

Metadata for biodiversity data of gravel pit lakes in Northern Germany

*Sven Matern , Robert Nikolaus , Malwina Schafft ,
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Sven Matern^{1, 2, 3} , Robert Nikolaus¹ , Malwina Schafft^{1, 2} ,
Thomas Klefoth⁴ , Matthias Emmrich⁵, Andreas Maday^{1, 2, 5} ,
Steffen Bader^{1, 6}, Christian Wolter¹ , Daniel Hering⁷ ,
Alessandro Manfrin^{1, 8}  & Robert Arlinghaus^{1, 2} 

¹ Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB), Berlin, Germany; corresponding author: sven.matern@ifb-potsdam.de

² Humboldt-Universität zu Berlin, Faculty of Life Sciences, Berlin, Germany

³ Potsdam Institute of Inland Fisheries (IfB), Potsdam, Germany

⁴ Hochschule Bremen, City University of Applied Sciences, Bremen, Germany

⁵ Angler Association of Lower Saxony, Hannover, Germany

⁶ Fischereiforschungsstelle Baden-Württemberg, Langenargen, Germany

⁷ University of Duisburg-Essen, Essen, Germany

⁸ University of Koblenz-Landau, Institute for Environmental Sciences, Landau, Germany

Please cite this paper as follows: Matern, S, Nikolaus, R, Schafft, M, Klefoth, T, Emmrich, M, Maday, A, Bader, S, Wolter, C, Hering, D, Manfrin, A & Arlinghaus, R, 2023. Metadata for biodiversity data of gravel pit lakes in Northern Germany. Freshwater Metadata Journal 53: 1-9. <https://doi.org/10.15504/fmj.2023.53>

Received: 2023-03-28 / Published: 2023-08-16

Keywords

gravel pit lake, biodiversity, fish, crayfish, birds, amphibians, dragonflies, macroinvertebrates, macrophytes, riparian vegetation

Short description of the dataset/summary

This dataset contains information on species presence in and at lakes in Northern Germany. Most of the lakes are gravel pit lakes. All lakes that contain "fish data" only are natural lakes (N=6). Depending on lake and biological taxa, lakes were sampled several times. This dataset contains information on species presence from the first sampling event at each lake to be representative of a roughly equal sampling efforts between the lakes. The complete database with all sampling events is available via www.fred.igb-berlin.de (DOI: 10.18728/igb-fred-807.0).

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

Dieser Datensatz enthält Informationen über das Vorkommen von Arten in und an Seen in Norddeutschland. Die meisten der Seen sind Baggerseen. Alle Seen, die nur "Fischdaten" enthalten, sind natürliche Seen (N=6). Je nach See und biologischen Taxa wurden die Seen mehrmals beprobt. Dieser Datensatz enthält Informationen über das Vorkommen von Arten aus der jeweils ersten Beprobung an jedem Gewässer, um einen ungefähr gleichen Beprobungsaufwand

zwischen den Seen zu repräsentieren. Die vollständige Datenbank mit allen Beprobungsereignissen ist unter www.fred.igb-berlin.de verfügbar (DOI: 10.18728/igb-fred-807.0).

General information

dataset entry ID:	FWM_38
name of the dataset:	
full name of the dataset:	Biodiversity data of gravel pit lakes in Northern Germany
full name of the dataset (original/national language):	Biodiversitätsdaten von Baggerseen in Norddeutschland
dataset short name:	BAGGERSEE biodiversity data
type of dataset:	species distribution data
data type:	point data/observation data
science keywords according to GCMD:	
topic:	Biosphere, Biological Classification, Terrestrial Hydrosphere
ISO topic category according to ISO 19115:	
	Biota, Inland Waters
INSPIRE keywords according to GEMET:	
	Species distribution
own science keywords:	gravel pit lake; biodiversity; fish; crayfish; birds; amphibians; dragonflies; macroinvertebrates; macrophytes; riparian vegetation
related project:	BAGGERSEE
funding:	Federal Ministry of Education and Research (BMBF): Research for Sustainability (FONA). Federal Agency for Nature Conservation with funding from the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) as part of the Federal Biological Diversity Programme (funding codes 01LC1320A, 01LC1320B and 3514685C20).

