Database of the PONDSCAPE project (Towards a sustainable management of pond diversity at the landscape level)

Pieter Lemmens, Aaike De Wever, Nicolas Bonjean, Annick Castiaux, Liesbeth Colson, Tom De Bie, Evelyn Decoster, Carla Denis, Els De Roeck, Dirk Ercken, Boudewijn Goddeeris, Raphaëlla Goyvaerts, Syaghalirwa N.M. Mandiki, Kevin Morelle, Emilie Praca, Isa Schön, Jeroen Van Wichelen, Katleen van der Gucht, Jochen Vandekerckhoven, Pieter Vanormelingen, Maria Villena Alvarez, Dirk Bauwens, Luc Denys, Marc Herremans, Leo Vanhecke, Betrand Losson, Yannick Caron, Henry-Michel Cauchie, Patrick Kestemont, Wim Vyverman, Luc De Meester, Steven A.J. Declerck & Koen Martens

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4 Université de Namur, Namur, Belgium
5 Centre de Recherche Public - Gabriel Lippmann (CRP-GL), Belvaux, Luxembourg
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7 National Botanic Garden of Belgium, Meise, Belgium
8 Natuurpunt, Mechelen, Belgium
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Keywords

farmland ponds, environmental conditions, occurrences, Belgium, Luxembourg

Short description of the dataset/summary

The database of the PONDSCAPE project (Towards a sustainable management of pond diversity at the landscape level) comprises taxon occurrence data of eight different organism groups (bacteria, phytoplankton, diatoms, cladoceran, macro-invertebrates, macrophytes, amphibians and fish) and data on physical, chemical and morphometric variables of 125 farmland ponds covering five biogeographic regions in Belgium and Luxembourg.

General information

dataset entry ID:	SF_9
name of the dataset:	
full name of the dataset:	Towards a sustainable management of pond diversity at the landscape level
dataset short name:	Pondscape
type of dataset:	species (taxonomic group) per site database including environmental information
data type:	point data/observation data
science keywords according to GCMD:	
topic:	Agriculture, Biosphere, Biological Classification, Land Surface, Terrestrial Hydrosphere
ISO topic category according to ISO 19115:	Farming, Biota, Environment, Inland Waters
INSPIRE keywords according to GEMET:	Bio-geographical regions
own science keywords:	farmland ponds, occurrences, environmental conditions, Belgium, Luxembourg
related project:	PONDSCAPE
funding:	Belspo research project SD/BD/02A

Technical and administrative specifications

data format:	Excel
operating system:	all Windows systems
data language:	English
current access level:	internal
currently available through GBIF:	yes
exchange planned:	yes
data in data repository:	no
Do you plan to publish the data on the Freshwater Biodiversity Data Portal:	yes
update level:	completed
documentation:	
type:	scientific paper
language:	English

contact details:

metadata contact person:	
first, last name:	Koen Martens
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scientific contact person:
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Intellectual property rights and citation

dataset creator (data compiler):
contact name: Pieter Lemmens
contact email: pieter.lemmens@kuleuven.be
contact institution: KU Leuven
data contributors to/owners of this dataset:
multiple
number: 9
data contributor/owner 1:
contact name: Koen Martens
contact email: koen.martens@naturalsciences.be
contact institute: RBINS
criteria for using this part of the dataset:
The dataset is publicly available (data portal, data archive) and can be used without restrictions, but dataset creator/data contributors must be informed prior to publication. Data must be acknowledged and cited correctly.
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contact institute: UGent
criteria for using this part of the dataset:
The dataset is publicly available (data portal, data archive) and can be used without restrictions, but dataset creator/data contributors must be informed prior to publication. Data must be acknowledged and cited correctly.
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contact email: patrick.kestemont@unamur.be
contact institute: UNamur
criteria for using this part of the dataset:
The dataset is publicly available (data portal, data archive) and can be used without restrictions, but dataset creator/data contributors must be informed prior to publication. Data must be acknowledged and cited correctly.
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contact email: leo.vanhecke@skynet.be
contact institute: National Botanical Garden
criteria for using this part of the dataset:
The dataset is publicly available (data portal, data archive) and can be used without restrictions, but dataset creator/data contributors must be informed prior to publication. Data must be acknowledged and cited correctly.
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contact email: luc.denys@inbo.be

