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SKRIFTER NR. 130

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JOHANNES LID

# THE FLORA OF JAN MAYEN

Illustrated  
by  
DAGNY TANDE LID



Norsk Polarinstitutt's Bibliotek

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NORSK POLARINSTITUTT  
OSLO 1964

NORSK POLARINSTITUTT

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## Preface

Parts of the manuscript of this treatise were written several years ago. These sections have now been rewritten and incorporated in text. Actually the Norwegian expedition of 1930 was to have completed my Jan Mayen Flora. However, since 1930 ten expeditions have brought to light several new and very important plant finds which are now treated together with the older ones. Moreover, we now have the great advantage of the new Jan Mayen map (Norsk Polarinstitut 1959), as well as a comprehensive catalogue of all place names of Jan Mayen (ORVIN 1960).

*Geographical situation.* Jan Mayen is an isolated island in the Arctic Sea, approximately 500 km east of Greenland and 550 km north-east of Iceland. More precisely, the island is situated between  $70^{\circ} 49'$  and  $71^{\circ} 9'$  N. Lat., and between  $7^{\circ} 56'$  and  $9^{\circ} 5'$  W. Long. The length of the island is 53 km, and across the north-eastern part it is 16 km at its widest. The total area amounts to 380 km<sup>2</sup>. The island is of volcanic origin, the highest peak being the glaciated volcano Beerenberg which rises to a height of 2277 m. Heavy seas break against the coast, and landing on the island requires skilled seamanship. Until 1940 the only settlement on the island was the Norwegian meteorological station at Jamesonbukta. In former days Jan Mayen was a terra nullius; since 1929 the island has belonged to Norway.

*Acknowledgements.* To all those who have aided me in connection with my Jan Mayen Flora, I am most grateful. Firstly I would like to thank Mr. ADOLF HOEL, who sponsored the 1930 expedition and in so many respects facilitated the journey and our stay on Jan Mayen. I am greatly indebted to the managers of the Norwegian station on Jan Mayen in 1930, the late FRITZ ØIEN and the late GENNADI N. OLONKIN, who generously offered us accomodation at the station. Next, my cordial thanks to my able assistant and associate, Mr. LEVI RYGG, who never failed in adding to and preparing our plant collections. I wish to thank Miss LOUISE A. BOYD and Dr. J. WARREN WILSON for information, both verbal and by letter, on their botanical investigations on Jan Mayen. I am also much indebted to the directors of the Botanical Museum in Oslo, Professor ROLF NORDHAGEN and the late Professor JENS HOLMBOE, and the staff of the museum for assistance and encouragement. I am especially gratefull to those who assisted in the identification of critical taxa, Professor ERIC HULTÉN, Stockholm (*Cerastium alpinum* and *C. arcticum*), the late Mrs. ELISABETH EKMAN, Stockholm (*Draba*), Professor THORVALD SØRENSEN, Copenhagen (*Puccinellia coarctata*), the late

Dr. HUGO DAHLSTEDT and Dr. GUSTAF HAGLUND, Stockholm (*Taraxaca*), the late Mr. C. JENSEN, Copenhagen, the late Mr. E. JØRGENSEN, Bergen, and Dr. E. V. WATSON, Reading (*Bryophyta*), and the late Professor BERNT LYNGE, Oslo (*Lichenes*). Thanks are due to Mr. J. E. DANDY, London, for loan of Jan Mayen plant specimens from the British Museum of Natural History. I would also like to thank Miss LIV BARSTAD (now Mrs. DYSTHE) who in 1931 painted *Taraxacum acromaurum* (Plate accompanying the copies of this treatise). Furthermore my thanks to Mrs. ANNE CATHRINE BRENNA who has perused the English manuscript and offered valuable suggestions. Last but not least my best thanks to my wife, DAGNY TANDE LID, who has made the plant drawings after authentic Jan Mayen specimens, as well as preparing the maps.

Botanical Museum of the University of Oslo, January 1964.

JOHANNES LID

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## Introduction

This treatise of the flora of Jan Mayen is mainly based on the results of the author's investigations on the island in 1930. All other available records of plant finds on the island have been inserted, however. In order to explain the origin of such plant records, the various expeditions that have visited the island are treated in the first chapter.

The main purpose of the 1930 expedition was to investigate the regional distribution of the vascular plants on the island. With this in view complete plant lists were prepared for a series of selected localities, 137 in all. All finds, including our own, are now plotted on the maps Nos. 1–62. Moreover, for rarer plants the localities are enumerated under the heading of each species. In the case of the more common species, however, I have found it unnecessary to enumerate the numerous localities in the text. In order to give a survey of the distribution, the localities have been grouped, and the island divided into ten regional areas, I–X, see Fig. 2. The situation of the actual botanical localities are to be found on the sketch map, Fig. 1, pp. 8–9.

The results of our statistical analyses of the actual plants growing around the specimens of each species are to be found in the Tables Nos. 1–36. Bryophytes and lichens, in some cases also fungi, are included in the analyses.

During our stay on the island in 1930 a rich material of vascular plants, as well as of cryptogams, was collected and presented to the Botanical Museum of Oslo. The material of vascular plants has partly been reserved for the Jan Mayen Exsiccatae, of which eighteen series are distributed simultaneously with this treatise, and presented to the Botanical Museums of Oslo, Bergen, Trondheim, Tromsø, Reykjavik, Copenhagen, Lund, Stockholm, Uppsala, Helsingfors, Leningrad, Vienna, Leyden, Paris, London, Kew, New York and Ottawa.

# JAN MAYEN

10 Km

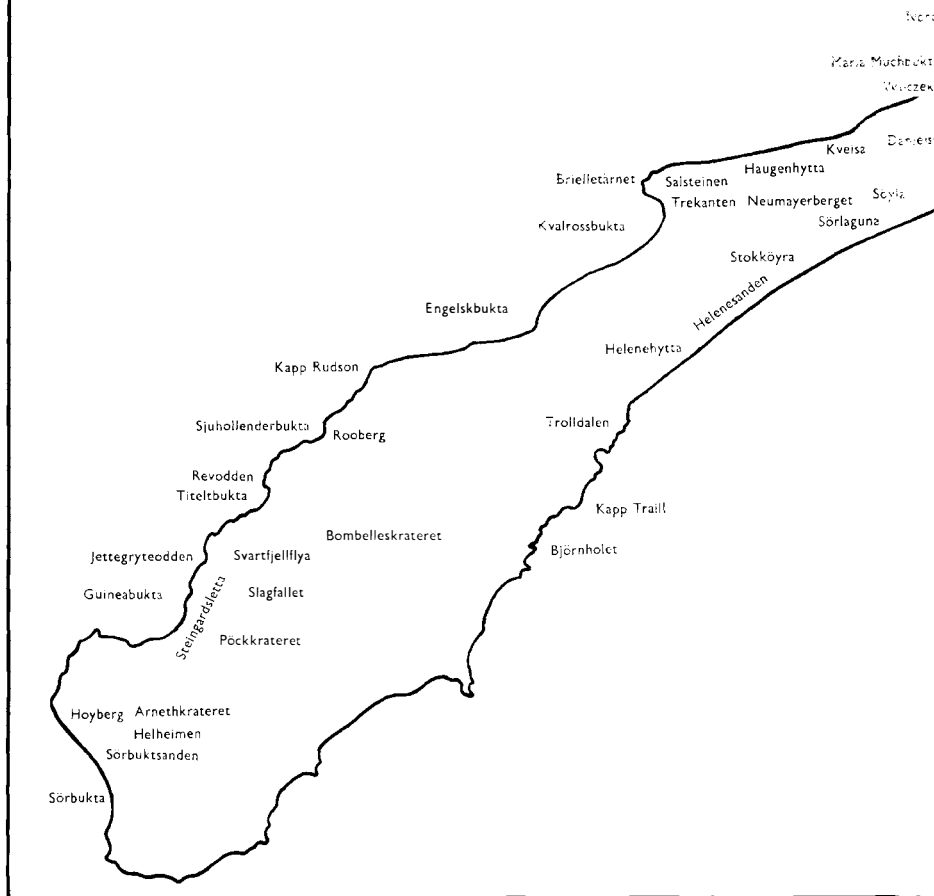
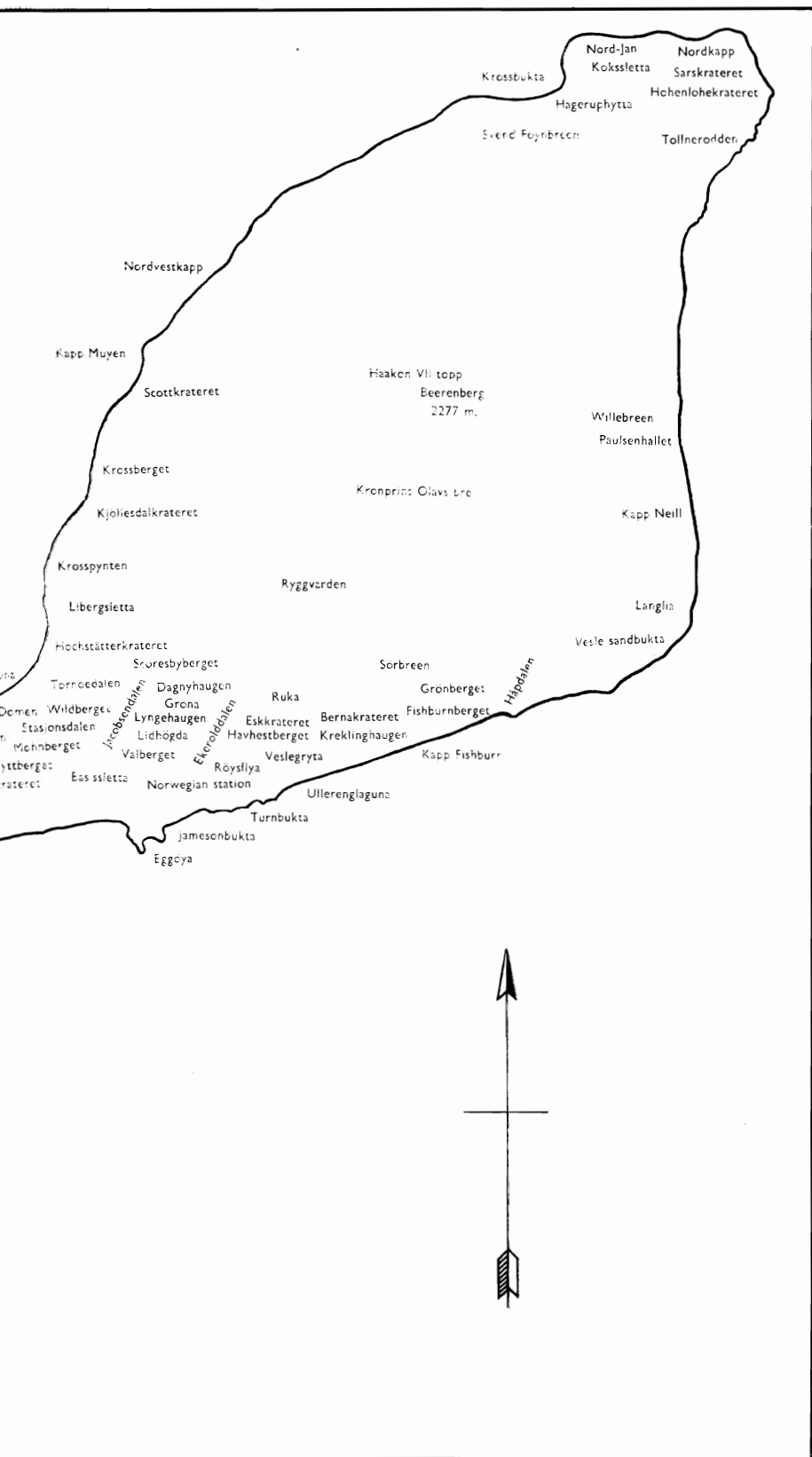


Fig. 1. Sketch Map of Jan Mayen



Mayen with place names.

## Historical section

### BOTANICAL INVESTIGATIONS ON JAN MAYEN 1817–1957

During the last centuries a series of expeditions have investigated the flora of Jan Mayen. From the Dutch period in the 17th century we have no information on the flora. Nor are there any botanical records from the 18th century. The first record of vegetation met with in the literature available is due to WILLIAM SCORESBY (SCORESBY 1820), followed by BERNA and VOGT (VOGT 1863). After this there were expeditions in rapid succession.

In the following brief survey of the botanical investigations of Jan Mayen, expeditions that have not contributed to the flora of the island, are omitted, e. g. the expedition of Lord DUFFERIN in 1856, and that of LEIGH SMITH in 1872.

Some antiquated plant names used by the expeditions, are now transferred to modern nomenclature.

#### The Scoresby expedition 1817

As commander of the whaling vessel “Esk of Whiley” the famous Scottish explorer, WILLIAM SCORESBY jun., cruised the Arctic Sea in the summer of 1817. On this voyage he visited Jan Mayen, landing 4. August on the south-eastern shore at a place which he named Jameson Bay. Passing Havhestberget he climbed to the summit of Eskkrateret which he named after the vessel. – – – “The cliffs here afforded but few specimens of plants. Indeed we travelled a considerable distance before we could perceive the least sign of vegetation. As we advanced, however, we met with tufts of plants in full blossom, scattered widely about among the volcanic minerals; but under the last cliff we visited [i. e. Havhestberget], the variety was greater, and the specimens more vigorous” (SCORESBY 1820 p. 164). Six plants are enumerated, viz. (in modern naming):

*Draba norvegica*  
*Honckenya peploides*  
*Oxyria digyna*

*Saxifraga groenlandica*  
*Saxifraga oppositifolia*  
*Silene acaulis*

#### The Berna and Vogt expedition 1861

In 1861 a scientific expedition under the leadership of GEORG BERNA of Büdesheim and Professor CARL VOGT of Geneva set off from Hamburg in the schooner “Joachim Hinrich” in order to explore northern regions. The expedition reached Jan Mayen 22. August 1861, and on the same day a party went ashore at Turnbukta. From there BERNA and VOGT went up to Bernakrateret, which was named

after BERNA, and climbed up to Eskkrateret, which later on erroneously has been named Vogtkrateret (e. g. LYNGE 1939 p. 6; LID 1941 p. 5; HAGEN 1950 p. 4). The next day another party went ashore on the sandy beach of Sørлагuna where the geologist AMAND GRESSLY collected some plants. VOGT (1863 p. 277) records the following six species obtained on these two trips ashore:

<i>Carex maritima</i>	<i>Ranunculus glacialis</i>
<i>Cochlearia groenlandica</i>	<i>Salix herbacea</i>
<i>Oxyria digyna</i>	<i>Saxifraga oppositifolia</i>

Thus four species were added to the six already collected by SCORESBY in 1817.

#### The Norwegian North-Atlantic Expedition 1877

In the steamer "Vøringen" the Norwegian expedition of 1877 arrived at Jan Mayen 28. July, and anchored in Maria Muschbukta. The surgeon, Dr. D. C. DANIELSSEN, who acted as botanist on the expedition, went ashore in the morning of 29. July. In the afternoon of the same day he collected some plants on the mountain ridge and on the slopes of the crater which later on was named Daniels-sen-krateret. The plants were examined by Professor AXEL BLYTT. Eleven species of vascular plants were found (MOHN 1882 p. 25), three of which proved to be new for the island (marked with asterisks).

<i>Cerastium arcticum</i>	<i>Ranunculus glacialis</i>
<i>Cochlearia groenlandica</i>	<i>Saxifraga groenlandica</i>
<i>Draba norvegica</i>	* <i>Saxifraga nivalis</i>
<i>Honckenya peploides</i>	<i>Saxifraga oppositifolia</i>
<i>Oxyria digyna</i>	* <i>Saxifraga rivularis</i>
* <i>Phippsia algida</i>	

#### The Austrian Polar Expedition 1882–1883

In the vessel "Pola" the Austrian expedition arrived at Maria Muschbukta 12. July 1882. Here the Austrians established a scientific polar station. They wintered on the island and left 6. August 1883. A collection of vascular plants was gathered by the surgeon, Dr. FERDINAND FISCHER ("mehr als 100 Nummern"), and by lieutenant GUSTAV BEER ("ungefähr 50 Nummern"). Both collections were examined by Dr. H. W. REICHARDT of Vienna. In the plant list (REICHARDT 1886 pp. 10–16) 29 vascular species are enumerated:

<i>Cardamine bellidifolia</i>	<i>Poa alpigena</i>
<i>Cerastium arcticum</i>	<i>Poa alpina</i> var. <i>vivipara</i>
<i>Cochlearia groenlandica</i>	<i>Polygonum viviparum</i>
<i>Cystopteris fragilis</i>	<i>Ranunculus glacialis</i>
<i>Draba alpina</i>	<i>Ranunculus pygmaeus</i>
<i>Draba norvegica</i>	<i>Salix herbacea</i>
<i>Equisetum arvense</i>	<i>Saxifraga cernua</i>
<i>Festuca rubra</i>	<i>Saxifraga groenlandica</i>
<i>Festuca vivipara</i>	<i>Saxifraga nivalis</i>
<i>Honckenya peploides</i>	<i>Saxifraga oppositifolia</i>
<i>Koenigia islandica</i>	<i>Saxifraga rivularis</i>
<i>Luzula arcuata</i>	<i>Saxifraga tenuis</i>
<i>Mertensia maritima</i>	<i>Silene acaulis</i>
<i>Oxyria digyna</i>	<i>Taraxacum</i> sp.
<i>Phippsia algida</i>	

Sixteen species were new, i. e. the number of species was more than doubled. For many years this plant list was considered to be a fairly complete registration of the flora of Jan Mayen.

### The French Polar Expedition 1892

In the vessel "la Manche" the expedition under the leadership of Capitaine A. P. L. BIENAIMÉ visited Jan Mayen in 1892. On 27. August a party landed in Maria Muschbukta, and spent some time there (BIENAIMÉ 1893 pp. 10–13). The surgeon of the expedition, Dr. P. COUTEAUD, who acted as a naturalist, reports that he found some of the 28 vascular plants previously reported from the island, e. g. *Cerastium arcticum*, *Cochlearia groenlandica*, *Honckeya peploides*, *Polygonum viviparum*, *Oxyria digyna*, *Ranunculus glacialis*, *Salix herbacea*, *Silene acaulis*, and "de nombreuses Graminées et des Saxifrages". Then follows this remarkable passage: "La flore phanérogamique de Jan-Mayen s'est enrichie d'une nouvelle espèce: c'est une Rubiacée du genre *Galium* qui figure dans nos collections" (BIENAIMÉ 1893 p. 146). Once only we find a comment on this obscure *Galium* in the subsequent literature, viz. by OSTENFELD: "Il nomme dans son 'rapport sommaire' un seul Phanérogame nouveau: *Galium* sp.; mais probablement c'est une erreur, car il ne se trouve pas dans la liste des Phanérogames que le prof. Bureau a publiée d'après les déterminations de M. Franchet" (OSTENFELD 1897 p. 21). The list referred to by OSTENFELD contains the following eleven species: *Cerastium arcticum*, *Cochlearia groenlandica*, *Luzula arcuata*, *Oxyria digyna*, *Polygonum viviparum*, *Ranunculus glacialis*, *Salix herbacea*, *Saxifraga groenlandica*, *Saxifraga nivalis*, *Saxifraga oppositifolia* and *Saxifraga rivularis* (BIENAIMÉ 1893 p. 219).

In attempting to trace the plants collected by Dr. COUTEAUD, the author applied to the Muséum d'histoire naturelle of Paris. From Prof. H. HUMBERT I received the following information: "au sujet des plantes de l'expédition de 'la Manche' dans l'île Jean Mayen, il nous a été impossible de mettre la main dessus. Nous trouvons bien trace de leur entrée au Muséum en 1893; elles ont été étudiées par M. Franchet; mais elles ne sont ni conservées a part ni intercalées dans l'herbier général. — Restent deux hypothèses; ou il s'agissait, comme c'est souvent le cas, pour les plantes de ces régions, de tres petits fragments que l'on n'a pas gardés; ou elles sont avec bien d'autres dans des vieux inaccessibles en ce moment vu l'exiguité de nos locaux et la pénurie de personnel" (from Professor H. HUMBERT's letter of 25. May 1932).

In accordance with this information the author finds it reasonable to omit the mentioned *Galium* from the flora of Jan Mayen. See also *Cardamine pratensis*.

### The Danish «Ingolf» Expedition 1896

The Danish hydrographical expedition to Greenland in the vessel "Ingolf" under the command of C. F. WANDEL visited Jan Mayen 22. July 1896. The botanist, the late Professor C. H. OSTENFELD of Copenhagen, spent some hours on the island. He landed on the sandy beach of Sørlaguna, made towards the eastern end of the lagoon, and crossed the low ridge of lava and went to the south-eastern slope of Mohnberget. On this trip he collected a series of cryptogams, many of which at that time were new for the island. As there are rather few

phanerogams in these localities, OSTENFELD's list only contains 18 vascular plants, none of which were new to the island. Transcribed to modern nomenclature, the plants are the following (OSTENFELD 1897 p. 31, and p. 220):

Cerastium arcticum	Polygonum viviparum
Cochlearia groenlandica	Ranunculus glacialis
Draba alpina	Salix herbacea
Draba norvegica	Saxifraga groenlandica
Festuca vivipara	Saxifraga nivalis
Luzula arcuata	Saxifraga oppositifolia
Oxyria digyna	Saxifraga rivularis
Phippsia algida	Saxifraga tenuis
Poa alpina	Silene acaulis

#### The Swedish expedition 1899

In the steamer "Antarctic" this expedition under the leadership of Professor A. G. NATHORST visited Jan Mayen in 1899. The members of the expedition went ashore four times in all: 12. June at Sørslaguna, 16–19. June in Maria Muschbukta, 19. June in Maria Muschbukta, and finally 20–24. June at the western part of Engelskbukta.

NATHORST, and P. DUSÉN, who mainly collected bryophytes, gathered the following vascular plants in the central part of the island (DUSÉN 1900 pp. 4–8):

Cerastium arcticum	Polygonum viviparum
Cochlearia groenlandica	Ranunculus glacialis
Cystopteris fragilis	Ranunculus pygmaeus
Draba alpina	Sagina intermedia
Draba norvegica	Salix herbacea
Honkenya peplodes	Saxifraga cernua
Luzula arcuata	Saxifraga groenlandica
Mertensia maritima	Saxifraga nivalis
Oxyria digyna	Saxifraga oppositifolia
Phippsia algida	Saxifraga rivularis
Poa alpina	Silene acaulis

Only one of these species was new for the island, viz. *Sagina intermedia*, while their *Cerastium edmonstonii* (WATS.) MURB. et OSTENF. may be identical with *Cerastium arcticum*.

#### The Danish expedition 1900

The Danish East Greenland Expedition of 1900 under the leadership of G. AMDRUP visited Jan Mayen 25–29. June 1900. The botanists, N. HARTZ and C. KRUSE spent three days on the island and did excellent work. They collected an extensive material of vascular plants on and near Hoyberg 28. June, on Wildberget, and several other places at and in the vicinity of Sørslaguna 26–28. June.

The vascular plants were examined by KRUSE (1902 pp. 297–301). KRUSE's list is by far the most complete list of vascular plants ever published from Jan Mayen. HARTZ and KRUSE rediscovered all the vascular plants previously found on the island, with the exception of *Cystopteris fragilis*. Ten species were assumed to be new for the island. One of them, *Carex maritima*, had already been found in 1861 by BERNA and VOGT, a record evidently not recognized by HARTZ and KRUSE.

KRUUSE reckons the number of vascular plants of the island to be 39. One of these, *Draba fladmizensis* WULF. var. *altaica* (LEDEB.) GELERT, must be excluded (the specimens in herb. Copenhagen are identical with *Draba norvegica*). On the other hand there is an additional species in KRUUSE's list, *Saxifraga tenuis*, which at that time was treated as a variety of *Saxifraga nivalis*. KRUUSE's *Alsine biflora* (L.) WG. is *Sagina caespitosa* (specimens in herb. Copenhagen). These corrections having been made, KRUUSE's list appears as follows:

Arabis alpina	Oxyria digyna
Calamagrostis neglecta	Phippsia algida
Cardamine bellidifolia	Poa alpigena
Cardamine pratensis	Poa alpina
Carex lachenalii	Polygonum viviparum
Carex maritima	Ranunculus glacialis
Cerastium arcticum	Ranunculus pygmaeus
Cerastium cerastoides	Sagina caespitosa
Cochlearia groenlandica	Sagina intermedia
Cystopteris fragilis	Salix herbacea
Draba alpina	Saxifraga cernua
Draba norvegica	Saxifraga groenlandica
Draba nivalis	Saxifraga nivalis
Equisetum arvense	Saxifraga oppositifolia
Festuca rubra	Saxifraga rivularis
Festuca vivipara	Saxifraga tenuis
Honckenya peploides	Sibbaldia procumbens
Koenigia islandica	Silene acaulis
Luzula arcuata	Taraxacum croceum
Mertensia maritima	

Thus the number of species increased from 30 to 39, and this number has, until quite recently, been considered as comprising all the vascular plants of the flora of Jan Mayen.

#### The Johannes Gandrup expedition 1919

From Iceland the surveying ship "Islands Falk" set out for Jan Mayen in the summer of 1919. The Danish botanist, Mr. JOHANNES GANDRUP, joined the expedition and collected important botanical material, particularly of cryptogams. The localities visited by GANDRUP were Blyttberget, Mohnberget and Maria Muschbukta 4. August, Nordlaguna and Sørlaguna 5. August, Bjørnholet 7. August, and Guineabukta 9. August. The material of vascular plants was examined by JOHANNES GANDRUP and M. P. PORSILD. Besides rediscovering 28 previously known species, GANDRUP found one new phanerogam, viz. *Saxifraga foliolosa* R. BR. (GANDRUP 1924 p. 12). GANDRUP's Jan Mayen plants are preserved in the Botanical Museum of Copenhagen.

#### The Chaworth Mustars' expedition 1921

Under the leadership of Mr. HAGBART EKEROLD, a Norwegian expedition left Bergen in 1921 for the purpose of establishing a meteorological station on Jan Mayen. The late Mr. J. L. CHAWORTH MUSTARS of the University of Cambridge joined the expedition in order to carry out botanical and zoological investigations on the island. The expedition in the sealers "Isfluglen" and "Polarfront" reached



Jan Mayen 7. August, and CHAWORTH MUSTARS left 17. September after having spent 41 days on the island (WORDIE 1922 pp. 180–185).

Apart from a few sporadic comments nothing has been published about the botanical work of CHAWORTH MUSTARS. However, in January 1931 the author found some of CHAWORTH MUSTARS' Jan Mayen plants in the herbarium of the Botanical Museum of Copenhagen. We know now that CHAWORTH MUSTARS collected at least four phanerogams which were new for the island in 1921, viz. *Poa glauca*, *Trisetum spicatum*, *Carex bigelowii*, and *Veronica alpina*.

#### The Norwegian Jan Mayen expedition 1930

The Norwegian expedition of 1930 was fitted out by Norges Svalbard- og Ishavsundersøkelser, the purpose being to explore the fjords of East Greenland north of Scoresby Sound. By the courtesy of the leader, Mr. ADOLF HOEL, I and my assistant, LEVI RYGG, M. Sc., were invited to travel with the expedition as far as Jan Mayen where we were to carry out botanical investigations.

In the sealer "Veslekari" we left Ålesund 9. July, and reached Jan Mayen 14. July. On the same day we disembarked at the Norwegian station. The manager of the station, Mr. FRITZ ØIEN, kindly invited us to take up our headquarters at the station, a proposal which we were very pleased to accept. From 26. July the new manager of the station, Mr. GENNADI N. OLONKIN, generously prolonged this arrangement. In addition to our stay at the headquarters, the author stopped for some days at Margarethytta in Titeltbukta.

During our stay, from 14. July to 23. August, I and Mr. RYGG investigated the vegetation in most parts of the island, from Sørbukta and Hoyberg in the south to Krossbukta and Nordkapp in the north. The main regions omitted were the south-eastern part from Sørkapp to Kapp Olonkin, Landlia, and the coast from Kapp Muyen to Svend Føynbreen. Priority was given to a thorough investigation of selected localities. 137 such localities were examined, these usually being of an extent of fifty or a couple of hundred metres, none of them exceeding one kilometer. A complete list of the vascular plants was prepared for each of these localities.

Apart from rediscovering all the vascular plants previously recorded from the island, the following thirteen species were discovered in 1930:

<i>Empetrum hermaphroditum</i>	<i>Potentilla crantzii</i>
<i>Epilobium anagallidifolium</i>	<i>Ranunculus hyperboreus</i>
<i>Gnaphalium supinum</i>	<i>Taraxacum acromaurum</i>
<i>Luzula confusa</i>	<i>Taraxacum brachyrhynchum</i>
<i>Luzula spicata</i>	<i>Taraxacum recedens</i>
<i>Minuartia biflora</i>	<i>Taraxacum torvum</i>
<i>Minuartia rubella</i>	

Moreover, we found the following five species, previously collected but not published, and accordingly unknown to us in 1930:

<i>Carex bigelowii</i>	<i>Trisetum spicatum</i>
<i>Poa glauca</i>	<i>Veronica alpina</i>
<i>Sagina caespitosa</i>	

Specimens of these five species were kept in the herbarium of the Botanical Museum of Copenhagen.

It may be mentioned that Mr. JACOB VAAGE and the late Professor BERNT LYNGE collected some vascular plants at and near Maria Muschbukta en route to East Greenland in 1929. In the same year Mr. JOHAN KJØLLESDAL also collected plants on the island. Others who collected plants on Jan Mayen were Mr. THOR IVERSEN and Dr. P. F. SCHOLANDER in 1930 and Mr. SIGURD AANDSTAD in 1932, the two last ones stopping at the island on their way to East Greenland.

#### Miss Louise A. Boyd's expedition 1931

In the summer of 1931 Miss LOUISE A. BOYD of San Fransisco went to East Greenland in the sealer "Veslekari" in order to explore the country. The expedition left Ålesund 1. July and visited Jan Mayen on the outward journey 9–12. July. Miss BOYD visited the Norwegian station at Jamesonbukta, climbed Havhestberget and Eskkrateret, and crossed the island to Maria Muschbukta (BOYD 1932 p. 533, and 1935 p. 8). Mr. R. H. MENZIES, who acted as botanist, states that he "was incapacitated and unable to take part in either of the two expeditions on land. Miss BOYD, however, returned to the ship with a collection of 22 species including what later proved to be a new species of *Taraxacum* and the only new species discovered by the expedition" (BOYD 1932, Appendix I p. 559). The plants were examined, partly at Kew, partly by Miss ALICE EASTWOOD at the California Academy of Sciences, and partly by the author at the Botanical Museum of Oslo. The specimens were distributed to these three institutions. A list of the plants is on file at the American Geographical Society. At my request Miss BOYD kindly sent me a copy of this list which comprises 18 vascular plants:

- |                                   |                                 |
|-----------------------------------|---------------------------------|
| 1. <i>Ranunculus glacialis</i>    | 10. <i>Saxifraga caespitosa</i> |
| 2. <i>Arabis alpina</i>           | 11. <i>Taraxacum</i> sp.        |
| 3. <i>Cochlearia groenlandica</i> | 12. <i>Polygonum viviparum</i>  |
| 4. <i>Draba rupestris</i>         | 13. <i>Oxyria digyna</i>        |
| 5. <i>Cerastium alpinum</i> var.  | 14. <i>Salix arctica</i>        |
| 6. <i>Sibbaldia procumbens</i>    | 15. <i>Salix herbacea</i>       |
| 7. <i>Saxifraga nivalis</i>       | 16. <i>Luzula confusa</i>       |
| 8. <i>Saxifraga oppositifolia</i> | 17. <i>Poa alpina</i>           |
| 9. <i>Saxifraga cernua</i>        | 18. <i>Equisetum arvense</i>    |

No. 4 is a synonym of *Draba norvegica*, No. 5. is *Cerastium arcticum*, No. 10 is *Saxifraga groenlandica*, and no. 16 is *Luzula arcuata*. As for No. 14 *Salix arctica* I believe there must have been some mixing of Miss BOYD's plants from Greenland and those from Jan Mayen, and that the *Salix arctica* specimens actually came from East Greenland. Moreover, Mr. MENZIES had no mention of this species, see above.

#### Miss Louise A. Boyd's expedition 1933

Also in 1933 Miss BOYD went to East Greenland in the sealer "Veslekari". She left Harstad 4. July and arrived at Jan Mayen 8. July. In the course of the days 8–12. July Miss BOYD made several successful trips ashore and "gathered quantities of flowers which were growing in profusion" (BOYD 1935 p. 8). In the

chapter "Botanical work of the Expedition" (BOYD 1935 pp. 288–292) the botanist of the expedition, Mr. WILLIAM B. DREW, enumerates 28 vascular plants from the following five localities: a) Barren lava plains west of the wireless station 8. July. b) Dry foothills of Mt. Beerenberg, 1,5 km west of the wireless station [i. e. Lidhøgda] 9. July. c) Rocky slopes, about 500 meters, Mt. Beerenberg 9. July. d) Talus slopes of bird rocks near Turnbukta 10. July. e) Dry lava ridge, Maria Muschbukta 10. July.

- |                                      |   |
|--------------------------------------|---|
| 1. <i>Trisetum spicatum</i> d        | 15. <i>Draba fladnizensis</i> a         |
| 2. <i>Poa alpina</i> a               | 16. <i>Draba rupestris</i> b, d.        |
| 3. <i>Carex maritima</i> a, b        | 17. <i>Draba nivalis</i> b              |
| 4. <i>Luzula arcuata</i> a, d        | 18. <i>Draba alpina</i> e               |
| 5. <i>Salix herbacea</i> a, b        | 19. <i>Arabis alpina</i> d              |
| 6. <i>Oxyria digyna</i> a, b         | 20. <i>Saxifraga oppositifolia</i> a, b |
| 7. <i>Arenaria peploides</i> d       | 21. <i>Saxifraga caespitosa</i> a, b, c |
| 8. <i>Cerastium alpinum</i> a, b     | 22. <i>Saxifraga nivalis</i> b, d       |
| 9. — — var. <i>glanduliferum</i> b   | 23. <i>Saxifraga rivularis</i> a, d     |
| 10. <i>Silene acaulis</i> b          | 24. <i>Saxifraga cernua</i> b           |
| 11. <i>Ranunculus pygmaeus</i> d, e  | 25. <i>Sibbaldia procumbens</i> d       |
| 12. <i>Ranunculus glacialis</i> a    | 26. <i>Mertensia maritima</i> d         |
| 13. <i>Cochlearia groenlandica</i> a | 27. <i>Veronica alpina</i> d            |
| 14. — — var. <i>oblongifolia</i> d   | 28. <i>Taraxacum croceum</i> d          |

I presume that Nos. 8 and 9 are *Cerastium arcticum*, Nos. 13 and 14 *Cochlearia groenlandica*, and Nos. 15 and 16 *Draba norvegica*. Although *Trisetum spicatum* and *Veronica alpina* had been found by CHAWORTH MUSTARS as early as in 1921, they were now published for the first time (BOYD 1935 p. 289). See also BIRD (1935 p. 121).

