

<i>Pseudoleskea plicata</i>	... 1,3	<i>Schistidium apocarpum</i>	... 1
<i>Pterigynandrum filiforme</i>	... 1	<i>Schistidium rivulare</i>	... 1,2
<i>Ptilium crista-castrensis</i>	... 3	<i>Sphagnum compactum</i>	... 3
<i>Racomitrium aciculare</i>	... 1	<i>Sphagnum quinquefarium</i>	... 1,3
<i>Racomitrium aquaticum</i>	... 1	<i>Sphagnum recurvum</i>	... 3
<i>Racomitrium canescens</i>	... 1	<i>Sphagnum russowii</i>	... 3
<i>Racomitrium elongatum</i>	... 1	<i>Sphagnum subsecundum</i>	... 3
<i>Racomitrium heterostichum</i>	... 1,2	<i>Splachnum ampullaceum</i>	... 3
<i>Rhabdoweisia fugax</i>	... 1	<i>Splachnum sphaericum</i>	... 3
<i>Rhizomnium punctatum</i>	... 1	<i>Tayloria lingulata</i>	... 1
<i>Rhytidadelphus loreus</i>	... 3	<i>Tayloria serrata</i>	... 1,3
<i>Rytidadelphus squarrosus</i>	... 1	<i>Tetraphis pellucida</i>	... 3
<i>Riccardia multifida</i>	... 1	<i>Timmia austriaca</i>	... 1
<i>Scapania helvetica</i>	... 1	<i>Timmia bavarica</i>	... 3
<i>Scapania irrigua</i>	... 3	<i>Tortella tortuosa</i>	... 1,3
<i>Scapania scandica</i>	... 1	<i>Tortula norvegica</i>	... 1
<i>Scapania subalpina</i>	... 1	<i>Trichodon cylindricus</i>	... 2
<i>Scapania uliginosa</i>	... 2	<i>Tritomaria exsecta</i>	... 1,3
<i>Scapania umbrosa</i>	... 1,3	<i>Tritomaria quinquedentata</i>	... 3
<i>Scapania undulata</i>	... 1	<i>Ulota hutchinsiae</i>	... 1

Irene Bisang

## LICHENS FROM EVOLÈNE AND SURROUNDINGS (SWITZERLAND)

### Abstract

An annotated list of 591 taxa of lichens and lichenicolous fungi found during a field meeting in 1990 in the Val d'Hérens and surroundings, Canton de Valais, Switzerland, is presented.

### Introduction

The 1990 biennial summer field meeting of the "Bryologische en Lichenologische Werkgroep der KNNV" (the Dutch Bryological and Lichenological Working group), held from 20 to 30 July, was based in Evolène, Val d'Hérens, Canton de Valais, in Switzerland. It was a combined meeting with the "Schweizerische Vereinigung für Bryologie und Lichenologie", and five Dutch and three Swiss with principal interest in lichens attended all or part of the meeting. They collected and identified c. 591 taxa in the Val d'Hérens and surroundings, which are presented in the list below.

Remarkably little has been published so far on the lichen flora of the Val d'Hérens and indeed of all Canton de Valais. No enumeration of lichens of any of the tributary valleys seems to exist, and the well-known works of Gams (1927) and Buschardt (1979), the most important sources for lichen floristic data on Valais, give only a very fragmentary impression of the lichen flora, and do not treat the Val d'Hérens. Occasionally, a few records can be found in recent taxonomic treatments, e.g. v.d. Boom (1992), Breuss (1990), S. Hyvönen & J. Hyvönen (1985), Laundon (1989), Lumbsch (1989), H. Mayrhofer (1987), M. Mayrhofer (1988), Mayrhofer & Poelt (1979), Poelt (1983).

## Investigation area

The Canton de Valais is situated in the centre of the Alps. It falls apart in a northern and a southern mountain area separated by an approximately east-west-running valley through which the Rhône flows. This valley, with a length of c. 160 km and a width of several km, at an altitude of c. 500 m, constitutes a lowland plain in the middle of the high mountains. In the north and south of this valley, alpine mountain slopes steeply raise to 2000 - 3000 m, intersected by narrow tributary valleys running in north-south direction. On the south side these are a.o. Val d'Héremence, Val d'Hérens and Val d'Anniviers, the valleys visited during the meeting.

Geologically the Val d'Hérens can be divided into three different sections: In the southernmost, upper part, in the surroundings of Arolla and the Val Ferpècle, granites and gneisses of the alpine bedrock are exposed. In the central part, around Evolène, the rocks are of mesozoic origin: quartzites and limestone of Triassic origin, and a series of Jurassic shales and calcareous shales known as "Bündnerschiefer". These rocks are highly metamorphic, and due to changes in mineral composition and direction of the minerals they are schistose. Moreover, they are usually rather basic. In the northernmost, lowest part of the valley, near Thyon, mainly gneisses, glimmerschists and phyllites can be found, which are equally schistose and usually basic.

The precipitation is strongly correlated with the elevation. Down in the Rhône valley, it is less than 600 mm/y. High in the mountains, e.g. at Dent Blanche, more than 3200 mm/y are measured. However, the evaporation increases also with altitude. In addition, local topography very strongly influences the climatic conditions. Thus south-exposed slopes are generally very dry, even high in the mountains, whereas north-facing slopes are much cooler and more humid, even in the Rhône valley.

These geological and climatic circumstances are reflected in the vegetation. In the lowest parts of the Val d'Hérens, with a warm and dry climate, *Pinus sylvestris* forest predominates. From the montane zone upward to about 1800 m, the forests are dominated by *Larix decidua* and *Picea abies*. The subalpine zone, c. 1800 - 2200 m, in the upper part of the valley has forest composed of *Pinus cembra* and *Larix decidua*, while at the timberline *Pinus mugo* may be found. The timberline is often lowered due to cattle grazing. Further important human influences are ski pistes and artificial lakes.

### Collecting sites

Since the meeting was based in Evolène, most excursions were made in the Val d'Hérens. However, a few trips were made in the neighbouring Val d'Héremence and Val d'Anniviers (Fig. 1). The collecting sites are located between 1350 m and 2700 m. The following list, in chronological order, contains more detailed information. For observer abbreviations, see below.

#### Val d'Hérens

1. SE of Evolène, SSE of Ferpècle, E-facing slope above La Borgne; exposed heathland with granite boulders. Grid ref. 608,6/100,5. Alt. 1950 m. 18 July 1990. Observer: PB.
2. SE of Evolène, SE of Ferpècle, 500 m WSW of Bricola, near glacier; open area, overhang and granite boulders. Grid ref. 609,4/99,4. Alt. 2150 m. 18 July 1990. Observer: PB.

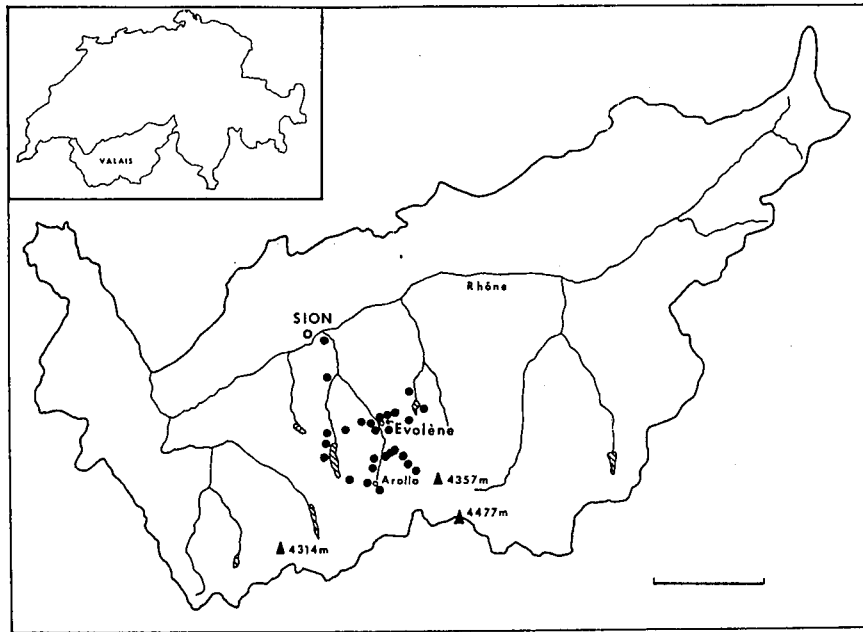


Fig. 1: Indication of some of the study areas (scale = 20 km)

3. SE of Evolène, Ferpècle, NW of storage lake; SW-facing slope with *Larix* forest near parking lot. Grid ref. 608.5/101.3. Alt. 1850 m. 18 July 1990. Observer: PB.
4. W of Evolène, S of Lana; N-facing slope with *Larix-Picea* forest and calcareous schist boulders. Grid ref. 603.3/107.2. Alt. 1500 m. 19 July 1990. 2 Aug. 1990. Observers: PB, LS.
5. W of Evolène, S of Lana; N-facing slope with *Larix-Picea* forest and calcareous schist boulders. Grid ref. 603.2/107.3. Alt. 1540 m. 19 July 1990. Observer: PB.
6. W of Evolène, Vernec; N-facing slope and edge with *Larix-Picea* forest and calcareous schist boulders in meadow. Grid ref. 601.9/107.0. Alt. 1780 m. 19 July 1990. Observer: PB.
7. W of Evolène, Barati; E-facing slope, village and calcareous schist boulders in meadow. Grid ref. 601.8/107.7. Alt. 1850 m. 19 July 1990. Observer: PB.

#### Val d'Hérémence

8. S of Sion, SW of Thyon, La Combière, near cableway; exposed heathland and shaded vertical faces along path. Grid ref. 594.3/114.3. Alt. 2090 m. 20 July 1990. Observer: PB.
9. S of Sion, SW of Thyon, La Combière; E-facing slope and shaded vertical faces along path. Grid ref. 594.3/113.8. Alt. 2100 m. 20 July 1990. Observer: PB.
10. S of Sion, SW of Thyon, La Combière; exposed heathland with granite boulders near little lake. Grid ref. 593.8/112.5. Alt. 2110 m. 20 July 1990. Observer: PB.
11. S of Sion, SW of Thyon, La Combière; E-facing slope with rock outcrops along path. Grid ref. 593.8/112.8. Alt. 2110 m. 20 July 1990. Observer: PB.

