

Catalogue of *Mutilla europaea* Linnaeus, 1758 (Insecta, Hymenoptera, Mutillidae) deposited in the collections of the major Natural History Museums of Sweden

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Abstract

Natural History Museums in Sweden have thousands of curated specimens and include Sweden's largest holdings of *Mutilla europaea* Linnaeus, 1758 (Insecta, Hymenoptera, Mutillidae). The present survey recorded 216 specimens of *M. europaea* in eight different major museums, collected from the 18th century to the present day, representing an invaluable source of historical biodiversity data. This work aims to create a guide to all datasets of museum collections of *M. europaea* created within the GBIF initiative, revealing the geographical distribution and frequency of the species in southern Sweden.

Key words: Database, GBIF, insect collection, Scandinavia



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Introduction

Sweden has a strong entomological tradition and large quantities of insects have been collected for a long time. Many of these specimens now belong to museums all over the country. These vast collections are the result of nearly 300 years of collecting (NRM 2024). Scientific collections are museums' key to successful research, international collaboration and live exhibitions, serving as sources of biological data for scientists, educators, and the general public (Bradley et al. 2014). Preserving and valorizing the scientific, cultural and historical value of the collections represent the core mission of museums.

GBIF (Global Biodiversity Information Facility) is a central organization focusing on biodiversity informatics and biodiversity data. Its aim is to ensure reliable access to information and data on biodiversity worldwide. GBIF is a global infrastructure that unites researchers, authorities and organizations worldwide to achieve this goal. The major Swedish natural history museums are associated to GBIF.

The Swedish collections of Hymenopteran species are now a large archive of individuals collected by people in different parts of the country over many decades. Insect collections can be used in researches about rare species that are difficult to study in the field and also in studies over longer time series that extend far back in time. However, it can be difficult to know in which collections all specimens are found. Museums often do not provide complete lists of the



specimens in their collections despite increased digitization efforts, thus making it difficult to make data available to the scientific community. This project's dataset focuses on the large velvet ant *Mutilla europaea*, Linnaeus 1758 (Hymenoptera: Mutillidae), documenting its occurrence and distribution in Swedish museum collections. *Mutilla europaea* is a wasp showing strong sexual dimorphism. The females are wingless and terrestrial while the males are winged. The males fly during summer when they also pollinate plants. The females are bumblebee (*Bombus* spp.) nest parasites: after mating, they lay their eggs in *Bombus* spp. nests (Brothers et al. 2000). The distribution of the species outside Sweden includes most of Europe (including the European part of Russia, South Ural, Western Siberia), North Africa, Asia: Kazakhstan, Turkey (Lelej and Schmid-Egger 2005) and as far east as Japan.

Material and methods

The survey dealt with the museum collections that have the largest insect collections in Sweden, i.e. National Museum of Natural History in Stockholm (**NRM**), the National Museum of Natural History in Gothenburg (**GNM**), the Biological Museum in Lund (**BMIL**) and the Museum of Evolution in Uppsala (**EMIU**). The collection in the Biological Museum in Lund is the largest one. The survey covered also a number of smaller but still significant collections, i.e., Helsingborgs museum (**HM**), Malmö museum (**MM**), Vänersborgs museum (**VM**) and Sveriges lantbruksuniversitet (**SLU**), which manages the Veterinary Museum in Skara, which has its collection of insects in the Ecology Center in Uppsala. A dataset was then created and added to the datasets available through GBIF.

Data set name: Map of specimens in the largest museum collection in Sweden (this link is not publicly accessible and requires user registration).

Map: https://www.gbif.org/occurrence/download?country=SE&dataset_key=b23c2479-214f-4160-9f98-bd3831ab131b&dataset_key=4508bed1-d45d-4a2d-9790-34cc99ee8cce&dataset_key=2356f899-6244-4bbb-aa33-50e29132e86a&taxon_key=4506278&advanced=1.

Filter used:

- "DatasetKey is one of (Lund University Biological Museum - Insect collections Specimens, Entomological Collection (GNM), Lund University Biological Museum - Insect collections Inventory)",
- "TaxonKey is *Mutilla europaea* Linnaeus, 1758"

The survey focused exclusively on *M. europaea* found in the Hymenoptera Museum collections. The author trusted the identification labels because there are no other *Mutilla* species in Sweden. A frequency map and a distribution map (Alpha 200) of sites from which *M. europaea* has been confirmed were built using the Swedish Agricultural University's (SLU) database Artdatabanken (<https://www.analysisportal.se>) based on grid statistics. Those maps contain all records from Sweden collected during the survey.

Results

The collections of the surveyed museums contained a total of 216 specimen from Sweden (Table 1) (189 pinned and 27 glued), distributed over a time span of 150 years, from the 1870s until the 2020s (Fig. 1). The surveyed collections of *M. europaea* are in good condition and offer a good reference base for researchers. A total of 138 specimens had complete data with year and locality that can be used to confirm the species distribution and frequency in Sweden (Figs 2, 3).

