

# Study of the *Arctophila fulva* wetlands in the Arctic based on AVA data

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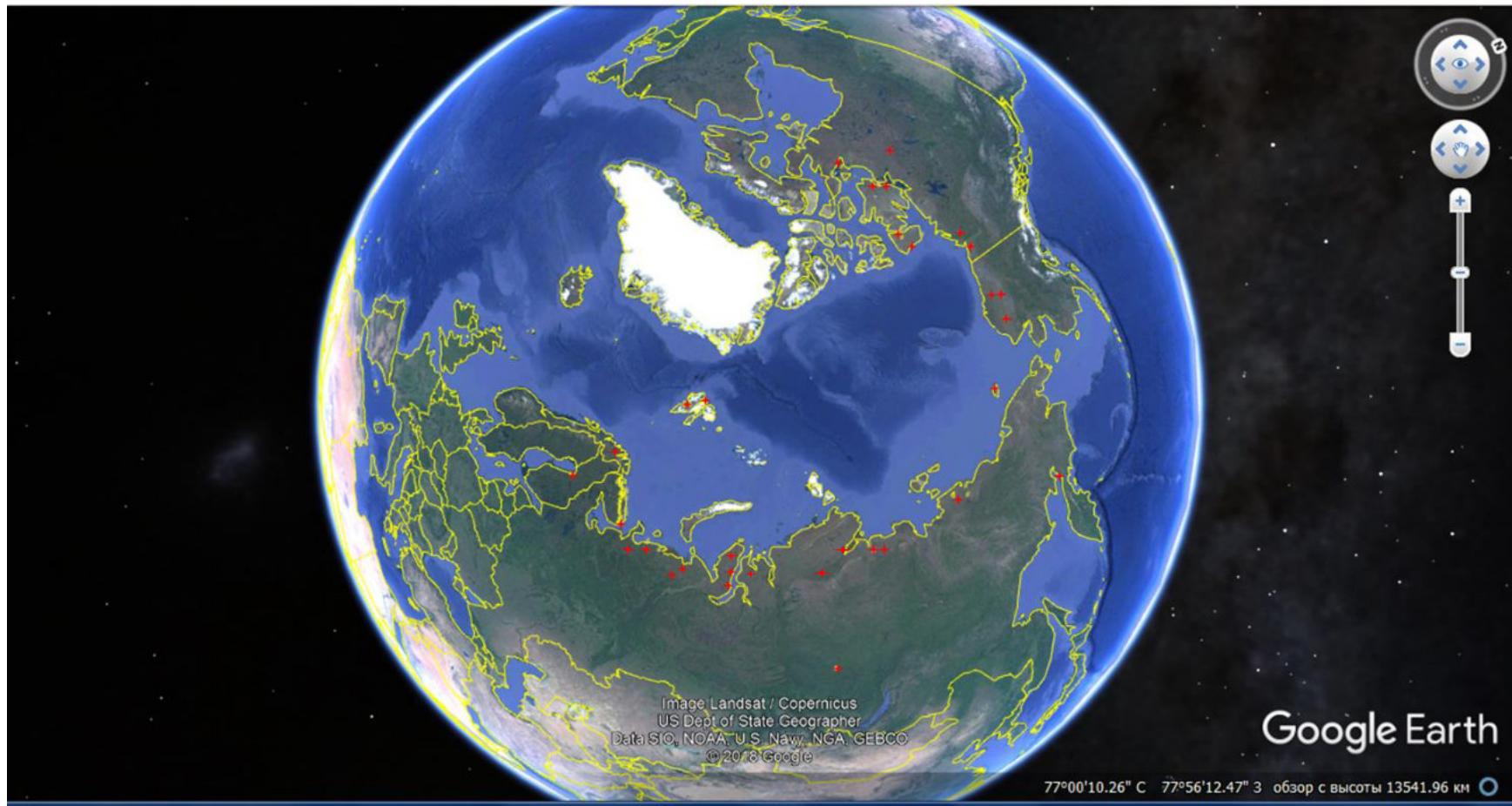
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# Arctophila fulva distribution around the world



E. Hultén, M. Fries. *Atlas of North European Vascular Plants North of the Tropic of Cancer*. Koeltz Scientific Books, 1986. p. 129.