contact institute: Institute for Nature and Forests
criteria for using this part of the dataset:
The dataset is publicly available (data portal, data archive) and can be used without restrictions, but dataset creator/data contributors must be informed prior to publication. Data must be acknowledged and cited correctly.

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contact institute: Natuurpunt
criteria for using this part of the dataset:
The dataset is publicly available (data portal, data archive) and can be used without restrictions, but dataset creator/data contributors must be informed prior to publication. Data must be acknowledged and cited correctly.

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contact institute: KU Leuven
criteria for using this part of the dataset:
The dataset is publicly available (data portal, data archive) and can be used without restrictions, but dataset creator/data contributors must be informed prior to publication. Data must be acknowledged and cited correctly.

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contact institute: CRP
criteria for using this part of the dataset:
The dataset is publicly available (data portal, data archive) and can be used without restrictions, but dataset creator/data contributors must be informed prior to publication. Data must be acknowledged and cited correctly.

data contributor/owner 9:
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contact email: blosson@ulg.ac.be
contact institute: ULiege
criteria for using this part of the dataset:
The dataset is publicly available (data portal, data archive) and can be used without restrictions, but dataset creator/data contributors must be informed prior to publication. Data must be acknowledged and cited correctly.

citation of this dataset:
author(s): Lemmens, P., Bonjean, N., Castiaux, A., Colson, L., De Bie, T., Decoster, E., Denis, C., De Roeck, E., Ercken, D., Goddeeris, B., Goyvaerts, R., Mandiki, S.N.M., Morelle, K., Praca, E., Schön, I., Van Wichelen, J., Van Der Gucht, K., Vandekerckhoven, J., Vanormelingen, P., Villena Alvarez, M., Bauwens, D., Denys, L., Herremans, M., Vanhecke, L., Losson, B., Caron, Y., Cauchie, H.-M., Kestemont, P., Vyverman, W., De Meester, L., Declerck, S.A.J. & Martens, K.
title and journal (name, number, pages):
Towards a sustainable management of pond diversity at the landscape level (PONDSCAPE)
year: 2018
doi: https://doi.org/10.15468/zs6sky

citation of the metadata:
author(s): Lemmens P., De Wever A., Bonjean N., Castiaux A., Colson L., De Bie T.,

Decoster E., Denis C., De Roeck E., Ercken D., Goddeeris B., Goyvaerts R., Mandiki S.N.M., Morelle K., Praca E., Schön I., Van Wichelen J., van der Gucht K., Vandekerckhoven J., Vanormelingen P., Villena Alvarez M., Bauwens D., Denys L., Herremans M., Vanhecke L., Losson B., Caron Y., Cauchie H.-M., Kestemont P., Vyverman W., De Meester L., Declerck S.A.J. & Martens K.

title and journal (name, number, pages):
Database of the PONDSCAPE project (Towards a sustainable management of pond diversity at the landscape level). Freshwater Metadata Journal 31: 1-10

year: 2018

doi: https://doi.org/10.15504/fmj.2018.31

dataset related references:

reference 1:

author(s): De Bie, T., De Meester, L., Brendonck, L., Martens, K., Goddeeris, B., Ercken, D., Hampel, H., Denys, L., Vanhecke, L., Van der Gucht, K., Van Wichelen, J., Vyverman, W., Declerck, S.A.

title: Body size and dispersal mode as key traits determining metacommunity structure of aquatic organisms. Ecology Letters 15(7): 740-747.

