





ARTSDATABANKEN

# Geografisk stadfesta artsinformasjon

Nils Valland, Artsdatabanken

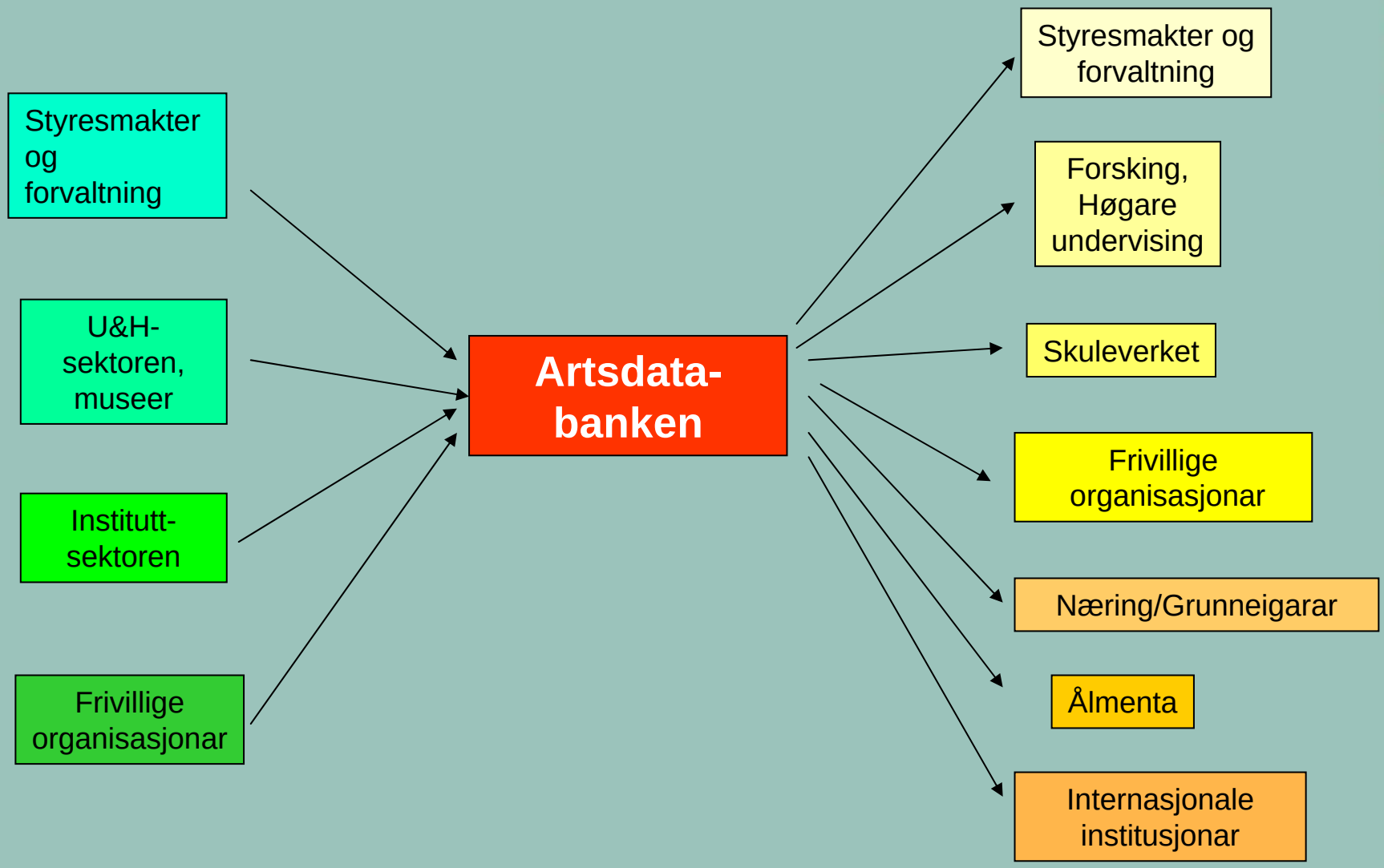
Samling om kartlegging og overvaking av biologisk mangfald

DN, 2.11. 2006

# Artsdatabanken – kvifor oppretta ?

- For generelt å styrkje arbeidet med truga og sårbare arter, naturtypar og gener
- For at resultat skal få større og breidare autoritet og legitimitet
- For å gjere informasjon om Norges biologiske mangfald lett forståeleg og lett tilgjengeleg

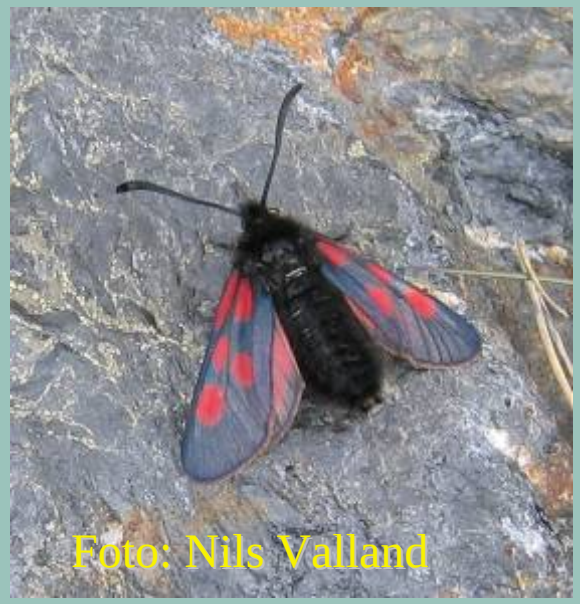
# Vår ”omverd”




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# Visjon

- *Vi skal gjennom samhandling formidle kunnskap som set fokus på biologisk mangfald*





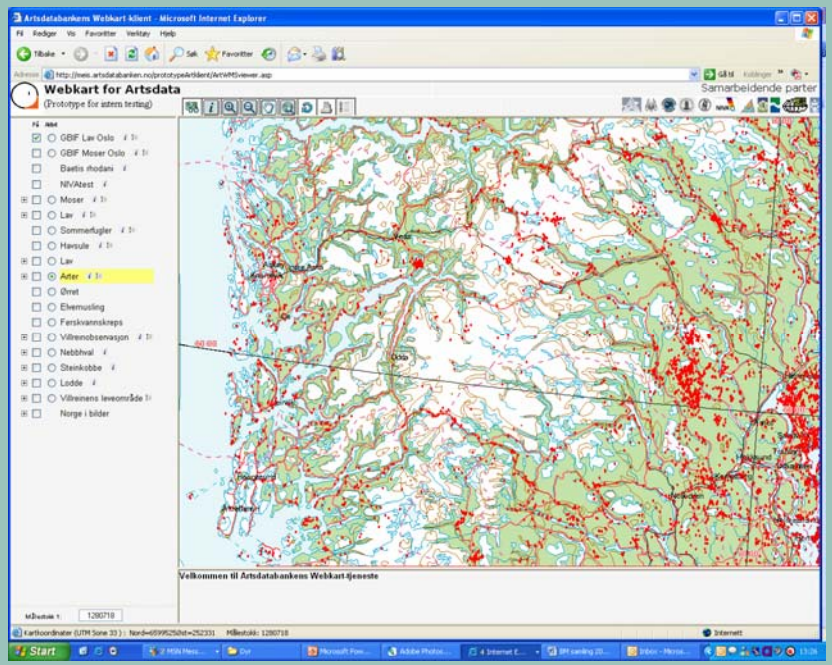


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Stortinget

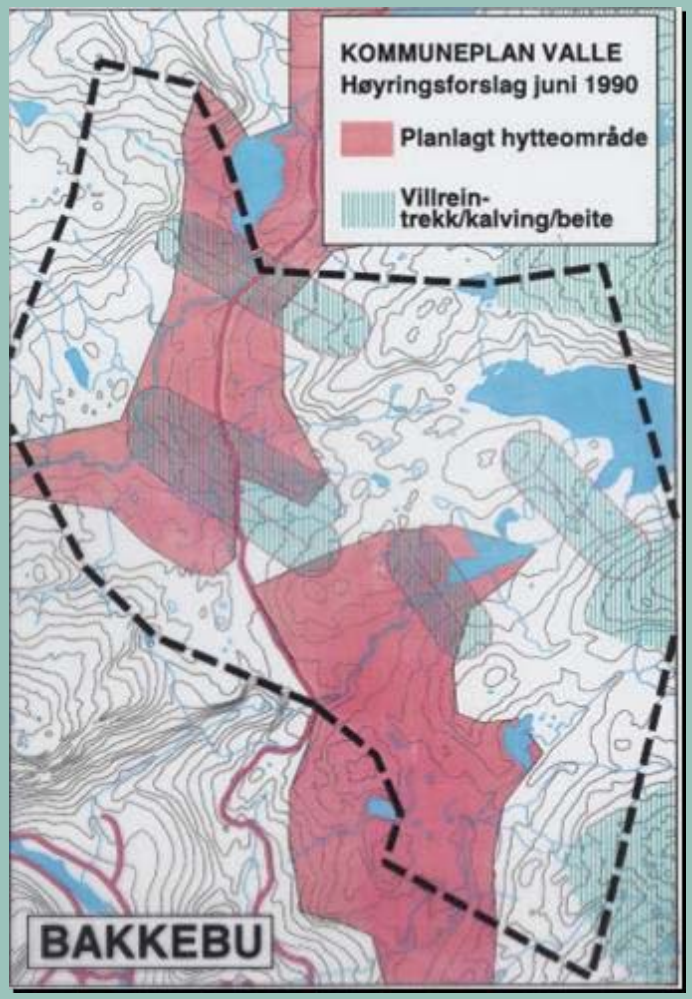
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# Kart må prioriterast !!




- Ei hovudoppgåve vil bli å gjere stadfesta informasjon tilgjengeleg gjennom digitale kart

# Samfunnet treng naturdata




- Geografisk stadfesta og naturfagleg kvalitetssikra informasjon er ein føresetnad for at forvaltningsorgana skal gjera miljøtilpasningar

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# Samfunnet forventar naturdata frå naturhistoriske museer




- rolle som kunnskapsprodusentar for kultur- og naturforvaltninga
- det digitaliserte materialet må tilretteleggast for formidling, forvaltning og forskning
- prioritering av digital og nettbasert formidling
- auka samarbeid mellom musea for utvikling av formidling og samlingsforvaltning

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# Naturmangfaldlova

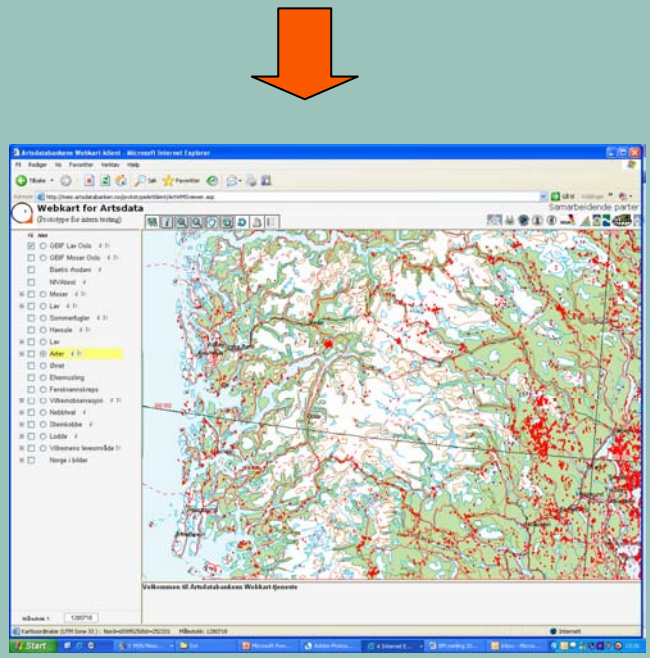



- Regelverk for forvaltning av truga naturtypar
- Forvaltning av leveområda for truga arter

