General information

name of the dataset:

    full name of the dataset: *Ostracod Metadatabase of Environmental and Geographical Attributes*

    dataset short name: *OMEGA*

type of dataset (more information**):**   *species distribution data*

    data type: *point data/observation data*

    short description of the dataset/summary:

        OMEGA contains metadata for component regional databases of non-marine ostracod ecology and distribution. It includes full taxonomic names and geographical coordinates for each record treating these as both data and metadata, as well as metadata relating to geographical, environmental and climatic attributes.

science keywords according to GCMD**:**

    topic: *Biosphere, Biological Classification, Paleoclimate*

    keywords: *Ostracoda; non-marine; zoobenthos; North America; Europe*

ISO topic category according to ISO 19115**:**

        Biota

Technical and administrative specifications

data format:	*Excel*
operating system:	*all Windows systems*
data language:	*English*
current access level:	*internal*
currently available through GBIF:	*no*
exchange planned:	*no*
data in data repository:	*yes*
specify repository:	*Freshwater Biodiversity Data Portal*

Do you plan to publish the data on the Freshwater Biodiversity Data Portal:

	already published through BioFresh
media for data delivery:	*online FTP*
update level:	*update planned*
others/details:	*Updated datasets will be supplied at intervals, as available, incorporating additional component regional databases.*

documentation:

type:	*internal description*
language:	*English*

contact details:

metadata contact person:

first, last name:	*David J. Horne*
phone:	*+442078828200*
email:	*d.j.horne@qmul.ac.uk*
institution:	*Queen Mary University of London - School of Geography*
address:	*Mile End Road*
postal code, city:	*E1 4NS London*
country	*UK*
web address:	*http://www.geog.qmul.ac.uk*

technical contact person:

first, last name:	*David J. Horne*
phone:	*+442078828200*
email:	*d.j.horne@qmul.ac.uk*

scientific contact person:

first, last name:	*David J. Horne*
phone:	*+442078828200*
email:	*d.j.horne@qmul.ac.uk*

Intellectual property rights and citation

dataset publisher (if the database is already published): *BioFresh*

dataset creator (data compiler):
    contact name: *David J. Horne*
    contact email: *d.j.horne@qmul.ac.uk*
    contact institution: *Queen Mary University of London*

data contributors to/owners of this dataset:
                                multiple
    number: *3*

provider 1:
    provider institute: *Queen Mary University of London, UK*
    contact name: *David J. Horne (NODE)*
    contact email: *d.j.horne@qmul.ac.uk*
    criteria for using the data in a publication/scientific analysis:
                                  The dataset needs to be requested from dataset creator with specific conditions of use.
    comments: *The NODE (Nonmarine Ostracod Distribution in Europe) database is a contributor to OMEGA. Contact David J. Horne regarding both NODE and OMEGA.*

provider 2:
    provider institute: *Kent State University, Ohio, USA*
    contact name: *Alison J. Smith (North American Non-marine Ostracode Database)*
    contact email: *alisonjs@kent.edu*
    criteria for using the data in a publication/scientific analysis:
                                  The dataset needs to be requested from dataset creator with specific conditions of use.
    comments: *NANODe (North American Non-marine Ostracode Database) is a contributor to OMEGA.*
                                Contact Alison J. Smith regarding NANODe; maps and other data can be viewed online at:
                                http://www.personal.kent.edu/~alisonjs/nanode/

provider 3:
    provider institute: *Canadian Museum of Nature, Ottawa/Gatineau*
    contact name: *Jean-Marc Gagnon (Delorme Ostracode Autecological Database)*
    contact email: *JGagnon@mus-nature.ca*
    criteria for using the data in a publication/scientific analysis:
                                  The dataset needs to be requested from dataset creator with specific conditions of use.
    comments: *DOAD (Delorme Ostracode Autecological Database), originally collected and compiled by Denis Delorme, is a contributor to OMEGA. Contact Jean-Marc Gagnon regarding DOAD.*

citation of this dataset:
    author(s):   *BioFresh (publisher), Horne, D.J. (ed.)*
    title: *OMEGA - Ostracod Metadatabase of Environmental and Geographical Attributes (Europe, North America). Published on http://data.freshwaterbiodiversity.eu, accessed on [date].*
    year: *2014*
    doi (if applicable):   *http://dx.doi.org/10.13148/bfcf15*

citation of the metadata:
    author(s):   *Horne D.J. , Curry B.B., Delorme L.D. , Martens K., Smith A.J. & Smith R.J.*

title and journal (name, number, pages):

Ostracod Metadatabase of Environmental and Geographical Attributes. Freshwater Metadata Journal 0: 0-0

year: *0000*

doi (if applicable): *http://dx.doi.org/10.15504/fmj.0000.0*

comments: *OMEGA was first established in 2011 by David J. Horne, B. Brandon Curry, L. Denis Delorme, Koen Martens, Alison J. Smith and Robin J. Smith, all of whom remain associated with the project although David J. Horne is here listed as the "owner" and contact person (Horne et al., 2011a). The OMEGA dataset available through the BioFresh Portal is restricted to occurrence data; a full version of OMEGA including searchable metadata about the contributing databases can be obtained from David J. Horne. There are 3 contributing databases so far:*

NODE (Nonmarine Ostracod Distribution in Europe), owner David J.Horne, Queen Mary University of London, UK;

NANODe (North American Non-marine Ostracode Database), owner Alison J. Smith, Kent State University, Ohio, USA;

DOAD (Delorme Ostracode Autecological Database), owner the Canadian Museum of Nature, Gatineau, Canada.

