

# The lichen biota of three nature reserves in island Saaremaa, Estonia

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**Abstract:** A description of the lichen biota of three nature reserves – Kaugatoma-Lõo, Odalätsi and Viieristi reserves in Saaremaa island, Estonia is presented. In total 404 species are listed, of them 228 are recorded from Kaugatoma-Lõo, 169 from Odalätsi and 167 from Viieristi reserves. The composition of the lichen biota of the reserves reflects the availability of habitats (alvar grasslands, sand dunes, different types of forests) in the area. The share of rare and protected species is the highest in Kaugatoma-Lõo reserve because of the rare in Estonia habitats (thin calcium-rich soils) and substrata (lignum of old, dead junipers). *Ramalina elegans*, previously considered as extinct in Estonia, was re-found from Odalätsi and Viieristi reserves.

## Kokkuvõte: Kolme Saaremaa kaitseala sambllike elustik

Esitatakse kolme Saaremaa kaitseala – Kaugatoma-Lõo, Odalätsi ja Viieristi kaitsealade samblikustiku lühikirjeldused koos samblike moodustavate ja samblikelikasvavate seente nimekirjadega. Kolmelt kaitsealalt kokku on teada 404 liiki, neist 228 Kaugatoma-Lõo, 169 Odalätsi ning 167 Viieristi kaitsealalt. Enim haruldasi ja kaitstavad taksoneid leiti Kaugatoma-Lõo kaitselalt kuna kaitseala põhilised biotoobid – kuivad loonidud – on samblike poolest liigirikkad, samas vähelevinud. Palju haruldasi liike Kaugatoma-Lõo kaitsealal kasvab ka vanadel, kuivanud kadakatel. Jäik rihmsamblik (*Ramalina elegans*), mida loeti Eestis hävinuks, leiti taas Odalätsi ja Viieristi kaitsealadel.

## INTRODUCTION

Nature reserves are formed for preserving or maintaining wildlife, biodiversity, features of landscape or other aspects of special interest. Up to now, there are about 400 reserves in Estonia, covering approximately 5900 km<sup>2</sup>, which is c. 13% of the Estonian land area (<http://loodus.keskkonnainfo.ee/w5/>). Lichen inventories have been carried out in several of them, but only some species-lists have been published (Martin et al., 1999; Randlane, 1981; Suija et al., 2007; Suija & Jüriado, 2002). This paper is inspired by the floristic survey of the habitats

of three protected areas in Saaremaa – Kaugatoma-Lõo Landscape Reserve (LR), Odalätsi LR and Viieristi Nature Reserve (NR). The survey was carried out mainly within the frameworks of XVII<sup>th</sup> symposium of Baltic Mycologists and Lichenologists (BML) held in Saaremaa from September 17<sup>th</sup> to 21<sup>th</sup>, 2008. We present here (1) a list of lichenized, lichenicolous and allied fungi of the reserves, (2) a basic overview about protected and rare species, and (3) notes about substrate preferences of lichens found in these reserves.

## Study areas

The principles of the protection of these three reserves are different as the set of habitats is diverse. Kaugatoma-Lõo LR (499.5 ha), situated in Sõrve peninsula (Fig. 1) was founded to protect geologically important Kaugatoma limestone cliffs (the entire cliff is 360 m long and 1.9 m high) and the largest area of calcareous thin-soil grasslands on Ordovician or Silurian limestone (alvars) in Saaremaa, Lõo alvar (Vabariigi Valitsuse määrus 380, 2000). As these semi-natural habitats are dependent on the suitable management, then sheep grazing, mowing and chopping down bushes and trees is supported here to maintain the alvar-grassland area.

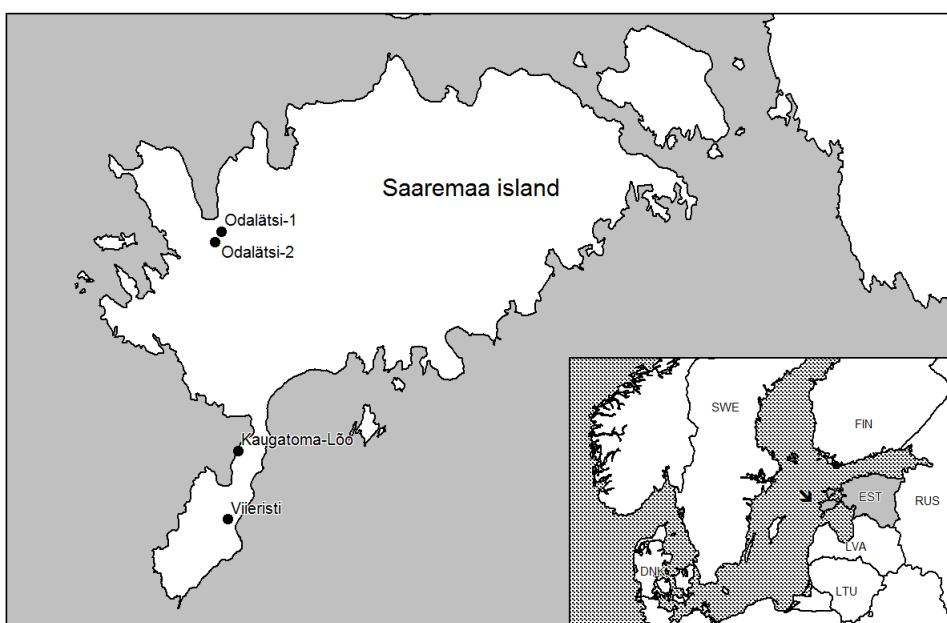
Odalätsi Landscape Reserve (Fig. 1) in the western part of Saaremaa (163 ha) was founded to protect Odalätsi karst springs (northern part of the reserve) and sand dunes (southern part), and natural and semi-natural habitats lying on them. The dunes are partly covered with *Cladina* type boreal heath pine forests. The springs area is surrounded predominantly by paludified and peatland forests (Vabariigi Valitsuse määrus 133, 2007).

Viieristi Nature Reserve (378 ha) in the eastern part of Sõrve peninsula (Fig. 1) was established mainly as a botanical reserve because in

this limited area (378 ha) 22 officially protected plant species (*Ajuga pyramidalis*, *Taxus baccata*, *Hedera helix*, etc.) in Estonia have been recorded. The reserve includes shore bluff *Viieristi mäed* (Viieristi mountains; 24–27 m height), which has been formed from the Littorina Sea stage with the development of the Baltic Sea. Under the shore bluff, a unique for Estonia calcium-rich spring fen lies as a 10–15 meters zone. There is also a temporary water body – Koltsi lake. Various types of forests spread in the area including eutrophic boreo-nemoral, meso-eutrophic boreo-nemoral hillock, paludifying and peatland forests (Vabariigi Valitsuse määrus 110, 1997).

## MATERIALS AND METHODS

The list of species is based on the data collected by the participants of the XVII<sup>th</sup> symposium of Baltic Mycologists and Lichenologists held in Saaremaa from September 17<sup>th</sup> to 21<sup>th</sup>, 2008. As the reserves (especially Kaugatoma-Lõo) are interesting in respect of lichens and have been visited before, then some data originate also from previous studies. The database of Estonian lichens *eSamba*, cryptogam database of Natural History Museum of Stockholm *Kryptos*, herbarium databases of Uppsala and Lund



**Fig. 1.** The location of the Kaugatoma-Lõo, Odalätsi (Odalätsi-1 – Odalätsi springs; Odalätsi-2 – Odalätsi dunes) and Viieristi reserves in Saaremaa island, Estonia.

Universities have been used as well as published (Ekman et al., 1991; Moberg, 1992; Aptroot et al., 2005) and unpublished data.

Specimens which were difficult to identify in the field were determined using routine methods of microscopy described in hand-books (e.g. Jüriado et al., 2004). Lichen substances of sterile specimens and of taxonomically critical species (e.g. *Cladonia chlorophaea* group) were determined using the thin layer chromatography (TLC) method by Orange et al. (2001).

The material collected during the symposium is preserved in following herbaria: Department of Plant Taxonomy and Nature Conservation, Gdańsk University (UGDA); herbarium of Gorce National Park (GPN); Department of Botany, Saint Petersburg University (LECB); Institute of Botany, Lithuania (BILAS), Botanical and Mycological Museum, Natural History Museum, University of Tartu (TU), private collections of Ulf Schiefelbein (herb. U. Schiefelbein) and Mohammad Sohrabi (herb. M. Sohrabi).

A rare species is defined here as a species with less than ten localities in Estonia; the information about rarity comes from the database of *eBiodiversity* (<http://elurikkus.ut.ee/>). The data about protected species originate from *Riigi Teataja* (Vabariigi Valitsuse määrus 195, 2004; Keskkonnaministri määrus 51, 2004) and the data about red-listed species from Randlane et al. (2008). The nomenclature follows Randlane et al. (2009).

## RESULTS AND DISCUSSION

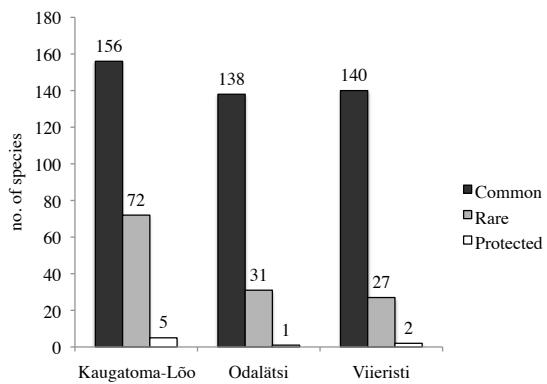
In total 404 species of lichenized, lichenicolous and allied fungi were listed, of them 228 from Kaugatoma-Lõo Landscape Reserve, 169 from Odalätsi LR and 167 from Viieristi Nature Reserve (Appendix). Among the recorded species, there are five lichenized (*Buellia arborea*, *Lecania cyrtellina*, *Lecanora compallens*, *Micarea myriocarpa*, *Verrucaria olivacella*) and six lichenicolous fungi (*Acremonium antarcticum*, *Capronia peltigerae*, *Pyrenophaeta xanthoriae*, *Scutula aff. heeri*, *Stigmidiumpycobilimbiae* and *S. solorinum*) which have recently been reported as new for the country (Suija et al., 2009; Appendix). *Ramalina elegans*, collected only once earlier from the island Abruka (near Saaremaa) by Veli Räsänen in 1929 (R. Skyten, pers. comm.) and considered therefore as extinct in Estonia (Randlane et al., 2008), has been re-found from Odalätsi and Viieristi reserves.