#### C. G. Bird's expedition 1934

During the summer of 1934 an expedition of three English students, C. G. BIRD, E. C. BIRD and R. B. CONNELL spent the months of July and August on Jan Mayen. One of the purposes of the expedition was to make a complete collection of vascular plants and collect as many other plants as possible (BIRD 1935 p. 121). The vascular plants were identified by Mr. A. J. WILMOTT at the Botanical Department of the British Museum of Natural History, London. In BIRD's annotated plant list (BIRD 1935 pp. 121–124), 34 vascular plants are enumerated:

- |                               |                                |
|-------------------------------|--------------------------------|
| <i>Cardamine bellidifolia</i> | <i>Poa alpigena</i>            |
| <i>Carex lachenalii</i>       | <i>Poa alpina</i>              |
| <i>Carex maritima</i>         | <i>Polygonum viviparum</i>     |
| <i>Cerastium arcticum</i>     | <i>Ranunculus glacialis</i>    |
| <i>Cerastium cerastoides</i>  | <i>Ranunculus pygmaeus</i>     |
| <i>Draba</i> sp.              | <i>Sagina nivalis</i>          |
| <i>Draba</i> sp.              | <i>Salix herbacea</i>          |
| <i>Equisetum arvense</i>      | <i>Saxifraga cernua</i>        |
| <i>Festuca rubra</i>          | <i>Saxifraga foliolosa</i>     |
| <i>Festuca vivipara</i>       | <i>Saxifraga groenlandica</i>  |
| <i>Honckenya peploides</i>    | <i>Saxifraga nivalis</i>       |
| <i>Koenigia islandica</i>     | <i>Saxifraga oppositifolia</i> |
| <i>Luzula arcuata</i>         | <i>Saxifraga rivularis</i>     |
| <i>Luzula confusa</i>         | <i>Saxifraga tenuis</i>        |
| <i>Mertensia maritima</i>     | <i>Silene acaulis</i>          |
| <i>Oxyria digyna</i>          | <i>Taraxacum croceum</i>       |
| <i>Phippsia algida</i>        | <i>Trisetum spicatum</i>       |

BIRD claimed to have found two new vascular plants, *Cerastium cerastoides* and *Trisetum spicatum*. In the case of the latter the claim was justified as Mr. BIRD at

that time had no information either of the finds in 1921 and 1930 or of Miss BOYD's find in 1933. The former species, however, is identical with the plant which was published as *Cerastium trigynum* by KRUSE (1902 p. 299).

#### The Imperial College expedition 1938

This expedition was fitted out by the Imperial College of Science and Technology, London, under the leadership of Mr. ALEXANDER KING. Botanists were Mr. R. SCOTT RUSSELL and Mr. P. S. WELLINGTON. The botanical work was to include a physiological study of the factors controlling growth in the Arctic. These investigations were complementary to the collection of plant specimens and an ecological description of the vegetation. The physiological and ecological studies were published in *The Journal of Ecology* Vol. XXVIII No. 1 and 2 (February and August 1940 pp. 153–179, 271–288, and 289–309) by R. SCOTT RUSSELL and P. S. WELLINGTON. During their stay of less than seven weeks the botanists very successfully collected most of the plants previously known from the island, and added three new species, viz.:

*Alchemilla glomerulans*  
*Cassiope hypnoides*  
*Euphrasia frigida*

The botanical material was presented to the herbarium of the British Museum of Natural History, London, and Mr. A. J. WILMOTT identified the vascular plants. A list of the plants was to have been published in the *Journal of Botany* 1940 (RUSSELL AND WELLINGTON 1940 p. 159). However, this list was never published, which is most regrettable, as we are now confined to the information on the plants to be found in the ecological papers. In such papers the special localities are generally insufficiently recorded. However, in the cases where the localities of SCOTT RUSSELL's plants could be traced, I have plotted his plant finds on the maps.

#### The Oxford University expeditions 1947 and 1950

In the *Journal of Ecology* (Vol. 40 (1952) pp. 249–264) the botanist of these expeditions, Dr. J. WARREN WILSON, gives very interesting ecological and physiological information on the vegetation. From a systematical point of view, however, there are but very few plant records, these mostly being of the more common plants only. On the expedition to Jan Mayen in 1947, Dr. WILSON brought along a handwritten copy of my plant list from 1930. In letters of 2. March and 16. April 1948 Dr. WILSON very kindly told me of some of his most interesting finds, which are now registered and plotted on the maps. Dr. WILSON made a very remarkable find in 1947. Near Sjuhollendarbukta he discovered *Lycopodium selago*, new for the island (specimens in the Botanical Museum, Oslo).

#### The Norwegian expedition 1950

The purpose of Norsk Polarinstitutt's expedition to Jan Mayen in 1950 was to carry out cartographical work. One of the assistants, Mr. ERIK AALRUST, gathered

a plant collection of 33 species, which was presented to the Botanical Museum of Oslo, and subsequently identified by the author. Among Mr. AALRUST's plants were some specimens of *Lycopodium selago*, found in a new place, slightly to the south of Dr. WILSON's find in 1947. Moreover, on his daily walks on the island, Mr. AALRUST made detailed sketch maps of the location of some of the common and easily recognizable plants, such as *Cochlearia*, *Phippsia* and *Ranunculus*. Thus we got several new dots on the maps, particularly in the mountains of the southern part of the island.

One of the cartographers, Mr. WILHELM SOLHEIM, also collected some plants on Jan Mayen in 1950, e. g. *Empetrum hermaphroditum*.

#### Norwegian investigations 1955

During his stay on Jan Mayen 1955–1956 the Norwegian meteorologist, Mr. MAGNE RØTTE, gathered a rich collection of plants, which was presented to the Botanical Museum of Oslo. After having identified and registered Mr. RØTTE's plants, I have plotted his various plant finds on the maps.

#### Norwegian expedition 1956

The Norwegian botanist, Mr. OLAF I. RØNNING, visited Jan Mayen 2–16. July 1956. Besides studying the flora and the vegetation, Mr. RØNNING collected plants and brought back to Tromsø Museum botanical material of several plant groups. A vivid description of the island is given by RØNNING in "Naturen" (1958 pp. 43–57). Among RØNNING's plants are specimens of an anthropochore, *Deschampsia caespitosa*, introduced during the last war.

#### Icelandic expedition 1957

In 1957 the Icelandic botanist, Mr. STEINDOR STEINDORSSON, made a short trip to Jan Mayen. In the sealer "Oddi" he left Akureyri 12. June, and landed on the sandy beach near Eggøya 15. June. During his one week stay, Mr. STEINDORSSON examined the vegetation in 14 selected localities, from Titeltbukta in the south-west to Nordlaguna and Eggøya in the north-east. 32 vascular plants are enumerated in Tafla V (STEINDORSSON 1958 pp. 87–88).

## Systematical section

Apart from the Empetraceae the sequence of families follows DALLA TORRE et HARMS, Genera Siphonogamarum, 1908. Within the family the genera and the species are arranged alphabetically. The illustrations of the plants are drawn in natural size, and by the reproduction reduced to 60 per cent.

### SYNOPSIS OF FAMILIES, GENERA, SPECIES AND HYBRID

	Genera	Species		Genera	Species
Polypodiaceae	1	1		Ranunculaceae	1 3
Cystopteris (1)				Ranunculus (3)	
Equisetaceae	1	1		Cruciferae	4 8
Equisetum (1)				Arabis (1)	
Lycopodiaceae	1	1		Cardamine (2)	
Lycopodium (1)				Cochlearia (1)	
				Draba (4)	
Gramineae	6	9		Saxifragaceae	1 7
Calamagrostis (1)				Saxifraga (7)	
Festuca (2)				Rosaceae	3 3
Phippsia (1)				Alchemilla (1)	
Poa (3)				Potentilla (1)	
Puccinellia (1)				Sibbaldia (1)	
Trisetum (1)					
Cyperaceae	1	3		Onagraceae	1 1
Carex (3)				Epilobium (1)	
Juncaceae	1	3		Ericaceae	1 1
Luzula (3)				Cassiope (1)	
Salicaceae	1	1		Empetraceae	1 1
Salix (1)				Empetrum (1)	
Polygonaceae	3	3		Boraginaceae	1 1
Koenigia (1)				Mertensia (1)	
Oxyria (1)				Scrophulariaceae	2 2
Polygonum (1)				Euphrasia (1)	
Caryophyllaceae	5	9		Veronica (1)	
Cerastium (3)				Compositae	2 6
Honckenya (1)				Gnaphalium (1)	
Minuartia (2)				Taraxacum (5)	
Sagina (2)					
Silene (1)					
				19	37 64

19 families, 37 genera, 63 species, and 1 hybrid.

ARTIFICIAL KEY TO THE VASCULAR PLANTS OF JAN MAYEN

**1. Plants without true flowers (Pteridophytes)**

- A. Leaves (fronds) and no stem ..... *Cystopteris fragilis*
- B. Plants with a stem.
  - I. Stem leaves short, scarious, whorled ..... *Equisetum arvense*
  - II. Stem leaves closely overlapping ..... *Lycopodium selago*

**2. Flowering plants with woody creeping stem**

- A. Broad deciduous leaves. Fruit a capsule ..... *Salix herbacea*
- B. Narrow evergreen leaves. Dwarf shrubs.
  - I. Petals lacking. Black shiny berry ..... *Empetrum hermaphroditum*
  - II. Petals white. Fruit a capsule ..... *Cassiope hypnoides*

**3. Grass-like plants with linear leaves (Monocotyledones)**

- A. Hollow stem with solid nodes ..... *Gramineae*
- B. Solid stem without nodes.
  - I. Stem 3-angled. Fruit a nut in a perigon ..... *Carex*
  - II. Stem terete. Fruit a capsule ..... *Luzula*

**4. Flowering plants, usually with broad leaves (Dicotyledones)**

- A. Perianth single.
  - I. Flowers in a dense head on a common receptacle. Petals united.
    - a. Petals whitish. Stem leafy ..... *Gnaphalium supinum*
    - b. Petals yellow. Scapose plants ..... *Taraxacum*
  - II. No dense head. Sepals free, no petals.
    - a. Small annual plant with ternate flower ..... *Koenigia islandica*
    - b. Perennial plants.
      - 1. Leaves oblong-lanceolate ..... *Polygonum viviparum*
      - 2. Leaves reniform, glabrous ..... *Oxyria digyna*
      - 3. Leaves palmately lobed, hairy ..... *Alchemilla glomerulans*
- B. Perianth double. Petals free.
  - I. Petals white.
    - a. Four petals ..... *Cruciferae*
    - b. Five petals.
      - 1. Leaves opposite ..... *Caryophyllaceae*
      - 2. Leaves alternate.
        - \* Two styles ..... *Saxifraga*
        - \*\* Many styles ..... *Ranunculus glacialis*
  - II. Petals yellow.
    - a. Three petals ..... *Ranunculus hyperboreus*
    - b. Four petals ..... *Draba alpina*
    - c. Five petals.
      - 1. Leaves stipulate.
        - \* Leaves ternate ..... *Sibbaldia procumbens*
        - \*\* Leaves quinate ..... *Potentilla crantzii*
      - 2. Leaves unstipulate ..... *Ranunculus pygmaeus*
  - III. Petals red.
    - a. Four petals.
      - 1. Leaves pinnate ..... *Cardamine pratensis*
      - 2. Leaves lanceolate, opposite ..... *Epilobium anagallidifolium*
    - b. Five petals. Leaves opposite.
      - 1. Styles 3, sepals united ..... *Silene acaulis*
      - 2. Styles 2, sepals free ..... *Saxifraga oppositifolia*
- C. Perianth double. Petals united.
  - I. Leaves alternate. Petals blue ..... *Mertensia maritima*
  - II. Leaves opposite.
    - a. Annual. Petals white with blue veins ..... *Euphrasia frigida*
    - b. Perennial. Petals blue ..... *Veronica alpina*

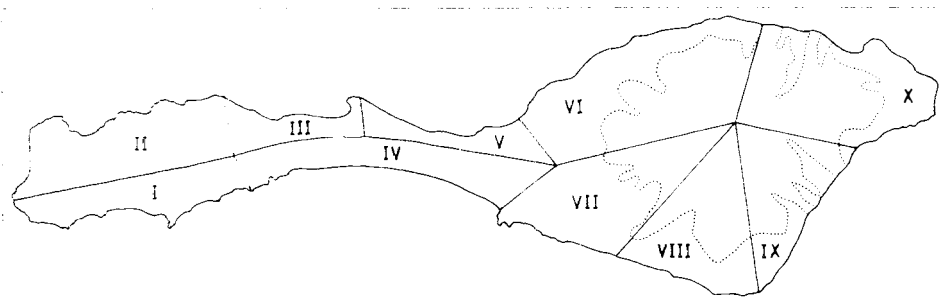


Fig. 2. Jan Mayen divided into ten areas. I. Sørkapp – Kapp Traill. II. Sørbukta – Kapp Rudson. III. Engelsbukta and Kvalrossbukta. IV. Sørlaguna. V. Maria Muschbukta and Nordlaguna. VI. Hochstetterkrateret – Weyprechtbreen. VII. Eggøya – Sørbreen. VIII. Sørbreen – Søraustkapp. IX. Søraustkapp – Dufferinbreen. X. Nord-Jan.

#### JAN MAYEN DIVIDED INTO TEN AREAS

Under the heading of each species the localities are grouped into ten smaller areas, I–X, the situation of which is shown in Fig. 2. The author's finds from 1930 are usually quoted without signature.

Besides the distribution on the island, the general distribution and the northern limit are quoted for each species.

#### 1. Fam. POLYPODIACEAE

##### 1. *Cystopteris fragilis* (L.) BERNH.

Fig. 3 a. Map 1. Table 1. Exsicc. No. 1.

- II. Lava cave in Helheimen south of Arnethkrateret 13. August 1930. "Um die Guinea-Bucht" (REICHARDT 1886 p. 10).
- III. Engelsbukta 1899 F. Åkerblom (DUSÉN 1900 p. 8).
- VII. Rockery above Ullerengsanden 23. July 1930, two specimens about 40 m above sea level.
- VIII. Håpdalen 1938, a single plant (SCOTT RUSSELL and WELLINGTON 1940 p. 175).

Fronds 10–12 cm, sometimes up to 17 cm long. In August 1930 the plants in Helheimen produced mature spores, 60  $\mu$  long, the spines 3–5  $\mu$  long. *Cystopteris fragilis* is a very rare plant on Jan Mayen, having been found five times in all.

Two patches of *Cystopteris fragilis* in the cave of Helheimen were used for the statistical analyses, Table 1.

The first find was made by the Austrian expedition 1882–1883 (REICHARDT 1886 p. 10).

General distribution: Circumpolar and cosmopolite, in the north extending to the northern coast of Greenland, in the south to Kerguelen (HULTÉN 1962 p. 62).

#### 2. Fam. EQUISETACEAE

##### 2. *Equisetum arvense* L.

Fig. 3 b. Map. 2. Table 2. Exsicc. No. 2.

- I. Bjørnholet 7. August 1919 (GANDRUP 1924 p. 8).
- II. Grew abundantly at Sørbukta, Guineabukta, and Titeltbukta in 1930. Titeltbukta 1950 (ERIK AALRUST). "Rudson-Spitze in einer Meereshöhe von ungefähr 20 Metern" (REICHARDT 1886 p. 10).



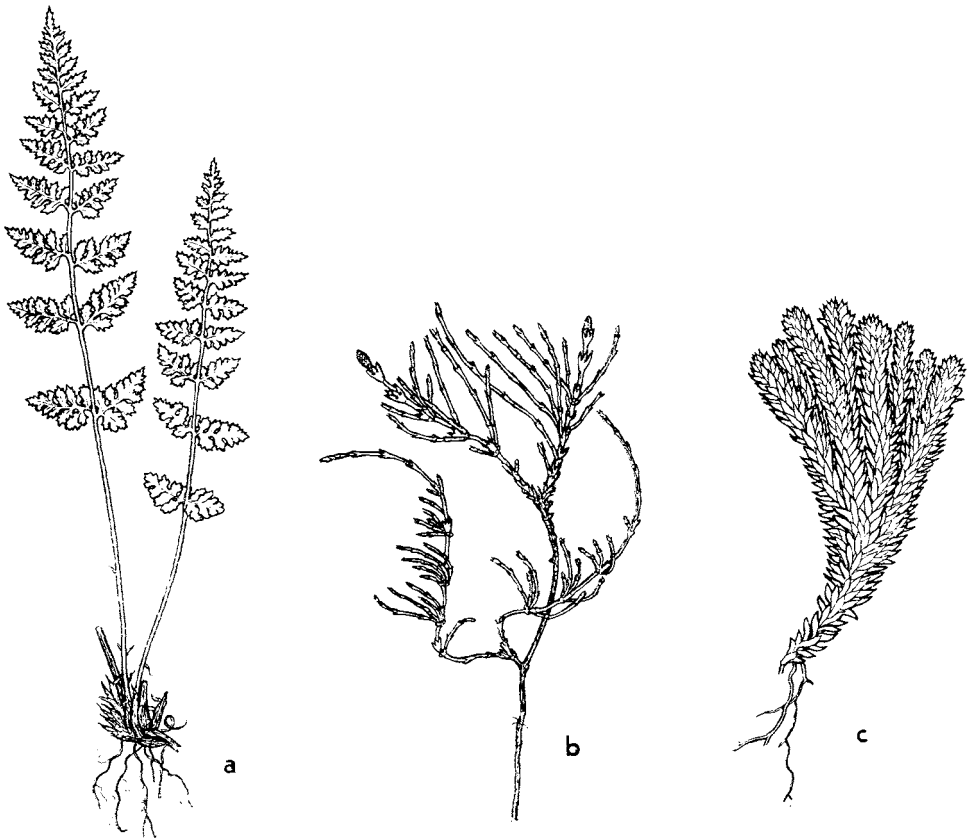


Fig. 3. a. *Cystopteris fragilis*. b. *Equisetum arvense*. c. *Lycopodium selago*. (6/10)

- III. Western part of Engelsbukta 1930. Kvalrossbukta 1934 (BIRD 1935 p. 123).
- IV. Near Helenehytta, south of Mohnberget, and at the foot of Wildberget and the lower part of Jacobsendalen 1930.
- V. Neumayerberget and Hochstetterkrateret 1930. Haugennytta ("Camp Dobbel") 1934 (BIRD 1935 p. 123).
- VI. West of Scottkrateret, Kapp Muyen and south of Kapp Muyen 1930. Libergsletta 1955 (MAGNE RØTTE).
- VII. North of Bernakrateret, Kreklinghaugen and on the western slope of Vestre Sørbremorena 1930.
- VIII. Fairly common in Fishburndalen and on Grønberget 1930.
- X. East of Krossbukta in Nord-Jan 1950 (ERIK AALRUST).

The plants are usually more or less creeping, on Wildberget also upright specimens, reaching a height of 18 cm. Fertile plants in Titeltbukta (AALRUST 1950), south of Wildberget (1930), and on Libergsletta (RØTTE 1955). Mature spores were not observed, however. *Equisetum arvense* is mainly restricted to lower parts of the island, on Grønberget, however, it is found up to an altitude of approx. 200 m.

First found by the Austrian expedition 1882–1883 (REICHARDT 1886 p. 10).

General distribution: Circumpolar (HULTÉN 1962 p. 106). Northern limit on the northern coast of Greenland.

3. Fam. LYCOPODIACEAE

3. *Lycopodium selago* L.

Fig. 3 c. Map 3.

- II. Near Sjuhollendarbukta 2. August 1947, on the slope facing north at an altitude of about 100 m (J. WARREN WILSON). Between Guineabukta and Titelbukta at about 50 m, 1. August 1950 (ERIK AALRUST).

The plants of both collections are of the same appearance and size, 5–8 cm high.

The synedria. Dr. J. WARREN WILSON has informed me (by letter) that the plants were growing in a dense carpet of *Rhacomitrium lanuginosum*. Fragments of bryophytes were found intermingled with the specimens of both collections. Those from the Warren Wilson collection (1) were identified by Mr. PER STØRMER, while Dr. E. V. WATSON identified those from the Aalrust collection (2):

	1	2
Diplophyllum albicans	–	x
Diplophyllum taxifolium	x	x
Dicranum glaciale	x	x
Dicranum starkei	–	x
Drepanocladus uncinatus	x	x
Rhacomitrium lanuginosum	–	x
Rhytidiadelphus squarrosus	x	–

*Lycopodium selago* seems to be a rare plant in Jan Mayen, hitherto found in area II only.

General distribution: Circumpolar and cosmopolite (HULTÉN 1962 p. 52). In the north extending to the northern coast of Greenland. In the Antarctic too, *L. selago* has an almost circumpolar distribution.

4. Fam. GRAMINEAE

- A. Spikelets 1-flowered.  
 I. Lemmas awned ..... 4. *Calamagrostis neglecta*  
 II. Lemmas not awned ..... 7. *Phippisia algida*
- B. Spikelets many-flowered.  
 I. Lemmas awned.  
 a. Lemma with an apical awn, usually hairy.  
 1. Stoloniferous. Not viviparous ..... 5. *Festuca rubra*  
 2. Not stoloniferous. Viviparous ..... 6. *Festuca vivipara*  
 b. Lemma with an awn at the back ..... 12. *Trisetum spicatum*
- II. Lemmas not awned, glabrous.  
 a. Lemmas keeled along the back.  
 1. Stoloniferous. Not viviparous ..... 8. *Poa alpigena*  
 2. Caespitose, not stoloniferous.  
     \* Spikelets viviparous ..... 9. *Poa alpina*  
     \*\* Not viviparous. Panicle branches scabrous ..... 10. *Poa glauca*  
 b. Lemmas rounded at the back ..... 11. *Puccinellia coarctata*



Fig. 4. a. *Festuca vivipara*. b. *Festuca rubra* var. *mutica*. c. *Calamagrostis neglecta*. (<sup>6</sup>/<sub>10</sub>)

4. *Calamagrostis neglecta* (EHRH.) GAERTN.

Fig. 4c. Map 4. Table 3. Exsicc. No. 3.

II. Sørbukta near the beach 13. August 1930.

IV. South of Brinken, and at the foot of Wildberget 21. July and 20. August 1930. South of Jacobsendalen 20. August 1930.

VIII. Fishburndalen 100 m, 25. July 1930. Also found in Fishburndalen in 1947 by J. WARREN WILSON (communication by letter 1948).

Grows on moist sandy ground, not found above 100 m. At the foot of Wildberget growing in a dense carpet of *Drepanocladus uncinatus* (see Table 3). In 1930 the highest culms measured 50 cm.

First found at the foot of Wildberget 1900 by N. HARTZ (KRUSE 1902 b, p. 302).  
General distribution: Circumpolar (HULTÉN 1962 p. 72). In Europe south to Switzerland and Caucasus. Northern limit by Kongsfjorden in Svalbard.

5. *Festuca rubra* L. var. *mutica* HARTM.

Fig. 4 b. Map 5. Table 4. Exsicc. Nos. 4 and 5.

- II. Hoyberg 1900, N. HARTZ and C. KRUSE (KRUSE 1902 b, p. 302). Several localities in Sørbukta 1930. Sjuhollandarbukta 1957 (STEINDORSSON 1958 p. 88).
- III. Several localities in Kvalrossbukta and on Brielletårnet 1930.
- IV. Wildberget, and north-east of Sørlaguna, HARTZ and KRUSE 1900 (KRUSE 1902 b p. 302). Søyla 1919 (GANDRUP 1924 p. 13); 1947 J. WARREN WILSON. East of Helenehytta, south of Neumayerberget, and two places at the foot of Wildberget 1930.
- V. Maria Muschbukta and Fugleberget (REICHARDT 1886 p. 11). The summit and the western slope of Neumayerberget 1930. Maria Muschbukta 1957 (STEINDORSSON 1958 p. 88).
- VI. Near Kjøllesdalkrateret 1930. Vestbukta 1947 (J. WARREN WILSON).
- VII. Valberget 150 m, three places in Grøna in the western part of Ekerolddalen, Vestmorena of Sørbreen 1930.
- VIII. Fishburnberget, Fishburndalen and Grønberget 1930. Fishburnberget 1938 (SCOTT RUSSELL and WELLINGTON 1940 p. 174), 1947 (J. WARREN WILSON).

Lemmas usually extremely hairy, in one case only, on Grønberget, with almost glabrous lemmas. The tallest specimen 30 cm.

First found on Jan Mayen by the Austrian expedition in 1882–1883.

General distribution: Circumpolar (HULTÉN 1962 p. 64). Northern limit by Murchisonfjorden in Svalbard, slightly to the north of 80° N. L.

6. *Festuca vivipara* (L.) SM.

Fig. 4 a. Map 6. Table 25. Exsicc. No. 6.

- I. Bjørnholet 7. August 1919 (J. GANDRUP, herb. Copenhagen).
- II–X. Very common throughout the investigated areas, only missing in 9 of the author's 137 selected localities 1930.

Ascending to 340 m in the upper part of Ekerolddalen, and to 425 m on Scoresbyberget. The specimens usually 10–15 cm, maximum height 25 cm.

First found by the Austrian expedition 1882 (REICHARDT 1886 p. 11).

Occurs frequently in the analyses, often dominating, e. g. Tables Nos. 12, 14, 18, 24, 26 and 28.

General distribution: Amphi-Atlantic (HULTÉN 1958 p. 36). From Hudson Bay in the west to Novaya Zemlya in the east. Northern limit at the northern coast of Svalbard, southern limit in England.

7. *Phyppsia algida* (SOL.) R. BR.

Fig. 5 b. Map 7. Table 5. Exsicc. No. 7.

- I. Bjørnholet 7. August 1919 (GANDRUP 1924 p. 8).
- II–X. Common in all areas investigated in 1930. Undoubtedly common in area I as well.

In the upper part of Ekerolddalen ascending to about 350 m. Grows right down to the very bottom of Eskkrateret at 190 m.

Ripe seed was common in 1930. Most specimens 3–4 cm high, maximum height

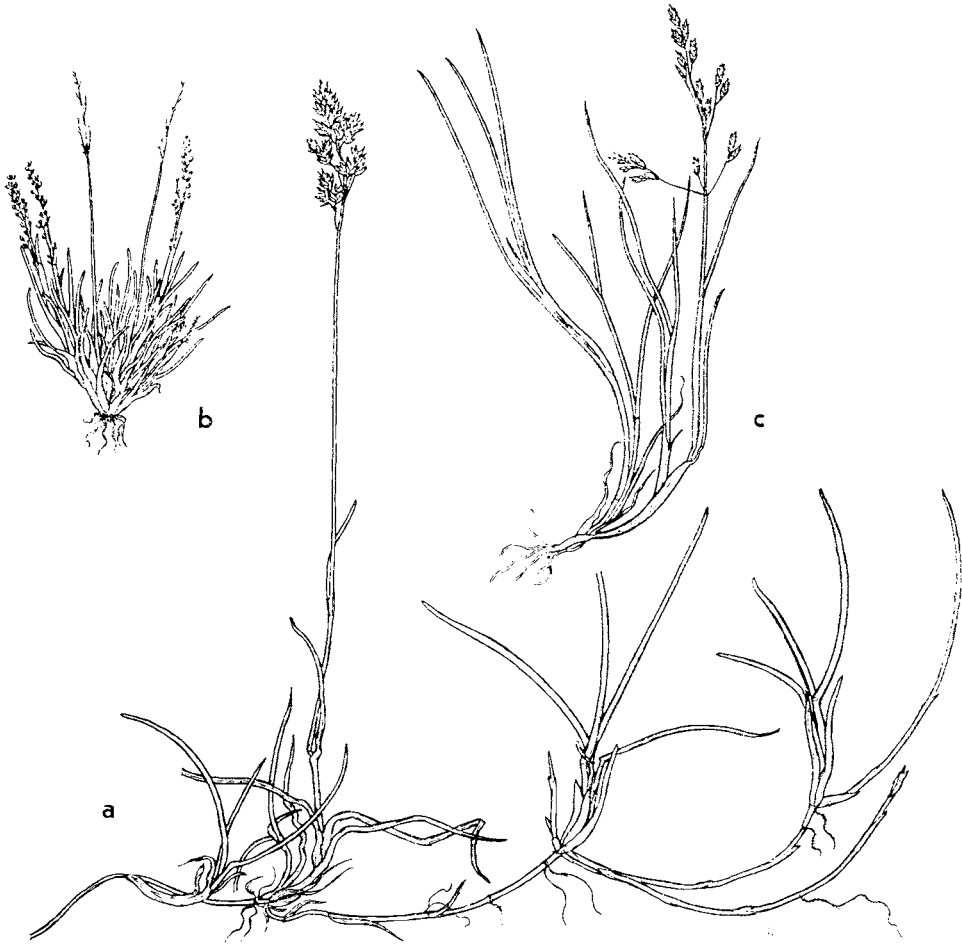


Fig. 5. a. *Poa alpigena*. b. *Phippsia algida*. c. *Puccinellia coarctata*. (<sup>6</sup>/<sub>10</sub>)

9 cm. According to DUSÉN specimens in bloom were found as late as 23. September (DUSÉN 1900 p. 8). This, however, is a misprint as on the label in herb. Holmia the date is 23. June.

The first find in Jan Mayen was made on Blyttberget by D. C. DANIELSSEN 29. July 1877 (MOHN 1882 p. 25).

General distribution: Circumpolar (HULTÉN 1962 p. 8). Widespread in the Arctic, northern limit on the northern coast of Greenland, southern limit in Labrador, but also found in the mountains of Colorado.

#### 8. *Poa alpigena* (FR.) LINDM.

Fig. 5 a. Map 8. Table 6. Exsicc. Nos. 8, 9 and 10.

- II. Fairly common from Sørbukta to Kapp Rudson.
- III. Many places in Kvalrossbukta and on Brielletårnet.
- IV. West and east of Helenehytta. South of Neumayerberget. West of Soyla. At the foot of Wildberget and in the lower part of Jacobsendalen.
- V. West of Danielsenkraeteret. Maria Muschbukta. Wilczekdalen and south of Nordlaguna. West of Hochstetterkraeteret. Tornoedalen.
- VI. Near Krosspynten. South-east of Richterhaugen. South of Scottkraeteret.

- VII. Valberget. At the foot of Lidhøgda. Three places on Grøna. Upper part of Ekerolddalen. Near Bernakrateret. West of Sørbreen.
- VIII. Fairly common on Fishburnberget and in Fishburndalen, on Grønberget and east to Håpdalen.
- IX. Paulsenhallet south of Willebreen.
- X. Kraterlia 1 km east of Hageruphytta.

In the upper part of Ekerolddalen and on Grønberget ascending to about 280 m. Specimens usually with culms and spike, in Kraterlia no culms were found. Culms usually 20–25 cm high, maximum 45 cm, on Paulsenhallet.

Anthers usually shrunken and of a dull yellowish colour. Normal violet antsreh were observed in Sørbukta, Titeltbukta and south of Helenehytta.

First found in Engelskbukta 1882 by the Austrian expedition (REICHARDT 1886 p. 11 sub nomen *Poa flexuosa* WAHLENB.).

General distribution: Circumpolar (HULTÉN 1962 p. 14). In Europe south to Setesdalen in Norway and to Scotland, in North America south to Newfoundland. Northern limit: The north coast of Svalbard.

#### 9. *Poa alpina* L. var. *vivipara* L.

Fig. 6 c. Map 9. Exsicc. No. 11.

- II-X. Very common throughout the investigated areas, missing only in ten of the 137 selected localities. No record from area I, however. On Nord-Jan found as far to the west as near Svend Foynbreen (July 1950 ERIK AALRUST).

The viviparous variety is the only one occurring on Jan Mayen. The height of the specimens is usually 10–20 cm. The largest plants on Fishburnberget measured up to 30 cm. Upper limit on Scoresbyberget at 440 m.

The first find on Jan Mayen was made by the Austrian expedition 1882–1883 (REICHARDT 1886 p. 10).

During the investigations in 1930 the author did not do any special analysis of the synedria of this species. *Poa alpina* occurs in several other analyses, however, e. g. in the Tables Nos. 10, 12, 14, 17, 18, 24, 28, 31, 33 and 34.

General distribution: Amphi-Atlantic (HULTÉN 1958 p. 230). Grows as far north as near Murchisonfjorden in Svalbard, and south to Mexico, North Africa and Himalaya.

#### 10. *Poa glauca* VAHL.

Fig. 6 b. Map 10. Table 7. Exsicc. No. 12.

- II. Sjuhollandarbukta 1947 (J. WARREN WILSON).
- V. At the foot of Domen 20. September, and east of Hochstetterkrateret 10. July 1955 (MAGNE RØTTE).
- VI. Slope near Kjøllesdalkrateret 1930. Krossberget 1947 (J. WARREN WILSON).
- VII. Above Ullerenglaguna and on Kreklinghaugen 1930. Ullerengstranda and at the foot of Bernakrateret 21. August 1955 (MAGNE RØTTE).
- VIII. Kapp Fishburn 25. August 1921 (J. L. CHAWORTH MUSTARS, specimens in herb. Copenhagen). The steep slope of Fishburnberget and in the lower part of Fishburndalen 1930. Fishburnberget 1938 (SCOTT RUSSELL and WELLINGTON 1940 p. 174). Fishburndalen 1947 (J. WARREN WILSON).



Fig. 6. a. *Trisetum spicatum*. b. *Poa glauca*. c. *Poa alpina* var. *vivipara*. (6/10)

Grows on gravel and on rocks, often in large luxuriant tufts with many decumbent culms, usually 15–20 cm, sometimes 25 cm long.

The first find on Jan Mayen was made by CHAWORTH MUSTARS in 1921, the first publication by SCOTT RUSSELL and WELLINGTON (1940 p. 174).

General distribution: Circumpolar (HULTÉN 1962 p. 28). In Europe also in the mountains of Southern Europe, in Asia south to Japan, in North America south to Colorado. Northern limit: The north coast of Greenland.

11. *Puccinellia coarctata* FERN. et WEATH.

Syn. *Puccinellia retroflexa* (CURT.) HOLMB. subsp. *borealis* HOLMB.

Fig. 5 c. Map 11. Tables 8 and 9. Exsicc. No. 13.

- II. On the drifting sand in Sørbukta along a stretch of about one km westwards to Hoyberg 13. August 1930. Northern part of Guineabukta, Jettegryteodden and Titeltbukta 14. August 1930. Sørbuktsanden 1950 (ERIK AALRUST).

Creeping and densely caespitose with decumbent culms, the length usually being 10–15 cm, the longest culm in our 1930-material 17 cm. The specimens in Titeltbukta produced ripe seed in 1930.

My specimens were first identified as subsp. *borealis* of *Puccinellia retroflexa*, and this determination was confirmed by TH. SØRENSEN in 1949. Later on Professor SØRENSEN informed me that the name *P. coarctata* FERN. et WEATH. had priority to the subsp. *borealis* of HOLMBERG (see SØRENSEN 1953 p. 42).

First found on Jan Mayen 13. August 1930. First publication: SØRENSEN (1953 p. 46).

General distribution: Amphi-Atlantic (SØRENSEN 1953 p. 46; HULTÉN 1958 p. 280). Ranging from Labrador in the west to Waigatsch in the east, and to 73° N in East Greenland. In Europe south to the Faeroes.

12. *Trisetum spicatum* (L.) RICHT.

Fig. 6 a. Map 12. Table 10. Exsicc. No. 14.

- II. Sørbukta near the beach, south of Arnekrateret, southern part of Svartfjellflya. Jettegryteodden. 300 m south-west of Titeltbukta.  
IV. Brinken south of Wildberget at 150 m.  
V. Fugleberget east of Domen near Nordlaguna 1955 (MAGNE RØTTE).  
VI. Several places around Kjølesdalkrateret 1930. Krossberget 1947 (J. WARREN WILSON).  
VII. Slope of Valberget, eastern slope of Lidhøgda at 100 m, several places in Grøna and higher up in Ekerolddalen, Bernakrateret. Kreklinghaugen, slope above Ullerengsanden and east to Vestre Sørbremorena.  
VIII. Fishburnberget, Fishburndalen and Grønberget 1930. Kapp Fishburn 21. August 1921 (J. L. CHAWORTH MUSTARS, specimens in herb. Copenhagen). Fishburndalen 1947 (J. WARREN WILSON).  
IX. Paulsenhallet south of Willebreen.  
X. Slope south of Kokssletta July 1950 (ERIK AALRUST).

Plants usually 15–20 cm high, especially large specimens found in Paulsenhallet 2. August 1930 measured up to 30–35 cm.

Grows from near the sea level up to some 100–150 m. The largest specimens are to be found where the sea birds are nesting.

First collected on Jan Mayen by CHAWORTH MUSTARS, see above. First published, however, by E. G. BIRD, who collected this species on “the lateral moraine of Sud-gletscher. A new record for the island” (BIRD 1935 p. 123).

