



Icelandic Museum
of Natural History

Brynjólfsgata 5
IS-107 Reykjavík

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Inter institutional databases in Iceland in relation to NeIC-LifeWatch

Dr. Thorleifur Eiriksson

Workshop Collaboration on e-Infrastructures for Nordic Biodiversity Informatics
Oslo 25-26.08.205

IMNH established in 2007



The Icelandic Museum of Natural History operates under its own Special Act.



The Icelandic Museum of Natural History
Brynjolfsgata 5
105 Reykjavik

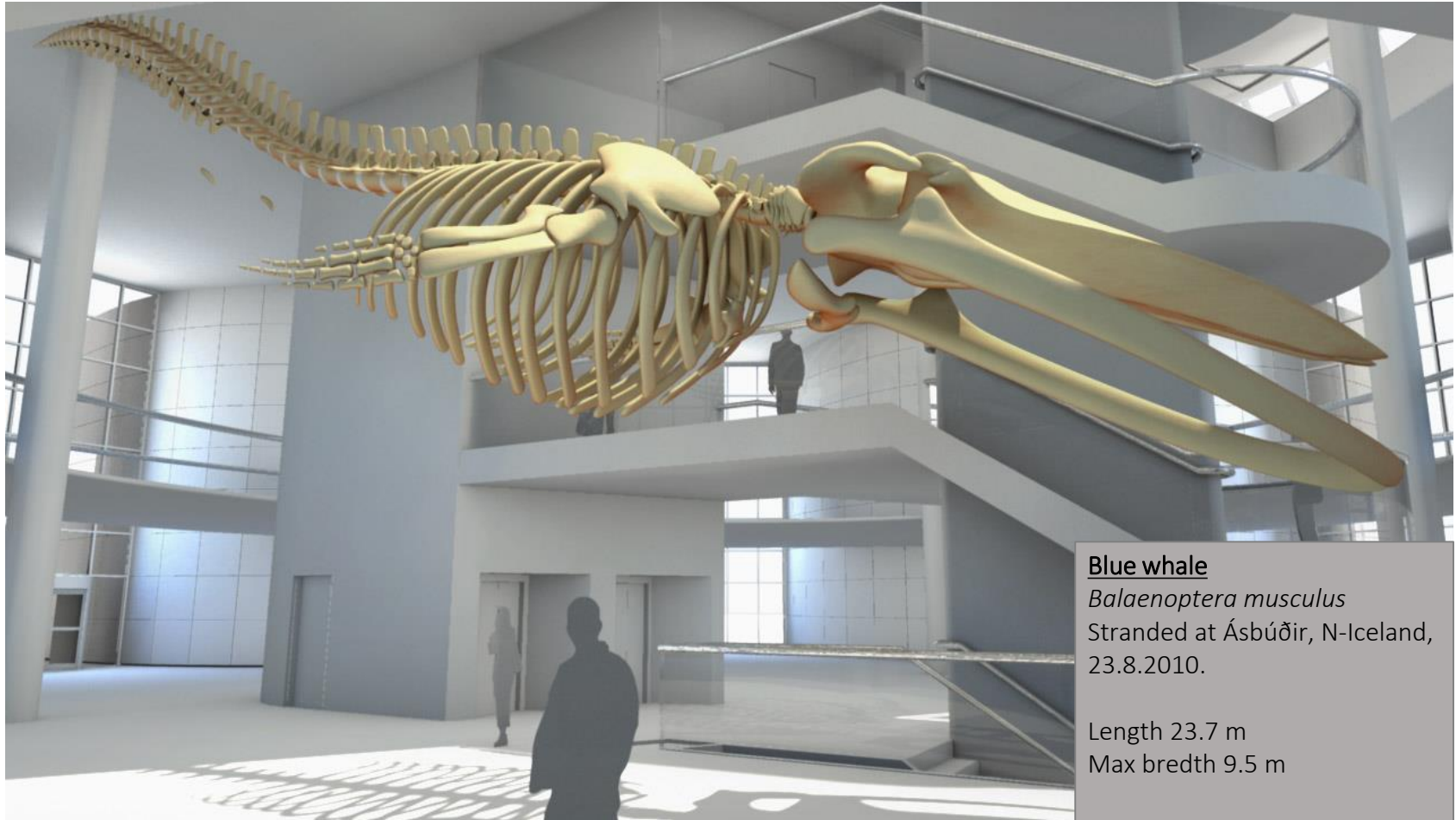
Act no. 35/2007 for The Icelandic Museum of Natural History