## Protected and rare species

The number of rare and protected species is the highest in Kaugatoma-Lõo LR (Fig. 2) where three species of the II protection category (*Cladonia convoluta*, *Solorina saccata*, *Squamaria lentigera*) and two species of the III category (*Fulglesia bracteata*, *Psora decipiens*) have been reported. All species, mentioned above, are specialized to grow on thin, calcium-rich soils in Estonia which have a limited distribution area in Estonia spreading mainly in western part of the country and islands (Kukk & Sammul, 2006). From Viieristi NR, one species of the II category, *Chaenotheca gracilenta*, and two species of the III category, *Thelotrema lepadinum* and *Hypocenomyce anthracophila*, were recorded. The first two are known only from old forests, and are therefore endangered by the forest management activities (Randlane, 2006). From the territory of Odalätsi NR, *Stereocaulon condensatum*, a protected species of the III category has been reported before, however, the species was not found during the BML symposium (Appendix).

The number of rare taxa is also the highest in Kaugatoma-Lõo LR (Fig. 2). In total 72 rare lichens are known from this area. Several of them have been found on old dead junipers (*Juniperus communis*), e.g. *Buellia arborea*, *Caloplaca herbidella* and *C. hungarica*. *Sphaerophorus globosus*, which was reported twice in 1980ies from the alvar, was not re-found during BLM excursion (Appendix).

31 rare lichenized and lichenicolous species are known from the Odalätsi reserve. They



**Fig. 2.** The numbers of common, rare and protected species of lichenized and lichenicolous fungi in Kaugatoma-Lõo, Odalätsi and Viieristi reserves.

are recorded on different substrata, including windthrows (e.g. *Micarea myriocarpa* and *Psilolechia clavulifera*), small twigs of spruce (*Fellhanera bouteillei*) and decaying wood (*Cladonia caespiticia*, *C. cryptochlorophaea* and *C. decorticata*).

The number of rare taxa in Viieristi reserve is 28. These species have been recorded on the bark of deciduous trees (e.g. *Caloplaca lucifuga*, *Opegrapha sorediifera*), on epiphytic mosses (*Normandina acroglypta*) and on decaying lignum (*Caloplaca cerinella* and *Opegrapha ochrocheila*).

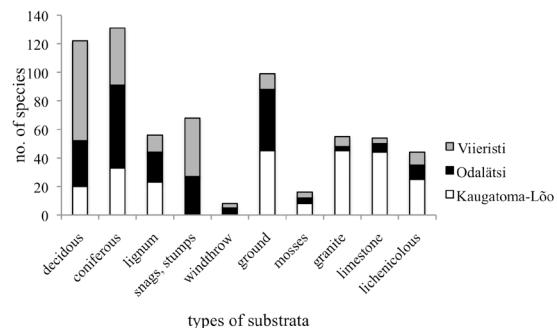
Most of the reported lichenicolous species have less than ten known localities in Estonia which is partly due to the short history of the investigations of these fungi (Suija, 2005) but also due to the unknown reasons of their uneven and fragmented distribution.

### Substrate groups

The composition of lichen biota of the studied reserves reflects the accessibility of habitats and substrata of these areas. Lichens on deciduous and coniferous trees and on different forest structural elements (logs, stumps, snags, etc.) dominate in Odalätsi and Viieristi reserves while epigeic and epilithic species were overwhelmingly found in Kaugatoma-Lõo reserve (Fig. 3). The number of epigeic species is almost the same in Kaugatoma-Lõo and Odalätsi reserves, 44 and 43 species respectively, but in the first case, the group is composed of calciphilous species (*Cladonia foliacea*, *C. subrangiformis*, *Psora decipiens*, etc.), while species growing on acid, sandy soil (*Stereocaulon* spp., *Placynthiella uliginosa*) are present in Odalätsi reserve.

The lignum of old, dead junipers (*Juniperus communis*) serves as a main substrate for epixylic species in Kaugatoma-Lõo reserve. In total, 23 species have been found there, with several rare lichens (*Buellia arborea*, *Caloplaca hungarica*, *Lecanora compallens*, etc.). The lignicolous taxa (e.g. *Hypocenomyce anthracophila*, *Placynthiella dasaea*) in the Odalätsi NR grow mainly on decorticated snags, stumps and logs of pines (*Pinus sylvestris*). The value of different kind of 'dead wood' for increasing lichen species richness in forest ecosystems has been emphasised in several recent studies (Lõhmus & Lõhmus, 2001; Spribile et al., 2008).

The highest number of lichenicolous fungi has been recorded in Kaugatoma-Lõo reserve –



**Fig. 3.** The numbers of lichens and lichenicolous fungi on different substrate groups in Viieristi, Odalätsi and Kaugatoma-Lõo reserves. The abbreviation of substrata: deciduous – deciduous trees and shrubs, coniferous – coniferous trees, lignum – decaying wood, timber, dead trees, etc.; windthrow – root system of upended trees; ground – ground level; mosses – epiphytic, epigeic, epilithic mosses.

23 species compared with nine and eight species which have been found in Odalätsi and Viieristi reserves, respectively. Thirteen species of the lichenicolous fungi from Kaugatoma-Lõo are confined to epigeic lichens (Appendix).

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**APPENDIX.****The list of lichenized, lichenicolous and allied fungi in Kaugatoma-Lõo, Odalätsi and Viieristi reserves**

Abbreviations of Red list categories [in square brackets]: RE – Regionally Extinct, CR – Critically Endangered, EN – Endangered, VU – Vulnerable, NT – Near Threatened, DD – Data Deficient; of reserves: Kau – Kaugatoma Landscape Reserve, Oda – Odalätsi Landscape Reserve, VII – Viieristi Nature Reserve; of substrata: Gr – granite, Ls – limestone, Grd – ground, Wth – windthrow; AG – *Alnus glutinosa*, AI – *Alnus incana*, AP – *Acer platanoides*, BP – *Betula pendula*, CA – *Corylus avellana*, CR – *Craetaegus* sp., FE – *Fraxinus excelsior*, JC – *Juniperus communis*, QR – *Quercus robur*, PA – *Picea abies*, PS – *Pinus sylvestris*, PT – *Populus tremula*, SA – *Sorbus aucuparia*, SC – *Salix caprea*, SF – *Salix fragilis*, SI – *Salix intermedia*, SN – *Sambucus nigra*, SS – *Salix* sp.; abbreviations of collectors (in brackets): Leg: – collected or observed by; det: – determined by; AK – Agnieszka Kowalewska, AP – Alfons Piterāns, AS – Ave Suija, BK – Bellis Kullman, DH – Dmitry Himelbrant, EK – Ekaterina Kuznetsova, EL – Ede Leppik, HL – Hilja Lippmaa, HT – Hans Trass, IS – Irina Stepanchikova, JM – Jurga Motiejūnaitė, JP – Juhani Püttsepp; KV – Katalin Veres, MK – Martin Kukwa, MS – Mohammad Sohrabi, MSk – Maria Skazina, PC – Paweł Czarnota, PL – Piret Löhmus, TR – Tiina Randalne, TT – Tiiu Törra, US – Ulf Schiefelbein; of databases: *eSamba* – database of Estonian lichens, *Fytoteket* – herbarium of Uppsala University, *Krypto-S* – cryptogam herbarium of Natural History Museum of Stockholm, *Lund* – herbarium of Lund University. The lichenicolous fungus is marked with # and non-lichenized fungus with +. Rare and protected species are underlined.

# *Abrothallus peyritschii* (Stein) Kotte – Kau: on thallus of *Vulpicida tubulosus* (Leg: AS)  
*Acarospora glaucocarpa* (Ach.) Körb. – Kau: Ls (Ekman et al., 1991)  
*Acarospora fuscata* (Nyl.) Arnold – Kau: Gr (Ekman et al., 1991)  
*Acarospora macrospora* (Hepp) A. Massal. ex Bagl. – Kau: Gr (Ekman et al., 1991)  
*Acarospora smaragdula* (Wahlenb.) A. Massal. – Kau: Gr (Leg: PC, US)  
# *Acremonium antarcticum* (Speg.) D. Hawksw. – Kau: on *Xanthoria parietina* on PS (Leg: MK)  
*Acrocordia cavata* (Ach.) R.C. Harris – VII: FE (Leg: EL)  
*Acrocordia gemmata* (Ach.) A. Massal. – Kau: JC (Leg: PC); Oda: AG, JC (Leg: PC); VII: FE (Leg: JM)  
*Agonimia gelatinosa* (Ach.) M. Brand & Diederich – Kau: on dead mosses (Leg: JM)  
*Agonimia tristicula* (Nyl.) A. Zahlbr. – Kau: on mosses, on *Cladonia* sp. (Leg: PC)  
*Anaptychia ciliaris* (L.) Körb. – Kau: SS (Leg: US)  
*Anaptychia ciliaris* var. *melanosticta* (Ach.) Boistel – Kau: Gr (Leg: HL, 1933: *eSamba*)