General distribution: Circumpolar (HULTÉN 1962 p. 60). Far to the south in America as well as in Europe and in Asia. Also in South America and New Zealand. Northern limit: The north coast of Greenland.





Fig. 7. a. *Carex bigelowii*. b. *Carex lachenalii*. ( $\frac{1}{10}$ )

5. Fam. CYPERACEAE

*Carex* L.

- A. Separate male and female spikelets ..... 13. *C. bigelowii*
- B. Male and female flowers in compound spikelets.
  - I. Male flowers at the base of spikelets ..... 14. *C. lachenalii*
  - II. Female flowers at the base of spikelets ..... 15. *C. maritima*

13. *Carex bigelowii* TORR.

Fig. 7 a. Map 13. Table 11. Exsicc. No. 15.

- II. Two patches near the drifting sand in Sorbukta.
- VI. Near Kjøllesdalkrateret 1930. Krossberget 1947 (J. WARREN WILSON).
- VII. Several places above Ullerengsanden, at the foot of Bernakrateret, and near Krecklinghaugen.
- VIII. Kapp Fishburn 21. August 1921 (J. L. CHAWORTH MUSTARS. Specimens in herb. Copenhagen). Fishburndalen, Grønberget, and east of Grønberget 1930. Fishburndalen 1947 (J. WARREN WILSON).



Fig. 8. *Carex maritima*. (6/10)

On Jan Mayen *Carex bigelowii* seems to prefer the agglomerate formation. The plants were in abundant bloom in 1930, with culms up to 10–12 cm high.

The first find was made by CHAWORTH MUSTARS, see above. The first publication by SCOTT RUSSELL and WELLINGTON (1940 pp. 163 and 166).

General distribution: Circumpolar (HULTÉN 1962 p. 50). Northern limit: 80° N in Ellesmere Island.

#### 14. *Carex lachenalii* SCHKUHR.

Fig. 7 b. Map 14. Table 12. Exsicc. No. 16.

- II. Sørbuftsanden. Near Hoyberg. South, east and north of Arnethkrateret. Steingardslett and Svartfjellflya east of Guineabukta. Jettegryteodden and two places in Titeltbukta. Sjuhollendarbukta. Kapp Rudson 1930. Hoyberg 1900 (HARTZ and KRUISE). Sjuhollendarbukta 1947 (J. WARREN WILSON). Rooberg 1950 (ERIK AALRUST).
- IV. Southern and eastern slope of Wildberget 1930. Kapp Traill and Søyla 1947 (J. WARREN WILSON).
- VI. Several places in Krossbyhallet and on Kjøllesdalkrateret. East of Krossberget. Scottlia and Scottkrateret. Kapp Muyen 1930. Krossberget 1947 (J. WARREN WILSON).
- VII. South of Valberget. The slope of Lidhøgda. The slope above Ullerengshaugen. Ullerenglaguna.
- VIII. Several localities on Fishburnberget, in Fishburndalen and on Grønberget. Håpdalen 1930. Kapp Fishburn 1947 (J. WARREN WILSON).

Culms usually 10–15 cm long, maximum height 20 cm. Ascending to about 200 m. Ripe seed was produced abundantly in 1930.

The first find on Jan Mayen was made near Hoyberg 28. June 1900 by N. HARTZ and C. KRUISE (KRUISE 1902 p. 301, sub nomen *Carex lagopina* Wg.).

General distribution: Circumpolar and far to the south in Europe, Asia and North America (HULTÉN 1962 p. 50). Northern limit: The north coast of Svalbard.

#### 15. *Carex maritima* GUNN.

Syn. *Carex incurva* LIGHTF.; *C. setina* (CHRIST.) KREUZ.

Fig. 8. Map 15. Tables 13 and 24. Exsicc. No. 17.

- II. Two places on Sorbuktsanden 1930. Hoyberg 28. June 1900 N. HARTZ and C. KRUISE (specimens in herb. Copenhagen). East of Rooberg 1950 (ERIK AALRUST).
- IV. The southern end of Helenesanden. Helenehytta. West of Søyla. Laguneflya south of Mohnberget. At the foot of Wildberget and near Jacobsendalen 1930. "The sandy field west of the south lagoon" 5. August 1919 (GANDRUP 1924 p. 13).
- V. "At the Austrian station" (GANDRUP 1924 p. 13). Austrian station and Nordlaguna 19. July 1929 (JAKOB VAAGE). Maria Muschbukta 1930.
- VII. Fairly common on Røysflya and up to Grøna and north of Dagnyhaugen in Ekerolddalen. Havhestberget. Veslegryta. Bernakrateret. Turnbukta and Ullerengsanden east to Sorbreen 1930. Lidhøgda 17. July 1932 (SIGURD AANDSTAD).

Chiefly growing on the lowest sandy plains up to about 75 m, only now and then at higher altitudes, e. g. up to 125 m on Havhestberget, and up to 200 m on Eskkrateret. The stolons may sometimes be as long as one meter or more.

First found by BERNA and VOGT 22. August 1861: "Ein Grashälmchen das ellenlange dünne Wurzeln durch den Sand schickt" (VOGT 1863 p. 277). Rediscovered near Hoyberg 1900 by N. HARTZ and C. KRUISE (KRUISE 1902 p. 301).

General distribution: Circumpolar (HULTÉN 1962 p. 48). Also in southern Europe, and far to the south in Asia and North America. Northern limit: The north coast of Greenland.

## 6. Fam. JUNCACEAE

### *Luzula* DC.

- A. Small heads on long arching stalks .....16. *L. arcuata*
- B. Heads on erect stalks .....17. *L. confusa*
- C. Inflorescence spike-like, drooping .....18. *L. spicata*

#### 16. *Luzula arcuata* (WAHLENB.) SW., s. str.

Fig. 9 b. Map 16. Tables 9, 12 etc. Exsicc. Nos. 18, 19 and 20.

I. Bjørnholet 7. August 1919 (GANDRUP 1924 p. 8).

II-X. Very common throughout all areas investigated, missing in only 12 of the 137 selected localities 1930.

Ascending to 340 m on the slope north of Ruka in Ekerolddalen, and to 430 m on the southern slope of Scoresbyfjellet.

Height of specimens usually 10-15 cm, maximum height 20 cm.

First found by the Austrian expedition in 1882-1883 in the vicinity of Sørlaguna (REICHARDT 1886 p. 11).

General distribution: Europe from Iceland and Jan Mayen east to Ural, north to Bear Island and south to Scotland and in Norway to Setesdalen. Also in Western Siberia and in Alaska and Yukon. *Luzula arcuata* is a less extreme Arctic species than *Luzula confusa*. Northern limit: Bear Island.

3-Lid: Jan Mayen



Fig. 9. a. *Luzula confusa*. b. *L. arcuata*. c. *L. spicata*. (<sup>6</sup>/<sub>10</sub>)

17. *Luzula confusa* (HARTM.) LINDEB.

Fig. 9 a. Map 17.

VII. At the foot of Havhestberget 19. July 1930. Grona in Ekerolddalen 22. July 1930. Also collected on Røysflya near the Norwegian station 13. July 1930 by P. F. SCHOLANDER, and on Havhestberget 17. July 1932 by SIGURD AANDSTAD.

VIII. Fishburndalen 19. August 1930.

I was puzzled by the appearance and the great variation of the *Luzula* population on Jan Mayen, and had some trouble in distinguishing between *Luzula arcuata* and *L. confusa*. In my opinion the bulk of our large collection of *Luzula* from Jan Mayen is referable to *L. arcuata* s. str. A few specimens remain, however, viz. the five samples mentioned above, which in my opinion are referable to *L. confusa*.

General distribution: Circumpolar (HULTÉN 1962 p. 22). Northern limit: The north coast of Greenland.

18. *Luzula spicata* (L.) DC.

Fig. 9 c. Map 18. Table 14.

- VII. Slope between Kreklinghaugen and Vestre Sorbremorena 22. August 1930. Above Ullersandensanden 21. August 1955 (MAGNE ROTTE).  
VIII. Fishburndalen 1947 (J. WARREN WILSON, communication by letter).

Specimens 20–25 cm high. Six tussocks were found in 1930, vigorous plants producing ripe seed. On these six tussocks we made the statistical analyses shown in Table 14.

First find: 22. August 1930. First record: This publication.

General distribution: Amphi-Atlantic (HULTÉN 1958 p. 236). Southern Europe, North Africa, Central Asia, and Western North America south to Colorado. Northern limit: 74° 25' N in East Greenland.

7. Fam. SALICACEAE

19. *Salix herbacea* L.

Fig. 10 a. Map 19. Table 15. Exsicc. No. 21.

- I–X. Very common throughout the island, missing only on the distinct sand-drifts. Undoubtedly common in area I as well, though not investigated by the author in 1930, but found there by other expeditions: “Bäregat” 7. August 1919 (GANDRUP 1924 p. 8); “häufig auf dem Plateau des Südtheiles der Insel” (REICHARDT 1886 p. 12).

Ascending to the upper limit of phanerogams, to the summit of the lower and middle high craters, on the slope north of Ruka up to 340 m, and on Scoresbyberget up to the very summit at 442 m.

The stem of this creeping shrub is generally more or less buried in the moss carpet, only rising to one or two cm above the ground. The thickest subterranean stem diameter 6 mm, the broadest leaf 24 mm. The plants produced ripe seed in abundance in 1930.

First observed on Jan Mayen 22. August 1861 by CARL VOGT: “— — — nebst einer kriechenden Weide” (VOGT 1863 p. 277).

General distribution: Amphi-Atlantic (HULTÉN 1958 p. 42). Also in the mountains of southern Europe. Northern limit: Near 79° N in East and West Greenland.

8. Fam. POLYGONACEAE

20. *Koenigia islandica* L.

Fig. 10 b. Map 20. Table 16. Exsicc. No. 22.

- I. Bjørnholet 7. August 1899 (GANDRUP 1924 p. 8).  
II. Hoyberg June 1900 (KRUSE 1902 b, p. 301). Two places in Sørbukta. East and north of Arnethkrateret. The brink near Rooberg 1930. Titeltbukta (BIRD 1935 p. 122).  
IV. Helenehytta. Stokkøyra. East of Neumayertoppen. East of Søyla. Near Danielssenkrateret. South of Mohnberget. At the foot of Wildberget. Jacobsendalen and Jacobsendeltaet 1930. Wildberget 1938 (SCOTT RUSSELL and WELLINGTON 1940 p. 170).



Fig. 10. a. *Salix herbacea*. b. *Koenigia islandica*. ( $\frac{6}{10}$ )

- V. South of Nordlaguna. West of Hochstetterkrateret. Upper Tornøedalen 1930. On the delta of Tornøebekken 1938 (SCOTT RUSSELL and WELLINGTON 1940 p. 171). Southern part of Libergsletta 1955 (MAGNE RØTTE).
- VI. Near Kjøllesdalkrateret. Kapp Muyen.
- VII. North of Dagnyhaugen. At the foot of Havhestberget. Jamesonbukta. Skrinnodden. Turnbukta. Bernakrateret. Ullerengstranda. At the foot of Vestbreen.
- VIII. At the foot of Fishburnberget. Fishburndalen. Håpdalen.

Green, as well as intense red specimens were observed in 1930 (see SCOTT RUSSELL and WELLINGTON 1940 p. 171). The plants were extremely small, generally approximately 1 cm high, sometimes 2 cm, and a few specimens in Sørbukta 4 cm.

The smut fungus *Ustilago picacea* LAGERH. et LIRO (det. IVAR JØRSTAD 1956) was found in the capsules of *Koenigia islandica* from Sørlaguna 17. July 1930. To my knowledge this is the second find of this fungus outside Scandinavia. Dr. ERIK ASPLUND found *Ustilago picacea* on Svalbard 1915 (LIND 1928 p. 32).

The Austrian expedition 1882-1883 was the first to record *Koenigia islandica* from Jan Mayen (REICHARDT 1886 p. 12).

General distribution: Circumpolar. In Europe south to Hardangervidda in Norway (see map in LID 1959 p. 90), in Asia south to Sikkim, in North America south to Colorado (leg. EILIF DAHL 1953). Northern limit: 79° 50' N on northern Svalbard.

## 21. *Oxyria digyna* (L.) HILL.

Fig. 11 a. Map 21. Table 17. Exsicc. No. 23.

- I. Bjørnholet 7. August 1919 (GANDRUP 1924 p. 8).
- II-X. Very common in the investigated areas, occurred in every one of the author's 137 selected localities in 1930, and thus being one of the most common phanerogams on Jan Mayen.

Ascending to the upper limit of phanerogam vegetation, on Scoresbyberget up to the very summit at 442 m. The specimens usually 10 cm high, maximum height 20 cm. In 1930 in full bloom, and producing ripe seed abundantly.

The first find on Jan Mayen was made by WILLIAM SCORESBY on Eskkrateret 4. August 1817 (SCORESBY 1820 p. 164).



Fig. 11. a. *Oxyria digyna*. b. *Polygonum viviparum*. (\*10)

Apart from the somewhat extreme occurrence (Table 17), *Oxyria digyna* occurred in several other analyses, e. g. Tables Nos. 10, 12, 14, 28, 31 and 33.

General distribution: Circumpolar. Also in southern Europe, Central Asia, and in North America south to South California. Northern limit: The north coast of Greenland.

## 22. *Polygonum viviparum* L.

Fig. 11 b. Map 22. Exsicc. No. 24.

I. "Hochebene des Südtheiles der Insel" (REICHARDT 1886 p. 12). Bjørnholet 7. August 1919 (GANDRUP 1924 p. 13).

II-VIII. Fairly common in these seven areas.

IX. Paulsenhallet south of Willebreen 1930. Kapp Neill 14. July 1950 (ERIK AALRUST).

X. North of Sarskrateret.

Plants usually 5–10 cm high; the tallest specimens on Paulsenhallet measured 23 cm 2. August 1930.

Four micromycetes were found on our specimens from 1930 (HAGEN 1950 pp. 7, 8 and 9).

The first find of *Polygonum viviparum* on Jan Mayen was made by the Austrian expedition 1882–1883 (REICHARDT 1886 p. 12).

General distribution: Circumpolar. Mountains of southern Europe. Asia south to Sikkim. North America south to New Mexico. Northern limit: The north coast of Greenland.

## 9. Fam. CARYOPHYLLACEAE

- A. Sepals distinct. Petals white.
- I. Petals cleft.
- a. Styles 5.
1. Sepals long, acute, dark ..... 23. *Cerastium alpinum*
2. Sepals shorter, obtuse, green ..... 24. *Cerastium arcticum*
- b. Styles 3 ..... 25. *Cerastium cerastoide*
- II. Petals entire.
- a. Leaves lanceolate-elliptic, fleshy ..... 26. *Honckenya peploides*
- b. Leaves filiform, subulate.
1. Styles 3. Flower bud oblong.
- \* Sepals obtuse ..... 27. *Minuartia biflora*
- \*\* Sepals acute ..... 28. *Minuartia rubella*
2. Styles 4–5. Flower bud spherical.
- \* Stamens 10 ..... 29. *Sagina caespitosa*
- \*\* Stamens 5 ..... 30. *Sagina intermedia*
- B. Sepals united. Petals pink ..... 31. *Silene acaulis*

### 23. *Cerastium alpinum* L.

Fig. 12 a. Map 23.

- V. Northern side of Nordlaguna 20. September 1955 (MAGNE RØTTE, det. LID).
- VII. Dry foothills of Mt. Beerenberg, 1,5 km west of the Norwegian station, 9. July 1933 (WILLIAM B. DREW, det. ERIC HULTÉN 1955).
- VIII. Grønberget 25. July 1930 (J. LID, det. ERIC HULTÉN).

Among the large material of *Cerastium* from Jan Mayen, these three samples were the only ones which could be referred to *C. alpinum*. They diverge considerably from the common *C. arcticum* in being slender, darker, and particularly in having narrower and more acute leaves than *C. arcticum*. (See HULTÉN 1956 p. 428.)

First find of *C. alpinum* L. s. str. Grønberget 1930. First record by WILLIAM B. DREW (1935 p. 289).

General distribution: Amphiatlantic (HULTÉN 1958 p. 40). Also in the mountains of southern Europe. Northern limit: Ellesmere Island.

### 24. *Cerastium arcticum* LGE. var. *vestitum* HULTÉN.

Fig. 12 b. Map 24. Table 18. Exsicc. No. 25.

- I. Bjørnholet 7. August 1919 J. GANDRUP (GANDRUP 1924 p. 8).
- II-X. Very common throughout the investigated areas, found in all the 137 selected localities in 1930, and thus as frequent as *Oxyria digyna*.





Fig. 12. a. *Cerastium alpinum*. b. *C. arcticum*. c. *C. cerastoides*. (6/1)

In the mountains ascending to the limit of phanerogam vegetation, up to the very summit of Scoresbyberget at 442 m. Grows in tufts of varying size with many stems and flowers. The stems are more or less decumbent, rarely standing as high as 10 cm. By counting the flowers of 200 stems it was found that 136 stems had one flower, 50 stems had two flowers, 12 stems three flowers, and 2 stems four flowers.

The first find on Jan Mayen was made by D. C. DANIELSSEN, who collected specimens "on the isthmus south of Mary Muss Bay" in 1877 (MOHN 1882 p. 25 sub nomen *Cerastium alpinum* L. ?), specimens in the Botanical Museum of Oslo).

General distribution: Amphi-Atlantic (HULTÉN 1958 p. 32). The var. *vestitum*, the only variety recorded from Jan Mayen, ranges from Hudson Bay in the west to Novaya Zemlya in the east without touching Scandinavia (HULTÉN 1956 p. 455) Northern limit: The north coast of Ellesmere Island.

25. *Cerastium cerastoides* (L.) BRITTON.

Syn. *C. trigynum* VILL.

Fig. 12 c. Map 25. Table 29. Exsicc. No. 26.

- II. 25 finds from Sørbukta to Sjuhollendarbukta August 1930. Margarethhytta in Titeltbukta 1934 (C. G. BIRD). Guineabukta and Titeltbukta 1950 (ERIK AALRUST).
- III. Salsteinen in Kvalrossbukta.
- IV. South of Søyla. Several places on Wildberget and in Jacobsendalen.
- V. Hochstetterkrateret.
- VI. Upper part of Tornøedalen. Fairly common from Essa to Kapp Muyen.
- VII. Slope above Ullerengsanden. Kreklinghaugen. River bed north-east of Ullerenglaguna.
- VIII. Fishburnberget. Several places in Fishburndalen. Grønberget. Håpdalen.
- IX. Paulsenhallet south of Willebreen.
- X. Marmadukeflya near Tollnerodden. Slope of Hohenlohekrateret. Nordkapp. South of Hageruphytta.

The plants were generally found in flowering or fruiting state in July and August 1930. The most vigorous plants were found in the lower part of Jacobsendalen. Ascending to 250 m in Tornøedalen.

First found on Jan Mayen at the foot of Wildberget in June 1900 by HARTZ and KRUISE (KRUISE 1902 p. 299, sub nomen *C. trigynum*). C. G. BIRD, who collected this species in 1934, suggested that it was new for the island. However, Mr. BIRD was not aware of the fact, that HARTZ and KRUISE'S *C. trigynum* VILL. is merely a synonym of his *C. cerastoides* (L.) BRITTON.

No special statistical analysis of this species was made in 1930. It is present throughout the *Epilobium anagallidifolium* analyses, however, see Table 29.

General distribution: Amphi-Atlantic (HULTÉN 1958 p. 48). Ranging from Hudson Bay in the west to Ural in the east. Also in the mountains of southern Europe, and in Central Asia. Northern limit on Bjørnøya (RØNNING 1959 p. 23).

26. *Honckenya peploides* EHRH.

Fig. 13 e. Map 26. Table 19. Exsicc. No. 27.

- II. Sørbukta. Near Hoyberg. Margarethhytta in Titeltbukta. Sjuhollendarbukta.
- III. Abundant in the western part of Engelskbukta. Kvalrossbukta.
- IV. Helenehytta and the western part of Helenesanden. Sørlaguna near Søyla and at the foot of Wildberget 1955 (MAGNE RØTTE).
- V. Maria Muschbukta. North of Nordlaguna.
- VII. North of Eggøya. Jamesonbukta. Fairly common on Ullerengsanden from Turnbukta to Sørbreen.
- VIII. At the foot of Fishburnberget.

Grows on fine sand on and near the beach, rarely higher than 25 m above sea level.

First found on Jan Mayen on Ullerengsanden 4. August 1817 by WILLIAM SCORESBY (SCORESBY 1820 p. 164, sub nomen *Arenaria peploides*).

General distribution: Circumpolar. In Europe south to Beira Litoral in Portugal, in Asia south to Korea. Northern limit: Isfjorden, Svalbard.

27. *Minuartia biflora* (L.) SCH. et TH.

Fig. 13 a. Map 27.

Of this species fourteen localities are known, six from the Norwegian expedition 1930, and eight from the Imperial College expedition 1938. Specimens from the latter are numbered and preserved in the British Museum of Natural History, London.

- VI. Kjøllesdalkrateret 5. August 1930. Valley behind Nordwestkapp 31. July 1938 (No. 161).  
VII. Dagnyhaugen 15. July 1930. Bernakrateret 28. July 1930. Kreklinghaugen 23. July 1930. Head of Ekerolddalen 1938 (No. 93). West of Sørbreen 15. July 1938 (No. 82). Moraine of Sørbreen 15. July 1938 (No. 294).  
VIII. Fishburnberget 25. July 1930. Fishburndalen with *Epilobium anagallidifolium* 18. August 1930. Fishburnberget below bird cliff 11. July 1938 (No. 43). Fishburndalen, east slope 9. July 1938 (No. 22). Fishburndalen 10. July 1938 (No. 34). Valley behind Vesle Sandbukta 26. July 1938 (No. 298).

The plants are somewhat tufted, but otherwise of the common appearance and size. No finds above some 200 m. R. SCOTT RUSSELL refers this species to the solifluxion areas.

Apparently fairly common in the central part of the island, and it is remarkable that it was not found before 1930. The record by KRUSE (1902 p. 298) is based on a misinterpretation of *Sagina caespitosa* (specimens in the Copenhagen herbarium).

General distribution: Circumpolar. Northern limit: North coast of Svalbard.

28. *Minuartia rubella* (WAHLENB.) HIERN.

Fig. 13 b. Map 28. Table 20. Exsicc. No. 28.

- VII. At the foot of Havhestberget. The summit of Havhestberget. West of Veslegryta. The summit of Bernakrateret. Ullerenglaguna and the slope west of Ullerenglaguna. Kreklinghaugen. The delta north-east of Ullerenglaguna.  
VIII. 1 km east of Grønberget (one specimen).

Dense tufts on sand and gravel. The colour distinctly bluish-green, sometimes tinged with violet. Tuft diameter generally 3–6 cm.

On Havhestberget and east of Grønberget ascending to about 120 m, elsewhere rarely higher up than 50 m above sea level.

The first find was made on Havhestberget 19. July 1930. According to SCOTT RUSSELL and WELLINGTON (1940 p. 162) they found *Minuartia rubella* on exposed hillsides in dry-moss communities.

General distribution: Circumpolar. Also in the mountains of Central and Southern Europe and in North Africa. Northern limit: At 83° N on the north coast of Greenland.

29. *Sagina caespitosa* (J. VAHL) LGE.

Fig. 13 c. Map 29. Table 13. Exsicc. No. 29.

- IV. Laguneflya at the foot of Brinken. Straight south of Jøssingdalen. At the foot of Wildberget and on the slopes of this mountain. South of Jacobsendalen.  
V. Øvredalen west of Mohnberget at 80 m. – Høchstetterkrateret 1938 (SCOTT RUSSELL and WELLINGTON 1940 p. 168).

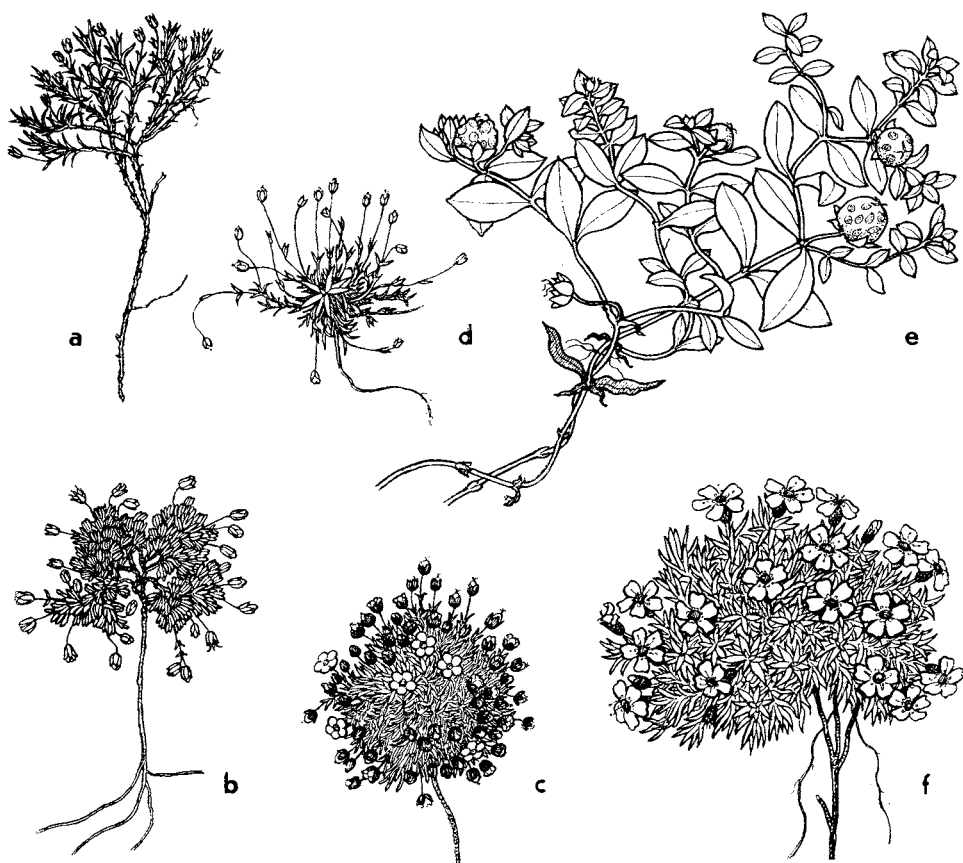


Fig. 13. a. *Minuartia biflora*. b. *Minuartia rubella*. c. *Sagina caespitosa*. d. *Sagina intermedia*. e. *Honckenya peploides*. f. *Silena acaulis*. ( $\frac{6}{10}$ )

- VI. Kjøllesdalkrateret.
- VII. At the foot of Valberget. Several places on Lidhøgda up to 180 m. Dagnyhaugen. Havhestberget and up to the summit of Eskkrateret at 284 m. Fairly common on the eastern part of Røysflya, around Veslegryta, Turnbukta and on Ullerengstranda east to Vestre Sørbremorena. Also found on Havhestberget 1932 by SIGURD AANDSTAD, and on Røysflya 1938 (SCOTT RUSSELL and WELLINGTON 1940 p. 164).
- VIII. Fishburndalen and Grønberget.

*Sagina caespitosa* thrives well on Jan Mayen, and the author has never seen such large and vigorous tufts as those growing on Ullerengsanden at the foot of Kreklinghaugen. The average diameter of the tufts was 4–5 cm, and in several cases it was 6–7 cm. 84 flowers were counted in one of the biggest tufts in 1930.

Most finds were made on the sandy plains up to 50–60 m above sea level. The find at the very summit of Eskkrateret was somewhat exceptional.

First found on Jan Mayen on Sørлагuna 22. July 1896 by C. H. OSTENFELD (four depauperate specimens in the Copenhagen herbarium, not named by OSTENFELD, but identified by the author in 1931). Also found on Sørлагuna

26. June 1900 by HARTZ and KRUSE, but erroneously determined as *Alsine biflora* (L.) WG. (KRUSE 1902 p. 298).

General distribution: Amphi-Atlantic (HULTÉN 1958 p. 180). Northern limit: 77° 32' N on Svalbard (LID 1962 p. 100).

30. *Sagina intermedia* FENZL.

Fig. 13 d. Map 30. Table 16. Exsicc. Nos. 30 and 31.

I. Bjørnholet 7. August 1919 J. GANDRUP (herb. Copenhagen).

II-X. Very common throughout the investigated areas, found in 117 of the 137 selected localities in 1930. No doubt also common in area I.

Found at the lower levels as well as in the mountains, ascending to 340 m in the upper part of Ekerolddalen, and to 425 m on the slopes of Scoresbyberget.

Professor C. H. OSTENFELD found *Sagina intermedia* on Sørlaguna 23. July 1896 (herb. Copenhagen), it was not published in his list, however (OSTENFELD 1897). The next find was made in Maria Muschbukta 16. June 1899 by P. DUSÉN (DUSÉN 1900 p. 6, sub nomen *Sagina nivalis* (LINDBL.) FR.).

General distribution: Circumpolar. Northern limit: The north coast of Greenland.

31. *Silene acaulis* L.

Fig. 13 f. Map 31. Table 21. Exsicc. No. 32.

I. Bjørnholet 7. August 1919 (GANDRUP 1924 p. 11).

II-X. Fairly common in the investigated areas.

Tufts of varying size, the largest having a diameter of 10–15 cm. Specimens in full bloom, and others producing ripe seed were common in 1930. On Fishburnberget a plant with white flowers was found 25. July 1930. Mostly growing in the lower regions, ascending to 250 m on the slope north of Eskkrateret.

SCORESBY found this species 4. August 1817, very likely near Havhestberget (SCORESBY 1820 p. 164).

General distribution: Probably circumpolar. Northern limit: The north coast of Greenland.

10. Fam. RANUNCULACEAE

*Ranunculus* L.

A. Petals white. Flower 2–2,5 cm broad ..... 32. *R. glacialis*  
B. Petals yellow. Flower less than 1 cm broad.

I. Three sepals and three petals ..... 33. *R. hyperboreus*

II. Five sepals and five petals ..... 34. *R. pygmaeus*

32. *Ranunculus glacialis* L.

Fig. 14 a. Map 32. Tables 5 and 7. Exsicc. No. 33.

I. Bjørnholet 7. August 1919 J. GANDRUP (GANDRUP 1924 p. 8).

II X. Very common in damp places, often also on very dry ground. Found in 130 of the selected localities 1930.

This species was met with on the most different kinds of ground, sometimes in places which were utterly dried up. Height of plants usually 5–7 cm, now and again 10–12 cm. By counting the flowers of 100 stems it was found that 79 had one flower, 13 had two, and 8 had three flowers.

Ascending to the summit of the middle high mountains. On Eskkrateret at the very summit at 284 m, as well as on the plain clayey bottom of the crater at 190 m. Upper limit: The summit of Scoresbyberget 442 m.

Found near Turnbukta 22. August 1861 by GEORG BERNA and CARL VOGT ("die Eisranunkel", VOGT 1863 p. 277).

General distribution: Amphi-Atlantic (HULTÉN 1958 p. 92). Ranging from East Greenland in the west to the Kola Peninsula in the east. Also in the mountains of southern Europe. Northern limit: Near 80° N in East Greenland.

### 33. *Ranunculus hyperboreus* ROTTB.

Fig. 14 b. Map 33. Table 22. Exsicc. No. 34.

IV. Among driftwood on Sørlaguna south-west of Søyla 17. July 1930. Jacobsendalen near Wildberget at 75 m, 21. July 1930.

VI. Krosspyntsletta at some 15 m above sea level 19. August 1955 (MAGNE ROTTE).

The plants produced ripe seed in 1930, as well as in 1955. In Jacobsendalen they were growing in a dense carpet of moss (see Table 22), and there were a lot of them in this locality.

General distribution: Circumpolar. Northern limit: The north coast of Greenland.

### 34. *Ranunculus pygmaeus* WAHLENB.

Fig. 14 c. Map 34. Table 29. Exsicc. No. 35.

I–II. Bjørnholet 7. August 1919 J. GANDRUP (GANDRUP 1924 p. 8). "Auf der Hochebene des Südtheiles" (REICHARDT 1886 p. 13). Several places in Sørbukta and around Arnekrateret, Guineabukta, Slagfallet, Jettegryteodden, Titeltbukta, Sjuhollendarbukta and Kapp Rudson.

III. Common on Kvalrossen and around Kvalrossbukta.

IV. Helenehytta and east of Helenehytta. South of Neumayerberget. Abundant around Søyla. At the southern foot of Mohnberget. Southeastern slope of Wildberget. Jacobsendalen.

V. Blyttberget (BIRD 1935 p. 121). Danielssenkrateret. Wilczekdalen. South of Nordlaguna West of Hochstetterkrateret. Southern slope of Scoresbyberget.

VI. Upper part of Tornoedalen. Kjølledalkrateret. Krossberget and north to Scottkrateret and Kapp Muyen.

VII. Valberget. Lidhøgda. Dagnyhaugen. Havhestberget. Grøna and other places in Ekeroldalen to north of Eskkrateret. Kreklinghaugen.

VIII. Fairly common on Fishburnberget and in Fishburndalen. Grønberget. Håpdalen.

IX. Paulsenhallet south of Willcbreen.

X. Tollnerodden. Hohenlohekrateret. Hageruphytta. Also found in Kraterlia and east of Sarskrateret 1950 (ERIK AALRUST).

Plants usually 10 cm high, slightly higher when fruiting. The specimens on Paulsenhallet 2. August 1930 measured 20 cm. In nearly all localities were found plants producing ripe seed in 1930.

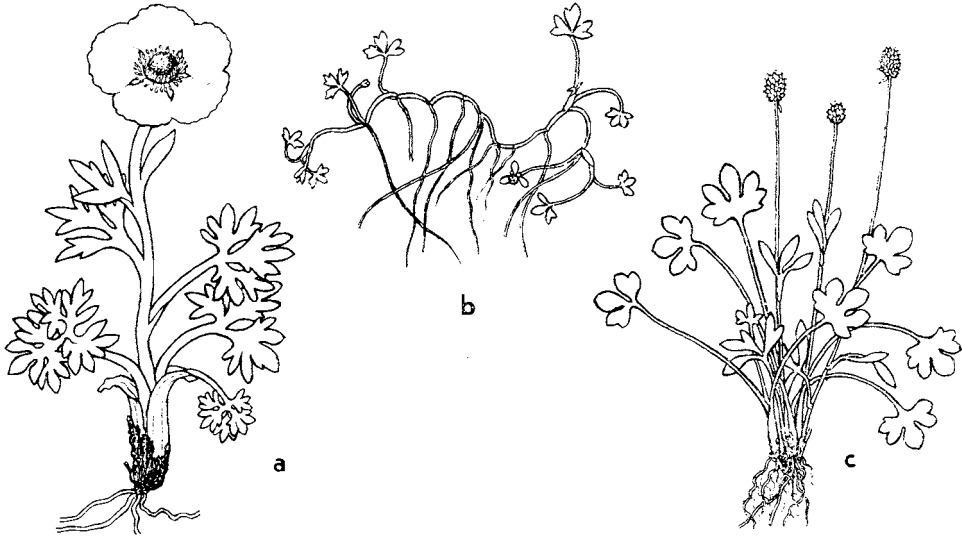


Fig. 14. a. *Ranunculus glacialis*. b. *R. hyperboreus*. c. *R. pygmaeus*. (6, 10)

First found by the Austrian expedition 1882–1883 (REICHARDT 1886 p. 13).

General distribution: Circumpolar. Northern limit: Brennevinsbukta in northern Svalbard.

### 11. Fam. CRUCIFERAE

- A. Leaves pinnate.....37. *Cardamine pratensis*
- B. Leaves simple.
  - I. Siliquae linear, 1.5–4 cm long.
    - a. Leaves entire, glabrous.....36. *Cardamine bellidifolia*
    - b. Leaves dentate, pubescent.....35. *Arabis alpina*
  - II. Siliquae ovate, 5–7 mm long.
    - a. Siliquae globose or ovoid.....38. *Cochlearia groenlandica*
    - b. Siliquae distinctly flattened.
      - 1. Flowers yellow. Siliquae glabrous.....39. *Draba alpina*
      - 2. Flowers white.
        - \* Siliquae hairy.....41. *Draba norvegica*
        - \*\* Siliquae glabrous.
          - Leaves with simple, forked and stellate hairs.....41. *Draba norvegica*
          - Leaves with stellate hairs only.....40. *Draba nivalis*

### 35. *Arabis alpina* L.

Fig. 15 d. Map 35. Table 23. Exsicc. No. 36.

