



## Гербарийді цифрлау және GBIF IPT арқылы деректерді жариялау Оцифровка гербария и публикация данных через GBIF IPT Herbarium data digitization and publishing through GBIF IPT

# Качество данных: основные концепции

Карагандинский университет имени академика Е.А. Букетова, 15-17 марта 2023 г.

# План лекции

- Что такое “качество данных”
- Основные типы ошибок в данных и способы их исправления
- Документирование
- Контроль качества данных порталом GBIF

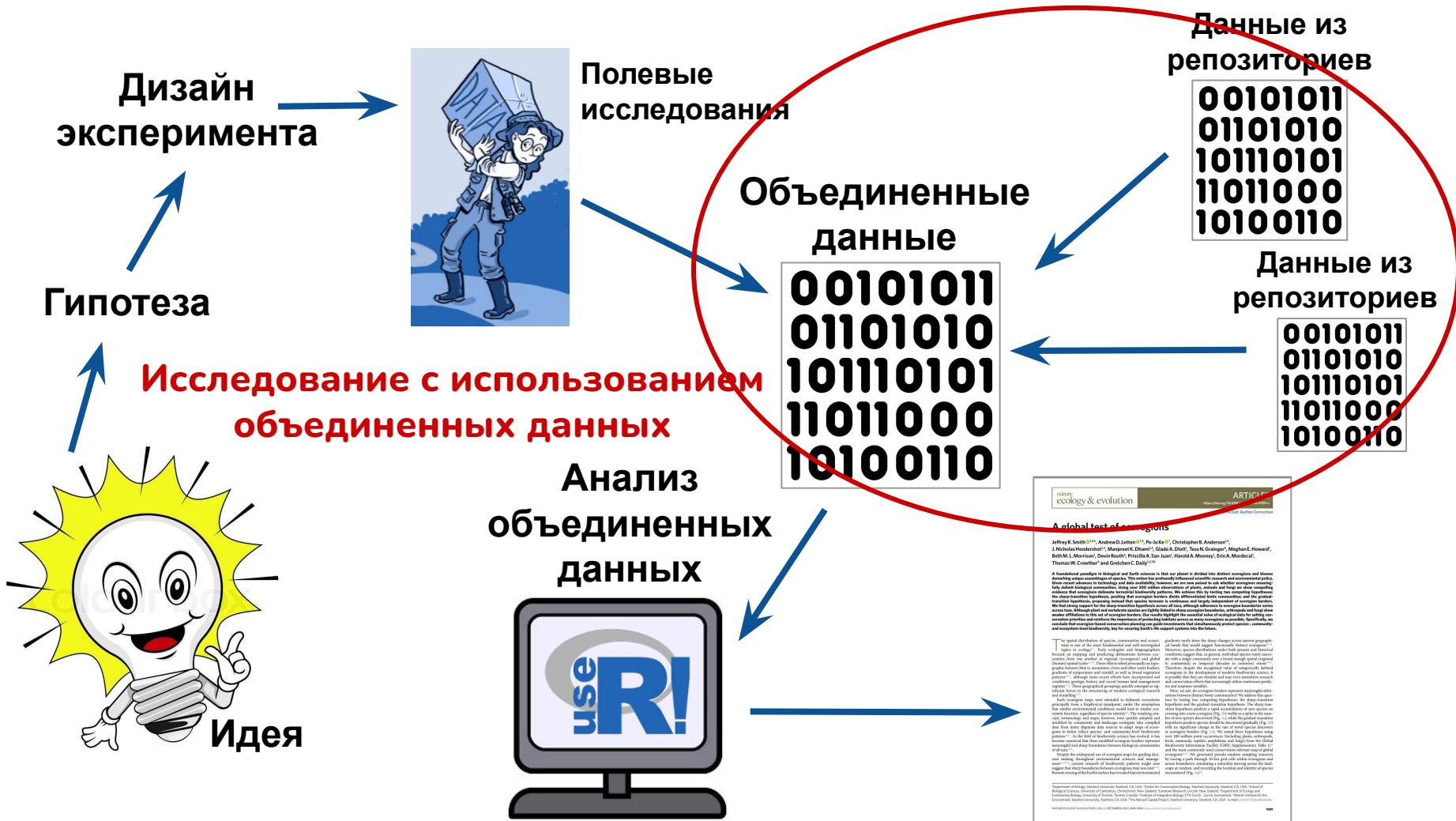


Arthur D. Chapman<sup>1</sup>

*Although most data gathering disciplines treat error as an embarrassing issue to be expunged, the error inherent in [spatial] data deserves closer attention and public understanding ...because error provides a critical component in judging fitness for use.*  
(Chrisman 1991).

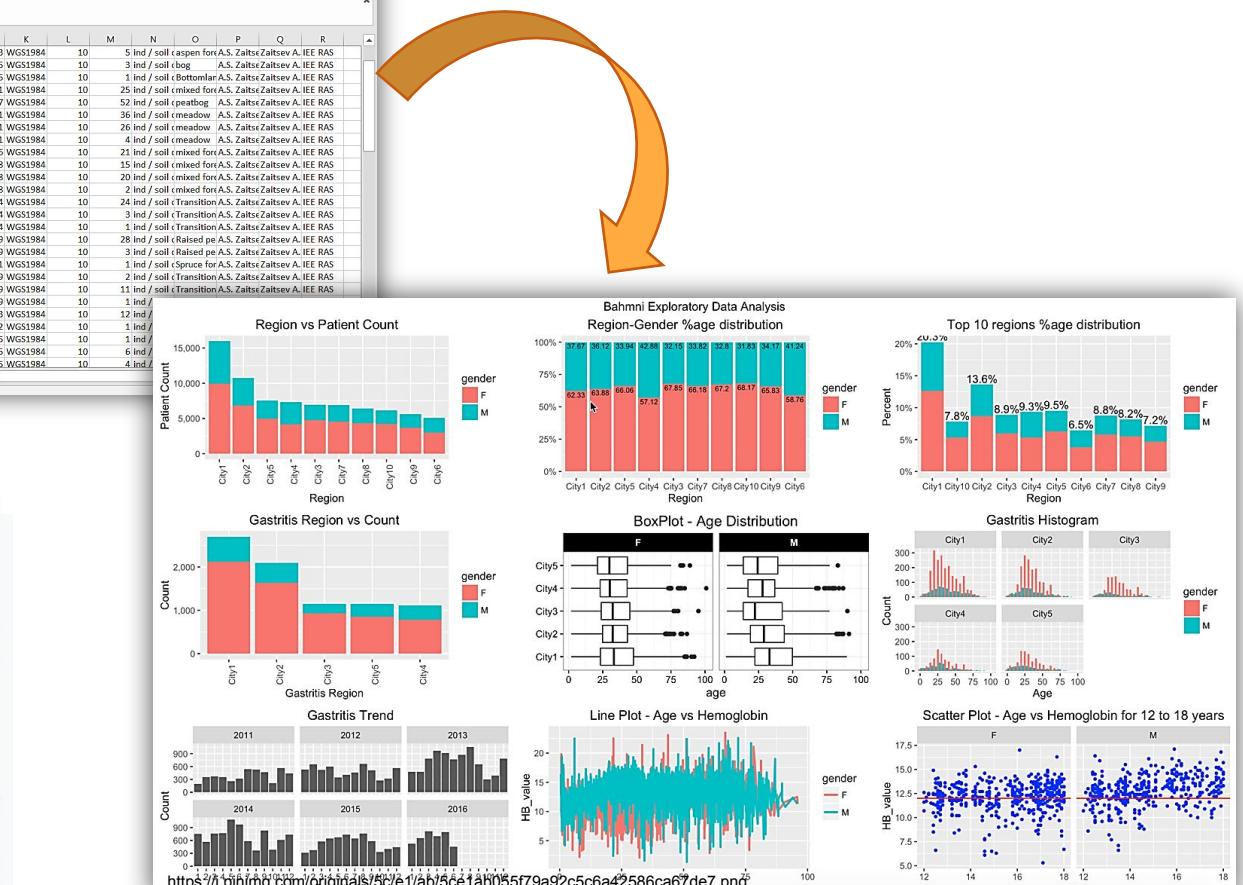
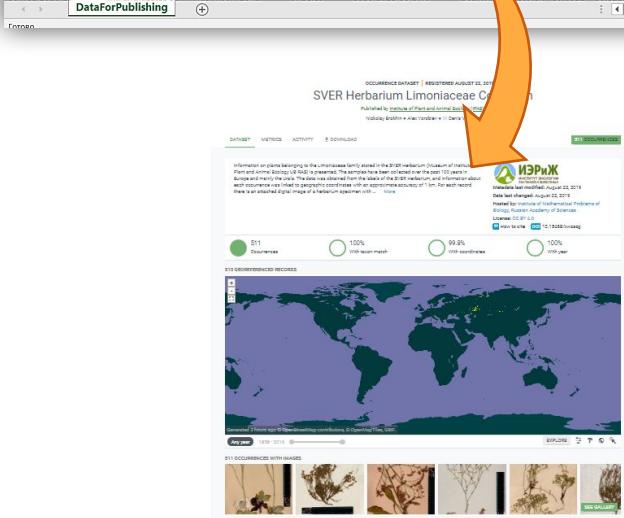
GBIF