*Arctoparmelia incurva* (Pers.) Hale [EN] – Kau: Gr (Leg: HL, 1933: *eSamba*)  
*Arthonia didyma* Körb. [NT] – Oda: AG, AI, SS (Leg: PC, DH, IS)  
# *Arthonia intexta* Almq. – Kau: in apothecia of *Lecidella* cf. *elaeochroma* on JC<sub>lignum</sub> (Leg: MK)  
*Arthonia leucopellaea* (Ach.) Almq. – VII: PA (Leg: DH, EL)  
*Arthonia punctiformis* Ach. – Oda: AP (Leg: EK)  
*Arthonia radiata* (Pers.) Ach – Oda: SA, PS<sub>twig</sub> (Leg: IS, EL); VII: FE, SA (Leg: AK, EL)  
*Arthonia spadicea* Leight. – Oda: PS (Leg: EL); VII: AG, PS (Leg: DH, EL, US)  
*Arthonia vinosa* Leight. – VII: PS (Leg: AS)  
*Arthopyrenia* sp. – Oda: PS (Leg: AS)  
*Aspicilia caesiocinerea* (Nyl. ex Malbr.) Arnold – Kau: Gr (Leg: HT, 1982: *eSamba*)  
*Aspicilia calcarea* (L.) Mudd – Kau: Ls (Leg: AK, US, MS, PL)  
*Aspicilia cinerea* (L.) Körb. – Kau: Gr (Ekman et al., 1991); VII: Gr (Leg: EL)  
*Aspicilia contorta* (Hoffm.) Kremp. ssp. *contorta* – Kau: Ls (Leg: US, KV, PL)  
*Aspicilia contorta* subsp. *hoffmanniana* S. Ekman & Fröberg – Kau: Ls (Leg: TR, 1983: *eSamba*)  
*Aspicilia moenium* (Vain.) G. Thor & Timdal – Kau: Ls (Leg: DH, IS, EK); Oda: concrete (Leg: US)  
*Bacidia arceutina* (Ach.) Arnold – Kau: JC<sub>lignum</sub>, JC (Leg: PC, US); Oda: AG, JC, PA, PS, SA (Leg: MK, PC, DH, IS, JM, AS, US); VII: snag of deciduous tree (Leg: PC, AS)  
*Bacidia bagliettoana* (A. Massal. & De Not.) Jatta – Kau: on plant debris, mosses (Leg: PC, IS); Oda: on plant debris, dead mosses, sand (Leg: PC, DH, JM); VII: on mosses, on soil (Leg: US)  
*Bacidia fraxinea* Lönnr. – Kau: SF, JC (Leg: PC); Oda: PT (Leg: PC); VII: FE (Leg: PC, JM)  
*Bacidia rubella* (Hoffm.) A. Massal – Kau: JC, SF (Leg: AK, US, DH, IS, EK); Oda: PS (Leg: PC); VII: FE (Leg: JM)  
*Bacidia subincompta* (Nyl.) Arnold – VII: BP (Leg: AS)  
*Bacidina arnoldiana* agg. – VII: FE (Leg: US) – The specimens growing as epiphytes belong most probably to *Bacidia sulphurella* which conidia are strongly hooked at one end (e.g. Brand et al., 2009).  
*Bacidina chlorotica* (Nyl.) Vězda & Poelt – Oda: SA (Leg: AK, PC)  
*Biatora efflorescens* (Hedl.) Erichsen – VII: AG, BP, PS, SC (Leg: EL, PC)  
*Biatora globulosa* (Flörke) Fr. – VII: FE, snag of deciduous tree (Leg: PC, AS)  
*Bilimbia lobulata* (Sommerf.) Hafellner & Coppins [VU] – Kau: Grd (Leg: PC)  
*Bilimbia microcarpa* Th. Fr. – Kau: Grd (Leg: TR, 1984: *eSamba*)  
*Bilimbia sabuletorum* (Schreb.) Arnold – Kau: on dead mosses and plant debris (Leg: AP); Oda: on mosses and on lignum (Leg: PC, IS)  
*Bryoria capillaris* (Ach.) Brodo & D. Hawksw. – Oda: PS (Leg: EL, MS, PL)  
*Bryoria fuscescens* (Gyeln.) Brodo & D. Hawksw. – Kau: Gr (Leg: HT, 1983: *eSamba*); Oda: PS (Leg: EL, US, PL)  
*Bryoria subcana* (Nyl. ex Stizenb.) Brodo & D. Hawksw. – Oda: PS (Leg: AS, DH)  
*Buellia arborea* Coppins & Tønsberg – Kau: JC<sub>lignum</sub> (Leg: DH)  
*Buellia disciformis* (Fr.) Mudd – VII: (Ekman et al., 1991)

- Buellia griseovirens* (Turner & Borrer ex Sm.) Almb. – Kau: SF, *JC<sub>lignum</sub>* (Leg: MK, PC, US); Oda: SS, PS, BP, AI, JC, PT (Leg: MK, AK, US, DH, IS, EK, MS); Vii: AG, SA, FE, BP (Leg: MK, EL, PC, KV)
- Buellia schaeferi* De Not. – Kau: *JC<sub>lignum</sub>* (Leg: DH, IS, EK)
- Calicium abietinum* Pers. – Vii: *PA<sub>snag</sub>* (Leg: PL)
- Calicium glaucellum* Ach. – Oda: *PS<sub>lignum</sub>*, snag (Leg: PC, MS, EL, AS, US, DH); Vii: *PS<sub>snag</sub>*, stump (Leg: EL, US)
- Calicium quercinum* Pers. – Oda: stump (Leg: PL, 1996: eSamba)
- Calicium salicinum* Pers. – Vii: *PS<sub>lignum</sub>*, *PA<sub>lignum</sub>*, snag of deciduous tree (Leg: PC, EL, AS, US, DH)
- Calicium viride* Pers. – Oda: BP (Leg: PC); Vii: PA, snag (Leg: EL, PC, US)
- Caloplaca alociza* (A. Massal.) Mig. – Kau: Ls (Ekman et al., 1991)
- Caloplaca ammiospila* (Wahlenb.) H. Olivier – Kau: *JC* (Leg: DH, IS, EK)
- Caloplaca cerina* (Ehrh. ex Hedw.) Th. Fr. – Kau: *JC* (Leg: AK)
- Caloplaca cerinella* (Nyl.) Flagey – Vii: dead twigs of dwarf shrubs (Leg: PC)
- Caloplaca chrysophthalma* Degel. – Kau: *JC* (Leg: DH, IS, EK)
- Caloplaca citrina* (Hoffm.) Th. Fr. – Kau: *JC<sub>lignum</sub>* (Leg: TR, 1989: eSamba); Oda: concrete (Leg: US)
- Caloplaca ferruginea* (Huds.) Th. Fr. – Kau: *JC<sub>twig</sub>* (Leg: PL)
- Caloplaca flavorubescens* (Huds.) J.R. Laundon – Kau: *JC<sub>lignum</sub>* (Leg. S. Ekman, 1989: Lund)
- # *Caloplaca grimmiae* (Nyl.) H. Olivier – Kau: on *Candelariella vittellina* (Moberg, 1992)
- Caloplaca herbidella* (Hue) H. Magn. – Kau: *JC* (Leg: MK, PC, DH, IS, EK, MS, PL, JM, US)
- Caloplaca holocarpa* (Hoffm. ex Ach.) A.E. Wade – Kau: *JC<sub>lignum</sub>* (Leg: KV, DH, IS, EK); Oda: concrete (Leg: US)
- Caloplaca hungarica* H. Magn. – Kau: *JC* (Leg: US)
- Caloplaca lucifuga* G. Thor [NT] – Vii: FE (Leg: MK)
- Caloplaca saxicola* (Hoffm.) Nordin – Kau: Gr (Leg: DH, IS, EK)
- Caloplaca sinapisperma* (Lam. & DC.) Maheu & A. Gillet – Kau: Grd (Leg: HT, 1982: eSamba)
- Caloplaca variabilis* (Pers.) Müll. Arg. – Kau: Ls (Leg: TR, 1989, 2004: eSamba)
- Candelariella aurella* (Hoffm.) Zahlbr. – Kau: Ls (Leg: DH, IS, EK); Oda: concrete (Leg: US)
- Candelariella coralliza* (Nyl.) H. Magn. – Kau: Gr (Leg: EL, US, DH, IS)
- Candelariella reflexa* (Nyl.) Lettau – Kau: epiphytic mosses growing on branches of *JC* (Leg: US)
- Candelariella vitellina* (Hoffm.) Müll. Arg. – Kau: Ls, Gr (Leg: US, PL); Vii: Gr (Leg: EL)
- Candelariella xanthostigma* (Ach.) Lettau – Kau: *JC* (Leg: DH, IS, EK)
- # *Capronia peltigerae* (Fuckel) D. Hawksw. – Oda: on moribund thallus of *Peltigera rufescens* (Leg: JM)
- Catillaria nigroclavata* (Nyl.) Schuler – Oda: PS (Leg: EL, AS); Vii: FE (Leg: PC)
- # *Cercidospora epipolytropa* (Mudd) Arnold – Kau: on apothecia of *Lecanora polytropa* (Leg: HT, 1983, det. AS: eSamba)
- Cetraria aculeata* (Schreb.) Fr. – Kau: Grd (Leg: DH); Oda: Grd (Leg: MS, PL, EL, US); Vii: Grd (Leg: DH)
- Cetraria ericetorum* Opiz – Kau: Grd (Leg: HT, 1982: eSamba)
- Cetraria islandica* (L.) Ach. – Kau: Grd (Leg: HT, 1982: JP, 1986: eSamba); Oda: Grd (Leg: KV, MS, PL, EL, US)
- Cetraria muricata* (Ach.) Eckfeldt – Kau: Grd (Leg: JP, 1986: eSamba); Oda: Grd (Leg: DH, IS, EK, MS)
- Cetraria sepincola* (Ehrh.) Ach. – Oda: on branches of trees (Leg: DH); Vii: BP (Leg: DH)
- Chaenotheca brachypoda* (Ach.) Tibell – Vii: stump, snag (Leg: EL)
- Chaenotheca brunneola* (Ach.) Müll. Arg. – Vii: wood (Leg: KV)
- Chaenotheca chlorella* (Ach.) Müll. Arg. – Vii: *AG<sub>snag</sub>* (Leg: PL)
- Chaenotheca chryscephala* (Turner ex Ach.) Th. Fr. – Oda: PS, *PS<sub>snag</sub>* (Leg: KV, PL, EL, AS, AK, US, DH, IS, EK); Vii: BP, PA, stump (Leg: EL, KV, US, EK)
- Chaenotheca ferruginea* (Turner & Borrer) Mig. – Oda: PS (Leg: EL, AK, KV, MS, PL, DH, IS, EK, US); Vii: PS, PA, lignum, stump (Leg: EL, KV, DH)
- Chaenotheca furfuracea* (L.) Tibell – Oda: Wth (Leg: PL, EL, AS); Vii: PS, Wth (Leg: EL)
- Chaenotheca gracilenta* (Ach.) J.-E. Mattsson & Middelb. [VU] – Vii: on decaying wood of roots and humus of Wth (Leg: PC)
- Chaenotheca stemonea* (Ach.) Müll. Arg. – Vii: stump, Wth (Leg: EL)
- Chaenotheca trichialis* (Ach.) Th. Fr. – Oda: *PS<sub>snag</sub>*, PS (Leg: PC, AS, DH, IS, EK); Vii: PS, PA, AG (Leg: DH, AS, PL)
- Chaenotheca xyloxena* Nádv. – Oda: stump (Leg: EL, AK)
- # *Chaenothecopsis consociata* (Nádv.) A.F.W. Schmidt – Oda: on *Chaenotheca chryscephala* (Leg: PL, AS)
- +/# *Chaenothecopsis pusilla* (Ach.) A.F.W. Schmidt – Oda: PS (Leg: DH, IS, EK); Vii: on thallus of *Chaenotheca gracilenta*, AG (Leg: PC, AS)
- # *Chaenothecopsis subparoica* (Nyl.) Tibell – Oda: on *Chrysotrichia chrysophthalma* (probably *C. flavovirens*) on dead PS (Leg. G. Thor, 1989, det. L. Tibell: Krypt-S)
- Chromatoclamys muscorum* (Fr.) H. Mayrhofer & Poelt – Kau: on terricolous mosses and squamules of *Cladonia* sp. over calcareous soil (Leg: PC)
- Chrysotrichia flavovirens* Tønsberg – Oda: PS, *PS<sub>snag</sub>* (Leg: DH, IS, EK, MK, AK, US, PL); Vii: stump, AG, BP (Leg: EL, AS)
- Cladina arbuscula* (Wallr.) Hale & W.L. Culb. – Kau: Grd (Leg: MS, US); Oda: Grd (Leg: EL, AP, US, KV); Vii: Grd (Leg: EL)
- Cladina ciliata* var. *tenuis* (Flörke) Ahti – Kau: Grd (Leg: HT, 1982: eSamba); Oda: Grd (Leg: AP, US)
- Cladina mitis* (Sandst.) Hustich – Kau: Grd (Leg: HT, 1982: eSamba); Oda: Grd (Leg: KV)
- Cladina portentosa* (Dufour) Follmann [NT] – Kau: Grd (Leg: HT, 1990: eSamba); Oda: Grd (Leg: AS)
- Cladina rangiferina* (L.) Nyl. – Kau: Grd (Leg: MS); Oda: Grd (Leg: MS, EL); Vii: Grd (Leg: EL, KV)
- Cladina stellaris* (Opiz) Brodo – Oda: Grd (Leg: EK)
- Cladina stygia* (Fr.) Ahti – Oda: Grd (Leg: AP, MK, US)
- Cladonia bacillaris* (Ach.) Nyl. – Oda: stump (Leg: EL); Vii: stump (Leg: EL)
- Cladonia borealis* S. Stenroos [EN] – Kau: Grd (Leg: AK, DH)
- Cladonia botrytes* (K.G. Hagen) Willd. – Oda: *PS<sub>stump</sub>* (Leg: EL)

