

## Supporting information

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## Electronic Appendix S4: Hierarchical systems structuring the conspecti EVC1, EVC2 and EVC3.

This Appendix features, in synoptic manner, the syntaxonomic systems as presented in detail in Conspectus EVC1 (see Appendix 1), Conspectus EVC2 (see Appendix 2) and Conspectus EVC3 (see Appendix 3). The basic principle of the system underpinning the EVC1 is the concept of zonality and azonality. The hierarchical systems for structuring conspecti EVC2 and EVC3 follow the environmental (substrate and nature of water medium) criteria.

## Conspectus EVC1

### 1. ZONAL AND INTRAZONAL VEGETATION

#### 1.1 VEGETATION OF THE ARCTIC ZONE

##### 1.1.1 ZONAL VEGETATION OF POLAR DESERT AND TUNDRA

PAP: *Drabo corymbosae-Papaveretea dahlmani* Daniëls, Elvebakk et Matveyeva in Daniëls et al. 2015

KOB: *Carici rupestris-Kobresietea bellardii* Ohba 1974

LOI: *Loiseleurio procumbentis-Vaccinietea* Eggler ex Schubert 1960

##### 1.1.2 INTRAZONAL VEGETATION OF POLAR DESERT AND TUNDRA

SAX: *Saxifrago tricuspidatae-Calamagrostietea purpurascens* Drees et Daniëls 2009

COC: *Saxifrago cernuae-Cochlearietea groenlandicae* Mucina et Daniëls in Mucina et al. 2016

#### 1.2 VEGETATION OF THE BOREAL ZONE

##### 1.2.1 ZONAL BOREAL AND HEMIBOREAL FORESTS

PIC: *Vaccinio-Piceetea* Br.-Bl. in Br.-Bl. et al. 1939

ASA: *Asaro europaei-Abietetea sibiricae* Ermakov, Mucina et Zhitlukhina in Willner et al. 2016

BRA: *Brachypodio pinnati-Betuletea pendulae* Ermakov et al. 1991

PYR: *Pyrolo-Pinetetea sylvestris* Korneck 1974

#### 1.3 VEGETATION OF THE NEMORAL FOREST ZONE

##### 1.3.1 ZONAL TEMPERATE BROAD-LEAVED FORESTS

FAG: *Carpino-Fagetetea sylvatica* Jakucs ex Passarge 1968

PUB: *Quercetea pubescentis* Doing-Kraft ex Scamoni et Passarge 1959

QUE: *Quercetea roburi-petraeae* Br.-Bl. et Tx. ex Oberd. 1957

##### 1.3.2 INTRAZONAL SCRUB OF THE NEMORAL ZONE

RHA: *Crataego-Prunetea* Tx. 1962 *nom. conserv. propos.*

LON: *Lonicero-Rubetea plicati* Haveman, Schaminée et Stortelder in Stortelder et al. 1999

ROB: *Robinietea* Jurko ex Hadač et Sofron 1980

ARE: *Salicetea arenariae* Weber 1999

##### 1.3.3 INTRAZONAL BOREO-TEMPERATE GRASSLANDS AND HEATH

ULI: *Calluno-Ulicetea* Br.-Bl. et Tx. ex Klika et Hadač 1944

NAR: *Nardetea strictae* Rivas Goday et Borja Carbonell in Rivas Goday et Mayor López 1966 *nom. conserv. propos*

COR: *Koelerio-Corynephoretea canescentis* Klika in Klika et Novák 1941  
SED: *Sedo-Scleranthetea* Br.-Bl. 1955  
GER: *Trifolio-Geranietea sanguinei* T. Müller 1962  
MOL: *Molinio-Arrhenatheretea* Tx. 1937

#### 1.3.4 VEGETATION OF THE NEMORAL OROSYSTEMS

SAB: *Junipero-Pinetea sylvestris* Rivas-Mart. 1965 *nom. invers. propos.*  
ERI: *Erico-Pinetea* Horvat 1959  
MUG: *Roso pendulinae-Pinetea mugo* Theurillat in Theurillat et al. 1995  
RHO: *Rhododendro hirsuti-Ericetea carneae* Schubert et al. 2001  
VIR: *Betulo carpaticae-Alnetea viridis* Rejmánek ex Bœuf, Theurillat, Willner, Mucina et Simler in Bœuf et al. 2014  
MUL: *Mulgedio-Aconitetea* Hadač et Klika in Klika et Hadač 1944  
TRI: *Juncetea trifidi* Hadač in Klika et Hadač 1944  
SES: *Elyno-Seslerietea* Br.-Bl. 1948