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# Webkartteneste for arter





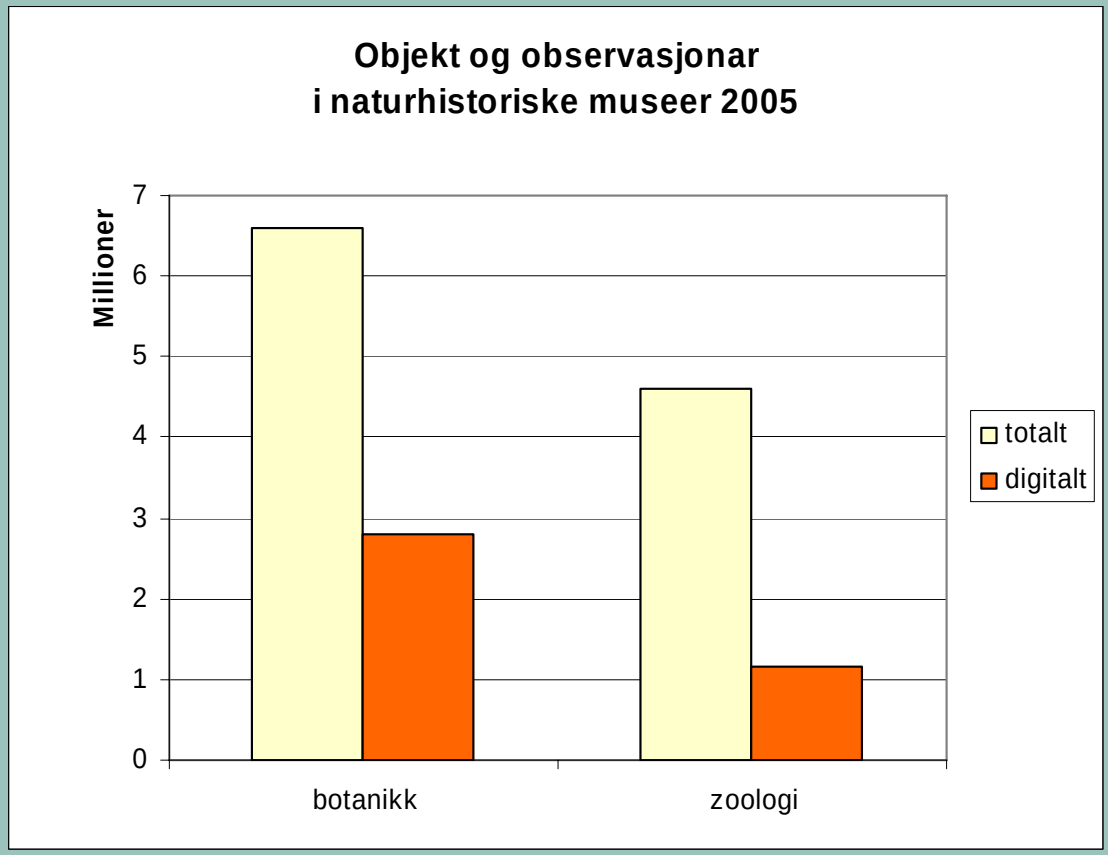

- Finne artsdata
- Kvalitetssikre data
- Kode artdata
- Lage wms-tenester
- Lage kartklient

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# Kvar finst geografisk stadfesta artsdata ?

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# Datavolum hjå universitetsmusea




**Objekt og observasjonar**

- 11,12 mill. totalt
- 3,95 mill. digitalisert 2005
- 35 % er digitalisert

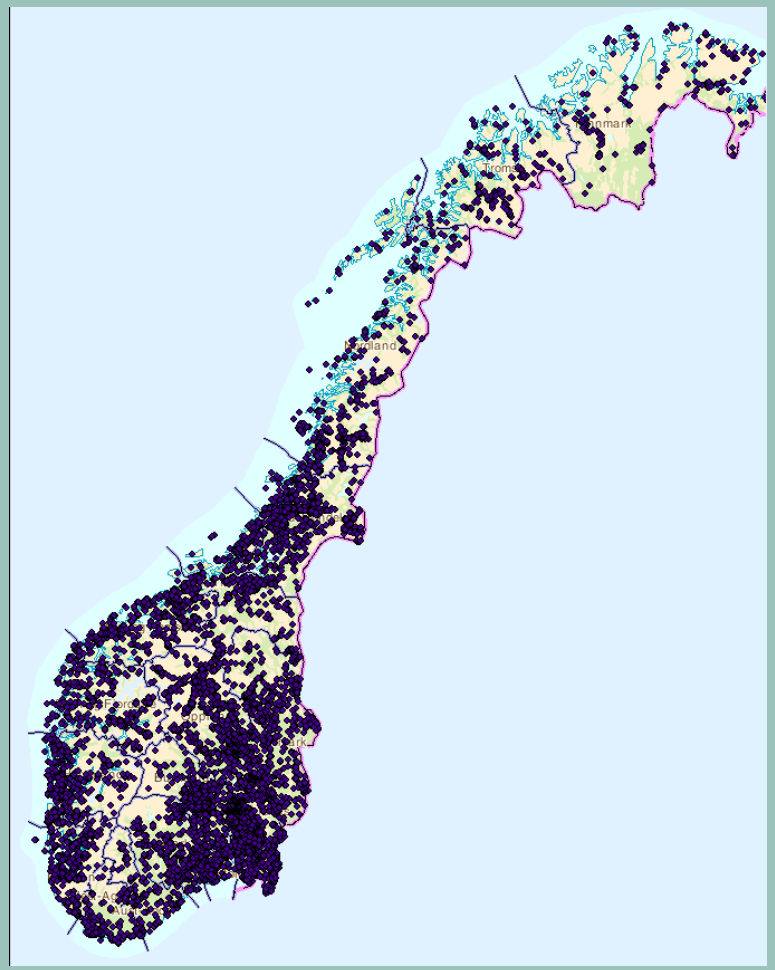
NB ! Tala har feilkjelder

Kjelder:

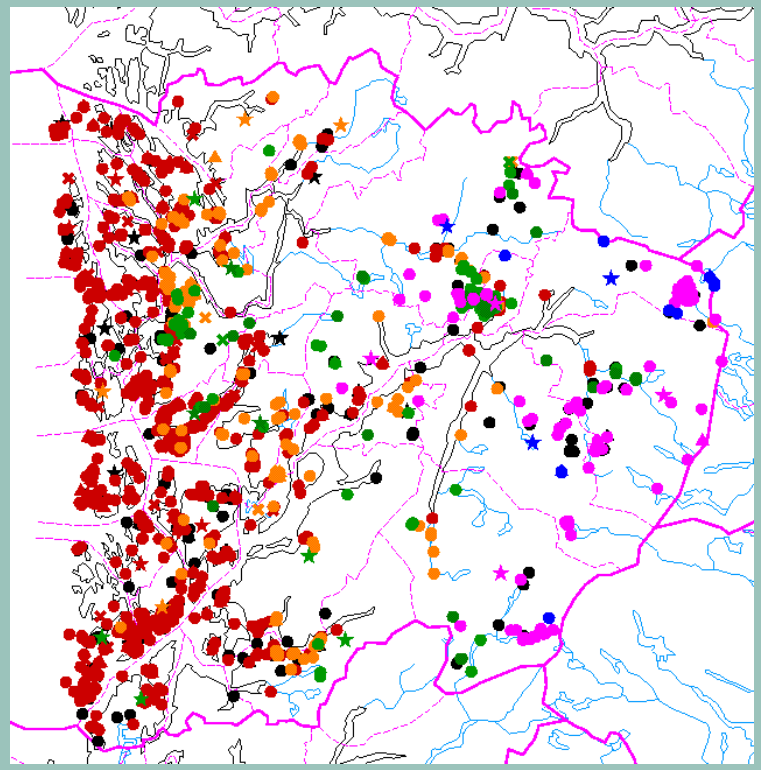
1. Årsrapport Museumsprosjektet-UiO 2005
2. Internrapport om samlingsdatabaser, NHM-UIO 2005

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# Nasjonale museumsdatabasar



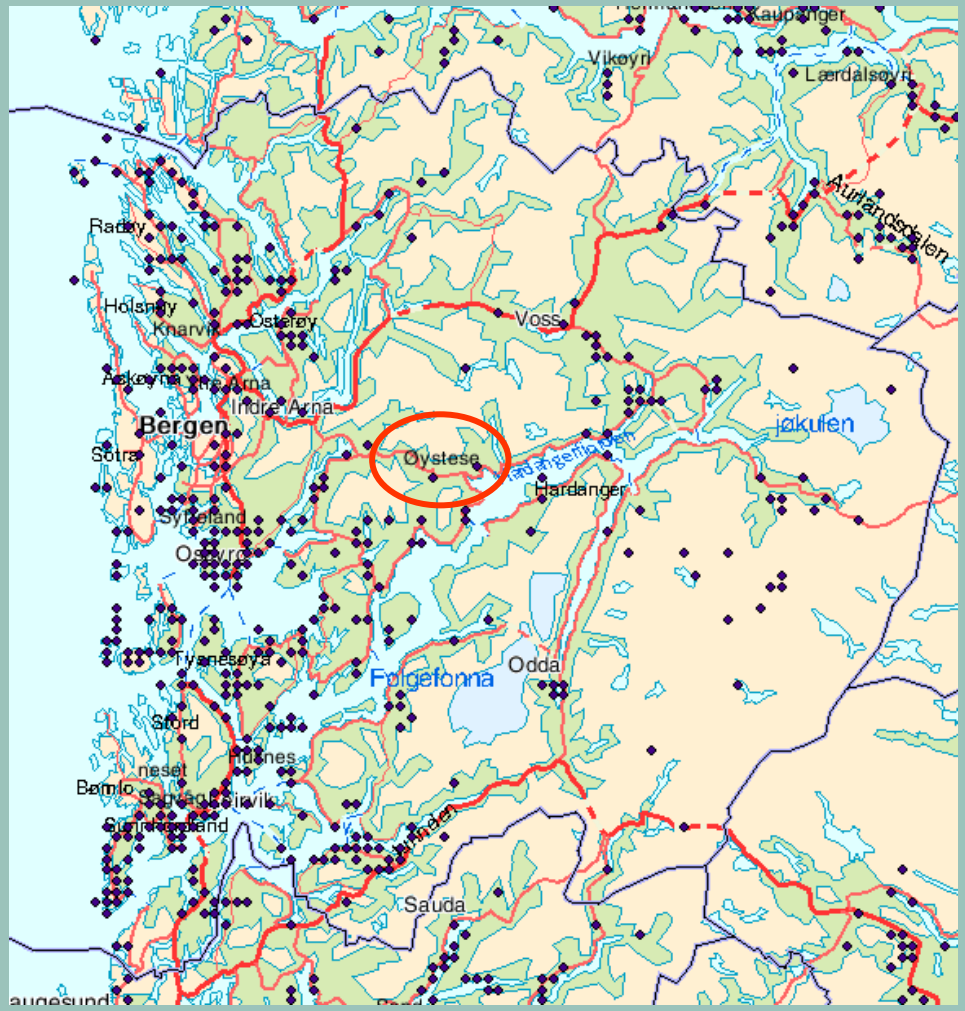
Lav



Kjelde: Lavdatabasen, NHM-UiO

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# Nasjonale museumsdatabasar

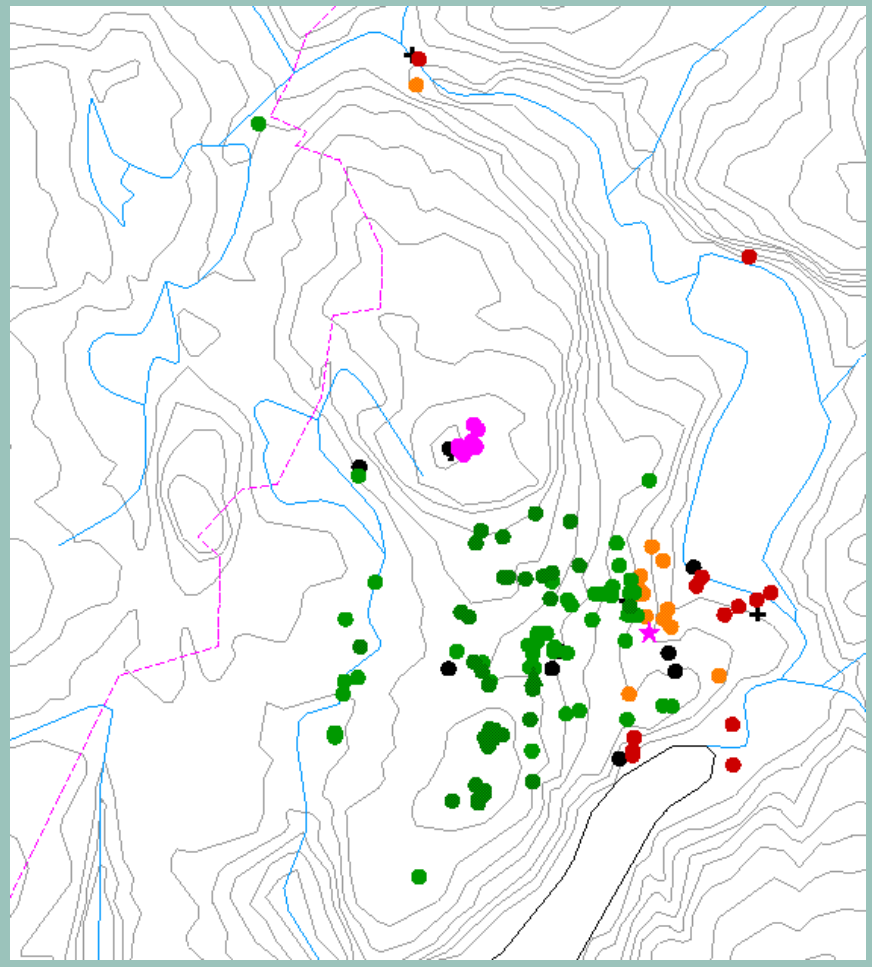



Lav i Hordaland

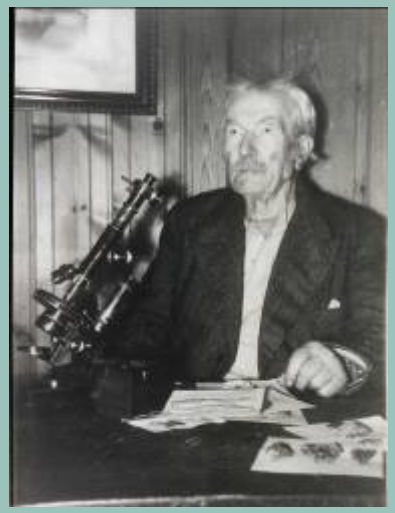
Kjelde: Lavdatabasen, NHM-UiO

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# Nasjonale museumsdatabasar