- Cladonia caespiticia* (Pers.) Flörke [VU] – Oda: on soft decaying wood (Leg: JM)
- Cladonia cariosa* (Ach.) Spreng. – Oda: Grd (Leg: IS)
- Cladonia carneola* (Fr.) Fr. – Oda: log (Leg: EL)
- Cladonia cenotea* (Ach.) Schaer. – Oda: stump, PS, on rotten lignum (Leg: KV, AS, US, DH, IS, EK, MS); VII: BP, PS, stump (Leg: EL)
- Cladonia cervicornis* subsp. *verticillata* (Hoffm.) Ahti – Oda: Grd (Leg: US, EL, DH, IS, EK, MS)
- Cladonia chlorophaea* (Flörke ex Sommerf.) Spreng. – Kau: Grd (Leg: AK); Oda: Grd, PS (Leg: KV, EL, AK); VII: bark of tree (Leg: KV)
- Cladonia coniocraea* (Flörke) Spreng. – Oda: PS (Leg: AP, MS, EL, MS); VII: BP<sub>sug</sub>, log, BP, PS (Leg: EL)
- Cladonia convoluta* (Lam.) Anders [VU] – Kau: Grd (Leg: EL, PL, TT, KV)
- Cladonia cornuta* (L.) Hoffm. – Oda: Grd (Leg: AK, KV, EL, AS)
- Cladonia crispata* (Ach.) Flot. – Oda: Grd (Leg: EL)
- Cladonia cryptochlorophaea* Asahina – Kau: JC, JC<sub>lignum</sub> (Leg: AK)
- Cladonia decorticata* (Flörke) Spreng. – Oda: stump (Leg: EL)
- Cladonia deformis* (L.) Hoffm. – Oda: Grd (Leg: AP, EL, AS)
- Cladonia digitata* (L.) Hoffm. – Oda: PS, log, stump (Leg: AP, EL, KV, MS, AS, US); VII: stump (Leg: EL, KV, US)
- Cladonia fimbriata* (L.) Fr. – Kau: Grd among mosses, JC, JC<sub>lignum</sub> (Leg: AK); Oda: Grd, PS (Leg: US, AK, KV, AS); VII: BP, Grd (Leg: EL)
- Cladonia floerkeana* (Fr.) Flörke – Oda: Grd, log, stump (Leg: AP, DH, IS, EK, EL, MS, PL, US)
- Cladonia foliacea* (Huds.) Willd. – Kau: Grd (Leg: EL, PC, MS)
- Cladonia furcata* (Huds.) Schrad. – Kau: Grd (Leg: AK, US); Oda: Grd (Leg: KV, EL, US); VII: Grd (Leg: AP, EL, KV)
- Cladonia glauca* Flörke – Oda: Grd, PS<sub>sug</sub> (Leg: DH, EL)
- Cladonia gracilis* (L.) Willd. – Oda: Grd (Leg: AP, EL, KV, MS, AS, US, DH, IS, EK, MS)
- Cladonia grayi* G. Merr. ex Sandst. – Oda: Grd (Leg: AK)
- Cladonia macilenta* Hoffm. – Kau: Grd (Leg: HT, 1982: eSamba); Oda: PS<sub>sug</sub>, lignum (Leg: MS, AS, DH, IS, EK, MS)
- Cladonia merochlorophaea* Asahina – Oda: Grd, lignum (Leg: AK)
- Cladonia novochlorophaea* (Sipman) Brodo & Ahti – Oda: Grd (Leg: AK); VII: BP (Leg: AK)
- Cladonia ochrochlora* Flörke – Kau: JC, JC<sub>lignum</sub> (Leg: AK)
- Cladonia parasitica* (Hoffm.) Hoffm. [NT] – VII: log (Leg: EL)
- Cladonia phyllophora* Ehrh. ex Hoffm. – Oda: Grd (Leg: AP, US)
- Cladonia pocillum* (Ach.) Grognot [NT] – Kau: Grd (Leg: AP, JM, PL)
- Cladonia polydactyla* (Flörke) Spreng. – Oda: Grd (Leg: EL)
- Cladonia pyxidata* (L.) Hoffm. – Kau: Grd, JC, JC<sub>lignum</sub> (Leg: KV, AK); Oda: Grd (Leg: KV, DH); VII: Grd (Leg: KV)
- Cladonia rangiformis* Hoffm. – Kau: Grd (Leg: KV, PL)
- Cladonia rei* Schaer. – Oda: Grd (Leg: US)
- Cladonia scabriuscula* (Delise) Leight. – Oda: Grd (Leg: US)
- Cladonia squamosa* Hoffm. – Oda: Grd, log (Leg: AP, MS, EL); VII: Grd (Leg: KV)
- Cladonia subrangiformis* Sandst. – Kau: Grd (Leg: KV, PL, det. T. Ahti)
- Cladonia symphytarpia* (Flörke) Fr. – Kau: Grd (Leg: AK, KV, US)
- Cladonia turgida* Ehrh. ex Hoffm. – Kau: Grd (Leg: PL)
- Cladonia uncialis* (L.) Weber ex F.H. Wigg. – Oda: Grd (Leg: AS, EL, DH)
- Clauzadea chondrodes* (A. Massal.) Clauzade & Cl. Roux – Kau: Ls (Meyer, 2002)
- Clauzadea monticola* (Schaer.) Hafellner & Bellem. – Kau: Ls (Ekman et al., 1991)
- Cliostomum griffithii* (Sm.) Coppins – Oda: on hard wood of old fence (Leg: PC); VII: PA, PA<sub>lignum</sub> (Leg: PC, DH, EK, US)
- # *Clypeococcum hypocenomyctis* D. Hawksw. – Oda: on Hypocenomyce scalaris on PS (Leg: AK); VII: on *H. scalaris* on stump (Leg: EL)
- Collema bachmanianum* (Fink) Degel. [DD] – Kau: on dead mosses and sandy soil (Leg: DH)
- Collema crispum* (L.) Weber ex F.H. Wigg. – Kau: Grd (Leg: US)
- Collema cristatum* (L.) Weber ex F.H. Wigg. – Kau: Ls, Grd (Leg: AP, DH, IS, KV, JM)
- Collema fuscovirens* (With.) J.R. Laundon – Kau: Ls (Leg: DH)
- Collema parvum* Degel. [VU] – Kau: Ls (Leg: TR, 1989, det. L. Fröberg: eSamba)
- Collema polycarpon* Hoffm. – Kau: Ls (Leg: PL)
- Collema tenax* (Sw.) Ach. em. Degel. – Kau: Grd (Leg: IS)
- Dermatocarpon leptophyllum* (Ach.) K.G.W. Lång [DD] – Kau: Ls (Leg: HT, 1991, det. G. Degelius: eSamba)
- Dermatocarpon miniatum* (L.) W. Mann [DD] – Kau: Ls (Ekman et al., 1991)
- Dimerella pineti* (Ach.) Vězda – Oda: PS, lignum (Leg: AK, AS, IS); VII: PS, BP, PA, CR, AG, log (Leg: EL, AK, AS, DH, US)
- # *Diploschistes muscorum* (Scop.) R. Sant. – Kau: on mosses, on *Cladonia pocillum* growing on soil, on *Cladonia* spp. growing on dead JC (bark and wood) (Leg: AP, EL, MK, AK, PC, KV, PL, US, DH, IS, EK, JM)
- Diploschistes scruposus* (Schreb.) Norman – Kau: Gr (Leg: EL)
- Diplotomma alboatratum* (Hoffm.) Flot. – Kau: PS<sub>branch</sub>, PS<sub>twigs</sub>, JC<sub>twigs</sub> (Leg: PC, KV, DH, IS, EK)
- Diplotomma pharcidium* (Ach.) M. Choisy – Kau: JC<sub>twigs</sub> (Leg: TR, 1983: eSamba)
- Endocarpon pusillum* Hedw. [EN] – Kau: on mosses (Ekman et al., 1991)
- # *Epicladonia sandstedei* (Zopf) D. Hawksw. – Kau: on *Cladonia chlorophaea*, *C. pocillum* on Grd (Leg: AK, AS); Oda: on *C. cornuta* on Grd, on primary squamules of *C. fimbriata* (Leg: AK, JM)
- # *Epicladonia stenospora* (Harm.) D. Hawksw. – Kau: on *Cladonia cryptochlorophaea* on JC<sub>sug</sub> (Leg: AK)
- Evernia prunastri* (L.) Ach. – Kau: CR, SS (Leg: US, PL); Oda: PS (Leg: US, AS); VII: PA<sub>twig</sub>, PS, BP, FE (Leg: EL, KV)
- Farnoldia jurana* (Schaer.) Hertel – Kau: Ls (Leg: KV)
- Fellhanera bouteillei* (Desm.) Vězda – Oda: PA<sub>twigs</sub>, PA<sub>needles</sub> (Leg: AP, JM)