### 1.4 VEGETATION OF THE STEPPE ZONE

#### 1.4.1 ZONAL STEPPE GRASSLANDS

FES: *Festuco-Brometea* Br.-Bl. et Tx. ex Soó 1947

#### 1.4.2 INTRAZONAL SALINE VEGETATION OF THE STEPPE ZONE

FEP: *Festuco-Puccinellietea* Soó ex Vicherek 1973  
CRY: *Crypsietea aculeatae* Vicherek 1973

### 1.5 VEGETATION OF THE CONTINENTAL DESERT ZONE

#### 1.5.1 ZONAL VEGETATION OF CONTINENTAL SEMIDESERTS

LER: *Artemisietea lerchianae* Golub 1994

#### 1.5.2 INTRAZONAL VEGETATION OF CONTINENTAL SEMIDESERTS

TAM: *Tamaricetea arceuthoidis* Akhani et Mucina 2015  
KAL: *Kalidietea foliati* Mirkin et al. ex Rukhlenko 2012  
AEL: *Aeluropodetea littoralis* Golub et al. 2001

### 1.6 VEGETATION OF THE MEDITERRANEAN ZONE

#### 1.6.1 ZONAL MEDITERRANEAN FORESTS AND SCRUB

QUI: *Quercetea ilicis* Br.-Bl. ex A. Bolòs et O. de Bolòs in A. Bolòs y Vayreda 1950  
ROS: *Ononido-Rosmarinetea* Br.-Bl. in A. Bolòs y Vayreda 1950  
LAV: *Cisto-Lavanduletea stoechadis* Br.-Bl. in Br.-Bl. et al. 1940

#### 1.6.2 INTRAZONAL MEDITERRANEAN SCRUB

NER: *Nerio-Tamaricetea* Br.-Bl. et O. de Bolòs 1958  
CYT: *Cytisetea scopario-striati* Rivas-Mart. 1974

#### 1.6.3 INTRAZONAL MEDITERRANEAN GRASSLANDS AND HERBLANDS

LYG: *Lygeo sparti-Stipetea tenacissimae* Rivas-Mart. 1978 *nom. conserv. propos.*  
SAC: *Stipo giganteae-Agrostietea castellanae* Rivas-Mart. et al. 1999  
BUL: *Poetea bulbosae* Rivas Goday et Rivas-Mart. in Rivas-Mart. 1978  
TUB: *Helianthemetea guttati* Rivas Goday et Rivas-Mart. 1963  
TRA: *Stipo-Trachynietea distachyae* S. Brullo in S. Brullo et al. 2001

#### 1.6.4 INTRAZONAL MEDITERRANEAN SEMIDESERTS

PEG: *Pegano harmalae-Salsoletea vermiculatae* Br.-Bl. et O. de Bolòs 1958

#### 1.6.5 VEGETATION OF OROMEDITERRANEAN GRASSLANDS AND SCRUB

IND: *Festucetea indigestae* Rivas Goday et Rivas-Mart. 1971  
PIL: *Saginetea piliferae* Gamisans 1975  
RUM: *Rumici-Astragaletea siculi* Pignatti et Nimis in E. Pignatti et al. 1980

ANA: *Trifolio anatolici-Polygonetea arenastri* Quézel 1973  
ONO: *Festuco hystricis-Ononidetea striatae* Rivas-Mart. et al. 2002  
GEN: *Carici-Genistetea lobelii* Klein 1972  
DAP: *Daphno-Festucetea* Quézel 1964  
CYP: *Diantho troodi-Teucrietea cyprii* S. Brullo et al. 2005

## **1.7 VEGETATION OF THE CANARY ISLANDS, MADEIRA AND AZORES**

### **1.7.1 ZONAL CLASSES OF THE CANARY ISLANDS, MADEIRA AND AZORES**

KLE: *Kleinio neriifoliae-Euphorbiete a canariensis* (Rivas Goday et Esteve 1965) Santos 1976  
OLE: *Oleo cerasiformis-Rhamniete a crenulatae* Santos ex Rivas-Mart. 1987  
LAU: *Pruno lusitanicae-Lauretea azoricae* Oberd. ex Rivas-Mart. et al. 1977  
AZO: *Lauro azoricae-Juniperetea brevifoliae* Rivas-Mart. et al. 2002  
CAN: *Cytiso-Pinetea canariensis* Rivas Goday et Esteve ex Esteve 1969  
SUP: *Spartocytisetea supranubii* Schönfelder et Voggenreiter 1994