Approximately 2000 species and 200 genera of living non-marine Ostracoda are known world-wide (Martens et al., 2008; Smith et al., 2015). Compiling metadata from different regional databases requires not only the checking and validation of the geographical coordinates of localities, but also taxonomic harmonisation because (a) different scientific names may have been used for the same species in different databases, and (b) some species may have been misidentified in some databases (Horne et al., 2011b). The OMEGA dataset currently uploaded is a partial one comprising only records for which geographical coordinates have been validated; updates will follow after further validation work. A summary of taxonomic harmonisation issues and progress can be obtained on request from David J. Horne.

Data users are advised to contact D.J. Horne prior to using the data. Those wishing to access and use a wider range of data from contributing databases must contact the appropriate database owners.

References
Horne, D.J., Curry, B.B., Delorme, L.D., Martens, K., Smith, A.J. & Smith, R.J. 2011a. OMEGA: the Ostracod Metadatabase of Environmental and Geographical Attributes. Joannea Geologie und Paläontologie, 11, 80-84.
Horne, D. J., Jocque, M., Brendonck, L. & Martens, K. 2011b. On Potamocypris compressa (Crustacea, Ostracoda) from temporary rock pools in Utah, USA, with notes on the taxonomic harmonisation of North American and European ostracod faunas. Zootaxa, 2793, 35-46.
Martens, K., Schön, I., Meisch, C. & Horne, D. J. 2008. Global diversity of ostracods (Ostracoda, Crustacea) in freshwater. Hydrobiologia, 595,

185-193.

Smith, A.J., Horne, D.J., Martens, K. & Schön, I. 2015. Class Ostracoda. In: Thorp, J. & Rogers, D.C. (Eds), Ecology and General Biology, 757-780. Thorp and Covich?s Freshwater Invertebrates, Fourth Edition, Volume I, Academic Press.

General data specifications

regional coverage of the dataset:

    scale of the dataset: *global*

continents: *North America, Europe*

spatial extent (bounding coordinates):

    southernmost latitude [°]:   *19.29583*

    northernmost latitude [°]:   *69.25*

    westernmost longitude [°]:   *-139.93*

    easternmost longitude [°]:   *36.66666667*

    countries: *North America: Canada, Mexico, United States*

                               Europe: Albania, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Macedonia, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Svalbard, Sweden, Switzerland, Ukraine, United Kingdom

Site specifications

coordinate system/grid data: *latitude/longitude, format: DD*
    grid data available: *no*
    resolution: *0.0001*
    comments: *Coordinates are in decimal degrees, wherever possible to four decimal places; in some cases these are calculated from degrees, minutes and seconds given in the contributing database, while in other cases the contributing database provides decimal degrees but only to two decimal places.*
    site coding available: *no*

number of sites: *>1000*
comments: *approximately 8,000 sites*

Biological data

biological data origin:

	general compilation
specify method:	*Mixed methods: some component databases contain data mainly from original sampling, others are compiled mainly from the literature.*
organism group addressed:	*other group(s): zoobenthos (Ostracoda)*
comments:	*Non-marine Ostracoda are benthonic or nekto-benthonic; they are rarely, if ever, found in the plankton.*

Sample resolution

<u>other group(s):</u>

taxonomic resolution: *order, family, sub-family, genus, species, other*
  other taxonomic levels: *superfamily*
  percentage of species level data: *100*
taxonomic coding:
  taxalist according to: *based on FADA with additions*
  citation: *Martens, K., Schön, I., Meisch, C. & Horne, D. J. 2008. Global diversity of ostracods (Ostracoda, Crustacea) in freshwater. Hydrobiologia, 595, 185-193.*
    Smith, A.J. & Horne, D. J. 2016. Class Ostracoda. In: Thorp, J. & Rogers, D.C. (Eds), Keys to Nearctic Fauna, 477-514. Thorp and Covich?s Freshwater Invertebrates, Fourth Edition, Volume II Academic Press.

Other specifications

GIS layers, shapes related to the dataset:

species distribution

quality control procedures:

Were any quality control procedures applied to your dataset?

yes

quality control protocols and comments:

Coordinates of all included records have been checked with the aid of Google Earth, followed by correction and/or validation wherever possible. The results of the checking procedure are recorded in OMEGA by designating each record according to one of three criteria:

Green: accurate
Amber: acceptable as accurate within limitations of available data
Red: uncertain and needs further checking

A report on the procedure, including discussions of limitations and spatial resolution issues, will be made available as a pdf.

Taxonomic harmonisation between the three component databases has been carried out and a report, including indications where further revision may be necessary, is available as a pdf.

comments:

The full OMEGA database includes searchable fields giving indications of the validation status of the taxonomic names used and of the coordinates of records, as well as whether various types of environmental data are available in the database of origin. A copy of the full OMEGA dataset can be supplied, on request, by the provider (D.J.Horne).Likewise, GIS layers (shape files) of distribution data can easily be provided on request, as can kmz files for use in Google Earth.