- Fulgensia bracteata* (Hoffm.) Räsänen [NT] – Kau: Grd (Leg: AP, EL, US, KV, MS, PL, TT, PC)
- Fulgensia fulgens* (Sw.) Elenkin [DD] – Kau: Grd (Leg: MK)
- Fuscidea arboricola* Coppins & Tønsberg – Vii: AG (Leg: PC)
- Fuscidea pusilla* Tønsberg – Oda: PS (Leg: AK); Vii: stump (Leg: EL)
- Graphis scripta* (L.) Ach. – Oda: SS, SA (Leg: EK, MSk); Vii: FE, AG, CA, AI (Leg: EL, MK, DH, IS, EK, MSk, KV, US)
- Haematomma ochroleucum* (Neck.) J.R. Laundon – Kau: Gr (Ekman et al., 1991); Vii: PS (Leg: EL) – The specimen from Viieristi reserve contains zeorin and usnic acid.
- Hertelidea botryosa* (Fr.) Printzen & Kantvilas – Oda: PS<sub>snag</sub> (Leg: PL)
- Hymenelia carnosula* (Arnold) Lutzoni – Kau: Ls (Ekman et al., 1991)
- Hymenelia heteromorpha* (Kremp.) Lutzoni – Kau: Ls (Ekman et al., 1991)
- Hypocenomyce anthracophila* (Nyl.) P. James & Gotth. Schneid. – Vii: stump (Leg: AS)
- Hypocenomyce caradocensis* (Leight. ex Nyl.) P. James & Gotth. Schneid. – Oda: snag (Leg: TR, 1989, det. S. Ekman: eSamba)
- Hypocenomyce friesii* (Ach.) P. James & Gotth. Schneid. – Oda: PS<sub>lignum</sub>, on decaying wood, decaying stump (Leg: DH, EK, PL, JM)
- Hypocenomyce scalaris* (Ach.) M. Choisy – Oda: PS, stump (Leg: AP, AK, US, KV, MS, PL, EL, AS); Vii: lignum, stump, PS (Leg: EL, KV, AS)
- Hypogymnia physodes* (L.) Nyl. – Kau: CR (Leg: MS, PL, US); Oda: PS, BP, JC (Leg: KV, MS, PL, EL, AS, US); Vii: BP, PS (Leg: EL, KV, AS)
- Hypogymnia tubulosa* (Schaer.) Hav. – Oda: PS (Leg: EL, KV, PL); Vii: twig (Leg: KV)
- Imshaugia aleutearies* (Ach.) S.L.F. Meyer – Oda: PS, PS<sub>snag</sub>, stump, JC (Leg: US, IS, EK, MS, PL, EL, AS); Vii: log, PS (Leg: AP, EL, AS, DH)
- Ionaspis rhodopis* (Sommerf.) Blomb. & Forssell – Kau: Ls (Ekman et al. 1991)
- Lecanactis abietina* (Ach.) Körb. – Vii: PA<sub>stump</sub>, PA, AG, BP (Leg: MK, EK, EL, US)
- Lecania cyrtella* (Ach.) Th. Fr. – Oda: SA (Leg: IS); Vii: SS<sub>branches</sub> (Leg: MK, PC, IS, JM, US)
- Lecania cyrtellina* (Nyl.) Sandst. – Vii: twigs of dwarf shrubs (Leg: PC)
- Lecania naegelii* (Hepp) Diederich & van den Boom – Kau: JC (Leg: US); Oda: AP, SA (Leg: EK, IS); Vii: SS<sub>branches</sub> (Leg: PC, JM)
- Lecanora albella* (Pers.) Ach. – Oda: BP (Leg: EL)
- Lecanora albescens* (Hoffm.) Branth & Rostr. – Kau: Ls (Leg: AP); Oda: Ls (Leg: US)
- Lecanora allophana* (Ach.) Nyl. – Vii: SA, FE, PT (Leg: EL)
- Lecanora argentata* (Ach.) Malme – Vii: FE, QR (Leg: EL, MK, AK, US, KV)
- Lecanora cadubriae* (A. Massal.) Hedl. – Oda: PS (Ekman et al. 1991)
- Lecanora campestris* (Schaer.) Hue – Kau: Gr (Ekman et al. 1991)
- Lecanora carpinea* (L.) Vain. – Kau: SS<sub>twigs</sub> (Leg: DH, IS, EK); Oda: SA, QR (Leg: IS, MSk); Vii: SA, FE, CR (Leg: AP, EL, AK, KV, AS)
- Lecanora chlorotera* Nyl. – Kau: JC (Leg: MS, US); Vii: SA, FE, PT (Leg: US, KV, EL)
- Lecanora compallens* Herk & Aptroot – Kau: JC<sub>lignum</sub> (Leg: PC)
- Lecanora crenulata* Hook. – Kau: Ls (Leg: DH)
- Lecanora dispersa* (Pers.) Röhrl. – Kau: Ls (Leg: DH, IS, EK, KV, MS)
- Lecanora expallens* Ach. – Oda: PS (Leg: MK)
- Lecanora hagenii* (Ach.) Ach. – Kau: SN, JC<sub>twigs</sub> (Leg: US, DH, IS, EK)
- Lecanora intricata* (Ach.) Ach. – Kau: Gr (Leg: HT, 1991: eSamba)
- Lecanora intumescens* (Rebent.) Rabenh. [VU] – Vii: FE (Leg: MK)
- Lecanora leptyrodes* (Nyl.) Degel. – Vii: FE (Leg: AS)
- Lecanora norvegica* Tønsberg – Vii: BP (Leg: EL)
- Lecanora polytropa* (Ehrh. ex Hoffm.) Rabenh. – Kau: Gr (Leg: DH)
- Lecanora pulicaris* (Pers.) Ach. – Oda: PT, PS, PC<sub>lignum</sub> (Leg: EL, KV, PL, US); Vii: PS, BP (Leg: EL)
- Lecanora rugosella* Zahlbr. – Kau: JC<sub>twigs</sub> (Leg: DH, IS, EK)
- Lecanora rupicola* (L.) Zahlbr. – Kau: Gr (Leg: MK, MS, PL, DH); Vii: Gr (Leg: EL)
- Lecanora strobilina* (Spreng.) Kieff. – Vii: PS (Leg: EL)
- Lecanora cf. subcarninea* Szatala – Oda: BP (Leg: DH)
- Lecanora sulphurea* (Hoffm.) Ach. – Kau: Gr (Leg: PL)
- Lecanora symmicta* (Ach.) Ach. – Kau: SS, JC<sub>twigs</sub> (Leg: DH, IS, EK, US); Oda: PT (Leg: IS); Vii: snag of deciduous tree (Leg: PC, AS)
- Lecanora varia* (Hoffm.) Ach. – Kau: JC<sub>lignum</sub> (Leg: MK, DH, IS, EK, PL); Oda: PS<sub>lignum</sub> (Leg: DH, IS, EK, MS, US); Vii: stump (Leg: EL)
- Lecidea fuscoatra* (L.) Ach. – Kau: Gr (Leg: EL, US)
- Lecidea lapicida* var. *pantherina* (DC.) Ach. – Kau: Gr (Leg: US)
- Lecidea nylanderi* (Anzi) Th. Fr. – Oda: PS (Leg: US, DH, PL, AS, AK, EL, PC); Vii: PS, BP (Leg: EL, AK, US, DH, PL, AS, PC)
- Lecidea turgidula* Fr. – Oda: JC (Leg: AS); Vii: stump (Leg: EL)
- Lecidella elaeochroma* (Ach.) M. Choisy – Kau: SS, JC<sub>lignum</sub>, JC<sub>twigs</sub> (Leg: KV, PC, US, MS, PL, DH, IS, EK); Oda: SA (Leg: AP, IS); Vii: FE, PT (Leg: AP, EL, AK, KV, US, AS, DH)
- Lecidella stigmatica* (Ach.) Hertel & Leuckert – Kau: Ls (Ekman et al., 1991); Oda: on mortar stone (Leg: US)
- Lecidella subviridis* Tønsberg – Vii: PS (Leg: EL)
- Lempholemma isidioides* (Nyl. ex Arnold) H. Magn. [VU] – Kau: Ls (Ekman et al. 1991)
- Lepraria eburnea* J.R. Laundon – Oda: bark of tree (Leg: KV)
- Lepraria elobata* Tønsberg – Oda: PS (Leg: AK)
- Lepraria incana* (L.) Ach. – Kau: leather hanging on PA (Leg: EL); Oda: PS, PA (Leg: AK, KV, AS); Vii: BP, PA (Leg: AS)
- Lepraria jackii* Tønsberg – Oda: PS (Leg: AK, MS)
- Lepraria lobificans* Nyl. – Vii: Grd, stump (Leg: EL)
- Leptogium gelatinosum* (With.) J.R. Laundon [DD] – Kau: Grd (Aptroot et al., 2005)

