

# Flora of vascular plants of the Seili island and its surroundings (SW Finland)

Andrzej Brzeg<sup>1</sup>, Wojciech Szwed<sup>2</sup> & Maria Wojterska<sup>1\*</sup>

<sup>1</sup>Department of Plant Ecology and Environmental Protection, Faculty of Biology, Adam Mickiewicz University in Poznań, Umultowska 89, 61-614 Poznań, Poland

<sup>2</sup>Department of Forest Botany, Faculty of Forestry, Poznań University of Life Sciences, Wojska Polskiego 71D, 60-625 Poznań, Poland

\* corresponding author (e-mail: mwzerios@amu.edu.pl; ORCID: <https://orcid.org/0000-0002-7774-1419>)

**Abstract.** The paper shows the results of floristic investigations of 12 islands and several skerries of the inner part of SW Finnish archipelago, situated within a square of 11.56 km<sup>2</sup>. The research comprised all vascular plants – growing spontaneously and cultivated, and the results were compared to the present flora of a square 10 × 10 km from the Atlas of Vascular Plants of Finland, in which the studied area is nested. The total flora counted 611 species, among them, 535 growing spontaneously or escapees from cultivation, and 76 exclusively in cultivation. The results showed that the flora of Seili and adjacent islands was almost as rich in species as that recorded in the square 10 × 10 km. This study contributed 74 new species to this square. The hitherto published analyses from this area did not focus on origin (geographic-historical groups), socioecological groups, life forms and on the degree of threat of recorded species. Spontaneous flora of the studied area constituted about 44% of the whole flora of Regio aboënsis. In the studied flora, 22 species threatened in Finland were found.

**Key words:** flora, origin, life forms, socioecological groups, endangered species, distribution patterns, inner archipelago, Turku

## 1. Introduction

The flora of SW Finnish Archipelago was of interest to Eklund (1931, 1946, 1958), whose studies concentrated mainly on the islands of the Korpo-Houtskär area and some other islands situated beyond Seili archipelago. The analyses of dynamic tendencies in the flora (based on Eklund's data and on own studies) and patterns of species distribution published by von Numers & van der Maarel (1998), Korvenpää *et al.* (2003), Hannus & von Numers (2008) and von Numers (2011, 2017), did not however cover Seili and adjacent islands. The investigation of the flora of vascular plants of the island Seili and its surroundings was a part of broader studies on the plant cover of this area (Wojterski *et al.* 1993). Some data on plant taxa, besides Eklund (1946), were given in the karyological work of Arohonka (1982). More recently, vascular plants have been investigated by Leila Linnaluoto, which has resulted in a rich herbarium collection deposited in the Archipelago Research Institute on Seili. Many new floristic data (the lists of species and dates of encounter)

were presented in the atlas by Lampinen *et al.* (2016) and Lampinen (2017).

The aims of this study were to show the richness and differentiation of plant taxa in this part of the SW Finnish Archipelago and comparison to the existing data.

## 2. Study area

Geobotanical studies covered a fragment of archipelago around the island of Seili in SW Finland. The area has been characterised by Wojterska *et al.* (2018). Documented human influence dates back to the 17th century, when a leper colony was located on a small island, at that time adjacent to Seili (contemporarily, due to the land uplift, its peninsula), and at least since that time, the main island of Seili has been inhabited. Settlements, roads or piers were present also on three other islands (Kalvgrundet, Katavaluoto and Lammasluoto), the other 16 remained uninhabited. After the death of the last leper patient, a mental hospital was established on Seili. It was closed in 1962, and its

buildings were adapted in 1977 for the Archipelago Research Institute of the University of Turku. This brought about the cessation of land use, mainly in the valleys that cross the island in the W-E direction, and resulted in serious changes in vegetation. On abandoned fields, different stages of secondary succession were observed, or plantations of trees of different geographic origin, mainly of genera *Populus*, *Picea*, *Betula*, *Abies* and *Pinus*, were introduced. Numerous ornamental and useful plants have been cultivated in the proximity of settlements. Nowadays, several years after completion of our investigations, the nature of Seili is protected by the Natura 2000 and Shore Conservation Programmes (Nature on the Island of Seili).

Geobotanical studies were designed and first conducted by the late prof. Teofil Wojterski, through 7 vegetation seasons in the years 1978-1997. The short information on these investigations was published in 1993 (Brzeg *et al.* 1993; Wojterski *et al.* 1993).

### 3. Material and methods

The authors' floristic studies, which began in 1978 and were continued in the years 1980, 1981, 1985, 1986, 1996 and 1997, were carried out in the height

of the growing season – in July and August, therefore, the early spring flora has been assessed mainly on the basis of herbarium collections of the Archipelago Research Institute of the University of Turku. The investigations focused on the terrestrial flora, and on plants of the littoral zone down to 2 meters depth. The studied area was divided into 44 squares,  $0.5 \times 0.5$  km each, nested in the grid present on the topographic map of Finland (Peruskartta 1968). Floristic studies comprised 33 of above mentioned squares (comp. Fig. 6-11). Independently, the detailed distribution of localities of chosen taxa was registered in the form of topograms.

Phytosociological relevés and field observations of all botanists participating in this project (Balcerkiewicz S., Brzeg A., Bujakiewicz A., Kasprowicz M., Szwed W., Wojterska H., Wojterska M. and Wojterski T.) contributed additional information. All the plant species were noted, both wild and cultivated. Over 1300 herbarium sheets with plant specimens were collected for further determination and verification by specialists (see Acknowledgments) and deposited in the herbarium of W. Szwed of the University of Natural Sciences in Poznań. The notes on plant occurrences counted more than 30.000 records.

**Table 1.** Syntaxonomic definition of socioecological groups of taxa

Category	Syntaxonomic definition	Abbreviation
Deciduous forests	<i>Quercu-Fageteta</i> , <i>Alnetea glutinosae</i>	DF
Coniferous forests	<i>Vaccinio-Piceetea</i>	CF
Littoral tall herbs	<i>Bidentetea tripartitae</i> , <i>Cakiletea maritimae</i> , <i>Filipendulion ulmariae</i> , <i>Phalaridion</i> <i>arundinaceae</i> , <i>Senecionion fluviatilis</i> (p.p.)	LTH
Halophytes	<i>Isoëto durieui-Juncetea bufonii</i> , <i>Juncetea</i> <i>maritimi</i> , <i>Scirpetum maritimi</i>	H
Peats and mires	<i>Oxycocco-Sphagneteta</i> , <i>Scheuchzerio-Caricetea</i> <i>fuscae</i>	P
Reeds	<i>Phragmitetea</i> (p.max.p.)	R
Water	<i>Lemnetea</i> , <i>Potametea pectinati</i> , <i>Zosteretea</i> <i>marinae</i>	W
Forest	Species connected with forest ecosystems, occurring in different types of forests	F
Chasmophytic plants	<i>Asplenietea trichomanis</i>	C
Meadows, pastures & heathland	<i>Calluno-Ulicetea</i> (p.max.p.), <i>Molinio-</i> <i>Arrhenatheretea</i> (p.max.p.)	M
Xerothermophilous swards, forest edges and thickets	<i>Festuco-Brometea</i> , <i>Koelerio-Corynephoretea</i> , <i>Rhamno-Prunetea</i> , <i>Trifolio-Geranietea</i> <i>sanguinei</i>	X
Nitrophilous tall herbs and thickets of forest edges, gaps and of clear cuttings	<i>Convolvuletalia sepium</i> (p.max.p.), <i>Epilobietea</i> <i>angustifolii</i>	NTH
Synanthropic segetal	<i>Aperetalia spicae-venti</i> , <i>Papaveretalia rhoeadis</i>	SS
Synanthropic ruderal	<i>Onopordetalia acanthii</i> , <i>Polygono-Poetea</i> , <i>Sisymbrietalia</i>	SR
Cultivated and escapees from cultivation	-	C/SR



**Fig. 1.** Square number 669:322 from the Atlas of Distribution of Vascular Plants, grid 10 × 10 km (after Lampinen *et al.* 2016), within which the study area is located

The complete flora of vascular plants was presented in a form of tables (Appendices 1 and 2), containing also information about a square (cf. Fig. 6) in which a given taxon was found.

Division into families was adopted after Hämet-Ahti *et al.* (1998). The nomenclature and concept of genera, species, and taxa of lower rank were based on the critical compilation of following sources: Pawłowski (1956), Tutin *et al.* (1964-1980), Lid (1985), Hämet-Ahti *et al.* (1986, 1998, 2005), Mirek *et al.* (2002) and Rothmaler *et al.* (2002). Some species were provided with commonly used synonyms and those used in the Atlas of Distribution of Vascular Plants (Lampinen *et al.* 2016; Lampinen 2017). Some species, which occurred in the study area in several subspecies or varieties and which identification was impossible, were provided with an abbreviation “s.l.”. In all other cases, the determination of subspecies/varieties means that only those taxa were found during the study.

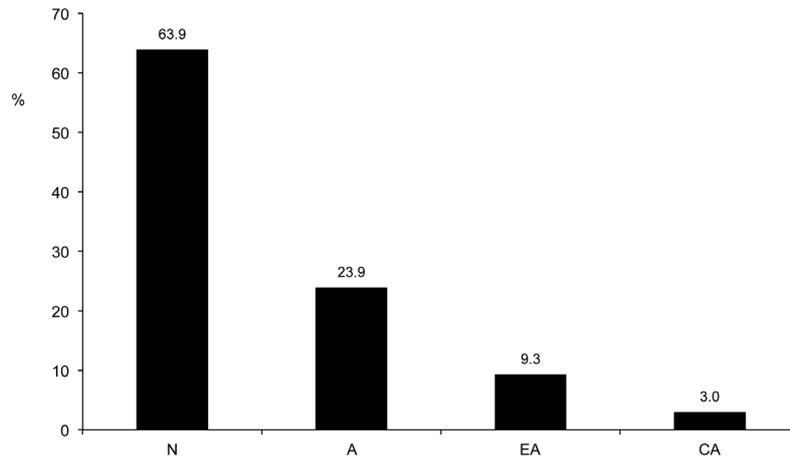
The lower rank taxa had to be specified, since in the Finnish flora, both in the investigated area and elsewhere in Finland, there are some counterparts with different distribution, ecology or origin, e.g.: *Tripleurospermum maritimum* ssp. *maritimum* (native) versus *T. maritimum* ssp. *subpolare* (absent in Regio aboënsis, elsewhere an archaeophyte), *Cuscuta europaea* ssp. *europaea* (archaeophyte) versus *C. europaea* ssp. *halophyta* (native) or *Polygonum aviculare* ssp. *aviculare* (archaeophyte, synanthropic ruderal) versus *Polygonum aviculare* ssp. *boreale* (native, halophyte). Interpretation of origin or

belonging to the socioecological group for such taxa at the level of species is doubtful.

For each taxon (species, subspecies or variety) following data were estimated (Appendix 1):

- origin referred to Regio aboënsis (after Hämet-Ahti *et al.* 1998, 2005, slightly simplified): N – native, A – archaeophyte, EA – established alien; CA – casual alien, found after 1950);
- socioecological group of taxa after concept of van der Maarel (1971), according to the results of own investigations (Table 1); the syntaxonomic diagnoses follow Dierssen & Dierssen (1996) or Ratyńska *et al.* (2010);
- main life form according to the concept of Raunkiaer (after Ellenberg *et al.* 1991, Rothmaler *et al.* 2002 or Zarzycki *et al.* 2002);
- local occurrence frequency of taxa counted in 33 squares in the following 5 categories: c – common (26-33 squares), f – frequent (18-25), s – scattered (10-17), r – rare (3-9), rr – very rare (1-2 squares or stated only in the literature or herbarium and/or not confirmed);
- present in the Atlas of Distribution of Vascular Plants (Lampinen *et al.* 2016; grid 10 × 10 km, square number 669:322, within which the study area is located (Fig. 1);
- information about new taxa for the area;
- the category of threat in Finland after Kalliovirta *et al.* (2010).

Distribution of chosen taxa was given on the background of the generalised map of vegetation complexes (Wojterska *et al.* 2018).



**Fig. 2.** Spectrum of the origin of taxa, with simplified categories  
 Explanations: N – native, A – archaeophytes, EA – established aliens, CA – casual aliens

## 4. Results

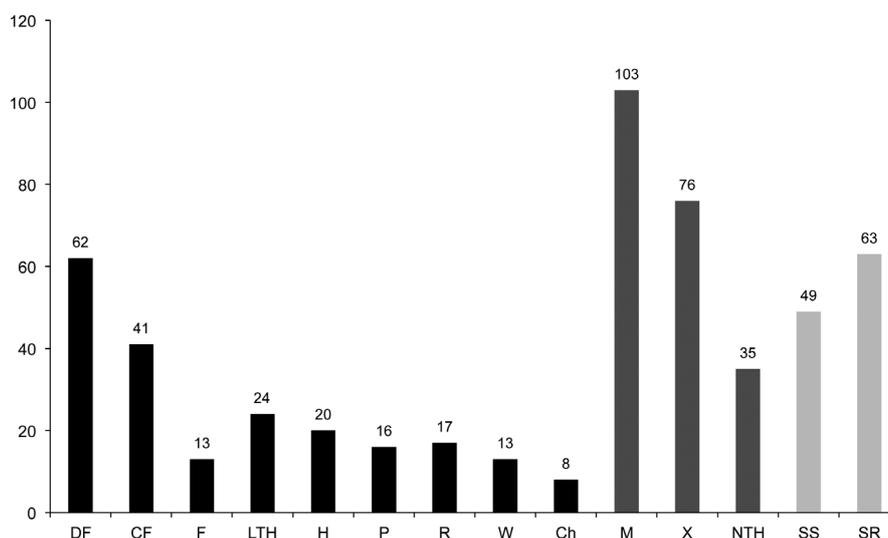
### 4.1. Flora of spontaneously occurring plants

The Appendix 1 includes 540 taxa (535 species) of spontaneously occurring vascular plants: native, effectively naturalised synanthropic and escapees from cultivation. They represented 83 families and 272 genera. The families richest in taxa (Table 2) were: Poaceae (52 taxa, 9.7% of spontaneous flora), Rosaceae (42, 7.8%) and Asteraceae (36, 6.7%), whereas 32 families were represented by 1 taxon only.

*Carex* was the genus richest in taxa (16 taxa, 0.3%). Relatively well represented were also: *Alchemilla*, *Hieracium* and *Polygonum* (10 taxa, 0.2% each). A very big group of genera (166) was represented by only one taxon per genus (Table 3).

Taking into account the spectrum of the origin of taxa (Fig. 2), we found that the most numerous were native taxa (345 – 63.9%). The number of archaeophytes was high (129 – 23.9%), whereas established (50 – 9.3%) and casual (16 – 3%) aliens were less numerous.