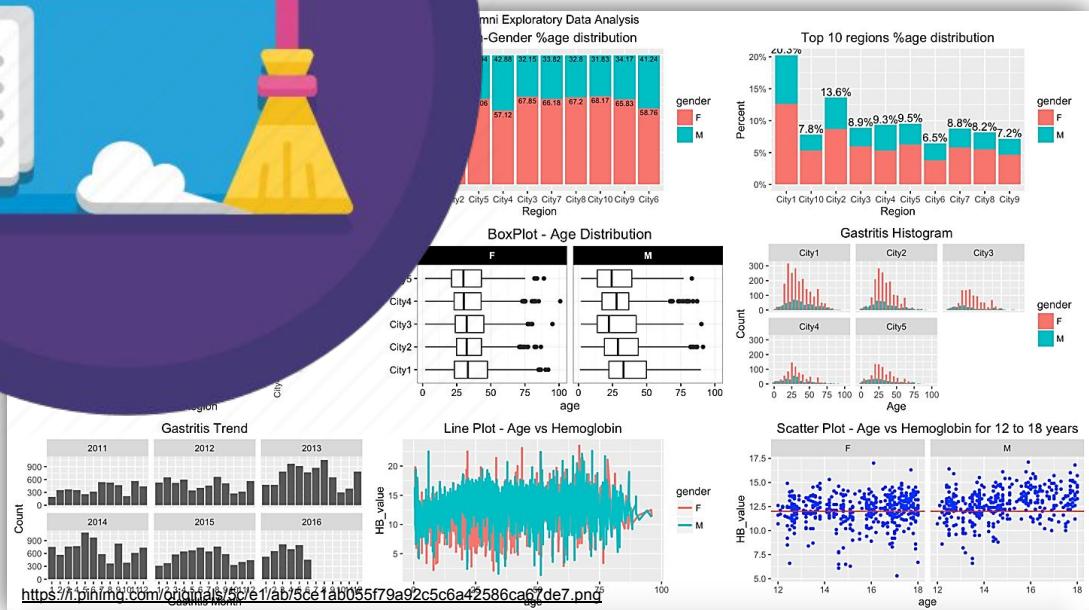
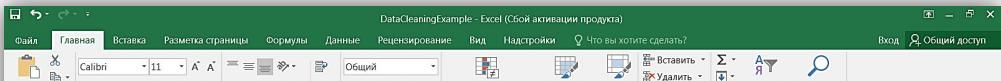
<sup>1</sup> Australian Biodiversity Information Services  
PO Box 7491, Toowoomba South, Qld, Australia  
email: [papers.digit@gbif.org](mailto:papers.digit@gbif.org)



B2 A Achipteria coleoptrata (Linnaeus, 1758)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
5	lee-2010-04	Achipteria coleoptrata (Linnaeus, 1758)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.0568	30.6463	WG51984	10	5 Ind / soil : aspen for A.S. Zaitsev A.IEE RAS						
6	lee-2010-05	Gallium obvia (Linné, 1753)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.0984	30.3861	WG51984	10	3 Ind / soil : bog						
7	lee-2010-06	Tetracepheus velutinus (Michael 1860)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.0984	30.3861	WG51984	10	1 Ind / soil : Bog						
8	lee-2010-07	Achipteria coleoptrata (Linnaeus, 1758)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.1039	30.8891	WG51984	10	25 Ind / soil : aspen for A.S. Zaitsev A.IEE RAS						
9	lee-2010-08	Medicago lupulina (Linné, 1753)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.1033	30.3507	WG51984	10	52 Ind / soil : flowering						
10	lee-2010-09	Schelorhiza laevigata (Koch, 1835)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.4417	30.6801	WG51984	10	36 Ind / soil : meadow						
11	lee-2010-10	Microtritia minima (Bergse, 1904)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.4417	30.6801	WG51984	10	26 Ind / soil : meadow						
12	lee-2010-11	Rhynchospora duplex (Grandjean 1953)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.4417	30.6801	WG51984	10	4 Ind / soil : meadow						
13	lee-2010-12	Schelorhiza laevigata (Koch, 1835)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.102	30.4306	WG51984	10	21 Ind / soil : mixed for A.S. Zaitsev A.IEE RAS						
14	lee-2010-13	Parakalmiidae	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.057	30.6418	WG51984	10	15 Ind / soil : mixed for A.S. Zaitsev A.IEE RAS						
15	lee-2010-14	Platynothrus peltifer (Koch, 1840)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.057	30.6418	WG51984	10	20 Ind / soil : mixed for A.S. Zaitsev A.IEE RAS						
16	lee-2010-15	Xerinx tegeocerasus (Hermann 1804)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.057	30.6418	WG51984	10	2 Ind / soil : mixed for A.S. Zaitsev A.IEE RAS						
17	lee-2010-16	Hedysarum occidentale (Ewing, 1909)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.171	30.6404	WG51984	10	24 Ind / soil : Transition A.S. Zaitsev A.IEE RAS						
18	lee-2010-17	Tetracepheus velutinus (Michael 1860)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.171	30.6404	WG51984	10	3 Ind / soil : Transition A.S. Zaitsev A.IEE RAS						
19	lee-2010-18	Trichorhiza trifolifolia (C.L.Koch, 1836)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.171	30.6404	WG51984	10	1 Ind / soil : Transition A.S. Zaitsev A.IEE RAS						
20	lee-2010-19	Oppelia nova (Oudemans, 1902)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.1042	30.39	WG51984	10	28 Ind / soil : Raised pe A.S. Zaitsev A.IEE RAS						
21	lee-2010-20	Nanthermannia dorsalis (Banks, 1896)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.1042	30.39	WG51984	10	3 Ind / soil : Raised pe A.S. Zaitsev A.IEE RAS						
22	lee-2010-21	Phthiranthes globosa (Koch, 1841)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.1019	30.3891	WG51984	10	1 Ind / soil : Spruce for A.S. Zaitsev A.IEE RAS						
23	lee-2010-22	Opella nova (Oudemans, 1902)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.0984	30.3809	WG51984	10	2 Ind / soil : Transition A.S. Zaitsev A.IEE RAS						
24	lee-2010-23	Tectocarpus velutinus (Michael 1860)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.0984	30.3809	WG51984	10	11 Ind / soil : Transition A.S. Zaitsev A.IEE RAS						
25	lee-2010-24	Zetomimus furcatus (Warburton & Pearce 1895)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.0984	30.3809	WG51984	10	1 Ind / soil : Transition A.S. Zaitsev A.IEE RAS						
26	lee-2010-25	Hoplophyllum illinoense (Ewing, 1909)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	56.652	30.1743	WG51984	10	12 Ind / soil : Transition A.S. Zaitsev A.IEE RAS						
27	lee-2010-26	Schelorhiza laevigata (Koch, 1835)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.1743	30.6452	WG51984	10	1 Ind / soil : Transition A.S. Zaitsev A.IEE RAS						
28	lee-2010-27	Chloranthus spiculatus (Michael 1860)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.3531	30.8125	WG51984	10	6 Ind / soil : Transition A.S. Zaitsev A.IEE RAS						
29	lee-2010-28	Schelorhiza latipes (C.L.Koch, 1844)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.3531	30.8125	WG51984	10	4 Ind / soil : Transition A.S. Zaitsev A.IEE RAS						
30	lee-2010-29	Minuartia venutiflora (Koch, 1841)	SPECIES	2010	2010-06-0RU	Bezhanitsi	Polisskoy	57.3531	30.8125	WG51984	10	1 Ind / soil : Transition A.S. Zaitsev A.IEE RAS						