- Leptogium lichenoides* (L.) Zahlbr. – Kau: on epigeic mosses (Leg: DH, IS, EK, MSk, JM); Vii: on mossy soil (Leg: DH)
- Leptogium pulvinatum* (Hoffm.) Otalora – Kau: on epigeic mosses (Leg: HT, 1991, det. M.G. Otalora: *eSamba*)  
+ *Leptorhaphis epidermidis* (Ach.) Th. Fr. – Oda: *BP* (Leg: AS)  
# *Lichenoconium* aff. *echinosporum* D. Hawksw. – Oda: on *Cladonia* cf. *pyxidata* on Grd (Leg: AK)  
# *Lichenoconium lecanorae* (Jaap) D. Hawksw. – Kau: on apothecia of *Lecanora chlorotera* (Leg: US); Vii: on apothecia of *L. chlorotera* (Leg: JM)  
# *Lichenodiopsis lecanorae* (Vouaux) Dyko & D. Hawksw. – Kau: on *Lecanora chlorotera* (Leg: US)  
# *Lichenosticta alcicornaria* (Linds.) D. Hawksw. – Kau: on *Cladonia cryptochlorophaea* on dead JC, on *C. pocillum* on Grd (Leg: AK); Oda: on podetia of *Cladina arbuscula* on ground (Leg: DH, JM)
- Loxospora elatina* (Ach.) A. Massal. – Oda: *PS* (Leg: AS); Vii: stump (Leg: MK)
- Melanelia disjuncta* (Erichsen) Essl. [DD] – Kau: Gr (Leg: HT, 1989: *eSamba*)
- Melanelia sorediata* (Ach.) Goward & Ahti [DD] – Kau: Gr (Leg: TR, 1984: *eSamba*)
- Melanelixia fuliginosa* subsp. *glabratula* (Lamy) J.R. Laundon – Kau: CR, JC (Leg: MS, PL, DH, IS, EK); Oda: SS (Leg: EK, MSk, US); Vii: *FE*, *BP*, snag of deciduous tree (Leg: EL, AS, US)
- Melanelixia subaurifera* (Nyl.) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch – Kau: (Leg: US); Oda: *PS* (Leg: EL); Vii: *FE*, *BP* (Leg: EL, KV)
- Melanohalea exasperata* (De Not.) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch – Kau: SS (Leg: US)
- Melanohalea exasperatula* (Nyl.) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch – Oda: *PS*<sub>twig</sub> (Leg: AS); Vii: *PA*<sub>twig</sub> (Leg: EL)
- Micarea denigrata* (Fr.) Hedl. – Kau: *JC*<sub>lignum</sub> (Leg: MK); Vii: on hard exposed wood of pine root (Leg: PC)
- Micarea* cf. *nitschkeana* (J. Lahm ex Rabenh.) Harm. – Oda: lignum (Leg: EK, MSk)
- Micarea lignaria* (Ach.) Hedl. – Vii: lignum (Ekman et al., 1991)
- Micarea melaena* (Nyl.) Hedl. – Oda: *PS*, stump (Leg: AS)
- Micarea micrococcia* (Körb.) Gams ex Coppins – Oda: *PS* (Leg: AK, US, PC); Vii: *PA* (Leg: US)
- Micarea misella* (Nyl.) Hedl. – Oda: on hard wood of old fence (Leg: PC); Vii: (Ekman et al., 1991)
- Micarea myriocarpa* V. Wirth & Vézda ex Coppins – Oda: on dry roots of an upended PA (Leg: JM)
- Micarea peliocarpa* (Anzi) Coppins & R. Sant. – Vii: *AG*, *SC*, *PA*<sub>log</sub> (Leg: PC)
- Micarea prasina* s. l. – Oda: *PS*, *PS*<sub>lignum</sub> (Leg: AP, EL, DH); Vii: *BP*, *PS*, *PA*<sub>twig</sub>, stump, log, *AG* (Leg: EL, EK, DH, IS, AS, MK)
- Microcalcium arenarium* (Hampe ex A. Massal.) Tibell – Oda: on dry roots of an upended PA (Leg: JM)
- Miriquidica deusta* (Stenh.) Hertel & Rambold – Kau: Gr (Leg: TR, 1989; HT, 1991: *eSamba*)
- # *Monodictys epilepraria* Kukwa & Diederich – Vii: on *Lepraria* cf. *incana* on PA (Leg: MK)
- # *Muellerella lichenicola* (Sommerf.) D. Hawksw. – Kau: on *Rinodina* sp. on Ls (Leg: TR, 2004, det. AS: *eSamba*)
- Mycobilimbia berengeriana* (A. Massal.) Hafellner & V. Wirth – Kau: Grd (Leg: KV)
- Mycobilimbia epixanthoides* (Nyl.) Vitik., Ahti, Kuusinen, Lommi & T. Ulvinen – Vii: *PS* (Leg: EL)
- Mycoblastus fucatus* (Stirt.) Zahlbr. – Kau: *JS* (Leg: JM); Oda: *PS* (Leg: AK); Vii: *PS* (Leg: AS, US)
- Mycoblastus sanguinarius* (L.) Norman – Oda: *PS* (Leg: EL, AS); Vii: *AG* (Leg: PL)
- + *Mycocalicium subtile* (Pers.) Szatala – Oda: *PS*<sub>snag</sub> (Leg: DH, EL, AS)
- Normandina acroglypta* (Norman) Aptroot – Oda: *QR*, on *Radula complanata* on *QR* (Leg: DH, det. JM); Vii: *FE*, on epiphytic liverworts growing on *Ulmus* sp. (Leg: JM)
- Ochrolechia androgyna* (Hoffm.) Arnold – Vii: *PA* (Leg: AS)
- Ochrolechia arborea* (Kreyer) Almb. – Vii: lignum (Ekman et al., 1991)
- Ochrolechia microstictoides* Räsänen – Oda: *PS*<sub>snag</sub> (Leg: EL)
- Ochrolechia pallescens* (L.) A. Massal. – Kau: (Ekman et al., 1991)
- Opegrapha atra* Pers. [NT] – Vii: *PT*, *FE* (Leg: EL, PC)
- Opegrapha ochrocheila* Nyl. [VU] – Vii: log (Leg: EL)
- Opegrapha rufescens* Pers. – Vii: *FE*, *AG*, *PS* (Leg: IS, KV, EL, US)
- Opegrapha sorediifera* P. James – Vii: *AG* (Leg: MK)
- Opegrapha varia* Pers. – Vii: *AG* (Leg: EL, US)
- Opegrapha vulgata* (Ach.) Ach. – Vii: *FE* (Leg: EL)
- Parmelia saxatilis* (L.) Ach. – Kau: Gr (Leg: EL, MS, US); Oda: stump (Leg: EL); Vii: *BP* (Leg: US, TT)
- Parmelia sulcata* Taylor – Kau: SS (Leg: US); Oda: *PS* (Leg: KV, EL); Vii: *PA*<sub>twig</sub>, *PT*, *BP* (Leg: EL, US, KV)
- Parmeliopsis ambigua* (Wulfen) Nyl. – Kau: (Ekman et al., 1991); Oda: *PS*, stump, JC (Leg: US, KV, MS, AS, DH); Vii: *PS*, *BP*, lignum (Leg: EL, US, EK)
- Parmeliopsis hyperopta* (Ach.) Arnold – Oda: *PS*<sub>lignum</sub> (Leg: DH); Vii: stump (Leg: EL)
- Peltigera aphthosa* (L.) Willd. – Kau: Grd (Leg: MS)
- Peltigera canina* (L.) Willd. – Oda: Grd (Leg: MS); Vii: Grd (Leg: EL)
- Peltigera polydactylon* (Neck.) Hoffm. – Vii: Grd (Leg: KV, AS)
- Peltigera praetextata* (Flörke ex Sommerf.) Zopf – Vii: stump (Leg: AS)
- Peltigera rufescens* (Weiss) Humb. – Kau: Grd (Leg: EL, AK, KV, MS, DH, IS, EK); Oda: Grd (Leg: AK, US)
- Pertusaria albescens* (Huds.) M. Choisy & Werner – Kau: *JC*<sub>lignum</sub>, SI, JC (Leg: MK)
- Pertusaria amara* (Ach.) Nyl. – Kau: *JC* (Leg: MK, US); Vii: *PA*<sub>twig</sub>, CR, SA, *BP*, *FE* (Leg: EL, KV, US, AS, IS)
- Pertusaria coccodes* (Ach.) Nyl. – Kau: *AG* (Leg: MK); Vii: *FE*, *BP* (Leg: MK, AK)
- Pertusaria hemisphaerica* (Flörke) Erichsen – Vii: *PA*, *AG* (Leg: US, AS)
- Pertusaria leioplaca* DC. – Vii: *PT*, *FE*, *CA*<sub>snag</sub>, *SA*, *BP* (Leg: EL, AK, KV, EK, US)
- Pertusaria leucostoma* (Bernh.) A. Massal. – Vii: *FE* (Leg: EL)
- Pertusaria pertusa* (Weigel) Tuck. – Vii: *BP*, *FE* (Leg: EK, EL, JM)
- Phaeophyscia endophoenicea* (Harm.) Moberg [DD] – Vii: *PT* (Leg: PC)
- Phaeophyscia orbicularis* (Neck.) Moberg – Kau: SS (Leg: US)

