

Check-list of the bryophytes collected during Iter Mediterraneum III

Ruprecht Düll

Introduction

During the OPTIMA Excursion from 27-05 till 18-06-1990 which was guided by Prof. Dr. F. M. Raimondo – Palermo - a lot of bryophytes was collected by Ruprecht and Irene Düll, some were gathered by F. M. Raimondo and H. Hoffmann – Zuerich - (compare the list of localities, all collections after June, 8th were made by the latter two).

Samples of all records are deposited in PAL, DUIS (private herbarium Düll) and STU (“!” behind the record). Most collections were determined by the author. For determination of critical taxa he has to thank Dr. A. Frisvoll – Trondheim, G. Blom – Oxford, R. May – Bonn and Dr. Bruggeman – Nannenga – Utrecht.

Thanks also to H. Hoffmann who placed her manuscript to my disposal.

The distribution in Italy and the types of distribution are given according to Düll (1983, 1984-1985, 1992). A few of them were changed (see Düll 1992 & Aleffi & Schumacker 1995). The nomenclature follows these publications, too. Taxa with an asterisk (“*”) were new for Sicily.

Altogether 231 species and varieties were collected, 46 hepatics and 187 mosses (45% of all species formerly known from Sicily). Compared with Dia & al. (1987) 21 are new for Sicily. Most of these records are also published in Cortini (1992 & 2001) and in Aleffi & Schumacker (1995). Many taxa are rediscovered.

Check-list

Hepaticophytina

Aneura pinguis (L.) Dumort var. *pinguis*

n.temp - dj-holarc(-bip)

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990.

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990.

MADONIE: near Pietà limestone, VB181, ca. 710 m, 07.06.1990.

***Barbilophozia barbata* (Schmidel ex Schreb.) Loeske**

subbor-mont - dj-holarc

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!)

*** *Barbilophozia hatcheri* (A. Evans) Loeske var. *hatcheri***

bor-mont - holarc(-bip)

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990.

***Calypogeia arguta* Nees & Mont.**

suboc-med - dj-w.eur-as-afr

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990 (!)

***Calypogeia fissa* (L.) Raddi**

suboc-med – eur-w.as-afr-n.am

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990 (!)

*** *Calypogeia muelleriana* (Schiffn.) Muell. Frib.**

subbor-mont - dj-holarc

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990 (!)

Note: Recorded without real locality by Aleffi & Schumacker (1995) who have used the original manuscript (established 1992) of this publication.

Cephalozia bicuspidata* (L.) Dumort. var. *bicuspidata

temp - dj-holarc(-bip)

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990 (!)

Cephaloziella divaricata* (Sm.) Schiffn. var. *divaricata

temp - circpol-afr(-bip)

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!)

***Cololejeunea minutissima* (Sm.) Schiffn.**

oc-med - eur-c. e. as-afr-am

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990.

* *Cololejeunea rossettiana* (C. Massal.) Schiffn.

submed-mont - eur-n.afr-w.as

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050 m, 05.06.1990 (!)

Note: recorded without real locality by Aleffi & Schumacker (1995) who have used the original manuscript (established 1992) of this publication.

Conocephalum conicum (L.) Underw.

subbor-mont - holarc

NEBRODI: Vallone Calanna, steep sloped woodland (where *Petagna saniculaefolia* grows), 10.06.1990, R.

Diplophyllum albicans (L.) Dumort.

n. suboc - dj-holarc(-bip)

MADONIE: Pomieri, siliceous rocks, VB190, m 1500, 08.06.1990.

Frullania dilatata (L.) Dumort.

temp - dj-euras-afr

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050 m, 05.06.1990 (!)

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990.

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990.

* *Frullania parvistipula* Steph.

e.submed-mont - s.e.euras-afr(m)

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990 (!)

Note: Recorded without real locality by Aleffi & Schumacker (1995) who have used the original manuscript (established 1992) of this publication.

Jungermannia gracillima Sm.

w.temp - circpol-c.as

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990 (!)

Lejeunea cavifolia (Ehrh.) Lindb. var. *cavifolia*

suboc-mont - circpol

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050 m, 05.06.1990 (!)

***Lophocolea bidentata* (L.) Dumort.**

w.temp - dj-holarc(-bip)

MADONIE: Pomieri, siliceous rocks, VB190, 1500 m, 08.06.1990.

NEBRODI: Monte Soro, Biviere di Cesarò, 1320 m, 10.06.1990 R.

NEBRODI: Vallone Calanna, steep sloped woodland (where *Petagna saniculaefolia* grows), 10.06.1990, R.*** *Lophocolea minor* Nees**

subkont - dj-holarc(-bip)

NEBRODI: Vallone Calanna, steep sloped woodland (where *Petagna saniculaefolia* grows), 10.06.1990, R.

Note: recorded without real locality by Aleffi & Schumacker (1995) who have used the original manuscript (established 1992) of this publication.

*** *Lophozia excisa* (Dicks.) Dumort. var. *excisa***

bor-mont - circpol-afr(m)(bip)

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!)

Note: Recorded without real locality by Aleffi & Schumacker (1995) who have used the original manuscript (established 1992) of this publication.

***Lunularia cruciata* (L.) Lindb.**

oc-med/subtrop – eur-w.as-afr-n.am(-bip)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050 m, 05.06.1990.

PALERMO: Monte Pellegrino, 2 km before Grotta Santa Rosalia, southern exposition, limestone, UC425, ca. 200 – 350 m, 29.05.1990 (!)

PALERMO: Parco Villa Giulia, limestone, UC415, ca. 0 m, 27.05.1990; 3 (130 m)!

TRAPANI: seashore at the western part of Monte Cofano near Cornino, coastal vegetation, limestone/clay, UC220, near sealevel, 31.05.1990; 17 (1120-1200 m).

***Marchantia paleacea* Bertol.**

med/trop(-mont) dj-holarc

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990, R.

Marsupella emarginata* (Ehrh.) Dumort. var. *emarginata

w.temp-mont - dj-holarc

PELORITANI: Antennamare, west of Messina, open rocks, volcanic soil, 1010 m, 17.06.1990, R.

Metzgeria furcata* (L.) Dumort. var. *furcata

w.temp - subcosm

NEBRODI: Monte Soro, Biviere di Cesarò, 1320 m, 10.06.1990, R.

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990 (!)

***Nardia scalaris* Gray**

w.temp-mont – holarc

PELORITANI: Antennamare, west of Messina, open rocks, volcanic soil, 1010 m, 17.06.1990, R.

***Pellia endiviifolia* (Dicks.) Dumort.**

s. temp - holarc

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990, R.

MADONIE: near Pietà limestone, VB181, ca. 710 m, 07.06.1990.

MADONIE: Communello near Piano Zucchi limestone, VB191, 1230 m, 08.06.1990.

SICANI: Fiume Sosio ca. 5 km behind Palazzo Adriano direction Chiusa Sclafani, limestone, UC375, mountainous level, 02.06.1990 (!)

***Pellia epiphylla* (L.) Corda**

w. temp - holarc

MADONIE: Portella Mandarinini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990 (!);

NEBRODI: Vallone Calanna, steep sloped woodland (where *Petagna saniculaefolia* grows), 10.06.1990, R.***Plagiochasma rupestre* (Forst.) Steph.**

med(-mont) - s.eur-w.as-afr-am(-bip)

PALERMO: Monte Pellegrino, 2 km before Grotta Santa Rosalia, southern exposition, limestone, UC425, ca. 200 – 350 m, 29.05.1990 (!)

***Plagiochila asplenoides* (L. emend. Taylor) Dumort.**

w.temp - dj-euras

NEBRODI: Monte Soro, stop on the way to Biviere di Cesarò, small stream and *Fagus* woodland (other plants seen there were *Lysimachia nemorum*, *Lathyrus vernus*), volcanic soil, 1360 m, 10.06.1990, (+) fo. minor R.

NEBRODI: Monte Soro, Biviere di Cesarò, 1320 m, 10.06.1990, R.

NEBRODI: Vallone Calanna, steep sloped woodland (where *Petagna saniculaefolia* grows), 10.06.1990, R.

***Plagiochila porelloides* (Torr. ex Nees) Lindenb.**

subbor-mont - circpol-c.as-afr(m)

NEBRODI: Monte Soro, stop on the way to Biviere di Cesarò, small stream and *Fagus* woodland (other plants seen there were *Lysimachia nemorum*, *Lathyrus vernus*), 1360 m, 10.06.1990.

NEBRODI: Vallone Calanna, steep sloped woodland (where *Petagna saniculaefolia* grows), 10.06.1990, R.

***Porella cordeana* (Huebener) Moore**

w.temp-mont - dj-holarc

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990 (!)

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!)

MADONIE: Monte Carbonara, limestone, VB191, ca. 1800-1900 m, 05.06.1990 (!)

NEBRODI: Monte Soro, artificial lake on the way to Biviere di Cesarò, 1460 m, 10.06.1990, R.

***Porella obtusata* (Taylor) Trevis.**

oc-mont - dj-(w.)eur-e.as-afr

MADONIE: Monte Daino, siliceous, VB191, ca. 1600 m, 03.06.1990 (!)

***Porella platyphylla* (L.) Pfeiff.**

subbor-dealp -c.eur-w.as

MADONIE: Piano Zucchi, rivulet valley, between hotel "La Montanina" and forest station limestone, VB191, 1120-1200 m, 04.06.1990, leg. sub *P. baueri* (!)

***Radula complanata* (L.) Dumort.**

w.temp - holarc

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990.

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990; H4 (1360 m) R.

NEBRODI: Monte Soro, Biviere di Cesarò, 1320 m, 10.06.1990, R.