The analysis of socioecological groups in the flora of the studied area (Table 1, Fig. 3) has shown that, besides all categories of forest taxa (116) and those connected with littoral (H, LTH and W – 57), meadows, pastures and heath (103), also the share of xerothermophilous plants was important (76 taxa). Among natural elements of the flora, the most numerous were taxa connected with deciduous forests and thickets (62), prevailing over the group of coniferous forests taxa (41). Albeit there was a great surface of open rocky habitats (compare Wojterska *et al.* 2018), the group of chasmophytic vascular plant taxa was not numerous (8). Strictly



**Fig. 3.** Spectrum of socioecological groups in the flora of the studied islands

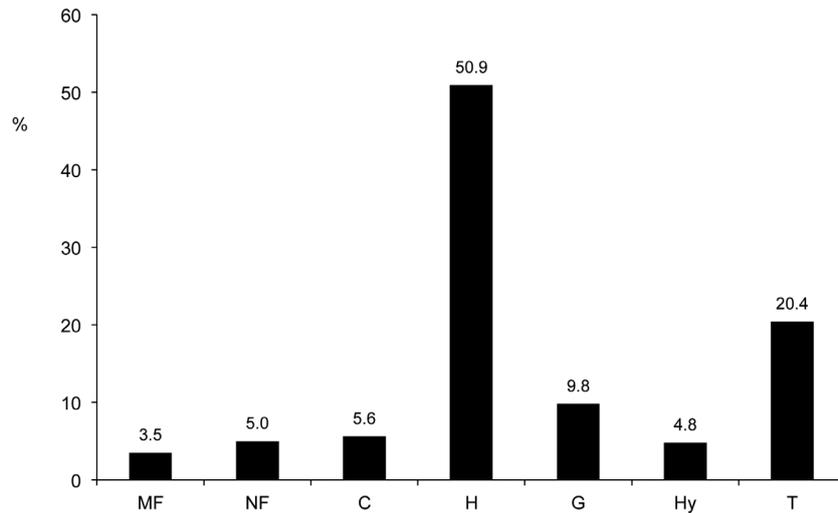
Explanations: black colour on the graph – taxa connected with natural or close to natural habitats, dark grey – the plants of seminatural habitats, light grey – synanthropic plants. For other abbreviations see Table 1

**Table 2.** Floristic richness of families

Family	Number of taxa in each family	%
Poaceae	52	9.7
Rosaceae	42	7.8
Asteraceae	36	6.7
Caryophyllaceae	28	5.2
Cyperaceae	23	4.3
Cichoriaceae	22	4.1
Brassicaceae	21	3.9
Scrophulariaceae	20	3.7
Fabaceae, Lamiaceae	18	3.3
Polygonaceae, Ranunculaceae	17	3.1
Apiaceae, Juncaceae	12	2.2
Boraginaceae, Dryopteridaceae, Pyrolaceae, Rubiaceae	9	1.7
Onagraceae, Orchidaceae, Primulaceae	8	1.5
Chenopodiaceae, Ericaceae, Salicaceae, Violaceae	7	1.3
Betulaceae, Campanulaceae, Equisetaceae, Plantaginaceae	5	0.9
Alliaceae, Convallariaceae, Crassulaceae, Grossulariaceae, Lycopodiaceae, Potamogetonaceae	4	0.7
Aspleniaceae, Caprifoliaceae, Geraniaceae, Solanaceae	3	0.6
Clusiaceae, Convolvulaceae, Euphorbiaceae, Fumariaceae, Gentianaceae, Juncaginaceae, Liliaceae, Malvaceae, Papaveraceae, Pinaceae, Typhaceae, Urticaceae, Valerianaceae	2	0.4
Aceraceae, Adoxaceae, Asclepiadaceae, Asparagaceae, Callitrichaceae, Cupressaceae, Cuscutaceae, Eleagnaceae, Empetraceae, Fagaceae, Haloragaceae, Hippuridaceae, Hypolepidaceae, Iridaceae, Lemnaceae, Linaceae, Lythraceae, Menyanthaceae, Oleaceae, Ophioglossaceae, Oxalidaceae, Polypodiaceae, Portulacaceae, Saxifragaceae, Sparganiaceae, Thelypteridaceae, Tiliaceae, Trilliaceae, Ulmaceae, Vitaceae, Zannichelliaceae, Zosteraceae	1	0.2
Total	540	100.0

**Table 3.** Floristic richness of genera

Name or number of genera	Number of taxa in each genus
<i>Carex</i>	16
<i>Alchemilla, Hieracium, Polygonum</i>	10
<i>Galium, Veronica</i>	9
<i>Juncus, Poa, Rosa</i>	8
<i>Epilobium, Vicia, Viola</i>	7
<i>Agrostis, Festuca, Myosotis, Ranunculus, Salix</i>	6
<i>Calamagrostis, Campanula, Dryopteris, Equisetum, Plantago, Pyrola, Rumex, Stellaria, Trifolium</i>	5
<i>Allium, Cerastium, Chenopodium, Cirsium, Eleocharis, Lathyrus, Luzula, Lysimachia, Potamogeton, Potentilla, Ribes, Sedum, Sonchus</i>	4
<i>Achillea, Asplenium, Atriplex, Galeopsis, Geranium, Lamium, Melampyrum, Melandrium, Rubus, Senecio, Silene, Sorbus, Taraxacum, Vaccinium</i>	3
<i>Alnus, Alopecurus, Anemone, Angelica, Anthemis, Arabis, Arctium, Artemisia, Aster, Barbarea, Betula, Cardamine, Centaurea, Centaurium, Cotoneaster, Deschampsia, Elymus, Eriophorum, Euphorbia, Euphrasia, Fallopia, Filipendula, Fragaria, Geum, Gnaphalium, Hypericum, Listera, Lolium, Lycopodium, Malva, Matricaria, Mentha, Odontites, Pimpinella, Polygonatum, Raphanus, Sagina, Scleranthus, Scutellaria, Solanum, Spargula, Spargularia, Thlaspi, Triglochin, Tripleurospermum, Typha, Urtica, Valeriana</i>	2
166 genera	1
Total	540



**Fig. 4.** Life forms spectrum in the flora of the studied islands

Explanations: MF – megaphanerophytes, NF – nanophanerophytes, C – chamaephytes, H – hemicryptophytes, G – geophytes, Hy – hydrophytes, T – therophytes

synanthropic taxa (segetal and ruderal) were also numerous (112). Taxa connected with natural or close to natural habitats (214), were less numerous, than those occurring on anthropogenically transformed sites (326) (Fig. 3). In the last group, the number of plants of seminatural habitats (214) was higher than that of synanthropic (112) (Fig. 3).

In the life form spectrum, hemicryptophytes constituted over 50% (Fig. 4). They were followed by therophytes with 20.4%. The lowest was the share of megaphanerophytes – only 3.5%.

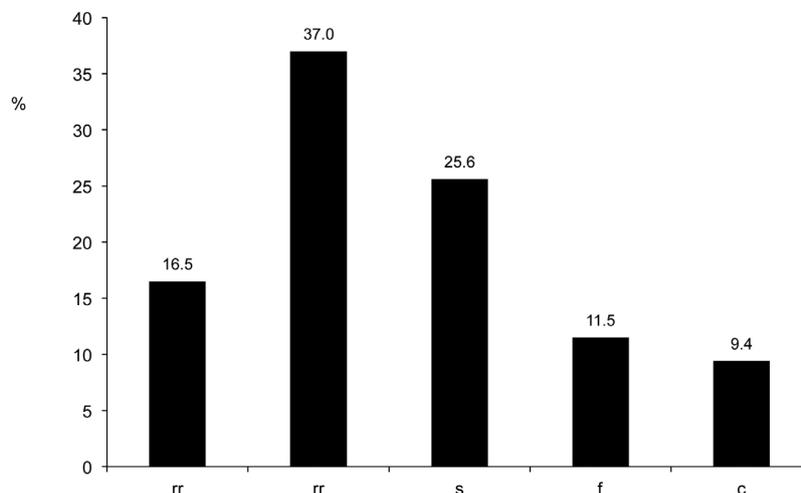
#### 4.2. Frequency of occurrence and distribution patterns of species

Rare and very rare taxa constituted 53.5% of the list, whereas the group of most common, found in more

than 25 squares, comprised less than 10% of the total list (Fig. 5). Number of taxa found in one square varied from 41 (D1) to 393 (E3) (Appendix 1).

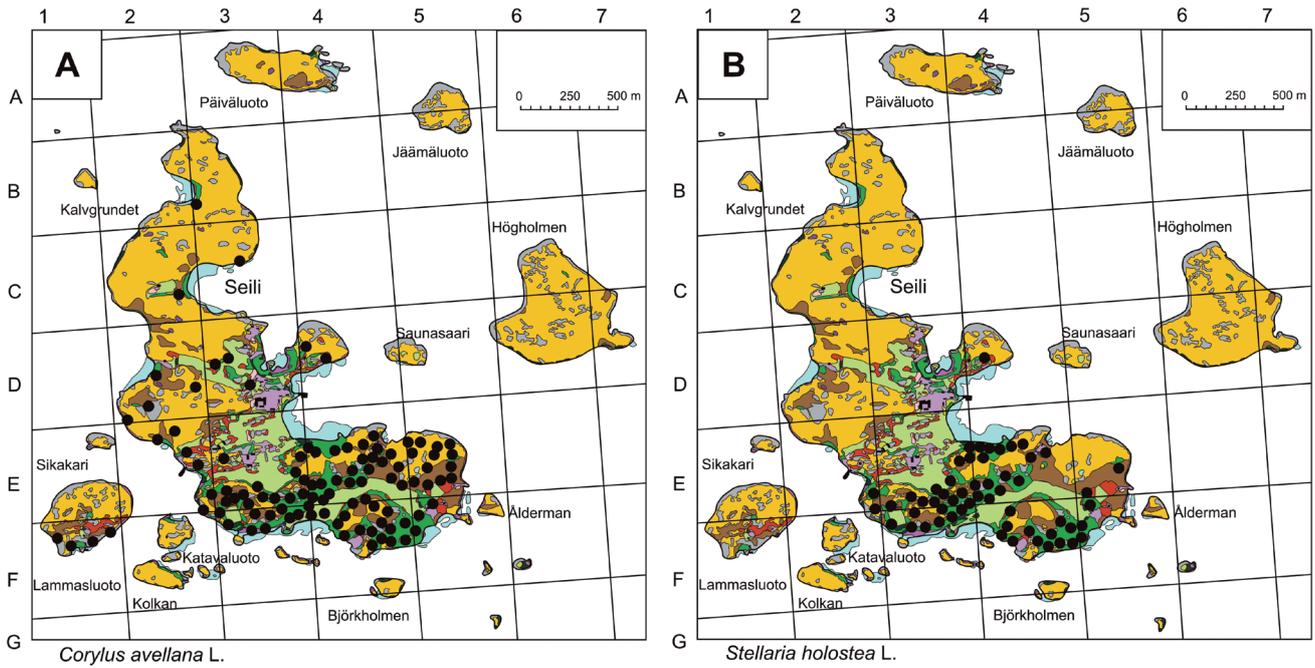
In all or almost all squares ( $0.5 \times 0.5$  km), there were noted halophilous taxa, such as: *Juncus gerardii* (33), *Agrostis stolonifera* ssp. *maritima* (33), and *Glaux maritima* (31), those of littoral reeds and tall herbs group: *Lythrum salicaria* (33) and *Phalaris arundinacea* (33), hydrophytes: *Batrachium baudotii* (33), *Zannichellia palustris* (32), and *Potamogeton perfoliatus* (32), as well as of coniferous forests: *Juniperus communis* (31), *Deschampsia flexuosa* (31), and *Pinus sylvestris* (31).

The group of species that were noted only in one square counted 38 (cf. Appendix 1); out of them, some occurred only at single localities e.g.: *Artemisia*



**Fig. 5.** The share of frequency groups in the whole flora

Explanations: rr – very rare, r – rare, s – scattered, f – frequent, c – common

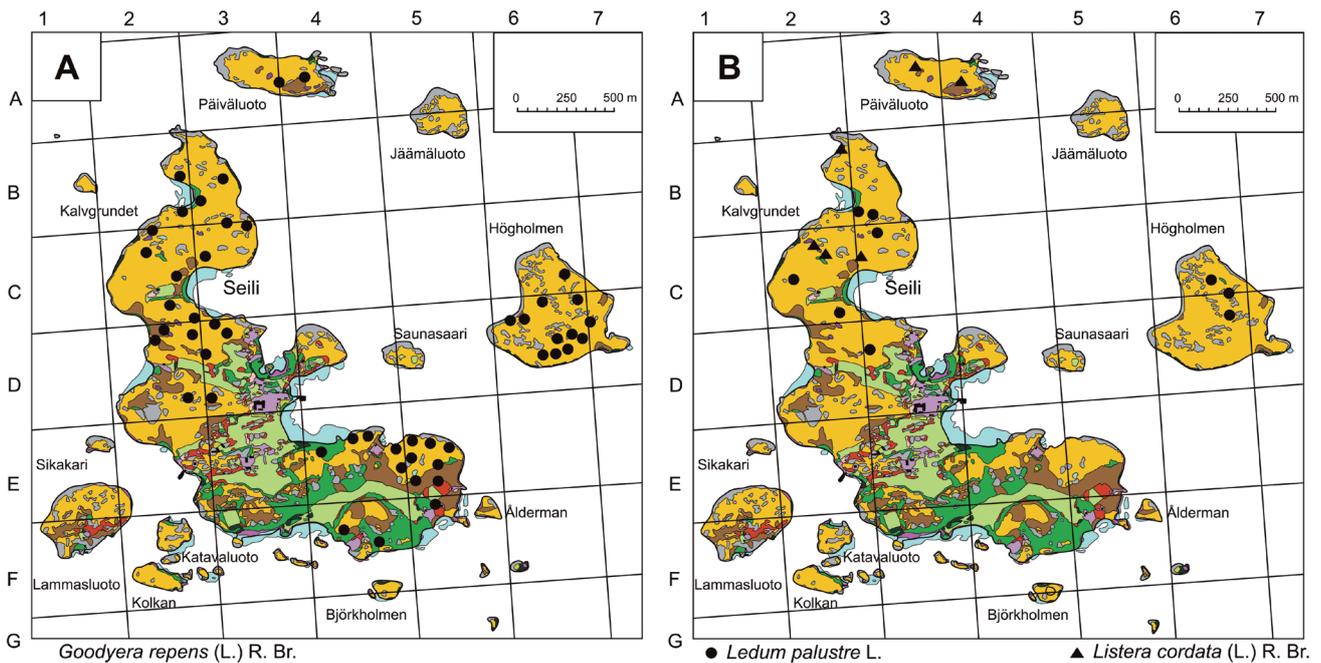


**Fig. 6.** Distribution of selected indicator species of deciduous forests  
 Explanations: A – *Corylus avellana*, B – *Stellaria holostea*

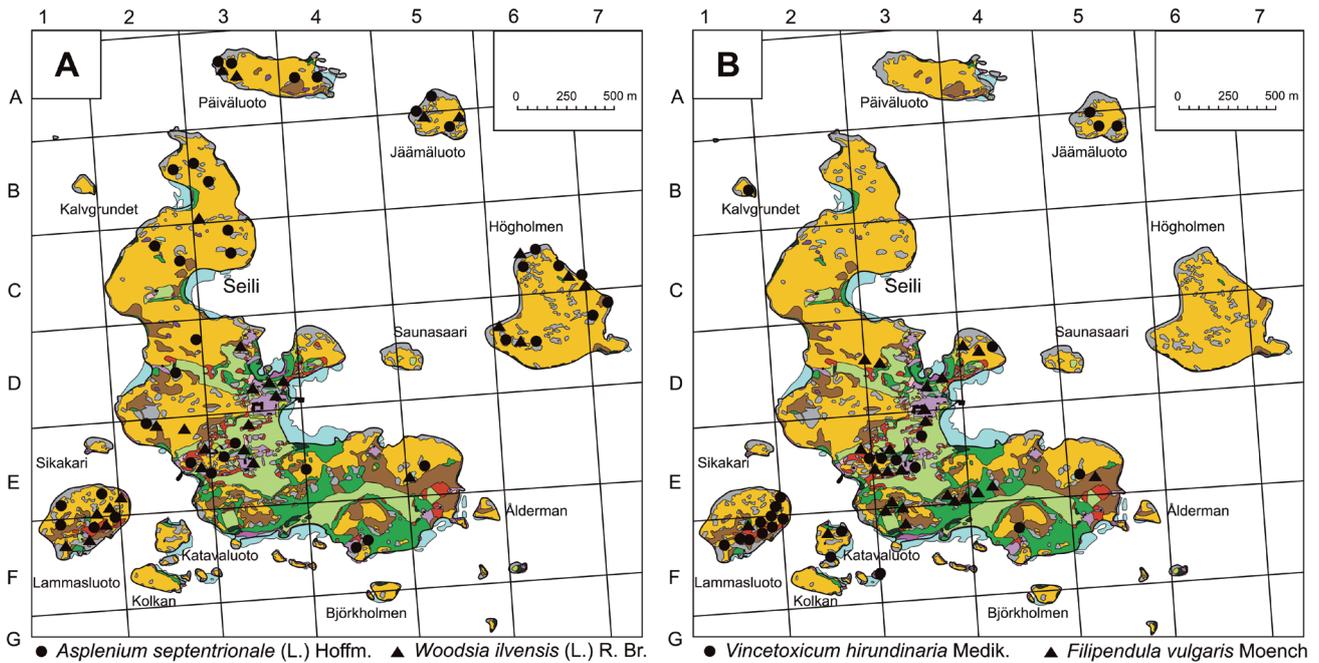
*absinthium*, *Callitriche palustris*, *Centaurea cyanus*, *Corallorhiza trifida*, *Eleocharis parvula*, *Hyoscyamus niger*, *Juncus bulbosus*, *Malva pusilla*, *Melandrium noctiflorum*, *Rubus chamaemorus*, *Silene viscosa*, and *Vicia sylvatica*.