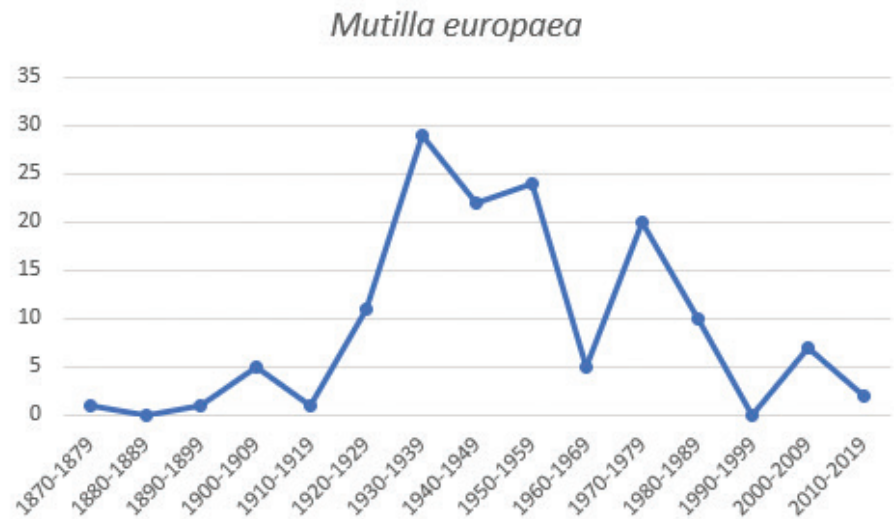


Figure 1. Number of specimens of *M. europaea* in the collections distributed over each decade from 1870 to 2019.

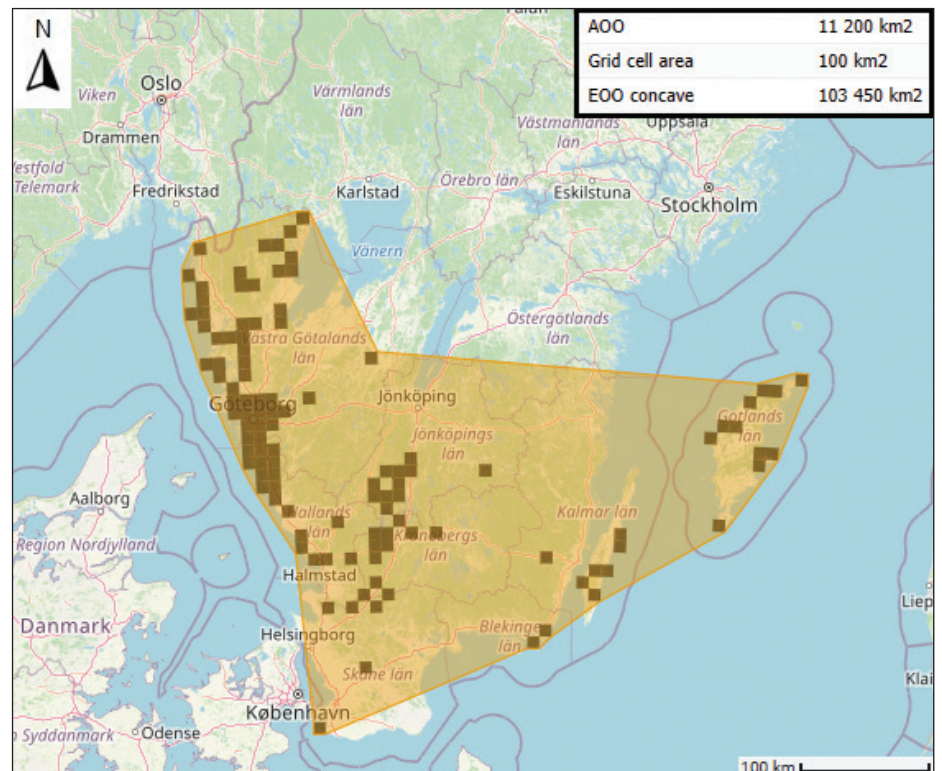


Figure 2. Distribution map of *M. europaea* in Sweden based on the surveyed collections.

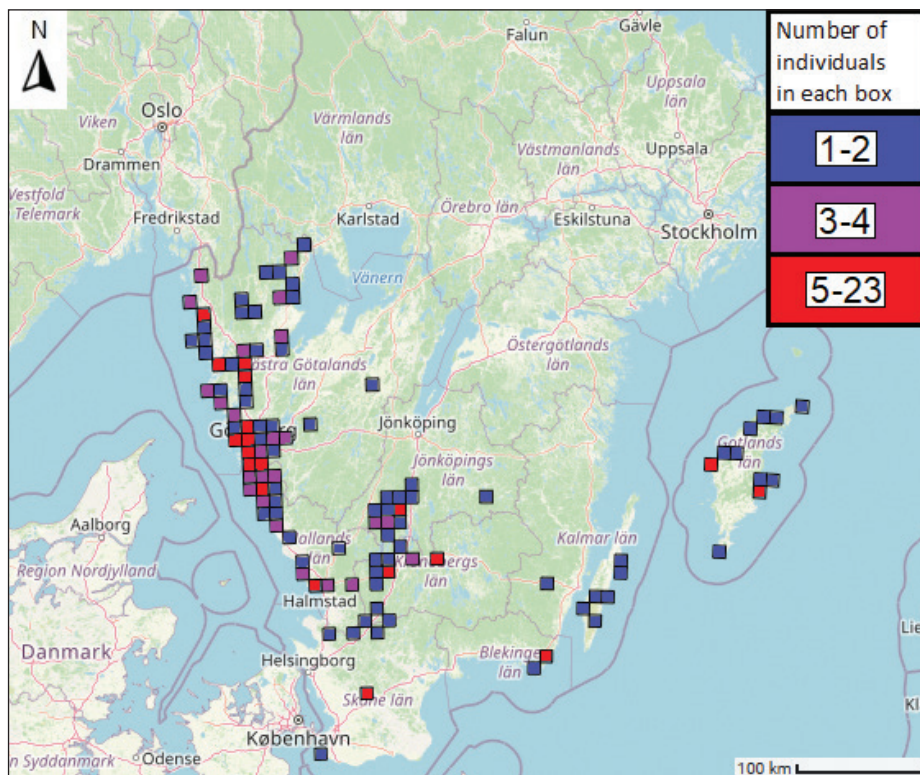


Figure 3. Frequency map of *M. europaea* in Sweden based on the surveyed collections.