*** *Radula lindenbergiana* Gottsche ex C. Hartm.**

w.suboc-mont - holarc-afr

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990. (!), male.

Note: Recorded without real locality by Aleffi & Schumacker (1995) who have used the original manuscript (established 1992) of this publication.

***Reboulia hemisphaerica* (L.) Raddi**

submed-suboc-mont - cosm

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990, c.spg (!)

MADONIE: Piano Zucchi, rivulet valley, between hotel “La Montanina” and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990, c.spg. (!)

MADONIE: Monte Carbonara, limestone, VB191, ca. 1800-1900 m, 05.06.1990 (!)

NEBRODI: Vallone Calanna, steep sloped woodland (where *Petagna saniculaefolia* grows), 10.06.1990, R.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990.

PELORITANI: Antennamare, west of Messina, open rocks, volcanic soil, 1010 m, 17.06.1990, R.

***Riccardia chamedryfolia* (With.) Grolle**

n. suboc-mont - dj-holarc

MADONIE: Portella Mandarinini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990 !

***Riccardia multifida* (L.) Gray**

w. temp-mont - holarc(-bip)

MADONIE: Portella Mandarinini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990 !

***Riccia atromarginata* Levier**

med-oc - s.eur-w.as-afr

PALERMO: Monte Pellegrino, 2 km before Grotta Santa Rosalia, southern exposition, limestone, UC425, ca. 200 – 350 m, 29.05.1990 (!), l.cl.

***Riccia ciliata* Hoffm.**

e. submed - eur-afr(-bip)

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!)

***Riccia ciliifera* Link ex Lindenb. fo. *pedemontana* Steph.**

submed-subkont - eur-w.as-n.afr

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990 (!); leg. sub *R. lamellosa*, rev. J. Ast (!)

Riccia sorocarpa* Bisch. var. *sorocarpa

temp - dj-holarc(-bip)

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 , fo. *minima*!

***Scapania aspera* M. & H. Bernet**

suboc-mont – eur-w.as

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990 (!)***Scapania compacta* (A. Roth) Dumort.**

suboc-submed - eur-w.as-afr

PELORITANI: Antennamare, west of Messina, open rocks, volcanic soil, 1010 m, 17.06.1990, R.

***Scapania undulata* (L.) Dumort.**

w.temp-mont - dj-holarc

MADONIE: behind Portella Mandarinini beneath Geraci Siculo (last rivulet valley) siliceous rocks, VB181, 1300 m, 06.06.1990 (!)

***Targionia hypophylla* L.**

oc-submed - subcosm

PALERMO: Monte Pellegrino, 2 km before Grotta Santa Rosalia, southern exposition, limestone, UC425, ca. 200 – 350 m, 29.05.1990 (!)

PALERMO: Parco Villa Giulia, limestone, UC415, near sealevel, 27.05.1990.

TRAPANI: Riserva Naturale “Lo Zingaro”, Monte Sparagio, limestone, UC220, ca. 450 m (!), 30.05.1990.

***Targionia lorbeeriana* K. Muell.**

med-suboc - eur-w. as-afr(-bip)

MADONIE: Gangi, siliceous, VB191, ca. 1000 m, 08.06.1990, c. spg. !

Bryophytina***Aloina ambigua* (Br. & Schimp.) Limpr.**

submed – dj.holarc(-bip)

PALERMO: Monte Pellegrino, 2 km before Grotta Santa Rosalia, southern exposition, limestone, UC425, ca. 200 – 350 m, 29.05.1990, c. spg. (coll. sub *A. aloides*, rev. T. G. Morales!).***Amblystegium riparium* (Hedw.) Bruch. & al.**

temp - holarc(-bip)

PALERMO: Monreale, courtyard inside monastery, limestone, collinee, UC415, 27.05.1990.

***Anacolia webbii* (Mont.) Schimp.**

oc-med-mont - s.eur-w.c.-as-afr

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!), also c.spg.: R

***Anomodon viticulosus* (Hedw.) Hook. & Taylor**

temp - holarc

MADONIE: Piano Zucchi, rivulet valley, between hotel “La Montanina” and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!).

MADONIE: Contrada Uccellini, direction Portella Mandarini, limestone, VB181, 1250 m 06.06.1990, R.

Antitrichia curtipendula* (Hedw.) Brid. fo. *curtipendula

suboc – eur-w.as-afr-n.am(-bip)

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990

NEBRODI: Monte Soro, stop on the way to Biviere di Cesarò, small stream and *Fagus* woodland (other plants seen there were *Lysimachia nemorum*, *Lathyrus vernus*), 1360 m, 10.06.1990.

PALERMO: northern slopes of Monte Rose, limestone, UC375, 1200 m, 01.06.1990 (!)

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)

Aulacomnium palustre* (Hedw.) Schwaegr. var. *palustre

bor - subcosm

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990 !

Barbula convoluta* Hedw. var. *convoluta

temp - holarc (-bip)

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990 (!)

MADONIE: Portella Colla and Portella Arena beechforest, limestone, VB190, 1450 m, 08.06.1990 (!); also leg. e.g. Schmattorsch, 2.4.1934!

MESSINA: Taormina, direction Castel Mola: Duis!

***Barbula convoluta* var. *commutata* (Jur.) Husn.**

submed(-mont) - eur-w.as-n.afr

CALTAGIRONE: Bosco di Santo Pietro, north of Vittoria Macchia, 240 m, 17.06.1990, R.

PELORITANI: Antennamare, west of Messina, open rocks, volcanic soil, 1010 m, 17.06.1990, R.

***Barbula unguiculata* Hedw.**

temp - holarc (-bip)

PALERMO: Monte Pellegrino, 2 km before Grotta Santa Rosalia, southern exposition, limestone, UC425, ca. 200 – 350 m, 29.05.1990 (!)

MADONIE: Piano Zucchi, rivulet valley, between hotel “La Montanina” and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!)

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990.

Bartramia ithyphylla* Brid. var. *ithyphylla

bor-mont - holarc (-bip)

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990, c.spg. (!)

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 c.spg.

NEBRODI: Monte Soro, stop on the way to Biviere di Cesarò, small stream and *Fagus* woodland (other plants seen there were *Lysimachia nemorum*, *Lathyrus vernus*), 1360 m, 10.06.1990, R; H5 (1340m) c.spg. R.

PELORITANI: Antennamare, west of Messina, open rocks, volcanic soil, 1010 m, 17.06.1990, c.spg. R.. New for Madonie.

Bartramia pomiformis* Hedw. var. *pomiformis

bor(-mont) =-holarc(bip)

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990, c.spg. (!)

PELORITANI: Antennamare, west of Messina, open rocks, volcanic soil, 1010 m, 17.06.1990, c.spg., R.

***Bartramia stricta* Brid.**

suboc-med – eur-w.as-afr-n.am (-bip)

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)

PELORITANI: Antennamare, west of Messina, open rocks, volcanic soil, 1010 m, 17.06.1990, R.

Note: Also leg. W. Trautmann: Aetna, Taormina, leg. 5.1914: Duis!

***Brachythecium albicans* (Hedw.) Bruch & al.**

subbor - holarc (-bip)

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990 (!)

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!)

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990 (!)

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990

MADONIE: Piano Battaglia, limestone, VB181, 07.06.1990 (!)

Note: New for Madonie. Has only been recorded before 1950.

Brachythecium glareosum (Spruce) Bruch. & al. var. *glareosum*

subbor(-mont) - holarc

NEBRODI: Vallone Calanna, steep sloped woodland (where *Petagna saniculaefolia* grows), 10.06.1990, R. Has only been recorded before 1950.

* ***Brachythecium reflexum*** (Starke) Bruch & al.

bor-mont - holarc

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990 (!)

Note: Recorded by (Cortini (2001)) without concrete source (before 1950).

Brachythecium rivulare Bruch & al.

subbor - holarc (-bip)

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990.

MADONIE: Comunello near Piano Zucchi, limestone, VB191, 1230 m, 08.06.1990.

Brachythecium rutabulum (Hedw.) Bruch & al. var. *rutabulum*

temp - subcosm

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990, probably var. *turgescens* (!)

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990.

NEBRODI: Monte Soro, Biviere di Cesarò, 1320 m, 10.06.1990 R.

NEBRODI: Vallone Calanna, steep sloped woodland (where *Petagna saniculaefolia* grows), 10.06.1990, R.

SICANI: Fiume Sosio ca. 5 km behind Palazzo Adriano direction Chiusa Sclafani, limestone, UC375, mountainous level, 02.06.1990 (!)

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)

Brachythecium rutabulum (Hedw.) Bruch. & al. var. *flavescens* Bruch. & al.

temp - eur-afr(m)n.am

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990 (!) New for Madonie. Has only been recorded before 1950.

Brachythecium salebrosum (Weber & D. Mohr) Bruch. & al. var. *salebrosum*

subbor - holarc (-bip)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1000 m, 05.06.1990 (!)

Brachythecium starkei* (Brid.) Bruch. & al. var. *starkei

bor-mont - dj-euras

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990 (!)

Brachythecium velutinum* (Hedw.) Bruch. & al. var. *velutinum

temp - holarc (- ? bip)

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!)

***Brachythecium velutinum* (Hedw.) Bruch. & al. var. *salicinum* (Bruch. & al.) Moenk.**

submed - eur-w.as-n.afn-n.am

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990, c. spg.(!)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990, c. spg.(!)

MADONIE: Monte Carbonara, limestone, VB191, ca. 1800-1900 m, 05.06.1990, c. spg.(!)

MADONIE: Vallone degli Angeli, limestone, VB181, 1460 m 07.06.1990 (!)