- IV. The southern and eastern slopes of Wildberget up to the 205-m pass.
- VII. The slopes of Valberget, Lidhøgda and Grøna in Ekerolddalen. Bernakrateret.
- VIII. Fishburnberget and Fishburndalen. Eastern slope of Grønberget.
- IX. Paulsenhallet south of Willebreen.

Ascending to about 150 m on Lidhøgda and on Grønberget, and up to 205 m on Wildberget. The plants produced ripe seed abundantly in 1930. Height of plants usually 10–15 cm, maximum height 25 cm.

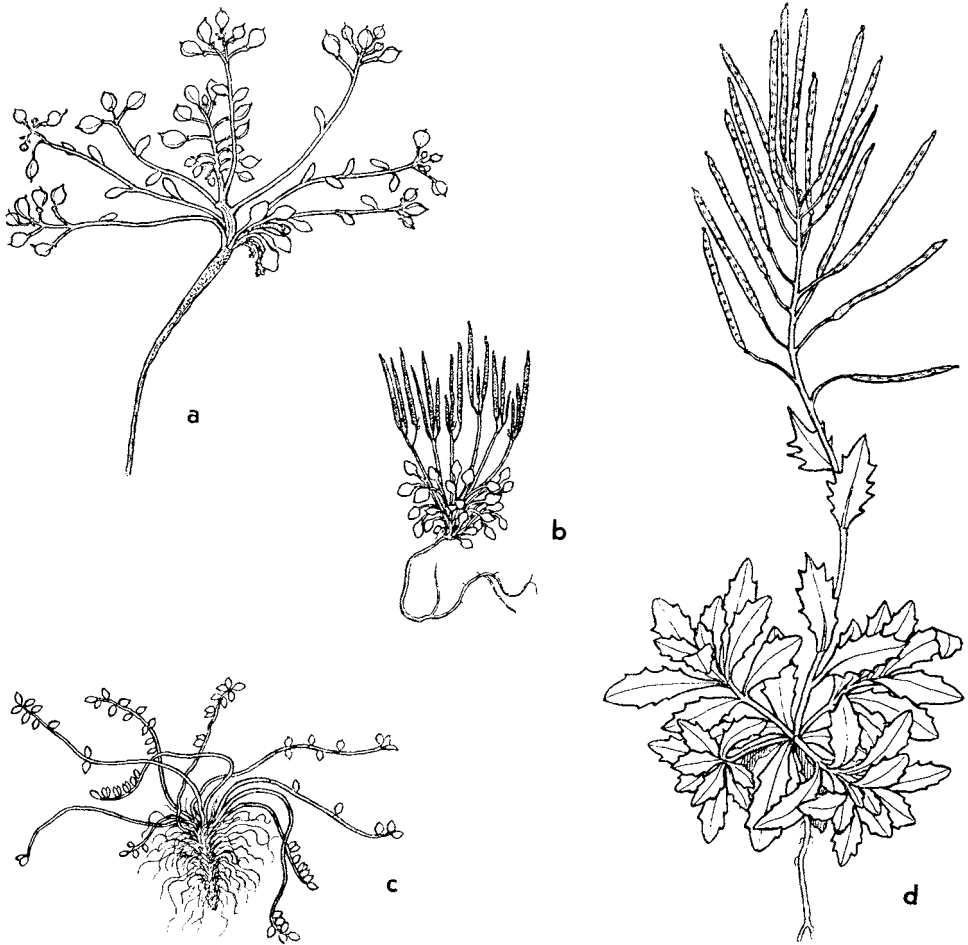


Fig. 15. a. *Cochlearia groenlandica*. b. *Cardamine bellidifolia*.  
c. *Cardamine pratensis*. d. *Arabis alpina*. (\*<sub>110</sub>)

First found 28. June 1900 on Wildberget by N. HARTZ (Specimen in herb. Copenhagen). See also KRUSE 1902 p. 300.

General distribution: Amphi-Atlantic (HULTÉN 1958 p. 50). Ranging from Hudson Bay in the west to Ural in the east. Northern limit: Magdalenafjorden on Svalbard.

### 36. *Cardamine bellidifolia* L.

Fig. 15 b. Map 36.

- I. Near Bjørnholet 1934 (BIRD 1935 p. 122).
- II. Hoyberg 1900 (C. KRUSE, specimens in herb. Copenhagen). East and north of Arnethkrateret 1930. Pöckkrateret 1950 (ERIK AALRUST). Slagfallet 1930. Slope of Bombelleskrateret 1934 (BIRD 1935 p. 122).
- V. Tornøedalen north of Oskehaugen 1930. Haugenstranda and Danielssenkrateret 1957 (STEINDORSSON 1958 p. 87).
- VI. The southern slope of Scoresbyberget up to the very summit. Kjollesdalkrateret. Krossberget, and north to Scottkrateret and the brooklet north of Scottkrateret.
- VII. Dagnyhaugen. Grøna and upper part of Ekeroldalen. Ruka. The very summit of Eskkrateret.
- VIII. Fishburndalen. Grønberget.



Ascending to 284 m on Eskkrateret, to 300 m on Ruka, and to 442 m on Scoresbyberget. Plants with ripe seed were common in 1930.

First found on Jan Mayen by GUSTAV BEER of the Austrian expedition 1882–1883: “Selten, in Felsspalten auf dem Südwestabhange des Bären-Berges” (REICHARDT 1886 p. 14).

General distribution: Nearly circumpolar, not found in Arctic Russia. Northern limit: The north coast of Greenland.

### 37. *Cardamine pratensis* L.

Fig. 15 c. Map 37. Table 24. Exsicc. No. 37.

II. Three small sterile specimens in a depression in the lava field not far from Hoyberg 28. June 1900 (KRUSE 1902 p. 300). – Some 50 sterile specimens in a dry brooklet 250 m north of the beach of Sørbukta 14. August 1930. Six square metres were available for statistical analyses: Table 24.

VIII. Fishburndalen 1947 J. WARREN WILSON (communication by letter of 2. March 1948).

A record by R. SCOTT RUSSELL and WELLINGTON (1940 p. 163) has not been localized.

The leaves were small, crowded, and no stem was visible. When I found this plant in the brooklet near Sørbukta in 1930, I made the following note in my diary: “den liknar ein *Galium*”, i. e. it looks like a *Galium*. Thus, the obscure *Galium* observed by the French expedition of 1892 might have been *Cardamine pratensis*.

The first record of *Cardamine pratensis* from Jan Mayen is due to CHR. KRUSE: “en liden knapt 1 tomme høi steril blomsterplante, der ikke hidtil var iagttaget paa øen (*Cardamine pratensis*)” (KRUSE 1902 b, p. 108).

General distribution: Circumpolar. Far to the south in Europe, Asia and North America. Northern limit: The north coast of Ellesmere Island.

### 38. *Cochlearia groenlandica* L.

Fig. 15 a. Map 38. Tables 5 and 9. Exsicc. No. 38.

I–X. Very common in all areas, surely in area I, as well. Found in 113 of the selected localities 1930.

Grows abundantly on the manured ground of the bird cliffs and on the slopes where the sea birds nest. In the herbarium *Cochlearia* and many other Jan Mayen plants retain the lingering smell of bird's nests for many years.

Ascending to the summit of Scoresbyberget at 442 m, in the upper part of Ekerolddalen perhaps still higher.

Throughout the island *Cochlearia* produces ripe seed abundantly. After having shed their seeds, the plants wither, and, after a year or two, the exterior strata of the root leave a round hole in the surface of the ground, as though a worm had crept out of it.

Observed on Jan Mayen 22. August 1861 by GEORG BERNA and CARL VOGT (VOGT 1863 p. 277, sub nomen LÖFFELKRAUT), and subsequently found by all expeditions visiting the island.

General distribution: Circumpolar. Northern limit: The north coast of Greenland.

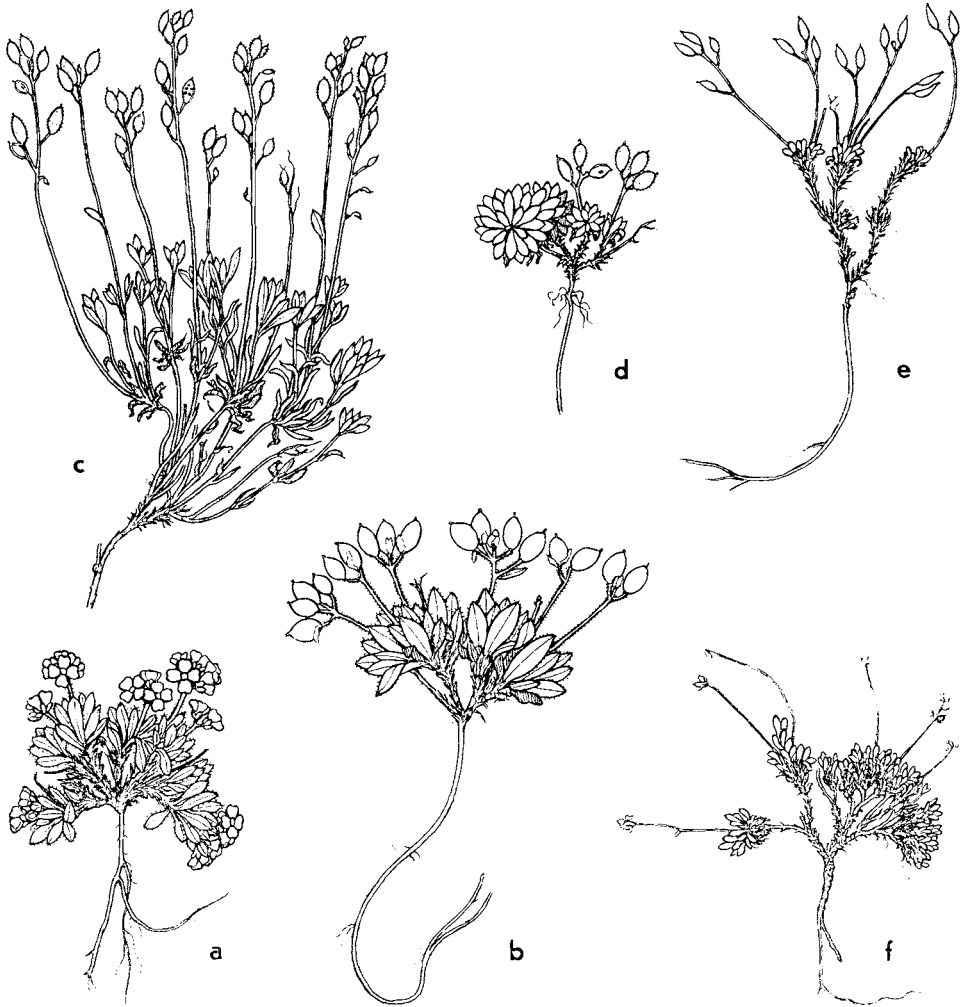


Fig. 16. a, b. *Draba alpina*. c, d. *Draba norvegica*. e. *Draba nivalis*.  
f. *Draba nivalis* × *norvegica*. ( $\frac{6}{10}$ )

### 39. *Draba alpina* L.

Figs. 16 a and b. Map 39. Exsicc. No. 39.

- IV. Several places on the southern slopes of Brinken, the slope of Wildberget and up to the pass to Stasjonsdalen. Jacobsendalen.
- V. Maria Muschbukta 1929 (JAKOB VAAGE), 1933 (LOUISE A. BOYD). On a hill south of Tornøedalen 1930.
- VI. North-west of Scoresbyberget and almost up to the summit of that mountain. West of Vesleessa. Kjølledalkrateret. South of Krossberget. Kapp Muyen. Also found on Libergsletta 1955 (MAGNE RØTTE).
- VII. Valberget. Lidhogda. Grøna in Ekerolddalen. Dagnyhaugen. Havhestberget and the slope of Eskkrateret. Ruka 300 m.
- VIII. Fishburndalen in the vicinity of *Epilobium anagallidifolium*.

Specimens in bloom were found in most of the localities in 1930, and specimens with ripe seed were not rare. The stems were usually very low.

First record due to GUSTAV BEER of the Austrian expedition 1882–1883: “Auf dem Südwestabhänge des Bären-Berges in Felsspalten” (REICHARDT 1886 p. 14).

General distribution: Circumpolar. In Europe south to Jotunheimen in Norway, in Asia south to Pamir, in North America south to the southern part of Hudson Bay. Northern limit: The north coasts of Ellesmere Island and of Greenland (PORSILD 1957 p. 184).

40. *Draba nivalis* LILJEBL.

Fig. 16 e. Map 40. Table 25. Exsicc. No. 40.

- IV. Several places on the slopes of Wildberget.
- VII. Lidhøgda. Grøna in Ekerolddalen. North of Dagnyhaugen. Havhestberget. The southern slope of Eskkrateret. West of Veslegryta. Both inside and on the slopes of Bernakrateret.
- VIII. Grønberget together with *Potentilla crantzii* 1930. Fishburnberget 1938 (SCOTT RUSSELL 1940 p. 174).

Height of plants 4–5 cm. Most plants were flowering and several plants produced ripe seed in 1930. Ascending to about 200 m on the southern slopes of the mountains.

Apart from the collections from 1930 and 1938, the only find of this species is due to HARTZ and KRUSE, who found a single specimen “ved Syd-Lagunens NO-Spids”, i. e. most likely at the foot of Wildberget (KRUSE 1902 p. 300, specimen seen 1931 in herb. Copenhagen).

General distribution: Circumpolar. In Europe south to Hardangervidda (LID 1959 p. 96). Northern limit: Brennevinsfjorden, Svalbard.

*Draba nivalis* × *norvegica*, det. LID, teste ELISABETH EKMAN. Fig. 16 f.

A single specimen of this hybrid was found 10. August 1930 on a stone at the foot of Havhestberget about 50 m above sea level. The parent plants were growing in the vicinity. This is the only plant hybrid hitherto recorded from Jan Mayen.

41. *Draba norvegica* GUNN.

Figs. 16 c and d, Map 41. Table 20. Exsicc. Nos. 41 and 42.

- II. Hoyberg 28. June 1900 N. HARTZ (herb. Copenhagen sub nomen *Draba fladnizensis* var. *altaica*). Sorbukta near the beach. The *Cystopteris* cave south of Arnekrateret 1930. Titeltbukta 1950 (ERIK AALRUST).
- III. Kvalrossbukta, Kvalrossen and Brielletårnet.
- IV. Helenehytta. West of Søyla. Fairly common on the slopes of Brinken and Wildberget, Jacobsendalen and Basissetta.
- V. Maria Muschbukta 1929 (JAKOB VAAGE). West of Neumayerberget, Danielssenkrateret, Blyttberget, Hochstetterkrateret, upper part of Tornøedalen, Scoresbyberget 1930. Mohnberget 1955 (MAGNE RØTTE).
- VI. Kjøllesdalkrateret. Krossberget. Scottkrateret. South of Kapp Muyen.
- VII. Valberget. Lidhøgda. Several places in Ekerolddalen, e. g. Grøna, Dagnyhaugen and north of Dagnyhaugen. Havhestberget. Eskkrateret. Røysflya. Veslegryta. Turnbukta. Bernakrateret. Kreklinghaugen.
- VIII. Fairly common on Fishburnberget, in Fishburnndalen, on Grønberget and east of Grønberget. Fishburnberget 1938 (SCOTT RUSSELL and WELLINGTON 1940 p. 174 sub nomen *Draba arctica*).
- IX. Paulsenhallet south of Willebreen.
- X. North of Sarskrateret. Hageruphytta.

†Lid: Jan Mayen

The compact tufts growing on sand and gravel usually standing but 2 or 3 cm above the ground (exsicc. No. 41), while plants growing on steep slopes reach a height of 8 to 10 cm (exsicc. No. 42). The siliquae are covered by forked hairs. On one occasion only has a form with glabrous siliquae been found. This was 2 km north-east of Søyla 14. August 1955 (MAGNE RØTTE).

Grows in the lowlands as well as in the mountains, right up to the summit of Esokrateret at 284 m, on Lidhøgda up to 291 m, and on the southern slope of Scoresbyberget to 425 m.

Found by the Austrian expedition 1882–1883 (REICHARDT 1886 p. 14 sub nomen *Draba corymbosa*). However, it was most likely found as early as 4. August 1817 by WILLIAM SCORESBY (SCORESBY 1820 p. 164 sub nomen *Draba verna*). The *Draba hirta* f. *trichella*, and *Draba fladmizensis* var. *altaica* (KRUISE 1902 p. 299) both belong to *Draba norvegica*, according to specimens seen in herb. Copenhagen.

General distribution: Amphi-Atlantic (HULTÉN 1958 p. 32). Ranging from Hudson Bay in the west to Novaya Zemlya and Waigatsch in the east. In Europe south to Scotland. Northern limit: The north coast of Svalbard.

## 12. Fam. SAXIFRAGACEAE

### *Saxifraga* L.

- A. Petals red. Leaves opposite .....46. *S. oppositifolia*
- B. Petals white. Leaves alternate.
  - I. Basal leaves reniform.
    - a. Stem with axillary bulbils .....42. *S. cernua*
    - b. Stem without bulbils .....47. *S. rivularis*
  - II. Basal leaves cuneate at the base.
    - a. Flowering stem leafy .....44. *S. groenlandica*
    - b. Scapose plants, stem with no leaves.
      - 1. Inflorescence mainly of bulbils .....43. *S. foliolosa*
      - 2. Inflorescence of normal flowers.
        - \* Small reddish plant. Rust-coloured hairs on the lower side of the leaves .....48. *S. tenuis*
        - \*\* Larger, usually green plant, no rustcoloured hairs .....45. *S. nivalis*

### 42. *Saxifraga cernua* L.

Fig. 17 a. Map 42. Tables 27 and 29. Exsicc. No. 43.

I. Bjørnholet 7. August 1919 (GANDRUP 1924 p. 8).

III–X. Fairly common in the central and northern parts of the island, not found in area II.

Mostly found on the southern slopes of the mountains, ascending to 300 m on Ruka, and to 425 m on Scoresbyberget.

Height of specimens usually 10–12 cm. Particularly large specimens were found on Wildberget and on Paulsenhallet, and especially on Grøna in Ekerolddalen. This specimens were up to 25 cm high with ground leaves 30–33 mm broad. The plants propagated by ground bulbils, axillary bulbils, and perhaps also by seed.



Fig. 17. a. *Saxifraga cernua*. b. *S. foliolosa*. c. *S. nivalis*. (6, 10)

The first record of this species was made by the Austrian expedition 1882–1883 (REICHARDT 1886 p. 15).

General distribution: Circumpolar. In Europe south to Scotland, in Asia south to Himalaya. Northern limit: The north coast of Greenland.

#### 43. *Saxifraga foliolosa* R. BR.

Fig. 17 b. Map 43. Table 26. Exsicc. No. 44.

- I. Bjørnholet 7. August 1919 J. GANDRUP (GANDRUP 1924 p. 8: "*Saxifraga nivalis* in a viviparous form"). Several places east of Franz Josefs Topp and Elisabethtoppen towards Kapp Wien 1950 (ERIK AALRUST).
- II. West of Elisabethtoppen and Rudolfstoppen 1950 (ERIK AALRUST).
- III. 1 km north of Midtfjellet at approximately 400 m.
- IV. Several places in Trollaldalen south-west of Helenesanden. The slopes of Brinken and Wildberget. Jacobsendalen.
- V. North of Neumayerberget. Kveisa. Kota. Danielssenkrateret. Blyttberget.
- VI. Fairly common around Scoresbyberget. By the southern river in Krossbyhallet. Kjøllesdal-krateret.

VII. Western slope of Lidhøgda. The pass between Schmelkdalen and Ekerolddalen. Grøna. Dagnyhaugen and north of Dagnyhaugen.

Grows in damp places in the valleys and on the mountains up to 400 m, and on the very summit of Scoresbyberget at 442 m.

Plants usually 8–10 cm high, on Wildberget maximum height 15 cm. A single plant with a normal flower was seen in Ekerolddalen 15. July 1930.

The first find on Jan Mayen was made 4. August 1919 on Blyttberget by J. GANDRUP (specimens in herb. Copenhagen).

General distribution: Circumpolar (HULTÉN 1958 p. 110). In Europe south to Dovre in Norway. Northern limit: The north coast of Greenland.

#### 44. *Saxifraga groenlandica* L.

Fig. 18 a. Map 44. Tables 10, 12 etc. Exsicc. No. 45.

I-X. Very common in all places investigated in 1930, and found in 134 of the 137 selected localities.

Usually 5–6 cm high, but sometimes only 2–3 cm. The largest specimens were found in a scree in Olsbudalen in the western part of Engelskbukta, large tufts with stems standing 14–15 cm high. The stem usually bears 2 or 3 flowers.

Found on sandy plains as well as on more or less steep slopes, in dry as well as in damp localities. Ascending to the summit of Scoresbyberget at 442 m. As it is growing in such widely different places, it occurred in a series of analyses, see Tables 10, 12, 15, 16, 20, 23, 25, 26, 27, 29 and 35.

First found by Scoresby 4. August 1817 on Eskkateret (SCORESBY 1820 p. 164 sub nomen *Saxifraga tricuspidata*). Other expeditions have recorded this species as *Saxifraga caespitosa* L., or *S. decipiens* EHRH.

General distribution: Circumpolar (HULTÉN 1958 p. 96). Northern limit: The north coast of Greenland.

#### 45. *Saxifraga nivalis* L.

Fig. 17 c. Map 45. Table 27. Exsicc. No. 46.

I. Bjørnholet 7. August 1919 (GANDRUP 1924 p. 8).

II-X. Common in all areas investigated in 1930, found in 112 of the 137 selected localities.

Ascending to the summit of the middle high mountains, Neumayerberget at 198 m, Eskkateret at 280 m, Lidhøgda at 290 m, and on the southern slope of Scoresbyberget at 425 m.

Plants usually 5–10 cm high. On Paulsenhallet south of Willebreen the specimens reached 15 cm, and on the brink above Hageruphytta in Nord-Jan the maximum height was measured to 18 cm.

The first find on Jan Mayen was made 29. July 1877 on Danielssenkrateret by D. C. DANIELSSEN (MOHN 1882 p. 25).

General distribution: Circumpolar. Northern limit on the north coast of Greenland.

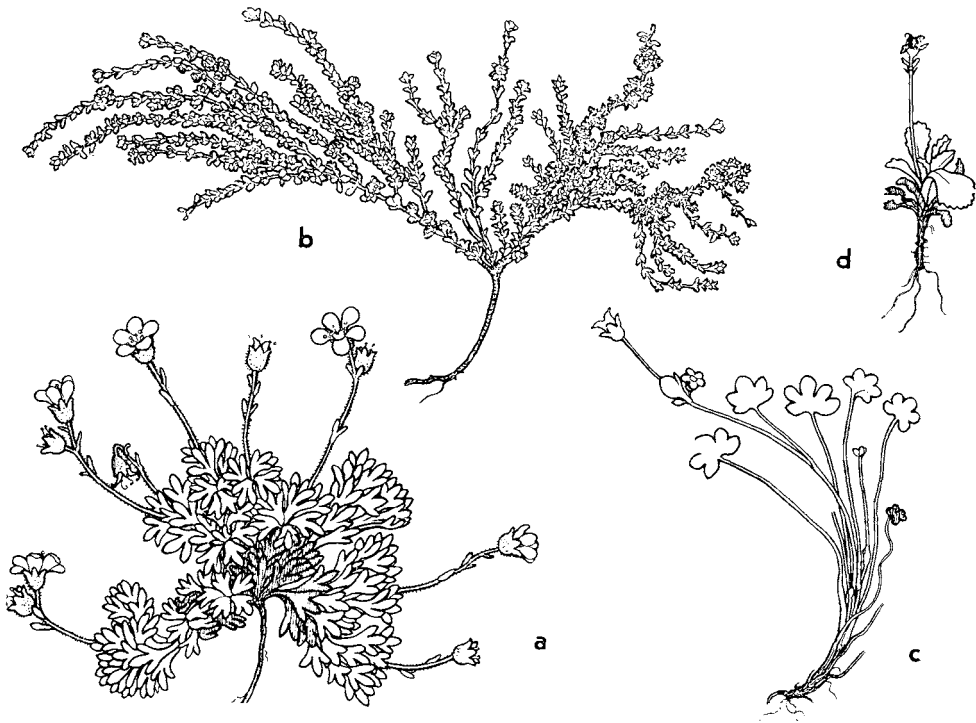


Fig. 18. a. *Saxifraga groenlandica*. b. *S. oppositifolia*. c. *S. rivularis*. d. *S. tenuis*. (<sup>6/10</sup>)

46. *Saxifraga oppositifolia* L.

Fig. 18 b. Map 46. Tables 12, 15 etc. Exsicc. No. 47.

I. Bjørnholet 7. August 1919 (GANDRUP 1924 p. 8).

II-VIII. Common in these seven areas investigated in 1930, occurred in 115 of the 137 selected localities.

X. Krossbukta in Nord-Jan 1950 (ERIK AALRUST).

Though common in the southern and central parts of the island, this species seems to be rare in area X. I did not notice it there in 1930, nor did I find it in area IX, Paulsenhallet.

Ascending to the summit of Eskkrateret at 280 m, the summit of Lidhøgda at 290 m, and up to 425 m on the southern slope of Scoresbyberget.

The creeping form, f. *reptans* ANDERSS. et HESSELM., predominated, while the tufted form was fairly rare (see ANDERSSON och HESSELMAN 1900 p. 25).

This easily perceptible Arctic saxifrage was found by WILLIAM SCORESBY in 1817 (SCORESBY 1820 p. 25).

General distribution: Circumpolar. Northern limit: This species reaches the northernmost point of Greenland at 83° 15' N.

47. *Saxifraga rivularis* L.

Fig. 18 c. Map 47. Tables 3, 16 etc. Exsicc. No. 48.

I-X. Very common in all investigated areas, in 1930 found in 119 of the 137 selected localities, only missing in a few very dry places.

Grows in the lowlands as well as in the mountains, ascending up to the very summit of Scoresbyberget at 442 m.

Plants small, usually but 2–5 cm high, rarely exceeding 7–8 cm. The largest specimens were found near Søyla, stems 9–10 cm high. Poorly developed plants were found on Tronfjellet north-west of Kapp Wien in August 1950 by ERIK AALRUST.

First found 29. July 1877 on Danielssenkrateret by D. C. DANIELSSEN (MOHN 1882 p. 25).

General distribution: Circumpolar. Northern limit on Frans Josef Land, and about at the same latitude in Grinnel Land, Canada.

48. *Saxifraga tenuis* (WAHLENB.) H. SM.

Fig. 18 d. Map 48. Tables 23 and 26. Exsicc. No. 49.

II–X. Common in all areas investigated in 1930, occurred in 117 of the 137 selected localities.

In abundant bloom or in fruit throughout the island in 1930. Plants usually 3–5 cm high, maximum height 8 cm. Ascending to the very summit of Scoresbyberget at 442 m.

The first find on Jan Mayen was made by the Austrian expedition (REICHARDT 1886 p. 15, sub nomen *S. nivalis* L.  $\beta$  *tenuis* WAHLENB.: “Unter der Stammart hin und wieder”).

General distribution: Almost circumpolar. Northern limit: Peary Land, North Greenland.

13. Fam. ROSACEAE

49. *Alchemilla glomerulans* BUS.

Fig. 19. Map 49.

VIII. Hillside in Håpdalen 21. July 1938, leg. R. SCOTT RUSSELL No. 183.

SCOTT RUSSELL found this species on an area of about 5 square m where there were fox burrows: “*Alchemilla* sp. (closely allied to *A. glomerulans*) was dominant and was confined to this area” (SCOTT RUSSELL and WELLINGTON 1940 p. 175).

Specimens are preserved in the British Museum (Natural History) in London. I am much indebted to the keeper of Botany, Mr. J. E. DANDY, for lending me the material, a sheet with two specimens, determined by the late Mr. A. J. WILMOTT. I can merely confirm Mr. WILMOTT’s determination. The lower specimen on the sheet is depicted in Fig. 19.

General distribution: Amphi-Atlantic (HULTÉN 1958 p. 114). Ranging from Labrador in the west to Ural in the east. Southern limit in the Pyrenees. The locality on Jan Mayen, a little to the north of 71° N, corresponds to the northern limits in North Norway and in Scoresby Sound, East Greenland.





Fig. 19. *Alchemilla glomerulans*. ( $\frac{6}{10}$ )

50. *Potentilla crantzii* (CR.) G. BECK.

Fig. 20 a. Map 50. Table 28. Exsicc. No. 50.

- VI. South of Kjøllesdalkrateret 7. August 1930.
- VII. Slope of Vestre Sørbremorena 22. August 1930.
- VIII. Eastern slope of Grønberget 18. August 1930. Håpdalen 1938 (SCOTT RUSSELL and WELLINGTON 1940 p. 175).

This species seems to be rare and is only found growing in restricted numbers on Jan Mayen. Four large tufts were found near Kjøllesdalkrateret, two tufts at Vestre Sørbremorena, and a few specimens on Grønberget. In spite of being scarce *Potentilla crantzii* apparently thrives extremely well on the island. Many stems stand 20–25 cm high, and the plants produced ripe seed abundantly in 1930.

Statistical analyses were made on four square metres, one south of Kjøllesdalkrateret, one on Grønberget, and two at the slope of Vestre Sørbremorena.

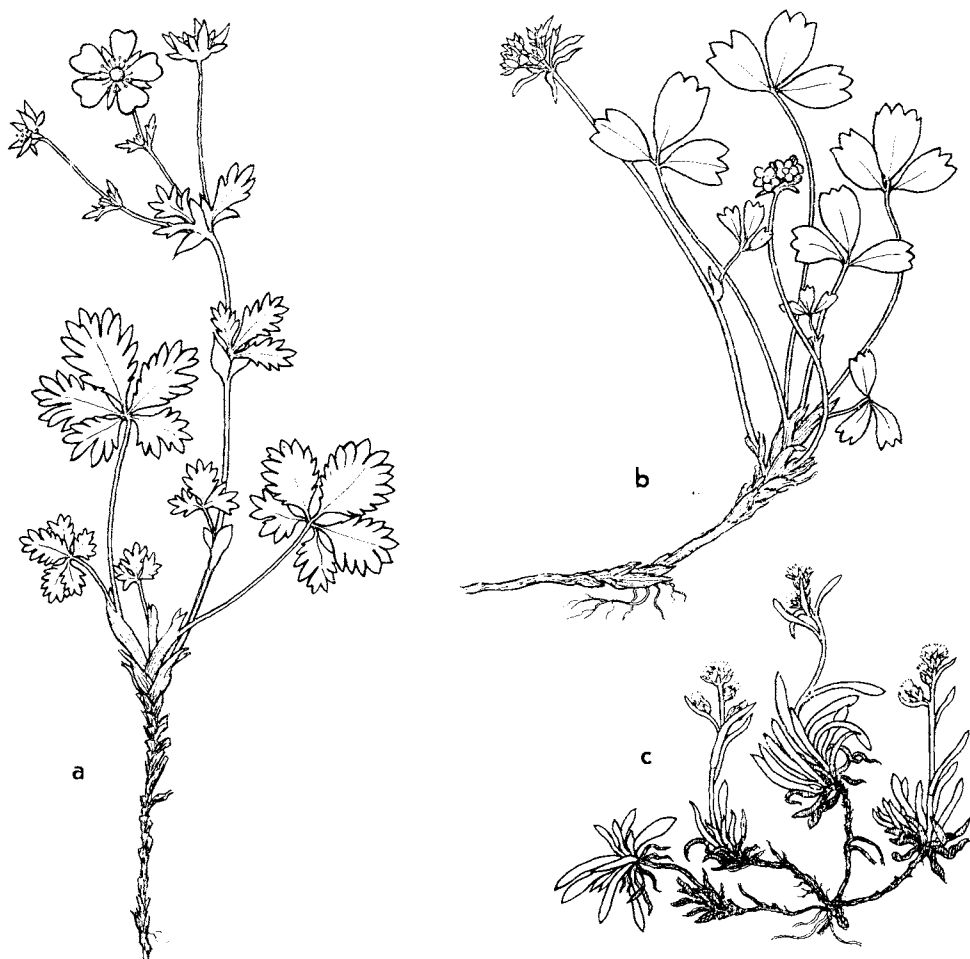


Fig. 20. a. *Potentilla crantzii*. b. *Sibbaldia procumbens*. c. *Gnaphalium supinum*. (6/10)

First find 7. August 1930. First publication 1940 (SCOTT RUSSELL and WELLINGTON 1940 p. 175).

General distribution: Amphi-Atlantic (HULTÉN 1958 p. 46). Ranging from Hudson Bay in the west to Ural in the east. Also in Southern Europe and Central Asia. Northern limit: Kongsfjorden, Svalbard.

#### 51. *Sibbaldia procumbens* L.

Fig. 20 b. Map 51. Table 29. Exsicc. No. 51.

- II. Near Hoyberg 1900 (KRUSE 1902 p. 298). Sørbukta. South and east of Arnethkrateret. Northern side of Guineabukta. Jettegryteodden. Titeltbukta. Sjuhollandarbukta. Kapp Rudson 1930. Revodden 1950 (ERIK AALRUST).
- IV. Common on the slopes of Wildberget north to Jacobsendalen 1930. Kapp Traill 1947 (J. WARREN WILSON, communication by letter 1948).
- VI. On and in the vicinity of Kjøllesdalkrateret. Scottkrateret 1930. Libergsletta 1955 (MAGNE RØTTE).
- VII. At the foot of Valberget. Slope above Ullerengsanden. Kreklinghaugen. Vestre Søbre-morena. 1930. Bird rocks near Turnbukta 10. July 1933 (LOUISE A. BOYD, herb. Oslo).
- VIII. Fairly common on Fishburnberget, in Fishburndalen and on Grønberget 1930. Hillside behind Håpbukta 1938 (SCOTT RUSSELL and WELLINGTON 1940 p. 175).

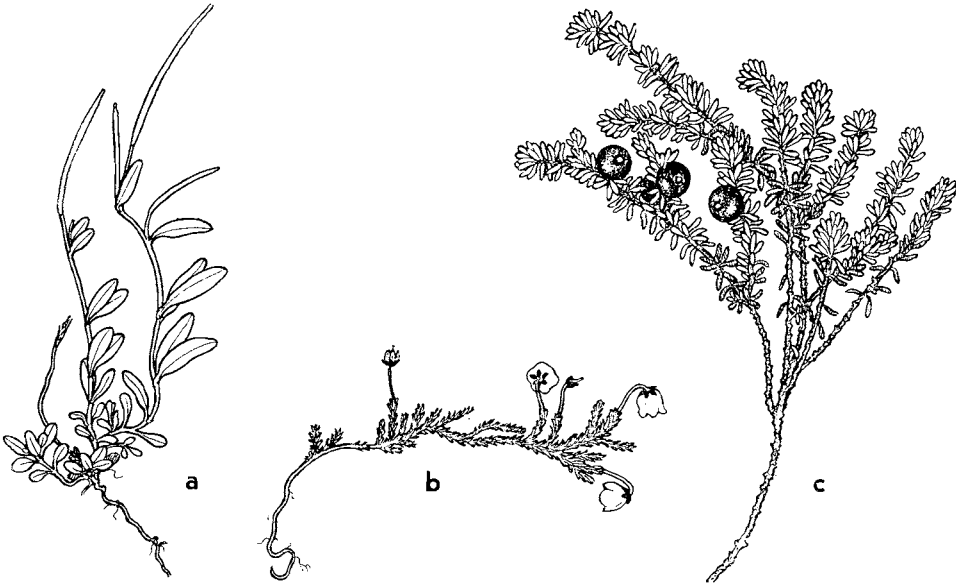


Fig. 21. a. *Epilobium anagallidifolium*. b. *Cassiope hypnoides*.  
c. *Empetrum hermaphroditum*. ( $\frac{6}{10}$ )

This species grows in the more sheltered places, on "Sibbaldia banks" (SCOTT RUSSELL and WELLINGTON 1940 p. 166). Specimens usually 5 cm high, sometimes 10 cm. Does not grow very far up the mountainsides, rarely higher than 250 m above sea level.