Technical and administrative specifications

data format:	Excel
operating system:	all operating systems
data language:	English
current access level:	web (public)
web address:	https://www.gbif.org/dataset/3580c8a0-33eb-40ac-b172-995854622428
currently available through GBIF :	yes
exchange planned:	no
data in data repository:	yes
specify repository:	IGB FRED (fred.igb-berlin.de ; DOI: 10.18728/igb-fred-807.0)
Do you plan to publish the data on the Freshwater Biodiversity Data Portal:	
	already published through the Freshwater Biodiversity Data Portal
update level:	completed
documentation:	
type:	scientific paper
others/details:	see dataset related references
language:	English

contact details:
metadata contact person:

first, last name: Sven Matern
 phone: +49 (0)33201 406 69
 email: sven.matern@ifb-potsdam.de
 institution: Potsdam Institute of Inland Fisheries (IfB)
 address: Im Königswald 2
 postal code, city: 14469 Potsdam
 country: Germany
 web address: <https://www.ifb-potsdam.de>
 technical contact person:
 first, last name: Robert Nikolaus
 email: nikolaus.klosterdorf@outlook.de
 scientific contact person:
 first, last name: Robert Arlinghaus
 phone: +49 (0)30 64181 653
 email: robert.arlinghaus@igb-berlin.de
 institution: Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB)
 address: Müggelseedamm 310
 postal code, city: 12587 Berlin
 country: Germany
 web address: <https://www.igb-berlin.de/en>
comments: Sven Matern and Robert Nikolaus are both metadata and technical contact persons.

Intellectual property rights and citation

dataset creator (data compiler):

contact name: Sven Matern
 contact email: sven.matern@ifb-potsdam.de
 contact institution: Potsdam Institute of Inland Fisheries (IfB)

data contributors to/owners of this dataset:

multiple
 number: 11

data contributor/owner 1:

contact name:
 contact email: sven.matern@ifb-potsdam.de
 contact institute: Potsdam Institute of Inland Fisheries (IfB)

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: nikolaus.klosterdorf@outlook.de
 contact institute:

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: malwina.schafft@igb-berlin.de

contact institute: Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB)

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: thomas.klefoth@hs-bremen.de

contact institute: Hochschule Bremen, City University of Applied Sciences

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: m.emmrich@av-nds.de

contact institute: Angler Association of Lower Saxony in Hannover

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 6:

contact name:

contact email: a.maday@av-nds.de

contact institute: Angler Association of Lower Saxony in Hannover

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 7:

contact name:

contact email: steffen.bader@lazbw.bwl.de

contact institute: Fischereiforschungsstelle Baden-Württemberg

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 8:

contact name:

contact email: christian.wolter@igb-berlin.de

contact institute: Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB)

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 9:

contact name:

contact email: daniel.hering@uni-due.de

contact institute: University of Duisburg-Essen

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 10:

contact name:

contact email: manfrin@uni-landau.de

contact institute: University of Koblenz-Landau, Institute for Environmental Sciences

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 11:

contact name:

contact email:

robert.arlinghaus@igb-berlin.de

contact institute:

Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB)

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):

Matern, S., Nikolaus, R., Schafft, M., Klefoth, T., Emmrich, M., Maday, A., Bader, S., Wolter, C., Hering, D., Manfrin, A. & Arlinghaus, R.

title and journal (name, number, pages):

Biodiversity data of gravel pit lakes in Northern Germany. Leibniz Institute of Freshwater Ecology and Inland Fisheries. Occurrence dataset
<https://doi.org/10.15468/snyq2x> accessed via GBIF.org.

year:

2023

doi:

<https://doi.org/doi.org/10.15468/snyq2x>

citation of the metadata:

author(s):

Matern S, Nikolaus R, Schafft M, Klefoth T, Emmrich M, Maday A, Bader S, Wolter C, Hering D, Manfrin A & Arlinghaus R

title and journal (name, number, pages):

Metadata for biodiversity data of gravel pit lakes in Northern Germany. Freshwater Metadata Journal 53: 1-9

year:

2023

doi:

<https://doi.org/10.15504/fmj.2023.53>

dataset related references:

reference 1:

author(s):

