

# Eastern Pacific Invertebrate Communities of the Cenozoic (EPICC) TCN



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# Collaborator Map



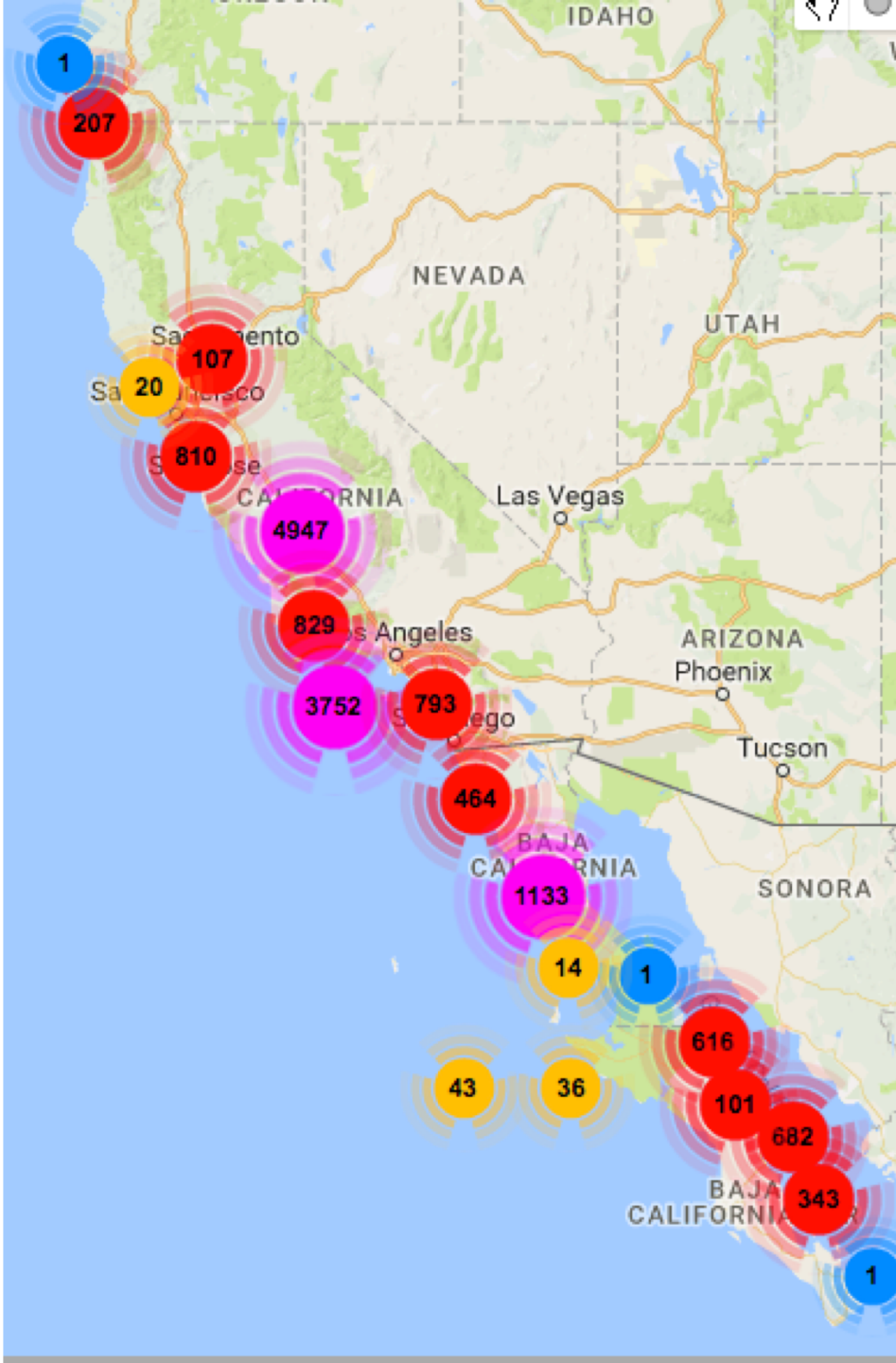
**UCMP PIs:** Charles Marshall (Lead PI, UCMP Director), Seth Finnegan, Pat Holroyd, Lisa White

**Collaborating PIs:** Pat Druckenmiller (UAM), Liz Nesbitt (Burke), Edward Davis (UO), Peter Roopnarine (CAS), Jann Vendetti (LACM), Greg Dietl (PRI)

**Unfunded collaborators:** Cooper Center (Nicole Bonuso), Smithsonian NMNH (Kathy Hollis)

# Scope

- Marine invertebrates (microfossils excluded)
- Paleocene – Pleistocene age
- From the eastern Pacific



# Progress in digitization

## TCN goals

- Specimens cataloged: 1.6M
- Specimens imaged: 85K
- Localities georeferenced: 35K

## TCN progress

- Specimens cataloged: 582K
- Specimens imaged: 19K
- Localities georeferenced: 12K