NEBRODI: Monte Soro, Biviere di Cesarò, 1320 m, 10.06.1990, R., c.spg. New for Madonie.

***Bryoerythrophyllum recurvirostre* (Hedw.) P. C. Chen**

temp(-mont) - holarc (-bip)

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 c.spg.(!) + fo. serrata (!)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1000 m, 05.06.1990 c.spg.

MADONIE: Vallone degli Angeli, limestone, VB181, 1460 m, 07.06.1990, c. spg. (!) New for Madonie. Has only been recorded before 1950.

Bryum alpinum* Huds. ex With. var. *alpinum

suboc-submed-mont - holarc (-bip)

MADONIE: Monte Quacella, limestone, VB191, ca. 1800 m, leg. Raimondo, 03.06.1990.

MADONIE: behind Portella Mandarinini beneath Geraci Siculo (last rivulet valley), siliceous rocks, VB181, 1300 m, 06.06.1990 (!)

MADONIE: Piano Battaglia, limestone, VB181, 07.06.1990.

Bryum argenteum* Hedw. var. *argenteum

temp - cosm

PALERMO: Monte Pellegrino, 2 km before Grotta Santa Rosalia, southern exposition, limestone, UC425, ca. 200 – 350 m, 29.05.1990 (!)

***Bryum bicolor* Dicks. (incl. *B. barnesii*)**

submed – subcosm

PALERMO: Cozzo Pernice, near the road between Palazzo Adrian and Monte Rose limestone, UC375, upper mountainous level, 01.06.1990, c. spg. (!)

Bryum caespiticiu Hedw. var. *caespiticiu*

temp - subcosm

PALERMO: Monte Pellegrino, 2 km before Grotta Santa Rosalia, southern exposition, limestone, UC425, ca. 200 – 350 m, 29.05.1990 (!)

MADONIE: Portella Colla and Portella Arena beechforest, limestone, VB190, 1450 m, 08.06.1990 (!)

SICANI: Monte Rose, recultivated forests limestone, UC375, 1200-1350 m, 01.06.1990 (!)

Bryum capillare Hedw. var. *capillare*

temp - subcosm

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990 (!)

MADONIE: Monte Carbonara, limestone, VB191, ca. 1800-1900 m, 05.06.1990, c. spg. (!)

NEBRODI: Monte Soro, Biviere di Cesarò, 1320 m, 10.06.1990, R.

PALERMO: Monte Pellegrino, 2 km before Grotta Santa Rosalia, southern exposition, limestone, UC425, ca. 200 – 350 m, 29.05.1990.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)

PELORITANI: Antennamare, west of Messina, open rocks, volcanic soil, 1010 m, 17.06.1990, R.

Bryum donianum Grev.

oc-med - eur-w. e. as-afr

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990, c. spg. (!)

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990, c. spg. (!)

* ***Bryum elegans*** Nees ex Brid.,

bor-mont - euras-n.afr

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990 (!)

Note: Recorded by Cortini (2001) without concrete source (before 1950).

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990.

* ***Bryum funckii*** Schwaegr.

s.temp –eurosib-w.c.as

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990 (!) Recorded by Cortini (2001) without concrete source (before 1950).

***Bryum gemmiparum* De Not.**

suboc-submed - dj-holarc(-bip)

MADONIE: Monte Quacella, limestone, VB191, ca. 1800 m, leg. Raimondo, 03.06.1990 (!)

MADONIE: Piano Zucchi, rivulet valley, between hotel "La Montanina" and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050 m, 05.06.1990 (!) New for Madonie.

***Bryum kunzei* Hornsch.**

temp - dj-euras-afr

MADONIE: Vallone degli Angeli, limestone, VB181, 1460 m, 07.06.1990 (!) New for Madonie.

***Bryum mildeanum* Jur.**

suboc - eur-w. c. as-afr

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990 (!)

NEBRODI: Monte Soro, Biviere di Cesarò, 1320 m, 10.06.1990 R; new for Madonie. Has only been recorded before 1950.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)

***Bryum pallescens* Schleich. ex Schwaegr.**

temp - holarc (-bip)

PALERMO: Parco Villa Giulia, limestone, UC415, ca. 0 m, 27.05.1990.

Bryum pseudotriquetrum* (Hedw.) P. Gaertn. & al. var. *pseudotriquetrum

temp - subcosm

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990 !.

MADONIE: Contrada Uccellini, direction Portella Mandarini, limestone, VB181, 1250 m 06.06.1990, (!)

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990 (!)

MADONIE: behind Portella Mandarini beneath Geraci Siculo (last rivulet valley), siliceous rocks, VB181, 1300 m, 06.06.1990 (!)

NEBRODI: Monte Soro, artificial lake on the way to Biviere di Cesarò, 1460 m, 10.06.1990, R.

NEBRODI: Monte Soro, stop on the way to Biviere di Cesarò, small stream and *Fagus* woodland (other plants seen there were *Lysimachia nemorum*, *Lathyrus vernus*), 1360 m, 10.06.1990, R.

NEBRODI: Monte Soro, small pond near Biviere di Cesarò, 1340 m, 10.06.1990.

***Bryum radiculosum* Brid.**

suboc-med - dj-holarc (-bip)

MADONIE: Gangi, siliceous, VB191, ca. 1000 m, 08.06.1990.

***Bryum subelegans* Kindb. (= *B. laevifilum*)**

temp - holarc(-bip)

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990.

***Calliergonella cuspidata* (Hedw.) Loeske**

temp - holarc(-bip)

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990.

MADONIE: Portella Mandarinini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990.

NEBRODI: Monte Soro, Biviere di Cesarò, 1320 m, 10.06.1990, R.

NEBRODI: Vallone Calanna, steep sloped woodland (where *Petagna saniculaefolia* grows), 10.06.1990, R.***Ceratodon conicus* (Hampe ex C. Muell.) Lindb.**

oc-submed - eur-afr(m)-n.am

MADONIE: Monte Quacella, limestone, VB191, ca. 1800 m, leg. Raimondo, 03.06.1990 (!)

MADONIE: Monte Carbonara, limestone, VB191, ca. 1800-1900 m, 05.06.1990 (!); new for Madonie. Also collected by H. Has only been recorded before 1950.

Ceratodon purpureus* (Hedw.) Brid. var. *purpureus

temp - cosm

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990, sterile. (!)

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990, c. spg. (!)

***Ceratodon purpureus* (Hedw.) Brid. var. *xanthopus* Sull. & Lesq. ex Lesq. & James**

suboc - dj-holarc(-bip)

MADONIE: Portella Colla and Portella Arena beechforest, limestone, VB190, 1450 m, 08.06.1990, c. spg. (!) New for Madonie.

***Coscinodon cribrosus* (Hedw.) Spruce**

bor-mont holarc

PELORITANI: Antennamare, west of Messina, open rocks, volcanic soil, 1010 m, 17.06.1990, R.

Cratoneuron filicinum* (Hedw.) Spruce var. *filicinum

temp - cosm

MADONIE: Piano Zucchi, rivulet valley, between hotel "La Montanina" and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!)

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990.

MADONIE: Pietà (Polizzi Generosa), VB181, 07.06.1990.

MADONIE: near Pietà limestone, VB181, ca. 710 m, 07.06.1990.

MADONIE: Piano Battaglia, limestone, VB181, 07.06.1990.

MADONIE: Comunello near Piano Zucchi limestone, VB191, 1230 m, 08.06.1990.

NEBRODI: Vallone Calanna, steep sloped woodland (where *Petagna saniculaefolia* grows), 10.06.1990 R.***Cryphaea heteromalla* (Hedw.) Mohr**

oc-submed - eur-w.as-afr

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990, c. spg. (!), common!

Ctenidium molluscum* (Hedw.) Mitt. var. *molluscum

temp(-mont) - dj-holarc

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990.

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990.

NEBRODI: Vallone Calanna, steep sloped woodland (where *Petagna saniculaefolia* grows), 10.06.1990, R.***Ctenidium molluscum* (Hedw.) Mitt. var. *condensatum* (Schimp.) & Britton**

temp - eur-?n.am

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990 (!) New for Madonie.

PALERMO: northern slopes of Monte Rose, limestone, UC375, 1200 m, 01.06.1990.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990.

Dichodontium pellucidum* (Hedw.) Schimp. var. *pellucidum

bor-mont - holarc

NEBRODI: Monte Soro, stop on the way to Biviere di Cesarò, small stream and *Fagus* woodland (other plants seen there were *Lysimachia nemorum*, *Lathyrus vernus*), 1360 m, 10.06.1990, (+) fo. *minor*, R. New for Madonie (has only been recorded from Caronie before).***Dicranella howei* Renauld & Cardot**

oc-med eur-w.as-afr-n.am

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990 (!)

PELORITANI: Antennamare, west of Messina, open rocks, volcanic soil, 1010 m, 17.06.1990, R. New for Madonie.

Dicranella varia (Hedw.) Schimp. var. *varia*

temp - holarc

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990 (!)

Dicranum scoparium Hedw.

subbor - holarc(-bip)

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!)

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990.

NEBRODI: Monte Soro, stop on the way to Biviere di Cesarò, small stream and *Fagus* woodland (other plants seen there were *Lysimachia nemorum*, *Lathyrus vernus*), 1360 m, 10.06.1990 R.

PELORITANI: Antennamare, west of Messina, open rocks, volcanic soil, 1010 m, 17.06.1990, R.

Didymodon acutus (Brid.) Saito var. *acutus*

submed - dj-holarc

CALTAGIRONE: Bosco di Santo Pietro, north of Vittoria Macchia, 240 m, 17.06.1990, R.

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990 (!)

MADONIE: Contrada Uccellini, direction Portella Mandarini, limestone, VB181, 1250 m, 06.06.1990.

