

AN ACCOUNT ON THE GENUS *SCHISTIDIUM* (GRIMMIACEAE) IN TWO  
AREAS OF THE SWISS ALPS

After the NISM Moosbestimmungskurs 1996 I had the opportunity to go on two excursions, one to the granite area of the Göschener Tal - Göschener Alp, and the other to the mainly calcareous area of Klausenpass. I had the good fortune of excellent companionship and guidance by Silvia Stofer and Edi Urmi, in Göschener Tal and Klausenpass, respectively. The main purpose of these field trips was to study some of the alpine species which do not occur in Scandinavia, but a list of all taxa that we collected could be of interest, and is presented here. We indeed succeeded in finding three species unknown to northern Europe, but probably quite common in the Swiss alps. These species are either undescribed or have names not combined in *Schistidium*, and they are here simply called "A", "B" and "C". "A" is a siliceous species typical of humid sites, "B" grows on base-rich rocks but seems to avoid limestone, whereas "C" occurs on exposed calcareous rocks (hopefully I shall publish an account on the alpine *Schistidia* of central Europe quite soon). - Field determinations of *Schistidium* in September could be deceptive - I was certain we found *S. alpicola* (*S. agassizii*) near the Gasthaus in Göschener Alp, however, the material turned out to be depauperate *S. rivulare*. On the other hand, I never imagined that we collected *S. frigidum*, but we did.

1. Göschener Tal - Göschener Alp (Kt. Uri), September 9th

We first went to the N-faced slopes just above the dam in Göschener Alp (Tab. 1, locality 1), then we collected along the small road from the dam down to the Gasthaus (loc. 2-4), but most of the time we spent studying the magnificent and almost continuous granite wall built along the road in Göschener Tal (loc. 7-15). The flora proved to be extremely rich, and the 18 registered taxa (Tab. 1) comprise about 65 percent of the known Swiss *Schistidium* flora. Four species, i.e. *S. confertum*, *S. papillosum*, *S. prinosum* and taxon "A" were previously known from the valley, collected by J. Albrecht in May 1956. The flora is much richer on concrete (of the granite walls) than on the granite outcrops, and increases in the number of taxa with decreasing altitude. Several of the calcareous taxa did probably not grow in the valley (at least in the investigated part of it) before the granite walls were built. None of the collected species are probably rare in Switzerland, but *S. frigidum* is so far known only from a few localities situated at much higher altitudes than in Göschener Tal. It is also interesting that *S. rivulare* frequently occurred on concrete of the granite walls.

The Göschener Tal/Göschener Alp area also has a very rich *Grimmia* and *Racomitrium* flora easily studied in the many rocky pastures along the road, and the area is well suited to demonstrate the family Grimmiaceae. On gravelly ground at the top of the dam we collected mixed rich material of two morphs both referable to *Racomitrium canescens* subsp. *canescens*. The deviant morph fits *R. canescens* var. *strictum* Schlieph. ex Limpr. (*R. mollissimum* Philib.) in several respects, indicating that this taxon represents something more than a habitat modification. Keep your eyes open, I should be very interested to study mixed morphs of *Racomitrium canescens* from the Alps!