year: 2012

General data specifications

regional coverage of the dataset:

spatial extent of the dataset: national

continents: Europe

spatial extent (bounding coordinates):

southernmost latitude [°]: 49.4313

northernmost latitude [°]: 51.5679

westernmost longitude [°]: 2.3642

easternmost longitude [°]: 6.5611

countries: Europe: Belgium, Luxembourg

world climatic regions according to Köppen:
Group C: temperate/mesothermal climates

freshwater ecoregions of the world (FEOW) according to WWF:
Europe: Central & Western Europe

European ecoregions according to Illies (WFD):
Western Plains (ER13)

ecosystem type: lakes/ponds

covered timeframe: 2008 - 2008

Site specifications

coordinate system/grid data:

datum (e.g. WGS84): WGS84

grid data available: no

site coding:

site coding available: yes, alphanumerical

number of digits: 5

example: ABER3

number of sites: 100 - 1000

exact number of sites: 125

Climate and environmental data

climate related data: no climate data available
environmental data:

available parameters per site: maximum depth
data source: as sampled
physico-chemical data: total P, total N, sulphate, chloride, calcium, hardness, alkalinity, oxygen content, water temperature, pH, chlorophyll, Secci disc depth, suspended solids, sediment/soil parameters
availability of physico-chemical data, if there is more than one sample per site:
mean values per site
stressors influencing the sites: no stressor data available

Biological data

biological data origin: from sampling,
PONDSCAPE
organism group addressed: amphibians, fish, macro-invertebrates (Mollusca, Coleoptera), zooplankton (Cladocera), phytoplankton, (benthic) diatoms, macrophytes, other group(s): bacterioplankton

Sample specifications/sample resolution

amphibians:

sample information:
covered timeframe: 2008 - 2008
historical data: no
season: summer
temporal resolution/frequency of sampling:
per year
time series data: no
taxonomic resolution:
level: species
percentage of species level data: 100
taxonomic coding:
taxalist according to: see De Bie et al. (2012)
reference(s): De Bie, T., De Meester, L., Brendonck, L., Martens, K., Goddeeris, B., Ercken, D., Hampel, H., Denys, L., Vanhecke, L., Van der Gucht, K., Van Wichelen, J., Vyverman, W., Declerck, S.A. (2012). Body size and dispersal mode as key traits determining metacommunity structure of aquatic organisms. Ecology Letters 15(7): 740-747.
sample specifications:
type: semi-quantitative

replicate samples: no

fish:

sample information:

covered timeframe: 2008 - 2008
historical data: no
palaeo data: no
season: summer
temporal resolution/frequency of sampling: per year
time series data: no

taxonomic resolution:

level: species
percentage of species level data: 100

taxonomic coding:

taxalist according to: see De Bie et al. (2012)
reference(s): De Bie, T., De Meester, L., Brendonck, L., Martens, K., Goddeeris, B., Ercken, D., Hampel, H., Denys, L., Vanhecke, L., Van der Gucht, K., Van Wichelen, J., Vyverman, W., Declerck, S.A. (2012). Body size and dispersal mode as key traits determining metacommunity structure of aquatic organisms. Ecology Letters 15(7): 740-747.

sample specifications:

type: semi-quantitative
replicate samples: no

macro-invertebrates:

sample information:

covered timeframe: 2008 - 2008
historical data: no
palaeo data: no
season: summer
temporal resolution/frequency of sampling: per year
time series data: no

taxonomic resolution:

level: family, genus, species
percentage of species level data: 70

taxonomic coding:

taxalist according to: see De Bie et al. (2012)
reference(s): De Bie, T., De Meester, L., Brendonck, L., Martens, K., Goddeeris, B., Ercken, D., Hampel, H., Denys, L., Vanhecke, L., Van der Gucht, K., Van Wichelen, J., Vyverman, W., Declerck, S.A. (2012). Body size and dispersal mode as key traits determining metacommunity structure of aquatic organisms. Ecology Letters 15(7): 740-747.