PALERMO: Monte Pellegrino, 2 km before Grotta Santa Rosalia, southern exposition, limestone, UC425, ca. 200 – 350 m, 29.05.1990.

PALERMO: alley of plane trees in the Orto botanico limestone, UC415, near sealevel, 29.05.1990.

Didymodon luridus Hornsch. var. *luridus*

submed - dj-holarc

MADONIE: Vallone degli Angeli, limestone, VB181, 1460 m, 07.06.1990 (!)

SICANI: Fiume Sosio ca. 5 km behind Palazzo Adriano direction Chiusa Sclafani, limestone, UC375, mountainous level, 02.06.1990 (!)

MADONIE: Gangi, siliceous, VB191, ca. 1000 m, 08.06.1990, “fo. cuspidata”(!)

TRAPANI: seashore at the western part of Monte Cofano near Cornino, coastal vegetation limestone/clay, UC220, near sealevel, 31.05.1990.

***Didymodon sinuosus* (Mitt.) Garov.**

suboc-submed(-mont) eur-w.as-n.afn-n.am

MADONIE: Piano Zucchi, rivulet valley, between hotel “La Montanina” and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!)

Note: formerly only known from Peloritani. Has only been recorded before 1950.

SICANI: Fiume Sosio ca. 5 km behind Palazzo Adriano direction Chiusa Sclafani, limestone, UC375, mountainous level, 02.06.1990 (!)

***Didymodon tophaceus* (Brid.) Lisa**

temp - holarc(-bip)

MADONIE: near Pietà limestone, VB181, ca. 710 m, 07.06.1990 (!)

MADONIE: Comunello near Piano Zucchi limestone, VB191, 1230 m, 08.06.1990.

SICANI: Fiume Sosio ca. 5 km behind Palazzo Adriano direction Chiusa Sclafani, limestone, UC375, mountainous level, 02.06.1990 (!)

Didymodon vinealis* (Brid.) Zander var. *vinealis

submed - dj-holarc

MADONIE: Gangi, siliceous, VB191, ca. 1000 m, 08.06.1990.

***Didymodon vinealis* (Brid.) Zander var. *flaccida* (Bruch & Schimp.) Zander (= *Barbula cylindrica*)**

submed-suboc - dj-holarc(-bip)

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990 (!); 27 (higher mountainous elevations)!,

NEBRODI: Vallone Calanna, steep sloped woodland (where *Petagna saniculaefolia* grows), 10.06.1990, R.

PALERMO: Monte Pellegrino, 2 km before Grotta Santa Rosalia, southern exposition, limestone, UC425, ca. 200 – 350 m, 29.05.1990.

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990 (!)

***Distichium capillaceum* (Hedw.) Bruch & al.**

bor-mont - cosm

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!) (+) R

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050 m, 05.06.1990 (!)

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990.

MADONIE: Contrada Uccellini, direction Portella Mandarini, limestone, VB181, 1250 m 06.06.1990, R.

PALERMO: northern slopes of Monte Rose, limestone, UC375, 1200 m, 01.06.1990.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 + c.spg. (!)

Ditrichum flexicaule (Schwaegr.) Hampe var. ***flexicaule***

subbor(-mont) - holarc

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990 (!)

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990.

****Drytodon patens*** (Hedw.) Brid. (= *Grimmia curvata* (Brid.) De Sloover)

bor-mont - holarc

MADONIE: Portella Mandarinini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990 (!), det. Frisvoll. Recorded by Cortini (2001) without concrete source (before 1950).

Encalypta rhaptocarpa Schwaegr. var. ***rhaptocarpa***

subarc-subalp - holarc(-bip)

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990 c.spg.(!); is the third record (only recorded before 1950).

Encalypta streptocarpa Hedw.

subbor(-mont) - holarc

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1000 m, 05.06.1990 (!)

MADONIE: Vallone degli Angeli, limestone, VB181, 1460 m 07.06.1990 (!)

MADONIE: Portella Colla and Portella Arena beechforest, limestone, VB190, 1450 m, 08.06.1990 (!)

PALERMO: northern slopes of Monte Rose, limestone, UC375, 1200 m, 01.06.1990.

Encalypta vulgaris Hedw.

submed - dj-holarc(-bip)

MADONIE: Monte Quacella, limestone, VB191, ca. 1800 m, leg. Raimondo, 03.06.1990 (!)

MADONIE: Piano Zucchi, rivulet valley, between hotel "La Montanina" and forest station limestone, VB191, 1120-1200 m, 04.06.1990 fo. major (!)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990 fo. major (!)

MADONIE: Monte Carbonara, limestone, VB191, ca. 1800-1900 m, 05.06.1990, c. spg.(!)

MADONIE: Contrada Uccellini, direction Portella Mandarinini, limestone, VB181, 1250 m 06.06.1990, c.spg.

MADONIE: Vallone degli Angeli, limestone, VB181, 1460 m 07.06.1990.

PALERMO: northern slopes of Monte Rose, limestone, UC375, 1200 m, 01.06.1990, c. spg. (!)

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990, c. spg. (!)

Eucladium verticillatum (Brid.) Bruch & al.

submed – dj-holarc(-bip)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990 !

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990 !

TRAPANI: Riserva Naturale “Lo Zingaro”, eastcoast, near tourist-center, caves and neighbourhood, limestone, UC220, ca. 10 m, 30.05.1990 !.

Eurhynchium crassinervium (Wils.) Schimp. (= *Cirriphyllum cr.*)

suboc(-mont) - eur-c.e.as-afr

MADONIE: Piano Zucchi, rivulet valley, between hotel “La Montanina” and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!)

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990.

Eurhynchium hians (Hedw.) Sande Lac. var. ***rigidum*** (Boulay) Duell

submed-suboc - eur-e.as-afr

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990 (!) New for Madonie.

Eurhynchium meridionale (Bruch. & al.) De Not.

suboc-med - eur-w.as-afr

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050 m, 05.06.1990 (!) New for Pr. Trapani and Madonie.

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990 (!)

Eurhynchium praelongum (Hedw.) Bruch. & al. var. ***praelongum***

temp - holarc(-bip)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1000 m, 05.06.1990.

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990.

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990 (!), det. Frisvoll.

NEBRODI: Monte Soro, stop on the way to Biviere di Cesarò, small stream and *Fagus* woodland (other plants seen there were *Lysimachia nemorum*, *Lathyrus vernus*), 1360 m, 10.06.1990 (+) fo. minor R.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990.

Eurhynchium pulchellum (Hedw.) Jenn. var. ***pulchellum***

subbor-mont - holarc(-bip)

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990 (!)

Eurhynchium pumilum (Wilson) Schimp.

suboc-submed - eur-w.as-afr(-bip)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1000 m, 05.06.1990.

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990 (!) New for Pr. Palermo.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)

Eurhynchium schleicheri (Hedw. f.) Jur.

s.temp – eurosib-w.as-afr

MADONIE: Contrada Uccellini, direction Portella Mandarini, limestone, VB181, 1250 m 06.06.1990, (!)

NEBRODI: Monte Soro, small pond near Biviere di Cesarò, 1340 m 10.06.1990, R.

Eurhynchium speciosum (Brid.) Jur.

temp – eur-w.as-afr-n.am

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1030 m, 05.06.1990 (!)

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990 (!) Only known from Malta and “Sicilia” (without locality).

Eurhynchium striatum (Hedw.) Schimp.

suboc - euras-afr

NEBRODI: Vallone Calanna, steep sloped woodland (where *Petagna saniculaefolia* grows), 10.06.1990, R.

* ***Fabronia pusilla*** Raddi

med - dj-holarc

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!)

Note: Recorded from Sicily by Cortini (1992 & 2001) without primary source.

Fissidens bryoides* Hedw. var. *bryoides

temp - holarc(-bip/subcosm?)

MADONIE: Monte Quacella, limestone, VB191, ca. 1800 m, leg. Raimondo, 03.06.1990.

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050 m, 05.06.1990, c.spg. (!) vide Bruggeman-N.; new for Madonie. - *F. adianthoides* ssp. *subtaxifolius* in Dia et al. (1987) is a synonym of *F. adianthoides* only.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990, c. spg.(!)

TRAPANI: seashore at the western part of Monte Cofano near Cornino, coastal vegetation limestone/clay, UC220, ca. 10 m, 31.05.1990.

***Fissidens dubius* P. Beauv. (= *F. cristatus*)**

temp-mont - holarc

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!)

MADONIE: Piano Zucchi, rivulet valley, between hotel “La Montanina” and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!)

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990.

*** *Fissidens limbatus* Sull. var. *bambergeri* (Schimp. ex Milde) Duell (= *F. bambergeri*)**

suboc-med – eur-w.as-afr-n.am

MADONIE: Monte Quacella, limestone, VB191, ca. 1800 m, leg. Raimondo, 03.06.1990.

Recorded by Cortini (2001) without concrete source (before 1950).

Fissidens taxifolius* Hedw. ssp. *taxifolius

temp - holarc(-bip)

MADONIE: Monte Quacella, limestone, VB191, ca. 1800 m, leg. Raimondo, 03.06.1990 (!)

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990 (!)

MADONIE: Contrada Uccellini, direction Portella Mandarini, limestone, VB181, 1250 m 06.06.1990, R.

MADONIE: Pomieri, siliceous rocks, VB190, m 1500, 08.06.1990, c.spg.; H5 (1340 m), R.

Fissidens viridulus* (Sw.) Wahlenb. var. *viridulus

submed - holarc

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990, c.spg. (!), (det. Brugg.-N.).

MADONIE: Piano Zucchi, rivulet valley, between hotel “La Montanina” and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!)

