**FACILITIES, EQUIPMENT AND OTHER RESOURCES**

NEOTOMA PALEOECOLOGY DATABASE

The Neotoma Paleoecology Database is an internationally leading data resource for paleoecological and associated paleoenvironmental data. Neotoma is endorsed as a repository by the US National Science Foundation, the US Geological Survey, Past Global Changes (PAGES), and the American Quaternary Association. Neotoma is registered as an American Geophysical Union COPDESS data resource and is accredited by the ICSU World Data System, with pending CoreTrustSeal accreditation. Data uploaded to the Neotoma ​relational database are housed at the Center for Environmental Informatics at Penn State​ and ​are protected by data backup and archiving policy that facilitates swift backup and long-term archiving. Data are protected by multiple measures, including redundant disk storage, off-site mirroring, file-system snapshotting, regular tape backup, and duplication of the backup set. ​CEI is committed to continuing to host the Neotoma database on a long-term basis even if there are temporary gaps in funding.

All data in Neotoma is user contributed, and all datasets are open and available for reuse with attribution under a Creative Commons License (CC-By 4.0). Datasets in Neotoma are assigned persistent unique digital identifiers (DOIs) with associated landing pages (e.g.<https://data.neotomadb.org/14194>) that are readily discoverable through internet search engines. Neotoma data can be retrieved through multiple mechanisms, including the map-based graphical user interface Neotoma Explorer (<https://apps.neotomadb.org/explorer/>), Neotoma’s RESTful application programmatic interfaces (APIs,<https://api.neotomadb.org/api-docs/>), and the neotoma R package (<https://cran.r-project.org/web/packages/neotoma/index.html>). Neotoma open-source code is posted to GitHub (<https://github.com/NeotomaDB/>). Model workflows for retrieving and analyzing Neotoma data are available at<http://open.neotomadb.org/>. Neotoma data can be searched and retrieved through third-party portals such as NOAA’s National Center for Environmental Informatics – Paleoclimatology (<https://www.ncdc.noaa.gov/paleo-search/>) and the Earth Life Consortium (<https://earthlifeconsortium.org/>). Snapshots of the full Neotoma database are periodically posted to Neotoma’s home page in PostgreSQL (<https://www.neotomadb.org/snapshots>) and to FigShare (<https://figshare.com/search?q=neotoma+database>). Educational resources for high school and college audiences are available at Carleton’s Science Education Resource Center (SERC,<https://serc.carleton.edu/neotoma/activities.html>).

Neotoma datasets are curated by an expert network of over 100 Data Stewards who ensure high data quality and conformance with community data standards. The Neotoma Leadership Council, elected by Neotoma members, is the leading governance body for Neotoma, with an Executive Working Group charged with handling ongoing operations. Neotoma informatics resources are continually being improved by Neotoma IT’s working group, with active members at the University of Wisconsin-Madison, Penn State, University of California, the University of Oregon, and other locations.