#### Val d'Hérens

12. S of Evolène; little *Alnus* forest along river La Borgne. Grid ref. 604.6/105.8. Alt. 1350 m. 20 July 1990. Observer: PB.
13. S of Evolène, between Les Haudères and Arolla, S of La Gouille; SE-facing slope with acid boulders in meadow. Grid ref. 603.9/99.9. Alt. 1820 m. 21 July 1990. Observers: PB, LS.
14. S of Evolène, N of Arolla, Pramousse; E-facing slope with acid boulders, *Larix* trees and vertical rockfaces. Grid ref. 603.7/98.7. Alt. 1850 m. 21 July 1990. Observers: PB, LS.

#### Val d'Hérémence

15. N of Lac des Dix, Mayentset; E-facing slope along road, and damp, shaded, acid boulders along stream. Grid ref. 596.9/105.3. Alt. 1700 m. 22 July 1990. Observer: PB.
  16. NW of Lac des Dix; E-facing slope with exposed weakly calcareous schist outcrops above storage lake. Grid ref. 596.8/103.2. Alt. 2420 m. 22 July 1990. Observer: PB.
- #### Val d'Hérens
17. SSE of Evolène, La Tour; *Alnus-Sorbus* wood along stream. Grid ref. 605.3/105.5. Alt. 1410 m. 22 July 1990. Observer: PB.
  18. S of Evolène, W of Arolla; *Pinus-Larix* forest and shaded vertical rockfaces along path, near hotel. Grid ref. 603.2/97.3. Alt. 2050 m. 23 July 1990. Observers: PB, HD, PK.
  19. S of Evolène, W of Arolla; *Pinus-Larix* forest and little *Salix* forest. Grid ref. 603.1/96.8. Alt. 2050 m. 23 July 1990. Observers: PB, HD, PK, LS.
  20. S of Evolène, W of Arolla; exposed hilly area with calcareous schist and granite near stream. Grid ref. 603.0/96.5. Alt. 2100 m. 23 July 1990. Observers: PB, HD, PK.
  21. E of Evolène; E-facing exposed meadow with barns and calcareous schist. Grid ref. 604.2/106.5. Alt. 1400 m. 23 July 1990. Observer: PB.
  22. E of Evolène; E-facing *Larix-Picea* forest with shaded vertical rockfaces along path and calcareous schist outcrops. Grid ref. 603.9./106.3. Alt. 1520 m. 23 July 1990. Observer: PB.

#### Val d'Anniviers

23. S of Sierre, SE of Lac de Moiry, Fête d'Août de Chateaupré; alpine pasture, W-facing slope with exposed granite and calcareous schist boulders in glacier deposits in valley. Grid ref. 610.9/106.2. Alt. 2360 m. 24 July 1990. Observers: PB, HD, PK, HS, LS.
24. S of Sierre, N of Lac de Moiry, Moretta; E-facing slope with subalpine dwarfscrub and shaded calcareous schist outcrops and gneiss boulders. Alt. 2100 m. Grid ref. 609.8/111.0. 24 July 1990. Observers: PB, HD, PK, HS, LS.

#### Val d'Hérens

25. S of Evolène, W of Arolla, along path to Pas de Chèvres. Grid ref. 599.7/96.2. Alt. 2700 m. 24 July 1990. Observer: G. Harmsen.
26. SE of Evolène, La Sage; W-facing slope with fence posts and calcareous schist outcrops in meadow. Grid ref. 606.1/105.3. Alt. 1720 m. 25 July 1990. Observers: PB, HS.
27. SE of Evolène, La Sage; W-facing slope with *Picea-Larix* forest and shaded vertical calcareous rock faces above the village. Grid ref. 606.3/105.3. Alt. 1800 m. 25 July 1990. Observers: PB, HS, LS.
28. SE of Evolène, La Sage; W-facing slope with *Larix* forest and shady blockstream. Grid ref. 606.4/105.2. Alt. 1840 m. 25 July 1990. Observers: PB, HS.
29. S of Evolène, SE of Les Haudères, at trail along river La Borgne de Ferpècle; N-facing slope with *Picea-Larix* forest and shaded vertical rock faces. Grid ref. 605.9/103.2. Alt. 1500 m. 25 July 1990. Observers: PB, HS.
30. S of Evolène, SE of Les Haudères, along river La Borgne de Ferpècle; N-exposed sloping meadow with *Acer* and well-lit schist outcrops. Grid ref. 606.1/103.2. Alt. 1540 m. 25 July 1990. Observers: PB, HD, PK, HS.
31. S of Evolène, SE of Les Haudères, along river La Borgne de Ferpècle; NE-facing slope with *Larix-Picea* forest, *Sorbus*, and calcareous rock outcrops. Grid ref. c. 606.3/103.0. Alt. 1540 m. 25 July 1990. Observers: PB, HD, PK, HS.
32. 1 km W of Evolène, Arbey; *Picea-Larix* forest and clearings on N- and E-facing slope between village and Evolène. Grid ref. c. 603.5/106.5. Alt. 1400 m. 26 July 1990. Observers: HD, PK, HS, LS.
33. S of Evolène, Arolla, along trail to Pas de Chèvres, S-side of Plan Tsardon; alpine meadows with calcareous schist boulders on SW-facing slope. Grid ref. c. 602.0/97.0. Alt. 2300-2500 m. 27 July 1990. Observers: HD, PK, HS, LS.
34. c. 4 km S of Evolène, Les Haudères, Forêt de Tauge; *Picea-Larix* forest on N-facing slope. Grid ref. c. 605.5/103.0. Alt. c. 1650 m. 28 July 1990. Observers: HD, PK, HS, LS.
35. W of Lac des Dix, W of La Barma; E-facing slope. Grid ref. 595.3/101.2. Alt. 2560 m. 30 July 1990. Observer: LS.
36. ESE of Evolène, path from Le Tsaté to Lac de Moiry, Col du Tsaté. Grid ref. 609.4/105.4. Alt. 2870 m. 31 July 1990. Observer: LS.

37. W of Evolène, Les Arpillés. Grid ref. 600,4/106,1. Alt. 2370 m. 1 Aug. 1990. Observer: LS.

38. Evolène, shore of Borgne, granite boulder in open valley. Grid ref. 604,3/106,4. Alt. 1350 m. 29 July 1990. Observer: MB.

39. 1 km SW of Evolène, vertical N face in *Larix* wood on NE slope, limestone rocks. Grid ref. 603,9/105,8. Alt. 1620 m. 29 July 1990. Observer: MB.

40. 1 km W of Evolène, large block of calcareous schist in meadow. Grid ref. 603,4/106,6. Alt. 1470 m. 29 July 1990. Observer: MB.

Val d'Héremence

41. W of Lac de Dix, c. 0.3 km W of La Barna, alpine meadow with calcareous schist. Grid ref. c. 595,6/101,1. Alt. 2500 m. 30 July 1990. Observer: MB.

Val d'Hérens

42. 4 km W of Arolla, Col de Riedmatten, S-exposed acid schistose rock. Grid ref. 599,5/96,2. Alt. 2920 m. 30 July 1990. Observer: MB.

43. SE of Evolène, 3.8 km SE of Les Haudères, Ferpècle, on SW slope with large boulders. Grid ref. 608,5/101,4. 31 July 1990. Alt. 1860 m. Observer: MB.

44. E of Sion, Tourbillon, steep S-exposed rockface with schist and top of dry hill with brittle gneiss. Grid ref. c. 594,4/120,4. Alt. 600 m. 31 July 1990. Observer: MB.

45. 0.5 km SE of Evolène, W-exposed shaded limestone rock. Grid ref. 604,8/106,4. Alt. 1400 m. 31 July 1990. Observer: MB.

46. 3.5 km WNW of Evolène, Artsinol, exposed E-facing slope with gneiss. Grid ref. 601,1/107,7. Alt. 2200 m. 1 August 1990. Observer: MB.

47. 4.1 km WSW of Evolène, 1.1 km SW of Vouasson, W-exposed rounded gneiss rocks, more or less sheltered. Grid ref. 600,4/105,8. Alt. 2380. 1 August 1990. Observer: MB.

48. 5.2 km W of Evolène, 0.2 km NE of Col de la Meina, schistose rock at shore of little lake. Grid ref. 599,3/105,8. Alt. 2640 m. 1 August 1990. Observer: MB.

49. 0.8 km SW of Evolène, *Larix* wood on NE slope with vertical face of block composed of calcareous schist. Grid ref. c. 603,9/106. Alt. c. 1560 m. 2 August 1990. Observer: MB.

50. 1.9 km NW of Evolène, *Picea-Larix* wood on NE slope with blocks of calcareous schist. Grid ref. c. 603/108. Alt. 1350 m. Observer: MB.

51. SE of Evolène, 5 km SE of Les Haudères, Ferpècle, schiststones in small brook in open landscape. Grid ref. 608,8/100,1. Alt. 1950 m. 2 August 1990. Observer: MB.

52. 1.5 km W of Evolène, near lake of Arbey, base of *Picea* at edge of wood. Grid ref. 602,7/106,9. Alt. 1770 m. 3 August 1990. Observer: MB.

53. S of Evolène, 0.6 km SW of Haudères, *Acer* in hay-field. Grid ref. 605,1/105,1. Alt. 1460 m. 3 August 1990. Observer: MB.

54. S of Evolène, 1.1 km WSW of Haudères, W of road to Arolla, *Larix* wood on E slope with schistose rock in dry gully of brook. Grid ref. 604,3/103,1. Alt. 1780 m. 3 August 1990. Observer: MB.

55. S of Evolène, 2 km WSW of Les Haudères, outside tunnel in road to Arolla, E-exposed steep rocks. Grid ref. 604/102,1. Alt. 1800 m. 3 August 1990. Observer: MB.

