Advances in Geospatial Data Collection for Paleoanthropology

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One Source - Many Clients

PaleoCore provides flexible data access that allows you to choose the client and software tools appropriate to the task.

Web Use the web interface to easily manage data from anywhere via the internet collaboratively. No need to pass data files back and forth.

GIS Use GIS clients to view, edit and analyze spatial data via open data protocols such as Web Mapping and Web Feature services (WMS/WFS).

R A custom API provides ready access to your data in just a couple lines of code. Take advantage of R's powerful statistical and spatial libraries for analysis and visualization.
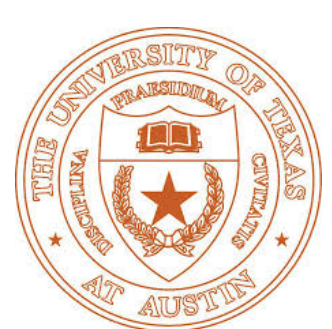
PaleoCore is Open-Source

The source code is freely available at:
https://github.com/paleocore/paleocore

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The Role of Digital Data Management

Vast amounts of paleontological data are digitally inaccessible and there is an active effort to bring existing collections online. A related problem is ensuring that new collections are digitized immediately and do not add to the existing problem.

Data discovery Shared digital data allows us to answer the most fundamental questions of what occurs where. Simple data standards, such as Darwin Core, facilitate data discovery by providing a common terminology for information about specimens.

Data synthesis Collections that are commensurate (i.e. have compatible collection methods and sampling protocols) can be used for broader synthetic analyses. Data ontologies for paleontology, currently being developed, will facilitate synthetic analyses.

PaleoCore

http://www.paleocore.org

A Web-Based Data Management System for Paleoanthropology

PaleoCore provides 1) standards for data management based on Darwin Core, 2) an online digital repository for paleontological projects, 3) tools for digital data collection in the field.

Reliable Data managed through PaleoCore are stored at the Texas Advanced Computing Center (TACC), an NSF funded super-computing facility in Austin, TX.

Collaborative The web interface allows easy collaborative data management with colleagues anywhere there's internet access. Even spatial data can be edited online.

Geospatial Paleontological data are by their nature geospatial. PaleoCore is designed specifically for managing spatial data such as individual fossil occurrences, hydrology, research area boundaries etc.

Windows Mobile **Apple iOS**

Mobile Workflows

Export data to a laptop for field campaigns. Migrate data to and from the laptop to mobile devices for data collection in the field.

Rapid Mobile devices with built in GPS receivers, cameras and advanced user interfaces allow rapid and more comprehensive data collection in the field.

Flexible Take advantage of Windows Mobile or iOS workflows. Android solutions are in development.

Reliable Digital data are easily duplicated. Multiple backups protect against data loss. Digital workflows are easily combined with traditional paper workflows and field notes.

PaleoCore is Built on Open-Source Technology