

F. Schumm (2025):

Images of Lichens Vol. 32

Vezda Lichenes Rariores Exsiccati
part 7

This is part 7 (of a planned 8-part series) with images from Vezda's "Lichenes Rariores Exsiccati". For the species names, I generally used those given by Vezda, but then listed the synonyms, for which I extensively consulted the Index Fungorum database. In addition, I have included a description for each species, taken from standard literature sources (e.g., The Lichenologist, Bryologist, or monographs by Hale, Lücking, Galloway, etc.).

For the descriptions of europaean species I used mainly the excellent descriptions that are provided in Prof. Nimis *ITALIC* 8 under the URL: **<https://italic.units.it/>**

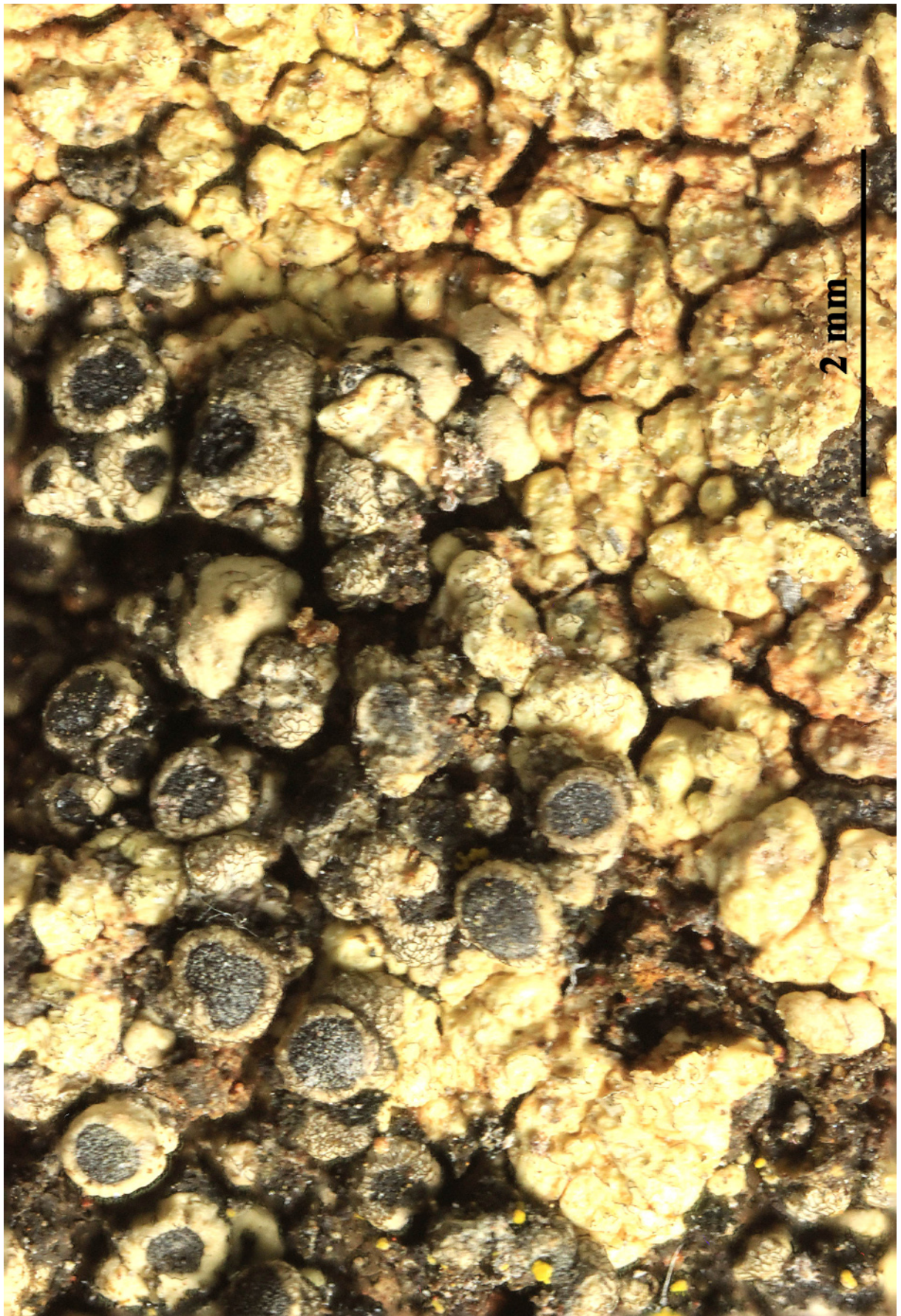
and the Australian Lichenslist under the Url: **https://www.anbg.gov.au/abrs/lichenlist/lichenchecklist_e_o.html**

F. Schumm, 10.2025

Rinodina canariensis Matzer, H. Mayrhofer & P. Clerc, in Matzer, Mayrhofer, Sattler & Clerc, *Nordic J. Bot.* 14(1): 105 (1994)

[VZR108], Insulae Canarienses, La Palma. 1 km ad septentriones a Punta Cumplida, 100 m. In thallo alieni lichensis parasitans, ad saxa eruptiva. Leg. H. Mayrhofer (no. 10660), M. Koch & M. Matzer, 30.11.1991. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 108.

Thallus crustose, episubstratic, up to c. 0.6 mm thick, continuous, rimose or areolate, the areoles usually inflated, smooth, pale to dark grey or ochraceous, often partly white-pruinose, sometimes with an evident dark hypothallus, often starting the life-cycle on other silicicolous crustose lichens, later usually autonomous. Medulla white in upper part, yellow to reddish brown and often K⁺ and C⁺ purple-red in lower part, I⁻ throughout. Apothecia lecanorine, 0.6-1(-1.4) mm across, subimmersed to sessile, with a flat to convex, black, epruinose or whitish-pruinose disc and an entire, persistent thalline margin. Epithecium dark brown, rarely olivaceous or bluish green and in this case reacting N⁺ red, often covered with a coarsely granular epipsamma; hymenium colourless, 100-130(-150) µm high; paraphyses 1-2 µm thick at mid-level, the apical cells 4-5 µm wide, with a dark brown cap; hypothecium colourless, up to 200 µm high. 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-septate, pigmented, fusiform, often curved, (15-)18-30(-32) x 9-14 µm, similar to the *Pachysporaria*-type, but tending towards the *Physcia*-type, with a finely scabrid wall and a well-developed torus, the ontogeny of type A (apical wall thickening after septum formation). Pycnidia black, immersed, rather rare. Conidia bacilliform, 3-8 x 1-1.5 µm. Photobiont chlorococcoid. Spot tests: cortex K⁺ yellow, C⁺ red, KC⁺ red, P⁺ faintly yellow; medulla K⁺, and C⁺ purple-red in lower part. Chemistry: atranorin and variable amounts of chloroatranorin, gyrophoric, lecanoric and orsellinic acids, rarely with zeorin; medulla with an unknown pigment. - Note: a Mediterranean-Macaronesian lichen found on base-rich volcanic rocks, such as andesite and basalt, more or less confined to coastal localities and to low coastal mountains, starting the life-cycle on several species of crustose lichens, especially *Acarospora heufleriana*, *Lecanora prae-postera*, *Ochrolechia parella*, and *Pertusaria pluripuncta*.



Rinodina canariensis

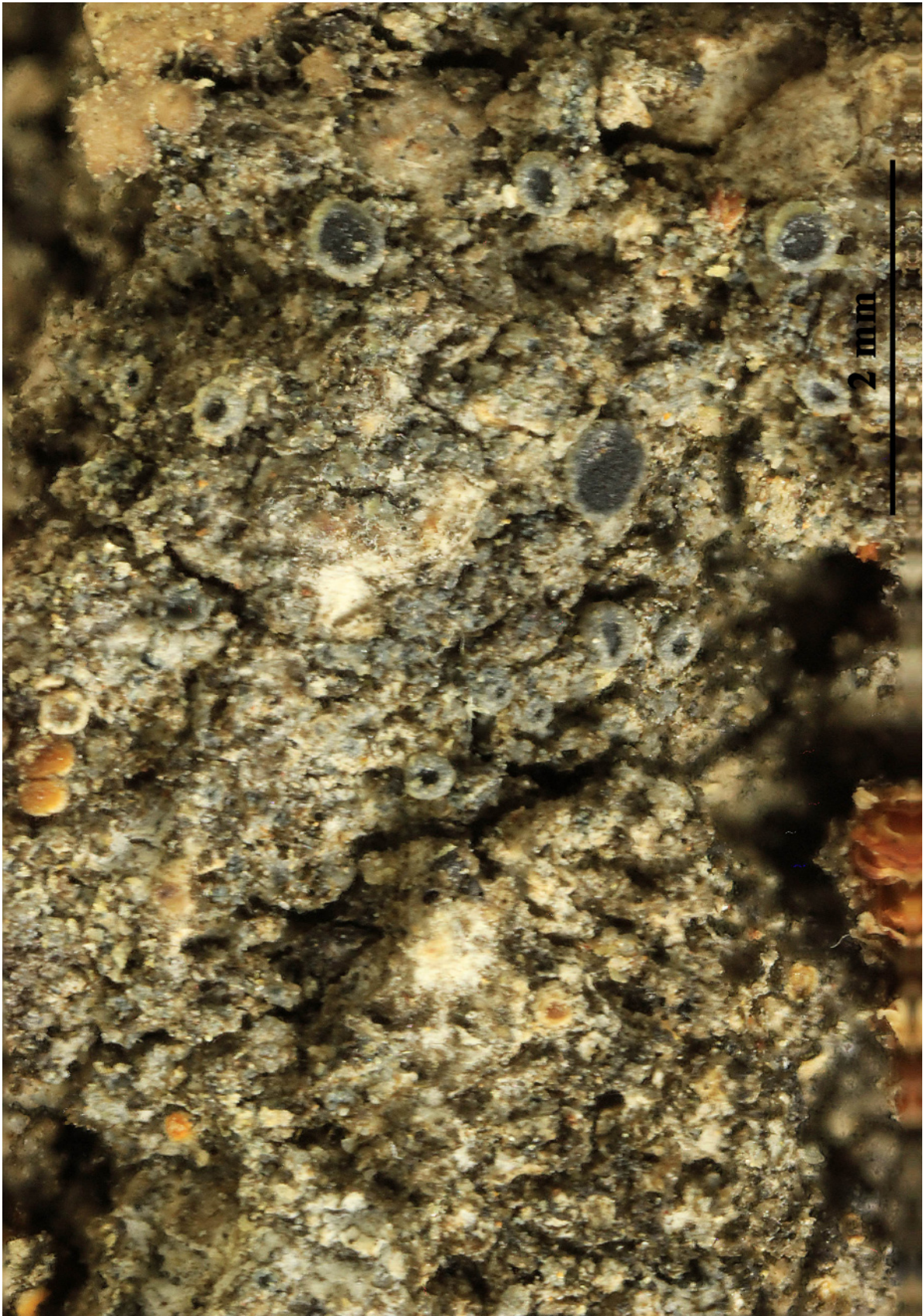


Rinodina canariensis

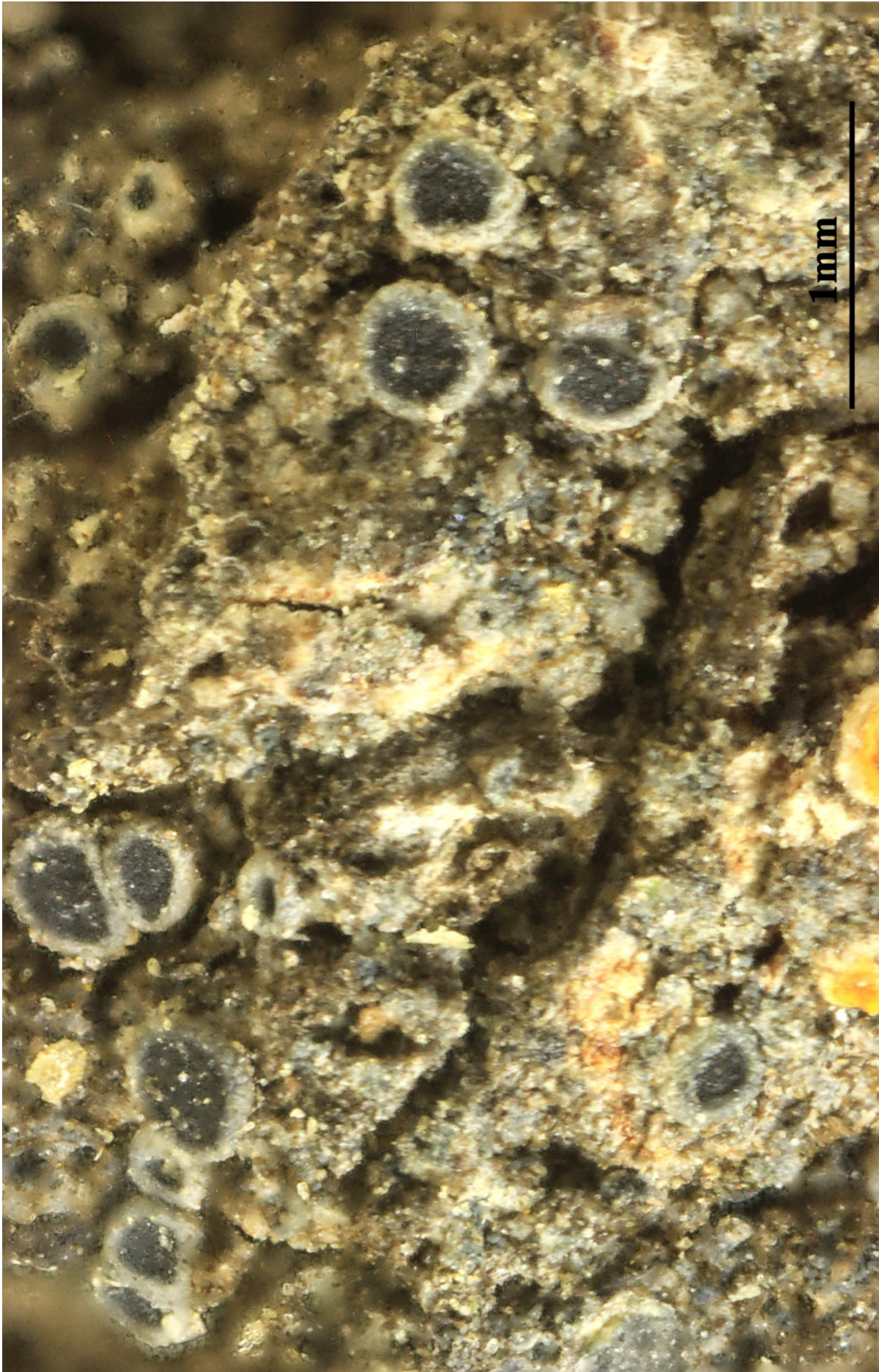
Rinodina colobina (Ach.) Th. Fr., Lich. Scand. (Upsaliae)(1): 205 (1871)
= *Lecanora colobina* Ach. 1810

[VZR148], Graecia. Macedonia, Drama, Falakró, 800 m. Ad truncos arborum (*Populus* sp.). Leg. H. Mayrhofer (no.11582), & H. Teppner, 25.6.1994. Ex A. Vezda: Lichenes Rariores Exsiccati Nr. 148.

Thallus crustose, thinly episubstratic, dark grey to blue-black, continuous or rimose-areolate, often granulose-blastidiate. Apothecia lecanorine, sessile, 0.4-0.7 mm across, with a black, flat to convex disc and a prominent, persistent, smooth to rarely granulose thalline margin. Thalline exciple corticate, the cortex paraplectenchymatous, up to 30 µm thick, of 5-10 µm wide cells I-, K+ violet; epithecium blue-grey to bluish-black, K+ violet; hymenium colourless, 70-85(-100) µm high; paraphyses simple to sparingly branched in upper part, the apical cell strongly swollen and 3-5 µm wide, the pigment located among the tips of paraphyses; hypothecium colourless to pale yellow, to 70 µm high. 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-septate, pale brown to almost colourless when young, (15-)17-20(-22) x 7-9(-10) µm, intermediate between the *Pachysporaria*-*Physcia*- and *Mischoblastia*-types, the wall smooth, without a well-developed torus, the lumina hour-glass shaped, the ontogeny of type A (apical wall thickening after the early septum formation). Photobiont chlorococcoid. Spot tests: thallus K+ violet, C+ violet, P-, N+ violet. Chemistry: Sedifolia-grey pigment in thallus and epithecium. - Note: a mild-temperate to Mediterranean lichen found on dust-impregnated bark of isolated trees, especially *Populus*, *Fraxinus*, *Juglans* and *Ulmus*, often on the basal parts of trunks; certainly declining.



Rinodina colobina



Rinodina colobina

[VZR227], Turcia. Distr. Antalya, Kemer, in valle rivi Ulupinar, prope pagum Ulupinar, 200 m. Ad corticem *Pinus nigrae*. Leg. A. Vězda, 7.4.1996, det. H. Mayrhofer. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 227.

Thallus crustose, areolate, ochraceous to pale brown, finally entirely covered with yellowish brown, dark grey-green, olivaceous to brown, up to 25-30 μm wide blastidia. Apothecia frequent, at first lecanorine, but soon becoming biatorine, 0.3-0.5(-0.8) mm across, with a brown to brown-black, concave to finally convex disc, the young ones with a thin, entire thalline margin which disappears in older apothecia. Thalline exciple ecorticate, 50-70 μm wide laterally, filled with small crystals reacting P+ orange-red; proper exciple indistinct laterally, to 20 μm thick in upper part; epithecium orange-brown, with a granular epipsamma reacting P+ orange-red; hymenium colourless, 100-120 μm high; paraphyses 1.5-2 μm thick at mid-level, the apical cells 3-5 μm wide; hypothecium yellowish, 50-80(-100) μm high. 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-septate, constricted at septum, brown, ellipsoid, (17-)20-23(-26) x (8-)10-12(-13) μm , Pachysporaria-type, smooth, with a well developed torus, the young ones with polygonal lumina and a type A ontogeny (apical wall thickening after the early septum formation). Photobiont chlorococcoid. Spot tests: thallus K- or K+ pale yellow, C-, KC-, P+ red, UV+ orange. Chemistry: thallus and apothecia with pannarin and an unknown pigment (traces). - Note: a Mediterranean species of acid bark (often on *Pinus halepensis*, covering wide areas, especially at the base of the trunks) in coastal situations, probably more widespread in Tyrrhenian Italy.



Rinodina dalmatica

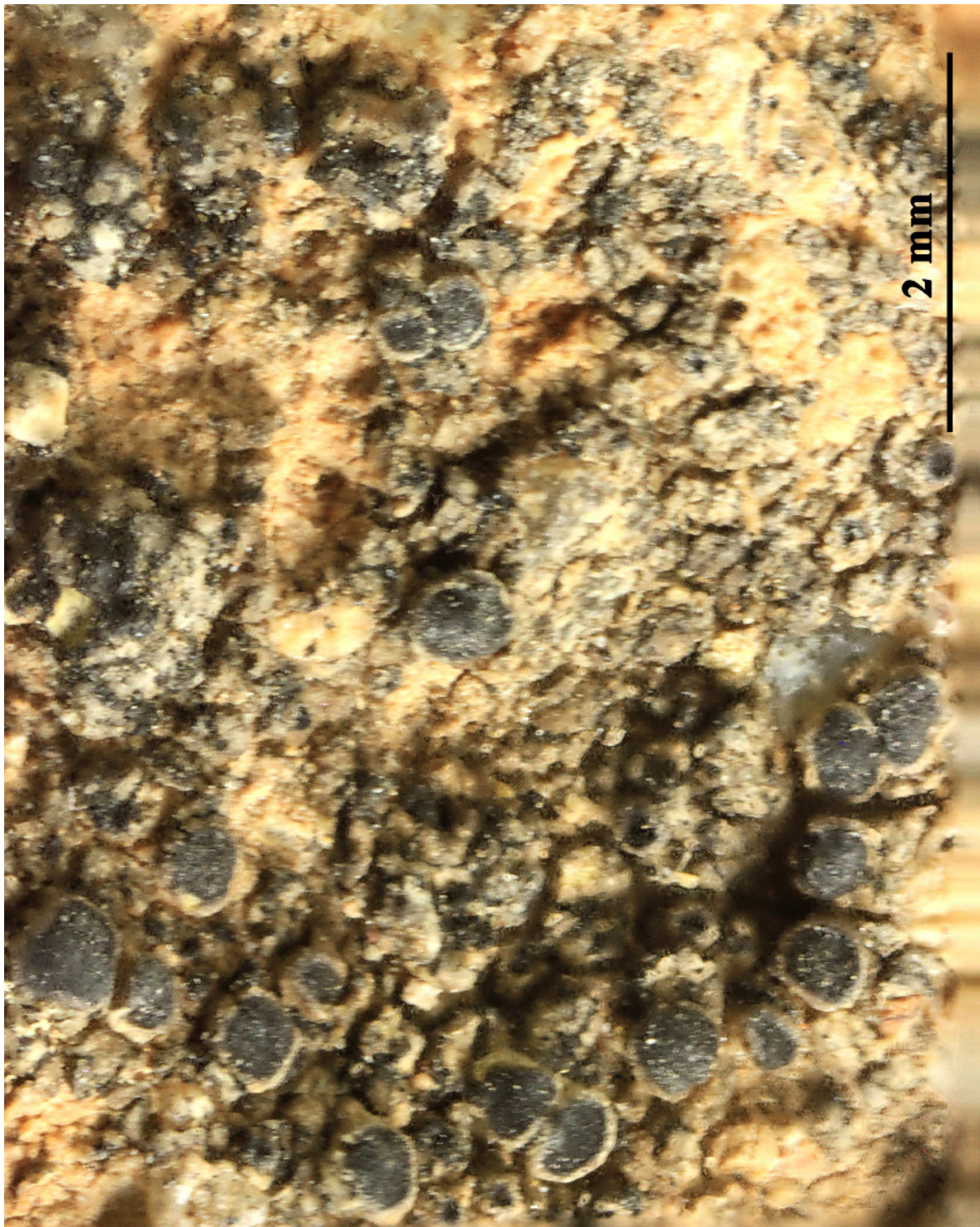


Rinodina dalmatica

- Rinodina gennarii*** Bagl., Comm. Soc. crittog. Ital. 1(fasc. 1): 17 (1861)
 = *Buellia alocizoides* (Leight.) A.L. Sm., Monogr. Brit. Lich. 2: 167 (1911)
 = *Rinodina confragosa* var. *demissa* (Körb.) Kremp., Denkschr. Kgl. Bayer. Bot. Ges., Abt. 2 4: 159 (1861)
 = *Rinodina demissa* (Körb.) Arnold, Flora, Regensburg 42: 68 (1859)
 = *Rinodina exigua* f. *demissa* (Körb.) Zahlbr., in Ginzberger, Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl. 92: 321 (1916)
 = *Rinodina exigua* var. *demissa* (Körb.) Th. Fr., Nova Acta R. Soc. Scient. upsal., Ser. 3 3: 229 (1861) [1860]
 = *Rinodina metabolica* var. *demissa* Körb., Syst. lich. germ. (Breslau): 124 (1855)
 = *Rinodina salina* Degel., Uppsala Univ. Årsskr.: 192 (1939)
 = *Rinodina sophodes* var. *demissa* (Körb.) Rostr., Bot. Tidsskr. 4: 99 (1871)
 = *Rinodina subexigua* (Nyl.) H. Olivier, Mém. Soc. natn. Sci. nat. Cherbourg 37: 170 (1909)
 = *Zeora metabolica* var. *demissa* Flörke, in Flotow, Jber. schles. Ges. vaterl. Kultur [27]: 124 (1849)

[VZR48], Italia. Sardinia. Prov. Nuoro: scopulum Torre Argentina dictum, prope oppidum Bosa, 5-10 m. Ad saxa eruptiva mollia. Leg. J. Poelt, M. Tretisch & A. Vězda, 19.7.1897, det. H. Mayrhofer. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 48.

Thallus crustose, thinly episubstratic, rimose to rimose-areolate, sometimes reduced to a few small areoles around the apothecia, whitish to dark grey or grey-brown, dull, rarely delimited by a dark prothallus. Apothecia lecanorine, abundant and usually crowded, adnate, 0.3-0.5(-0.7) mm across, with a dark brown to almost black, epruinose, flat to markedly convex disc and a thin, smooth, finally sometimes excluded thalline margin. Thalline exciple 20-100 µm wide laterally, expanding in lower part, the cortex 5-10 µm thick; proper exciple 5-20 µm wide laterally, expanded to 20-30(-55) µm at periphery; epithecium dark brown, 5-15 µm high, K-; hymenium colourless, 60-80(-90) µm high, K/I+ blue; paraphyses 1.5-2.5 µm thick at mid-level, not very coherent, the apical cells 3-6 µm wide; hypothecium colourless, up to 150 µm high. Asci 8-spored, narrowly clavate to 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-septate, brown, broadly ellipsoid, sometimes slightly curved, (11-)13-16(-18) x (6-)7-10(-11) µm, Dirinaria-



Rinodina gennarii



Rinodina gennarii

- Rinodina milvina*** (Wahlenb. ex Ach.) Th. Fr., Lich. arct. (Uppsala): 124 (1860)
- = *Lecanora badia* f. *milvina* (Wahlenb. ex Ach.) Stein, in Cohn, Krypt.-Fl. Schlesien (Breslau) 2(2): 136 (1879)
- = *Lecanora badia* β *milvina* (Wahlenb. ex Ach.) Körb., Flora, Regensburg 40: 181 (1857)
- = *Lecanora milvina* (Wahlenb. ex Ach.) Ach., Lich. Univ.: 358 (1810)
- = *Lichen milvinus* (Wahlenb. ex Ach.) Wahlenb., Fl. lapp.: 410 (1812)
- = *Lichen peltatus* * *milvina* (Wahlenb. ex Ach.) Lam., Encycl. Méth., Bot. Suppl. (Paris) 3(2): 393 (1813)
- = *Pachysporaria milvina* (Wahlenb. ex Ach.) M. Choisy, Bull. mens. Soc. linn. Soc. Bot. Lyon 18: 111 (1949)
- = *Parmelia badia* f. *milvina* (Wahlenb. ex Ach.) Nyl., Not. Sällsk. Fauna et Fl. Fenn. Förh. 2: 217 (1852)
- = *Parmelia badia* var. *milvina* (Wahlenb. ex Ach.) Fr., Sched. Crit. Lich. Suec., Fasc. 8-9: 6 (1827)
- = *Parmelia milvina* Wahlenb. ex Ach., Methodus, Sectio prior (Stockholmia): 34 (1803)

[VZR156}, Austria. Carinthia, pars Alpinum "Gurktaler Alpen" dictum, ad latera austro-orientalia montis Gregerlnock, 1850-2290 m. Ad saxa schistosa. Leg. R. Türk & H. Wittman, 21.9.1988. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 156.