Distribution of chosen species, depicted in the form of topograms, shows patterns characteristic for some

spatial vegetation complexes. Distribution of *Corylus avellana* and *Stellaria holostea* (Fig. 6A-B) was in accordance with the complex of eutrophic deciduous forests and thickets, whereas that of *Goodyera repens*, *Ledum palustre* and *Listera cordata* (Fig. 7A-B) with oligotrophic pine and spruce forests. *Asplenium septentrionale* and *Woodsia ilvensis* (Fig. 8A) were



**Fig. 7.** Distribution of selected indicator species of coniferous forests  
 Explanations: A – *Goodyera repens*, B – *Ledum palustre*, *Listera cordata*

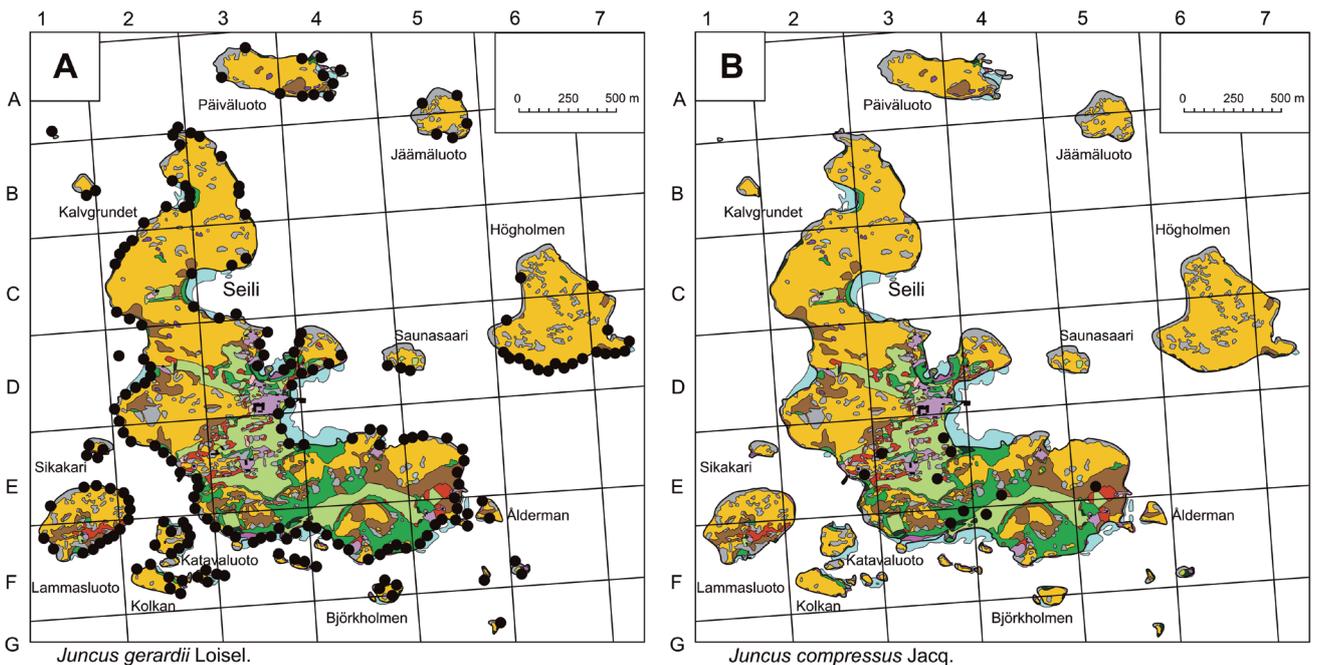


**Fig. 8.** Distribution of selected indicator species

Explanations: A – epilithic communities, *Asplenium septentrionale* and *Woodsia ilvensis*; B – xerothermophilous forest edges, *Vincetoxicum hirsutaria* and *Filipendula vulgaris*

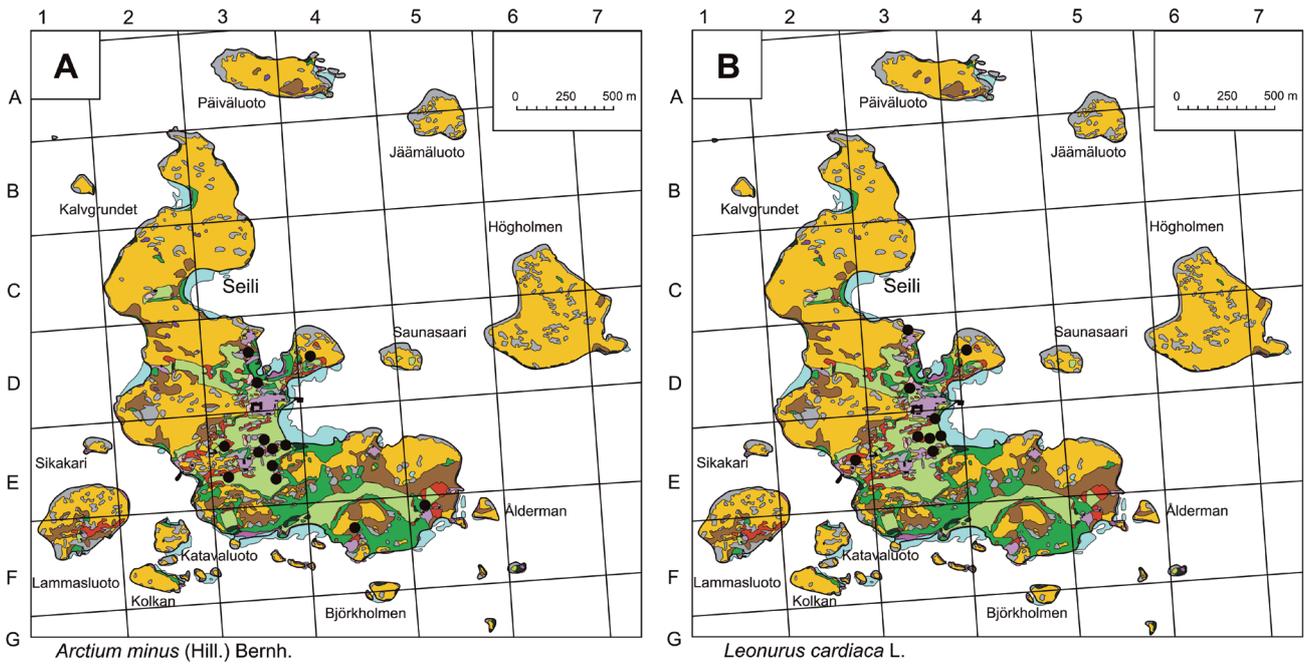
indicators of the complex of epilithic communities, *Vincetoxicum hirsutaria* and *Filipendula vulgaris* (Fig. 8B) for the complex of xerothermophilous swards, forest edges and thickets. *Juncus gerardii* (Fig. 9A) occurred along all flat coasts, similarly like the complex of coastal halophytes, whereas *Juncus compressus* (Fig. 9B), connected with extensively used roads, within

the complex of seminatural meadows and pastures. Distribution of *Arctium minus* and *Leonurus cardiaca* (Fig. 10A-B) was in accordance with the complex of synanthropic ruderal group, found mainly in the proximity of settlements. Littoral hydrophytes were represented by *Batrachium baudotii* and *Zannichellia palustris* (Fig. 11A-B).



**Fig. 9.** Distribution of selected indicator species

Explanations: A – coastal halophytes, *Juncus gerardii*; B – seminatural meadows and pastures, *Juncus compressus*

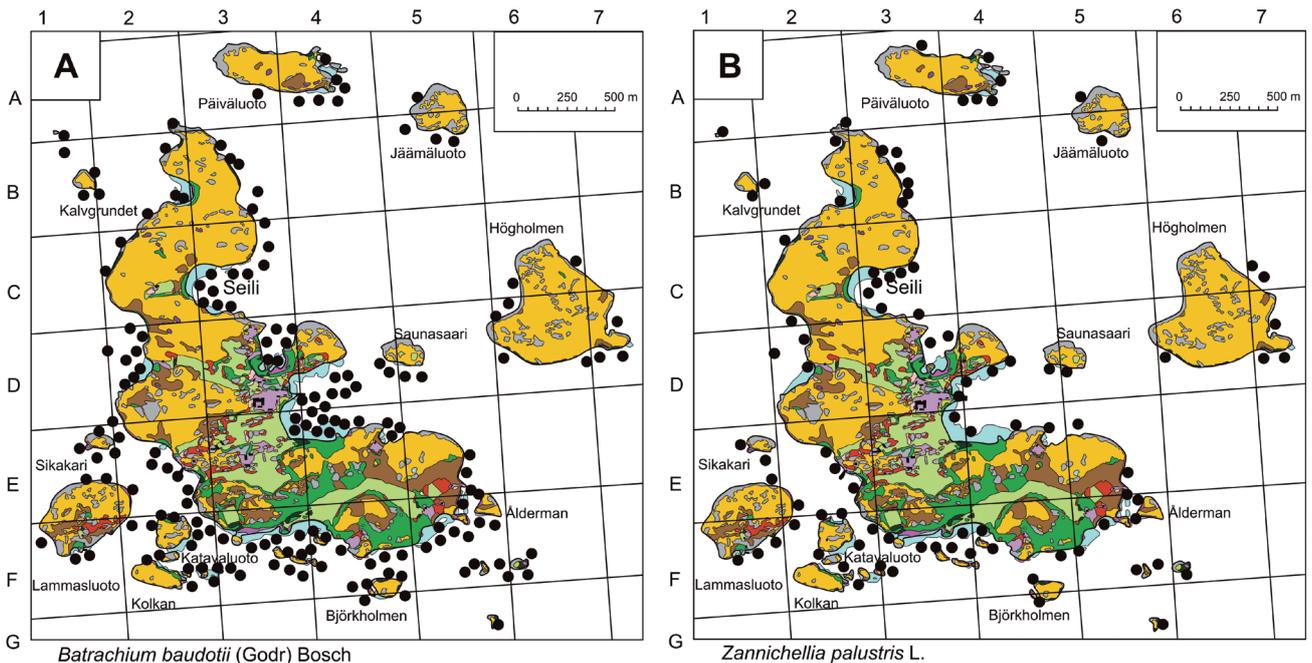


**Fig. 10.** Distribution of selected indicator species of ruderal communities  
 Explanations: A – *Arctium minus*, B – *Leonurus cardiaca*

4.3. Flora of cultivated plants

The second list (Appendix 2), encompasses 76 cultivated or introduced plants growing in fields, gardens and tree plantations. During the period of study, these plants were not found in the wild. They were noted in 14 out of 33 studied squares. They represented 32 families, with the following being richest in species: Pinaceae

(10), Asteraceae (7), Rosaceae (7) and Apiaceae (5). Among the families of cultivates plants, 7 were not represented in the wild: Amaryllidaceae, Cucurbitaceae, Hyacinthiaceae, Hydrangeaceae, Paeoniaceae, Rutaceae and Taxaceae. There were found 61 genera. The genus *Picea* (6) was the richest in species, followed by: *Abies* (3) and *Betula* (3), all from different geographic regions,



**Fig. 11.** Distribution of selected indicator species of littoral hydrophytes  
 Explanations: A – *Batrachium baudotii*, B – *Zannichellia palustris*

introduced in a form of plantations on abandoned fields. *Allium* (3), *Brassica* (2), *Cerasus* (2), *Hemerocallis* (2) and *Syringa* (2) were represented by three or two species, whereas the remaining 53 genera by only one species.

The life form spectrum showed the prevalence of phanerophytes (MF – 20, NF – 9) over hemicryptophytes (14). The second group were therophytes (15). Cultivated plants were relatively less frequent, they all belonged to the category rare (21) or very rare (55), because the most frequent *Syringa vulgaris* was found only in 8 squares.

## 5. Discussion

During our botanical explorations, 11 spontaneously occurring species reported by Eklund (1946), Arohonka (1982) or collected by Leila Linnaluoto (not publ.) were not found. These were: *Anthemis arvensis*, *Berteroa incana*, *Cardamine hirsuta*, *Convolvulus arvensis*, *Hieracium suecicum*, *Hippuris vulgaris*, *Lithospermum arvense*, *Lolium multiflorum*, *Montia fontana*, *Sparganium minimum* and *Thlaspi caerulescens*.

Eklund has contributed 280 species of spontaneously occurring vascular plants to the flora of Seili (Appendix 1), Arohonka – 261, while in the herbarium of Archipelago Research Institute there were 216 species. Altogether there were 409 spontaneously occurring taxa known from Seili. Our study supplemented this list with 131 taxa.

Data concerning distribution of the following early spring species: *Adoxa moschatellina*, *Anemone ranunculoides*, *Corydalis solida*, *Ficaria verna*, *Gagea minima*, *Muscari botryoides*, *Ornithogalum angustifolium* and *Scilla siberica*, might be incomplete due to the lack of our investigations in spring.

The present work has contributed 76 new, spontaneously occurring taxa, which previously were not noted in the square number 669:322 (compare Lampinen *et al.* 2016), and 46 found only in cultivation. Some of them were quite frequent, e.g.: *Alchemilla sarmatica* (noted in 14 squares), *Festuca salina* (30), *Hieracium linifolium* (15), *H. murorum* (12), *Rumex tenuifolius* (27), *Taraxacum balticum* (14), and *T. officinale* (21).