Table 1. The number of *M. europaea* in insect collections in Swedish museums.

Museum	Number of specimen	Females	Males
National Museum of Natural History, Stockholm	49	29	20
National Museum of Natural History, Gothenburg	59	50	9
Biological Museum at Lund University	70	46	24
Museum of Evolution, Uppsala	19	8	11
SLU, Ekologocentrum	11	9	2
Vänersborgs Museum	5	3	2
Helsingborgs Museum	2	2	0
Malmö Museum	1	1	0

Remarks on some of the surveyed specimens and on the examined collections

Among the surveyed collections are some of the oldest entomological collections in the world. BMIL collection has its origins in the early 18th century, holding the entomological collection of Johan Leche (1704–1764) and the collection of Kilian Stobaeus, donated to the museum in 1735 (Kilian Stobaeus is best known as the teacher of Linné during the year he lived in Lund, 1727–28). This collection is considered the second oldest insect collection in the world (Zoologiska Museet i Lund 2024). The historical collection found in EMIU was collected by Linnaeus' former disciple Carl Peter Thunberg (however, it is not certain that the specimens of *M. europaea* found in that collection come from Sweden (pers. comm. Mejlon H. Museum curator EMIU 2023-12-20)).

Some ambiguities exist such as a specimen (No. 63 in Appendix 1) in GNM labelled “Kullabo” but there are three Kullabo in Sweden and it is impossible to know which is the real location today. Three specimens in RNM (No. 4, 5 and 6 in Appendix 1) were labelled “Karup” but it is not known if it is the South or the North Karup.

Stellan Erlandsson wrote a paper in which he listed all documented finds of *M. europaea* he knew (Erlandsson 1964). During the survey four additional specimens identified by Erlandsson in 1971 were found in SLU, Ekologocentrum (No. 202, 203, 204 and 205 in Appendix 1).

The individuals in HM were collected by Cecilia Andersson. Cecilia Andersson was a diligent collector of insects, especially butterflies and beetles, and can be counted as the first woman in Sweden who was an active insect collector. The specimens lack the date of collection, the collecting locality is Båstad (Fig. 5). Cecilia Andersson lived in Båstad during the period 1906–1917 and it is therefore probably that the insects from Båstad were collected during that period (pers. comm. Hansen HR. Museum curator HM 2024-01-08)).



Figure 4. *Mutilla europaea* determined by Dr. Erlandsson.



Figure 5. *Mutilla europaea* collected by Cecilia Andersson, glued specimens. Photo: Hasse Römer Hansen.

Some other notable specimens

Some specimens have a scientific value higher than others. For instance, the two specimens collected in Östergötland county (Fig 6) (No. 104 and 105 in Appendix 1) are the only known individuals recorded in the county apart from one literature record (Hedström 1985). Unfortunately, their labels are difficult to interpret and it is only possible to decipher ÖG, which is the abbreviation for Östergötland.



Figure 6. The two specimen of *M. europaea* from Östergötlands county with label data difficult to decipher.

There are many black males of *M. europaea* in Eastern and Central Europe but only one black male collected in Sweden exists (Fig. 7). It was recorded in Steneby, Dalsland in Västra Götalands County and belongs to BMIL (No. 133 in Appendix 1).



Figure 7. The only black male in the surveyed collections.

During the survey it was possible to find a specimen probably corresponding to the literature record contained in the old inventory of insects made by Henning Nordenström partly during the 1870s and partly in 1896–99 where a finding of *M. europaea* is mentioned (Nordenström 1900). The individual listed by Nordenström was found in Odensjö and it could possibly be a specimen in RNM that was captured in Odensjö 1896 (collector unknown) (No. 1 in Appendix 1) (Fig. 8).



Figure 8. The specimen captured in Odensjö 1896.

Specimens collected in nests of *Bombus* spp.

Three females in BMIL were found in nests of *Bombus agrorum* Fabricius, 1787, nowadays *Bombus pascorum* Scopoli, 1763 (No. 123, 124 and 128 in Appendix 1). One female also from BMIL was found in a nest of *Bombus terrestris* Linnaeus, 1758. It is also mentioned that it hatched on September 1st 1925. In RNM 13 males and 3 females were captured in a nest of *Bombus muscorum* Linnaeus, 1758 (Erlandsson 1964) (No. 8, 19, 20 and 23 in Appendix 1). Stellan Erlandsson wrote in his paper that Wieslander found many males and females on August 3, 1930 (Erlandsson 1964). It is likely that these are the specimens labelled “August 20, 1930” in RNM that he is referring to. These are interesting findings, showing *M. europaea* interactions with the bumblebees they parasitize in Scandinavia.

Conclusions

Mutilla europaea is a relatively rare species in Sweden and the creation of a database of records for this species, by using the important collections of Swedish natural history museums, provides researchers with an important tool for extracting data useful for studies on the species conservation, systematics, biogeography, ecology and biology. The inclusion of the *M. europaea* database in the Swedish node of GBIF, ‘GBIF Sweden’, will provide the world community of scientists the access to several different types of data such as metadata, species lists or checklists and species observations for research on *M. europaea*.