Thallus crustose, episubstratic, rimose-areolate, often delimited by a black prothallus, the areoles up to 0.5-1 mm wide, smooth to rugose, dark grey, reddish brown or dark brown, dull. Medulla white, I-. Apothecia lecanorine, adnate to sessile, contiguous, sometimes angular by mutual compression, 0.3-1(-1.5) mm across, with a dark brown to black, concave to flat, rarely slightly convex disc and a thick, smooth to crenulate, persistent thalline margin. Thalline exciple 60-100 μ m wide laterally, corticate, without crystals; proper exciple colourless, 5-20 μ m wide laterally, expanding to 10-40 μ m in upper part; epithecium reddish brown, K-; hymenium colourless, (65-)100-120 μ m high; paraphyses not strongly coherent, 1.5-2.5 μ m thick at mid-level, the apical cells 3.5-5.5 μ m wide, immersed in dispersed pigment; 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-septate, often constricted at septum, brown, broadly ellipsoid, (13-)16-19(-23) x (7-)9-11(-13) μ m, *Milvina*-type, often grading into *Pachysporaria*-type at maturity, with a well-developed torus, the walls

finely warted, the ontogeny of type A (apical wall thickening after septum formation). Pycnidia dark, immersed. Conidia bacilliform, 4-5 x 1-1.5 μm . Photobiont chlorococcoid. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. Note: a cool-temperate to arctic-alpine, circumpolar lichen found on boulders of siliceous rocks, usually on steeply inclined surfaces, often (but not always) parasitic on other crustose lichens; the Italian distribution ranges from the Alps to the high Mediterranean mountains, with optimum near or above treeline.



Rinodina milvina

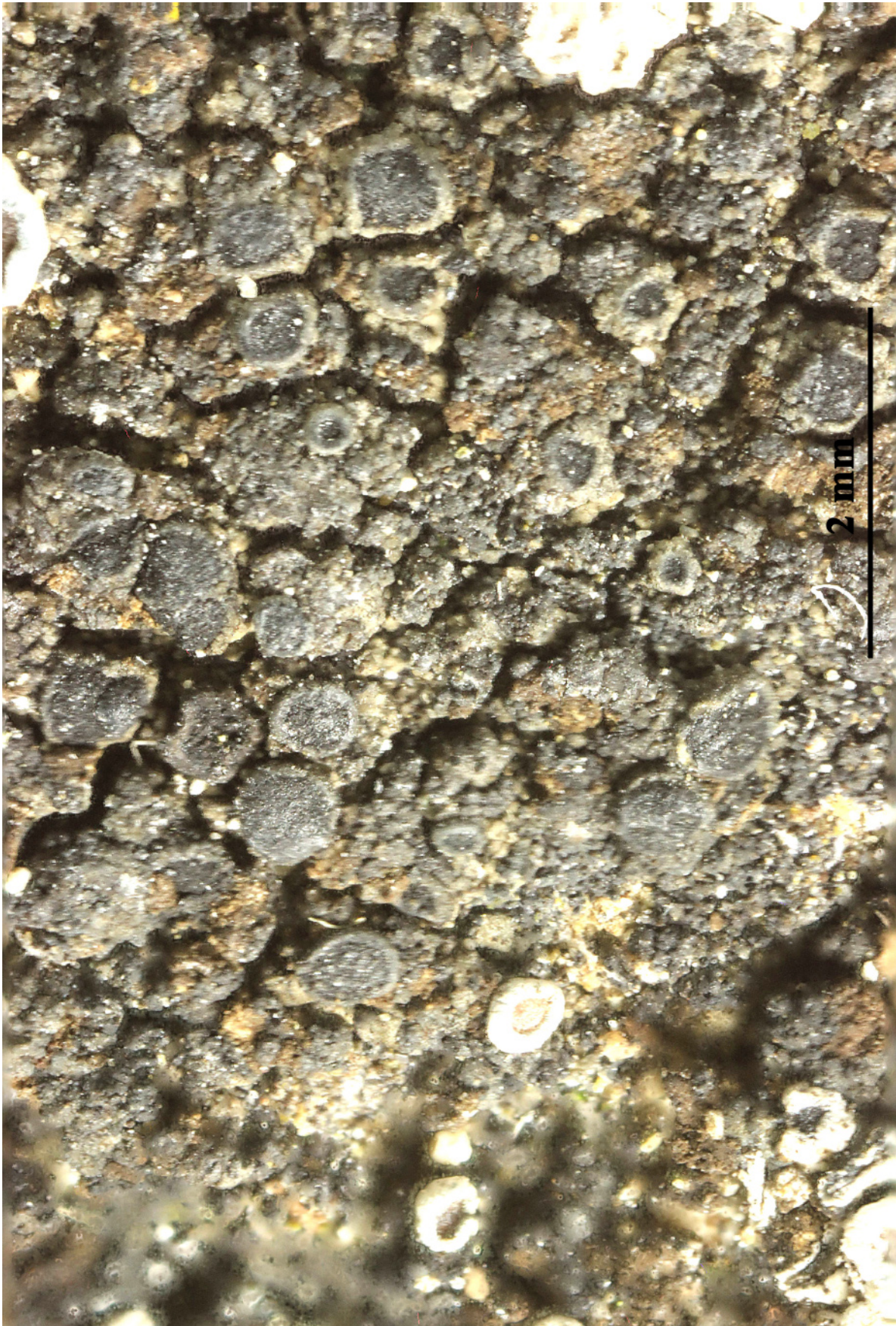


Rinodina milvina

Rinodina nigricans H. Mayrhofer, Lichenologist 15(3): 274 (1983)

[VZR157}, Nova Zelandia. South Island, Canterbury, Reeces Road prope Omihi, Montserrat, 400-450 m. Ad saxa calcarea. Leg. H. Mayrhofer (11584) & C. D. Meurk. EX A. VěZDA: LICHENS RARIORES EXSICCATI NR. 157.

Thallus dark grey-brown to blackish-brown, granular to warted or rimose- areolate, sometimes growing above other crusts, cortex K+ purple-violet, without perceptible prothallus, saxicolous. Apothecia lecanorine, adnate to sessile, dispersed or sometimes contiguous, to 0.6 mm diam., disc plane, blackish. Hymenium 80-100 μm tall. Epihymenium blue-green, K+ purple-violet. Hypothecium colourless. Ascospores 15-19 $\times$ 8-11 μm , wall finely warted. Chemistry: -.



Rinodina nigricans



Rinodina nigricans

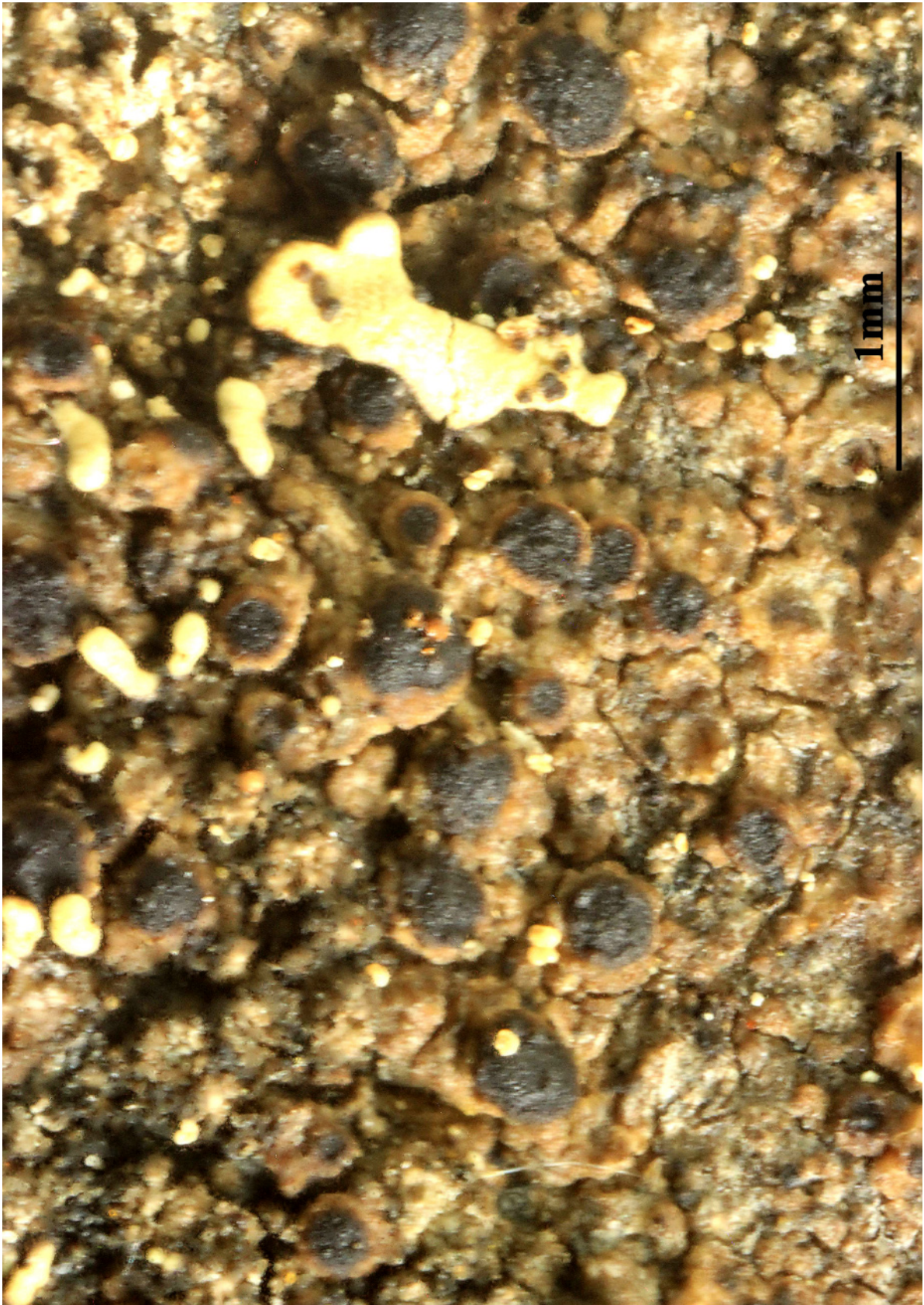
Rinodina orculata Poelt & M. Steiner, Mitt. bot. StSamml., Münch. 8: 191 (1970)

[VZR188], Bohemia, merid., montes Šumava. Distr. Klatovy, in monte "Smrkový vrch", 1100 m. Ad corticem arboris (*Acer pseudoplatanus*). Leg. A. Vězda et J. Liška, 21.6.1995, det. H. Mayrhofer. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 188.

Thallus crustose, episubstratic, at first discontinuous and consisting of small warts, then continuously areolate, whitish, grey-brown or reddish-brown, matt, without a clear prothallus. Apothecia lecanorine, sparse, adnate to sessile, 0.2-0.4(-0.6) mm across, with a brown to brow-black, flat to slightly convex disc, and a thick, entire to flexuose, persistent thalline margin. Thalline exciple corticate, the cortex 5-10 µm thick, I+ faintly blue (reaction often difficult to observe); epithecium reddish brown, K-; hymenium colourless, 60-80 µm high; paraphyses branched in upper part, the apical cells swollen, 3.5-5.5 µm wide; hypothecium colourless, 50-80 µm high. 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-septate, not constricted at septum, brown, ellipsoid, (10-)12-15(-17) x (6.5-)7.5-8(-9) µm, Physconia-type, with a well-developed, dark torus and a relatively prolonged Physcia-type stage, the wall smooth to minutely warted, with an ontogeny of type A (apical wall thickening after septum formation). Photobiont chlorococcoid. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: on the bark of conifers and subalpine shrubs, especially common on *Rhododendron*; certainly more widespread in the Alps, mostly near treeline.



Rinodina orculata



Rinodina orculata

Rinodina peloleuca (Nyl.) Müll. Arg., Nuovo G. bot. ital. 23(1): 125 (1891)

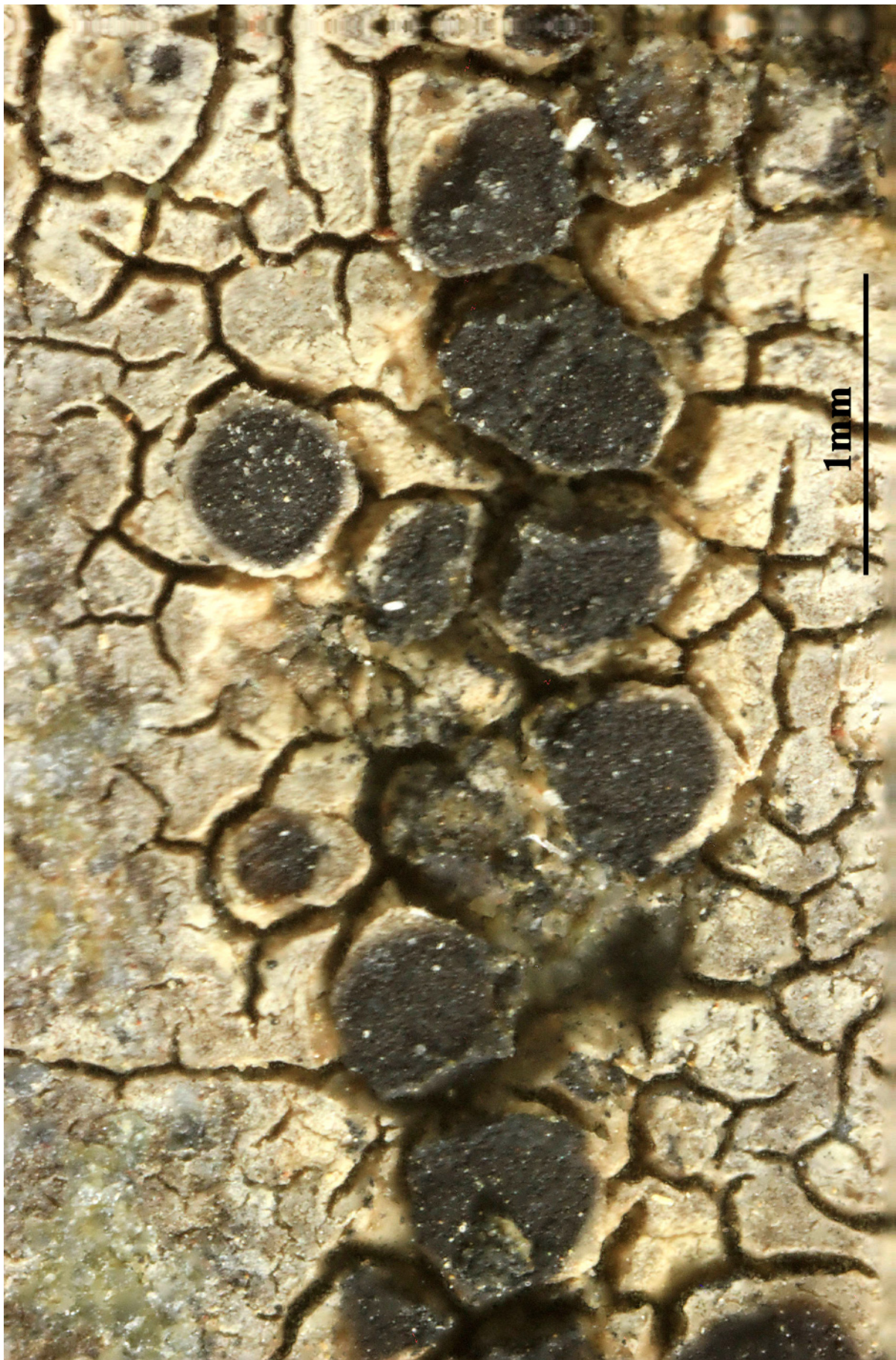
[VZR270], Chile, Patagonia, XII. Regio (Magallanes): Fretum Magallan, Fuerte Bulnes, 50 km ad meridiem a Punta Arenas, 53°36' merid., 70°56' occid., 0 m. Ad scopulum. Leg. M. Matzer (1670) & B. Pelzmann, 13.12.1994, det. H. Mayrhofer. EX A. VěZDA: LICHENES RARI-ORES EXSICCATI NR. 270.

Thallus saxicolous, crustose, usually thick, continuous, rimose, white, sordid white, light grey to grey, more rarely brownish; in longitudinal section with an upper phenocortex, algal layer thick, medulla, particularly the lower medulla, often (but not always!) with (dispersed patches of) an orange pigment (skyrin). Prothallus mostly absent, occasionally well developed at the margin of the thallus, dark brown, with a whitish pruina at the periphery. Apothecia to 1 (—1.3) mm diam., numerous, cryptolecanorine, lecanorine, or (pseudo-) biatorine, innate or adnate; disc plane or slightly convex, dark brown to blackish, usually with a lighter coloured proper margin surrounding the disc which is often visible as a thin line especially in moistened apothecia. Exciple outwardly brown, internally hyaline. Epihymenium 15-35 µm tall, brown or yellowish brown; yellow colour intensifying in K; epihymenium often covered by a hyaline epipsamma. Hymenium 100-115 µm tall. Hypothecium 100-170 µm deep, usually hyaline, rarely yellow; yellow colour intensifying in K, a hyaline hypothecium may yellowing in K. Paraphyses 1-3 µm wide, unbranched, more rarely with single branches in the upper parts; apices to 6 µm wide. Asci corresponding to the *Lecanora* type, with 8, or rarely less than 8 spores. Ascospores (12-)15-23(-27) x (8-)10-13(-15) µm, of the *Physconia* type; cell lumina in mature spores surrounded by a distinct inner wall layer; spore ontogeny of type A (in young spores the septum is inserted before internal wall thickenings become distinct); during spore ontogeny slight apical internal wall thickenings may occur in some spores for a time; torus small, diffuse, or absent; spore surface finely scabrid. Spermatogonia usually present, immersed in the thallus; ostiolar region brownish or blackish; spermatogonia in longitudinal section ± cup-shaped or cylindrical, 160-300 µm tall, 110-180 µm wide; spermatogonial wall hyaline at the base of spermatogonia and laterally, above brown, rarely with an orange pigment reacting K+ red-violet. Spermatophores short, septate, usually unbranched. Spermatogenous cells usually terminal, rarely intercalary; terminal spermatogenous cells oblong to flask-shaped, forming sper-

matia apically; intercalar spermatogenous cells cylindrical and with a lateral projection on which spermatia are formed. Spermatia 4-5 x(1-1.5(-2) μm , bacilliform, hyaline, simple. CHEMISTRY: Lichen substances present in the thallus: skyrin and triterpenes (including an isomer of zeorin); spot tests: thallus K-, KC-, C-, P-; medulla: orange



Rinodina peloleuca



Erioderma baRinodina pelo-

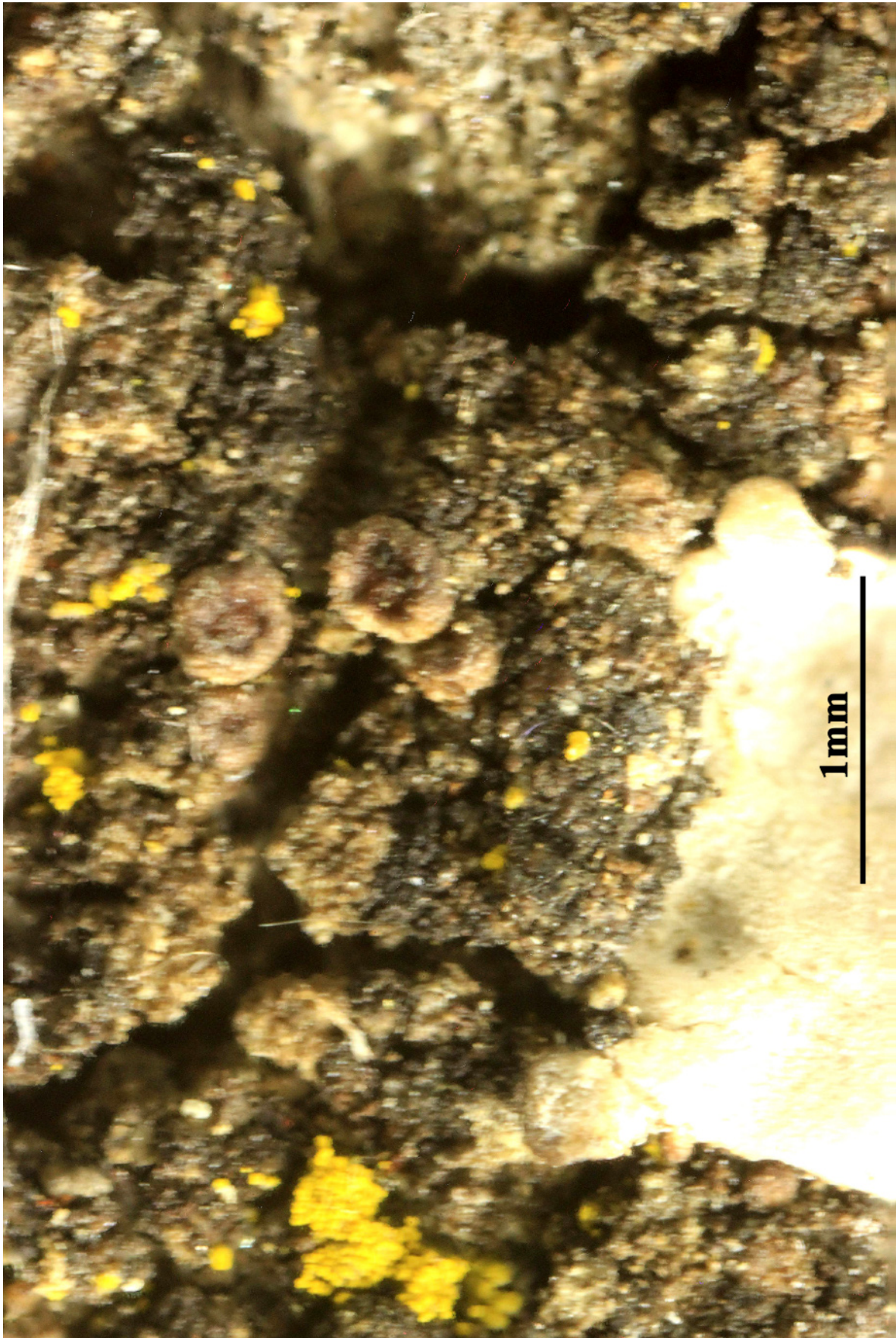
Rinodina poeltiana Giralt & Obermayer Herzogia, 9: 709, 1993.

[VZR127], Austria. Stiria: pars Alpinum "Seetaler Alpen" dicta, 6 km ad occidentem ab Unzmarkt, Murknie, inter Wöll et Eding, 720 m. Ad corticem *Salix albae*. Leg. W. Obermayer, 15.1.1989, det. H. Mayrhofer. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 127.

Thallus crustose, episubstratic, of contiguous to scattered, blastidiate areoles, without a distinct prothallus. Areoles grey to grey-brown, matt, flat to slightly convex, 0.1-0.3(-0.5) mm wide. Blastidia dark brown, 20-30(-40) μ m thick, confluent, forming a continuous granulose crust, developing from the surface and margins of the areoles. Apothecia rare, lecanorine, at first adnate, then sessile, 0.2-0.5 mm across, with a usually flat, brown disc, an entire, smooth to blastidiate, prominent thalline margin, and often a raised parathecial ring between the disc and the thalline margin. Thalline exciple 50-80(-100) μ m wide, corticate, devoid of crustals, I-; proper exciple 5-10 μ m wide laterally, expanding to 40-60 μ m in upper part, I-; epithecium reddish brown, K-; hymenium colourless, 70-90(-100) μ m high, not interspersed with oil droplets; paraphyses 1.5-2(-2.5) μ m thick in lower part, the apical cells capitate, 3.5-6 μ m wide; hypothecium colourless, 40-70(-100) μ m high. Asci 6-8-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-septate, brown, broadly ellipsoid, (13-)14-18(-21) x (7-)8-11(-13) μ m, smooth, without torus or with a poorly developed torus, Pachysporaria-type II. Pycnidia dark, immersed in thallus. Conidia bacilliform, 3.5-4.5 μ m long. Photobiont chlorococcoid. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a rather poorly known epiphytic species. The type material, from Austria, was growing on *Salix alba*.



