Microtomographic investigation of a large corpus of cichlids

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## 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)

### 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 [[1](#ref-YuJbg3zO)] for helping us write this manuscript collaboratively.

## References

1. **Open collaborative writing with Manubot** Daniel S Himmelstein, Vincent Rubinetti, David R Slochower, Dongbo Hu, Venkat S Malladi, Casey S Greene, Anthony Gitter *PLOS Computational Biology* (2019-06-24) <https://doi.org/c7np> DOI: [10.1371/journal.pcbi.1007128](https://doi.org/10.1371/journal.pcbi.1007128) · PMID: [31233491](https://www.ncbi.nlm.nih.gov/pubmed/31233491) · PMCID: [PMC6611653](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6611653)