The first find on the island was made 28. June 1900 near Hoyberg by HARTZ and KRUSE. Since then *Sibbaldia procumbens* has been found in many places in the southern and central parts of the island.

General distribution: Amphi-Atlantic (HULTÉN 1958 p. 236). Also in the mountains of Southern Europe, Central Asia and Western North America. Northern limit: The north coast of Svalbard (OLAF I. RÖNNING).

#### 14. Fam. ONAGRACEAE

##### 52. *Epilobium anagallidifolium* LAM.

Fig. 21 a. Map 52. Table 29. Exsicc. No. 52.

VIII. Several places in Fishburndalen 1930. Rediscovered in 1938 by R. SCOTT RUSSELL (SCOTT RUSSELL and WELLINGTON 1940 p. 168, sub nomen *Epilobium alpinum*). Observed in Fishburndalen in 1947 by J. WARREN WILSON (communication by letter 1948).

The first find was made 25. July 1930 in an almost dry brook at the bottom of Fishburndalen. On 18. and 19. August some twenty patches were counted on either side of the valley, most of them less than one meter across, the largest 8 meters long. The plants were in full bloom in July, and had ripe seed in August. Height of plants in August 5–7 cm.

As mentioned above, the first record of this species from Jan Mayen was given 1940 by R. SCOTT RUSSELL, who did not know of our discovery in 1930.

General distribution: Amphi-Atlantic (HULTÉN 1958 p. 240), and almost circumpolar. Also in the mountains of Southern Europe, Central Asia and in the Rocky Mountains. Northern limit: The Taymyr Peninsula.

15. Fam. ERICACEAE

53. *Cassiope hypnoides* (L.) D. DON.

Fig. 21 b. Map 53.

VIII. Håpdalen 13. July 1938 (R. SCOTT RUSSELL).

The only record from Jan Mayen of this heather is due to R. SCOTT RUSSELL (SCOTT RUSSELL and WELLINGTON 1940 p. 162). In the publication no special locality is given: "(2) Exposed hillsides: dry-moss communities". However, the locality given above is quoted from the label of the specimens preserved in the British Museum (Natural History) in London. The drawing in Fig. 21 b is of one of these specimens.

I failed to visit Håpdalen in 1930, though I was in the neighbourhood, and thus I missed one of the richest and most interesting botanical localities on the island.

General distribution: Amphi-Atlantic (HULTÉN 1958 p. 34). Ranging from west of Hudson Bay in the west to Jenesei in the east. Northern limit: Krossfjorden, Svalbard.

16. Fam. EMPETRACEAE

54. *Empetrum hermaphroditum* (LGE.) HAGERUP.

Fig. 21 c. Map 54. Table 30. Exsicc. No. 53.

II. Titeltbukta 27. July 1950 (WILHELM SOLHEIM).

VI. Krossberget 5. August 1930. Also found at "West Cross Bay" in 1947 by J. WARREN WILSON (communication by letter 1948).

VII. Several places on the slopes above Ullerengsanden, on Kreklinghaugen and on the slope of Vestre Sørbremorena 1930.

VIII. Approximately 30 specimens were found in 1930 in Fishburndalen and on Grønberget.

On Jan Mayen *Empetrum hermaphroditum* usually occurs as large mats or carpets. A mat on Krossberget measured 2,5 m by 1,8 m. Even larger was a coherent carpet of *Empetrum hermaphroditum* on the slope of Vestre Sørbremorena, 10 m by 2–3 m, practically covered by ripe fruits 22. August 1930. R. SCOTT RUSSELL gives an instructive photo of a carpet of *Empetrum hermaphroditum* on Jan Mayen (SCOTT RUSSELL and WELLINGTON 1940 Plate 10, Photo 2).

The diameter of the stem of one of our plants from Fishburndalen is 7 mm. It is a slip of the pen when SCOTT RUSSELL claims that the *Empetrum* stems on Jan Mayen reach a diameter of 8 or 9 cm, instead of 8 or 9 mm (SCOTT RUSSELL and WELLINGTON 1940 p. 164).

Found by the author 23. July 1930 on Kreklinghaugen. Mr. KVIVE ANDERSEN, who had spent several years at the Norwegian station on Jan Mayen, informed me



Fig. 22. a. *Mertensia maritima*. b. *Veronica alpina*. ( $\frac{6}{10}$ )

in 1930 that he had collected *Empetrum* above Ullerengsanden in 1925. Soon afterwards he presented specimens to his friend Dr. F. SCHÄFER, who then was surgeon at the coal-mine company of Kongsfjorden, Svalbard. However, the first record in literature of *Empetrum hermaphroditum* on Jan Mayen is due to R. SCOTT RUSSELL (SCOTT RUSSELL and WELLINGTON 1940 p. 159).

General distribution: Probably circumpolar. Northern limit: Grinnell Land, Arctic Canada.

## 17. Fam. BORAGINACEAE

### 55. *Mertensia maritima* (L.) S. F. GRAY.

Fig. 22 a. Map 55. Tables 31 and 32. Exsicc. No. 54.

- I. Bjørnholet 7. August 1919 (GANDRUP 1924 p. 8).
- II. Abundant on Sørbuktsanden, in Guineabukta, Jettegryteodden and Titeltbukta 1930. Near Høyberg 28. June 1900 N. HARTZ (herb. Copenhagen). Sjuhollendarbukta 1950 (ERIK AALRUST).
- III. Two places in the western part of Engelskbukta. Beach at the foot of Brielletårnet 1930. "Im Nordosten der Englischen Bucht", i. e. Kvalrossbukta (DUSÉN 1900 p. 5).
- IV. "Syd-Lagunen" (KRUSE 1902 p. 300). The author did not find *Mertensia* on Sorlaguna in 1930.
- V. By the Austrian station (GANDRUP 1924 p. 12). Maria Muschbukta 1929 (JAKOB VAAGE). Nordlaguna 1900 (KRUSE 1902 p. 300).
- VII. At the foot of Havhestberget, and on the steep sandy slope east of Havhestberget. Veslegryta and Turnbukta. Ullerengsanden and east of Ullerenglaguna.
- VIII. Slope of Fishburnberget.
- X. Krossbukta in Nord-Jan 1950 (ERIK AALRUST).

Grows on sand, on and near the beach, sometimes, however, also on sandy slopes, e. g. east of Havhestberget up to approximately 75 m above sea level. Creeping stems usually 10–15 cm long. Blooming abundantly in all investigated localities in 1930.

The Austrian expedition was the first to find this pretty plant with blue flowers on Jan Mayen (REICHARDT 1886 p. 16).

General distribution: Circumpolar (*M. maritima* coll.). In Europe south to Denmark and Eire. Northern limit: Raudfjorden, Svalbard (FRIDTJOV ISACHSEN).

## 18. Fam. SCROPHULARIACEAE

### *Euphrasia frigida* PUGSL.

The only record of this *Euphrasia* from Jan Mayen is a passage by R. SCOTT RUSSELL: "In addition *Epilobium alpinum* was found on one slope in Fishburn Valley while *Euphrasia frigida* (probably the var. *pusilla*) occurred on the surface of the terraces in several parts of the district." (SCOTT RUSSELL and WELLINGTON 1940 p. 168).

Pro tempore I have not numbered this species as there are no specimens available to my knowledge, either in the British Museum (Natural history) or elsewhere. Nor do we know any special locality. However, if the record is correct, as I suppose it to be, then *Euphrasia frigida* is the 63rd vascular plant on Jan Mayen.

General distribution: Amphi-Atlantic (HULTÉN 1958 p. 50). Ranging from Hudson Bay in the west to Ural in the east. Southern limit: Eire. Northern limit: 74° 30' N on East Greenland.

### 56. *Veronica alpina* L.

Fig. 22b. Map. 56. Tables 29 and 33. Exsicc. N●. 55.

VI. Kjølesdalkrateret and Krossberget 1930.

VIII. Kapp Fishburn 21. August 1921 J. L. CHAWORTH MUSTARS (herb. Copenhagen). Fishburn-dalen and Grønberget 1930. Håpdalen 1938 (SCOTT RUSSELL and WELLINGTON 1940 p. 175).

Most specimens were in full bloom in 1930, and many had ripe seed. Height of specimens when in bloom 5–6 cm, when bearing fruit 10–12 cm, the maximum height, 16–18 cm, was observed on specimens growing together with *Potentilla crantzii* south of Kjølesdalkrateret.

First found in 1921 by CHAWORTH MUSTARS. Obviously found in several places in 1938 by SCOTT RUSSELL (SCOTT RUSSELL and WELLINGTON 1940 pp. 167 and 175). Also found on Krossberget and in Fishburn-dalen 1947 by J. WARREN WILSON (communication by letter 1948).

General distribution: Amphi-Atlantic (HULTÉN 1958 p. 54). Ranging from Hudson Bay in the west to Ural in the east. Southern limit in Europe: Scotland. Northern limit: East Greenland, a little farther to the north than Jan Mayen.

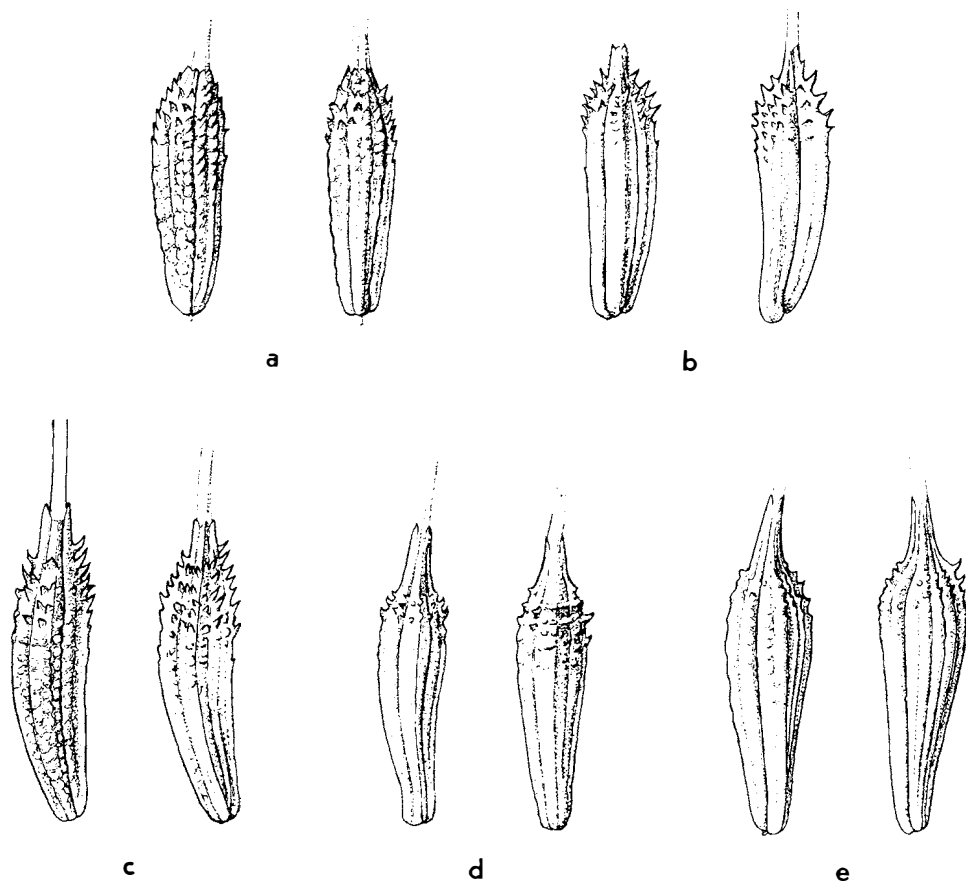


Fig. 23. Achenes of *Taraxaca*. a. *T. brachyrhynchum*. b. *T. croceum*.  
c. *T. acromaurum*. d. *T. torvum*. e. *T. recedens*. ( $\frac{1}{1}$ )

### 19. Fam. COMPOSITAE

- A. Stem with several small heads ..... *Gnaphalium supinum*  
B. Scape with a large solitary head ..... *Taraxacum*

#### 57. *Gnaphalium supinum* L.

Fig. 20 c. Map 57. Table 34. Exsicc. No. 56.

- VI. Kjøllesdalkrateret 5. August 1930. North of Kjøllesdalkrateret 7. August 1930.  
VIII. At the foot of Fishburnberget and in Fishburndalen 18. and 19. August 1930. Håpdalen  
1938 (SCOTT RUSSELL and WELLINGTON 1940 p. 175).

Specimens usually only 1–2 cm high, sometimes 4–5 cm. In full bloom August 1930. R. SCOTT RUSSELL found *Gnaphalium supinum* usually confined to localities of the type “Sibbaldia banks”, as did also the author in 1930. In 1947 J. WARREN WILSON had found that pH of the substratum (agglomerate) of *Gnaphalium supinum* on Krossberget and in Fishburndalen ranged from 7,1 to 7,2 (communication by letter 1948).



Fig. 24. *Taraxacum acromaurum*. ( $\frac{1}{2}$ )

First found by the Norwegian expedition 1930, rediscovered by the Imperial College expedition 1938, and first published 1940 by SCOTT RUSSELL and WELLINGTON (1940 p. 167).

General distribution: Amphi-Atlantic (HULTÉN 1958 p. 118). Ranging from Hudson Bay in the west to Ural in the east. Also in the mountains of southern Europe. Northern limit: Magerøya in northern Norway, slightly farther north than Kjøllesdalkrateret on Jan Mayen.

*Taraxacum* WEB.

All *Taraxaca* on Jan Mayen belong to the *Spectabilia* section.

- A. Fruit red or reddish.
  - I. Most leaves entire, or almost entire ..... *T. recedens*
  - II. Leaves lobed ..... *T. acromaurum*
- B. Fruit yellow or grey.
  - I. Leaves lobed.
    - a. Tall plant. Fruit 4,3 mm, rostrum 10 mm ..... *T. croceum*
    - b. Small plant. Fruit 4.0 mm, rostrum 7 mm ..... *T. brachyrhynchum*
  - II. Leaves entire. Fruit 5.1 mm, rostrum 11 mm ..... *T. torvum*

58. *Taraxacum acromaurum* DAHLST.

Figs. 23 c and 24. Plate I. Map 58. Table 35. Exsicc. No. 57.



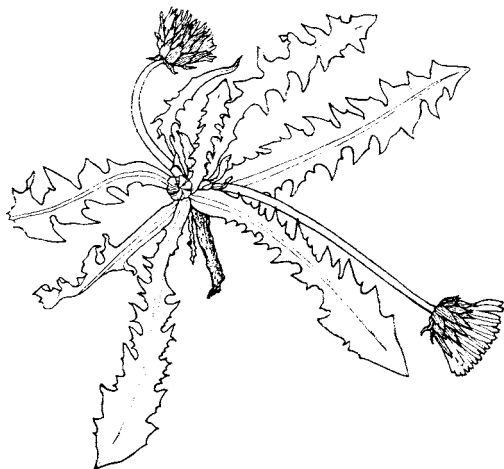


Fig. 25. *Taraxacum brachyrhynchum*. Type specimen. ( $\frac{1}{2}$ )

- II. Hoyberg. South, east and north of Arnethkrateret. South and east of Guineabukta. Below Slagfeltet. Jettegryteodden. Titeltbukta. Sjuhollendarbukta. – Also collected in Titeltbukta August 1950 by ERIK AALRUST.
- IV. The southern end of Helenesanden. Several places on Brinken and on Wildberget. Jacobsendalen.
- VI. Libergsletta and Krosspynten 4. Sept. 1955 MAGNE RØTTE.
- VII. Valberget. Lidhøgda. Grøna in Ekerolddalen. Havhestberget. Kreklinghaugen. – Bird cliff near Turnbukta 10. July 1933 LOUISE A. BOYD.
- VIII. Fishburnberget. Fishburndalen. Grønberget.

In the autumn 1930 the material was examined by Dr. HUGO DAHLSTEDT, Stockholm. Dr. DAHLSTEDT found it to resemble an Icelandic *Taraxacum*, which at that time was undescribed. Later on DAHLSTEDT described this Icelandic *Taraxacum*, and named it *T. acromaurum* (OSTENFELD and GRONTVED 1934 p. 146). In 1946 Dr. GUSTAF HAGLUND, Stockholm, re-examined the Jan Mayen material and stated that it was identical with the Icelandic *Taraxacum acromaurum* DAHLST. This species, which is common in Iceland (CHRISTIANSEN 1942 p. 330), is fairly common on Jan Mayen too. Ripe seed was produced abundantly in 1930.

General distribution: Iceland and Jan Mayen. Northern limit Jan Mayen.

59. *Taraxacum brachyrhynchum* HAGL. nov. sp.

Figs. 23 a and 25. Map 59. See Table 34. Exsicc. No. 58.

- VI. Near Kjølledalkrateret, dry river bed. 5. August 1930.
- VII. Veslegryta on Roysflya south of Eskkrateret 19. July 1930.

Diagnosis: Planta ad c. 10 cm alta, sat robusta. Folia sat decumbentia-suberecta, lingulato-lanceolata-late linearia, ad c. 2.5 cm lata et 15 cm longa, laete viridia, lutescentia, fere glabra, lobis lateralibus utrinque ad 6, deltoideis, brevibus, approximatis, breviter acutis, patentibus-reversis, dorso leviter sigmoideo-curvatis, vel subrectis, sparse denticulatis-integris, lobo terminali medio-cri, breviter mucronato, triangulari-hastato, in foliis exterioribus saepe magno,

subrectangulari, sub apice lobulato-dentato, petiolis late alatis, brevibus, pallidis, nervo mediano pallido-sat rubescenti. Involucrum mediocre, olivaceo-viride, sat laetum, basi subovata-ovato-turbinata. Squamae exteriores laxe adpressae, ovato-lanceolatae, ad c. 3.5 mm latae, c. 8 mm longae, praesertim apice  $\pm$  bruneo-violaceae, angustissime marginatae, sat acuminatae, laeves. Calathium subobscurum luteum. Ligulae marginales extus stria fusco-violacea ornatae. Antherae polline carentes. Stylus et stigmata lutea. Achenium substramineum vel parum brunnescens, c. 4.0 mm longum, supra medium latius, superne breviter squamuloso-tuberculatum, ceterum rugulosum vel basi sublaeve, in pyramidem brevissimam, c. 0.2 mm longam vel etiam haud limitatam, conicam abiens. Rostrum c. 10 mm longum.

Typus: Jan Mayen, prope Kjøllesdalkrateret 5. VIII 1930; in Mus. Bot. Osloense.

The leaves are long, of nearly equal breadth, with many short lobes, and with short broad winged petioles. The head is bright, the style yellow, and the anthers have no pollen. Achene bright yellow, strongly muricate, and with very short cusp.

General distribution: Known from Jan Mayen only.

60. *Taraxacum croceum* DAHLST. coll.

Figs. 23 b and 26 b. Map 60.

II. Sørbukta near the beach 13. August 1960.

VI. Near Kjøllesdalkrateret 5. August 1930.

This taxon is fairly closely related to the Scandinavian mountain species *Taraxacum ceratolobum* DAHLST. It was impossible to determine it more accurately, however, owing to the insufficient material (communications by letters, from DAHLSTEDT 1930, and from HAGLUND 1946).

Previous records of *Taraxacum croceum* from Jan Mayen should most likely partly be referred to the more common *T. acromaurum* DAHLST., e. g. P. DUSÉN (1900 p. 5), C. KRUSE (1902 p. 301), C. G. BIRD (1935 p. 122), and R. SCOTT RUSSELL and P. S. WELLINGTON (1940 pp. 166, 169 and 170), while the *Taraxacum* in Zone I and II by SCOTT RUSSELL and WELLINGTON (1940 p. 174) may be *T. torvum* HAGL.

General distribution: This special type of *Taraxacum croceum* is known from Jan Mayen only.

61. *Taraxacum recedens* (DAHLST.) HAGL. nov. sp.

(syn. *T. purpuridens* DAHLST. var. *recedens* DAHLST.)

Figs. 23 e and 26 a. Map 61.

III. Kvalrossbukta on the southern slopes, the slopes of Salsteinen, Trekanten, and near the summit of Brielletårnet 1. August 1930.

IV. The slope east of Trolldalen above the southern part of Helenesanden 15. August 1930. Southern slope of Wildberget at about 150 m 9. August 1930.

VIII. Fishburnberget together with *Taraxacum torvum* 18. August 1930.



Fig. 26. a. *Taraxacum recedens*. b. *Taraxacum croceum*. ( $\frac{1}{2}$ )

Diagnosis: A forma primaria foliis magis elongatis angustioribus, intermediis praesertim acutis, involucris crassioribus, magis obscuris, squamis exterioribus laterioribus nec non acheniis fulvo-brunneis sat recedet (DAHLSTEDT in litteris 5 XII 1930).

Typus: Jan Mayen, Kvalrossbukta sub Salsteinen 1. VIII 1930; in Mus. Bot. Osloense.

Upon my return from Jan Mayen in 1930, I sent my material of this *Taraxacum* to the eminent *Taraxaca* expert Dr. HUGO DAHLSTEDT in Stockholm. DAHLSTEDT wrote the above cited diagnosis for this taxon, and created the varietal name *recedens*, as he was of the opinion that it was closely allied to the Scandinavian *T. purpuridens* DAHLST. Upon the death of DAHLSTEDT the material was re-examined in 1946 by the late Dr. GUSTAF HAGLUND, who was then the Swedish expert on *Taraxaca*. HAGLUND found that the variety diverged considerably from *T. purpuridens* in so many characters that it deserved to be raised to an independent species.

According to HAGLUND, *T. recedens* is a tall and coarse plant with much more dentated and lobed leaves, larger and darker heads, broader outer bracts, brighter styles, and larger and less dentated achenes than those of *T. purpuridens*.

General distribution: Known from Jan Mayen only.

62. *Taraxacum torvum* HAGL. nov. sp.

Figs. 23 d and 27. Map 62. Table 36. Exsicc. Nos. 59 and 60.

VIII. Fishburnberget at 50 m, 18. August 1930. Western slope of Grønberget at about 200 m 19. August 1930.

IX. Paulsenhallet south of Willebreen 2. August 1930.

Diagnosis: Planta ad c. 50 cm alta. Folia longissima, obovato-lanceolata, subobscure viridia, canescentia, fere glabra, integra, acutiuscula-subobtusa, breviter dentata vel vix lobulato-dentata, denticulis intermixtis praedita, petiolis longis, sensim angustatis, pallidis—ima basi rubro-violaceis. Involucrum magnitudine mediocre c. 2 cm altum, fusco-viride—atro-viride, basi truncata vel subturbinata. Squamae exteriores patentes—erecto-patentes, lanceolatae vel anguste ovato-lanceolatae, ad c. 3.5 mm latae et 14 mm longae, fusco-virides, emarginatae, laeves. Calathium ut videtur sat lacte luteum, radians. Ligulae marginalis extus stria cano-violacea ornatae. Antherae polliniferae. Stylus et stigmata fusco-viridia. Achenium fusco-stramineum, 5 mm longum (pyramide inclusa), supra medium latius, superne sat minute spinulosum, ceterum rugulosum vel basi sublaeve, in pyramiden conicam, c. 0.7 mm longam sensim abiens. Rostrum 10 mm longum vel paullo longius.

Typus: Jan Mayen, Paulsenhallet 2. VIII 1930, Mus. Bot. Osloense.

This large and coarse species is chiefly known by its long, entire, erect leaves, almost blackish-green heads, and by its flaxen achenes with short conic cusp.

General distribution: Known from Jan Mayen only.



Fig. 27. *Taraxacum torvum*. Type specimen. ( $\frac{1}{2}$ )

### ANTHROPOCHORES

Anthropochores are rare on Jan Mayen. Apart from some seedlings of *Pisum arvense* L. at the Norwegian station, and some seedlings of *Malus silvestris* (L.) MILL. at Helenehytta, the only introduced species found by us in 1930 were a few specimens of *Ranunculus acris* L. and *Rumex longifolius* DC. at the Norwegian station, and *Matricaria inodora* L. by the cabin north of Nordlaguna.

An additional anthropochore, *Deschampsia caespitosa* (L.) PB., which had been introduced during the last war, was brought home from Jan Mayen in 1956 by OLAF I. RÖNNING.

## Comments and summary

### 1. *The composition of the flora*

Apart from a few odd anthropochores, 62 wild vascular plants are now known from Jan Mayen. A conjectured 63rd species, *Euphrasia frigida*, has been reported by a British expedition. This *Euphrasia* is not included, however, as the author has not succeeded in tracing any specimen from Jan Mayen.

The low percentage of Monocotyledones is surprising. While the percentage of Monocotyledones on Bear Island is 29, and on Svalbard proper 32, the percentage on Jan Mayen is 24. This may, however, be explained by the lack of actual bogs and mires on Jan Mayen.

A very characteristic feature of the flora of Jan Mayen is the abundance of *Taraxaca*, which thrives extremely well throughout the island on the ground manured by the sea birds. Five species are distinguished. One of these, *Taraxacum acromaurum* DAHLST., is also found in Iceland. A new type of *Taraxacum croceum* DAHLST. (coll.) is not yet described, while the three remaining species are described by GUSTAF HAGLUND as new to science, and are assumed to be endemic to the island.

### 2. *Amphi-Atlantic and circumpolar groups*

Apart from the *Taraxaca*, the other 57 vascular plants of Jan Mayen all belong to the group of Arctic and Northern plants which are common around the northern part of the Atlantic Ocean. They are all found in Norway and in Iceland, and all but one, occur in Greenland. Two thirds (37 species) are of the circumpolar pattern, one third (19 species) of the Amphi-Atlantic pattern, while one species, *Luzula arcuata* (WAHLENB.) Sw. s. str., occurs in Norway, on Bear Island and in Iceland, but does not reach Greenland or Eastern North America.

### 3. *Northern limits*

Apart from the *Taraxaca*, none of the other 57 species have their northern limit on Jan Mayen, though four of them, *Alchemilla glomerulans*, *Gnaphalium supinum*, *Puccinellia coarctata* and *Veronica alpina*, are not far from their northern limit. The northern limit of *Cerastium cerastoides* and *Luzula arcuata* is on Bear Island. Most of the remaining species have their northern limit close up to or north of 80° N. L.

#### 4. *Comparison between the flora of Jan Mayen and Bear Island*

By comparing the flora of Jan Mayen with that of the somewhat smaller Bear Island, it appears, that, with the exception of the *Taraxaca*, the vascular plants of Jan Mayen have now reached the same number as those on Bear Island, viz 57 species (see HANSEN and HOLMBOE 1925, and RØNNING 1959).

The following 31 species are found on both islands:

Equisetum arvense	Cerastium cerastoides
Lycopodium selago	Silene acaulis
Calamagrostis neglecta	Ranunculus hyperboreus
Poa alpina var. vivipara	Ranunculus pygmaeus
Poa alpigena	Arabis alpina
Phippsia algida	Cardamine pratensis
Festuca rubra	Draba alpina
Festuca vivipara	Draba norvegica
Luzula arcuata	Cochlearia groenlandica
Luzula confusa	Saxifraga cernua
Salix herbacea	Saxifraga groenlandica
Koenigia islandica	Saxifraga nivalis
Oxyria digyna	Saxifraga oppositifolia
Polygonum viviparum	Saxifraga rivularis
Sagina intermedia	Saxifraga tenuis
Cerastium arcticum	

#### 5. *Contingental immigration*

We know very little about the plants' settling on Jan Mayen. However, the vegetation of today may certainly have grown there for thousands of years. The last volcanic activity known occurred in 1732. That year the whalers found that a heavy layer of volcanic ashes covered parts of the island. The vegetation may soon have recovered, however, as the wind quickly would have dispersed the ashes.

In the course of time plants may have immigrated now and again. Thus seed of *Taraxaca* may have been carried through the air from Iceland, or even from more distant places. We know that drift-ice and drift-wood constantly are washed ashore in many places on the island. The fresh reports of living flowering plants and mosses peregrinating on drifting ice floes in the Arctic Ocean (HULTÉN 1962 b, p. 362), indicate that change as well as increase of the flora of Arctic countries may occur more often than hitherto assumed.

## Tables of statistical analyses

This part of our botanical investigations in 1930 was not intended for making a survey of the plant communities of the island. Indeed, the statistical analyses were actually made to show the conditions of growth and the environment of each species on its habitat. The author proposes to use the word *synedria* as an adequate term to the coexistence of plant specimens in the restricted areas applied to in the statistical analyses.

Usually ten patches, each of one square meter, were examined each time. The quantities are indicated according to the five degrees of the Hult-Sernander scale.

Table 1  
*Cystopteris fragilis* -synedria  
Lava cave in Helheimen, Sør-Jan 13. August 1930.

Three squares of 1 m <sup>2</sup>	1	2	3	Three squares of 1 m <sup>2</sup>	1	2	3
Cerastium arcticum	-	1	-	Brachythecium glaciale	1	1	1
Cystopteris fragilis	1	3	3	Brachythecium reflexum	-	-	1
Oxyria digyna	1	2	1	Drepanocladus uncinatus	+	+	2
Poa alpigena	1	1	1	Lescuraea radicata	-	1	1
Poa alpina	-	1	1	Polytrichum alpinum	1	1	1
Polygonum viviparum	1	1	1	Rhacomitrium lanuginosum	-	1	1
Ranunculus pygmaeus	-	1	1	Rhytiadelphus squarrosus	-	-	4
Salix herbacea	5	3	2	Tortula norvegica	1	-	-
Saxifraga nivalis	-	1	1				
Saxifraga rivularis	1	1	1	Cladonia coccifera	1	1	-
Saxifraga tenuis	1	-	-	Cladonia crispata	-	1	-
Sibbaldia procumbens	2	3	4	Cladonia mitis	1	1	1
Taraxacum acromaurum	1	2	2	Peltigera canina	2	1	2
				Stereocaulon vesuvianum	1	-	-
Barbilophozia hatcheri	1	1	1				
Barbilophozia lycopodioides	1	1	1	Inocybe fastigiata	1	-	1
Brachythecium albicans	1	1	1	Rhytisma salicina	1	1	1



Table 2  
*Equisetum arvense* -synedria  
At the foot of Wildberget 20. August 1930. 15 m.

Ten squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Calamagrostis neglecta</i>	—	—	—	—	2	1	1	—	2	—
<i>Cerastium arcticum</i>	1	—	—	—	—	—	—	1	1	—
<i>Equisetum arvense</i>	5	4	5	5	5	4	5	5	5	5
<i>Festuca rubra</i>	—	—	—	—	1	—	—	1	—	—
<i>Festuca vivipara</i>	1	1	—	1	—	—	—	—	—	—
<i>Luzula arcuata</i>	—	—	—	—	—	—	—	1	—	—
<i>Oxyria digyna</i>	1	—	1	—	—	—	—	—	1	1
<i>Poa alpigena</i>	1	—	—	—	—	—	—	—	—	—
<i>Ranunculus glacialis</i>	1	—	—	—	—	—	—	1	—	—
<i>Ranunculus pygmaeus</i>	1	1	—	—	—	—	—	—	—	—
<i>Salix herbacea</i>	2	3	3	2	1	—	—	—	2	1
<i>Saxifraga groenlandica</i>	1	—	—	—	—	—	—	1	—	—
<i>Saxifraga rivularis</i>	—	—	—	—	—	—	1	—	1	1
<i>Taraxacum acromaurum</i>	1	—	—	—	—	—	—	—	—	—
<i>Scapania obcordata</i>	1	—	—	—	—	—	—	—	—	—
<i>Bartramia ithyphylla</i>	1	1	—	—	—	—	—	—	—	—
<i>Calliergon stramineum</i>	1	1	1	1	1	1	1	1	1	1
<i>Drepanocladus uncinatus</i>	5	5	5	5	5	5	5	5	5	5
<i>Oncophorus vires</i>	1	1	1	—	1	—	—	—	—	1
<i>Oncophorus wahlenbergii</i>	1	—	—	—	—	—	—	—	—	—
<i>Philonotis tomentella</i>	1	1	—	—	—	—	—	—	—	—
<i>Plagiopus oederi</i>	—	1	—	—	—	—	—	—	—	—
<i>Rhacomitrium canescens</i>	—	1	—	—	—	—	—	2	1	—
<i>Peltigera canina</i>	—	1	—	—	—	—	—	—	—	—
<i>Rhytisma salicina</i>	1	1	1	1	1	—	—	—	1	1

Table 3  
*Calamagrostis neglecta* -synedria  
At the foot of Wildberget 20. August 1930. 10 m.

Ten squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Calamagrostis neglecta</i>	5	5	5	5	5	5	5	5	5	5
<i>Cerastium arcticum</i>	1	1	—	—	—	1	1	1	—	1
<i>Equisetum arvense</i>	2	1	1	1	1	1	1	1	1	1
<i>Salix herbacea</i>	—	—	—	—	—	—	—	—	1	1
<i>Saxifraga groenlandica</i>	1	1	—	—	—	—	1	—	1	1
<i>Saxifraga nivalis</i>	—	—	—	—	—	1	—	—	—	—
<i>Saxifraga rivularis</i>	1	1	1	1	1	1	1	1	1	1
<i>Cephalozia arctica</i>	—	—	1	—	—	—	—	—	—	—
<i>Aulacomnium turgidum</i>	1	—	—	1	1	—	1	1	1	—
<i>Calliergon sarmentosum</i>	1	—	—	—	—	—	—	—	—	—
<i>Calliergon stramineum</i>	1	1	1	1	1	1	1	1	1	1
<i>Campyllum chrysophyllum</i>	1	1	1	1	1	1	1	1	1	1
<i>Drepanocladus uncinatus</i>	5	5	5	5	5	5	5	5	5	5
<i>Mnium rugosum</i>	1	1	1	1	1	1	1	1	1	1
<i>Oncophorus wahlenbergii</i>	—	—	1	—	—	—	—	—	—	—
<i>Philonotis tomentella</i>	1	1	1	—	—	—	—	1	1	—
<i>Polytrichum juniperinum</i>	—	—	1	—	—	—	—	—	—	—
<i>Rhacomitrium canescens</i>	—	—	—	1	—	—	—	—	—	—

Table 4  
Four patches of *Festuca rubra* var. *mutica*.  
1. Kjøllesdalkrateret 7. August, 2. Fishburndalen 19. August,  
3 and 4. At the foot of Wildberget 20. August 1930.

Four squares of 1 m <sup>2</sup>	1	2	3	4	Four squares of 1 m <sup>2</sup>	1	2	3	4
<i>Calamagrostis neglecta</i>	—	—	2	—	<i>Calliergon stramineum</i>	—	—	1	1
<i>Cerastium arcticum</i>	1	—	—	1	<i>Drepanocladus uncinatus</i>	1	5	5	5
<i>Empetrum hermaphroditum</i>	—	3	—	—	● <i>Encophorus virens</i>	—	—	1	—
<i>Equisetum arvense</i>	—	1	5	5	<i>Polytrichum alpinum</i>	1	—	—	—
<i>Festuca rubra</i>	1	1	1	1	<i>Rhacomitrium canescens</i>	4	—	—	2
<i>Festuca vivipara</i>	1	1	—	—	<i>Rhacomitrium lanuginosum</i>	1	—	—	—
<i>Luzula arcuata</i>	1	1	—	1					
<i>Oxyria digyna</i>	2	—	—	—	<i>Cetraria delisei</i>	1	1	—	—
<i>Poa alpina</i>	1	—	—	—	<i>Cetraria islandica</i>	1	1	—	—
<i>Polygonum viviparum</i>	1	1	—	—	<i>Cladonia mitis</i>	1	1	—	—
<i>Potentilla crantzii</i>	3	—	—	—	<i>Ochrolechia frigida</i>	1	1	—	—
<i>Ranunculus glacialis</i>	—	—	—	1	<i>Stereocaulon vesuvianum</i>	1	1	—	—
<i>Salix herbacea</i>	2	3	1	—					
<i>Saxifraga groenlandica</i>	—	—	—	1	<i>Rhytisma salicina</i>	—	—	1	—
<i>Saxifraga nivalis</i>	1	—	—	—					
<i>Silene acaulis</i>	1	—	—	—					

Table 5  
*Phippsia algida* -synedria  
Sørslaguna south of Wildberget 17. August 1930. 5 m.