sample specifications:

type: semi-quantitative
replicate samples: no

zooplankton:

sample information:

covered timeframe: 2008 - 2008
historical data: no
palaeo data: no

season: summer
temporal resolution/frequency of sampling: per year
time series data: no

taxonomic resolution:
level: species
percentage of species level data: 100

taxonomic coding:
taxalist according to: see De Bie et al. (2012)
reference(s): De Bie, T., De Meester, L., Brendonck, L., Martens, K., Goddeeris, B., Ercken, D., Hampel, H., Denys, L., Vanhecke, L., Van der Gucht, K., Van Wichelen, J., Vyverman, W., Declerck, S.A. (2012). Body size and dispersal mode as key traits determining metacommunity structure of aquatic organisms. Ecology Letters 15(7): 740-747.

sample specifications:
type: semi-quantitative
replicate samples: no

phytoplankton:

sample information:
covered timeframe: 2008 - 2008
historical data: no
season: summer
temporal resolution/frequency of sampling: per year
time series data: no

taxonomic resolution:
level: genus

taxonomic coding:
taxalist according to: see De Bie et al. (2012)
reference(s): De Bie, T., De Meester, L., Brendonck, L., Martens, K., Goddeeris, B., Ercken, D., Hampel, H., Denys, L., Vanhecke, L., Van der Gucht, K., Van Wichelen, J., Vyverman, W., Declerck, S.A. (2012). Body size and dispersal mode as key traits determining metacommunity structure of aquatic organisms. Ecology Letters 15(7): 740-747.

sample specifications:
type: semi-quantitative
replicate samples: no

(benthic) diatoms:

sample information:
covered timeframe: 2008 - 2008
historical data: no
palaeo data: no
season: summer
temporal resolution/frequency of sampling: per year
time series data: no

taxonomic resolution:
level: family, genus, species
percentage of species level data: 10

taxonomic coding:
taxalist according to: see De Bie et al. (2012)

reference(s): De Bie, T., De Meester, L., Brendonck, L., Martens, K., Goddeeris, B., Ercken, D., Hampel, H., Denys, L., Vanhecke, L., Van der Gucht, K., Van Wichelen, J., Vyverman, W., Declerck, S.A. (2012). Body size and dispersal mode as key traits determining metacommunity structure of aquatic organisms. Ecology Letters 15(7): 740-747.

sample specifications:

type: semi-quantitative

replicate samples: no

macrophytes:

sample information:

covered timeframe: 2008 - 2008

historical data: no

palaeo data: no

season: summer

temporal resolution/frequency of sampling: per year

time series data: no

taxonomic resolution:

level: species

percentage of species level data: 100

taxonomic coding:

taxalist according to: see De Bie et al. 2012

reference(s): De Bie, T., De Meester, L., Brendonck, L., Martens, K., Goddeeris, B., Ercken, D., Hampel, H., Denys, L., Vanhecke, L., Van der Gucht, K., Van Wichelen, J., Vyverman, W., Declerck, S.A. (2012). Body size and dispersal mode as key traits determining metacommunity structure of aquatic organisms. Ecology Letters 15(7): 740-747.

sample specifications:

type: quantitative (abundance data)

replicate samples: no

other group(s):

sample information:

covered timeframe: 2008 - 2008

historical data: no

season: summer

temporal resolution/frequency of sampling: per year

time series data: no

taxonomic resolution:

level: other taxonomic levels available

other taxonomic levels: DGGE bands

taxonomic coding:

taxalist according to: not relevant (DGGE bands)

sample specifications:

type: semi-quantitative

replicate samples: no

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:

Species names were checked using the GBIF species list.

Acknowledgements

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References

De Bie, T., De Meester, L., Brendonck, L., Martens, K., Goddeeris, B., Ercken, D., Hampel, H., Denys, L., Vanhecke, L., Van der Gucht, K., Van Wichelen, J., Vyverman, W., Declerck, S.A. , 2012. Body size and dispersal mode as key traits determining metacommunity structure of aquatic organisms. Ecology Letters 15(7): 740-747.