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Fishes and the environment of the Northern Ewaso Ng'iro in Kenya

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Keywords

Kenya, freshwater fishes, metacommunity, beta diversity

Short description of the dataset/summary

This dataset provides habitat, water parameters, and species of fishes collected monthly from 10 localities from 2015-2016. There are 101 collection events and over 10,000 fish specimens recorded.

Short description of the dataset/summary (original/national language)

This dataset provides habitat, water parameters, and species of fishes collected monthly from 10 localities from 2015-2016. There are 101 collection events and over 10,000 fish specimens recorded.

General information

dataset entry ID:	FWM_28
name of the dataset:	
full name of the dataset:	Fishes and the environment of the Northern Ewaso Ng'iro in Kenya
full name of the dataset (original/national language):	Fishes and the environment of the Northern Ewaso Ng'iro in Kenya
dataset short name:	Fishes and habitat in the N. Ewaso Ng'iro
type of dataset:	species (taxonomic group) per site database including environmental information

data type: point data/observation data
science keywords according to GCMD:
topic: Biological Classification, Human Dimensions, Terrestrial Hydrosphere
ISO topic category according to ISO 19115:
Elevation, Inland Waters
INSPIRE keywords according to GEMET:
Habitats and biotopes, Land use
own science keywords: meta-community, freshwater fishes, intermittent streams
funding: This project was funded by the Smithsonian Institution through a postdoctoral fellowship to RCS.

Technical and administrative specifications

data format: Excel
operating system: all operating systems
data language: English
current access level: restricted access
currently available through [GBIF](#): no
exchange planned: yes
data in data repository: yes
specify repository: FIP - Freshwater Metadatabase repository
Do you plan to publish the data on the Freshwater Biodiversity Data Portal:
yes
update level: completed
documentation:
type: manual
language: English
contact details:
metadata contact person:
first, last name: Ray Schmidt
phone: 4707285798
email: rschmidt@tulane.edu
institution: Smithsonian Institution
address: 4210 Silver Hill Road, MRC 534 ?Fishes
postal code, city: 20746 Suitland
province, state: Maryland
country: USA
web address: <https://raycschmidt.wixsite.com/fishdiversity>
technical contact person:
first, last name: Ray Schmidt
phone: 4707285798
email: rschmidt@tulane.edu
scientific contact person:
first, last name: Ray Schmidt
phone: 4707285798
email: rschmidt@tulane.edu

Intellectual property rights and citation

dataset creator (data compiler):

contact name: Ray C. Schmidt
 contact email: rschmidt@tulane.edu
 contact institution: Smithsonian Institution

data contributors to/owners of this dataset:

multiple
 number: 5

data contributor/owner 1:

contact name:
 contact email: rschmidt@tulane.edu
 contact institute: Smithsonian Institution

criteria for using this part of the dataset:

The dataset is publicly available (data portal, data archive) and can be used without restrictions, but must be acknowledged and cited correctly.

data contributor/owner 2:

contact name:
 contact email: wanjanyingi@gmail.com
 contact institute: National Museums of Kenya

criteria for using this part of the dataset:

The dataset is publicly available (data portal, data archive) and can be used without restrictions, but must be acknowledged and cited correctly.

data contributor/owner 3:

contact name:
 contact email: woodstaylorlizabeth@gmail.com
 contact institute: University of Tennessee, Knoxville

criteria for using this part of the dataset:

The dataset is publicly available (data portal, data archive) and can be used without restrictions, but must be acknowledged and cited correctly.

data contributor/owner 4:

contact name:
 contact email: josephgathua@yahoo.com
 contact institute: National Museums of Kenya

criteria for using this part of the dataset:

The dataset is publicly available (data portal, data archive) and can be used without restrictions, but must be acknowledged and cited correctly.

data contributor/owner 5:

contact name:
 contact email: 2kipscham@gmail.com
 contact institute: National Museums of Kenya

criteria for using this part of the dataset:

The dataset is publicly available (data portal, data archive) and can be used without restrictions, but must be acknowledged and cited correctly.

citation of this dataset:

author(s): Schmidt, R.C., Nyingi, W.D., Woods, T., Gathua, J. & Kosgei, G.

title and journal (name, number, pages):

Data on the fishes and environment of the Northern Ewaso Ng'iro in Kenya from 2015 - 2016.