56. S of Evolène, 2.7 km SSE of Arolla, W slope with steep to overhanging acid rock. Grid ref. 604,4/94,5. Alt. 2280 m. 4 August 1990. Observer: MB.

57. S of Evolène, 3.3 km SSE of Arolla, along path to Bertol, on siliceous stones in small brook. Grid ref. 604,7/93,8. Alt. 2380 m. 4 August 1990. Observer: MB.

58. 2.3 km ENE of Evolène, 1.2 km SW of Col de Torrent, large block of calcareous schist on SW slope, bird's perch. Grid ref. 606,6/107,6. Alt. 2380 m. 6 August 1990. Observer: MB.

59. 3.9 km ENE of Evolène, Col de Torrent, alpine grassland with calcareous schist. Grid ref. 607,2/108,7. Alt. c. 2920 m. 6 August 1990. Observer: MB.

60. 2 km NE of Evolène, Beplan, alpine grassland with large erratic block of acid schist. Grid ref. 605,5/107,4. Alt. 2180 m. 6 August 1990. Observer: MB.

61. c. 1.2 km SW of Evolène, NE slope, near edge of *Larix* wood, rotting trunk of *Picea* and calcareous schist in bed of dry brook. Grid ref. c. 603,6/106,7. Alt. 1740 m. 7 August 1990. Observer: MB.

62. c. 1.7 km WNW of Evolène, near Grotte de Glace; N slope with *Larix* wood and calcareous schist. Grid ref. c. 602,8/107,2. Alt. c. 1575 m. 7 August 1990. Observer: MB.

63. 0.5 km WNW of Evolène, shore of Borgne, just N of bridge, large boulders of schist in stream. Grid ref. 603,9/106,9. Alt. 1340 m. 7 August 1990. Observer: MB.

66. S of Evolène, 2.6 km SSW of Les Haudères, narrow valley with large block of gneiss at shore of stream. Grid ref. 604,2/101,3. Alt. 1700 m. 8 August 1990. Observer: MB.

67. S of Evolène, 1.5 km SW of Les Haudères, narrow valley with N-exposed steep shaded rock face of crumbling schist. Grid ref. 604,3/102,4. Alt. 1600 m. 8 August 1990. Observer: MB.

68. c. 1.1 km SE of Evolène, SW slope with calcareous schist in grassland. Grid ref. c. 605,2/106. Alt. 1450 m. 8 August 1990. Observer: MB.

The encountered species are listed in alphabetical order. For each species the numbers of the localities are given, where it has been collected, as indicated above. Indications of habitat, abbreviated as explained below, are often added. The list is composed of contributions by Pieter van den Boom (PB), Maarten Brand (MB), Harrie Sipman (HS), Leo Spier (LS), Han van Dobben (HD) and Pim van der Knaap (PK). The material of the latter two was identified by André Aptroot. Material of all the species is kept in the herbaria of the collectors, except the collections of HD and PK which are kept in the herbarium of André Aptroot.

We are grateful to the following specialists for their help with identification of some specimens: Dr. O. Breuss, Vienna (*Placopyrenium*), Dr. P. Clerc, Geneva (part of the *Usnea* specimens), Dr. P. Diederich, Luxemburg (lichenicolous fungi), Dr. H. Mayrhofer, Graz (*Protothelenella* and *Rinodina*), Dr. W. Obermayer, Graz (*Arthrorhaphis*), Dr. L. Tibell, Uppsala (*Caliciales*).

#### Substrate abbreviations

Ac = *Acer*

Acp = *Acer pseudoplatanus*

Al = *Alnus*

La = *Larix*

Pic = *Picea*

Pin = *Pinus*

Po = *Populus*

Rh = *Rhododendron*

Sa = *Salix*

So = *Sorbus*

c = calcareous rock

s = siliceous rock

e = epilithic (unident. rock)

w = wood

p = stump

m = moss

t = terricolous

#### List of species

*Acarospora badiofusca* (Nyl.) Th. Fr., 13, on exposed vertical surface of gneiss.

*Acarospora bullata* Vain., 57s.

*Acarospora cervina* (Pers.) Massal., 4c 7c 16c.

*Acarospora chlorophana* (Wahlenb.) Massal.,

9s, only a small specimen, on overhang.

*Acarospora fuscata* (Nyl.) Arn., 13s 24s 26s.

*Acarospora glaucocarpa* (Ach.) Körber, 22c.

*Acarospora* cf. *heppii* (Naegeli) Naegeli, 22, on

calcareous schist, shaded in a forest, thallus only visible around the apothecia, which are 0.5 mm in diam and epruinose, hymenium ca. 80  $\mu$ m high, paraphyses 2  $\mu$ m thick at the base and 3  $\mu$ m at the apices.

*Acarospora impressula* Th. Fr., 38c.

*Acarospora laqueata* Stiz., 44e.

*Acarospora* cf. *umblicata* Bagl., 24s.

*Acarospora veroniensis* Massal., 6s 30s 40s.

*Agonimia tristricula* (Nyl.) Zahlbr., 5t 16t, on moss. The latter specimen is accompanied by *Bryonora castanea* and has several perithecia.

*Alectoria nigricans* (Ach.) Nyl., 41.

*Alectoria ochroleuca* (Hoffm.) Massal., 25t.

*Anaptychia ciliaris* (L.) Körber, 12Al.

*Anema deceptans* (Massal.) Forss., 54s.

*Anema nummularium* (Duf.) Nyl., 44e.

*Arthonia exilis* (Flörke) Anzi, 65.

*Arthonia intexta* Almq., 46, on *Lecidella carpathica*.

*Arthonia punctiformis* Ach., 53, on twigs of *Acer*.

*Arthonia radiata* (Pers.) Ach., 17So 32 34So.

*Arthonia virosa* Leighton, 29p.

*Arthopyrenia lapponina* Anzi, 65.

- Arthopyrenia punctiformis* Massal., 29Ac.  
*Arthrorhaphis citrinella* (Ach.) Poelt, 18t 24m, conf. W. Obermayer.  
*Aspicilia alphoplaca* (Wahlenb. in Ach.) Poelt & Leuckert 13s 30s.  
*Aspicilia caesiocinerea* (Nyl. ex Malbr.) Arn. s.l., 16s 28s.  
*Aspicilia calcarea* (L.) Mudd, 45c.  
*Aspicilia candida* (Anzi) Hue, 36s.  
*Aspicilia cinerea* (L.) Körber, 13 32s.  
*Aspicilia contorta* (Hoffm.) Krempel., 23c 26s.  
*Aspicilia grisea* Arnold, 47c.  
*Aspicilia mastrucata* (Wahlenb.) Th. Fr., 57s.  
*Aspicilia rolleana* Hue, 15s.  
*Aspicilia melanaspsis* (Ach.) Poelt & Leuckert, 48s 63s.  
*Aspicilia radiosa* (Hoffm.) Poelt & Leuckert, 26c 55e.  
*Aspicilia supertegens* Arn., 24c.  
*Aspicilia viridescens* (Massal.) Krempel., 33c.  
*Bacidia arnoldiana* Körber, 17So.  
*Bacidia bagliettoana* (Massal. & De Not.) Jatta, 4m.  
*Bacidia beckhausii* Körber, 6p 18w 29w.  
*Bacidia circumspecta* (Nyl. ex Vain.) Malme, 19Sa.  
*Bacidia globulosa* (Flörke) Haf. & V. Wirth, 5p 29p.  
*Bacidia herbarum* (Stizenb.) Arn., 22t, on moss.  
*Bacidia naegeli* (Hepp) Zahlbr., 17So.  
*Bacidia populorum* (Massal.) Trevis., 17So.  
*Baeomyces placophyllus* Ach., 23t.  
*Baeomyces roseus* Pers., 33t.  
*Baeomyces rufus* (Hudson) Rebert., 8t.  
*Bellemerea alpina* (Sommerf.) Clauz. & Roux, 23s 46s, on exposed boulder.  
*Bellemerea cinereoufescens* (Ach.) Clauz. & Roux, 13s 23s.  
*Bellemerea sanguinea* (Krempel.) Haf. et Roux, 47s.  
*Bellemerea subcandida* (Arnold) Haf. et Roux, 41c 59c.  
*Biatora epizanthoidiza* auct., 11Pic.  
*Biatora vernalis* (L.) Fr., 23t 41t.  
*Biatorella hemisphaerica* Anzi, 21t.  
*Biatoropsis usnearum* Rs., 18, on *Usnea* on *Larix*, conf. P. Diederich.  
*Brodoa atrofusca* (Schaerer) Goward, 14s 27s.  
*Brodoa intestiniformis* (Vill.) Goward, 6s 28s.  
*Bryonora castanea* (Hepp) Poelt, 16t 23t. Both collections contain norstictic acid in the apothecia (K+r), and the margin of the apothecia is paler than the disc. The spores are 17-22 x 5.5-8 µm.  
*Bryonora pruinosa* (Th. Fr.) Holt-Hartw., 28t, on moss. The apothecial margin is darker than the disk, and the spores are 14-16 x 4.5-5.5 µm.  
*Bryoria bicolor* (Ehrh.) Brodo & Hawksw., 14t 34t.  
*Bryoria capillaris* (Ach.) Brodo & Hawksw., 9Pin 30.  
*Bryoria chalybeiformis* auct., 57.  
*Bryoria fuscescens* (Gyelnik) Brodo & Hawksw., 9Pin 14t 27La 34Pic.  
*Bryoria implexa* (Hoffm.) Brodo & Hawksw., 49La 52Pic 64La.  
*Bryoria nadvornikiana* (Gyelnik) Brodo & Hawksw., 4La.  
*Bryoria urangiana* (Gyelnik) Brodo & Hawksw., 3La.  
*Buellia chlorophaea* (Hepp ex Leight.) Lett., 30s.  
*Buellia epigaea* (Pers.) Tuck., 23.  
*Buellia geophila* (Sommerf.) Lyng., 23t.  
*Buellia griseovirens* (Turner & Borrer) Almb., 4p 19p.  
*Buellia insignis* (Naeg. ex Hepp) Th. Fr., 13t 23 28t.  
*Buellia cf. leptocline* (Flot.) Körber, 46s.  
*Buellia papillata* (Sommerf.) Tuck., 16t.  
*Buellia cf. poeltii* Schauer, 19 on a stump, thallus K-, spores 7.5-8.5 x 18-20 µm, hymenium c. 45 µm. Growing together with *B. punctata*.  
*Buellia punctata* (Hoffm.) Massal., 14t 14La 18La 21w 27 32.  
*Buellia schaeereri* de Not., 6Pic 30Ac 32La 34La.  
*Buellia subdisciformis* (Leight.) Vain., 15s.  
*Buellia ubertor* Anzi, 57s.  
*Buellia zahlbruckneri* Steiner, 14La 19Sa.  
*Calicium adspersum* Pers., 14La.  
*Calicium subquercinum* Asah., 50, wood of *Picea*.  
*Calicium trabinellum* Ach., 4p 14p 29p 30.  
*Calicium viride* Pers., 62La.  
*Caloplaca aloiciza* (Massal.) Mig., 59c 68c.  
*Caloplaca amniospila* (Wahlenb.) Oliv., 33t.  
*Caloplaca aractina* (Anzi) Jatta, 28s.  
*Caloplaca arenaria* (Pers.) Müll. Arg., 2s 24s 30s 32s 38s 48s, collections with spores of 10-13 x 3-4 µm and a septum of < 1 µm which refers to *C. rubroaurantiaca* B. de Lesd. are also included.  
*Caloplaca biatorina* (Massal.) Steiner ssp. *biatorina*, 33c.  
*Caloplaca bryochryson* Poelt, 62.  
*Caloplaca cerina* (Ehrh. ex Hedw.) Th. Fr., 6Al.

