Microtomographic investigation of a large corpus of cichlids

This manuscript (permalink) was automatically generated from habi/EAWAG-manuscript@69facc4 on June 30, 2022.

Authors

- **David Haberthür**
  0000-0003-3388-9187 · habi · habi
  Institute of Anatomy, Unversity of Bern, Switzerland

- **Mikki Law**

  None

- **Kassandra Ford**

  None

- **Marcel Häsler**

  None

- **Ole Seehausen**

  None

- **Ruslan Hlushchuk**

  Institute of Anatomy, Unversity of Bern, Switzerland

Abstract

A large corpus of fishes spanning a size range of 6 to 20 cm was nonestructively assessed using micro-computed tomography.

Introduction

History

- Cichlids from Lake Victoria
- Sample ‘library’ of EAWAG
- Valuable, hence non-destructive imaging is *paramount*

microCT

- Nondestructive imaging of a diverse kind of samples
- Ideal method to provide insight into *these* samples

Materials and Methods

Preparation of fishes

- Collection
- Storage in 75% Ethanol.

microCT imaging

- Scanned on the 1272 (some fishes) and the 2214 (most of the fishes)
- Scanned in custom-made, parametrized holders which were 3D printed, see [1]. An example can be seen/downloaded here.

Data analysis

Preparation for analysis

- Python code in Jupyter, which is freely available: https://github.com/habi/eawag
- Automatic dissemination/copying of data to the relevant

Extraction of OJ and PJ

- Details needed from Mikki on how she did it exactly

Results

- A lot of fishes
- A lot of scans
- A lot of data

Discussion

The discussion of the results and the outlook to what we'll do in the future is going into this file here.

Acknowledgments

We thank the Manubot project [2] for helping us write this manuscript collaboratively.

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