

# The PALEONICHES-TCN



Ordovician  
Cincinnati Region



Pennsylvanian  
Midcontinent U.S.



Neogene  
Southeastern U.S.

B.S. Lieberman, J.R. Hendricks, A.L. Stigall,  
U.C. Farrell, S. Butts, A. Molineux, J.H.  
Beach, R. Portell, B. Hunda, K. Hauer

*U. of Kansas, Paleontological Research Institution, Ohio U., U. of Texas, Yale  
U., Cincinnati Museum, Miami University, Florida Museum*

# PALEONICHES – TCN : Data

931,324 specimens databased, original  
goal 450,000

> 9,200 fossil localities georeferenced

1,100 images of fossil species

Data shared/published via iDigBio and  
institutional websites

# PALEONICHES – TCN: Research

Scientific publications in various journals including:

*Global Ecology and Biogeography, Proceedings of the Royal Society, Series B, Journal of Biogeography, and Paleobiology*

Used GIS and Ecological Niche Modeling to study macroevolutionary effects of climate change

# PALEONICHES – TCN: Research

Species niches conserved over millions of years and through major climate changes

Climate is the primary factor controlling geographic distributions over millions of years, with biotic factors playing a much more limited role

Many species of modern marine mollusks, some of them pivotal to marine ecosystems and the human economy, are at significant risk of extinction by 2100

# PALEONICHES – TCN: Training

9 graduate students (7 female)

10 undergraduate students (8  
female)

1 female post-doctoral fellow

# PALEONICHES – TCN: Outreach



[www.digitalatlasofancientlife.org](http://www.digitalatlasofancientlife.org)

 @PaleoDigAtlas

Digital Atlas App

Free for iPhone/iPad



# PALEONICHES – TCN: Outreach

Digital Atlas of Ancient Life Website:

[www.digitalatlasofancientlife.org](http://www.digitalatlasofancientlife.org)

Described in Hendricks, Stigall, and Lieberman. 2015. *Palaeontologia Electronica*

More than 1,000 species represented with information, images, and maps

> 450,000 visits; > 1,500,000 hits

# PALEONICHES – TCN: Outreach

Fossil guide

On Twitter @PaleoDigAtlas



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# PALEONICHES – TCN: Outreach

## Digital Atlas of Ancient Life App

Derived from Digital Atlas of Ancient Life  
Website

Works on both iPad and iPhone

App is available for Free at Apple App  
Store



# Digital Atlas of Ancient Life

## Electronic Field Guide

Explore taxonomic information, images and maps for three Paleontological time periods.

▶ **START**

🕒 **BROWSE**

🕒 **TIME PERIOD**



Ordovician



Pennsylvanian



Neogene



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Andy Bentley (KU)

iDigBio



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NSF Emerging Frontiers

NSF Sedimentary Geology & Paleobiology