### **1.7.2 INTRAZONAL CLASSES OF THE CANARY ISLANDS, MADEIRA AND AZORES**

MOQ: *Polycarpaeo niveae-Traganetea moquini* Rivas-Mart. et Wildpret in Rivas-Mart. et al. 2002  
AEO: *Aeonio-Greenoviete a* Santos 1976  
VIO: *Violetea cheiranthifoliae* Voggenreiter ex Mucina in Mucina et al. 2016  
TOL: *Tolpido azoricae-Holcetea rigidi* Fernández Prieto et Aguiar in Fernández Prieto et al. 2012

## **2 AZONAL VEGETATION**

### **2.1 ALLUVIAL FORESTS AND SCRUB**

POP: *Alno glutinosae-Populetea albae* P. Fukarek et Fabijanić 1968  
PUR: *Salicetea purpureae* Moor 1958

### **2.2 SWAMP FORESTS AND SCRUB**

ALN: *Alnete a glutinosae* Br.-Bl. et Tx. ex Westhoff et al. 1946  
FRA: *Franguletea* Doing ex Westhoff in Westhoff et Den Held 1969

### **2.3 VEGETATION OF COASTAL CLIFFS AND DUNES**

SAG: *Saginete a maritimae* Westhoff et al. 1962  
CRI: *Crithmo-Staticetea* Br.-Bl. in Br.-Bl. et al. 1952  
CAK: *Cakiletea maritimae* Tx. et Preising in Tx. ex Br.-Bl. et Tx. 1952  
AMM: *Ammophiletea* Br.-Bl. et Tx. ex Westhoff et al. 1946  
CRU: *Helichryso-Crucianelletea maritimae* Géhu et al. in Sissingh 1974

### **2.4 VEGETATION OF ROCK CREVICES AND SCREES**

ADI: *Adiantetea* Br.-Bl. et al. 1952  
POD: *Polypodiete a* Jurko et Peciar ex Boşcaiu, Gergely et Codoreanu in Raţiu et al. 1966  
ASP: *Aspleniete a trichomanis* (Br.-Bl. in Meier et Br.-Bl. 1934) Oberd. 1977  
CYM: *Cymbalario-Parietariete a diffusae* Oberd. 1969  
THL: *Thlaspiete a rotundifoliae* Br.-Bl. 1948  
LAM: *Lamio tomentosi-Chaerophyllete a humilis* Belonovskaya et al. 2014  
PHA: *Phagnalo saxatilis-Rumicete a indurati* (Rivas Goday et Esteve 1972) Rivas-Mart. et al. 1973  
DRY: *Drypidete a spinosae* Quézel 1964

### **2.5 VEGETATION OF ARCTIC-ALPINE VEGETATION OF SNOW-RICH HABITATS**

HER: *Salicete a herbaceae* Br.-Bl. 1948

### **2.6 VEGETATION OF SALINE AND BRACKISH WATERS AND SWAMPS**

ZOS: *Zosterete a* Pignatti 1953  
HAL: *Halodulo wrightii-Thalassiete a testudinum* Rivas-Mart. et al. 1999  
RUP: *Ruppiete a maritimae* J. Tx. ex Den Hartog et Segal 1964  
SPA: *Spartinete a maritimae* Beeftink 1962  
THE: *Therosalicorniete a* Tx. in Tx. et Oberd. 1958  
JUN: *Juncete a maritimi* Br.-Bl. in Br.-Bl. et al. 1952  
SAL: *Salicorniete a fruticosae* Br.-Bl. et Tx. ex A. Bolòs y Vayreda et O. de Bolòs in A. Bolòs y Vayreda 1950

## 2.7 FRESHWATER AQUATIC VEGETATION

LEM: *Lemnetea* O. de Bolòs et Masclans 1955

POT: *Potamogetonetea* Klika in Klika et Novák 1941

## 2.8 VEGETATION OF FRESHWATER SPRINGS, SHORELINES AND SWAMPS

MON: *Montio-Cardaminetea* Br.-Bl. et Tx. ex Klika et Hadač 1944

LIT: *Littorelletea uniflorae* Br.-Bl. et Tx. ex Westhoff et al. 1946

ISO: *Isoëto-Nanojuncetea* Br.-Bl. et Tx. in Br.-Bl. et al. 1952

PHR: *Phragmito-Magnocaricetea* Klika in Klika et Novák 1941

## 2.9 VEGETATION OF BOGS AND FENS

SCH: *Scheuchzerio palustris-Caricetea fuscae* Tx. 1937

OXY: *Oxycocco-Sphagnetetea* Br.-Bl. et Tx. ex Westhoff et al. 1946

## 3 ANTHROPOGENIC VEGETATION

PAR: *Papaveretea rhoeadis* S. Brullo et al. 2001 *nom. conserv. propos.*

SIS: *Sisymbrietea Gutte et Hilbig* 1975

CHE: *Chenopodietea* Br.-Bl. in Br.-Bl. et al. 1952

DIG: *Digitario sanguinalis-Eragrostietea minoris* Mucina, Lososová et Šilc in Mucina et al. 2016