# Location of *Arctophila fulva* stands studied (273 relevés at all)



# Published data

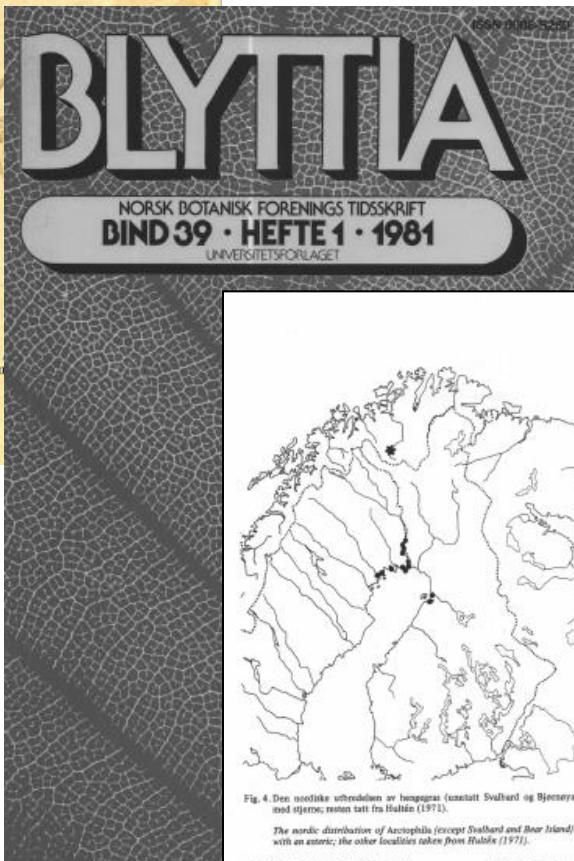


Fig. 4. Den nordiske utbredelsen av hengegrai (unntatt Svalbard og Bjørnøya). Kautokeino-inkaliteten merket med et stjernetegn (stjernen i det øverste feltet).

The nordic distribution of *Arctiophila* (except Svalbard and Bear Island). The Kaarstokken locality marked with an asteric; the other localities taken from Halvorsen (1971).

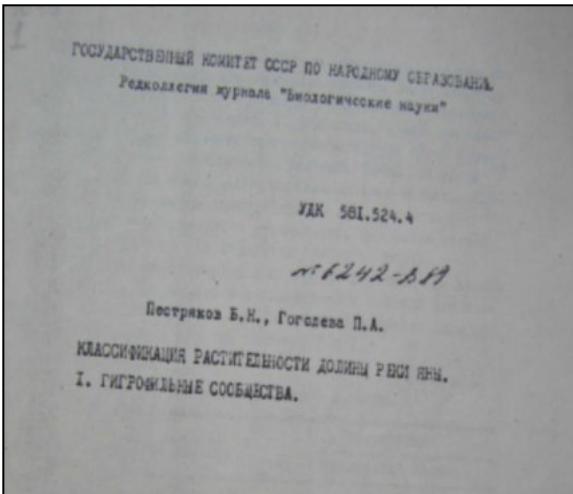
især hvis hængegraset har flyteblad.

Især hvis hengegrøn har flyttet.  
Forekomsten er så liten at den bør få stå helt i fred. Vi har samlet materialer til alle de store herbariene i Norge.

Forskningens utgangspunkt i Kartofleinovasdraget ligger nokså langt fra de nærmeste andet (fig. 4), 280 km fra Tortola i Tornedalen og vesentlig lengre fra Asta Kola. Den forbinder Bottenviken/Tornedals-området med det artiske. Skal vi dømme ut fra forekomsten i Tornedalen (fl. tilhørende opplystningene, noen notater hos Ericson & Wallenius 1979), har arten en ganske snver økologi og vært spilt en relativt liten rolle i N.-Tromsø og Finnmark bortsett fra et par lokaliteter i Tromsø og Karlsøy.

liten, men synes være i en viss ekspansjon. Hvert av bestandene har en kant av velvoknede stenkle skudd rundt det feste midtpartiet. Vi antar at graset her bøyer formerer seg vegetativt (menget spår formeler). Helle forent kan derfor skyldes en etikkert establering. Arten sto i blomst de siste dagene i juli, og det er tilsvint om det produserte fra i 1980, et år med de varmeste somrene Kautokeino har hatt i nøyaktig ti år. Det er ikke uelukket at forekomsten er av nokkå my datø, og spredning med fugl fra Bottemarka/Tomsdalen er også vedlikeholdende mulighet.

