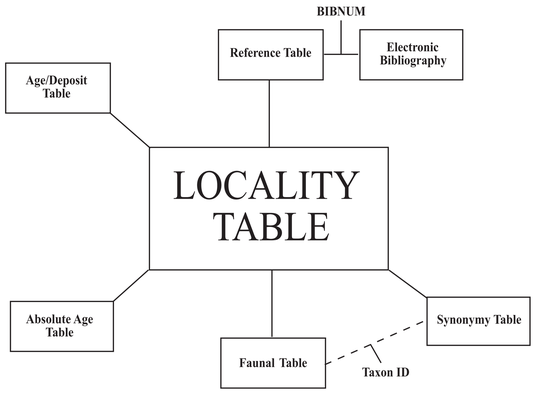
OVERVIEW

The Miocene Mammal Mapping Project (MIOMAP) database, housed at the University of California at Berkeley, is now online for use by the scientific community. MIOMAP is a relational database designed for web-based distribution and incorporation into a GIS analytical tool (ARC/INFO 8.3). Orginally developed in Paradox 9.0 following the FAUNMAP data structure, MIOMAP has now been transferred into MySQL for online accessibility. The database includes published fossil mammal localities between 30 and 5 million years old (Arikareean through Hemphillian) from the western United States as well as some well-identified, unpublished species represented by voucher specimens in museums. Information associated with each locality includes latitude, longitude, relevant taxonomy and synonymies, geologic age, depositional environment, taphonomic attributes, bibliographic information, and, when available, numbers of identified specimens (NISP) and minimum number of individuals represented (MNI). The structure of the database is shown below.



Each table is joined to all other tables via machine number, analysis unit, and bibnum.

MIOMAP is currently accessible at:

http://miomap.berkeley.edu

Queries of the database can be made through HTML forms or through an interactive mapping interface that utilizes open source MapServer 4.0 software. Search results or the entire dataset can be downloaded in Microsoft Excel format. The figures to the right represent screen shots taken from the online interfaces.

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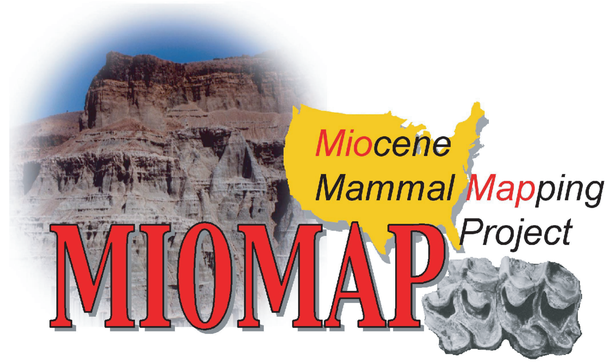

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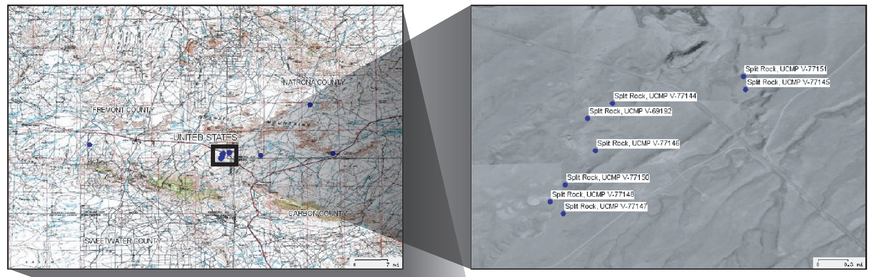
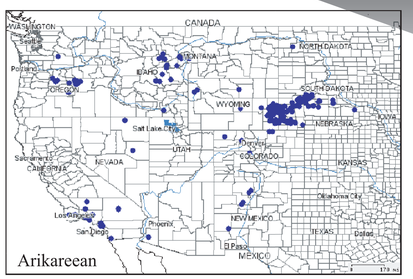
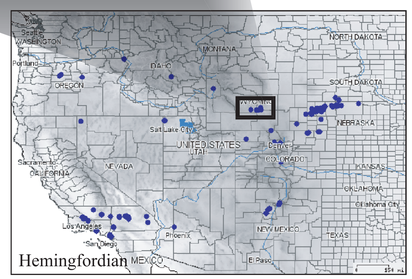
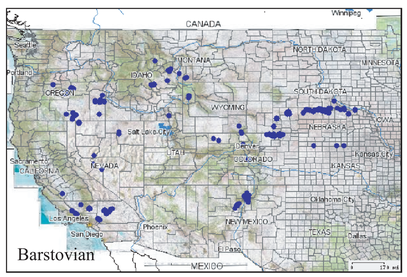
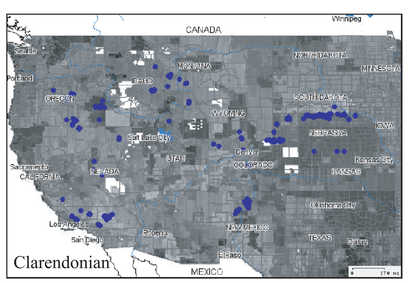