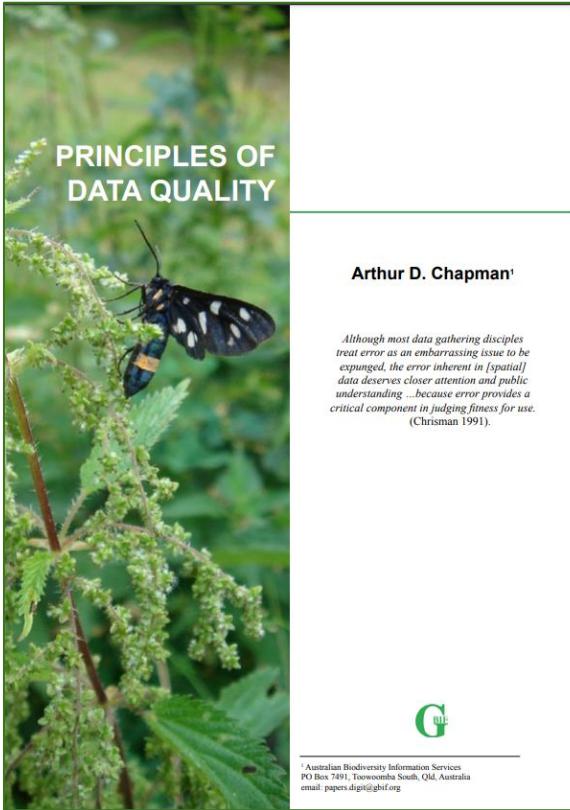




# Данные всегда содержат ошибки

Качество данных – это относительная концепция, которая зависит от способа использования этих данных





## Основные подходы к оценке качества данных



Arthur D. Chapman

Chapman AD (2005) Principles of Data Quality. Global Biodiversity Information Facility.  
<https://doi.org/10.15468/doc.jrgg-a190>

# Наиболее распространенные ошибки в данных

**Технические ошибки:** опечатки, пропущенные значения, лишние пробелы, корректность диапазонов для дат, соответствие типа данных полю, в котором они содержатся

ошибки формата данных

**Согласованность данных:** соответствие даты сбора, идентификации, обновления и оцифровки, координаты всех точек находятся в указанном регионе, точки находок сухопутных видов находятся на суше и т.д.

Номенклатурные ошибки:  
соответствие названия таксонов выбранному справочнику  
Соответствие других значений справочным

# Инструменты для поиска и исправления технических ошибок и ошибок в данных

## Текстовые редакторы

- BBEdit (Mac)
- Notepad++ (Windows)
- Emacs, vi (Unix, Linux)

- R (командная строка)
- RStudio (графический пользовательский интерфейс)



Выберите то, что удобно вам!



**аудитор данных**



**автор**

Графическая форма удобная для чтения  
неудобна для передачи информации и хранения

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F		
00	NUL 0000	STX 0001	SOT 0002	ETX 0003	EOT 0004	ENQ 0005	ACK 0006	BEL 0007	BS 0008	HT 0009	LF 000A	VT 000B	FF 000C	CR 000D	SO 000E	SI 000F		
10	DLE 0010	DC1 0011	DC2 0012	DC3 0013	DC4 0014	NAK 0015	SYN 0016	ETB 0017	CAN 0018	EM 0019	SUB 001A	ESC 001B	FS 001C	GS 001D	RS 001E	US 001F		
20	SP 0020	! 0021	" 0022	# 0023	\$ 0024	% 0025	& 0026	*	( 0028	) 0029	*	+	,	-	.	/		
30	0 0030	1 0031	2 0032	3 0033	4 0034	5 0035	6 0036	7 0037	8 0038	9 0039	:	; <td>&lt; 003A</td> <td>= 003B</td> <td>&gt; 003C</td> <td>? 003D</td> <td>003E</td> <td>003F</td>	< 003A	= 003B	> 003C	? 003D	003E	003F
40	@ 0040	A 0041	B 0042	C 0043	D 0044	E 0045	F 0046	G 0047	H 0048	I 0049	J 004A	K 004B	L 004C	M 004D	N 004E	O 004F		
50	P 0050	Q 0051	R 0052	S 0053	T 0054	U 0055	V 0056	W 0057	X 0058	Y 0059	Z 005A	[ 005B	\ 005C	] 005D	^ 005E	— 005F		
60	‘ 0060	а 0061	б 0062	с 0063	д 0064	е 0065	ֆ 0066	գ 0067	հ 0068	ի 0069	յ 006A	յ 006B	լ 006C	մ 006D	ն 006E	օ 006F		
70	р 0070	q 0071	ր 0072	ս 0073	տ 0074	ս 0075	ւ 0076	ւ 0077	չ 0078	յ 0079	չ 007A	չ 007B	{ 007C	 007D	} 007E	~ 007F		
80	Ђ 0402	Ѓ 0403	Ѓ 201A	Ѓ 0453	Ѓ 201E	Ѓ 2026	Ѓ 2020	Ѓ 2021	Ѓ 20AC	Ѓ 2030	Ѓ 0409	Ѓ 2039	Њ 040A	Ќ 040C	Ћ 040B	Џ 040F		
90	Ђ 0452	Ѡ 2018	Ѡ 2019	Ѡ 201C	Ѡ 201D	Ѡ 2022	Ѡ 2013	Ѡ 2014	Ѡ 2021	Ѡ 2122	Ѡ 0459	Ѡ 203A	Ѡ 045A	Ѡ 045C	Ѡ 045B	Ѡ 045F		
A0	₩ 00A0	₩ 040E	₩ 045E	₩ 0408	₩ 00A4	₩ 0490	₩ 00A6	₩ 00A7	₩ 0401	₩ 00A9	₩ 0404	₩ 00AB	₩ 00AC	₩ 00AD	₩ 00AE	₩ 0407		
B0	₩ 00B0	₩ 00B1	₩ 0406	₩ 0456	₩ 0491	₩ 00B5	₩ 00B6	₩ 00B7	₩ 0451	₩ 2116	₩ 0454	₩ 00BB	₩ 0458	₩ 0405	₩ 0455	₩ 0457		
C0	₩ 0410	₩ 0411	₩ 0412	₩ 0413	₩ 0414	₩ 0415	₩ 0416	₩ 0417	₩ 0418	₩ 0419	₩ 041A	₩ 041B	₩ 041C	₩ 041D	₩ 041E	₩ 041F		
D0	₩ 0420	₩ 0421	₩ 0422	₩ 0423	₩ 0424	₩ 0425	₩ 0426	₩ 0427	₩ 0428	₩ 0429	₩ 042A	₩ 042B	₩ 042C	₩ 042D	₩ 042E	₩ 042F		
E0	₩ 0430	₩ 0431	₩ 0432	₩ 0433	₩ 0434	₩ 0435	₩ 0436	₩ 0437	₩ 0438	₩ 0439	₩ 043A	₩ 043B	₩ 043C	₩ 043D	₩ 043E	₩ 043F		
F0	₩ 0440	₩ 0441	₩ 0442	₩ 0443	₩ 0444	₩ 0445	₩ 0446	₩ 0447	₩ 0448	₩ 0449	₩ 044A	₩ 044B	₩ 044C	₩ 044D	₩ 044E	₩ 044F		