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Additional information

Conflict of interest

The author has declared that no competing interests exist.

Ethical statement

No ethical statement was reported.

Funding

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Author contributions

The author solely contributed to this work.

Data availability

All of the data that support the findings of this study are available in the main text.

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Appendix 1

This appendix contains a list of all specimens of *Mutilla europaea* that were found in Sweden from 1850–2020 and which today are part of the eight largest historical insect collections in museums in Sweden (all them now part of the database accessible through GBIF).

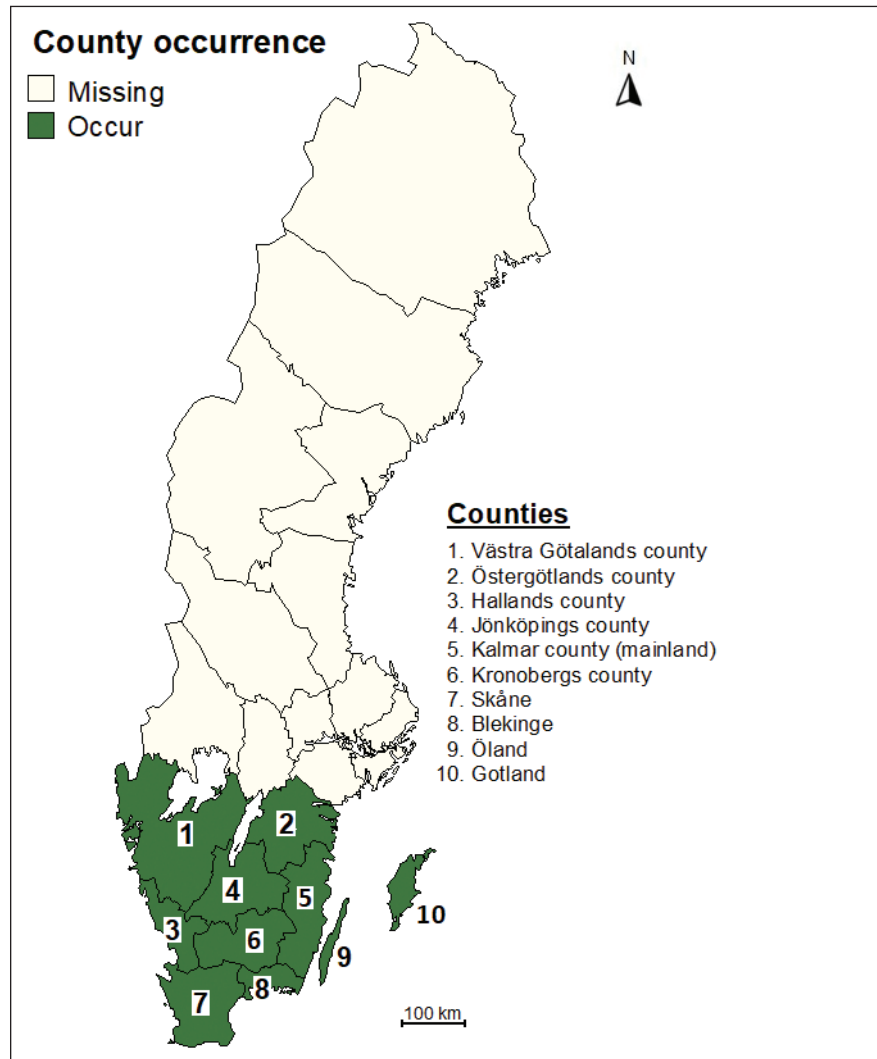


Figure A1. Country occurrence.