## Lav i Granvin

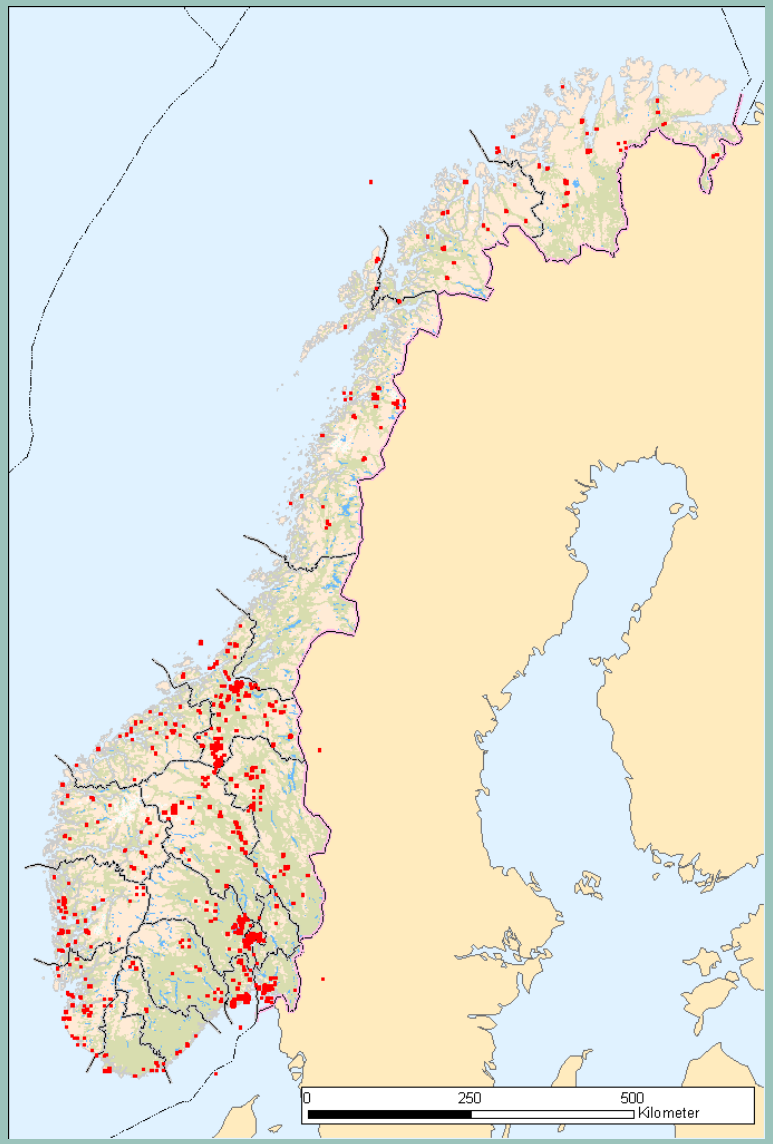


Botanikar og gardbrukar
Johan Havaas (1864-1956)
http://www.granvin.kommune.no/Artikkel.asp?MId1=1&AId=45&back=1

Kjelde: Lavdatabasen, NHM-UiO

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# Nasjonale museumsdatabasar



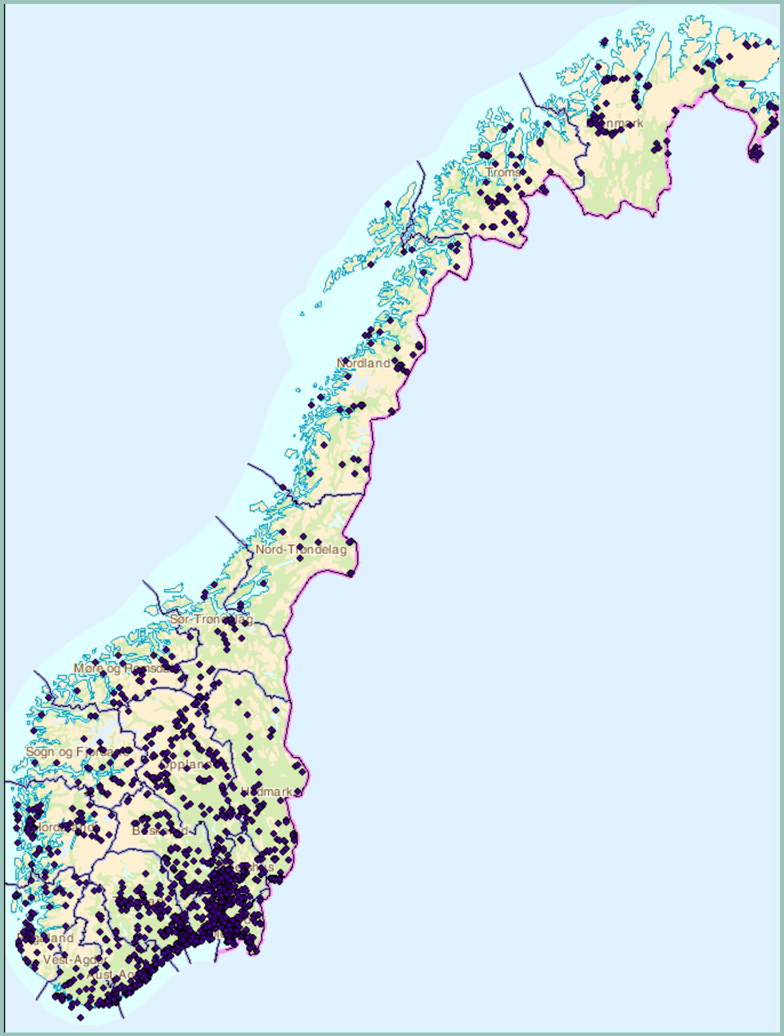

Raudlista lav og mosar, utdrag frå Vitskapsmuseet

Kjelde: Botanikkbasen, Muspro-UiO

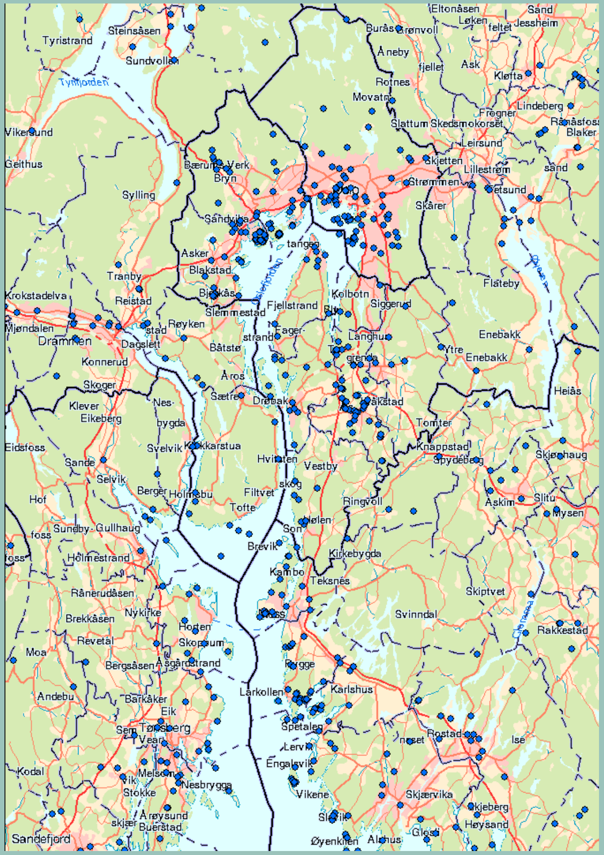
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# Nasjonale museumsdatabasar

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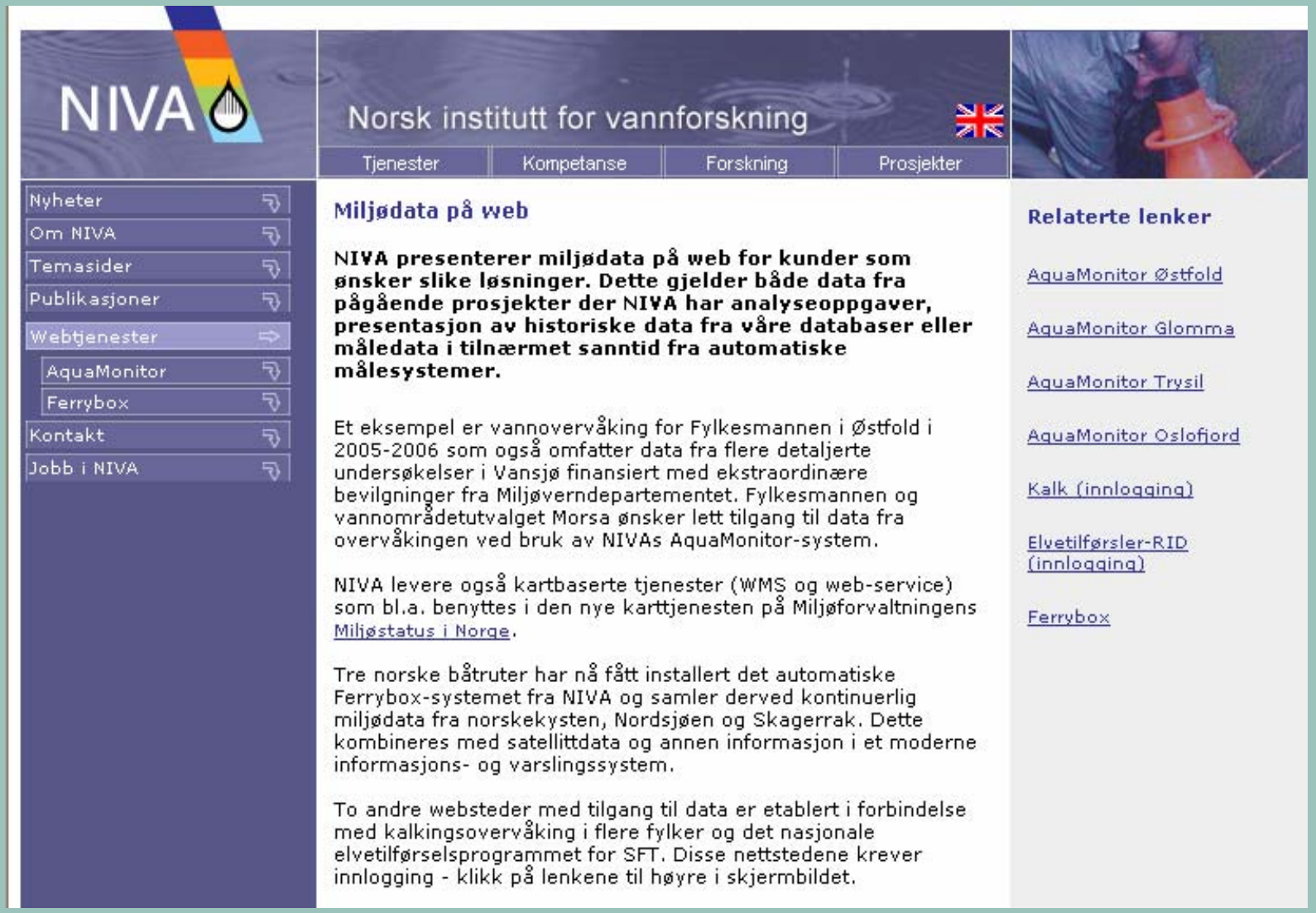