Out of 540 species found in the above mentioned square (669:322), 96 were not found on Seili and adjacent islands, although, some of them were quite widespread in a big square, including: *Alisma plantago-aquatica*, *Alliaria petiolata*, *Artemisia campestris*, *Bolboschoenus maritimus*, *Carex muricata*, *C. pseudocyperus*, *Frangula alnus*, *Lemna minor* and *Potentilla neglecta* (whereas *P. argentea* s.str. was noted in 14 squares on Seili). Lack of some freshwater plants was connected with the observed diminishing or even disappearance of water bodies.

Some plants mentioned in the list of Lampinen (l.c.) probably got extinct in the discussed square, concluding from the date of the last record. On the other hand, 13 species noted only before the WWII were confirmed on Seili during our study (*Alchemilla filicaulis*, *Callitriche palustris*, *Carex viridula*, *Euphrasia stricta*, *Heracleum sphondylium* s.l., *Lathyrus linifolius*, *Lycopodium clavatum*, *Moneses uniflora*, *Myosotis stricta*, *Pyrola rotundifolia*, *Festuca arundinacea*, *Urtica urens*, *Vicia angustifolia*).

The high share of archaeophytes in the studied archipelago resulted first of all from the local concept of this group of species (which included e.g. the great part of meadow plants) and from high share of hemicryptophytes in the Finnish flora, which has been indicated and discussed already by Erkamo (1959, 1961), Jalas (1961, 1965), Sukopp (1972), or Suominen and Hämet-Ahti (1993). On the other hand, a low share of established, and, especially, casual aliens was conspicuous.

Comparison of the spontaneous flora of the studied area, with the flora of Regio aboënsis (11500 km<sup>2</sup> – 1215 species, Lahti *et al.* 1988) showed that 44% of all species found in this region occurred in the Seili archipelago.

According to our observations in the period of almost 20 years, the dynamics of populations (number of localities and abundance of individuals) of following 50 species of vascular plants had shown the tendency to decrease and they may be endangered if this tendency continues: *Alchemilla acutiloba*, *A. glabra*, *A. xanthochlora*, *Anagallis arvensis*, *Arctium minus*, *A. tomentosum*, *Arabis hirsuta*, *Artemisia absinthium*, *Asperugo procumbens*, *Asplenium viride*, *Callitriche palustris*, *Campanula patula*, *Carduus crispus*, *Carex elata*, *Centaurea cyanus*, *Cerastium glomeratum*, *Chenopodium glaucum*, *Ch. polyspermum*, *Corallorhiza trifida*, *Dactylorhiza maculata*, *Dentaria bulbifera*, *Descurainia sophia*, *Diphasiastrum complanatum*, *Eleocharis parvula*, *Epilobium lamyi*, *E. obscurum*, *Fumaria officinalis*, *Galium ×pomeranicum*, *Hippophaë rhamnoides*, *Hyoscyamus niger*, *Hypochoeris maculata*, *Juncus bulbosus*, *Lathyrus linifolius*, *L. niger*, *Leonurus cardiaca*, *Malva pusilla*, *Matricaria chamomilla*, *Melandrium album*, *M. noctiflorum*, *Papaver somniferum*, *Ranunculus bulbosus*, *Salix phylicifolia*, *Scleranthus annuus*, *Silene viscosa*, *Sisymbrium officinale*, *Solanum nigrum*, *Sorbus intermedia*, *Ulmus glabra*, *Urtica urens* and *Vicia sylvatica*. The measures that have been undertaken in the last decades, such as: mowing, prescribed burning and cattle grazing, may contribute to the restoration of the traditional cultural landscape and preservation of the island's biodiversity (Nature of the Island of Seili).

23 species from the red list of plant species in Finland (Kalliovirta *et al.* 2010) were found on the

islands: 3 critically endangered – CR (*Pimpinella major*, *Polygonum oxyspermum*, *Rosa canina* s.str.), 3 endangered – EN (*Epilobium lamyi*, *E. obscurum*, *Lithospermum arvense*), 5 vulnerable – VU (*Cirsium oleraceum*, *Galium verum*, *Melampyrum arvense*, *Sorbus intermedia*, *Ulmus glabra*), 11 near threatened – NT (*Alchemilla plicata*, *A. propinqua*, *Antennaria dioica*, *Cardamine pratensis*, *Centaurium pulchellum*, *Chimaphila umbellata*, *Dianthus deltoides*, *Nardus stricta*, *Pyrola media*, *Taxus baccata*, *Zostera marina*) and one of data deficient – DD (*Rosa corymbifera*). One of the above mentioned taxa was found only in culture (*Taxus baccata*). Some of these red list species were quite abundant, especially on Seili, e.g.: *Galium verum*, *Melampyrum arvense*, *Rosa canina* and *Zostera marina*. Their resources were not locally endangered, provided that the extensive way of management would be maintained.

Although the studied area covers only 11.56 km<sup>2</sup>, it shows striking floristic richness. The stated number of spontaneously occurring species (535) is similar to that of the 10 × 10 km square 669:322 (540 species, among them 40 not confirmed after WWII, Lampinen *et al.* 2016). The high number of new species (76) can be partly explained by slightly narrower concept of some species, and by taking into account escapees from cultivation in the studied flora. It is worth mentioning, however, that both the Finnish flora (Hämet-Ahti *et al.* 1998, 2005) and Atlas of Vascular Plants (Lampinen *et al.* 2016) also comprise several cultivated species. List of cultivated species (Appendix 2) gives opportunity for the assessment of their behaviour in future, i.e., their tendencies for spreading in the wild.

In the last decades, papers addressing the dynamics of flora of the Archipelago were published (von Numers & van der Maarel 1998; Korvenpää *et al.* 2003; Hannus & von Numers 2008; von Numers 2011, 2017) taking as a benchmark the flora of Eklund (1958). Our study

comprised some not yet analysed areas and aspects, such as the share of threatened species, importance of cultivated species for the total floristic richness and their local dynamics.

## 6. Conclusions

Considering the rather small area (11.56 km<sup>2</sup>) of Seili islands such high number of plant species (535) confirms the importance of this area for the protection of the richness of flora and its representativeness for the whole region.

Intensive, detailed studies conducted on a relatively small area may contribute importantly to the enrichment of the inventory of species in a region.

**Acknowledgments.** The studies on Seili were possible due to the financial support of the Archipelago Research Institute of the University of Turku and from the Polish Committee of Scientific Research (Grant 6 P04C 022 10). The geobotanical exploration on Seili has been performed by listed earlier group of researchers. Several of them made their notes and herbarium accessible and by doing so helped in investigating this flora. Also in the determination of some taxa other botanists were of great help. The following groups of species were identified or verified by: Maria Pawlus – *Alchemilla* and *Festuca*; Karol Latowski – Brassicaceae and Apiaceae; Waldemar Żukowski – Cyperaceae, especially *Eleocharis*; Jerzy Zieliński – *Abies*, *Picea*, *Rosa* and *Rubus*. We hereby express our gratitude for the favour and time they have granted us. Special thanks are due to Fiona Milne-Rostkowska, who made linguistic corrections.

## Author Contributions

Research concept and design: A. Brzeg, W. Szwed  
Acquisition and/or assembly of data: A. Brzeg, W. Szwed, M. Wojterska  
Data analysis and interpretation: A. Brzeg, M. Wojterska  
Drafting the article: A. Brzeg, W. Szwed, M. Wojterska  
Critical revision: A. Brzeg, M. Wojterska  
Final approval: A. Brzeg, M. Wojterska

## References

- AROHONKA T. 1982. Kromosomiluku Määrietyksiä Nauvon Seilin saaren putkilokasveista (Chromosome counts of vascular plants of the island Seili in Nauvo, SW Finland). Turun Yliop. Biol. Laitos. Julk. 3: 1-12.
- BRZEG A., BUJAKIEWICZ A., RUSIŃSKA A., SZWED W., TOBOLEWSKI Z. & WOJTERSKI T. 1993. Flora of the island Seili in southwestern Finland. Wiad. Bot. 37(3/4): 21-23 (in Polish with English Summary).
- DIERSSEN K. & DIERSSEN B. 1996. Vegetation Nordeuropas. 838 pp. E. Ulmer Verlag, Stuttgart.
- EKLUND O. 1931. Über die Ursachen der regionalen Verteilung der Schärenflora SW-Finlands. Acta Botanica Fennica 8: 1-133.
- EKLUND O. 1946. Über die Kalkabhängigkeit der Kormophyten SW-Finland. Memoranda Soc. Fauna et Flora Fennica 22: 166-187.
- EKLUND O. 1958. Die Gefäßpflanzenflora beiderseits Skiftet im Schärenarchipel Südwestfinlands: Kirchspiele, Korpo, Houtskär, Nagu, Inio, Brändö, Kumlinge, Sottunga und Kökar. Bidrag till K nedom af Finlands. Natur och Folk 101: 1-321.
- ELLENBERG H., WEBER H. E., DULL R., WIRTH V., WERNER W. & PAULISEN D. 1991. Zeigerwerte von Pflanzen in Mitteleuropa [Indicator values of plants in Central Europe]. 248 pp. Scripta Geobotanica. 18. Verlag Erich Goltze KG, Göttingen.

- ERKAMO V. 1959. Über die Zahlenverhältnisse der synanthropen und der ursprünglichen Pflanzenarten Finnlands. *Arch. Soc. Vanamo* 13: 132-140.
- ERKAMO V. 1961. Über die Synanthropen in der finnischen Flora. *Fennia* 85: 82-85.
- HÄMET-AHTI L., SUOMINEN J., ULVINEN T., UOTILA P. & VUOKKO S. 1986. *Retkeilykasvio*. 598 pp. Suomen Luonnonsuojelun Tutki Oy, Forssa.
- HÄMET-AHTI L., SUOMINEN J., ULVINEN T. & UOTILA P. (eds.). 1998. *Retkeilykasvio*. (Field Flora of Finland), Ed. 4. 656 pp. Finnish Museum of Natural History, Botanical Museum, Helsinki.
- HÄMET-AHTI L., KURTTO A., LAMPINEN R., PIIRAINEN M., SUOMINEN J., ULVINEN T., UOTILA P. & VÄRE H. 2005. Lisäyksiä ja korjauksia *Retkeilykasvion* neljänteen painokseen. *Lutukka* 21: 41-85.
- HANNUS J.-J. & VON NUMERS M. 2008. Vascular plant richness in relation to habitat diversity and island area in the Finnish Archipelago. *J Biogeogr* 35: 1077-1086.
- JALAS J. 1961. Fälle von Introgression in der Flora Finnlands hervorgerufen durch die Tätigkeit des Menschen. *Fennia* 85: 58-81.
- JALAS J. 1965. Hemerobe und hemerochrome Pflanzenarten. Ein terminologischer Reformversuch. *Acta Soc. Fauna Flora Fennica* 72(2): 1-15.
- KALLIOVIRTA M., RYTTÄRI T., HÆGGSTRÖM, C.-A., HAKALISTO S., KANERVA T., KOISTINEN M., LAMMI A., LEHTELÄ M., RAUTIAINEN V.-P., RINTANEN T., SALONEN V. & UUSITALO A. 2010. Putkilokasvit. Vascular Plants. Tracheophyta. In: P. RASSI, E. HYVÄRINEN, A. JUSLÉN & I. MANNERKOSKI (eds.). *Suomen lajien uhanalaisuus Punainen kirja* (The 2010 Red List of Finnish Species), pp. 183-203. Ministry of the Environment, Finnish Environment Institute, Helsinki.
- KORVENPÄÄ T., VON NUMERS M. & HINNERI S. 2003. A meso-scale analysis of floristic patterns in the SW Finnish Archipelago. *J Biogeogr* 30: 1019-1031.
- LAHTI T., KURTTO A. & VÄISÄNEN R. 1988. Floristic composition and regional species richness of vascular plants in Finland. *Ann Bot Fenn* 25: 281-291.
- LAMPINEN R. 2017. *Kasviatlas 2016: Tilastokarttoja*. [http://www.luomus.fi/kasviatlas/tilasto/atlas2016\\_tilastokartat.pdf](http://www.luomus.fi/kasviatlas/tilasto/atlas2016_tilastokartat.pdf). (access 8.12.2017).
- LAMPINEN R., LAHTI T., KURTTO A. & LOMMI S. 2016. Atlas of the Distribution of Finnish Vascular Plants (*Kasviatlas, Växtatlas*). Square 669:322. <http://www.luomus.fi/kasviatlas> (access 8.12.2017).
- LID J. 1985. *Norsk, Svensk, Finsk Flora*. 5 ed. 837 pp. Det Norske Samlaget, Oslo.
- MAAREL E. VAN DER 1971. Florastatistieken als bijdrage tot de evaluatie van nturgebieden. *Gorteria* 5: 176-188.
- MIREK Z., PIĘKOŚ-MIRKOWA H., ZAJĄC A. & ZAJĄC M. 2002. Flowering plants and pteridophytes of Poland. A checklist. In: Z. MIREK (ed.). *Biodiversity of Poland*, 1, 442 pp. W. Szafer Institute of Botany, Polish Academy of Sciences, Kraków.
- NATURE on the Island of Seili <http://www.nationalparks.fi/seili/nature> Access: 27.12. 2018
- PAWŁOWSKI B. 1956. *Flora Tatrorum. Plantae vasculares* 1. 672 pp. PWN, Warszawa.
- PERUSKARTTA 1:20 000 1968. 1043 04 Aaslaluoto. (Topographic map of Finland). Maanmittaushallituksen Topografinen Toimisto. Helsinki.
- PETÄJÄ A. & JUUSTI T. 1979. Archipelago Research Institute. 14 pp. University of Turku, Turku.
- RATYŃSKA H., WOJTERSKA M., BRZEG A. & KOLACZ M. 2010. *Multimedialna encyklopedia zbiorowisk roślinnych Polski* ver. 1.1. Instytut Edukacyjnych Technologii Informatycznych. Uniwersytet Kazimierza Wielkiego, Bydgoszcz.
- ROTHMALER W., JÄGER E. J. & WERNER K. 2002. *Exkursionsflora von Deutschland*. 4. Gefäßpflanzen: Kritischer Band. 948 pp. Spektrum Akad. Verl., Heidelberg, Berlin.
- SUKOPP H. 1972. Wandel von Flora und Vegetation in Mitteleuropa unter dem Einfluß des Menschen. *Berichte über Landwirtschaft* 50(1): 112-139.
- SUOMINEN J. & HÄMET-AHTI L. 1993. Kasvistomme muinaistulokkaat: tulkintaa ja perusteluja. (Archaeophytes in the flora of Finland). *Norrlnia* 4: 1-90.
- TUTIN T. G., HEYWOOD V. H., BURGESS N. A., MOORE D. M., VALENTINE D. H., WALTERS S. M., WEBB D. A. (eds.). 1964-1980. *Flora Europaea*. 1-5. Cambridge University Press, Cambridge.
- VON NUMERS M. 2011. Sea shore plants of the SW archipelago of Finland – distribution patterns and long term changes in 20<sup>th</sup> century. *Ann Bot Fenn* 48 (Suppl. A): 1-46.
- VON NUMERS M. 2017. Distribution patterns and long term changes in vascular plants of non-littoral areas in SW archipelago of Finland. Part I. Study concept and Pteridophyta. *Ann Bot Fenn* 54: 245-262.
- VON NUMERS M. & VAN DER MAAREL E. 1998. Plant distribution patterns and ecological gradients in the Southwest-Finnish archipelago. *Global Ecology and Biogeography Letters* 7:421-440.
- WOJTERSKA M., BALCERKIEWICZ S. & BRZEG A. 2018. Map of vegetation complexes of the Seili island and its surroundings (SW Finland). *Biodiv. Res. Conserv.* 51: 35-41
- WOJTERSKI T., BALCERKIEWICZ S., BRZEG A., BUJAKIEWICZ A., KASPROWICZ M., ŁUSZCZYŃSKI J., RUSIŃSKA A., SZWED W., TOBOLEWSKI Z., WOJTERSKA H. & WOJTERSKA M. 1993. Vegetation of the island Seili in southwestern Finland. *Wiad. Bot.* 37(3/4):17-19 (in Polish with English Summary).
- ZARZYCKI K., TRZCIŃSKA-TACIK H., RÓŻAŃSKI W., SZELĄG Z., WOLEK J. & KORZENIAK U. 2002. Ecological indicator values of vascular plants of Poland. In: Z. MIREK (ed.). *Biodiversity of Poland*, 2, 183 pp. W. Szafer Institute of Botany, Polish Academy of Sciences, Kraków.