Funnet av hengegras i Kautokeino fayer var ikke et sikkert av flere andre funn i nærområdet.



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КЛАССИФИКАЦИЯ РАСТИТЕЛЬНОСТИ ДОЛНИХ РЕСУРСОВ  
I. ГИГРОЗИМНЫЕ СОССЕДСТВА.

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Пестриков Б.Н., Гоголева П.А.

## КЛАССИФИКАЦИЯ РАСТИТЕЛЬНОСТИ ДОЛИН РЕКИ АМУ. I. ГИГРОФИЛЬНЫЕ СООБЩЕСТВА.

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Ассоциация *Arctophylo-Nierembergetum lanceolatae* (табл. 2).  
Занимает небольшую прибрежную полосу небольших тундровых озёр и стариц дельты реки, находящуюся, оставленную во время пропала по периферии проток склоноватинных берегов в устье реки. По синантропическому положению ассоциации представляют переходное обобщение в классе *Fragmitetalia*.  
Образует просвечивающие покрытия - 45-60 %, средняя высота - 20-30 см. Высота насаждения - 2-3 м.

Takao 3.

Номер сплошения	1	2	3	4	5	6	7	8	9	10
Проективное покрытие	60	60	45	30	20	70	60	60	30	СТД-
Средн. высота травостоя	20	35	20	30	25	30	30	30	30	СН-
Количество видов	6	5	3	2	2	4	2	2	4	СТВ

L.B. Arotophylo-Hippuridetum lanceolatae	
Hippuris lanceolata	2 4 + 3 3 3 4 4 2 $\gamma^{2-4}$
Arotophyla fulva	5 3 1 2 + 1 3 2 2 $\gamma^{-3}$

Прочие виды  
*Leptoscolus pallens* + 2 4 \* 111

Бриофорум полистахион + 1 II  
Богат тут, зустрічається: *Caltha palustris*(1),  
*Ranunculus aquatilis*(1), *Potamogeton filiformis*(6), *Ranunculus  
peregrinus*(6).

Места съемки (все съемки сделаны в Усть-Бисенском районе):

