

# Supplementary references for “Colonial history and global economics distort our understanding of deep-time biodiversity”

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This document contains the references for the data sources used in the study:

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**Keywords:** paleontology, biodiversity, sampling biases, scientific colonialism, research ethics, scientometrics

## Overview

Table 1: Specifications Table

<b>Source</b>	The Paleobiology Database
<b>Download url for occurrences</b>	<a href="https://paleobiodb.org/data1.2/occs/list.csv?datainfo&amp;rowcount&amp;interval=Ediacaran,Holocene&amp;show=class,class,assext,genus,subgenus,coll,coords,loc,paleoloc,strat,stratext,lith,env,ref,crmod,timebins,timecompare">https://paleobiodb.org/data1.2/occs/list.csv?datainfo&amp;rowcount&amp;interval=Ediacaran,Holocene&amp;show=class,classext,genus,subgenus,coll,coords,loc,paleoloc,strat,stratext,lith,env,ref,crmod,timebins,timecompare</a>
<b>Download url for references</b>	<a href="https://paleobiodb.org/data1.2/occs/refs.csv?interval=Ediacaran,Holocene&amp;select=occs&amp;show=formatted,entnam">https://paleobiodb.org/data1.2/occs/refs.csv?interval=Ediacaran,Holocene&amp;select=occs&amp;show=formatted,entnam</a>
<b>Date downloaded</b>	19/01/2021
<b>Data format</b>	Processed
<b>Data access</b>	Available to download from <a href="https://dx.doi.org/10.17605/OSF.IO/6WC7A">https://dx.doi.org/10.17605/OSF.IO/6WC7A</a>
<b>Location</b>	Global
<b>Time</b>	1990 - 2020

## Data Processing

The affiliate countries of the authors of each of the publications were compiled using (1) webscraping methods and (2) manually when the former was not possible. When the publications could not be found or the

metadata could not be found, alternative sources such as personal websites, academic social networks such as ResearchGate or Academia.edu, or published obituaries (in the case when one or more of the authors were deceased). The affiliate dataset was merged with the occurrences dataset of the Paleobiology Database to link the affiliate countries to where sampling took place. All countries were standardised using the official three-letter country codes (ISO 3166-1 alpha-3) the International Organization for Standardization (ISO, <https://www.iso.org/>) using the R package countrycode 1.2.0[1].

## Data description

Sample dataset:

##	reference_no	samp_country	aff_country	samp_code	aff_code
## 1	71813	France	France	FRA	FRA
## 2	71707	Mongolia	Russia	MNG	RUS
## 3	72371	Russia	Russia	RUS	RUS
## 4	72986	Russia	Russia	RUS	RUS
## 5	74895	United Kingdom	Russia	GBR	RUS
## 6	74895	Japan	Russia	JPN	RUS
## 7	74895	Russia	Russia	RUS	RUS
## 8	73353	Argentina	Argentina	ARG	ARG
## 9	74204	Myanmar (Burma)	China	MMR	CHN
## 10	73338	Argentina	Argentina	ARG	ARG
## 11	74067	Myanmar (Burma)	United States	MMR	USA

The final dataset comprises 5 columns:

- ‘reference\_no’: the id of the publication as per the Paleobiology Database
- ‘samp\_country’: the country where sampling took place
- ‘aff\_country’: the affiliate country of the author(s) of the publication
- ‘samp\_code’: the country code for the sampling country
- ‘aff\_code’: the country code for the affiliate country

Each row in the reference represents one affiliate country and sampling country. As such, in some cases, one reference can have multiple rows, e.g. 74895 where the authors of the publication were from Russia but the data was obtained from the UK, Japan and Russia. The first occurring row of a reference contains the affiliate country of the first author.

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