigroup.org/pdf/cocuyo/Cocuyo_17_2008.pdf
- Schulze, A.**, Cutler, E. B. & Giribet, G. **2007**. Phylogeny of sipunculan worms: a combined analysis of four gene regions and morphology. *Molecular Phylogenetics and Evolution*, 42: 171-192. <http://dx.doi.org/10.1016/j.ympev.2006.06.012>
- Schulze, A.** **2006**. Phylogeny and genetic diversity of palolo worms (*Palola*, Eunicidae) from the tropical north Pacific and the Caribbean. *Biological Bulletin*, 210: 25-37. <http://www.biobull.org/content/210/1/25.full?sid=6c2763a9-0563-4d11-b569-f6a5c9ebb36b>
- Schulze, A.** **2005**. Sipuncula from Bocas del Toro (Panama). *Caribbean Journal of Science*, 41: 523-527. http://caribjsci.org/pdf/41_TOC41n3.pdf

- Collin, R., Diaz, M.C., Norenburg, J., Rocha, R.M., Sanchez, J.R., **Schulze, A.**, Schwartz, M. and Valdes, A. **2005**. Photographic identification guide to some common marine invertebrates of Bocas del Toro, Panama. *Caribbean Journal of Science*, 41: 638-707. http://caribjsci.org/pdf/41_TOC41n3.pdf
- Southward, E. C., **Schulze, A.** and Gardiner, S. L. **2005**. Pogonophora (Annelida): form and function. *Hydrobiologia*, 535/536: 227-251. http://link.springer.com/chapter/10.1007/1-4020-3240-4_13
- Schulze, A.**, Cutler, E. B. and Giribet, G. **2005**. Reconstructing the phylogeny of the Sipuncula. *Hydrobiologia*, 535/536: 277-296. http://link.springer.com/chapter/10.1007/1-4020-3240-4_15
- Schulze, A.** and Rice, M. E. **2004**. Sipunculan diversity at Twin Cays, Belize with a key to the species. *Atoll Research Bulletin*, 521:1-9. <http://www.sil.si.edu/digitalcollections/atollresearchbulletin/issues/00521.pdf>
- Cutler, E. B. and **Schulze, A.** **2004**. Sipuncula from Barbados, including two new for the island plus *Siphonosoma vastum*; first record from the Atlantic Ocean. *Bulletin of Marine Science*, 74: 225-228. <http://www.ingentaconnect.com/search/article?option1=tka&value1=siphonosoma+vastum&pageSize=10&index=1>
- Cutler, E. B., **Schulze, A.** and Dean, H. K. **2004**. The Sipuncula of sublittoral New Zealand with a key to all New Zealand species. *Zootaxa*, 525: 1-19. <http://www.mapress.com/zootaxa/2004f/z00525f.pdf>
- Schulze, A.** and Halanych, K. **2003**. Siboglinid evolution shaped by habitat preference and sulfide tolerance. *Hydrobiologia*, 496: 199-205. <http://link.springer.com/article/10.1023/A%3A1026192715095>
- Schulze, A.** **2003**. Phylogeny of Vestimentifera (Siboglinidae, Annelida) inferred from morphology. *Zoologica Scripta*, 32: 321-342. <http://dx.doi.org/10.1046/j.1463-6409.2003.00119.x>
- Schulze, A.** **2002**. Histological and ultrastructural characterization of the intravascular body in Vestimentifera (Siboglinidae, Annelida). *Cahiers de Biologie Marine*, 43: 355-358. <http://www.sb-roscoff.fr/cbm/article.htm?execution=e14s1>
- Southward, E., **Schulze, A.** and Tunnicliffe, V. **2002**. Vestimentiferans (Pogonophora) in the Pacific and Indian Oceans: a new genus from Lihir Island (Papua New Guinea) and the Java Trench, with the first report of *Arcovestia ivanovi* from the North Fiji Basin. *Journal of Natural History*, 36: 1179-1197. <http://dx.doi.org/10.1080/00222930110040402>
- Schulze, A.** **2001**. Ultrastructure of opisthosomal chaetae in Vestimentifera and implications for phylogeny. *Acta Zoologica*, 82: 127-138. <http://dx.doi.org/10.1046/j.1463-6395.2001.00074.x>
- Schulze, A.** **2001**. Comparative anatomy of excretory organs in vestimentiferan tube worms (Obturata, Pogonophora). *Journal of Morphology*, 250: 1-11. <http://dx.doi.org/10.1002/jmor.1054>
- Schulze, A.** **1998**. Morphological, anatomical and histological study of *Flabellina pedata* (Montagu, 1815) with regard to the phylogeny of the Flabellinidae. *Archiv für Molluskenkunde*, 127: 57-67.
- Schulze, A.** and Wägele, H. **1998**. Morphology, anatomy and histology of *Flabellina affinis* (Gmelin, 1791) (Nudibranchia, Aeolidioidea, Flabellinidae) and its relation to other Mediterranean *Flabellina* species. *Journal of Molluscan Studies*, 64: 195-214. <http://dx.doi.org/10.1093/mollus/64.2.195>

