F. Schumm (2025):

Images of Lichens Vol. 29
Vezda Lichenes Rariores Exsiccati part 4

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A. Vezda published two important exsiccati works: "Lichenes Rariores Exsiccati" and "Lichenes Selecti Exsiccati".
In this book, I continue the illustrations of lichen species from Vezda's Lichenes Rariores. The images are arranged alphabetically, using the names assigned by Vezda. However, the most recent names according to the Index Fungorum are also given, and I have added descriptions from the literature.
In this book I try to depict with macro photos what was distributed in my copy of "Lichenes Rariores". The pages start with the synonyms, than the copy of the labels with collector and determinator. Than I append descriptions of the species . The numbers in [..] are the numbers of the bags in my private lichen herbarium F. Schumm in Wangen out of which the images are taken.

For the descriptions I consulted
Awasthi, DD. (1991): A key to the Microlichens of India, Nepal and Sri Lanka. - Bibliotheca Lichenologica Band 40.
Lücking, R. (2008): Fl. Neotrop. Monogr. 103.

For the descriptions I consulted and used mainly the excellent descriptions that are provided in Prof. Nimis ITALIC 8 under the URL:
https://italic.units.it/

and the Australian Lichenslist under the Url:
https://www.anbg.gov.au/abrs/lichenlist/lichenchecklist_e_o.html

F. Schumm, 09.2025

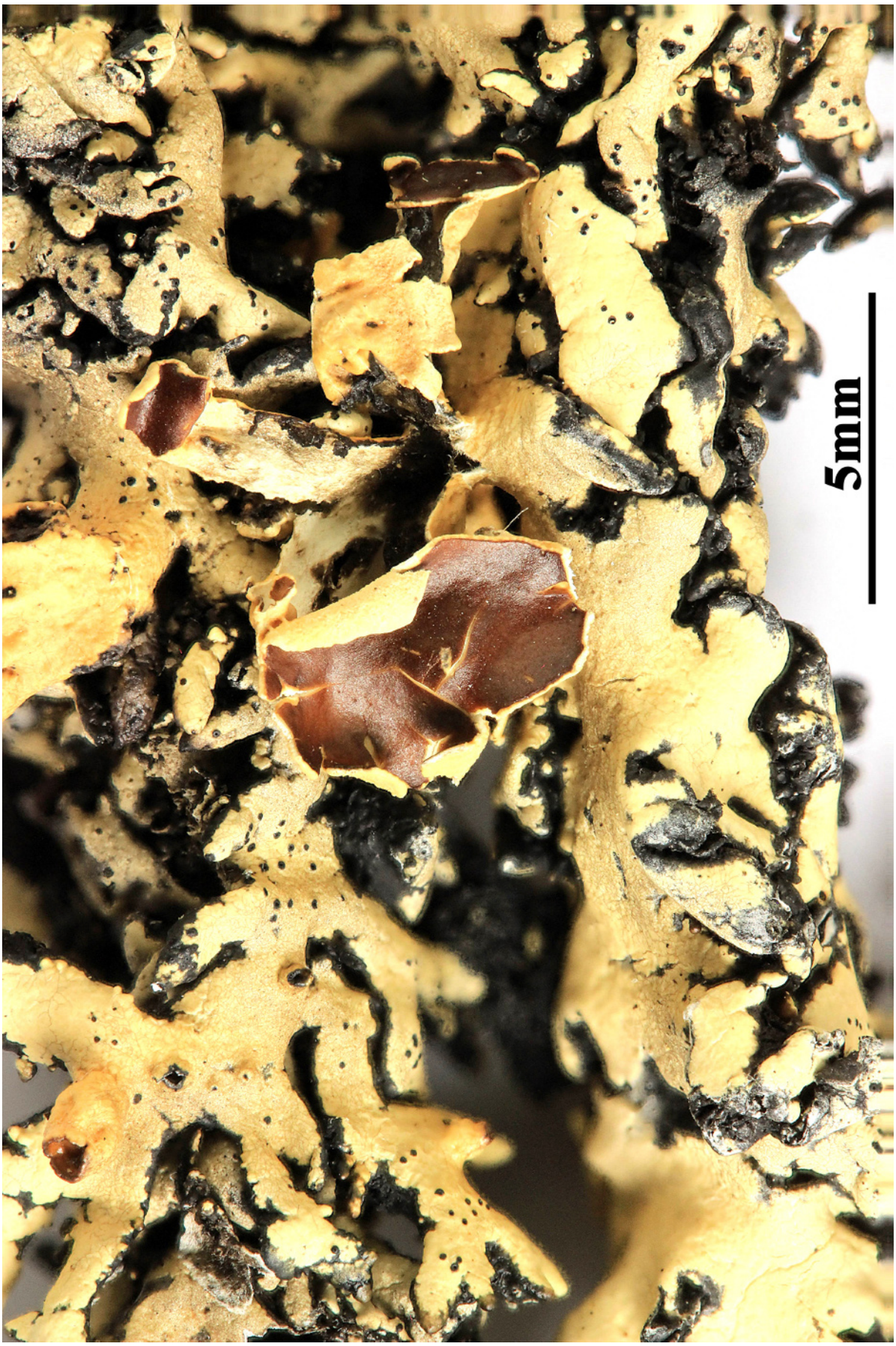
Hypogymnia madeirensis (Tav.) D. Hawksw., Lichenologist 5(5-6): 455 (1973)
= *Parmelia madeirensis* Tav. 1952

[VZR63], Lusitania. Madeira centralis: secus viam inter Qeimadas et Cabezo de Capitao Mor, 1100-1300 m. In ramulis emortuos Ericae arboreae. Leg. G. B. Feige & I. Feige (herb. Essen 12359) - Annot.: physodic acid, chloroatranorin (majoe), 2'-O-methylphysodic acid (major), atranorin, 3-hydroxiphysodic acid (minor), alectoronic acid (trace). anal with HPLC by G. B. Feige. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR.63.

Mark P- (ohne physodalic a.). Th unregelmäßig ausgedehnt, ziemlich weich, röhrig hohl, bis 7,5 cm im Durchmesser, Lappen sympodial (Seitenlappen übergipfelt den Lappen, auf dem er entsteht) verzweigt, zusammenschließend oder fast überlappend, Oberseite weiß-grau, ohne Sorale und Isidien; Lappenspitzen glänzend, abgerundet, gekerbt oder eingeschnitten gekerbt, Ränder braun; Seitenästchen in älteren Pflanzenteilen aufgerichtet: Unterseits schwarz und und feingrubig, Unterseite zwischen den Zipfeln vorzugsweise zum Zentrum hin sichtbar; K gelb, C-, P-. Apothecien zerstreut, röhrig gestielt, verkehrt kegelförmig, längs gefurcht, bis 4 mm hoch; Th-Rand der Apothecien ca. 0,1 mm dick, Scheibe bleich- oder kastanienbraun, bis 8 mm breit, nicht bereift, anfangs konkav, dann flach werdend. Pykniden punktförmig, vorzugsweise in Seitenästen entwickelt, im oberen Teil schwarz, ca. 0,1 mm breit, mit eingedrückter Mündung. Sporen zu 8, 7-9 x 5-8 µm; Pyknosporen 5-6 x 0,8 µm Chemie: Medulla:K+gelb, C -, KC , P-; keine physodalic acid.

Hypogymnia madeirensis

Hypogymnia madeirensis



Hypogymnia madeirensis

Hypogymnia tavaresii D. Hawksw. & P. James, in Hawksworth, Lichenologist 5(5-6): 454 (1973)

[VZR116], Insulae Canarienses, Tenerife. Las Montañas de Anaga, in monte Pico del Inglés, 900 m. In ramulis Erica arboreae ad corticem. Leg. A. Vězda & F. Ceni, 8.3.1994. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 116.

Thallus corticolous, adnate, foliose, 4-8 cm diam., attached to the substrate except at the apices; marginal lobes free, spreading, becoming erect at the apices; lobes dorsiventrally flattened, plane at the apices but becoming convex and inflated in the central parts, 1-3 mm wide; upper surface glaucous-grey to pale greenishgrey, matt, smooth, not distinctly rugose; lower surface brown in the central parts but becoming buff towards the apices. Anatomical structure as in other species of *Hypogymnia*. Phycobiont belonging to the genus *Trebouxia*. Soralia, isidia and pseudocyphellae absent. Ascocarps abundant to sparse, rarely absent, distinctly stalked; stalks 2-5 mm tall, inflated above, constricted towards the base, often plicate, occasionally 1-3 branched; disc imperforate, concave, pale brown to hazel, usually 2-6 mm diam. Excipulum thallinum concolourous with the thallus, entire and persistent. Epithecium pale brown, 6-9 µm tall; thecium colourless, 30-45 µm tall; hypothecium colourless, 15-20 µm tall. Paraphyses (? pseudoparaphyses) simple or sparsely branched, septate, conglutinate, 1-5-2-5 µm wide, apices capitate, 2-5-3-5 µm wide. Asci clavate, arrested-bitunicate, thick walled, apices with an internal beak, 8 spored, 25-35 x 15-20 µm. Ascospores irregularly biseriate in the asci, subglobose to ellipsoid, simple, hyaline, 5-7 x 3.5-4.5 µm. Pycnidia abundant, immersed in the upper cortex, globose, black, 110-160 |µm diam.; conidia cylindrical, hyaline, simple, 2.5-5 x 1-2 µm. Thallus K+ yellow, C- , KC- , P - or faintly yellow; medulla K- , C- , KC+ rose, P+ bright yellow; contains atranorin, chloratranorin, physodic acid and physodalic acid. Holotype: Canary Islands, Tenerife, Las Mercedes, to the west of the road.

Hypogymnia tavaresii

Hypogymnia tavaresii

Ingaderia troglodytica Feige & Lumbsch, Mycotaxon 48: 383 (1993)
= *Paralecanographa grumulosa* (Dufour) Ertz & Tehler 2011 - Lectotype Feige ESS-11058 (Designated by Ertz & Tehler, Fungal Diversity 49: [11]. 2011).
= *Chiodecton spilocarpum* Nyl.
= *Lecanactis dilleniana* var. *monstrosa* (Bagl.) Jatta
= *Lecanactis dilleniana* var. *subfumosa* (Jatta) Jatta.
= *Lecanactis grumulosa* (Dufour) Fr.
= *Lecanactis grumulosa* var. *monstrosa* (Bagl.) Grummann
= *Lecanactis hemisphaerica* J.R. Laundon
= *Lecanactis monstrosa* Bagl.
= Lecanactis nothiza (Nyl.) P. James
= *Lecanactis pictonica* (Nyl.) H. Olivier
= *Lecanographa grumulosa* (Dufour) Egea & Torrente
= *Opegrapha cavernicola* Llimona & Werner
= *Opegrapha diaphoroides* Nyl. non auct.
= *Opegrapha dirinaria* (Nyl.) Nyl.
= *Opegrapha grumulosa* var. *dirinaria* Nyl.
= *Opegrapha grumulosa* var. *platycarpa* Nyl.
= *Opegrapha platycarpa* (Nyl.) Nyl.

[VZR64], Hispania. Baleares insulae. insula Minorca, sinus "Cala Morell" dictus. Ad parietes rupium calcareum prope cavernas olim Triglodytium. Leg. G.. & S. Feige (herb. Feige Ess 11058)- Isotypus. -annot.: Gyrophoric acid (major), lecanoric acid (minor) orselinic acid (trace), by HPLC anal. G. B. Feige. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 64.

Thallus starting as a lichenicolous fungus on different hosts belonging to Arthoniales (e.g. Dirina, Roccella), eventually becoming lichenized, of two types: 1) crustose, episubstratic, usually thick, continuous to rimose-areolate, chalky-white to grey-white or pale brownish grey, farinose, often delimited by a dark prothallus, 2) fruticose, pendent to suberect, grey, often faintly white-pruinose, consisting of very fragile, flattened, usually sterile, 0.1-10 mm wide and up to several cm long, strap-shaped laciniae with a cortex of periclinally arranged hyphae and a very poorly developed medulla. Medulla usually thick in crustose forms, chalky-white, I-. Apothecia at first immersed, then sessile, of widely different shapes, round and 0.2-1.5 mm across, angular, or clearly lirelliform and then to 3 mm long, mostly irregularly substellate,

with a flat to convex, often white- or bluish-pruinose, sometimes umbonate disc and a thin, often prominent, rarely finally excluded, black but often grey-pruinose, more or less wavy proper margin. Proper exciple dark brown, extending below the hymenium, K-; epithecium colourless to dark brown, thin, K+ greenish; hymenium colourless, 50-90 µm high, I+ pale reddish; paraphysoids branched and anastomosing, up to 2(-2.5) µm thick, the apical cells swollen and 3-4.5 µm thick, with a granular external brown pigmentation; hypothecium dark brown, K+ pale green. Asci 8-spored, cylindrical-clavate, thick-walled and fissitunicate, with a thin K/I+ pale blue tholus and a small ocular chamber with an inconspicuous amyloid ring. Ascospores 2-5-septate and slightly constricted at the central septa, hyaline (overmature spores turning pale brown), straight to slightly curved, ellipsoid to cylindrical-fusiform, the central cells larger, 12-23 x 3-4(-5) µm, surrounded by a thin gelatinous sheath. Photobiont trentepohlioid (but this might be the photobiont of the host, and the species could be not lichenized). Spot tests: thallus and apothecial pruina K-, C+ red, KC+ red, P-, UV-. Chemistry: gyrophoric and lecanoric acids, and erythrin. - Note: on steeply inclined to rain-sheltered surfaces of more or less calcareous cliffs subject to humid maritime winds in rather shaded situations, starting as a lichenicolous fungus, later probably developing an own thallus. It sometimes forms long, fruticose outgrowths which look like a different lichen, previously called Ingaderia troglodytica (see Erzt & Tehler 2011).

Ingaderia troglodytica

Ingaderia troglodytica

Ingaderia troglodytica

Ingaderia troglodytica Feige & Lumbsch, Mycotaxon 48: 383 (1993)
= *Paralecanographa grumulosa* (Dufour) Ertz & Tehler 2011 - Lectotype Feige ESS-11058 (Designated by Ertz & Tehler, Fungal Diversity 49: [11]. 2011).
= *Chiodecton spilocarpum* Nyl.
= *Lecanactis dilleniana* var. *monstrosa* (Bagl.) Jatta
= *Lecanactis dilleniana* var. *subfumosa* (Jatta) Jatta.
= *Lecanactis grumulosa* (Dufour) Fr.
= *Lecanactis grumulosa* var. *monstrosa* (Bagl.) Grummann
= *Lecanactis hemisphaerica* J.R. Laundon
= *Lecanactis monstrosa* Bagl.
= Lecanactis nothiza (Nyl.) P. James
= *Lecanactis pictonica* (Nyl.) H. Olivier
= *Lecanographa grumulosa* (Dufour) Egea & Torrente
= *Opegrapha cavernicola* Llimona & Werner
= *Opegrapha diaphoroides* Nyl. non auct.
= *Opegrapha dirinaria* (Nyl.) Nyl.
= *Opegrapha grumulosa* var. *dirinaria* Nyl.
= *Opegrapha grumulosa* var. *platycarpa* Nyl.
= *Opegrapha platycarpa* (Nyl.) Nyl.

[VZR65], Italia. Pelagiae insulae: insula Lampedusa, scopulum "Cabo Grecale" dictum, 30-50 m. Ad parietes rupium calcareum. Leg. P. L. Nimis, J. Poelt & A. Vězda. EX VěZDA: LICHENS RARIORES EXSICCATI NR. 65.

Thallus starting as a lichenicolous fungus on different hosts belonging to Arthoniales (e.g. Dirina, Roccella), eventually becoming lichenized, of two types: 1) crustose, episubstratic, usually thick, continuous to rimose-areolate, chalky-white to grey-white or pale brownish grey, farinose, often delimited by a dark prothallus, 2) fruticose, pendent to suberect, grey, often faintly white-pruinose, consisting of very fragile, flattened, usually sterile, 0.1-10 mm wide and up to several cm long, strap-shaped laciniae with a cortex of periclinally arranged hyphae and a very poorly developed medulla. Medulla usually thick in crustose forms, chalky-white, I-. Apothecia at first immersed, then sessile, of widely different shapes, round and 0.2-1.5 mm across, angular, or clearly lirelliform and then to 3 mm long, mostly irregularly substellate, with a flat to convex, often white- or bluish-pruinose, sometimes umbonate disc and a thin, often prominent, rarely finally excluded,

black but often grey-pruinose, more or less wavy proper margin. Proper exciple dark brown, extending below the hymenium, K-; epithecium colourless to dark brown, thin, K+ greenish; hymenium colourless, 50-90 µm high, I+ pale reddish; paraphysoids branched and anastomosing, up to 2(-2.5) µm thick, the apical cells swollen and 3-4.5 µm thick, with a granular external brown pigmentation; hypothecium dark brown, K+ pale green. Asci 8-spored, cylindrical-clavate, thick-walled and fissitunicate, with a thin K/I+ pale blue tholus and a small ocular chamber with an inconspicuous amyloid ring. Ascospores 2-5-septate and slightly constricted at the central septa, hyaline (overmature spores turning pale brown), straight to slightly curved, ellipsoid to cylindrical-fusiform, the central cells larger, 12-23 x 3-4(-5) µm, surrounded by a thin gelatinous sheath. Photobiont trentepohlioid (but this might be the photobiont of the host, and the species could be not lichenized). Spot tests: thallus and apothecial pruina K-, C+ red, KC+ red, P-, UV-. Chemistry: gyrophoric and lecanoric acids, and erythrin. - Note: on steeply inclined to rain-sheltered surfaces of more or less calcareous cliffs subject to humid maritime winds in rather shaded situations, starting as a lichenicolous fungus, later probably developing an own thallus. It sometimes forms long, fruticose outgrowths which look like a different lichen, previously called Ingaderia troglodytica (see Erzt & Tehler 2011).

Ingaderia troglodytica

Ingaderia troglodytica

Ingaderia troglodytica

Lecanactis grumulosa (Dufour) Fr., Lich. eur. reform. (Lund): 375 (1831)
= *Paralecanographa grumulosa* (Dufour) Ertz & Tehler, Fungal Diversity 49(1): 57 (2011)
= *Ingaderia troglodytica* Feige & Lumbsch, Mycotaxon 48: 383 (1993)
= *Lecanactis delimis* (Nyl.) A.L. Sm., Bull. Acad. Intern. Géogr. Bot. 21: 189 (1911)
= *Lecanactis grumulosa* var. *monstrosa* (Bagl.) Grummann, Cat. Lich. Germ. (Stuttgart): 18 (1963)
= *Lecanactis hemisphaerica* J.R. Laundon, Lichenologist 8(2): 142 (1976)
= *Lecanactis mirifica* (Stirt.) A.L. Sm., Monogr. Brit. Lich., Edn 2 2: 225 (1926)
= *Lecanactis monstrosa* Bagl., Mém. R. Accad. Sci. Torino, Ser. 2 17: 430 (1857)
= *Lecanactis monstrosa* var. *grumulosa* (Dufour) Lettau, Feddes Repert., Beih. 69(no. 1): 47 (1932)
= *Lecanactis nothiza* (Nyl.) P. James, in Hawksworth, James & Coppins, Lichenologist 12(1): 107 (1980)
= *Lecanographa grumulosa* (Dufour) Egea & Torrente, Biblthca Lichenol. 54: 134 (1994)
= *Lecanographa hemisphaerica* (J.R. Laundon) Egea & Torrente, Biblthca Lichenol. 54: 138 (1994)
= *Lecidea delimis* Nyl., Flora, Regensburg 56(19): 297 (1873)
= *Opegrapha dilleniana* b *monstrosa* (Bagl.) Jatta, Syll. Lich. Ital. (Trano): 440 (1900)
= *Opegrapha grumulosa* Dufour, J. Phys. Chim. Hist. nat. Arts 87: 214 (1818)
= *Opegrapha mirifica* Stirt., Scott. Natural. 5: 17 (1879)
= *Opegrapha nothiza* Nyl., Flora, Regensburg 63: 13 (1880)

[VZR35], Italia. Pelagiae insulae: insula Lampedusa, scopulum "Cabo Greca" dictum, 30-50 m. Ad saxa calcarea. Leg. A. Vězda, 14.4.1992. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 35.

Thallus starting as a lichenicolous fungus on different hosts belonging to Arthoniales (e.g. Dirina, Roccella), eventually becoming lichenized, of two types: 1) crustose, episubstratic, usually thick, continuous to rimose-areolate, chalky-white to grey-white or pale brownish grey, farinose, often delimited by a dark prothallus, 2) fruticose, pendent to suberect, grey, often faintly white-pruinose, consisting of very fragile, flattened, usually sterile, 0.1-10 mm wide and up to several cm long, strap-shaped laciniae with a cortex of periclinally arranged hyphae and a very poorly developed medulla. Medulla usually thick in crustose

forms, chalky-white, I-. Apothecia at first immersed, then sessile, of widely different shapes, round and 0.2-1.5 mm across, angular, or clearly lirelliform and then to 3 mm long, mostly irregularly substellate, with a flat to convex, often white- or bluish-pruinose, sometimes umbonate disc and a thin, often prominent, rarely finally excluded, black but often grey-pruinose, more or less wavy proper margin. Proper exciple dark brown, extending below the hymenium, K-; epithecium colourless to dark brown, thin, K+ greenish; hymenium colourless, 50-90 µm high, I+ pale reddish; paraphysoids branched and anastomosing, up to 2(-2.5) µm thick, the apical cells swollen and 3-4.5 µm thick, with a granular external brown pigmentation; hypothecium dark brown, K+ pale green. Asci 8-spored, cylindrical-clavate, thick-walled and fissitunicate, with a thin K/I+ pale blue tholus and a small ocular chamber with an inconspicuous amyloid ring. Ascospores 2-5-septate and slightly constricted at the central septa, hyaline (overmature spores turning pale brown), straight to slightly curved, ellipsoid to cylindrical-fusiform, the central cells larger, 12-23 x 3-4(-5) µm, surrounded by a thin gelatinous sheath. Photobiont trentepohlioid (but this might be the photobiont of the host, and the species could be not lichenized). Spot tests: thallus and apothecial pruina K-, C+ red, KC+ red, P-, UV-. Chemistry: gyrophoric and lecanoric acids, and erythrin. - Note: on steeply inclined to rain-sheltered surfaces of more or less calcareous cliffs subject to humid maritime winds in rather shaded situations, starting as a lichenicolous fungus, later probably developing an own thallus. It sometimes forms long, fruticose outgrowths which look like a different lichen, previously called Ingaderia troglodytica (see Erzt & Tehler 2011

Lecanactis grumulosa

Lecanactis grumulosa

Lecanactis grumulosa

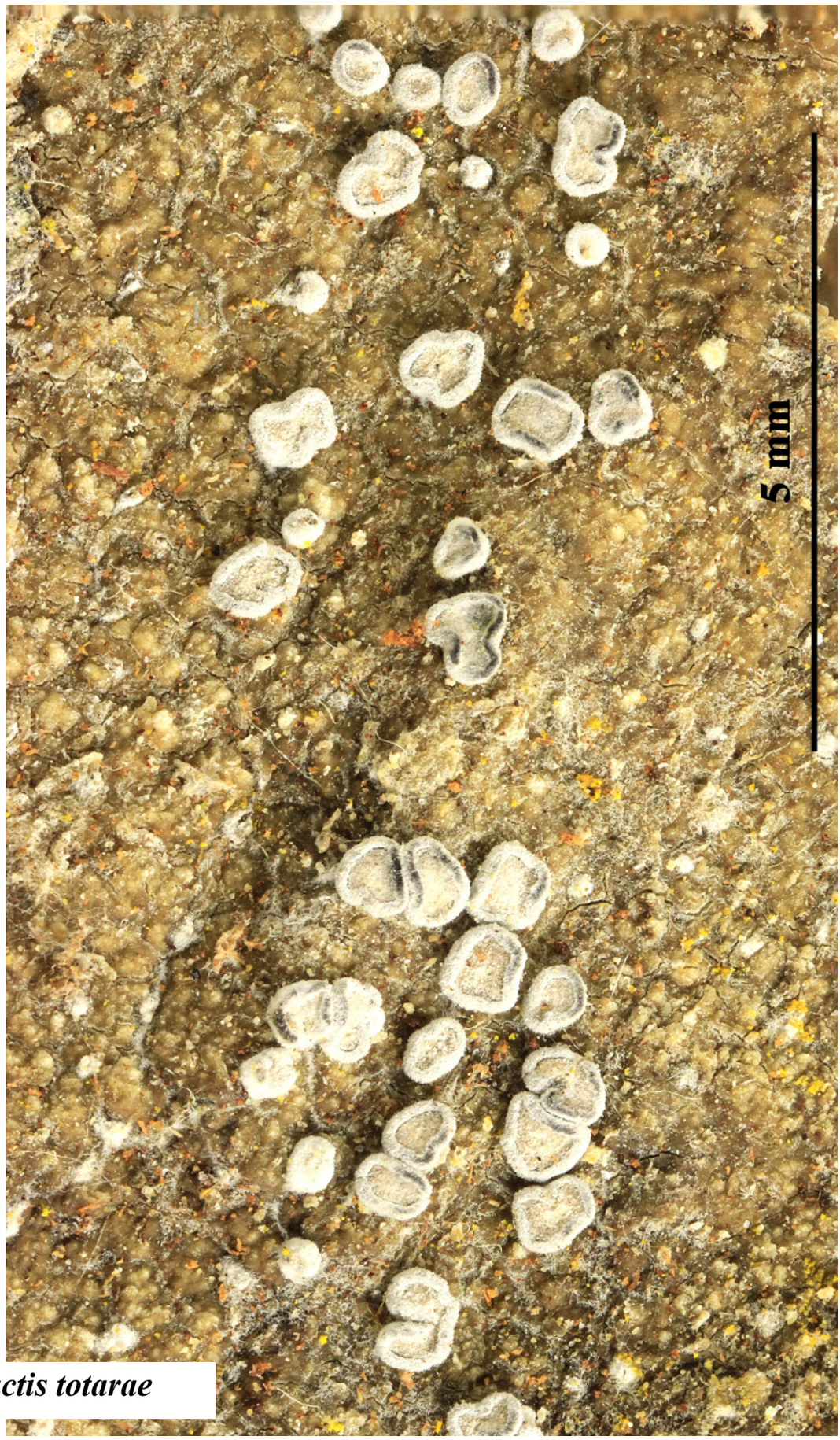
Lecanactis totarae Zahlbr., Denkschr. Kaiserl. Akad. Wiss. Wien, Math.-Naturwiss. Kl. 104: 261 (1941)

[VZR313], Nova Zelandia. South Island. Distr. Southland, Catlins State Forest Park, 60 km ad orientem versus Invercargill, 300 m. In margine silvae secus viam. Ad truncum arboris (*Podocarpus totarae*). Leg. W. Malcolm & A. Vězda, 27.4.1997. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 313.

Ascosporae 3-septate, straight or sligtly curved (18-)21-27 x 4-6 µm; and shorter macroconidia (10-14 x 2.5-3.5 µm). Thallus K± yellowish, C-, KC-, P-, containing schizopeltic acid

Description ex: Egea, J. M. & Torrente, P. (1994): El género de hongos liquenizados Lecanactis.- Bibl. Lichenol. Band 54.
Ascésporas de (18-)21-27 x 4-6 um, rectas o poco curvadas. Nueva Zelanda.
Talo epifleddico, verde-blanquecino o sulfureo, continuo o fisurado, bien desarrollado, con la superficie lisa, rugosa o granuloso-verrucosa; llega a ocupar varios centimetros cuadrados de la superficie del substrato. En seccién, de hasta 200 µm de grosor, con medula poco diferenciada, constituida por hifas de 3-4 µm de anchura, con la pared fuertemente granulosoverrucosa, con abundantes cristales incrustados. Ascomas redondeados o irregulares, de 0,4-1,2 ´mm de didmetro, sésiles, constrictos en la base, aislados o mas frecuentemente reunidos en grupos, cubiertos por una capa de pruina blanquecina o grisdcea. Margen al principio prominente, al final poco desarrollado o inexistente. Excipulo constituido por hifas ramificadas y entrelazadas, claramente visibles después de un tratamiento con K, con paredes pardo-rojizas, poco gelatinizadas y completamente incrustadas de granulos o cristales que se disuelven en K y recristalizan en forma de cristales aciculares. Himenio de 80-100 µm, I+ azul claro, después rojizo. Subhimenio 40-55 µm, pardo. Parafisoides algo ramificados, poco anastomosados, de 1,5-2 µm de anchura en el himenio; células apicales ligeramente engrosadas, de 3-4 µm, coraloides. Ascos cilindrico-claviformes, de 70-85 x 14-16 µm. Ascdésporas fusiformes, con uno de los extremos atenuado, rectas o levemente curvadas, con paredes celulares relativamente gruesas y uniformes, de (18-)21-27 x 4-6 µm, con (3-)4-5 septos. Picnidios hundidos o semihundidos en el talo, ensanchados en el dpice. Microconidios de 7-9 x 1 µm, rectos o ligeramente curvados; macroconidios de 10-14 x 2,5-3,5 µm, curvados,

algunos sigmoides, raramente rectos. Quimica: Talo K- o K+ amarillento, C-, KC-, P-. Ascomas y picnidios K-, C-. Contiene dcido esquizopéltico. Distribuci6én y habitat: Lecanactis totarae se conoceslo de zonas bajas de North Auckland, en NuevaZeland



Lecanactis totarae

Lecanactis totarae

Lecania furfuracea Vězda, Lichenes Rariores Exsiccati 39(nos 381-390): 3, no. 386 (1999)

[VZR386], Bohemia merid., montes Šumava (Gabreta), secus viam inter Horní Kvilda et Kvilda, loco dicto Jezerní slat', 950 m. Ad lignum et corticem *Piceae excelsae* in sylva turfos. -Isotypus.- Leg. A. Vězda, 30.5.1989. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 386

Thallus lignum vel corticem arboris incolens, leproso-furfuraceus, modice crassus, rimoso-areolatus, cinereo-albidus, K-, C-, P-. Apothecia crebra, lecanorina, 0.2-0.5 mm lata, 0.1 mm crassa, in thallo immersa, marginibus primum pallide-fuscis, mox tamen exclusis, discis planis demum paulum convexis, castaneis. pro parte granuloso-pruinosis. Hymenium 45µm altum, hyalinum. Paraphyses simplices, rectae, 2 µm crassae, apicibus haud incrassatis. Asci clavati, membranis modice crassis, in apicibus tholis instructi, 8-spori, ascosporae ellipsoideae vel elongato-ellipsoideae, simplices, rarissime 1-septatae, 10-12 x 2.5-4.5 µm.

Lecania furfuracea

Lecania furfuracea

Lecania nylanderiana A. Massal., Sched. Crit. Lich. Exsicc. (Veronae) 8: 152 (1856)
= *Adermatis nylanderiana* (A. Massal.) Clem., Gen. fung. (Minneapolis): 175 (1909)
= *Lecania athroocarpa var. nylanderiana* (A. Massal.) Boistel, Nouv. Fl. Lich. (Paris) 2: 57 (1903)
= *Lecanora nylanderiana* (A. Massal.) Stizenb., Ber. Tät. St Gall. naturw. Ges.: 373 (1882) [1880-81]
= *Lecanora syringea subsp. nylanderiana* (A. Massal.) Harm., Cat. Descript. Lich. Lorraine IV: 319 (1898)

[VZR182], Italia. Brescia. Alpi bresciani, Alta val Trompia. Cima Candolina, 1600 m. Ad saxa dolomitica. Leg. A. Vězda, 27.7.1995. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 182. - Isotypus von *Lecania var athallina* Vězda var. n.

Thallus crustose, episubstratic, thin, of sharply angular, flat areoles, whitish, pale grey to grey-brown, without a distinct prothallus. Apothecia lecanorine, 0.3-0.8 mm across, usually crowded and often deformed by mutual compression, with a dark brown to black, but always whitish pruinose, flat to slightly convex disc and a grey-pruinose thalline margin. Thalline exciple clearly lecanorine, best developed in basal parts, the cortex with a network of narrow hyphae, the medulla rich in algae; proper exciple thin to moderately thick, pale to dark brown in outer part, paler within; epithecium patchily dark brown, with an epipsamma; hymenium colourless or yellowish in upper part, 60-80 µm high; paraphyses coherent, the apical cells swollen, up to 6 µm wide. Asci 8-spored, narrowly clavate, with a K/I+ blue tholus and a central non-amyloid area, Bacidia-type. Ascospores 3-septate, hyaline, ellipsoid with rounded ends, 12-16(-18) x 4-5 µm, thin-walled, without a gelatinous perispore. Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a temperate species found on vertical to rain-sheltered surfaces of calcareous rocks.

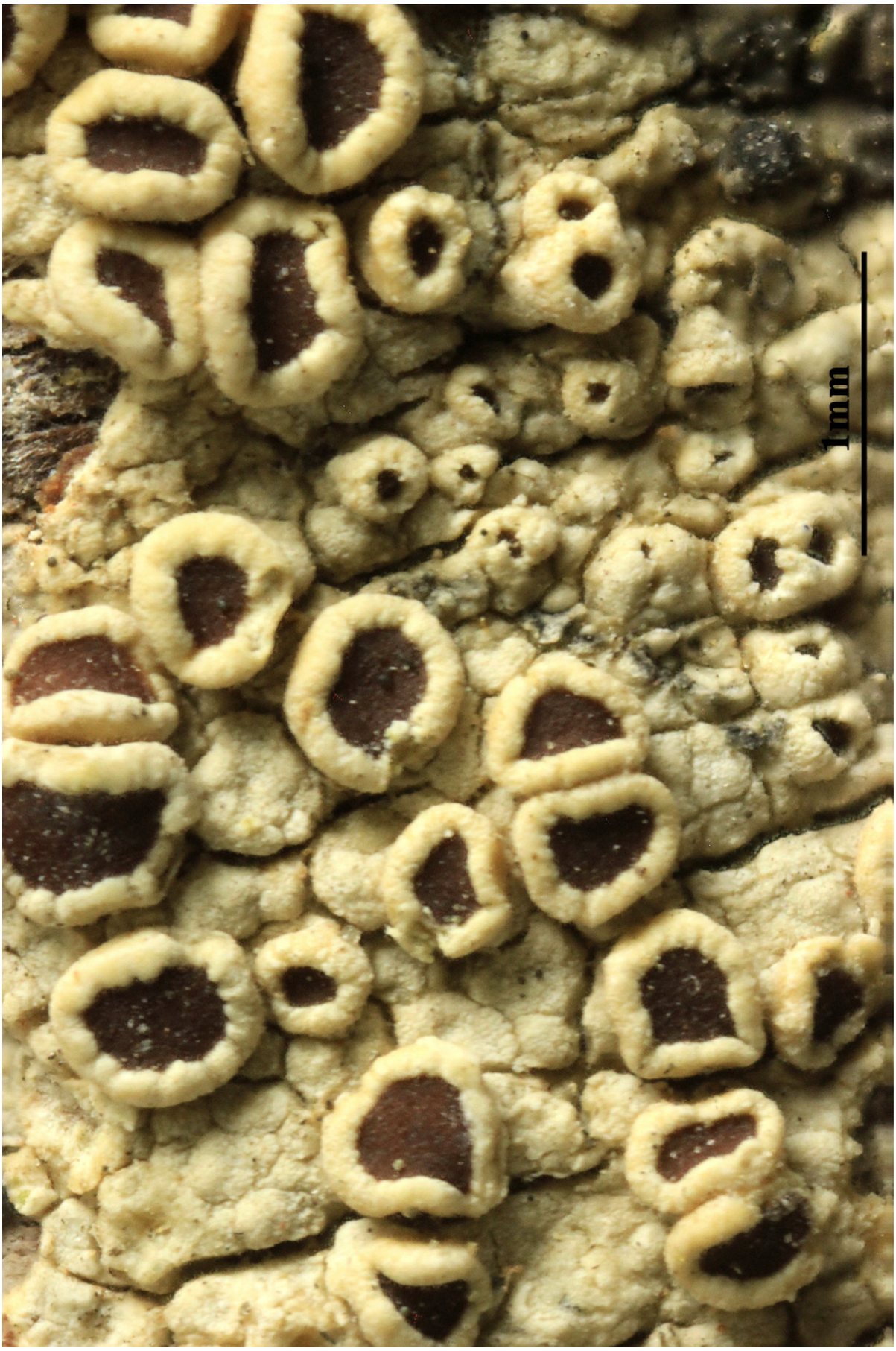
Lecania nylanderiana

Lecania nylanderiana

Lecanora culbersonii Vězda, Lichenes Rariores Exsiccati, Fasc. 45(nos 441-450): no. 449 (2000) sp.n. ad int.

[VZR449], USA, Texas, Val Verde County, in deserto dicto Chihuahuana Desert, 21 km ad septentr.-occidentem versus a Del Rio, secus viam Box Canyan Road. Ad ramos emortuos *Acacciae* sp.. Leg. W. L. Culberson (no. 22131) & R. Ornduff, 12.8.1991. - Atranorin et series of unidentifid terpene-like compounds by TLC. Anal. A. Johnson & C. F. Culberson. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 449.

Lecanora culbersonii



Lecanora culbersonii

Lecanora epibryon* subsp. *broccha (Nyl.) Lumbsch, in Lumbsch, Feige & Elix, Pl. Syst. Evol. 191(3-4): 229 (1994)
= *Lecanora broccha* Nyl., in Crombie 1875

Nova Zelandia. South Island. Otago (pars centralis), 45°4.3' merid., 169°45.8' orient., 1900 m. In caespitibus emortuis (*Chionochloa*). Leg. & det. W. Malcolm, 30.10.1999. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 411.

Thallus thin, dispersed-verrucose to verruculose, yellowish white to yellowish orange, or whitish orange to cream-coloured, epruinose. Soredia absent. Prothallus not visible. Apothecia sessile to slightly constricted at the base, 0.8–2.5 mm diam.; disc pale to dark red-brown or almost black, epruinose; margin concolorous with the thallus, thin, entire, flexuose. Cortex hyaline, indistinct, gelatinous, inspersed with small crystals, 40–55 µm thick laterally and 55–120 µm thick basally. Amphithecium with small crystals that dissolve readily in KOH (allophana-type). Parathecium hyaline, 10–12 µm thick, with numerous small crystals soluble in KOH. Epihymenium reddish brown, c. 10–15 µm thick, K–, without crystals (glabrata-type), with small oil droplets. Hymenium hyaline, inspersed with small oil droplets, 55–80 µm thick. Hypothecium and subhymenium hyaline. Paraphyses c. 2 µm wide, sparingly branched apically; apices capitate, to c. 3.5 µm wide, reddish brown. Ascospores ellipsoidal, 12.5–17.5 × 6.5–9.5 µm. CHEMISTRY: Chemistry: Thallus and apothecial margin K+ yellow or K+ yellow → reddish, C+ faint orange to reddish, Pd+ yellowish orange; containing stictic acid (major), norstictic acid (submajor), atranorin (submajor), barbatic acid (submajor), 2,5,7-trichloro-3-O-methylnor-lichexanthone (submajor), chloroatranorin (minor), connorstictic acid (minor), constictic acid (minor), ±4-O-demethylbarbatic acid (minor), 5,7-dichloro-3-O-methylnorlichexanthone (minor), ±gyrophoric acid (minor), ±lecanoric acid (minor), ±3-O-methylasemone (minor), 2,5,7-trichloro-lichexanthone (minor), ±ursolic acid (minor), ±methyl barbatate (trace), ±methyl-ß-orsellinate (trace), menegazziaic acid (trace) and cryptostictic acid (trace). Occurs in Tasmania. Outside Australia it is known from montane regions of southern South America, and mountains in New Guinea and New Zealand.

Lecanora epibryon* subsp. *broccha

Lecanora epibryon* subsp. *broccha

Lecanora exspersa Nyl., Flora, Regensburg 58: 443 (1875)

[VZR442], Montenegro. Montes Durmitor, silva virginea supra lacum "Zminje jezero", loco Surdup dicto, 1500-1700 m. Ad corticem arborum. Leg. A. Vězda, 21.8.1984, det. T. Toensberg. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 442.

Lecanora exspersa is a corticolous sterile sorediate crustose lichen previously known only from sparse collections in the mountains of Eurasia and North America. Chemical and morphological study of these specimens as well as a molecular phylogeny of L. exspersa from Europe, and other sorediate members of the genus with which *L. exspersa* may be confused, helped to confirm its identification and placement within the *L. subfusca* group. This is characterized by its thin, grey, smooth to verruculose thallus on bark or wood, its discrete, circular mint-green soralia that erupt from verrucae (these becoming larger and plane with age and often bearing a prominent thalline rim), and its production of atranorin and nephrosteranic acid.

Lecanora exspersa

Lecanora exspersa

Lecanora meridionalis H. Magn., Meddn Göteb. Bot. Trädg. 7: 82 (1932)

[VZR183], Italia, Insula Elba, in litore occid., Petresi Mortaio, in valle Uviale dei Petresi, 80 m. Ad corticem (*Ficus*). Leg. F. Ceni et A. Vězda, 17.5.1995, det. T. Lumbsch. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 183.

Thallus crustose, smooth to slightly verrucose, white to pale grey, sometimes with a yellowish tinge, often delimited by a black prothallus. Apothecia lecanorine, sessile, 0.3-1(-1.8) mm across, with a black, concave to slightly convex disc and a thick, usually smooth, rarely crenulate thalline margin. Thalline exciple distinctly corticate, the cortex 16-25 µm wide laterally, 20-45 µm wide at base, with abundant, very large crystals insoluble in K, often intermixed with small crystals soluble in K; epithecium dark green to bluish green-brown, with abundant, coarse crystals soluble in K and N, N+ red; hymenium colourless, 50-90 µm high, not inspersed with oil droplets; paraphyses slightly thickened at apex (up to 3 µm); hypothecium colourless,without oil droplets. Asci 8-spored, clavate, very thin-walled, with a K/I+ blue, tall tholus penetrated by a faintly amyloid apical cushion, the wall K/I-, surrounded by a blue outer layer, Lecanora-type. Ascospores 1-celled, hyaline, broadly ellipsoid, 9-14 x 6-8 µm. Conidia cylindrical, 10-14 µm long. Photobiont chlorococcoid. Spot tests: thallus K+ yellow, C-, KC-, P-; margin of apothecia P- or P+ faintly yellow. Chemistry: thallus with atranorin (major), chloroatranorin (minor) and roccellic cid. - Note: several Italian records of this very controversial taxon related to *L. chlarotera* need reconfirmation; it was considered by some authors as a form of *L. chlarotera* with darker apothecial discs, but according to Malíček (2014) it represents a good species.