- Caloplaca cerina* var. *muscorum* (Massal.) Jatta, 16s.  
*Caloplaca cinnamomea* (Th. Fr.) Oliv., 23t.  
*Caloplaca cirrochroa* (Ach.) Th. Fr., 22c 27c.  
*Caloplaca cf. conversa* (Krempel.) Jatta, 20c.  
*Caloplaca crenularia* (With.) Laundon, 14s.  
*Caloplaca decipiens* (Arn.) Blomb. & Forss., 27c.  
*Caloplaca exsecuta* (Nyl.) DT, 60s.  
*Caloplaca flavescens* (Huds.) Laund., 48e.  
*Caloplaca flavovirescens* (Wulfen) DT & Sarnth., 15s 21c 30 31c.  
*Caloplaca herbidella* (Hue) H. Magn., 32.  
*Caloplaca holocarpa* (Hoffm.) Wade, 59.  
*Caloplaca irrubescens* (Nyl.) Zahlbr., 40c 50c.  
*Caloplaca tsiditigera* Vezda, 1s 23s.  
*Caloplaca lactea* (Massal.) Zahlbr., 23 33.  
*Caloplaca leucoraea* (Ach.) Branth, 33.  
*Caloplaca obliterans* (Nyl.) Blomb. & Forss., 29c 50c.  
*Caloplaca pyracea* (Ach.) Th. Fr., 32.  
*Caloplaca saxicola* (Hoffm.) Nordin, 21c 48e 27s.  
*Caloplaca stillicidiorum* (Vahl) Lyng., 41 45 49 66.  
*Caloplaca subathallina* H. Magn., 31So.  
*Caloplaca tegularis* auct., 24s.  
*Caloplaca tetraspora* (Nyl.) Oliv., 16t.  
*Caloplaca tirolensis* Zahlbr., 6m 23m.  
*Caloplaca variabilis* (Pers.) Müll. Arg., 26c.  
*Caloplaca velana* (Massal.) Du Rietz, 7c 33 44e.  
*Candelaria concolor* (Dickson) Stein, 53.  
*Candelariella aurella* (Hoffm.) Zahlbr., 23e 33e 59c.  
*Candelariella reflexa* (Nyl.) Lettau, 19Sa.  
*Candelariella vitellina* (Hoffm.) Müll. Arg., 16s, moss 31So.  
*Candelariella xanthostigma* (Ach.) Lettau, 6p.  
*Carbonea atronivea* (Arn.) Hertel, 58c 59c.  
*Carbonea vitellinaria* (Nyl.) Hertel, 36s, on *C. vitellina*.  
*Catapyrenium cinereum* (Pers.) Körber, 23t 33t.  
*Catapyrenium lachneum* (Ach.) R. Sant., 24, terricolous among schist.  
*Catapyrenium waltherti* (Krempel.) Körber, 41t, the distribution of this species is restricted to the arctic and the alpine zones. Only one record is mentioned from Switzerland by Breuss (1990).  
*Catillaria chalybeta* (Körber) Massal., 50c 63e.  
*Catillaria contristans* (Nyl.) Zahlbr., 24c.  
*Catillaria lenticularis* (Ach.) Th. Fr., 22c.  
*Catillaria nigroclavata* (Nyl.) Schuler, 32Po.  
*Catinarina atropurpurea* (Schaerer) Vezda, 30.  
*Cetraria chlorophylla* (Willd.) Vain., 14La 18La 34.  
*Cetraria cucullata* (Bell.) Ach., 8t 14t.  
*Cetraria ericetorum* Opiz, 8t.  
*Cetraria hepaticum* (Ach.) Vain., 8s 13s 28s.  
*Cetraria islandica* (L.) Ach., 1t 18t 34t.  
*Cetraria nivalis* (L.) Ach., 16t 37t.  
*Cetraria pinastri* (Scop.) S.F. Gray, 11Pic 20w 28La.  
*Cetraria tilesii* auct., 23t.  
*Chaenotheca brunneola* (Ach.) Müll. Arg., 50w.  
*Chaenotheca chlorella* (Ach.) Müll. Arg., 5p 29p, conf. L. Tibell.  
*Chaenotheca chrysocephala* (Turn.) Th. Fr., 32.  
*Chaenotheca furfuracea* (L.) Tibell, 6t 17So 34.  
*Chaenotheca phaeocephala* (Turn.) Th. Fr., 32.  
*Chaenotheca trichialis* (Ach.) Th. Fr., 5p 6Pic 32 34.  
*Chaenotheca xyloxena* Nädv., 17p, conf. L. Tibell.  
*Chaenothecopsis cf. debilis* (Turn. et Borr.) Tibell, 62La.  
*Chaenothecopsis pusilla* (Flörke) A. Schmidt, 6p 9p, det. L. Tibell.  
*Chaenothecopsis cf. vridreagens* (Nädv.) A. Schmidt, 50w.  
*Chrysopsis testacea* (Hoffm.) Cholsy, 44c.  
*Chrysothrix candelaris* (L.) Laundon, 6Pic 20Pic.  
*Cladina arbuscula* (Wallr.) Hale & Culb., 3t 24.  
*Cladina mitis* (Sandst.) Hustich, 8t.  
*Cladina rangiferina* (L.) Nyl., 3t 24t.  
*Cladina stellaris* (Opiz) Brodo, 65t.  
*Cladonia borealis* Stenroos, 8t 23c 28m 34m. Containing usnic and barbatic acids (TLC).  
*Cladonia cariosa* (Ach.) Sprengel, 64t.  
*Cladonia cenotea* (Ach.) Schaerer, 6p 34 62La.  
*Cladonia cervicornis* (Ach.) Flotow ssp. *cervicornis*, 8t 20t.  
*Cladonia chlorophaea* (Flörke ex Sommerf.) Spreng. em. Asah., 34.  
*Cladonia contocraea* (Flörke) Sprengel, 19.  
*Cladonia deformis* auct., 24 34.  
*Cladonia digitata* (L.) Hoffm., 34.  
*Cladonia ecmocyna* (Gray) Leighton, 35 36.  
*Cladonia fibriata* (L.) Fr., 8t 22t 27 28m.  
*Cladonia furcata* (Huds.) Schrad., 24.  
*Cladonia gracilis* (L.) Willd. var. *gracilis*, 8t.