Rinodina poeltiana

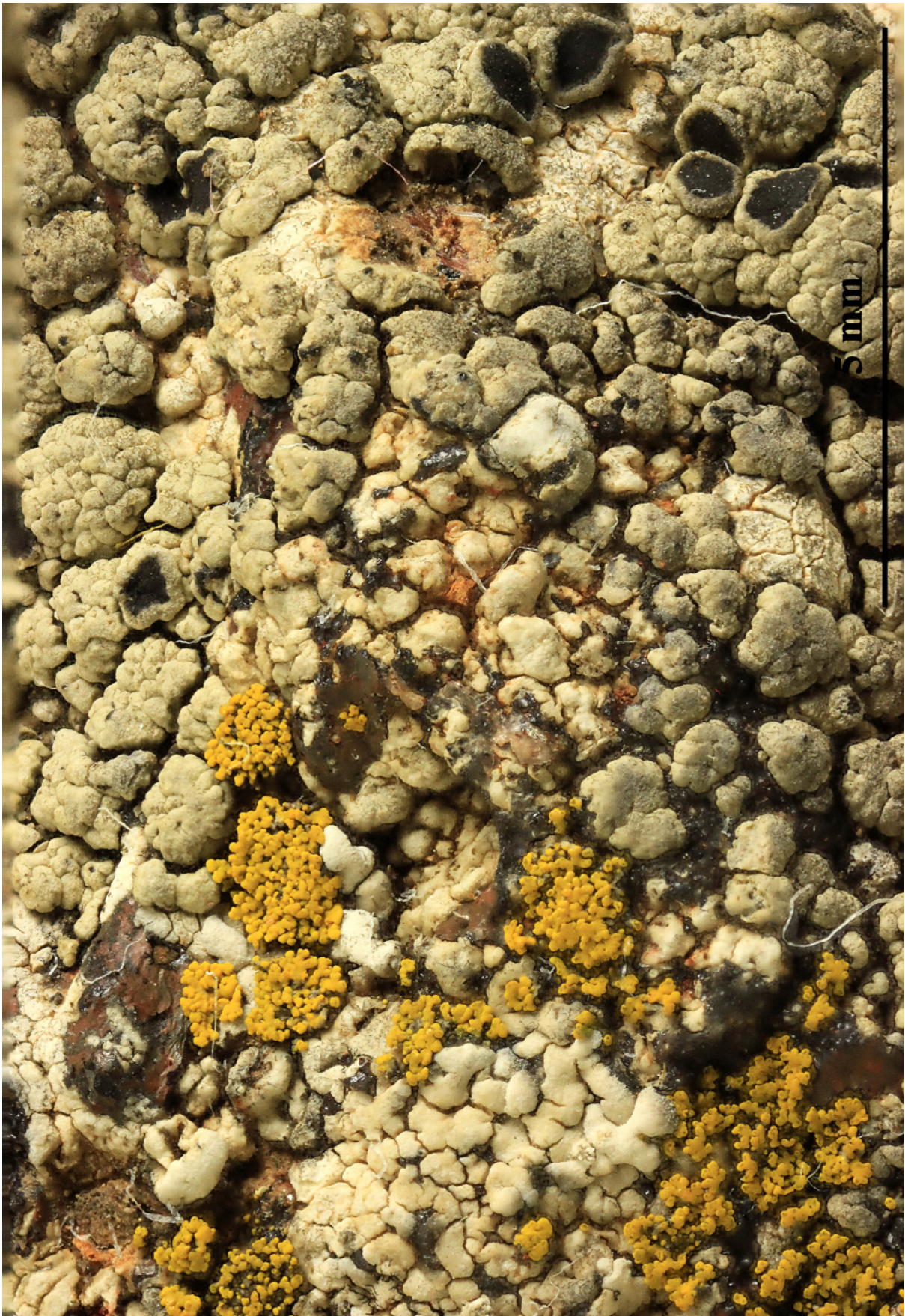


Rinodina poeltiana

Rinodina santorinensis J. Steiner, Verh. zool.-bot. Ges. Wien 69: 55 (1919)

[VZR39], Italia. Pelagiae insulae: insula Linosa, in colle "Nero", 100 m. Ad saxa eruptiva, supra thallum *Buelliae* sp. vigen. Leg. P. L. Nimis, J. Poelt & A. Vězda, 15.4.1992. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 39.

Thallus crustose, episubstratic, rimose-areolate, up to 2 mm thick, whitish or pale to dark grey, usually delimited by a black prothallus, often starting the life-cycle on epilithic *Pertusaria*-species and other crustose lichens. Areoles flat to convex, often sublobate or subsquamulose, with a brown lower surface. Medulla white, I-. Apothecia lecanorine, 0.7-1.7(-2) mm across, adnate to sessile, with a flat, dark brown to black, sometimes whitish-pruinose disc, and a thick, smooth or crenulate, persistent proper margin. Proper exciple dark brown in upper part, colourless below; epithecium red-brown to dark brown, rarely with a granular epipsamma reacting P+ orange; hymenium colourless, 70-90(-100) μm high; paraphyses 1-2 μm thick at mid-level, the apical cells 3-6 μm wide; hypothecium colourless, to 300 μm high. 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-septate, brown, ellipsoid, (14-)15-21(-22) x 8-12(-14) μm , at first *Pachysporaria*-type, then tending towards the *Physcia*-type, the wall warted, with a well-developed torus, the ontogeny of type A (apical wall thickening after septum formation). Pycnidia common, black, immersed in the thallus, with slightly prominent ostioles. Conidia bacilliform, 3.5-5 x 1-1.5 μm . Photobiont chlorococcoid. Spot tests: thallus K+ yellow, C-, KC-, P+ orange. Chemistry: atranorin, sometimes chloroatranorin, pannarin. - Note: a mainly Mediterranean-Macaronesian species found on different types of base-rich, especially volcanic rocks in areas under maritime influence, often starting the life-cycle on other crustose lichens; exclusively Tyrrhenian in Italy; related to *R. beccariana*.



Rinodina santorinensis



Rinodina santorinensis

Rinodina santorinensis J. Steiner, Verh. zool.-bot. Ges. Wien 69: 55 (1919)

[VZR138], Insulae Canarienses, Gran Canaria. Distr. Mogán, in declivibus orientalibus supra urbem Mogán, 500-600 m. Ad lavam, supra thallum *Caloplacae scoriophilae* vel *Lecanorae sulphurellae* parasitans. Leg. et det. A. Vězda. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 138.

Thallus crustose, episubstratic, rimose-areolate, up to 2 mm thick, whitish or pale to dark grey, usually delimited by a black prothallus, often starting the life-cycle on epilithic *Pertusaria*-species and other crustose lichens. Areoles flat to convex, often sublobate or subsquamulose, with a brown lower surface. Medulla white, I-. Apothecia lecanorine, 0.7-1.7(-2) mm across, adnate to sessile, with a flat, dark brown to black, sometimes whitish-pruinose disc, and a thick, smooth or crenulate, persistent proper margin. Proper exciple dark brown in upper part, colourless below; epithecium red-brown to dark brown, rarely with a granular epipsamma reacting P+ orange; hymenium colourless, 70-90(-100) μm high; paraphyses 1-2 μm thick at mid-level, the apical cells 3-6 μm wide; hypothecium colourless, to 300 μm high. 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-septate, brown, ellipsoid, (14-)15-21(-22) x 8-12(-14) μm , at first Pachysporaria-type, then tending towards the Physcia-type, the wall warted, with a well-developed torus, the ontogeny of type A (apical wall thickening after septum formation). Pycnidia common, black, immersed in the thallus, with slightly prominent ostioles. Conidia bacilliform, 3.5-5 x 1-1.5 μm . Photobiont chlorococcoid. Spot tests: thallus K+ yellow, C-, KC-, P+ orange. Chemistry: atranorin, sometimes chloroatranorin, pannarin. - Note: a mainly Mediterranean-Macaronesian species found on different types of base-rich, especially volcanic rocks in areas under maritime influence, often starting the life-cycle on other crustose lichens; exclusively Tyrrhenian in Italy; related to *R. beccariana*.



Rinodina santorinensis



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Rinodina santorinensis



Rinodina santorinensis

Rinodina serpentini H. Mayrhofer & Poelt - Topotypus

= *Rinodina rinodinoides* (Anzi) H. Mayrhofer & Scheid.

= *Buellia rinodinoides* Anzi - Atti Soc. Ital. Sc. Nat. Milano, 9: 253, 1866.

= *Lecidea rinodinoides* (Anzi) Stizenb..

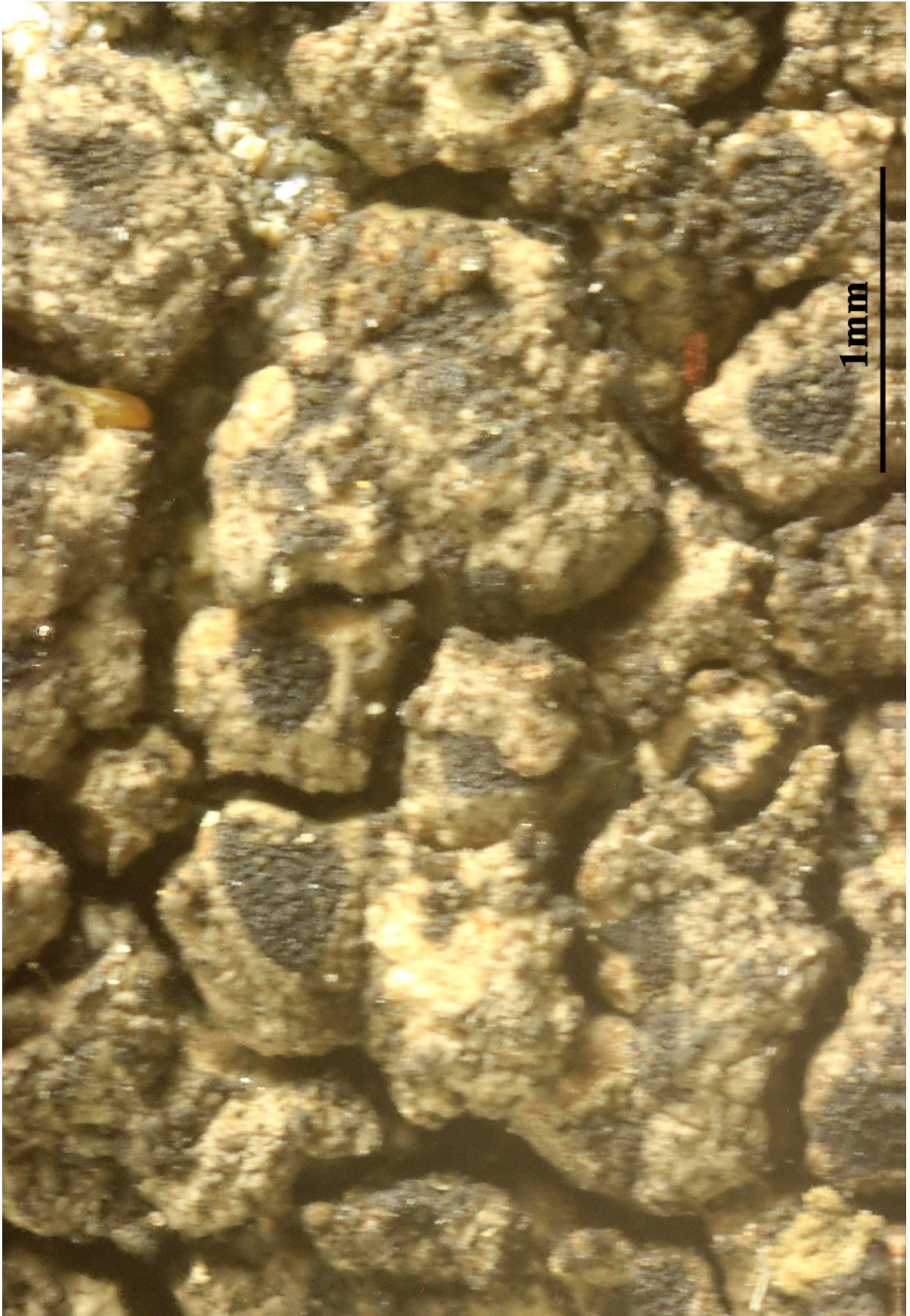
= *Rinodina melanocarpa* Müll. Arg..

[VZR sn], Bohemoslovakia. Moravia sept.-occid.: Tišnov, in valla fl. Svratka prope pagum Ujčov, 350 m. Ad saxa serpentina. Leg. A. Vězda, 15.4.1979. Ex Herbario A. Vězda s. nr.

Thallus crustose, episubstratic, to 0.5 mm thick, areolate, without a distinct prothallus, the areoles sharply angular, up to 1.4 mm wide, contiguous, flat, whitish to grey, rarely grey-brown, dull. Apothecia pseudolecanorine to lecideine, innate to adnate, 0.3-1 mm across, with a black, flat to slightly convex disc and a black, often sinuous proper margin. Proper exciple colourless, 10-15 µm wide laterally, up to 15-20 µm wide in upper part; epithecium reddish brown, K-; hymenium colourless, 80-90(-110) µm high; paraphyses 1.5-2 µm thick in lower part, conglutinate, the apical cells 3-3.5 µm wide, immersed in a dispersed pigment; hypothecium colourless to pale brown, 70-130(-180) µm high. 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-septate, brown, ellipsoid, 13-18 x 7-11 µm, with rugulate-ornamented walls, *Milvina*-type, with ontogeny of type A (apical wall thickening after septum formation). Pycnidia dark, immersed in thallus. Conidia bacilliform, 5-6 µm long. Photobiont chlorococcoid. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: zeorin. - Note: an arctic-alpine species described from the Italian Alps and also known from the Karakorum Mountains, found on usually south-exposed surfaces of very hard, base-rich siliceous rocks and serpentine near and above treeline.



Rinodina serpentina

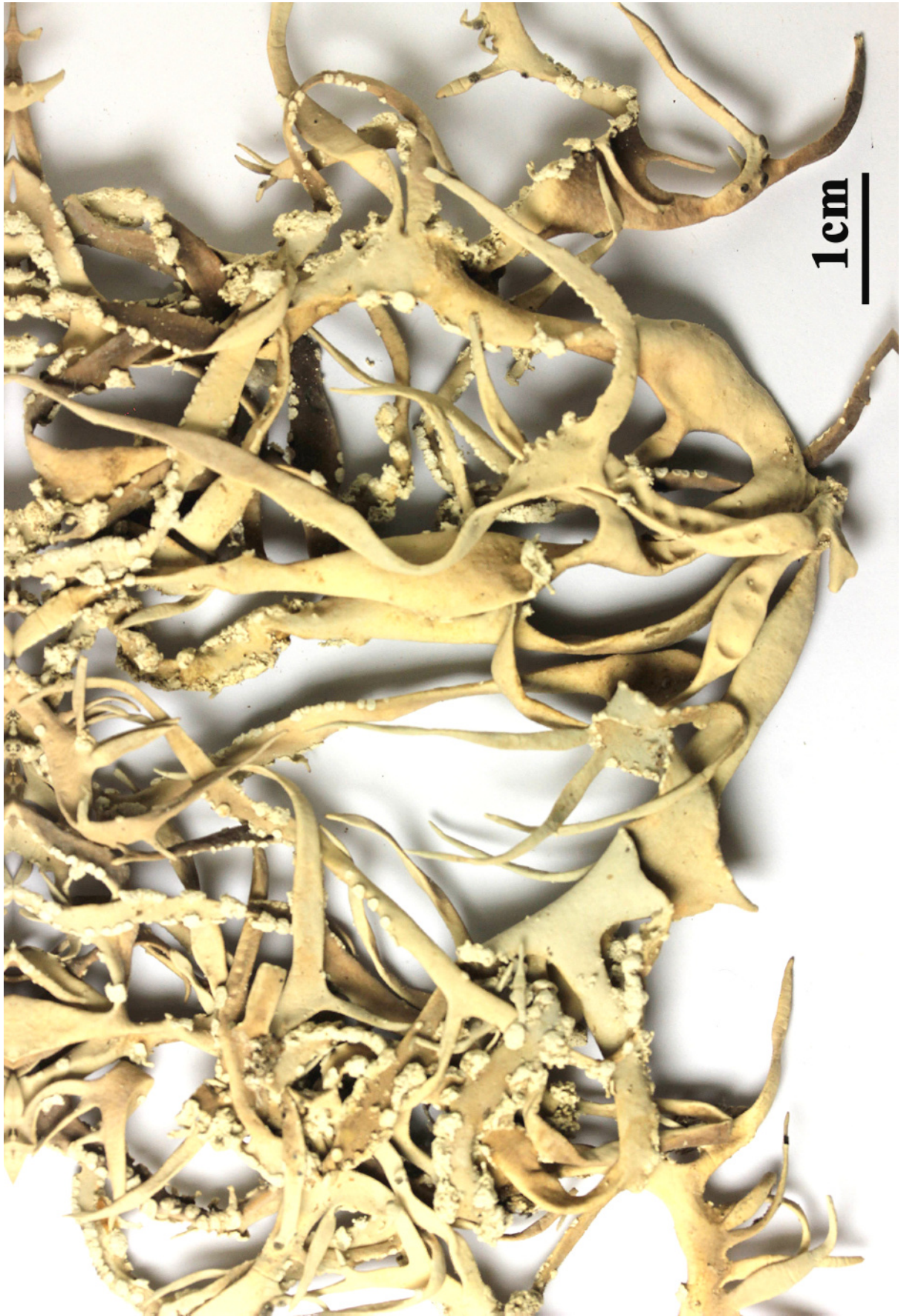


Rinodina serpentinei

Roccella fuciformis (L.) DC., in Lamarck & de Candolle, Fl. franç., Edn 3 (Paris) 2: 335 (1805)
 = *Lichen caesariensis* With., Bot. arr. veg. Gr. Brit. (London) 2: 716 (1776)
 = *Lichen fuciformis* L., Sp. pl. 2: 1147 (1753)
 = *Nemaria fuciformis* (L.) Navás, Brotéria, sér. bot. 8: 48 (1909)
 = *Parmelia fuciformis* (L.) Ach., Methodus, Sectio post. (Stockholmiæ): 258 (1803)
 = *Roccella tinctoria* var. *fuciformis* (L.) Bab., Primit. Florae Scanicae: 123 (1839)
 = *Roccellomyces fuciformis* E.A. Thomas ex Cif. & Tomas., Atti Ist. bot. Univ. Lab. crittog. Pavia, sér. 5 10(2): 279 (1954)
 = *Roccella teneriffensis* Vain.

[VZR1 28], Insulae Canarienses. Tenerife. Carachico, inter pagos Las Cruces et Tanque, 300 m. Ad muros vetustos e lapidibus basalticis constructos. Leg. F. Ceni & A. Vězda, 11.3.1995, det. A. Vězda. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 128.

Thallus fruticose, shrubby, pendulous, up to 20(-30) cm long, grey to pale lilac-grey, sorediate, attached by a single basal holdfast. Branches strap-shaped, flattened, smooth, up to 1.5 cm wide, irregularly branched, progressively tapering, with pointed ends, with more or less circular to irregular, grey-white, mostly marginal soralia. Cortex of anticlinally arranged hyphae, arising from the outermost part of the medulla; medulla and basal holdfast white. Apothecia lecanorine, very rare, black, marginal or laminal, 1-2 mm across. Hymenium colourless; paraphysoids branched-anastomosing; hypothecium dark brown to black. Asci 8-spored, thick-walled, fissitunicate, with an internal beak and a small K/I+ blue ring in the thickened apex. Ascospores 3-septate, hyaline, fusiform, straight or slightly curved 18-30 x 4-7 µm. Pycnidia black, immersed. Conidia 10-15 x 1 µm, more or less curved. Photobiont trentepohlioid. Spot tests: cortex K- or K+ pale yellow, C-, KC-, P-; medulla C-; soralia K+ or K+ pale yellow, C+ and KC+ red; soralia and medulla UV+ blue-white. Chemistry: erythrin, roccellic and lepralic acids. - Note: a supralittoral Mediterranean-Macaronesian species found on steeply inclined or rain-sheltered surfaces of a wide variety of rocks (mainly calcareous) exposed to humid maritime winds, mostly in rather shaded situations.



Roccella fuciformis



Roccella fuciformis

Roccella linearis (Ach.) Vain., in Hiern, Cat. Afr. Pl. 2(2): 434 (1901)
= *Roccella fuciformis* var. *linearis* Ach. 1810

[VZR29], Tanzania. Tanga regio, 17 km ad meridiem a Tanga, prope ruinas "Tongoni", in litore, 10 m. Ad ramulos arborum. Leg. T. Pócs (88025), 4.3.1988, det. E. Farkas. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 29.

Thallus saxicolous, grey, soresiate, texture firm, angular, surface foveolate, holdfast internally white to brown. Cortex more or less a palisade plectenchyma. Apothecia unknown. Cortex C + red, K + yellow, Pd –, subcortex C –, medulla C –, P –, IKI + violet, soralia C + red, IKI –, Pd –, major substances erythrin, lecanoric. – Palaeotropic coasts from Papua New Guinea over India to W. Africa, Cape Verde Islands, Ascension, St Helena.



Roccella linearis



Roccella linearis

Roccella teneriffensis Vain., Kgl. Danske Vidensk. Selsk. Skr., Nat. math. 6: 397 (1924)

= *Roccella fuciformis* (L.) DC. in Lamarck & de Candolle, Fl. Franç., éd. 3, 2: 335, 1805.

= *Lichen fuciformis* L. - Sp. Pl., 2: 1147, 1753.

[VZR139], Insulae Canarienses. Tenerife. Carachico, inter pagos Las Cruces et Tanque, 300 m. Ad muros vetustos e lapidibus basalticis constructos. Leg. F. Ceni & A. Vězda, 11.3.1994. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 139.

Thallus fruticose, shrubby, pendulous, up to 20(-30) cm long, grey to pale lilac-grey, sorediate, attached by a single basal holdfast. Branches strap-shaped, flattened, smooth, up to 1.5 cm wide, irregularly branched, progressively tapering, with pointed ends, with more or less circular to irregular, grey-white, mostly marginal soralia. Cortex of anticlinally arranged hyphae, arising from the outermost part of the medulla; medulla and basal holdfast white. Apothecia lecanorine, very rare, black, marginal or laminal, 1-2 mm across. Hymenium colourless; paraphysoids branched-anastomosing; hypothecium dark brown to black. Asci 8-spored, thick-walled, fissitunicate, with an internal beak and a small K/I+ blue ring in the thickened apex. Ascospores 3-septate, hyaline, fusiform, straight or slightly curved 18-30 x 4-7 µm. Pycnidia black, immersed. Conidia 10-15 x 1 µm, more or less curved. Photobiont trentepohlioid. Spot tests: cortex K- or K+ pale yellow, C-, KC-, P-; medulla C-; soralia K+ or K+ pale yellow, C+ and KC+ red; soralia and medulla UV+ blue-white. Chemistry: erythrin, roccellic and lepraric acids. - Note: a supralittoral Mediterranean-Macaronesian species found on steeply inclined or rain-sheltered surfaces of a wide variety of rocks (mainly calcareous) exposed to humid maritime winds, mostly in rather shaded situations; much rarer and less heliophytic than *R. phycopsis*.



Roccella teneriffensis



Roccella teneriffensis

Roccella vicentina (Vain.) Follmann, in Follmann & Sánchez-Pinto, Courier
 Forschungsinstitut Senckenberg 95: 184 (1987)
 = *Gyalecta vicentina* Vain. 1896
 = *Roccella tinctoria* DC. Fl. Franç., ed. 3, 2: 334, 1805.
 = *Roccella arnoldii* Vain.
 = *Roccella canariensis* Darb.
 = *Roccella canariensis* var. *vincentina* (Vain.) Zahlbr.
 = *Roccella dichotoma* (Pers.) Darb.
 = *Roccella fastigiata* Bory
 = *Roccella guanchica* Feige & Viethen
 = *Roccella patellata* Stirt.
 = *Roccella tuberculata* var. *vincentina* Vain.

[VZR178], Insulae Canarienses, Tenerife. Bajamer, Punta del Hidalgo, Barranco del Hidalgo, 200-300 m. Ad saxa eruptiva. Leg. & det. A. Vězda, 8.3.1994. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 178.

Thallus fruticose, stiff, brown to greyish-brown, consisting of 3-20 cm long, up to 3 mm thick, terete, foveate or smooth branches originating from a common basal holdfast, usually (in Italy) sorediate and without apothecia (fertile specimens are normally esorediate); soralia lateral, circular, white, strongly convex. Cortex of anticlinally arranged hyphae arising from the outermost part of the medulla, not forming a conspicuous palisade plectenchyma, overlain by an amorphous epicortex; medulla in holdfast white, but usually streaked brown or black. Apothecia very rare in Italian material, lateral, sessile, rounded, with a black, but often white-pruinose, finally cracked disc and a thin, finally excluded thalline margin. Proper exciple very thin; epithecium brown to almost colourless; hymenium colourless, 70-90 µm high, I+ blue; paraphysoids branched and sparingly anastomosing in upper part, c. 1 mm thick; hypothecium dark brown to black. Asci 8-spored, thick-walled, fissitunicate, with an internal beak and a small K/I+ blue ring in the thickened apex. Ascospores 3-septate, hyaline (overmature spores often pale brown), oblong-fusiform, slightly curved, 19-21(-25) x (4-)5-6 µm. Pycnidia solitary, immersed, black, c. 0.1 mm in diam. Conidia thread-like, curved, 16-21 x < 1 µm. Photobiont trentepohlioid. Spot tests: cortex K-, C-, KC- (C+, KC+ red under the epicortical layer), P-; medulla and soralia C+ and KC+ red. Chemistry: erythrin and lecanoric acid. - Note: this species with a Macaronesian- western Mediterranean distribution occurs on steeply inclined surfaces of siliceous rocks sub-

ject to humid, salt-laden maritime winds. The species can be both fertile and sorediate (see Tehler & al. 2009), but all Italian specimens, restricted to a few sites in Tyrrhenian Italy, are sorediate. For nomenclatural matters see Tehler (2002).



Roccella vicentina



Roccella vicentina

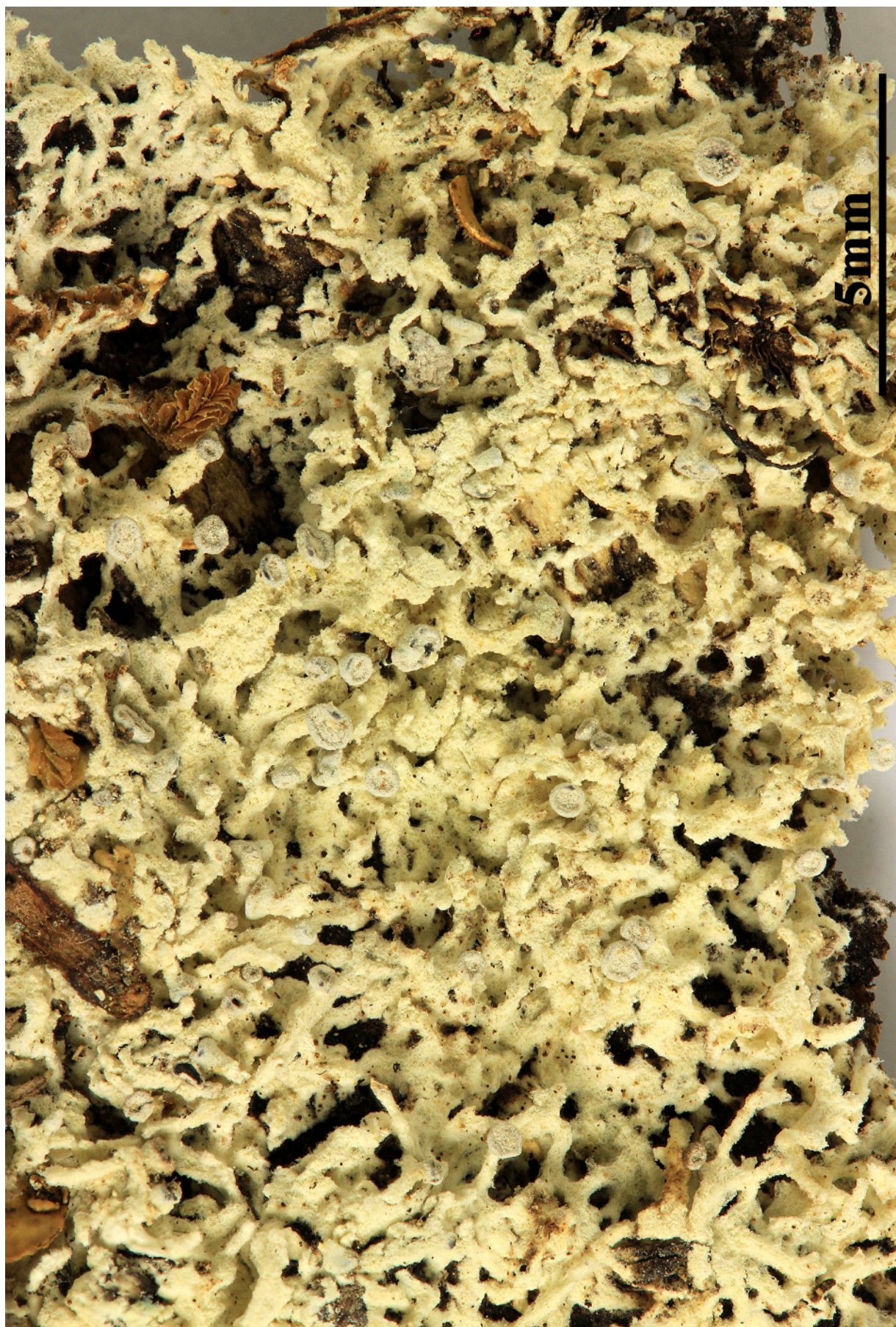
Sagenidium molle Stirt., Proc. Roy. phil. Soc. Glasgow 10: 305 (1877)

[VZR275], 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, 30.4.1997. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 275.