# Appendices

## Appendix 1. Specification and characteristics of spontaneous vascular flora of Seili archipelago

1	2	3	4	5	6	7	8	9	10	11	12	13	14
									A <sub>1</sub>	A <sub>2</sub>	A <sub>3</sub>	A <sub>4</sub>	A <sub>5</sub>
	Square												
1	<i>Acer platanoides</i> L.	N	DF	MF	f	+					+	+	
2	<i>Achillea collina</i> Becker ex Rchb.	A	X	H	r	+							
3	<i>Achillea millefolium</i> L. ssp. <i>millefolium</i>	A	M	H	f	+					+	+	
4	<i>Achillea ptarmica</i> L.	EA	M	H	f	+				+	+	+	
5	<i>Acinos arvensis</i> (Lam.) Dandy [ <i>Satureja acinos</i> (L.) Scheele]	N	X	T	r	+							
6	<i>Aconitum ×stoerkianum</i> Rhb.	CA	C/SR	H	r	+							
7	<i>Actaea spicata</i> L.	N	DF	H	r	+							
8	<i>Adoxa moschatellina</i> L.	N	DF	G	r	+							
9	<i>Aegopodium podagraria</i> L.	N	NTH	H	r	+							
10	<i>Aethusa cynapium</i> L.	A	SS	T	r	+							
11	<i>Agrimonia eupatoria</i> L.	N	X	H	r	+							
12	<i>Agrostis canina</i> L.	N	P	H	s	+					+	+	
13	<i>Agrostis capillaris</i> L. [ <i>A. tenuis</i> Sibth.]	A	M	H	f	+				+	+	+	
14	<i>Agrostis gigantea</i> Roth	N	M	H	r	+							
15	<i>Agrostis stolonifera</i> ssp. <i>maritima</i> (Lam.) G.Mey.	N	H	H	c	+			+	+	+	+	+
	<i>Agrostis stolonifera</i> ssp. <i>prorepens</i> (K. Koch) Asch.	N	M	H	s	+							
16	<i>Agrostis vinealis</i> Schreb.	N	X	H	rr	+							+
17	<i>Ajuga reptans</i> L.	CA	C/SR	H	r	+							
18	<i>Alchemilla acutiloba</i> Opiz [ <i>A. vulgaris</i> L. ssp. <i>acutangula</i> (Buser) Murb.]	A	M	H	rr	+							
19	<i>Alchemilla fillicaulis</i> Buser var. <i>fillicaulis</i>	EA	M	H	r								
20	<i>Alchemilla glabra</i> Neygenf.	N	M	H	rr	+							
21	<i>Alchemilla micans</i> Buser [ <i>A. gracilis</i> Opiz]	A	M	H	s	+							
22	<i>Alchemilla monticola</i> Opiz	A	M	H	s	+							
23	<i>Alchemilla plicata</i> Buser	A	M	H	r			NT					
24	<i>Alchemilla propinqua</i> H. Lindb. ex Juz.	EA	M	H	r	+	NT						
25	<i>Alchemilla sarmatica</i> Juz.	EA	M	H	s	+							
26	<i>Alchemilla subcrenata</i> Buser	A	M	H	r	+							
27	<i>Alchemilla xanthochlora</i> Rothm.	EA	M	H	r	+							
28	<i>Allium oleraceum</i> L.	A	X	G	r	+							
29	<i>Allium schoenoprasum</i> L. ssp. <i>schoenoprasum</i>	N	X	G	f	+				+	+	+	+
30	<i>Allium scorodoprasum</i> L.	A	M	G	r	+							
31	<i>Allium vineale</i> L.	A	X	G	r	+							
32	<i>Alnus glutinosa</i> (L.) Gaertn.	N	DF	MF	c	+				+	+	+	+
33	<i>Alnus incana</i> (L.) Moench ssp. <i>incana</i>	N	DF	MF	rr	+							
34	<i>Alopecurus geniculatus</i> L.	A	M	H	r	+						+	
35	<i>Alopecurus pratensis</i> L.	A	M	H	s	+							
36	<i>Anagallis arvensis</i> L.	CA	SS	T	r	+							
37	<i>Anchusa arvensis</i> (L.) M. Bieb.	A	SS	T	r	+							
38	<i>Anemone nemorosa</i> L.	N	DF	G	s	+					+	+	
39	<i>Anemone ranunculoides</i> L.	N	DF	G	r	+							
40	<i>Anethum graveolens</i> L.	CA	C/SR	T	r	+							
41	<i>Angelica archangelica</i> L. ssp. <i>litoralis</i> (Fr.) Thell.	N	LTH	H	c	+			+	+	+	+	+
42	<i>Angelica sylvestris</i> L.	N	M	H	c	+				+	+	+	+
43	<i>Antennaria dioica</i> (L.) Gaertn.	N	M	C	s	+	NT				+		
44	<i>Anthemis arvensis</i> L.	A	SS	T	rr	+							
45	<i>Anthemis tinctoria</i> L. [ <i>Cota tinctoria</i> (L.) J. Gay.]	EA	X	H	rr	+							
46	<i>Anthoxanthum odoratum</i> L. ssp. <i>odoratum</i>	N	M	H	s	+							
47	<i>Anthriscus sylvestris</i> (L.) Hoffm.	A	NTH	H	f	+				+		+	
48	<i>Aquilegia vulgaris</i> L.	EA	C/SR	H	r	+							
49	<i>Arabidopsis thaliana</i> (L.) Heynh.	N	X	T	s	+							
50	<i>Arabis glabra</i> (L.) Bernh. [ <i>Turritis glabra</i> L.]	N	X	H	r	+							
51	<i>Arabis hirsuta</i> (L.) Scop.	N	X	H	r	+							
52	<i>Arctium minus</i> Bernh.	A	SR	H	r	+							
53	<i>Arctium tomentosum</i> Mill.	A	SR	H	r	+							
54	<i>Arctostaphylos uva-ursi</i> (L.) Spreng.	N	CF	Ch	f	+					+	+	+
55	<i>Arenaria serpyllifolia</i> L.	N	X	T	r	+							
56	<i>Armoracia rusticana</i> P. Gaertn., B. Mey. et Scherb.	EA	C/SR	H	rr	+							
57	<i>Artemisia absinthium</i> L.	EA	SR	Ch	rr	+							
58	<i>Artemisia vulgaris</i> L. var. <i>vulgaris</i>	A	SR	H	s	+							
59	<i>Asparagus officinalis</i> L.	EA	C/SR	G	rr	+							



1	2	3	4	5	6	7	8	9	10	11	12	13	14
60	<i>Asperugo procumbens</i> L.	A	SR	T	rr	+							
61	<i>Asplenium septentrionale</i> (L.) Hoffm.	N	Ch	H	f	+					+	+	+
62	<i>Asplenium trichomanes</i> L. ssp. <i>trichomanes</i>	N	Ch	H	s	+					+		
63	<i>Asplenium viride</i> Huds.	N	Ch	H	r		+						
64	<i>Aster ×salignus</i> Willd.	EA	C/SR	H	rr		+						
65	<i>Aster tripolium</i> L. [ <i>Tripolium pannonicum</i> (Jacq.) Dobrocz.]	N	H	H	c	+			+	+	+	+	+
66	<i>Athyrium filix-femina</i> (L.) Roth	N	DF	H	s	+					+	+	
67	<i>Atriplex longipes</i> Drejer ssp. <i>praecox</i> (Hülph.) Turesson	N	H	T	f	+			+	+		+	+
68	<i>Atriplex patula</i> L.	A	SR	T	s	+							
69	<i>Atriplex prostrata</i> Boucher ex DC.	N	H	T	f	+				+		+	
70	<i>Avenula pubescens</i> (Huds.) Dumort.	A	M	H	s	+							
71	<i>Barbarea stricta</i> Andr.	N	NTH	H	r	+							
72	<i>Barbarea vulgaris</i> R. Br.	EA	NTH	H	s	+				+			
73	<i>Batrachium baudotii</i> (Godr.) Bosch [ <i>Ranunculus peltatus</i> Schrank ssp. <i>baudotii</i> (Godr.) C. D. K. Cook]	N	W	Hy	c	+			+	+	+	+	+
74	<i>Berteroa incana</i> (L.) DC.	EA	SR	H	rr	+							
75	<i>Betula pendula</i> Roth var. <i>pendula</i>	N	F	MF	c	+				+	+	+	+
76	<i>Betula pubescens</i> Ehrh. ssp. <i>pubescens</i>	N	F	MF	s	+					+	+	
77	<i>Bidens tripartita</i> L.	A	LTH	T	s	+							
78	<i>Briza media</i> L.	N	M	H	s	+							
79	<i>Bromus hordeaceus</i> L.	A	X	T	r	+							
80	<i>Calamagrostis ×strigosa</i> (Wahlenb.) Hartm.	N	LTH	H	r		+						
81	<i>Calamagrostis arundinacea</i> (L.) Roth	N	F	H	s								
82	<i>Calamagrostis canescens</i> (F. H. Wigg.) Roth	N	DF	H	r						+		
83	<i>Calamagrostis epigejos</i> (L.) Roth	N	NTH	G	f	+					+	+	
84	<i>Calamagrostis stricta</i> (Timm) Koeler [ <i>C. neglecta</i> (Ehrh.) P. Gaertn. et al.]	N	LTH	H	r	+						+	
85	<i>Callitriche palustris</i> L. [ <i>C. verna</i> L.]	N	W	Hy	rr	+							
86	<i>Calluna vulgaris</i> (L.) Hull	N	CF	Ch	c	+				+	+	+	+
87	<i>Caltha palustris</i> L. ssp. <i>palustris</i>	N	M	H	s	+							
88	<i>Calystegia sepium</i> (L.) R. Br. ssp. <i>sepium</i> [ <i>Convolvulus sepium</i> L.]	N	NTH	H	r	+							
89	<i>Campanula glomerata</i> L.	A	C/SR	H	rr		+						
90	<i>Campanula patula</i> L.	A	M	H	r	+							
91	<i>Campanula persicifolia</i> L.	N	X	H	s	+							
92	<i>Campanula rapunculoides</i> L.	A	C/SR	H	r	+							
93	<i>Campanula rotundifolia</i> L. ssp. <i>rotundifolia</i>	A	M	H	f	+					+	+	+
94	<i>Capsella bursa-pastoris</i> (L.) Medik.	A	SR	T	s	+							
95	<i>Cardamine hirsuta</i> L.	N	NTH	H	rr	+							
96	<i>Cardamine pratensis</i> L. ssp. <i>pratensis</i>	N	M	H	s	+		NT			+		
97	<i>Carduus crispus</i> L.	A	NTH	H	rr	+							
98	<i>Carex brunnescens</i> (Pres.) Poir.	N	P	H	r		+				+	+	
99	<i>Carex canescens</i> L.	N	P	H	f	+				+	+	+	+
100	<i>Carex cespitosa</i> L.	N	M	H	r		+						
101	<i>Carex digitata</i> L.	N	DF	H	f	+					+	+	
102	<i>Carex echinata</i> Murray [ <i>C. stellulata</i> Good.]	N	P	H	r	+							
103	<i>Carex elata</i> All.	N	R	H	r		+						
104	<i>Carex hirta</i> L.	A	SR	G	r		+						
105	<i>Carex leporina</i> L. [ <i>C. ovalis</i> Good.]	A	M	H	s	+						+	+
106	<i>Carex nigra</i> (L.) Reichard s.l. [ <i>C. fusca</i> All.]	N	P	H	c	+				+	+	+	+
107	<i>Carex pallescens</i> L.	N	DF	H	s	+					+		
108	<i>Carex panicea</i> L.	N	M	H	s	+					+		
109	<i>Carex pilulifera</i> L.	N	M	H	f	+					+	+	
110	<i>Carex rostrata</i> Stokes	N	R	Hy	rr	+							
111	<i>Carex spicata</i> Huds. [ <i>C. contigua</i> Hoppe]	A	M	H	s	+							
112	<i>Carex vesicaria</i> L.	N	R	Hy	r	+						+	
113	<i>Carex viridula</i> Michx. s.l. [ <i>C. oederi</i> Retz.; <i>C. serotina</i> Merát]	N	P	H	r	+							
114	<i>Carum carvi</i> L.	A	M	H	r	+							
115	<i>Centaurea cyanus</i> L.	A	SS	T	rr	+							
116	<i>Centaurea jacea</i> L.	A	M	H	f	+						+	
117	<i>Centaurium litorale</i> (Turner) Gilmour	N	H	T	f	+			+	+		+	
118	<i>Centaurium pulchellum</i> (Sw.) Druce	N	H	T	r	+							
119	<i>Cerastium arvense</i> L.	EA	X	C	r	+							