Lecanora meridionalis

Lecanora meridionalis

Lecanora saligna (Schrad.) Zahlbr., Cat. Lich. Univers. 5: 536 (1928)
= *Lecanoropsis saligna* (Schrad.) Ivanovich & Printzen, in Ivanovich, Weber, Palice, Hollinger, Otte, Sohrabi, Sheehy & Printzen, Phytotaxa 695(1): 38 (2025)
= *Lecanora effusa var. sarcopis* (Ach.) Th. Fr., Lich. Scand. (Upsaliae)(1): 263 (1871)
= *Lecanora effusella* Hedl., Bih. K. svenska VetenskAkad. Handl., Afd. 3 18(no. 3): 33 (1892)
= *Lecanora saligna* (Schrad.) Zahlbr., Cat. Lich. Univers. 5: 536 (1928) f. saligna
= *Lecanora saligna* (Schrad.) Zahlbr., Cat. Lich. Univers. 5: 536 (1928) var. saligna
= *Lecanora saligna var. sarcopis* (Ach.) Tomin, Opredelitel' Korkovych Lishainikov Evrop. Chasti SSSR: 413 (1956)
= *Lecanora sarcopis* (Ach.) Ach., Deutschl. Fl. (Frankfurt) 3(2): 78 (1813)
= *Lecanora sarcopis* (Ach.) Ach., Deutschl. Fl. (Frankfurt) 3(2): 78 (1813) f. sarcopis
= *Lecanora sarcopis* (Ach.) Ach., Deutschl. Fl. (Frankfurt) 3(2): 78 (1813) var. sarcopis
= *Lecanora varia var. sarcopis* (Ach.) Mudd, Man. Brit. Lich.: 150 (1861)
= *Lichen salignus* Schrad., Spicil. fl. germ. 1: 84 (1794)
= *Lichen sarcopis* (Ach.) Wahlenb., Fl. lapp.: 406 (1812)
= *Parmelia varia var. sarcopis* Ach., Methodus, Suppl. (Stockholmiæ): 39 (1803)

[VZR366], Moravia, distr. Nové Město, secus viam inter pagos Křidla et Branisŏv, 580 m. Ad corticem arborum. Leg. A. Vězda, 5.1950, dupl det T. Lumbsch. Ex A. Vězda: Lichenes Rariores Exsiccati Nr.366.

Thallus crustose, ecorticate, granulose, whitish to yellowish green, more commonly grey or beige to grey-brown, without a distinct prothallus. Apothecia lecanorine, round or angular by mutual compression, often crowded, sessile with a weakly constricted base, (0.3-)0.4-0.7(-0.9) mm across, with a pale ochre to red-brown or dark brown, flat to slightly convex disc and a weakly prominent, thin, finally poorly evident, smooth to slightly crenulate thalline margin which is often slightly paler and more yellowish than thallus. Thalline exciple corticate, with patches of golden-dark brown granules, the cortex (6-)10-23(-39) µm wide laterally, (18-)19-30(-45) µm wide at base; proper exciple colourless to faintly brown, (8-)15-60(-70) µm wide; epithecium reddish brown to orange-brown, with granules soluble in K, reac-

ting N+ orange-red; hymenium colourless or with orange-brown granular patches, (35-)40-65(-75) µm high; paraphyses sparingly branched and anastomosing, 1.5-2 µm thick at mid-level, the apical cells 2-5 µm wide, the apical gel sheath 3-6 µm wide; hypothecium colourless or pale yellowish brown, (35-)65-160(-220) µm high. Asci 8-spored, clavate, very thin-walled, with a K/I+ blue, tall tholus penetrated by a faintly amyloid apical cushion, the wall K/I-, surrounded by a blue outer layer, Lecanora-type. Ascospores 1-celled, hyaline, narrowly ellipsoid, often slightly bent or deformed, (6.5-)8-11(-13.5) x (3-)4-6(-7.5) µm. Pycnidia semi-immersed to immersed, with a pale brown wall, colourless to pigmented in upper part. Conidia of three types: 1) broadly fusiform to curved macroconidia measuring 7-8 x c. 2.5 µm, produced into 60-110 µm wide macropycnidia (the most common); 2) slightly curved leptoconidia measuring 8-11 x 1-1.5 µm; 3) microconidia measuring 7.5-10.5 x 0.9-1.2 µm. Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC- or KC+ pale yellow, P-, UV-. Chemistry: thallus with isousnic acid and variable amounts of usnic acid; apothecia with the Superba-brown pigment. - Note: a holarctic, temperate to boreal-montane lichen found on hard, undecomposed wood or on acid bark (conifers, Betula, etc.); most frequent in the Alps, but also present in the mountains of Southern Italy. For further details see van den Boom & Brand (2008) and Ivanovich & al. (2025).

Lecanora saligna

Lecanora saligna

Lecanora saligna

Lecidea anthracophila Nyl., Flora, Regensburg 48: 603 (1865)
= *Carbonicola anthracophila* (Nyl.) Bendiksby & Timdal, Taxon 62(5): 950 (2013)
= *Biatora anthracophila* (Nyl.) Tuck., Syn. N. Amer. Lich. (Boston) 2: 14 (1888)
= *Hypocenomyce anthracophila* (Nyl.) P. James & Gotth. Schneid., in Schneider, Biblthca Lichenol. 13: 81 (1980) [1979]
= *Psora anthracophila* (Nyl.) Arnold, Flora, Regensburg 53(30–31): 471 (1871) [1870]

[VZR808], Gallia - Corsica. Distr. Bocagnano: Secus viam inter Col de Tartavello et pagum Vero, 600 m. In cortice vulgu carbonisato annosarum, in silva clara. Leg. Y. Rondon et A. Vězda. Ex A. Vězda: Lichenes Rariores Exsiccati Nr.808.

Thallus squamulose grey-green, greenish brown to medium brown, shiny, sorediate. Squamules up to 0.8(-1.3) mm wide, ascending, geotropically oriented, at first weakly concave or flat, later convex, with a slightly upturned, whitish to pale brown, sorediate margin, the soredia grey, farinose to granular, arranged in marginal, labriform soralia. Cortex up to 130 µm thick (including an up to 70 µm thick epinecral layer), of thick-walled hyphae with very narrow lumina; medulla white, I-. Apothecia rare, lecideine to biatorine, up to 0.8(-1.3) mm across, mainly marginal or developing on the underside of squamules, with a reddish brown to brown, convex, epruinose disc, and an entire, more or less prominent, soon excluded proper margin. Proper exciple of closely conglutinated, thin-walled hyphae with ellipsoid to short-cylindrical lumina, pale brown in outer part, colourless in inner part, without crystals, K-, N-; epithecium brown, K-, N-; hymenium colourless, 40-50 µm high; paraphyses sparingly branched and anastomosing, 2-2.5 µm thick at mid-level, the apical cells swollen and dark-capped; hypothecium colourless. Asci 8-spored, clavate, without an apical amyloid cap, with a well-developed, amyloid tholus containing a deeper amyloid tube. Ascospores 1-celled to (rarely) 1-septate, hyaline, narrowly ellipsoid to fusiform, 7-13 x 1.5-2.5 µm. Pycnidia sessile, black, mostly marginal, with a brown wall, N-. Conidia thread-like, slightly curved, 6.5-12.5 x c. 1 µm. Photobiont chlorococcoid. Spot tests: cortex K-, C-, KC-, P+ red, UV-; soralia and medulla KC+ purple, UV+ blue-white. Chemistry: fumarprotocetraric acid, protocetraric acid, colensoic acid, 4-O-methylphysodic acid and related compounds. - Note: a circumboreal-montane lichen found on charred wood in upland areas.

Lecidea anthracophila

Lecidea anthracophila

Lecidea gypsicola Llimona, in Vězda, Lichenes Selecti Exsiccati, Fasc. (Průhonice) 47: 3 (no. 1160) (1973)

[VZR472], Insulae Canarienses, Gran Canaria, supra urbem Fataga, 800 m. In abrupto, ad terram in rupibus. Leg. A. Vězda, 7.2.1993, det. H. Hertel. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 472.

Annot. von H. Hertel: Hymenium 60-65-77 µm hoch. Ascosporen 9.5-12.1-15 x 4.5-5.3-6.5 µm, Thallus und Excipulum C+ rot /(yrophorsäure), Medulla J-. Hypothecium schwarzbraun. Die Art steht der *Lecidea* **fuscoatra** sehr nahe.

Thallus crustose, areolate, the areoles very thick, flat to slightly convex, white, sometimes with a light brownish hue when dry, pale bluish grey when wet, dull. Cortex rather thick; medulla white, I-. Apothecia lecideine, black, slightly constricted at base, (0.7-)1-2 mm across, with a black, usually faintly pruinose, initially flat but soon turning convex disc and a thin, sometimes finally excluded proper margin. Proper exciple blackish brown in outer part, almost colourless within, with many crystals, C+ red; epithecium olive-green to olive-brown; hymenium colourless; paraphyses simple to branched and anastomosing, 1.5-2 µm thick at mid-level, gradually expanded upwards, the apical cells 3-5 µm wide; hypothecium dark brown to almost black. Asci 8-spored, narrowly clavate, thick-walled, with a K/I+ pale blue tholus and a strongly amyloid, thin apical cushion, surrounded by a I+ blue outer layer, Lecidea-type. Ascospores 1-celled, hyaline, ellipsoid to narrowly ellipsoid, (12.5-)15-18 x (4.5-)5-6(-6.5) | µm, c. 2.9 times as long as wide. Photobiont chlorococcoid. Spot tests; thallus K-, C+ red, KC+ red, P-, UV-. Chemistry: gyrophoric acid and variable amounts of lecanoric acid. - Note: a species belonging to the critical *L. fuscoatra*-complex. It is known from several localities in Spain, where it invariably grows on gypsum, and from the Irano-Turanian region, where it occurs on calciferous rocks. To be looked for in the gypsum outcrops of Southern Italy, especially in Sicily.

Lecidea gypsicola

Lecidea gypsicola

Lecidea speirodes Nyl., Flora, Regensburg 68(3): 44 (1885)

[VZR365], Slovacia. Montes Tatra Magna, iugum Belianske Tatry, in monte Bujači, 1900 m. Ad lapides magnos schitosos argillaceo-calcareos in vegetatione alpina. Leg. A. Vězda, 7.1965, det. H. Hertel. Ex A,. Vězda: Lichenes Rariores Exsiccati Nr. 365.

Thallus crustose, episubstratic, continuous or rimose, chalky white, often with a bluish tinge, 0.2-1.2 mm thick, most often without a clear prothallus, rarely delimited by a thin dark prothalline line. Medulla white, I+ deep blue. Apothecia lecideine, black, epruinose, (0.2-)0.4-2(-3) mm across, with a flat to finally strongly convex disc and a persistent, raised, wavy proper margin. Proper exciple green-black to brown-black along a thin outer rim, colourless or pale grey within, C+ orange-red; epithecium green-black, K-; hymenium bright blue green, rarely brownish or colourless, 50-70 µm high; paraphyses coherent, simple or forked in upper part, c. 2 µm thick at mid-level, the apical cells hardly swollen, to 2.6 µm wide; hypothecium dark brown, K-. Asci 8-spored, clavate, Lecidea-type. Ascospores 1-celled but often pseudodiblastic, hyaline, ellipsoid, 6-12 x 3.5-6.5 µm, not halonate, thin-walled. Pycnidia black, globose, immersed. Conidia bacilliform, 5-15 x 0.8-1.5 µm. Photobiont chlorococcoid. Spot tests: thallus K- or K+ faintly yellow, C-, KC-, P-. Chemistry: thallus and exciple with 2'-O-methylanziaic acid. - Note: a lichen known from the central and southern European mountains (Alps, Pyrenees, Cordillera Cantabrica in Spain, Tatra Mountains), found on steeply inclined, superficially decalcified calciferous rocks or on lime-containing siliceous rocks, with optimum in upland areas, up to the nival belt in the Alps. The world distribution was mapped by Hertel (2006).

Lecidea speirodes

Lecidea speirodes

Lecidea variegatula Nyl., Flora, Regensburg 48: 6 (1865)

[VZR184], Moravia austro.-merid.,Distr. Moravsky Krumiov, in valle fliminis Rokytná loco dicto Tábor, supra vicum Rokytná, 300 m. Ad lapides siliceos ad margiem silvae. Leg. A. Vězda, 20.10.1995. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 184.

Thallus crustose, episubstratic, areolate, pale yellowish brown to brown, somehow shiny, the areoles subsquamulose, weakly convex with reflexed margins, (0.2-)0.4-0.7(-1.3) mm wide, contiguous to usually scattered. Medulla white, I-. Apothecia abundant, often located at the margins of the areoles, lecideine, glossy black, circular in outline, 0.2-0.8(-1.3) mm across, with a flat disc and a very thin proper margin. Proper exciple dark brown to dark green-brown in outer part, paler brown within, up to 30 µm wide laterally; epithecium bluish green or green, with the Cinereorufa-green pigment; hymenium colourless or greenish in upper part, 25-37 µm high; paraphyses coherent; hypothecium colourless. Asci 8-spored, narrowly clavate, thick-walled, with a K/I+ pale blue tholus and a strongly amyloid, thin apical cushion, surrounded by a I+ blue outer layer, Lecidea-type. Ascospores 1-celled, hyaline, ellipsoid, 5-7.3(-8.5) x 2.5-3(-3.6) µm. Photobiont chlorococcoid, the cells up to 22 µm wide. Spot tests: cortex and medulla K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: on low siliceous outcrops, pebbles and tiles at low elevations; widespread in Europe but rarely collected, with a single record from the Eastern Alps (Austria).

Lecidea variegatula

Lecidea variegatula

Leifidium tenerum (Laurer) Wedin, Pl. Syst. Evol. 187(1-4): 235 (1993)
= *Sphaerophorus curtus* Hook. f. & Taylor [as 'Sphaerophoron curtum'], London J. Bot. 3: 654 (1844)
= *Sphaerophorus globosus var. curtus* (Hook. f. & Taylor) Zahlbr., Cat. Lich. Univers. 1: 692 (1922)
= *Sphaerophorus tener* Laurer [as 'Sphaerophoron'], Linnaea 2: 45 (1827)
= *Sphaerophorus tener var. curtus* (Hook. f. & Taylor) Taylor & Hook. f., in Hooker, Bot. Antarct. Voy. Erebus Terror 1839-1843 1: 194 (1845)

[VZR323], Nova Zelandia. South Island, distr. Canterbury, Christchurch, transitus Lewis Pass, in valle Nina Valley Truck, 700 m. Ad corticem arboris (*Podocarpus*). Leg. W. Malcolm & A. Vězda. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 323.

Thallus slender, ±richly branched, terete, forming loose to compact often very extensive colonies, or small cushions or patches, pale grey to white, rarely somewhat brownish. Main branches stouter, elongate, very sparingly branched, up to 7 cm long and 0.5–1.5 mm wide; cortex thin, 30–45 µm thick (2 or 3 hyphal layers). Apothecia terminal, raised conspicuously above the rest of the thallus, 1–2 (–2.5) mm diam.; development angiocarpic; exciple covering the developing mazaedium until it is finally shed in one piece; thalline receptacle normally completely lost early. Mazaedium oriented apically. Ascospores globose, rarely subglobose, (5.5–) 7–9 (–11) µm diam., hyaline to pale grey, smooth or with a small amount of ornamentation, becoming more bluish to greenish grey and ornamentation dissolving in KOH, but no visible change in colour in HNO3. Conidia obovate to rod-shaped, 3–4 × 1.5 µm. CHEMISTRY: Medulla K–, C–, P–, I–; containing sphaerophorin and unidentified accessory substances. - A common epiphyte in all types of temperate rainforest, occasionally in wet-sclerophyll forest; also on the ground and on rocks in alpine and subantarctic areas. In New Zealand, Argentina and Chile.

Leifidium tenerum

Leifidium tenerum

Leptogium corniculatum (Hoffm.) Minks, Flora, Regensburg 56: 353 (1873)
= *Scytinium palmatum* (Huds.) Gray, Nat. Arr. Brit. Pl., 1: 398, 1821
= *Obryzum corniculatum* (Hoffm.) Wallr., Naturgesch. Flecht. 1: 253 (1825)
= *Collema corniculatum* Hoffm., Deutschl. Fl., Zweiter Theil (Erlangen): 105 (1796) [1795]
= *Collema palmatum f. corniculatum* (Hoffm.) Ach., Syn. meth. lich. (Lund): 319 (1814)
= *Collema palmatum var. corniculatum* (Hoffm.) Ach., Lich. Univ.: 643 (1810)
= *Guignardia corniculata* (Hoffm.) Keiñl., Annln naturh. Mus. Wien 39: 195 (1925)
= *Leptogium palmatum var. corniculatum* (Hoffm.) Mont., in Webb & Berthelot, Hist. nat. Iles Canar. (Paris) 3(2): 128 (1840)
= *Lichen corniculatus* (Hoffm.) Ach., Lich. suec. prodr. (Linköping): 138 (1799) [1798]
= *Lichen palmatus* * *corniculatum* (Hoffm.) Lam., Encycl. Méth. Bot., Suppl. (Paris) 3(2): 412 (1813)
= *Parmelia corniculata* (Hoffm.) Fingerh., Tentam. Flor. Lich. Eiffliac.: 57 (1829)

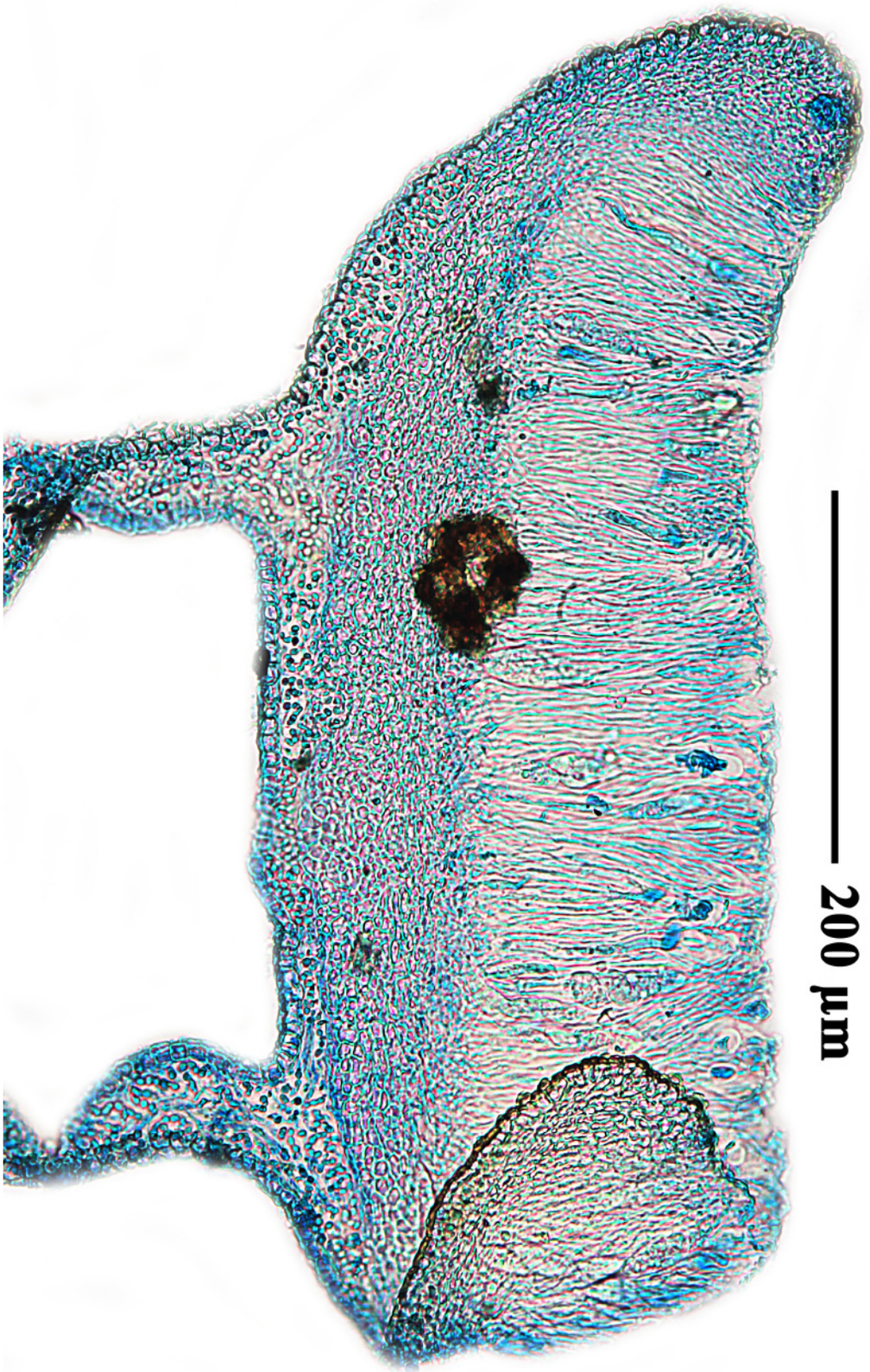
[VZR121], Insulae Canarienses, Tenerife. Las Montañas de Anaga, Las Mercedes, 800-900 m. Ad terram in fossis viae. Leg. et det. A. Vězda, 05.03.1994. - Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 121.

Thallus foliose, subgelatinous when wet, brown to olive-green, smooth to faintly longitudinally wrinkled, somehow shiny especially at the tips, loosely attached, forming loose, up to 4(-7) cm wide tufts, or growing amongst mosses. Lobes 3-8 mm broad, up to 3(-5) cm long, 50-100 µm thick, ascending to erect, subtubular, the revolute margins curling inward, especially in upper part, usually with antler-like tips. Upper and lower cortex composed of a single layer of angular cells, the layer inbetween of intertwined hyphae and loosely arranged chains of Nostoc. Apothecia very rare, lecanorine, sessile, strongly constricted at base, up to 0.8 mm across, with a brown, concave to flat, smooth disc and a thin, often wrinkled thalline margin. Proper exciple euparaplectenchymatous, 12-65 µm thick laterally; epithecium pale brown; hymenium colourless, 125-300 µm high, I+ blue; paraphyses coherent, mostly simple, c. 1 µm thick at mid-level, the apical cells slightly swollen; hypothecium colourless to pale yellow, 25-50 µm high. Asci 8-spored, cylindrical-clavate, the apex strongly thickened, the apical dome K/I+ pale blue, with a downwardly projecting K/I+ deep blue

tubular structure. Ascospores submuriform to muriform, with 5-9 transverse septa and 1-2 longitudinal septa, hyaline, broadly ellipsoid to subfusiform, thin-walled, 30-56 x 10-20 µm. Photobiont cyanobacterial (*Nostoc*, the cells in chains). Spot tests: all negative. Chemistry: without lichen substances. - A mild-temperate lichen found amongst terricolous or epilithic mosses in areas with siliceous substrata, sometimes on soil.

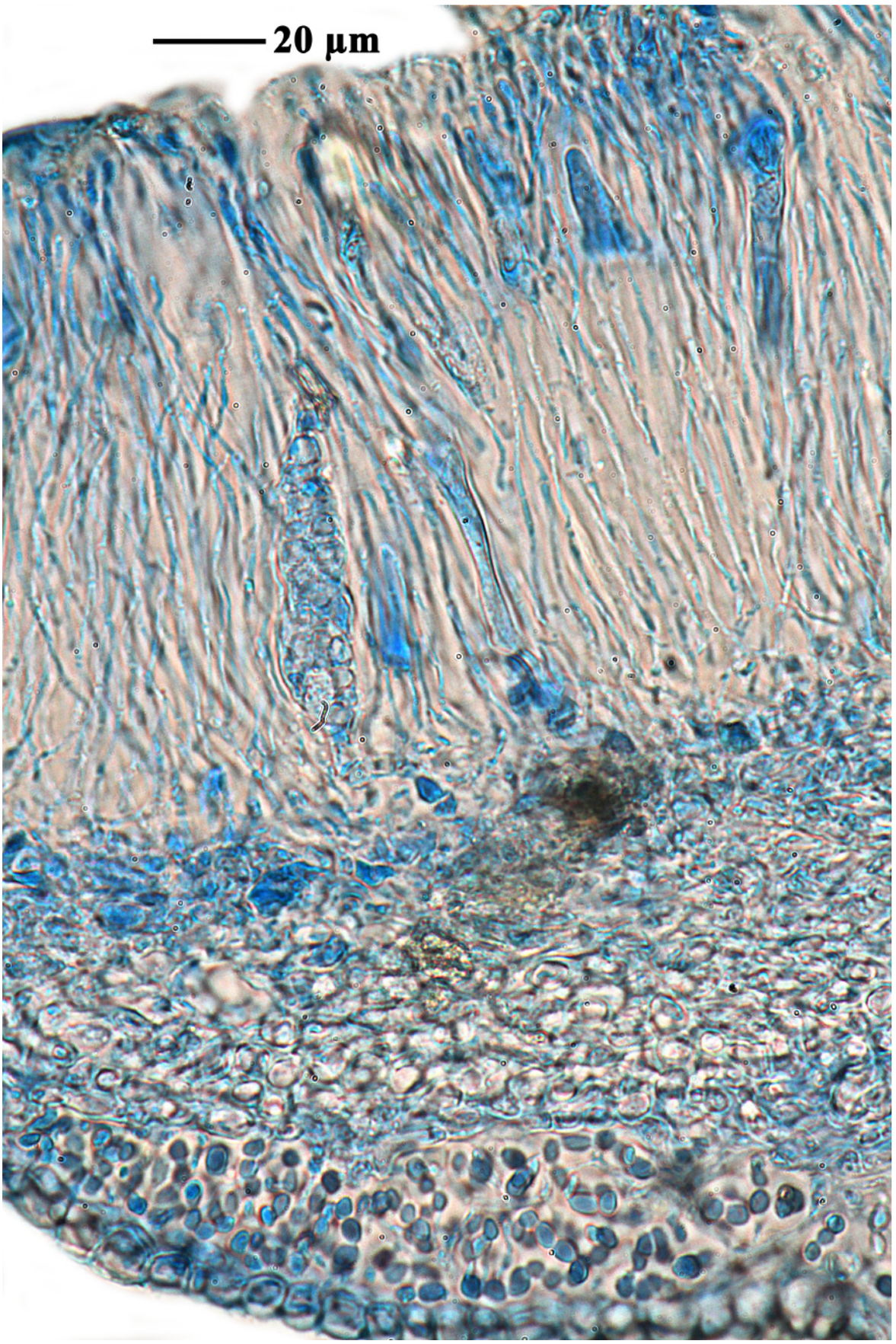
Leptogium corniculatum

Leptogium corniculatum

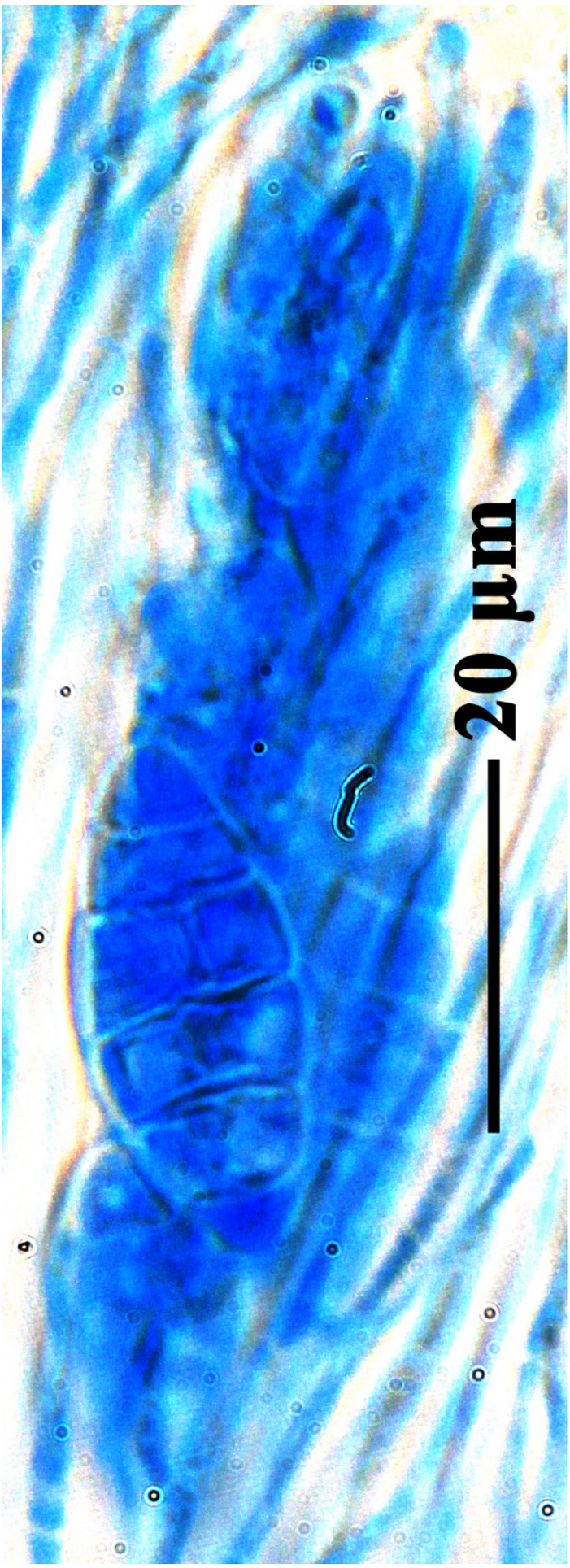


Leptogium corniculatum

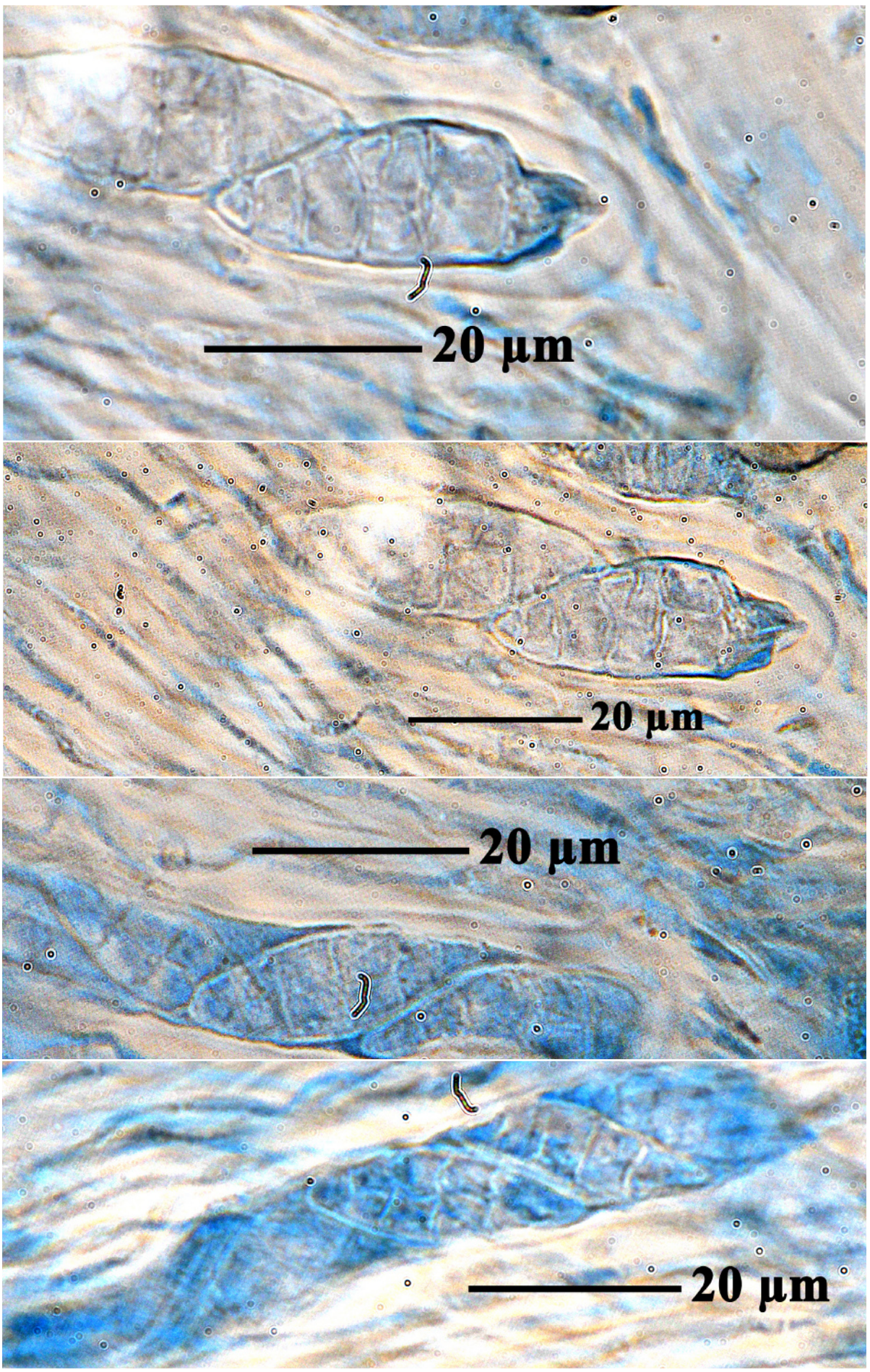
Leptogium corniculatum



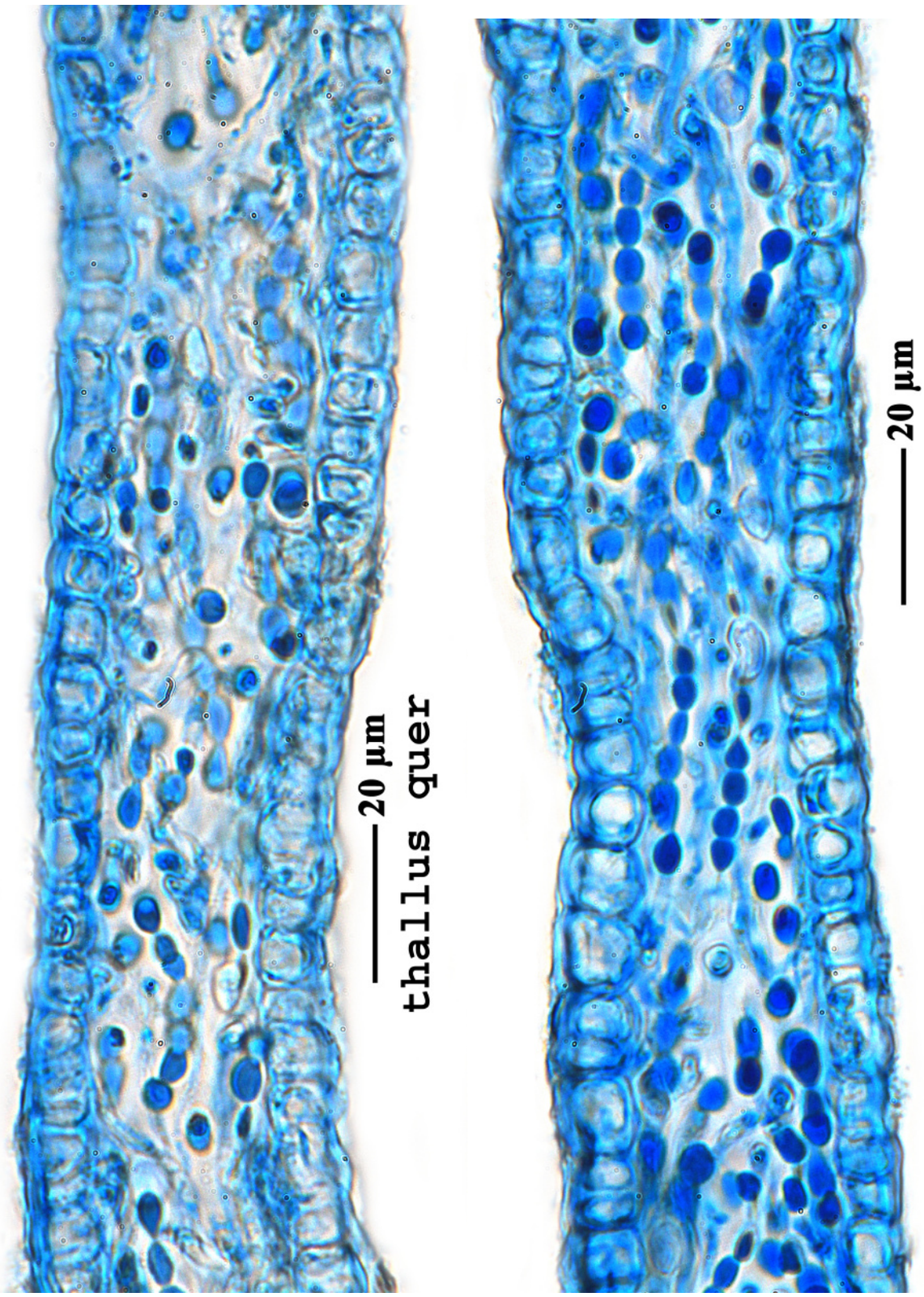
Leptogium corniculatum



Leptogium corniculatum



Leptogium corniculatum



Leptogium corniculatum

Leptogium ferax (Durieu & Mont.) Rabenh., Krypt.-Fl. Sachsen, Abth. 2 (Breslau): 237 (1870)

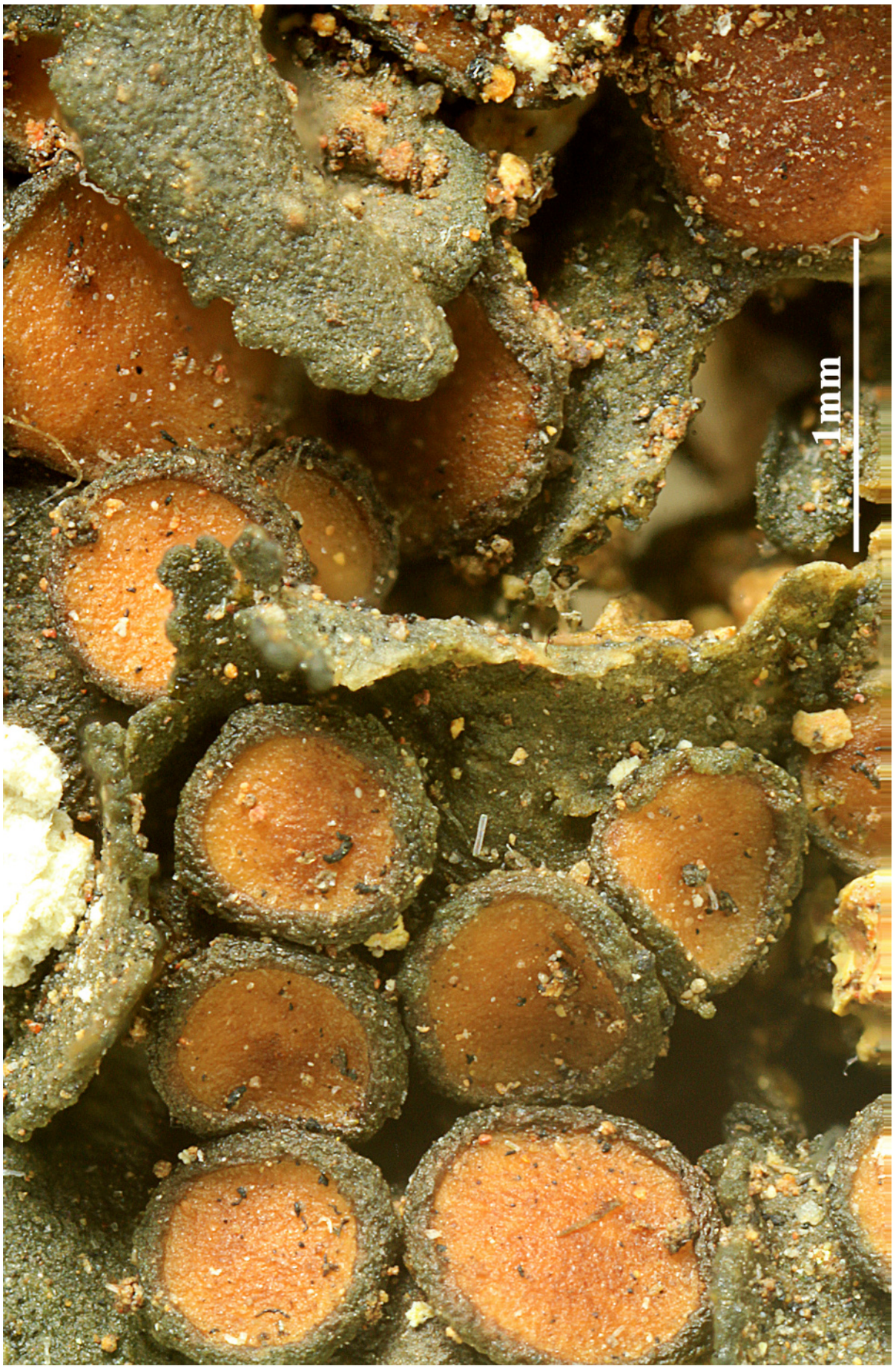
= *Scytinium ferax* (Durieu & Mont.) Otálora, P.M. Jørg. & Wedin, Fungal Diversity 64(1): 290 (2013) [2014]

= *Collema ferax* Durieu & Mont., in Montagne, in Durieu, Expl. Sci. Alg., Fl. Algér. 1(livr. 6): 206 (1847) [1846-49]

[VZR76], Insulae Canarienses, Gran Canaria: distr. Arucas, secus viam inter vicos Lanzarote et Vallesco, 8oo m. Ad teram in saxosis basalticis. Leg A. Vězda, 12.02.1993. - Ex A. VěZDA: Lichenes Rariores Exsiccati Nr. 76.