1. The Icelandic Museum of Natural History is the property of the Icelandic state and one of three Central Museums in Iceland. A public, non-profit institute.
2. Objectives: shed light on nature in Iceland, natural history, use of natural resources and nature conservation, by informing the general public via exhibition and other means of media, including printing and e-publishing.

The Museum shall collect, record and preserve natural items and **data on nature**, and undertake research within its field.

The Museum shall collaborate closely with its sister-institute – **The Icelandic Institute of Natural History**.

Exhibition planning – Icelandic nature



Blue whale

Balaenoptera musculus

Stranded at Ásbúðir, N-Iceland,
23.8.2010.

Length 23.7 m

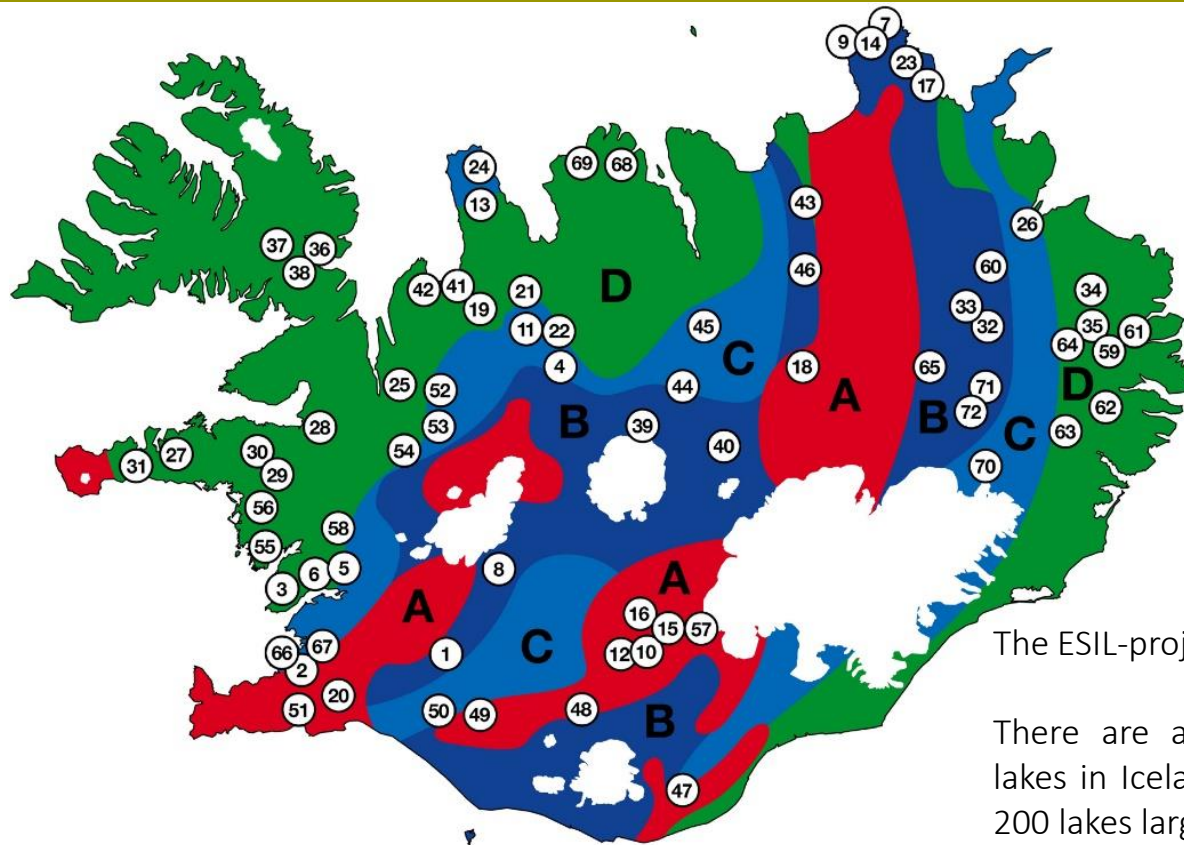
Max breadth 9.5 m

Priorities in database work



- Open access to the databases of the museum through gbif.net.
- Collect information on biological databases in Iceland and make them available through gbif.net.
- Update Icelandic access to GBIF, biodiversity.is, where it is possible to find in one place link to different databases on biodiversity.
- Finish strategic planning for research- and e-infrastructure at government level (this autumn).

ESIL - Ecological survey of Icelandic lakes



The ESIL-project focuses on freshwater lakes.

There are approximately 1.850 freshwater lakes in Iceland larger than 0,1 km² and ca. 200 lakes larger than 1,0 km².

The project started in 1992 and the database contains information of about 80 lakes $\geq 1,0$ km², distributed all over the country.