Thallus white to greyish-blue-white, soft, felted, in fine strands, 0.2-0.4 mm thick and 4-8 mm tall, and to 10(-15) cm diam., orbicular or irregularly spreading, without soredia or isidia, corticolous, or muscicolous. Apothecia emergent, lateral and terminal on strands, frequent to absent, subpedicellate, subglobose, disc concave to plane or subconvex, black or brown-black, distinctly white-tomentose, 0.5-1(-2) mm diam. Ascospores fusiform with pointed ends, 5-septate, locules rounded, slightly curved $22-30(-34) \times 3-8 \mu\text{m}$. Chemistry: Lepraric acid.



Sagenidium molle

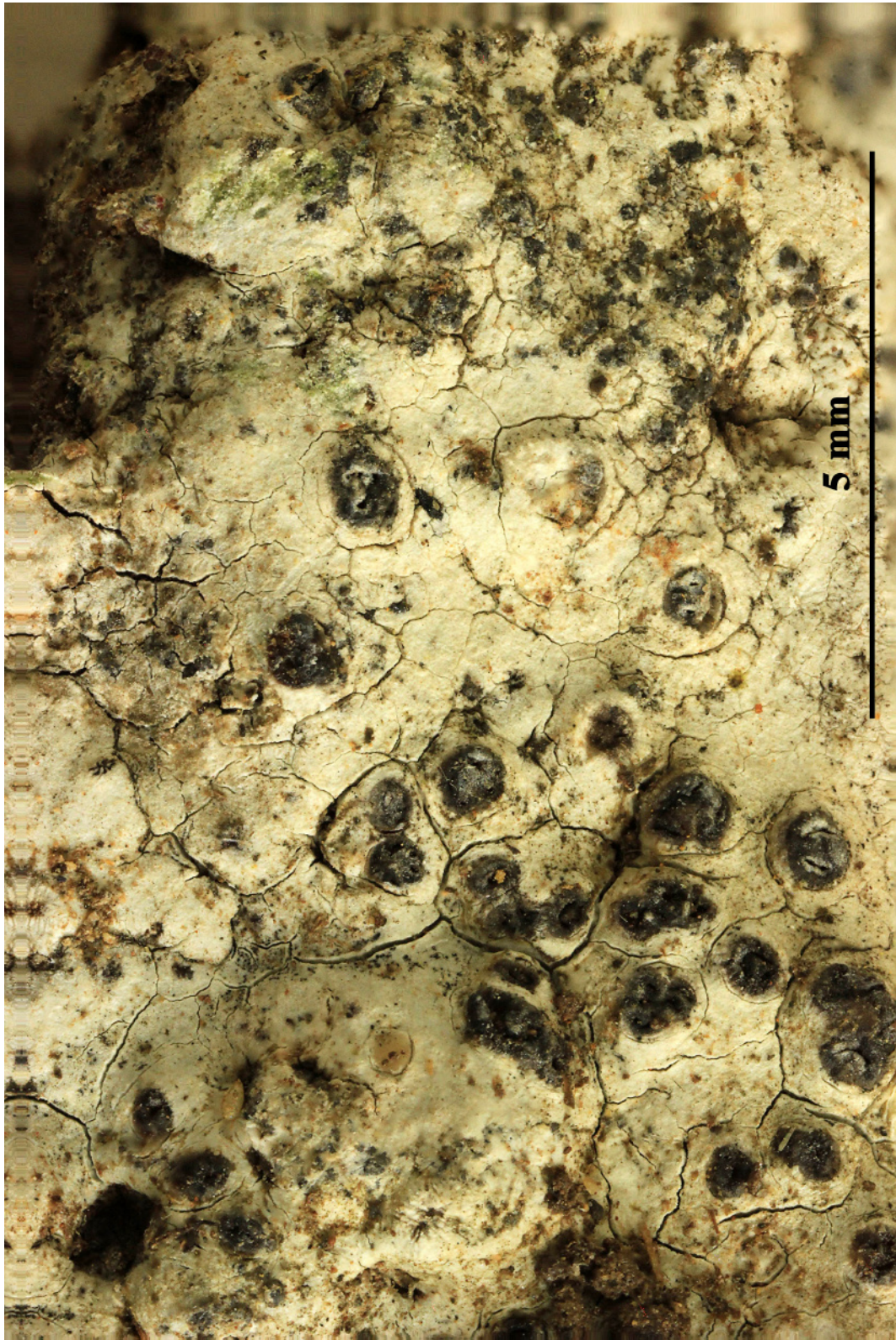


Sagenidium molle

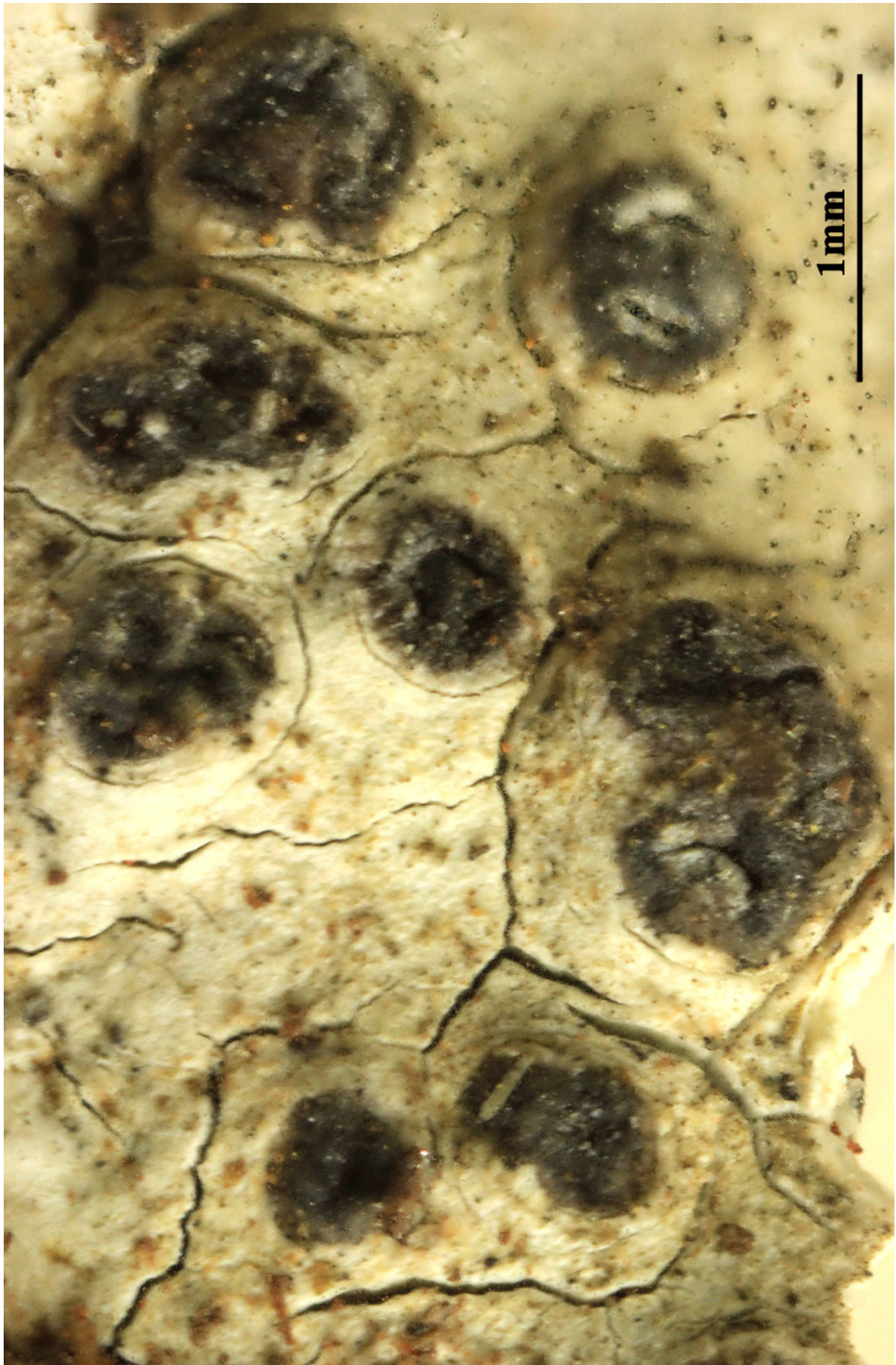
[VZR206], Insulae Canarienses. Insula Gran Canaria, distr. Arucas: Moya, in faucibus "Barranco de los propios", 500 m. Ad saxa eruptiva. Leg.& det A. Vězda, 13.4.1993. EX A. Vězda: LICHENES RARIORES EXSICCATI NR. 206.

Thallus krustig, gelblich weiß, 0,2-0,8 mm dick, diffus, dem Gestein fest aufliegend; Oberfläche glatt oder stellenweise rissig. Photobiont *Trentepohlia* sp., Faden 3,5-7 µm, Einzelzellen bis 15 µm breit. Thallus von Hyphensträngen und *Trentepohlia*-Faden durchzogen, mit eingelagerten Oxalatkristallen, oberseits stellenweise berindet. Apothecien mittel- bis dunkelbraun, zuerst eingesenkt, dann mit breiter Basis auf sitzend, bis 1,8 mm groß, mit wulstigem, unregelmäßig dickem Eigenrand; Scheibe jung krugförmig, im Alter höckerig, umboniert oder mehrfach geteilt und eingeschnitten. Eigenrand aus dem Excipulum proprium und degenerierenden Randern des Hymeniums zusammengesetzt, im Schnitt bis 300 µm breit; Excipulum an der Basis ± pseudoparenchymatisch, 48-62 µm dick. Hymenium (140-)230-340(-400) µm hoch, im Alter durch sterile Hyphenstränge ein- bis mehrfach geteilt; Hypothecium 24-30 µm. In J färben sich Ascuswände, Hymenium, Hypothecium, Teile des Eigenrandes und eine subexcipulare Schicht blau, bei längerer Einwirkung braunlich violett. Paraphysen verklebt, 1-1,5 µm dick, unverzweigt, spitzwärts nicht verdickt. Asci 8-sporig, lang zylindrisch, 164-180 x 12-14 µm, Wände schwach amyloid. Ascosporen farblos, eumuriform mit 5-8 Quer- und 1-2 Längssepten, (17-)19-27(-34,5) x (8,5-)11-14 µm, mit schmalem Halo. Pycnidien eingesenkt, gekammert, 150-280 µm breit und 190-325 µm hoch; Conidien stabchenförmig, 5-7 x 0,5-0,8 µm, terminal an unverzweigten oder verzweigten, langzelligen Conidiophoren gebildet; [die verzweigten Conidiophoren entsprechen dem Typ III bei VOBIS (1980)]. Chemie: Mit Hilfe von TLC keine Flechtenstoffe nachgewiesen. - Kennzeichnend für *S. atlantica* sind die dicke, gelblich weiße Lager mit *Trentepohlia*, braune, etwas glasige Apothecien mit wulstigem Rand und unregelmäßig skulpturierten Scheiben, mauerformige Ascosporen und die in älteren, geteilten Apothecien streifige Blaufärbung des Hymeniums und Eigenrandes in J. Letzteres hat sie mit *S. protuberans* gemeinsam, von der sie durch die mauerförmigen Sporen und den dickeren, von Hyphensträngen durchzogenen Thallus mit eingelagerten Oxalatkristallen abweicht.

Sagiolechia atlantica Henssen is described from Madeira, the Azores and Canary Islands. The lichen is closely related to *protuberans* (Ach.) A. Massal., but differs by its muriform ascospores. Both species correspond in a special developmental type and iodine reaction of the ascocarp, whereas *S. rhexoblephara* (Nyl.) Zahlbr. deviates by the structure and development of the apothecia.



Sagiolechia atlantica



Sagiolechia atlantica

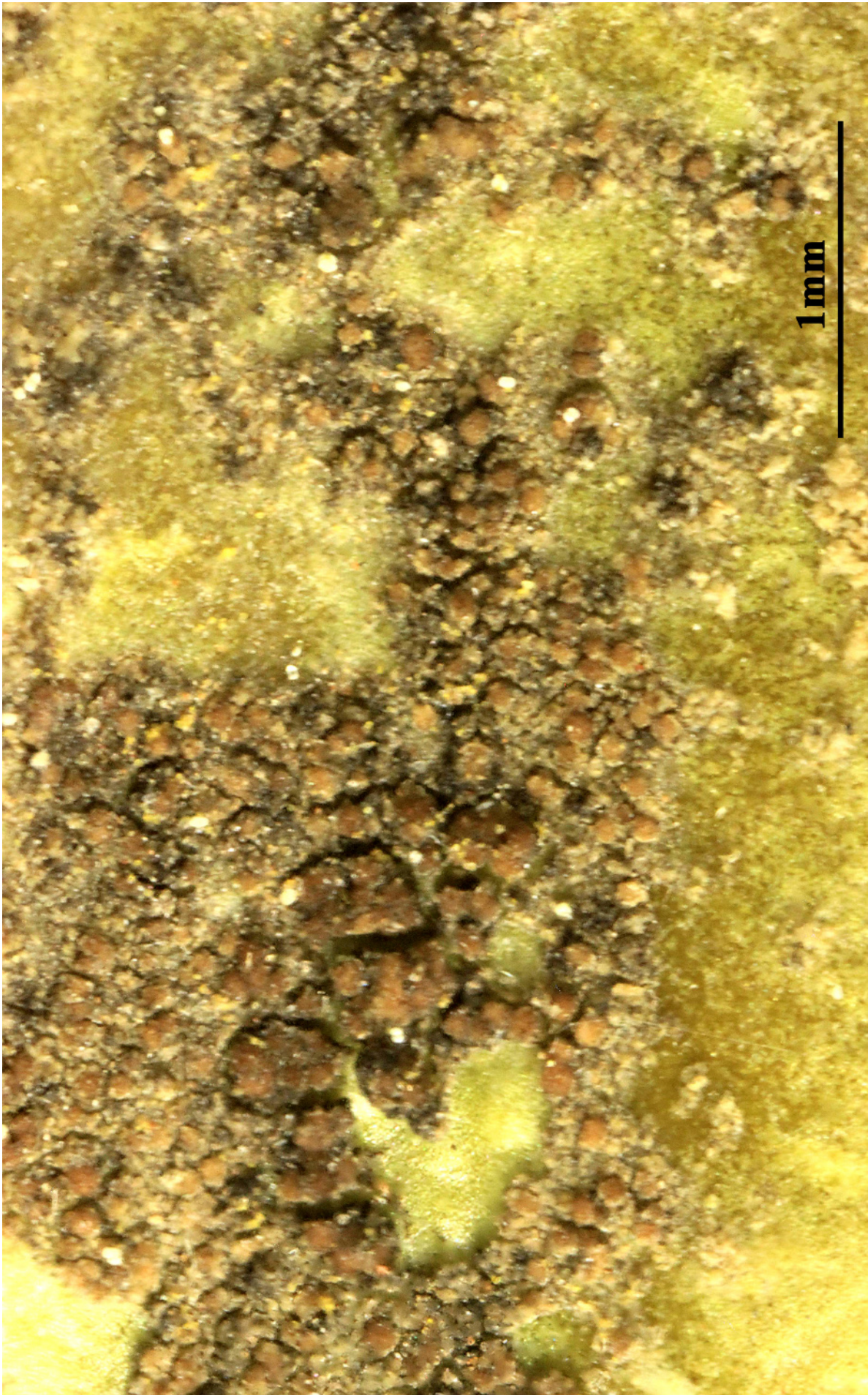
Scoliciosporum curvatum Sérus., Nordic J. Bot. 13(4): 458 (1993)

[VZR129}, Hispania. Navarra. Usún, Arbayún, in ripa rivuli, 500 m. Foliicola (*Buxus sempervirens*). Leg. P. v. d. Boom & J. Etayo, 7.1993, det. J. Etayo. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 129.

Thallus crustose, thinly episubstratic, granular or areolate, uneven, whitish, pale green or dark grey-green, consisting of c. 50 µm thick goniocysts. Apothecia usually abundant, biatorine, 0.1-0.15(-0.2) mm across, scattered, often immersed in thallus granules, beige, pale pinkish brown, finally often orange-brown or brown, with an initially flat, but rapidly turning strongly convex disc, soon immarginate. Proper exciple evident only in young apothecia, up to 10 µm thick, of elongated, interwoven hyphae, the outer surface usually with a few projecting hyphae; epithecium brownish; hymenium colourless; paraphyses strongly branched and anastomosing up to the upper part, immersed in a gelatinous matrix and resembling excipular hyphae, the apices mostly slightly clavate; hypothecium colourless, paraplectenchymatous in upper part. Asci 12-16-spored, broadly clavate, surrounded by a gelatinous, amyloid sheet, with a well-developed, amyloid tholus containing a widely cylindrical axial body and a poorly developed, bluntly conical ocular chamber, more or less Lecanora-type. Ascospores (0-)1-septate, hyaline, falciform or sigmoid, (7-)10-15(-18) x 1.5-2.5(-3.5) µm. Photobiont chlorococcoid, the cells (12-)14-20(-22) µm wide. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: mostly foliicolous in the understory of humid forests; in Central Europe on needles of *Abies* and *Picea*, elsewhere on leaves and green twigs of *Buxus* in very humid situations; widespread in Europe, but most common in its western parts, with several records from the Alps.



Scoliciosporum curvatum



Scoliciosporum curvatum

Scoliciosporum curvatum Sérus., Nordic J. Bot. 13(4): 458 (1993)

[VZR350], Bohemia meridionalis, montes Šumava, reservatum naturae Houska dictum, prop stationem viae ferreae "Ovesná", 730 m, Ad folia *Piceae excelsae*. Leg. Š. Bayerová, J. Liška & Z. Palice. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 350.

Thallus crustose, thinly episubstratic, granular or areolate, uneven, whitish, pale green or dark grey-green, consisting of c. 50 µm thick goniocysts. Apothecia usually abundant, biatorine, 0.1-0.15(-0.2) mm across, scattered, often immersed in thallus granules, beige, pale pinkish brown, finally often orange-brown or brown, with an initially flat, but rapidly turning strongly convex disc, soon immarginate. Proper exciple evident only in young apothecia, up to 10 µm thick, of elongated, interwoven hyphae, the outer surface usually with a few projecting hyphae; epithecium brownish; hymenium colourless; paraphyses strongly branched and anastomosing up to the upper part, immersed in a gelatinous matrix and resembling excipular hyphae, the apices mostly slightly clavate; hypothecium colourless, paraplectenchymatous in upper part. Asci 12-16-spored, broadly clavate, surrounded by a gelatinous, amyloid sheet, with a well-developed, amyloid tholus containing a widely cylindrical axial body and a poorly developed, bluntly conical ocular chamber, more or less Lecanora-type. Ascospores (0-)1-septate, hyaline, falciform or sigmoid, (7-)10-15(-18) x 1.5-2.5(-3.5) µm. Photobiont chlorococcoid, the cells (12-)14-20(-22) µm wide. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: mostly foliicolous in the understory of humid forests; in Central Europe on needles of *Abies* and *Picea*, elsewhere on leaves and green twigs of *Buxus* in very humid situations; widespread in Europe, but most common in its western parts, with several records from the Alps.



Scoliciosporum curvatum



Scoliciosporum curvatum

- Sclerophora nivea*** Tibell, Beih. Nova Hedwigia 79: 679 (1984)
 = *Sclerophora pallida* (Pers.) Y.J. Yao & Spooner, Kew Bull. 54(3): 688 (1999)
 = *Calicium pallidum* Pers., Ann. Bot. (Usteri) 7: 20 (1794)
 = *Chaenotheca pallida* (Pers.) Stizenb., Ber. Tät. St Gall. naturw. Ges.: 157 (1862) [1861-62]
 = *Coniocybe nivea* (J.F. Gmel.) Arnold, Flora, Regensburg 68: 59 (1885)
 = *Coniocybe nivea* var. *pallida* (Pers.) Arnold, Flora, Regensburg 68: 59 (1885)
 = *Coniocybe pallida* (Pers.) Fr., Sched. Crit. Lich. Suec., Fasc. 1-4: no. 3 (1824)
 = *Coniocybe pallida* var. *nivea* Zahlbr., Cat. Lich. Univers. 1: 646 (1922)
 = *Coniocybe stilbea* var. *pallida* (Pers.) Körb., Syst. lich. germ. (Breslau): 319 (1855)
 = *Fulgia pallida* (Pers.) Trevis., Flora, Regensburg 45(1): 6 (1862)
 = *Pilacre pallida* (Pers.) Boud., Hist. Class. Discom. Eur. (Paris): 91 (1907)
 = *Pseudo-coniocybe pallida* (Pers.) Marchand, Énum. Méth. Rais Fam. Genres Mycophytes (Paris): 158 (1896)
 = *Roesleria pallida* (Pers.) Sacc., Syll. fung. (Abellini) 8: 826 (1889)
 = *Stemonitis nivea* J.F. Gmel., Syst. Nat., Edn 13 2(2): 1467 (1792)
 = *Trichia nivea* Hoffm., Veg. Crypt. 2: 14 (1790)

[VZR356], Italia. Prov. Isernia, inter Molise et Pescopennataro, prope Laghi dell'Anitra, 1050 m. Ad corticem arboris (*Acer* sp.). Leg. P. L. Nimis, C. Rouc & M. Tretiach, 5.4.1997. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 356.

Thallus endosubstratic, poorly evident. Apothecia at first sessile and covered with a yellow pruina, then stalked and pin-like, 0.4-0.7 mm high, the stalk 0.06-0.1 mm thick, straw-yellow to pale grey in old specimens, epruinose, translucent when wet, consisting of hyaline, non-sclerotized, periclinally arranged hyphae. Capitulum broadly ovoid to lenticular, 0.25-0.32 mm across, the mazaedium well developed, pale ochraceous, densely interspersed with minute, dark yellow crystals. Exciple well-developed, forming a basal collar, of anticlinally oriented, hyaline hyphae, the surface covered in a layer of colourless to yellow crystals (pruina); hypothecium pale yellowish brown, with a slightly convex upper surface. Asci clavate, with a single functional wall layer, without apical structures, K/I-, dissolving at early stages, formed singly from ascogenous hyphae with croziers, with 2-seriately arranged ascospores. Ascospores 1-celled, globose, hyaline, 7-8 µm wide, with a verrucose ornamentation. Photobiont trentepohlioid. Spot tests: all

parts of the ascomata including the yellow pruina K-, C-, KC-, P-, except the crystals in the mazaedium, which react K⁺ fleeting purple-violet (often with the formation of large crystals). Chemistry: thallus without lichen substances. - Note: a temperate species found on old trees with base-rich bark, such as *Acer*, *Ulmus* and *Fraxinus*, in dry crevices of the bark.