Fontinalis antipyretica* Hedw. var. *antipyretica

subbor - dj-holarc(-s.afr)

MADONIE: behind Portella Mandarinini beneath Geraci Siculo (last rivulet valley), siliceous rocks, VB181, 1300 m, 06.06.1990 (!) For records from literature verification is needed.

Fontinalis hypnoides C. Hartm. var. *duriaei* (Schimp.) Husn. (better as a species: *F. duriaei* Schimp.)

submed - holarc(-bip)

SICANI: Fiume Sosio ca. 5 km behind Palazzo Adriano direction Chiusa Sclafani, limestone, UC375, mountainous level, 02.06.1990 (!)

Note: records of *F. squamosa* are very doubtful. Probably missidentifications of the above taxon.

Funaria convexa Spruce

med-mont - s.eur-w.as-afr-am

MADONIE: Monte Carbonara, limestone, VB191, ca. 1800-1900 m, 05.06.1990, c. spg. (!)

Note: Has only been recorded before 1950 (Taormina, leg. Roell 13.4.1911, det. Bottini: Duis! c. spg. (!))

Funaria hygrometrica Hedw. var. *hygrometrica*

temp - cosm

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1030 m, 05.06.1990 c.spg.

MADONIE: Portella Colla and Portella Arena beechforest, limestone, VB190, 1450 m, 08.06.1990, c. spg.(!)

PELORITANI: Antennamare, west of Messina, open rocks, volcanic soil, 1010 m, 17.06.1990, c.spg. R.

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990 (!) c.spg.

Funaria muhlenbergii Turn.

submed-suboc-mont – eur-w.es.as-afr-n.c.am

PALERMO: northern slopes of Monte Rose, limestone, UC375, 1200 m, 01.06.1990.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990, c. spg.

Grimmia decipiens (K. F. Schultz) Lindb.

suboc-mont - dj-holarc

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990 (!)

Grimmia hartmanii Schimp. var. *hartmanii*

subbor-mont - dj-holarc

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!)

Note: third record from Sicily (has only been recorded before 1950).

***Grimmia laevigata* (Brid.) Brid.**

submed-suboc-mont - cosm

MADONIE: Monte Quacella, limestone, VB191, ca. 1800 m, leg. Raimondo, 03.06.1990 (!)

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990 (!)

MADONIE: behind Portella Mandarinini beneath Geraci Siculo (last rivulet valley), siliceous rocks, VB181, 1300 m, 06.06.1990, c. spg.(!)

MADONIE: Piano Battaglia limestone, upper mountainous level, VB181, 07.06.1990.

MADONIE: UTM VB-1-91 Piant di Quacella limestone, VB191, 1350 m, 07.06.1990.

MADONIE: Piano Battaglia limestone, upper mountainous level 07.06.1990.

PALERMO: Piano Urghe, Monte Zimara siliceous, VB173, 1000 m 08.06.1990 (!)

PALERMO: Piant di Quacella limestone, VB191, 1350 m, 07.06.1990.

***Grimmia lisae* De Not. (= *G. trichocarpa* var. *brachycarpa*)**

med-oc - s.eur-w.as-afr(m)-n.am

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050 m, 05.06.1990 (!)

MADONIE: Gangi, siliceous, VB191, ca. 1000 m, 08.06.1990, c.spg. (!) Also leg. Winter:

MESSINA: Taormina, direction Mt. Venere, leg. 4.1914 (sub. *G. trich.*): Je! Mola near T., 600 m c.spg., leg. Fleischer 6.4.1897: Je!

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)

Grimmia pulvinata* (Hedw.) Sm. var. *pulvinata

temp holarc(-bip)

MADONIE: Piano Zucchi, rivulet valley, between hotel "La Montanina" and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!); c.spg.

MADONIE: Contrada Uccellini, direction Portella Mandarinini, limestone, VB181, 1250 m 06.06.1990, c.spg.

MADONIE: Gangi, siliceous, VB191, ca. 1000 m, 08.06.1990, c.spg.

SICANI: Monte Rose, recultivated forests limestone, UC375, 1200-1350 m 01.06.1990, c. spg.(!)

SICANI: Fiume Sosio ca. 5 km behind Palazzo Adriano direction Chiusa Sclafani, limestone, UC375, mountainous level, 02.06.1990 (!)

Grimmia trichophylla* Grev. var. *trichophylla

temp(-mont) dj-subcosm

PALERMO: northern slopes of Monte Rose, limestone, UC375, 1200 m, 01.06.1990; R. (Records in literature need verification).

PALERMO: Piano Battaglia, beachforest slopes, 1600 m, 06.08.1990, det. Greven!

Gymnostomum calcareum* Nees & Hornsch. var. *calcareum

submed-mont holarc(-bip)

PALERMO: Monte Pellegrino: 2 km above Mondello behind the tunnel, umbragenous deciduous forest limestone, UC425, ca. 130 m, 29.05.1990 (!)

TRAPANI: seashore at the western part of Monte Cofano near Cornino, coastal vegetation limestone/clay, UC220, near sealevel, 31.05.1990 (!)

***Habrodon perpusillus* (De Not.) Lindb.**

med-oc - euras-afr

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990 also c.spg. (!) According to Dia et al. (1987) formerly only recorded by Nicholson (1921).

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990 (!)

***Hedwigia ciliata* (Hedw.) P. Beauv.**

subbor-mont - cosm

MADONIE: behind Portella Mandarinini beneath Geraci Siculo (last rivulet valley), siliceous rocks, VB181, 1300 m, 06.06.1990.

Homalothecium lutescens* (Hedw.) Robins. var. *lutescens

temp - eur-w.e.as-afr

MADONIE: Contrada Uccellini, direction Portella Mandarinini, limestone, VB181, 1250 m 06.06.1990, (!)

NEBRODI: Monte Soro, stop on the way to Biviere di Cesarò, small stream and *Fagus* woodland (other plants seen there were *Lysimachia nemorum*, *Lathyrus vernus*), 1360 m, 10.06.1990, R.

***Homalothecium philippeanum* (Spruce) Bruch. & al.**

subkont-submed-mont euras-n. afr

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1000 m, 05.06.1990 (!)

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1500 m, 02.06.1990 (!)

Homalothecium sericeum* (Hedw.) Bruch & al. var. *sericeum

temp - dj-holarc

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990 (!)

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990 (!)

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990.

MADONIE: Contrada Uccellini, direction Portella Mandarinini, limestone, VB181, 1250 m 06.06.1990.

MADONIE: Vallone degli Angeli, limestone, VB181, 1460 m 07.06.1990 (!)

MADONIE: Gangi, siliceous, VB191, ca. 1000 m, 08.06.1990.

SICANI: Monte Rose, recultivated forests limestone, UC375, 1200-1350 m 01.06.1990.

SICANI: Fiume Sosio ca. 5 km behind Palazzo Adriano direction Chiusa Sclafani, limestone, UC375, mountainous level, 02.06.1990 (!)

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)

TRAPANI: Riserva Naturale "Lo Zingaro", Monte Sparagio, limestone, UC220, ca. 450 m.

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990.

Hypnum andoi A.J.E. Smith (*H. mamillatum*)

suboc — circpol-afr

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)

Formerly only recorded once from Caronie.

Hypnum cupressiforme Hedw. var. *cupressiforme*

temp - cosm

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1000 m, 05.06.1990.

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990 (!)

NEBRODI: Vallone Calanna, steep sloped woodland (where *Petagna saniculaefolia* grows), 10.06.1990, R.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990.

SICANI: Fiume Sosio ca. 5 km behind Palazzo Adriano direction Chiusa Sclafani, limestone, UC375, mountainous level, 02.06.1990 (!)

Hypnum cupressiforme Hedw. var. *filiforme* Brid. (Cortini (1992) sub var. cupr.)

temp - dj-holarc(-bip)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990 (!)

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990.

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990.

Hypnum cupressiforme Hedw. var. *lacunosum* Brid.

temp - dj-holarc(-bip)

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!)

MADONIE: Piano Zucchi, rivulet valley, between hotel "La Montanina" and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!)

MADONIE: Gangi, siliceous, VB191, ca. 1000 m, 08.06.1990.

PALERMO: northern slopes of Monte Rose, limestone, UC375, 1200 m, 01.06.1990.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)

***Hypnum vaucheri* Lesq.**

bor-mont – holarc

MADONIE: Monte Quacella, limestone, VB191, ca. 1800 m, leg. Raimondo, 03.06.1990 (!)

Isothecium alopecuroides* (Dubois) Isov. var. *alopecuroides

temp - dj-euras-afr(m)

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050 m, 05.06.1990 (+) c.spg.

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990 (!)

NEBRODI: Monte Soro, stop on the way to Biviere di Cesarò, small stream and *Fagus* woodland (other plants seen there were *Lysimachia nemorum*, *Lathyrus vernus*), 1360 m, 10.06.1990, c. spg., R

NEBRODI: Monte Soro, small pond near Biviere di Cesarò, 1340 m, 10.06.1990, R.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990 (!)

***Isothecium striatulum* (Spruce) Kindb. (= *Eurhynchium s.*)**

submed-suboc-mont/de - eur-w.as-afr

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!).
New for Madonie.

Leptodon smithii* (Hedw.) Weber & D. Mohr. var. *smithii

oc-med- eur-w.as-afr-n.s.am(-bip)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990.

MADONIE: Vallone degli Angeli, limestone, VB181, 1460 m 07.06.1990.

PALERMO: northern slopes of Monte Rose, limestone, UC375, 1200 m, 01.06.1990.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)

TRAPANI: Riserva Naturale “Lo Zingaro”, Passo del Lupo, steep rocks limestone, UC220, ca. 450 m, 30.05.1990.