## Sommarfuglar



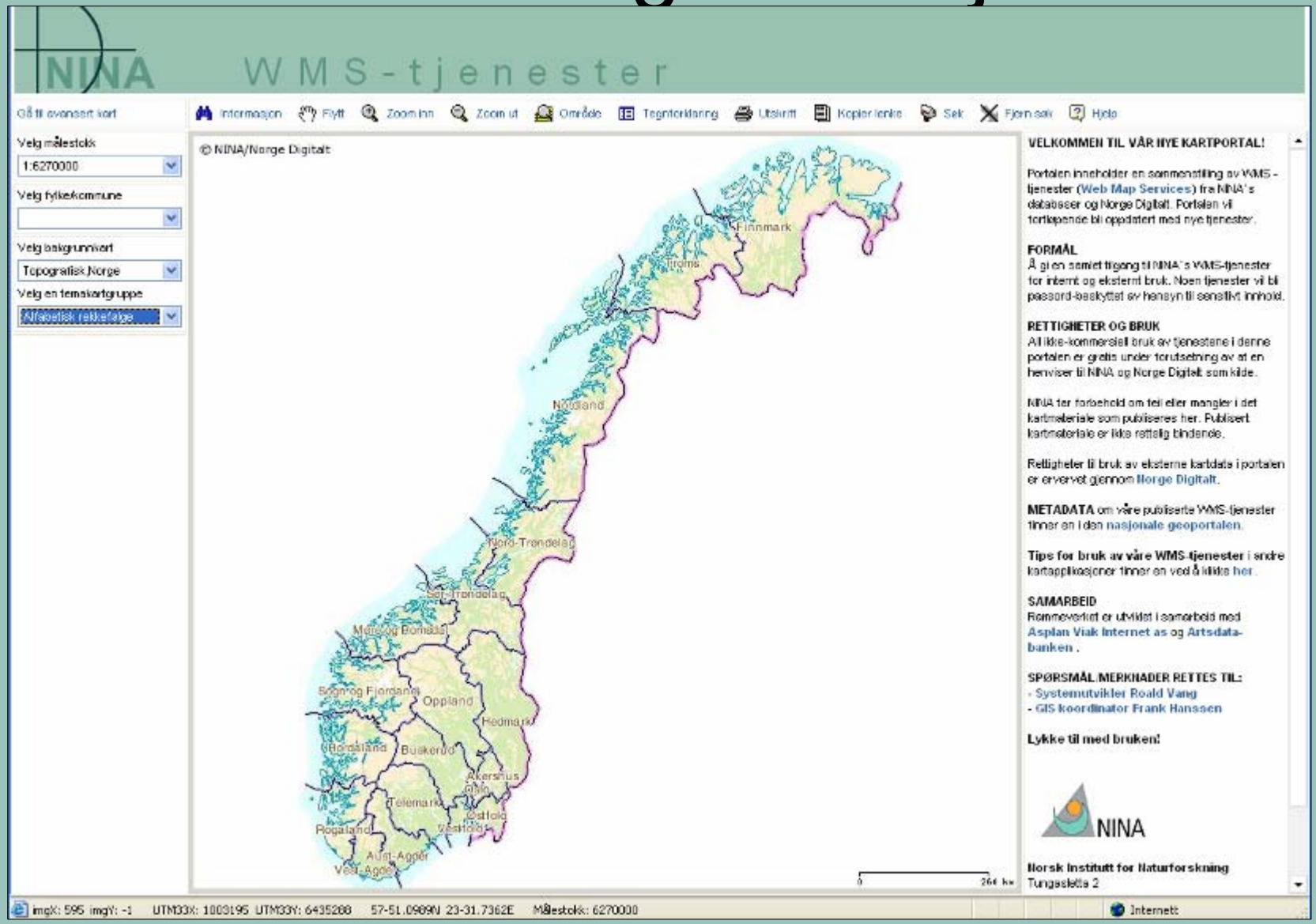

Kjelde: Sommerfuglbasen, NHM-UiO

# Forskningsintitusjonar



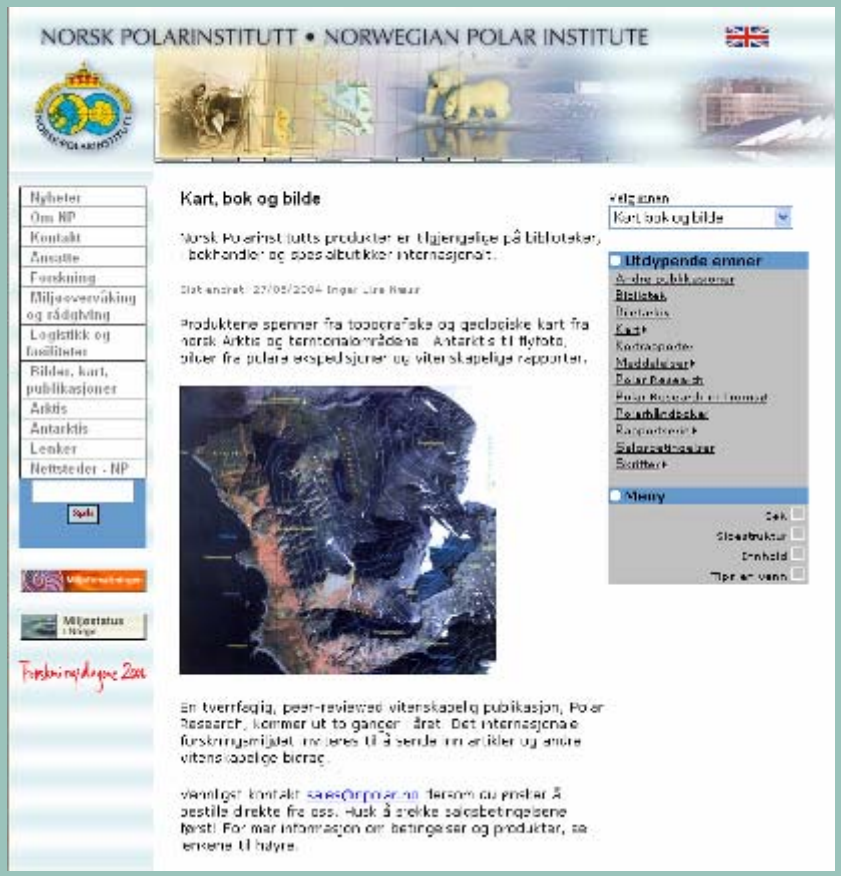

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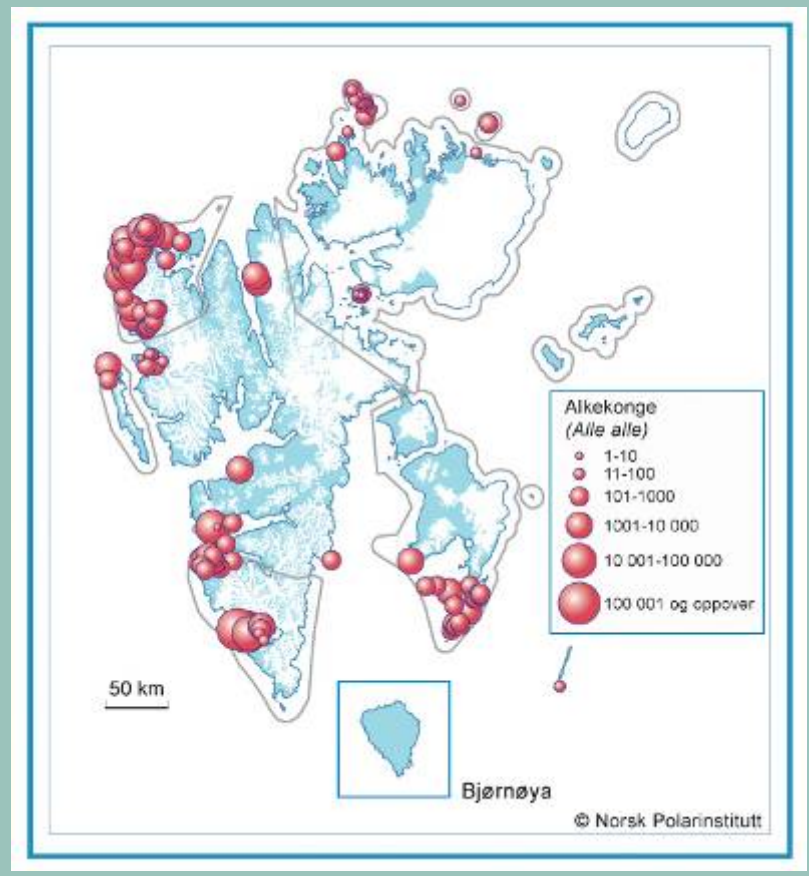
# Forskningsintitusjonar




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# Forskningsintitusjonar

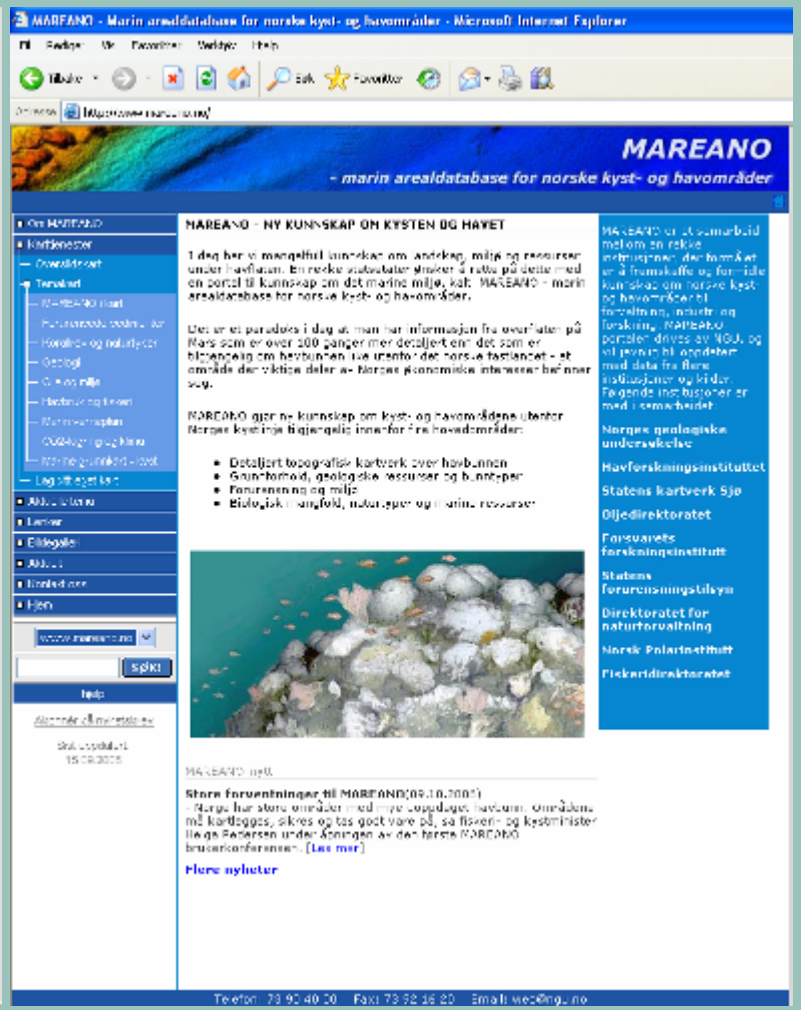



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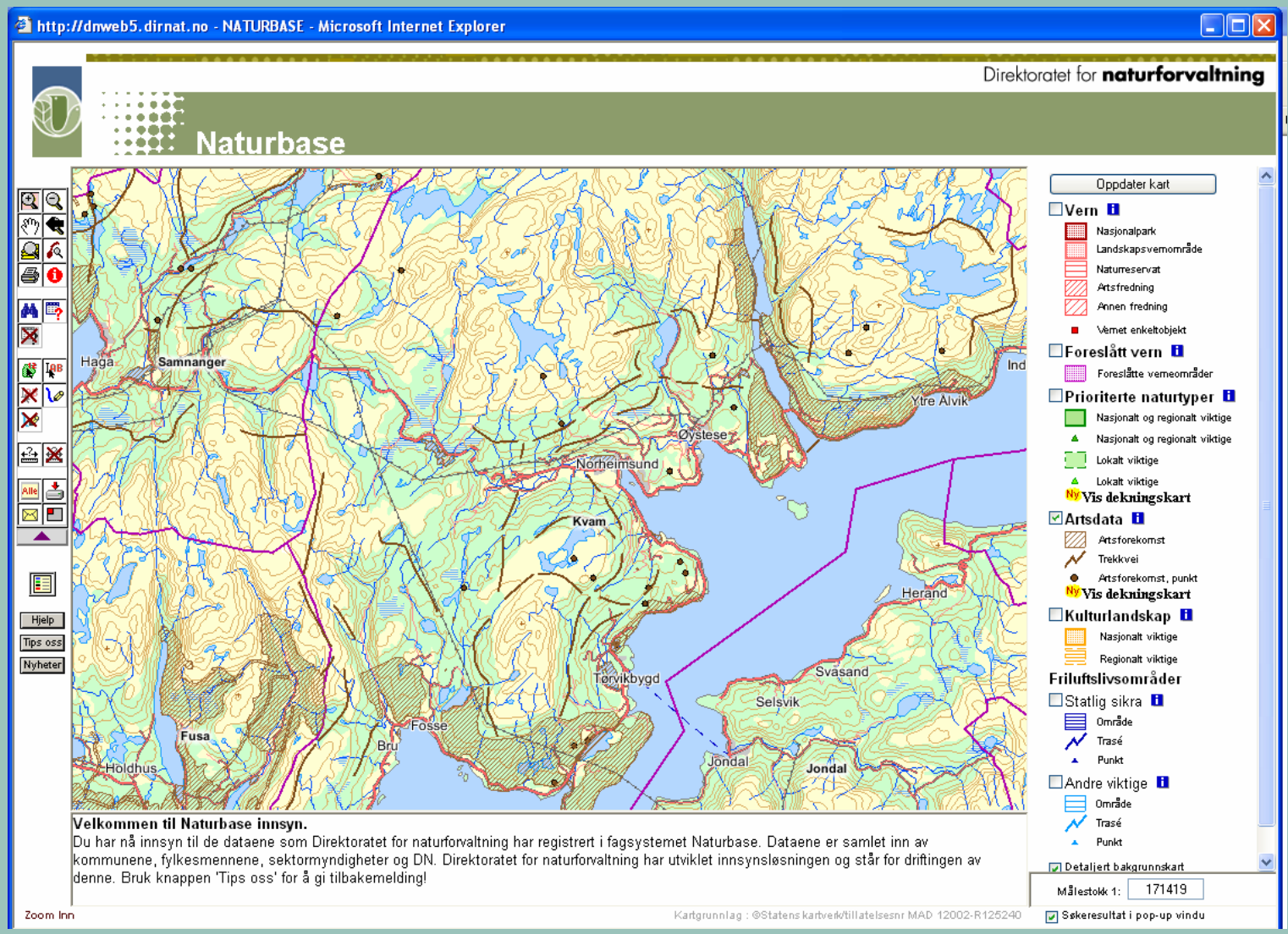
# Forskningsintitusjonar