Thalli mostly brown, if shaded then of a greenish tinge, not exceeding 1 cm in diameter. Lobes orbicular, margin entire, lamina subtly wrinkled (as in e.g. *L. magnussonii*). Medulla compact, comparable to that of *L. magnussonii* (cf. Jørgensen 1994). Apothecia present, diameter 2–2.5 mm, rim lined with dense accumulation of scale- or shell-like structures recalling the isidia of *Collema flaccidum*. Disc plane red-brown. Spores ellipsoidal (immature ones fusiform to broadly fusiform), submuriform to muriform, 8 per ascus, 30.9 (–32.2) x 9.2 (–11.5) µm. This species resembles the common gelatinous lichen *Collema crispum* (Degelius 1954). A well developed cortex and muriform spores are diagnostic characters. It has been recorded from the coastal regions of Mediterranean Algeria, France, Greece (Crete), Portugal and Spain (Arvidsson 1984, Carvalho & Jones 1997).

Leptogium ferax

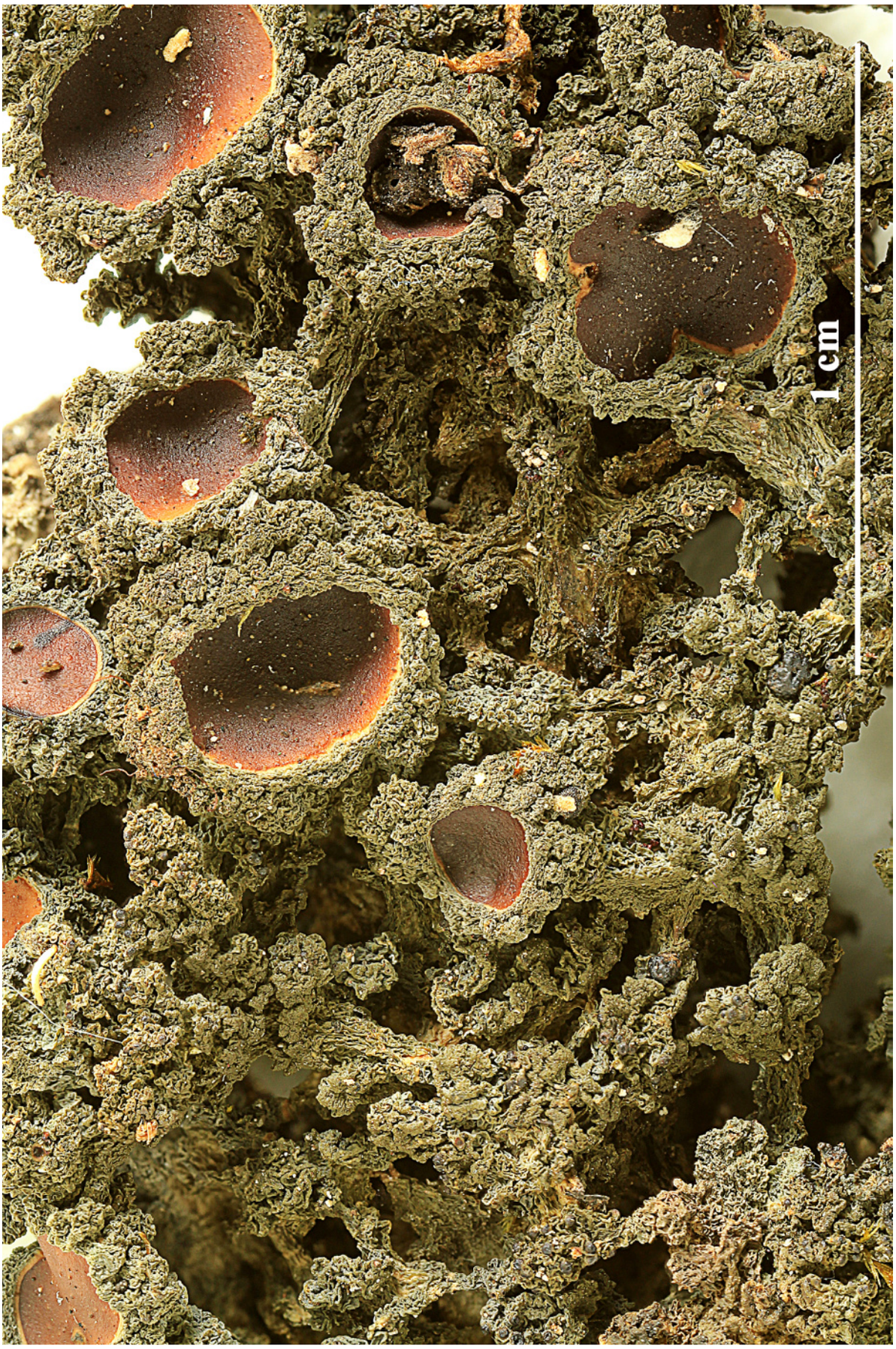


Leptogium ferax

Leptogium phyllocarpum **(**Pers**.)** Mont var**.** ***daedaleum*** (Flot.) Nyl., Syn. meth. lich. (Parisiis) 1(1): 130 (1858)
= *Stephanophorus daedaleus* Flot. 1843

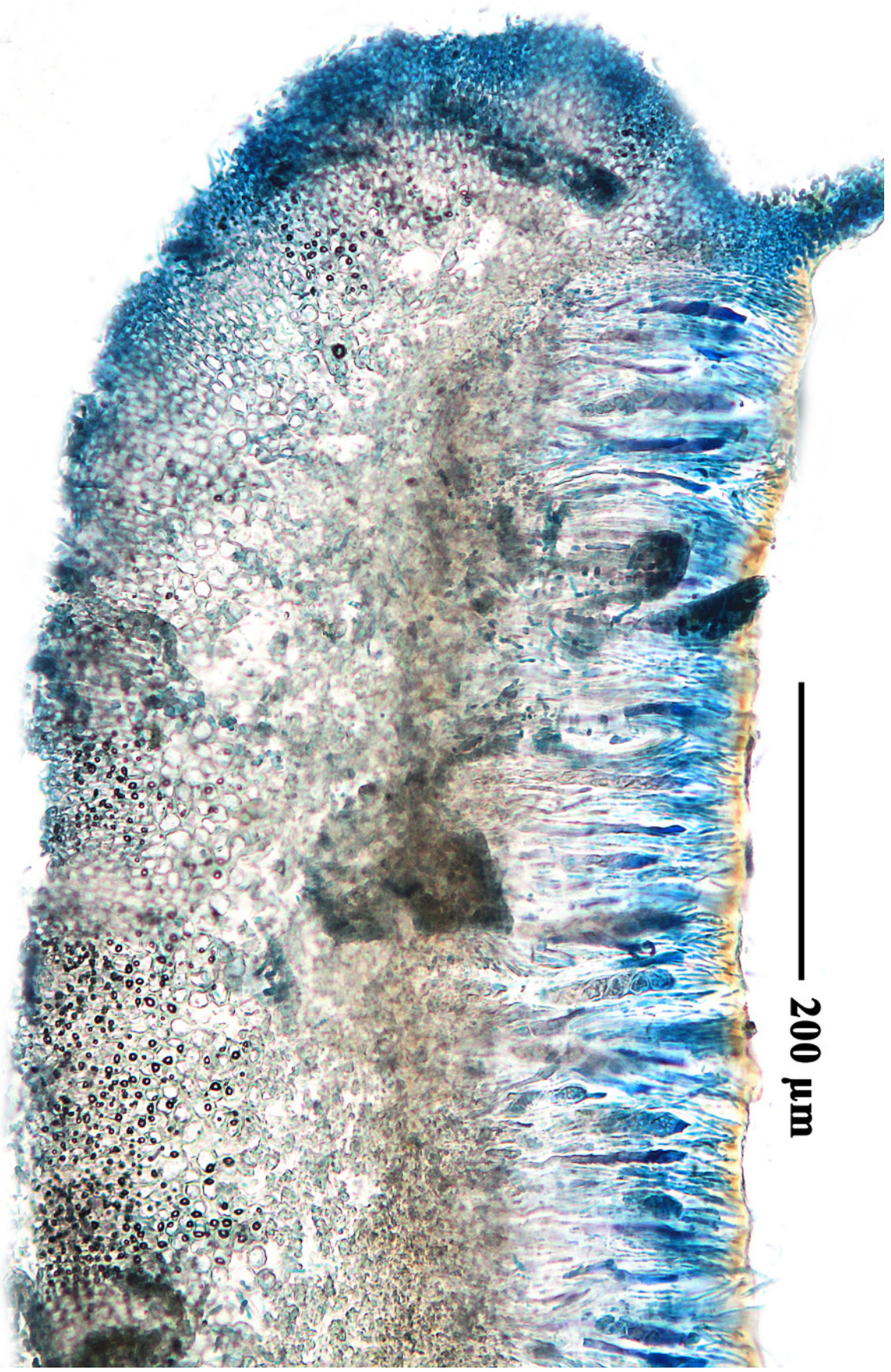
[VZR396], Mexico. Sonora, 1 km ad orientem ab urbe Yecora. secus viam. Ad corticem arborum (*Quercus* sp.), 1600 m. Leg. J. Halda, 28.11.1996, det. A. Vezda, conf. P. Jørgensen. - EX A. VeZDA: LICHENES RARIORES EXSICCATI NR. 396.

Thallus: foliose, 2-7 cm in diam., adnate, irregularly lobate; lobes: very irregular, elongate, strongly thickened (swelling markedly when wet), often anatomosing, 1-2 mm wide, 150-600 µm thick; apices: rotund, thickened, entire or lobulate; upper surface: medium gray to dark gray to almost black, usually dull, heavily lamellate longitudinally (not really wrinkled); internal anatomy: with upper and lower cortices consisting of a single layer of irregularly isodiametrical cells 5-9 µm in diam., internally with loosely interwoven chains of Nostoc and hyphae; lower surface: pale to medium gray, wrinkled, with scattered tufts of white hairs; Apothecia: common, submarginal towards lobe tips, sessile, 1-5 mm wide; disc: brown to red-brown, concave to plane; margin thalline concolorous with the thallus, entire or lobulate, heavily wrinkled; exciple euparaplectenchymatous, 70-130 µm thick centrally; hymenium hyaline below and thinly brown above, 115-200 µm tall; paraphyses: unbranched, 1-2 µm wide, slightly inflated apically; subhymenium pale yellow to pale brown, 50-100 µm thick; asci cylindricoclavate, 8-spored; ascospores hyaline, muriform, 3-5-septate transversely, 1-septate longitudinally, ellipsoid to subfusiform, 23-30 x 9-13 µm; Pycnidia not observed; Spot tests: all negative; Secondary metabolites none detected. Substrate and ecology: common on bark of soft-barked oaks at intermediate elevations; World distribution: pantropical and subtropical, occurring in North and South America, Africa, Australasia and Asia; Sonoran. - *Leptogium phyllocarpum* is characterized by its undulating, crisp lobes with lamellae on the upper surface, that is well considerably when wet. The only other, similar, fertile species is the rarer *L. chloromelum*, that is a much lighter greenish gray, more crustose, wrinkled species with a granular, rather than wrinkled or lobate thalline margin of the apothecia. *Leptogium milligranum* is potentially confusable as well due to its dark color, but it has granular isidia.

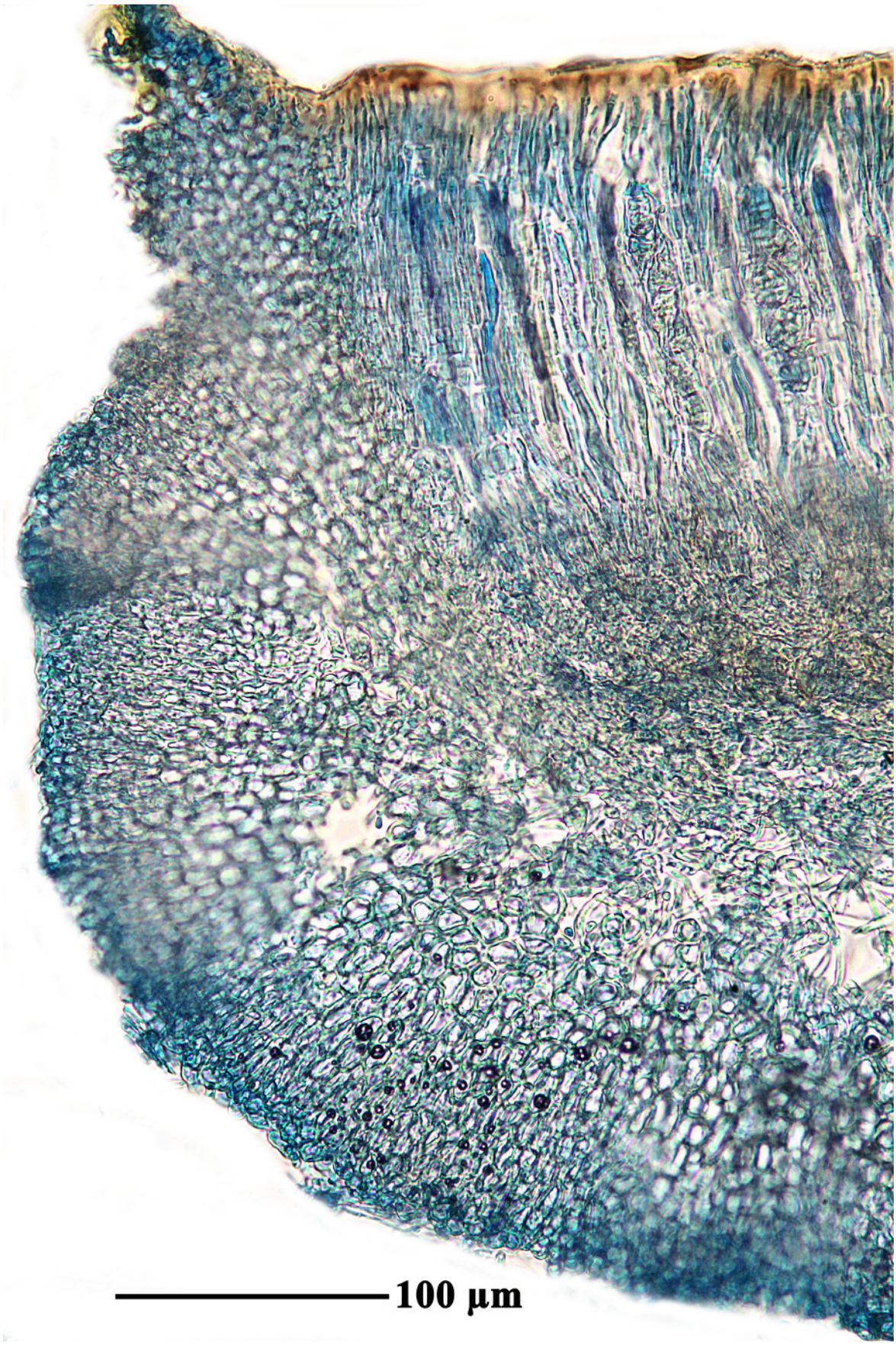


Leptogium phyllocarpum

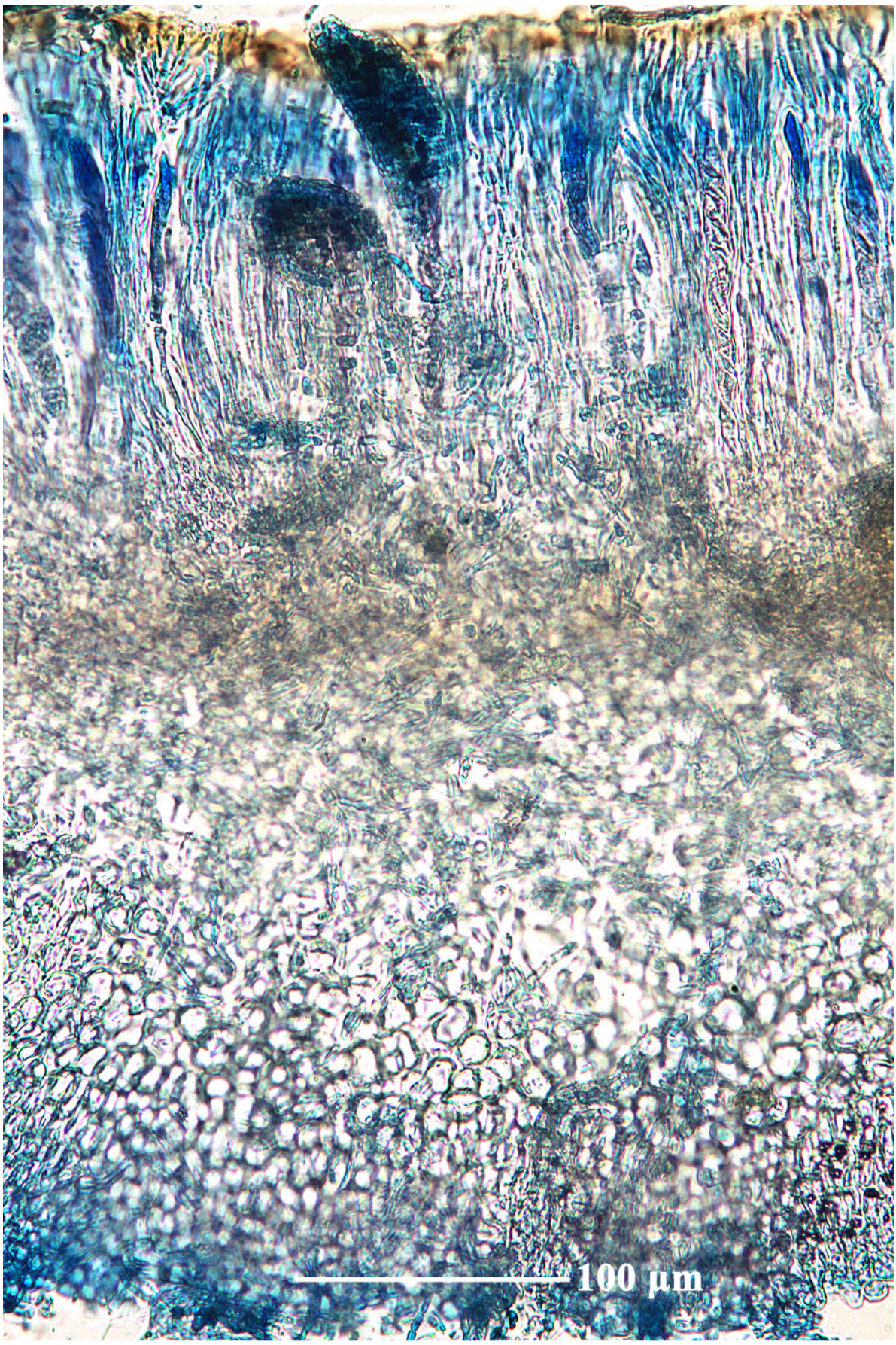
Leptogium phyllocarpum



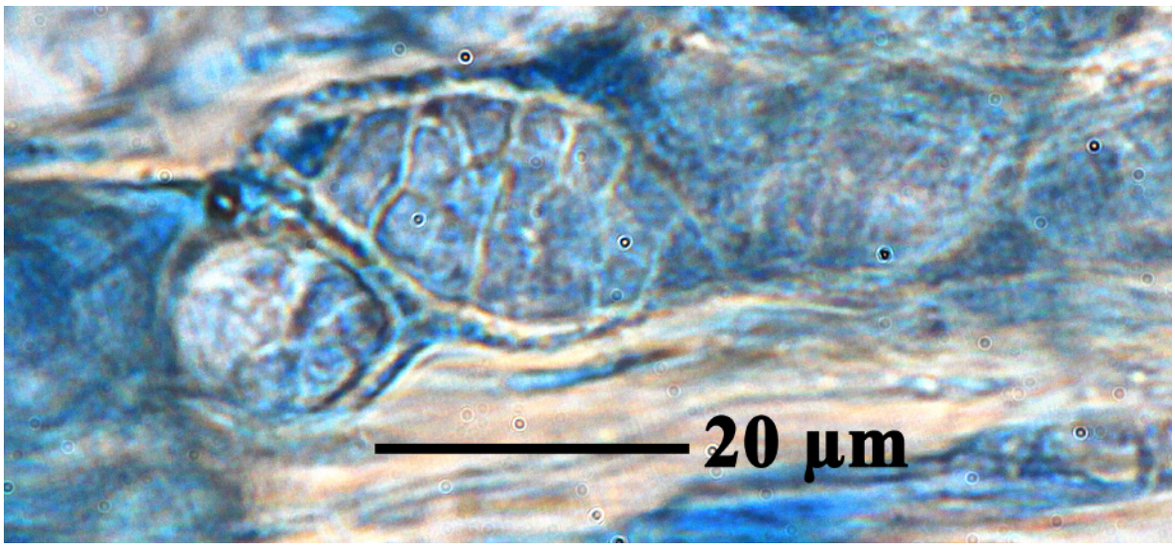
Leptogium phyllocarpum

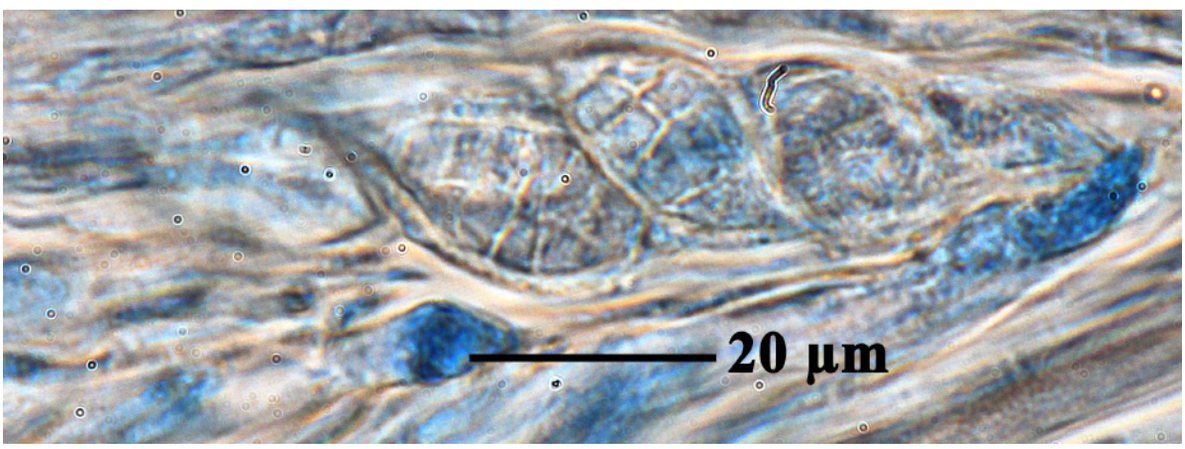


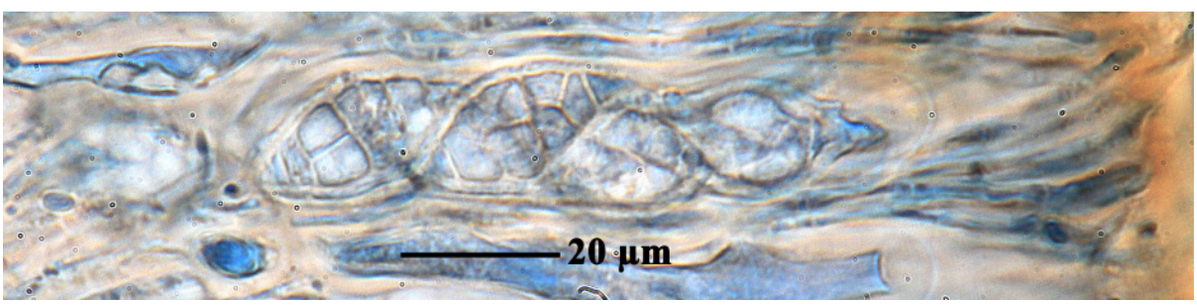
Leptogium phyllocarpum



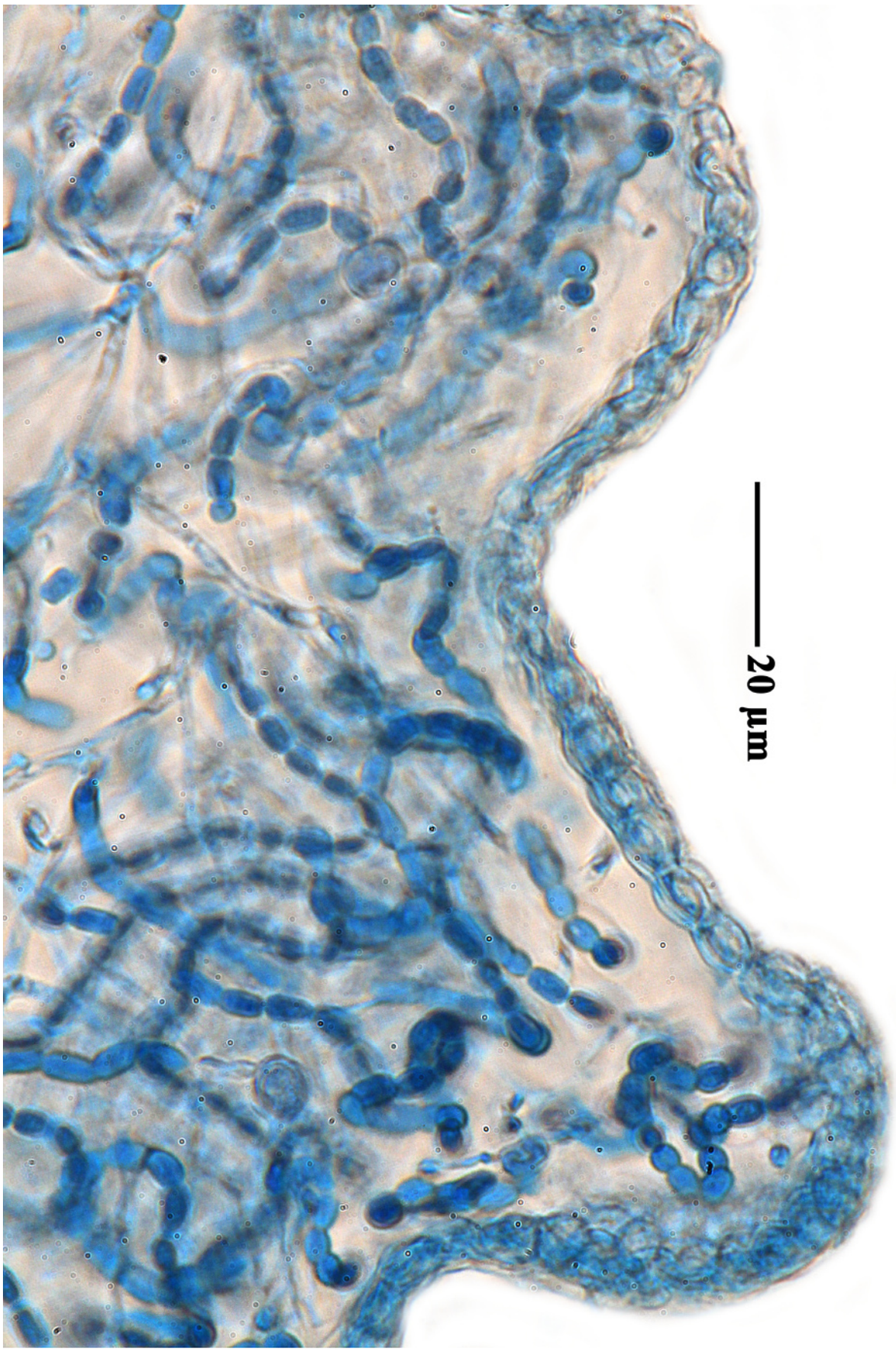
Leptogium phyllocarpum







Leptogium phyllocarpum



Leptogium phyllocarpum

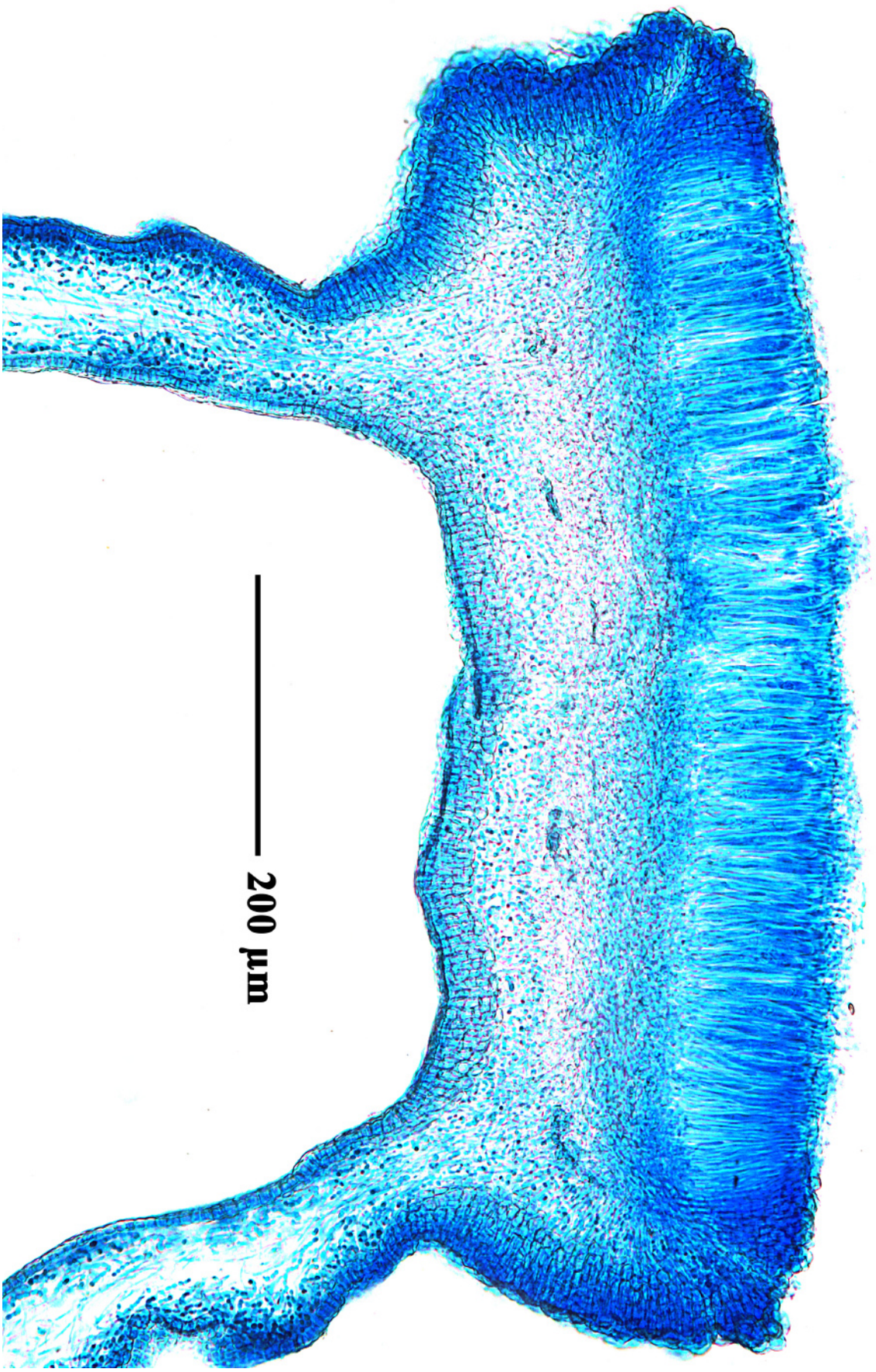
Leptogium tuckermanii C.W. Dodge [as 'tuckermani'], Ann. Mo. bot. Gdn 20(3): 436 (1933)

[VZR238], Dominica (Antilles Minores), Roseau, in litore prope Layou River, 3 m. Ad corticem Plamarum (*Cocos nucifera*). Leg. A. Vězda, 17.07.1996. - Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 238.

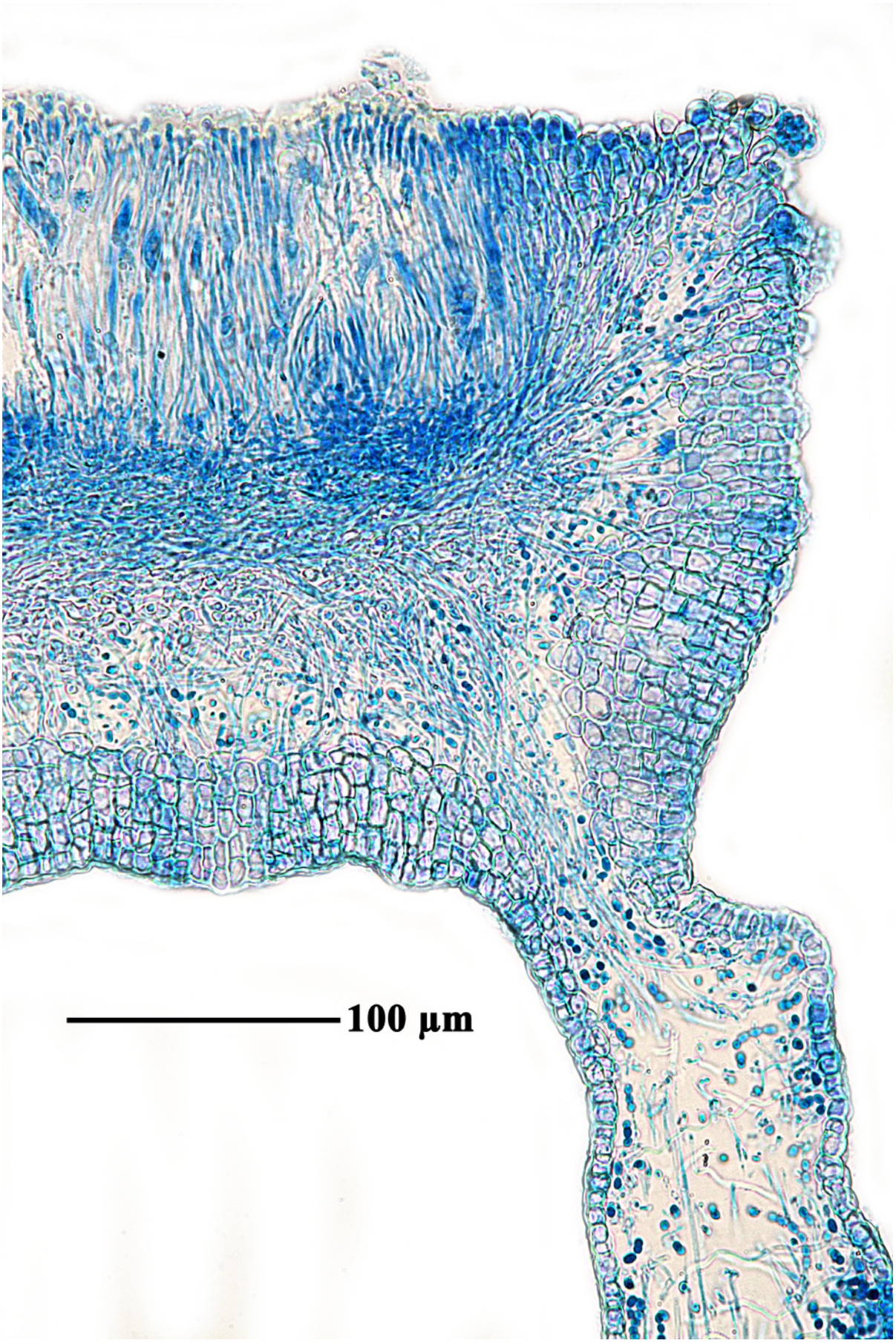
Thallus mineral gray or darker, lobes crowded, more or less elevated and crisped, rounded, smooth on both sides, 35-60 µm thick, algal layer of *Nostoc* about 25 µm, with pseudoparenchymatous cortex above and below of large cells. Apothecia minute, 0.5-0.9 mm. in diameter, constricted at the base, margin whole, smooth, pale, disc chestnut; amphithecium with a thick pseudoparenchymatous cortex below, about 60 µm, thinning to two rows of cells about 10-12 µm thick above; parathecium thin, pseudoparenchymatous, 10-12 µm thick, of small cells, inconspicuous and often reported absent; hypothecium 20 µm thick, of slender densely woven hyphae; thecium 90-120 µm tall; paraphyses filiform, 2 µm in diameter, with clavate apices; epithecium brown; asci cylindric, 12 µm in diameter; ascospores 8 per ascus, imbricately monostichous, ends acute, muriform, with 3-5 transverse septa, cells not numerous, 18-22 x 10-12 µm. - This species has long been confused with *L. moluccanum, L. mariannum,* and *L. diaphanum*. It differs from the two former in habit and color and from the latter by its structure. It is apparently widespread in the American tropics, being reported from Paraguay, and from Brasil in the states of Rio Grande do Sul and Matto Grosso by Malme, and in Minas Geraes by Vainio.