буквы английского (латиница) и  
русского (кириллица) алфавитов

E  
0415

E  
0045

C  
0421

C  
0043

C - самая "опасная"

Temporagу reservoir 37 km SE Dzhangala  
Temporagу reservoir

Старицы р. Урал юго-вост. пос. Есенсай

Старицы р. Урал юго-вост. пос. Есенсай

Старицы р. Урал юго-вост. пос. Есенсай

Пойма реки Урал у поселка Есенсай

Пойма реки Урал у поселка Есенсай

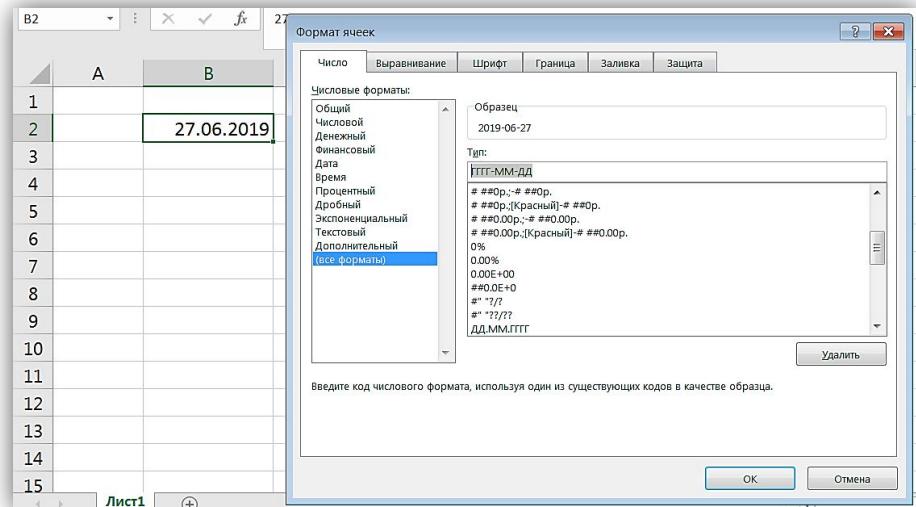
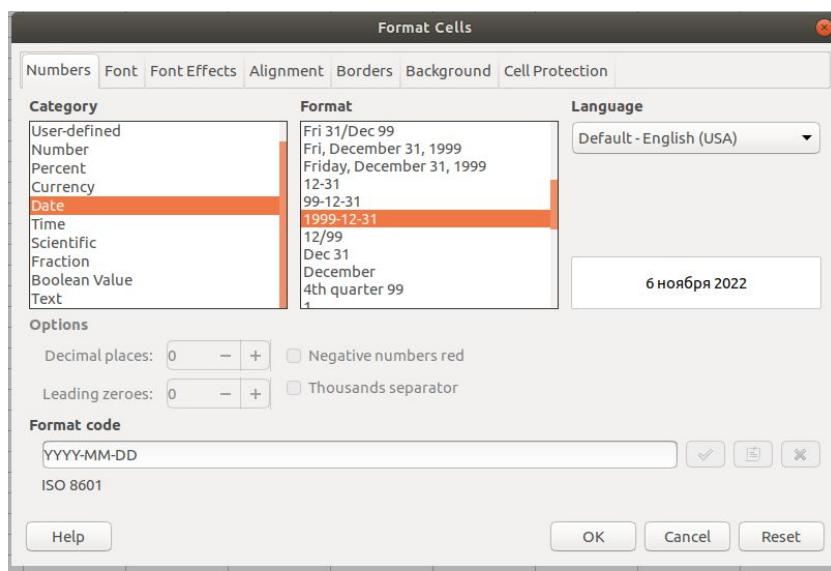
Есенсай

три разных слова!

Есенсай

Есенсай

eventDate	verbatimEventDate
2019-08-27	27 авг 2019
2019-08-27	27 VIII 2019
2019-08-27	27.08.2019
2019-08-29/30	29-30 августа 2019

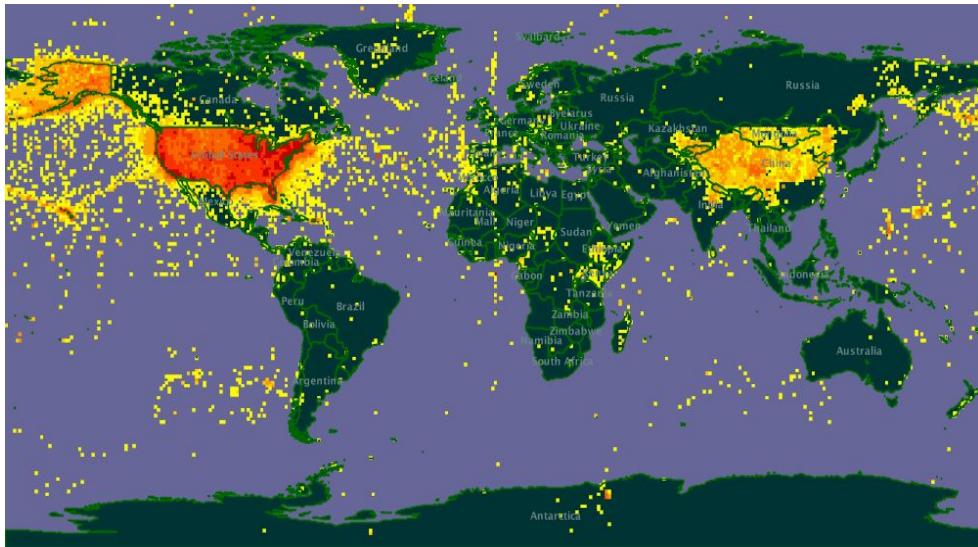


**Как правильно задать формат даты ГГГГ-ММ-ДД**



# Пространственные данные: наиболее распространенные технические ошибки

- Широта и долгота перепутаны местами
- Неправильно указано полушарие
- Нулевые значения
- Неизвестная система координат
- Ошибки преобразования координат из одной системы в другую или из одной формы представления в другую



Ранняя GBIF карта, иллюстрирующая данные из США, с широко распространенными ошибками:

- Координаты 0,0 (Гринвичский меридиан и Экватор)
- Неправильно указано полушарие (точки с неверной (восточной) долготой попадают в Китай, с неверной (южной) широтой - в Чили).