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990.

Leucodon sciuroides* (Hedw.) Schwaegr. var. *sciuroides

temp - euras-afr

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990.

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990.

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990.

MADONIE: Contrada Uccellini, direction Portella Mandarini, limestone, VB181, 1250 m
06.06.1990.

MADONIE: Vallone degli Angeli, limestone, VB181, 1460 m 07.06.1990.

PALERMO: Cozzo Pernice, near the road between Palazzo Adrian and Monte Rose, UC375,
01.06.1990.

Leucodon sciuroides (Hedw.) Schwaegr. var. ***morensis*** (Schwaegr.) De Not.

oc-submed - eur-w.as-afr

MADONIE: Monte Quacella, limestone, VB191, ca. 1800 m, R., c.spg.!

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191,
1050 m, 05.06.1990.

PALERMO: northern slopes of Monte Rose, limestone, UC375, 1200 m, 01.06.1990; c.spg.!,

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990.

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams,
limestone/clay, UC418, 630 m, 31.05.1990 (!)

Metaneckera menziesii (Drumm.) Steere

submed-subkont-mont – eur-w.as-n.afr-n.am

MADONIE: Piano Zucchi, rivulet valley, between hotel “La Montanina” and forest station
limestone, VB191, 1120-1200 m, 04.06.1990 (!)

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990 !

MADONIE: Contrada Uccellini, direction Portella Mandarini, limestone, VB181, 1250 m
06.06.1990.

PALERMO: northern slopes of Monte Rose, limestone, UC375, 1200 m, 01.06.1990.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 !

* ***Neckera bessi*** (Lobarz.) Jur. (= *Homalia b.*)

subkont-mont - eurosib-w.c.as-afr(m)

MADONIE: Piano Zucchi, rivulet valley, between hotel “La Montanina” and forest station
limestone, VB191, 1120-1200 m, 04.06.1990 (!)

Note: Recorded by Cortini (2001) without concrete source (before 1950).

Neckera complanata (Hedw.) Huebener

temp - dj-holarc

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191,
1000 m, 05.06.1990.

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams,
limestone/clay, UC418, 630 m, 31.05.1990 (!)

Orthotrichum affine Brid. var. ***affine***

temp - dj-holarc

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990 (!), c.spg.
New for Madonie.

SICANI: Monte Rose, recultivated forests limestone, UC375, 1200-1350 m 01.06.1990.

***Orthotrichum affine* Brid. var. *fastigiatum* (Brid.) Hueb.**

temp - euras-afr

MADONIE: Piano Zucchi, rivulet valley, between hotel “La Montanina” and forest station limestone, VB191, 1120-1200 m, 04.06.1990, c. spg.(!)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990, c. spg.(!) Has only been recorded before 1950.

***Orthotrichum anomalum* Hedw.**

temp - holarc(-bip)

SICANI: Monte Rose, recultivated forests limestone, UC375, 1200-1350 m 01.06.1990.

TRAPANI: Riserva Naturale “Lo Zingaro”, Passo del Lupo, steep rocks limestone, UC220, ca. 450 m, 30.05.1990, c. spg. (!)

Orthotrichum cupulatum* Brid. var. *cupulatum

temp(-mont) dj-holarc

MADONIE: Piano Zucchi, rivulet valley, between hotel “La Montanina” and forest station limestone, VB191, 1120-1200 m, 04.06.1990, c. spg.(!)

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)

***Orthotrichum diaphanum* Brid.**

temp – circpol-w.as.-afr(-bip)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990 (!)

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990

MADONIE: Gangi, siliceous, VB191, ca. 1000 m, 08.06.1990.

PALERMO: alley of plane trees in the Orto botanico limestone, UC415, near sealevel 29.05.1990, c.spg.

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990 (!); c.spg.

Orthotrichum lyellii* Hook. & Taylor var. *lyellii

suboc-submed – eur-w.as-afr-n.c.am

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)

Orthotrichum rupestre Schleich. ex Schwaegr. var. ***rupestre***

n.suboc-mont - cosm

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990, c. spg.(!); 18 (1300m) c.spg. + fo. papillosa c.spg.!

NEBRODI: Monte Soro, stop on the way to Biviere di Cesarò, small stream and *Fagus* woodland (other plants seen there were *Lysimachia nemorum*, *Lathyrus vernus*), 1360 m, 10.06.1990, c. spg.R.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990, c. spg.(!)

Orthotrichum schimperi Hammar

dj-holarc - temp

MADONIE: Gangi, siliceous, VB191, ca. 1000 m, 08.06.1990, c.spg. (!)

Note: formerly a synonym of *O. pumilum* like e.g. in Cortini (1992).* ***Oxystegus cylindricus*** (Br. ex Brid.) Hilp. var. ***cylindricus*** (= *O. tenuirostris*)

suboc-mont dj-holarc(-bip)

Nebrodi: Monte Soro, stop on the way to Biviere di Cesarò, small stream and *Fagus* woodland (other plants seen there were *Lysimachia nemorum*, *Lathyrus vernus*), volcanic soil, 1360 m, 10.06.1990 (!) R, det. R. May.

Note: Recorded by Cortini (2001) without concrete source (before 1950).

Palustriella commutata (Hedw.) Ochyra var. ***commutata*** (= *Cratoneuron commutatum*)

temp - holarc

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990 !

SICANI: Fiume Sosio ca. 5 km behind Palazzo Adriano direction Chiusa Sclafani, limestone, UC375, mountainous level, 02.06.1990 (!)

Palustriella commutata (Hedw.) Ochyra var. ***sulcata*** (Lindb.) Ochyra (= *Cratoneuron commutatum* var. *sulcatum*)

subarc-subalp –eur-e. as-n. afr-n. am

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990 !

Probably this variety.

Note: The variety has not been recorded by Cortini (2001).

Philonotis fontana (Hedw.) Brid.

subbor - holarc(-bip)

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990 (!) also R.

***Philonotis rigida* Brid.**

oc-med-mont - eur-w.as-afr

PELORITANI: Antennamare, west of Messina, open rocks, volcanic soil, 1010 m, 17.06.1990, R.

Plagiomnium affine* (Blandow) T. J. Kop. var. *affine

temp - euras-afr

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990 (!); Probably the records of *P. elatum* (and *P. medium*) in Dia et al. (1987) also belong to this taxon.

***Plagiomnium undulatum* (Hedw.) T. J. Kop.**

temp - euras-afr(-bip)

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990.

NEBRODI: Monte Soro, stop on the way to Biviere di Cesarò, small stream and *Fagus* woodland (other plants seen there were *Lysimachia nemorum*, *Lathyrus vernus*), 1360 m, 10.06.1990 (+) fo. minor R;

NEBRODI: Vallone Calanna, steep sloped woodland (where *Petagna saniculaefolia* grows), 10.06.1990, R.

Plagiothecium denticulatum* (Hedw.) Bruch. & al. var. *denticulatum

subbor - cosm

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!)

***Pleuridium acuminatum* Lindb.**

suboc - dj-holarc

PELORITANI: Antennamare, west of Messina, open rocks, volcanic soil, 1010 m, 17.06.1990, R.

***Pleurochaete squarrosa* (Brid.) Lindb.**

submed - dj-holarc

MADONIE: Piano Zucchi, rivulet valley, between hotel "La Montanina" and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1000 m, 05.06.1990

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990

MADONIE: Gangi, siliceous, VB191, ca. 1000 m, 08.06.1990

NEBRODI: Monte Soro, Biviere di Cesarò, 1320 m, 10.06.1990, R.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990.

TRAPANI: Riserva Naturale "Lo Zingaro", Passo del Lupo, steep rocks limestone, UC220, ca. 450 m, 30.05.1990

Pogonatum aloides (Hedw.) P. Beauv. var. *aloides*

temp - euras-afr(-bip)

NEBRODI: Monte Soro, *Fagus* woodland (stop on our way back near a moist area with *Symphytum tuberosum*) 1600 m, 09.06.1990, + R, sterile.

NEBRODI: Monte Soro, small pond near Biviere di Cesarò, 1340 m, 10.06.1990, c. spg., R.

Pohlia cruda (Hedw.) Lindb.

temp-mont - cosm

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990, (+) c.spg. (!)

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990 (!)

Pohlia nutans (Hedw.) Lindb. var. *nutans*

subbor - cosm

PELORITANI: Antennamare, west of Messina, open rocks, volcanic soil, 1010 m, 17.06.1990, R.

Pohlia wahlenbergii (Weber & D. Mohr) Andrews. var. *wahlenbergii*

subbor - cosm

SICANI: Fiume Sosio ca. 5 km behind Palazzo Adriano direction Chiusa Sclafani, limestone, UC375, mountainous level, 02.06.1990, c. spg.(!)

****Polytrichum commune*** Hedw. var. *perigoniale* (Michx.) Hampe

subbor - holarc(-bip)

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990 (!)

Note: Recorded from there formerly as *P. commune*, but by Cortini (2001) without concrete source as var. *perigoniale* (after 1950).

Polytrichum juniperinum Hedw.

temp - cosm

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990 (!)

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990.

NEBRODI: Monte Soro, Biviere di Cesarò, 1320 m, 10.06.1990, R.

PELORITANI: Antennamare, west of Messina, open rocks, volcanic soil, 1010 m, 17.06.1990, R.

Polytrichum piliferum* Hedw. var. *piliferum

temp - cosm

PELORITANI: Antennamare, west of Messina, open rocks, 1010 m, 17.06.1990, c. spg. R.

***Polytrichum strictum* Brid.**

bor - holarc(-bip)

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990, c.spg. (!)