POL: *Polygono-Poetea annuae* Rivas-Mart. 1975

ART: *Artemisietea vulgaris* Lohmeyer et al. in Tx. ex von Rochow 1951

EPI: *Epilobietea angustifolii* Tx. et Preising ex von Rochow 1951

ARC: *Matricario-Poetea arcticae* A. Ishbirdin in Sumina 2012

BID: *Bidentetea* Tx. et al. ex von Rochow 1951

ORY: *Oryzetea sativae* Miyawaki 1960

# Conspectus EVC2

## 1. EPIGEIC BRYOPHYTE AND LICHEN VEGETATION

FUN: *Funarietea hygrometricae* von Hübschmann 1957

CER: *Ceratodonto purpurei-Polytrichetea piliferi* Mohan 1978

PSO: *Psoretea decipiens* Mattick ex Follmann 1974

HYL: *Hylocomietea splendentis* Gillet ex Marstaller 1992

CAM: *Campylopodetea vaporarii* Brullo et al. 2004

## 2. EPILITHIC BRYOPHYTE AND LICHEN VEGETATION

PLA: *Platyhypnidio-Fontinalietea antipyreticae* Philippi 1956

ALA: *Aspicilietea lacustris* Wirth 1972

VMA: *Verrucarietea maurae* Drehwald 1993

SAP: *Schistidieta apocarpae* Ježek et Vondráček 1962

RAC: *Racomitrietea heterostichi* Neumayr 1971

CTE: *Ctenidieta mollusci* von Hübschmann ex Grgić 1980

CLA: *Clauzadeetea immersae* Roux in Roux et al. 2009

VNI: *Verrucarietea nigrescentis* Wirth 1980

RHI: *Rhizocarpetea geographici* Wirth 1972

ACA: *Aspicilietea candidae* Asta et Roux ex Roux in Bültmann et al. 2015

POR: *Porpidieta zeoroidis* Roux in Bültmann et al. 2015

COL: *Collematetea cristati* Wirth 1980

LCH: *Leprarietea chlorinae* Wirth 1972

ROC: *Roccelletea phycopsis* Egea in Bültmann et al. 2015

## 3. EPIPHYTIC AND OTHER BRYOPHYTE AND LICHEN VEGETATION

NEC: *Neckeretea complanatae* Marstaller 1986 *nom. conserv. propos.*  
FRU: *Frullanio dilatatae*-*Leucodontetea sciuroidis* Mohan 1978  
ARL: *Arthonio radiatae*-*Lecidelletea elaeochromae* Drehwald 1993  
HYP: *Hypogymnieteae physodis* Follmann 1974 *nom. conserv. propos.*  
FEL: *Fellhaneretea bouteillei* Bricaud et Roux in Bricaud et al. 2009  
PHY: *Physcieteae* Tomaselli et De Micheli 1952  
LCA: *Leprarietea candelaris* Wirth 1980  
CLE: *Cladonio digitatae*-*Lepidozietea reptantis* Ježek et Vondráček 1962 *nom. conserv. propos.*

## Conspectus EVC3

### 1. VEGETATION OF FRESHWATER ALGAE

CHA: *Charetea intermediae* F. Fukarek 1961  
STI: *Stigeoclonieteae tenuis* Arendt 1982  
LEF: *Lemaneetea fluvialis* Weber-Oldecop ex Bobrov et Chemeris 2012  
NAV: *Naviculetea gregariae* Täuscher in Bültmann et al. 2015  
AST: *Asterionelletea formosae* Täuscher 1998

### 2. VEGETATION OF SOIL ALGAE

BRH: *Bracteacocco minoris*-*Hantzschieteae amphioxys* Khaybullina et al. 2005

### 3. AEROPHYTIC ALGAL VEGETATION

GLO: *Gloeocapseteae sanguineae* Bültmann et Golubič in Bültmann et al. 2015  
DES: *Desmococceteae olivacei* Bültmann in Bültmann et al. 2015

### 4. VEGETATION OF SNOW AND ICE ALGAE

MES: *Mesotaenieteae berggrenii* Bültmann et Takeuchi in Bültmann et al. 2015

### 5. VEGETATION OF MARINE ALGAE

ENT: *Entophysalideteae deustae* Giaccone in Bültmann et al. 2015  
CYS: *Cystoseiretea* Giaccone 1965  
LIS: *Lithophylleteae soluti* Giaccone 1965  
CAU: *Caulerpeteae racemosae* Giaccone et Di Martino in Bültmann et al. 2015