Leptogium tuckermanii

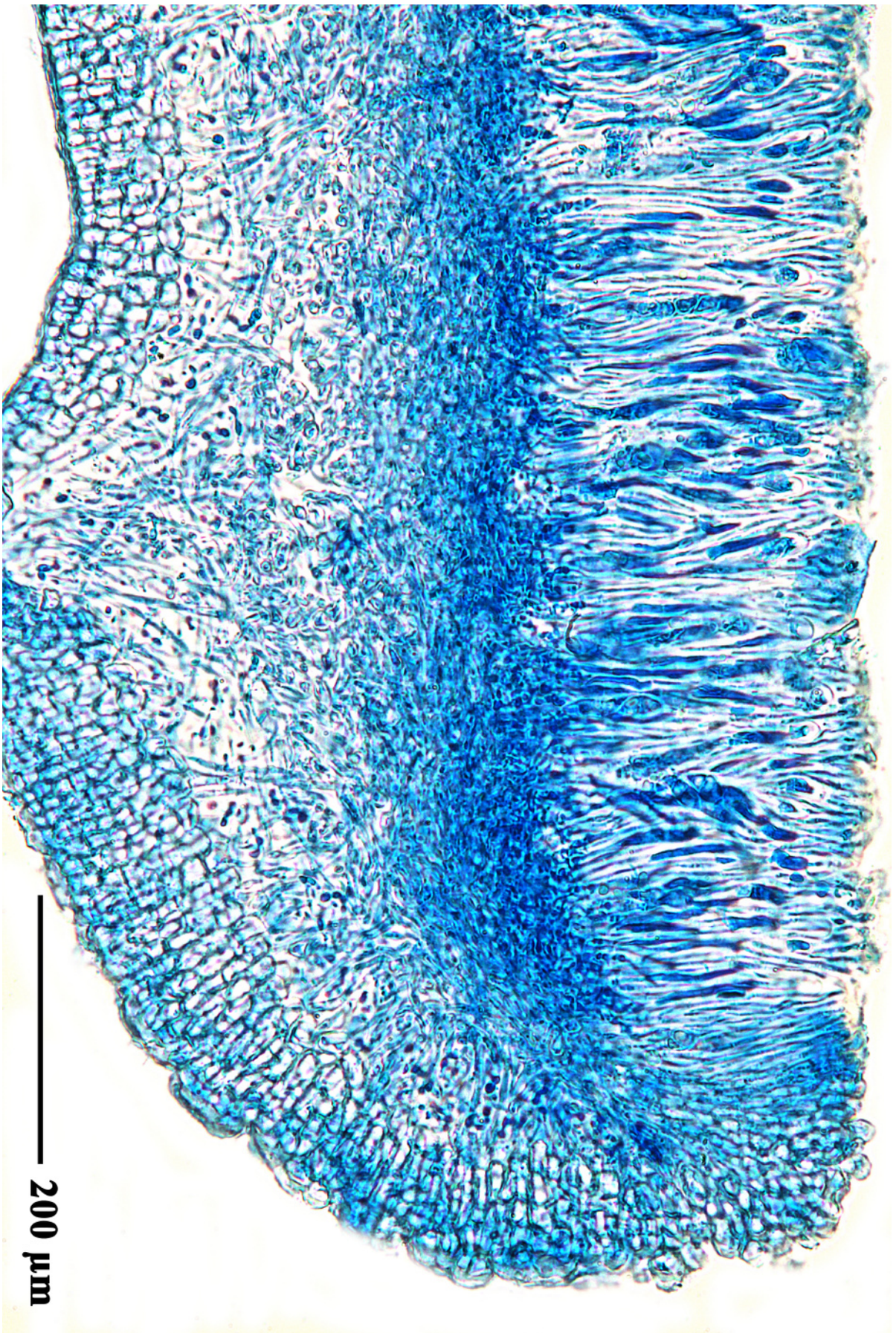
Leptogium tuckermanii



Leptogium tuckermanii

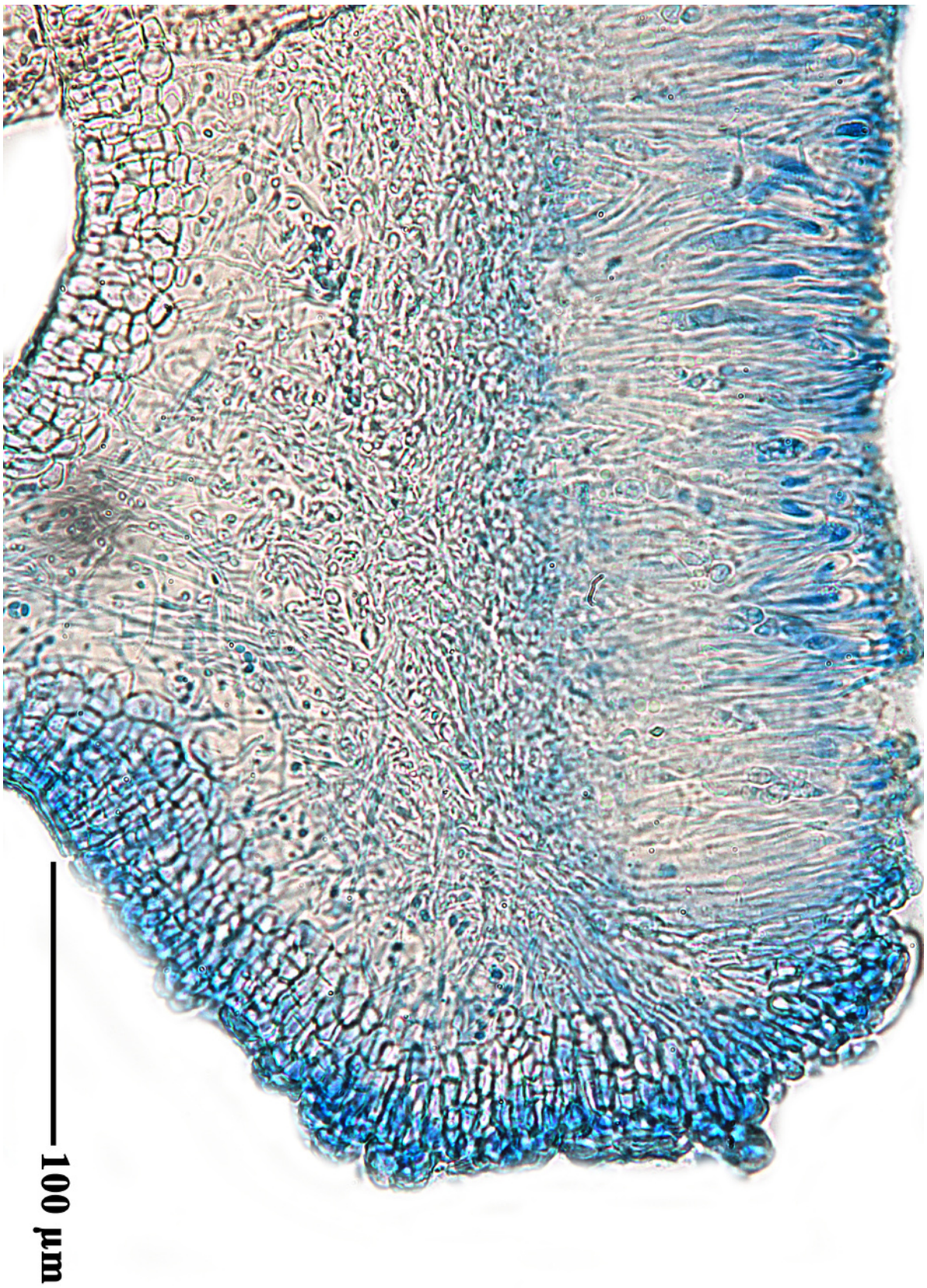


Leptogium tuckermanii

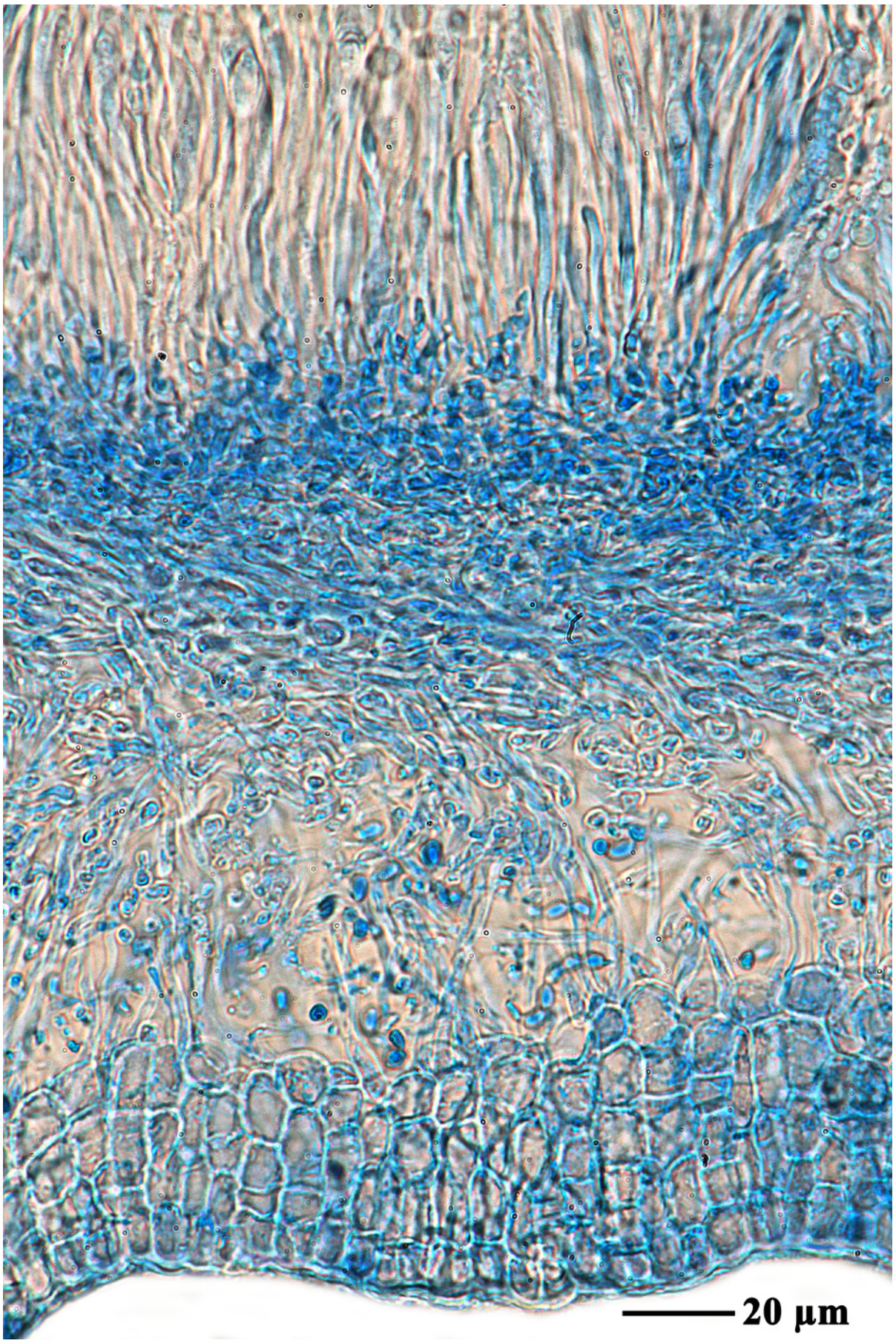


Leptogium tuckermanii

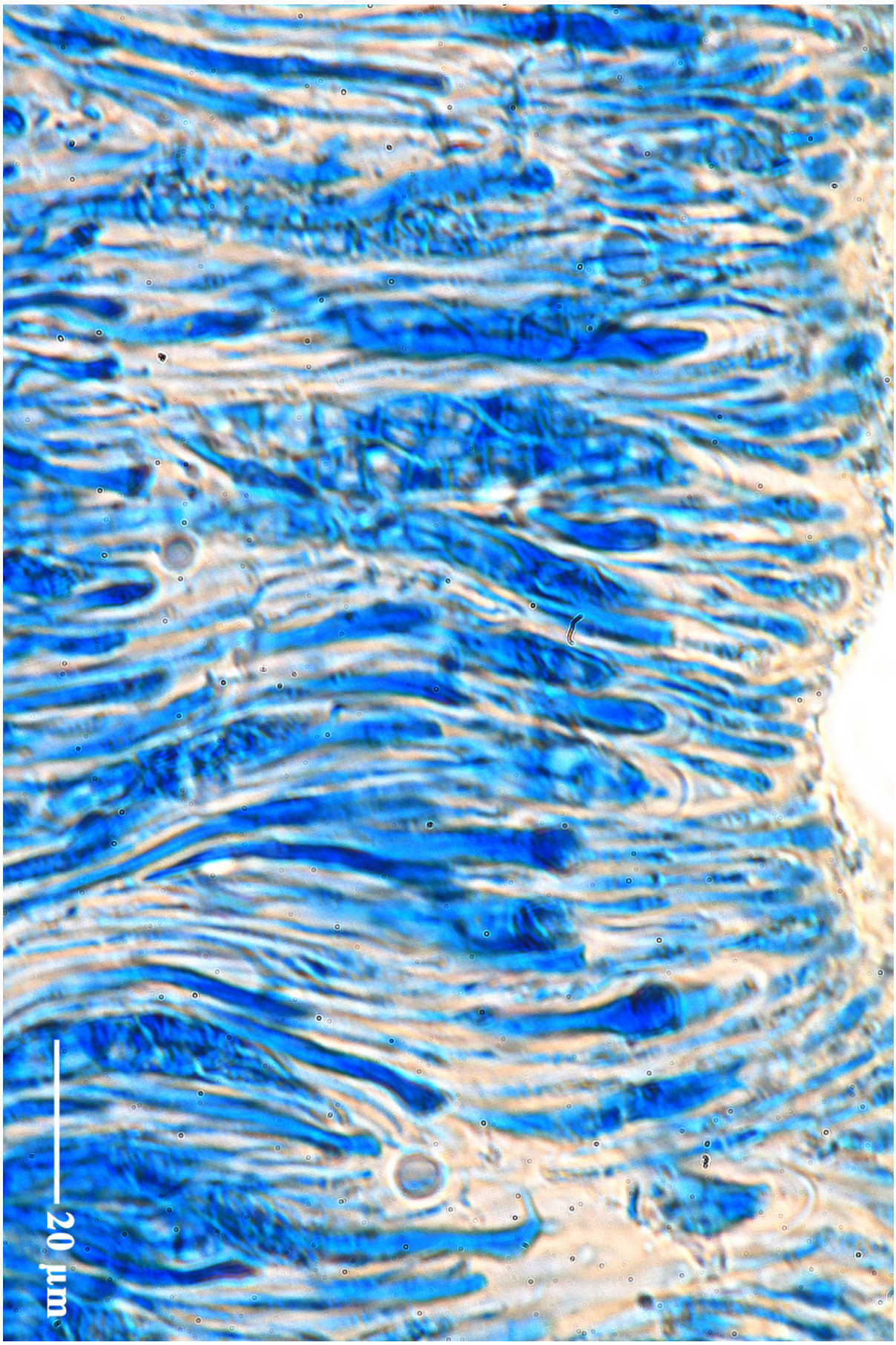
Leptogium tuckermanii



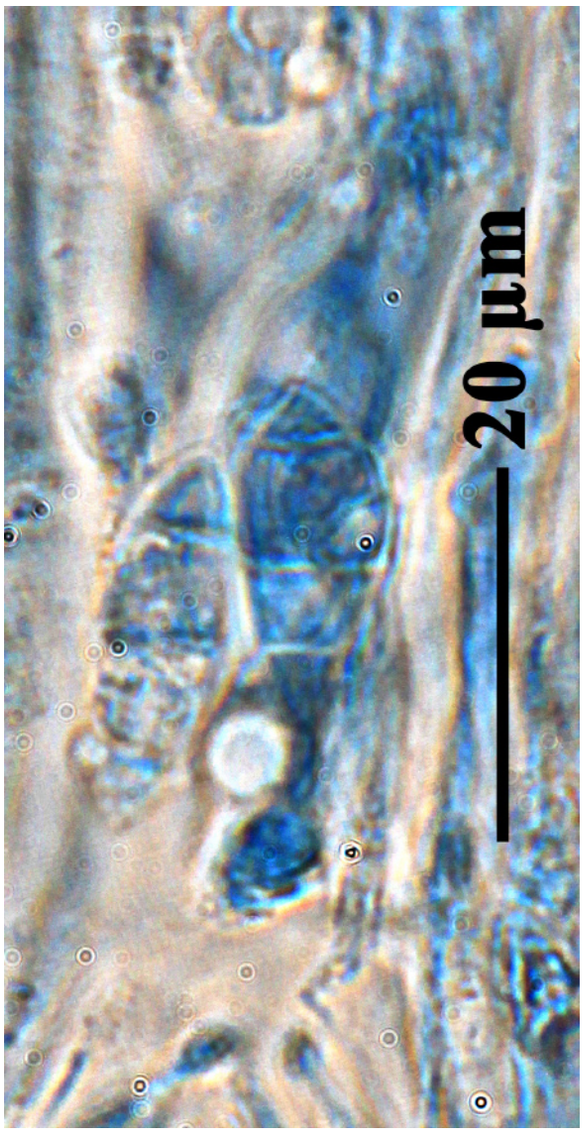
Leptogium tuckermanii



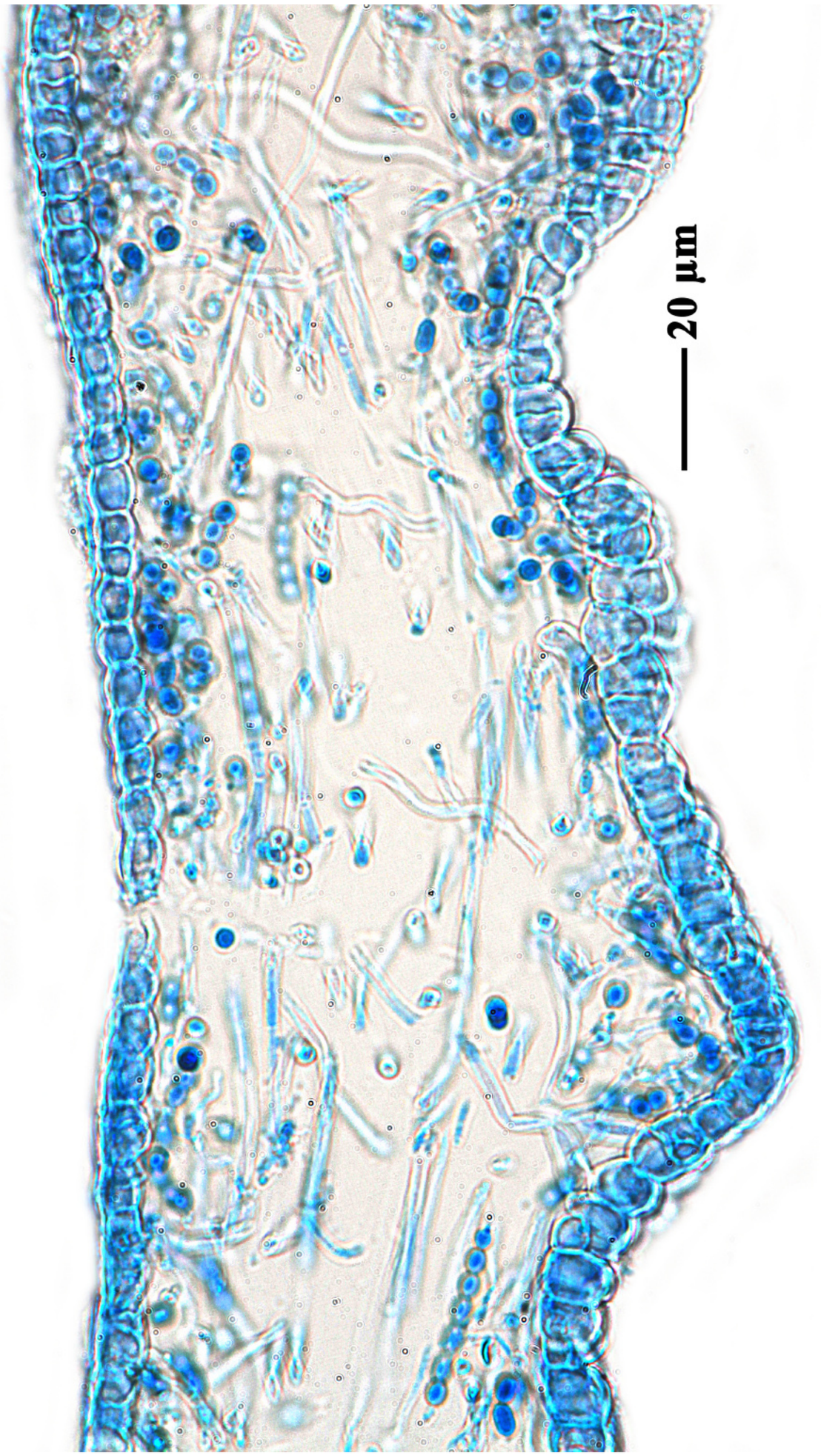
Leptogium tuckermanii



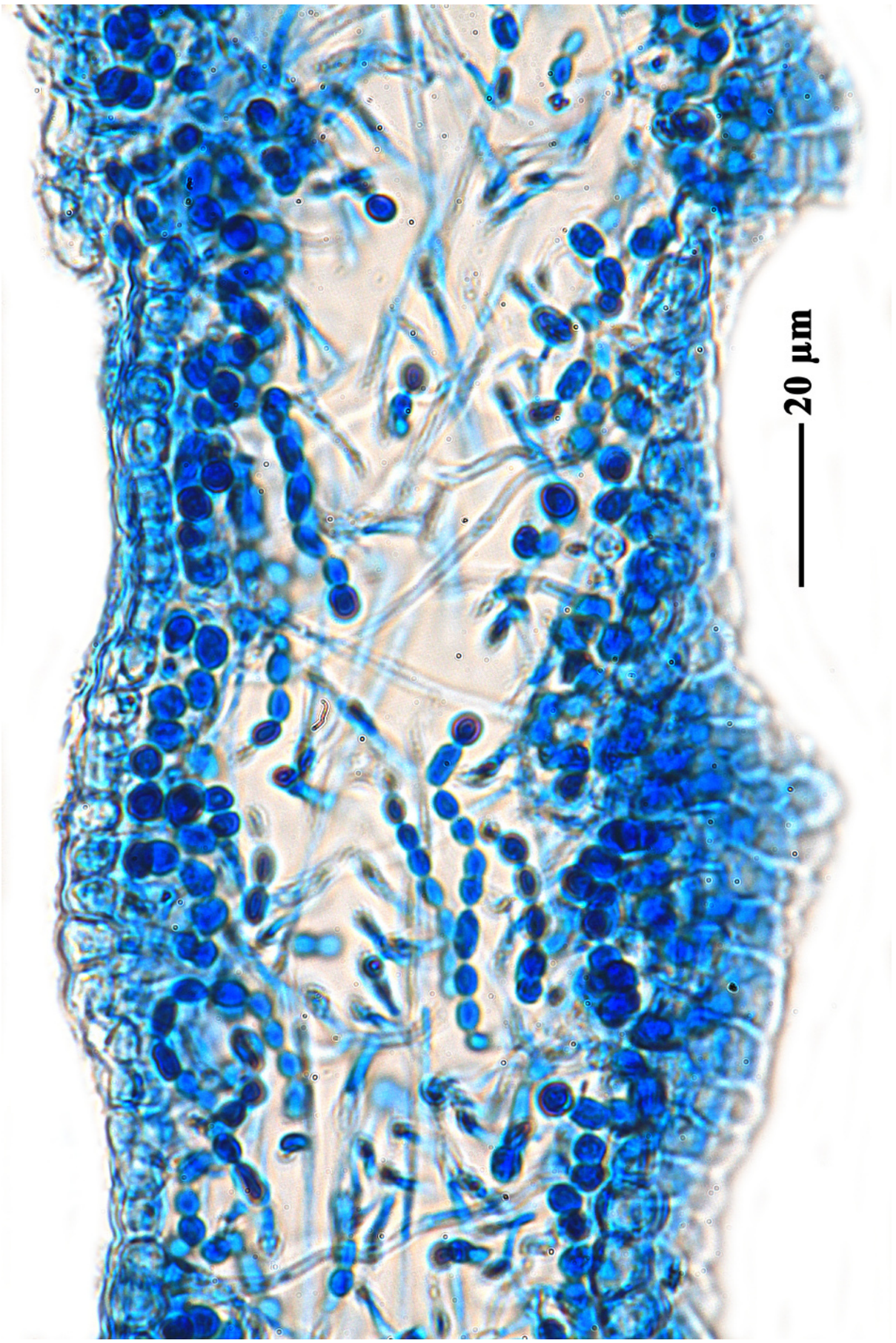
Leptogium tuckermanii



Leptogium tuckermanii



Leptogium tuckermanii



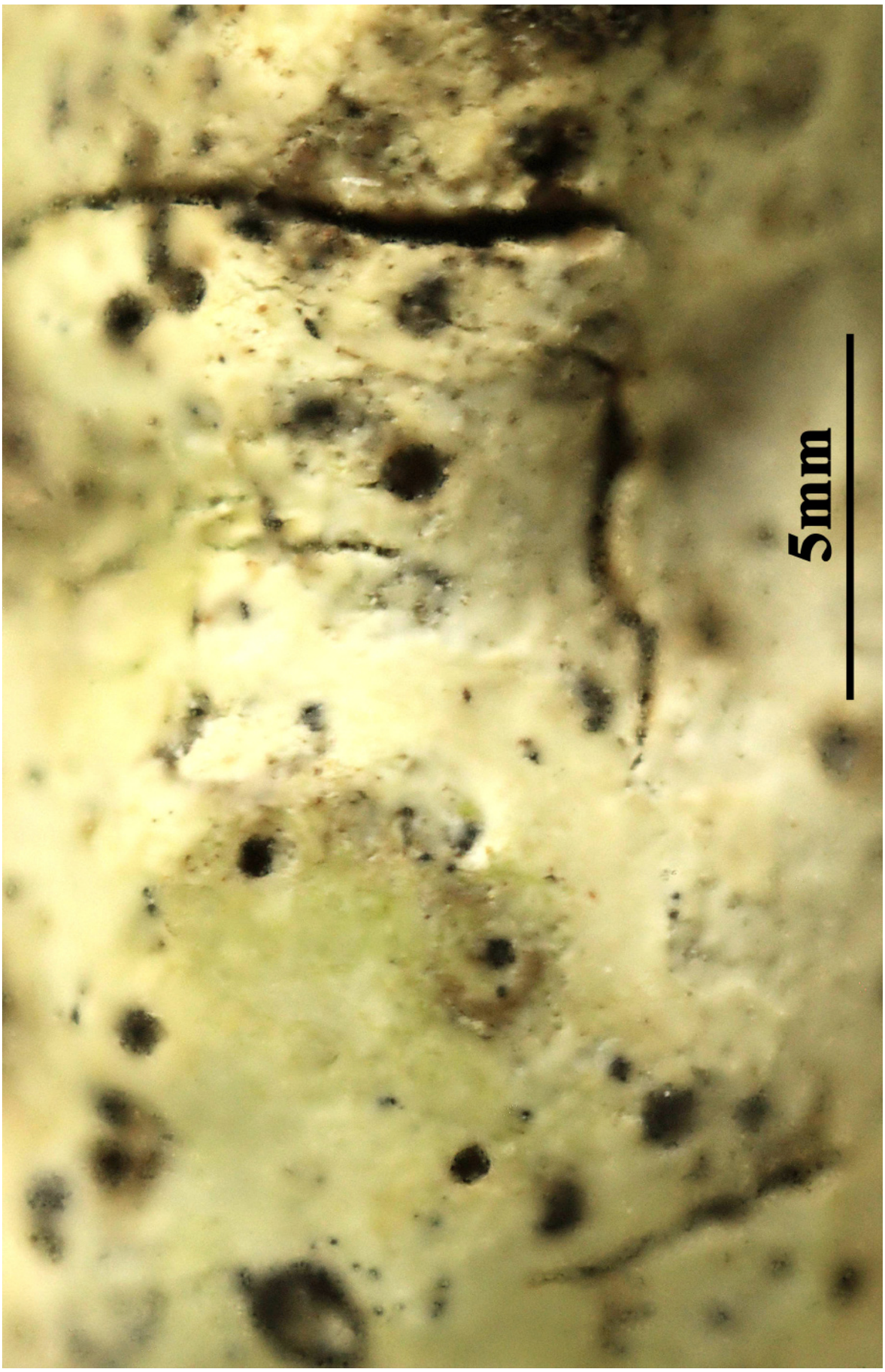
Leptogium tuckermanii

L***eptotrema wightii*** (Taylor) Müll. Arg., Flora, Regensburg 65: 499 (1882)
= S*anguinotrema wightii* (Taylor) Lücking, in Lücking, Mangold, Plata, Parnmen, Kraichak & Lumbsch, Bot. J. Linn. Soc. 436: 441 (2015)
= *Endocarpon baileyi* Stirt., Trans. & Proc. Roy. Soc. Victoria 17: 74 (1881)
= *Endocarpon wightii* Taylor, London J. Bot. 6: 155 (1847)
= *Leptotrema baileyi* (Stirt.) Shirley, Proc. R. Soc. Qd. 6: 194 (1889)
= *Myriotrema wightii* (Taylor) Hale, Mycotaxon 11(1): 135 (1980)
= *Phaeotrema wightii* (Taylor) Zahlbr., in Magnusson & Zahlbruckner, Ark. Bot. 31A(no. 1): 48 (1944)
= *Thelotrema wightii* (Taylor) Nyl., Mém. Soc. Imp. Sci. Nat. Cherbourg 5: 118 (1858) [1857]

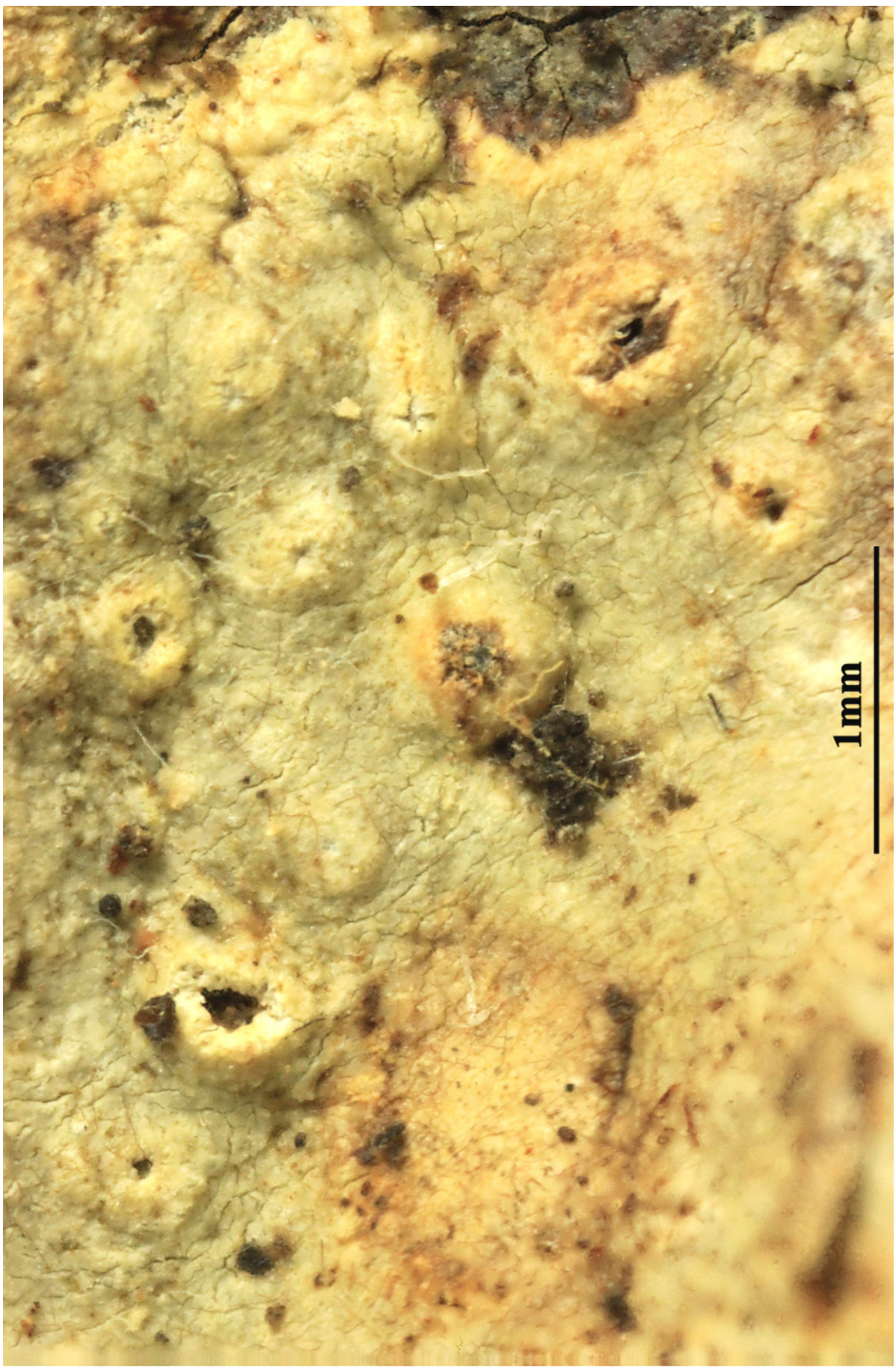
[VZR344], Cuba. Sierra del Escambray, in monte Collantes, 750 m. Ad saxa calcarea umbrosa. Leg. T. Pócs & A. Borhidi. Ex A. VěZDA: Lichenes Rariores Exsiccati Nr. 344.

Thallus crustose, pale greenish mineral gray, thick and epiphloeodal, bulging (gall-forming); surface smooth but grainy in appearance; hypothallus black. Cortex loose; photobiont trentepohlioid alga in layer with columnar calcium oxalate crystals; medulla loose with scattered clusters of red crystals. Ascomata pore-like apothecia, immersed, 0.1-0.3 mm diam., disk covered by a round pore, 0.05-0.20 mm in diam.; margin entire, gray-brown. Columella absent; exciple not carbonized, pale brown; paraphysoids absent; hymenium clear, 100-150 μm high; paraphyses unbranched but anastomosing laterally towards the excipulum. Asci 8-spored; ascospores brown, submuriform with 4-6 transverse locules and 0-2 longitudinal locules, 20-30 x 9-13 μm with thickened septa and rounded lumina, I+ violet-blue. Chemistry. Unidentified red anthraquinone pigment in medulla. Substrate and Habitat. Corticolous on trees, less frequently on mosses, commonly found on shaded to semi-exposed tree trunks in forests. Distribution. Pantropical, north into southeastern North America and Europe; in North Carolina found in the Coastal Plain and Piedmont ecoregions.

L*eptotrema wightii*



L*eptotrema wightii*



L*eptotrema wightii*

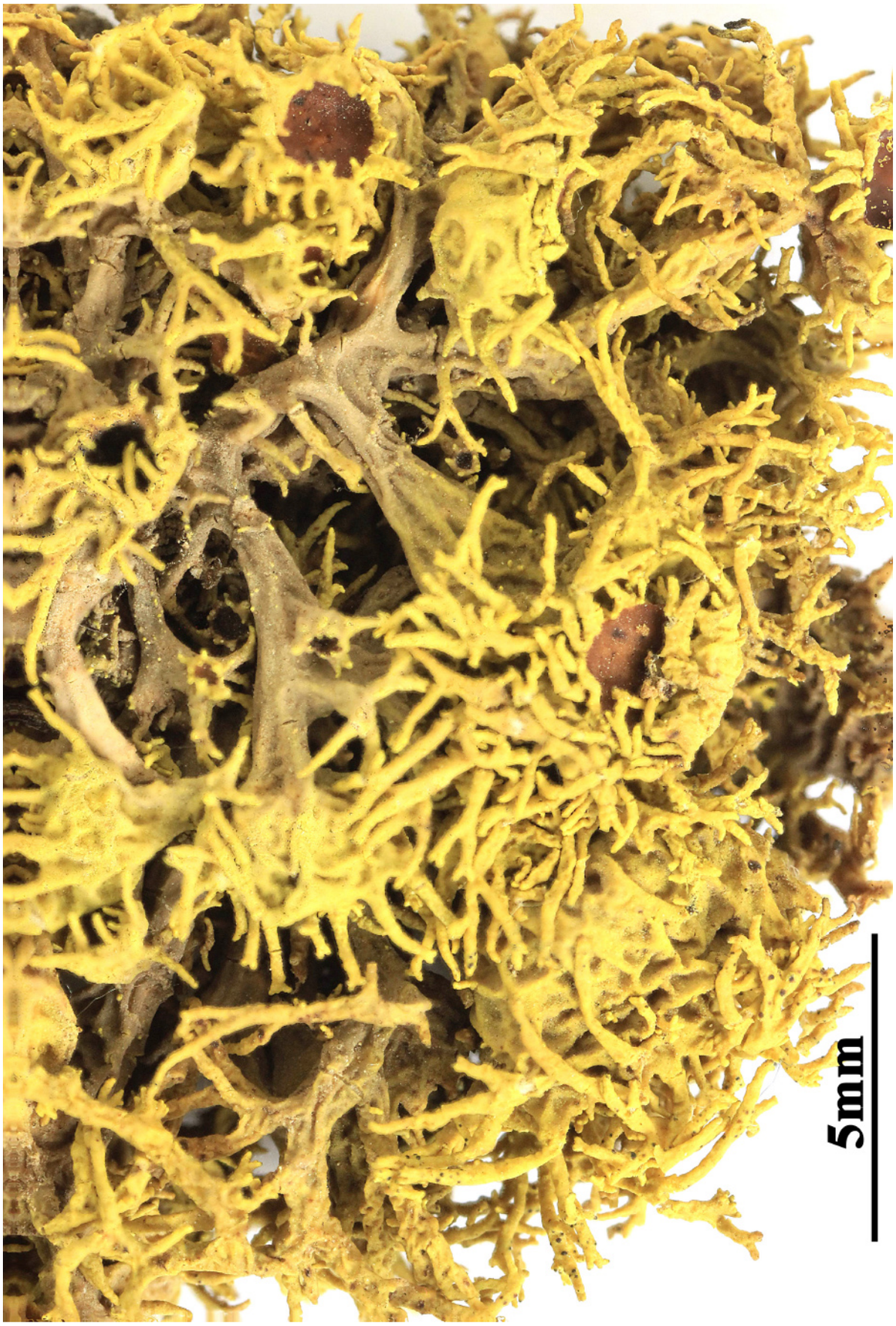
Letharia columbiana (Nutt.) J.W. Thomson, Taxon 18: 536 (1969)
= *Borrera columbiana* Nutt. 1836

[VZR], USA. Washington. Spokane County. In urbe Spokane, loco Riverside Spoke Park dicto, Ad ramos emortuos *Pini poderosae*. Leg. W. L. Culberson (no. 22399)- Annot.: Atranotin vulpinic acid, norstictic acid, connorstictic acid by TLC, anal. A. Johnson and C. F. Culberson- Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 325.

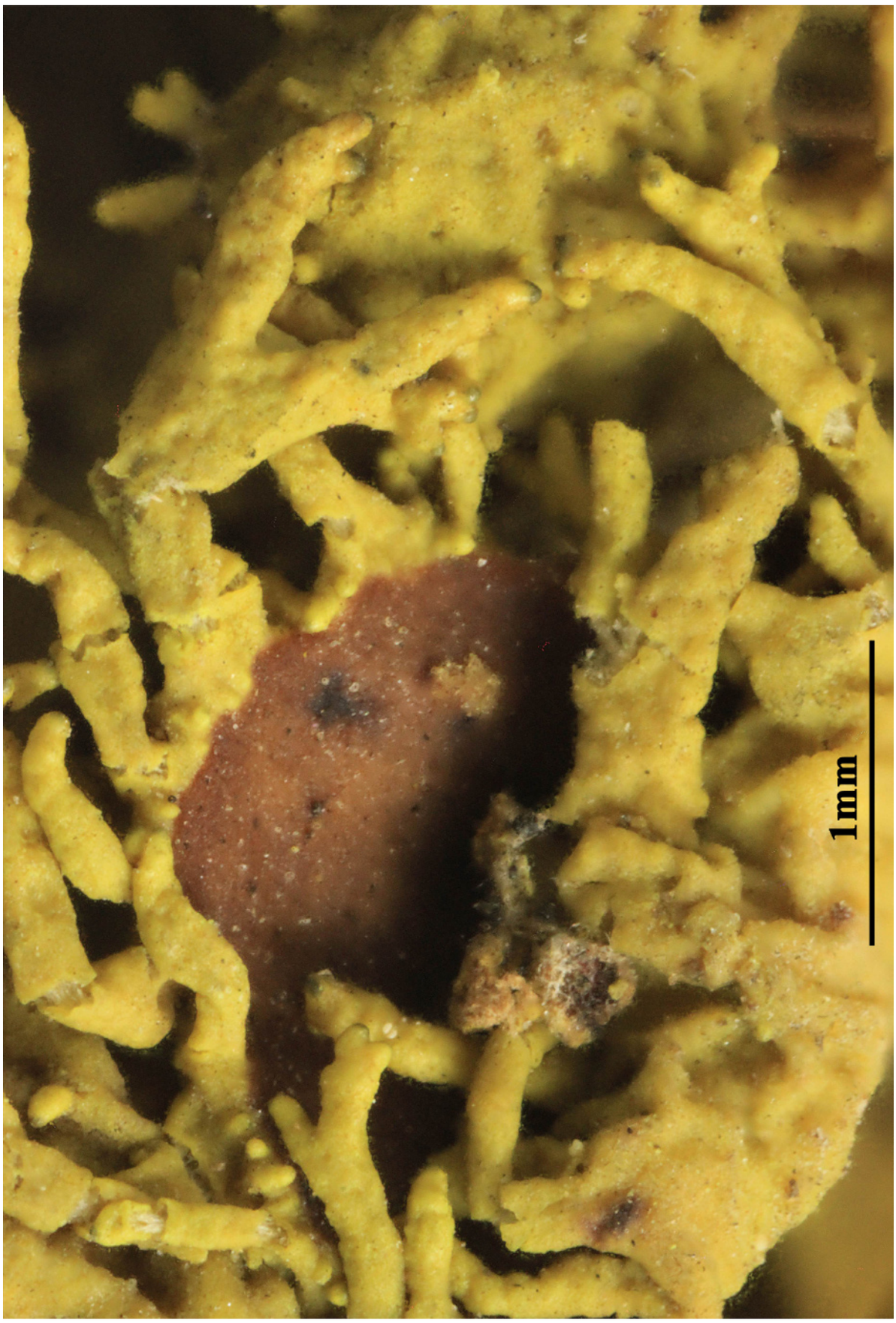
Thallus: (2-) 3-11 (-17) cm tall, tufted to subpendulous, attached by a distinct basal disc, c. 0.2 mm diam. near the base; branching loose, intricately irregular or anisotomically di-(tetra-)chotomous to almost isotomic near the ultimate branches, often divaricate, axils acute to obtuse, rounded branches: c. 0.5-3 (-4) mm wide, unevenly thickened, subterete to angular, or irregularly flattened, especially just below the axils; higher order branches terminating in attenuated, subulate, forked divisions; short, narrow, ± isidia-like "branchlets" sometimes abundant near base; surface bright greenish yellow or chartreuse yellow-green, abraded areas often slightly paler or brighter yellow, extreme tips of branches and branchlets often ± brown, trunk near the base dark grayish brown to blackish; dull to ± shiny, shallowly to rather deeply lacunose/ foveolate (smaller branches) or channelled/ grooved, with wrinkles and ridges, which are often reticulate and strongly flexuous-sinuous; cortex sometimes cracked transversely, occasionally finely and shallowly rimulose in places; medulla white, appearing slightly lustrous, arachnoid or fibrous, ± loose but partly conglutinated into several (c. 5-10) narrow, ± longitudinal hyphal bundles ± separated by gaps; Apothecia usually common, up to 22 mm diam., solitary or often occurring in two's or three's, sessile, terminating the shorter restricted branches, and irregularly hollow in the center; disc dark grayish to reddish brown, or deep brown, occasionally with patches the thin brown layer broken off or abraded, showing a distinctly yellow layer underneath), dull to lustrous or slightly shiny, epruinose, deeply concave when young (< c. 3 mm across, becoming undulate and irregularly folded, often deeply depressed towards the center; thalline margin c. 0.1 (-0.2) mm wide, strongly raised and inflexed when young, soon level with the disc, with few to many ± elongated projections ("lobules" or "fibrils") formed almost from the start and having similar appearance and structure to the smaller branches of the thallus, 0.5-1 cm long and 1 mm wide at the base but soon narrowing and gradually attenuating to roundish or ±

pointed tips, the longer ones often branching; surface of lobules and underside of margin often strongly foveolate or lacunose; epihymenium c. 15 micrometer plus minus deep yellow-brown; hymenium: c. 25-40 micrometer, hyaline to pale yellowish; asci c. 20-25 x 10-15 micrometer, 8-spored; ascospores ellipsoid, c. 7.5-8 x 3.5-4 µm; Pycnidia absent to more often frequent, in section c. 0.75 µm diam.; conidia arcuate, apparently uniform in thickness, c. 8-10 µm long; Spot tests: cortex and medulla: K-, C-, KC-, P- Secondary products: cortex with vulpinic acid. Substrate and ecology: on bark or wood of conifers, in open, well-ventilated intermontane forests, usually growing high on trunks, sometimes on dead branches World distribution: western North America with a distribution similar to that of *L. vulpina,* frequent in southern California at 1525-2570 m; Baja California at 980-1400 m in chaparral; rare in Sonora and Arizona. - Notes: It often occurs with *L. vulpina* and differs from it mainly in lacking soredia and usually having abundant apothecia and/or pycnidia. At least in the Sonoran region, *L. columbiana* often has rather coarse and weakly divided main branches, but occasionally smaller specimens are finer and more densely branched. Most older North American descriptions of □*L. vulpina*□ (e.g., those of Herre 1910, Hasse 1913, Fink 1935, and Howard 1950, include fertile material (now *L. columbiana*).