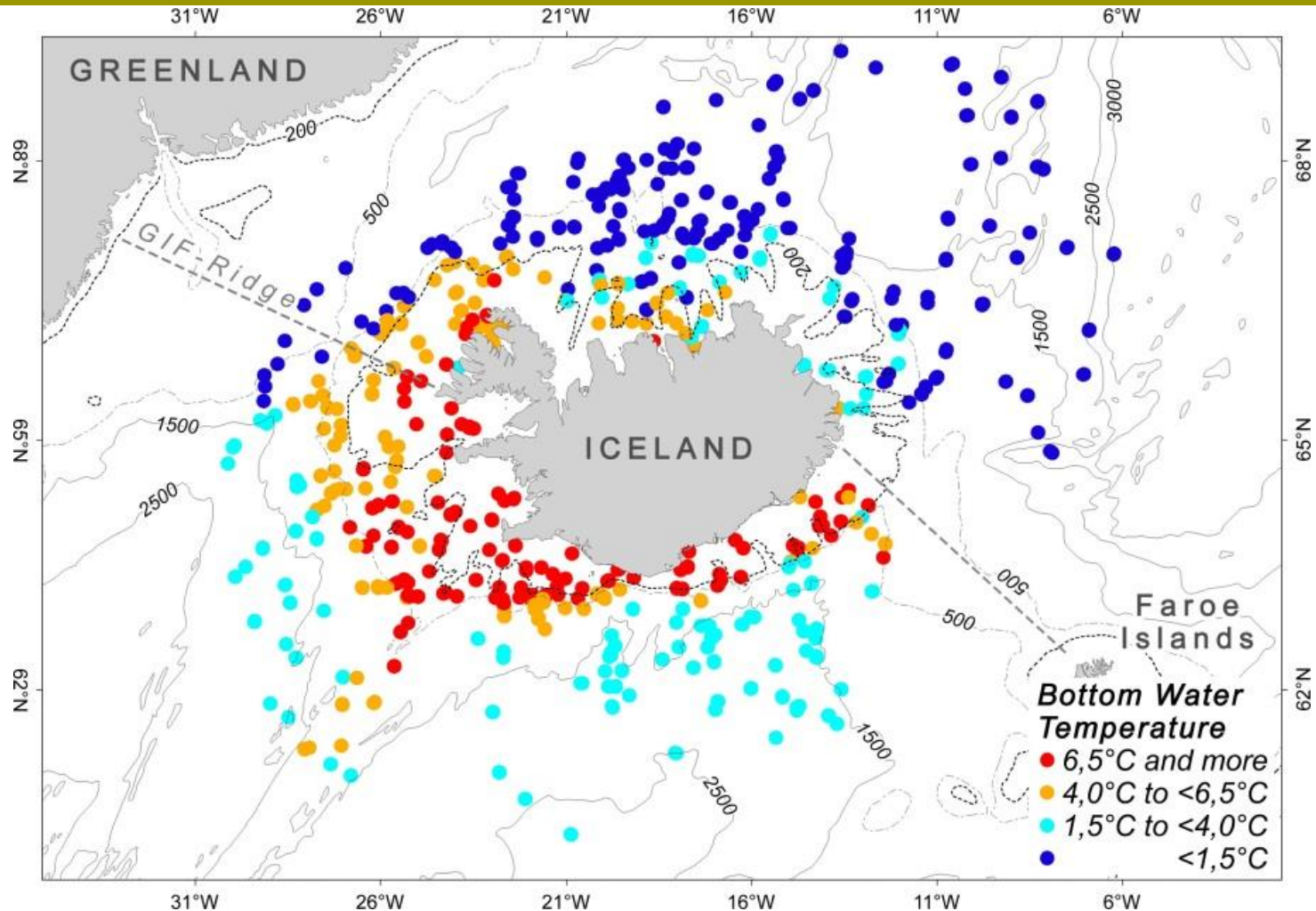
ESIL – Aims of the project



Natural History Museum of Kópavogur, Hólar - Agricultural Collage, University of Iceland, Institute of Freshwater Fisheries and Icelandic Museum of Natural History.

- To build up a database with standardized ecological information on main types of Icelandic lakes. The database will include information on biology, limnology and hydrogeology of lakes.
- A nation-wide database with ecological information will enhance scientific studies in the field of ecological pattern-analysis and other work of comparative-approach, e.g. questions pertaining to effects of environmental factors on the evolution and adaptation of freshwater organisms.
- The database is a source and reference material for scientific research in the future.
- The database is a computerized SQL-server and GIS-based storage of all data obtained in the survey. The database will be accessible on the internet through website-connection and by use of search-machines.

Bioice - Systematic sampling of benthos



The front of benthos d-base including Bioice