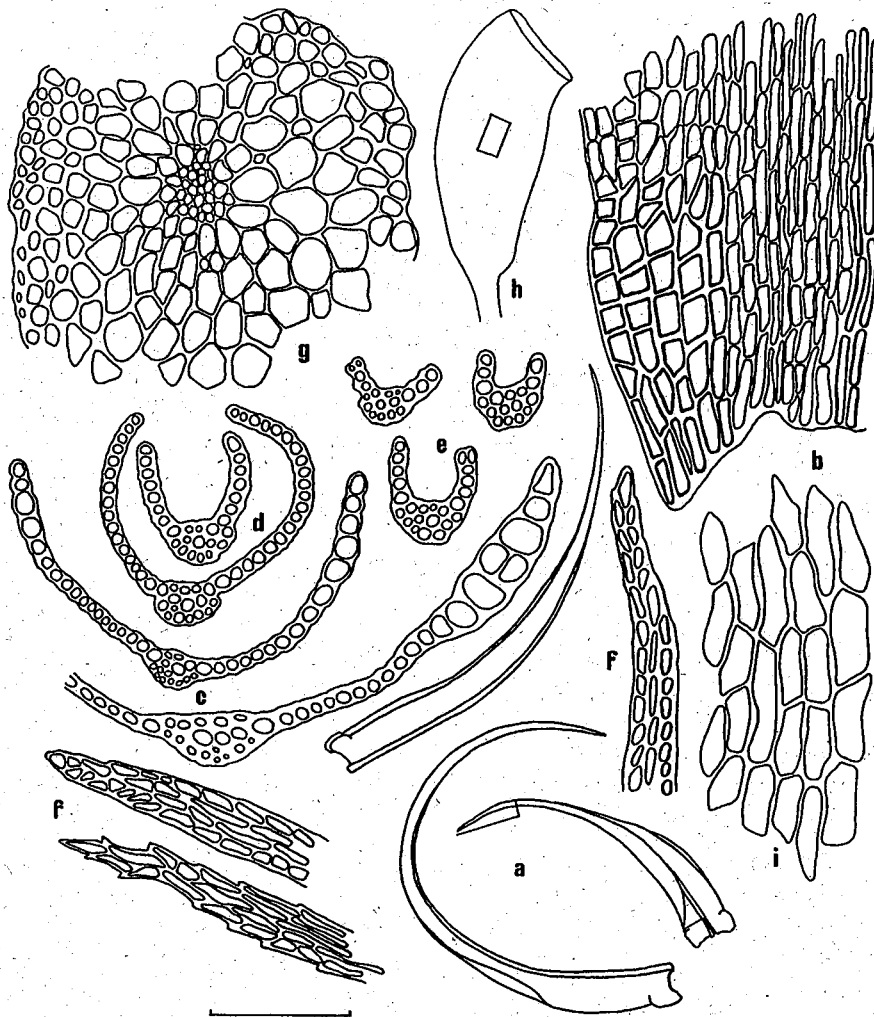


Abb. 3: *Kiaeria starkei*, M 10 706, CH, VS - a: Blattumrisse; b: Zellbild im Blattgrund; Blattquerschnitte c: im Blattgrund, d: oberhalb des Blattgrundes, e: im oberen Viertel des Blattes; f: Zellbild in der Blattspitze; g: Stämmchenquerschnitt; h: Kapselumriss; i: Zellbild der Urne in der Kapselmitte.

2. Klausenpass (Kt. Uri), September 11th

*Schistidium dupretii* and taxon "C" were constantly present on the low limestone boulders in the pastures of the S-faced side of the pass. Close to the road we collected typical alpine material of *S. brunnescens* subsp. *brunnescens* with recurved leaf margins. In protected fissures of the larger outcrops compact tufts of *S. trichodon* var. *trichodon* and *S. robustum* occurred. The small outcrops of siliceous rocks were generally too poor for *Schistidium*, but we collected depauperate material of *S. apocarpum* and taxon "B" in fissures of a siliceous rock wall. - *S. dupretii* was the only species on the limestone boulders at the steep slopes of the N-faced side of the pass. The larger dolomite outcrops at about 2100 m generally had a richer moss flora, and here we studied luxuriant plants of *S. trichodon* var. *trichodon* and *S. robustum* growing together with *Geheebia gigantea* (Funck) Boulh. and *Ctenidium procerrimum* (Mol.) Lindenb.

Finally I would like to thank the organizers and all the participants of the NISM 1996 course for those wonderful, memorable days in Zürich. A special, warm thank goes to my field companions, Silvia Stofer and Edi Urmi.

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... wieder keine Flechten in der Meylania!

Habitat	Granite boulder in stream bed	Concrete artificial wall	Moist granite outcrop	Moist granite outcrop	Concrete drainage channel	Granite outcrop road-cutting	Concrete granite wall	Concrete granite wall	Concrete granite wall	Concrete granite wall	Concrete granite wall by stream	Concrete granite wall	Concrete granite wall	Concrete granite wall	Concrete granite wall
Locality no	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Altitude m a.s.l.	1820	1800	1792 1793	1780	1780	1770	1750	1728	1705	1625	1595	1455	1450	1412	1380
apocarpum					•									•	•
<i>brunn.</i> ssp. <i>brunn.</i>								•						•	•
<i>brunn.</i> ssp. <i>griseum</i>											•	•	•		
confertum									•						
<i>confusum</i>		••				•	•	•	•		•			•	
<i>crassipilum</i>								•							•
<i>dupretii</i>	•	••			•	•	•	•	•	•	•	•	•	•	•
<i>elegant.</i> ssp. <i>elegant.</i>									•	•		•	•		•
frigidum				•											
papillosum		•	•	••		••	•	••	•	•	••	•	•	•	•
pruinatum									•			•			
rivulare	•				••					•		•		••	••
<i>robustum</i>		•					••	••	••	••	••	••	••	•	•
<i>trichodon</i> var. <i>nutans</i>		••	••	•	•		••	••	••	•	•	•	•	•	•
var. <i>trichodon</i>								•							
Taxon "A"			•			•								•	
Taxon "B"							•	•		•	•	•	•	•	•
Taxon "C"									•	•	•	•	•	•	•
No taxa	2	5	3	3	4	4	6	9	9	9	8	10	8	9	9

Table 1. Distribution of taxa on different collecting sites, Göschener Alp - Göschener Tal. ° = field observation, • = collected material, °/•• = dominant taxon; names in italics indicate calcareous taxa probably without natural habitats in the Göschener area.