Letharia columbiana



Letharia columbiana

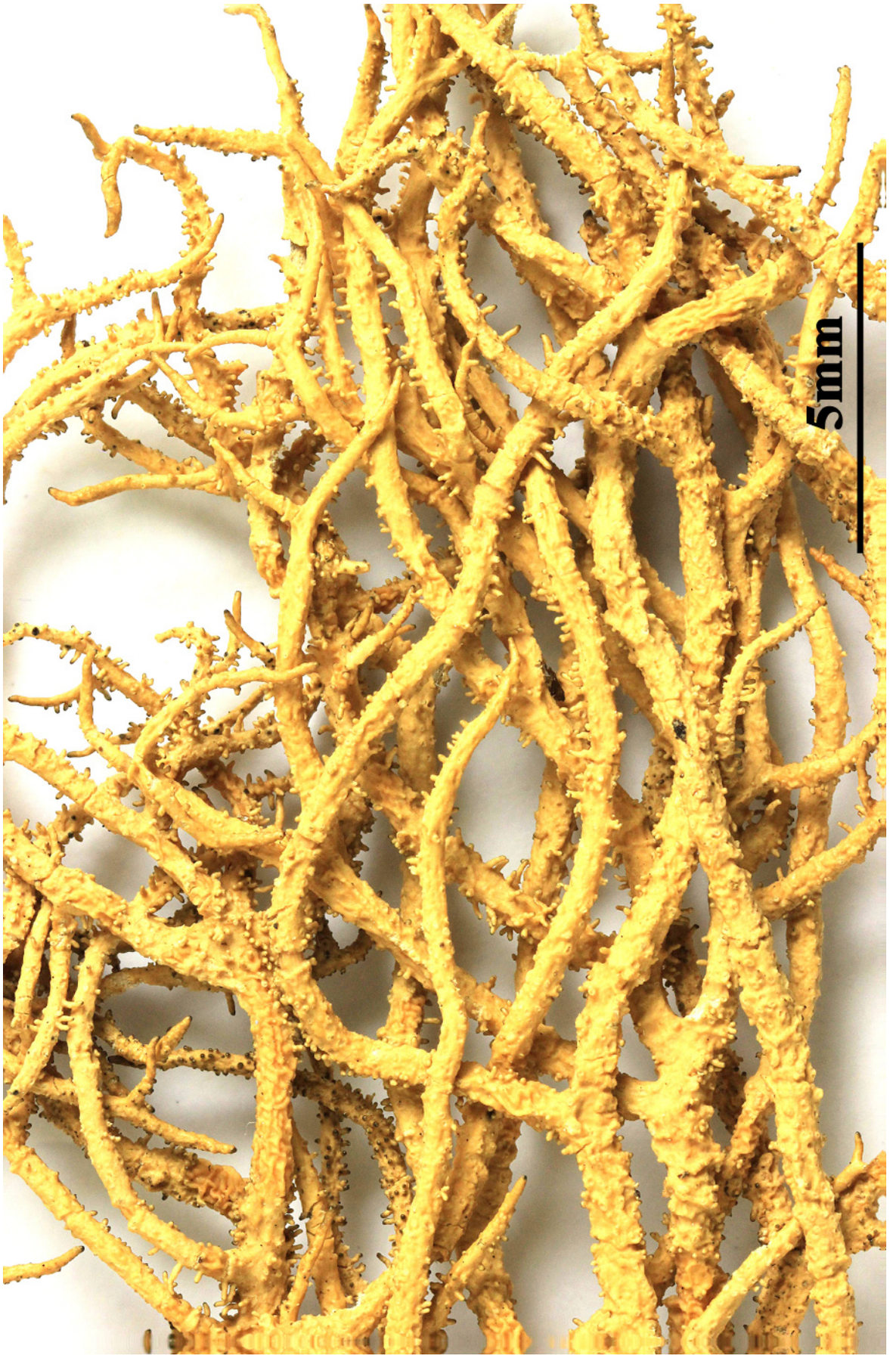


Letharia columbiana

Lethariella intricata (Moris) Krog, Norw. Jl Bot. 23(2): 94 (1976)
= *Evernia intricata* (Moris) M. Choisy, Bull. Soc. bot. Fr. 104: 334 (1957)
= *Stereocaulon intricatum* Moris, Stirp. Sard. Elench. 3: 22 (1829)
= *Usnea intricata* (Moris) Th. Fr., Nova Acta R. Soc. Scient. upsal., Ser. 3 2: 370 (1858)

[VZR500], Italia, Calabria. Consenza, San Donato di Ninea, in loco Piano del Pulledro dicto, 1580 m. Ad corticem arborum (*Fagus silvatica*). Leg. O. Puntillo, 143.5.1989. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 500.

Thallus fruticose, attached with a basal holdfast, shrubby to subpendulous, up to 15 cm long, rather rigid but not fragile, irregularly branched, isidiate. Branches pale grey in basal parts, dark grey in upper parts, terete, with a more or less scrobiculate surface. Isidia usually abundant, irregularly dispersed, at first verruciform, later cylindrical to branched-coralloid, concolorous with the branches or sometimes darkened at tips. Cortex paraplectenchymatous, 30-40 µm thick; medulla dense, forming a hollow axis in the older part of the branches, the cavity with a few hyphal strands, the space between medulla and cortex filled with crystals of calcium oxalates. Apothecia rare, lecanorine, mostly lateral, strongly constricted at base and often subpedicellate, with a brown to finally black disc and a smooth to scrobiculate-verrucose, sometimes isidiate thalline margin. Epithecium brownish; hymenium and hypothecium colourless. Asci 8-spored, clavate, the K/I+ blue tholus penetrated by a faintly amyloid apical cushion with parallel or diverging flanks, the wall K/I-, surrounded by a K/I+ blue outer layer, Lecanora-type. Ascospores 1-celled, hyaline, ellipsoid, 7-9 x 2-3 µm. Pycnidia black, immersed. Conidia pleurogenous, slightly inflated in the center or weakly bifusiform, 8-9 x 1.2-1.5 µm. Photobiont chlorococcoid. Spot tests: thallus K+ yellow, C-, KC-, P-. Chemistry: cortex with atranorin (minor) and chloroatranorin (minor), medulla with merochlorophaeic acid (major), submero-chlorophaeic acid (minor), 4-0-methylcryptochlorophaeic acid (minor); ± fatty acid(s) of the rangiformic/norrangiformic/isorangiformic acid complex. - Note: this is probably an old, relict Mediterranean species found on siliceous rocks and acid bark (e.g. of old *Pinus leucodermis* near treeline in the Southern Apennines.



Lethariella intricata

Lethariella intricata

Letrouitia domingensis (Pers.) Hafellner & Bellem., Nova Hedwigia 35(2 & 3): 281 (1982) [1981]
= *Bombyliospora domingensis* (Pers.) Zahlbr., in Wawra & Beck, Itin. Princ. S. Coburgi 2: 153 (1888)
= *Heterothecium domingense* (Pers.) Tuck., Proc. Amer. Acad. Arts & Sci. 7: 229 (1868) [1866]
= *Lecanora domingensis* (Pers.) Ach., Syn. meth. lich. (Lund): 336 (1814)
= *Lecidea domingensis* (Pers.) Nyl., Acta Soc. Sci. fenn. 7(2): 462 (1863)
= *Lopadium domingense* (Pers.) Fink, Lich. Fl. U.S.: 235 (1935)
= *Miltidea domingensis* (Pers.) Stirt., Trans. Proc. N.Z. Inst. 30: 386 (1898) [1897]
= *Parmelia ventosa var. domingensis* (Pers.) Eschw., in Martius, Fl. bras. enum. pl. 1(1): 189 (1833)
= *Patellaria domingensis* Pers., Ann. Wetter. Gesellsch. Ges. Naturk. 2(1): 12 (1810)
= *Placodium domingense* (Pers.) Vain., Dansk bot. Ark. 4(no. 11): 11 (1926)

[VZR239], Dominica (Antilles Minores): Castle Bruce (septentr.-orient. pars insulae), in vincinitate pagi, 100 m. Ad corticem arborum (*Theobroma cacao*). Leg. F. Ceni & A. Vězda, 2.12.1810. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 239.

Thallus pale yellow, greenish yellow to yellow-orange, effuse, occasionally smooth, usually verrucose; soredia and isidia absent. Apothecia common, scattered, ±rounded or somewhat distorted, sessile, constricted at the base, 0.5–2.0 mm wide; disc red-brown, brown-black to black, concave, plane or convex; margin prominent, yellow-orange to orange, elevated above the disc, becoming partially excluded in older black apothecia; disc and margin K+ purple; proper exciple of radiating agglutinated hyphae, the outer layer encrusted with anthraquinone crystals, colourless within and lacking crystals, containing scattered algal cells near the base of the apothecium. Epihymenium red-brown, encrusted with golden yellow or orange anthraquinone crystals or the crystals eroded. Hymenium not inspersed, colourless, 90–115 µm thick; hypothecium yellow to pale brown. Asci 8-spored, very rarely with 6 ascospores, 60–90 × 16–22 µm. Ascospores ellipsoidal, straight to slightly curved, transversely septate, with 6–10 lens-shaped locules, 25–48 × 8–16 µm. Conidia short-bacilliform, c. 3 × 1 µm. CHEMISTRY: Thallus and apothecia K+ purple; both containing fragilin (major), parietin (minor), ±emodin (trace), ±7-chloroemodin (trace), ±7-chlorofallacinal (trace), ±7-chloroteloschistin (trace), ±7-chloropa-

rietinic acid (trace), ±physcoin bisanthrone (trace), ±fragilin bisanthrone (trace). - common on bark in rainforest or wet-sclerophyll forest. A pantropical-subtropical species in Australia, eastern and southern Asia, Africa, North, Central and South America, New Caledonia, Fiji and the Hawaiian Islands.

Letrouitia domingensis

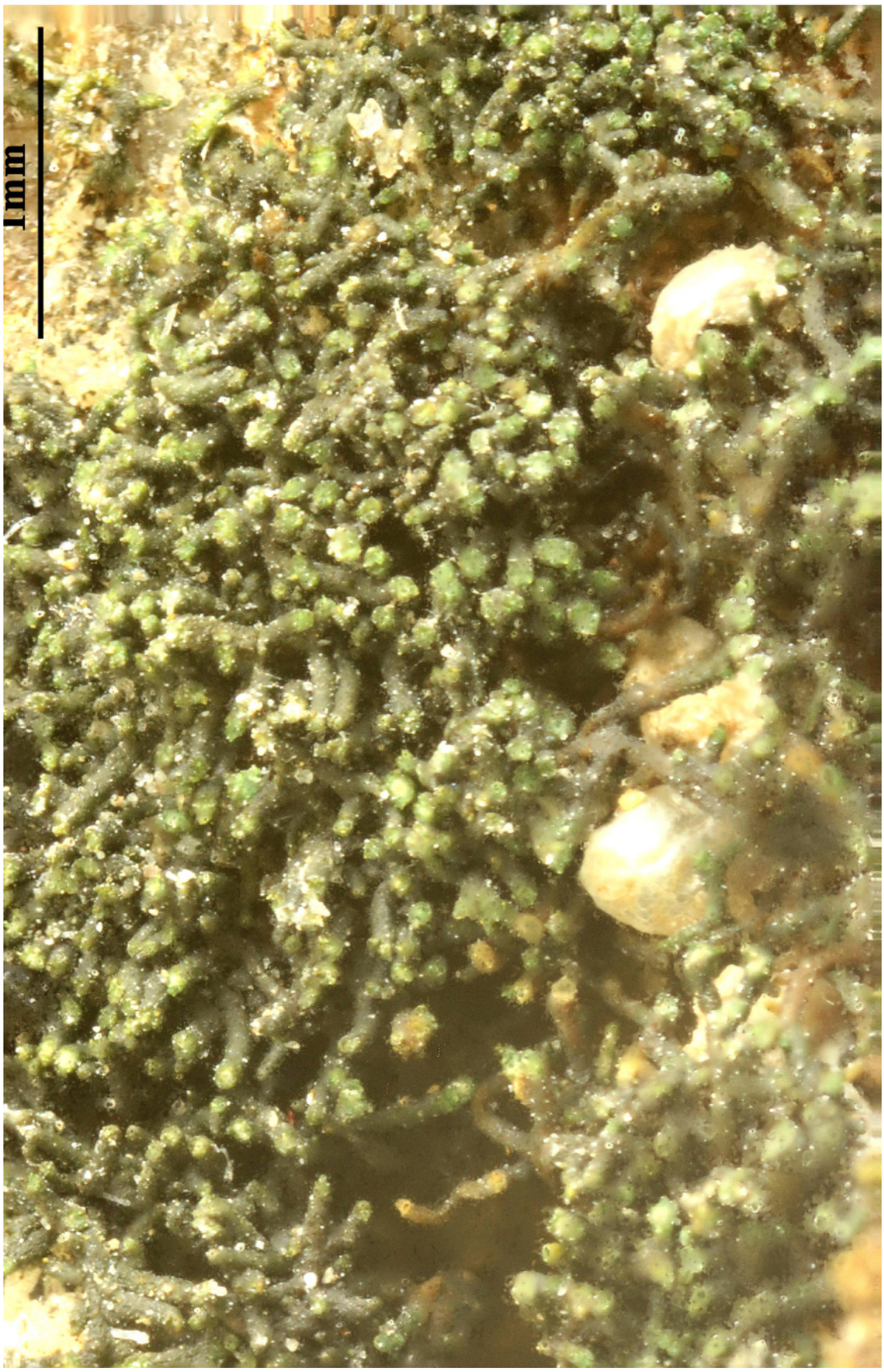
Letrouitia domingensis

Lichina confinis (O.F. Müll.) C. Agardh, Spec. alg. (Lipsiae) 1: 105 (1821)
= *Chondrus pygmaeus* var. *minor* (Turner) Duby, Bot. Gall., Edn 2 (Paris) 2: 948 (1830)
= *Clathroporina confinis* Müll. Arg., Bot. Jb. 6: 403 (1885)
= *Fucus pygmaeus* f. *minor* Turner, Fuci (London) 4: tab. 204, figs 1-10 (1819)
= *Lichen confinis* O.F. Müll., Icon. Plant. Dan. 5(fasc. 15): 5, tab. DCCCLX-XIX, fig. 2 (1782)
= *Lichinomyces confinis* (O.F. Müll.) E.A. Thomas, Beitr. Kryptfl. Schweiz 9(no. 1): 173 (1939)
= *Neolichina confinis* (Müll. Arg.) Gyeln., Rabenh. Krypt.-Fl., Edn 2 (Leipzig) 9.2(2.1): 17 (1940)
= *Pygmaea confinis* (O.F. Müll.) Kuntze, Revis. gen. pl. (Leipzig) 2: 876 (1891)
= *Stereocaulon confine* (O.F. Müll.) Hoffm., Deutschl. Fl., Zweiter Theil (Erlangen): 130 (1796) [1795]

[VZR329], Italia. Calabria. Loco Cirella di Diamante, ad saxa in litore maris, 5 m. Leg. D. Puntillo, 5.10. 1989. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 320.

Thallus small-fruticose, shrubby, shining dark olive-brown to black, gelatinous when wet, forming loose, 5-15 mm wide, small cushions, the central parts sometimes falling off, leaving a ring-shaped thallus. Branches ecorticate, more or less cylindrical, up to 0.2(-0.3) mm thick and 3-5 mm tall, dichotomously branched. Hyphae arranged in a fountain-like pattern, with the photobiont in outer parts and a central hyphal strand of compact hyphae. Apothecia lecanorine, almost perithecioid, globose, 0.2-0.3 mm across. developing at the tips of branches, with a punctiform, pale brown disc and a thick thalline margin. Proper exciple poorly developed, of parallel hyphae; epithecium colourless to yellowish brown; hymenium colourless, I+ blue; paraphyses coherent, branched and anastomosing, the apical cells swollen; hypothecium colourless. Asci (4-)8-spored, narrowly cylindrical, pointed at apex, with an I+ blue coat and a thin, soon disintegrating wall, Lichina-type. Ascospores 1-celled, hyaline, ellipsoid, (12-)14-18(-21) x 10-15 µm. Pycnidia common, superficially similar to apothecia. Conidia 1-celled, bacilliform, 3-5 x c. 1 µm. Photobiont cyanobacterial, filamentous (Rivulariaceae, the cells 3-12 x 3-10 µm, arranged in tapering chains). Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a characteristic lichen found on rocks at the interface between

the littoral and the mesic supralittoral belts; overlooked and perhaps more widespread, especially in Southern Italy, but certainly not common.



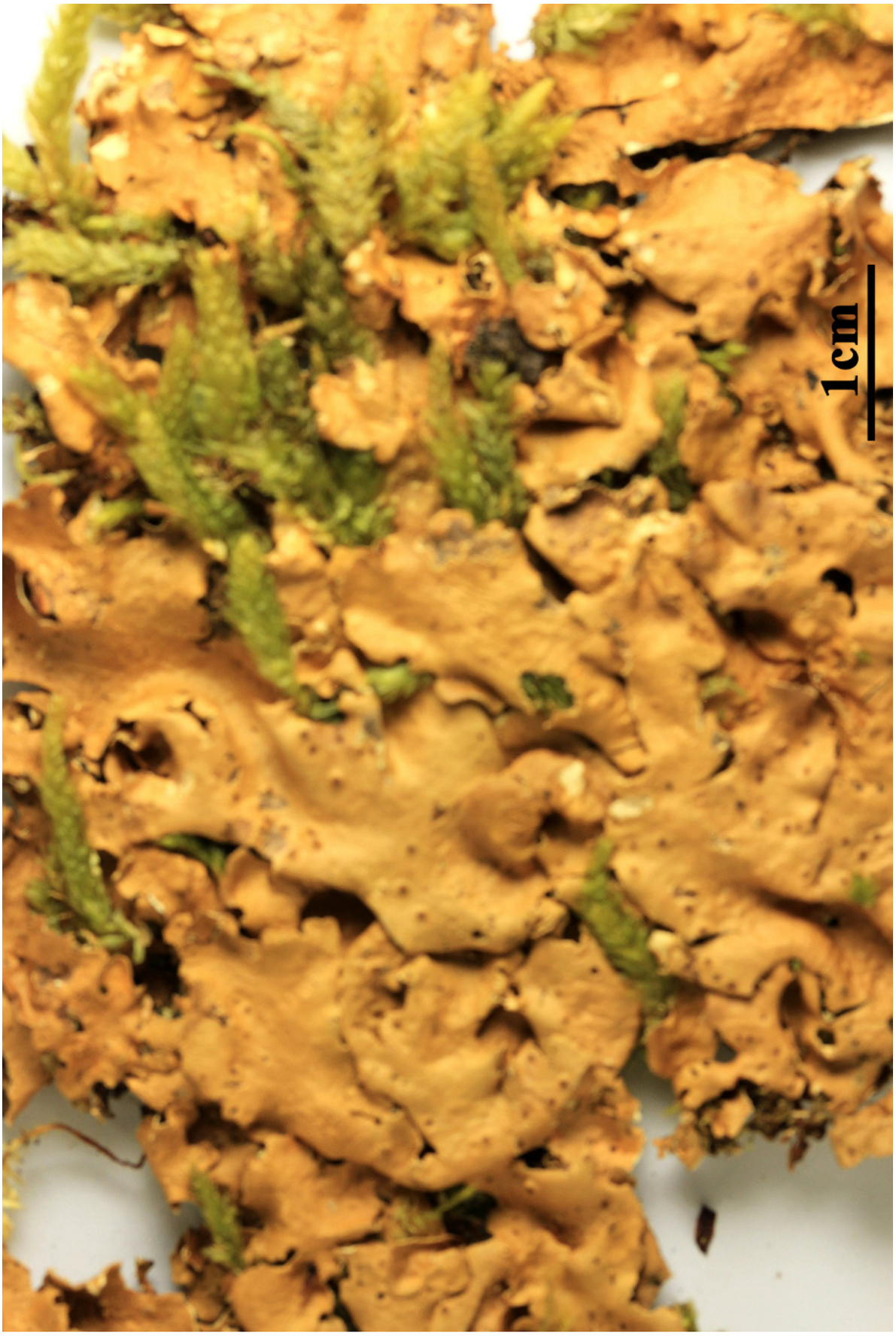
Lichina confinis

Lichina confinis

Lobaria adscripta (Nyl.) Hue, Nouv. Arch. Mus. Hist. Nat., Paris, 4 sér. 2: 26 (1900)
= *Ricasolia herbacea* f. *adscripta* Nyl. 1865

[VZR297], Nova Zelandia. South Island, distr. Westland. Franz Josef Glacier. Karankura Forest, in silva virginea secus viam. Ad corticem arborum. Leg. W. Malcolm & A. Vězda, 25.4.1997. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 297.

Thallus foliose, lobate, ± attached centrally, ± subascendent marginally, spreading, often in very larges rosettes, 5-20(-50) cm diam.,corticolous, rarely saxicolous. Lobes broad, rounded, overlapping, sinues shallow, evenly rounded, margins entitre or weakly crenulate, sinuous, sometimes ascending, or ± deflexed. Upper surface bright lettuce green or browenish at margins when wet, dull olive browenish to red - brown when dry, undulate to roughened corrugate, not scrobiculate or faveolate, matt or shining. continuous, without isidia, soredia or pseudocyphellae, minutely scabrid-cracked centrally. in older specimens small secondary lobules may develop centrally. Medulla white, with internal cephalodia often visible as swellings on lower occasionally also un ipper surface. Lower surface pale yellowish-buff, darker centrally, whitish in narrow marginal zone, very slightly thickened and dark brown at margins, glabrous, smooth or slightky wrinkled or roughened at margins, tomentose centrally, tomentum short, uniform, soft, pale buff, darker centrally, often with scattered, simple or squarrose, buff rhizines centrally. Apothecia laminal, often ± central, numerous, sessile to subpediculate, disc red-brown, waxy, shining, shallowly o deeply concave, plane or ± undulate in mature fruits to 8 mm diam., smooth, matt or shining, epruinose, thalline margin very massive, pale, corrugate-scabrid,inflexed when young, obscuring the disc, entire to striate-areolate or weakly crenulate, thalline exciple coarsely warted-paüollate, ± areolate, pale brown to yellowish-buff. Ascospores colourless, linear-aciculate with pointed ends, 2-4-septate, 25-52 x 5-12 µm. Pycnidia rare to frequent.immersed, visible as small browenish hemispherical swellings on upper surface, 0.1-0.5 mm diam., ostiole black, excavate, carbonaceous. Conidia straight, rod-shaped, 3x1 µm. Chemistry: Cortex K-; medulla K-, C+ red, KC+ red, P-, gyrophoric acid.



Lobaria adscripta

Lobaria adscripta

Lobaria adscripta

Lobaria amplissima (Scop.) Forssell, Bih. K. svenska VetenskAkad. Handl., Afd. 3 8(no. 3): 26, 111 (1883)
= *Ricasolia amplissima* (Scop.) De Not. 1846

[VZR122], Italia. Sardinia. Distr. Oristano, Monte Ferru, 700 m. Ad corticem arborum (*Quercus ilex*). Leg. F. Ceni & A. Vězda, 19.5.1994. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 122.

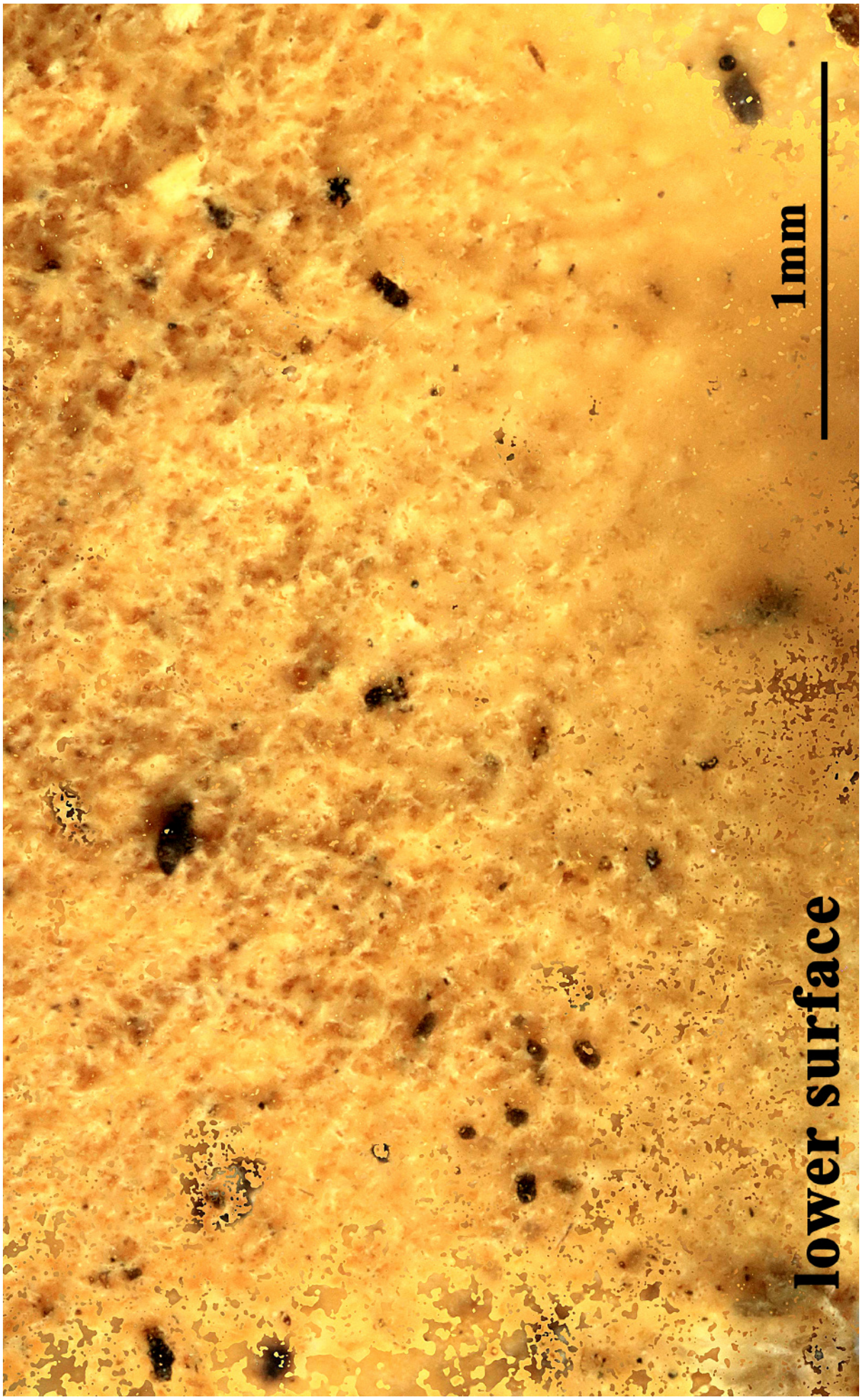
Thallus foliose, heteromerous, dorsiventral, broad-lobed, more or less coriaceous, 0.5-0.7 mm thick, usually forming large, up to 35 cm wide, regular rosettes. Lobes 7-20(-30) mm wide, rounded at apex, sinuate at margins, contiguous to slightly overlapping, ivory white to grey-white when dry (turning yellow-brown in the herbarium), green-grey when wet, matt, smooth to warted (pycnidia). Cephalodia globose and partly internal on the lower side, or shrub-like and densely branched on the upper side, blue-green-brown or brownish black, up to 2 cm in diam. Lower surface white at margins, pale brown over most of the surface, sometimes black near the centre, tomentose, the hairs whitish or brownish 0.15-0.2 mm long, usually with a few, up to 2(-4) mm long, fasciculate, at the base squarrosely branched rhizines. Upper and lower cortex paraplectenchymatous; medulla white. Apothecia rather rare, lecanorine, laminal, sessile and constricted at base, up to 1 cm across, with a concave to flat, glossy brown disc and a smooth, persistent thalline margin. Epithecium brownish; hymenium and hypothecium colourless; paraphyses mostly simple. Asci 8-spored, cylindrical, fissitunicate, the apex of the endoascus with a K/I+ blue ring-shaped structure, Peltigera-type. Ascospores 1-3-septate, hyaline, needle-like, at first hyaline then turning pale yellowish brown, straight to sigmoid, 40-65 x 5-7 µm. Pycnidia laminal, fully immersed into 0.7-1.2 mm wide, conical thalline warts, 0.1-0.2 mm across, the wall 2-layered in upper part, the inner part greyish K+ aeruginose, the outer part brownish, K-, the ostiole opening as an elongated crack. Conidia bacilliform to rectangular, sometimes broadening at ends, 3-7 x 1-1.5 µm. Photobiont chlorococcoid in thallus, cyanobacterial (Nostoc) in the cephalodia. Spot tests: upper cortex K- or K+ yellow, C-, KC-, P-; medulla K+ pale yellow, C-, KC- or KC+ deep pink, P-. Chemistry: cortex with variable amounts of atranorin (usually in traces); medulla with m-scrobiculin (major) and p-scrobiculin, sometimes substituted by pseudocyphellarin. - Note: a mild-temperate species found on old, isolated deciduous trees

in humid areas with high rainfall, formerly more widespread in Northern Italy.

Lobaria amplissima

Lobaria amplissima

Lobaria amplissima



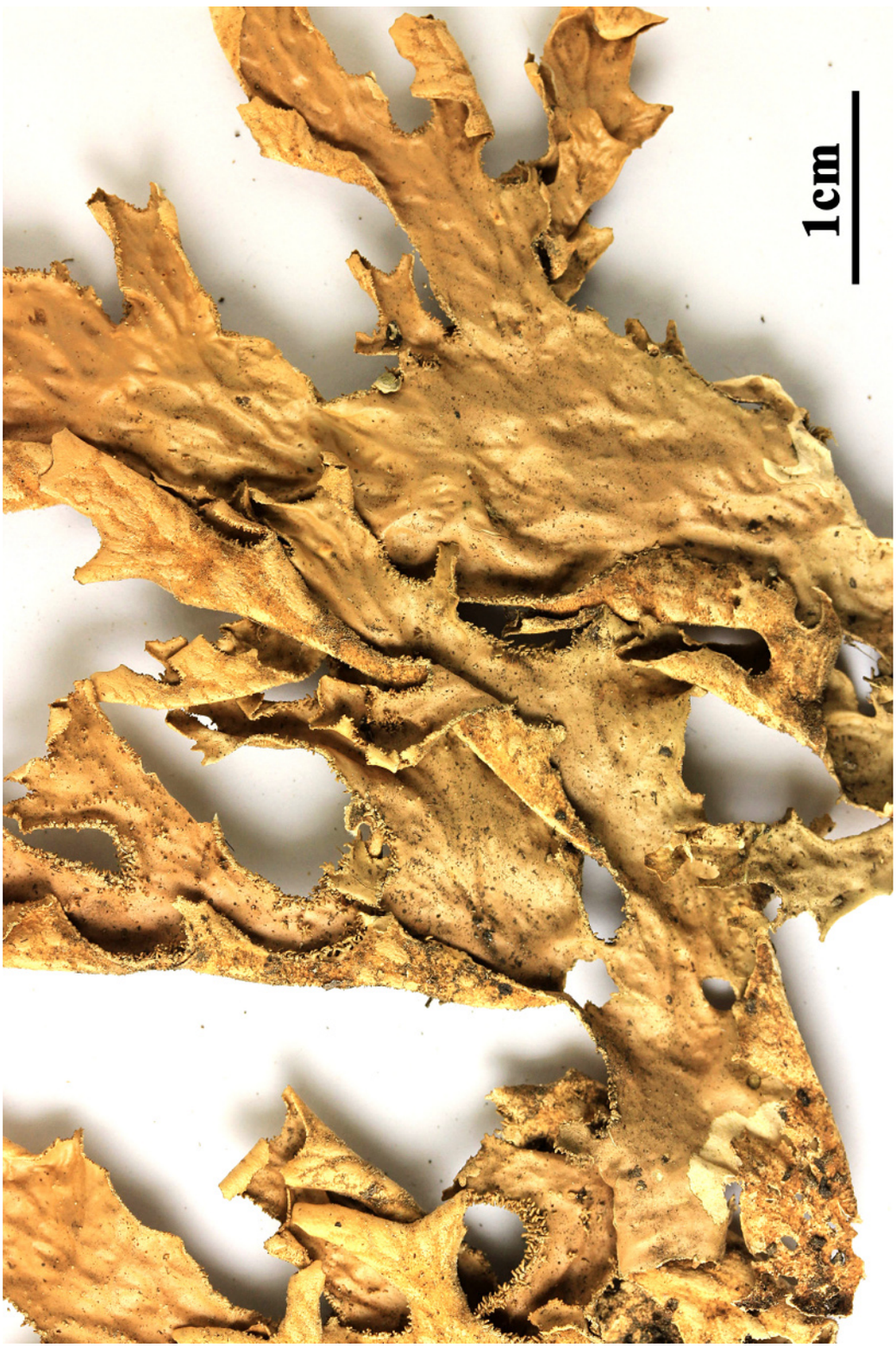
Lobaria amplissima

Lobaria pulmonaria* var. *meridionalis (Vain.) Zahlbr., Hedwigia 74: 198 (1934)
= *Lobaria meridionalis* Vain. 1913
= *Lobaria pulmonaria var. meridionalis* auct. eur. non Asahina is a synonym of Lobaria pulmonaria (L.)

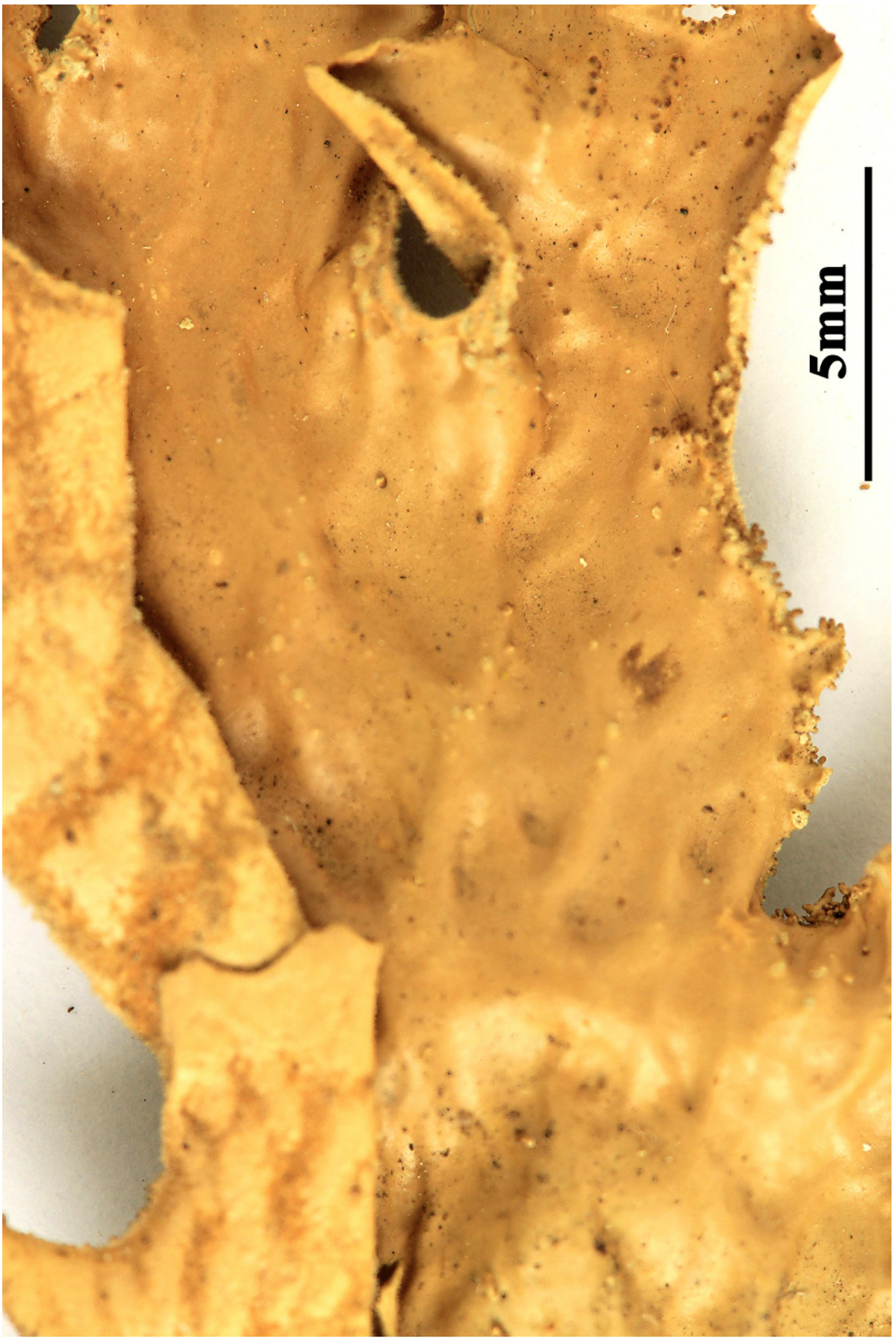
[VZR123], Insulae Canarienses, Tenerife. Montañas de Anaga, secus viam inter Pico de Inglés et vicum Taborno, 700 m. Ad truncos arborum in Laurisilva. Leg. et det. A. Vězda, 14.3.1994. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 123.

Thallus foliose, heteromerous, dorsiventral, broad-lobed, potentially >40 cm across, up to 0.5 mm thick, loosely attached at one end, sorediate and/or isidiate. Lobes broadly strap-shaped, 1-3(-5) cm wide, more or less dichotomously divided, at first adpressed, then mostly free from substrate in apical parts, the apices truncate, sinuate-indented; upper surface grey-green to yellowish brown, brighter green when wet, dull or slightly glossy, strongly reticulately ridged, with marked depressions. Isidia or granular soredia often present along margins and on ridges, the isidia cylindrical to club-shaped, more rarely flattened, often branched, to 0.4(-2) mm long when terete, the soralia developing where the isidia were shed, discrete to patchily confluent, punctiform to linear, with mostly coarse, globose, 20-70 µm wide soredia, often gathered into up to 80 µm wide consoredia. Lower surface white to pale brown at margins and on the swellings corresponding to the depressions on upper surface, otherwise pale to dark brown, tomentose, except on the swellings, mostly erhizinate or with sparse, at first squarrose, then simple rhizines. Upper and lower cortex pseudoparenchymatous; medulla white, often with internal cephalodia which are sometimes visible as rounded thickenings on the lower and/or upper side. Apothecia rare, laminal, most frequent on the ridges, 2-5(-7) mm across, with a brown-red disc and a thin, sometimes finally excluded, initially minutely hairy thalline margin. Epithecium reddish brown; hymenium colourless or pale brown in lower part; paraphyses mostly simple, not capitate; hypothecium brownish. Asci 8-spored, clavate, fissitunicate, the thickened apex with a K/I+ blue ring, Peltigera-type. Ascospores (1-)3(-5)-septate, fusiform to narrowly ellipsoid, hyaline to pale brown at maturity, (16-)18-30(-37) x 5-9 µm. Pycnidia immersed on the ridges. Conidia bacilliform, c. 5 x 1 µm. Photobiont chlorococcoid (Dictyochloropsis; cyanobacteria present in the internal cephalodia. Spot tests: upper cortex K-, C-, KC-, P-; medulla K+ yellow-orange

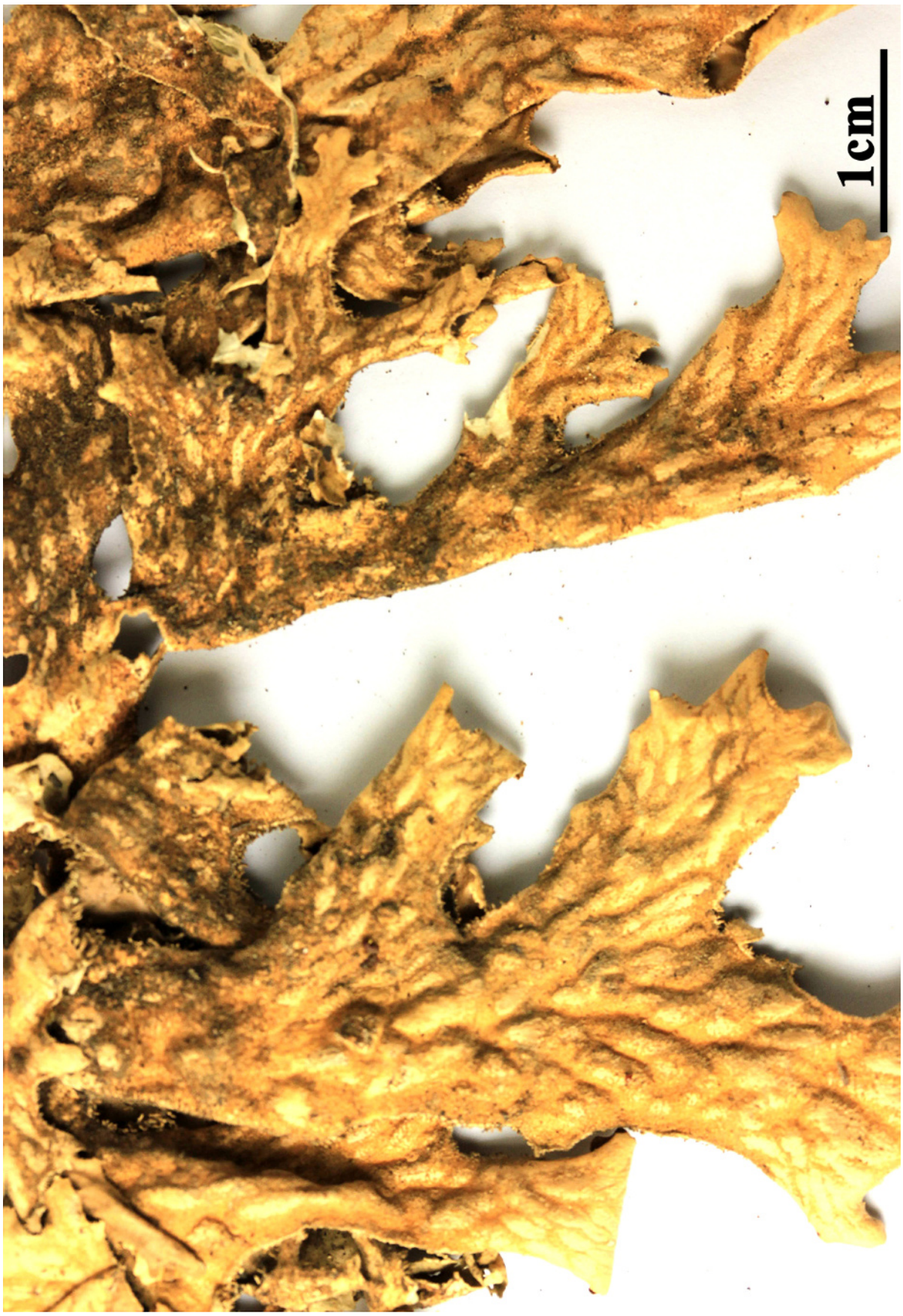
(often faintly), C-, KC- or KC+ yellow-orange, P+ faintly orange-red. Chemistry: stictic and constictic acids (major), norstictic, cryptostictic, and salazinic acids (minor). - Note: a mainly temperate, holarctic species found on bark and on epiphytic and epilithic mosses in humid forests; extinct in the plains of Northern Italy, it is still abundant in humid montane forests of Central and Southern Italy, reaching the coast in undisturbed areas of the Tyrrhenian ecoregion.