Sclerophora nivea



Sclerophora nivea

Siphula decumbens Nyl., Lich. Nov. Zeland. (Paris): 14 (1888)

= *Lichen torulosus* Ach., Lich. suec. prodr. (Linköping): 100 (1799) [1798]

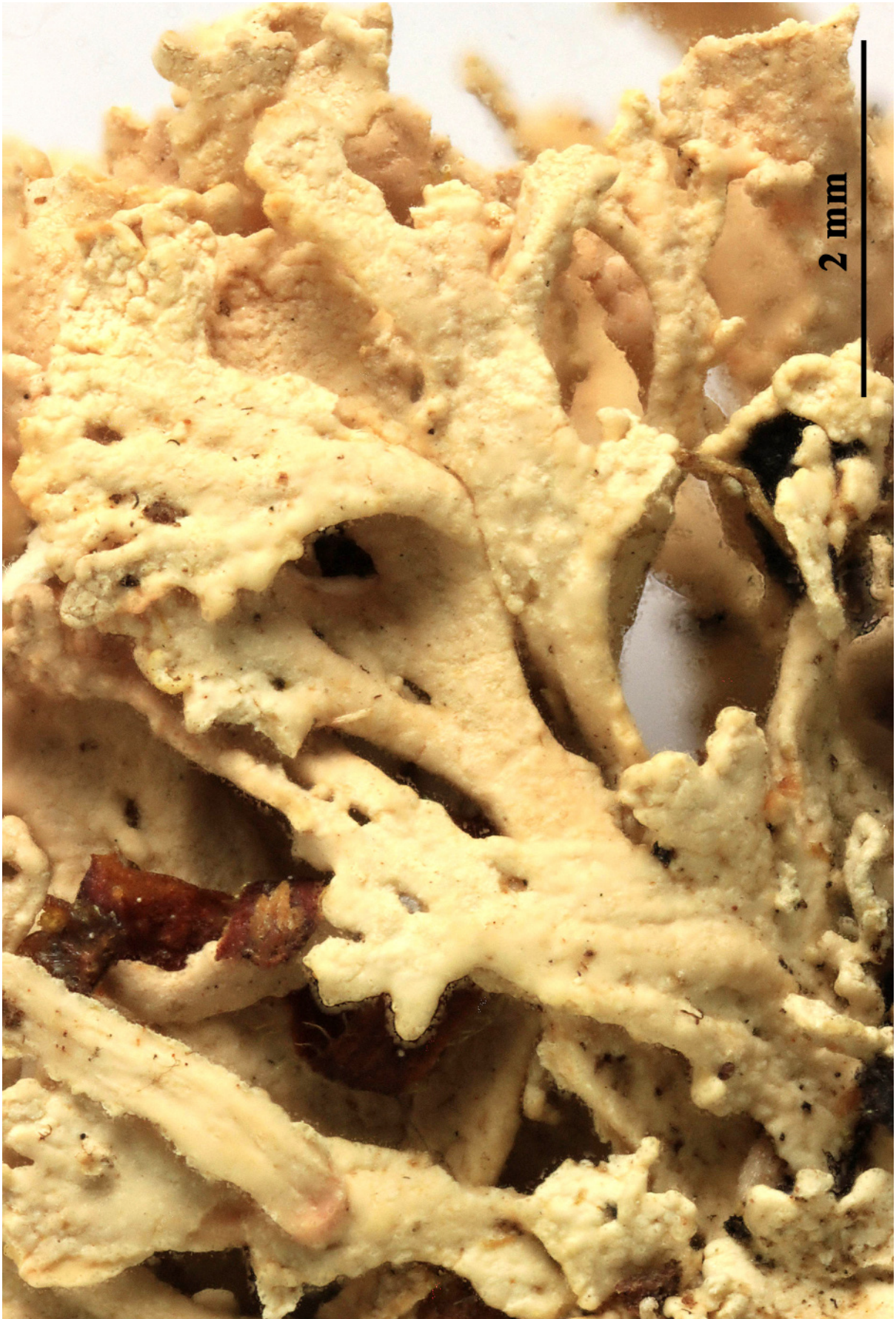
= *Siphula torulosa* (Ach.) Nyl., Mém. Soc. Imp. Sci. Nat. Cherbourg 5: 98 (1858) [1857]

[VZR379], Nova Zelandia. South Island, distr. Nelson, Kahurangi National Park, inter Carpark Flora et casam alpinam Mt. Arthur dictam, 1250 m. Ad terram humosam in silva. Leg. W. Malcolm & A. Vězda. 25.4.1997, det. G. Kantvilas, Observ Kantvilas: Thalli colore coerulesceti loca umbrosa in silvis incolentes, TKC: thamnolic acid. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 379.

Thallus lobes variable, narrow, 2-6 mm wide, 0.3-3(-4) cm tall, ± terete or flattened, rarely simple, strap-like, margins entire or variously notched and incised, apices rounded, furcate or irregularly pectinate, ± unilaterally thickened, crowded, congested. Surface ± smooth, coriaceous to roughened, scabrid-areolate or furrowed, in humid, low-light sites often ± fenestrate with ragged, lacerate margins, chalky white in subalpine exposed sites, becoming greenish in sheltered, humid or shaded sites, 0.3 mm thick, smoother and more coriaceous in exposed subalpine habitats, 0.05-0.1 mm thick in shade forms. Chemistry: Medulla K⁺ yellow or -, Pd⁺ yellow. Two chemodemes appear to be present, a thamnolic acid chemodeme (K⁺) and a chemodeme with baeomycesic acid (K⁻).



Siphula decumbens

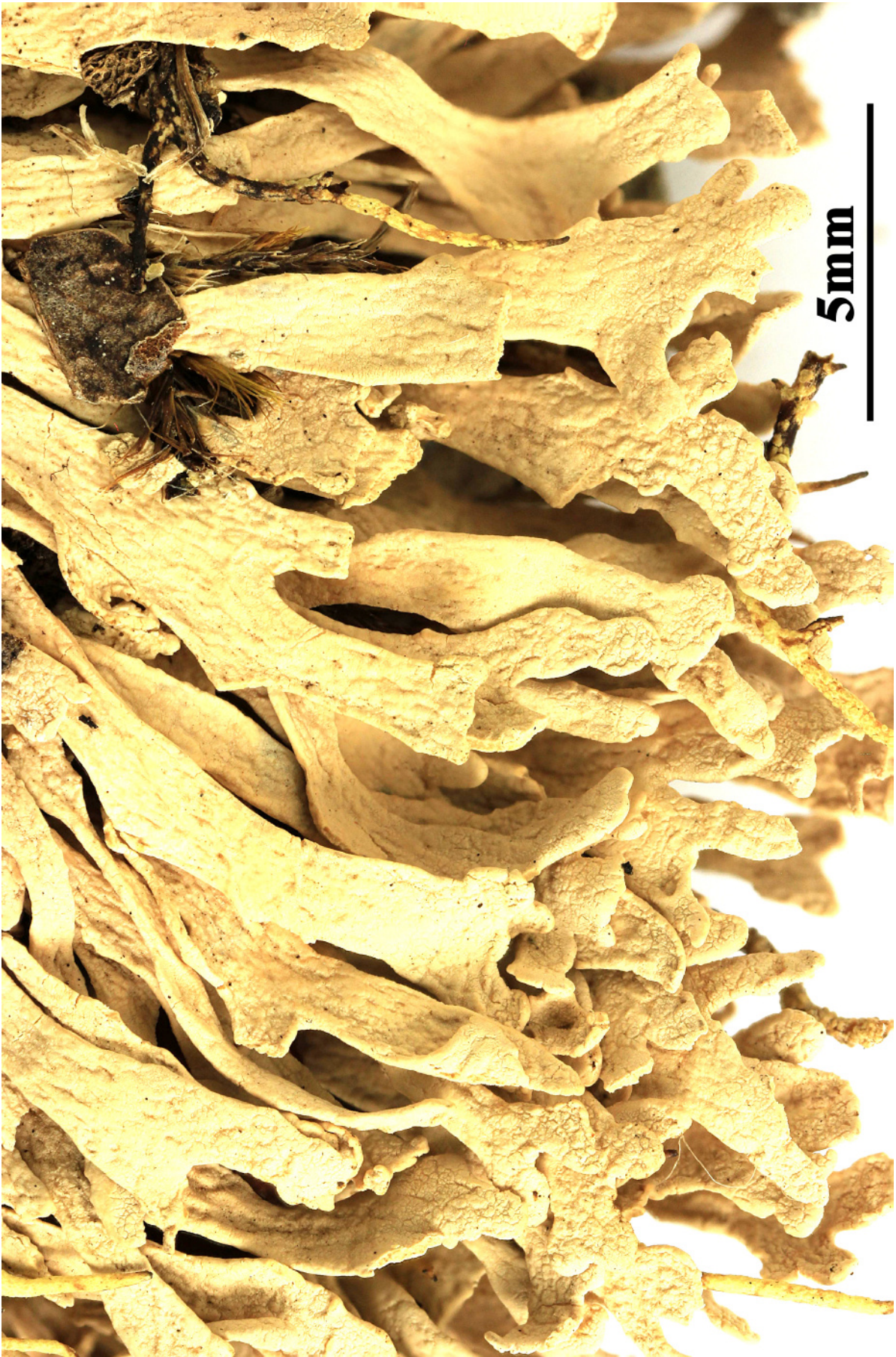


Siphula decumbens

Siphula decumbens Nyl., Lich. Nov. Zeland. (Paris): 14 (1888)
= *Lichen torulosus* Ach., Lich. suec. prodr. (Linköping): 100 (1799) [1798]
= *Siphula torulosa* (Ach.) Nyl., Mém. Soc. Imp. Sci. Nat. Cherbourg 5: 98
(1858) [1857]

[VZR317], Nova Zelandia. South Island, distr. Nelson, Westport, planities Denniston, in monte Rochfort, 750 m. Ad terram in rupe silicea. Leg, W. Malcolm & A. Vězda. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 317.

Thallus lobes variable, narrow, 2-6 mm wide, 0.3-3(-4) cm tall, ± terete or flattened, rarely simple, strap-like, margins entire or variously notched and incised, apices rounded, furcate or irregularly pectinate, ± unilaterally thickened, crowded, congested. Surface ± smooth, coriaceous to roughened, scabrid-areolate or furrowed, in humid, low-light sites often ± fenestrate with ragged, lacerate margins, chalky white in subalpine exposed sites, becoming greenish in sheltered, humid or shaded sites, 0.3 mm thick, smoother and more coriaceous in exposed subalpine habitats, 0.05-0.1 mm thick in shade forms. Chemistry: Medulla K⁺ yellow or -, Pd⁺ yellow. Two chemodemes appear to be present, a thamnolic acid chemodeme (K⁺) and a chemodeme with baeomycesic acid (K⁻).



Siphula decumbens



Siphula decumbens

Siphula dissoluta Nyl., Lich. Nov. Zeland. (Paris): 14 (1888)

= *Siphula subcoriacea* var. *dissoluta* (Nyl.) Hellb., Bih. K. svenska VetenskAkad. Handl., Afd. 3 21(no. 13): 23 (1896)

[VZR318], Nova Zelandia. South Island, distr. Nelson, Kahurangi National Park, in monte supra casam alpinam Mt. Arthur dictam, 1400 m. Ad terram. Leg. W. Malcolm & A. Vězda. EX A. Vězda: LICHENES RARIORES EXSICCATI NR. 318.

Thallus lobes coarse, 3-8 mm wide and 5-20 mm tall, distinctly unilaterally thickened at apices, apices rounded, undulate, margins entire or slightly incised, ± wavy. Surface coarsely scabrid, areolate or corrugate, white, in low-light or sites of high humidity lobes thinner and often ± fenestrate with lacerate, ragged margins. Chemistry: Medulla K⁺ violet-purple, Pd⁻. Hypothamnolic acid (UV⁺ vivid blue-white).



Siphula dissoluta



Siphula dissoluta

Siphula fragilis (Hook. f. & Taylor) Js. Murray, in Weber, Lichenes Exsicc. Colo., Fasc. 7: no. 265 (1969)
 = *Parasiphula fragilis* (Hook. f. & Taylor) Kantvilas & Grube, in Grube & Kantvilas, Lichenologist 38(3): 46 (2006)
 = *Endocarpon fragile* Hook. f. & Taylor, London J. Bot. 3: 639 (1844)
 = *Sticta fragilis* (Hook. f. & Taylor) Müll. Arg., Flora, Regensburg 71: 546 (1888)

[VZR307], Nova Zelandia. South Island, distr. Nelson, Westport, planities Denniston, 900 m. In rupibus supra terram humosam. Leg. W. Malcolm & A. Vězda, 24.4.1997. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 307.

Thallus lobes thin and fragile, undulate, 3-8 mm wide and to 20 mm tall, margins entire, rounded or truncate. Surface uniformly smooth, suffused reddish-pink, margins darker fawnish-pink to reddish, very rarely fenestrate, occasionally with tufts of pale, simple rhizines growing from lower surface in decumbent plants on exposed soil. Chemistry: Medulla K-, C-, Pd-. TLC nil.



Siphula fragilis



Siphula fragilis

- Solenopsora holophaea*** (Mont.) Samp., Brotéria, sér. bot. 19: 26 (1921)
 = *Candelariella holophaea* (Mont.) Zahlbr., Cat. Lich. Univers. 5: 795 (1928)
 = *Diphratora holophaea* (Mont.) Jatta, Syll. Lich. Ital. (Trano): 266 (1900)
 = *Lecania holophaea* (Mont.) A.L. Sm., Monogr. Brit. Lich., Edn 2 1: 341 (1918)
 = *Lecaniella holophaea* (Mont.) Jatta, Fl. ital. crypt. (Florence) 3: 398 (1910)
 = *Lecanora holophaea* (Mont.) Nyl., Bull. Soc. bot. Fr. 8(10): 755 (1863) [1861]
 = *Pannaria holophaea* (Mont.) B. de Lesd., Feuille. Jeun. Natural. 37: 67 (1907)
 = *Parmelia holophaea* Mont., in Webb & Berthelot, Hist. nat. Iles Canar. (Paris) 3(2): 113 (1840)
 = *Psoroma holophaeum* (Mont.) Pit. & Harm., Bull. Soc. bot. Fr. 58(Mém. 22): 43 (1911)
 = *Squamaria holophaea* (Mont.) H. Olivier, Expos. Lich. Ouest France 1: 200 (1897)
 = *Thalloidima holophaeum* (Mont.) Arnold, Flora, Regensburg 53(30–31): 471 (1871) [1870]

[VZR70], Insulae Canarienses, Gran Canaria: distr. Mogán, in declivibus occidentalibus montis Guirre supra urbem Mogán, 500-600 m. Ad terram in fissuris rupium basalticarum. Leg. A. Vězda, 15.2.1993. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 70.

Thallus squamulose, olive-green to olive-brown, epruinose, rather glossy. Squamules 1-3(-4) mm wide, rounded, concave to flat, contiguous or imbricate, with entire to crenulate or flexuose, raised margins; lower surface somewhat paler, attached by sparse, mostly centrally located, pale rhizines. Upper cortex of anticlinally oriented, gelatinized hyphae; medulla white; lower cortex absent. Apothecia lecanorine, 0.5-1.5 mm across, sessile to shortly stipitate, with a dark brown to blackish, flat disc, and a smooth, finally sometimes excluded thalline margin. Epithelium reddish brown; hymenium colourless or pale reddish brown, 50-60 µm high, I+ blue; paraphyses coherent, the apical cells swollen and brown-capped; hypothecium colourless or very pale brown, 130-140 µm high. Asci 8-spored, cylindrical-clavate, with a K/I+ blue outer coat and a K/I+ uniformly blue apical dome, approaching the Catillaria-type. Ascospores 1-septate, hyaline, ellipsoid-elongate to slightly fusiform, 11-18(-24) x (3-)4-6(-7) µm. Pycnidia globose, immersed, the wall dark brown in upper part, colourless in lower part. Conidia simple, hyaline, short-bacilliform. Photobiont chlorococcoid. Spot tests: cortex

and medulla K-, C-, KC-, P-, UV-. Chemistry: terpenoids, unidentified substances. - Note: a Mediterranean-Atlantic lichen found in sheltered crevices of basic siliceous rocks and on soil, especially along the coast; exclusively Tyrrhenian in Italy. Certainly not related to other species of *Solenopsora*.



Solenopsora holophaea



Solenopsora holophaea

Sphaerophorus stereocauloides Nyl., Flora, Regensburg 52: 69 (1869)

[VZR276], 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, 25.4.1887. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 276.

Thallus fruticose, 7-15(-20) cm tall, attached to the substrate by a thick holdfast of brown branching rhizoids. Main branches terete, 2-6 mm thick, with terminal branchlets 1-1.5 mm in diam., branching irregular to subdichotomous, with numerous short, coralloid phyllocladial branchlets occurring in fasciculate groups. Surface of branches smooth, greenish-grey to whitish, transversely annulate-cracked. Cephalodia grey-blue, sparse to frequent, occurring with phyllocladial branchlets, small, cylindrical, to 5 mm long and 1.5-4 mm wide. Algal layer $\pm$ continuous, 40-60 μ m thick, surrounding central medulla, photobiont, spherical, 10-12 μ m diam. Apothecia terminal, subglobose to globose 1.5-4 mm diam., mazaedium apical, exposed at an early stage of development by rupture of the enclosing receptacle, when mature black, partially surrounded by receptacle. Asci cylindrical. Ascospores spherical to broadly ellipsoid, dark blue to dark brownish, 8-12 μ m diam. Chemistry: K-, C-, KC-, Pd-. Sphaerophorin.



Sphaerophorus stereocauloides



Sphaerophorus stereocauloides

- Sphinctrina turbinata*** Fr., Syst. orb. veg. (Lundae): 121 (1825)
 = *Acolium inquinans* var. *stigonellum* (Ach.) Branth & Rostr., Bot. Tidsskr. 3: 266 (1869)
 = *Acolium stigonellum* (Ach.) Gray, Nat. Arr. Brit. Pl. (London) 1: 482 (1821)
 = *Acolium tympanellum* var. *stigonellum* (Ach.) Körb., Syst. lich. germ. (Breslau): 303 (1855)
 = *Calicium sessile* var. *stigonellum* (Ach.) Duby, Bot. Gall., Edn 2 (Paris) 2: 638 (1830)
 = *Calicium stigonellum* Ach., Methodus, Sectio prior (Stockholmiae): 88 (1803)
 = *Calicium turbinatum* Pers., Tent. disp. meth. fung. (Lipsiae): 59 (1797)
 = *Calicium tympanellum* subsp. *stigonellum* (Ach.) Fr., Lich. eur. reform. (Lund): 401 (1831)
 = *Calicium tympanellum* subsp. *turbinatum* (Pers.) Fr., Lich. eur. reform. (Lund): 402 (1831)
 = *Cyphelium stigonellum* (Ach.) Ach., K. Vetensk-Acad. Nya Handl. 3: 268 (1815)
 = *Cyphelium turbinatum* (Pers.) Ach., K. Vetensk-Acad. Nya Handl. 3: 268 (1815)
 = *Hypoxylon sphinctericum* Bull., Hist. Champ. Fr. (Paris) 1(1): 168 (1791)
 = *Lecidea gelasinata* (With.) Ach., Methodus, Sectio prior (Stockholmiae): 33 (1803)
 = *Lichen gelasinatus* With., Arr. Brit. pl., Edn 3 (London) 4: 8 (1796)
 = *Sphaeria sphinctrica* (Bull.) Sowerby, Col. fig. Engl. Fung. Mushr. (London) 3(no. 27): tab. 386, fig. 1 (1803)
 = *Sphinctrina gelasinata* (With.) Zahlbr., Cat. Lich. Univers. 1: 654 (1922)
 = *Sphinctrina turbinata* (Pers.) De Not., G. bot. ital. 2(1.1): 314 (1846)
 = *Trachylia stigonella* (Ach.) Fr., Corpus Fl. Prov. Suec. 1: 283 (1835)
 = *Trachylia tympanella* var. *stigonella* (Ach.) Boistel, Nouv. Fl. Lich. (Paris) 2: 263 (1903)

[VZR110], Turcia. Distr. Antalya. Kaşa, transitus Sinekçibeli Ceçidi in montibus Akdaglan, 1500 m. Ad lignum trunci (*Juniperua* sp.), in thallo *Pertusariae* sp. vicens. Leg. A. Vězda, 11.4.1996. EX A. Vězda: LICHENES RARIORES EXSICCATI NR. 220.

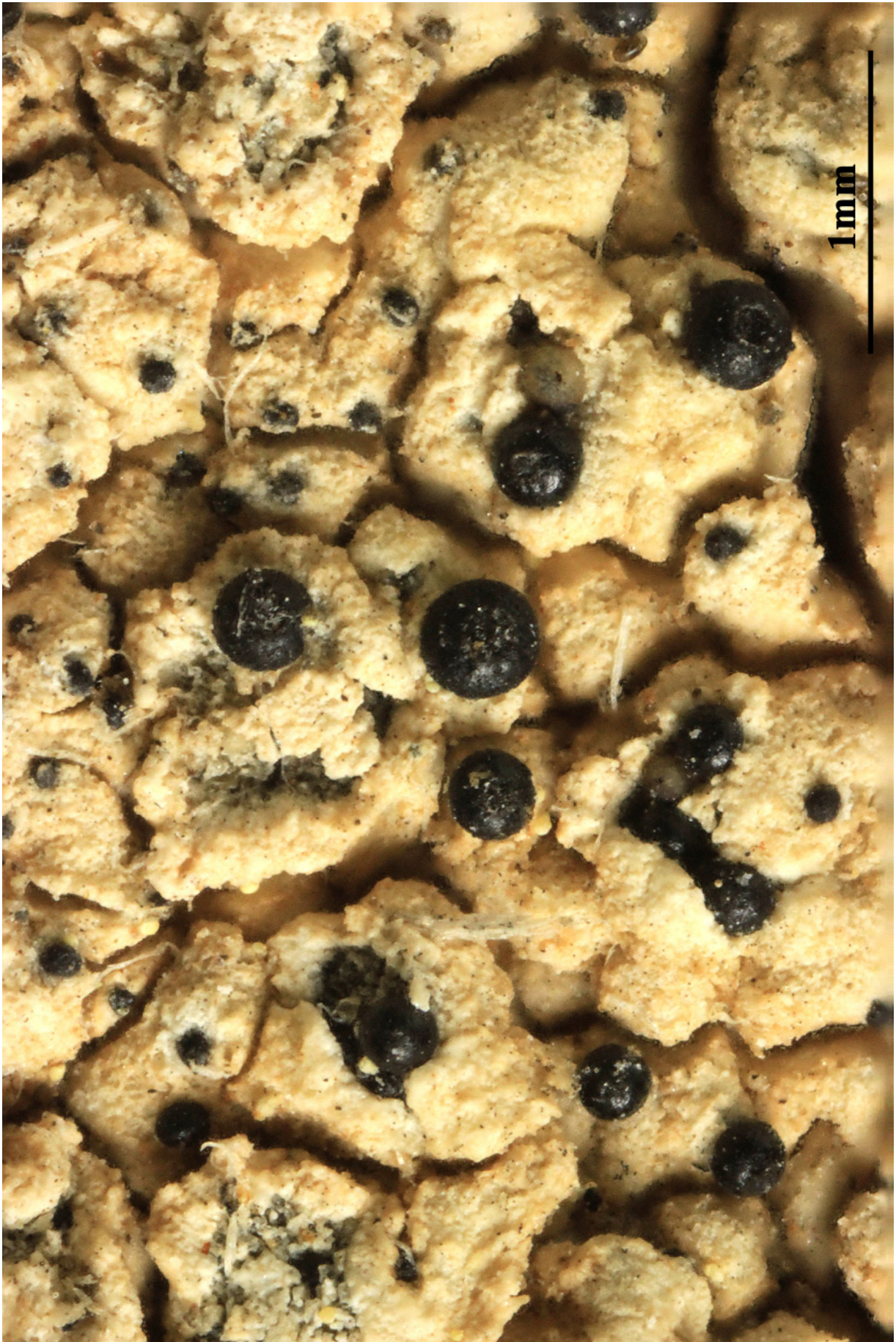
Thallus not evident, not lichenized. Apothecia short-stalked to subsessile, 0.16-0.3 mm high. Stalk dark to pale brown, more rarely black, of periclinally arranged, red hyphae with strongly gelatinized walls, pale in inner part, reddish in outermost part, which is sometimes overlain by a thick gelatinous coat. Capitulum spherical to slightly irregular, 0.2-0.4 mm across, shiny black or dark brown; mazaedium well-developed,

black. Exciple well-developed, dark ruby red in section, not sclerotized, consisting of more or less periclinally arranged hyphae, the surface slightly sclerotized in upper part, hyaline and gelatinose in lower part; hypothecium colourless to pale brown, 35-50 µm high. Asci 8-spored, cylindrical, formed singly from ascogenous hyphae with croziers, with a single, functional wall layer, K/I-, disintegrating at a rather late stage, with uniseriately arranged spores. Ascospores 1-celled, subglobose, dark brown, 5-7.5 x 4.5-7.5 µm, surrounded by a gelatinous coat, with an ornamentation of minute pores (resembling small warts under the optical microscope), and a few irregular cracks. Photobiont absent. Spot tests: K-, C-, KC-, P-, except the reddish parts of the ascomata, especially in the exciple, which react K+ purple. Chemistry: without lichen substances. - Note: mostly on *Pertusaria pertusa* in humid beech forests, much more rarely on saxicolous *Pertusaria*-species. Widespread throughout the country, with optimum in the montane belt.

Sphinctrina turbinata



Sphinctrina turbinata

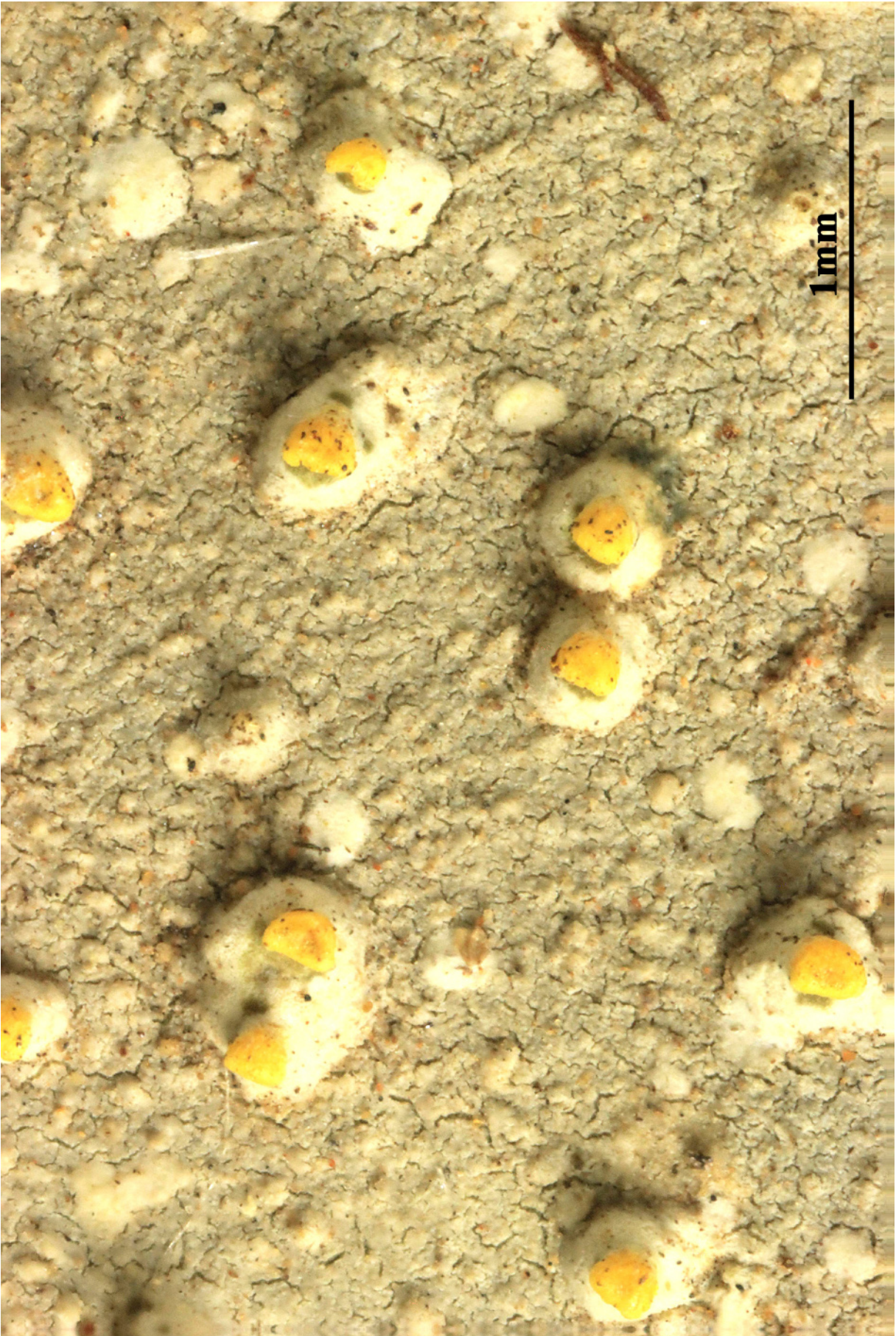


Sphinctrina turbinata

Sporopodium flavescens (R. Sant.) Vězda, Lichenes Selecti Exsiccati, Fascicle 88 (nos 2176-2200) (Průhonice): 5 (no. 2193) (1988)

[VZR98], Australia. Queenslandia. Mc Pherson Range: Duck Creek Road, 900 m. 24°14' austr., 153°07' orient, Foliicola in pluviisilva subtropicali. Leg. K.& A. Kalb, 18.8.1992, det. K. Kalb. EX A. Vězda: LICHENES RARIORES EXSICCATI NR. 98.