University of Iceland, The Icelandic Institute of Natural History
and The Marine Research Institute

Botndýr - U_GG@IMINOR SERVER 0.9.3@MAR@IMINOR.FISKIS.TOFA.IS

Skrá Syn Tol Stofstofur Hjalp

Samples Data

Accession Heimild Cruise ID Station no. Sample Other sample no

Day Mon Year Date on label Lat° min sec Lon° min sec Time Lat 2° min sec Lon 2° min sec Time 2

Radius uncertainty (km) Location source Location remarks Location on label Bottom temp. (C°)

Salinity (ppm) Depth 1 (m) Depth 2 (m) Gear method Vol total (picked) sieved Substr. descr.

Sulphur smell Habitat type Habitat comment Remark on sample

Vista Uppfæra Eyða Hreinsa Endurhlaða

Species records | Images | Bioice frumfokkun | Bioice aettafokkun

Name filter

Sample 2103

Species Cornuspiroides striolata

Ident. changes NI catl. no. 3456 Catalog status Labeling completed MRNI

Auxil. no. Foreign mus. cat. no. Loan Return loan

Det/leg on label Det Leg Remark on sampling

Guðmundur Guðmundsson Guðmundur Guðmundsson

Width Length Height Expl. spec. measure

Live/dead Specim. no. total Unknown label sign Misc remarks

Specimen condition. Preservation.

