Scripps Oceanography’s Pelagic Invertebrate Collection: Documenting Marine Biodiversity through DigIn: Digitization of Invertebrate Collections

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https://scripps.ucsd.edu/pelagic-invertebrate-collection
http://www.digin-tn.org/

The Scripps Pelagic Invertebrate Collection serves as a repository for both preserved specimens and associated data. Historically, the collection data associated with our unsorted parent net tow material have been digitally discoverable for the research and education community. However, we also house tens of thousands of individual sorted and identified specimens, some of which have come from our net tow collection material or from past and present researchers’ specialized specimen collections (e.g., Martin Johnson’s lobster phyllosoma larvae, Abraham Fleiminger’s copepods, Edward Britton’s euphausiids, etc.). The existence of this material has largely only been known by viewing removal tags within a net tow sample, by comparing comments in a line of data to a physical sample, communicating with our staff, or by special inquiry. In an effort to bring this reference specimen material into digitally discoverable territory, SIO-PIC joined SIO’s Benthic Invertebrate Collection and a consortium of 18 other institutions across the United States to establish an NSF-funded Thematic Collection Network (TCN). This TCN, Documenting Marine Biodiversity through Digitization of Invertebrate Collections (DigIn) has set out to digitize and mobilize 835K lots, representing 7.5 million specimens. A core objective of this network is to assemble robust, vouchered marine invertebrate data and accompanying specimens to enhance research and education in marine biodiversity, ecology, systematics, oceanography and other disciplines.

**Project Goals**
- Digitize approximately 34,500 lots.
- Develop pathway to connect reference (sibling) specimens data to parent net tow collection event data.
- Currently, ~146,000 parent net tow event based samples are digitally discoverable.

**Reference Specimen Collection Areas**
- Lobster Early Life History (Phyllosoma and Puerulus) Collection
- Copepod Fluid and Slide Collection
- Copepod Fluid and Slide Collection

**PIC Specific Goals**
- Develop pathway to connect reference (sibling) specimens data to parent net tow collection event data.

**Digitization Workflow**
1) Digitizer 1 pulls sample and assigns physical space location (carriage, stack, bay, shelf, drawer, box).
2) Manual data matching to legacy data or direct data capture from labels.
3) Affix and scan in thermally printed, archival tag with assigned PIC Cat. No. and translated Datamatrix barcode.
4) Conduct data quality control check by 2nd Digitizer.
5) Return specimen lot(s) to assigned physical location(s).
6) Digitizers track daily progress for quarterly and annual reporting.

**Taxonomy Validation**
- Validate and update taxonomy via World Register of Marine Species portal (WoRMs).

**Filemaker Pro Database Development**
- Import data (.csv) into Filemaker Pro.
- Connect reference specimen data to parent net tow collection event data where possible.

**Darwin Core Data Field (Term) Standardization**
- What is Darwin Core?
  - What is Darwin Core?
    - Geospatial information (longitude, latitude)
    - Collection event details
    - Taxonomic levels
    - Preservation type, etc.

**iDigBio Data Aggregator**
- iDigBio Data Aggregator
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