Ebenso wie *Sporopodium citrinum* zeichnet sich *S. flavescens* (R. SANT.) VEZDA durch Kampylidien mit leuchtend gelber Farbe aus. Die wesentlichen Unterscheidungsmerkmale liegen in der deutlich aufgeblasenen Basis der Kampylidien und dem mehr oder weniger glatten Thallus.



Sporopodium flavescens



Sporopodium flavescens

- Steinia geophana*** (Nyl.) Stein, in Cohn, Krypt.-Fl. Schlesien (Breslau) 2(2): 209 (1879)
 = *Biatora geophana* (Nyl.) Th. Fr., Öfvers. K. Svensk. Vetensk.-Akad. Förhandl. 21: 271 (1865)
 = *Biatorella geophana* (Nyl.) Rehm, Rabenh. Krypt.-Fl., Edn 2 (Leipzig) 1.3(lief. 32): 307 (1890) [1896]
 = *Lecidea geophana* Nyl., Lich. Scand. (Helsinki): 212 (1861)
 = *Lecidea insita* Stirt., Scott. Natural. 5: 17 (1879)
 = *Pleolecis geophana* (Nyl.) Clem., Gen. fung. (Minneapolis): 174 (1909)
 = *Sarcogyne geophana* (Nyl.) Boistel, Nouv. Fl. Lich. (Paris) 2: 228 (1903)
 = *Sarea geophana* (Nyl.) Kuntze, Revis. gen. pl. (Leipzig) 3(3): 515 (1898)

[VZR228], Bohemia centralis, distr. Beroun, loco "Na Herinkách" dicto, 420 m. Ad terram secus viam. Leg. & det. J. Horáková. EX A. VěZDA: LICHENS RARIORES EXSICCATI NR. 228.

Thallus crustose, episubstratic, pale grey to dull grey-green, thin and film-like, subgelatinous when wet, continuous, more or less ephemeral, with sparse goniocysts. Apothecia biatorine, sessile, 0.2-0.6 mm across, with a dark brown to black-brown, strongly convex, rough disc, without a distinct proper margin. Proper exciple poorly developed, of a few thread-like hyphae resembling paraphyses; epithecium reddish brown to brown, with granules not dissolving in K; hymenium colourless to brownish, 65-80 µm high, I+ pale blue; paraphyses scarce, immersed in the hymenial gel, simple, not apically thickened, 0.5-1 µm thick; hypothecium brownish, of vertically arranged hyphae. Asci (12-)16-spored, clavate-cylindrical, thin-walled, without a tholus, K/I + blue, with a distinct apical pore. Ascospores 1-celled, hyaline, globose or subglobose, 4-6(-8) x 4-6 µm, the wall c. 0.5 µm thick, without a perispore. Pycnidia rare, dark, immersed, the conidiogenous cells elongate-ampulliform, enteroblastic. Conidia acrogenous, ellipsoid, hyaline, 1-1.5 µm long. Photobiont chlorococcoid, with ellipsoid cells. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances - Note: an ephemeral, facultatively lichenised species of moist, slightly calciferous soil, rotten wood, small pebbles, terricolous Peltigera- and Solorina-species and plant debris, often found in rather disturbed habitats such as on earth banks along white roads and on track sides.



Steinia geophana



Steinia geophana

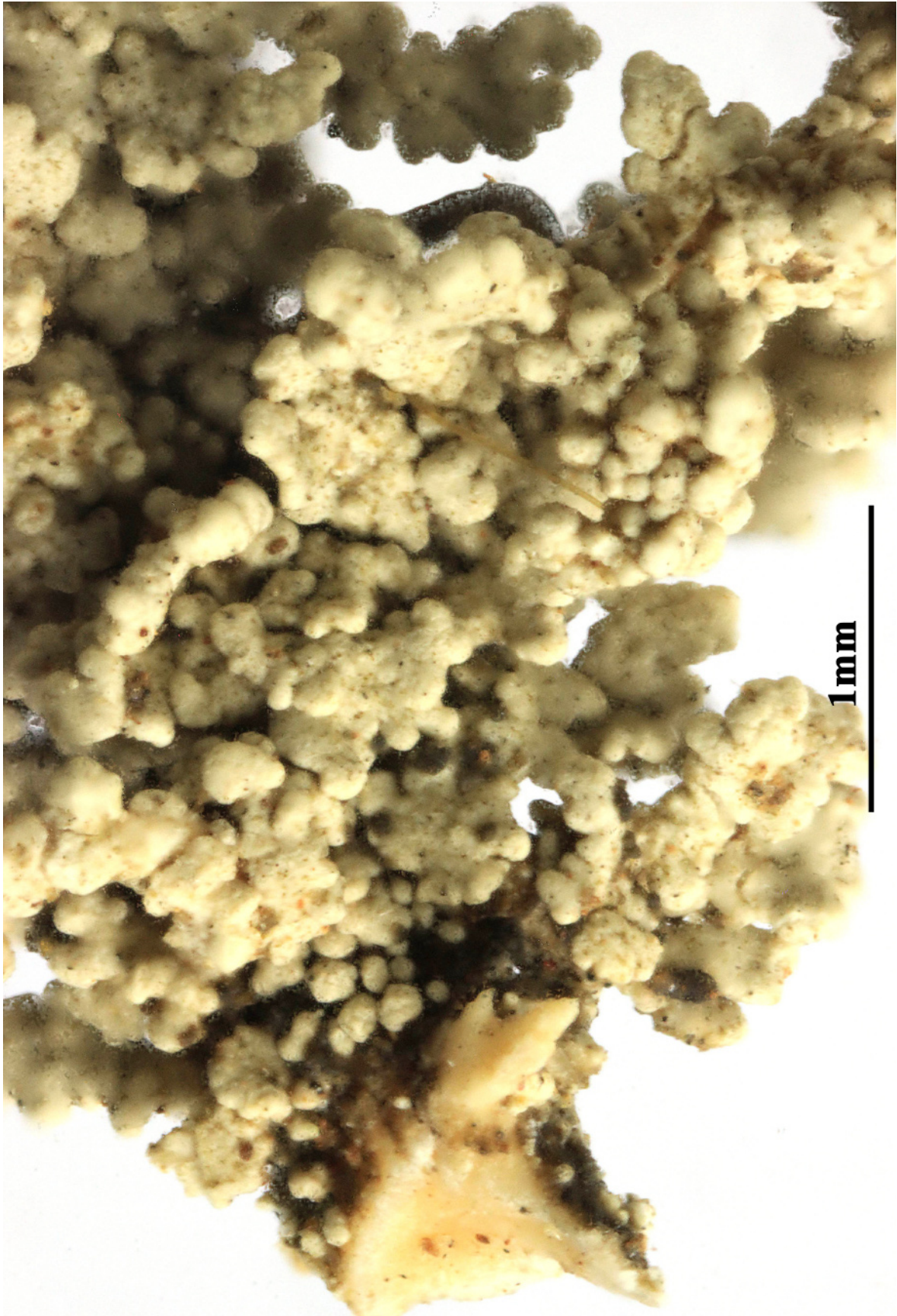
Stereocaulon azureum (Schaer.) Nyl., Mém. Soc. Imp. Sci. Nat. Cherbourg
5: 97 (1858) [1857]
= *Stereocaulon tomentosum* var. *azureum* Schaer. 1850

[VZR482], Madeira Insula: Ad parietes rupium basalticarum in declivibus austroorient. Montis Poiso, 1300 m. Ad terra. Leg. et et I. Pišút. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 482.

S. azureum (Schaerer) Nyl. has finely granular phyllocladia and elegant, richly branched, often richly fertile pseudopodetia with terminal apothecia; it is unique amongst species of *Stereocaulon* in containing both lobaric and stictic acids. A further species, *S. atlanticum* (Lamb) Lamb (= *S. meyeri* Stein ssp. *atlanticum*), described from the Azores has smooth pseudopodetia with terminal, capitate soralia, shortly stalked, sacculate cephalodia and contains stictic acid, norstictic acid and atranorin as well as accessory substances of the stictic acid complex; this species has also been recorded from central and South Africa as well as tropical America and belongs to subsect. *Aciculisporae* which includes the widespread species, *S. ramulosum* (Sw.) Rausch.



Stereocaulon azureum



Stereocaulon azureum

Stereocaulon colensoi C. Bab., in Hooker, Bot. Antarct. Voy. Erebus Terror 1839-1843, II, Fl. Nov.-Zeal.: 295 (1855)

[VZR287], Nova Zelandia. South Island, distr. Nelson. Westport. Planities Denniston, ad latera montis Rochfort, 750 m. Ad saxa silicea. Leg. W. Malcolm & A. Vězda, 21.04.1997. Ex A. Vězda: LICHENES RORIDORES EXSICCATI NR. 287.

Stereocaulon colensoi is characterised by the saxicolous habit, a large, robust thallus to 8 cm tall, corticate or decorticate pseudopodetia, the surface smooth, wrinkled to verrucose-arcolate, never soresiate; corticate, glossy, smooth, terete, finger-like to branched phyllocladia; very distinctly stalked ficoid, single or clustered cephalodia, the surface distinctly convoluted and maculate or scabrid-areolate; lateral and terminal apothecia with prominent, black or dark brown-black, marginate discs. Chemistry: atranorin, colensoinic acid, unidentified tetrahydroxy fatty acids, and traces of unidentified compounds.





Stereocaulon colensoi

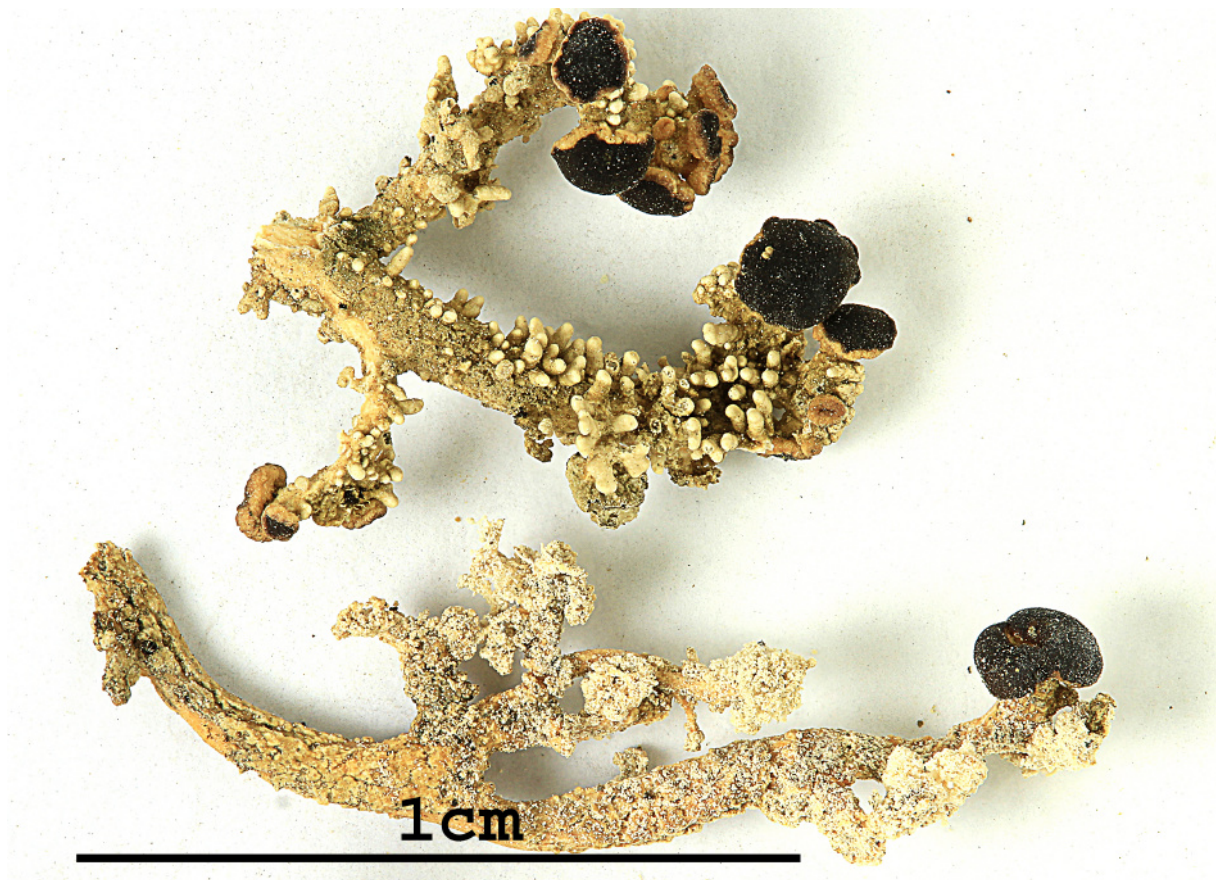


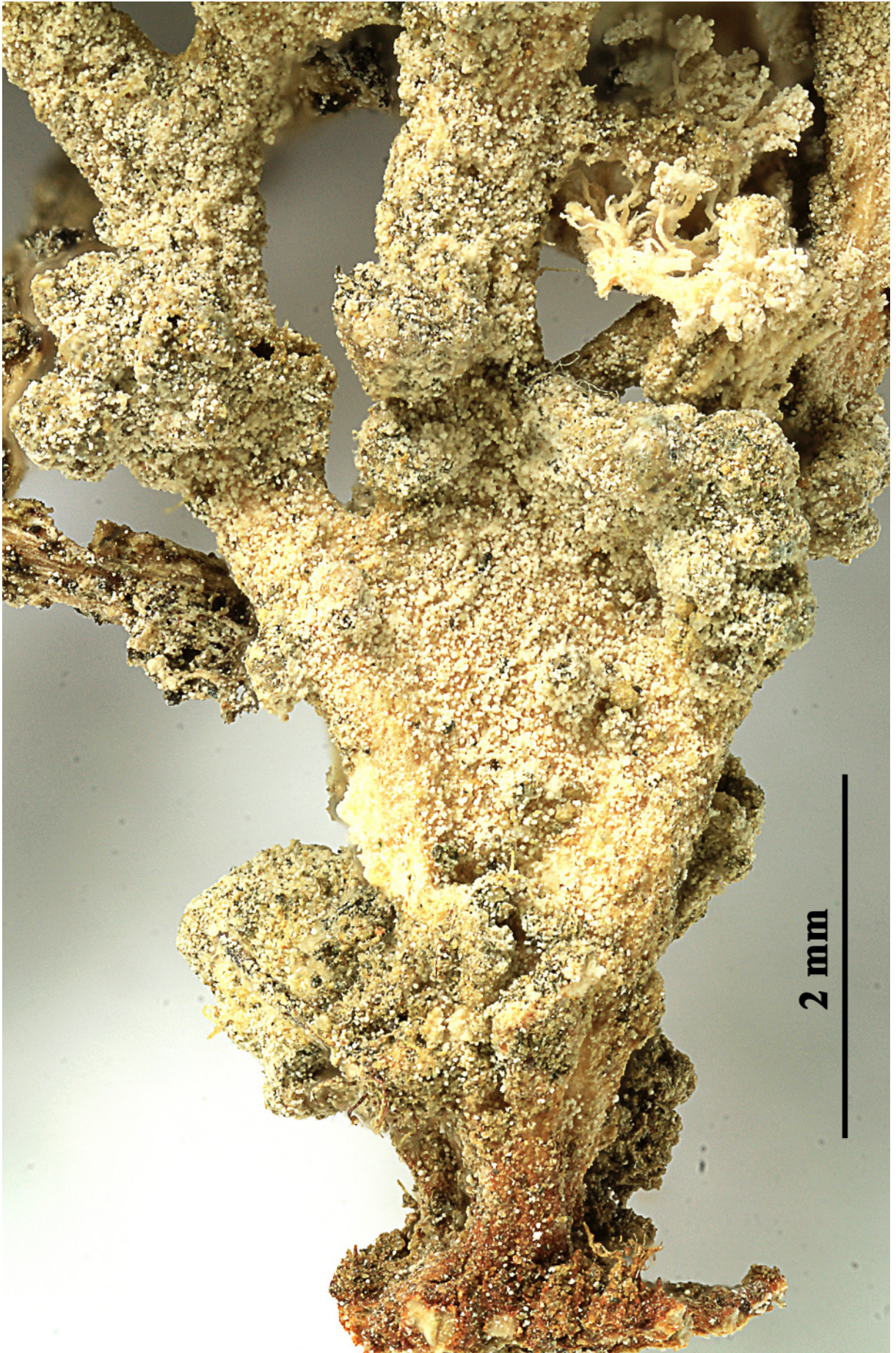
Stereocaulon colensoi

Stereocaulon corticatum Nyl., Flora, Regensburg 41: 117 (1858)
 = *Stereocaulon corticatum* var. *humile* (Müll. Arg.) I.M. Lamb, in
 Frey, Bot. Jb. 86: 244 (1967)
 = *Stereocaulon corticatum* var. *subcorticatum* (Räsänen) I.M. Lamb,
 Can. J. Bot. 29: 581 (1951)
 = *Stereocaulon humile* Müll. Arg., Bull. Herb. Boissier 4: 88 (1896)
 = *Stereocaulon leptaleum* Nyl., Syn. meth. lich. (Parisiis) 1(2): 251 (1860)
 = *Stereocaulon subcorticatum* Räsänen, Ann. bot. Soc. Zool.-Bot. fenn.
 Vanamo 2(no. 1): 24 (1932)

[VZR288], Nov Zelandia, South Island, distr. Nelson: Kahurangi National Park, secus viam ad stationem "Flora Carpatk", 900 m. Ad saxa silicea secus viam, Leg. W. Malcolm & A. Vězda. Ex A. VěZDA: LICHENES RARIORES EXSICCATI NR. 288.

Stereocaulon corticatum is characterised by: the saxicolous habit; rather small pseudopodetia, 2-3 cm tall (rarely to 6 cm tall), branched in upper parts; the cortex continuous or in flaky patches; sparsely developed, sorediate phyllocladia; granular, effuse, white soredia, present on most parts of thallus, in part derived from breakdown of phyllocladia; and a chemistry of atranorin, rangiformic and norrangiformic acids.





Stereocaulon corticatum



Stereocaulon corticatum

Stereocaulon fronduliferum I.M. Lamb, J. Hattori bot. Lab. 43: 293 (1977)

[VZR279], Nova Zealandia, Nelson, Westport. planities Denniston, in monte Rochfort. 750 m. Ad saxa silicea. Leg. W. Malcolm & A. Vězda, 21.04.1997. Ex A. Vězda: LICHENES RARIORES EXSICCATI NR. 279.

Pseudopodetia arcte affixa, plus minusve erecta, ad 3.5 cm alta (sed saepe minora), ramosa, teretia aut leviter complanata, habitu dorsiventrali (uno latere corticata, glaucescentia, saepe transversim rugosa aut fissa, altero latere decorticata, glabra, ochraceo-albida), ramificatione bilateralis, distincte pinnatifida. Ramuli phyllocladoidei complanati, simplices aut flabellatim divisi, superficie dorsali glauco-corticati, ventrali pallidiores; longit. 1-2 mm, sed basin pseudopodetiorum versus longiores. Soredia nulla. Cephalodia lateralia, sessilia aut breviter pedicellata, subglobosa, 0.7-1.3 mm lata, primo laevia, dein leviter aut sat distincte foveolata; fuscescentia, subnitida, intus solida (protosacculata), alga Nostocaceas continentia, cortice 40-50 μ m crasso, incolori aut pallide isabellino, palisadico. Apothecia terminalia, fere ab initio hemisphaerico-convexa et immarginata, tandem fere globosa, 1.0-1.5 (-2.0) mm lata, fusconigricantia, subnitida opacave. Conus centralis laxo contextus, hyphis hyalinis saepe materia viridiflava et granulosa (KHO dissolventi et solutionem aurantiaco-rubescens effundenti) inspersis. Hypothecium pigmentiferum (fuscum, KHO fere immutatum), ad 150 μ m crassum. Hymenium 90-110 (-120) μ m altum. Sporae 6-8/asus, rectae vel subrectae, cylindrico-fusiformes, (4) 5-9 (-10)-septatae, ad septa passim leviter constrictae, 40-70 (-80) x 3.5-4.5(-6.5) μ m. Atranorinum, acidum fumarprotocetraricum et fortasse parce acidum protocetraricum continens (K- vel leviter fuscoflavescent, P intense miniato rubescens). - Species valde peculiaris, phyllocladiis complanatis et flabellato-divisis fere *Stereocaulon foliolosum* NYL. simulans.

English description:

Pseudopodetia closely attached, more or less erect, up to 3.5 cm high (but often smaller), branched, smooth or slightly flattened, dorsiventral habit (barked on one side, glaucous, often transversely wrinkled or flat, barbed on the other side, glabrous, grayish-white), with bilateral ramification, distinctly pinnatifid. Phyllocladoid branches flattened, simple or fan-shaped, dorsal surface glaucous-corticated, ventral paler; it goes away 1-2 mm, but the base of the pseudopodetia is longer. No soredia. Lateral cephalodia, sessile or shortly pedicellate, subglobose, 0.7-1.3

mm wide, first smooth, then slightly or rather distinctly foveolate; brownish, subnitida, inside solid (protosacculata), containing Nostocaceae algae, corex 40-50 μm thick, colorless or pale isabelline, palisade. Terminal apothecia, almost hemispherical-convex at the beginning and emarginate, finally almost globose, 1.0-1.5 (-2.0) mm wide, brownish-grey, opaque. Central cone loosely woven, hyaline hyphae often sprinkled with greenish-yellow and granular material (dissolving in KOH and shedding an orange-red solution). Hypothecium pigmentiferous (brown, almost unchanged by KOH), up to 150 μm thick. Hymenium 90-110 (-120) μm high. Spores 6-8/ascus, straight or substraight, cylindrical-fusiform, (4)5-9(-10)-septate, slightly constricted at the septa, 40-70(-80) x 3.5-4.5(-6.5) μm . Containing atranorin, fumarprotocetraric acid and perhaps sparingly protocetraric acid (K- or slightly brownish-yellow, P+ intensely red-tinted). - A very peculiar species, with phylloclades flattened and flabellate-divided, almost *Stereocaulon foliolosum* NYL. pretending



Stereocaulon fronduliferum



Stereocaulon fronduliferum



Stereocaulon fronduliferum

- Stereocaulon ramulosum*** Raeusch., Nomencl. bot., Edn 3: 328 (1797)
 = *Lichen ramulosus* Sw., Prodr.: 147 (1788)
 = *Stereocaulon macquariense* C.W. Dodge [as 'macquariensis'], Nova Hedwigia 15: 289 (1968)
 = *Stereocaulon macrocarpoides* (Nyl.) Linds., Trans. Linn. Soc. London 25: 529 (1866)
 = *Stereocaulon macrocarpum* A. Rich., Voyage de Découvert. de l'Astrolabe, Botan. 1: 34, tab. IX, fig. 4 (1832)
 = *Stereocaulon mixtum* Nyl., Annls Sci. Nat., Bot., sér. 4 11: 210 (1859)
 = *Stereocaulon proximum* Nyl., Annls Sci. Nat., Bot., sér. 4 11: 210 (1859)
 = *Stereocaulon proximum* subsp. *macrocarpoides* Nyl., Syn. meth. lich. (Parisiis) 1(2): 238 (1860)
 = *Stereocaulon proximum* var. *macrocarpoides* (Nyl.) Nyl., Annls Sci. Nat., Bot., sér. 4 15: 371 (1861)
 = *Stereocaulon proximum* var. *nudatum* Müll. Arg., Flora, Regensburg 69(16): 252 (1886)
 = *Stereocaulon pulvinare* C.W. Dodge, B.A.N.Z. Antarct. Res. Exped. Rep., Ser. B 7: 139 (1948)
 = *Stereocaulon ramulosum* ** *submollescens* Nyl., C. r. hebd. Séanc. Acad. Sci., Paris 83: 88 (1876)
 = *Stereocaulon ramulosum* f. *crebratum* I.M. Lamb, J. Hattori bot. Lab. 43: 283 (1977)
 = *Stereocaulon ramulosum* f. *elegans* Th. Fr., Stereoc. Piloph. Comm.: 11 (1857)
 = *Stereocaulon ramulosum* f. *nudatum* (Müll. Arg.) I.M. Lamb, J. Hattori bot. Lab. 43: 282 (1977)
 = *Stereocaulon ramulosum* f. *proximum* (Nyl.) Tuck., Proc. Amer. Acad. Arts & Sci. 7: 228 (1868) [1866]
 = *Stereocaulon ramulosum* f. *subcompressum* I.M. Lamb, J. Hattori bot. Lab. 43: 282 (1977)
 = *Stereocaulon ramulosum* var. *compactum* Müll. Arg., Bull. Herb. Boissier 4: 87 (1896)
 = *Stereocaulon ramulosum* var. *macrocarpoides* (Nyl.) Müll. Arg., Bull. Herb. Boissier 4: 87 (1896)
 = *Stereocaulon ramulosum* var. *macrocarpum* (A. Rich.) C. Bab., in Hooker, Bot. Antarct. Voy. Erebus Terror 1839-1843, II, Fl. Nov.-Zeal.: 294 (1855)
 = *Stereocaulon ramulosum* var. *nudatum* (Müll. Arg.) Müll. Arg., J. Linn. Soc., Bot. 32: 199 (1896)
 = *Stereocaulon ramulosum* var. *proximum* (Nyl.) Müll. Arg., Bull. Herb. Boissier 1: 22 (1894)
 = *Stereocaulon ramulosum* var. *pulvinare* (C.W. Dodge) I.M. Lamb, J. Hattori bot. Lab. 43: 283 (1977)

- = *Stereocaulon ramulosum* var. *submollescens* (Nyl.) I.M. Lamb, J. Hattori bot. Lab. 43: 285 (1977)
 = *Stereocaulon submollescens* (Nyl.) Zahlbr., Cat. Lich. Univers. 4: 668 (1927)

[VZR319], Nova Zelandia. South Island, distr. Westland, inter Haast et transitum Haast, 300 m. In fossis viae, ad terram. Leg. W. Malcolm & A. Vězda, 25.4.1997. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 318.