# Пространственные данные: ошибки формата

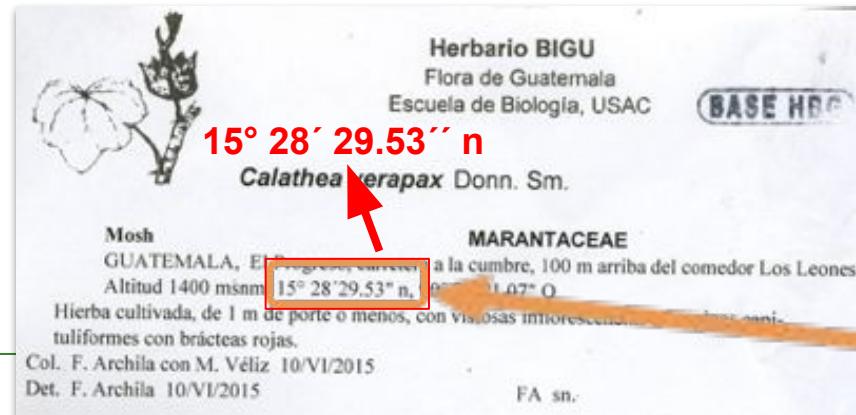
Градусы Минуты Секунды Полушарие →  
десятичные градусы

$$\Gamma\Gamma = (\Gamma + M/60 + C/3600) * [\text{Полушарие}]$$

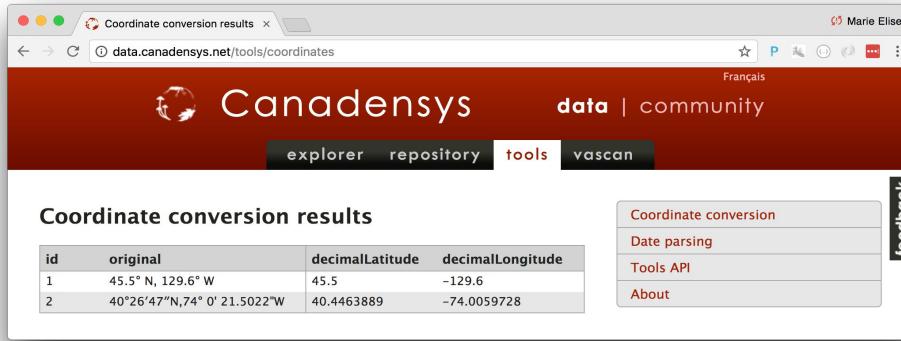
Полушарие: западное = -1; восточное = 1

$$\Gamma\Gamma = (15 + 28/60 + 29.53/3600) * 1$$

$$\Gamma\Gamma = 15.47487$$



# Автоматический пересчет координат из ГГ ММ СС в ГГ.ГГГГГ



The screenshot shows a web browser window with the title 'Coordinate conversion results'. The URL is 'data.canadensys.net/tools/coordinates'. The page has a dark red header with the 'Canadensys' logo and 'data | community' text. Below the header, there are tabs for 'explorer', 'repository', 'tools' (which is selected), and 'vascan'. A sidebar on the right contains links for 'Coordinate conversion', 'Date parsing', 'Tools API', and 'About'. The main content area displays a table of coordinate conversion results:

id	original	decimalLatitude	decimalLongitude
1	45° 5' N, 129° 6' W	45.5	-129.6
2	40°26'47"N,74° 0' 21.5022"W	40.4463889	-74.0059728

<http://data.canadensys.net/tools/coordinates?lang=en>



The screenshot shows the GIS-LAB website. The header features the 'GIS-LAB' logo and the text 'Географические информационные системы и дистанционное зондирование'. The top navigation bar includes links for 'Twitter', 'Facebook', 'Google+', and 'English'. The main navigation menu has items like 'Статьи', 'Документация', 'Геоданные', 'О GIS-Lab', and 'С чего начать?'. Below the menu, there are links for 'Форум', 'Блог', and 'Реклама'. The main content area has a heading 'Конвертация значений координат в формате DDMMSS в формат DD.DDDD'. A sub-section below it says 'Как переводить координаты из одного числового формата в другой'. On the right, there is a 'Select Language' dropdown and a 'Powered by Google Translate' link. A 'GIS-LAB' logo is also present in the bottom right corner.

<http://gis-lab.info/qa/dms2dd.html>

## WHAT THE NUMBER OF DIGITS IN YOUR COORDINATES MEANS

### LAT/LON PRECISION

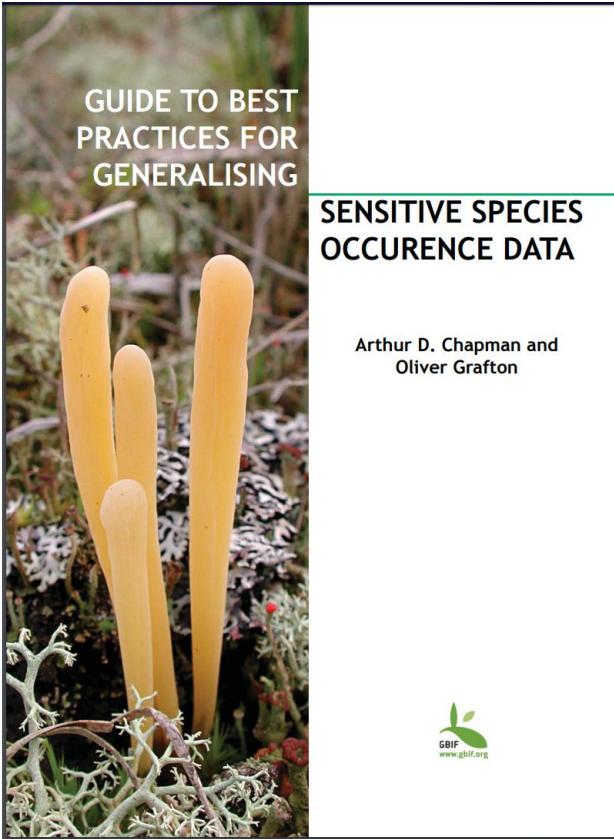
### MEANING

28°N, 80°W	YOU'RE PROBABLY DOING SOMETHING SPACE-RELATED
28.5°N, 80.6°W	YOU'RE POINTING OUT A SPECIFIC CITY
28.52°N, 80.68°W	YOU'RE POINTING OUT A NEIGHBORHOOD
28.523°N, 80.683°W	YOU'RE POINTING OUT A SPECIFIC SUBURBAN CUL-DE-SAC
28.5234°N, 80.6830°W	YOU'RE POINTING TO A PARTICULAR CORNER OF A HOUSE
28.52345°N, 80.68309°W	YOU'RE POINTING TO A SPECIFIC PERSON IN A ROOM, BUT SINCE YOU DIDN'T INCLUDE DATUM INFORMATION, WE CAN'T TELL WHO
28.5234571°N, 80.6830941°W	YOU'RE POINTING TO WALDO ON A PAGE
28.523457182°N, 80.683094159°W	"HEY, CHECK OUT THIS SPECIFIC SAND GRAIN!"
28.523457182818284°N, 80.683094159265358°W	EITHER YOU'RE HANDING OUT RAW FLOATING POINT VARIABLES, OR YOU'VE BUILT A DATABASE TO TRACK INDIVIDUAL ATOMS. IN EITHER CASE, PLEASE STOP.

Сколько нужно знаков  
после запятой?

<https://xkcd.com/2170/>

# Sensitive data - данные, не подлежащие разглашению



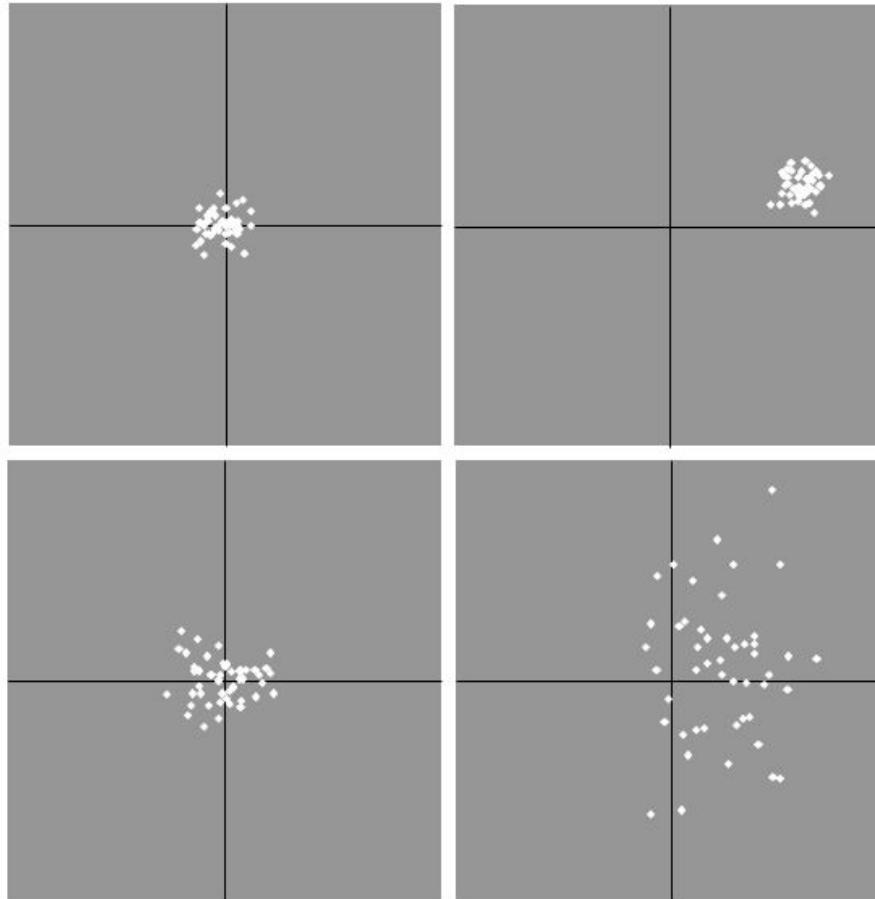
## Методика генерализации информации о находках охраняемых видов