- # *Phaeopyxis punctum* (A. Massal.) Rambold, Triebel & Coppins – Oda: on *Cladonia* sp. (Leg: AS); VII: on *C. digitata* on log, on *Cladonia* sp. on log (Leg: EL, AS)
- Phlyctis agelaea* (Ach.) Flot. – VII: FE, PT (Leg: JM, EL)
- Phlyctis argena* (Ach.) Flot. – Kau: *JC<sub>lignum</sub>*, *JC<sub>twig</sub>* (Leg: MK, MS, US, DH, IS); Oda: SS, JC, AG, PS (Leg: MK, EL, AS, AK); VII: AG, PT, PS, FE, SA (Leg: MK, EL, PC, KV, AS, US)
- # *Phoma* sp. – Oda: on *Cladina rangiferina* on Grd (Leg: MK)
- Physcia adscendens* (Th. Fr.) H. Olivier – Kau: *JC*, *JC<sub>lig</sub>*, *JC<sub>twigs</sub>* (Leg: AK, KV, PL, US, DH, IS, EK); Oda: SS (Leg: US, EK, MSk)
- Physcia aipolia* (Ehrh. ex Humb.) Fürnr. – Kau: *JC<sub>twigs</sub>* (Leg: DH, IS, EK)
- Physcia dubia* (Hoffm.) Lettau – Kau: (Leg: HT, 1982, det. TR: eSamba)
- Physcia tenella* (Scop.) DC. subsp. *tenella* – Kau: *JC*, *JC<sub>lignum</sub>*, *JC<sub>twigs</sub>* (Leg: AK, DH, IS, EK, KV, US); Oda: SS (Leg: EK, MSk)
- Physcia tenella* subsp. *marina* (A. Nyl.) D. Hawksw. – Kau: Gr (Leg: HT, 1983; TR, 1984: eSamba)
- Placidium pilosellum* (Breuss) Breuss [EN] – Kau: on mosses (Leg: HT, 1982: eSamba)
- Placynthiella dasaea* (Stirt.) Tønsberg – Oda: PS, PS<sub>lignum</sub> (Leg: AK, DH, IS); VII: BP, PS (Leg: AK, AS, PC)
- Placynthiella icmalea* (Ach.) Coppins & P. James – Kau: dead *JC*, on *Cladonia pyxidata* s. str. on Grd (Leg: AK); Oda: sandy soil, PS<sub>lignum</sub>, log, PS<sub>stump</sub>, Wth, Grd (Leg: DH, IS, EL, AS); VII: log, stump (Leg: AP, EL, AS)
- Placynthiella oligotropha* (J.R. Laundon) Coppins & P. James – Kau: Grd (Leg: PL)
- Placynthiella uliginosa* (Schrad.) Coppins & P. James – Oda: Grd (Leg: AS, IS)
- Placynthium nigrum* (Huds.) Gray – Kau: Ls (Ekman et al., 1991)
- Platismatia glauca* (L.) W.L. Culb. & C.F. Culb. – Oda: PS, PS<sub>sang</sub> (Leg: EL, AS, KV, MS, US, DH, IS, EK, MSk); VII: PA<sub>twig</sub>, PS, FE (Leg: EL, DH, IS, EK, MSk)
- Polyblastia albida* Arnold – Kau: Ls (Ekman et al., 1991)
- Polyblastia nidulans* (Sten.) Arnold – Kau: Ls (Ekman et al., 1991)
- Porpidia crustulata* (Ach.) Hertel & Knoph – Kau: Gr (Leg: JP, 1986: eSamba); VII: Gr (Leg: AP, AK, PC, BK)
- # *Pronectria xanthoriae* Lowen & Diederich – Kau: on *Xanthoria parietina* on PS<sub>branches</sub> (Leg: MK, PC, US)
- Protoblastenia calva* (Dicks.) Zahlbr. – Kau: Ls (Ekman et al., 1991)
- Protoblastenia incrustans* (DC.) J. Steiner – Kau: Ls (Leg: MS, KV)
- Protoblastenia rupestris* (Scop.) J. Steiner – Kau: Ls (Leg: AK, US, KV, DH, IS, EK)
- Protoparmelia atriseda* (Fr.) R. Sant. & V. Wirth – Kau: Gr (Leg: TR, 1989: eSamba)
- Protoparmelia badia* (Hoffm.) Hafellner – Kau: Gr (leg. S. Ekman, 1989: eSamba)
- Protoparmeliopsis macrocyclos* (H. Magn.) Moberg & R. Sant. [NT] – Kau: Gr (Leg: TR, HT, 1984)
- Protoparmeliopsis muralis* (Schreb.) M. Choisy – Kau: Gr (Leg: DH, US)
- Pseudevernia furfuracea* (L.) Zopf – Kau: *JC*, *JC<sub>twigs</sub>*, *JC<sub>lig</sub>*, *JC<sub>num</sub>* (Leg: US, MS, DH, IS, EK); Oda: PS (Leg: EL, US, KV, DH); VII: PA<sub>twig</sub>, BP (Leg: EL, KV, DH, IS, EK, MSk)
- Psilolechia clavulifera* (Nyl.) Coppins – Oda: on dry roots of upended PA (Leg: JM)
- Psora decipiens* (Hedw.) Hoffm. – Kau: Grd (Leg: EL, PC, KV, MS, PL, TT, US)
- Psorotrichia schaeereri* (A. Massal.) Arnold – Kau: (Ekman et al., 1991)
- Pycnora sorophora* (Vain.) Hafellner – Oda: PS<sub>lignum</sub> (Leg: DH); VII: PS (Leg: EL)
- # *Pyrenopeziza xanthoriae* Diederich – Kau: on *Xanthoria parietina* on PS (Leg: MK, IS)
- Pyrrhospora quernea* (Dicks.) Körb. – Kau: JS (Leg: MK); VII: AG, CR (Leg: EL, AS)
- Ramalina elegans* (Bagl. & Carestia) Jatta [RE] – Oda: SA (Leg: EK); VII: bark of deciduous trees (Leg: IS) – The characters of the specimens match with the description of *R. elegans* (Poelt, 1969; Kataeva & Makarova, 2008). The spores of the specimens are 1-septate, in part curved, in part straight, 12.5–15.7 x 4.7–6.3 µm. The branches of the thallus are mostly not canaliculate, solid, in some parts perforated, pseudocypellae absent, the medulla is UV+ (sekikaic/homosekikaic acid complex). The apothecia are subterminal.
- Ramalina farinacea* (L.) Ach. – Kau: *JC*, SS, CR (Leg: MS, US, DH, IS, EK); Oda: *JC* (Leg: KV, EL, DH); VII: BP, FE, CR (Leg: EL, KV, US)
- Ramalina fastigiata* (Pers.) Ach. – Kau: SF (Leg: PC, MS, MSk, IS, EK); VII: FE (Leg: US)
- Ramalina fraxinea* (L.) Ach. – Kau: (Leg: US)
- Ramalina subfarinacea* (Nyl. ex Cromb.) Nyl. – Kau: Gr (Ekman et al., 1991)
- Rhizocarpon distinctum* Th. Fr. – Oda: Gr (Leg: JM)
- Rhizocarpon geographicum* (L.) DC. – Kau: Gr (Leg: US)
- Rhizocarpon lecanorinum* Anders – Kau: Gr (Leg: HT, 1982, 1983: eSamba)
- # *Rimularia insularis* (Nyl.) Rambold & Hertel – Kau: on *Lecanora rupicola* on Gr (Leg: PL)
- Rinodina bischoffii* (Hepp) A. Massal. – Kau: Ls (Leg: HT, TR, 1989: eSamba)
- Rinodina pyrina* (Ach.) Arnold – VII: on dead twigs of dwarf shrubs (Leg: PC)
- Rinodina septentrionalis* Malme – Kau: *JC* (det. R. Moberg, 1991: Fytoteket)
- Ropalospora viridis* (Tønsberg) Tønsberg – VII: BP, AG (Leg: EL, PC, US)
- # *Roselinella cladoniae* (Anzi) Matzer & Hafellner – Oda: on *Cladina rangiferina*, *C. arbuscula*, *Cladonia novochlorophocea* (Leg: DH, MK, AK)
- Sagiolechia protuberans* (Ach.) A. Massal. – Kau: Ls (Leg: KV)
- Sarcogyne regularis* Körb. – Kau: Ls (Leg: KV)
- Schaereria fuscocinerea* (Nyl.) Clauzade & Cl. Roux – Kau: Gr (Leg: HT, 1983: eSamba)
- Scoliciosporum chlorococcum* (Graewe ex Sten.) Vězda – Kau: *JC<sub>twigs</sub>* (Leg: DH, IS, EK); VII: bark of tree (Leg: KV)
- Scoliciosporum sarothamni* (Vain.) Vězda – Kau: SS<sub>branches</sub>, *JC<sub>twigs</sub>*, *JC<sub>lignum</sub>* (Leg: JM, DH, IS, EK); VII: SS<sub>branches</sub> (Leg: PC, JM, EK)
- Scoliciosporum umbrinum* (Ach.) Arnold – Kau: Gr (Leg: HT, 1983: eSamba); VII: Gr (Leg: EL)
- # *Scutula aff. heerii* (Hepp) P. Karst. – Kau: on thallus of *Peltigera rufescens* on Grd (Leg: PC)
- Solorina saccata* (L.) Ach. [NT] – Kau: Grd (Leg: DH)