**Table A1.** list of all specimens of *Mutilla europaea* that were found in Sweden from 1850–2020.

Nr	Municipality	Place	Time	Sex	Code	Coordinates
1	Småland	Odensjö	1896	F	NHRS-HEVA 0000-20668	56.860493, 13.594556
2	Skåne	Unknown	1902-08-08	M	NHRS-HEVA 0000-20657	Unknown
3	Skåne	Hjärnarp	1907-06-25	F	NHRS-HEVA 0000-20658	56.319870, 12.906266
4	Halland	(Karup)	1909-06-06	F	NHRS-HEVA 0000-20696	Unknown
5	Halland	(Karup)	1909-06-06	F	NHRS-HEVA 0000-20695	Unknown
6	Halland	(Karup)	1909-07-02	F	NHRS-HEVA 0000-20694	Unknown
7	Västergötland	Unknown	1902 or 1912-07-01	F	NHRS-HEVA 0000-20662	Unknown
8	Halland	Halmstad	1930-08-20	M	NHRS-HEVA 0000-20674	56.696178, 12.873065
9	Halland	Halmstad	1930-08-20	M	NHRS-HEVA 0000-20675	56.696134, 12.873118
10	Halland	Halmstad	1930-08-20	M	NHRS-HEVA 0000-20676	56.696129, 12.873163
11	Halland	Halmstad	1930-08-20	M	NHRS-HEVA 0000-20677	56.696035, 12.873155
12	Halland	Halmstad	1930-08-20	M	NHRS-HEVA 0000-20678	56.696025, 12.873127
13	Halland	Halmstad	1930-08-20	M	NHRS-HEVA 0000-20679	56.695936, 12.873163
14	Halland	Halmstad	1930-08-20	M	NHRS-HEVA 0000-20680	56.694945, 12.872535
15	Halland	Halmstad	1930-08-20	M	NHRS-HEVA 0000-20681	56.695828, 12.873038
16	Halland	Halmstad	1930-08-20	M	NHRS-HEVA 0000-20682	56.696006, 12.872912
17	Halland	Halmstad	1930-08-20	M	NHRS-HEVA 0000-20683	56.695833, 12.873208
18	Halland	Halmstad	1930-08-20	M	NHRS-HEVA 0000-20684	56.695591, 12.872993
19	Halland	Halmstad	1930-08-20	M	NHRS-HEVA 0000-20685	56.695710, 12.872687
20	Halland	Halmstad	1930-08-20	F	NHRS-HEVA 0000-20690	56.695187, 12.872858
21	Halland	Halmstad	1930-08-20	F	NHRS-HEVA 0000-20691	56.695123, 12.872391
22	Halland	Halmstad	1930-08-20	F	NHRS-HEVA 0000-20692	56.695522, 12.872310
23	Halland	Halmstad	1930-08-20	M	NHRS-HEVA 0000-20693	56.695295, 12.872265
24	Halland	Halmstad	1930-09-07	M	NHRS-HEVA 0000-20686	56.695631, 12.872696
25	Halland	Halmstad	1930-09-07	M	NHRS-HEVA 0000-20687	56.695843, 12.872598
26	Halland	Halmstad	1930-09-07	M	NHRS-HEVA 0000-20688	56.695419, 12.872912
27	Halland	Halmstad	1930-09-07	M	NHRS-HEVA 0000-20689	56.695374, 12.872553
28	Bohuslän	Kungälv	1930-09-07	M	NHRS-HEVA 0000-20701	57.870506, 11.998788
29	Dalsland	Stenebynäs	1949-07-05	M	NHRS-HEVA 0000-20703	58.932329, 12.200146
30	Dalsland	Stenebynäs	1949-07-14	M	NHRS-HEVA 0000-20704	58.932255, 12.200056
31	Öland	Gårdby	1949-08-25	M	NHRS-HEVA 0000-20667	56.600327, 16.647543
32	Dalsland	Skallsjö	1950-06-20	F	NHRS-HEVA 0000-20663	58.633728, 12.013988
33	Västergötland	Floda	1950-07-15	F	NHRS-HEVA 0000-20664	57.793065, 12.365984
34	Bohuslän	Ytterby	1950-07-29	F	NHRS-HEVA 0000-20700	57.860376, 11.909433
35	Gotland	Vinor	1950-08-01	M	NHRS-HEVA 0000-20666	57.959821, 19.245561
36	Öland	Vickelby alvar	1958-07-26	F	NHRS-HEVA 0000-20669	56.571383, 16.482325
37	Gotland	Vinor	1958-08-01	M	NHRS-HEVA 0000-20665	57.959779, 19.245812
38	Halland	Halmstad	1970-08-01-31	F	NHRS-HEVA 0000-20672	56.682547, 12.823451
39	Halland	Halmstad	1970-08-01-31	M	NHRS-HEVA 0000-20673	56.682562, 12.823415
40	Halland	Spårhaga	1971-08-12	F	NHRS-HEVA 0000-20670	57.558768, 11.941359
41	Halland	Spårhaga	1971-08-12	F	NHRS-HEVA 0000-20671	57.558758, 11.941341
42	Öland	S Näsby	2018-09-07	F	NHRS-HEVA000022930	56.585841, 16.662266
43	Västergötland	Unknown	Unknown	M	NHRS-HEVA 0000-20659	Unknown
44	Västergötland	Unknown	Unknown	F	NHRS-HEVA 0000-20660	Unknown
45	Västergötland	Unknown	Unknown	F	NHRS-HEVA 0000-20661	Unknown
46	Bohuslän	Unknown	Unknown	M	NHRS-HEVA 0000-20697	Unknown