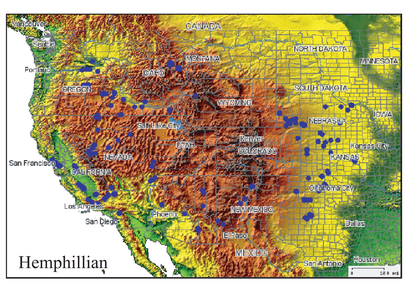






These maps, generated using the online MapServer 4.0 software, summarize the fossil-bearing localities (blue dots) by land mammal age. The various map backgrounds illustrate some of the options available to users. In addition, the online mapping interface allows users to zoom in on specific geographic regions (as shown above for the Split Rock localities).

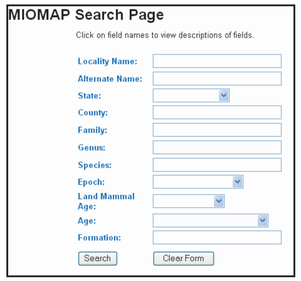




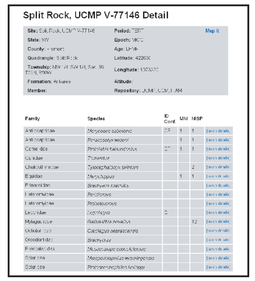
http://www.ucmp.berkeley.edu/miomap/miomap_home_page.htm

The MIOMAP introductory page (above) contains general information including the goals of the project, the data structure, tips for searching, and related links.

Below are images of the MIOMAP basic search page as well as a sample detailed output of one of the Split Rock localities.

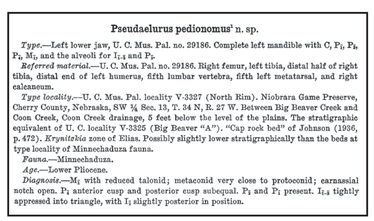


http://miomap.berkeley.edu/search.php



http://miomap.berkeley.edu/results_detail.php?LocSeq=1199

In the coming months, the web site will see extensive revisions, including a new look, adding more links to digital photos of type specimens and diagnoses (sample photo and diagnosis below), and more tools for spatial and paleoecological analyses. However, during this time we expect the database to continue to be fully accessible.



Pseudaelurus pedionomus[1] n. sp.

Type.—Left lower jaw, U. C. Mus. Pal. no. 29186. Complete left mandible with C, P_3, P_4, P_5, M_1, and the alveoli for I_{1-3} and P_2.

Referred material.—U. C. Mus. Pal. no. 29186. Right femur, left tibia, distal half of right tibia, distal end of left humerus, fifth lumbar vertebra, fifth left metatarsal, and right calcaneum.

Type locality.—U. C. Mus. Pal. locality V-3337 (North Rim). Niobrara Game Preserve, Cherry County, Nebraska, SW ¼ Sec. 13, T. 34 N, R. 27 W. Between Big Beaver Creek and Coon Creek, Coon Creek drainage, 5 feet below the level of the plains. The stratigraphic equivalent of U. C. locality V-3325 (Big Beaver "A"). "Cap rock bed" of Johnson (1926, p. 472). *Krynitskia* zone of Elias. Possibly slightly lower stratigraphically than the beds at type locality of Minnechaduza fauna.

Fauna.—Minnechaduza.

Age.—Lower Pliocene.

Diagnosis.—M_1 with reduced talonid; metaconid very close to protoconid; carnassial notch open. P_4 anterior cusp and posterior cusp subequal. P_3 and P_2 present. I_{1-3} tightly appressed into triangle, with I_3 slightly posterior in position.

Please e-mail us with suggestions that we can incorporate as we finalize the web site. We particularly welcome:

- Ideas to make the site maximally user-friendly
- Identification of any data errors

comments@miomap.berkeley.edu