Chapman AD & Grafton O (2008) Guide to Best Practices for Generalising Primary Species-Occurrence Data, version 1.0. Copenhagen: Global Biodiversity Information Facility, 27 pp. ISBN: 87-92020-06-2. Available online at <http://www.gbif.org/resource/80512>.

accurate

inaccurate

precise



## Оценка погрешностей в определении координат

**Accurate** - аккуратность определения координат (dwc: coordinateUncertaintyInMeters), погрешность прибора (карты)

**Precise** - точность прибора (dwc: coordinatePrecision), разрешающая способность прибора (карты)



## Georeferencing Best Practices

Arthur D. Chapman, John R. Wieczorek

Version 743e3a1, 2022-02-25 15:06:09 UTC

[Ссылка](#)



## Georeferencing Quick Reference Guide

Paula F. Zermoglio, Arthur D. Chapman, John R. Wieczorek, Maria Celeste Luna, David A. Bloom

Version 4ac9d96, 2022-02-25 15:09:32 UTC

[Ссылка](#)

# QGIS: открытая ГИС



- Настольная (локальная) геоинформационная система (ГИС)
- Для трансформации, анализа, визуализации, проверки и верификации и т.д.
- <http://www.qgis.org>



## Проверка корректности данных

Массив данных содержит образцы окаменелостей Триасового периода.

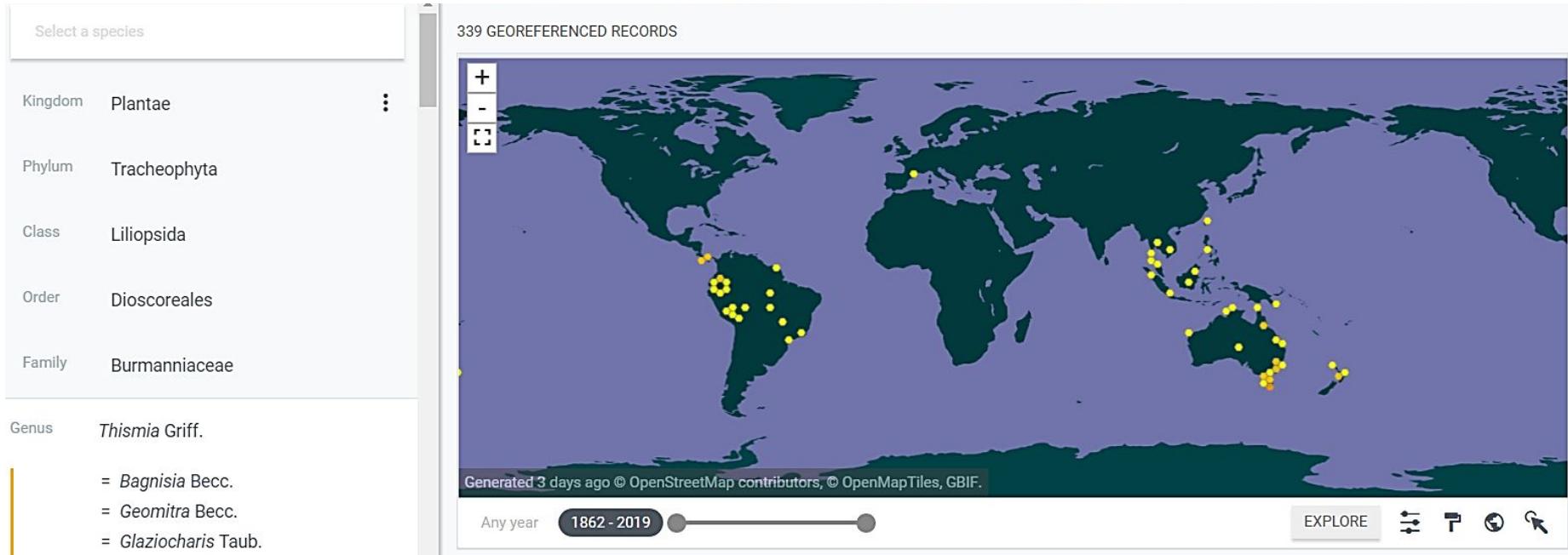
Представлены записи для образца рода *Thismia*.

***Thismia* – это ископаемый вид?**



# Проверка корректности данных

## *Thismia* – род современных цветковых растений



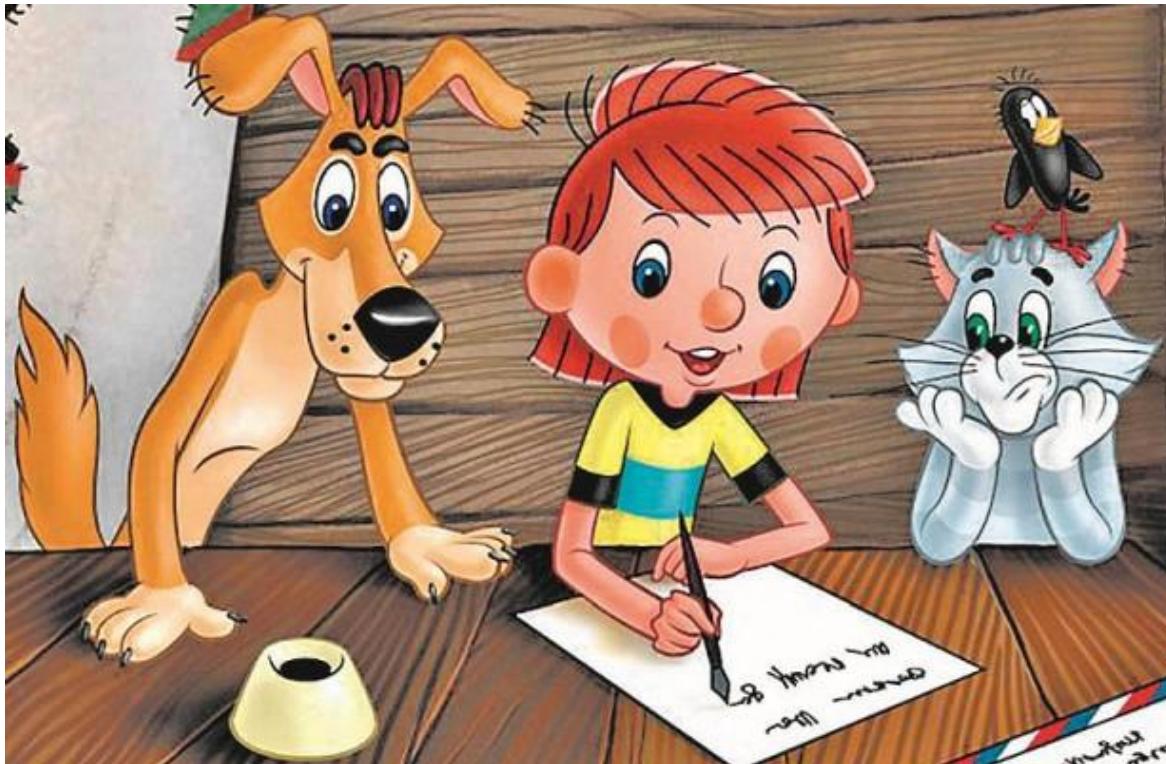
## Как вносить исправления?