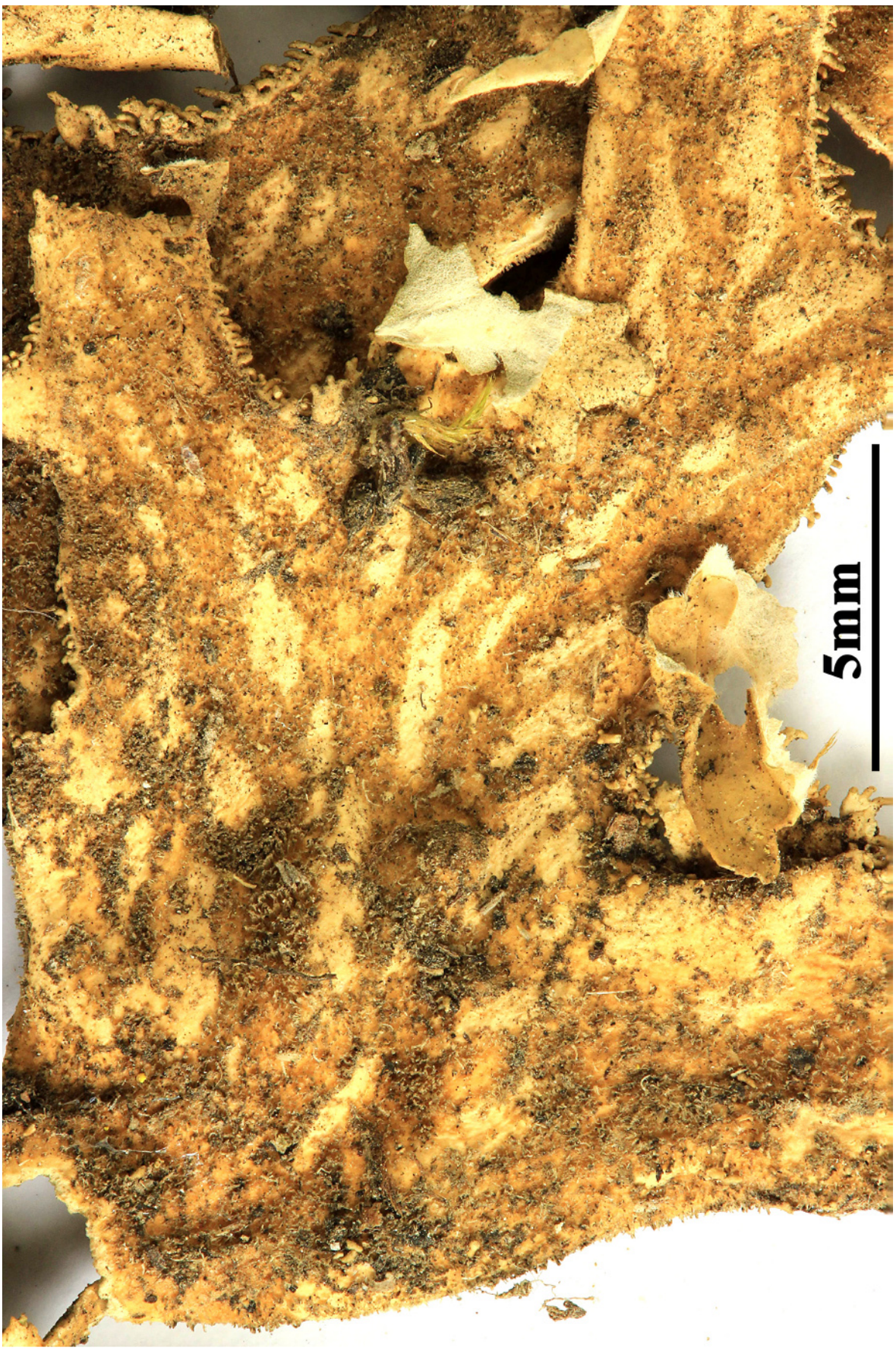
Lobaria pulmonaria* var. *meridionalis



Lobaria pulmonaria* var. *meridionalis



Lobaria pulmonaria* var. *meridionalis



Lobaria pulmonaria* var. *meridionalis

Lobaria quercizans Michx., Fl. Boreali-Americ. (Paris) 2: 324 (1803)
= *Ricasolia quercizans* (Michx.) Stizenb., Flora, Regensburg 81: 111 (1895)
= *Lichen diatrypus* * *quercizans* (Michx.) Lam., Encycl. Méth., Bot. Suppl. (Paris) 3(2): 405 (1813)
= *Parmelia quercizans* (Michx.) Ach., Lich. Univ.: 464 (1810)
= *Sticta damicornis* subsp. *quercizans* (Michx.) Nyl., Annls Sci. Nat., Bot., sér. 4 11: 213 (1859)
= *Sticta quercizans* (Michx.) Ach., Syn. meth. lich. (Lund): 234 (1814)
= *Stictina quercizans* (Michx.) Nyl., Syn. meth. lich. (Parisiis) 1(2): 344 (1860)

[VZR831], USA. Carolina Borealis. Transylvania County: Prope locum Tennessee Bald dictum, 1800 m. Ad corticem *Aesculi* sp. Leg. W. L. Culberson (no. 14142) & C. F. Culberson, 6.7.1969. Ex VěZDA: Lichenes Rariores Exsiccati Nr. 832.

Thallus commonly up to 15 cm, rarely to 36 cm broad, adnate, cartilaginous-coriaceous, smooth to rugose, often periclinally wrinkled in older parts; Cream-Buff to Olive- Gray, greener when wet. Lobes more or less imbricate, broad and rounded or narrow, of moderate size, up to 2.5 x 2.0 cm; tips free or attached entire; sinus not appreciably thickened. Lobules rare, soredia and isidia absent. Lower surface smooth or wrinkled, lacking well-defined naked areas and tomentose veins. Lower cortex Cream-Buff, Pale Olive-Buff and darkening. Light colored tomentum diffuse, variable in quantity and blackening with age; rhizines simple, scattered, pale or darkened. Thallus thickness 240-380µm, wrinkles up to 520 µm. Upper cortex 23-45 µm thick, of 6-8 cell layers, outer part brownish, lumen commonly to 9 µmand occasionally to 121 µm longest dimension. Algal layer dense, (27-)40-63 µm thick; algae green, cells 4-9 µm diam. Medulla thickness 130-240 µm, wrinkles up to 450 µm, hyphae 3-6 µm diam., lax throughout. Lower cortex 13-341 µm thick, 2-6 cells thick, subparaplectenchymatous, brownish, lumen 3-8 µm diam. Tomentum hyaline, usually unilaterally branched, often clustered, up to 170 µm long, 4-5 µm wide. Cephalodia internal, few, small; blue-green algal cells 4-101 µm diam. Pycnidia abundant, lamellar, forming hemispherical swellings up to 0.8 mm diam., with a black depressed ostiole. Pycnidiophores 2.5-4.5 µm thick, pycnidiospores 3.5-4.51 µm long. Apothecia very common, abundant, lamellar and submarginal, 1.0-4.5 mm broad. Disc flat, becoming strongly concave; Bay to Burnt Sienna, rarely blackening. Thalline

exciple concolorous with thallus, pubescent when young, becoming minutely warty, 80-150 µm thick. Rim entire to crenate, often inflexed. Proper exciple ca. 60 µm thick. Algae following thallus margin, extending under subhymenium in clumps. Hypothecium 72-90 µm thick, orange-brown or brownish, cells indistinct. Hymenium 90-125 µm thick, hyaline or faint brownish, epithecial gelatin orange-brown. Paraphyses thread-like or occasionally tips slightly swollen, rarely branched, 1.5-2.5 µm diam. Asci 78-103 x 13-21 µm. Spores 8 per ascus, hyaline but brownish in mass, usually 3-septate, fusiform when young, acicular or sigmoid when mature, ends often asymmetrical, 34-81 x 4-8 µm. Reactions: medulla and lower cortex K+ orange-red, upper cortex usually K+ yellow; lower cortex C+ red, medulla and lower cortex KC+ red; P-. Microchemical: gyrophoric, LQ unknown always present; 4-O-methylgyrophoric, atranorin, and unknown 2 present or absent.

Lobaria quercizans is distinguished by the presence of protruding pycnidia, abundant nonlobulate apothecia, green algae in the algal layer, and gyrophoric acid. Common on deciduous trees, *L. quercizans* is the most frequently collected Lobaria in the eastern portion of tNorth America. he study area (Fig. 10-11). This species is also found in eastern Asia.

Lobaria quercizans

Lobaria quercizans

Lobaria quercizans

Lobaria quercizans

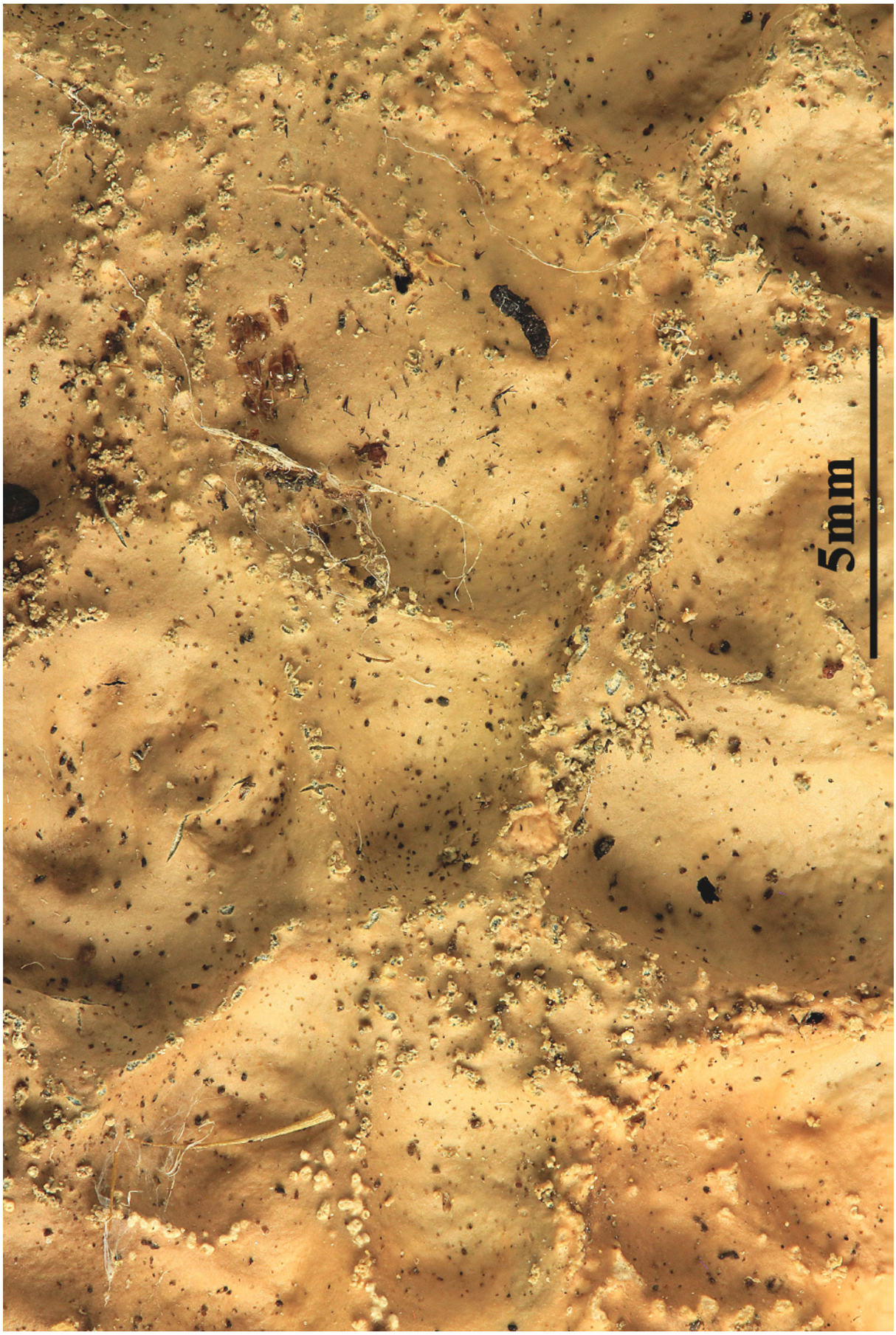
Lobaria quercizans

Lobaria retigera (Bory) Trevis., Lichenoth. Veneta 1-2: no. 75 (1869)
= *Lichen filix * retigera* (Bory) Lam., Encycl. Méth., Bot. Suppl. (Paris) 3(2): 421 (1813)
= *Lichen retiger* Bory, Voy. îles Afrique 3: 101 (1804)
= *Lobaria isidiosa* var. *subisidiosa* Asahina, J. Jap. Bot. 21(5-6): 84 (1947)
= *Lobaria retigera* var. *subisidiosa* (Asahina) Yoshim., Miscell. bryol. lichenol., Nichinan 6(8): 135 (1974)
= *Lobaria yakushimensis* Asahina, J. Jap. Bot. 21(5-6): 84 (1947)
= *Phycodiscis retigera* (Bory) Clem., Gen. fung. (Minneapolis): 83 (1909)
= *Sticta retigera* (Bory) Ach., Lich. Univ.: 455 (1810)
= *Stictina retigera* (Bory) Müll. Arg., Flora, Regensburg 61(31): 484 (1878)

[VZR204], Sibiria occidentalis, respublica Altay, prope lacum Telekotskoje ozero dictum, ad occidentem versus pago Jajlju, ad muscos trunci arboris, 500 m. Leg. J. Halda, 2-10.1995. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 204.

Thallus adnate centrally, ±free at the margins, 8–12 cm wide. Lobes sublinear, irregularly to dichotomously branched, 3–6 mm wide; apices subrotund; margins entire, subascending. Upper surface brownish black when wet, olive-brown to tan when dry, dull, distinctly reticulate-faveolate, with conspicuous interconnecting ridges, lacking soredia and phyllidia; isidia sparse to moderately dense, erect, cylindrical, fragile, becoming coralloid-branched, to 0.6 mm tall, mainly on reticulate ridges. Photobiont a cyanobacterium (blue-green). Lower surface pale brown with bullate glabrous areas separated by a network of blue-black tomentum, sparsely to densely rhizinate centrally; rhizines simple or squarrosely branched, dark brown. Apothecia and pycnidia not seen in Australian material. CHEMISTRY: Cortex K–; medulla K–, C–, KC–, P–; containing retigeranic acid A (minor), retigeranic acid B (major), retigeranic acid C (minor), retigeranic acid D (trace), thelephoric acid (in dark tomentum), without stictic acid. - Scattered in coastal and hinterland forests of eastern Australia; grows on bark and more rarely on moist rocks. This tropical and subtropical lichen also occurs in Africa, Papua New Guinea and New Zealand.

Lobaria retigera



Lobaria retigera

Lobaria retigera

Lobaria retigera

Macentina abscondita Coppins & Vězda, Lichenologist 9(1): 47 (1977)
= *Psoroglaena abscondita* (Coppins & Vězda) Hafellner & Türk, Stapfia 76: 157 (2001)
= *Leucocarpia abscondita* (Coppins & Vězda) Hafellner, in Hafellner & Maurer, Mitt. naturw. Ver. Steierm. 124: 124 (1994)

[VZR336], Bohemia, merid., montes Šumava (Gabretta), distr. Volary, loco dicto "Nové údoli", 850 m. Ad corticem arboris emortuae (Ulmus glabra). Leg. et det. Z. Palice, 11.5.1996. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NRR. 336.

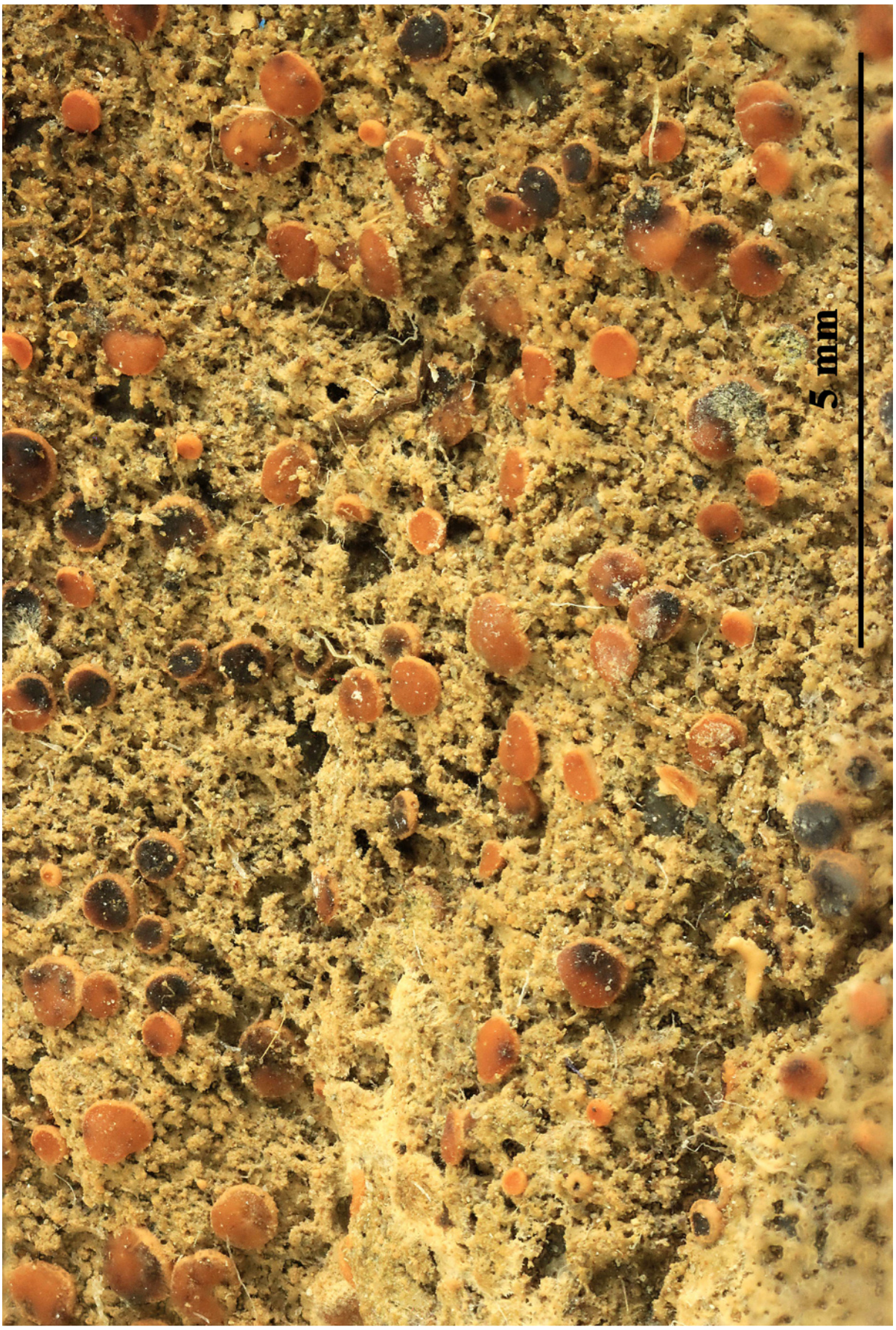
Thallus crustose to subleprose, very thinly episubstratic, dull grass-green, granular, entirely consisting of minute goniocysts spreading diffusely over the substrate, surrounded by colourless hyphae with very small papillae best visible under SEM. Perithecia c. 0.1 mm across, projecting, yellowish- to orange-brown when dry, almost translucent and colourless when wet. Exciple 10-12 µm thick, colourless or yellowish, of periclinally arranged hyphae; involucrellum absent; hamathecium of branched periphyses measuring c. 15 x 2 µm, interascal filaments absent; hymenial gel I+ red, K/I+ blue. Asci 8-spored, fissitunicate, clavate-cylindrical to pyriform, thickened at apex when young, K/I-, 45-50 x 10-15 µm. Ascospores at first simple, but soon becoming 1-3-septate, hyaline, narrowly ellipsoid, more or less attenuate at the lower end, 12-20 x 3.5-4.5 µm, without a perispore. Photobiont chlorococcoid, the cells 8-12 µm wide. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: optimum on the bark of Sambucus in shaded-humid situations.

Macentina abscondita

Malcolmiella cinereovirens Vězda, Lichenes Rariores Exsiccati 27(nos 261-270): 3 (1997)

[VZR], Nova Zelandia. South Island, distr. Nelson, in valle rivi "Brook Waterfalls", 160 m. Ad saxa silicea in ripa rivuli. Leg. W. Malcolm & A. Vězda, 18.04.1997. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 302.

Thallus corticola vel saxicola vel foliicola, crustaceus, granuloso-furfuraceus vel fere isidiosus, cinereovirens; cellulae algarum globosae, 6-8 µm latae, goniocystus 25-30 µm crassas formantes. Apothecia orbicularia, 0.6-0.8 mm latae, basi arcte constricta, discis planis aurantiacis, marginibus testaceis, paulum elevatis, demum evanescientibus, Excipulum hyalinum, infra granulis parvis 2 µm crassis in K lutescentibus adsperis. Hypothecium fuscum. Hymenium 80-90 µm altum, hyalinum, zona epihymeniali granulis parvis inspersa; paraphyses rectae, tubulis 1 µm crassis, apicibus incrassatis. Asci cylindrico-clavati, tholo instructi, 8-spori. Ascosporae in maturnitate simplices, late ellipsoideae, episporio hyalino interrupto tectae, 13.5 x 4-4.5 µm.



Malcolmiella cinereovirens

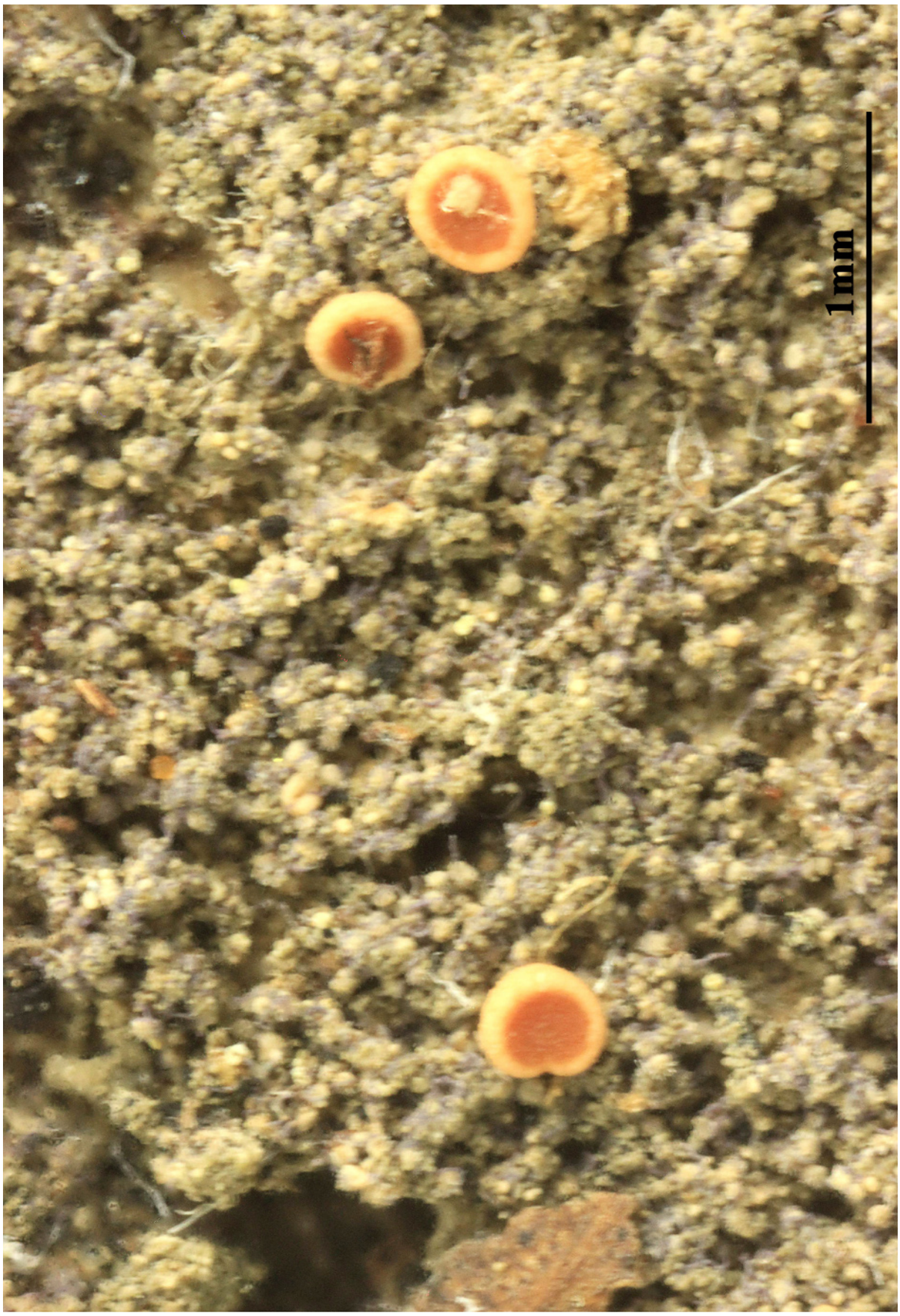
Malcolmiella cinereovirens

Malcolmiella cinereovirens Vězda, Lichenes Rariores Exsiccati 27(nos 261-270): 3 (1997)

[VZR265], Nova Zelandia: South Island, Nelson, Hackett River, ad confluentem rivulorum Hackett et Miner, 170 m. Corticola. Leg. S. Malcolm (2757), 25.3.1996. -Isotypus - Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 265.

Thallus corticola vel saxicola vel foliicola, crustaceus, granuloso-furfuraceus vel fere isidiosus, cinereovirens; cellulae algarum globosae, 6-8 µm latae, goniocystus 25-30 µm crassas formantes. Apothecia orbicularia, 0.6-0.8 mm latae, basi arcte constricta, discis planis aurantiacis, marginibus testaceis, paulum elevatis, demum evanescientibus, Excipulum hyalinum, infra granulis parvis 2 µm crassis in K lutescentibus adsperis. Hypothecium fuscum. Hymenium 80-90 µm altum, hyalinum, zona epihymeniali granulis parvis inspersa; paraphyses rectae, tubulis 1 µm crassis, apicibus incrassatis. Asci cylindrico-clavati, tholo instructi, 8-spori. Ascosporae in maturnitate simplices, late ellipsoideae, episporio hyalino interrupto tectae, 13.5 x 4-4.5 µm.

Malcolmiella cinereovirens

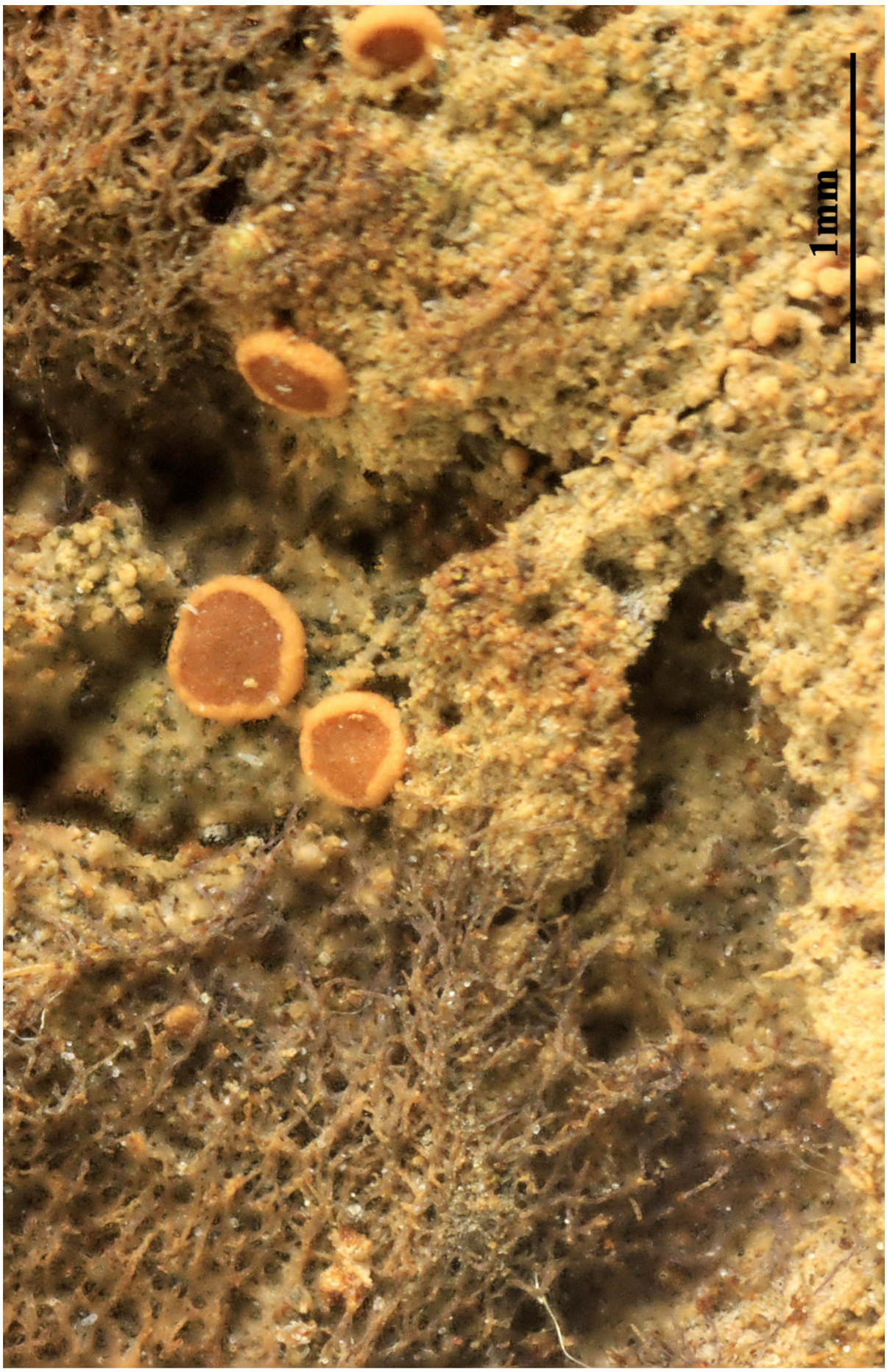


Malcolmiella cinereovirens

Malcolmiella cinereovirens* var. *isidiata Vězda, Lichenes Rariores Exsiccati 27(nos 261-270): 3 (1997)

[VZR266], Australia. Blundells Creek Road, 30 km ad occidentem a Canberra, 800 m. secus rivulum in pluviisilva. Ad corticem arborum. Leg. K. & A. Kalb, 5.9.1995. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 266.

Thallus isidiis globulis, 0.006-0.009 mm latis pallide viridis instructus. Isidia ad thallum hyphis affixa, extus textura pseudoparenchymatica tecta, intus cellulis algarum dispersis implacta.



Malcolmiella cinereovirens* var. *isidiata

Malcolmiella cinereovirens* var. *isidiata

Megalospora gompholoma (Müll. Arg.) C.W. Dodge, Nova Hedwigia 19(3-4): 490 (1971) [1970]
= *Patellaria gompholoma* Müll. Arg. 1879

[VZR273], Nova Zelandia. South Island. Distr. Nelson, Kahurangi National Park, regio montis Mt. Arthur, secus viam Flora Carpark - casa alpina Mt. Arthur, 1250 m. Ad corticem arborum. Leg. W. Malcolm & A. Vězda. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 273.

Thallus whitis grey, thin or rather thick, smooth or rugulose. Isidia and soredia absent, Chemistry: pannarin and zeorin. Apothecia c. 1.5 mm diam., when young 0.5-0.9 mm, and up to (1,2-)2.7 mm, 330-640 µm thick, Disc flat or sometimes markedly convex, darkbrown to black, more or less intensely blue-grey pruinose, dull. Margin prominent, thick or thin, darkbrown to black, epruinose, slightly glossy. Epithecium diffusely olive-brown to darkbrown, with a yellowish granular top-layer, 7-15 µm thick, Hymenium 120-160 pm high, with I+ blue asci, Excipulum yellowish brown to brown, paler in the medullary excipulum, with a darkbrown subhypothecium, K+ red, Apothecium basis 185-320 µm wide. Apothecium chemistry: unknown substances A and, in variable amounts, D and E, Crystals of Calcium Oxalate in the medullary excipulum regularly present, Spores solitary, bicellular and straight, 77-115 x 25-40 µm, Spore wall 2 µm thick, Epispore µm thick, warted. Pycnidia not observed. Distribution and ecology *Megalospora gompholoma* ssp. *fuscolineata* appears to be restricted mainly to Tasmania and Victoria in Australia, but there is a single, remarkable find from New Zealand.

Megalospora gompholoma

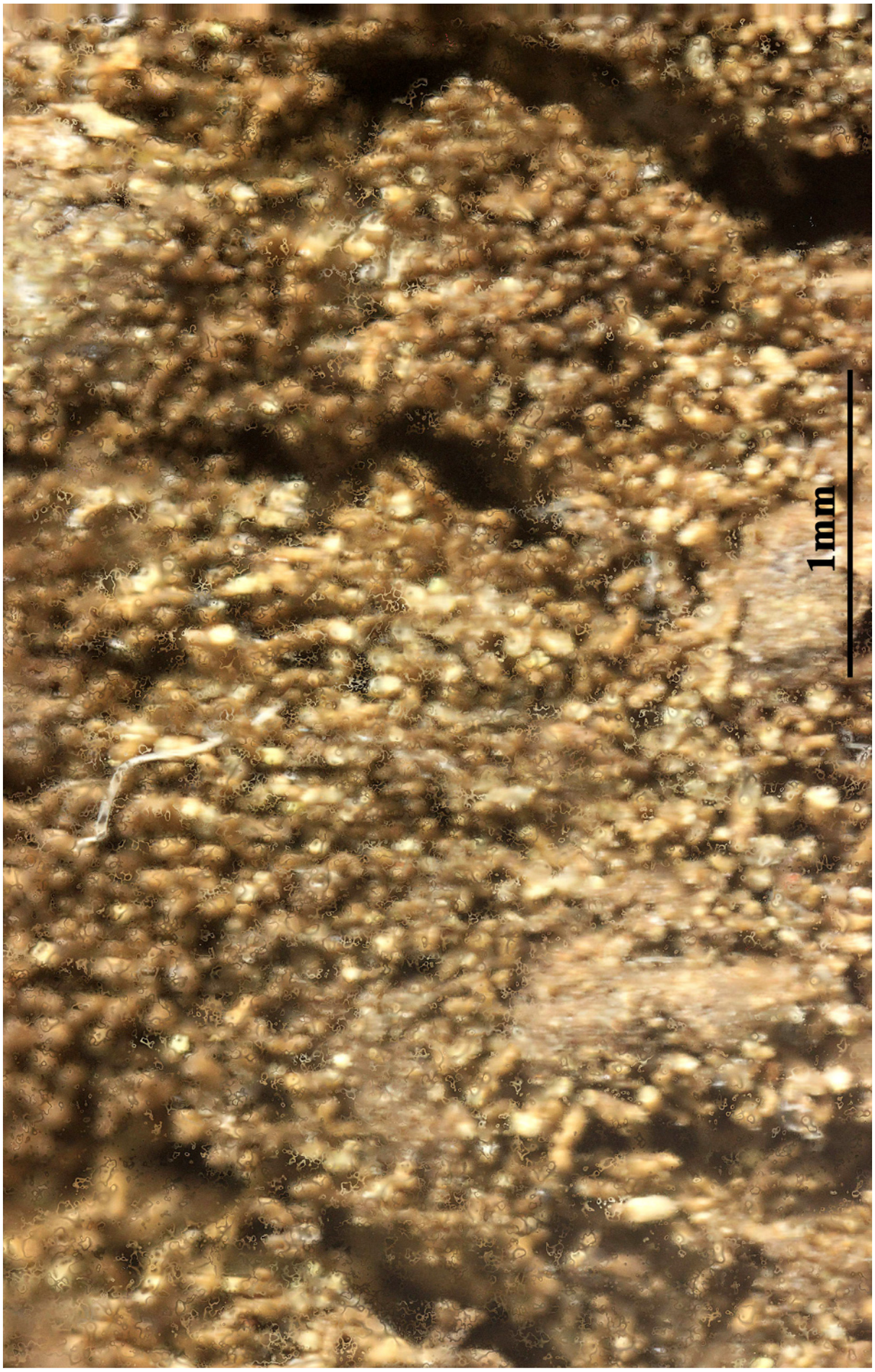
Megalospora gompholoma

Melanelia infumata (Nyl.) Essl., Mycotaxon 7(1): 48 (1978)
= *Melanohalea infumata* (Nyl.) O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch, Mycol. Res. 108(8): 882 (2004)
= *Imbricaria infumata* (Nyl.) Arnold, Flora, Regensburg 65: 406 (1882)
= *Parmelia elegantula subsp. infumata* (Nyl.) Clauzade & Cl. Roux, Bull. Soc. bot. Centre-Ouest, Nouv. sér., num. spec. 7: 827 (1985)
= *Parmelia infumata* Nyl., Flora, Regensburg 58: 359 (1875)
= *Parmelia olivacea f. infumata* (Nyl.) Blomb. & Forssell, Enum. Pl. Scand.: 65 (1880)

[VZR216], Turcia. Distr. Antalya. montes Akdaglari, transitus Sinekci-beli Geçidi, 1545 m. Ad lignum trunci (Juniperus sp.). Leg. A. Vězda, 10.4.1996. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 216.

lichenized thallus foliose (foliaceous), leaf-like; thallus continuous, diffuse, effuse; upper surface: brown(ish) green (olivaceous, olive green) |black(ish) brown | red(dish) brown (if pale: orange brown) [th upper surface], pruinose. [th marginal and upper surface] specific structures: present [th margin] cilia, cilioid structures: absent [th upper surface] isidia, isidioid structures present; soredia, soralia, soralioid structures: absent; rhizines, rhizoid structures present; simple ascomata absent; secondary metabolites absent. - substrate: rock, siliceous, siliciferous, acidic | rock, stones, pebbles.

Melanelia infumata

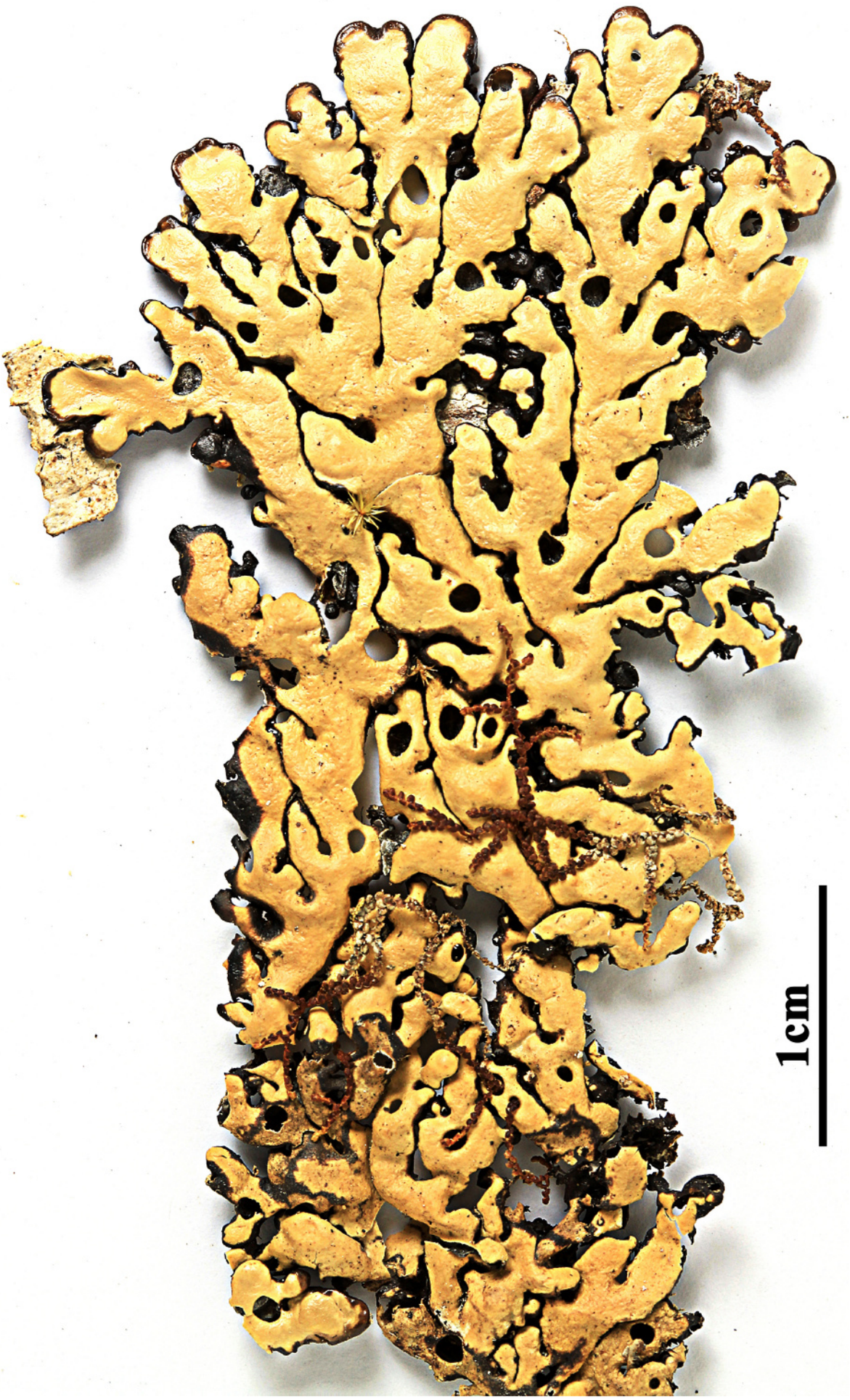


Melanelia infumata

Menegazzia pertransita (Stirt.) R. Sant., Ark. Bot. 30A(no. 11): 12 (1942)
= *Menegazzia weindorferi f. endocitrina* (Hillmann) R. Sant., Ark. Bot. 30A(no. 11): 12 (1942)
= *Parmelia pertransita* Stirt., Proc. Roy. phil. Soc. Glasgow 10: 294 (1877)
= *Parmelia weindorferi f. endocitrina* Hillmann, Feddes Repert. Spec. Nov. Regni veg. 45: 172 (1938)

[VZR283], Nova Zelandia. South Island. Canterbury, transitus Lewis Pass. Bina Valley Track, 700 m. In silva virginea ad truncum aroris. Leg. W. Malcolm & A. Vězda, 29.04.1952. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 283.