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# Forvaltninga




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BROWSE TAXONOMY
Kingdom: Animalia
Kingdom: Archaea
Kingdom: Bacteria
Kingdom: Chromista
Kingdom: Fungi
Kingdom: Plantae
Kingdom: Protozoa
Kingdom: Unspecified
Kingdom: Viruses

DATA PROVIDERS
Taxonomic name
Specimen/observation

COUNTRIES
Data by country

GBIF REGISTRY
Data providers 188
Records 107007469
Become a data provider
Advanced search
Google Earth

ABOUT GBIF
Press
What is GBIF?
Demonstration Projects
New MOU (2007-2011)
Signatory table
GBIF's Current Members
How to Join GBIF
GBIF Directory
Documents & History
Ebbe Nielsen Prize
Symposia & Workshops
Work Programme

## ABOUT GBIF

The Global Biodiversity Information Facility (GBIF) is an international non-profit organisation to provide free and universal access to data regarding the world's biodiversity. To learn more about GBIF itself, visit the GBIF Communications Portal: **www.gbif.org**

A wide range of countries and organisations participate in GBIF and have made their data available here. These bodies maintain ownership for all of the data they share. Any feedback provided through this web site will be passed back to the data provider concerned.

## ABOUT THIS PORTAL

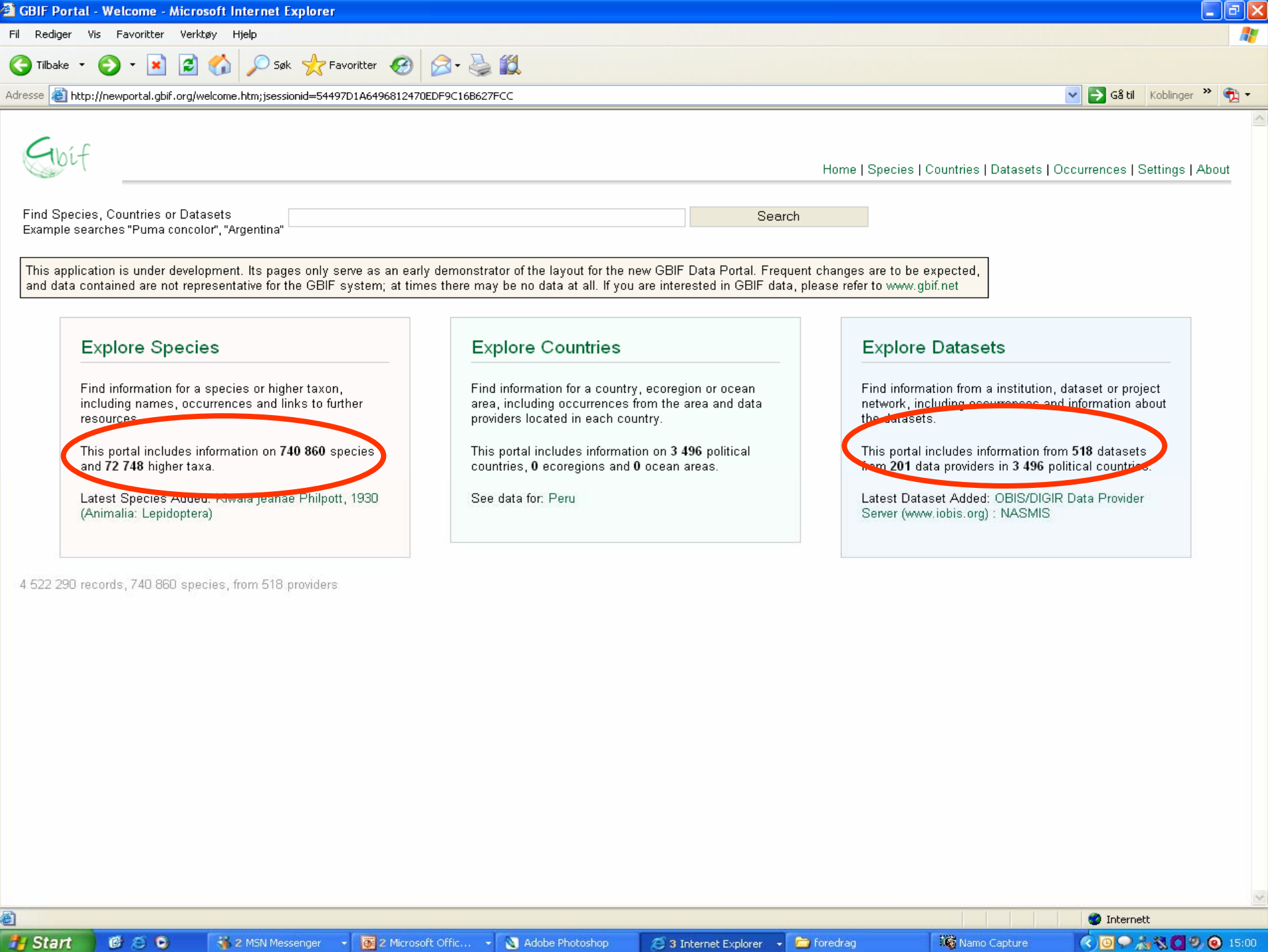
This portal is a prototype service providing access to the two types of data which are already being shared through the GBIF Network:

1. **Taxonomic names.** GBIF developing an 'Electronic Catalogue of Taxonomic Names'. This will provide access to authoritative information about both scientific and common names for all organisms, and will integrate data from a wide range of different organisations. The portal already includes data for over 983,000 scientific names and 253,000 common names from the Catalogue of Life Partnership Annual Checklist. Some names are listed with the words 'Tentative position in taxonomy'. This indicates that the name is only known to the portal from specimen/observation records and should not be treated as authoritative simply on the basis of being listed here.
2. **Specimens and Observations.** The GBIF Network already provides access to over 40 million records of occurrences of different organisms. Many of these relate to specimens in natural history museums and herbaria around the world, or to living cultures of micro-organisms, but at least a third come from observations of wild organisms. Wherever possible these records include information about the locality where the organisms were found and are used to generate maps of the distribution of these occurrences. Counts of occurrence records are listed against the organism names to which they apply. For genera and taxa of higher ranks, these counts include only those occurrences which have been identified to the taxon concerned. For species these counts include all occurrences for the species and also for any included infraspecific taxa, as well as for any known synonyms.

This is a work in progress. Please explore what is already present and visit us again in the coming months as we integrate more data and provide more flexible interfaces to search and browse the data. The following icons are used on many pages in the portal:

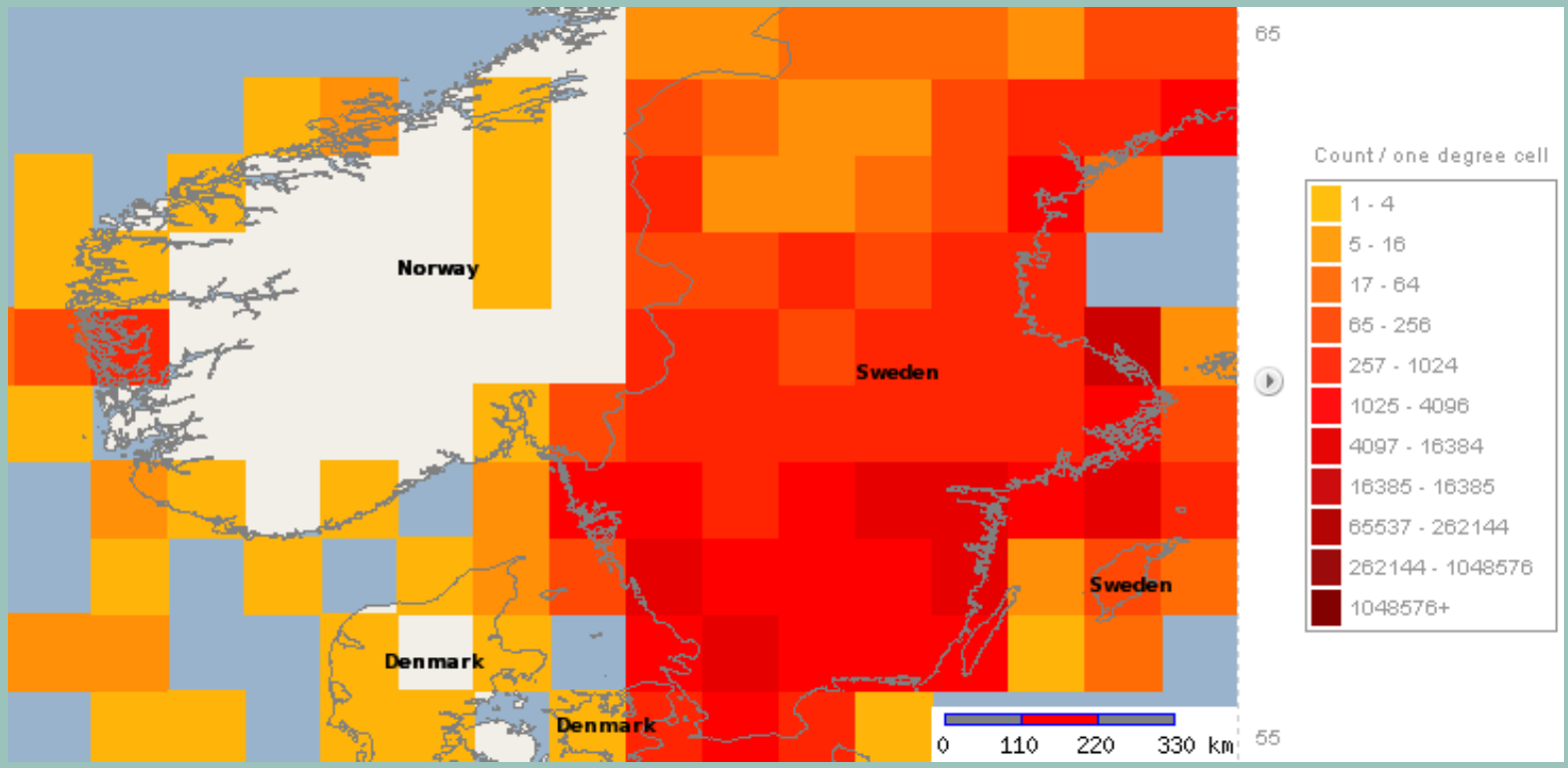
- Send feedback on a data item to the original data provider
- Get further details
- Download data

## USE OF DATA


GBIF Portal - Welcome - Microsoft Internet Explorer
Fil Rediger Vis Favoritter Verktøy Hjelp
Tilbake Søk Favoritter
Adresse http://newportal.gbif.org/welcome.htm;jsessionid=54497D1A6496812470EDF9C16B627FCC
Gå til Koblinger
Home | Species | Countries | Datasets | Occurrences | Settings | About
Find Species, Countries or Datasets
Example searches "Puma concolor", "Argentina"
Search
This application is under development. Its pages only serve as an early demonstrator of the layout for the new GBIF Data Portal. Frequent changes are to be expected, and data contained are not representative for the GBIF system; at times there may be no data at all. If you are interested in GBIF data, please refer to www.gbif.net
Explore Species
Find information for a species or higher taxon, including names, occurrences and links to further resources.
This portal includes information on 740 860 species and 72 748 higher taxa.
Latest Species Added: Kiwaia jeanae Philpott, 1930 (Animalia: Lepidoptera)
Explore Countries
Find information for a country, ecoregion or ocean area, including occurrences from the area and data providers located in each country.
This portal includes information on 3 496 political countries, 0 ecoregions and 0 ocean areas.
See data for: Peru
Explore Datasets
Find information from a institution, dataset or project network, including occurrences and information about the datasets.
This portal includes information from 518 datasets from 201 data providers in 3 496 political countries.
Latest Dataset Added: OBIS/DIGIR Data Provider Server (www.iobis.org) : NASMIS
4 522 290 records, 740 860 species, from 518 providers
Internett
Start
2 MSN Messenger
2 Microsoft Offic...
Adobe Photoshop
3 Internet Explorer
foredrag
Namo Capture
15:00