- Cladonia grayi* G.K. Merrill ex Sandst., 43, with grayanic acid.  
*Cladonia humilis* (With.) Laundon var. *bourgeanica* Archer, 46t, with bourgeanic acid.  
*Cladonia macroceras* (Del.) Ahti, 24 34.  
*Cladonia macrophylla* (Schaerer) Stenh., 4 37.  
*Cladonia macrophyllodes* Nyl., 24 33 41 47.  
*Cladonia merochlorophaea* Asah. var. *merochlorophaea*, 43 56 65.  
*Cladonia merochlorophaea* Asah. var. *novochlorophaea* Sipman, 43 56 65.  
*Cladonia phyllophora* Hoffm., 18t 24t 28t 43t.  
*Cladonia pleurota* (Flörke) Schaerer, 28t.  
*Cladonia pocillum* (Ach.) O.J. Rich., 23t.  
*Cladonia pyxidata* (L.) Hoffm., 20t 46t 56t.  
*Cladonia rangiformis* Hoffm., 36t.  
*Cladonia subulata* (L.) Weber, 5t 34t.  
*Cladonia symphyocarpa* (Ach.) Fr., 23t 56t.  
*Cladonia uncialis* (L.) Wigg., 37t 47t.  
*Clauzadea monticola* (Ach.) Haf. & Bellem., 23e 66e.  
*Clitostomum corrugatum* (Ach.) Fr., 5p.  
*Coelocaulon aculeatum* (Schreber) Link, 23t 34t.  
*Coelocaulon muricatum* (Ach.) Laundon, 14t 23t 28t 34t 35t.  
*Collema auriforme* (With.) Coppins & Laundon, 16s.  
*Collema calloptismum* Massal., 54.  
*Collema ceraniscum* Nyl., 41.  
*Collema crispum* (Huds.) G.H. Web., 30.  
*Collema cristatum* (L.) Weber, 22e on moss.  
*Collema flaccidum* (Ach.) Ach., 31 23 30.  
*Collema fuscovirens* (With.) Laundon, 58c.  
*Collema polycarpon* Hoffm., 16c.  
*Collema undulatum* Laurer ex Flotow, 49c 56c 59c.  
*Cornicularia normoerica* (Gunn.) Du Rietz, 13s.  
*Cybebe gracilentia* (Ach.) Tibell, 27c in crevice of overhang, det. L. Tibell.  
*Cyphelium inquinans* (Sm.) Trevisan, 27La.  
*Cyphelium notarisii* (Tul.) Blomb. & Forss., 32w.  
*Cyphelium tigillare* (Ach.) Ach., 14La 19p. In the collection of loc. 14 the yellow pigment is scarce, most of the thallus is grey.  
*Cystocoleus ebeneus* (Dillw.) Thwaites, 11s.  
*Dacampia engeliana* (Saut.) Massal., 5, on *Solorina saccata*.  
*Dacampia hookeri* (Borr.) Massal., 23, this placodioid lichen was growing on soil. We consider this white to grey thallus with perithecia as a separated species.  
*Dactylina madreporiformis* (Wulf.) Tuck., 59.  
*Dactylospora saxatilis* (Schaerer) Haf., 13s, on *Pertusaria*.  
*Dermatocarpon intestiniforme* (Körber) Hasse, 16s 20s.  
*Dermatocarpon* cf. *luridum* (With.) Laundon, 48, a collection of scanty material.  
*Dermatocarpon minutum* (L.) Mann, 14e 18c 33e.  
*Dimelaena oreina* (Ach.) Norm., 24s 48s.  
*Diploschistes gypsaceus* (Ach.) Zahlbr., 44c.  
*Diploschistes muscorum* (Scop.) R. Sant., 4m 44m.  
*Diploschistes ochrophanes* Lettau, 34.  
*Diploschistes scruposus* (Schreber) Norm., 13s 34e 47s.  
*Diplotomma ambiguum* (Ach.) Flag., 29s.  
*Diplotomma epipolium* (Ach.) Arn., 27c.  
*Endocarpon pallidum* Ach., 44e.  
*Endocarpon pulvinatum* Th. Fr., 58c.  
*Endocarpon pusillum* Hedw., 7c.  
*Epebe lanata* (L.) Vain., 24c.  
*Eplīchen scabrosus* (Ach.) Clem. ex Haf., 18t, on *Baeomyces rufus*.  
*Evernia divaricata* (L.) Ach., 6Pic 30.  
*Evernia mesomorpha* Nyl., 21w 27La.  
*Evernia prunastri* (L.) Ach., 27La 34.  
*Flavopunctelia flaventior* (Stirton) Hale, 32, on wood of barn.  
*Fulgensia bracteata* (Hoffm.) Rs., 23t 33t.  
*Fulgensia* cf. *fulgens* (Sw.) Elenk., 44 68.  
*Fulgensia schistidii* (Anzi) Poelt, 45.  
*Glypholecia scabra* (Pers.) Müll. Arg., 33e.  
*Gyalecta geoica* (Wahlenb.) Ach., 33t.  
*Gyalecta jenenstis* (Batsch) Zahlbr., 34e.  
*Hymenelia prevostii* (Fr.) Krempel., 33.  
*Hypocenyce caradocensis* (Leighton ex Nyl.) P. James & G. Schneider, 27, on *Larix*, together with *Cyphelium tigillare*.  
*Hypocenyce scalaris* (Ach.) Choisy, 3p 27.  
*Hypogymnia austerodes* (Nyl.) Rs., 19Sa.  
*Hypogymnia bitteri* (Lyng.) Ahti, 32 34.  
*Hypogymnia farinacea* Zopf, 27La.  
*Hypogymnia physodes* (L.) Nyl., 14s 27.  
*Hypogymnia tubulosa* (Schaerer) Hav., 30.  
*Hypogymnia vittata* (Ach.) Parr., 34, on moss.  
*Icmadophila ericetorum* (L.) Zahlbr., 14La 34.  
*Illosporium carneum* Fr., 34.  
*Imshaugia aleurites* (Ach.) Fricke Meyer, 27La.  
*Karschia talcophila* (Ach. ex Flot.) Körber, 34, on *Diploschistes scruposus*.  
*Koerberiella wimmeriana* (Körber) Stein, 16s 48.

- Lecania cyrtella* (Ach.) Th. Fr., 17So 19Sa.  
*Lecania polycycla* (Anzi) Lettau, 63e, a small collection with only a few apothecia.  
*Lecania suavis* (Müll. Arg.) Migula, 24e, growing on a very shaded overhanging rock together with *Caloplaca tegularis*. It is probably a first record for Switzerland and already published (v.d. Boom 1992).  
*Lecanora argopholis* (Ach.) Ach., 15s 16s 47s 66s. This collection contains atranorin. This species has a circumpolar and continental distribution and is common in the Alps. (Vänskä 1984).  
*Lecanora allophana* (Ach.) Nyl., 32.  
*Lecanora argentata* (Ach.) Malme, 12Al 30Ac.  
*Lecanora bicincta* Ram., 33.  
*Lecanora cadubriae* (Massal.) Hedl., 6w 9Pin 14La 31La 32La 62La.  
*Lecanora campestris* (Schaerer) Hue, 24s 66s.  
*Lecanora carpineae* (L.) Vain., 12Al 29w 53Ac.  
*Lecanora centisia* Ach., 10s 28s 46s.  
*Lecanora chlorotera* Nyl., 12Al 30So 32 53Ac.  
*Lecanora chloropolia* (Erichsen) Almb., 32.  
*Lecanora circumborealis* Brodo & Vitik., 26w 43Rh 52Pic.  
*Lecanora crenulata* (Dickson) Hooker, 29c, on a vertical rockface, scattered among *L. dispersa*.  
*Lecanora dispersa* (Pers.) Sommerf., 13s 23 29c 33.  
*Lecanora dispersoaeolata* (Schaerer) Lamy, 33c 59c.  
*Lecanora epibryon* (Ach.) Ach., 33t 59.  
*Lecanora expallens* Ach., 30Acp.  
*Lecanora fuscescens* (Sommerf.) Nyl., 8Rh 9Pin.  
*Lecanora garovaglii* (Körber) Zahlbr., 44s 68s.  
*Lecanora hagenii* (Ach.) Ach., 6Al 19Sa 59c.  
*Lecanora* cf. *hypoptoides* (Nyl.) Nyl., 14La. Thallus grey, thin; apothecia red-brown to dark brown, convex, epithecium without epi-samma; spores 3.5-4.5 x 10-11 m.  
*Lecanora intricata* (Ach.) Ach., 14s 60e.  
*Lecanora intumescens* (Rebent.) Rabenh., 30Acp.  
*Lecanora marginata* (Schaerer) Hertel & Ramb. ssp. *elata* (Schaerer) Clauz. et Roux, 16s, on shaded rockface.  
*Lecanora mughicola* Nyl., 32w.  
*Lecanora muralis* (Schreber) Rabenh., 25c 32c 44e 60s.  
*Lecanora pituperda* Körber, 34 52Pic.  
*Lecanora polytropa* (Hoffm.) Rabenh., 24s 28s 33s 57s.  
*Lecanora pulicaris* (Pers.) Ach., 19Pin 19Sa 30 32 65. Some specimens have P-negative apothecial margins.  
*Lecanora rupicola* (L.) Zahlbr. ssp. *rupicola*, 13s 28s.  
*Lecanora rupicola* ssp. *subplanata* (Nyl.) Leuckert & Poelt, 13s 16s 20s 24s.  
*Lecanora salicicola* H. Magn., 20Rh 24Rh.  
*Lecanora saligna* (Schrader) Zahlbr., 21w 38La 64.  
*Lecanora subintricata* (Nyl.) Th. Fr., 64.  
*Lecanora symnicta* (Ach.) Ach., 12Al.  
*Lecanora valesiaca* Müll. Arg., 68s.  
*Lecanora varia* (Hoffm.) Ach., 6w 14La 14La 32w 34 65.  
*Lecidea antiloga* Stirt., 61La.  
*Lecidea atrobrunnea* (Ram. ex Lam. & DC.) Schaerer, 33s 35s 59s.  
*Lecidea atroviridis* (Arn.) Th. Fr., 13s.  
*Lecidea auriculata* Th. Fr., 1s 15s 20s 23s.  
*Lecidea confluens* (Weber) Ach., 10s 14s 27 28 34.  
*Lecidea diducens* Nyl., 57s.  
*Lecidea haerjedalica* H. Magn., 57.  
*Lecidea helvola* (Körber ex Hellb.) Hedl., 34.  
*Lecidea lactea* Flörke ex Schaerer, 15s 43s 57s.  
*Lecidea lapicida* (Ach.) Ach., 28s.  
*Lecidea leprosolimbata* (Arn.) Lett. ex Poelt, 41.  
*Lecidea lithophila* (Ach.) Ach., 33s.  
*Lecidea luteoatra* Nyl., 56s.  
*Lecidea paratropoides* Müll. Arg., 57s.  
*Lecidea promiscua* var. *ceruvinicola* (B. de Lesd.) Clauz. et Roux, 60.  
*Lecidea promiscua* var. *promiscens* (Nyl.) Clauz. et Roux, 41 43.  
*Lecidea pullata* (Norm.) Th. Fr., 14La 20w 29w.  
*Lecidea rufofusca* (Anzi) Nyl., 48e.  
*Lecidea swartzioidea* Nyl., 13, on vertical shaded surface of boulder.  
*Lecidea tessellata* Flörke, 42s 59e.  
*Lecidea turgidula* Fr., 18La.  
*Lecidea ultima* Th. Fr., 59c.  
*Lecidella carpathica* Körber, 10s 13s 24s 28 32 34.  
*Lecidella elaeochroma* (Ach.) Choisy, 9Pin.  
*Lecidella euphorea* (Flörke) Hertel, 19Sa 30Ac.  
*Lecidella inamoena* (Müll. Arg.) Hertel, 45c 58c 59c 66c.  
*Lecidella stigmataea* (Ach.) Hertel & Leuckert, 15s 16c 31c 33 49c.  
*Lecidella subincongrua* (Nyl.) Hertel & Leuckert, 11s.  
*Lecidella wulfenii* (Hepp) Körber, 16t (moss) 23t 59t.

