

Living and fossil brachiopods: quantifying morphology in ontogeny and phylogeny

Carlson Lab

Dr. Sandra J. Carlson

Dr. Holly A. Schreiber, postdoctoral
researcher

Dr. David W. Bapst, postdoctoral
researcher

Natalia Lopez Carranza, Ph.D. student

Department of Earth and Planetary
Sciences, UCD



Terebratalia transversa

Lab interests

- What can we learn from living representatives?
- How does morphology vary?
 - Populations
 - Species
 - Higher taxa
- Ontogeny
- Systematics and phylogeny



Laqueus erythraeus, CA



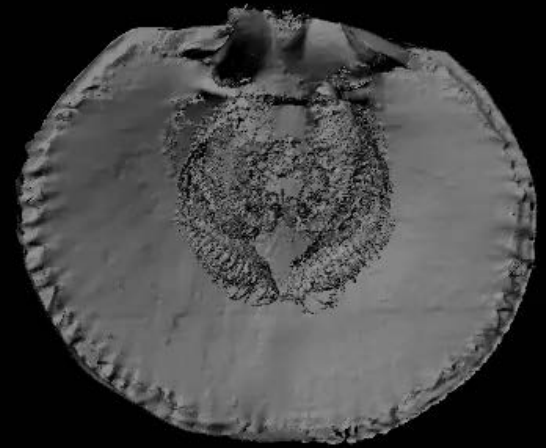
Terebratalia transversa, CA



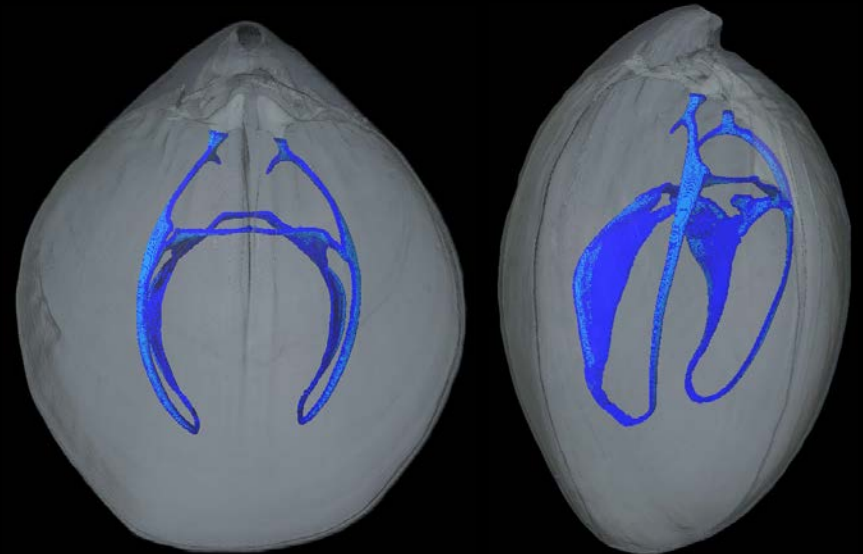
Terebratalia occidentalis?, CA, Pliocene

Current projects

- 3D morphometric analyses of short and long loops
 - Ontogeny
 - Phylogenetic distribution
- 3D reconstructions from CT scanned specimens



Chlidonophora incerta, short loop



Laqueus erythraeus, long loop

Current projects

- Species delimitation in extant brachiopods (Order Terebratulida)
 - Morphological variability
 - Genetic variability
- Comparing species boundaries in fossils species from the Cenozoic of CA



Terebratalia occidentalis, Santa Catalina Island, CA



Terebratalia occidentalis?, Fugler Point (Pliocene), CA