Ten squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Cerastium arcticum</i>	1	1	1	—	—	—	—	1	1	—
<i>Cochlearia groenlandica</i>	1	1	1	1	1	1	1	1	1	1
<i>Festuca vivipara</i>	1	—	—	1	—	1	—	—	—	—
<i>Luzula arcuata</i>	—	1	—	—	—	—	—	—	—	—
<i>Oxyria digyna</i>	1	—	1	—	—	1	—	—	1	1
<i>Phippsia algida</i>	1	1	2	2	1	2	1	2	1	2
<i>Ranunculus glacialis</i>	1	1	1	1	1	1	1	1	1	1
<i>Sagina caespitosa</i>	1	1	—	—	1	—	1	1	—	—
<i>Sagina intermedia</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga groenlandica</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga tenuis</i>	—	—	—	—	—	—	1	—	—	—
<i>Barbula recurvirostris</i>	1	1	1	1	1	1	—	—	1	1
<i>Bartramia ithyphylla</i>	—	—	1	—	—	—	—	—	—	—
<i>Ceratodon purpureus</i>	1	1	1	1	1	1	1	1	1	1
<i>Polytrichum alpinum</i>	1	1	1	1	—	—	—	1	1	—
<i>Rhacomitrium canescens</i>	—	—	1	—	—	1	—	1	1	—
<i>Placopsis gelida</i>	—	—	1	—	—	1	—	—	1	1







Table 13  
*Carex maritima* -synedria  
 Turnbukta 18. August 1930. 10 m.

Ten squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Carex maritima</i>	5	4	4	5	4	5	5	5	5	4
<i>Cerastium arcticum</i>	—	—	1	—	—	—	—	—	1	1
<i>Cochlearia groenlandica</i>	1	1	1	—	—	—	—	1	—	—
<i>Festuca vivipara</i>	—	—	—	—	—	—	—	—	1	1
<i>Honckenya peplodes</i>	—	—	—	—	—	—	—	—	—	2
● <i>xyria digyna</i>	1	—	—	—	—	1	1	—	—	1
<i>Ranunculus glacialis</i>	—	1	1	—	—	—	—	—	1	1
<i>Sagina caespitosa</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga groenlandica</i>	1	1	—	—	—	—	1	1	—	—
<i>Polytrichum alpinum</i>	—	1	1	—	—	—	—	1	1	—
<i>Rhacomitrium canescens</i>	1	1	1	1	1	1	1	1	1	1

*Carex maritima* dominated, other phanerogams were rare and few in number, usually but one specimen to each square.

Table 14  
*Luzula spicata* -synedria  
 East of Kreklinghaugen 22. August 1930. Ca 50 m.

Six squares of 1 m <sup>2</sup>	1	2	3	4	5	6
<i>Carex lachenalii</i>	—	1	—	—	—	—
<i>Cerastium arcticum</i>	1	—	1	—	—	—
<i>Draba norvegica</i>	1	—	—	—	—	—
<i>Festuca vivipara</i>	1	1	1	1	1	1
<i>Luzula arcuata</i>	1	1	1	1	1	1
<i>Luzula spicata</i>	1	1	1	1	1	1
<i>Oxyria digyna</i>	2	2	1	1	1	1
<i>Poa alpina</i>	1	1	1	1	1	1
<i>Polygonum viviparum</i>	1	1	1	1	—	1
<i>Ranunculus glacialis</i>	1	1	1	1	—	1
<i>Salix herbacea</i>	1	1	1	1	—	—
<i>Saxifraga groenlandica</i>	1	1	1	1	—	—
<i>Saxifraga oppositifolia</i>	1	1	—	—	—	—
<i>Saxifraga rivularis</i>	—	1	—	—	—	—
<i>Silene acaulis</i>	1	1	1	—	—	—
<i>Trisetum spicatum</i>	1	1	1	1	—	—
<i>Polytrichum alpinum</i>	1	1	1	1	1	1
<i>Placopsis gelida</i>	—	1	1	—	—	—
Stones and gravel	5	5	5	5	5	5

Table 15  
*Salix herbacea* -synedria  
 Lidhøgda 23. August 1930. 60 m.

Ten squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Cerastium arcticum</i>	—	—	—	—	—	—	—	—	1	—
<i>Festuca vivipara</i>	—	—	1	1	—	—	1	—	1	—
<i>Luzula arcuata</i>	1	1	1	2	1	1	1	1	1	1
<i>Oxyria digyna</i>	—	1	1	1	—	1	—	1	1	—
<i>Ranunculus glacialis</i>	—	—	—	—	—	—	—	1	—	—
<i>Salix herbacea</i>	2	3	2	2	2	3	2	2	2	3
<i>Saxifraga groenlandica</i>	1	1	1	1	1	—	1	1	1	1
<i>Saxifraga oppositifolia</i>	2	1	3	2	2	2	4	3	3	2
<i>Saxifraga nivalis</i>	—	—	—	—	—	—	—	1	—	—
<i>Anthelia juratzkana</i>	1	1	1	1	1	2	1	2	2	1
<i>Blepharostoma trichophyllum</i>	1	1	1	1	1	1	1	1	1	1
<i>Cephalozia ambigua</i>	1	—	—	—	—	—	—	1	—	—
<i>Cephaloziella arctica</i>	1	—	—	—	—	—	—	—	—	—
<i>Nardia scalaris</i>	1	—	—	—	1	—	—	—	—	—
<i>Pleuroclada albicans</i>	—	—	—	—	—	—	—	1	—	—
<i>Scapania irrigua</i>	1	1	1	1	1	1	1	1	1	1
<i>Aulacomnium palustre</i>	1	—	—	—	—	—	—	—	—	—
<i>Aulacomnium turgidum</i>	1	1	1	1	—	—	1	—	—	—
<i>Bartramia ithyphylla</i>	1	1	1	1	1	1	1	1	1	1
<i>Calliergon stramineum</i>	—	—	—	—	—	—	—	1	—	—
<i>Cynodontium hyperboreum</i>	—	—	—	1	—	—	—	—	—	—
<i>Dicranoweisia crispula</i>	—	—	—	—	—	—	—	1	—	—
<i>Distichum capillaceum</i>	1	—	—	—	1	—	—	—	—	—
<i>Drepanocladus uncinatus</i>	—	—	—	—	1	1	1	2	—	1
<i>Oncophorus wahlenbergii</i>	1	1	1	1	1	1	1	1	1	1
<i>Philonotis tomentella</i>	1	1	1	1	1	1	1	1	1	1
<i>Polytrichum alpinum</i>	1	1	1	1	1	1	1	1	1	1
<i>Rhacomitrium canescens</i>	5	5	5	4	5	4	4	4	3	5
<i>Rhacomitrium fasciculare</i>	—	—	—	1	—	—	—	—	—	—
<i>Rhacomitrium lanuginosum</i>	1	1	1	2	1	1	2	1	1	1
<i>Schistidium apocarpum</i>	1	—	—	—	—	—	—	—	—	—
<i>Cladonia lepidota</i>	—	—	—	—	1	—	1	—	1	—
<i>Lecidea pelobotrya</i>	1	1	1	1	1	1	1	1	1	1
<i>Peltigera venosa</i>	1	—	1	—	—	—	—	—	—	—
<i>Placopsis gelida</i>	1	1	1	1	1	1	1	1	1	1
<i>Psoroma hypnorum</i>	—	—	—	—	1	—	—	—	—	—
<i>Solorina bispora</i>	—	—	—	—	—	—	—	—	—	1
<i>Stereocaulon alpinum</i>	1	1	1	1	1	1	1	1	1	1
<i>Stereocaulon denudatum</i>	1	1	1	1	1	1	1	1	2	1
A mushroom ( <i>Agaricaceae</i> )	1	1	1	1	—	1	1	1	1	1
<i>Melampsora epitea</i> (on <i>Salix</i> )	—	1	1	1	1	1	1	1	1	1
<i>Rhytisma salicina</i>	—	—	1	—	1	—	—	—	—	1

Table 16  
*Koenigia islandica* -synedria  
 Dry bed of brooklet in Sørbukta 14. August 1930.

Ten squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Cerastium arcticum</i>	1	1	1	1	2	1	1	1	1	1
<i>Cochlearia groenlandica</i>	—	—	—	—	—	—	1	1	1	—
<i>Equisetum arvense</i>	1	—	—	1	1	—	—	1	1	—
<i>Festuca vivipara</i>	1	1	1	1	1	1	—	1	1	1
<i>Koenigia islandica</i>	1	1	1	1	1	1	1	1	1	1
<i>Luzula arcuata</i>	—	—	—	—	—	—	—	1	—	—
<i>Oxyria digyna</i>	1	1	1	1	1	1	1	1	1	1
<i>Phippsia algida</i>	1	—	—	1	1	1	1	1	—	1
<i>Poa alpina</i>	—	—	—	—	—	—	1	—	—	—
<i>Puccinellia coarctata</i>	—	—	1	—	—	—	—	—	—	—
<i>Sagina intermedia</i>	2	1	2	2	1	1	1	1	1	1
<i>Salix herbacea</i>	—	—	—	1	—	—	—	—	—	—
<i>Saxifraga groenlandica</i>	—	—	—	1	1	1	1	1	1	1
<i>Saxifraga oppositifolia</i>	—	—	—	—	—	1	1	—	—	1
<i>Saxifraga rivularis</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga tenuis</i>	—	—	—	—	—	—	—	1	—	—
<i>Cephaloziella arctica</i>	—	—	—	1	—	—	—	—	—	—
<i>Blindia acuta</i>	—	—	—	1	—	—	—	—	—	—
<i>Bryum pseudotriquetrum</i>	1	—	—	—	—	1	—	1	—	—
<i>Calliergon sarmentosum</i>	—	—	—	1	—	—	—	1	—	—
<i>Calliergon stramineum</i>	—	—	—	—	—	—	—	1	—	—
<i>Calliergon turgescens</i>	1	1	—	1	1	1	1	1	1	1
<i>Drepanocladus badius</i>	—	—	—	1	—	—	—	—	—	—
<i>Drepanocladus revolvens</i>	1	1	1	3	2	1	1	2	2	2
<i>Oncophorus wahlenbergii</i>	—	—	—	1	1	1	—	—	—	—
<i>Polytrichum alpinum</i>	—	1	1	—	1	1	1	1	1	1
<i>Rhacomitrium canescens</i>	—	—	—	—	—	—	1	1	1	—
<i>Schistidium agassizii</i>	1	1	1	1	1	1	1	1	1	1
<i>Placopsis gelida</i>	1	1	1	1	1	—	1	—	1	—

Table 17  
*Oxyria digyna* - synedria  
 East of Havhestberget 21. August 1930. Steep sandy slope.

Ten squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Mertensia maritima</i>	—	1	—	—	—	—	—	—	—	—
<i>Oxyria digyna</i>	5	5	5	5	5	5	5	5	5	5
<i>Poa alpina</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga cernua</i>	—	—	—	1	1	—	1	1	—	—



Table 18  
*Cerastium arcticum* -synedria  
 Slope of Valberget 20. August 1930. 60 m.

Ten squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Cerastium arcticum</i>	1	1	1	1	1	1	1	1	1	1
<i>Cochlearia groenlandica</i>	1	—	1	1	—	1	—	—	1	1
<i>Festuca vivipara</i>	1	1	1	1	1	1	1	1	1	1
<i>Luzula arcuata</i>	1	1	1	1	1	1	1	1	1	1
<i>Oxyria digyna</i>	1	1	1	1	1	1	1	1	1	1
<i>Phippsia algida</i>	1	—	—	—	—	—	—	—	—	—
<i>Poa alpina</i>	1	1	1	1	1	1	1	1	1	1
<i>Ranunculus glacialis</i>	1	—	—	—	1	—	1	—	—	1
<i>Sagina intermedia</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga groenlandica</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga rivularis</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga tenuis</i>	—	—	—	—	—	—	—	1	1	1
<i>Anthelia juratzkana</i>	1	1	1	1	1	1	1	1	1	1
<i>Bartramia ithyphylla</i>	1	1	1	—	—	1	1	1	1	1
<i>Dicranoweisia crispula</i>	1	—	—	—	—	—	—	—	—	—
<i>Polytrichum alpinum</i>	1	1	1	1	1	1	1	1	1	1
<i>Rhacomitrium canescens</i>	2	2	1	1	2	2	2	1	2	1
<i>Lecidea pallida</i>	1	1	1	1	—	1	1	—	—	—
<i>Placopsis gelida</i>	1	1	—	—	1	—	—	1	1	—
<i>Stereocaulon vesuvianum</i>	1	1	1	—	1	1	1	—	1	1

Table 19  
*Honckenya peploides* -synedria  
 Turnbukta 21. August 1930.

Ten squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Carex maritima</i>	—	—	1	1	1	1	—	—	—	—
<i>Honckenya peploides</i>	2	2	1	2	2	1	2	3	1	1
<i>Mertensia maritima</i>	—	—	1	1	—	—	—	—	—	—

Table 20  
*Minuartia rubella* -synedria  
 250 m west of Veslegryta 21. August 1930. 50 m.

Ten squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Carex maritima</i>	--	1	--	--	--	--	--	--	--	--
<i>Cerastium arcticum</i>	--	1	--	--	--	--	--	--	--	--
<i>Draba nivalis</i>	--	--	--	--	--	--	--	--	--	1
<i>Draba norvegica</i>	1	1	1	1	1	1	1	1	1	1
<i>Festuca vivipara</i>	1	1	1	1	1	1	1	1	--	1
<i>Luzula arcuata</i>	1	1	1	1	1	1	1	1	1	1
<i>Minuartia rubella</i>	1	1	1	1	1	1	1	1	1	1
<i>Ranunculus glacialis</i>	--	1	--	1	1	1	1	1	1	1
<i>Sagina caespitosa</i>	1	--	1	1	1	1	1	1	1	1
<i>Saxifraga groenlandica</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga oppositifolia</i>	1	1	--	1	--	1	1	1	1	1
<i>Polytrichum piliferum</i>	1	--	--	1	--	1	1	--	1	--
<i>Racomitrium lanuginosum</i>	--	--	1	--	--	1	1	1	--	1
<i>Racomitrium sudeticum</i>	1	1	1	1	1	1	1	1	1	1
<i>Schistidium apocarpum</i>	1	1	1	1	1	1	1	1	1	1
<i>Placopsis gelida</i>	1	1	1	1	1	1	1	1	1	1
<i>Stereocaulon denudatum</i>	1	1	1	1	1	1	1	1	1	1
Number of <i>Minuartia</i> tufts	3	2	1	7	8	6	3	4	2	2

In this synedria the following lichens were growing on small stones: *Gyrophora arctica*, *Lecanora lacustris*, *Lecidea auriculata*, *Lecidea brachyspora*, *Rhizocarpon hochstetteri*.

Table 21

*Silene acaulis* -synedria

1. Veslegryta 21. August; 2-4. Vestre Sørbremorena 22. August;  
5-10. Fishburndalen 19. August 1930.

Ten squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Carex lachenalii</i>	-	-	1	-	-	-	-	-	-	-
<i>Cerastium arcticum</i>	-	1	-	1	-	-	-	-	-	-
<i>Draba norvegica</i>	-	1	-	-	-	-	-	-	-	-
<i>Empetrum hermaphroditum</i>	-	-	-	-	4	4	4	4	5	4
<i>Equisetum arvense</i>	-	-	-	-	-	1	-	-	-	-
<i>Festuca vivipara</i>	1	1	1	1	1	-	1	1	-	1
<i>Luzula arcuata</i>	1	1	1	1	1	1	1	-	1	1
<i>Luzula spicata</i>	-	1	1	1	-	-	-	-	-	-
<i>Oxyria digyna</i>	1	2	1	1	1	1	-	-	-	-
<i>Poa alpina</i>	-	1	1	1	-	-	-	-	-	-
<i>Polygonum viviparum</i>	-	1	1	1	1	1	1	1	1	1
<i>Ranunculus glacialis</i>	1	1	1	1	-	-	-	-	-	-
<i>Salix herbacea</i>	-	1	1	1	2	3	1	1	1	1
<i>Saxifraga groenlandica</i>	-	1	1	1	-	-	-	-	-	-
<i>Saxifraga nivalis</i>	-	-	-	-	-	1	1	-	-	-
<i>Saxifraga oppositifolia</i>	1	1	-	-	-	-	-	-	-	-
<i>Saxifraga rivularis</i>	-	-	1	-	-	-	-	-	-	-
<i>Silene acaulis</i>	2	1	1	1	1	1	1	1	1	1
<i>Trisetum spicatum</i>	-	1	1	1	-	-	-	-	-	-
<i>Grimmia apocarpa</i>	1	-	-	-	-	-	-	-	-	-
<i>Polytrichum alpinum</i>	-	1	1	1	-	-	-	-	-	-
<i>Rhacomitrium canescens</i>	1	-	-	-	5	5	5	5	5	4
<i>Rhacomitrium lanuginosum</i>	-	-	-	-	-	2	1	1	1	1
<i>Peltigera canina</i>	-	-	-	-	-	-	-	-	-	1
<i>Peltigera leucophlebia</i>	-	-	-	-	-	1	-	1	-	-
<i>Placopsis gelida</i>	1	-	1	1	-	-	-	-	-	-
<i>Stereocaulon alpinum</i>	-	-	-	-	-	1	1	1	1	2
<i>Stereocaulon denudatum</i>	1	-	-	-	-	-	-	-	-	-

Table 22

*Ranunculus hyperboreus* -synedria

Jacobsendalen 21. July 1930, 75 m.

Ten small moss tufts	1	2	3	4	5	6	7	8	9	10
<i>Ranunculus hyperboreus</i>	2	2	2	2	2	2	2	2	2	2
<i>Calliergon sarmentosum</i>	1	1	1	1	1	1	1	1	1	1
<i>Drepanocladus uncinatus</i>	5	5	5	5	5	5	5	5	5	5
<i>Philonotis tomentella</i>	1	1	1	1	1	1	1	1	1	1

Table 23  
*Arabis alpina* -synedria  
Lidhøgda 18. July 1930.

Ten squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Arabis alpina</i>	2	1	1	1	1	1	1	1	1	1
<i>Cerastium arcticum</i>	1	1	1	1	1	1	1	1	1	1
<i>Draba norvegica</i>	1	—	1	1	1	1	—	1	1	—
<i>Festuca vivipara</i>	1	1	1	1	1	1	1	1	1	1
<i>Luzula arcuata</i>	1	1	1	1	1	1	1	1	1	1
<i>Oxyria digyna</i>	1	1	1	1	1	1	1	1	1	1
<i>Poa alpina</i>	1	1	1	1	1	1	1	1	1	1
<i>Ranunculus glacialis</i>	1	1	—	1	—	1	1	1	1	1
<i>Ranunculus pygmaeus</i>	—	—	—	—	1	1	—	—	—	1
<i>Sagina caespitosa</i>	1	—	1	1	1	1	1	1	—	1
<i>Salix herbacea</i>	1	1	1	1	1	1	1	1	—	1
<i>Saxifraga groenlandica</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga nivalis</i>	—	1	—	—	—	—	—	—	—	1
<i>Saxifraga oppositifolia</i>	1	2	1	1	1	1	1	1	1	1
<i>Saxifraga rivularis</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga tenuis</i>	1	1	1	1	1	1	1	1	1	1
<i>Anthelia juratzkana</i>	2	1	1	2	3	1	1	1	1	1
<i>Sauteria alpina</i>	1	—	—	—	—	—	—	—	—	—
<i>Bartramia ithyphylla</i>	1	1	1	1	1	1	—	1	1	1
<i>Dicranoweisia crispula</i>	1	1	1	—	—	1	1	1	1	—
<i>Polytrichum alpinum</i>	1	1	1	1	1	1	—	1	1	1
<i>Rhacomitrium canescens</i>	3	1	1	2	—	2	—	—	1	—
<i>Rhacomitrium lanuginosum</i>	1	—	1	—	—	—	1	—	—	—
<i>Cladonia pyxidata</i>	1	1	1	1	1	1	—	1	1	1
<i>Peltigera scabrosa</i>	—	1	—	—	1	—	—	1	1	1
<i>Placopsis gelida</i>	1	1	1	1	1	1	1	1	1	1
<i>Psoroma hypnorum</i>	1	—	—	1	1	—	—	1	1	1
<i>Solorina bispora</i>	1	1	—	1	—	—	—	1	—	—
<i>Stereocaulon alpinum</i>	2	1	1	1	1	1	1	1	1	1

Table 24  
*Cardamine pratensis* -synedria  
Sørbukta 14. August 1930. 10 m.

Six squares of 1 m <sup>2</sup>	1	2	3	4	5	6
<i>Cardamine pratensis</i>	1	1	1	1	2	1
<i>Carex maritima</i>	3	3	4	4	5	5
<i>Cerastium arcticum</i>	1	—	—	—	—	—
<i>Cochlearia groenlandica</i>	—	—	1	—	—	—
<i>Equisetum arvense</i>	3	4	3	3	2	1
<i>Festuca vivipara</i>	—	1	—	—	—	—
<i>Oxyria digyna</i>	1	1	1	2	2	2
<i>Polygonum viviparum</i>	1	1	—	—	1	1
<i>Puccinellia coarctata</i>	—	—	1	—	—	1
<i>Sagina intermedia</i>	—	—	1	1	—	—
<i>Salix herbacea</i>	1	—	1	1	1	1
<i>Silene acaulis</i>	1	—	—	—	—	—
<i>Ceratodon purpureus</i>	—	2	2	2	3	2
<i>Drepanocladus uncinatus</i>	—	1	1	1	1	1
<i>Polytrichum alpinum</i>	—	1	1	1	1	1
<i>Rhacomitrium canescens</i>	—	1	1	—	1	1
<i>Cetraria delisei</i>	—	1	1	1	1	1
<i>Stereocaulon denudatum</i>	—	1	1	1	1	1

Table 25  
*Draba nivalis* -synedria  
Dagnyhaugen 20. August 1930. 100 m.

Five squares of 1 m <sup>2</sup>	1	2	3	4	5
<i>Cerastium arcticum</i>	1	—	1	—	—
<i>Draba nivalis</i>	1	1	1	1	1
<i>Festuca vivipara</i>	1	1	1	1	1
<i>Luzula arcuata</i>	1	1	1	1	1
<i>Oxyria digyna</i>	—	—	1	—	—
<i>Poa alpina</i>	—	—	—	—	1
<i>Ranunculus glacialis</i>	1	1	—	—	—
<i>Sagina caespitosa</i>	1	1	1	1	1
<i>Salix herbacea</i>	1	1	2	1	1
<i>Saxifraga groenlandica</i>	1	1	1	1	1
<i>Saxifraga oppositifolia</i>	2	1	1	1	1
<i>Cesia coralloides</i>	—	—	—	—	1
<i>Bartramia ithyphylla</i>	—	—	1	—	—
<i>Distichium capillaceum</i>	1	1	1	1	1
<i>Polytrichum alpinum</i>	1	1	1	1	1
<i>Rhacomitrium canescens</i>	1	1	1	1	1
<i>Rhacomitrium lanuginosum</i>	4	4	5	5	5
<i>Tortella fragilis</i>	1	1	1	1	1
<i>Bacidia cf alpina</i>	—	1	—	1	1
<i>Cladonia lepidota</i>	1	1	1	1	1
<i>Gyrophora arctica</i>	1	—	—	1	—
<i>Gyrophora hyperborea</i>	—	—	—	—	1
<i>Lecidea elata</i>	1	1	1	1	1
<i>Placopsis gelida</i>	1	1	1	—	1
<i>Psoroma hypnorum</i>	—	—	1	—	—
<i>Solorina bispora</i>	1	1	1	1	1
<i>Stereocaulon alpinum</i>	4	3	2	1	1
<i>Stereocaulon vesuvianum</i>	2	2	2	3	4
<i>Galera mycenopsis</i>	—	1	1	—	—

Table 26  
*Saxifraga foliolosa* -synedria  
North of Dagnyhaugen 20. August 1930.

Ten squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Cerastium arcticum</i>	1	1	—	—	1	1	—	—	—	—
<i>Luzula arcuata</i>	1	1	1	1	—	1	1	1	1	1
<i>Oxyria digyna</i>	—	—	—	—	—	—	—	1	—	—
<i>Phippsia algida</i>	1	1	1	1	1	1	1	1	1	1
<i>Sagina intermedia</i>	1	1	1	1	1	1	1	1	1	1
<i>Salix herbacea</i>	1	1	—	1	1	1	1	1	1	1
<i>Saxifraga foliolosa</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga groenlandica</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga rivularis</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga tenuis</i>	1	1	1	1	1	1	1	1	1	1
<i>Anthelia juratzkana</i>	1	1	1	1	1	1	1	1	1	1
<i>Blindia acuta</i>	1	1	1	1	1	1	1	1	1	1
<i>Bryum arcticum</i>	—	1	—	—	—	—	1	1	1	1
<i>Calliergon sarmentosum</i>	4	4	4	4	4	4	4	4	4	4
<i>Dichodontium pellucidum</i>	—	1	—	—	—	—	—	—	1	—
<i>Oncophorus wahlenbergii</i>	1	1	1	1	1	1	1	1	1	1
<i>Philonotis fontana</i>	—	—	—	—	—	—	—	—	1	—
<i>Polytrichum alpinum</i>	—	—	—	—	—	1	1	1	1	—
<i>Rhacomitrium canescens</i>	1	1	1	—	—	1	1	1	1	1
<i>Lecidea elata</i>	1	1	1	1	1	1	1	1	1	1
<i>Placopsis gelida</i>	—	—	—	—	—	—	—	1	1	1

Table 27  
*Saxifraga nivalis* -synedria  
At the foot of Havhestberget 21. August 1930. 50 m.

Ten squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Carex maritima</i>	—	1	1	—	—	—	1	2	2	—
<i>Cerastium arcticum</i>	1	1	1	1	1	1	1	1	1	1
<i>Draba norvegica</i>	—	—	—	—	1	1	1	—	—	—
<i>Festuca vivipara</i>	3	2	1	1	1	1	1	1	1	2
<i>Luzula arcuata</i>	1	1	1	1	1	1	1	1	1	1
<i>Oxyria digyna</i>	2	3	4	3	2	3	2	1	4	2
<i>Poa alpina</i>	1	1	1	1	1	1	1	1	1	1
<i>Ranunculus glacialis</i>	—	—	1	—	1	1	—	1	—	—
<i>Ranunculus pygmaeus</i>	—	—	—	—	—	—	1	1	—	2
<i>Sagina intermedia</i>	1	1	1	1	1	1	1	1	1	1
<i>Salix herbacea</i>	—	—	—	—	—	—	—	1	1	—
<i>Saxifraga cernua</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga groenlandica</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga nivalis</i>	2	2	1	1	1	1	1	1	1	1
<i>Saxifraga oppositifolia</i>	1	1	1	2	1	1	2	1	1	1
<i>Saxifraga tenuis</i>	—	—	—	—	—	—	1	—	—	—
<i>Taraxacum acromaurum</i>	1	—	—	—	—	—	—	—	—	—
<i>Bryum pallescens</i>	1	—	—	—	1	—	—	—	—	—
<i>Ceratodon purpureus</i>	1	—	—	—	1	—	—	—	—	—
<i>Dichodontium pellucidum</i>	—	—	—	—	—	1	—	—	—	—
<i>Distichium capillaceum</i>	3	4	4	5	5	5	4	3	4	4
<i>Ditrichum homomallum</i>	1	1	—	—	1	—	—	—	—	—
<i>Drepanocladus uncinatus</i>	2	3	1	1	1	2	1	3	1	1
<i>Pohlia drummondii</i>	—	1	—	—	—	—	—	—	—	—
<i>Polytrichum alpinum</i>	2	3	3	1	1	1	1	1	1	1
<i>Rhacomitrium canescens</i>	2	1	1	1	1	1	2	1	1	1
<i>Schistidium apocarpum</i>	1	—	—	—	—	—	—	—	—	—
<i>Tortula norvegica</i>	2	2	1	1	1	1	1	1	1	1
<i>Tortula ruralis</i>	1	1	—	—	—	—	—	—	—	—
<i>Peltigera canina</i>	3	2	2	1	1	1	2	1	1	1
<i>Peltigera spuria</i>	—	—	—	—	—	—	1	—	—	1

Table 28  
*Potentilla crantzii* -synedria  
1. Kjøllesdalkrateret 7. August, 2. Grønberget 18. August,  
3 and 4. Vestre Sørbremorena 22. August 1930.

Four squares of 1 m <sup>2</sup>	1	2	3	4	Four squares of 1 m <sup>2</sup>	1	2	3	4
<i>Carex lachenalii</i>	—	—	1	—	<i>Bartramia ithyphylla</i>	—	1	—	—
<i>Cerastium arcticum</i>	1	1	1	—	<i>Ceratodon purpureus</i>	—	1	—	—
<i>Draba nivalis</i>	—	1	—	—	<i>Dicranum scoparium</i>	—	1	—	—
<i>Empetrum hermaphroditum</i>	—	—	—	4	<i>Distichium capillaceum</i>	—	1	—	—
<i>Festuca rubra</i>	1	—	—	—	<i>Drepanocladus uncinatus</i>	1	1	—	—
<i>Festuca vivipara</i>	1	1	—	1	<i>Polytrichum alpinum</i>	1	1	—	—
<i>Luzula arcuata</i>	1	1	1	1	<i>Rhacomitrium canescens</i>	+	1	1	1
<i>Oxyria digyna</i>	2	1	2	1	<i>Rhacomitrium lanuginosum</i>	1	1	—	—
<i>Poa alpina</i>	1	—	—	—	<i>Tortula ruralis</i>	—	1	—	—
<i>Polygonum viviparum</i>	1	2	1	1					
<i>Potentilla crantzii</i>	3	2	1	1	<i>Cetraria delisei</i>	1	1	—	—
<i>Ranunculus pygmaeus</i>	—	1	—	—	<i>Cetraria islandica</i>	1	—	—	—
<i>Salix herbacea</i>	2	1	3	1	<i>Cladonia mitis</i>	1	—	—	—
<i>Saxifraga groenlandica</i>	—	1	1	—	<i>Ochrolechia frigida</i>	1	1	—	—
<i>Saxifraga nivalis</i>	1	—	1	—	<i>Peltigera canina</i>	—	1	1	1
<i>Saxifraga oppositifolia</i>	—	1	1	—	<i>Peltigera leucophlebia</i>	—	1	—	—
<i>Sibbaldia procumbens</i>	—	—	1	—	<i>Stereocaulon alpinum</i>	—	1	—	—
<i>Silene acaulis</i>	1	—	2	—	<i>Stereocaulon vesuvianum</i>	1	1	1	1
<i>Taraxacum sp.</i>	1	1	1	—					

Table 29  
*Epilobium anagallidifolium* -synedria  
Fishburndalen 18. August 1930. 100 m.

10 squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Arabis alpina</i>	1	—	—	—	—	1	1	1	1	1
<i>Carex lachenalii</i>	1	1	1	3	1	1	1	—	1	2
<i>Cerastium arcticum</i>	1	1	1	—	1	1	1	1	1	1
<i>Cerastium cerastoides</i>	2	1	1	1	1	2	1	1	1	1
<i>Epilobium anagallidifolium</i>	5	4	2	2	2	1	1	1	1	1
<i>Equisetum arvense</i>	—	1	—	—	—	—	—	—	1	1
<i>Festuca vivipara</i>	—	—	—	—	1	1	1	1	1	1
<i>Gnaphalium supinum</i>	—	—	1	—	—	—	—	—	—	—
<i>Luzula arcuata</i>	1	1	1	1	1	1	1	1	1	1
<i>Minuartia biflora</i>	—	—	—	—	—	—	1	1	1	—
<i>Oxyria digyna</i>	3	2	3	2	2	2	2	2	1	1
<i>Poa alpina</i>	1	1	1	1	1	1	1	1	1	1
<i>Polygonum viviparum</i>	—	1	1	—	1	—	1	1	1	1
<i>Ranunculus pygmaeus</i>	1	1	1	1	1	1	1	1	1	1
<i>Sagina intermedia</i>	—	—	—	—	—	1	—	—	—	—
<i>Salix herbacea</i>	—	—	1	2	—	—	—	—	—	1
<i>Saxifraga cernua</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga groenlandica</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga tenuis</i>	1	—	—	1	—	—	1	1	1	1
<i>Sibbaldia procumbens</i>	1	1	1	1	1	1	1	1	2	2
<i>Taraxacum</i> sp.	1	1	2	2	1	1	1	2	1	2
<i>Trisetum spicatum</i>	—	—	—	—	—	—	1	1	—	—
<i>Veronica alpina</i>	2	2	2	1	1	1	1	1	1	1
<i>Anthelia juratzkana</i>	1	1	1	1	1	1	1	1	1	1
<i>Bartramia ithyphylla</i>	—	1	—	—	—	—	—	—	—	—
<i>Brachythecium glaciale</i>	1	2	2	2	2	2	1	2	2	1
<i>Dicranoweisia crispula</i>	1	1	2	2	1	1	1	1	1	1
<i>Drepanocladus uncinatus</i>	1	1	2	2	2	2	1	1	1	1
<i>Philonotis tomentella</i>	—	1	—	—	—	—	—	—	—	—
<i>Pohlia drummondii</i>	—	1	—	—	—	—	—	—	—	—
<i>Polytrichum alpinum</i>	1	2	1	1	1	1	1	1	1	1
<i>Rhacomitrium canescens</i>	1	1	1	1	1	1	1	1	1	1
Bryophyta altogether	3	5	5	5	5	5	3	4	5	4
<i>Peltigera canina</i>	—	1	1	1	—	—	1	1	1	1
<i>Peltigera venosa</i>	1	1	1	1	1	1	1	1	1	1
<i>Psoroma hypnorum</i>	—	1	—	—	—	—	—	—	—	—
<i>Stereocaulon</i> sp.	1	1	—	—	—	—	1	—	—	—

Table 30  
*Empetrum hermaphroditum* -synedria  
Fishburndalen 19. August 1930. 80 m.

Ten squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Empetrum hermaphroditum</i>	5	4	4	4	5	4	4	5	4	5
<i>Equisetum arvense</i>	—	—	1	—	1	—	—	—	—	—
<i>Festuca rubra</i>	—	—	—	—	1	—	—	—	—	—
<i>Festuca vivipara</i>	—	1	—	1	1	1	1	—	1	1
<i>Luzula arcuata</i>	1	1	1	1	1	1	1	—	1	1
<i>Oxyria digyna</i>	1	1	1	—	—	—	—	—	—	—
<i>Polygonum viviparum</i>	1	1	1	1	1	1	1	1	1	1
<i>Salix herbacea</i>	2	2	3	1	3	1	1	1	1	1
<i>Saxifraga nivalis</i>	1	—	1	1	—	—	—	—	—	—
<i>Saxifraga oppositifolia</i>	—	—	1	—	—	—	—	—	—	1
<i>Silene acaulis</i>	—	1	1	1	—	—	1	1	1	—
<i>Trisetum spicatum</i>	—	—	—	—	—	—	—	—	—	1
<i>Rhacomitrium canescens</i>	5	5	5	5	5	5	5	5	4	4
<i>Rhacomitrium lanuginosum</i>	1	—	2	1	—	1	1	1	1	—
<i>Tetraplodon mnioides</i>	—	—	—	—	—	1	—	—	—	—
<i>Peltigera canina</i>	—	—	—	—	—	—	—	—	1	—
<i>Peltigera leucophlebia</i>	1	—	1	—	—	—	1	—	—	—
<i>Stereocaulon alpinum</i>	—	—	1	1	—	1	1	1	2	1

Table 31  
*Mertensia maritima* -synedria  
Turnbukta 21. August 1930.