Matern, S., Emmrich, M., Klefoth, T., Wolter, C., Nikolaus, R., Wegener N. & Arlinghaus, R.

title:

Effect of recreational-fisheries management on fish biodiversity in gravel pit lakes, with contrasts to unmanaged lakes. J Fish Biol., 94: 865-881.

year:

2019

doi:

<https://doi.org/10.1111/jfb.13989>

reference 2:

author(s):

Nikolaus, R., Schafft, M., Maday, A., Klefoth, T., Wolter, C. & Arlinghaus, R.

title:

Status of aquatic and riparian biodiversity in artificial lake ecosystems with and without management for recreational fisheries: Implications for conservation. Aquatic Conserv: Mar Freshw Ecosyst., 31: 153-172.

year:

2021

doi:

<https://doi.org/10.1002/aqc.3481>

reference 3:

author(s):

Matern, S., Klefoth, T., Wolter, C., Hussner, A., Simon, J. & Arlinghaus, R.

title:

Fish community composition in small lakes: The impact of lake genesis and fisheries management. Freshw Biol., 67: 2130-2147.

year:

2022

doi:

<https://doi.org/10.1111/fwb.14001>

General data specifications

regional coverage of the dataset:

spatial extent of the dataset: regional
continents: Europe

spatial extent (bounding coordinates):

southernmost latitude [°]: 52.01
northernmost latitude [°]: 53.62
westernmost longitude [°]: 7.24
easternmost longitude [°]: 13.59
minimum altitude: -0.9 metres
maximum altitude: 110.5 metres
countries: Europe: Germany

world climatic regions according to [Köppen](#):

Group C: temperate/mesothermal climates
Group D: continental/microthermal climate

freshwater ecoregions of the world (FEOW) according to [WWF](#):

Europe: Central & Western Europe

European ecoregions according to [Illies \(WFD\)](#):

Central Plains (ER14)

ecosystem type: lakes/ponds

covered timeframe: 2016 - 2020

Site specifications

coordinate system/grid data: latitude/longitude, format: DD

datum (e.g. WGS84): WGS84

grid data available: no

site coding available: no

number of sites: <100

exact number of sites: 95

Biological data

biological data origin: from sampling,

BAGGERSEE

organism group addressed: water birds, amphibians, fish, macro-invertebrates (Mollusca, Crayfish, Ephemeroptera, Odonata, Coleoptera, Trichoptera, Chironomidae), macrophytes, angiosperms (riparian vegetation)

Sample resolution

water birds:

taxonomic resolution:

level: species

percentage of species level data: 100

comments: includes all birds detected at sampling site

taxonomic coding:

taxalist according to: n/a

reference(s): Please contact authors for further information.

sample specifications:

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

A description of the sampling methods can be found in the following publication:

Nikolaus, R., Schafft, M., Maday, A., Klefoth, T., Wolter, C. & Arlinghaus, R. Status of aquatic and riparian biodiversity in artificial lake ecosystems with and without management for recreational fisheries: Implications for conservation. *Aquatic Conserv: Mar Freshw Ecosyst.* 2021; 31: 153-172. <https://doi.org/10.1002/aqc.3481>

amphibians:

taxonomic resolution:

level: genus, species

percentage of species level data: 65

taxonomic coding:

taxalist according to: n/a

reference(s): Please contact authors for further information.

sample specifications:

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

A description of the sampling methods can be found in the following publication:

Nikolaus, R., Schafft, M., Maday, A., Klefoth, T., Wolter, C. & Arlinghaus, R. Status of aquatic and riparian biodiversity in artificial lake ecosystems with and without management for recreational fisheries: Implications for conservation. *Aquatic Conserv: Mar Freshw Ecosyst.* 2021; 31: 153-172. <https://doi.org/10.1002/aqc.3481>

fish:

taxonomic resolution:

level: genus, species

percentage of species level data: 99

taxonomic coding:

taxalist according to: n/a

reference(s): Please contact authors for further information.

sample specifications:

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

A description of the sampling methods can be found in the following publications:

Matern, S., Emmrich, M., Klefoth, T., Wolter, C., Nikolaus, R., Wegener, N. & Arlinghaus, R. Effect of recreational-fisheries management on fish biodiversity in gravel pit lakes, with contrasts to unmanaged lakes. *J Fish Biol.* 2019; 94: 865-881. <https://doi.org/10.1111/jfb.13989>
Matern, S., Klefoth, T., Wolter, C., Hussner, A., Simon, J. & Arlinghaus, R. Fish community composition in small lakes: The impact of lake genesis and fisheries management. *Freshw Biol.* 2022; 67: 2130-2147. <https://doi.org/10.1111/fwb.14001>

macro-invertebrates:

taxonomic resolution:

level: family, genus, species

percentage of species level data: 66

taxonomic coding:

taxalist according to: n/a

reference(s): Please contact authors for further information.

sample specifications:

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

A description of the sampling methods can be found in the following publication:

Nikolaus, R., Schafft, M., Maday, A., Klefoth, T., Wolter, C. & Arlinghaus, R. Status of aquatic and riparian biodiversity in artificial lake ecosystems with and without management for recreational fisheries: Implications for conservation. Aquatic Conserv: Mar Freshw Ecosyst. 2021; 31: 153-172. <https://doi.org/10.1002/aqc.3481>

macrophytes:

taxonomic resolution:

level: genus, species, other taxonomic levels available
other taxonomic levels: subspecies
percentage of species level data: 89

taxonomic coding:

taxalist according to: n/a
reference(s): Please contact authors for further information.

sample specifications:

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

A description of the sampling methods can be found in the following publication:

Nikolaus, R., Schafft, M., Maday, A., Klefoth, T., Wolter, C. & Arlinghaus, R. Status of aquatic and riparian biodiversity in artificial lake ecosystems with and without management for recreational fisheries: Implications for conservation. Aquatic Conserv: Mar Freshw Ecosyst. 2021; 31: 153-172. <https://doi.org/10.1002/aqc.3481>

angiosperms:

taxonomic resolution:

level: genus, species
percentage of species level data: 65

taxonomic coding:

taxalist according to: n/a
reference(s): Please contact authors for further information.

sample specifications:

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

A description of the sampling methods can be found in the following publication:

Nikolaus, R., Schafft, M., Maday, A., Klefoth, T., Wolter, C. & Arlinghaus, R. Status of aquatic and riparian biodiversity in artificial lake ecosystems with and without management for recreational fisheries: Implications for conservation. Aquatic Conserv: Mar Freshw Ecosyst. 2021; 31: 153-172. <https://doi.org/10.1002/aqc.3481>

Other specifications

GIS layers, shape files related to the dataset:

no data available

availability of photos:

no

availability of maps: no

quality control procedures:

Were any quality control procedures applied to your dataset?

yes

quality control protocols and comments:

Data were checked for correctness. Sometimes species determination was not possible and lowest taxonomic level was noted.

Acknowledgements

Federal Ministry of Education and Research (BMBF): Research for Sustainability (FONA). Federal Agency for Nature Conservation with funding from the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) as part of the Federal Biological Diversity Programme (funding codes 01LC1320A, 01LC1320B and 3514685C20).

References

- Matern, S., Klefoth, T., Wolter, C., Hussner, A., Simon, J. & Arlinghaus, R., 2022. Fish community composition in small lakes: The impact of lake genesis and fisheries management. *Freshw Biol.*, 67: 2130-2147. <https://doi.org/10.1111/fw.b.14001>
- Matern, S., Emmrich, M., Klefoth, T., Wolter, C., Nikolaus, R., Wegener, N. & Arlinghaus, R., 2019. Effect of recreational-fisheries management on fish biodiversity in gravel pit lakes, with contrasts to unmanaged lakes. *J Fish Biol.*, 94: 865-881. <https://doi.org/10.1111/jfb.13989>
- Nikolaus, R., Schafft, M., Maday, A., Klefoth, T., Wolter, C. & Arlinghaus, R., 2021. Status of aquatic and riparian biodiversity in artificial lake ecosystems with and without management for recreational fisheries: Implications for conservation. *Aquatic Conserv: Mar Freshw Ecosyst.*, 31: 153-172. <https://doi.org/10.1002/aqc.3481>