# Internasjonale GBIF- databasar

Dyr

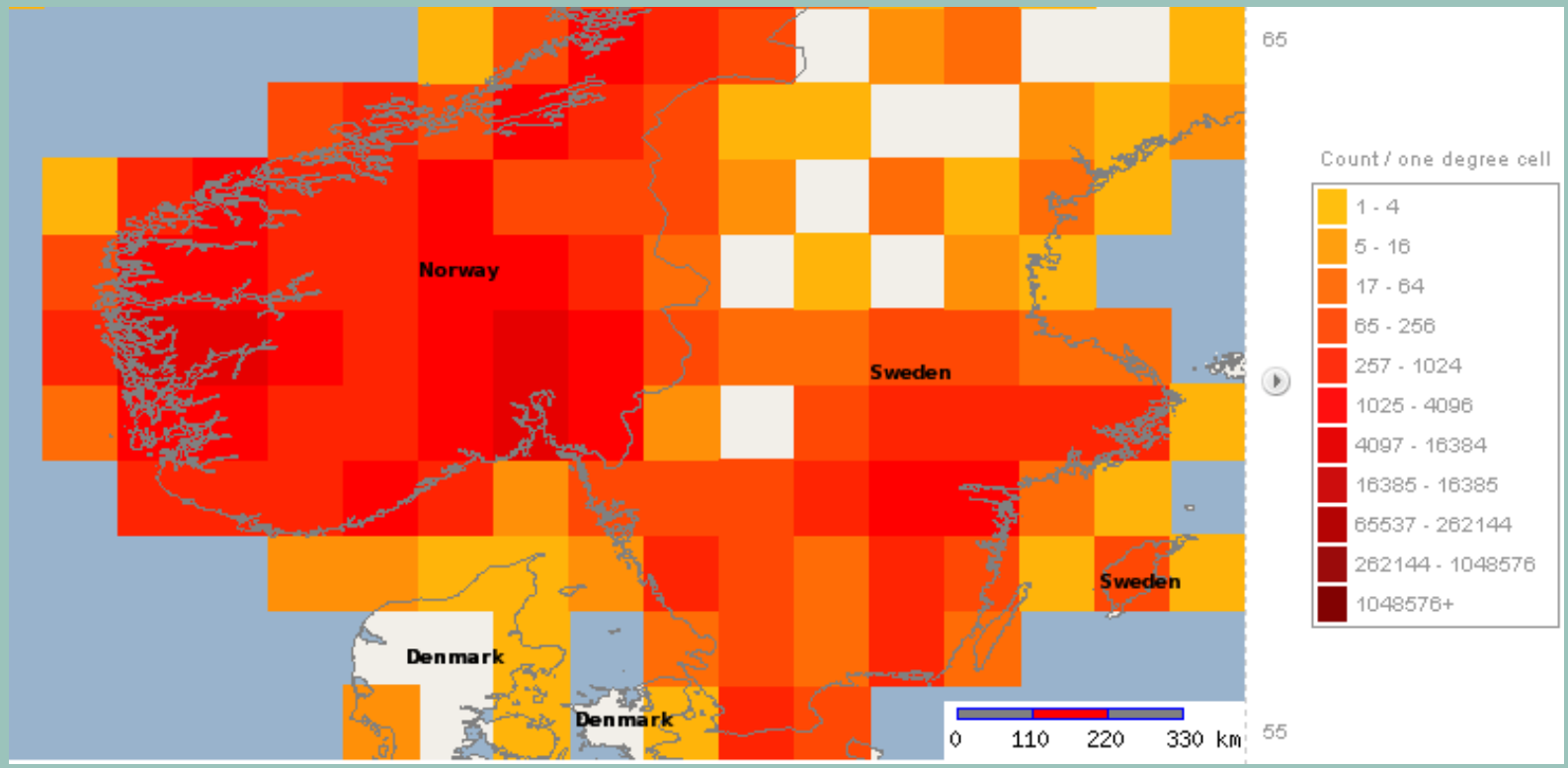



**Kjelde: http://newportal.gbif.org/**

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# Internasjonale GBIF- databasar

Sopp



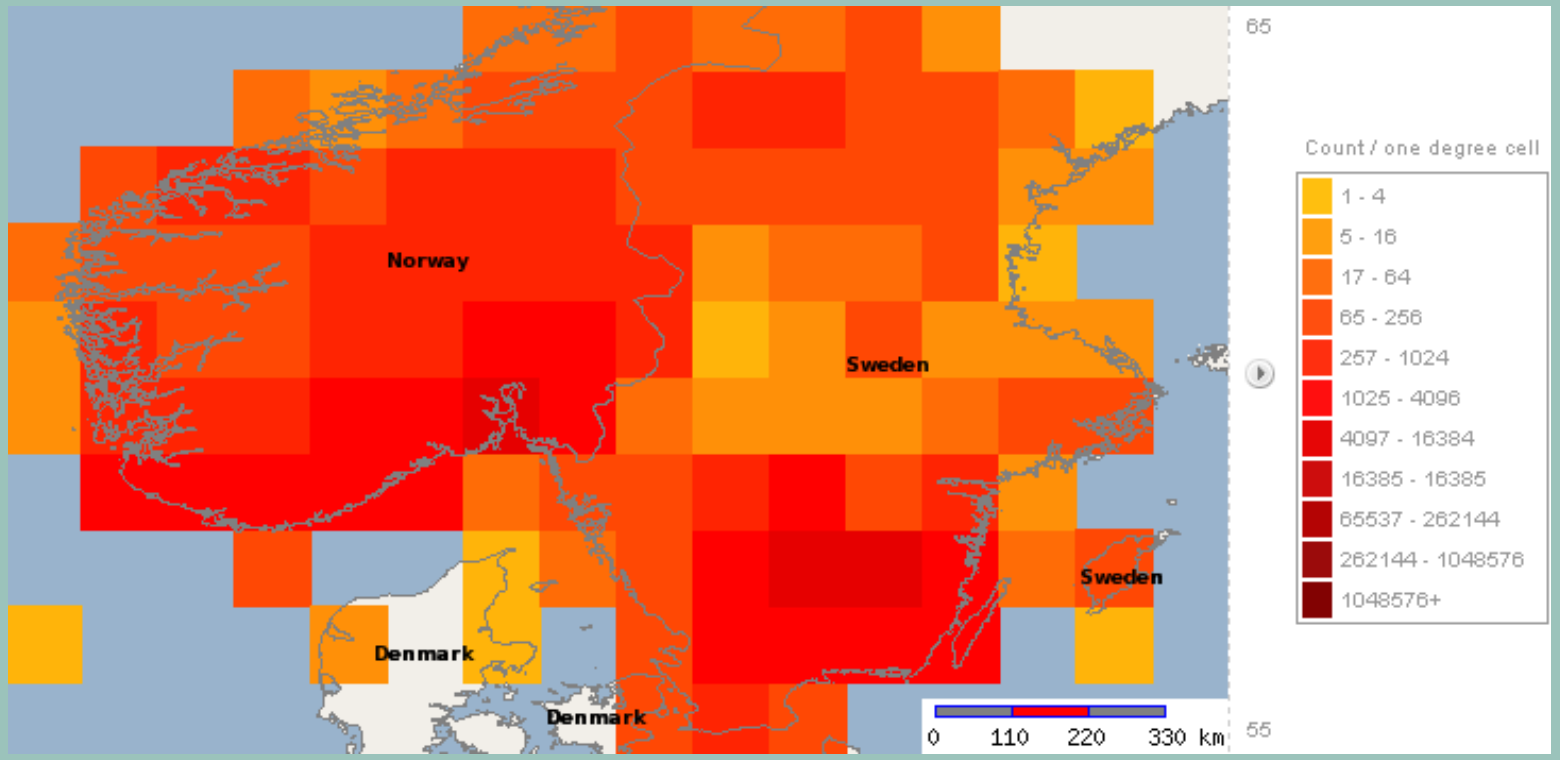

**Kjelde: http://newportal.gbif.org/**

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# Internasjonale GBIF- databasar

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## Planter

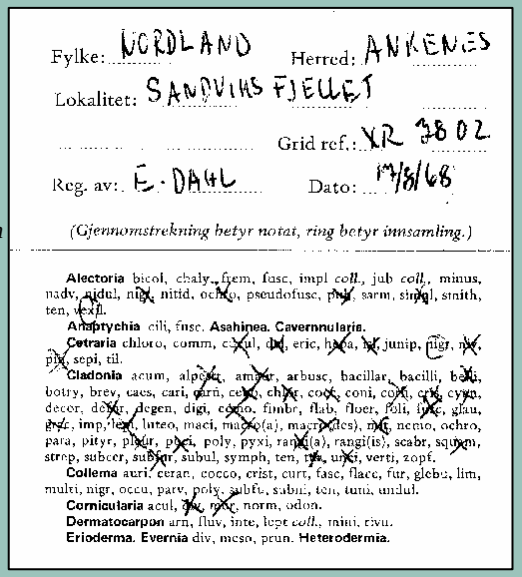



**Kjelde: http://newportal.gbif.org/**

# Kvalitetssikring



*Foto:Ron Foreman*



Fylke: NORDLAND Herred: ANKENES

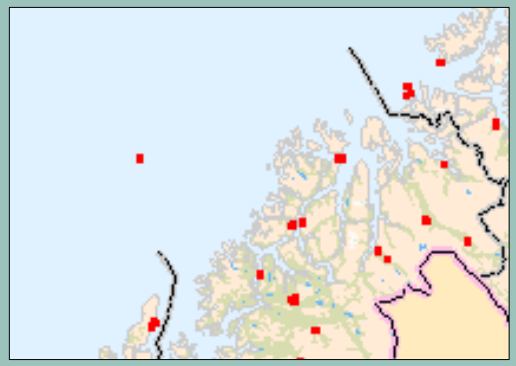
Lokalitet: SANDVIKS FJELLET

Grid ref.: XR 3802

Reg. av: E. DAHL Dato: 17/8/68

*(Gjennomstrekning betyr notat, ring betyr innsamling.)*

**Alectoria** bicol, chaly, fiem, fusc, impl *coll.*, jub *coll.*, minus, nadv, nidul, nig, nitid, ochro, pseudofusc, pub, sarm, sinoq, smith, ten, vexil.
**Anaptychia** cili, fusc. **Asahinea. Cavernularia.**
**Cetraria** chloro, comm, ex ul, du, eric, hiem, hy junip, nigr, nig, pin, sepi, til.
**Cladonia** acum, alpest, amaur, arbusc, bacillar, bacilli, bel, botry, brev, caes, cari, carn, cerv, chlor, coce, coni, corn, cris, cyan, decor, deg r, degen, digi, ecmo, fimbr, flab, floer, foli, furc, glau, gra, imp, lep, luteo, maci, macr (aj, macr ides), mit, nemo, ochro, para, pityr, pleur, pyxi, poly, pyxi, rang(a), rangi(is), scabr, squam, strep, subcer, subsq r, subul, symph, ten, tra, uncl, verti, zopf.
**Collema** auri, cerac, cocco, crist, curt, fasc, flacc, fur, glebu, lim, multi, nigr, occu, parv, poly, subfl, subnl, ten, tunl, undul.
**Cornicularia** acul, div, nigr, norm, odon.
**Dermatocarpon** arn, fluv, inte, lepr *coll.*, min, rivu.
**Erioderma. Evernia** div, meso, prun. **Heterodermia.**



- Artsnavn
  - mange gamle objekt/observasjoner med gamle artsnavn
  - taksonomien utviklar seg
  - oppdatering naudsynt
- Geografisk stadfesting
  - objekta samla for andre formål
  - gamle objekt med stadnavn, kommune eller UTM-rute
  - dårleg presisjon for arealforvaltning

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# Tilrettelegging

**DARWIN CORE 2 (ver. 1.2)**

| | Field Name | Format | Norsk minimum |
|---|---|---|---|
| 1 | DateLastModified | date, | Ja |
| 2 | InstitutionCode | char(10), | Metadata |
| 3 | CollectionCode | char(3), | Metadata |
| 4 | CatalogNumber | char(10), | Ja |
| 5 | ScientificName | char(100), | Nei |
| 6 | BasisOfRecord | char(18), | Metadata / Ja |
| 7 | Kingdom | char(8), | Ja |
| 8 | Phylum | char(20), | Ja |
| 9 | Class | char(25), | Ja |
| 10 | Order | char(25), | Ja |
| 11 | Family | char(25), | Ja |
| 12 | Genus | char(25), | Ja |
| 13 | Species | char(30), | Ja |
| 14 | Subspecies | char(25), | Ja |

- Databaseobjekta må kodast av dataeigar/dataforvaltar
- Parameterliste jfr. Darwin Core 2 (GBIF standard)
- Norsk tillegg med norske navn og georeferering

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* Utdrag av Darwin Core 2

Darwin Core 2 DRAFT Review - Welcome to Darwin Core 2 Review - Microsoft Internet Explorer
Fil Rediger Vis Favoritter Verktøy Hjelp
Tilbake Søk Favoritter
Adresse http://darwincore.calacademy.org/ Gå til Koblinger



navigasjon

- Forside
- Documentation
- Extensions
- Pending Issues
- Related Sites
- About This Site

logg inn

**Brukernavn**

**Passord**

logg inn

Glemt passordet?

