

The image displays a large collection of fossil shells, likely bivalves, arranged in various trays and small containers. The shells vary in size, shape, and color, ranging from small, delicate specimens to large, thick, and somewhat flattened shells. Some shells are shown in cross-section, revealing internal structures. The background is a light-colored surface, possibly a table or a display board. A semi-transparent text box is overlaid in the center of the image.

# Eastern Pacific Invertebrate Communities of the Cenozoic (EPICC)

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# Collaborator Map



# Scope of project

- 66 million years of marine community evolution, since the end-Cretaceous mass extinction, from the entire Eastern Pacific.
- Taxa include species from all readily fossilizable animal phyla (except vertebrates).
- ~1.6 million fossils to be web mobilized.

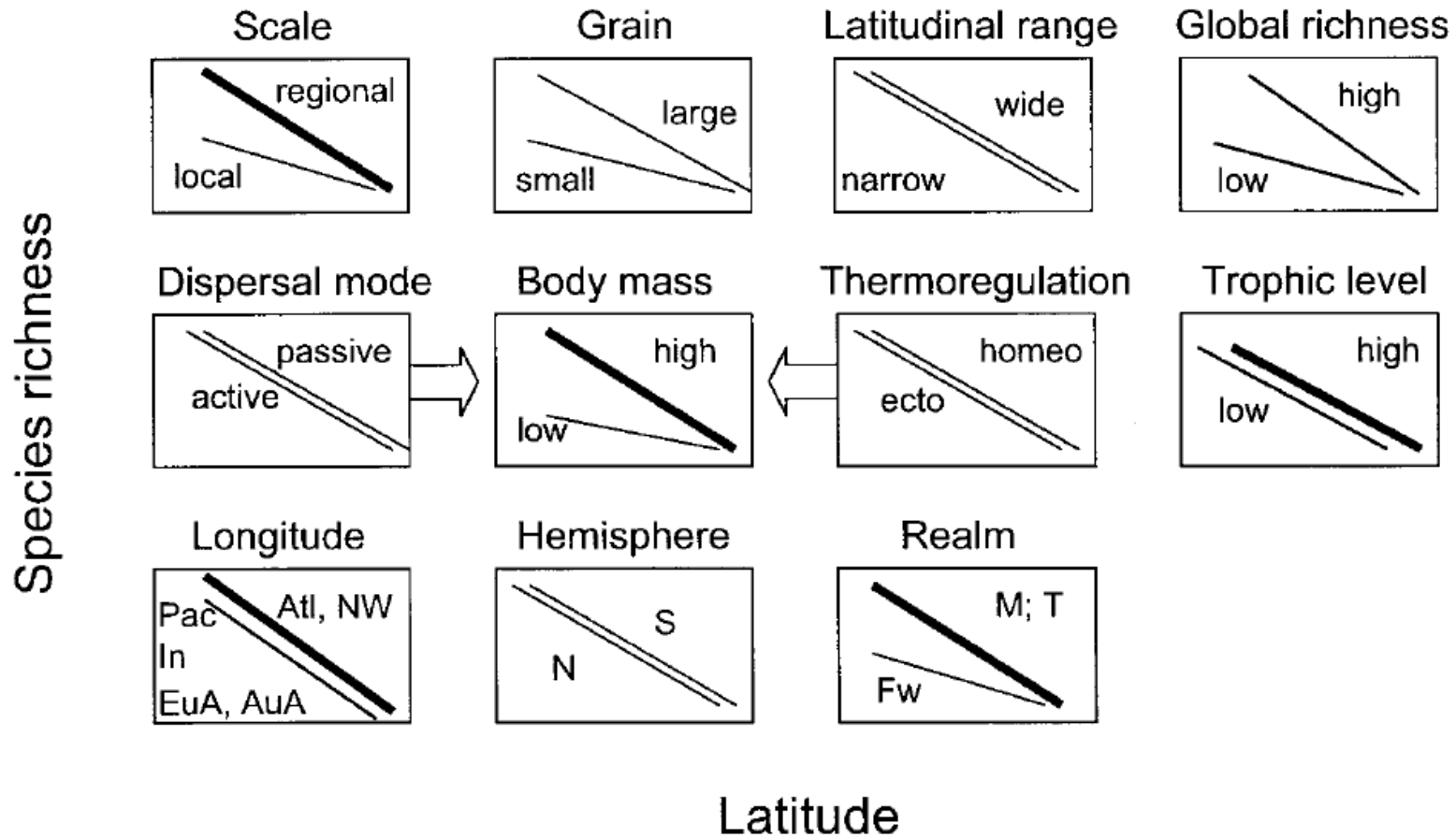


