University of Texas High-Resolution X-ray CT Facility Archive 0829

Humphries:

Polyodon: Scans of the head of *Polyodon spathula* (TNHC 22770; Federal Fish Hatchery, San Marcos, Texas; collected 19 August 1994) for Dr. Julian Humphries of the University of Texas at Austin and Dr. Timothy Rowe of the Department of Geological Sciences, The University of Texas at Austin. Scanned by Matthew Colbert 14 March 2003.

16bitrf: 1024x1024 16-bit TIFF images. II, 120 kV, 0.2 mA, no filter, empty wedge, no offset, slice thickness 3 lines (= 0.123 mm), S.O.D. 120 mm, 1000 views, 3 samples per view, inter-slice spacing 3 lines (= 0.123 mm), field of reconstruction 34 mm (maximum field of view 39 mm), reconstruction offset 5000, reconstruction scale 2300. Acquired with 9 slices per rotation. Drift-removal and ring-removal processing done by Rachel Racicot based on correction of raw sinogram data using IDL routines "RK_SinoDeDrift" with parameters DRIFTLENGTH = 21, then "RK_SinoRingProcSimul", with default parameters. Total slices = 975. Deleted slices 976 to 981.

8bitjpg: 8-bit JPEG versions of the above images.

specimenphotos: JPG images of the specimen.

University of Texas High-Resolution X-ray CT Facility Archive 0859

Humphries:

Polyodon: Image processing of the head of an alcohol specimen *Polyodon spathula* (TNHC 22770; Federal Fish Hatchery, San Marcos, Texas; collected 19 August 1994) for Dr. Julian Humphries of the University of Texas at Austin and Dr. Timothy Rowe of the Department of Geological Sciences, The University of Texas at Austin. Scanned by Matthew Colbert 14 March 2003. Original scan data located on Archive 0829. Field of reconstruction = 34.0 mm; inter-slice spacing = 0.123 mm for the original coronal slices and 0.0332 mm for the horizontal and sagittal reslicings. Image processing by Julian Humphries and Amy Balanoff, April 2003, on 1024 x 1024 sized images. Reslicing done on every pixel.

emorphology: Web image-processing.

movies:

- Quicktime slice-by-slice animations along the three orthogonal axes (CorFlipHeadSkel.mov, HorFlipHeadSkel.mov, SagFlipHeadSkel.mov). All are reduced from their original image size for web viewing and are compressed using Quicktime's photo-jpg compression (quality: low).
- Quicktime animations of 3D rotations created in VGStudioMAX around the three orthogonal axes with the skeleton only (RollSpinHeadSkel.mov, PitchSpinHeadSkel.mov,

YawSpinHeadSkel.mov) with the skin (RollSpinHeadSkin.mov, PitchSpinHeadSkin.mov, YawSpinHeadSkin.mov). All are reduced from their original image size for web viewing and are compressed using Quicktime's photo-jpg compression (quality: low).

applet:

sliceslg: Unreduced, slightly leveled slices along the three orthogonal axes (**coronal, horizon, sagittal**) for use with the java applet. Images were compressed using jpg compression (quality: 27) based on the original resliced image processing of this data set (not archived).

slicessm: Reduced, aggressively leveled slices along the three orthogonal axes (**coronal, horizon, sagittal**) for use with the java applet. Images were compressed using jpg compression (quality: 50) based on the original resliced image processing of this data set (not archived).

thumbs: For applet navigation: coronal.jpg, horizon.jpg, and sagittal.jpg.

thumbs&images: Website imagery for thumbs and navigation.

specimen photos: Photographs of the specimen.

IP to array:

data: 8-bit, unleveled, cropped from 1024 x 1024 sized coronal images.

vox: Uncompressed grayscale tiff frames of 3D rotations of the skull with and without skin around the three orthogonal axes created in VGStudioMax (**roll, pitch, yaw, rollskin, pitchskin, yawskin**). Images saved at original size.

unreducedmovies:

- Quicktime slice-by-slice animations along the three orthogonal axes (CorFlipHeadSkel.mov, HorFlipHeadSkel.mov, SagFlipHeadSkel.mov). All are the same size as resliced images and are compressed using Quicktime's photo-jpg compression (quality: medium).
- Quicktime animations of 3D rotations created in VGStudioMAX around the three orthogonal axes with the skeleton only (RollSpinHeadSkel.mov, PitchSpinHeadSkel.mov, YawSpinHeadSkel.mov) and with the skin (RollSpinHeadSkin.mov, PitchSpinHeadSkin.mov, YawSpinHeadSkin.mov). Images were compressed using Quicktime's photo-jpg compression (quality: medium).