- Lecidoma demissum* (Rustr.) Scheider et Hertel, 33t 47t 48t.  
*Lempholemma myriococcum* (Ach.) Th. Fr., 27t 40 63e.  
*Lepraria incana* (L.) Ach., 32Pic, with divaricatic acid.  
*Lepraria neglecta* Vain. s.l., 6s 20m 23m 24.  
*Leptoloma membranaceum* (Dicks.) Vain., 24c.  
*Leptoplaca chrysodeta* (Vain. ex Rs.) Laundon, 34e.  
*Leptoplaca xantholyta* (Nyl.) Hue, 49.  
*Leptogium gelatinosum* (With.) Laundon, 7s 16c, on moss on vertical rockface.  
*Leptogium minutissimum* (Flörke) Fr., 24t, on moss on vertical rockface.  
*Leptogium lichenoides* (L.) Zahlbr., 4t 22t.  
*Leptogium saturninum* (Dickson) Nyl., 9s 32, on overhanging rock (loc 9).  
*Leptogium schraderei* (Ach.) Nyl., 21c.  
*Leptogium tenuissimum* (Dickson) Körber, 18t.  
*Letharia vulpina* (L.) Hue, 3La 27La 65Pin.  
*Lichenostigma maureri* Haf., 47, on *Usnea*.  
*Lichenothelia scopularia* (Nyl.) Hawksw., 38s.  
*Lobaria linita* (Ach.) Rabenh., 9t 25t.  
*Lobaria scrobiculata* (Scop.) DC., 43t.  
*Lopadium pezizoldeum* (Ach.) Körber, 8t.  
*Megasporea verrucosa* (Ach.) Haf. & V. Wirth, 23t 41t 58t 59t.  
*Melanella disjuncta* (Erichsen) Essl., 13s 20s, on vertical shaded surface.  
*Melanella exasperata* (de Not.) Essl., 32.  
*Melanella exasperatula* (Nyl.) Essl., 19Sa 52Pic.  
*Melanella glabrata* (Lamy) Essl. ssp. *glabrata*, 12Al.  
*Melanella panniformis* (Nyl.) Essl., 24s.  
*Melanella solediosa* (Almb.) Essl., 28s.  
*Melanella stygia* (L.) Essl., 28s.  
*Melanella subargentifera* (Nyl.) Essl., 12Al 30Ac 32Ac.  
*Melanella substygia* (Rs.) Essl., 48s.  
*Melanolecia* cf. *dissipabilis* (Nyl.) Hertel, 54 59.  
*Melanolecia jurana* (Schaerer) Hertel, 59c.  
*Micarea denigrata* (Fr.) Hedl., 61w.  
*Micarea lignaria* (Ach.) Hedl. var. *lignaria*, 43.  
*Micarea lutulata* (Nyl.) Coppins, 46s.  
*Micarea melaena* (Nyl.) Hedl., 29p.  
*Micarea melanobola* (Nyl.) Coppins, 61, for a long time this species was only known with certainty from the type locality in southern Finland (Coppins 1983), but recently also mentioned from France (Vivant 1988).  
*Micarea misella* (Nyl.) Hedl., 3p 27La 29p.  
*Micarea prasina* Fr., 34.  
*Microcalicium subpedicellatum* (Schaerer) Tibell, 30.
- Mitriquidica garovaglitii* (Schaerer) Hertel & Rambold, 13s 42s 57s.  
*Mitriquidica instrata* (Nyl.) Hertel & Rambold, 28s.  
*Mitriquidica intrudens* (H. Magn.) Hertel & Rambold, 46s.  
*Mitriquidica nigroleprosa* (Vain.) Hertel & Rambold, 57s.  
*Muellerella pygmaea* (Körber) Hawksw., 33, on *Caloplaca* sp.  
*Mycobilimbia fusca* (Massal.) Haf. & V. Wirth, 20t 22t 29t.  
*Mycobilimbia hypnorum* (Libert) Kalb & Haf., 23p 23t.  
*Mycobilimbia lobulata* (Sommerf.) Haf., 27 33.  
*Mycobilimbia sabuletorum* (Schreber) Haf., 29c.  
*Mycocalicium parietinum* (Ach. ex Schaerer) Hawksw., 30.  
*Mycopyrenula coryli* (Massal.) Vain., 17Al.  
*Mycoblastus sanguinarius* (L.) Norm., 32La.  
*Mycoporum hippocastani* (DC.) Coppins, 65.  
*Neofuscelia delisei* (Nyl.) Essl., 14s 60s.  
*Neofuscelia loxodes* (Nyl.) Essl., 24s.  
*Nephroma bellum* (Sprengel) Tuck., 6p 34.  
*Nephroma expallidum* (Nyl.) Nyl., 48.  
*Nephroma laevigatum* Ach., 34.  
*Nephroma parile* (Ach.) Ach., 8c 14c 34.  
*Nephroma resupinatum* (L.) Ach., 34.  
*Nigropuncta rugulosa* D. Hawksw., 24s, on overhanging rock, det. P. Diederich.  
*Ochrolechia alboflavescens* (Wulfen) Zahlbr., 11Pic 27 32.  
*Ochrolechia androgyna* (Hoffm.) Arn., 13t, on moss.  
*Ochrolechia inaequatula* (Nyl.) Zahlbr., 41 59.  
*Ochrolechia microstictoides* Rs., 14La  
*Ochrolechia subviridis* (Hoeg) Erichsen, 14c, on moss on N side of boulder.  
*Ochrolechia turneri* (Sm.) Hasselr., 27La.  
*Opegrapha gyrocarpa* Flotow, 34e.  
*Opegrapha zonata* Körber, 29s.  
*Ophioparma ventosum* (L.) Norman, 6s.  
*Pannaria leucophaea* (Vahl) P.M. Jorg., 6t 11s 16t 34.  
*Pannaria pezizoides* (Weber) Trevisan, 6t.  
*Pannaria praeterrissa* Nyl., 6s 11s 15s 24s.  
*Parmelia omphalodes* (L.) Ach., 24s.  
*Parmelia saxatilis* (L.) Ach., 8t 34.  
*Parmelia sulcata* Taylor, 32.  
*Parmelina quercina* (Willd.) Hale, 32.

- Parmeliella triptophylla* (Ach.) Müll. Arg., 24s.  
*Parmelopsis ambigua* (Wulfen) Nyl., 3p.  
*Parmelopsis hyperopta* (Ach.) Arn., 20w 34.  
*Peccania coralloides* Massal., 44 68.  
*Peltigera aptosa* (L.) Willd., 5t 8t 34 43.  
*Peltigera canina* (L.) Willd., 29t 49t 50t 54t.  
*Peltigera collina* (Ach.) Schrader, 34.  
*Peltigera degenii* Gyelnik, 34t.  
*Peltigera didactyla* (With.) Laundon, 2t 51t.  
*Peltigera elisabethae* Gyelnik, 30t 35t 49t 50t.  
*Peltigera horizontalis* (Hudson) Baumg., 34 49 50.  
*Peltigera lepidophora* (Nyl.) Bitt., 41t 59t.  
*Peltigera leucophlebia* (Nyl.) Gyelnik, 34 37 43.  
*Peltigera malacea* (Ach.) Funck, 8t 34 43.  
*Peltigera membranacea* (Ach.) Nyl., 22t 29t 34.  
*Peltigera neckeri* Müll. Arg., 14t 29t 34t 38t 49t.  
*Peltigera polydactyla* (Neck.) Hoffm., 50.  
*Peltigera praetextata* (Flörke ex Sommerf.) Zopf, 22t 34 49.  
*Peltigera rufescens* (Weiss) Humb., 11t 18t 34 45 48.  
*Peltigera venosa* (L.) Hoffm., 9t.  
*Pertusaria albescens* (Hudson) Choisy & Werner, 32La.  
*Pertusaria amara* (Ach.) Nyl., 32Pic 45.  
*Pertusaria coccodes* (Ach.) Nyl., 27La.  
*Pertusaria corallina* (L.) Arn., 13s 34e.  
*Pertusaria flavicans* Lamy, 59.  
*Pertusaria lactea* (L.) Arn., 29s 34e.  
*Pertusaria pseudocorallina* (Liljeblad) Arn., 13s, on S exposed sloping surface.  
*Phacopsis huuskonenii* Rs., 22, on *Bryoria* on *Picea*.  
*Phaeocalicium compressulum* (Nyl. ex Szat.) A. Schmidt, 34, on *Atrius* twigs.  
*Phaeophyscia ciliata* (Hoffm.) Moberg, 32.  
*Phaeophyscia constipata* (Norrl. et Nyl.) Moberg, 4, on moss.  
*Phaeophyscia endococcina* (Körber) Moberg, 14s 20s 65.  
*Phaeophyscia endophaenicea* (Harm.) Moberg, 53.  
*Phaeophyscia nigricans* (Flörke) Moberg, 1s, on vertical shaded gneiss rockface.  
*Phaeophyscia orbicularis* (Neck.) Moberg, 32.  
*Phaeophyscia sciastra* (Ach.) Moberg, 24s 30s.  
*Phaeorrhiza nimbosa* (Fr.) Mayrh. et Poelt, 23t 59t.  
*Phaeospora parasitica* (Lönner.) Arn., 29, on *Rhizocarpon concentricum*.  
*Physcia aipolia* (Ehrh. ex Humb.) Fűrnr., 27La 32.  
*Physcia caesia* (Hoffm.) Fűrnr., 20s.  
*Physcia dubia* (Hoffm.) Lettau, 2s 20s 23s 48.
- Physcia stellaris* (L.) Nyl., 6Al 12Al.  
*Physcia tenella* (Scop.) DC., 19Sa.  
*Physconia distorta* (With.) Laundon, 32.  
*Physconia grisea* (Lam.) Poelt, 32, on wood of barn.  
*Physconia muscigena* (Ach.) Poelt, 6c 23c 44.  
*Physconia peristidiosa* (Erichs.) Moberg, 31, on rock.  
*Placopyrenium tatrense* (Vezda) Breuss, 24s, conf. O. Breuss.  
*Placynthiella oligotropha* (Laund.) Coppins & James, 18t 48t.  
*Placynthium asperellum* (Ach.) Trevisan, 13s.  
*Placynthium garovaglitii* (Massal.) Malme, 39c 49c 68.  
*Placynthium nigrum* (Hudson) S.F. Gray, 22c 24t.  
*Placynthium pluriseptatum* (Arn.) Arn., 47e.  
*Placynthium* cf. *subradiatum* (Nyl.) Arn., 68e.  
*Placynthium tantaleum* (Hepp) Hue, 54c 61c.  
*Plattismatia glauca* (L.) Culb. & Culb., 34.  
*Pleurosticta acetabulum* (Necker) Elix & Lumbsch, 19Sa.  
*Polyblastia albida* Arn., 20c 23c.  
*Polyblastia cupularis* Massal., 14s 39e 41e 49e 50e 54e 58e.  
*Polyblastia dermatodes* Massal., 23c 49e.  
*Polyblastia gelatinosa* (Ach.) Th. Fr., 41t.  
*Polyblastia melaspora* (Tayl.) Zahlbr., 51e.  
*Polyblastia pallescens* (Nyl.) Lönner., 56e 66e.  
*Polyblastia sendtneri* Krempel., 41.  
*Polyblastia verrucosa* (Ach.) Lönner., 2s.  
*Polyblastia* sp., 24, a small collection, composed of densely cylindrical branches with a 13-15µm wide, one cell thick, hyaline cortical layer bearing a few papillae. Perithecia were not found. Very similar to collections from The Netherlands which have perithecia. This plant was growing on moss on an E-facing vertical surface, associated with *Placopyrenium tatrense*.  
*Polychidium muscicola* (Sw.) S.F. Gray, 24m.  
*Polysporina simplex* (Dav.) Vezda, 24s.  
*Porpidia cinereoatra* (Ach.) Hertel & Knoph, 23s.  
*Porpidia crustulata* (Ach.) Hertel et Knoph, 64e.  
*Porpidia macrocarpa* (DC.) Hertel & Schwab, 2s 29s 49s.