# Digital deliverables

(beyond the piping of specimen data to iDigBio)

- Online stratigraphic dictionary for the eastern Pacific.
- Locality compilation showing equivalence across different museums.
- Updated taxonomic authorities for eastern Pacific fossils (there is no existing online source).
- Video, Gigamacro image sets, 3D models as part of Virtual Field Experiences, linked to Googlemaps and web-mobilized specimen data.
- Established standardized image acquisition protocols and views for the relevant taxonomic groups.

# Latitudinal Richness Gradient

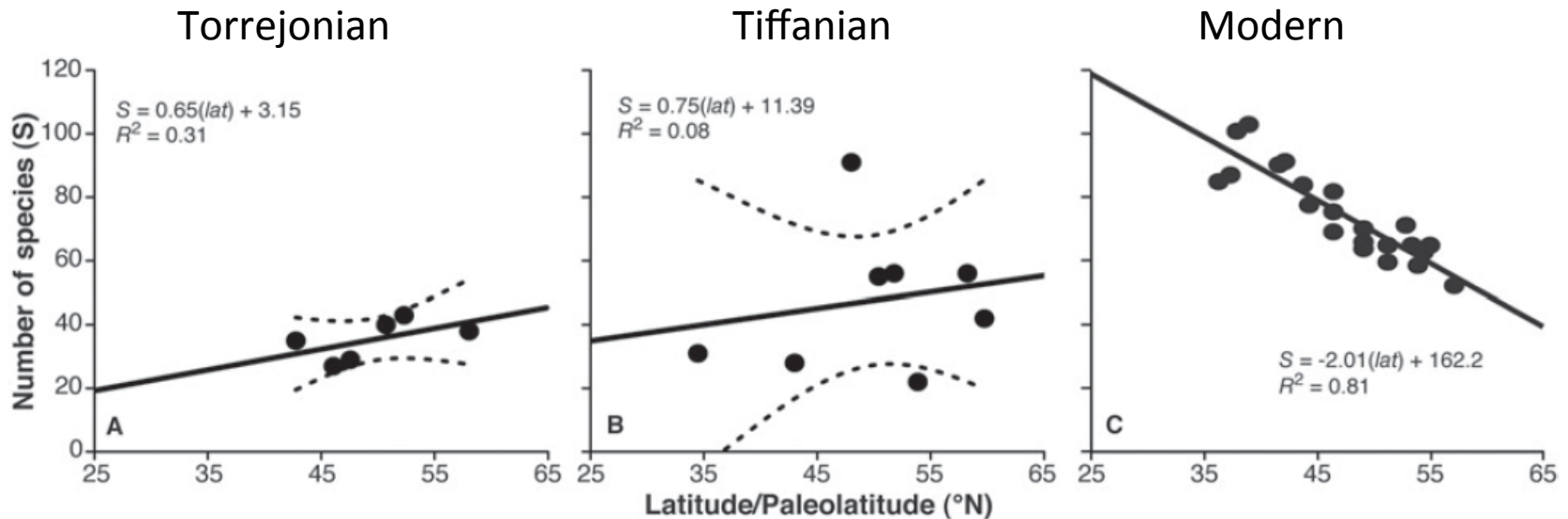


Almost 600 gradients from ~1000 studies

Hillebrand (2004) Am Nat 163: 192-211

# Fossils don't always show a latitudinal gradient

## Western Interior North American Mammals



Rose et al. (2011) *Geology* 39: 163-166

# Potential cause of modern gradient in marine ecosystem

**ecosystem:** Collapse of the tropics over the last 15 million years