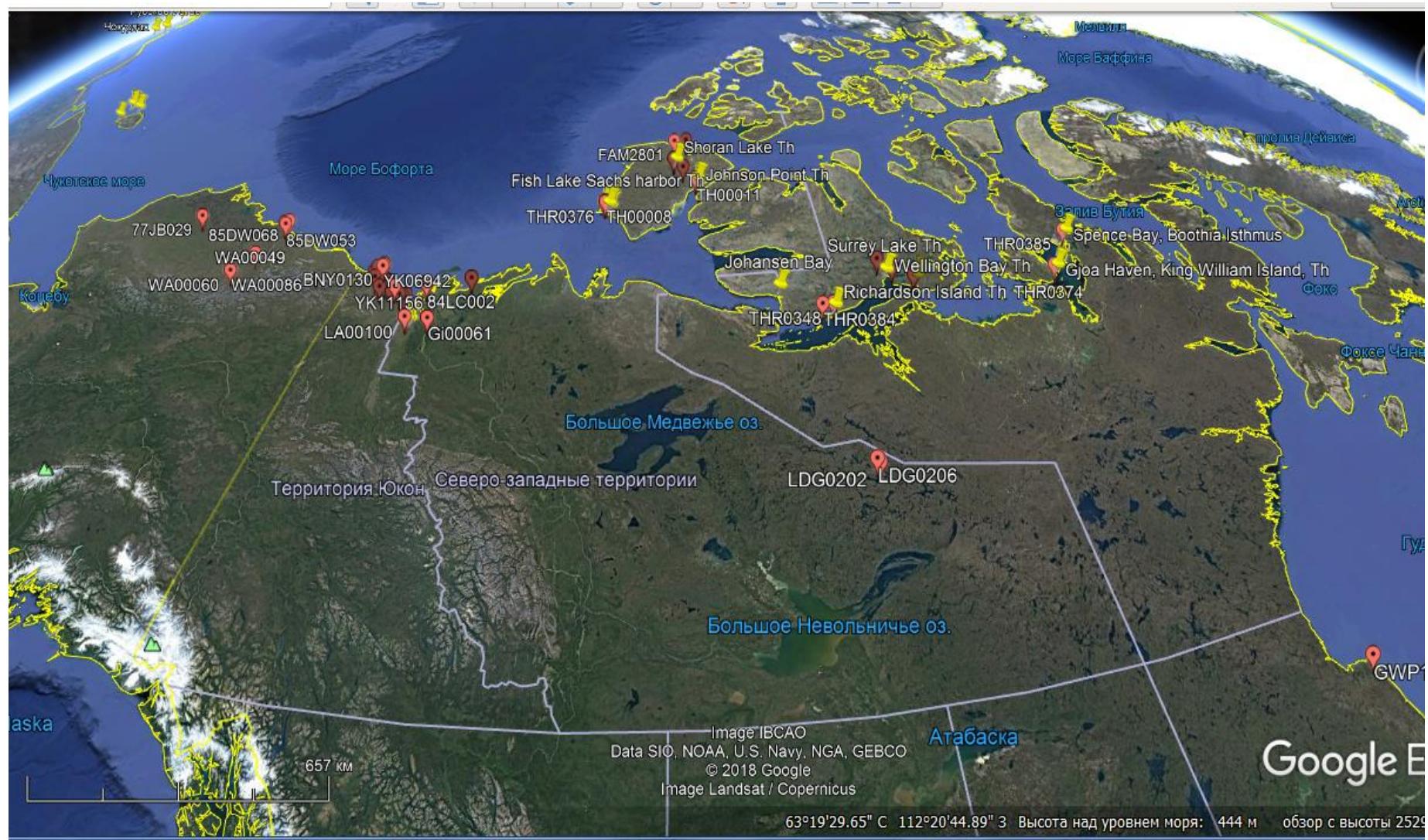
I - 3 км. к югу от п. Нижнекамск. 05.08.86. Героцова Н.А.  
II - берег озера Белое п. Нижнекамск. 05.08.86. Героцкова Н.А.

3 - берег озера, 300 м. к сев. от п. Нижнекамск. 03.05.88  
Следователь Н.Н.

4 - 3,2 км. к югу от п. Нижнекамск. 05.08.88. Гоголева Н.А.  
5 - барановка, устье Яши. 03.08.88. Петраков Б.Н.

6 - барен озера, ур. 1404. 00.08.08. Гаранова Н.Н.

# AVA *Arctophila fulva* relevés from Alaska and northern Canada



# The AVA data on Alaska and northern Canada (30 relevés)

# To check the taxonomy and nomenclature of plants and lichens

The screenshot shows a website with a header menu including Home, About, The Report, Data, Policy, Download, Education, and Congress 2018. A logo for the Arctic is in the top right. Below the menu are three download links:

- Download Plants chapter chapter 9**: (PDF 2.4 MB) - image of pink flowers.
- Download Appendix 9.1**: List and distribution of all Arctic vascular plants (Excel 1.2 MB) - image of small white flowers.
- Download Appendix 9.2**: Endemic Arctic vascular plant distribution (Excel 111 KB) - image of yellow flowers.