Accession	Cruise ID	Station no.	Sample	Other sam...	Gear method	Sampling day	Sampling m...	Sampling y...	Local time 1	Local time 2	Location o...	Location re...
BIOICE	HM-1-91	8	2011	910720,8	RP sledge	20	7	1991	12:13	12:33		
BIOICE	HM-1-91	14	2020	910722,2	detr. sledge...	22	7	1991	01:17	01:40		
BIOICE	HM-1-91	15	2021	910722,3	detr. sledge...	22	7	1991	06:50	07:10		
BIOICE	HM-1-91	23	2032	910723,7	detr. sledge...	23	7	1991	18:10	18:30		
BIOICE	HM-1-92	9	2077		RP sledge	3	7	1992	17:55	18:15		
BIOICE	HM-1-92	9	2079		detr. sledge...	3	7	1992	23:29	23:49		
BIOICE	HM-1-92	10	2081		RP sledge	4	7	1992	07:56	08:16		
BIOICE	HM-1-92	11	2087		RP sledge	4	7	1992	19:00	19:20		
BIOICE	HM-1-92	13	2089		detr. sledge...	5	7	1992	00:33	00:51		
BIOICE	HM-1-92	17	2100		RP sledge	6	7	1992	06:33	06:53		
BIOICE	HM-1-92	17	2102		detr. sledge...	6	7	1992	09:15	09:35		
BIOICE	HM-1-92	18	2103		detr. sledge...	6	7	1992	12:37	12:57		
BIOICE	HM-1-92	18	2107		RP sledge	6	7	1992	16:35	16:55		
BIOICE	HM-1-92	19	2108		RP sledge	6	7	1992	18:57	19:17		
BIOICE	HM-1-92	19	2110		detr. sledge...	6	7	1992	21:40	22:00		
BIOICE	HM-1-92	20	2113		RP sledge	7	7	1992	01:00	01:20		
BIOICE	HM-1-92	21	2114		RP sledge	7	7	1992	02:17	02:37		
BIOICE	HM-1-92	22	2117		detr. sledge...	7	7	1992	08:25	08:45		
BIOICE	HM-1-92	24	2122		detr. sledge...	7	7	1992	15:51	16:01		
BIOICE	HM-1-92	28	2129		detr. sledge...	8	1992	05:34	05:54			
BIOICE	HM-1-93	1	2315		detr. sledge...	2	5	1993	04:55	05:25		
BIOICE	HM-1-93	1	2317		RP sledge	2	5	1993	13:16	13:46		
BIOICE	HM-1-93	2	2318		detr. sledge...	2	5	1993	17:32	18:32		
BIOICE	HM-1-93	2	2319		RP sledge	2	5	1993	19:26	19:56		
BIOICE	HM-1-93	3	2321		detr. sledge...	3	5	1993	00:23	00:53		
BIOICE	HM-1-93	4	2325		RP sledge	3	5	1993	00:00	00:00		
BIOICE	HM-1-93	21	2361		detr. sledge...	7	5	1993	17:55	18:15		
BIOICE	HM-1-93	21	2362		RP sledge	7	5	1993	20:51	21:11		
BIOICE	HM-1-93	21	2363		Agassiz trawl	7	5	1993	22:06	22:26		
BIOICE	HM-1-93	22	2364		RP sledge	8	5	1993	01:55	02:15		
BIOICE	B-9-93	558	2400		detr. sledge...	1	7	1993	01:50	02:10		
BIOICE	HM-1-93	16	2518		detr. sledge...	13	7	1993	05:25	05:40		
BIOICE	HM-1-93	41	2581		RP sledge	16	7	1993	05:43	05:58		
BIOICE	HM-1-93	41	2582		detr. sledge...	16	7	1993	07:51	08:06		
BIOICE	HM-1-95	8	2751		Agassiz trawl	31	7	1995	13:15	13:35		
BIOICE	HM-1-95	21	2782		Agassiz trawl	4	8	1995	16:58	17:18		
BIOICE	HM-1-95	21	2783		RP sledge	4	8	1995	19:57	20:17		
HAFRO-JON...				DAGNY-81-70		22	6	1979				
HAFRO-JON...				H-1-83-50		23	3	1983				

59 (0 valdar)

