

PALEONICHES

digitizing fossils to enable new syntheses in biogeography
2012-2016



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

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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, GBIF and
institutional websites



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



Digital Atlas of Ancient Life

Guide to Ordovician, Pennsylvanian, and Neogene fossils

www.digitalatlasofancientlife.org



@PaleoDigAtlas

Digital Atlas App

Free for iPhone/iPad



PALEONICHES – TCN : Outreach

Digital Atlas of Ancient Life Website:

www.digitalatlasofancientlife.org

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

On Twitter @PaleoDigAtlas

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

➤ 450,000 visits; > 1,500,000 hits

Lives on with the addition of the Cretaceous World TCN



Ordoevic
Cincinnati Region



Pennsylvanian
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Neogene
Southeastern U.S.



Digital Atlas of Ancient Life

Electronic Field Guide

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

▶ **START**

🕒 **BROWSE**

🕒 **TIME PERIOD**



Ordovician



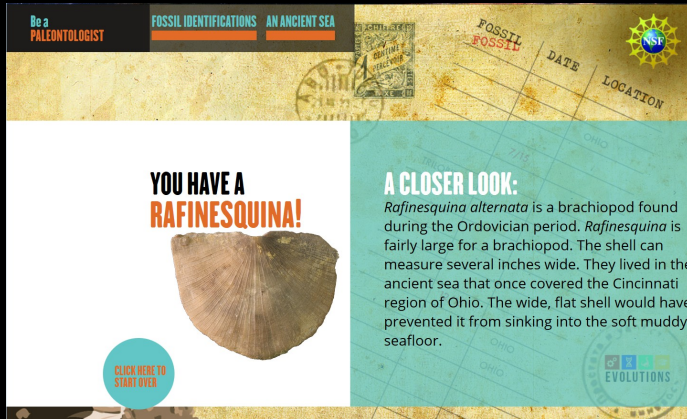
Pennsylvanian



Neogene



PALEONICHES – TCN : Outreach



Peabody EVOLUTIONS program



High-school and undergraduate interns

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iDigBio



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NSF Advancing the Digitization of Biological Collections

NSF Emerging Frontiers

NSF Sedimentary Geology & Paleobiology