

Exploring Geology on the World-Wide Web – Dinosaurs and Vertebrate Paleontology

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INTRODUCTION

This is the first in a series of columns that will discuss methods of utilizing the World-Wide Web as a resource for teaching and learning geology. Since this is my first article, I would like to briefly discuss the World-Wide Web and to explain the format of this column.

The World-Wide Web, also called the WWW, W3, or Web, is not a physical object but rather a virtual environment. To navigate the Web, one uses a single "browser" program that understands all of the different information-retrieval and data-format protocols commonly used by computers. This allows seamless access to multimedia information over the Internet, the vast network of millions of interconnected computers throughout the world. The current explosive popularity of the Internet and the World-Wide Web has led to the availability of a large number of introductory books for the novice user (for example, see December and Randall, 1995; Eager, 1994; Kent, 1995; Pfaffenberger, 1995). Ellen Metzger discusses the Internet and the World-Wide Web in her "STRATEGY COLUMN for Precollege Science Teachers" in this issue of the JGE (see p. 552-555).

The recent appearance of user-friendly Web browsers such as *Mosaic* and *Netscape* (Dupuy, 1995; Kraynak, 1995), along with increasing ease of access to the Internet, has led to the availability of a seemingly infinite amount of information that is obtainable at the click of a mouse. Unfortunately, the information is of varying quality and is not often indexed in any meaningful way. The Web is also a volatile landscape with resources appearing and disappearing literally overnight. This column is an attempt to make some of the resources on geology available to earth-science teachers and students in a timely and coherent manner and to save users many hours of "surfing" the Internet looking for usable information.

Each "Exploring Geology" article will be devoted to a single geoscience topic and will list the Universal Resource Locators (URLs), or "addresses," of several appropriate World-Wide Web resources for that topic. I will assume that readers have access to the Web *via* a browser capable of handling multimedia information. For each of the Web resources listed, I will briefly discuss where the resource is physically located, who is providing the information, what type of information is available there, and some comments on the quality of

that information where appropriate. I will end with a discussion of how these resources can be utilized for unsupervised self-instruction and some suggestions for exercises and questions appropriate for teaching students of various educational levels.

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This issue's column will focus on World-Wide Web resources for learning about dinosaurs and also a few other Mesozoic and Cenozoic fossil vertebrates. Dinosaurs were spectacular animals and there are many Web sites offering pictures of dinosaurs and little else. I've generally tried to avoid sites which only offer "pretty pictures" in favor of those which offer some solid factual information as well.

All of the URL addresses in this article are available as hypertext links on a Web page I created at:

<http://www.geology.uiuc.edu/~schimmri/geology/geology.html>

Connecting to the resources below from this single Web page will save a substantial amount of typing.

DINOSAUR EXHIBITS

The following resources feature exhibits of dinosaurs along with varying amounts of scientific information.

Royal Tyrrell Museum

<http://www.cuug.ab.ca:8001/VT/tyrrell/index.html>

The Royal Tyrrell Museum in Alberta, Canada is probably the best dinosaur museum in the world and this Web site reflects that excellence! Begin a wonderful multimedia virtual tour of the museum at the "Age of Reptiles" and follow it through to the present day. This site also offers information on the many dinosaur digs and educational programs offered by the museum.

University of California at Berkeley Museum of Paleontology

<http://ucmp1.berkeley.edu/exhibittext/cladecham.html>

Another excellent resource. Begin your virtual tour through the museum from the "Hall of Dinosaurs" and follow the many hypertext links. This site places great emphasis on evolutionary relationships between dinosaurs and other animals, and everything is explained in a clear, concise manner. The Museum of Paleontology as a whole will be discussed in more detail in my next column.