1	2	3	4	5	6	7	8	9	10	11	12	13	14
180	<i>Equisetum pratense</i> Ehrh.	N	DF	G	r	+							
181	<i>Equisetum sylvaticum</i> L.	N	DF	G	s	+							
182	<i>Erigeron acer</i> L. ssp. <i>acer</i>	A	X	H	r	+							
183	<i>Eriophorum angustifolium</i> Honck.	N	P	Hy	s	+				+			
184	<i>Eriophorum vaginatum</i> L.	N	P	H	r	+							
185	<i>Erophila verna</i> (L.) Chevall. [ <i>Draba verna</i> L.]	A	X	T	r	+							
186	<i>Erysimum cheiranthoides</i> L. ssp. <i>cheiranthoides</i>	A	SS	T	r	+							
187	<i>Eupatorium cannabinum</i> L.	N	LTH	H	r	+							
188	<i>Euphorbia cyparissias</i> L.	EA	X	G	r								
189	<i>Euphorbia helioscopia</i> L.	A	SS	T	r	+							
190	<i>Euphrasia nemorosa</i> (Pers.) Wallr.	A	M	T	r	+							
191	<i>Euphrasia stricta</i> J. F. Lehm.	A	M	T	s	+					+		
192	<i>Fallopia convolvulus</i> (L.) A. Löve	A	SS	T	s	+							
193	<i>Fallopia dumetorum</i> (L.) Holub	N	NTH	T	f	+					+	+	
194	<i>Festuca arundinacea</i> Schreb. [ <i>F. elatior</i> L., <i>Schedonorus arundinaceus</i> (Schreb.) Dumort.]	N	M	H	r	+							
195	<i>Festuca brevipila</i> Tracey [ <i>F. trachyphylla</i> (Hack.) Krajina]	EA	X	H	rr	+							
196	<i>Festuca ovina</i> L.	N	X	H	c	+					+	+	+
197	<i>Festuca pratensis</i> Huds. [ <i>Schedonorus pratensis</i> (Huds.) P. Beauv.]	A	M	H	r	+							
198	<i>Festuca rubra</i> L. ssp. <i>rubra</i>	N	M	H	s	+							+
199	<i>Festuca salina</i> Natho et Stohr [ <i>F. rubra</i> L. ssp. (var., fo.) <i>litoralis</i> auct.]	N	H	H	c	+				+	+	+	+
200	<i>Ficaria verna</i> Huds. [ <i>Ranunculus ficaria</i> L.]	N	DF	G	r	+							
201	<i>Filago arvensis</i> L.	A	X	T	r	+							
202	<i>Filipendula ulmaria</i> (L.) Maxim.	N	M	H	c	+					+	+	+
203	<i>Filipendula vulgaris</i> Moench	A	X	H	r	+							
204	<i>Fragaria moschata</i> Weston [ <i>F. muricata</i> Mill.]	EA	X	H	rr	+							
205	<i>Fragaria vesca</i> L.	N	X	H	f	+					+	+	+
206	<i>Fraxinus excelsior</i> L.	N	DF	MF	s	+							+
207	<i>Fumaria officinalis</i> L.	A	SS	T	r	+							
208	<i>Gagea minima</i> (L.) Ker Gawl.	A	DF	G	s	+							
209	<i>Galeopsis bifida</i> Boenn.	N	LTH	T	r	+							
210	<i>Galeopsis speciosa</i> Mill.	A	NTH	T	r	+							
211	<i>Galeopsis tetrahit</i> L.	A	NTH	T	f							+	+
212	<i>Galium album</i> Mill. [ <i>G. mollugo</i> auct. p.p.]	EA	X	H	r	+							
213	<i>Galium aparine</i> L.	N	NTH	T	s	+							
214	<i>Galium boreale</i> L.	N	M	H	s	+							+
215	<i>Galium elongatum</i> C. Presl [ <i>G. palustre</i> L. ssp. <i>elongatum</i> (C. Presl) Lange]	N	R	H	r	+							
216	<i>Galium palustre</i> L. ssp. <i>palustre</i>	N	R	H	c	+				+	+	+	+
217	<i>Galium spurium</i> L. s.l.	A	SS	T	r	+							
218	<i>Galium uliginosum</i> L.	N	M	H	r	+						+	+
219	<i>Galium verum</i> L.	N	X	H	s	+				VU			+
220	<i>Galium xpomericum</i> Retz.	EA	M	H	rr	+							
221	<i>Geranium pusillum</i> L.	A	SS	T	r	+							
222	<i>Geranium robertianum</i> L.	N	NTH	H	f	+							
223	<i>Geranium sylvaticum</i> L.	N	NTH	H	s	+							
224	<i>Geum rivale</i> L.	N	M	H	s	+							
225	<i>Geum urbanum</i> L.	N	NTH	H	f	+							
226	<i>Glaux maritima</i> L. [ <i>Lysimachia maritima</i> (L.) Galasso et al.]	N	H	H	c	+				+	+	+	+
227	<i>Glyceria fluitans</i> (L.) R. Br.	N	R	Hy	r	+							
228	<i>Gnaphalium sylvaticum</i> L. [ <i>Omalotheca sylvatica</i> (L.) Schultz-Bip. et F.W. Schultz]	A	NTH	H	s	+							
229	<i>Gnaphalium uliginosum</i> L.	A	SS	T	r	+							
230	<i>Goodyera repens</i> (L.) R.Br.	N	CF	H	s	+							+
231	<i>Gymnocarpium dryopteris</i> (L.) Newman	N	CF	G	f	+					+	+	
232	<i>Hepatica nobilis</i> Schreb.	N	DF	H	s	+							
233	<i>Heracleum sibiricum</i> L. [ <i>Heracleum sphondylium</i> L. ssp. <i>sibiricum</i> (L.) Sink.]	A	NTH	H	rr	+							
234	<i>Hieracium caesium</i> (Fr.) Fr.	N	X	H	r	+							+
235	<i>Hieracium cymosum</i> L. [ <i>Pilosella cymosa</i> (L.) F. W. Schultz et Schultz-Bip. p.p.]	N	X	H	r								
236	<i>Hieracium laevigatum</i> Willd. s. str.	N	F	H	r	+							
237	<i>Hieracium linifolium</i> Saelan ex Lindeb. [ <i>H. tridentatum</i> Fr.]	N	X	H	s	+							
238	<i>Hieracium murorum</i> L. s.l.	N	DF	H	s	+							
239	<i>Hieracium oistophyllum</i> Pugsley [ <i>H. fuscocinereum</i> Norrl. em. S. Bräut.; <i>H. sagittatum</i> (Lindeb.) Norrl.]	N	F	H	rr	+							



1	2	3	4	5	6	7	8	9	10	11	12	13	14
240	<i>Hieracium pilosella</i> L. [ <i>Pilosella officinarum</i> F.W. Schultz et Schultz-Bip.]	N	X	H	s	+							
241	<i>Hieracium suecicum</i> Fr. [ <i>Pilosella xfloribunda</i> (Wimm. et Grab) Arv.-Touv. p.p.]	N	X	H	rr								
242	<i>Hieracium umbellatum</i> L.	N	LTH	H	c				+	+	+	+	+
243	<i>Hieracium vulgatum</i> Fr. [ <i>H. lachenalii</i> C. C. Gmel.]	N	F	H	f	+					+	+	
244	<i>Hippophaë rhamnoides</i> L.	N	X	NF	rr	+							
245	<i>Hippuris vulgaris</i> L.	N	W	Hy	rr	+							
246	<i>Holcus mollis</i> L.	EA	M	H	r	+							
247	<i>Hordeum vulgare</i> L.	CA	SR	T	rr	+							
248	<i>Huperzia selago</i> (L.) Bernh. ex Schrank et Mart. ssp. <i>selago</i>	N	CF	C	s	+					+		+
249	<i>Hyoscyamus niger</i> L.	A	SR	T	rr	+							
250	<i>Hypericum maculatum</i> Crantz	A	X	H	s	+							
251	<i>Hypericum perforatum</i> L.	N	X	H	s	+							+
252	<i>Hypochoeris maculata</i> L.	N	X	H	rr	+							
253	<i>Iris pseudacorus</i> L.	N	R	Hy	s	+					+	+	
254	<i>Isatis tinctoria</i> L.	A	SR	H	r	+							
255	<i>Juncus articulatus</i> L. var. <i>articulatus</i>	A	M	H	r	+							
256	<i>Juncus bufonius</i> L. ssp. <i>bufonius</i>	A	SS	T	s	+							+
257	<i>Juncus bulbosus</i> L. [ <i>J. supinus</i> Moench]	N	P	H	rr	+							
258	<i>Juncus compressus</i> Jacq.	N	M	G	r	+							
259	<i>Juncus conglomeratus</i> L.	A	M	H	r	+							
260	<i>Juncus effusus</i> L.	N	M	H	s	+						+	
261	<i>Juncus filiformis</i> L.	N	P	G	r	+						+	+
262	<i>Juncus gerardii</i> Loisel.	N	H	G	c	+			+	+	+	+	+
263	<i>Juniperus communis</i> L. ssp. <i>communis</i>	N	CF	NF	c	+			+		+	+	+
264	<i>Lamium amplexicaule</i> L.	A	SS	T	r	+							
265	<i>Lamium hybridum</i> Vill. [ <i>L. incisum</i> Willd.]	A	SS	T	r	+							
266	<i>Lamium purpureum</i> L.	A	SS	T	r	+							
267	<i>Lapsana communis</i> L.	A	NTH	H	s	+							
268	<i>Lathyrus montanus</i> Bernh. [ <i>L. linifolius</i> (Reichard) Bässler]	N	DF	G	rr	+							
269	<i>Lathyrus niger</i> (L.) Bernh.	N	DF	G	rr	+							
270	<i>Lathyrus pratensis</i> L.	N	M	H	s	+					+	+	+
271	<i>Lathyrus vernus</i> (L.) Bernh.	N	DF	G	r	+							
272	<i>Ledum palustre</i> L. [ <i>Rhododendron tomentosum</i> Harmaja]	N	CF	C	r	+							
273	<i>Lemna trisulca</i> L.	N	W	Hy	r	+							
274	<i>Leontodon autumnalis</i> L. [ <i>Scorzoneroides autumnalis</i> (L.) Moench]	N	M	H	f	+			+	+		+	+
275	<i>Leonurus cardiaca</i> L. ssp. <i>cardiaca</i>	EA	SR	H	r	+							
276	<i>Leucanthemum vulgare</i> Lam.	A	M	H	s	+							
277	<i>Levisticum officinale</i> W. D. J. Koch	EA	C/SR	H	rr								
278	<i>Leymus arenarius</i> (L.) Hochst. [ <i>Elymus arenarius</i> L.]	N	LTH	G	c	+					+	+	+
279	<i>Lilium martagon</i> L.	EA	DF	G	r	+							
280	<i>Linaria vulgaris</i> Mill.	N	SR	G	r	+							
281	<i>Linnaea borealis</i> L.	N	CF	C	f	+							
282	<i>Linum catharticum</i> L.	N	X	T	r	+							
283	<i>Listera cordata</i> (L.) R.Br. [ <i>Neottia cordata</i> (L.) Rich.]	N	CF	G	r	+						+	+
284	<i>Listera ovata</i> (L.) R.Br. [ <i>Neottia ovata</i> (L.) Bluff & Fingerh.]	N	DF	G	r	+							
285	<i>Lithospermum arvense</i> L. [ <i>Buglossoides arvensis</i> (L.) M. I. Johnston]	A	SS	T	rr	+		EN					
286	<i>Lolium multiflorum</i> Lam.	EA	M	H	rr								
287	<i>Lolium perenne</i> L.	EA	M	H	r	+							
288	<i>Lonicera xylosteum</i> L.	N	DF	NF	s	+							
289	<i>Lotus corniculatus</i> L.	N	M	H	s	+							+
290	<i>Lupinus polyphyllus</i> Lindl.	EA	SR	H	r	+							
291	<i>Luzula campestris</i> (L.) DC.	A	X	H	s	+							
292	<i>Luzula multiflora</i> (Ret.) Lej. ssp. <i>multiflora</i>	A	M	H	f	+						+	+
293	<i>Luzula pallescens</i> Sw. [ <i>L. pallidula</i> Kirschner]	N	F	H	r								
294	<i>Luzula pilosa</i> (L.) Willd.	N	F	H	c	+						+	+
295	<i>Lycopodium annotinum</i> L. ssp. <i>annotinum</i> [ <i>Spinulum annotinum</i> (L.) A. Haines]	N	CF	C	f	+						+	+
296	<i>Lycopodium clavatum</i> L. ssp. <i>clavatum</i>	N	CF	C	rr	+							
297	<i>Lycopus europaeus</i> L.	N	DF	H	r	+							
298	<i>Lysimachia nummularia</i> L.	EA	M	C	rr	+							
299	<i>Lysimachia punctata</i> L.	CA	M	H	rr	+							
300	<i>Lysimachia thyrsoflora</i> L.	N	R	H	r	+							



1	2	3	4	5	6	7	8	9	10	11	12	13	14
301	<i>Lysimachia vulgaris</i> L.	N	M	H	c	+			+	+	+	+	+
302	<i>Lythrum salicaria</i> L.	N	M	H	c	+			+	+	+	+	+
303	<i>Maianthemum bifolium</i> (L.) F. W. Schm.	N	F	G	f	+					+	+	+
304	<i>Malus domestica</i> Borkh.	EA	C/SR	MF	r	+							
305	<i>Malva moschata</i> L.	EA	SR	H	rr	+							
306	<i>Malva pusilla</i> Sm.	A	SR	T	rr	+							
307	<i>Matricaria discoidea</i> DC. [ <i>Chamomilla suaveolens</i> (Pursh) Rydb., <i>M. matricarioides</i> (Less.) Porter]	EA	SR	T	r	+							
308	<i>Matricaria chamomilla</i> L. [ <i>Chamomilla recutita</i> (L.) Rauschert]	A	SS	T	rr	+							
309	<i>Melampyrum arvense</i> L.	A	M	T	r	+		VU					
310	<i>Melampyrum pratense</i> L.	N	CF	T	c	+					+	+	+
311	<i>Melampyrum sylvaticum</i> L.	N	F	T	f	+							
312	<i>Melandrium album</i> (Mill.) Garcke [ <i>Silene latifolia</i> Poir. ssp. <i>alba</i> (Mill.) Greuter & Burdet]	EA	SR	H	rr	+							
313	<i>Melandrium noctiflorum</i> (L.) Fr. [ <i>Silene noctiflora</i> L.]	EA	SS	T	rr	+							
314	<i>Melandrium rubrum</i> (Weigel) Garcke [ <i>Silene dioica</i> (L.) Clairiv.]	N	NTH	H	s	+							
315	<i>Melica nutans</i> L.	N	DF	H	f	+					+	+	
316	<i>Mentha xgracilis</i> Sole	EA	C/SR	H	rr	+							
317	<i>Mentha arvensis</i> L.	N	M	H	r	+					+	+	
318	<i>Menyanthes trifoliata</i> L.	N	P	G	r	+							
319	<i>Milium effusum</i> L.	N	DF	H	r	+							
320	<i>Moehringia trinervia</i> (L.) Clairiv.	N	NTH	H	f	+					+	+	
321	<i>Moneses uniflora</i> (L.) A.Gray	N	CF	C	r	+					+		
322	<i>Monotropa hypopitys</i> L. ssp. <i>hypopitys</i>	N	CF	G	s							+	
323	<i>Montia fontana</i> L.	N	W	Hy	rr	+							
324	<i>Mycelis muralis</i> (L.) Dumort. [ <i>Lactuca muralis</i> (L.) Gaertn.]	N	NTH	H	s	+							
325	<i>Myosotis arvensis</i> (L.) Hill.	A	SS	T	r	+							
326	<i>Myosotis laxa</i> Lehm. ssp. <i>baltica</i> (Sam.) Hyl. ex Nordh. <i>Myosotis laxa</i> Lehm. ssp. <i>caespitosa</i> (Schultz) Hyl. ex Nordh.	N	LTH	H	s	+					+		
327	<i>Myosotis ramosissima</i> Rochel [ <i>M. collina</i> Hoffm.]	N	X	T	r	+							
328	<i>Myosotis scorpioides</i> L. [ <i>M. palustris</i> (L.) L. em. Rchb.]	N	M	H	r	+							
329	<i>Myosotis stricta</i> Link ex Roem. et Schult. [ <i>M. micrantha</i> Pall.]	N	X	T	r	+							
330	<i>Myosurus minimus</i> L.	A	SS	T	rr	+							
331	<i>Myriophyllum spicatum</i> L. s.l.	N	W	Hy	s							+	
332	<i>Nardus stricta</i> L.	N	M	H	r	+		NT			+		
333	<i>Neottia nidus-avis</i> (L.) Rich.	N	DF	G	r	+							
334	<i>Odontites litoralis</i> (Fr.) Fr. ssp. <i>littoralis</i>	N	H	T	f	+			+	+		+	
335	<i>Odontites vulgaris</i> Moench [ <i>O. serotina</i> (Lam.) Rchb. <i>O. rubra</i> Gilib.]	A	M	T	r	+							
336	<i>Ophioglossum vulgatum</i> L.	N	LTH	G	s	+				+		+	
337	<i>Origanum vulgare</i> L.	N	X	C	r	+							
338	<i>Orthilia secunda</i> (L.) House	N	CF	C	f	+					+	+	
339	<i>Oxalis acetosella</i> L.	N	F	G	s	+					+	+	
340	<i>Oxycoccus palustris</i> Pers. [ <i>Vaccinium oxycoccus</i> L.]	N	P	C	r	+							
341	<i>Padus avium</i> Mill. [ <i>Prunus padus</i> L. ssp. <i>padus</i> ]	N	DF	MF	s	+							
342	<i>Papaver somniferum</i> L.	EA	SS	T	rr	+							
343	<i>Paris quadrifolia</i> L.	N	DF	G	r	+							
344	<i>Parthenocissus inserta</i> (A. Kern.) Fritsch	CA	NTH	H	r								
345	<i>Peucedanum palustre</i> (L.) Moench	N	R	H	s	+						+	
346	<i>Phalaris arundinacea</i> L. [ <i>Phalaroides arundinacea</i> (L.) Rausch.]	N	LTH	H	c	+			+	+	+	+	+
347	<i>Phegopteris connectilis</i> (Michx.) Watt [ <i>Thelypteris phegopteris</i> (L.) Sloss.]	N	CF	H	r	+							
348	<i>Phleum pratense</i> L. s.l.	A	M	H	s	+							
349	<i>Phragmites australis</i> (Cav.) Trin. et Steudel	N	R	Hy	c	+			+	+		+	+
350	<i>Picea abies</i> (L.) H. Karst. s.l.	N	CF	MF	c	+					+	+	+
351	<i>Pimpinella major</i> (L.) Huds.	CA	M	H	r	+	CR						
352	<i>Pimpinella saxifraga</i> L.	A	X	H	s	+						+	
353	<i>Pinus sylvestris</i> L.	N	CF	MF	c	+			+	+	+	+	+
354	<i>Plantago intermedia</i> DC [ <i>P. major</i> ssp. <i>intermedia</i> (DC.) Arcang.]	N	SS	T	r								
355	<i>Plantago lanceolata</i> L.	A	M	H	s	+							
356	<i>Plantago major</i> L. s. str.	A	M	H	f	+					+		
357	<i>Plantago maritima</i> L.	N	H	H	c	+			+	+		+	+
358	<i>Plantago winteri</i> Wirtg. [ <i>P. major</i> ssp. <i>winteri</i> (Wirtg.) W. Ludwig]	N	H	H	c	+				+	+	+	+
359	<i>Platanthera bifolia</i> (L.) Rich.	N	DF	G	s	+					+	+	
360	<i>Poa angustifolia</i> L.	N	X	H	s	+							