Ny bruker?

# Welcome to Darwin Core 2 Review

**The Darwin Core 2 is a simple set of data element definitions designed to support the sharing and integration of primary biodiversity data.**

Please note, the version of the DarwinCore under discussion here is **not** for implementation at this time. This site is for discussing what will come next. The versions currently in use are:

- 1.2 -- generic; see the DiGIR web site
- 1.21 -- for use with MaNIS, HerpNet, and OrNIS; see the DiGIR web site
- OBIS -- for use with the Ocean Biogeographic Inforamtion System; see the OBIS web site

The normative form of any Darwin Core 2 schema is an XML schema document (*.xsd). The schema file may display in your browser, or it may need to be saved locally for viewing. The XML schema proposed here can be downloaded as a schema or viewed in more readable HTML form via the Documentation page. The previous versions, with comments, are also available.

Please read the Purpose and Design Goals of the Darwin Core 2 to understand the rationale behind the current draft.

The Darwin Core 2 was proposed as a DRAFT standard in 2004, and is now being developed to be a standard of the Taxonomic Databases Working Group (TDWG). At the 2005 TDWG Meeting a sixty-day period of review and comment ended with the retraction of the Darwin Core 2 from consideration as a standard (see announcement at http://listserv.nhm.ku.edu/cgi-bin/wa.exe?A2=ind0509&L=tdwg&F=&S=&P=962). The Darwin Core has entered a new period of development to address concerns about schema architecture for all TDWG standards. Pending issues and suggested modifications are being summarized on this site and via a mailing-list/newsgroup hosted by GBIF. The contents of both sites are publicly visible, but only registered users can create new content, make comments, or post messages to the list. (Registration is easy and has been imposed only as a precaution against abuse, not a mechanism to limit participation). Unfortunately, the logins are not shared between sites, so separate registrations are required.

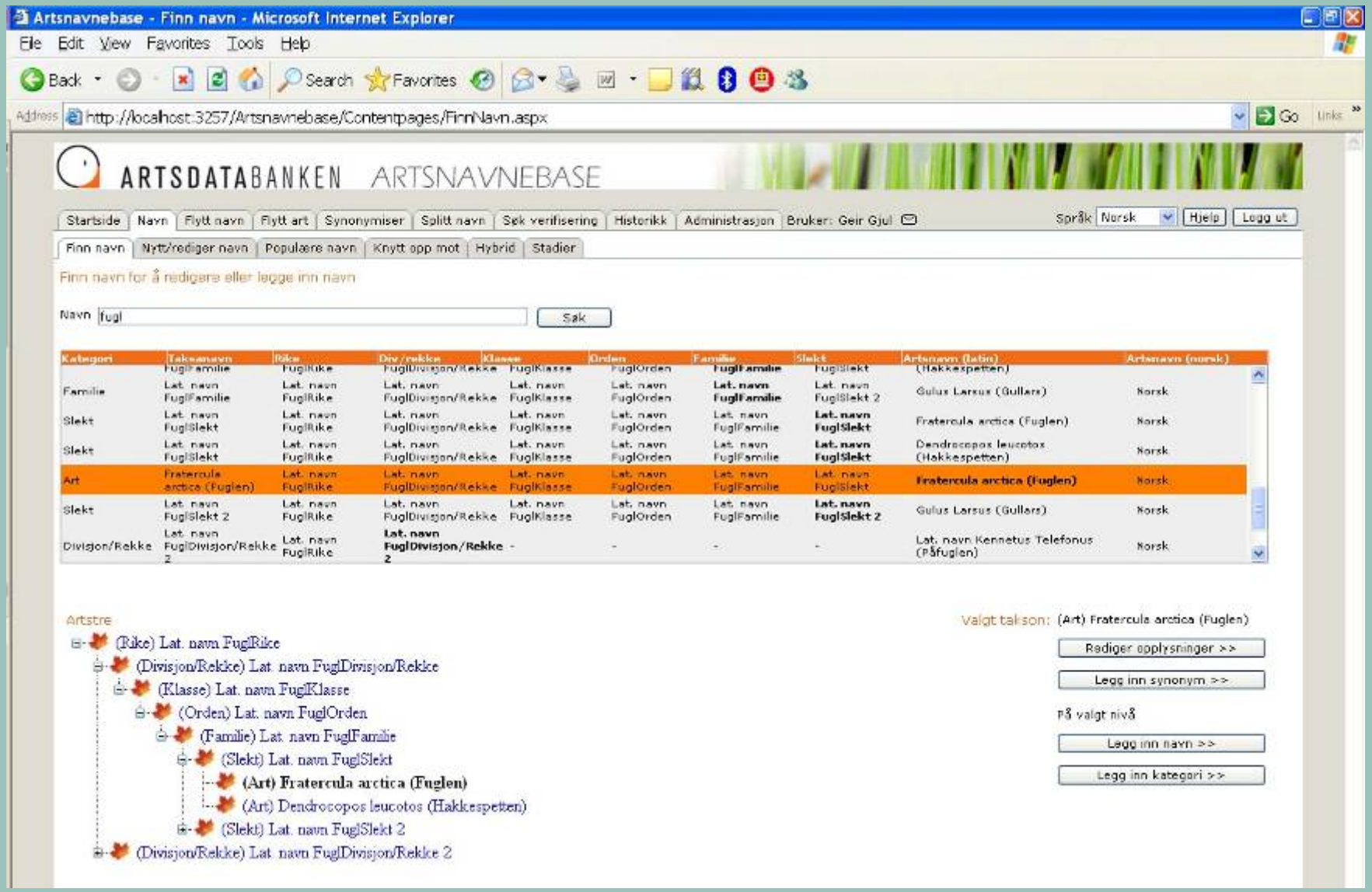
- Register on this site to create summaries and add comments;
- Register at the TDWG CIRCA site to post messages to the Darwin Core 2 Review list. (Follow the Self Register link on the upper right of the page.)

**IE users note: if a page takes too long to load, click the REFRESH button in the tool bar.**

Opprettet av admin
Sist endret 2005-10-09 08:53 PM

Fullført Internett
Start MSN Messenger 2 Microsoft ... Adobe Photos... Artsdatabank... Darwin Core 2... foredrag Namo Capture 15:58

# Felles artsnavn




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# Lage wms-teneste



```
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 ]>  <!-- end of DOCTYPE declaration -->

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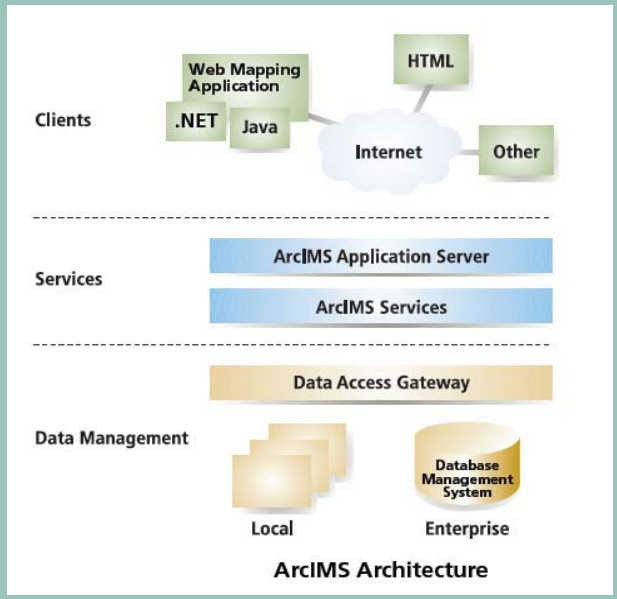
<!-- MapServer version 4.8.4 OUTPUT=GIF OUTPUT=PNG OUTPUT=JPEG OUTPUT=WBMP OUTPUT=

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  <Title>Test botanikk fra NTNU - Eksport til Artsdb.</Title>
  <OnlineResource xmlns:xlink="http://www.w3.org/1999/xlink" xlink:href="http://ga
</Service>

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  <Request>
    <GetCapabilities>
      <Format>application/vnd.ogc.cwc_xml</Format>
      <DCPType>
        <HTTP>
          <Get><OnlineResource xmlns:xlink="http://www.w3.org/1999/xlink" xlink:hr
          <Post><OnlineResource xmlns:xlink="http://www.w3.org/1999/xlink" xlink:h
        </HTTP>
      </DCPType>
    </GetCapabilities>
    <GetMap>
      <Format>image/gif</Format>
      <Format>image/png</Format>
      <Format>image/png; mode=24bit</Format>
      <Format>image/jpeg</Format>
      <Format>image/wbmp</Format>
      <Format>image/tiff</Format>
      <DCPType>
        <HTTP>
          <Get><OnlineResource xmlns:xlink="http://www.w3.org/1999/xlink" xlink:hr
```




- Dataeigar eller den institusjon som forvaltar dataene
- Lage XML-skjema



# Arter søkbare med SLD

- Søkje eller velgje arter eller taksonomiske grupper ved hjelp av SLD
- Søkjer på tvers av dataleverandørar
- Krev at data-leverandørar brukar same artsnavn og navn på høgare taksonomisk gruppe

- Styled Layer Descriptor
  - standard i OGC
- Interoperabilitet med vektordata
- Kan tilpassa kartografi

http://www.opengeospatial.org/standards/sld

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Styled Layer Descriptor | OGC® - Microsoft Internet Explorer
Fil Rediger Vis Favoritter Verktøy Hjelp
Tilbake Søk Favoritter
Adresse http://www.opengeospatial.org/standards/sld
Gå til Koblinger



Standards
- OpenGIS® Specifications
  - Catalogue Service
  - Coordinate Transformation
  - Filter Encoding
  - Geographic Objects
  - Geography Markup Language
  - GML in JPEG 2000
  - Grid Coverage Service
  - Location Services (OpenLS)
  - Simple Feature Access 1
  - Simple Feature Access 2
  - Simple Features CORBA
  - Simple Features OLE/COM
  - Styled Layer Descriptor
  - Web Coverage Service
  - Web Feature Service
  - Web Map Context
  - Web Mapping Service
  - Web Service Common
- Specification Profiles
- Abstract Specification
- Best Practices
- Discussion Papers
- Deprecated Documents
- Retired Documents
- Requests (RFP's, RFQ's...)

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# Styled Layer Descriptor

## OpenGIS® Styled Layer Descriptor (SLD) Implementation Specification

1) Overview
2) Downloads
3) Related News

## 1) Overview

The OpenGIS® Styled Layer Descriptor (SLD) Implementation Specification is an encoding that extends the Web Map Service specification to allow user-defined symbolization of feature data. It allows users (or other systems) to determine which features or layers are rendered with which colors or symbols.

The importance of visual portrayal of geographic data cannot be overemphasized. This document addresses the need for geospatial consumers (either humans or machines) to control the visual portrayal of the data with which they work. The current OpenGIS Web Map Service (WMS) specification supports the ability for an information provider to specify very basic styling options by advertising a preset collection of visual portrayals for each available data set. However, while a WMS currently can provide the client with a choice of style options, the WMS can only tell the client the name of each style. It cannot tell the client what portrayal will look like on the map. More importantly, the client has no way of defining its own styling rules. The ability for a human or machine client to define these rules requires a styling language that the client and server can both understand.

Defining this language, called the Styled Layer Descriptor (SLD), is the main focus of this specification which can be used to portray the output of Web Map Servers, Web Feature Servers and Web Coverage Servers.