Species records | Images | Bioice frumfokkun | Bioice aettafokkun

Name filter

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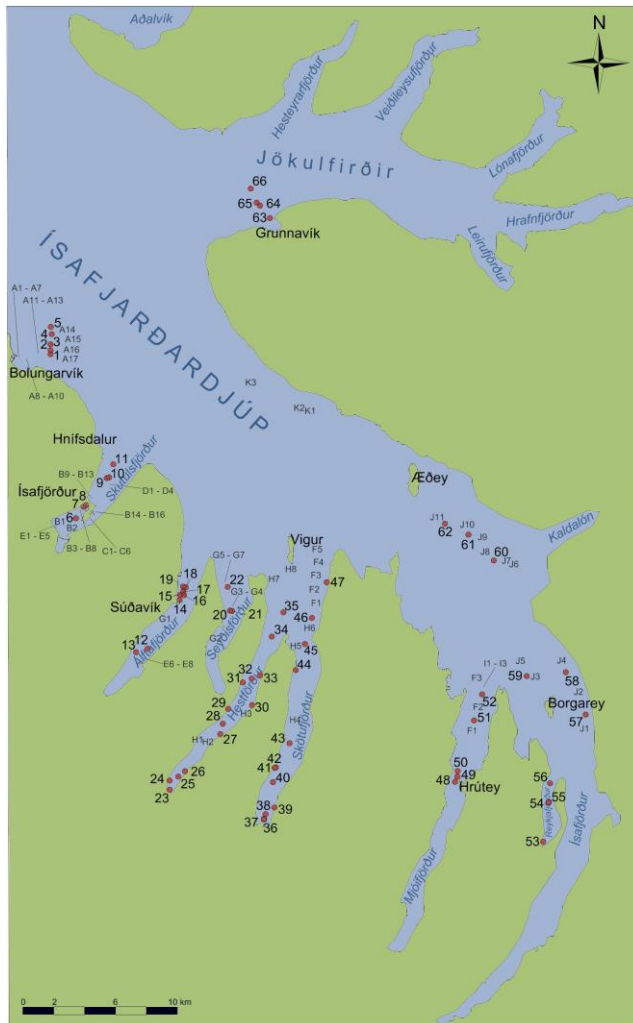
Live/dead Specim. no. total Unknown label sign Misc remarks

Specimen condition. Preservation.

Sample	Species	Ident. cha...	Det	Leg	Foreign mu...	NI catl. no.	Auxil. no.	Repository	Specim. no...	Det/leg on ...	Remark sp.
2110	Cornuspiroid...		Guðmundur ...				3455	MRNI	1		
2103	Cornuspiroid...		Guðmundur ...				3456	MRNI	6	Guðmundur ...	
2318	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3433	MRNI	4	Guðmundur ...	
H-1-83-50	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				21219	MRNI	2	Guðmundur ...	
DAGNY-81-70	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				21228	MRNI	6	Guðmundur ...	
ME 11	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				21163	MRNI	2	Guðmundur ...	
2021	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3419	MRNI	1	Guðmundur ...	
2319	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3416	MRNI	9	Guðmundur ...	
2113	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3427	MRNI	1	Guðmundur ...	
2108	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3425	MRNI	2	Guðmundur ...	
2129	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3430	MRNI	1	Guðmundur ...	
2077	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3421	MRNI	98	Guðmundur ...	
2107	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3426	MRNI	7	Guðmundur ...	
2081	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3423	MRNI	6	Guðmundur ...	
2079	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3422	MRNI	8	Guðmundur ...	
2089	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3424	MRNI	3	Guðmundur ...	
2318	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3428	MRNI	6	Guðmundur ...	
2100	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3417	MRNI	77	Guðmundur ...	
2751	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3414	MRNI	9	Guðmundur ...	
2782	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3413	MRNI	4	Guðmundur ...	
2363	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3412	MRNI	8	Guðmundur ...	
2020	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3408	MRNI	13	Guðmundur ...	
2114	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3409	MRNI	2	Guðmundur ...	
2361	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3398	MRNI	9	Guðmundur ...	
2102	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3403	MRNI	5	Guðmundur ...	
2317	Cornuspiroid...	Cornuspiroid...	Guðmundur ...				3405	MRNI	6	Guðmundur ...	

64 (1 valdar)