Menegazzia pertransita is characterised by the corticolous habit; large, gaping perforations with inrolled edges; pedicellate apothecia with a coarsely scabrid exciple and stalk; 8-spored asci; a non-granular epithecium; and the presence of fatty acids in the medulla. The relationship of this taxon to the Australian species M. weindorferi (Zahlbr.) R.Sant., needs closer assessment. In some forms ‘of M. pertransita the tomentum of the internal cavity may be *pigmented paleyellow; however, the pigment is not the same as that found in M. foraminulosa. in any case these two species are readily distinguished by differences in medullary chemistry. M. pertransita is a very variable species, ranging from specimens with small, narrow, radiating lobes to examples with broad, contorted or imbricate lobes. The occurrence of perforations is also variable, and in some collections only 1 or 2 perforations (usually at the margins of the thallus) may be present in an otherwise well-developed specimen. Some specimens from exposed, often subalpine, habitats may be suffused brownish.

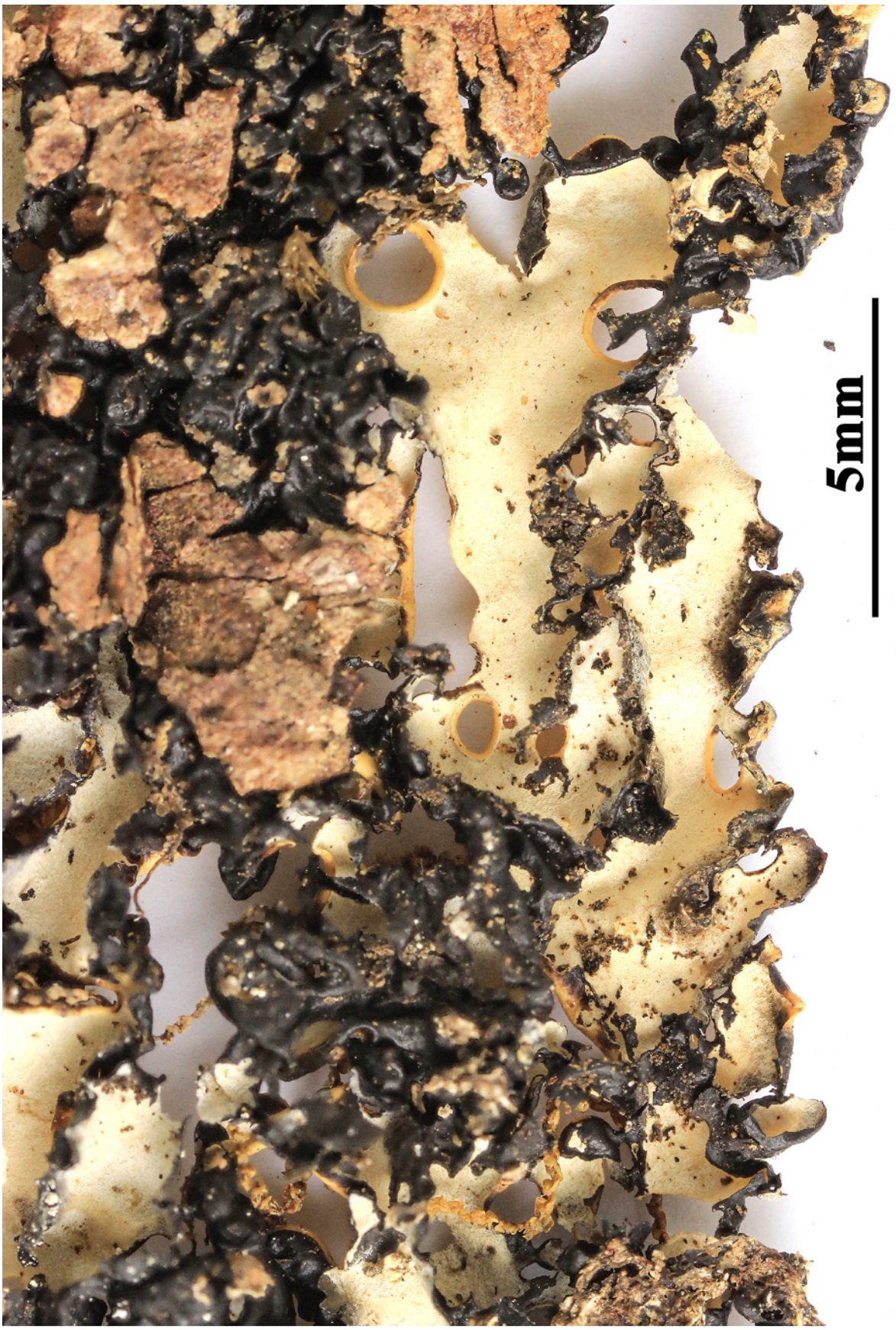


Menegazzia pertransita

Menegazzia pertransita

Menegazzia pertransita

Menegazzia pertransita



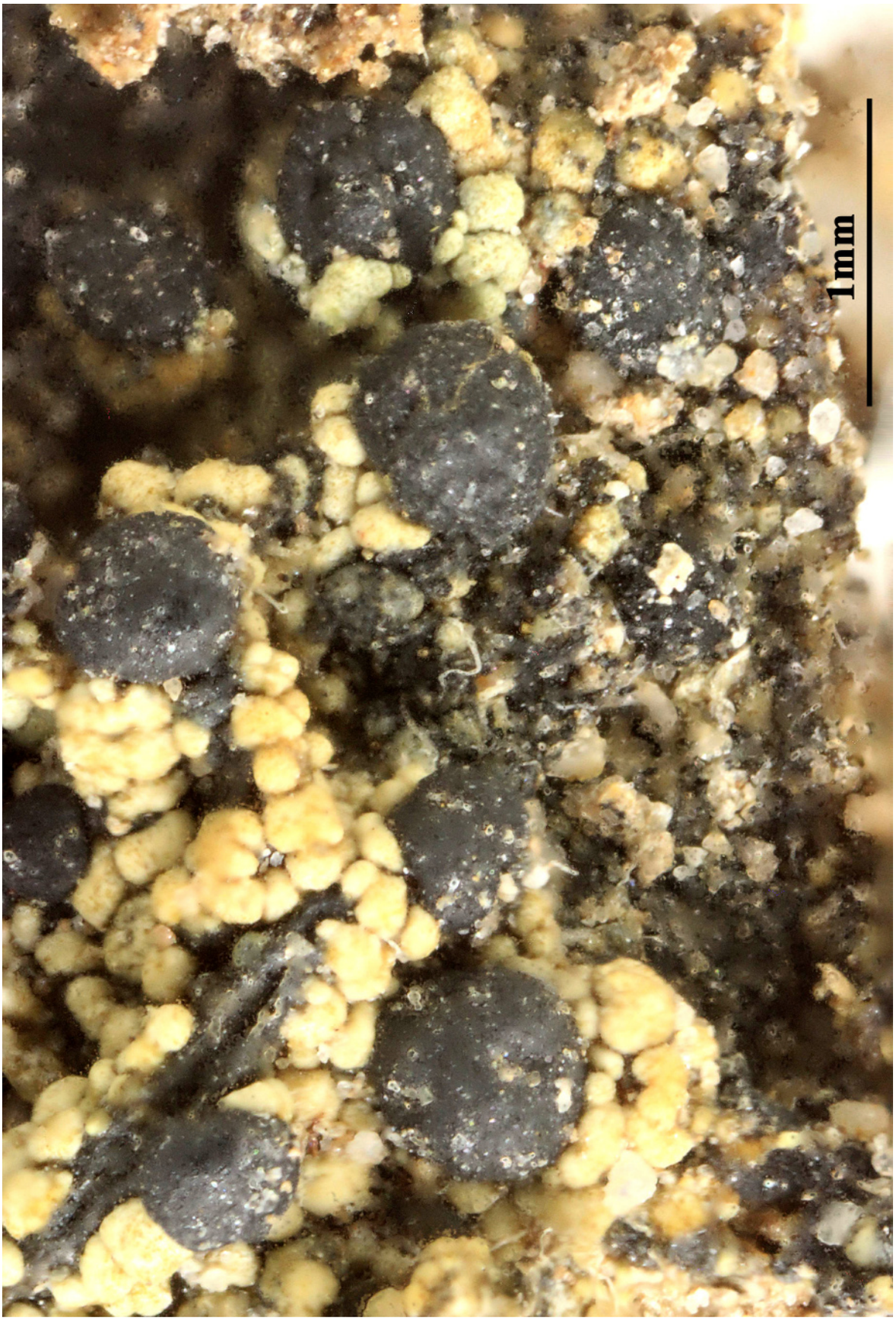
Menegazzia pertransita

Micarea austroternaria Coppins & Kantvilas, Lichenologist 22(3): 277 (1990)

[VZR267], Nova Zelandia. Nelson, Westport. Orikava Forest, planities Denniston, in monte Rochfort, 750 m. Ad terram arenosam. Leg. W. Malcolm & A. Vězda. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 267.

Thallus effuse, of scattered to contiguous areoles; prothallus inapparent. Areoles 80-300(-500) µm diam., convex to globose, grey-white and ± glossy, in exposed forms sometimes bluish-grey in upper parts; ecorticate, but with a hyaline epinecral layer up to c. 12 µm thick. Photobiont cells micareoid, 4-7 µm diam.; cephalodia absent or poorly differentiated (areoles often arise from a mixed ' algal crust' that includes various cyanobacteria). Apothecia numerous, (0-2-)0-3-0-8(-l) mm diam., or forming tuberculate clusters up to 1-4 mm diam., scattered or a few contiguous, at first plane and faintly marginate but usually soon convex, adnate or constricted below and ± turbinate, black, matt or slightly glossy; margin shallow, and scarcely raised above the level of the disc, usually slightly more glossy than the disc. Hymenium 60-70 µm tall, dark aeruginose above (especially in the epithecium), K-, N + red, dilutely coloured below. Paraphyses numerous, slender, sparingly branched and anastomosed, 1-3-2 µm wide; apices not swollen or densely coated with pigment, although embedded in the amorphously pigmented epithecial gel. Asci clavate, 52-65 x 12-14 µm, 8-spored; in K/I, with amyloid outer coat, and an amyloid apical dome with a shallow, conical ocular chamber and a narrow apical cushion that widens towards the apical wall. Ascospores (10-)14-22 x (4-)4-5-5-5(-6) µm, ellipsoid to usually fusiform, rarely slightly curved, (l-)3-septate. Hypothecium 200-350 µm tall, dilute aeruginose in upper part, becoming mottled olive-green or dull brown below, K- , N+ reddish; lower hymenium and upper hypothecium often with additional, scattered violet pigment granules (K+ vivid aeruginose); hyphae vertically orientated in upper part, becoming interwoven below, 1-5-2(-2-5) µm wide, in upper part intermixed with swollen (up to 5 um wide), short-celled ascogenous hyphae. Excipulum well-developed, dilute aeruginose above, becoming hyaline below except for the green-brown outer edge, of radiating, branched hyphae, c. 1.5-2 µm wide. Pycnidia rare, immersed in areoles, black, 30-50 µm diam.; wall green, N+ red; conidia (microconidia) 6-7 x 0.8 µm, rod-shaped but with ± tapering ends. Chemistry: Thallus K+ yellow, C+ pink, KC + orange-red, PD+ deep yellow, UV- or whitish; alectorialic acid by TLC.

Micarea austroternaria

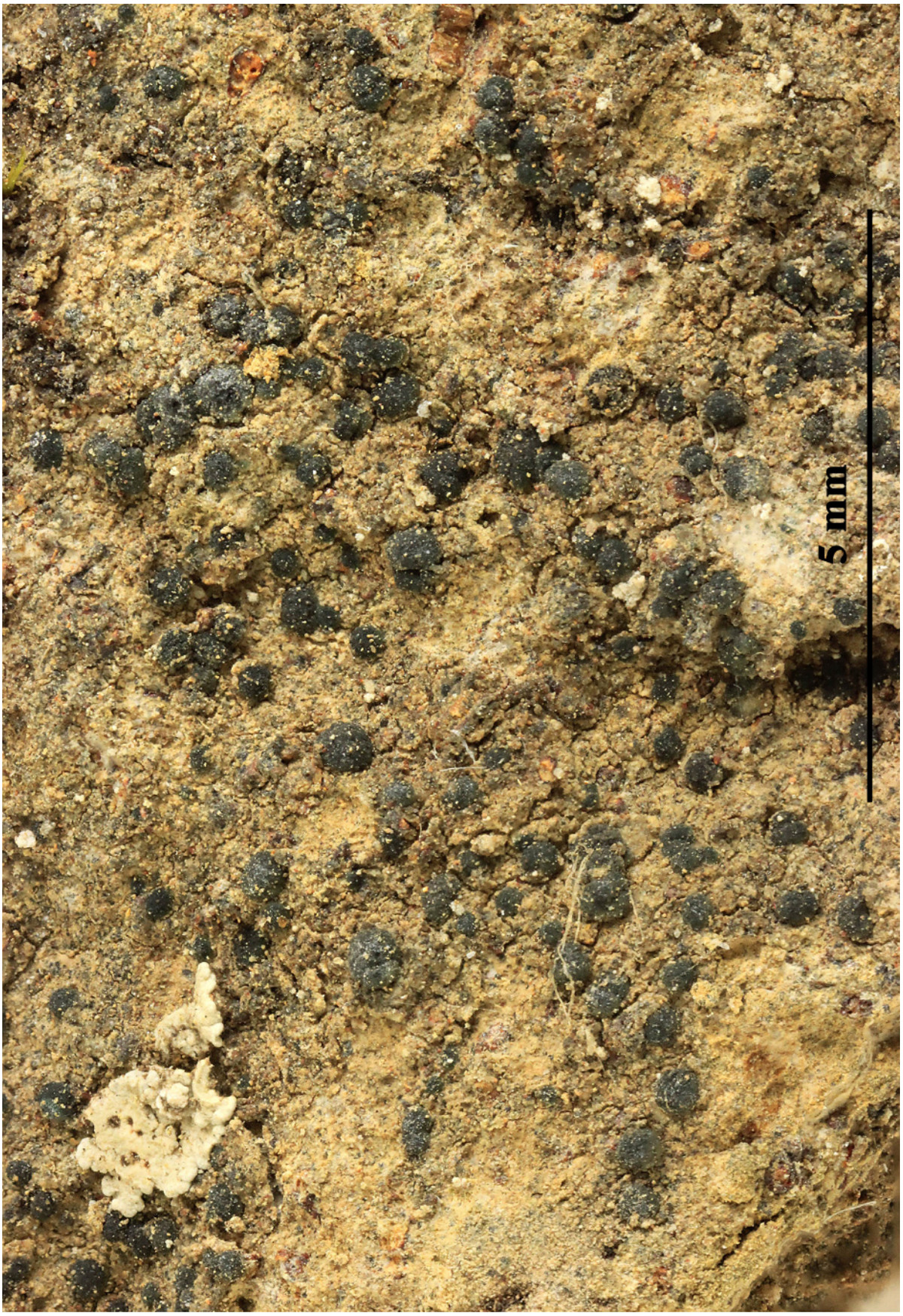


Micarea austroternaria

Micarea bauschiana (Körb.) V. Wirth & Vězda, in Vězda & Wirth, Folia geobot. phytotax. 11: 95 (1976)
= *Biatora bauschiana* Körb. 1860
= *Brianaria bauschiana* (Körb.) S. Ekman & M. Svenss. 2014

[VZR87], Insulae Canarienses, Gran Canaria: distr. Arucas, Valleseco, secus viam, 800 m. Ad terram compactam in rupibus basalticis. Leg. A. Vězda & B. Coppins. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 87.

Thallus crustose, grey, grey-green, grey brown or sometimes rust-coloured, episubstratic, continuous, minutely cracked or granulose, sometimes quite thick and then forming distinctive, angular areolae in the middle part of the patches. Apothecia micareoid, sessile, not constricted at base, to 0.2-0.3(-0.5) mm across, sometimes confluent and forming up to 0.8 mm wide, tuberculate aggregates, with a convex-hemispherical, pale bluish grey to brown-black disc (brown in shade-forms), from the beginning without a distinct proper margin. Proper exciple absent; epithecium colourless or greenish, K-, N± red; hymenium colourless or greenish to pale blue-green in thick sections, (30-)40-70 µm high; paraphyses scarce, of two types: the majority sparingly branched and 0.5-1.2(-1.5) µm thick, the others mostly simple, often fasciculate and 1.5-2 µm thick; hypothecium colourless to pale greenish in upper part, of interwoven hyphae, K-. Asci 8-spored, cylindrical-clavate, the I+ blue tholus with a wide, I+ dark blue tube structure that expands towards the top, without a pale axial body, Psora-type. Ascospores 1-celled, hyaline, ellipsoid, thin-walled, (6-)7-11(-12) x (2-)3-4(-4.8) µm. Pycnidia to 0.1 mm across, immersed, the wall greenish, K- or K+ intensifying green, N+ reddish. Conidia bacilliform, 4-6(-7.5) x 0.8-1.2 µm. Photobiont chlorococcoid, the cells thin-walled, globose and (5-)7-12(-15) µm wide, or ellipsoid and up to 15 x 10 µm. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: thallus without lichen substances. - Note: on a wide variety of substrata (rocks, exposed roots, consolidated soil) in shaded-dry situations (e.g. under overhangs), but restricted to humid areas. Probably overlooked and more widespread, especially in the Alps.



Micarea bauschiana

Micarea bauschiana

[VZR], Batavia. Prov. Nord-Brabant, Eindhoven, Budel-Dorplein. Ad terram supra plantas emortuas, prope metallifodiam, Leg. P.v.Boom. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 165.

Thallus effuse, episubstratal, composed of scattered to usually confluent areoles. Areoles convex to subglobose, c. 0-1-0-3(-0-38) mm diam., white, pale grey to pale grey-green, or pale brown-grey, matt; in sections ecorticate but sometimes with a hyaline epinecral layer up to 10(-20) |µm tall. Photobiont 'micareoid', cells 4-7 µm diam. Apothecia usually present, but often immature, matt, usually black, but shade-forms grey to grey-brown, rarely white in pigment-deficient ('albino') forms, scattered to crowded, shallowly convex to hemispherical, immarginate, 0-15—0-4 mm diam., or some confluent to coalescing, rarely tuberculate, and then 0.6 mm when coalescing or tuberculate. Exciple indistinct (sometimes inapparent), refiexed, hyaline, of radiating, branched, paraphysis-like hyphae, 1-1.5 µm thick. Hymenium c. 40-45 µm tall, usually poorly delimited from the underlying hypothecium, hyaline or dilute olivaceous (especially in upper part), K+ violaceous, surface (epihymenium) sometimes dark brown, K+ dissolving into solution; 1+ blue, mainly due to fuzzy coats of asci. Paraphyses numerous, richly branched (especially in the epihymenium), 1-1.5(-1.7) µm thick in mid-hymenium, scarcely swollen above and (in K) without any closely adhering pigment. Asci 26-38 x 10-12 µm, clavate; in K/I with apical dome dark blue, with a broad, shallow ocular chamber, and an often indistinct, non-amyloid apical cushion, but without any dark, tube-like structure. Ascospores ellipsoid or oblong to ovoid-oblong, sometimes slightly curved, 0-1-septate, (5-)6-9(-9.8) x l.8-2.7(-2.9) µm. Hypothecium hyaline or with weak brown mottling, 60-70 µm tall. Pycnidia usually numerous, entirely to half-immersed in areoles, c. 50-130 µm diam., exposed parts (ostiolar region) dark coloured, gaping to 100 |µm diam.; wall brown to olivaceous (often K+ violaceous) in exposed parts, hyaline below. Conidia (mesoconidia) bacilliform, often faintly biguttulate, (4.2-)4-5.7(-7.8) x (l-)l.2-l.4(-l.5) µm; macroconidia and microconidia not found. Chemistry: Thallus, and sections of apothecia and pycnidia, K- , C+ red, P-, except for olivaceous pigment that reacts C+ and K+ violaceous; gyrophoric acid by TLC. - Distribution and habitat. *Micarea confusa* is so far known only from northern Belgium and the neighbouring part of The Netherlands (Noord-Brabant), alt-

hough it has been collected on several occasions since 1987. All collections are essentially terricolous, usually over moribund bryophytes, but also on various debris. Most of the collecting sites are in the vicinity of old zinc works where the soils are contaminated with heavy metals, especially zinc and cadmium. Interestingly, the species has not been found at sites of disused iron workings in the region. Two collections of *M. confusa* are not from sites of industrial activity, suggesting that it is not obligately associated with metal-rich substrata, rather it is favoured by the special, artificially created conditions they offer, and hence more conspicuous to the collector. Further habitat information is given below. - Remarks: *Micarea confusa* is very similar to *M. denigrata*, differing mainly in its more elongate mesoconidia. Less consistent differences are its generally better developed thallus, and somewhat shorter ascospores, proportionally fewer of which become 1-septate. In addition, *M. confusa* is predominantly terricolous (often over bryophytes), whereas *M. denigrata* is usually lignicolous. The differences between *M. confusa* and *M. denigrata* are, arguably, slight and the question as to whether or not *M. confusa* represents a phenotypic variant of *M. denigrata* needs to be addressed.

Micarea confusa

Micarea confusa

Micarea confusa

Micarea lapillicola (Vain.) Coppins & Muhr, Graphis Scripta 8(2): 47 (1997)
= *Lecidea lapillicola* Vain., Meddn Soc. Fauna Flora fenn. 10: 107 (1883)

[VZR407], Bohemia, austro-occidentalis, distr. Železná Ruda. montes Šumava (Gabreta). in valle rivi "Debrnik", ad finem Bavaria-Bohemia, 750 m. Ad lapillos in ripa rivi. Leg. J. Liška, Z. Palice, C. Printzen & A. Vězda. Ex A. Vězda: Lichenes Rariores Exsiccati Nr.407. - Annot.: Forma thallo ferrugineo. Cezerum in omnino cum descriptione Coppins & Muhr congruit.

Thallus episubstratal, effuse, pale to medium grey, composed of dispersed to confluent areoles. Areoles discrete, convex, c. 0.1-0.2 mm across, matt; in section without a cortex, but often with a hyaline epinecral layer c. 3-8 µm tall. Prothallus not evident. Photobiont "micareoid", cells 3-7 µm in diameter. Cephalodia absent. Apothecia numerous, black (or grey in deep shade), matt, at first plane and shallowly marginate, (0.12-)0,2-0.3 mm in diameter, later becoming convex and immarginate and to 0.4 mm in diameter. Hymenium 35-55 µm tall, dilute greenish, I+ blue; epithecium usually dark olivaceous green, K- or K+ green intensifying, N+ purple-red. Paraphyses scanty, simple or sparingly branched or anastomosed, 3-6-septate, 1.2-1.5 µm wide in mid-hymenium, often gradually widening to 2 µm towards apices; individual apices not closely surrounded by pigment. Asci clavate, 25-33 x 8-l l µm, 8-spored; in K/J with an amyloid apical dome containing a darker blue, diverging, apical tubular structure. Ascospores simple, ellipsoid to ovoid-ellipsoid, 6-9.5(-ll) x 3-4(-5.5) µm. Hypothecium 45-70 µm tall, dark reddish brown, K-, N-, I- or I+ bluish in patches; hyphae in lower and lateral part, outwardly radiating (towards parathecial crown), 1.8-2.7 µm wide; hyphae in upper part, inegularly orientated, short-celled, (2.5-)3-6 µm wide. Exciple distinct in young apothecia, c. 20-30 µm wide laterally, hyaline, or with outer edge dark olivaceous green (concolorous with epithecium); hyphae outwardly radiating, separating in K, branched and anastomosed, 1.5-2 µm wide but widening to 2-3 µm towards edge of exciple. Pycnidia inconspicuous, immersed in areoles, walls hyaline or olivaceous green in upper part (around ostiole), 20-40 µm in diameter. when producing microconidia, or c. 50-60 µm in diameter when producing mesoconidia. Microconidia bacilliform, eseptate, eguttulate,34 x (0.5-)0.8 µm; conidiogenous cells short (preparations insuficient to make accurate measurements). Mesoconi-

dia oblong-ellipsoid to ovoid-oblong, often biguttulate and with a median constriction, eseptate, 34(4.5) x 1.3-1.7 µmy conidiogenous cells 4-7 x 1.5-2.3 µm, cylindrical or with a swollen base. Chemistry: Apothecial sections C-; thallus K-, C-, KC-, P-; not examined by TLC. Greenish pigment of hymenium, exciple edge and pycnidia, K- or K+ green intensifying (pigment A, Coppins 1983); reddish brown pigment of hypothecium, K-, N- (pigment F, Coppins 1983). Micarea lapillicola is so far known from Sweden, Finland and northeast Scotland, where it grows on siliceous (sometimes ironstained) stones and boulders in rather open situations, e.g. by forest tracks; also found on the metal lettering of an abandoned motorcycle in a dense and humid *Picea abies* forest. Associated species on the examined specimens include *Micarea erratica, Porpidia crustulata*, *Rizocarpon hochstetteri* and *Stereocaulon* sp. (iuvenile). - *Micarea lapillicola* is most likely to be confused with other, predominately saxicolous, species of the genus that share the combination of similar ascospores, a greenish (K- or K+ intensifying) pigment in the hymenium or epithecium, and a reddish brown (K-, N-) pigment in the hypothecium. These species are *M. erratica, M. lutulata, M. subconfusa*

Micarea lapillicola

Micarea lapillicola

Micarea lapillicola

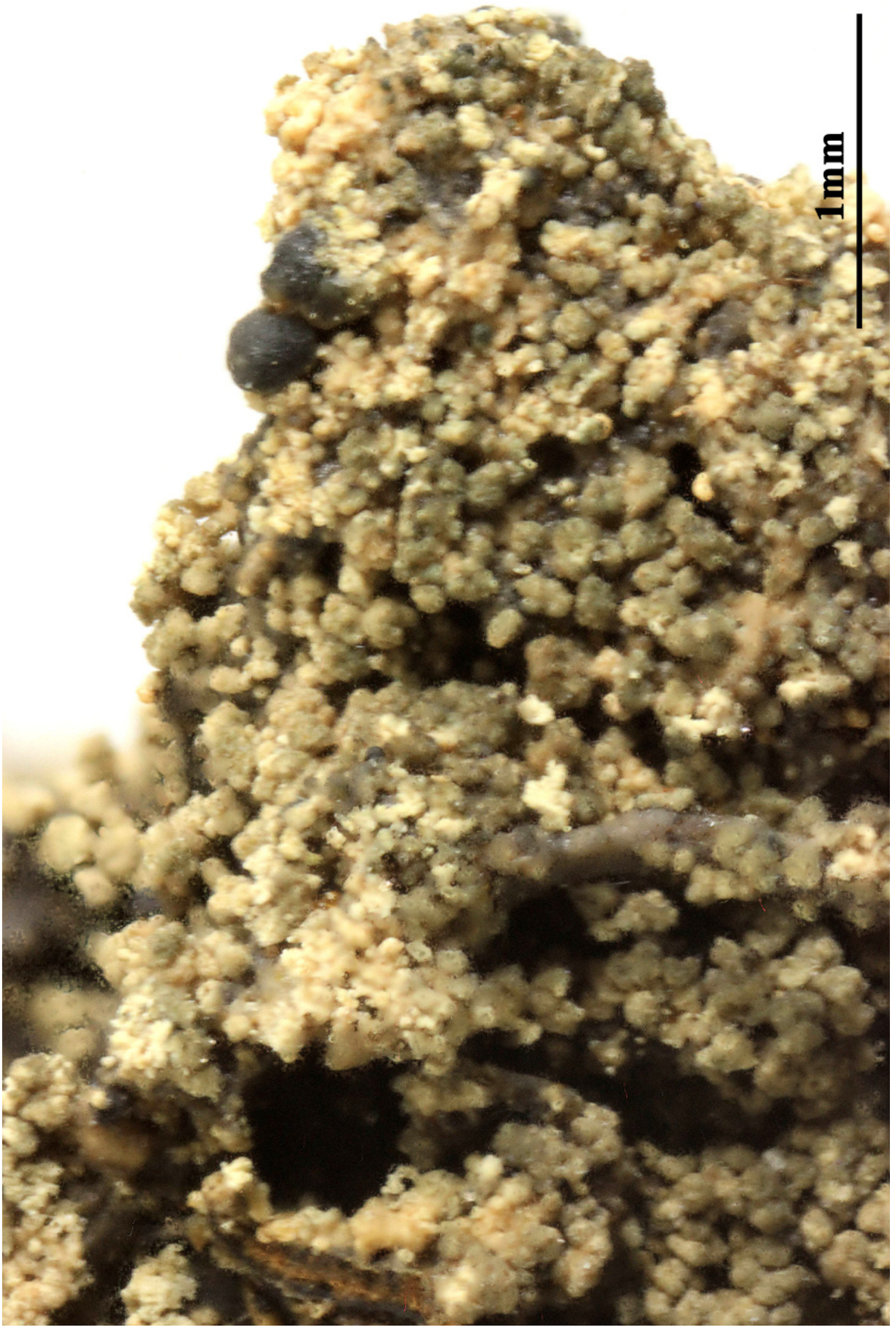
Micarea leprosula (Th. Fr.) Coppins & A. Fletcher, Lichenologist 7(2): 111 (1975)
= *Bacidia leprosula* (Th. Fr.) Lettau, Hedwigia 52(3-4): 133 (1912)
= *Bacidia lignaria* var. *leprosula* (Th. Fr.) Zahlbr., Cat. Lich. Univers. 4: 120 (1926) [1927]
= *Bilimbia leprosula* (Th. Fr.) Lettau, Bull. Acad. Intern. Géogr. Bot. 21: 179 (1912)
= *Bilimbia lignaria* var. *leprosula* (Th. Fr.) Oxner, Flora Lischaĭnikiv Ukraïni (Kiev) 2(1): 143 (1968)
= *Bilimbia milliaria* var. *leprosula* Th. Fr., Lich. Scand. (Upsaliae)(2): 382 (1874)
= *Bilimbia sphaeroides* subvar. *leprosula* (Th. Fr.) Boistel, Nouv. Fl. Lich. (Paris) 2: 191 (1903)
= *Micarea violacea* var. *leprosula* (Th. Fr.) Hedl., Bih. K. svenska Vetens-kAkad. Handl., Afd. 3 18(no. 3): 81 (1892)

[VZR440], Bohemia merid., distr. Klatovy, in valle rivi Vydra loco Turnerova chata dicto, 825 m. Supra muscos (*Racomitrium* sp.) ad saxa granitica, in lapidoso mobili. Leg. Z. Palice & O. Peksa, 7.7.2000, det. Z. Palice. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 440.

Thallus crustose, episubstratic, ash-grey, blue-grey or more rarely grey-brown, with minute white flecks, of scattered to usually coalescing (in the central, thicker parts of thallus), convex to globose, 0.1-0.4 mm wide, fragile, eroding areoles forming cracked, sorediate patches, the soredia 20-50 µm thick, the outer hyphae greenish, K-, N+ red. Apothecia not always present, micareoid, flat to convex, dark blue grey to glossy black, 0.2-0.5 mm across, adnate but finally slightly constricted at base, sometimes confluent and tuberculate (and then up to 1 mm across), with a soon excluded proper margin. Proper exciple thin but well-developed, especially in young apothecia, pale fuscous brown, of radiating, branched and anastomosing hyphae; epithecium scarcely differentiated from the hymenium, dark green, K-, N+ red; hymenium colourless in lower part, greenish to blue-green in upper part, 40-60 µm high, C+ red; paraphyses branched and anastomosing, (0.7-)1-1.5 µm thick at mid-level, the apical cells up to c. 2.5 µm wide, the epithecial pigment confined to the surrounding gel; hypothecium more or less colourless, 35-45 µm high, but much higher in tuberculate apothecia. Asci 8-spored, clavate to cylindrical-clavate, in K/I with a blue outer layer and apical dome and unstained wall, the dome with an apical cushion. Ascospores (1-)3-septate, hyaline, cylindrical-ellipsoid to fusi-

form, more or less curved, 14-26(-29) x 4-5.5 µm. Photobiont micareoid, the cells 4-7 µm wide. Spot tests: Thallus K-, C+ red, KC+ red, P+ red. Chemistry: argopsin and gyrophoric acid.
Note: on moribund silicicolous bryophytes and on twigs of shrubs, with optimum near and above treeline; the species is known from several localities in the Alps, all outside the Italian territory, but is easy to overlook, being often sterile, and should be looked for in the Italian Alps.

Micarea leprosula



Micarea leprosula

Micarea peliocarpa (Anzi) Coppins & R. Sant., in Coppins & James, Lichenologist 11(2): 155 (1979)
= *Bacidia friesiana* var. *violacea* Arnold, Flora, Regensburg 47: 598 (1864)
= *Bacidia hemipolioides* (Nyl.) Zahlbr., Cat. Lich. Univers. 4: 114 (1926) [1927]
= *Bacidia peliocarpa* (Anzi) Lettau, Hedwigia 52(3-4): 133 (1912)
= *Bacidia trisepta* (Nägeli) Zahlbr., in Engler & Prantl, Nat. Pflanzenfam., Teil. I (Leipzig) 1(1*): 135 (1905)
= *Bacidia violacea* (Arnold) Arnold, Flora, Regensburg 67(30): 581 (1884)
= *Biatora trisepta* Nägeli, in Müller Argoviensis, Mém. Soc. Phys. Hist. nat. Genève 16(2): 400 (1862)
= *Bilimbia hemipolioides* (Nyl.) A.L. Sm., Monogr. Brit. Lich. 2: 141 (1911)
= *Bilimbia hypnophila* var. *trisepta* (Nägeli) Bausch, Verh. naturw. Verein. Karlsruhe 4: 127 (1869)
= *Bilimbia lignaria* f. *trisepta* (Nägeli) Arnold, Flora, Regensburg 57(24): 383 (1874)
= *Bilimbia milliaria* var. *trisepta* (Nägeli) Th. Fr., Lich. Scand. (Upsaliae)(2): 382 (1874)
= *Bilimbia peliocarpa* Anzi, Atti Soc. ital. Sci. nat. 9: 250 (1866)
= *Bilimbia sabuletorum* var. *trisepta* (Nägeli) Rabenh., Krypt.-Fl. Sachsen, Abth. 2 (Breslau): 187 (1870)
= *Bilimbia sphaeroides* var. *trisepta* (Nägeli) Boistel, Nouv. Fl. Lich. (Paris) 2: 190 (1903)
= *Bilimbia subviridescens* var. *trisepta* (Nägeli) A.L. Sm., Monogr. Brit. Lich., Edn 2 2: 157 (1926)
= *Bilimbia trisepta* Hellb., Nerik. Laffl.: 77 (1871)
= *Bilimbia violacea* (Arnold) Arnold, Flora, Regensburg 53(30–31): 473 (1871) [1870]
= *Lecidea hemipolioides* Nyl., Flora, Regensburg 56(19): 294 (1873)
= *Lecidea peliocarpa* (Anzi) Nyl., Flora, Regensburg 64: 114 (1881)
= *Lecidea sabuletorum* f. *trisepta* (Nägeli) Stizenb., Nova Acta Acad. Caes. Leop.-Carol. German. Nat. Cur. 34(no. 2): 47, tab. III. fig. A, 35?62 (1867)
= *Lecidea trisepta* (Nägeli) Nyl., in Vainio, Meddn Soc. Fauna Flora fenn. 3: 113 (1878)
= *Lecidea violacea* P. Crouan & H. Crouan ex Nyl., Flora, Regensburg 45(29): 464 (1862)
= *Micarea trisepta* (Nägeli) Wetmore, Publs. Mich. St. Univ. Mus., ser. biol. 3: 284 (1968)
= *Micarea violacea* (Arnold) Hedl., Bih. K. svenska VetenskAkad. Handl., Afd. 3 18(no. 3): 80 (1892)
= *Micarea violacea* f. *hemipolioides* (Nyl.) Hedl., Bih. K. svenska VetenskAkad. Handl., Afd. 3 18(no. 3): 80 (1892)

= *Micarea violacea* f. *peliocarpa* (Anzi) Hedl., Bih. K. svenska VetenskA-kad. Handl., Afd. 3 18(no. 3): 81 (1892)
= *Patellaria trisepta* (Nägeli) Müll. Arg., Nuovo G. bot. ital. 21(3): 364 (1889)
= *Weitenwebera trisepta* (Nägeli) Poetsch, System. Aufzähl. samenlos. Pflanzen (Krypt.): 214 (1872)

[VZR353], Insulae Canarienses. Tenerife: Las Montanas de Anaga, La Cumbrilla, 900 m. Ad rupes humidas in fossis viae. Leg. A. Vězda & F. Ceni, 8.3.1994, det. A. Vězda. EX A. VěZDA: ÖLICHENES RARIORES EXSICCATI NR. 353.

Thallus crustose, usually episubstratic, greenish white to blue-grey, of moderately to strongly convex, to 0.2 mm wide areoles, sometimes almost continuous but more or less cracked, rarely endosubstratic and poorly evident. Apothecia micareoid, rounded, sessile, not constricted at base, sometimes confluent and tuberculate, flat to convex, 0.15-0.7(-1) mm across, variously coloured, from completely whitish to greyish, lead-grey, grey-brown, blackish or black, or often piebald or bluish tinged, at first usually with a slightly paler margin, but later mostly immarginate. Proper exciple up to 50(-60) µm wide, colourless to straw-coloured, composed of densely branched and anastomosing, 1.8-2.5 µm wide, paraphysis-like hyphae; epithecium scarcely differentiated from the hymenium; hymenium 40-55 µm high, colourless, but in upper part slightly olivaceous straw-coloured, greyish-green to aeruginose-green in darker apothecia, K± greenish intensifying, C+ fleeting orange-red, N+ red,; paraphyses conglutinated, branched and anastomosing, 1-1.5 µm thick at mid-level, the apical cells to 2.5 µm wide; hypothecium more or less colourless or pale yellow, 50-70 µm high. Asci 8-spored, clavate, in K/I with a blue outer layer and apical dome and unstained wall, the dome with an apical cushion, (25-)35-45(-50) x 12-15 µm. Ascospores (1-)3(-5)-septate, hyaline, fusiform-elongate, often slightly curved, (11-)15-23(-24) x 3-5(-6) µm. Pycnidia often present, of two types: a) small, 30-70 µm wide, immersed to ±sessile, whitish to dark olivaceous-green, producing thread-like to narrowly baciliform microconidia measuring 5-7.5(-8) x 0.4-0.7(-0.9) µm; b) immersed, 120-150 µm wide, often widely gaping, concolour with thallus around ostioles or greenish producing usually strongly curved, sometimes sigmoid, rarely also straight, mostly 3-septate macroconidia measuring 16-38(-50) x (1-)1.2-1.5(-1.7) µm; pycnidial walls C+ flee-

ting orange red, K- or K+ intensifying green when pigmented. Photobiont micareoid, the cells 4-8 µm wide. Spot tests: thallus and apothecial sections K-, C+ red, KC+ red, P-. Chemistry: gyrophoric acid. - Note: a temperate to boreal-montane, ecologically wide-ranging species found on the acid bark of deciduous (especially old oaks and Fagus) and coniferous trees, lignum, peaty soil, moribund bryophytes, and small siliceous pebbles.

Micarea peliocarpa

Micarea peliocarpa

Micarea polycarpella (Erichsen) Coppins & Palice, in Coppins, Palice & Soldan, Bryonora 16: 23 (1995)

= *Lecidea polycarpella* Erichsen, Verh. bot. Ver. Prov. Brandenb. 71: 90 (1929)

[VZR486], Aequatoria. Prov. Tungurahua: Banos, supta cataracta Ines Maria, 1900-1950 m. Ad lapillos secus viam. Leg. et det. Z. Palice, 11.3.2003. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 486.