- Porpidia nigrocruenta* (Anzi) Hertel, 40e 47e 66e.  
*Porpidia speirea* (Ach.) Krempel., 20s 59s.  
*Protoblastenia rupestris* (Scop.) Steiner, 22c 23c 50c.  
*Protoblastenia siebenhaariana* (Körber) Steiner, 54.  
*Protoblastenia terricola* (Anzi) Lyng., 23t 33 41.  
*Protoparmelia badia* (Hoffm.) Haf., 20s 23s 28s 33s.  
*Protothelenella croceae* (Bagl. & Car.) Haf. & Mayrh., 16t, known from the Alps and Fennoscandia, but only one record mentioned from Switzerland by H. Mayrhofer (1987); det. H. Mayrhofer.  
*Pseudophebe minuscula* (Nyl. ex Arn.) Brodo & Hawksw., 23s 42.  
*Pseudophebe pubescens* (L.) Choisy, 6s 8s 14s 23s 27 43.  
*Pseudevernia furfuracea* (L.) Zopf, 27 34 49.  
*Psora decipiens* (Hedw.) Hoffm., 23t.  
*Psora lurida* (Ach.) DC., 16t 24t 55.  
*Psoroma hypnorum* (Vahl) S.F. Gray, 9t 20t 56t.  
*Psorinia conglomerata* (Ach.) G. Schneider, 42.  
*Psorotichia* sp., 68.  
*Pycnothelia papillaria* (Ehrh.) Duf., 33t.  
*Pyrenopsis* sp., 56 58.  
*Racodium rupestre* Pers., 24s.  
*Ramalina farinacea* (L.) Ach., 34.  
*Ramalina obtusata* (Ach.) Bitl., 34Pic.  
*Ramalina pollinaria* (Westr.) Ach., 9s 12s 24s 27La 34.  
*Ramalina polymorpha* (Ach.) Ach., 14s 32.  
*Ramalina thrausta* (Ach.) Nyl., 34.  
*Rhizocarpon alpicola* (Anzi) Rabenh., 28s.  
*Rhizocarpon badiatrum* (Flörke ex Sprengel) Th. Fr., 28s.  
*Rhizocarpon concentricum* (Dav.) Beltr., 29s.  
*Rhizocarpon disporum* (Naeg. ex Hepp) Müll. Arg., 44.  
*Rhizocarpon geminatum* Körber, 13s 16s 24s 30.  
*Rhizocarpon geographicum* (L.) DC. ssp. *diabasicum* (Rs.) Poelt & Vezda, 4s 20s 46s 47s 60s 66s.  
*Rhizocarpon geographicum* (L.) DC. ssp. *fritgidum* (Rs.) Hertel, 42 59.  
*Rhizocarpon geographicum* (L.) DC. ssp. *geographicum*, 43s 47s.  
*Rhizocarpon hochstetteri* (Körber) Vain., 42s 43s 66s.  
*Rhizocarpon lavatum* (Fr.) Arn., 24c 47 56.  
*Rhizocarpon macrosporum* Rs., 20s 42s 46s 47s 56s 60s 66s, a collection of loc. 47 contains gyrophoric acid, collections of loc. 42, 47, 60 and 66 contains cf. bourgeanic acid, collections without substances are from loc. 46, 47, 56 and 66.  
*Rhizocarpon obscuratum* (Ach.) Massal., 24s.  
*Rhizocarpon polycarpum* (Hepp) Th. Fr. 1s 10s 20s, the latter collection was growing on branches of *Rhododendron*.  
*Rhizocarpon pulverulentum* (Schaerer) Rs., 50.  
*Rhizocarpon riparium* Rs., 24s 43s 46s 47s 66s, collections of loc. 46 and 66 have barbatic acid, collections of loc. 43, 47, 60 and 66 have psoromic acid.  
*Rhizocarpon subclucidum* Rs., 47s 56s 57s, collections of loc. 47 and 56 contains gyrophoric acid and collections of loc. 56 and 57 have no substances.  
*Rhizocarpon superficiale* (Schaerer) Vain., 42 57s.  
*Rhizocarpon umbilicatum* (Ram.) Flag., 23e 30e 33e 34e 39e.  
*Rhizoplaca chrysoleuca* (Sm.) Zopf, 13s 26s 48s.  
*Rhizoplaca melanophthalma* (DC.) Leuckert, 23s 57s.  
*Rimularia gibbosa* (Ach.) Coppins, Hertel & Rambold, 13s.  
*Rimularia insularis* (Nyl.) Rambold & Hertel, 28s.  
*Rinodina archaea* (Ach.) Arn., 4p 52 64 65.  
*Rinodina bischoffii* (Hepp) Massal., 26c.  
*Rinodina calcarea* (Arn.) Arn., 27c.  
*Rinodina cinnamomea* (Th. Fr.) Rs., 59.  
*Rinodina confragosa* (Ach.) Körber, 13, on shaded vertical surface of boulder.  
*Rinodina conradi* Körber, 23t.  
*Rinodina exigua* (Ach.) S.F. Gray, 6Al 16Rh 19S 22p.  
*Rinodina milvina* (Wahlenb.) Th. Fr., 24s 28s 33 46, det H. Mayrhofer.  
*Rinodina mriaraea* (Ach.) Körber, 9t 10t 20c 23t 24t 28t 41t.  
*Rinodina obnascens* (Nyl.) Oliv., 10, on *Aspicilia* sp.  
*Rinodina olivaceobrunnea* Dodge & Baker, 23t 33.  
*Rinodina rosclida* (Sommerf.) Arn., 23m 59m.  
*Rosellinula frustulosae* (Vouaux) R. Sant., 15s, on *Lecanora argopholis*.