CAFF DataBase - data on nomenclature and distribution of all Arctic vascular plants

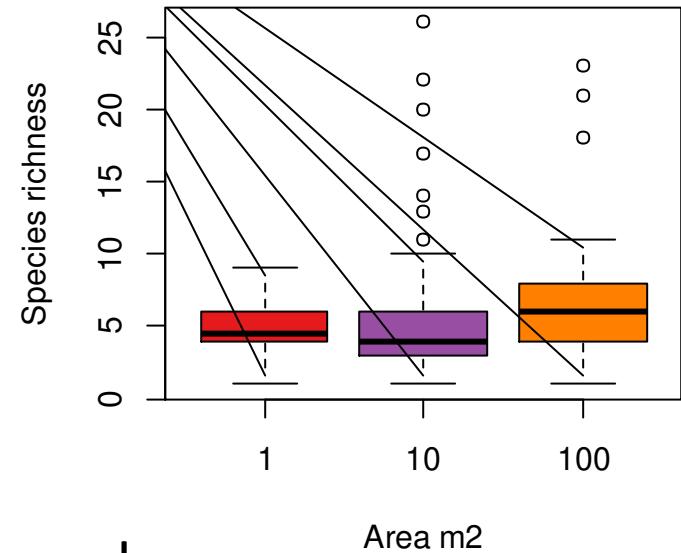
The screenshot shows the Euro+Med PlantBase homepage. It features a sidebar with links like Query the checklist, E+M Home, BDI Home, Berlin model explained, Credits, Explanations, How to cite us, and a Firefox search plugin link. The main content area has a title: "The Euro+Med PlantBase - the information resource for Euro-Mediterranean plant diversity". Below it is a detailed description of the database's scope and history. A search form is present with a "Search!" button. A note says "Fill in the empty field in order to query the database for a specific name. Use the asterisk (\*) as a wild card (e.g. Calend\* will find all names starting with Calend, Calendula officinalis \* will find the names of subspecies etc. of Calendula officinalis, and Ca\*la will find Calendula etc.). Asterisks at the beginning of a search term will be ignored. The input must contain at least three characters. The search is only on the name itself, so please do not include authorship or year of publication." A search result for "polulus" is shown with a "Query" button. A note says "Search for a botanical name like "Calendula\*\*": Name: polulus Query". At the bottom, there are notes about taxonomic authors and a contact email for comments. The footer includes a copyright notice for BGBM and a link to the last update date.

**Euro-Med Database - the on-line database and information system for the vascular plants of Europe and the Mediterranean region**

