# Morphbank: An Avenue to Document and Disseminate Anatomical Data. II: Histology Test Case

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## WHAT IS MORPHBANK?

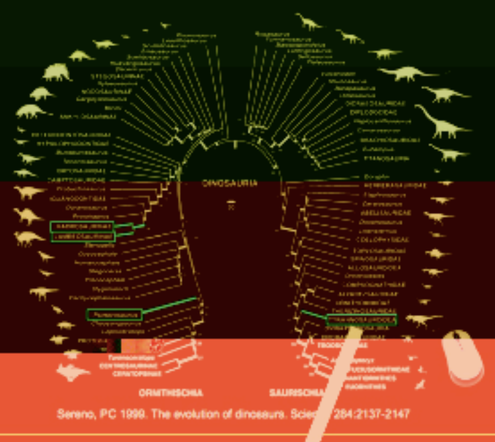
Morphbank (http://www.morphbank.net) is an open web repository for digital images utilized in specimen-based biological research. Established in 1998 by a consortium of systematic entomologists, Morphbank serves as a permanent archive to store and distribute images from any of the anatomical sciences. Here, we show its application to histological studies.

A) Images of specimens, such as whole skeletons, elements, and thin-sections, can be stored in Morphbank.

The data can be searched by specimen, image, view, etc...

B) A phylogeny is linked to major clades and is used to navigate to the taxon of interest.

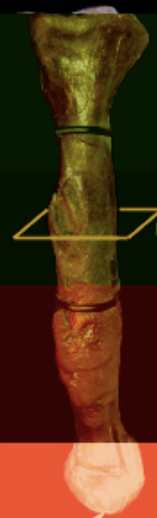
Taxa with recorded histological information will be highlighted as well.



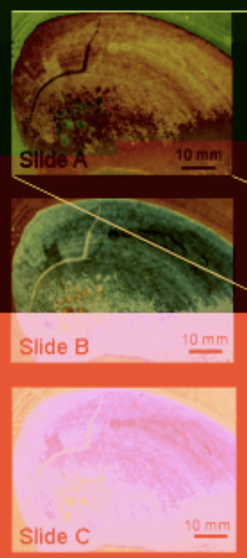

C)

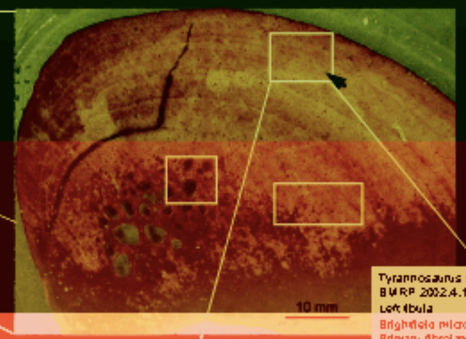
A skeleton for the chosen taxon serves as a template to show the bones for which histological information exists.

D) An image of the selected bone displays annotations indicating where sections were made. This image can be from the actual bone or, in its absence, a generic element belonging to the taxon of interest.

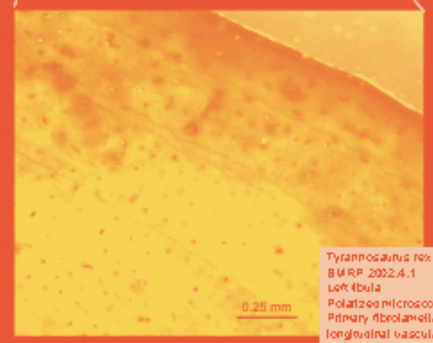


E)




Tyrannosaurus rex
BMRP 2002.4.1
Left fibula
Brightfield microscopy
Primary fibrolamellar bone
with growth lines
RSMu 2004-09




Tyrannosaurus rex
BMRP 2002.4.1
Left fibula
Polarized microscopy
Primary fibrolamellar bone,
longitudinal vascularization
RSMu 2004-09

Element selection, section planes, and information describing the specimen (e.g. histology, ontogenetic stage, stratigraphic information, etc.) can be annotated on the image.

All input and annotated data will be searchable with a Google-like search (i.e., in a keyword text field, with results ranked by how similar they are to objects in the database).

An ancillary goal of this project is to establish a user friendly, standardized template to help histologists researchers document and disseminate their work.

*ACKNOWLEDGEMENT: Funds for this project are provided by an NSF Division of Biological Infrastructure, Program in Biological Databases and Information grant (DBI 0446224) presented to to FR, GME, GR, AM, NJ, PJ, CJ, and RVE.*