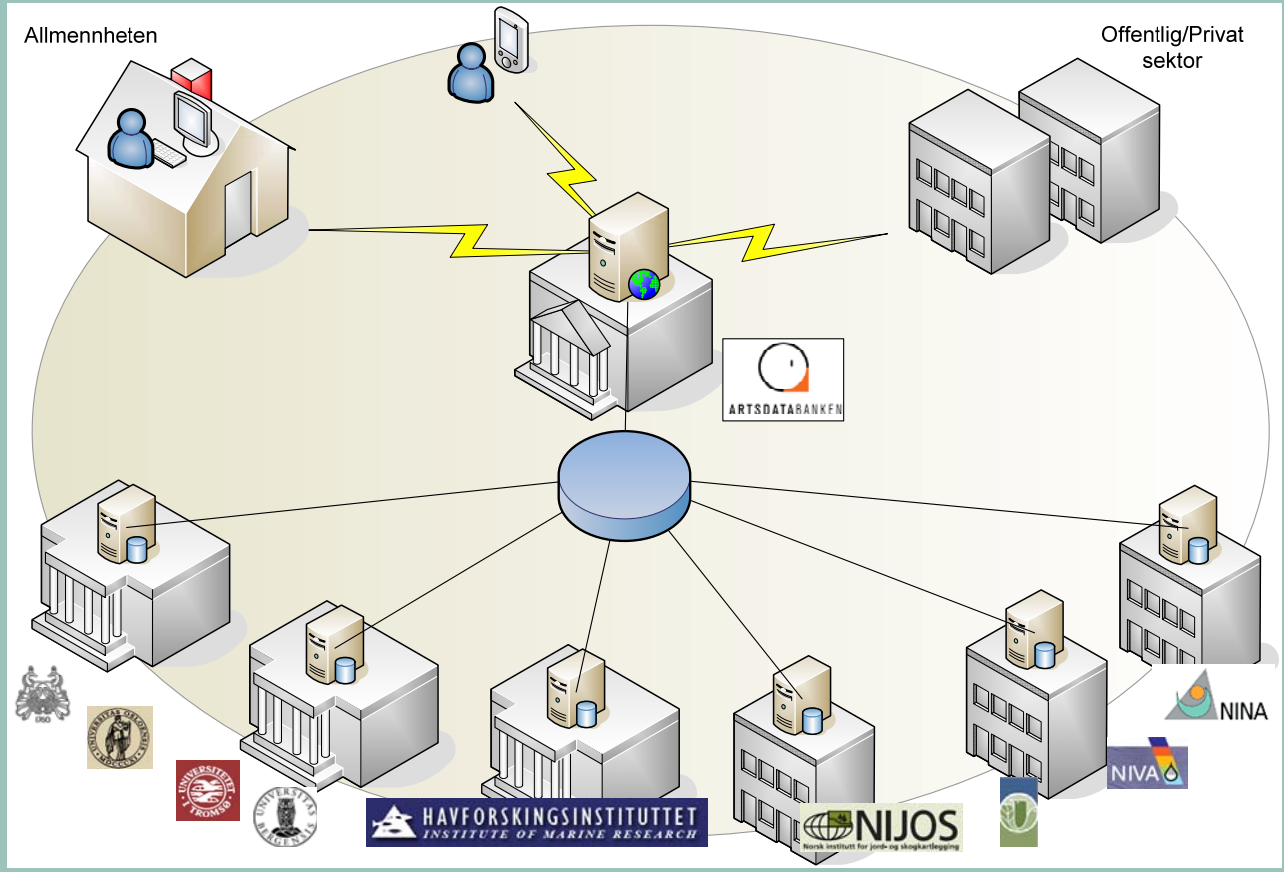
## 2) Downloads

| Version | Document Title (click to download) | Document # | Type |
|---|---|---|---|
| 1.0 | OpenGIS® Styled Layer Descriptor (SLD) Implementation Specification | 02-070 | IS |
| 1.1 | Styled Layer Descriptor Profile of the Web Map Service Implementation Specification | 05-078 | DP |

## 3) Related News

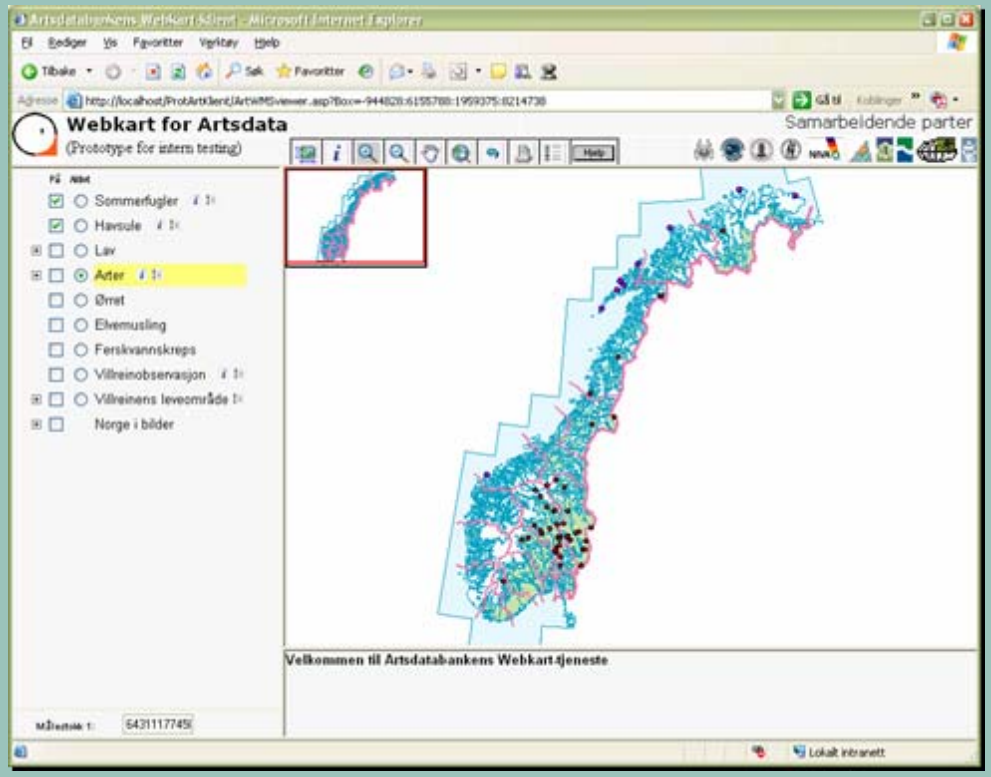
Internett
Start MSN Messenger 2 Microsoft ... Adobe Photos... 4 Internet E... foredrag Namo Capture WMS_notat_v... 16:19

# Webkartteneste for artsdata




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# Webkart-teneste




***Byggjer på prinsippa i Norge Digitalt***

## *Framdrift*

- Prosjekt
  - **oppstart våren 2006**
  - **varer ut 2007**
- Webkartforum etablert
- Pilotversjon aug. 2006
- Felles med GBIF-Norge frå sept. 2006
- Lansering versjon1.0. 01.02.2007 med nokre datasett frå partane
- Utfordringar
  - **Datakvaliteten**
  - **Teknologien hjå partane**
  - **Ressursmangel**
  - **Datarettar**

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# GLOBAL BIODIVERSITY INFORMATION FACILITY

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WWW.GBIF.ORG

# GBIF Mission

Megascience project aimed at

- Making the world's biodiversity data freely and universally available via the Internet
- Sharing primary scientific biodiversity data to benefit science and society.

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# GBIF-Norge

- Norges Forskningsråd er ansvarleg
- Drifta av ein nasjonal node er gjeve i oppdrag til NHM-UiO ( 3 år i første omgang)
- Norges Forskningsråd har etablert eit nasjonalt råd
- Tett samarbeid mellom GBIF-noden og Artsdatabanken

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# Folkeleg deltaking i registrering av planter og dyr i norsk natur



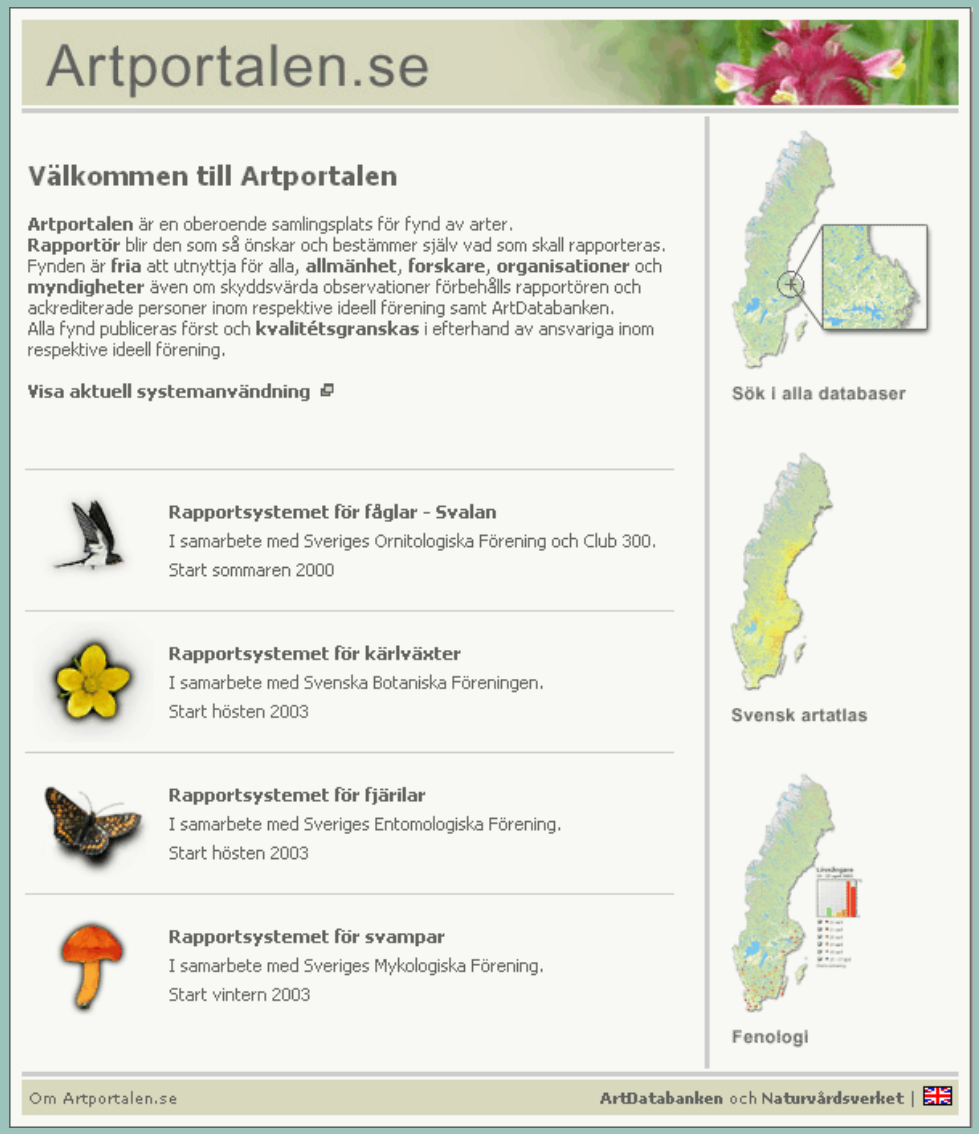
**Foto: www.woodland-trust.org.uk**

- Behov for å gjere biologisk mangfald folkeleg
- Kunnskapen som vanlege folk har om dyr og planter er ikke liten
- Den folkelege kunnskap kan bidra til vår nasjonale ”kunnskapsbase”.
- Skape interesse for å vere med på å auke vår felles kunnskap om førekomst og utbreiing av arter
- Treng verktøy for at både vanlege folk og dei som er høg arts-kompetanse kan registere sine artsobservasjonar og finna dei igjen, bl. på kart

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# Artsobservasjoner.no

***– folkeleg og profesjonell medverknad***




- Norsk versjon av den svenske Artportalen.se
  - **Etablere ”kopi” i Artsdatabanken eller**
  - **Drift hjå Artdatabanken**
- Ynskjer samarbeid med norske organisasjonar og aktørar
  - NOF
  - NBF
  - osv….
- Prinsippet er å registrere først og kvalitetssikre etterpå
- Mi side

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Rapportsystemet för
**Fåglar**

Rapportsystemet för
**Kärlväxter**

Rapportsystemet för
**Fjärilar**

Rapportsystemet för
**Svampar**

Rapportsystemet för övriga
**Vertebrater**

Rapportsystemet för
**Fiskar**

# Artportalen.se

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## Observasjonar:

- Ca. 7 mill. fuglar sidan juni 2000
- 434 000 karplanter (frå okt. 2003)
- 185 000 sommarfuglar (frå okt. 2003)
- 30 000 sopp (frå feb. 2004)
- 1,9 mill. obs i 2005
- 2 mill. obs til no i 2006

## Rapportar/uttak:

- 10 mill i 2005
- 14 mill. til no i 2006

## Webtrafikk 2005:

- 119 mill. treff
- 326 000 treff/dag
- 5700 innom kvar dag
- 318 000 unike IP-nummer

# Prosjektoppstart



- Avklare behov og nytte innan 01.11.2006
- Avklare kostnader, roller og organisering innan 07.12.2006
- Styrehandsaming 07.12.2006
- Implementering i 2007 ?

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# Prikken



- Finn ein art
- Lag ein prikk på Norgeskartet
- Del han med andre
- Prikken kan setja punktum for eit tiltak som hadde ført til tap av biologisk mangfald

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