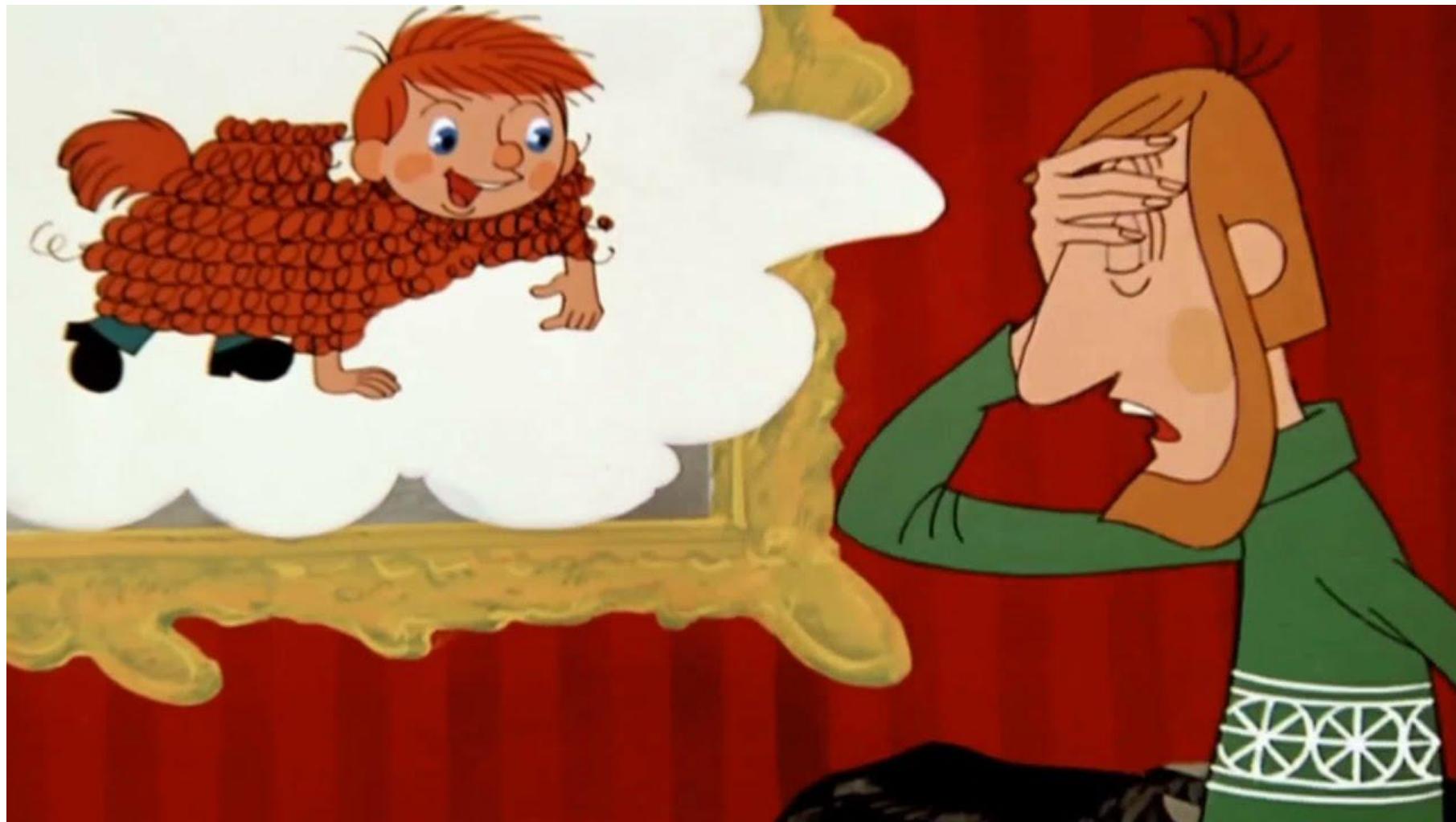
ID записи	Ошибка	Какое исправление сделано	Кто внес исправление	Дата
ISEE-1245	Неправильно указана широта 45° 71.345'	Исправлено на 45.71345	Сидоров И.И.	2010-08-05
ISEE-8354	Дата сбора 30 февраля	Удалено	Пахомов А.Е.	2013-12-25
ISEE-0507	Дубль записи ISEE-05077	Запись 05077 удалена	Боровиков Н.Н.	2015-05-10
ISEE-8932	Фамилия коллектора указана неверно	Исправлено с Пономарев на Понамарев	Волков А.А.	2017-03-18

24

Тщательное документирование  
Сохранение исходных данных (с ошибками)

# Зачем документировать исправления?





# Как GBIF контролирует качество данных

Get data   How-to   Tools   Community   About   dryomys

## Data quality requirements

*Publishers play an essential role not simply in sharing datasets, but also in managing their quality, completeness and usefulness and ensuring their integration and value within GBIF's global knowledge base.*



Male baya weaver (*Ploceus philippinus*) waits outside as a female inspects the nest he built from inside. Females baya weavers select mates on the basis of the quality of nest construction. Photo by Malay Mehta via iNaturalist. Research-grade observations, licensed under CC BY-NC 4.0.

<https://www.gbif.org/data-quality-requirements>



< Occurrences 1

TABLE GALLERY MAP TAXONOMY METRICS DOWNLOAD

Scientific name	Country or area	Coordinates	Month & year	Occurrence status	Basis of record	Dataset	Kingdom
<i>Mesophyllum lichenoides</i> (J.Ellis) Me Lemoi...	Spain		2022 January	Present	Preserved specimen	SANT-Algae	Plantae
<i>Eptesicus fuscus</i> subsp. <i>fuscus</i> (Palisot de ...	United States of America	41.3N, 72.9W	2022 January	Present	Preserved specimen	Vertebrate Zoology Division - Mammalogy...	Animalia
<i>Araeopteron</i> Hampson, 1893	Chinese Taipei	25.0N, 121.5E	2022 January	Present	Human observation	Taiwan Moth Occurrence Data Collected Fr...	Animalia
<i>Cyanistes caeruleus</i> (Linnaeus, 1758)	Germany	52.3N, 8.9E	2022 January	Present	Human observation	naturgucker	Animalia
<i>Croton</i> L.	Brazil	9.7S, 55.5W	2022 January	Present	Preserved specimen	CNMT - Herbário Centro Norte Mato Grosse...	Plantae
• <i>platystele ovalifolia</i> (focke) garay & dunst.	Brazil	1.1S, 48.4W	2022 January	Present	Preserved specimen	IAN herbarium - Embrapa Amazônia Orient...	Plantae
<i>Nucella lapillus</i> (Linnaeus, 1758)	France	47.1N, 2.2W	2022 January	Present	Human observation	naturgucker	Animalia
<i>Gryllodes sigillatus</i> (Walker, 1869)	United States of America	21.3N, 158.0W	2022 January	Present	Preserved specimen	University of Hawaii Insect Museum	Animalia
<i>Geastrum schmidelli</i> Vittad.	Poland	52.6N, 21.3E	2022 January	Present	Human observation	Register of protected and endangered fungi...	Fungi
<i>Exidia saccharina</i> Fr.	Poland	53.2N, 20.9E	2022 January	Present	Human observation	Register of protected and endangered fungi...	Fungi
<i>Flammulina elastica</i> (Sacc.) Redhead & R.H...	Poland	53.0N, 20.7E	2022 January	Present	Human observation	Register of protected and endangered fungi...	Fungi
<i>Flammulina elastica</i> (Sacc.) Redhead & R.H...	Poland	53.6N, 14.8E	2022 January	Present	Human observation	Register of protected and endangered fungi...	Fungi
<i>Flammulina elastica</i> (Sacc.) Redhead & R.H...	Poland	53.5N, 14.9E	2022 January	Present	Human observation	Register of protected and endangered fungi...	Fungi
<i>Calocera furcata</i> (Fr.) Fr.	Poland	53.5N, 14.9E	2022 January	Present	Human observation	Register of protected and endangered fungi...	Fungi
<i>Holwaya mucida</i> (Schulzer) Korf & Abawi	Poland	53.4N, 14.6E	2022 January	Present	Human observation	Register of protected and endangered fungi...	Fungi
<i>Phaeotremella foliacea</i> (Pers.) Wedin, J.C.Z...	Poland	51.8N, 15.6E	2022 January	Present	Human observation	Register of protected and endangered fungi...	Fungi
<i>Exidia glandulosa</i> (Bull.) Fr.	Poland	53.5N, 14.9E	2022 January	Present	Human observation	Register of protected and endangered fungi...	Fungi
<i>Trichaptum biforme</i> (Fr.) Ryvarden	Poland	53.0N, 21.0E	2022 January	Present	Human observation	Register of protected and endangered fungi...	Fungi
<i>Phylloporopsis nidulans</i> (Pers.) Singer	Poland	54.2N, 19.4E	2022 January	Present	Human observation	Register of protected and endangered fungi...	Fungi

