

Chandler J. Olson

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Education

Bachelor of Science in Biological Sciences
Concentration: Ecology/Evolution/Genomics

March 2021 | Drexel University
Suma Cum Laude

Experience

PhD Student | University of Alabama, Kocot Lab | August 2021 - Present

- Evaluation of Icelandic Aplacophora fauna collected on the IceAGE and IceDIVA cruises.
- Revision of Dondersiidae taxonomy and description of new species.
- Systematics of Aplacophora using and transcriptomic dataset.

Curatorial Assistant | Academy of Natural Science, Dept. of Malacology | Apr-Sep 2020, Apr-July 2021

- Developed new interface for collection database, transformed collection data to comply with Darwin Core standards, and began integration of general invertebrate collection to database using Python and FileMaker.
- Created python program to parse out agent information of over 28,000 individuals from the "2400 Years of Malacology" document to augment the standing agent dictionary database.
- Imaged collection specimens with digital photography and SEM imaging as part of the Pacific Island Land Snail Digitization Project and for other research projects.
- Accessioned donated collections into the main malacology collection.

Undergraduate Researcher | Drexel University, Russel Lab | Sept 2019 - March 2020

- Performed precision dissections of turtle ants removing components of head and abdomen for analysis of the bacterial communities and their role in the fixation of inorganic nitrogen to produce amino acids.
- Husbandry of ant colonies and management of various experimental dietary conditions.

Content Intern | AdMed Inc. | Apr – Sept 2019

- Worked in collaboration with PhD. and PharmD. medical writers to develop training materials on diseases and drug mechanism of actions for pharmaceutical companies (ex. Merck & Co., AbbVie Inc.).
- Developed new content (fact sheets, assessment tests) and ensured content accuracy of materials including video storyboards, podcasts, virtual classrooms.

iSTAR Undergraduate Researcher | Drexel University, Ward Lab | Jun 2018 - Jan 2019

- Conducted a variety of experiments in the field including a morphological survey of *Melipona beecheii* bee castes that suggests they may utilize rare morphological caste differentiation.
- Presented results on morphological differentiation as a poster at the STAR Summer Showcase at Drexel University in August and the Second International Scientific Conference in Cienfuegos, Cuba in October.

SEA-PHAGES Undergraduate Researcher | Drexel University | Sept 2017 - June 2018

- Isolated a *Mycobacterium smegmatis* bacteriophage and submitted annotated genome to GenBank.
- Contributed to work resulting in publication in *Microbiology Resource Announcements*.

Skills

- Molecular techniques: bacterial transformation, DNA extraction, DNA annotation, gel electrophoresis, micro-pipetting, PCR, shotgun cloning, viral plaque assays
- Photography Skills: macrophotography, focus stacking, SEM imaging
- Computer Skills: Python, R, Filemaker Pro, Adobe Photoshop, Adobe Premiere, Adobe After Effects, Adobe Illustrator, ImageJ
- PADI Advanced Open Water Scuba Certified

Honors

2023	Chermock Prize
2021-22	Graduate Council Fellowship
2021	NWCA Academic All-American
2020	Wents Co-op Fellowship Award
2017-21	Dean's List, Drexel University
2017-21	Dean's Scholarship, Drexel University
2017-21	Drexel Legacy Scholarship, Drexel University
2017-21	Gary & Marla Colton Endowment Scholarship, Drexel University
2018-19	Drexel Leadership Academy
2018-19	TriBeta Biological Honor Society, Recruitment Committee
2018-19	Drexel Student-Athlete Advisory Committee

Publications

2023	Béchade, B., Cabuslay, C. S., Hu, Y., Mendonca, C. M., Hassanpour, B., Lin, J. Y., Su, Y., Fiers, V. J., Anandarajan, D., Lu, R., Olson, C. J. , Duplais, C., Rosen, G. L., Moreau, C. S., Aristilde, L., Wertz, J. T., & Russell, J. A. (2023). Physiological and evolutionary contexts of a new symbiotic species from the nitrogen-recycling gut community of turtle ants. <i>The ISME Journal</i> , 17(10), 1751–1764. https://doi.org/10.1038/s41396-023-01490-1
2019	Apellido K. A., [et al, including Olson C. J.] (2019) Complete Genome Sequences of 12 B1 Cluster Mycobacteriophages, Gareth, JangoPhett, Kailash, MichaelPhcott, PhenghisKhan, Phleuron, Phergie, PhrankReynolds, PhrodoBaggins, Phunky, Vaticameos, and Virapocalypse, <i>ISME</i> , 8(8): 1-3. DOI: 10.1128/MRA.01387-18

Presentations (*presenter)