Nr	Municipality	Place	Time	Sex	Code	Coordinates
47	Bohuslän	Unknown	Unknown	M	NHRS-HEVA 0000-20698	Unknown
48	Bohuslän	Unknown	Unknown	F	NHRS-HEVA 0000-20699	Unknown
49	Bohuslän	Unknown	Unknown	M	NHRS-HEVA 0000-20702	Unknown
50	(Sydvästra Sverige)	Unknown	1850–1889	F	GNM-HYME 000030217	Unknown
51	(Sydvästra Sverige)	Unknown	1850–1889	F	GNM-HYME 000030208	Unknown
52	(Sydvästra Sverige)	Unknown	1850–1889	F	GNM-HYME 000030195	Unknown
53	(Sydvästra Sverige)	Unknown	1850–1889	F	GNM-HYME 000030219	Unknown
54	(Sydvästra Sverige)	Unknown	1850–1889	F	GNM-HYME 000030236	Unknown
55	(Sydvästra Sverige)	Unknown	1850–1889	F	GNM-HYME 000030190	Unknown
56	(Sydvästra Sverige)	Unknown	1850–1889	F	GNM-HYME 000030222	Unknown
57	Västergötland	Partille	1937–07–15	F	GNM-HYME 000030215	57.732592, 12.139536
58	Bohuslän	Lökeberg	1951–05–26	F	GNM-HYME 000030205	57.897952, 11.775746
59	Västergötland	(Göteborgstrakten)	1951–07–15	F	GNM-HYME 000030211	Unknown
60	Västergötland	(Göteborgstrakten)	1951–07–24	F	GNM-HYME 000030233	Unknown
61	Västergötland	Jonsered	1952–05–20	F	GNM-HYME 000030201	57.744258, 12.192923
62	Halland	Bunketorp	1953	F	GNM-HYME 000030228	57.584246, 12.115390
63	Västergötland	Kullabo	1953–05–16	F	GNM-HYME 000030206	Unknown
64	Småland	Angelstad	1953–07–28	F	GNM-HYME 000030221	56.829237, 13.749560
65	Västergötland	Floda	1954–07–21	F	GNM-HYME 000030202	57.794482, 12.365624
66	Halland	Syllinge	1956–06–30	F	GNM-HYME 000030214	57.244799, 12.268516
67	Västergötland	Lerum	1956–06–26	F	GNM-HYME 000030209	57.772275, 12.308985
68	Bohuslän	Jonskasen	1958–07–19	F	GNM-HYME 000030199	58.612063, 11.845149
69	Västergötland	Lerum	1958–08–20	F	GNM-HYME 000030212	57.773104, 12.311645
70	Västergötland	Lerum	1958–08–27	M	GNM-HYME 000030194	57.773832, 12.313962
71	Halland	Kungsbacka	1963–08–01-31	F	GNM-HYME 000030193	57.497188, 12.072765
72	Halland	Kungsbacka	1964	M	GNM-HYME 000030220	57.497256, 12.073124
73	Halland	Kungsbacka	1964	F	GNM-HYME 000030210	57.497391, 12.072872
74	Västergötland	(Göteborgstrakten)	1964–07–16	F	GNM-HYME 000030233	Unknown
75	Halland	Kungsbacka	1971–08–16	F	GNM-HYME 000030189	57.497328, 12.072495
76	Västergötland	Stora Lundby	1973–08–01	F	GNM-HYME 000030213	57.832859, 12.254188
77	Småland	Slättö	1977–05–15	F	GNM-HYME 000030216	57.107444, 13.743730
78	Dalsland	Fröskog	1977–06–01-30	F	GNM-HYME 000030238	58.977846, 12.458241
79	Halland	Halmstad	1977–07–01-31	F	GNM-HYME 000030229	56.683065, 12.823442
80	Västergötland	Övre Torbjörnemossen	1978–06–20	F	GNM-HYME 000030235	57.671523, 11.961311
81	Bohuslän	Skärhamn	1978–07–11	F	GNM-HYME 000030196	57.990804, 11.562243
82	Bohuslän	Ödsmål	1979–08–12	F	GNM-HYME 000030192	58.114244, 11.866080
83	Bohuslän	Högedsten	1981–07–08	F	GNM-HYME 000030188	58.597841, 11.331313
84	Västergötland	Landvetter	1982–06–26	F	GNM-HYME 000028827	57.676778, 12.192357
85	Halland	Onsala	1983–08–20	F	GNM-HYME 000029139	57.418559, 12.011149
86	Halland	Annestorp	1984–07–02	F	GNM-HYME 000030237	57.583764, 12.082511
87	Halland	Släp	1984–08–08	F	GNM-HYME 000030207	57.513867, 11.982071
88	Halland	Släp	1984–08–08	F	GNM-HYME 000030204	57.513828, 11.982062
89	Västergötland	Tråkär	1985–08–28	M	GNM-HYME 000029111	57.579584, 11.950261
90	Västergötland	Västra Lindås	1986–05–23	F	GNM-HYME 000029112	57.566313, 11.938098
91	Bohuslän	Torslanda	2004–08–09	F	GNM-HYME 000028826	57.704799, 11.748958
92	Bohuslän	Halvorsäng	2005–07–25	M	GNM-HYME 000030225	57.705212, 11.867401
93	Bohuslän	Halvorsberg	2005–08–18	F	GNM-HYME 000030223	57.706532, 11.861822
94	Västergötland	Änggårdskolonin	2007–05–29	F	GNM-HYME 000028828	57.676000, 11.947180