[https://www.gbif.org/occurrence/search?occurrence\\_status=present&q=](https://www.gbif.org/occurrence/search?occurrence_status=present&q=)



OCCURRENCE | 1 JANUARY 2022

# *Natrix natrix* (Linnaeus, 1758)

Common Grass Snake In English Observed in Finland

Animalia > Chordata > Reptilia > Squamata > Colubridae > *Natrix*[DETAILS](#) [RELATED RECORDS](#)Species: *Natrix natrix* (Linnaeus, 1758)

Location: Finland

Basis of record: Human observation

Event ID: <http://tun.fi/KE.176/625a9f60d5de48b7f1c2a9eb#Gathering1>

Dataset: Löydös Open Finnish Observation Database

Publisher: Finnish Biodiversity Information Facility

Issues: Recorded date unlikely

**Event**

Term	Interpreted	Original	Remarks
Day	1		<span>Recorded date unlikely</span>
Month	1		<span>Recorded date unlikely</span>
Year	2022		<span>Recorded date unlikely</span>
Event date	2022-01-01T00:00:00	2022-01-01/2022-12-31	<span>Recorded date unlikely</span>
Event ID	<a href="http://tun.fi/KE....c2a9eb#Gathering1">http://tun.fi/KE....c2a9eb#Gathering1</a>	<a href="http://tun.fi/KE....c2a9eb#Gathering1">http://tun.fi/KE....c2a9eb#Gathering1</a>	<span>Recorded date unlikely</span>
		0 occurrences	

<https://www.gbif.org/occurrence/3752412362>



OCCURRENCE | 5 AUGUST 1878

# *Natrix natrix* (Linnaeus, 1758)

Common Grass Snake In English Collected in Sweden

Animalia > Chordata > Reptilia > Squamata > Colubridae > *Natrix*

## Occurrence

Term	Interpreted	Original	Remarks
Catalogue number	K 1804	K 1804	
Individual count	1	1	
Occurrence ID	urn:catalog:ZMO:Herp:K 1804	urn:catalog:ZMO:Herp:K 1804	
Occurrence status	PRESENT		Occurrence status inferred from individual count
Recorded by	Hansson	Hansson	

## Location

Term	Interpreted	Original	Remarks
Continent	EUROPE	Europe	
Coordinate uncertainty in metres		0	Coordinate uncertainty metres invalid
Country or area	Sweden	Sweden	Country coordinate mismatch
Country code	SE		Country coordinate mismatch
Decimal latitude	0	0.0	Zero coordinate Country coordinate mismatch
Decimal longitude	0	0.0	Zero coordinate Country coordinate mismatch
Depth	0		Inferred
Depth accuracy	0		Inferred
Elevation	0		Inferred
Elevation accuracy	0		Inferred
Geodetic datum	WGS84		Geodetic datum assumed WGS84 Country coordinate mismatch
Locality	Strømstad	Strømstad	
Maximum depth in metres		0	Excluded
Maximum elevation in metres		0	Excluded
Minimum depth in metres		0	Excluded
Minimum elevation in metres		0	Excluded

<https://www.gbif.org/occurrence/199454806>



Occurrences 2

Search all fields Q

[Simple](#) [Advanced](#)

Occurrence status ▼

Present

Licence ▼

Scientific name ▼

Vulpes zerda (Zimmermann, 1780)

Basis of record ▼

Location ▼

Administrative areas (gadm.org) ▼

Coordinate uncertainty in metres ▼

Year ▼

Month ▼

Dataset ▼

Country or area ▼

Continent ▼

Issues and flags ▼

Media type ▼

Publisher ▼

Institution code ▼

Collection code ▼

SEARCH OCCURRENCES | 593 RESULTS

# Флаги на результатах поискового запроса

TABLE GALLERY MAP TAXONOMY METRICS [DOWNLOAD](#)

DOWNLOAD OPTIONS

	Raw data	Interpreted data	Multimedia	Coordinates	Format	Estimated data size
<a href="#">SIMPLE</a>	✗	✓	✗	✓ (if available)	Tab-delimited CSV (for use in Excel, etc.) <small>?</small>	319 KB (71 KB zipped for download)
<a href="#">DARWIN CORE ARCHIVE</a>	✓	✓	✓ (links)	✓ (if available)	Tab-delimited CSV (for use in Excel, etc.) <small>?</small>	977 KB (216 KB zipped for download)
<a href="#">SPECIES LIST</a>	✗	✓	✗	✗	Tab-delimited CSV (for use in Excel, etc.) <small>?</small>	

DOWNLOAD REPORT

Total: 593

Licence: CC BY-NC 4.0

Year range: 1800–2022

With year: 81 %

With coordinates: 56 %

With taxon match: 100 %

Known issues

A part of the GBIF processing is to flag occurrences that have suspicious fields

44 Occurrence status inferred from individual count 25 Type status invalid 17 Continent invalid 9 Recorded date invalid  
5 Basis of record invalid 3 Country derived from coordinates 2 Country invalid 2 Taxon match fuzzy 1 Coordinate invalid  
1 Multimedia URI invalid



[https://www.gbif.org/occurrence/download?taxon\\_key=5219310&occurrence\\_status=present](https://www.gbif.org/occurrence/download?taxon_key=5219310&occurrence_status=present)

## Материалы для самостоятельного изучения

- Chapman AD (2005) Principles of Data Quality. Global Biodiversity Information Facility. <https://doi.org/10.15468/doc.jrgg-a190>
- Chapman AD & Wieczorek JR (2020) Georeferencing Best Practices. Copenhagen: GBIF Secretariat. <https://doi.org/10.15468/doc-gg7h-s853>
- Zermoglio PF, Chapman AD, Wieczorek JR, Luna MC & Bloom DA (2020) Georeferencing Quick Reference Guide. Copenhagen: GBIF Secretariat. <https://doi.org/10.35035/e09p-h128>
- Chapman AD & Grafton O (2008) Guide to Best Practices for Generalising Primary Species-Occurrence Data, version 1.0. Copenhagen: Global Biodiversity Information Facility, 27 pp. <http://www.gbif.org/resource/80512>
- Six questions answered about the GBIF Backbone Taxonomy <https://data-blog.gbif.org/post/gbif-backbone-taxonomy/>