Note: New for Madonie. Has only been recorded before 1950.

***Pseudoleskea incurvata* (Hedw.) Loeske (= *Lescuraea i.*)**

bor-mont - holarc

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990 (!)

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!); + fo. minor!, 19 (1800-1900 m)!

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990 ! Only known from Madonie.

***Pseudoleskeella nervosa* (Brid.) Nyholm**

bor-mont - holarc

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!) Formerly only once recorded from Peloritani.

Pterigynandrum filiforme* Hedw. var. *filiforme

bor-mont - holarc

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990

MADONIE: Monte San Salvatore, siliceous, VB191 1900 m 03.06.1990 !

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990 !

NEBRODI: Monte Soro, stop on the way to Biviere di Cesarò, small stream and *Fagus* woodland (other plants seen there were *Lysimachia nemorum*, *Lathyrus vernus*), 1360 m, 10.06.1990 (+) fo. minor, R

NEBRODI: Monte Soro, Biviere di Cesarò, 1320 m, 10.06.1990, R.

Pterogonium gracile* (Hedw.) Sm. var. *gracile

MADONIE: Piano Zucchi, rivulet valley, between hotel "La Montanina" and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990 (!)

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990.

MADONIE: Contrada Uccellini, direction Portella Mandarini, limestone, VB181, 1250 m 06.06.1990.

PALERMO: Cozzo Pernice, near the road between Palazzo Adrian and Monte Rose, UC375, 01.06.1990!

PALERMO: northern slopes of Monte Rose, limestone, UC375, 1200 m, 01.06.1990.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)

Note: *Pterogonium gracile* var. *parvulum* G. Roth ex Zodda at first recorded from Sicily (Caronie) but not found by us again. Not accepted by Cortini (1992 & 2001).

* *Pterygoneurum ovatum* (Hedw.) Dixon

temp dj-holarc(-bip)

MADONIE: Piano Battaglia limestone, upper mountainous level, VB181, 07.06.1990, c.spg. (!)

Note: In Cortini (1992 & 2001) recorded without concrete source before 1950.

PALERMO: Palermo: Piant di Quacella limestone, VB191, 1350 m 07.06.1990

Pylaisia polyantha (Hedw.) Schimp. var. *polyantha*

subbor - holarc

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 sterile (!)

Racomitrium affine (Weber & D. Mohr) Lindb.

bor-mont - holarc

PELORITANI: Antennamare, west of Messina, open rocks, volcanic soil, 1010 m, 17.06.1990, c.spg. R; det. Frisvoll. Records of *R. heterostichum* and *R. sudeticum* are very doubtful.

* *Racomitrium elongatum* Ehrh. ex Frisvoll

bor - eur-w.as-afr(m)-n.am.

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!)

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990 (!)

NEBRODI: Monte Soro, stop on the way to Biviere di Cesarò, small stream and *Fagus* woodland (other plants seen there were *Lysimachia nemorum*, *Lathyrus vernus*), 1360 m, 10.06.1990 R;

NEBRODI: Monte Soro, Biviere di Cesarò, 1320 m, 10.06.1990, R.

MESSINA: Antennamare, west of Messina, open rocks, volcanic soil, 1010 m, 17.06.1990, R. Recorded by Cortini (2001) without concrete source (before 1950).

Rhynchostegiella tenella* (Dicks.) Limpr. var. *tenella

submed-suboc – eur.-w.as.-afr

MADONIE: Piano Zucchi, rivulet valley, between hotel “La Montanina” and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990, c. spg.(!) New for Pr. Trapani.

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990 (!)

***Rhynchostegium confertum* (Dicks.) Bruch. & al.**

submed-suboc - dj-euras-afr

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990 (!)

Rhynchostegium megapolitanum* (Blandow ex Weber & D. Mohr) Bruch. & al. var. *megapolitanum

eur.-w. /c. as-afr

SICANI: Monte Rose, recultivated forests limestone, UC375, 1200-1350 m 01.06.1990 (!)

Rhynchostegium riparioides* (Hedw.) C. E. O. Jensen fo. *riparioides

temp - holarc

MADONIE: Piano Zucchi, rivulet valley, between hotel “La Montanina” and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!)

MADONIE: behind Portella Mandarini beneath Geraci Siculo (last rivulet valley), siliceous rocks, VB181, 1300 m, 06.06.1990 (!)

MADONIE: Pietà (Polizzi Generosa), VB181, 07.06.1990.

MADONIE: Comunello near Piano Zucchi limestone, VB191, 1230 m, 08.06.1990.

NEBRODI: Monte Soro, artificial lake on the way to Biviere di Cesarò, 1460 m, 10.06.1990, R.

NEBRODI: Vallone Calanna, steep sloped woodland (where *Petagna saniculaefolia* grows), 10.06.1990, R.

SICANI: Fiume Sosio ca. 5 km behind Palazzo Adriano direction Chiusa Sclafani, limestone, UC375, mountainous level, 02.06.1990 (!)

***Rhytidiadelphus triquetrus* (Hedw.) Warnst.**

subbor - holarc

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)

Schistidium apocarpum* (Hedw.) Bruch. & Schimp. var. *apocarpum

temp - cosm

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990. agg. Probably most of the records without specimen, are doubtful.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)
 SICANI: Cozzo Pernice, near the road between Palazzo Adriano and Monte Rose, limestone, UC375, 01.06.1990 agg.

Schistidium atrofusum (Schimp.) Limpr. (= *Sch. apocarpum* var. *a.*)

subarc-subalp – eur-w.as-n.afn.-n.am

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990 (!)

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990, c. spg.
 (!) Has only been once recorded (also from Madonie).

Schistidium confertum (Funck) Bruch & Schimp. (= *Sch. apocarpum* var. *co.*)

subbor-mont - holarc (-bip)

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990, c. spg. (!)

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990, c. spg. (!) Has only been once recorded (from Madonie). But our specimen needs verification. Has only been recorded before 1950.

* ***Schistidium rivulare*** (Brid.) Podp. ssp. *latifolium* (Zett.) B. Bremer

bor-mont - holarc (-c.afn)

SICANI: Monte Carbonara, limestone, VB191, ca. 1800-1900 m, 05.06.1990 (!) R.
 Recorded by Cortini (2001).

Note: without concrete source (before 1950).

Schistidium singarense (Schiffn.) Laz. (= *Sch. apocarpum* agg.)

med – eur.c.as

SICANI: Monte Rose, limestone, UC375, 1300-1350 m 01.06.2004 R (sub *Sch. apocarpum*, rev. By Blom). Recorded by Cortini (2001) without concrete source (after 1950).

Scleropodium purum (Hedw.) Limpr. var. *purum*

temp - dj-holarc(bip)

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990 (!)

PELORITANI: Antennamare, west of Messina, open rocks, volcanic soil, 1010 m, 17.06.1990, R.

Scleropodium touretii (Brid.) L. F. Koch fo. *touretii*

med-oc-mont- n.am-?s.eur

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990.

MADONIE: Piano Zucchi, rivulet valley, between hotel “La Montanina” and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!)

MADONIE: Contrada Uccellini, direction Portella Mandarinini, limestone, VB181, 1250 m 06.06.1990.

MADONIE: Gangi, siliceous, VB191, ca. 1000 m, 08.06.1990.

NEBRODI: Monte Soro, stop on the way to Biviere di Cesarò, small stream and *Fagus* woodland (other plants seen there were *Lysimachia nemorum*, *Lathyrus vernus*), 1360 m, 10.06.1990, R.

NEBRODI: Monte Soro, Biviere di Cesarò, 1320 m, 10.06.1990, R.

NEBRODI: Vallone Calanna, steep sloped woodland (where *Petagna saniculaefolia* grows), 10.06.1990, R.

PALERMO: Monte Pellegrino, 2 km above Mondello behind the tunnel, umbragenous deciduous forest, limestone, UC425, ca. 130 m, 29.05.1990.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)

SICANI: Fiume Sosio ca. 5 km behind Palazzo Adriano direction Chiusa Sclafani, limestone, UC375, mountainous level, 02.06.1990 (!)

TRAPANI: Riserva Naturale “Lo Zingaro”, Passo del Lupo, steep rocks limestone, UC220, ca. 450 m, 30.05.1990.

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990.

***Scorpiurium circinatum* (Brid.) M. Fleischer & Loeske**

oc-med - eur-w./e.as-afr

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990

MADONIE: Piano Zucchi, rivulet valley, between hotel “La Montanina” and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!)

MADONIE: Gangi, siliceous, VB191, ca. 1000 m, 08.06.1990.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 (!)

PALERMO: alley of plane trees in the Orto botanico limestone, UC415, near sealevel 29.05.1990.

PALERMO: Monte Pellegrino, 2 km above Mondello behind the tunnel, umbragenous deciduous forest, limestone, UC425, ca. 130 m, 29.05.1990, c.spg. (!)

SICANI: Fiume Sosio ca. 5 km behind Palazzo Adriano direction Chiusa Sclafani, limestone, UC375, mountainous level, 02.06.1990 (!)

TRAPANI: Riserva Naturale “Lo Zingaro”, Monte Sparagio, limestone, UC220, ca. 450 m (!)

TRAPANI: Riserva Naturale “Lo Zingaro”, Passo del Lupo, steep rocks limestone, UC220, ca. 450 m, 30.05.1990

TRAPANI: seashore at the western part of Monte Cofano near Cornino, coastal vegetation limestone/clay, UC220, near sealevel, 31.05.1990 (!)

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990

* *Scorpiurium sendtneri* (Schimp.) M. Fleisch.

submed(-suboc) - eur-w.as-afr

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990 (!)

Note: Recorded by Cortini (2001) without concrete source (before 1950).