Ten squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Carex maritima</i>	—	—	—	—	—	—	1	1	—	—
<i>Cerastium arcticum</i>	—	—	—	—	—	—	—	—	—	1
<i>Mertensia maritima</i>	2	1	2	3	3	2	2	3	2	2
<i>Oxyria digyna</i>	1	—	2	1	1	—	1	—	—	2

Table 32  
*Mertensia maritima* -synedria  
East of Havhestberget 21. August 1930.

Ten squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Festuca vivipara</i>	—	—	1	—	—	—	1	—	—	—
<i>Mertensia maritima</i>	2	3	2	2	3	2	4	4	5	4
<i>Oxyria digyna</i>	1	2	2	1	3	4	1	3	1	4
<i>Saxifraga groenlandica</i>	—	—	—	—	—	1	1	—	—	—
<i>Tortula norvegica</i>	—	—	—	—	—	—	1	—	—	—
Number of flowering <i>Mertensia</i> specimens	10	26	21	17	24	7	15	10	14	12

Table 33  
*Veronica alpina* -synedria  
Fishburndalen 25. July 1930. 80 m.

One square metre	1	One square metre	1
<i>Arabis alpina</i>	1	<i>Silene acaulis</i>	1
<i>Cerastium arcticum</i>	1	<i>Taraxacum</i> sp.	2
<i>Draba norvegica</i>	1	<i>Trisetum spicatum</i>	1
<i>Equisetum arvense</i>	1	<i>Veronica alpina</i>	1
<i>Festuca vivipara</i>	1		
<i>Luzula arcuata</i>	1	<i>Lophozia alpestris</i>	1
<i>Oxyria digyna</i>	1	<i>Bartramia ithyphylla</i>	1
<i>Poa alpigena</i>	1	<i>Brachythecium glaciale</i>	1
<i>Poa alpina</i>	1	<i>Desmatodon latifolius</i>	1
<i>Polygonum viviparum</i>	1	<i>Polytrichum alpinum</i>	1
<i>Salix herbacea</i>	5	<i>Rhacomitrium canescens</i>	1
<i>Saxifraga cernua</i>	1	<i>Timmia austriaca</i>	1
<i>Saxifraga groenlandica</i>	1		
<i>Saxifraga tenuis</i>	1	<i>Peltigera canina</i>	1
<i>Sibbaldia procumbens</i>	2	<i>Stereocaulon alpinum</i>	1



Table 34  
*Gnaphalium supinum* -synedria  
 Near Kjøllesdalkrateret 5. August 1930.

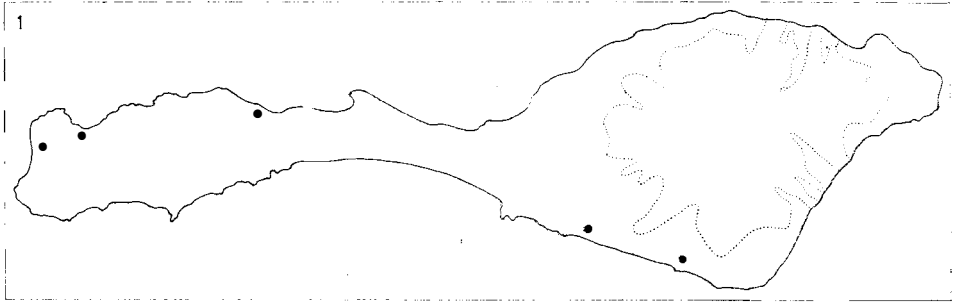
Ten squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Carex lachenalii</i>	1	1	—	—	—	—	1	—	—	—
<i>Cerastium arcticum</i>	—	—	1	1	1	—	—	1	—	1
<i>Cerastium cerastoides</i>	1	1	1	—	—	1	1	1	—	—
<i>Gnaphalium supinum</i>	2	3	4	4	4	3	4	3	4	4
<i>Luzula arcuata</i>	1	1	1	1	1	1	1	1	1	1
<i>Oxyria digyna</i>	1	1	1	1	1	2	1	1	1	1
<i>Poa alpina</i>	1	1	1	—	—	1	1	1	1	1
<i>Polygonum viviparum</i>	1	1	1	2	1	1	—	1	1	1
<i>Ranunculus pygmaeus</i>	1	1	1	1	—	1	1	1	1	—
<i>Sagina intermedia</i>	—	—	1	—	—	—	—	—	—	—
<i>Salix herbacea</i>	2	3	4	4	4	3	4	3	4	4
<i>Saxifraga groenlandica</i>	—	—	1	—	—	—	1	1	—	1
<i>Saxifraga oppositifolia</i>	—	—	1	—	1	1	1	1	—	1
<i>Saxifraga rivularis</i>	1	—	1	—	1	1	1	1	—	—
<i>Saxifraga tenuis</i>	—	—	1	1	—	1	—	—	—	—
<i>Sibbaldia procumbens</i>	2	1	1	1	1	1	1	—	1	1
<i>Silene acaulis</i>	—	—	—	2	1	—	—	—	1	—
<i>Taraxacum brachyrhynchum</i>	1	—	1	—	—	—	—	—	—	—
<i>Trisetum spicatum</i>	—	—	1	1	1	1	—	—	1	1
<i>Anthelia juratzkana</i>	5	5	4	3	5	3	5	4	4	3
<i>Cesia concinna</i>	1	1	2	1	2	1	1	1	1	1
<i>Lophozia alpestris</i>	1	1	1	1	1	1	1	1	1	1
<i>Andreaea rupestris</i>	1	1	1	1	1	1	1	1	1	1
<i>Bartramia ityphylla</i>	1	1	1	1	1	1	—	1	1	1
<i>Brachythecium glaciale</i>	1	1	1	1	1	1	1	1	1	1
<i>Dicranum starkei</i>	1	1	1	1	1	1	1	1	1	1
<i>Ditrichum homomallum</i>	1	—	1	1	—	—	—	—	—	—
<i>Drepanocladus uncinatus</i>	—	—	1	—	—	—	—	—	—	—
<i>Pohlia drummondii</i>	1	1	1	1	1	1	1	1	1	1
<i>Polytrichum alpinum</i>	1	1	1	1	1	1	1	1	1	1
<i>Rhacomitrium canescens</i>	1	1	1	1	1	1	1	1	1	1
<i>Rhacomitrium heterostichum</i>	—	—	—	—	1	—	—	—	—	—
<i>Timmia austriaca</i>	—	—	1	1	—	—	—	—	—	—
<i>Cetraria delisei</i>	—	1	1	—	—	—	—	—	—	—
<i>Cladonia cervicornis</i>	1	1	2	1	1	1	1	2	1	1
<i>Cladonia coccifera</i>	—	—	1	—	—	—	—	—	—	—
<i>Cladonia elongata</i>	1	1	1	1	—	1	1	—	—	1
<i>Cladonia lepidota</i>	—	—	—	—	—	—	1	—	—	—
<i>Cladonia mitis</i>	1	1	2	1	1	1	1	1	1	1
<i>Cladonia uncialis</i>	—	1	—	—	—	—	—	—	—	—
<i>Cornicularia aculeata</i>	—	1	1	1	—	—	—	—	—	—
<i>Lecidea neglecta</i>	—	—	—	1	—	—	—	—	—	—
<i>Lecidea vernalis</i>	—	1	—	1	—	—	—	—	—	—
<i>Peltigera canina</i>	—	—	—	1	—	—	—	—	—	—
<i>Peltigera venosa</i>	1	1	—	1	1	1	1	1	—	—
<i>Placopsis gelida</i>	1	—	1	—	1	1	—	—	—	—
<i>Psoroma hypnorum</i>	1	—	1	1	1	1	1	—	1	1
<i>Solorina crocea</i>	—	—	—	—	—	—	1	1	—	—
<i>Stereocaulon vesuvianum</i>	1	2	3	4	2	1	1	1	3	4

Table 35  
*Taraxacum acromaurum* -synedria  
 Lower slope of Wildberget 21. July 1930. 70 m.

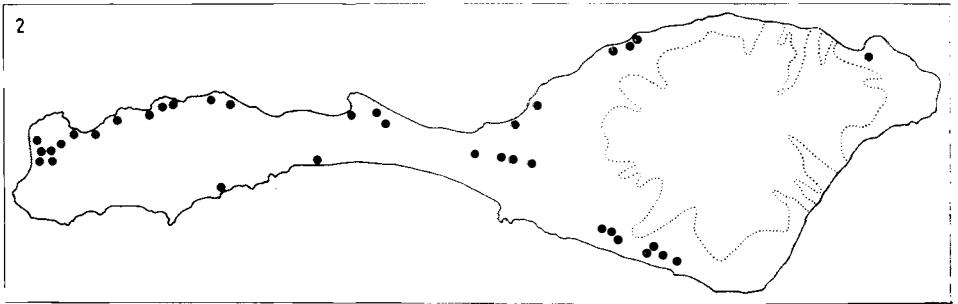
Ten squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Arabis alpina</i>	1	1	—	—	1	1	1	1	1	1
<i>Carex lachenalii</i>	—	—	—	—	—	1	—	—	—	—
<i>Cerastium arcticum</i>	1	—	1	1	—	1	1	1	1	1
<i>Cerastium cerastoides</i>	1	1	1	1	1	1	1	1	1	1
<i>Draba norvegica</i>	1	—	—	—	—	—	—	—	—	1
<i>Equisetum arvense</i>	1	3	4	2	2	2	2	1	—	1
<i>Festuca vivipara</i>	—	—	—	—	1	—	—	1	1	—
<i>Luzula arcuata</i>	1	1	1	1	1	1	1	1	1	1
<i>Oxyria digyna</i>	4	5	4	4	3	5	2	2	5	5
<i>Poa alpina</i>	1	1	1	1	1	1	1	1	1	1
<i>Polygonum viviparum</i>	1	1	1	1	1	1	1	1	1	1
<i>Ranunculus glacialis</i>	1	—	—	—	1	—	—	1	—	—
<i>Ranunculus pygmaeus</i>	1	1	1	2	2	1	1	1	1	2
<i>Sagina intermedia</i>	1	—	—	—	—	—	—	—	—	1
<i>Salix herbacea</i>	1	1	1	—	—	1	—	—	1	1
<i>Saxifraga cernua</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga groenlandica</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga nivalis</i>	1	1	1	1	1	1	1	1	1	1
<i>Saxifraga oppositifolia</i>	1	—	—	—	—	—	1	1	1	1
<i>Saxifraga rivularis</i>	—	1	1	—	—	—	—	—	—	1
<i>Saxifraga tenuis</i>	1	1	—	1	1	1	1	1	1	1
<i>Sibbaldia procumbens</i>	1	—	—	—	—	—	—	—	1	1
<i>Taraxacum acromaurum</i>	5	4	4	3	3	4	4	4	4	4
<i>Bartramia ithyphylla</i>	1	1	1	1	1	1	1	1	1	1
<i>Brachythecium glaciale</i>	3	1	2	4	5	5	4	3	4	1
<i>Bryum elegans</i>	—	—	—	1	—	—	—	—	1	—
<i>Desmatodon latifolius</i>	1	1	1	1	1	1	1	1	1	1
<i>Dicranoweisia crispula</i>	1	1	—	—	1	—	—	1	1	1
<i>Drepanocladus uncinatus</i>	1	1	—	1	1	1	1	—	1	—
<i>Pohlia drummondii</i>	1	—	—	—	1	—	—	—	—	—
<i>Polytrichum alpinum</i>	1	1	1	1	1	1	1	1	1	1
<i>Polytrichum norvegicum</i>	—	1	—	—	—	—	—	—	—	—
<i>Rhacomitrium canescens</i>	1	1	1	1	1	1	2	2	1	1
<i>Timmia austriaca</i>	1	1	1	1	1	1	1	1	1	1
<i>Timmia norvegica</i>	—	1	—	—	—	—	—	—	—	—
<i>Cladonia</i> sp. (elongata ?)	1	1	1	1	1	—	—	1	1	1
<i>Peltigera canina</i>	1	1	1	1	1	1	1	1	1	1
<i>Peltigera scabra</i>	—	—	—	—	1	—	—	1	—	—
<i>Psoroma hypnorum</i>	—	—	—	1	—	—	—	—	—	—
<i>Stereocaulon vesuvianum</i>	1	1	—	—	—	—	1	1	1	1
<i>Peronospora alsinearum</i>	1	—	—	—	1	—	1	1	—	1
<i>Puccinia saxifragae</i>	1	—	—	1	—	1	1	1	1	1
<i>Ustilago inflorescentia</i>	—	—	—	1	1	1	1	—	—	—
<i>Ustilago vinosa</i>	—	—	1	1	1	1	—	—	—	—

Table 36  
*Taraxacum torvum* -synedria  
 Steep slope of Fishburnberget 18. August 1930.

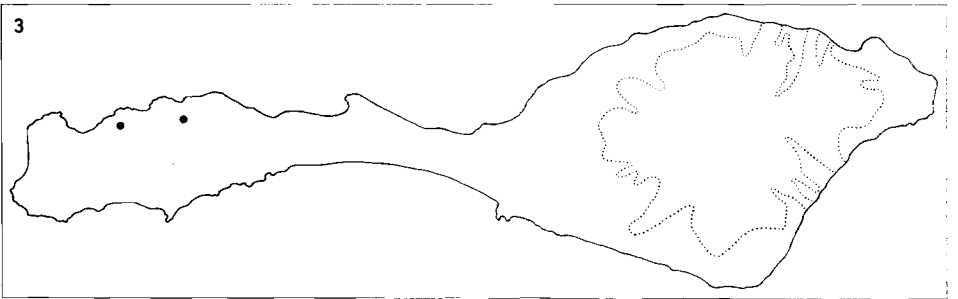
Ten squares of 1 m <sup>2</sup>	1	2	3	4	5	6	7	8	9	10
<i>Cerastium arcticum</i>	-	-	-	-	-	-	-	1	-	1
<i>Cochlearia groenlandica</i>	1	1	1	-	-	-	1	-	-	-
<i>Festuca vivipara</i>	1	1	1	1	-	-	-	1	-	1
<i>Mertensia maritima</i>	-	-	-	1	1	-	1	-	-	-
<i>Oxyria digyna</i>	4	4	5	5	5	5	5	5	5	4
<i>Poa alpina</i>	1	1	1	1	1	2	2	1	1	1
<i>Taraxacum acromaurum</i>	2	1	1	1	2	2	3	1	2	3
<i>Taraxacum torvum</i>	4	3	3	3	2	2	2	3	4	4
<i>Trisetum spicatum</i>	1	1	-	-	-	-	-	1	-	-
<i>Tortula ruralis</i>	-	-	1	-	-	1	1	1	-	-



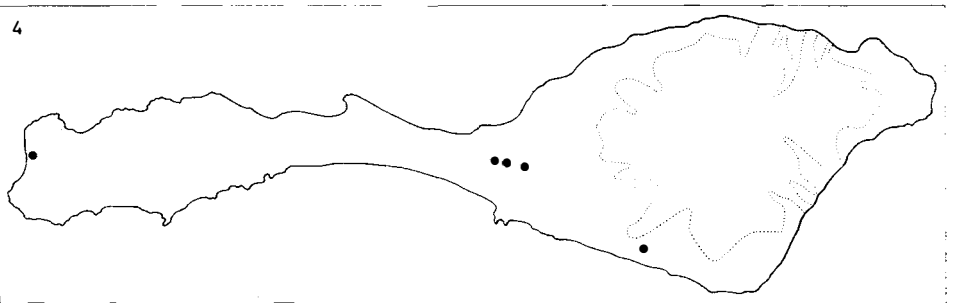
1. *Cystopteris fragilis*.



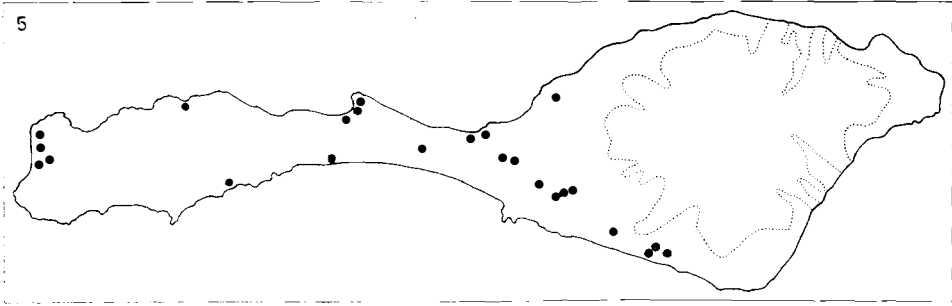
2. *Equisetum arvense*.



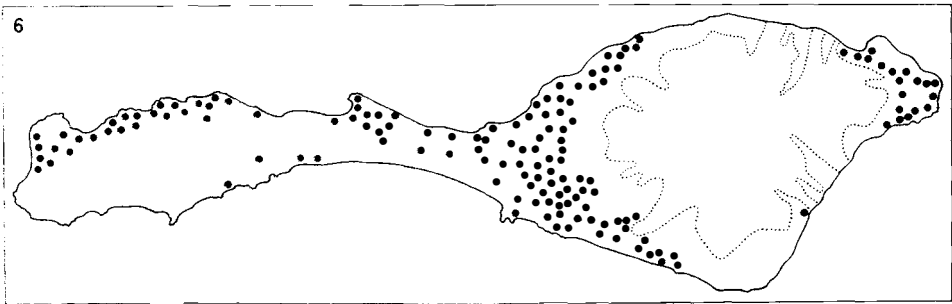
3. *Lycopodium selago*.



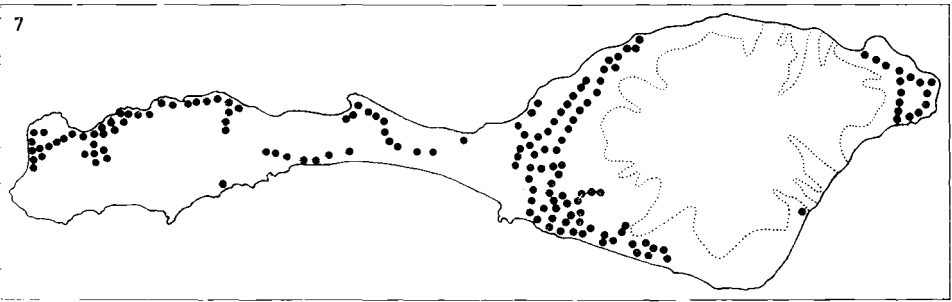
4. *Calamagrostis neglecta*.



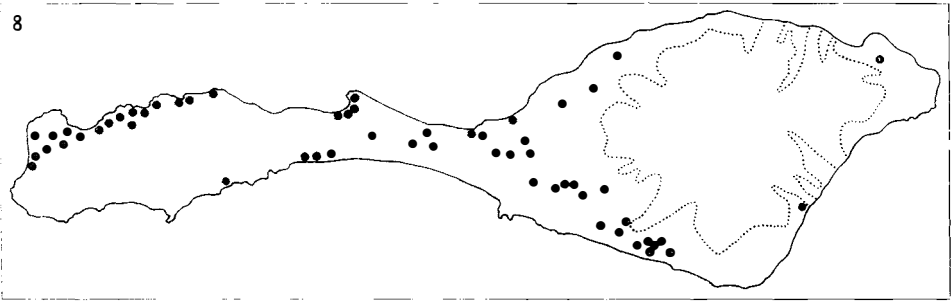
5. *Festuca rubra* var. *mutica*.



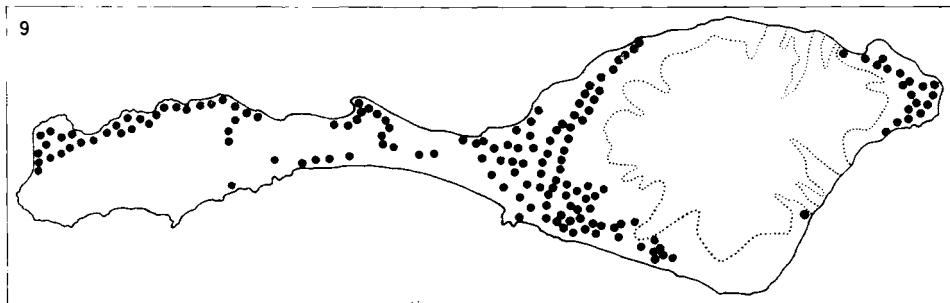
6. *Festuca vivipara*.



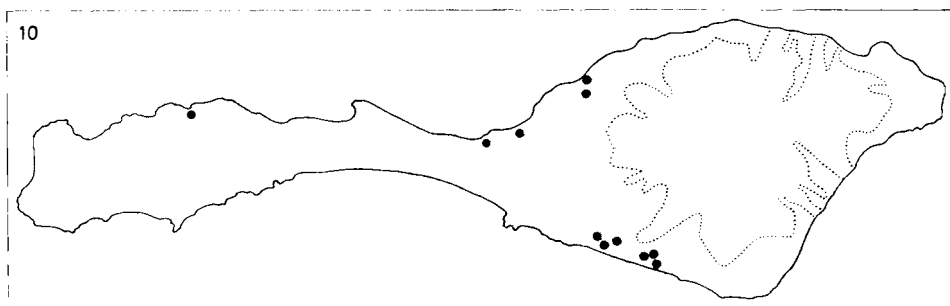
7. *Phippsia algida*.



8. *Poa alpigena*.



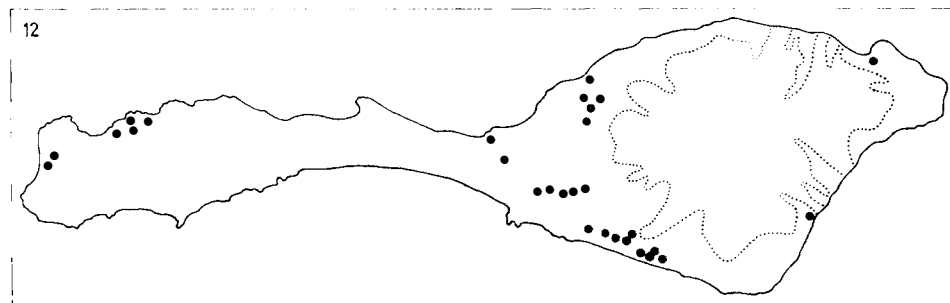
9. *Poa alpina* var. *vivipara*.



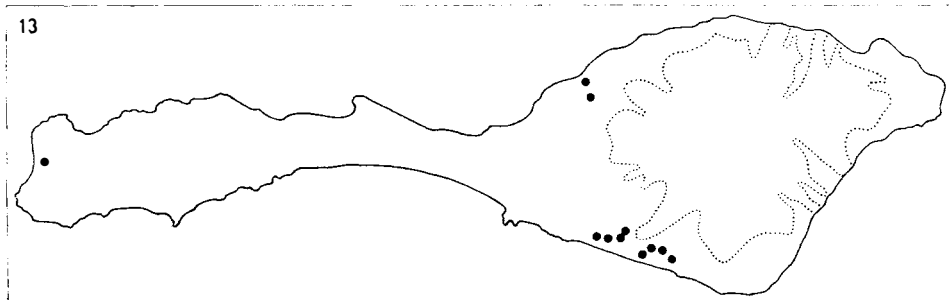
10. *Poa glauca*.



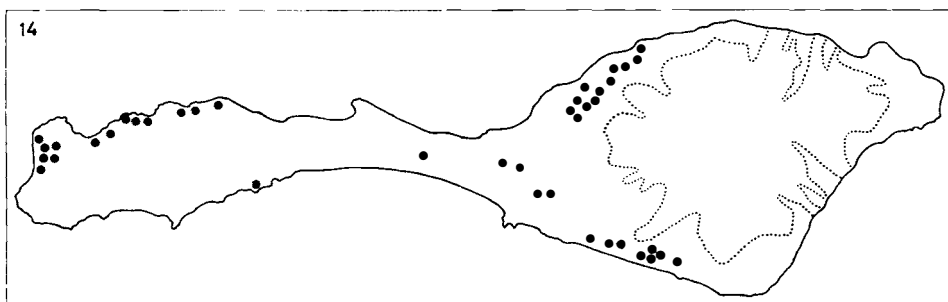
11. *Puccinellia coarctata*.



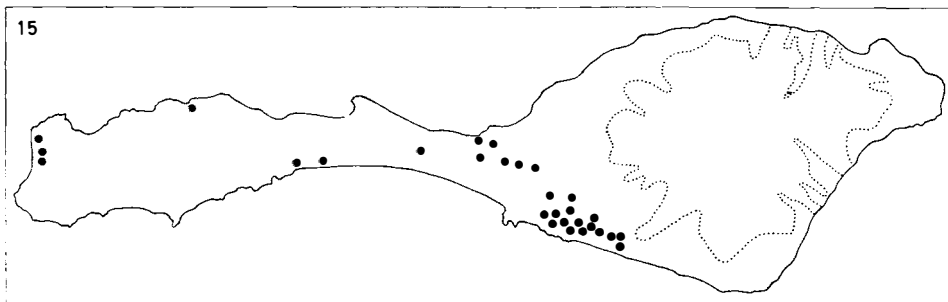
12. *Trisetum spicatum*.



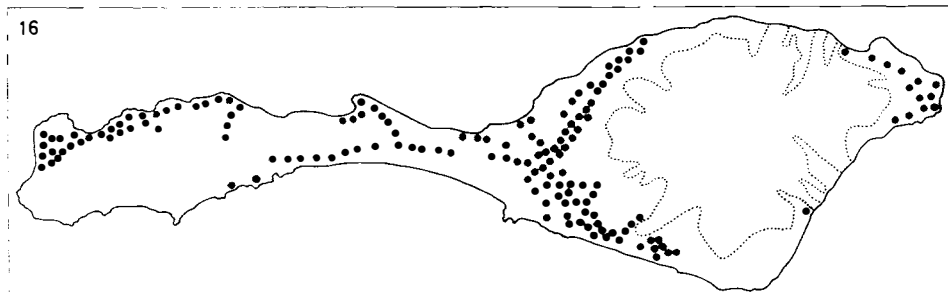
13. *Carex bigelowii*.



14. *Carex lachenalii*.



15. *Carex maritima*.



16. *Luzula arcuata*.



17. *Luzula confusa*.



18. *Luzula spicata*.

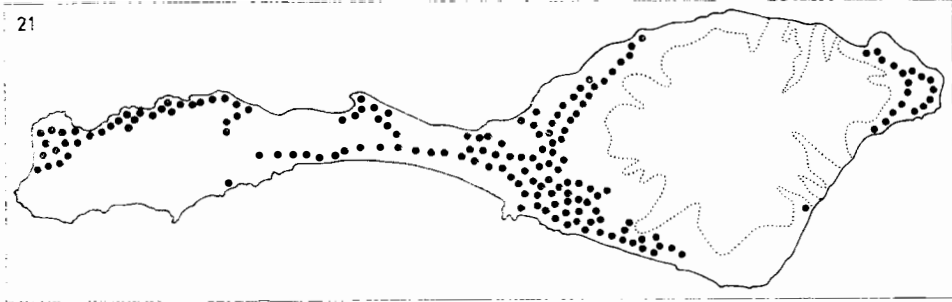


19. *Salix herbacea*.

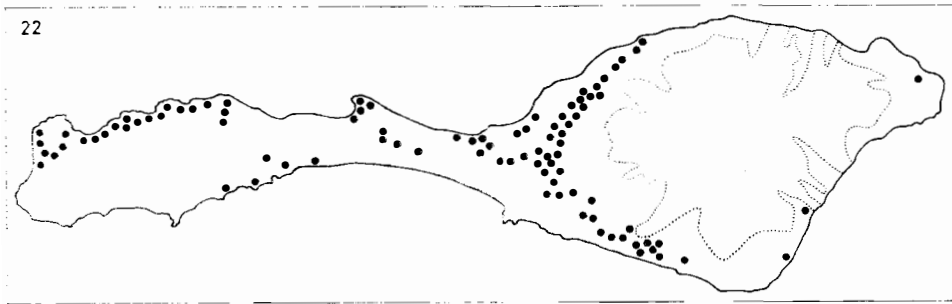


20. *Koenigia islandica*.

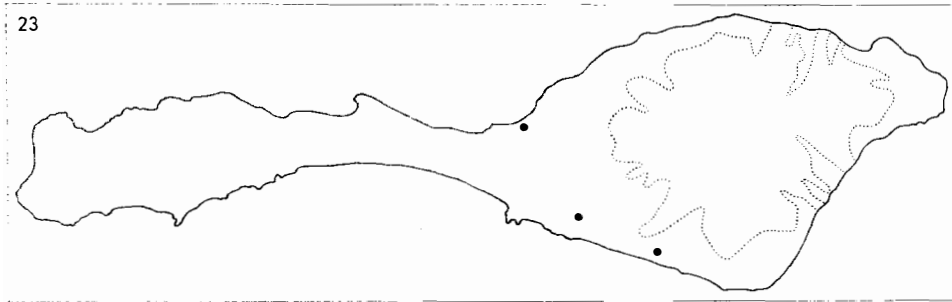




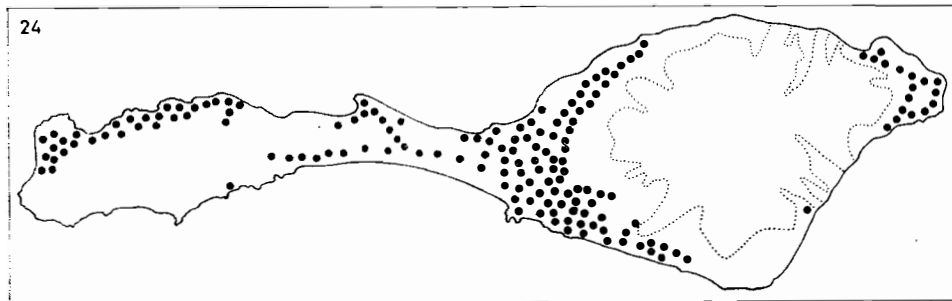
21. *Oxyria digyna*.



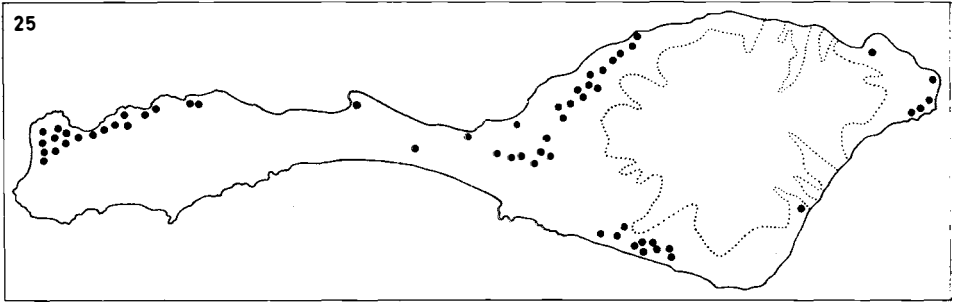
22. *Polygonum viviparum*.



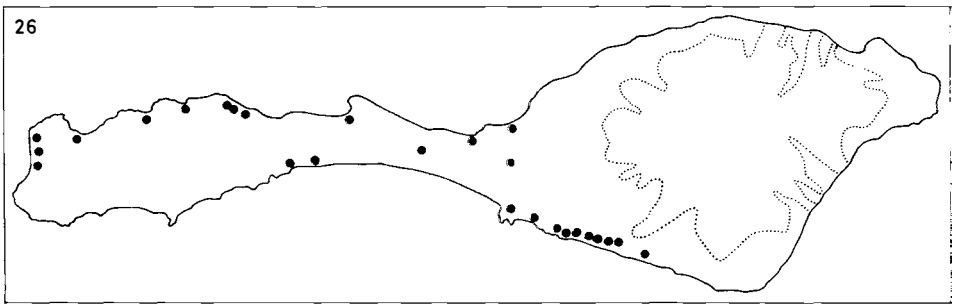
23. *Cerastium alpinum*.



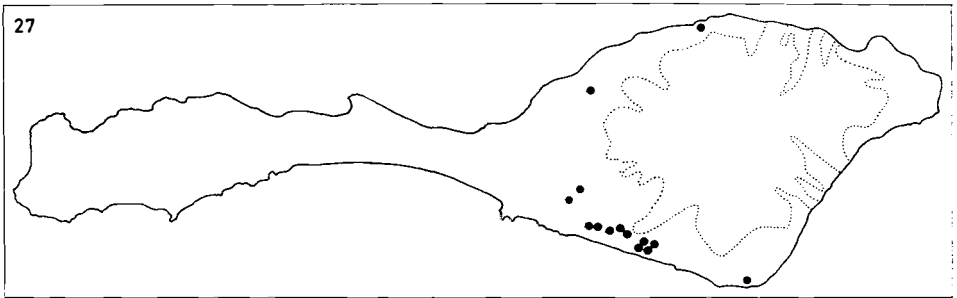
24. *Cerastium arcticum*.



25. *Cerastium cerastoides*.



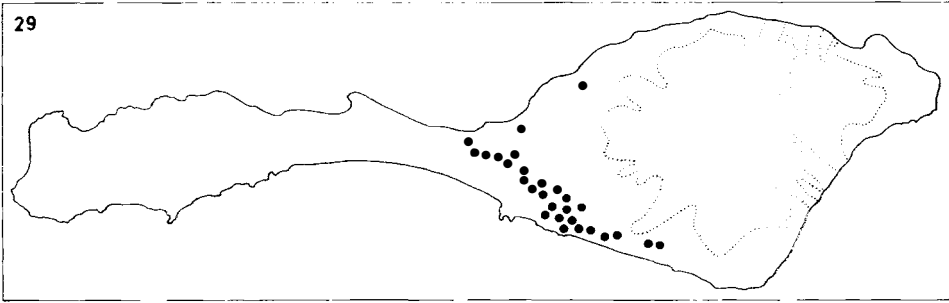
26. *Honckenya peploides*.



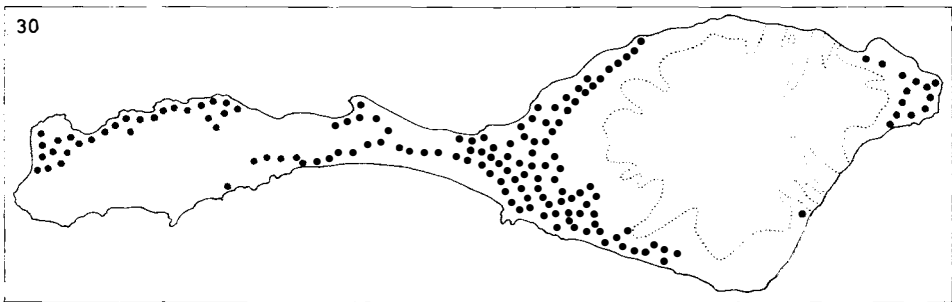
27. *Minuartia biflora*.



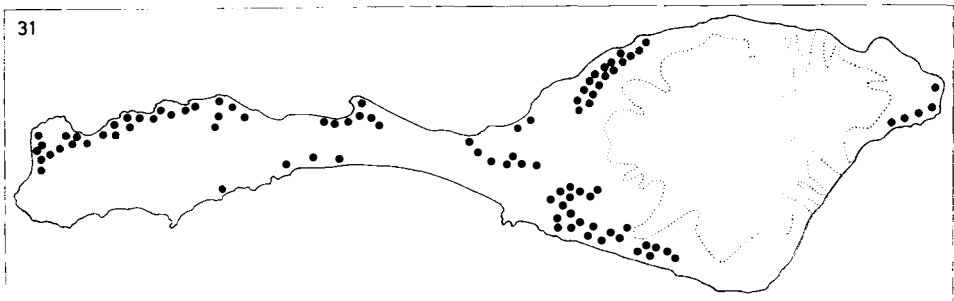
28. *Minuartia rubella*.