Nr	Municipality	Place	Time	Sex	Code	Coordinates
95	Bohuslän	Halvorsäng	2008-08-21	F	GNM-HYME 000030224	57.705284, 11.865146
96	Västergötland	Bohus	2017-08-02	M	GNM-HYME 000030226	57.850029, 12.031720
97	Skåne	Stehag	Unknown	F	GNM-HYME 000001339	55.896669, 13.394734
98	Västergötland	Kinneulle	Unknown	F	GNM-HYME 000030198	58.583472, 13.381611
99	Halland	Släp	Unknown	F	GNM-HYME 000030203	57.513828, 11.982062
100	Västergötland	(Skaratrakten)	Unknown	F	GNM-HYME 000030200	Unknown
101	Västergötland	(Skaratrakten)	Unknown	F	GNM-HYME 000030234	Unknown
102	Västergötland	(Skaratrakten)	Unknown	M	GNM-HYME 000030197	Unknown
103	Västergötland	(Skaratrakten)	Unknown	M	GNM-HYME 000030216	Unknown
104	Östergötland	Unknown	Unknown	M	GNM-HYME 000001337	Unknown
105	Östergötland	Unknown	Unknown	M	GNM-HYME 000001338	Unknown
106	Unknown	Unknown	Unknown	F	GNM-HYME 000030186	Unknown
107	Unknown	Unknown	Unknown	F	GNM-HYME 000030187	Unknown
108	Unknown	Unknown	Unknown	F	GNM-HYME 000001340	Unknown
109	Skåne	Ringsjön	1850-1880	F	MZLU-208871	55.696197, 13.181455
110	Skåne	Ilstorp	1850-1880	F	MZLU-208870	55.616503, 13.655548
111	Skåne	Lund	1850-1880	F	MZLU-208869	55.707466, 13.189753
112	Skåne	Ilstorp	1850-1880	F	MZLU-208868	55.616503, 13.655548
113	Skåne	Ilstorp	1850-1880	F	MZLU-208867	55.616503, 13.655548
114	Skåne	Ilstorp	1850-1880	M	MZLU-208866	55.616503, 13.655548
115	Skåne	Lund	1850-1880	M	MZLU-208865	55.707466, 13.189753
116	Västergötland	Stannum	1850-1944	F	MZLU-208876	57.828333, 12.241694
117	Västergötland	Unknown	1850-1944	F	MZLU-208913	Unknown
118	Småland	Dörarp	1910-07-01-31	F	MZLU-208863	56.986378, 14.002157
119	Småland	Timsfors	1921-06-26	F	MZLU-208898	56.477482, 13.620140
120	Småland	Ryssby	1923-05-31	F	MZLU-208887	56.860611, 14.175262
121	Småland	Ryssby	1924-08-08	F	MZLU-208888	56.860611, 14.175262
122	Småland	Ryssby	1925	F	MZLU-208889	56.860611, 14.175262
123	Småland	Sjöatorp	1925-08-27	F	MZLU-208896	56.905269, 14.425821
124	Småland	Sjöatorp	1925-08-27	M	MZLU-208894	56.905254, 14.425551
125	Småland	Sjöatorp	1925-08-27	M	MZLU-208893	56.905318, 14.425803
126	Småland	Sjöatorp	1925-08-28	M	MZLU-208892	56.905328, 14.425767
127	Småland	Ryssby	1925-09-01	F	MZLU-208890	56.860616, 14.175280
128	Småland	Sjöatorp	1925-09-04-24	F	MZLU-208895	56.905391, 14.425830
129	Dalsland	Köpmanabro	1931-07-06	F	MZLU-208915	58.773194, 12.506444
130	Öland	Mörbylånga	1932-06-29	F	MZLU-208905	56.517809, 16.391784
131	Öland	Kapelludden	1934-08-08	M	MZLU-208906	56.820831, 16.843996
132	Skåne	Vittsjö	1935-05-30	M	MZLU-208878	56.337167, 13.652757
133	Dalsland	Steneby	1936-07-08-12	M	MZLU-208916	58.923261, 12.308509
134	Gotland	Visby	1936-07-10	M	MZLU-208907	57.615875, 18.324850
135	Skåne	Yxenhult	1939-07-01-31	F	MZLU-208875	56.399051, 13.529841
136	Småland	Bolmstad	1941-07-01-31	M	MZLU-208902	56.887533, 13.783220
137	Bohuslän	Gustavsberg	1941-07-08	F	MZLU-208908	58.324528, 11.900674
138	Halland	Steninge	1941-08-01	F	MZLU-208885	56.777924, 12.658664
139	Skåne	Falsterbo	1941-09-01-30	F	MZLU-208924	55.392051, 12.839045
140	Småland	Bolmen	1942-06-27	F	MZLU-208891	56.811922, 13.701958
141	Småland	Bolmen	1942-07-24	M	MZLU-208904	56.887523, 13.783121
142	Småland	Bolmen	1942-07-24	M	MZLU-208903	56.811927, 13.701841