Thallus variable in size though mainly very large and well-developed, to 25 cm tall, with a very prominent holdfast, yellowish-brown and devoid of cortex and phyllocladia. Pseudopodetia ± complexly branching, of stout primary branches and smaller more richly branched, secondary branches towards apices, primary branches white, ± decorticate with prominent exposed fungal hyphae visible, appearing tomentose, ± fibrillose (×10 lens), with occasional shallow, vertical grooves, often lightly invested with a thin layer of algae, secondary branches ± covered with a distinctly greenish algal layer. Phyllocladia terete, corticate, conspicuously green when wet, simple, nodular and finger-like at first (often densely clothing young pseudopodetia) soon becoming complex, coralloid-branched, conspicuous towards apices of pseudopodetia. Cephalodia numerous, sessile or occasionally shortly stalked, prominent, bluish-grey when wet, folded, indented or wrinkled, surface smooth, never areolate or immaculate or scabrid. Apothecia usually terminal but also subterminal and lateral, small, usually not wider than supporting branch, disc always convex, pale red-brown to dark brown never black, thalline exciple smooth, pale yellowish brown. Ascospores 3-5(-7)-septate, 28-40(-90) × 3-4 µm Chemistry: Atranorin and perlatolic acid, ± anziaic acid.

Stereocaulon ramulosum



Stereocaulon ramulosum



Stereocaulon ramulosum



Stereocaulon ramulosum

- Stereocaulon vesuvianum*** Pers., Ann. Wetter. Gesellsch. Ges. Naturk. 2(1): 19 (1810)
- = *Stereocaulon alpinum* subsp. *vesuvianum* (Pers.) Fr., Lich. eur. reform. (Lund): 204 (1831)
- = *Stereocaulon alpinum* var. *vesuvianum* (Pers.) Link [as 'vesuviana'], Grundr. Krauterk. 3: 168 (1833)
- = *Stereocaulon botryosum* var. *vesuvianum* (Pers.) Ach., Syn. meth. lich. (Lund): 285 (1814)
- = *Stereocaulon denudatum* * *vesuvianum* (Pers.) Th. Fr., Stereoc. Philoph. comm.: 28 (1857)
- = *Stereocaulon denudatum* subsp. *vesuvianum* (Pers.) Th. Fr., Nova Acta R. Soc. Scient. upsal., Ser. 3 2: 352 (1858)
- = *Stereocaulon denudatum* var. *depressum* H. Magn., Göteborgs Kungl. Vetensk.-och Vitterh. Samh. handl., Ser. 4 30(no. 7): 82 (1926)
- = *Stereocaulon denudatum* var. *pulvinatum* (Rabenh.) Flot., Bot. Ztg. 8(29): 539 (1850)
- = *Stereocaulon denudatum* var. *umbonatum* (Wallr.) Zahlbr., Cat. Lich. Univers. 4: 644 (1927)
- = *Stereocaulon denudatum* var. *vesuvianum* (Pers.) Laurer ex Hepp, Flecht. Europ.: no. 2 (1855)
- = *Stereocaulon vesuvianum* f. *depressum* (H. Magn.) I.M. Lamb, J. Hattori bot. Lab. 43: 247 (1977)
- = *Stereocaulon vesuvianum* f. *umbonatum* (Wallr.) I.M. Lamb, in Poelt, Best. europ. Flecht. (Vaduz): 637 (1969)

[VZR457], Italia. Campania, ad latera montis ignivomi Vesuvii, 459 m. Ad sax basaltica. Leg. et det. D, Puntillo. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 462. - TLC: Stictic acid (major), cryptostictic acid (minor), menegazzia acid (trace), norstictic acid (trace), peristictic acid (minor), anl. K.Kalb.

Primary thallus crustose, ephemeral, usually absent in mature individuals, secondary thallus fruticose, forming pillows or extended mats on the rock. Pseudopodetia 1-4(-7) cm tall, firmly attached, erect to decumbent, rigid, lacking tomentum but with a more or less felty surface, whitish or greyish, darker at the base, simple or branched in upper part, esorediate, with a solid cartilaginous axis of parallel hyphae surrounded by a lax medulla. Phyllocladia often almost entirely covering the pseudopodetia, small, often verrucose, the largest ones usually peltate, flattened or concave, usually not confluent, at least some of them with a dark olive-coloured central part and paler margins. Cephalodia rare, verruculose, dark olive brown, containing Stigonema. Apothecia rare, 0.5-1 mm across, located on lateral branches, with a dark brown disc.

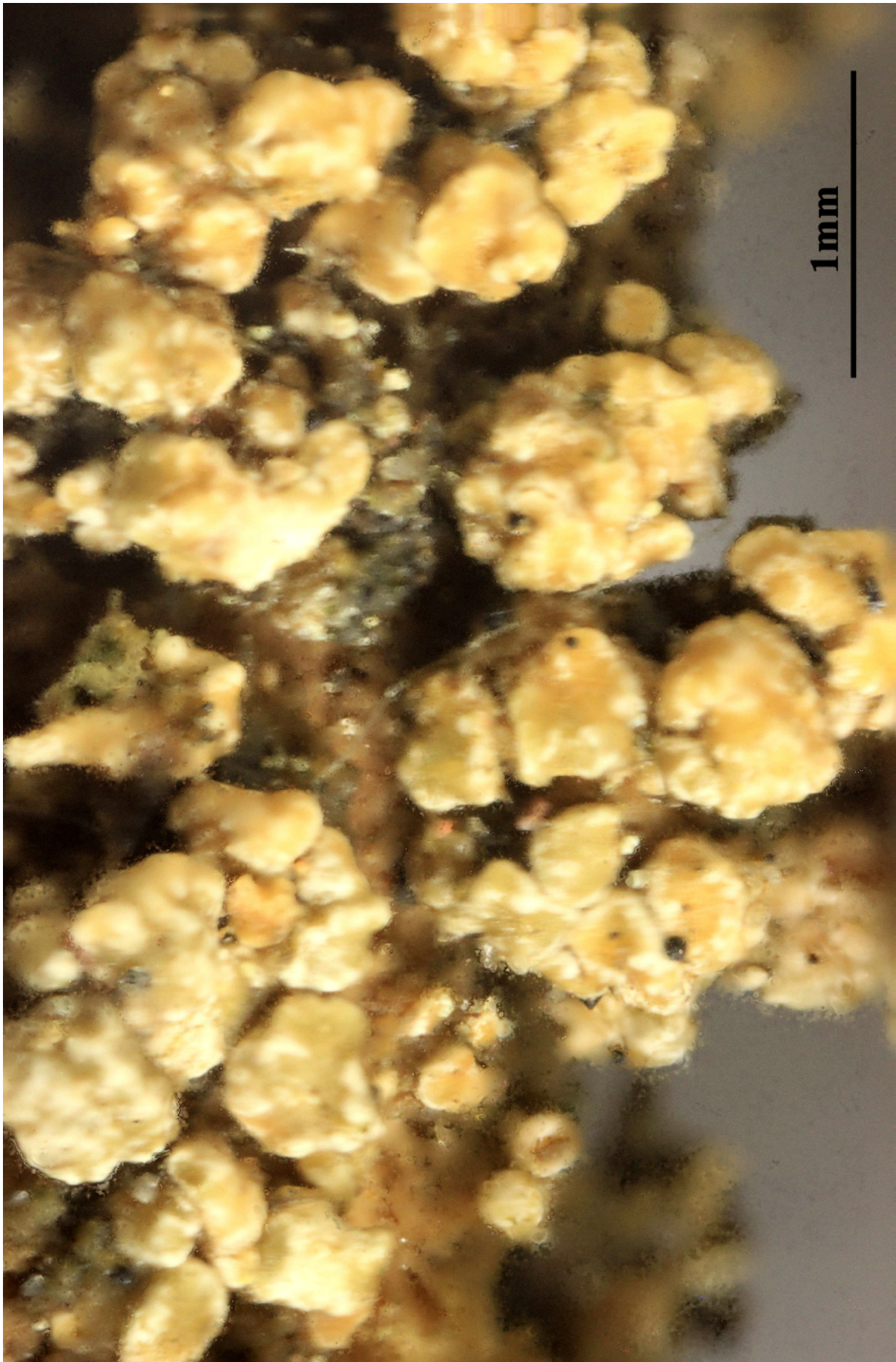
Proper exciple brown in outer part, colourless within; epithecium brown, K-; hymenium colourless; paraphyses mostly simple, 1.5-1.8 μm thick, the apical cells capitate, up to 4.5 μm wide, with a dark cap; hypothecium colourless. Asci 8-spored, cylindrical-clavate, with a K/I+ blue outer layer and apical dome, and a central, K/I+ darker blue tube, Porpidia-type. Ascospores 3-6-septate, hyaline, fusiform but thicker at one end, 26-38 x 3-3.5 μm . Pycnidia rather rare. Conidia 1-celled, hyaline, straight or curved, 8-12 x 0.6-0.8 μm . Main photobiont chlorococcoid. Spot tests: thallus K+ yellow (rarely K+ red), C-, KC-, P+ orange, UV-. Chemistry: atranorin and variable amounts of stictic and norstictic acids. - Note: on volcanic rocks, exceptionally also on wood; abundant on the Vesuvium and the Etna Volcanoes, but much rarer elsewhere in Italy..



Stereocaulon vesuvianum



Stereocaulon vesuvianum



Stereocaulon vesuvianum

- Stereocaulon vesuvianum*** Pers., Ann. Wetter. Gesellsch. Ges. Naturk. 2(1): 19 (1810)
- = *Stereocaulon alpinum* subsp. *vesuvianum* (Pers.) Fr., Lich. eur. reform. (Lund): 204 (1831)
- = *Stereocaulon alpinum* var. *vesuvianum* (Pers.) Link [as 'vesuviana'], Grundr. Krauterk. 3: 168 (1833)
- = *Stereocaulon botryosum* var. *vesuvianum* (Pers.) Ach., Syn. meth. lich. (Lund): 285 (1814)
- = *Stereocaulon denudatum* * *vesuvianum* (Pers.) Th. Fr., Stereoc. Philoph. comm.: 28 (1857)
- = *Stereocaulon denudatum* subsp. *vesuvianum* (Pers.) Th. Fr., Nova Acta R. Soc. Scient. upsal., Ser. 3 2: 352 (1858)
- = *Stereocaulon denudatum* var. *depressum* H. Magn., Göteborgs Kungl. Vetensk.-och Vitterh. Samh. handl., Ser. 4 30(no. 7): 82 (1926)
- = *Stereocaulon denudatum* var. *pulvinatum* (Rabenh.) Flot., Bot. Ztg. 8(29): 539 (1850)
- = *Stereocaulon denudatum* var. *umbonatum* (Wallr.) Zahlbr., Cat. Lich. Univers. 4: 644 (1927)
- = *Stereocaulon denudatum* var. *vesuvianum* (Pers.) Laurer ex Hepp, Flecht. Europ.: no. 2 (1855)
- = *Stereocaulon vesuvianum* f. *depressum* (H. Magn.) I.M. Lamb, J. Hattori bot. Lab. 43: 247 (1977)
- = *Stereocaulon vesuvianum* f. *umbonatum* (Wallr.) I.M. Lamb, in Poelt, Best. europ. Flecht. (Vaduz): 637 (1969)

[VZR368], Tanzania. Arusha National Park, Meru Crater, Kitito Campus, 2480-2600m. Ad lavam in vegetatione subalpina cum *Erica*. Leg. T. Pócs (88301), 16.- 18. 12.1988, duplo. det. H. Krog. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 368.

Primary thallus crustose, ephemeral, usually absent in mature individuals, secondary thallus fruticose, forming pillows or extended mats on the rock. Pseudopodetia 1-4(-7) cm tall, firmly attached, erect to decumbent, rigid, lacking tomentum but with a more or less felty surface, whitish or greyish, darker at the base, simple or branched in upper part, esorediate, with a solid cartilaginous axis of parallel hyphae surrounded by a lax medulla. Phyllocladia often almost entirely covering the pseudopodetia, small, often verrucose, the largest ones usually peltate, flattened or concave, usually not confluent, at least some of them with a dark olive-coloured central part and paler margins. Cephalodia rare, verruculose, dark olive brown, containing *Stigonema*. Apothecia rare, 0.5-1 mm across, located on lateral branches, with a dark brown disc. Proper exciple brown in outer part, colourless within; epithecium

brown, K-; hymenium colourless; paraphyses mostly simple, 1.5-1.8 μm thick, the apical cells capitate, up to 4.5 μm wide, with a dark cap; hypothecium colourless. Asci 8-spored, cylindrical-clavate, with a K/I+ blue outer layer and apical dome, and a central, K/I+ darker blue tube, Porpidia-type. Ascospores 3-6-septate, hyaline, fusiform but thicker at one end, 26-38 x 3-3.5 μm . Pycnidia rather rare. Conidia 1-celled, hyaline, straight or curved, 8-12 x 0.6-0.8 μm . Main photobiont chlorococcoid. Spot tests: thallus K+ yellow (rarely K+ red), C-, KC-, P+ orange, UV-. Chemistry: atranorin and variable amounts of stictic and norstictic acids. - Note: on volcanic rocks, exceptionally also on wood; abundant on the Vesuvium and the Etna Volcanoes, but much rarer elsewhere in Italy..



Stereocaulon vesuvianum



Stereocaulon vesuvianum

Stereocaulon virgatum Ach., in Sprengel, Syst. veg., Edn 16 4(1): 275 (1827)

[VZR249}, Dominica (Antilles Minores), reservatio naturae Morne Trois Pitons, in ripa lacus "Freshwater Lake", ad lapides siliceos, 600-700 m. Leg. & det. A. Vězda. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 249.

Primary thallus evanescent. Habitus more or less cornute. Pseudopodia simple or subsimple, 4-7 cm tall. Phyllocladia both partly coralloid and slightly flattened-folios, coralloid above, flattened-subfoliose below, not grain-like, never with darker centers. Subfoliose or squamulose phyllocladia without paler edges (although the undersides may be paler). Cephalodia verrucose, scabrid-verruculose or botryose, with poorly developed, pseudoparenchymatous cortical layer, occasionally absent or present. Apothecia exclusively lateral. hymenium 80-90 μm high. Hypothecium faintly pigmented (pale yellowish or yellow-brown). Chemistry: atranorin, stictic acid and norstictic acid, the latter two substances occurring in varied concentration, either in approximately equal proportions or with one or other of them strongly preponderant or perhaps in some cases present to the total exclusion of the other. The macroscopic reactions are therefore variable: K+yellow then red, P+yellow (norstictic acid predominating) or K+yellow, P+orange-red (stictic acid predominating). -

St. virgatum is closely related to *St. scutelligerum* Th. Fr., and like the latter is usually destitute of cephalodia. Cephalodia have however been seen in a few specimens from Dominica and Guadeloupe. They are of the anatomically undifferentiated, "spherical" to "botryose" type normally associated with species of the section *Denudata*. Th. Fries (1857, 1858) and Nylander (1860) erroneously stated that *St. virgatum* is a synonym of *St. furcatum* Fr. The latter is referable to *St. ramulosum* (Sw.) Räscher, as was pointed out by Müller Arg. (1887), and confirmed by Riddle (ex Dodge, 1929) and by I.M. Lamb. *Stereocaulon sphaerophoroides* Tuck., the commonly used name for a species endemic to the Azores, Madeira and Canary Islands, is a synonym of *St. virgatum*.



Stereocaulon virgatum



Stereocaulon virgatum

Stereocaulon virgatum Ach., in Sprengel, Syst. veg., Edn 16 4(1): 275 (1827)

[VZR140], Réunion Insula: Forêt de Bélour, in rupibus vulcanicis, 1500 m. Leg.J. Vivant, 20.3.1994. - primo editum sub nom. *Stereocaulon anamalum* Lamb. - Annot.: K. Kalb anal TLC Atranotrin, norstictic acid, connorstictic acid. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 140.

Primary thallus evanescent. Habitus more or less cornute. Pseudopodetia simple or subsimple, 4-7 cm tall. Phyllocladia both partly coralloid and slightly flattened-folios, coralloid above, flattened-subfoliose below, not grain-like, never with darker centers. Subfoliose or squamulose phyllocladia without paler edges (although the undersides may be paler). Cephalodia verrucose, scabrid-verruculose or botryose, with poorly developed, pseudoparenchymatous cortical layer, occasionally absent or present. Apothecia exclusively lateral. hymenium 80-90 µm high. Hypothecium faintly pigmented (pale yellowish or yellow-brown). Chemistry: atranorin, stictic acid and norstictic acid, the latter two substances occurring in varied concentration, either in approximately equal proportions or with one or other of them strongly preponderant or perhaps in some cases present to the total exclusion of the other. The macroscopic reactions are therefore variable: K+yellow then red, P+yellow (norstictic acid predominating) or K+yellow, P+orange-red (stictic acid predominating). -

St. virgatum is closely related to *St. scutelligerum* Th. Fr., and like the latter is usually destitute of cephalodia. Cephalodia have however been seen in a few specimens from Dominica and Guadeloupe. They are of the anatomically undifferentiated, "spherical" to "botryose" type normally associated with species of the section *Denudata*. Th. Fries (1857, 1858) and Nylander (1860) erroneously stated that *St. virgatum* is a synonym of *St. furcatum* Fr. The latter is referable to *St. ramulosum* (Sw.) Räscher, as was pointed out by Müller Arg. (1887), and confirmed by Riddle (ex Dodge, 1929) and by I.M. Lamb. *Stereocaulon sphaerophoroides* Tuck., the commonly used name for a species endemic to the Azores, Madeira and Canary Islands, is a synonym of *St. virgatum*.



Stereocaulon virgatum



Stereocaulon virgatum



Stereocaulon virgatum

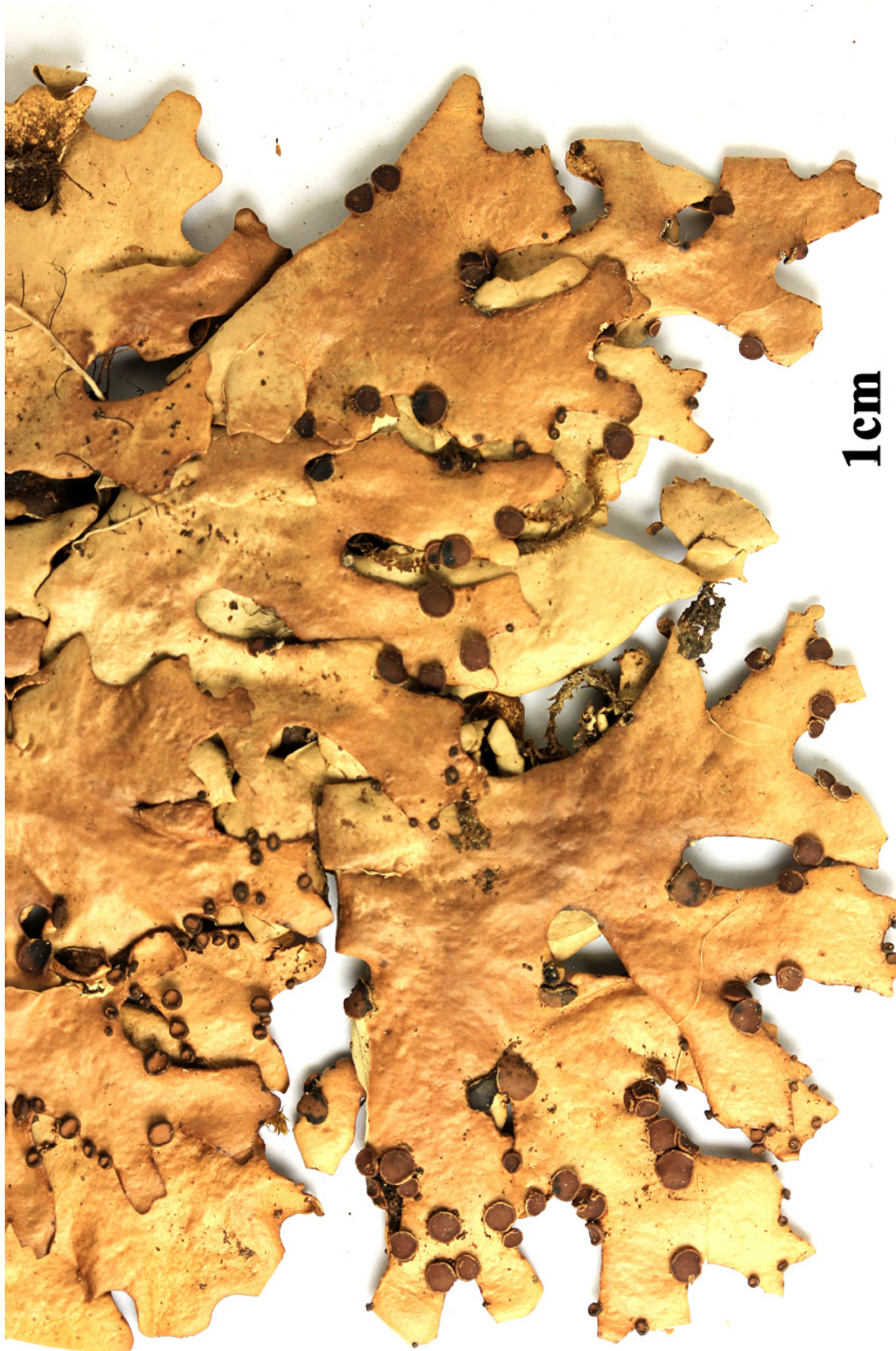
Sticta damicornis (Sw.) Ach., Methodus, Sectio post. (Stockholmiæ): 276 (1803)

= *Lichen damicornis* Sw. [as 'damaecornis'] 1788

[VZR149], Réunion insula (Mascareiguel), Forêt de Bélour, in pluvialisilva. Ad truncos arborum. Leg. J. Vivant, 20.3.1994, det. K. Kalb. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 149.

Thallus: foliose, irregularly spreading, loosely attached, with free and subascendent margins, 4-8(-10) cm in diam., somewhat coriaceous, pliable, flabby when moist, rather brittle when dry, ±regularly dichotomously lobate; lobes rather narrow, (1.5-)2-5(-7) mm wide, divergent at apices, discrete, contiguous to somewhat entangled centrally, plane; apices blunt, rounded or shallowly furcate; margins entire, sinuses smoothy rounded; upper surface olivaceous to bright lettuce green when moist, pale green-gray to olivaceous or buff when dry, dull, minutely punctate-impressed to irregularly dimpled in parts, ±uniformly smooth, minutely white-maculate (x10 lens) forming a faint, irregular white marbling of upper surface, without isidia, phyllidia or soredia; medulla white, K- photobiont: a green chlorococcoid; lower surface pale cream-colored or buff, often somewhat canaliculate, smooth to irregularly wrinkled or ridged, glabrous at or near apices, sparsely to moderately tomentose centrally; tomentum silky to felted-entangled, pale buff to brown-black; cyphellae common, scattered, rounded, regular, small 0.05-0.3(-0.5) mm in diam., with sharply defined margins, conspicuously raised above lower cortex and tomentum, with white or cream basal membranes; Apothecia not seen; Pycnidia: scattered, at or near margins, immersed, ostiole red-brown to brown-black; conidia hyaline, bacilliform with slightly swollen apices, 4-5 x 1 µm; Spot tests all negative Secondary metabolites: none detected. Substrate and ecology: on bark, still very poorly known and understood World distribution: West Indies (Jamaica, Cuba) and Mexico Sonoran distribution: south side of Mt. Evermann at 700 m on Isla Socorro in the Islas Revillagigedo south of the tip of Baja California Sur.- Notes: Palaeotropical and South American specimens referred to this name belong in other taxa, e.g. *Sticta dichotoma* for narrow-lobed species from Indian Ocean islands, and *S. ainoae* for collections from temperate South America (Galloway 1994b: 38). Hafellner (1995) synonymized the *S. damaecornis* with *S. canariensis*, but the former was described in 1788 and the latter in 1809, and as a consequence the name

S. damaecornis takes precedence (Galloway 1994b & 1995). In addition, the two taxa appear distinct and are not given as synonyms here.