Other benthos databases

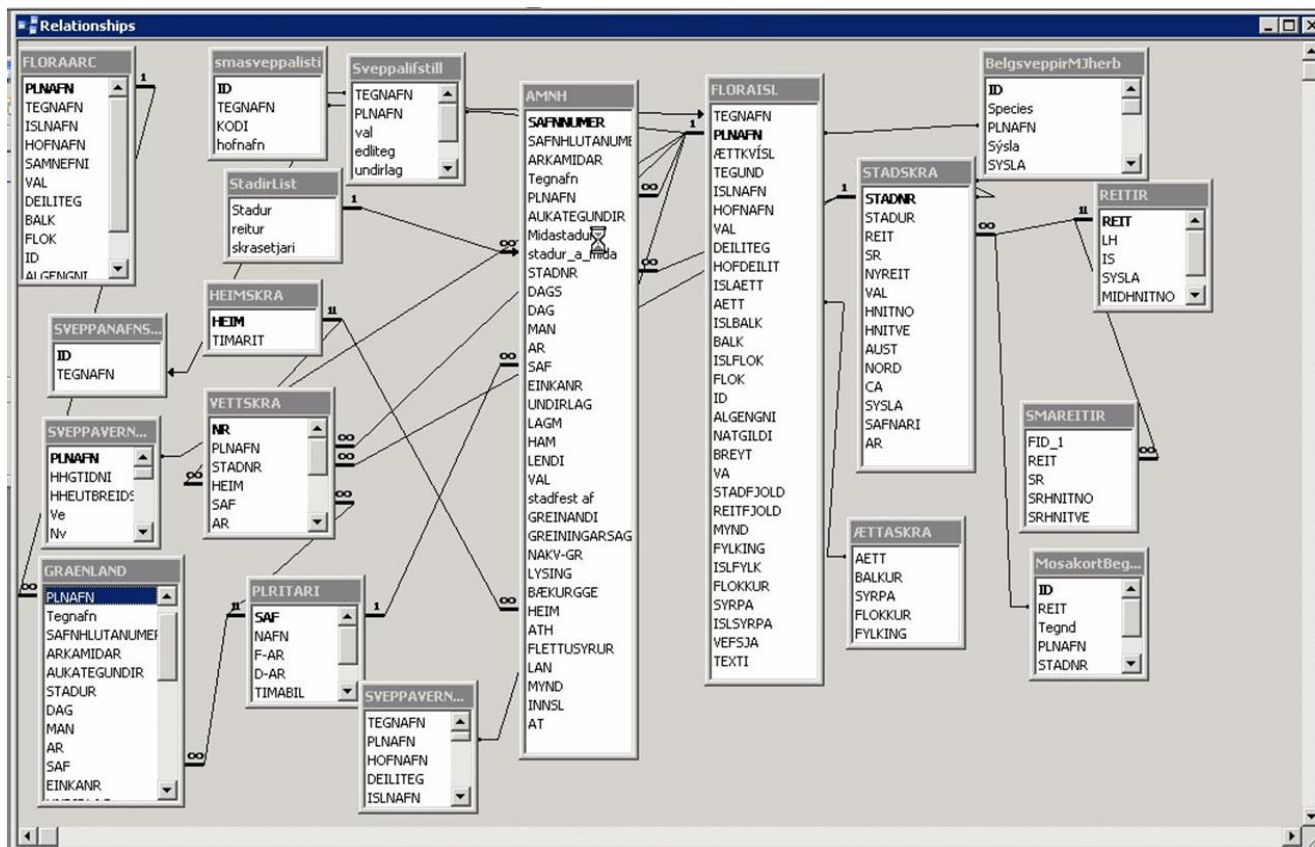


- There are databases on benthos that are not connected to BIOICE.
- In Westfjords Natural History Institute on marine invertebrates. Mostly data from within fjords.
- An example of sampling stations from a fjord system in NW-Iceland.

Plant distribution - database

The Icelandic Institute of Natural History

Example of relational database in ACCESS. CRUD system (copy, record, update, delete).