1	2	3	4	5	6	7	8	9	10	11	12	13	14
361	<i>Poa annua</i> L.	A	SR	T	s	+							
362	<i>Poa compressa</i> L. ssp. <i>compressa</i>	N	SR	H	r	+							
363	<i>Poa nemoralis</i> L.	N	DF	H	f	+					+	+	
364	<i>Poa palustris</i> L.	N	M	H	s	+							
365	<i>Poa pratensis</i> L. s. str.	A	M	H	s	+							
366	<i>Poa subcaerulea</i> Sm. [ <i>Poa humilis</i> Ehrh. ex Hoffm.]	N	M	H	s	+							
367	<i>Poa trivialis</i> L.	N	M	H	s	+							+
368	<i>Polygonatum multiflorum</i> (L.) All.	N	DF	G	r	+							
369	<i>Polygonatum odoratum</i> (Mill.) Druce	N	X	G	s	+							
370	<i>Polygonum arenastrum</i> Boreau [ <i>P. aequale</i> Lindm., <i>P. aviculare</i> L. ssp. <i>microspermum</i> (Jord. ex Boreau) Berher p.p.]	A	SR	T	r								
371	<i>Polygonum aviculare</i> L. ssp. <i>aviculare</i> [ <i>P. heterophyllum</i> Lindm.]	A	SR	T	s	+							
	<i>Polygonum aviculare</i> L. ssp. <i>boreale</i> (Lange) Karlsson [ <i>P. aviculare</i> L. var. <i>littorale</i> auct.]	N	H	T	s	+			+	+			
372	<i>Polygonum calcatum</i> Lindm. [ <i>P. aviculare</i> L. ssp. <i>microspermum</i> (Jord. ex Boreau) Berher p.p.]	A	SR	T	r								
373	<i>Polygonum hydropiper</i> L. [ <i>Persicaria hydropiper</i> (L.) Spach]	A	LTH	T	r	+							
374	<i>Polygonum neglectum</i> Besser [ <i>P. aviculare</i> L. ssp. <i>neglectum</i> (Besser) Arcang.]	N	SR	T	rr	+							
375	<i>Polygonum nodosum</i> Pers. [ <i>P. lapathifolium</i> L. ssp. <i>lapathifolium</i> , <i>Persicaria lapathifolia</i> (L.) Gray ssp. <i>lapathifolia</i> ]	A	SS	T	rr	+							
376	<i>Polygonum oxyspermum</i> C. A. Mey. & Bunge ex Ledeb.	N	H	T	r			CR	+	+		+	
377	<i>Polygonum persicaria</i> L. [ <i>Persicaria maculosa</i> Gray]	A	SS	T	r	+							
378	<i>Polygonum tomentosum</i> Schrank [ <i>P. lapathifolium</i> L. ssp. <i>pallidum</i> (With.) Fr., <i>Persicaria lapathifolia</i> ssp. <i>pallida</i> (With.) S. Ekman & T. Knutsson]	A	SS	T	r	+							
379	<i>Polypodium vulgare</i> L.	N	Ch	H	c	+				+	+	+	+
380	<i>Populus tremula</i> L.	N	DF	MF	f	+							+
381	<i>Potamogeton filiformis</i> Pers. [ <i>Stuckenia filiformis</i> (Pers.) Börner]	N	W	Hy	f	+			+	+	+	+	
382	<i>Potamogeton pectinatus</i> L. [ <i>Stuckenia pectinata</i> (L.) Börner]	N	W	Hy	s	+					+		
383	<i>Potamogeton perfoliatus</i> L.	N	W	Hy	c	+			+	+	+	+	
384	<i>Potamogeton pusillus</i> L.	N	W	Hy	r	+							
385	<i>Potentilla anserina</i> L. ssp. <i>anserina</i> [ <i>Argentina anserina</i> (L.) Rydb.]	N	M	H	f	+				+	+	+	
386	<i>Potentilla argentea</i> L. s. str.	A	X	H	s								+
387	<i>Potentilla crantzii</i> (Crantz) Beck. ex Fritsch	N	X	H	r	+							
388	<i>Potentilla erecta</i> (L.) Raeusch.	N	M	H	f	+					+	+	
389	<i>Primula veris</i> L.	N	X	H	s	+							
390	<i>Prunella vulgaris</i> L.	N	M	H	s	+							+
391	<i>Pteridium aquilinum</i> (L.) Kuhn ssp. <i>pinetorum</i> (C. N. Page & R. R. Mill) J. A. Thomson	N	CF	G	f	+					+	+	
392	<i>Puccinellia capillaris</i> (Lilj.) Jansen [ <i>P. distans</i> (L.) Parl. ssp. <i>borealis</i> Holmberg, <i>P. retroflexa</i> W. E. Hughes]	N	H	H	s	+				+	+	+	
393	<i>Pyrola chlorantha</i> Sw.	N	CF	H	s	+					+		
394	<i>Pyrola media</i> Sw.	N	CF	H	r	+		NT					
395	<i>Pyrola minor</i> L.	N	CF	H	s	+					+	+	
396	<i>Pyrola rotundifolia</i> L. ssp. <i>norvegica</i> (Knaben) Hämet-Ahti [ <i>P. r.</i> ssp. <i>maritima</i> (Kenyon) E. F. Warburg]	N	CF	H	rr	+	+						
	<i>Pyrola rotundifolia</i> L. ssp. <i>rotundifolia</i>	N	CF	H	r	+							
397	<i>Quercus robur</i> L.	N	DF	MF	r	+							
398	<i>Ranunculus acris</i> L. ssp. <i>acris</i>	N	M	H	s	+							
399	<i>Ranunculus auricomus</i> L.	N	M	H	s						+	+	
400	<i>Ranunculus bulbosus</i> L.	A	X	H	r	+							
401	<i>Ranunculus flammula</i> L.	N	R	H	r	+							
402	<i>Ranunculus polyanthemus</i> L. ssp. <i>polyanthemus</i>	A	X	H	s	+							
403	<i>Ranunculus repens</i> L.	N	M	H	f	+							+
404	<i>Raphanus raphanistrum</i> L.	A	SS	T	rr	+							
405	<i>Raphanus sativus</i> L.	CA	C/SR	T	rr								
406	<i>Rhinanthus minor</i> L. ssp. <i>minor</i>	A	M	T	r	+							
407	<i>Ribes alpinum</i> L.	N	DF	NF	f	+					+	+	
408	<i>Ribes nigrum</i> L.	N	DF	NF	s	+							
409	<i>Ribes spicatum</i> E. Robson s.l.	N	DF	NF	s	+							
410	<i>Ribes uva-crispa</i> L.	EA	DF	NF	r	+							
411	<i>Rorippa palustris</i> (L.) Besser	N	LTH	T	rr	+							
412	<i>Rosa caesia</i> Sm. [ <i>R. dumalis</i> Bechst. ssp. <i>coriifolia</i> (Fr.) auct.]	N	X	NF	s	+							+
413	<i>Rosa canina</i> L. s. str.	N	X	NF	s	+		CR					
414	<i>Rosa corymbifera</i> Borkh. [ <i>R. canina</i> L. ssp. <i>dumetorum</i> (Thuill.) auct.]	N	X	NF	r	+		DD					
415	<i>Rosa dumalis</i> Bechst. s. str.	N	X	NF	s	+							
416	<i>Rosa majalis</i> Herrm. [ <i>R. cinnamomea</i> L.]	N	X	NF	rr	+							
417	<i>Rosa mollis</i> Sm. ( <i>R. villosa</i> L.)	N	X	NF	rr	+							
418	<i>Rosa spinosissima</i> L. [ <i>R. pimpinellifolia</i> L.]	CA	C/SR	NF	r	+							



1	2	3	4	5	6	7	8	9	10	11	12	13	14
419	<i>Rosa</i> 'Splendens' [incl. <i>R. ×alba</i> L.]	CA	C/SR	NF	r	+							
420	<i>Rubus chamaemorus</i> L.	N	CF	H	rr								
421	<i>Rubus idaeus</i> L.	N	NTH	NF	c	+					+	+	+
422	<i>Rubus saxatilis</i> L.	N	CF	H	f	+						+	
423	<i>Rumex acetosa</i> L. ssp. <i>acetosa</i>	N	M	H	s	+					+		
424	<i>Rumex acetosella</i> L. ssp. <i>acetosella</i>	N	X	H	s	+							
425	<i>Rumex crispus</i> L. s.l.	N	M	H	c	+			+	+	+	+	
426	<i>Rumex longifolius</i> DC.	A	SR	H	r	+						+	
427	<i>Rumex tenuifolius</i> (Wallr.) A. Löve [ <i>R. acetosella</i> L. ssp. <i>tenuifolius</i> (Wallr.) O. Schwarz]	N	X	H	c	+			+	+	+	+	
428	<i>Sagina nodosa</i> (L.) Fenzl ssp. <i>nodosa</i>	N	Ch	C	r	+							
429	<i>Sagina procumbens</i> L.	N	SR	T	c	+			+		+	+	+
430	<i>Salix aurita</i> L.	N	DF	NF	r	+							
431	<i>Salix caprea</i> L.	N	DF	MF	f	+					+	+	
432	<i>Salix cinerea</i> L.	N	DF	NF	s	+							
433	<i>Salix pentandra</i> L.	N	DF	MF	r	+							
434	<i>Salix phylicifolia</i> L.	N	DF	NF	rr	+							
435	<i>Salix starkeana</i> Willd. ssp. <i>starkeana</i>	N	DF	NF	rr	+							
436	<i>Sambucus racemosa</i> L.	EA	NTH	NF	r	+							
437	<i>Saponaria officinalis</i> L.	EA	SR	H	r	+							
438	<i>Schoenoplectus tabernaemontani</i> (C. C. Gmel.) Palla	N	R	Hy	s	+			+				
439	<i>Scleranthus annuus</i> L. ssp. <i>annuus</i>	A	SS	T	rr	+							
440	<i>Scleranthus polycarpus</i> L. [ <i>S. annuus</i> ssp. <i>polycarpus</i> (L.) Thell.]	A	X	T	r	+							
441	<i>Scrophularia nodosa</i> L.	N	DF	H	f	+						+	
442	<i>Scutellaria galericulata</i> L.	N	R	H	s	+					+	+	
443	<i>Scutellaria hastifolia</i> L.	N	X	H	r	+							
444	<i>Sedum acre</i> L.	N	X	C	c	+				+	+	+	+
445	<i>Sedum album</i> L.	N	X	C	rr	+							
446	<i>Sedum maximum</i> (L.) Hoffm. [ <i>S. telephium</i> L. ssp. <i>maximum</i> (L.) Schinz & Thell., <i>Hylotelephium maximum</i> (L.) Holub]	N	X	G	c	+				+	+	+	+
447	<i>Sedum spurium</i> M.Bieb. [ <i>Phedimus spurium</i> (M. Bieb.) 't Hart]	EA	X	C	r	+							
448	<i>Senecio sylvaticus</i> L.	N	NTH	T	c	+				+	+	+	+
449	<i>Senecio viscosus</i> L.	EA	SR	T	r	+							
450	<i>Senecio vulgaris</i> L.	A	SS	T	r	+				+			
451	<i>Silene nutans</i> L.	N	X	H	r	+							
452	<i>Silene viscosa</i> (L.) Pers.	N	SS	H	rr	+							
453	<i>Silene vulgaris</i> (Moenh) Garcke var. <i>littoralis</i> (Rupr.) Jalas	N	LTH	C	s	+			+		+	+	
454	<i>Sisymbrium officinale</i> (L.) Scop.	A	SR	T	r	+							
455	<i>Solanum dulcamara</i> L.	N	DF	NF	s	+							
456	<i>Solanum nigrum</i> L. s.l.	A	SS	T	rr	+							
457	<i>Solidago virgaurea</i> L. ssp. <i>virgaurea</i>	N	CF	H	rr	+							
458	<i>Sonchus arvensis</i> L. var. <i>arvensis</i>	A	SS	H	s	+						+	
	<i>Sonchus arvensis</i> L. var. <i>maritimus</i> Wahlb.	N	LTH	H	c	+				+	+	+	+
459	<i>Sonchus asper</i> (L.) Hill.	A	SS	T	r	+							
460	<i>Sonchus oleraceus</i> L.	A	SS	T	r	+							
461	<i>Sorbus aucuparia</i> L. ssp. <i>aucuparia</i>	N	F	MF	c	+			+	+	+	+	+
462	<i>Sorbus intermedia</i> (Ehrh.) Pers. [ <i>S. suecica</i> (L.) Krok. et Almq.]	N	DF	MF	rr	+	VU						
463	<i>Sorbushybrida</i> L. [ <i>S. fennica</i> (Kalm) Fr., <i>Hedlundia hybrida</i> auct.]	N	DF	MF	rr	+							
464	<i>Sparganium natans</i> L. [ <i>S. minimum</i> Wallr.]	N	W	Hy	rr	+							
465	<i>Spergula arvensis</i> L. ssp. <i>arvensis</i>	A	SS	T	r	+							
466	<i>Spergula morisonii</i> Boreau	N	X	T	s	+					+		+
467	<i>Spergularia rubra</i> (L.) J. Presl et C. Presl	A	SR	H	r	+							
468	<i>Spergularia salina</i> J. Presl et C. Presl [ <i>S. marina</i> (L.) Griseb.]	N	H	H	s	+			+	+			
469	<i>Spiraea ×billiardii</i> Hérincq	EA	NTH	NF	r	+							
470	<i>Stachys palustris</i> L.	N	LTH	G	f	+				+	+	+	
471	<i>Stellaria graminea</i> L.	N	M	H	f	+						+	
472	<i>Stellaria holostea</i> L.	N	DF	C	r	+							
473	<i>Stellaria longifolia</i> Willd.	N	CF	H	r	+							
474	<i>Stellaria media</i> (L.) Vill.	N	SS	T	s	+							
475	<i>Stellaria palustris</i> Retz.	N	M	H	r	+							
476	<i>Tanacetum vulgare</i> L.	N	LTH	H	c	+			+	+	+	+	+
477	<i>Taraxacum balticum</i> Dahlst.	N	LTH	H	s	+			+	+		+	
478	<i>Taraxacum dahlstedtii</i> H. Lindb.	N	LTH	H	r	+							