- # *Sphaerellothecium araneosum* var. *cladoniae* Zhurb. & Alstrup – Kau: on primary squamules of *Cladonia symphycarpia* (Leg: JM)
- # *Sphaerellothecium propinquellum* (Nyl.) Cl. Roux & Triebel – Kau: on apothecia of *Lecanora carpinea* (Leg: JM)
- Sphaerophorus globosus* (Huds.) Vain. [CR] – Kau: Gr (Leg: HT, 1982, 1989: eSamba)
- Squamaria lentigera* (Weber) Poelt [EN] – Kau: Grd (Leg: AP, TT, EL, US)
- Stein geophana* (Nyl.) Stein – Oda: lignum (Leg: IS) + *Stenocybe pullatula* (Ach.) Stein – Oda: AG (Leg: DH)
- Stereocaulon condensatum* Hoffm. [VU] – Oda: Grd (Leg: HT, 1965: eSamba)
- Stereocaulon incrustatum* Flörke [DD] – Oda: Grd (Leg: TR, 1989: eSamba)
- Stereocaulon paschale* (L.) Hoffm. – Oda: Grd (Leg: HT, 1965: eSamba)
- Stereocaulon tomentosum* Fr. – Oda: stone, Grd (Leg: EL, det. AS)
- # *Stigmidium cladoniicola* Zhurb. & Diederich – Kau: on *Cladonia fimbriata* growing on ground among mosses (Leg: AK)
- # *Stigmidium mycobilimbiae* Cl. Roux, Triebel & Etayo – Kau: on thallus of *Bilimbia sabuletorum* on plant debris (Leg: PC)
- # *Stigmidium solorinarium* (Vain.) D. Hawksw. – Kau: on thallus of *Solorina saccata* (Leg: DH, det. AS)
- # *Taeniarella beschiana* Diederich – Oda: on thallus of *Cladonia coniocarea*, *Cladina arbuscula* (Leg: MS, DH); Vii: on *Cladonia* sp. (Leg: AS)
- Tephromela atra* (Huds.) Hafellner – Kau: Gr (Leg: US, PL); Vii: FE, Gr (Leg: MK, KV, JM, EL)
- Thelidium decipiens* (Nyl.) Kremp. – Kau: Ls (Ekman et al., 1991)
- Thelocarpon epibolum* Nyl. – Oda: PS<sub>lignum</sub> (Leg: IS)
- Thelotrema lepadinum* (Ach.) Ach. – Vii: AG (Leg: EL)
- Toninia physarooides* (Opiz) Zahlbr. – Kau: Grd (Leg: EL, KV, US, DH)
- Toninia sedifolia* (Scop.) Timdal [VU] – Kau: Grd (Leg: KV)
- Toninia verrucarioides* (Nyl.) Timdal [DD] – Kau: Ls (Ekman et al. 1991)
- Trapelia placodioides* Coppins & P. James – Kau: Grd (Aptroot et al., 2005); Oda: Gr (Leg: JM)
- Trapeliopsis flexuosa* (Fr.) Coppins & P. James – Kau: JC<sub>lignum</sub> (Leg: AK); Oda: PS<sub>stump</sub> (Leg: US, PL, EL); Vii: log (Leg: EL)
- Trapeliopsis granulosa* (Hoffm.) Lumbsch – Oda: on wood, PS, PS<sub>stump</sub>, Grd (Leg: AP, AK, US, MS, EL; AS); Vii: stump (Leg: AP, EL, AS)
- # *Tremella cladoniae* Diederich & M.S. Christ. – Kau: on thallus of *Cladonia foliacea* (Leg: EL)
- # *Tremella hypogymniae* Diederich & M.S. Christ. – Vii: on *Hypogymnia physodes* on BP (Leg: EL)
- # *Tremella lichenicola* Diederich – Kau: on *Mycoblastus fucatus* (Leg: JM); Vii: on *M. fucatus* on PS and PA (Leg: AS)
- Tuckermannopsis chlorophylla* (Willd.) Hale – Oda: SS, PS<sub>twig</sub> (Leg: EK, MSk, AS); Vii: PA<sub>twig</sub> (Leg: EL)
- Umbilicaria deusta* (L.) Baumg. – Kau: Gr (Leg: EL, IS, PL)
- Umbilicaria polyphylla* (L.) Baumg. – Kau: Gr (Leg: US, IS, PL)
- Usnea barbata* (L.) Weber ex F.H. Wigg. – Vii: (Leg: TT)
- Usnea dasypoga* (Ach.) Röhrl (syn. *U. filipendula* Stirt.) – Vii: (Leg: TT)
- Usnea hirta* (L.) F.H. Wigg. – Oda: PS (Leg: EL, MS, KV, DH, IS, EK, US); Vii: PS, PS<sub>twig</sub> (Leg: EL)
- Usnea subfloridana* Stirt. – Vii: (Leg: TT)
- Verrucaria bryoctona* (Th. Fr.) Orange – Oda: Grd (Leg: JM, PC)
- Verrucaria calciseda* DC. – Kau: Ls (Leg: TR, 2004: eSamba)
- Verrucaria foveolata* (Flörke) A. Massal. – Kau: Ls (Ekman et al., 1991); Vii: Ls (Leg: AS, det. J. Pykälä)
- Verrucaria fuscella* (Turner) Winch – Kau: Ls (Leg: HT, 1989: eSamba)
- Verrucaria glaucina* Ach. – Kau: Ls (Leg: HT, 1989: eSamba)
- Verrucaria muralis* Ach. – Kau: Ls (Ekman et al., 1991); Oda: concrete (Leg: US)
- Verrucaria nigrescens* Pers. – Kau: Ls (Leg: KV, US); Vii: Ls (Leg: AP)
- Verrucaria olivacea* Servit – Vii: Ls (Leg: AS, det. J. Pykälä)
- Verrucaria xyloxena* Norman – Vii: Grd (Leg: US)
- Vezdaea aestivalis* (Ohlert) Tsherm.-Woess & Poelt – Oda: on dead mosses and algal film overgrowing siliceous boulder (Leg: JM)
- # *Vouauxiella lichenicola* (Linds.) Petr. & Syd. – Vii: on apothecia of *Lecanora argentata*, *L. chlarotera* (Leg: AK, US, JM, EL)
- Vulpicida juniperinus* (L.) J.-E. Mattsson & M.J. Lai [DD] – Kau: JC<sub>twigs</sub>, JC<sub>lignum</sub> (Leg: DH, IS, EL)
- Vulpicida pinastri* (Scop.) J.-E. Mattsson – Oda: PS (Leg: EL, AS); Vii: PS, BP, stump (Leg: EL)
- Vulpicida tubulosus* (Schaer.) J.-E. Mattsson & M.J. Lai [NT] – Kau: Grd (Leg: MK, EL, US, MS, TT, PC)
- Xanthoparmelia conspersa* (Ehrh. ex Ach.) Hale – Kau: Gr (Leg: AK, US)
- Xanthoparmelia* (= *Neofuscelia*) *loxodes* (Nyl.) O. Blanco, A. Crespo, Elix, D. Hawksw. & Lumbsch – Kau: Gr (Leg: EL, US)
- Xanthoparmelia* (= *Neofuscelia*) *pulla* (Ach.) O. Blanco, A. Crespo, Elix, D. Hawksw. & Lumbsch – Kau: Gr (Leg: EL, DH, PL, US)
- Xanthoparmelia stenophylla* (Ach.) Ahti & D. Hawksw. – Kau: Gr (Leg: PL, DH, IS, EK); Vii: Gr (Leg: EL)
- Xanthoria candelaria* (L.) Th. Fr. – Kau: Gr (Leg: HT, 1982: eSamba)
- Xanthoria parietina* (L.) Th. Fr. – Kau: JC (Leg: US, KV); Oda: SS (Leg: KV, US); Vii: FE (Leg: MK, EL)
- Xanthoria polycarpa* (Hoffm.) Rieber – Kau: SS (Leg: US); Oda: SS (Leg: EL)
- # *Xanthoriicola phyciae* (Kalchbr.) D. Hawksw – Kau: in apothecia of *Xanthoria parietina* (Leg: IS, det. JM, PC)
- Xylographa vitiligo* (Ach.) J.R. Laundon – Vii: (Ekman et al., 1991)