2023	* Olson C. J. , McLaughlin E, Cobo MC, Kocot K. Icelandic Aplacophora: Remarkable undescribed diversity in the deep sea (talk). American Malacological Society Meeting, Tuscaloosa, AL
2023	* Olson C. J. , Torija E. Seahorse and Co: Engaging thousands in malacology through online resources (poster). American Malacological Society Meeting, Tuscaloosa, AL
2023	*Yap-Chiongco M. K., Cobo M. C., Olson C. J. , Farris W.J., Kocot K. M.. First Records of Epimeniidae (Solenogastres, Aplacophora) from the Arabian Sea (poster). American Malacological Society Meeting, Tuscaloosa, AL
2023	Bergmeier F. S., Cobo M. C., Gerken S., McLaughlin E. L., Olson C. J. , Roberts N. G., Vandersommen V., Yap-Chiongco M., *Kocot K. M. . First records of Monoplacophora from the Eastern Antarctica (poster). American Malacological Society Meeting, Tuscaloosa, AL
2023	*Cobo M. C., Bergmeier F. S., McLaughlin E. L., Olson C. J. , Roberts N. G., Farris W. J. Yap-Chiongco M., Kocot K. M.. First records of parasitic Nematoda in Solenogastres (Mollusca, Aplacophora): findings of the NBP23-03 “IcyInverts” expedition to the Eastern Antarctic (poster). American Malacological Society Meeting, Tuscaloosa, AL
2023	*Bennett R. M., Olson C. , Farris W. J., McLaughlin E, Rohlwing N., Cobo MC, Kocot K. Description and identification of a new species of solenogasters (Mollusca, Aplacophora) (poster). Undergraduate Research & Creative Activity Conference, Tuscaloosa, AL
2023	* Olson C. , McLaughlin E, Cobo MC, Kocot K. Diversity of Solenogasters (Mollusca, Aplacophora) in Deep Icelandic Waters (poster). Society for Integrative and Comparative Biology, Austin, TX

- 2018 ***Olson C**, McCurdy M, Smith Z, Joury S, Schneider S, Thomas R, Márquez S, Barrett M, Machado JAM, Ward DC. Variation in worker caste morphology of *Melipona beecheii* bees in Cuba (poster). II Conferencia Científica Internacional de la Universidad de Cienfuegos, Cienfuegos, Cuba.
- 2018 *Joury S, **Olson C**, McCurdy M, Smith Z, Thomas R, Márquez S, Barrett M, Machado JAM, Ward DC. Conditioning Bees in Cuba: assessing the cognitive behavior and color preferences of *Melipona beecheii* through visual associative learning assays (poster). II Conferencia Científica Internacional de la Universidad de Cienfuegos, Cienfuegos, Cuba.
- 2018 *Smith Z, Joury S, **Olson C**, McCurdy M, Thomas R, Márquez S, Barrett M, Machado JAM, Ward DC. Microhabitat and introduced species' effects on native bee community structure in Cienfuegos, Cuba (poster). II Conferencia Científica Internacional de la Universidad de Cienfuegos, Cienfuegos, Cuba.
- 2018 McCurdy M, Smith Z, Joury S, **Olson C**, Thomas R, Márquez S, Barrett M, Machado JAM, Ward DC. Limited thermoregulatory mechanisms in foraging *Melipona beecheii* bees (poster). STAR Scholars Summer Showcase, Philadelphia, PA.
- 2018 ***Olson C**, McCurdy M, Smith Z, Joury S, Schneider S, Thomas R, Márquez S, Barrett M, Machado JAM, Ward DC. Variation in worker caste morphology of *Melipona beecheii* bees in Cuba (poster). STAR Scholars Summer Showcase, Philadelphia, PA.
- 2018 *Joury S, **Olson C**, McCurdy M, Smith Z, Thomas R, Márquez S, Barrett M, Machado JAM, Ward DC. Conditioning Bees in Cuba: assessing the cognitive behavior and color preferences of *Melipona beecheii* through visual associative learning assays (poster). STAR Scholars Summer Showcase, Philadelphia, PA.
- 2018 *Smith Z, Joury S, **Olson C**, McCurdy M, Thomas R, Márquez S, Barrett M, Machado JAM, Ward DC. Microhabitat and introduced species' effects on native bee community structure in Cienfuegos, Cuba (poster). STAR Scholars Summer Showcase, Philadelphia, PA.
- 2018 ***Olson C**, *Truxon A, *Johnson H, *Gandhi R. A study of phage isolation using varied phage host and soil types (poster). SEA-PHAGES Poster Showcase, Philadelphia, PA.

Field work

- 2023 Eastern Antarctica. RVIB Nathaniel B. Palmer. 70 days.
- 2023 Oman. Global A.R.M.S. Program. 21 days.
- 2023 Dauphin Island, Alabama. Meiofauna Bioblitz. 21 days
- 2022 Friday Harbor, WA. Biodiversity and Integrative Taxonomy of Invertebrates Course. 56 days.
- 2018 Cienfuegos, Cuba. Bee biodiversity and Urban Beekeeping. 28 days.

Social Entrepreneurship

SEAHORSE AND CO: FOUNDER

Science Outreach Platform Featuring Seashell Identification Guides and Educational Videos

Website: SeahorseandCo.com

- Identification guides for 18 states of the United States East Coast and Gulf of Mexico
- Figuring 596 species from 123 different families
- Over 3,000 monthly visitors averaging 7.5 minutes per visit

Youtube Channel: [@SeahorseandCo](https://www.youtube.com/@SeahorseandCo)

- 10 educational videos related to malacology.
- Over 60,000 cumulative views

Awards

- Levitetz Innovation Seed Grant (\$1000)

Other Public Outreach

- 2023 University of Alabama Homecoming Outreach Tent (Award \$500)
- Designed and implemented seashell identification activity
- 2023 University of Alabama Homecoming Ar"BOO"return
- Designed and implemented "Spooky Snails" activity

Memberships

American Malacological Society
Society of Integrative and Comparative Biology