# variable plot sizes used for sampling

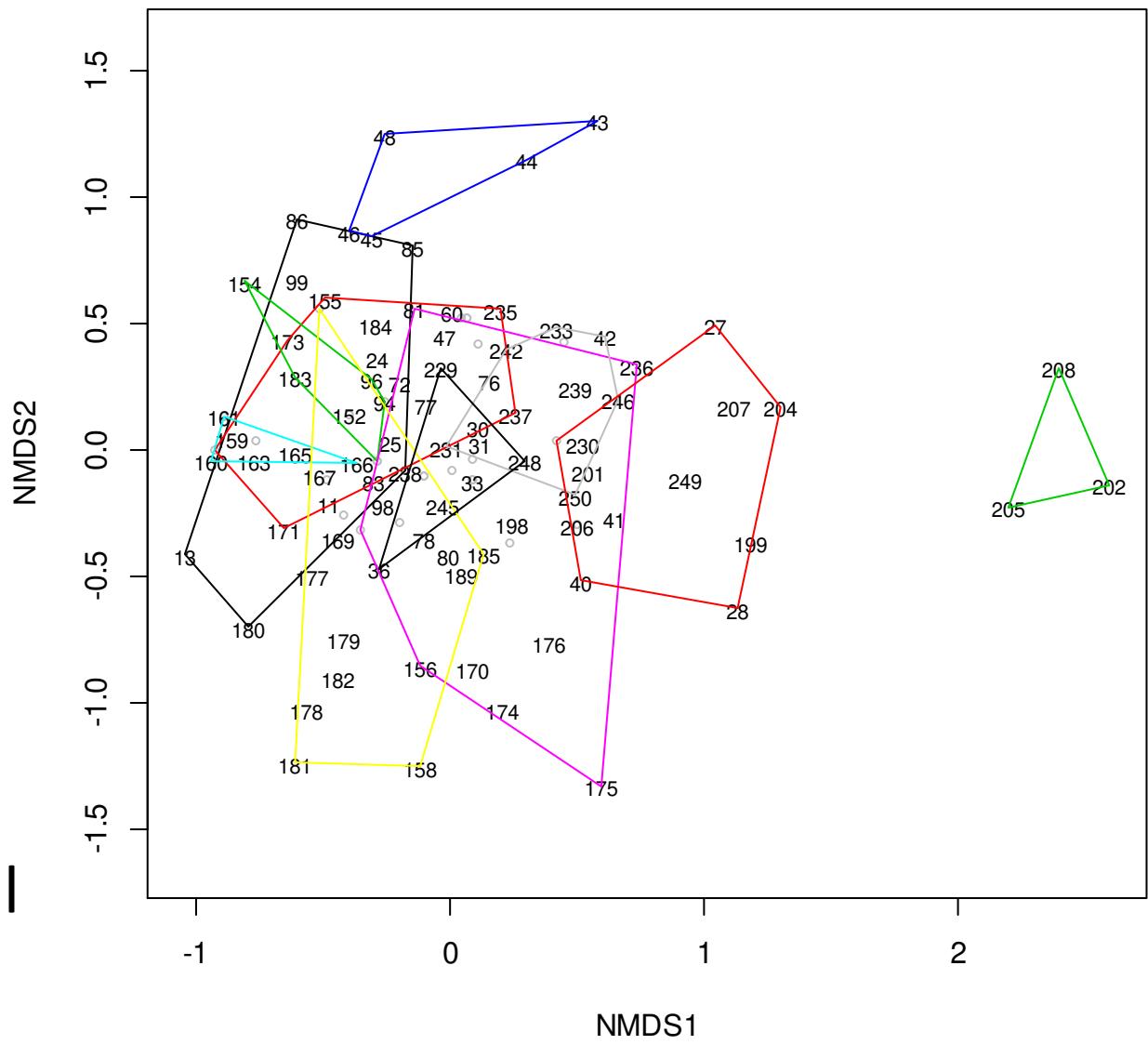
- We have to manage with the variation in plot sizes used (1, 2, 4, 9, 10, 16, 100, 314 m<sup>2</sup>)

Size	Nr. relevés	Nr. species	Mean species richness	Cumulative richness	Singletos	Doubletons
1	18	35	5	35	18	8
2	15	32	5	32	17	4
3	10	26	6	26	16	3
4	34	92	8	92	39	24
5	4	10	5	10	5	3
9	10	41	7	41	26	8
10	122	135	5	135	48	31
16	4	14	7	14	5	6
25	6	26	6	26	20	3
100	35	80	7	80	28	27
314	7	27	6	27	20	4
nd	2	6	5	6	2	4



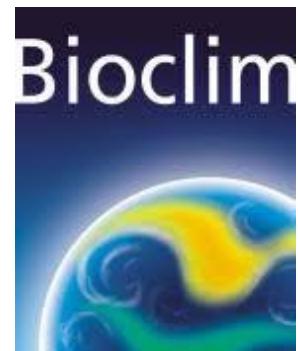
*Arctophila fulva* vegetation dataset partitioned according the plot size. Pools > **30 relevés** were subject to further separate classifications

- the plot size of the most of the relevés – 10 m<sup>2</sup> (122 relevés)
  - UPGMA hierarchical clustering method with Bray-Curtis coefficient
  - 11 clusters
  - Non-metric multidimensional scaling (NMDS) for visualisation



# Synoptic table and preliminary groups interpretation:

- *Arctophila fulva* – *Warnstorffia exannulata* type;
  - *Arctophila fulva* – *Ranunculus gmelini* type;
  - *Arctophila fulva* – *Ranunculus reptans* type;
  - *Arctophila fulva* – *Carex aquatilis* type;
  - *Arctophila fulva* – *Eriophorum angustifolium* type;
  - *Arctophila fulva* – *Hippuris lanceolata* type;
  - *Arctophila fulva* – *Dupontia fisheri* type



- Data on habitats and geographic position of each relevé -
- Possibility to extract WorldClim (Global Climate Data) values to check whether local climate might be correlating or not with the Arctophila vegetation patterns

# Thanks for attention

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