Nr	Municipality	Place	Time	Sex	Code	Coordinates
143	Småland	Bolmen	1942-07-24	M	MZLU-208901	56.811844, 13.702093
144	Småland	Bolmen	1942-07-24	M	MZLU-208900	56.811898, 13.701985
145	Småland	Bolmen	1942-07-24	M	MZLU-208899	56.811908, 13.702021
146	Småland	Bolmen	1942-07-24	M	MZLU-208864	56.811957, 13.701949
147	Halland	Enslöv	1945-07-17	F	MZLU-208882	56.736598, 12.971942
148	Västergötland	Utbynäs	1945-07-19	F	MZLU-208914	57.744134, 12.057412
149	Dalsland	Dals Rostock	1948-08-01	F	MZLU-208928	58.717716, 12.348404
150	Halland	Enslöv	1949-06-09	F	MZLU-208880	56.736603, 12.972005
151	Västergötland	Vemmenhult	1949-07-01-31	F	MZLU-208873	57.833083, 12.782721
152	Skåne	Yxenhult	1949-07-07	F	MZLU-208874	56.414002, 13.839751
153	Halland	Enslöv	1949-09-15	M	MZLU-208881	56.736603, 12.971987
154	Dalsland	Dals Rostock	1950-06-29	F	MZLU-208927	58.717725, 12.348395
155	Skåne	Ravnarp	1952-04-11-14	F	MZLU-208879	56.413992, 13.839769
156	Västergötland	Jonsered	1953-05-20	F	MZLU-208912	57.744172, 12.192851
157	Dalsland	Dals Rostock	1953-07-01-31	F	MZLU-208926	58.717730, 12.348431
158	Skåne	Åsljunga	1959-07-18	M	MZLU-208872	56.311026, 13.372932
159	Blekinge	Lökaryd	1976-08-16-30	M	MZLU-208938	56.138246, 15.847234
160	Blekinge	Lökaryd	1976-08-16-30	M	MZLU-208937	56.138287, 15.847315
161	Blekinge	Lökaryd	1976-08-16-30	M	MZLU-208936	56.138246, 15.847342
162	Blekinge	Lökaryd	1976-08-16-30	M	MZLU-208935	56.138246, 15.847342
163	Blekinge	Lökaryd	1976-08-16-30	M	MZLU-208934	56.138246, 15.847342
164	Blekinge	Lökaryd	1976-08-16-30	F	MZLU-208933	56.138246, 15.847342
165	Blekinge	Lökaryd	1976-08-16-30	M	MZLU-208932	56.138246, 15.847342
166	Småland	Torpa	1977-09-01-30	F	MZLU-208930	56.712136, 13.592049
167	Dalsland	Dals Rostock	1982	F	MZLU-208929	58.717725, 12.348314
168	Skåne	Vedelsbäck	1986-06-01-30	F	MZLU-208909	55.906913, 13.393575
169	Småland	Unknown	Unknown	F	MZLU-208886	Unknown
170	Skåne	Unknown	Unknown	F	MZLU-208877	Unknown
171	Bohuslän	Ljungskile	Unknown	F	MZLU-208931	58.223090, 11.919149
172	Dalsland	Gillungen	Unknown	F	MZLU-208925	58.700333, 12.524444
173	Dalsland	Rostock	Unknown	F	MZLU-208918	58.714050, 12.356750
174	Västergötland	Göteborg	Unknown	F	MZLU-208911	57.723305, 11.999536
175	Bohuslän	Resteröd	Unknown	F	MZLU-208910	58.270628, 11.892097
176	Småland	Tutaryd	Unknown	F	MZLU-208897	56.845778, 14.050250
177	Halland	Halmstad	Unknown	F	MZLU-208884	56.675944, 12.870944
178	Halland	Heberg	Unknown	F	MZLU-208883	56.882665, 12.628028
179	Gotland	Tofta	2001-08-05	M	Evolutionsmuseet	57.523660, 18.159893
180	Gotland	Ljugarn	2000-07-23	M	Evolutionsmuseet	57.341374, 18.690959
181	Unknown	Unknown	Unknown	M	Evolutionsmuseet	Unknown
182	Unknown	Unknown	Unknown	M	Evolutionsmuseet	Unknown
183	Unknown	Unknown	Unknown	M	Evolutionsmuseet	Unknown
184	Unknown	Unknown	Unknown	M	Evolutionsmuseet	Unknown
185	Unknown	Unknown	Unknown	F	Evolutionsmuseet	Unknown
186	Unknown	Unknown	Unknown	M	Evolutionsmuseet	Unknown
187	Unknown	Unknown	Unknown	M	Evolutionsmuseet	Unknown
188	Unknown	Unknown	Unknown	M	Evolutionsmuseet	Unknown
189	Unknown	Unknown	Unknown	M	Evolutionsmuseet	Unknown
190	Unknown	Unknown	Unknown	F	Evolutionsmuseet	Unknown



Nr	Municipality	Place	Time	Sex	Code	Coordinates
191	Unknown	Unknown	Unknown	F	Evolutionsmuseet	Unknown
192	Unknown	Unknown	Unknown	F	Evolutionsmuseet	Unknown
193	Unknown	Unknown	Unknown	F	Evolutionsmuseet	Unknown
194	Unknown	Unknown	Unknown	F	Evolutionsmuseet	Unknown
195	Unknown	Unknown	Unknown	F	Evolutionsmuseet	Unknown
196	Unknown	Unknown	Unknown	F	Evolutionsmuseet	Unknown
197	Unknown	Unknown	Unknown	M	Evolutionsmuseet	Unknown
198	Bohuslän	Tanum	1878	F	SLU, Ekologocentrum	58.597804, 11.331322
199	Dalsland	Rostock	1949-07-27	F	SLU, Ekologocentrum	58.717725, 12.348386
200	Dalsland	Rostorp	1950-07-12	F	SLU, Ekologocentrum	58.822812, 11.877147
201	Bohuslän	Sunningen	1961-06-28	F	SLU, Ekologocentrum	58.335942, 11.838376
202	Halland	Frösakull	1964-1971	M	SLU, Ekologocentrum	56.670722, 12.737306
203	Halland	Frösakull	1964-1971	M	SLU, Ekologocentrum	56.670722, 12.737306
204	Halland	Frösakull	1964-1971	F	SLU, Ekologocentrum	56.670722, 12.737306
205	Halland	Frösakull	1964-1971	F	SLU, Ekologocentrum	56.670722, 12.737306
206	Unknown	Unknown	Unknown	F	SLU, Ekologocentrum	Unknown
207	Unknown	Unknown	Unknown	F	SLU, Ekologocentrum	Unknown
208	Unknown	Unknown	Unknown	F	SLU, Ekologocentrum	Unknown
209	Unknown	Unknown	1920-1940	F	Malmö museum	Unknown
210	Skåne	Båstad	1906-1917	F	Helsingborgs museum	56.429107, 12.870049
211	Skåne	Båstad	1906-1917	F	Helsingborgs museum	56.429107, 12.870049
212	Unknown	Unknown	1850-1900	M	Vänersborgs museum	Unknown
213	Unknown	Unknown	1850-1900	M	Vänersborgs museum	Unknown
214	Unknown	Unknown	1850-1900	M	Vänersborgs museum	Unknown
215	Unknown	Unknown	1850-1900	F	Vänersborgs museum	Unknown
216	Unknown	Unknown	1850-1900	F	Vänersborgs museum	Unknown