year: 2020

citation of the metadata:

author(s): Schmidt, R.C., Nyingi, W.D., Woods, T.E., Gathua, J. & Kosgei, G.
title and journal (name, number, pages): Fishes and the environment of the Northern Ewaso Ng'iro in Kenya. Freshwater Metadata Journal 49: 1-6
year: 2020
doi: <https://doi.org/10.15504/fmj.2020.49>

dataset related references:

reference 1:
author(s): Nyingi, W.D.
title: Guide to Common Freshwater Fishes of Kenya. Moran (E.A.) Publishers Limited. 136 pages
year: 2013

General data specifications

regional coverage of the dataset:

spatial extent of the dataset: catchment
continents: Africa

spatial extent (bounding coordinates):

southernmost latitude [°]: -3.27541
northernmost latitude [°]: 1.266292
westernmost longitude [°]: 36.373911
easternmost longitude [°]: 39.490031
countries: Africa: Kenya
comments: Data generated from collections in the Northern Ewaso Ng'iro basin in Kenya from 2015 to 2016.

ecosystem type: rivers
covered timeframe: 2015 - 2016

Site specifications

coordinate system/grid data: latitude/longitude, format: DD
grid data available: no
site coding available: yes, alphanumerical
example: RCS1504
number of sites: 100 - 1000
exact number of sites: 101

Climate and environmental data

climate related data: no climate data available
environmental data: no environmental data per catchment available

available parameters per site: information on riparian vegetation (incl. information on modification)
data source: field measurement
information on cross section (incl. information on modification)
data source: field measurement

current velocity
 data source: field measurement
 mean depth
 data source: field measurement
 wetted width
 data source: field measurement
 substrate composition
 data source: field measurement
 information on instream habitat (incl. information on modification)
 data source: field measurement

comments: Information on riparian vegetation includes percentage riparian vegetation left & right bank; and percentage of canopy cover over sampled area.
 Information on instream habitat includes the percentage pool, riffle, and run.
 Substrate composition recorded as: bedrock - 6, cobble (6-25 cm) - 5, gravel (2-60 mm) - 4, sand (0.06-2 mm) - 3, mud/silt (<0.06 mm) - 2, clay/detritus - 1.

physico-chemical data: oxygen content, water temperature, pH
stressors influencing the sites: no stressor data available

comments: All physico-chemical variables were measured in the field.

Biological data

biological data origin: from sampling,
 Freshwater community dynamics in the Northern Ewaso Ng'iro in Kenya
 comments: Fishes and environmental data were collected during RCS's postdoctoral project funded by the Smithsonian Institution.
 organism group addressed: fish

Sample specifications/sample resolution

fish:

sample information:

covered timeframe: 2015 - 2016
 season: spring, summer, autumn, winter
 temporal resolution/frequency of sampling:
 per month

taxonomic resolution:

level: genus, species
 percentage of species level data: 99
 comments: All organisms were determined to species level except for one undescribed *Haplochromis* sp.

taxonomic coding:

taxalist according to: Nyingi 2013
 reference(s): Nyingi, W.D. 2013. A guide to common freshwater fishes of Kenya. Moran Publishers Kenya.

sample specifications:

type: semi-quantitative, presence/absence

replicate samples: no
number of samples: 101

specification of method(s) used for sampling and sorting:

Fishes were sampled with seines and electrofishers. Each locality was sampled for 45 minutes to one and one-half hours to ensure all habitat types were sampled.

Other specifications

GIS layers, shape files related to the dataset:

no data available

availability of photos: yes

availability of maps: yes

quality control procedures:

Were any quality control procedures applied to your dataset?

no

Acknowledgements

This research would not have been possible without the support of researchers and staff at the National Museums of Kenya (NMK) and Mpala Research Centre (MRC). Funding for this research was provided by the Mpala Smithsonian Postdoctoral Fellowship awarded to RCS. Scott Miller and Ben Turner (Smithsonian Institution) served as postdoctoral advisers to RCS. Dino Martins, Cosmas Nzomo, and Juilus Nakolonyo (MRC) assisted RCS in permitting, logistics, field collections, and security. Joseph Gathua, Kilbert Gosgei, and Caroline Kibet assisted with field collections, identifications, and deposition of material at NMK. Verity Williams, proprietor of Sabuk Lodge, graciously allowed access to her property to sample the river below the site of proposed dam. Staff in the Division of Fishes in the National Museum of Natural History assisted with processing loaned specimens associated with this project.

References

Nyingi, W.D., 2013. Guide to Common Freshwater Fishes of Kenya. Moran (E.A.) Publishers Limited. 136 pages