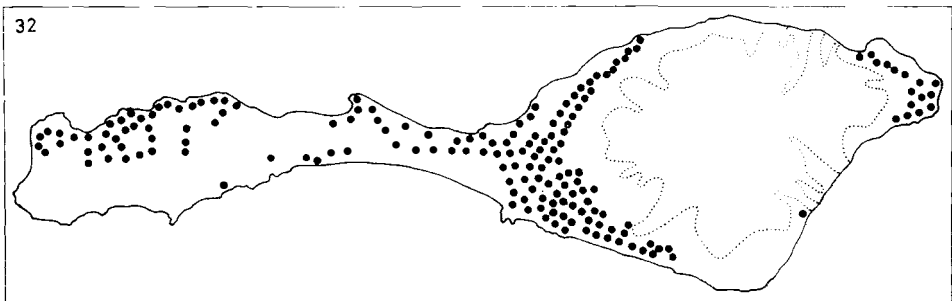
29. *Sagina caespitosa*.



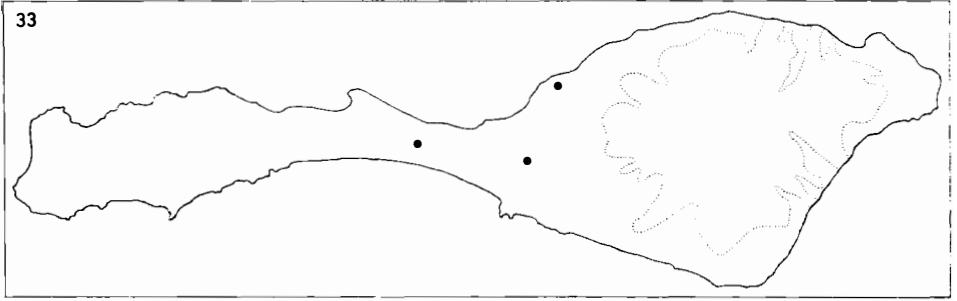
30. *Sagina intermedia*.



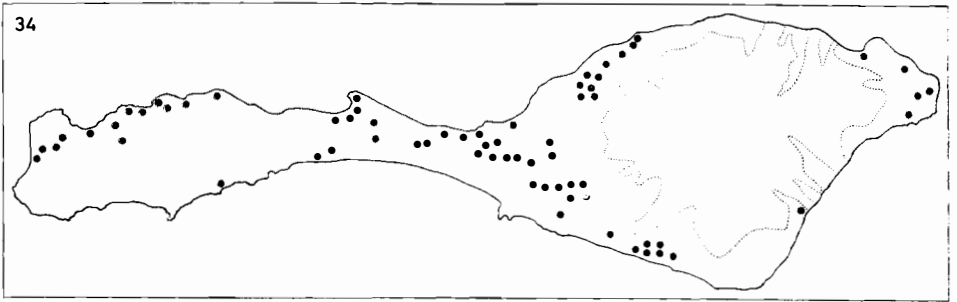
31. *Silene acaulis*.



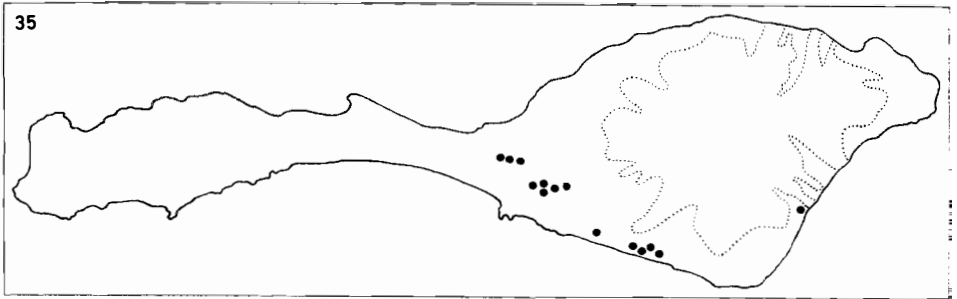
32. *Ranunculus glacialis*.



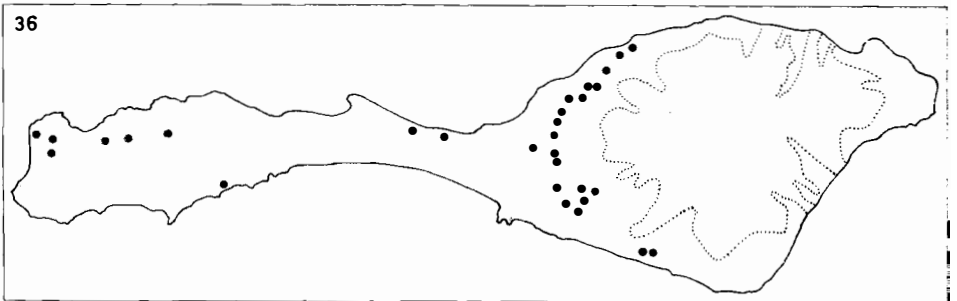
33. *Ranunculus hyperboreus*.



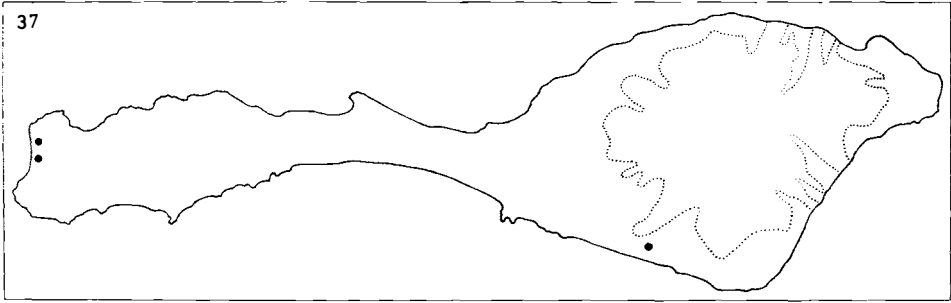
34. *Ranunculus pygmaeus*.



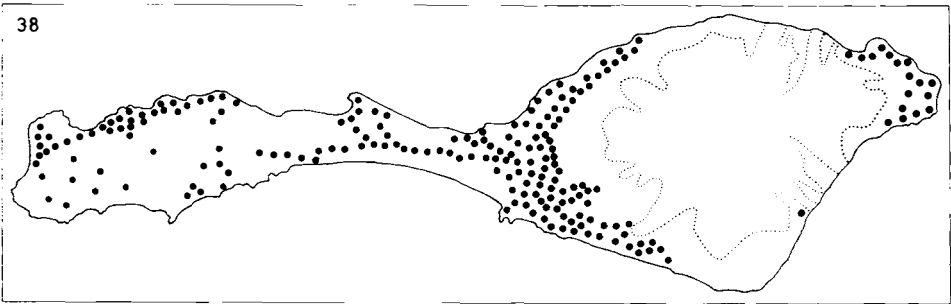
35. *Arabis alpina*.



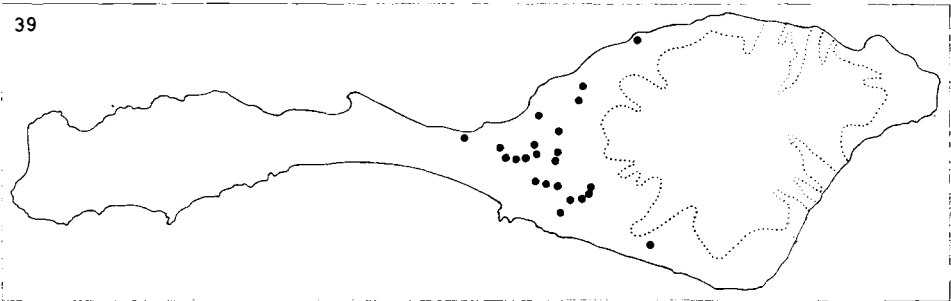
36. *Cardamine bellidifolia*.



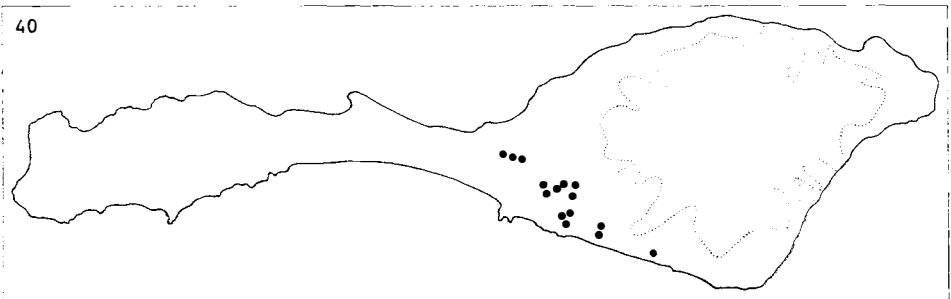
37. *Cardamine pratensis*.



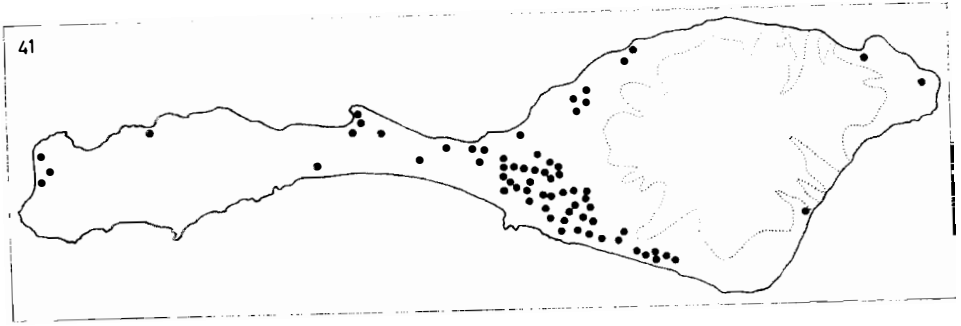
38. *Cochlearia groenlandica*.



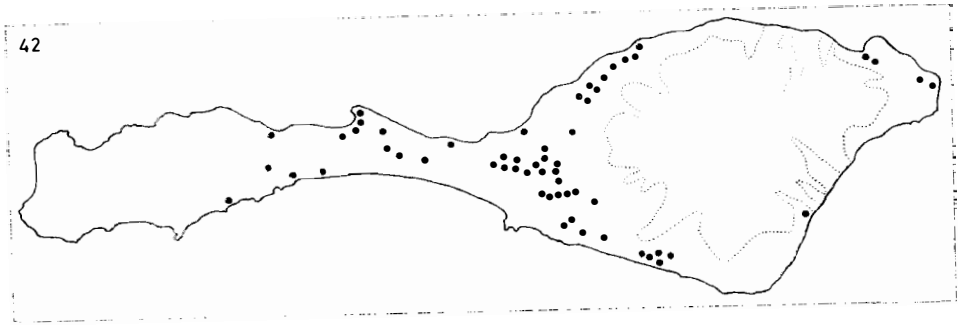
39. *Draba alpina*.



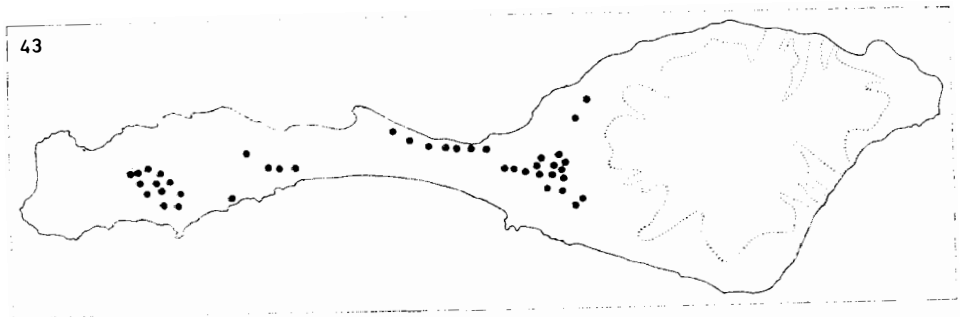
40. *Draba nivalis*.



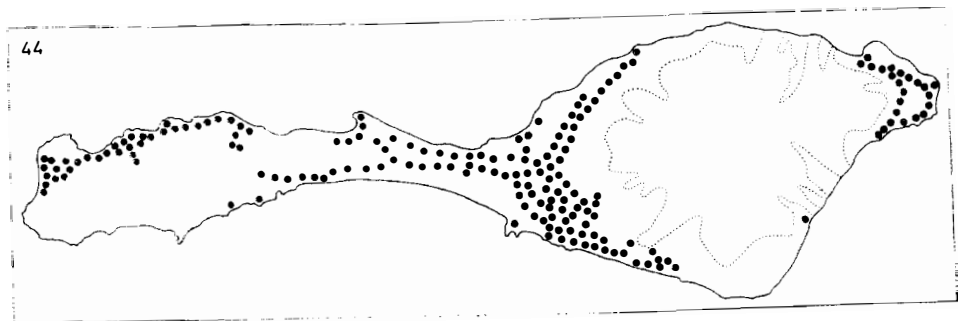
41. *Draba norvegica*.



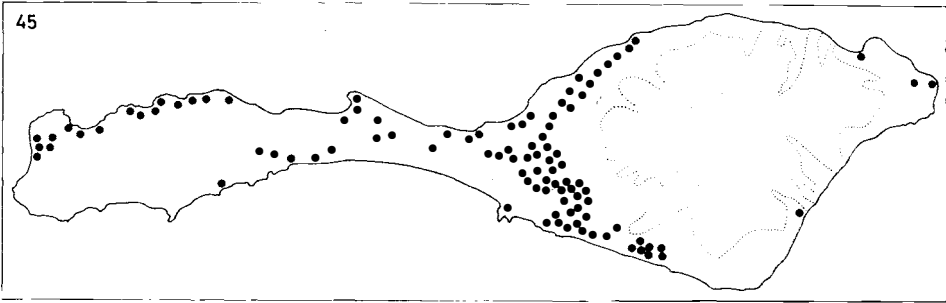
42. *Saxifraga cernua*.



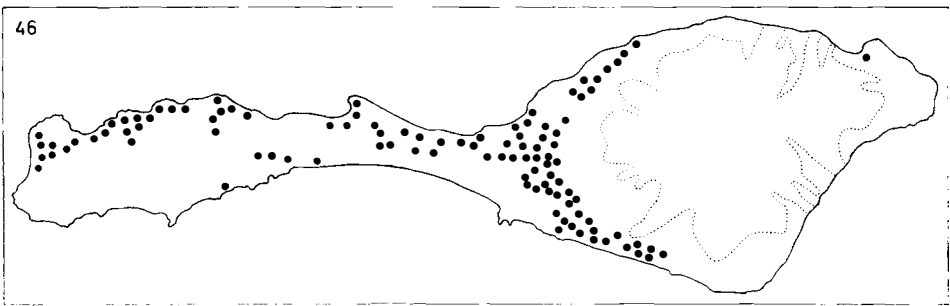
43. *Saxifraga foliolosa*.



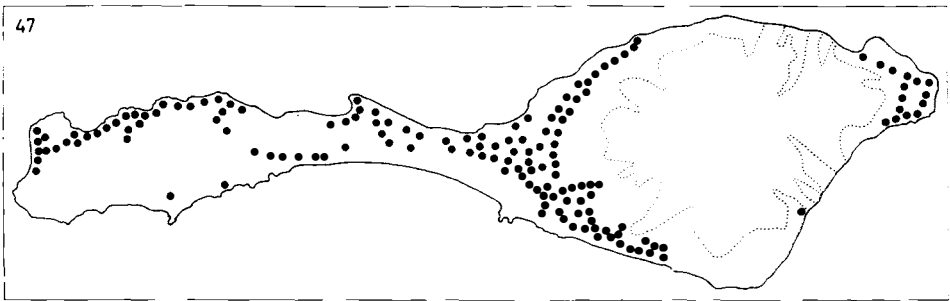
44. *Saxifraga groenlandica*.



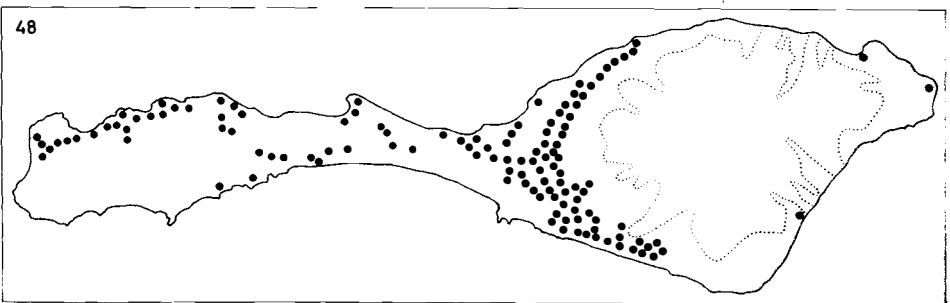
45. *Saxifraga nivalis*.



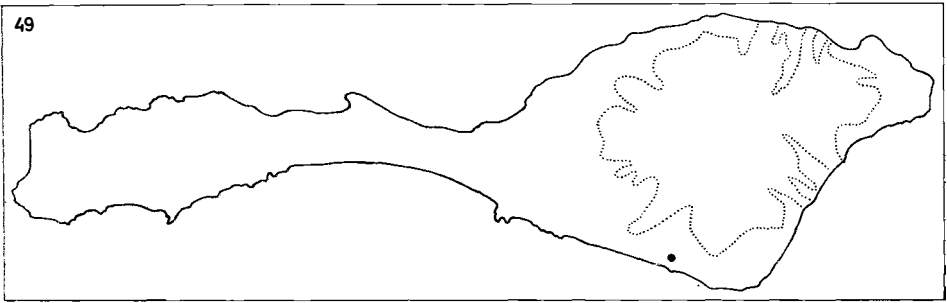
46. *Saxifraga oppositifolia*.



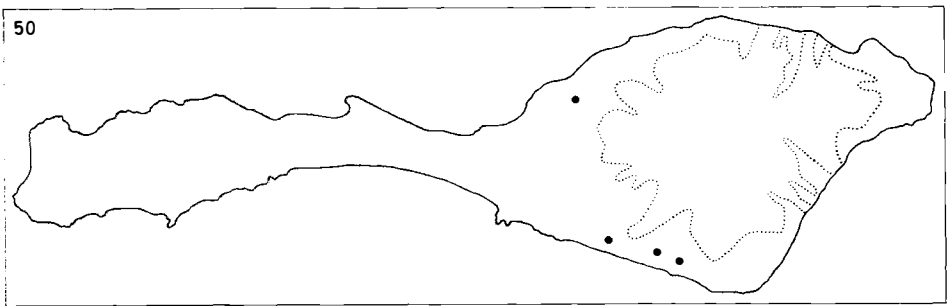
47. *Saxifraga rivularis*.



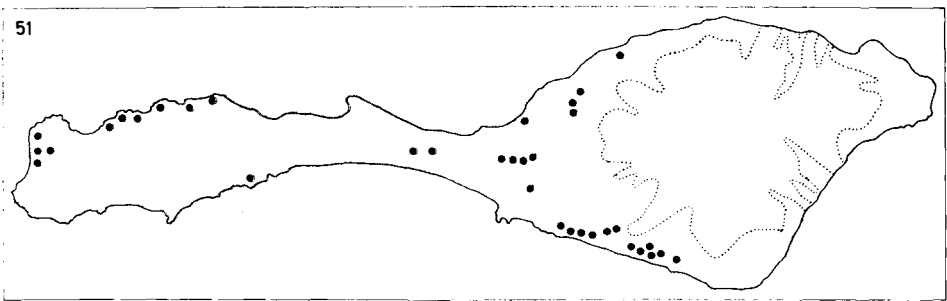
48. *Saxifraga tenuis*.



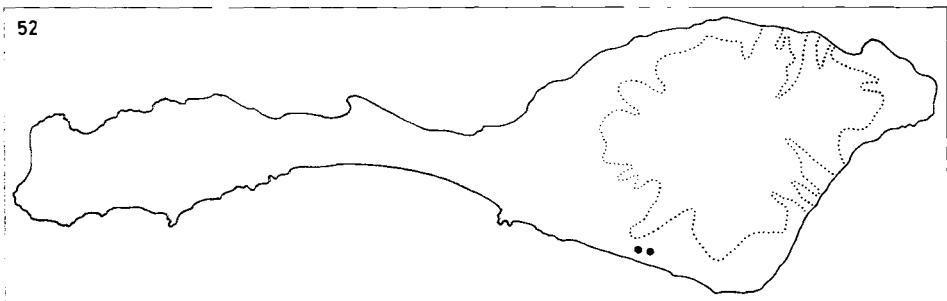
49. *Alchemilla glomerulans*.



50. *Potentilla crantzii*.

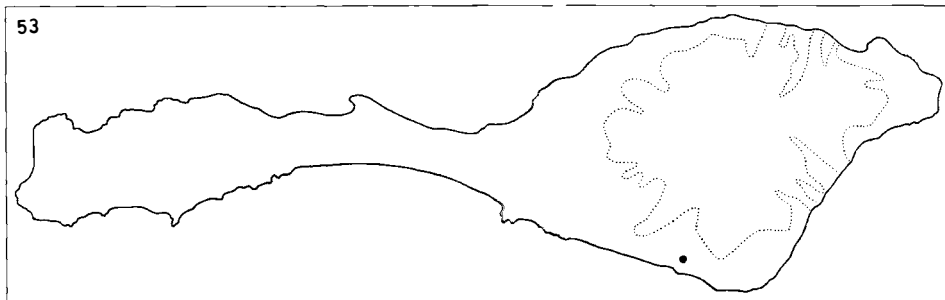


51. *Sibbaldia procumbens*.

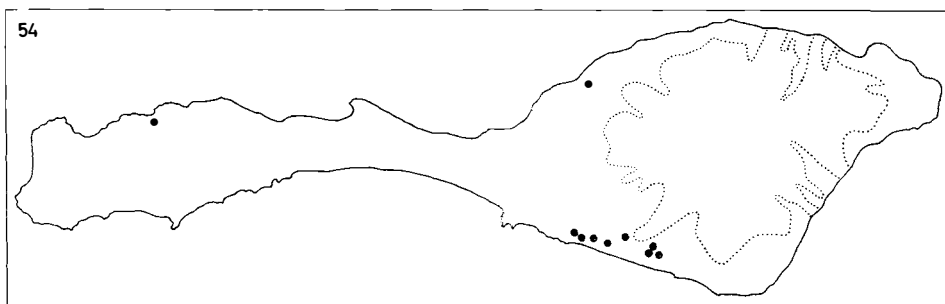


52. *Epilobium anagallidifolium*.

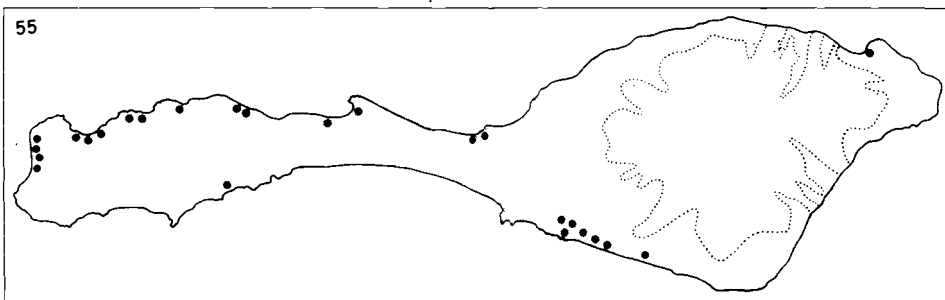




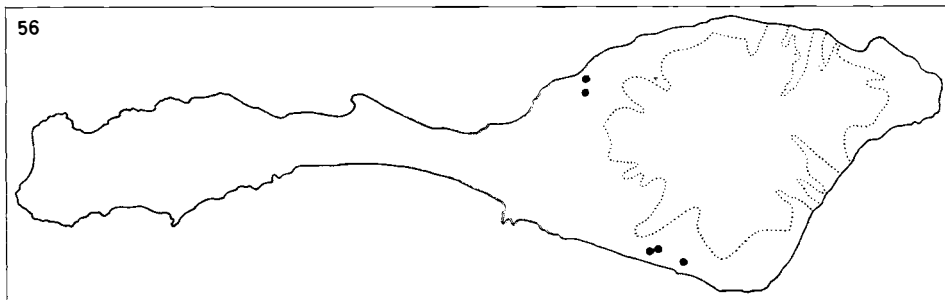
53. *Cassiope hypnoides*.



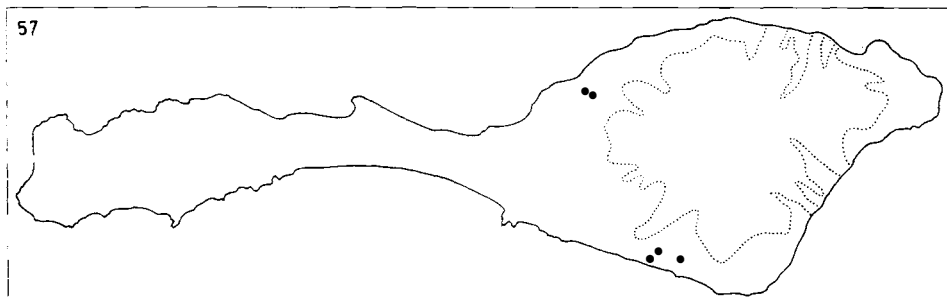
54. *Empetrum hermaphroditum*.



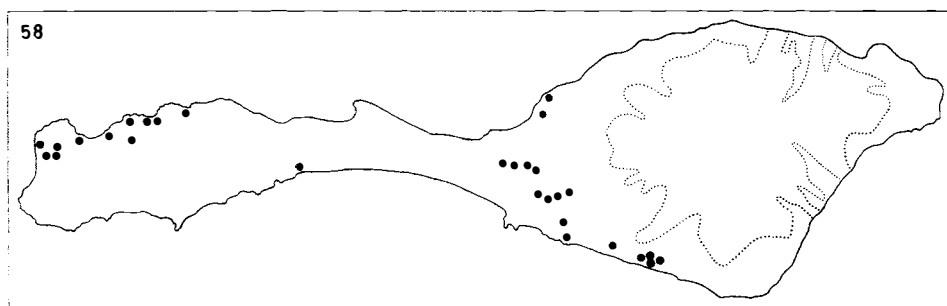
55. *Mertensia maritima*.



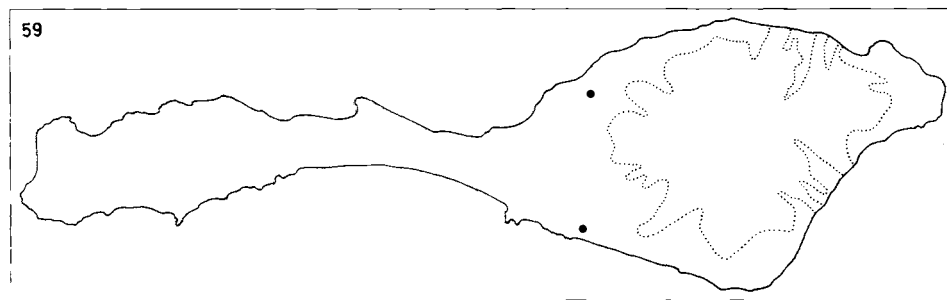
56. *Veronica alpina*.



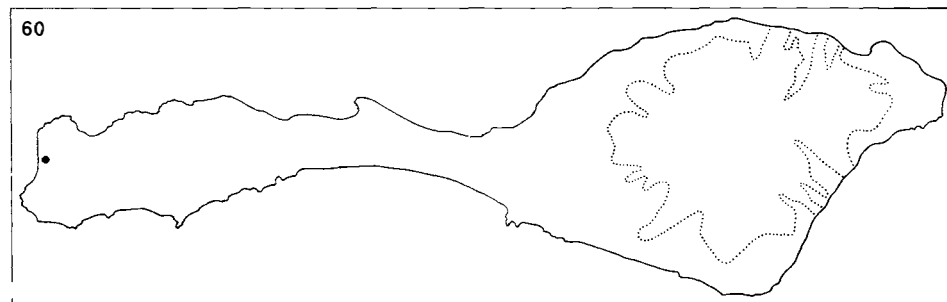
57. *Gnaphalium supinum*.



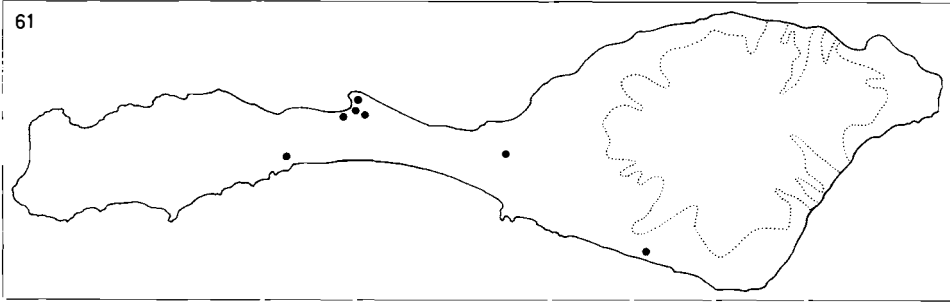
58. *Taraxacum acromaurum*.



59. *Taraxacum brachyrhynchum*.



60. *Taraxacum croceum*.



61. *Taraxacum recedens*.



62. *Taraxacum torvum*.

## Bibliography

- Anderson, Johann, 1746: *Nachrichten von Island, Grönland und der Strasse Davis*. Hamburg.
- Andersson, G. och H. Hesselman, 1900: Bidrag till kannedomen om Spetsbergens och Beeren Eilands kärllväxtflora. *Bihang till K. Svenska Vet.-Akad. Handl.* **26**. Afd. III. No. 1. Stockholm.
- Bienaimé, A. P. L., 1893: Voyage de 'la Manche' a l'île Jan-Mayen et au Spitzberg (Juillet-Août 1892). *Nouvelles Archives des Missions Scientifiques et Littéraires*. **V**. Paris.
- Bird, C. G., 1935: List of Plants Collected in 1934 in Jan Mayen Island. *The Journal of Botany. British and Foreign*. **73**, 121–124.
- Boyd, Louise A., 1932: Fiords of East Greenland. *The Geographical Review*. **22**, 529–559. New York.
- 1935: The Fiord Region of East Greenland. *American Geographical Society*. Special Publication No. 18. (Jan Mayen, 6–10.) New York.
- Christiansen, M. P., 1942: The Taraxacum-Flora of Iceland. *The Botany of Iceland*. **III**. Part III, 12. Copenhagen.
- Drew, W., 1935: Botanical Work of the Expedition. In Boyd, L. A.: *The Fiord Region of East Greenland*. 288–299. New York.
- Dusén, P., 1900: Beiträge zur Flora der Insel Jan Mayen. *Bihang till K. Svenska Vet.-Akad. Handl.* **26**. Afd. III. No. 13. Stockholm.
- Gandrup, J., 1924: A Botanical Trip to Jan Mayen. *Dansk Botanisk Arkiv*. **4**. Nr. 5. København.
- Hagen, A., 1950: Notes on Arctic Fungi. *Norsk Polarinstitutt Skrifter Nr. 93*. Oslo.
- Hanssen, O. and J. Holmboe, 1925: The Vascular Plants of Bear Island. *Nyt Magazin f. Naturv.* **62**, 210–235. Oslo.
- (Horn, G.) 1929: Jan Mayen. En oversikt over øens natur, historie og betydning. *Norsk Geografisk Tidsskrift*. **2**, 411–444. Oslo.
- Hultén, E., 1956: The Cerastium alpinum Complex. *Svensk Bot. Tidsskrift* **50**, 411–495. Uppsala.
- 1958: The Amphi-atlantic Plants. *Kungl. Svenska Vet.-Akad. Handl.* Fjärde Serien. **7**. Nr. 1. Stockholm.
- 1962: The Circumpolar Plants. I. *Kungl. Svenska Vet.-Akad. Handl.* Fjärde Serien. **8**. Nr. 5. Stockholm.
- 1962 b: Plants of the floating Ice-island "Arlis II". *Svensk Bot. Tidsskrift* **56**, 362–364. Uppsala.
- Kruuse, C., 1902: Jan Mayens Karplanter. *Botanisk Tidsskrift* **24**, 297–302. København.
- 1902 b: Et besøg paa Jan Mayen. *Naturen* 26. årg. 97–109. Bergen.
- Lid, J., 1941: Bryophytes of Jan Mayen. *Norges Svalbard og Ishavs-undersøkelser. Meddelelse Nr. 48*. Oslo. (Also printed in *Travaux Bryologiques*. **1**, 54–62. Paris 1942.)
- 1959: The Vascular Plants of Hardangervidda, a Mountain Plateau of Southern Norway. *Nytt Magazin for Botanikk*. **7**. 61–128. Oslo.
- 1962: Stutt-arve funnen på Svalbard. (*Sagina caespitosa* (J. Vahl) Lge. New to Svalbard.) *Blyttia*. **20**, 100–101. Oslo.
- Lind, J., 1928: The Micromycetes of Svalbard. *Skrifter om Svalbard og Ishavet. Nr. 13*. Oslo.
- Lyngé, B., 1939: Lichens from Jan Mayen. *Skrifter om Svalbard og Ishavet. Nr. 76*. Oslo.
- Menzies, R. H., 1932: Botanical Collections of the Louise A. Boyd Expedition. Appendix I to Boyd, L. A., *Fiords of East Greenland*. 1932. 559–561. New York.

- Mohn, H., 1882: Contributions to the Geography and Natural History of the Northern Regions of Europe. *The Norwegian North-Atlantic Expedition 1876-1878*. **1**. No. 5. Christiania. Norsk Polarinstitut. 1959: *Map of Jan Mayen*. Målstokk 1:50 000. Oslo.
- Orvin, A. K., 1960: The Place-Names of Jan Mayen. *Norsk Polarinstitut Skrifter Nr. 120*. Oslo.
- Ostenfeld, C. H., 1897: Contribution à la flore de l'île Jan-Mayen. *Botanisk Tidsskrift*. **21**, 18-32 and 220. København.
- and Johs. Grøntved. 1934: *The Flora of Iceland and the Færoes*. København.
- Porsild, A. E., 1957: Illustrated Flora of the Canadian Arctic Archipelago. *National Museum of Canada. Bulletin No. 146*. Ottawa.
- Reichardt, H. W., 1886: Flora der Insel Jan Mayen. *Die österreichische Polarstation Jan Mayen. Beobachtungs-Ergebnisse*. **3**. T. 7. Wien.
- Russell, R. S., and P. S. Wellington, 1940: The Vegetation of Jan Mayen Island. *The Journal of Ecology*. **28**, 153-179. Cambridge.
- Rønning, O. I., 1958: Planteliv på Jan Mayen. *Naturen*. 82 årg. 43-51. Bergen.
- 1959: The vascular flora of Bear Island. *Acta Borealia*. A. Scientia No. 15. Tromsø.
- Scoresby, W., 1820: *An Account of the Arctic Regions*. **1**, 154-169. Edinburgh.
- Steindorsson, S., 1958: Jan Mayen. I. Lýsing eyjarinnar, 57-74. II. Gródurathuganir, 74-89. *Náttúrufræðingnum*. **28**. Reykjavík.
- Sørensen, T., 1953: A Revision of the Greenland Species of Puccinellia Parl. *Meddelelser om Grønland*. **136**. Nr. 3. København.
- Vogt, C., 1863: *Nord-fahrt entlang der norwegischen Küste, nach dem Nordkap, den Inseln Jan Mayen und Island auf dem Schooner Joachim Hinrich unternommen während der Monate Mai bis Oktober 1861*. Frankfurt am Main.
- Wilson, J. W., 1952: Vegetation Patterns Associated with Soil Movement on Jan Mayen Island. *The Journal of Ecology*. **40**, 249-264. Cambridge.
- Wordie, J. M., 1922: Jan Mayen Island. *The Geographical Journal*. **59**, 180-195. London.

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*Taraxacum acromaurum* Dt. from Jan Mayen.  
Watercolour 1931 by Liv Barstad.

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