1	2	3	4	5	6	7	8	9	10	11	12	13	14
479	<i>Taraxacum officinale</i> F. H. Wigg. s.l.	A	M	H	f	+						+	+
480	<i>Thalictrum flavum</i> L.	N	LTH	H	rr	+							
481	<i>Thlaspi arvense</i> L.	A	SS	T	r	+							
482	<i>Thlaspi caerulescens</i> J. Presl et C. Presl ssp. <i>caerulescens</i> [ <i>Th. alpestre</i> L., <i>Noccaea caerulescens</i> (J. Presl & C. Presl) F. K. Mey]	EA	SR	H	rr	+							
483	<i>Tilia cordata</i> Mill.	N	DF	MF	s	+							
484	<i>Trientalis europaea</i> L. [ <i>Lysimachia europaea</i> (L.) U. Manns & Anderb.]	N	CF	G	f	+					+	+	
485	<i>Trifolium arvense</i> L.	A	X	T	r	+							
486	<i>Trifolium hybridum</i> L. ssp. <i>hybridum</i>	EA	M	H	r	+							
487	<i>Trifolium medium</i> L.	N	X	H	s	+							
488	<i>Trifolium pratense</i> L.	A	M	H	s	+							
489	<i>Trifolium repens</i> L.	A	M	H	s	+							
490	<i>Triglochin maritima</i> L.	N	H	H	c	+			+	+	+	+	+
491	<i>Triglochin palustris</i> L.	N	P	H	r	+							
492	<i>Tripleurospermum inodorum</i> (L.) Sch. Bib. [ <i>Matricaria inodora</i> L.]	A	SS	T	s	+							
493	<i>Tripleurospermum maritimum</i> (L.) W. D. J. Koch ssp. <i>maritimum</i> [ <i>Matricaria maritima</i> L.]	N	LTH	H	f	+			+	+		+	+
494	<i>Triticum aestivum</i> L.	CA	SR	T	rr	+							
495	<i>Tussilago farfara</i> L.	A	SR	G	s	+					+	+	
496	<i>Typha angustifolia</i> L.	N	R	Hy	rr	+							
497	<i>Typha latifolia</i> L.	N	R	Hy	rr	+						+	
498	<i>Ulmus glabra</i> Huds.	N	DF	MF	r	+		VU					
499	<i>Urtica dioica</i> L. ssp. <i>dioica</i>	N	NTH	H	f	+						+	
500	<i>Urtica urens</i> L.	A	SR	T	rr	+							
501	<i>Vaccinium myrtillus</i> L.	N	CF	C	c	+					+	+	+
502	<i>Vaccinium uliginosum</i> L.	N	CF	C	rr	+							
503	<i>Vaccinium vitis-idaea</i> L.	N	CF	C	c	+			+	+	+	+	+
504	<i>Valeriana officinalis</i> L.	N	LTH	H	s	+					+	+	+
505	<i>Valeriana sambucifolia</i> J. C. Mikan s.l.	N	LTH	H	c	+			+	+		+	+
506	<i>Verbascum thapsus</i> L.	N	SR	H	r	+							
507	<i>Veronica agrestis</i> L.	A	SS	T	r	+							
508	<i>Veronica arvensis</i> L.	A	SS	T	s	+							
509	<i>Veronica chamaedrys</i> L.	N	M	C	f	+					+	+	
510	<i>Veronica longifolia</i> L.	N	LTH	H	r	+							
511	<i>Veronica officinalis</i> L.	N	M	C	f	+					+	+	
512	<i>Veronica persica</i> Poir.	EA	SS	T	rr	+							
513	<i>Veronica scutellata</i> L.	N	M	H	r	+							
514	<i>Veronica serpyllifolia</i> L. ssp. <i>serpyllifolia</i>	A	M	H	r	+							
515	<i>Veronica verna</i> L.	A	X	T	r	+							
516	<i>Vicia angustifolia</i> L. [ <i>V. sativa</i> L. ssp. <i>nigra</i> (L.) Ehrh.]	EA	SS	T	r	+							
517	<i>Vicia cracca</i> L.	N	M	H	c	+			+	+	+	+	
518	<i>Vicia hirsuta</i> (L.) S.F. Gray [ <i>Ervilia hirsuta</i> (L.) Opiz]	A	SS	T	r	+							
519	<i>Vicia sativa</i> L. ssp. <i>sativa</i>	CA	SS	T	rr	+							
520	<i>Vicia sepium</i> L. ssp. <i>montana</i> (W. D. J. Koch) Hämet-Ahti	N	NTH	H	r	+							
521	<i>Vicia sylvatica</i> L. [ <i>Ervilia sylvatica</i> (L.) Schur]	N	X	H	rr	+							
522	<i>Vicia tetrasperma</i> (L.) Schreb. [ <i>Ervum tetraspermum</i> L.]	N	SS	T	s	+							
523	<i>Vincetoxicum hirundinaria</i> Medik.	N	X	H	s	+							
524	<i>Viola arvensis</i> Murray	A	SS	T	r	+							
525	<i>Viola canina</i> L. ssp. <i>canina</i>	N	M	H	f	+					+	+	
526	<i>Viola montana</i> L. [ <i>V. canina</i> ssp. <i>montana</i> (L.) Hartm.]	N	M	H	r								
527	<i>Viola odorata</i> L.	EA	C/SR	H	r								
528	<i>Viola palustris</i> L.	N	DF	H	r	+					+	+	
529	<i>Viola riviniana</i> Rechb.	N	DF	H	f	+					+	+	
530	<i>Viola tricolor</i> L. var. <i>tricolor</i>	N	X	T	f	+						+	+
531	<i>Viscaria vulgaris</i> Röhl. [ <i>Lychnis viscaria</i> L.]	N	X	H	s	+							
532	<i>Woodsia ilvensis</i> (L.) R. Br.	N	Ch	H	s	+					+		
533	<i>Zannichellia palustris</i> L. s.l.	N	W	Hy	c	+			+	+	+	+	+
534	<i>Zea mays</i> L.	CA	C/SR	T	rr	+							
535	<i>Zostera marina</i> L.	N	W	Hy	s	+	NT		+	+	+	+	

Explanations: 1 – subsequent number of species; 2 – names of taxa; 3 – origin of taxa (for Regio aboënsis): N – native, A – archaeophyte, EA – established alien, CA – casual alien; 4 – socioeco-logical group (comp. Tab. 1): DF – Deciduous forests, CF – Coniferous forests, LTH – Littoral tall herbs, H – Halophytes, P – Peats and mires, R – reeds, W – water, F – general forest, Ch – chasmophytes, M – meadows, pastures and heathland, X – Xerothermophilous swards, forest edges and thickets, NTH – Nitrophilous tall herbs and thickets connected with forests, SS – synanthropic segetal, SR – synanthropic ruderal, C/SR – cultivated and locally escaping on ruderal sites; 5 – life forms: MF – megaphanerophytes,



## Appendix 2. Specification of cultivated vascular plants of Seili archipelago

No	Taxon	Square			4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
					C <sub>2</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	D <sub>5</sub>	E <sub>1</sub>	E <sub>2</sub>	E <sub>3</sub>	E <sub>4</sub>	F <sub>1</sub>	F <sub>2</sub>	F <sub>3</sub>	F <sub>4</sub>	F <sub>5</sub>			
1	<i>Abies alba</i> Mill.																		0	+	
2	<i>Abies grandis</i> (Dougl. ex D. Don.) Lindl.										+								1		+
3	<i>Abies sibirica</i> Ledeb.		+								+								1		
4	<i>Allium cepa</i> L.		+				+					+							2		
5	<i>Allium porrum</i> L.		+				+					+							2		
6	<i>Allium sativum</i> L.		+				+				+								2		
7	<i>Anthriscus cerefolium</i> (L.) Hoffm.						+												1		+
8	<i>Apium graveolens</i> L.		+				+					+							2		
9	<i>Artemisia dracuncululus</i> L.											+							1		+
10	<i>Bergenia crassifolia</i> (L.) Fritsch		+				+				+								2		
11	<i>Beta vulgaris</i> L. ssp. <i>rapacea</i> (Koch) Döll		+				+					+	+						3		
12	<i>Betula fontinalis</i> Sarg. (= <i>B. occidentalis</i> Hook.)												+				+		2		+
13	<i>Betula japonica</i> Sieb.												+				+		2		+
14	<i>Betula papyrifera</i> Marshall												+				+		2		+
15	<i>Brassica cretica</i> Lam. ssp. <i>botrytis</i> (L.) O. Schwarz		+				+												1		
16	<i>Brassica oleracea</i> L. s.l.		+				+												1		
17	<i>Calendula officinalis</i> L.		+				+				+	+							3		
18	<i>Caragana arborescens</i> Lam.		+				+								+		+		3		
19	<i>Centaurea macrocephala</i> Muss. Puschk. ex Willd.		+								+								1		
20	<i>Cerastium tomentosum</i> L.		+				+				+	+		+					4		
21	<i>Cerasus avium</i> (L.) Moench (= <i>Prunus avium</i> (L.) L.)		+				+	+			+	+							4		
22	<i>Cerasus vulgaris</i> Mill. (= <i>Prunus cerasus</i> L.)		+				+	+			+	+	+	+					6		
23	<i>Chaenomeles japonica</i> (Thunb.) Lindl. ex Spach		+				+												1		
24	<i>Cucumis sativus</i> L.						+					+	+						3		
25	<i>Cucurbita pepo</i> L.						+					+							2		
26	<i>Dahlia hybrida</i> hort.		+				+						+						2		
27	<i>Daucus carota</i> L. ssp. <i>sativus</i> (Hoffm.) Arcang.		+				+					+							2		
28	<i>Delphinium ×cultorum</i> Voss		+									+							1		
29	<i>Dianthus barbatus</i> L.		+				+						+						2		
30	<i>Dicentra formosa</i> (Haw.) Walp.						+				+	+							3		+
31	<i>Eleagnus commutata</i> Bernh.		+												+				1		
32	<i>Fragaria ×ananassa</i> (Weston) Rozier		+				+	+	+		+	+	+				+		7		
33	<i>Helianthus tuberosus</i> L.		+				+												1		
34	<i>Helleborus</i> L. spec.										+		+						2		
35	<i>Hemerocallis fulva</i> (L.) L.						+	+			+	+	+						5		+
36	<i>Hemerocallis lilioasphodelus</i> L.										+	+							2		+
37	<i>Heracleum mantegazzianum</i> Somier et Levier.		+								+								1		
38	<i>Hyssopus officinalis</i> L.		+																0		+
39	<i>Iris germanica</i> L.		+				+				+	+					+		4		
40	<i>Lactuca sativa</i> L.		+				+					+							2		
41	<i>Lilium bulbiferum</i> L.		+					+				+	+	+					4		
42	<i>Linum usitatissimum</i> L.		+									+							1		
43	<i>Lycopersicon esculentum</i> Mill.		+				+					+							2		
44	<i>Melissa officinalis</i> L.		+				+												1		
45	<i>Muscari botryoides</i> (L.) Mill.						+	+				+							3		+
46	<i>Narcissus poeticus</i> L.						+	+				+			+				4		+
47	<i>Ornithogallum angustifolium</i> Boreau (= <i>O. umbellatum</i> L.)		+				+					+							2		+
48	<i>Paeonia officinalis</i> L.		+								+	+							2		
49	<i>Petroselinum crispum</i> (Mill.) A. W. Hill		+				+					+	+						3		

No	Taxon	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
50	<i>Petunia ×atkinsiana</i> D. Don		+				+					+							2		
51	<i>Phaseolus vulgaris</i> L.		+				+					+							2		
52	<i>Philadelphus coronarius</i> L.						+					+	+						3		+
53	<i>Picea engelmannii</i> Parry ex Engelm.										+					+			2		+
54	<i>Picea glauca</i> (Moench) Voss															+			1		+
55	<i>Picea jezoensis</i> (Siebold & Zucc.) Carr.		+													+			1		
56	<i>Picea omorica</i> (Panč.) Purk.															+			1		+
57	<i>Picea pungens</i> Engelm.															+			1		+
58	<i>Picea sitchensis</i> (Bong.) Carr.		+													+			1		
59	<i>Pisum sativum</i> L.		+				+					+							2		
60	<i>Populus tremula</i> × <i>P. tremuloides</i> Michx.											+							1		+
61	<i>Potentilla fruticosa</i> L.						+												1		+
62	<i>Prunus domestica</i> L.		+			+					+		+						3		
63	<i>Pseudotsuga menziesii</i> (Mirb.) Franco		+						+										1		
64	<i>Ptelea trifoliata</i> L.		+															+	1		
65	<i>Quercus rubra</i> L.		+		+														1		
66	<i>Rheum rhabarbarum</i> L.		+									+							1		
67	<i>Salix viminalis</i> L.		+														+		1		
68	<i>Scilla siberica</i> Haw.						+	+			+	+							4		+
69	<i>Solanum tuberosum</i> L.		+				+				+	+		+					3		
70	<i>Solidago gigantea</i> Aiton ssp. <i>serotina</i>		+				+											+	2		
71	<i>Spiraea chamaedryfolia</i> L. (= <i>S. ×arguta</i> Zabel)		+				+												1		
72	<i>Syringa josikaea</i> Jacq. ex Rchb.		+								+	+							2		
73	<i>Syringa vulgaris</i> L.					+	+	+			+	+		+	+		+		8		+
74	<i>Tagetes patula</i> L.		+				+				+								2		
75	<i>Taxus baccata</i> L.		+	NT			+					+							1		
76	<i>Viola ×wittrockiana</i> Gams ex Kappert		+				+	+			+							+	4		
Number of species in one square					3	12	38	6	1	1	22	38	16	4	4	6	8	3			

Explanations: 1 – species common with data of Lampinen *et al.* (2016) for square 669:322; 2 – species new for square 669:322; 3 – categories of threat in Finland (Kalliovirta *et al.* 2010) NT – near threatened; 4-17 – squares, 18 – frequency; 19 – taxa given by Eklund (1946); 20 – herbarium materials and unpublished data submitted by Leila Linnaluoto