- Sagiolechia protuberans* (Ach.) Massal., 33c.  
*Sarcogyne clavus* (DC.) Krempel., 2s.  
*Sarcogyne pusilla* Anzi, 58c 59c.  
*Sarcogyne regularis* Körber, 23c 33.  
*Sarea difformis* (Fr.) Fr., 29Pic 32.  
*Schaereria tenebrosa* (Flot.) Hertel & Poelt, 16s 28s 43s. The record of loc 16 has an epithecium with green and violet pigment which turns blue green in K, but the medulla is C+red and the cortex C-.  
*Schismatomma pericleum* (Ach.) Branth & Rostr., 32 34.  
*Scoliciosporum chlorococcum* (Graewe ex Stenh.) Vezda, 52Pic.  
*Scoliciosporum umbrinum* (Ach.) Arn. var. *corticola* (Anzi) Clauz. et Roux, 31So 65.  
*Scoliciosporum umbrinum* (Ach.) Arn. var. *umbrinum*, 2s.  
*Solorina bispora* Nyl. var. *bisporea*, 23t 33 59.  
*Solorina crocea* (L.) Ach., 8t.  
*Solorina octospora* Arn., 16t.  
*Solorina saccata* (L.) Ach., 5t 27 39.  
*Solorina spongiosa* (Sm.) Anzi, 9t.  
*Sporastatia testudinea* (Ach.) Massal., 23s.  
*Squamarina cartilaginea* (With.) P. James, 23t.  
*Squamarina gypsacea* (Sm.) Poelt, 59.  
*Staurothela cf. arctica* Lyng., 54.  
*Staurothela areolata* (Nyl.) Vain., 1c 16s 20c 33c 47c 55c 57c, very common in the investigated area.  
*Staurothela bacilligera* (Arn.) Arn., 39c.  
*Staurothela catalepta* (Ach.) Blomb. et Forss., 45c 63e.  
*Staurothela fissa* (Th. Tayl.) Zw., 57s.  
*Staurothela rufa* (Massal.) Zsch., 58c.  
*Staurothela succedens* (Rehm) Arn., 61.  
*Steinia geophana* (Nyl.) B. Stein, 8t.  
*Stereocaulon alpinum* Laur., 1t 13t 20t 23t 33, with atranorin and lobaric acid (TLC). It is a common species in the investigated area.  
*Stereocaulon glareosum* (Sav.) H. Magn., 56 57 59.  
*Stereocaulon tomentosum* Fr., 41.  
*Stereocaulon rivulorum* H. Magn., 23t, with atranorin and perlatolic acid (TLC).  
*Strangospora moriformis* (Ach.) B. Stein, 9La.  
*Strigula stigmatella* (Ach.) R.C. Harris, 50.  
*Synalissa symphorea* (Ach.) Nyl., 68.  
*Tephromela aglaea* (Sommerf.) Hertel & Rambold, 24.  
*Tephromela armeniaca* (DC.) Hertel & Rambold, 57s.  
*Tephromela atra* (Hudson) Haf., 24.  
*Thamnolia vermicularis* (Sw.) Schaerer, 23t 47t.  
*Thelidium aeneovinosum* (Anzi) Arn. 24, horizontal on gneiss, continuously submersed in a stream.  
*Thelidium decipiens* (Nyl.) Krempel., 58c.  
*Thelidium papulare* (Fr.) Arn., 61c.  
*Thelidium pyrenophorum* (Ach.) Mudd, 23c 47c 54c 59c.  
*Thelomma ocellatum* (Körber) Tibell, 21w 26w 32w.  
*Thyrea girardii* (Dur. et Mont.) Bagl. et Car., 44.  
*Thyrea pulvinata* (Schaerer) Massal., 68.  
*Thrombium epigaeum* (Pers.) Wallr., 8t 9t 64t.  
*Toninia aromatica* (Sm.) Massal., 45 55 58 68.  
*Toninia caeruleonigricans* (Lightf.) Th. Fr., 4c 44 45.  
*Toninia candida* (Weber) Th. Fr., 22m 32 33.  
*Toninia cinereovirens* (Schaerer) Massal., 44.  
*Toninia rosulata* (Anzi) Oliv., 16c.  
*Trapelia coerctata* (Sm.) Choisy, 19s 64s.  
*Trapeliopsis granulosa* (Hoffm.) Lumbsch, 13t.  
*Tremolechia atrata* (Ach.) Hertel, 42.  
*Umbilicaria cinereofuscens* (Schaerer) Frey, 57.  
*Umbilicaria crustulosa* (Ach.) Frey, 3s 6s 13s 60s.  
*Umbilicaria cylindrica* (L.) Del. ex Duby, 13s 42s 43s 47s 57s.  
*Umbilicaria decussata* (Vill.) Zahlbr., 42s.  
*Umbilicaria deusta* (L.) Baumg., 8s 24s 43s.  
*Umbilicaria hirsuta* (Sw. ex Westr.) Hoffm., 13s 15s 24s.  
*Umbilicaria hyperborea* (Ach.) Hoffm., 23s 43s.  
*Umbilicaria laevis* (Schaerer) Frey, 57s.  
*Umbilicaria microphylla* (Laur.) Massal., 42s.  
*Umbilicaria polyphylla* (L.) Baumg., 27e.  
*Umbilicaria vellea* (L.) Ach., 3s 14s 24s.  
*Usnea cavernosa* Tuck., 34.  
*Usnea diploptypus* Vain., 34.  
*Usnea filipendula* Stirt., 34.  
*Usnea hirta* (L.) Web. ex Wigg., 5Pic 27La 32 34.  
*Usnea lapponica* Vain., 12Al 27 32 34 52Pic.  
*Usnea plicata* (L.) Web. ex Wigg., 32 49La 62La.  
*Usnea scabrata* Nyl., 5Pic 12Al 18Pin 27La 32 34 49La.  
*Usnea substerilis* Mot., 3La 18La 27La 32.

- Vartcellaria rhodocarpa* (Körber) Th. Fr., 14p.  
*Verrucaria anziana* Garov., 51.  
*Verrucaria dolosa* Hepp, 20c.  
*Verrucaria glaucina* Ach., 33.  
*Verrucaria glaucovirens* Grumm., 27c.  
*Verrucaria hiasecens* Hepp, 59.  
*Verrucaria lecidoides* (Massal.) Trevis, 58.  
*Verrucaria margacea* Wahlenb., 61.  
*Verrucaria nigrescens* Pers., 49 54 55 68.  
*Verrucaria tristis* (Massal.) Krempelh., 41 58 59  
*Weddelomyces epicalloptisma* (Wedd.) D. Hawksw., 48, on *Xanthoria elegans*. This lichenicolous fungus usually grows on *Caloplaca flavescens*.

### References

- Boom, P.P.G. van den, 1992. The saxicolous species of the lichen genus *Lecania* in The Netherlands, Belgium and Luxemburg. *Nova Hedwigia* 54: 229-254.  
 Buschardt, A., 1979. Zur Flechtenflora der inneralpinen Trockentäler. *Bibl. Lichenol.* 10.  
 Breuss, O., 1990. Die Flechtengattung *Catapyrenium* (Verrucariaceae) in Europa. *Stapfia* 23.  
 Coppins, B.J., 1983. A taxonomic study of the lichen genus *Micarea* in Europe. *Bull. Brit. Mus. (Nat. Hist.), Bot. Ser.* 11(2): 17-214.  
 Gams, H., 1927. Von den Follatères zur Dent de Morcles. *Beitr. geobot. Landesaufnahme* 15.  
 Laundon, J.R., 1989. The species of *Lepruloma* - the name for the *Lepraria membranacea* group. *The Lichenologist* 21: 1-22.  
 Lumbsch, H.J., 1989. Die holarktischen Vertreter der Flechtengattung *Diploschistes* (*Thelotrema*aceae). *Journ. Hattori Bot. Lab.* 66: 133-196.  
 Mayrhofer, H. & Poelt J., 1979. Die saxicolen Arten der Flechtengattung *Rinodina* in Europa. *Bibl. Lichenol.* 12.  
 Mayrhofer, H., 1987. Ergänzende Studien zur Taxonomie der Gattung *Protothelenella*. *Herzogia* 7: 313-342.  
 Vänskä, H., 1984. The identity of the lichens *Lecanora frustulosa* and *L. argopholis*. *Ann. Bot. Fennici* 21: 391-402.  
 Vivant, J., 1988. Les Lichens des Pyrénées occidentales Françaises et Espagnoles. *Documents d'Ecologie Pyrénéenne* V: 3-119.

P.P.G. van den Boom<sup>°</sup>, A.M.  
 Brand<sup>\*\*</sup> and H.J.M. Sipman<sup>\*\*\*</sup>

<sup>°</sup> Aziëlaan 12, 5691 LC SON, The Netherlands

<sup>\*\*</sup> Klipperwerf 5, 2317 DX, Leiden, The Netherlands

<sup>\*\*\*</sup> Botanischer Garten & Botanisches Museum Königin-Luise-Strasse 6-8,  
 1000 Berlin 33, Deutschland

## LAUFENDE FORSCHUNGSPROJEKTE IN BRYOLOGIE / LICHENOLOGIE

In dieser Rubrik sollen Arbeiten vorgestellt werden (z. B. Diplomarbeiten, Dissertationen, "Freizeit"projekte, Projekte der Auftragsforschung usw.), in denen Moose und/oder Flechten schwerpunktmässig untersucht werden. Wer ein solches Thema bearbeitet oder in einem entsprechenden Projekt tätig ist und an dieser Stelle darüber berichten möchte - evtl. verbunden mit einer Bitte um Literaturhinweise, Angabe von Lokalitäten oder um Zusendung von Untersuchungsmaterial -, sende seinen Text (max. 1 A<sub>4</sub>-Seite) direkt an den Herausgeber.

### Untersuchung der Moosvegetation im Urwaldreservat Bödmerenwald

Das ausgedehnte Karstgebiet südlich des Pragelpasses im Muotatal, Kanton Schwyz, wird in seinem nach Südwesten abfallenden Teil von einem Subalpinen Fichtenwald bedeckt. Das unwegsame, von Karren zerfurchte Gelände erschwerte die forstwirtschaftliche Nutzung erheblich, so dass Teile des Waldes sich heute in einem urwaldähnlichen Zustand befinden. Eine etwa 0.7 Quadratkilometer grosse Fläche davon steht seit einigen Jahren unter Schutz.

Auf Anregung von Dr. Alois Bettschart, Einsiedeln, der die Phanerogamenvegetation des Gebietes pflanzensoziologisch bearbeitet hat, habe ich im Juli 1991 begonnen, die Moose im Reservat zu untersuchen.

Die durch die Lage am Alpennordrand bedingten reichlichen Niederschläge ermöglichen in der wasserschluckenden Karstlandschaft das Gedeihen üppiger Moosteppiche, die als Wasserspeicher und Humusbildner im Ökosystem des Subalpinen Fichtenwaldes eine zentrale Rolle spielen. Das durch Karrenspalten und -schlote, durch Klüfte und Dolinen reich gegliederte Relief enthält eine Vielfalt von Kleinstandorten, die durch ihre unterschiedlichen mikroklimatischen und edaphischen Gegebenheiten einen erstaunlichen Artenreichtum aufweisen. Bis jetzt wurden 235 Moostaxa festgestellt, die in zahlreichen, verschiedenen Artenkonfigurationen jeweils besondere Standorte charakterisieren.

Bemerkenswert ist die Entdeckung einiger überaus reichlicher Vorkommen von *Haplomitrium hookeri*, das in tellergrossen Rasen die seltenen, im Gebiet kleinflächig vorkommenden Flachmoor-Rinnen besiedelt.

Die Auswertung des umfangreichen Materials wird voraussichtlich im Herbst 1993 abgeschlossen sein. Meine Arbeit über die Moosvegetation des Urwaldreservates wird in einem Heft der "Berichte der Schwyzerischen Naturforschenden Gesellschaft" veröffentlicht.

Josef Bertram  
 Lindenstrasse 33/11  
 CH-4123 Allschwil

### *Mielichoferia* gesucht

Beide einheimischen Sippen der Gattung *Mielichoferia*, *M. mielichoferiana* (Funk) Loeske (= *M. nitida* Hornsch.) und *M. elongata* (Hook.) Hornsch., sind