~35% complete



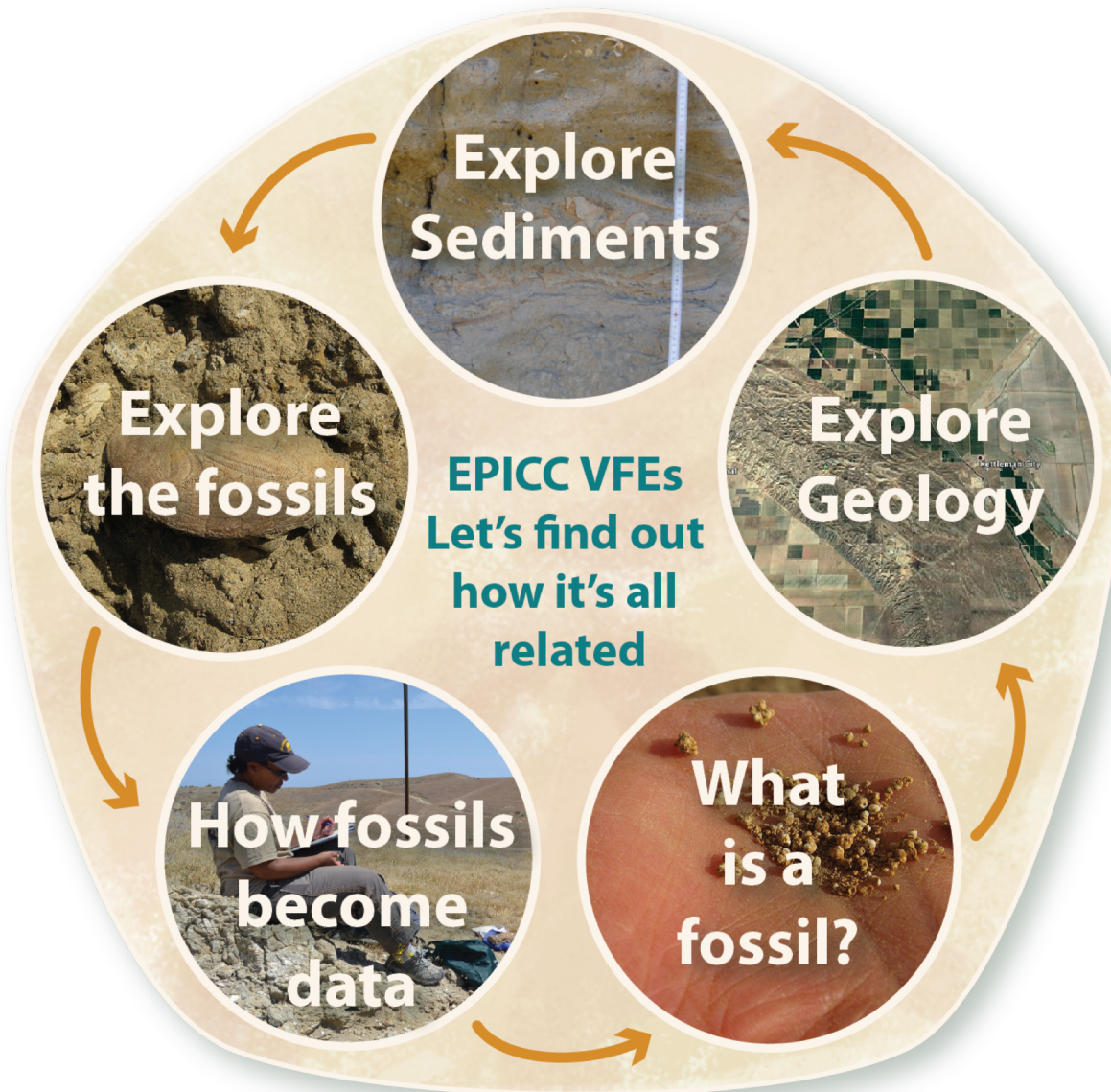
# Stratigraphic concordances

- Updating outdated stratigraphic units
- Based on: [USGS GeoLex](#) & unpublished USGS geologic names committee archives with updates from recent literature
- Script-ready data tables uploaded to Data Dryad
- Written descriptions of problematic formations
- California (200+ units; Peter Kloess, UCMP)
- OR, WA, British Columbia (66 units; Liz Nesbitt, Burke Museum)

# Taxonomic concordance

- 5300+ entries to date
- Based on taxonomic authority papers
- Started with Recent and Quaternary mollusks (Austin Hendy, LACM); framework for taxonomic names from older fossil literature
- Collaboration with taxonomic experts to add additional groups (i.e., Arthropoda) and reconcile outdated taxonomic concepts

# Virtual Field Experiences



- Gigapixel photography
- Video clips
- Connect museum specimens to the places they were collected
- ESRI Story Maps platform

# Research uses of data

- TCN data served via individual IPT or VertNet IPT to iDigBio, GBIF, etc.
- Ecological and evolutionary response of marine species and communities to major environmental changes such as:
  - Paleocene-Eocene Thermal Maximum
  - Greenhouse-icehouse transitions
  - Opening of Bering Strait, closing of Panama Seaway
  - Contraction of the tropics



# Take home messages

- Products already available
  - [Guide to labeling marine invertebrates](#)
  - [Setting up GeoLocate collaborative portal](#)
  - [Standard views of marine invertebrates for photography](#)
- Find new uses for these data!
- Ask questions about our data!
- Combine your data with ours!
- Have feedback on our approach? Talk to us.



# Acknowledgements



- PIs, students, staff and volunteers of EPICC
- iDigBio staff and trainings
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