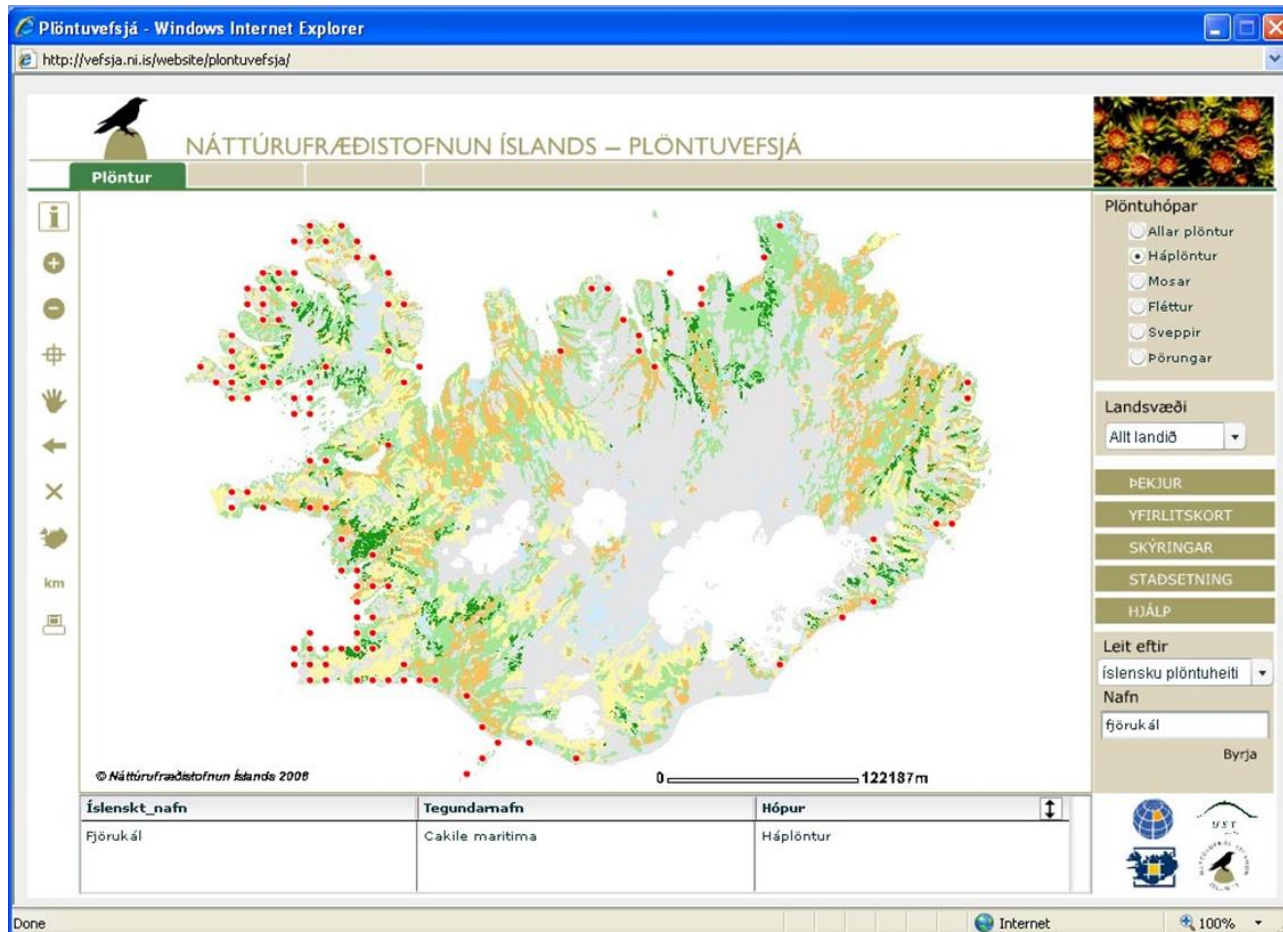
GBIF access to the Plant database



- The plant database of The Icelandic Institute of Natural History has been accessible through GBIF since 2005 and now accounts for over 500.000 entries.
- Other archives can easily be made accessible with/through GBIF. Presently there are 265.147.555 data entries accessible and searchable with/through GBIF at gbif.net.
- It is possible to search specific species and call forth distribution maps and/or species list for specific areas.

Example of processing from data base for public use

Distribution data of plants published on the internet through a browser connected to a/the database.



Challenges



Nature is prominent in Iceland (wilderness, fishing, nature-based tourism, and hydro- og and geothermal power), research on nature is of high standard, computer literacy is high and the society highly digitalized.

However, the challenges we face in relation to e-infrastructure and Biodiversity are:

1. Improve data sharing between research institutes (ongoing work),
2. Encourage academic dialogue on the Biodiversity concept (e.g. processes),
3. Improve public access to Biodiversity data and information,
4. Raise public interest in the Biodiversity concept.