Book Chapters

- Schulze, A.**, Boyle, M. J., Kawauchi, G. Y. Sipuncula. **2018, in press**. In: Handbook of Zoology. De Gruyter.
- Schulze, A.** and Cutler, E. G. **2007**. Pogonophora (Siboglinidae). In *McGraw-Hill Encyclopedia of Science and Technology, Vol 14*. McGraw-Hill Publishers, New York (pp. 92-93)
- Cutler, E. B. and **Schulze, A.** **2007**. Sipuncula. In *McGraw-Hill Encyclopedia of Science and Technology Vol 16*. McGraw-Hill Publishers, New York (pp. 525-527)
- Cutler, E. B. and **Schulze, A.** **2007**. Sipunculans. In *Encyclopedia of Tidepools and Rocky Shores*. University of California Press, Berkeley, CA (pp. 524-525)
- Schulze, A.** **2003**. Sipuncula – Peanut worms. In: Gale Research Staff (eds.), *Grzimek's Animal Life Encyclopedia Vol 2: Protostomes* (pp. 97-101).

Grants Funded

Funding Period	Title	Source	Role	Total	TAMUG
2017-2018	A model of diversity: <i>Capitella</i> spp. (Annelida: Capitellidae) in the Gulf of Mexico	TAMU-CONACYT	PI	\$24,000	\$12,000
2016-2017	Gene expression profiles in response to low dissolved oxygen in the bearded fireworm, <i>Hermodice carunculata</i>	TAMU-CAPES	PI	\$50,000	\$50,000

2016-2017	Sex and violence in marine worms: Eunicidae (Annelida) in Indonesia	National Geographic Society	PI	\$23,050	\$23,050
2011-2016	Collaborative Research - WormNet II: Assembling the Annelid Tree of Life	NSF DEB	TAMUG PI	\$2,990,000	\$386,326
2011-2013	Genetic diversity in three sipunculan species from the Sea of Japan and the Northeast Pacific	FEBRAS – CRDF Global	PI	\$41,000	\$15,000
2010-2011	Rangia clam responses to freshwater inflows in Galveston Bay	TPWD	Co-PI	\$28,163	\$28,163
2011-2013	Fauna and Flora responses to freshwater inflows in Galveston Bay	TCEQ	Co-PI	\$200,000	\$200,000
2009-2010	Macrofaunal species boundaries in the Sigsbee Abyssal Plain, Gulf of Mexico	TAMU-CONACYT	PI	\$24,000	\$12,300
2008-2009	Detection of non-indigenous marine invertebrates in Galveston Bay, TX by DNA barcoding	TX Seagrant	PI	\$10,000	\$10,000

Awards and Recognition

2018	Faculty Development Leave: Collaboration with Australian Museum and Museum and Art Gallery of the Northern Territory, Australia
2012	Faculty Development Leave: Collaboration with Federal University of Rio de Janeiro, Brazil
2010	International Research Travel Assistance Grant. "Predicting marine species distributions based on Ecological Niche Modeling and phylogeographic analyses". \$1,975
2008	Faculty Abroad Seminar: seminar in Mexico City in May 08 (unspecified amount)
2007	Pathways to the Doctorate Program: funding granted for one year of stipend and tuition plus one year of tuition for Lerin Odom; \$36,000.
2004-2006	Smithsonian Marine Station Postdoctoral Fellowship
2002-2004	MarCraig Postdoctoral Fellowship, Harvard University
2001-2002	Smithsonian Postdoctoral Fellowship
1997-1998	German Academic Exchange Service (DAAD) Fellowship
1996-1997	Government of Canada Award to pursue Ph.D. in Canada

Teaching

MARB 435/635	Marine Invertebrate Zoology, Writing Intensive, undergraduate and graduate level
MARB 668	Evolutionary Biology, graduate level
MARB 689	Ecological Processes, graduate level
Guest lecturer in various other courses	

Students mentored

Graduate student chair:

Current	4 Ph.D.
Former	1 Ph.D. (2013), 3 M.S. (2013-2015)

Graduate student committee member:

Current	10 Ph.D., 1 M.S.
Former	6 Ph.D. (including three external), 8 M.S.

Postdocs: 1

Undergraduate Research Scholars: 5