Sphagnum denticulatum Brid. (= *S. lescurii* var. *auriculatum* and var. *rufescens*, but not *S. lescurii* Sull. in Duell (1984); see Duell 1992!)

n. suboc - holarc

MADONIE: Portella Mandarini, direction Geraci, northern slopes, marshy country and siliceous rocky pastures, VB181, 1450-1500 m, 06.06.1990 (!)

Note: Also R. Has only been recorded from Madonie and Etna.

Syntrichia intermedia Brid. var. *intermedia* (= *Tortula i.*)

submed-mont" - dj-holarc

PALERMO: Monte Pellegrino, 2 km before Grotta Santa Rosalia, southern exposition, limestone, UC425, ca. 200 – 350 m, 29.05.1990 (!)

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990.

SICANI: Monte Rose, recultivated forests limestone, UC375, 1200-1350 m 01.06.1990 (!)

SICANI: Fiume Sosio ca. 5 km behind Palazzo Adriano direction Chiusa Sclafani, limestone, UC375, mountainous level, 02.06.1990 (!)

TRAPANI: Riserva Naturale "Lo Zingaro", Monte Sparagio, limestone, UC220, ca. 450 m (!)

TRAPANI: Riserva Naturale "Lo Zingaro", Passo del Lupo, steep rocks limestone, UC220, ca. 450 m, 30.05.1990.

Syntrichia laevipila Brid. var. *laevipila* (= *Tortula l.*)

suboc-submed - dj-holarc(-bip)

MADONIE: Piano Zucchi, rivulet valley, between hotel "La Montanina" and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990, c. spg.(!)

Syntrichia laevipila Brid. var. *laevipilaeformis* (De Not.) Limpr. (= *Tortulal.* var. *l.*)

submed-oc -eur-w.as-afr-n.am

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990, c. spg. (!) New for Pr.

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990 (!)

Note: Palermo and Trapani. Has only been recorded before 1950.

* *Syntrichia norvegica* Web. f. var. *norvegica* (= *Tortula* n.)

subarc - subalp

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990.

Note: Verification is needed. Recorded by Cortini (2001) without concrete source (before 1950).

Syntrichia princeps (De Not.) Mitt. var. *princeps* (= *Tortula* p.)

oc-submed - subcosm

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990, c. spg.(!)

Syntrichia ruraliformis (Besch.) Cardot var. *ruraliformis* (= *Tortula ruralis* ssp. *ruraliformis*)

suboc-submed –eur-w.as-afr-n.am

PALERMO: northern slopes of Monte Rose, limestone, UC375, 1200 m, 01.06.1990.

Syntrichia ruralis (Hedw.) Web. & D. Mohr ssp. *ruralis* (= *Tortula* r.)

temp - subcosm

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990 (!)

MADONIE: Piano Zucchi, rivulet valley, between hotel “La Montanina” and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!)

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990 (!)

MADONIE: Contrada Uccellini, direction Portella Mandarinini, limestone, VB181, 1250 m 06.06.1990.

SICANI: Monte Rose, recultivated forests limestone, UC375, 1200-1350 m 01.06.1990 (!)

Syntrichia virescens (De Not.) Ochyra (= *Tortula* v.)

temp - eur w.c.as-afr-?n.am

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050 m, 05.06.1990.

PALERMO: alley of plane trees in the Orto botanico limestone, UC415, near sealevel 29.05.1990.

Note: Formerly only known from Caronie.

Thamnobryum alopecurum (Hedw.) Gangulee var. *alopecurum*

suboc-submed - euras-afr

MADONIE: Piano Zucchi, rivulet valley, between hotel “La Montanina” and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1000-1050 m, 05.06.1990 (!)

Timmiella barbuloidea (Grid.) Moenk.

med - dj-euras-afr(-bip)

PALERMO: Monte Pellegrino, 2 km before Grotta Santa Rosalia, southern exposition, limestone, UC425, ca. 200 – 350 m, 29.05.1990, c. spg. (!)

PALERMO: Monte Pellegrino, 2 km above Mondello behind the tunnel, umbragenous deciduous forest limestone, UC425, 130 m, c. spg. (!)

TRAPANI: Riserva Naturale “Lo Zingaro”, Passo del Lupo, steep rocks limestone, UC220, ca. 450 m, 30.05.1990.

Tortella flavovirens (Brach.) Broth. var. *flavovirens*

suboc-submed – eur-w.as-afr-n.am

CALTAGIRONE: Bosco di Santo Pietro, north of Vittoria Macchia, 240 m, 17.06.1990, R.

Tortella nitida (Lindb.) Broth.

oc-med - eur-w. as-afr

TRAPANI: Riserva Naturale “Lo Zingaro”, Monte Sparagio, limestone, UC220, ca. 450 m (!)

TRAPANI: Riserva Naturale “Lo Zingaro”, Passo del Lupo, steep rocks limestone, UC220, ca. 450 m, 30.05.1990 (!)

Tortella tortuosa (Hedw.) Limpr. var. *tortuosa*

bor-mont - holarc(-bip)

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990 + fo. fragilifolia; both t. R. May (!)

MADONIE: Piano Zucchi, rivulet valley, between hotel “La Montanina” and forest station limestone, VB191, 1120-1200 m, 04.06.1990 (!)

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1000 m, 05.06.1990 (!)

MADONIE: Piano Battaglia, calcareous fen vegetation, VB191, 1550 m, 06.06.1990.

PALERMO: northern slopes of Monte Rose, limestone, UC375, 1200 m, 01.06.1990.

PALERMO: Rocca Busambra direction Ficuzza, limestone, UC395, 1100 m, 02.06.1990 fo. fragilifolia (!)

Tortula atrovirens (Sm.) Lindb.

submed-suboc – subcosm

TRAPANI: seashore at the western part of Monte Cofano near Cornino, coastal vegetation limestone/clay, UC220, ca. 10 m, 31.05.1990, female (!)

Tortula muralis Hedw. var. *muralis*

temp - subcosm

MADONIE: Piano Zucchi, rivulet valley, between hotel “La Montanina” and forest station limestone, VB191, 1120-1200 m, 04.06.1990, c. spg.(!)

PALERMO: Monte Pellegrino, 2 km before Grotta Santa Rosalia, southern exposition, limestone, UC425, ca. 200 – 350 m, 29.05.1990, c. spg.(!); la ($\pm$ Om) c.spg.

PALERMO: Monte Pellegrino, 2 km above Mondello behind the tunnel, umbragenous deciduous forest limestone, UC425, 130 m, c.spg.(!)

SICANI: Fiume Sosio ca. 5 km behind Palazzo Adriano direction Chiusa Sclafani, limestone, UC375, mountainous level, 02.06.1990 (!)

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990, c. spg.(!)

Tortula subulata* Hedw. var. *subulata

subbor(-mont) - holarc

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990, c. spg.(!)

MADONIE: Piano Pomo near Castellbuono, quartzite, VB191, 1300 m, 04.06.1990, c.spg.!.

MADONIE: Monte Carbonara, limestone, VB191, ca. 1800-1900 m, 05.06.1990 (!) R.

NEBRODI: Monte Soro, artificial lake on the way to Biviere di Cesarò, 1460 m, 10.06.1990, R.

PALERMO: northern slopes of Monte Rose, limestone, UC375, 1200 m, 01.06.1990.

SICANI: Monte Rose, recultivated forests limestone, UC375, 1200-1350 m 01.06.1990 (!)

***Tortula subulata* Hedw. var. *angustata* (Schimp.) Limpr.**

suboc-submed-mont - dj-holarc

MADONIE: top of Monte San Salvatore, siliceous, VB191, 1900 m, 03.06.1990 (!) A few records only.

Trichostomum brachydontium* Bruch var. *brachydontium

submed-mont - subcosm

MADONIE: Contrada Uccellini, direction Portella Mandarinini, limestone, VB181, 1250 m 06.06.1990.

PALERMO: northern slopes of Monte Rose, limestone, UC375, 1200 m, 01.06.1990.

***Trichostomum crispulum* Bruch var. *brevifolium* (Muell. Hal.) Bruch. & Schimp.**

submed-suboc(-mont) - eur-w.as-afr

CALTAGIRONE: Bosco di Santo Pietro, north of Vittoria Macchia, 240 m, 17.06.1990, R.

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990 fo. *crassinerve* (!)

Weissia controversa* Hedw. var. *controversa

temp - cosm

MADONIE: Monte Daino, siliceous, VB191, 1700 m, 03.06.1990, c. spg.(!)

***Weissia levieri* (Limpr.) Kindb.**

oc-med - eur-afr

SICANI: Monte Rose, recultivated forests limestone, UC375, 1200-1350 m 01.06.1990 (!);
 Note: has only been known from two records in Madonie (before 1950).

Zygodon rupestris Schimp. ex Lor. (= *Z. viridissimus* ssp. *baumgartneri* = *Z. vulgaris*)

suboc-med - dj-holarc

MADONIE: beneath Piano Zucchi, rivulet valley, *Quercus ilex*-forest, limestone, VB191, 1050-1200 m, 05.06.1990 + c.spg. (!)

NEBRODI: Monte Soro, artificial lake on the way to Biviere di Cesarò, 1460 m, 10.06.1990, R. Has only been recorded once from Palermo but all records of *Z. viridissimus* probably belong to this subspecies. Also by Cortini (1992) not accepted for Italy at all!

PALERMO: Alley of plane trees in the Orto botanico limestone, UC415, near sealevel, 29.05.1990.

TRAPANI: Monte Erice (San Giuliano), deciduous forest, rich in epiphytic cryptogams, limestone/clay, UC418, 630 m, 31.05.1990 (!)

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