Thallus crustose, thinly episubstratic, of irregular, minutely warted, 0.2-0.3 mm wide areoles, but often evident only near the apothecia, pale brown to greenish-brown; when pycnidia are abundant thallus thicker, of 0.4-1.2, flat to granular, greenish-grey to dull olive-grey areoles. Apothecia biatorine, at first flat or slightly convex, later hemispherical to subglobose, black, matt, simple or clustered and often tuberculate, 0.15-0.3(-0.4) mm across, with a thin, darker proper margin when young. Proper exciple 7-12(-15) µm wide, dark green throughout, the hyphae stout, coherent also in K; epithecium poorly delimited from the hymenium, but usually darker, K-; hymenium colourless, with dark blue-black streaks in lower part, bluish, greyish-blue to aeruginose green in upper part, 30-40(-50) µm high, K-, I+ blue; paraphyses rather scarce, coherent, mostly simple, rarely branched and anastomosing, 1-2 µm thick, but some of them clearly branched in upper part and 2-2.5 µm thick, with >3 µm wide apical cells; hypothecium colourless or pale straw. Asci cylindrical-clavate, with a K/I + pale blue apical dome with a dark blue tubular structure, 30-45 x 7-14 µm. Ascospores simple, hyaline, oblong-ellipsoid or ellipsoid, 8-10(-12) x 3-4.5(-5) µm. Pycnidia immersed, black, 70-150 µm wide, the ostioles widely gaping, the walls dull olive to aeruginose black, K-. Mesoconidia cylindrical, 4-5 x 1.2-1.4(-1.6) µm. Photobiont chlorococcoid, not micareoid, the cells globose, (7-)10-21(-28) µm wide. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a widespread, but poorly collected species known from several localities in Central Europe, a pioneer colonizer usually growing in disturbed habitats on loose or dumped siliceous stones.

Micarea polycarpella

Micarea polycarpella

Microtheliopsis uleana Müll. Arg., Flora, Regensburg 73: 195 (1890)
= *Microthelia uleana* (Müll. Arg.) F. Schill., Hedwigia 67: 290 (1927)
= *Microtheliopsidomyces uleanae* Cif. & Tomas., Atti Ist. bot. Univ. Lab. crittog. Pavia, sér. 5 10(1): 61 (1953)

[VZR6], Antillarum Insulae. Guadeloupe: Insula Basse-Terre, comm. Gourbeyoe, prope vicum Champfleeury in montibus Caraibes. Ad folia arborum. Leg. J. Vivant, 11.1989., det. A. Vězda. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 6.

Thallus crustose, continuous or dispersed into rounded to irregular patches, smooth or rarely thinly setose, 3–8 mm across, very thin (7–13 µm), ochraceous yellow to yellowish brown or green; setae formed by single, unbranched, septate hyphae (cells 4–6 µm long), 0.05–0.1 mm long and 2–3 µm broad, dark brown. Photobiont cells rectangular, 12–20 x 6–10 µm, in radiate plates, often forming setose, pale zoosporangia and gametangia (not to be confused with setae of the mycobiont!). Perithecia adnate, lensshaped to conical, rounded or radiately elongate, 0.15–0.25 mm diam. and 60–80 µm high, brownish black. Excipulum 7–15 µm thick, inner part pale, outer part dark brown. Involucrellum 6–12 µm thick, dark brown. Asci 24–30 x 6–8 µm. Ascospores fusiform ellipsoid, 3-septate, without constrictions at septa, 9–13 x 2.5–4 µm, greyish brown. Conidiomata not observed. Chemistry: no substances detected by TLC.

Microtheliopsis uleana

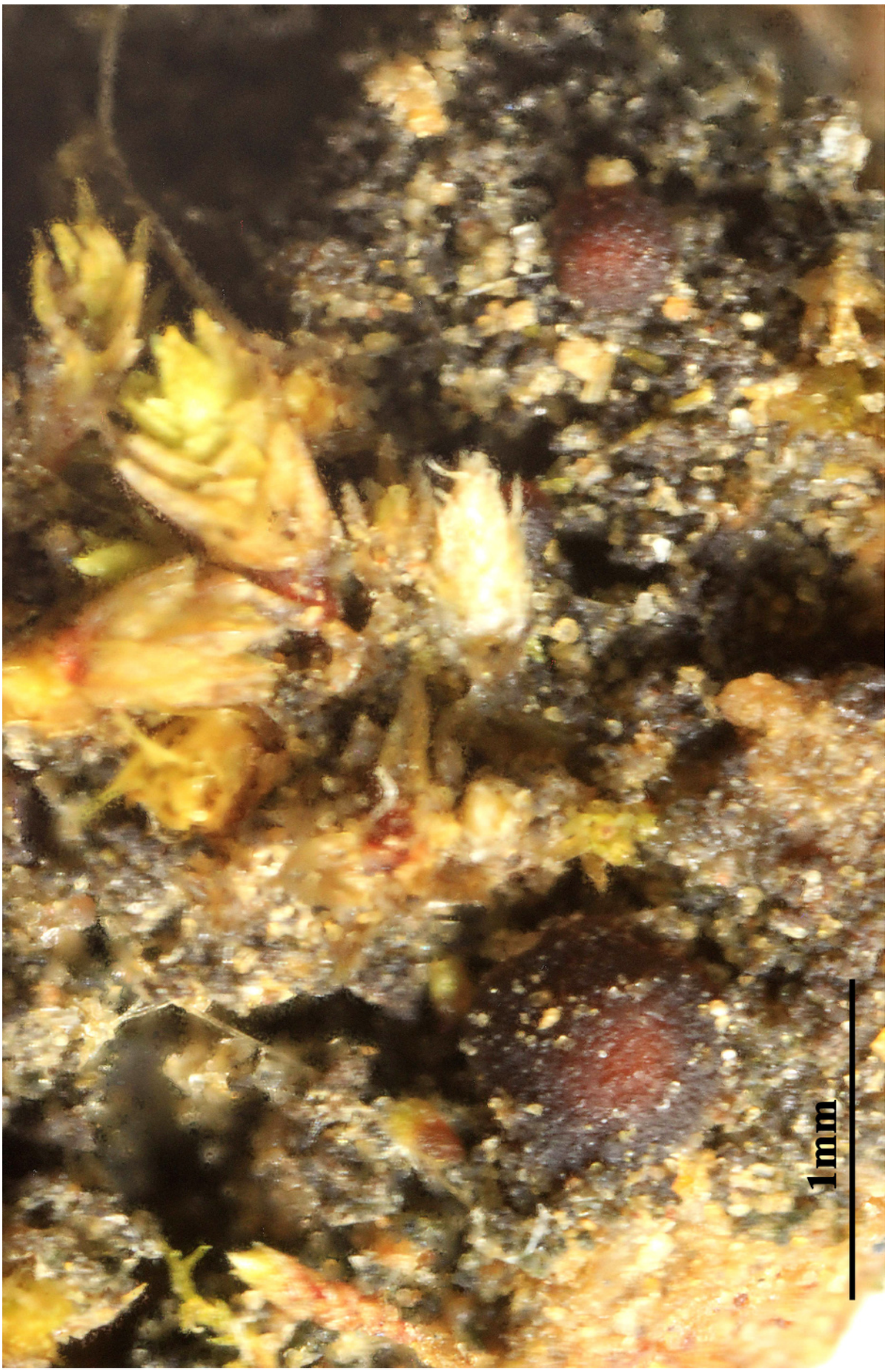
Microtheliopsis uleana

Moelleropsis humida (Kullh.) Coppins & P.M. Jørg., British Lichen Society Bulletin, Supplement 72: 75 (1993)
= *Gregorella humida* (Kullh.) Lumbsch, in Lumbsch, Prado & Kantvilas, Lichenologist 37(4): 300 (2005)
= *Biatora humida* Kullh., Not. Sällsk. Fauna et Fl. Fenn. Förh., Ny Ser. 11: 274 (1871) [1870]
= *Lecidea humida* (Kullh.) Th. Fr., Lich. Scand. (Upsaliae)(2): 477 (1874)
= *Pannularia humida* (Kullh.) Vain., Acta Soc. Fauna Flora fenn. 57(no. 2): 212 (1934)

[VZR480], Germania. Nordrhein-Westfalen, Kiesgruben prope Ratingen, ad terrram macram. Leg. G. Zimmermann, M.I. Messuti & H.T. Lumbsch, 4.2002. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 480.

Thallus crustose, olivaceous brown, dull grey-brown to almost black when dry, subgelatinous when wet, entirely consisting of 40-100 µm wide, corticate (fully covered by a layer of small, isodiametric cells), granular goniocysts. Apothecia biatorine, up to 0.3-0.4(-0.5) mm across, sessile, with a convex, colourless to medium brown (when dry) disc, emarginate. Proper exciple very poorly developed, of long-celled, thin-walled hyphae; epithecium poorly delimited from hymenium; hymenium colourless, I-; paraphyses simple or sparingly branched in upper part, slender, 1-1.5 µm thick, coherent (well-visible only in K), the apical cells not swollen; hypothecium colourless. Asci 8-spored, clavate, apically thickened, without any amyloid apical structures, approaching the Trapelia-type. Ascospores 1-celled, hyaline, ellipsoid, (8.5-)12-16(-19) x (5-)7-10(-15) µm, 1.7-2.1 times as long as wide, thin-walled, sometimes with a single pseudo-septum and appearing 2-celled, not halonate. Photobiont cyanobacterial (Nostoc, the cells in short chains). Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a rather ephemeral, short-lived species, pioneer on soil and debris, e.g. on dump heaps and margins of white roads; widespread in the boreal to temperate zones of Europe, but rare, but perhaps overlooked. In the Alps known from a single locality (Austria).

Moelleropsis humida



Moelleropsis humida

Moelleropsis humida (Kullh.) Coppins & P.M. Jørg., British Lichen Society Bulletin, Supplement 72: 75 (1993)
= *Gregorella humida* (Kullh.) Lumbsch, in Lumbsch, Prado & Kantvilas, Lichenologist 37(4): 300 (2005)
= *Biatora humida* Kullh., Not. Sällsk. Fauna et Fl. Fenn. Förh., Ny Ser. 11: 274 (1871) [1870]
= *Lecidea humida* (Kullh.) Th. Fr., Lich. Scand. (Upsaliae)(2): 477 (1874)
= *Pannularia humida* (Kullh.) Vain., Acta Soc. Fauna Flora fenn. 57(no. 2): 212 (1934)

[VZR435], Hollandia. Brabantia borealis, Son Hautens, pontus parvus super canalem, ad terram argillaceam. Leg. & det: P. v. Boom. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR.435.

Thallus crustose, olivaceous brown, dull grey-brown to almost black when dry, subgelatinous when wet, entirely consisting of 40-100 µm wide, corticate (fully covered by a layer of small, isodiametric cells), granular goniocysts. Apothecia biatorine, up to 0.3-0.4(-0.5) mm across, sessile, with a convex, colourless to medium brown (when dry) disc, emarginate. Proper exciple very poorly developed, of long-celled, thin-walled hyphae; epithecium poorly delimited from hymenium; hymenium colourless, I-; paraphyses simple or sparingly branched in upper part, slender, 1-1.5 µm thick, coherent (well-visible only in K), the apical cells not swollen; hypothecium colourless. Asci 8-spored, clavate, apically thickened, without any amyloid apical structures, approaching the Trapelia-type. Ascospores 1-celled, hyaline, ellipsoid, (8.5-)12-16(-19) x (5-)7-10(-15) µm, 1.7-2.1 times as long as wide, thin-walled, sometimes with a single pseudo-septum and appearing 2-celled, not halonate. Photobiont cyanobacterial (Nostoc, the cells in short chains). Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a rather ephemeral, short-lived species, pioneer on soil and debris, e.g. on dump heaps and margins of white roads; widespread in the boreal to temperate zones of Europe, but rare, but perhaps overlooked. In the Alps known from a single locality (Austria).

Moelleropsis humida

Moelleropsis humida

Multiclavula mucida (Pers.) R.H. Petersen, Am. Midl. Nat. 77: 212 (1967)
= *Calocera mucida* (Pers.) Wettst., Verh. Kaiserl.-Königl. zool.-bot. Ges. Wien 35: 553 (1886) [1885]
= *Clavaria mucida* Pers., Comm. fung. clav. (Lipsiae): 55 (1797)
= *Clavaria mucida* var. *rosea* Bres., Fl. ital. crypt., Hymeniales (Genoa): 1251 (1916)
= *Lentaria mucida* (Pers.) Corner, Monograph of Clavaria and allied Genera, (Annals of Botany Memoirs No. 1): 442 (1950)
= *Lentaria mucida var. hexaspora* Geitler, Öst. bot. Z. 112: 189 (1965)
= *Pistillaria mucida* (Pers.) Costantin & L.M. Dufour, Nouv. Fl. Champ., Edn 1 (Paris): 177 (1891)
= *Typhula mucida* (Pers.) Fr., Stirp. agri femsion. (Lundae) 4: 67 (1827) [1825-26]

[VZR244], Austria. Tirolia septentr.: Montes Alpium, pars Nordtiroler Kalkalpen, Brandenberg prope Keiserklamm, Krambach, 755 m. Ad lignum putridum in rivo. Leg. et det. J. Horáková. Ex A. VěZDA: Lichenes Rariores Exsiccati Nr. 244.

Thallus crustose, episubstratic, forming a soft, gelatinous (when wet), green to grey-green, 0.5-1 mm thick film made of minute granules consisting of clumps of algal cells incompletely surrounded by hyphae. Basidiocarps not lichenized, ephemeral (summer and autumn), cylindrical to club-shaped, 3-15(-20) mm tall, 0.2-0.5(-1) mm wide, creamy white, geotropically oriented, the apices pointed or slightly forked, the upper fertile part sometimes yellowish brown at maturity, the base slightly cottony, with a simple monomitic hyphal system, the hyphal septa with clamps, a dense subhymenium, and a thickening hymenium. Basidia clavate, with (4-)6 sterigmata. Basidiospores ellipsoid to slightly cylindrical, hyaline and smooth-walled, with (1-)2 oil droplets, (4.5-)5.5-6.5(-8) x 2-3.5 µm, I-. Photobiont chlorococcoid. Spot tests: all negative. Chemistry: thallus without lichen substances. - Note: on decaying wood (logs, stumps) in pristine, humid montane forests; perhaps overlooked by lichenologists, but certainly very rare in Italy.

Multiclavula mucida

Multiclavula mucida

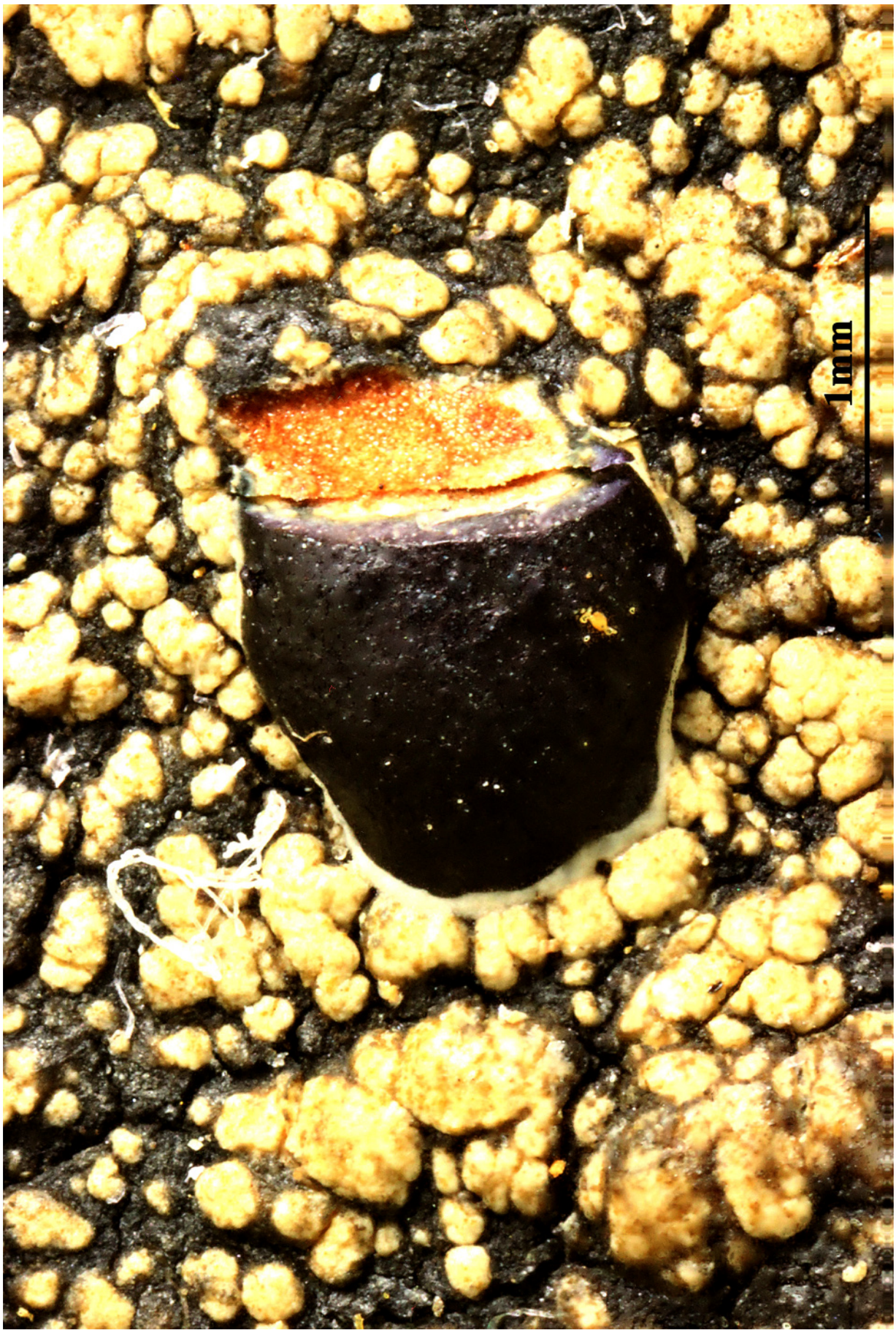
Mycoblastus fucatus (Stirt.) Zahlbr., Cat. Lich. Univers. 4: 3 (1926) [1927]
= *Violella fucata* (Stirt.) T. Sprib., in Spribille, Goffinet, Klug, Muggia, Obermayer & Mayrhofer, Lichenologist 43(5): 461 (2011)
= *Lecidea fucata* Stirt., Scott. Natural. 5: 16 (1879)
= *Megalospora fucata* (Stirt.) H. Olivier, Bull. Acad. Intern. Géogr. Bot. 21: 187 (1911)
= *Mycoblastus sterilis* Coppins & P. James, Lichenologist 11(2): 158 (1979)

[VZR66], Sina. Priv. Yunnan, montes Yulong Shan, 30 km ad septentriones ab oppido Likiang, 4000 m. Ad truncum arboris. Leg. J. Soják, 25.7.1990, det. A. Vězda. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 66.

Thallus crustose, episubstratic, greyish white to bluish grey in non-sorediate parts, continuous to areolate, usually but not always sorediate, forming regular or irregular, up to 3(-l0) cm wide patches, often delimited by a blue- or brown-black prothallus, especially when forming mosaics. Areoles more or less rounded to irregular in outline, adnate, convex, up to c. 0.3 mm in diam.; continuous parts usually distinctly tuberculate and more or less fissured. Soralia green or pale yellowish green when abraded, often appearing bluish grey due to a pigment in the external soredia, bursting from apices of areoles or tubercles, concave to convex, usually of variable size, up to 1.5 mm in diam., discrete to contiguous, occasionally a few becoming confluent, but never forming a leprose crust. Soredia mostly farinose, sometimes gathered into larger consoredia up to 90 μm in diam.; external soredia sometimes with a brown, K+ intensifying, N+ reddish brown pigment. Apothecia usually rare, biatorine, 0.5-1.5(-2) mm across, black, closely adpressed, with a flat to strongly convex disc and a thin, soon excluded proper margin. Proper exciple reduced, the hyphae vertically arranged and resembling paraphyses; epithecium scarcely differentiated from the hymenium; hymenium greenish (Cinereorufa-green pigment), with many purple-violet granules (Fucatus-violet pigment) reacting N+ red, K+ dissolving bright green; paraphyses branched and anastomosing, straight or slightly curved with thinner cross-bridges; hypothecium red-brown, the lower part pale violet to colourless, rarely red-brown-spotted. Asci (1-)2(-3)-spored, cylindrical-clavate, very thick-walled, with a K/I+ blue apical dome and a distinct ocular chamber, the outer layer forming a K/I+ dark blue apical cap, intermediate between the Biatora and the Bacidia-type. Ascospores 1-celled, hyaline but turning brownish when overmature, ellipsoid, (25-)30-48(-52) x 15-21 μm,

initially with a single wall, later with an additional internal wall turning brown. Photobiont chlorococcoid. Spot tests: K+ bright yellow turning red-brown, C-, KC+ dull brown, P+ rust-red, UV-. Chemistry: fumarprotocetraric acid, atranorin, chloroatranorin, traces of protocetraric acid. - Note: a cool-temperate lichen found on bark in humid woodlands of the montane belt; certainly much overlooked in the Alps, being mostly sterile.

Mycoblastus fucatus



Mycoblastus fucatus

Mycocalicium americanum (R. Sant.) Tibell, Symb. bot. upsal. 27(no. 1): 182 (1987)
= *Calicium americanum* R. Sant. 1943

[VZR94], Australia. Queenslandia, Tandora, ca. 25 km septendriones et orientem versus Marybough, 0 m, 24°27' austr., 152°52' orient. Ad lignum *Rhizophorae stylosae*. Leg. J. Hafellner & R. Rogers, 23.08.1986, det. L. Tibell. EX A. VĚZDA:LICHENES RARIORES EXSICCATI NR. 84.

Saprobic, not lichenized. Thallus sterile mycelium immersed in the substrate, sometimes rendering it a greenish or greenish gray color, often paler than surrounding wood but usually blackened around the base of the ascomata. Apothecia dark brown to black, rather robust, 0.5-0.8 mm tall, with shining stalk often thickened towards the base; capitulum 0.3-0.6 mm in diam., lenticular to obconical; disc flat to slightly convex, with strongly incurved margin; exciple 60-90 µm thick, well-developed, consisting of irregularly interwoven hyphae with swollen walls, inner part hyaline, outer part reddish brown to brown, central part often with droplets or amorphous crystals of a yellowish red to red pigment located in the hyphal lumina; a thin layer of spores is often found on the surface of the apothecia; stalk short, 0.10-0.20 mm in diam., the central part consisting of largely periclinally arranged, pale hyphae with swollen walls and moderately branched and intertwined, 2-3 µm in diam., outer part of the stalk with strongly intertwined hyphae with thickened walls, outermost part of stalk reddish brown to brown, reddish parts of the ascomata K+ violet red and H+ slightly intensified reddish; hymenium dark brown above, 80-110 µm tall, lining the inner surface of the exciple and extending upwards along the inner edge of the exciple; paraphyses simple, filiform, 1-1.5 µm thick; hypothecium hyaline, poorly developed, obconical asci: cylindrical, 35-60 x 4.5-6 µm, with moderately and uniformly thickened apex c. 1.5 µm thick; ascospores dark brown, simple, fusiform to ellipsoid, 8-11 x 3.5-5 µm, with a minute, irregular ornamentation visible under the light microscope. Pycnidia not observed. Secondary metabolites none detected. - On old wood. World distribution: South America (Argentina, Brazil, Chile, Colombia, Dominican Republic, and Paraguay) and North America Sonoran distribution: Baja California and Baja California Sur. - Notes: Mycocalicium americanum is characterized by its robust ascomata, its incurved exciple edge, its smooth and epruinose exciple margins, its large spores, and the red pigment in the ascomata. It is quite

similar to M. calicioides, which differs in having a yellow pruina on the capitulum, a rugose outer surface of the exciple, and a narrower disc. See Tibell (1987; 1996) for further details.

Mycocalicium americanum

Mycocalicium americanum

Mycocalicium americanum

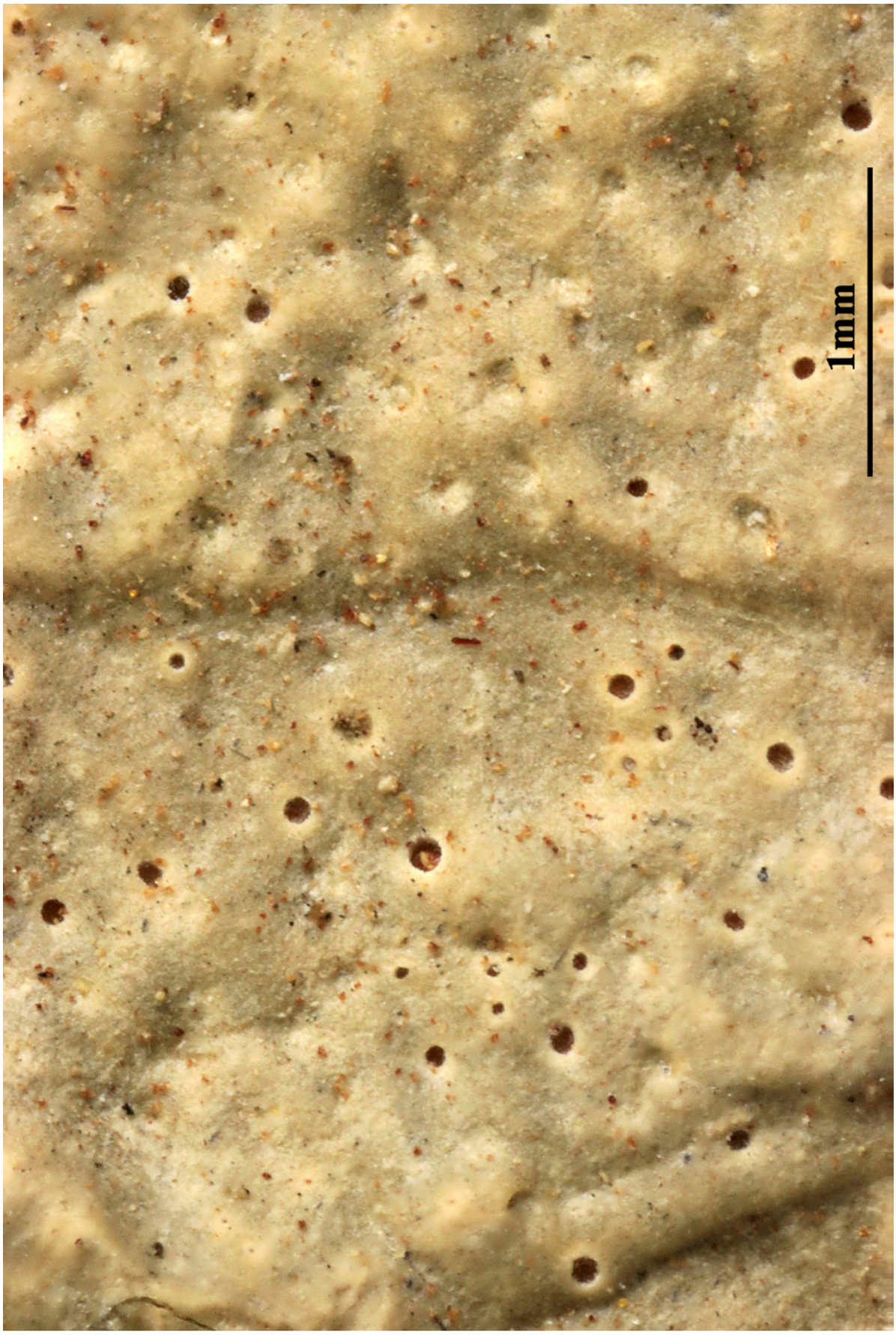
Mycocalicium americanum

Myriotrema minutulum (Hale) Hale, Mycotaxon 11(1): 134 (1980)
= *Ocellularia minutula* Hale, Smithson. Contr. bot. 38: 24 (1978)

[VZR107], Australia. Queenslandia. Dicks Tableland, "Rain Forest Discovery track" prope Eunugella, 60 km ad orientem a Mackay. 21°43' austr., 148°30' orient., 750 m. Ad corticem arborum in pluviisilva. Leg. K. & A. Kalb, 28.8.1992, det. K. Kalb. - TLC: psoromic acid, anal. K. Kalb. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 107.

Thallus corticola, epiphloeodes, tenuis, continuus, pallide cinereo-viridis, 6-8 cm latus; apothecia solitaria, sparsa, immersa vel semi-emergentia, 0.2-0.3 mm diametro, ecolumellata vel rudimentaliter columellata; excipulum non separatum, decoloratum; ostiolum discretum, rotundatum, 0.05 mm diametro, albo-cinctum; hymenium 120-130 µm altum; sporae 8/asus, 7-10 x 22-24 µm, 6-8 loculatae, I+ caerulescentes. CHEMISTRY.-psoromic and norpsoromic acids. REMARKS.- This inconspicuous species has much smaller apothecia than any other psoromic acid containing species with semiemergent fruiting bodies (nonmyriotremoid). The small but distinct pore, when strongly white annulate, resembles that of *0cellularia umbilicata* Muller Argoviensis, a Costa Rican species with a thicker, warty thallus and larger apothecia. The poorly known 0cellulria *albula* (Nylander) Zahlbruckner from Brazil has a white pruinose thallus and smaller spores. *Ocellularia minutula* occurs on saplings and lower trunks of trees in low to mid elevation rain forest.

Myriotrema minutulum

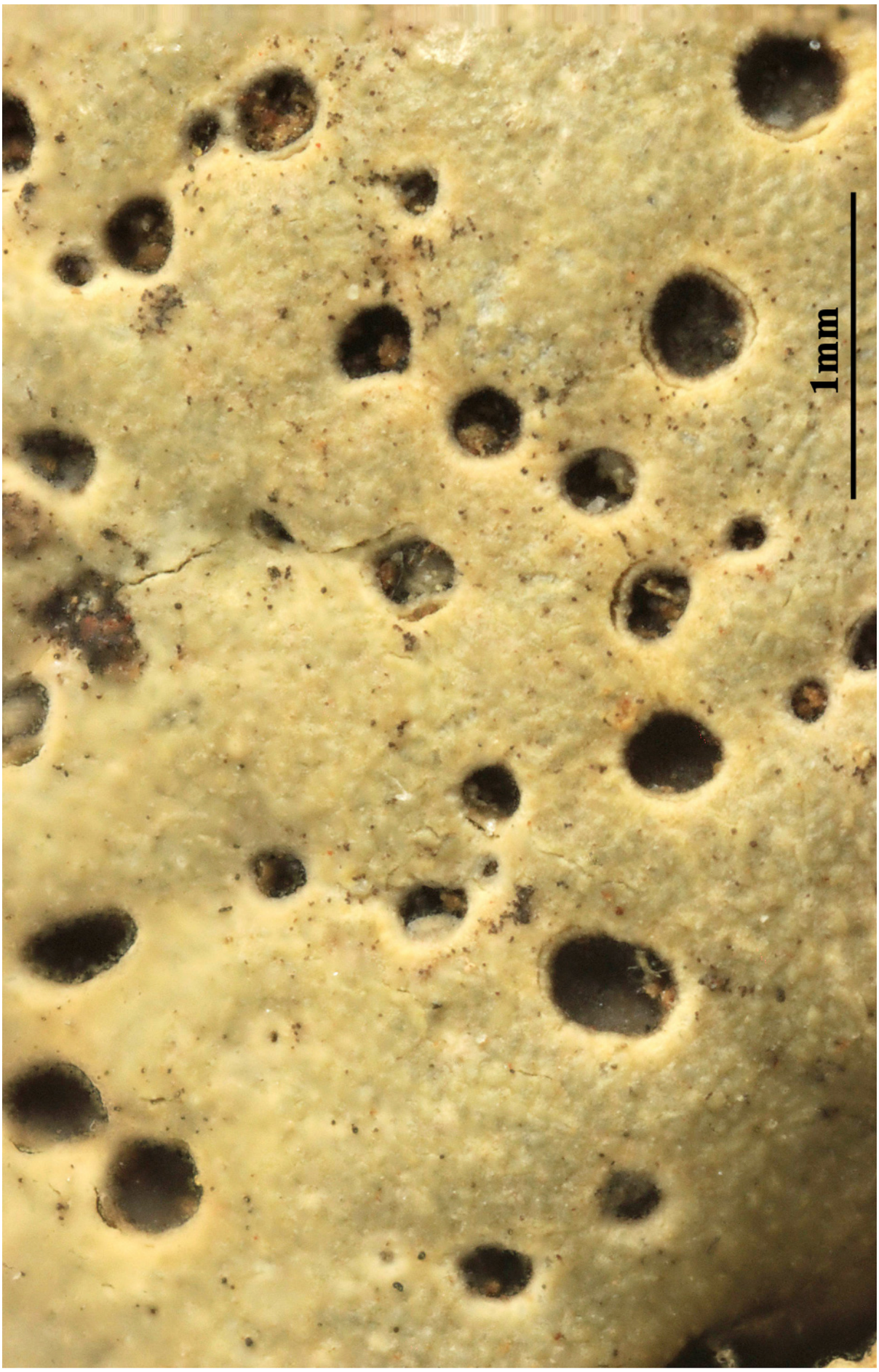


Myriotrema minutulum

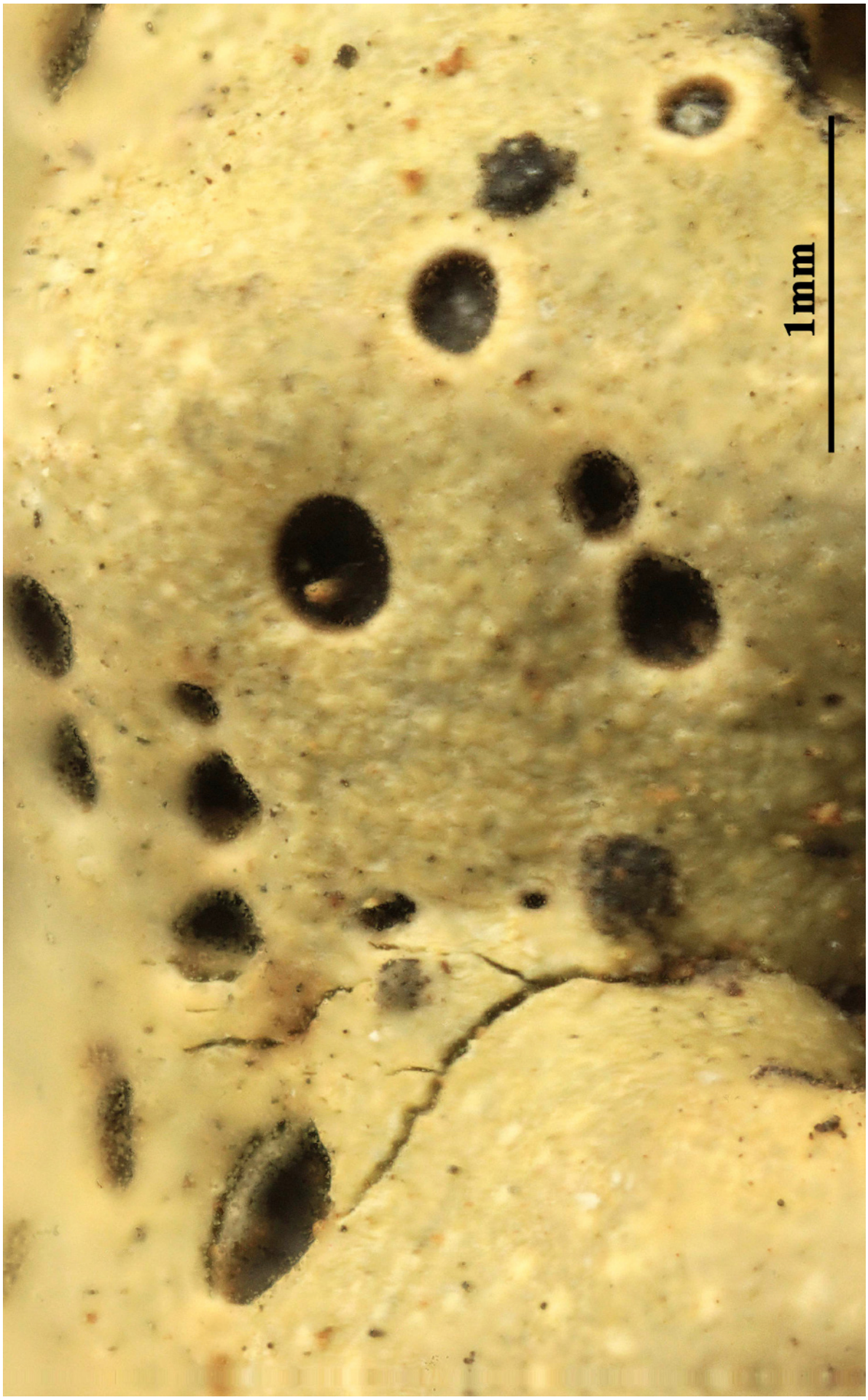
Myriotrema wightii (Taylor) Hale, Mycotaxon 11(1): 135 (1980)
= *Sanguinotrema wightii* (Taylor) Lücking, in Lücking, Mangold, Plata, Parnmen, Kraichak & Lumbsch, Bot. J. Linn. Soc. 436: 441 (2015)
= *Endocarpon baileyi* Stirt., Trans. & Proc. Roy. Soc. Victoria 17: 74 (1881)
= *Endocarpon wightii* Taylor, London J. Bot. 6: 155 (1847)
= *Leptotrema baileyi* (Stirt.) Shirley, Proc. R. Soc. Qd. 6: 194 (1889)
= *Leptotrema wightii* (Taylor) Müll. Arg., Flora, Regensburg 65: 499 (1882)
= *Phaeotrema wightii* (Taylor) Zahlbr., in Magnusson & Zahlbruckner, Ark. Bot. 31A(no. 1): 48 (1944)
= *Thelotrema wightii* (Taylor) Nyl., Mém. Soc. Imp. Sci. Nat. Cherbourg 5: 118 (1858) [1857]

[VZR403], Argentina. Missiones, San Ignacio, Patoreo Grande. 33°24' occid., 27°17' merid., 290 m. Ad corticem *Tecomae ochracae*. Leg. J. E. Montes (nr. 10058), 25.3.1956, det. H. S. Osorio. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 403.

Thallus corticolous, epiphloeodal, thin and fragile, shiny, smooth to verruculose, pale tannish gray, 10-15 cm broad; apothecia conspicuous, chroodiscoid, becoming basally constricted, 1-3 mm in diameter, the thalline margin coarse, erect to slightly recurved, the inner exciple evanescent, the disc white pruinose, becoming superficially actinoid with light carbonization; spores 8/ascus, 5-6 x 10-18 µm, 0-1 x 4-5 loculate, J+ blue. CHESfISTRY.-Psoromic acid. - REMARKS.-This species forms large conspicuous colonies on the lower trunk to mid bole of large trees. The pale flesh-colored apothecia stand out in particular because of the broad chroodiscoid disc. The disc becomes irregularly ridged with age, giving the superficial actinoid appearance mentioned by Tuckerman (1862:410). It has been known before only from Cuba. Externally it is extremely close to *Ocellularia subwrightii* Hale.



Myriotrema wightii



Myriotrema wightii

Neophyllis melacarpa (F. Wilson) F. Wilson, J. Linn. Soc., Bot. 28: 372 (1891)
= *Gymnoderma melacarpum* (F. Wilson) Yoshim., J. Jap. Bot. 48(9): 287 (1973)
= *Lecidea dactylophylla* (Müll. Arg.) Zahlbr., Cat. Lich. Univers. 3: 867 (1925)
= *Phyllis melacarpa* F. Wilson, Victorian Nat. 6: 68 (1889)
= *Phyllopsora melanocarpa* Müll. Arg., Hedwigia 34: 28 (1895)
= *Psora dactylophylla* Müll. Arg., Bull. Herb. Boissier 1(2): 35 (1893)

[VZR303], Nova Zelandia, distr. Nelson, Kahurangi Natioal Park, secus viam inter stationem "Flora Carpark" et casam alpinam Mt. Arthur dictam, 1399 m. Ad truncum putridum arboris (*Podocarpus*). Leg. W. Malcolm & A. Vězda, 21.4.1997. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 303.

Primary thallus to 1.5 mm tall and c. 0.5 mm wide, small, squamulose, sublinear, irregularly to pinnately lobed, pale greenish brown to olive-green above, cream or yellowish brown below. Lobes rounded at apex, sinuous at margins. Lobules often developing from upper surface or margins. Podetia on primary squamules, to 3 mm tall, simple, slender, usually very dense, cylindrical, sometimes distinctly flattened. Apothecia to 1 mm wide, on podetial tips, sometimes sunk below level of clustered primary thalli; disc convex to hemispheric, shining, blackish brown to black; exciple thin, becoming obscured. Ascospores ellipsoidal, 5–13 × 4–7 µm. CHEMISTRY: K-, KC-, P± red. Fumarprotocetraric melacarpic and grayanic acids (major), congrayanic and 4-0-demethylgrayanic acids (minor). - Occurs in south-eastern Australia. A common and characteristic species of rotting logs and tree bases in wet sclerophyll forests up to 1300 m.

Neophyllis melacarpa

Neophyllis melacarpa

Sarrameana cyamidia (Stirt.) Kantvilas & Vězda, Nordic J. Bot. 16(3): 329 (1996)
= *Loxospora cyamidia* (Stirt.) Kantvilas, Herzogia 14: 37 (2000)
= *Lecanora cyamidia* Stirt., Proc. Roy. phil. Soc. Glasgow 10: 305 (1877)

[VZR], Nova Zelandia. South Island, Marlborough, prope lacum "Lake Chalice", 1180 m. Ad corticem arboris (*Nothofagus menziesii*) in silva montana. Leg. et det. W. Malcolm. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 308.

Simplified Description:
Characterised by the corticolous habit; the dingy, creamish white to greyish, continuous to verrucose–papillate thallus; prominent scattered, sessile to subpedicellate apothecia with dark red-brown to somewhat blackened discs, densely covered in grey-white pruina and with persistent, swollen, lecanorine margins concolorous with thallus; the hymenium is inspersed with oil droplets; ascospores are fabiform, curved, apices curved, contents oily–granular, 20–30(–34) × 7–10(–13) µm. - *Loxospora cyamidia* is closely related to *L. solenospora* (the two taxa share an identical thallus chemistry and apothecial tissues inspersed with yellow-brown to red-brown granules that turn yellow as they dissolve in K). Ascospores of the two species are similar but distinctly and disjunctly broader in *L. cyamidia,* which also has a generally more robust thallus, larger apothecia with persistent pruina, and a distinctly lecanorine apothecial margin reminiscent of species of *Ochrolechia*.

Sarrameana cyamidia

Sarrameana cyamidia