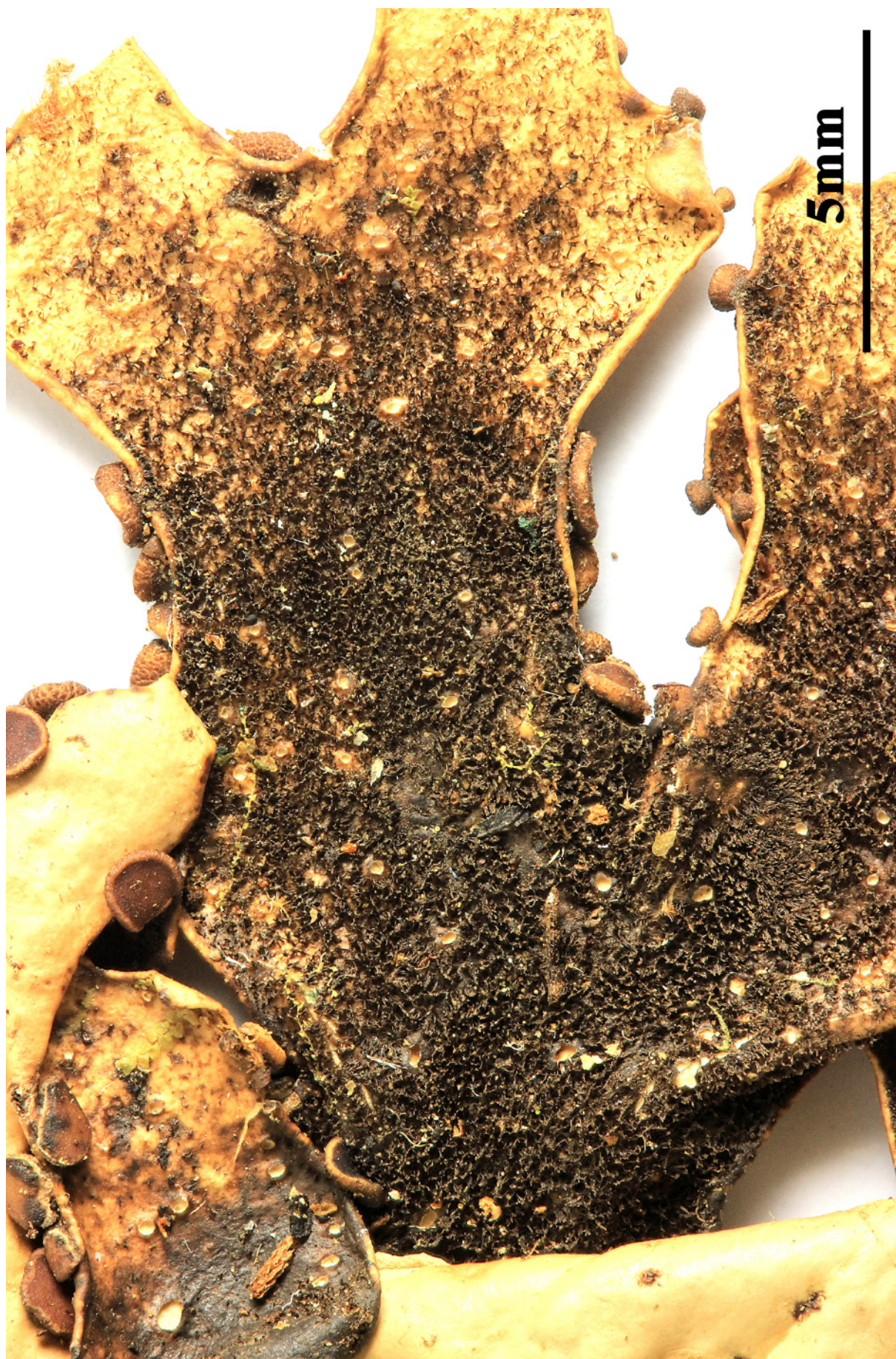
Sticta damicornis



Sticta damicornis



Sticta damicornis



Sticta damicornis

Sticta filicinella Nyl., Mém. Soc. Imp. Sci. Nat. Cherbourg 5: 102 (1858) [1857]

[VZR16], Antillarum Insulae. Guadeloupe: Insula Basse-Terre: in valle St. Louis prope Matouba, 800 m. Ad arbores in torrente. Leg. J. Vivent, 2.11.1991, det. A. Vězda. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR.16.

Ex Nxlender, Synopsis Lich. (1860):349.

Thallus plumbeo-cinereus parvus vel minor (latit. 2-3-pollicaris), aevigatus, nitidiusculus, papyraceo-tenuis, laciniatus, laciniis pinnatifidis et crenato-partitis, subtus albidus ramoso-nervosus, nervis pallidis demum fusco-tomentosis; apothecia obscure rufa sat parva (latit. circa f A millim.) marginalia (an semper?), margine thallino integro; spora incolores 1-(raro 3-) septate fusiformes, longit. 2-35 μm , crass. 7-8 μm . Ad cortices sylvarum humidarum in Venezuela Merida, alt. 2000 pedum. - Thallo tenniter membranaceo concinno subtus nervoso mox distincta; venis his rhizineo-tomentosis centrum versus confluentibus dilatatis, supraque lineari impressa saepe indicatis, Cyphella parvae pallida thelotremoidea, inter venas (nervos) dispositae. Venae ambitum versus et ad magnam interdum partem nude (pallidae). Forma thallo pallidiore minus distincte nervoso lecta fuit in Venezuela a Fendler, ex hb. Tuckerman.



Sticta filicinella



Sticta filicinella

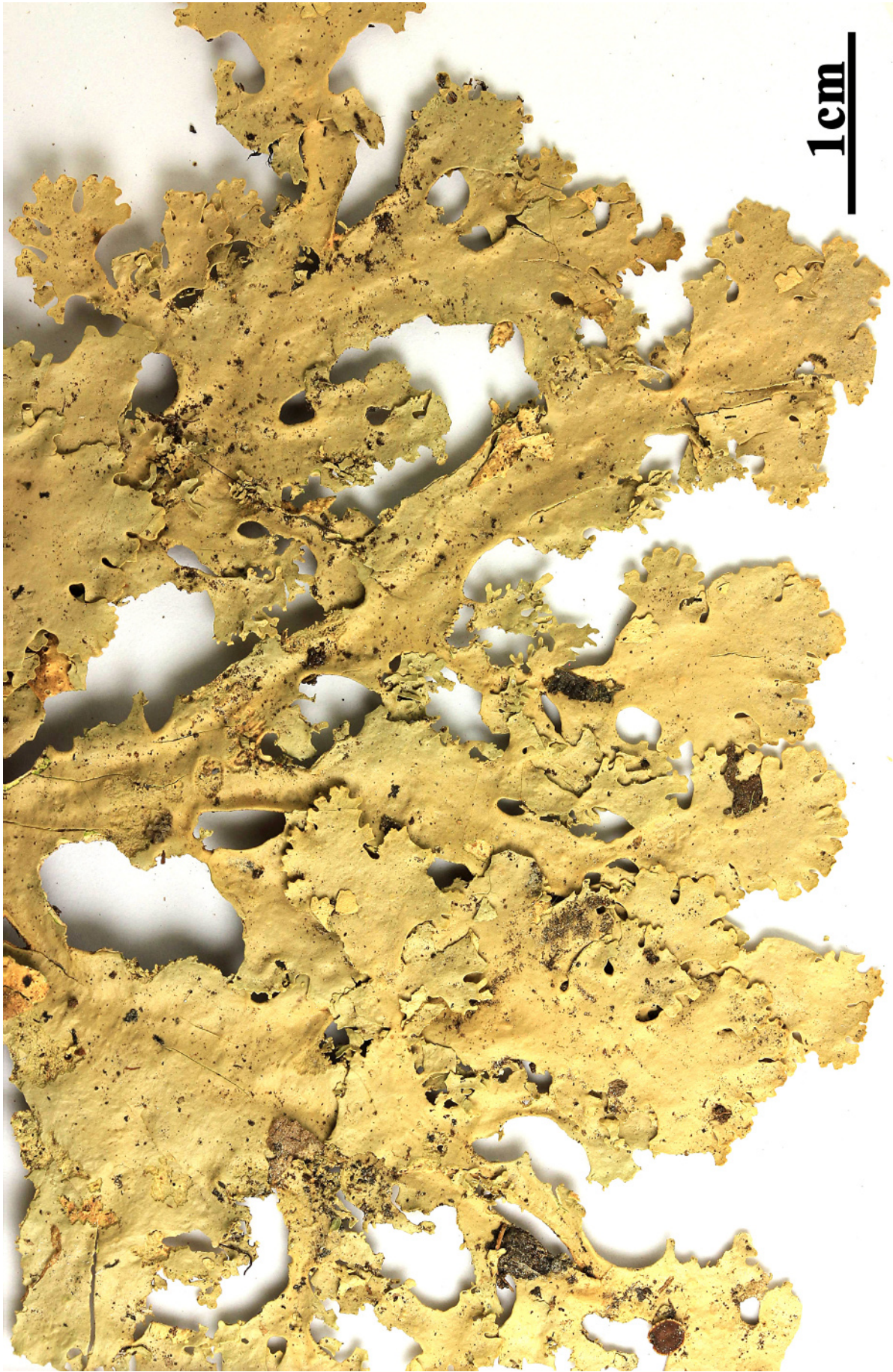


Sticta filicinella

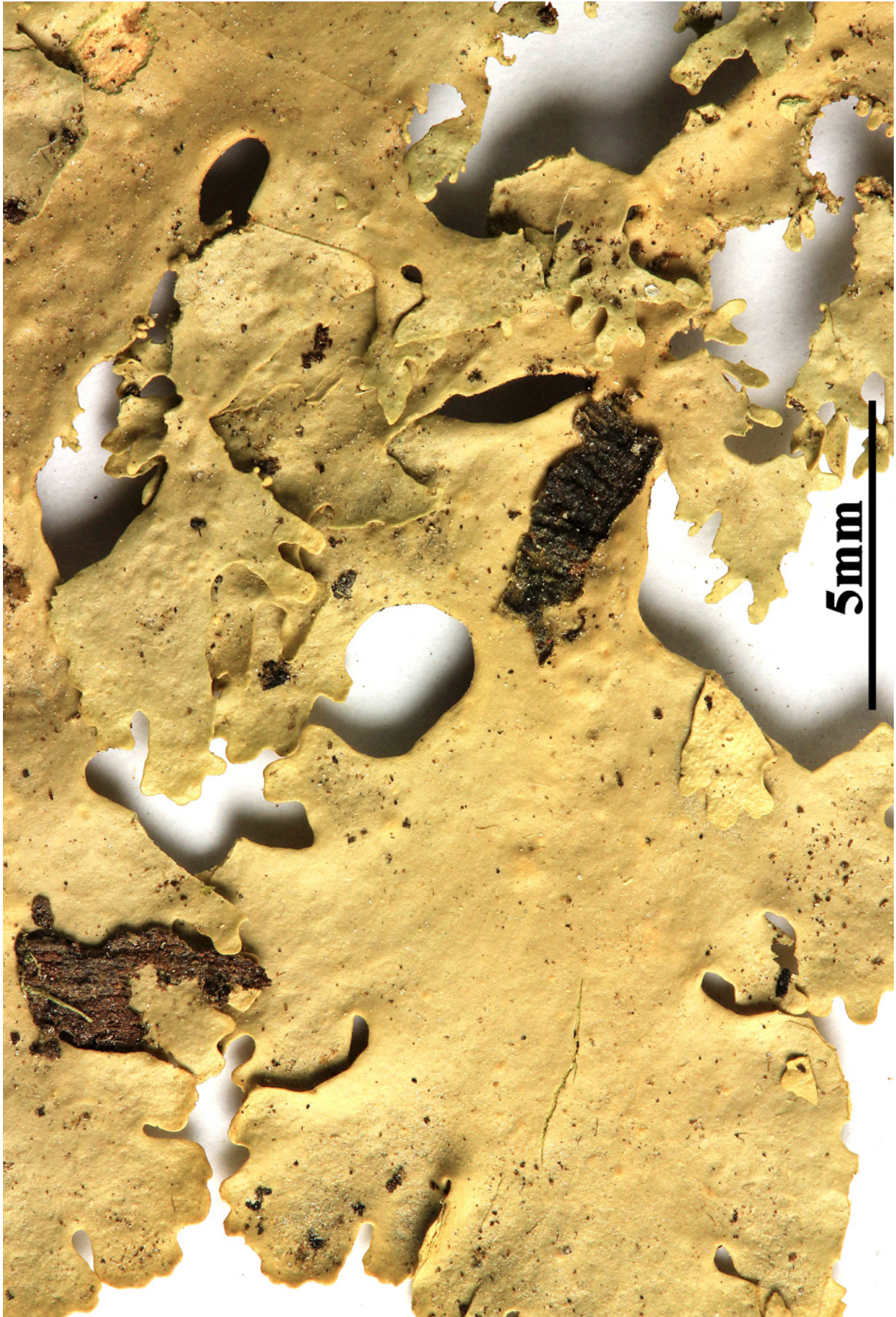
Sticta filix (Sw.) Nyl., J. Linn. Soc., Bot. 9: 246 (1867)
 = *Lichen filix* Sw., Method. Muscor. Illustr. (Upsaliae): 36 (1781)
 = *Lobaria filix* (Sw.) Raeusch., Nomencl. bot., Edn 3: 329 (1797)
 = *Platisma filix* (Sw.) Hoffm., Descr. Adumb. Plant. Lich. 3(no. 2): 1
 (1801)
 = *Sticta filicina* Ach., Methodus, Sectio post. (Stockholmiae): 275 (1803)
 = *Stictina filicina* Nyl., Syn. meth. lich. (Parisiis) 1(2): 349 (1860)

[VZR277], Nova Zelandia. South Island, distr. Westland, Franz Josef Glacier, Karankurua Forest, in silva virginea scus viam. Ad corticem arborum. Leg. W. Malcolm & A. Vězda, 25.4.1887. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 277.

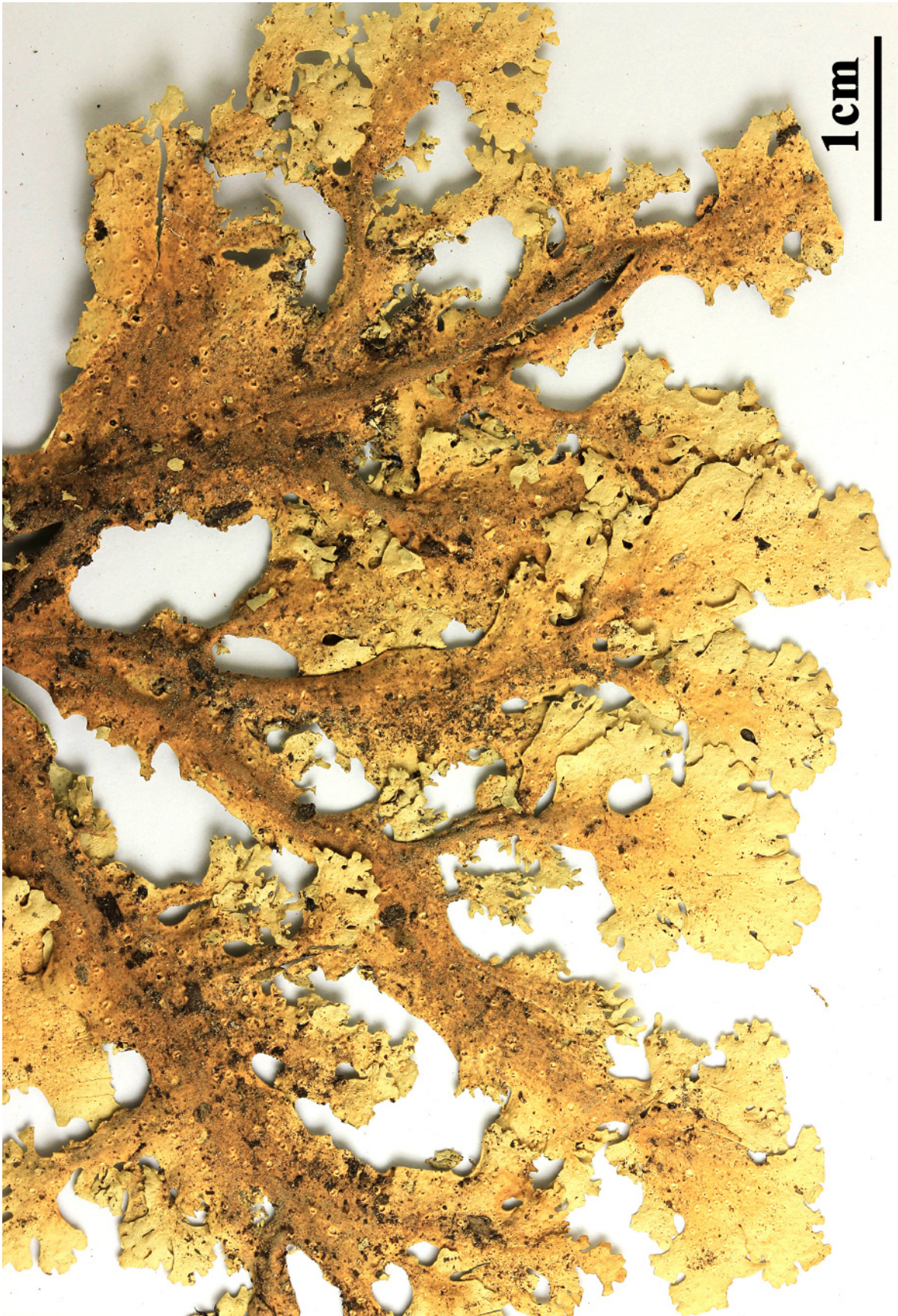
Thallus foliose, ± erect or pendulous or spreading, to 5-12(-15) cm tall, firmly attached by a ± root-like holdfast, supporting a short (1-2 cm), thickened, terete or ± canaliculate stalk. Lobes palmate, often imbricate, complex, with a distinctly grooved midrib, rather fragile, often ± fenestrate, brittle when dry, margins dissected, sinuses circular, irregularly lobed or notched, appearing phyllidiate. Upper surface bright green to greenish-yellow or olive, smooth or slightly wrinkled, matt, grooved-canaliculate in mid-line of lobes, often dark brown to black at base of lobes and on basal stalk, internal cephalodia visible as raised, hemispherical lumps. Lower surface pale greenish-white, glabrous, shining at margins, yellowish to dark brown or blackening towards centre, midrib conspicuously raised, dark red-brown and often short-tomentose, tomentum rather variable, thick, a ± uniform dark brown or pale white felt, to a short, sparse, pale pubescence on central ribs. Cyphellae ± numerous, small, scattered, pock-like with a poorly defined margin, hardly raised, membrane of pit yellowish-brown. Apothecia sessile, scattered, often crowded towards margins, rarely at centre, 0.5-4 mm diam., disc red-brown, smooth, matt, concave at first, becoming plane to subconvex with age, margins thick, striate-crenulate, inflexed at first, pale brown or pinkish, occluded with age. Ascospores fusiform, colourless, 1-3-septate, 30-38(-45) × 9-11 µm.



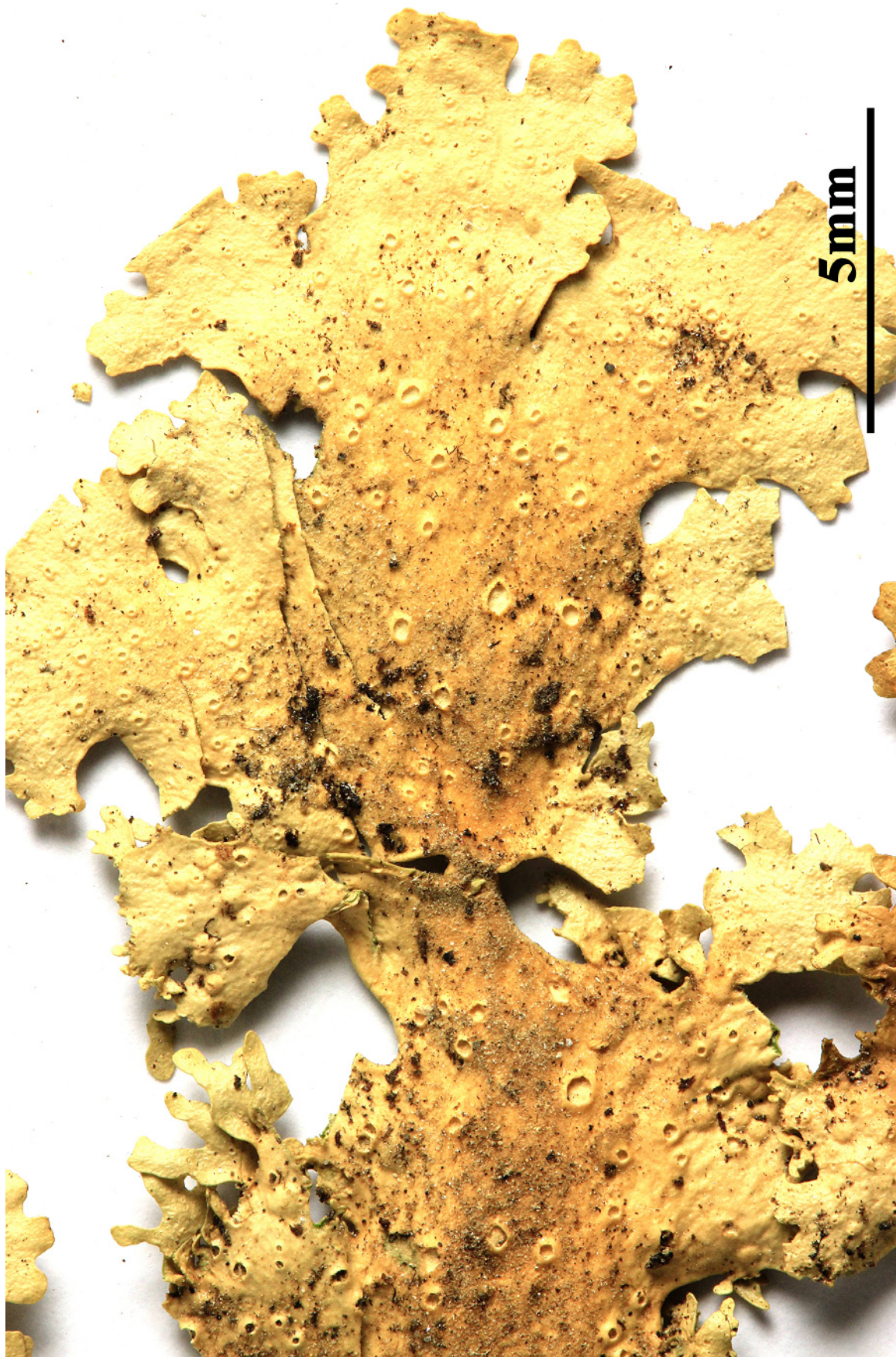
Sticta filix



Sticta filix



Sticta filix

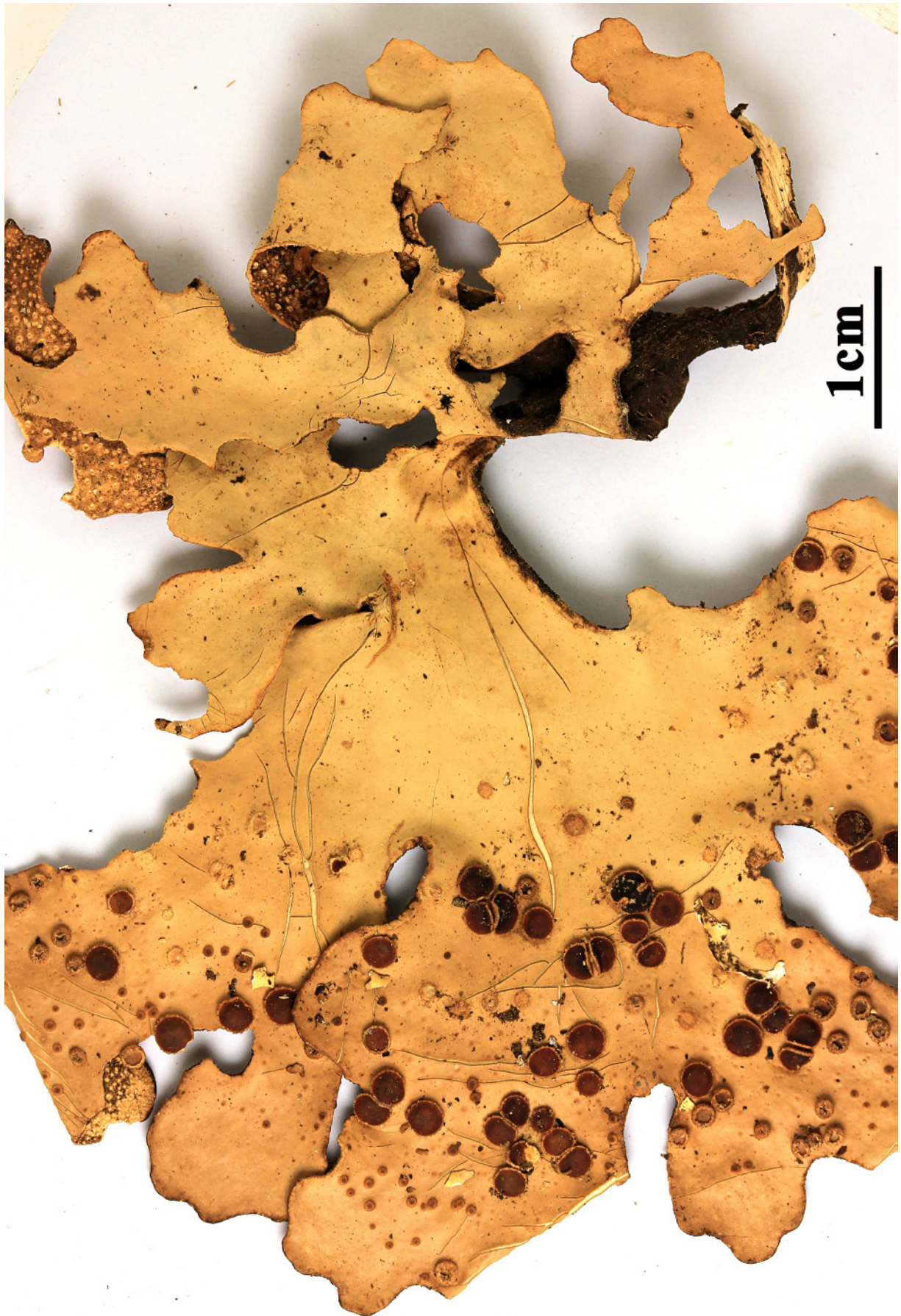


Sticta filix

Sticta latifrons A. Rich., in Dumont d'Urville, Voy. Aut. Monde 1: 27 (1832)
= *Lobaria latifrons* (A. Rich.) Trevis., Lichenoth. Veneta 1-2: no. 75 (1869)
= *Sticta filicina* f. *latifrons* (A. Rich.) Mont., Annls Sci. Nat., Bot., sér. 3
18: 308 (1852)
= *Sticta filicina* var. *latifrons* (A. Rich.) Mont., Annls Sci. Nat., Bot., sér. 3
18: 309 (1852)

[VZR278], Nova Zelandia, Nelso, Kahurangi National Park, regio montis Mt. Arthur, secus viam Flora Carpark - casa alpina Mt. Arthur, 1200 m. Ad truncum arborum. Leg. W. Malcolm & A. Vězda. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 278.

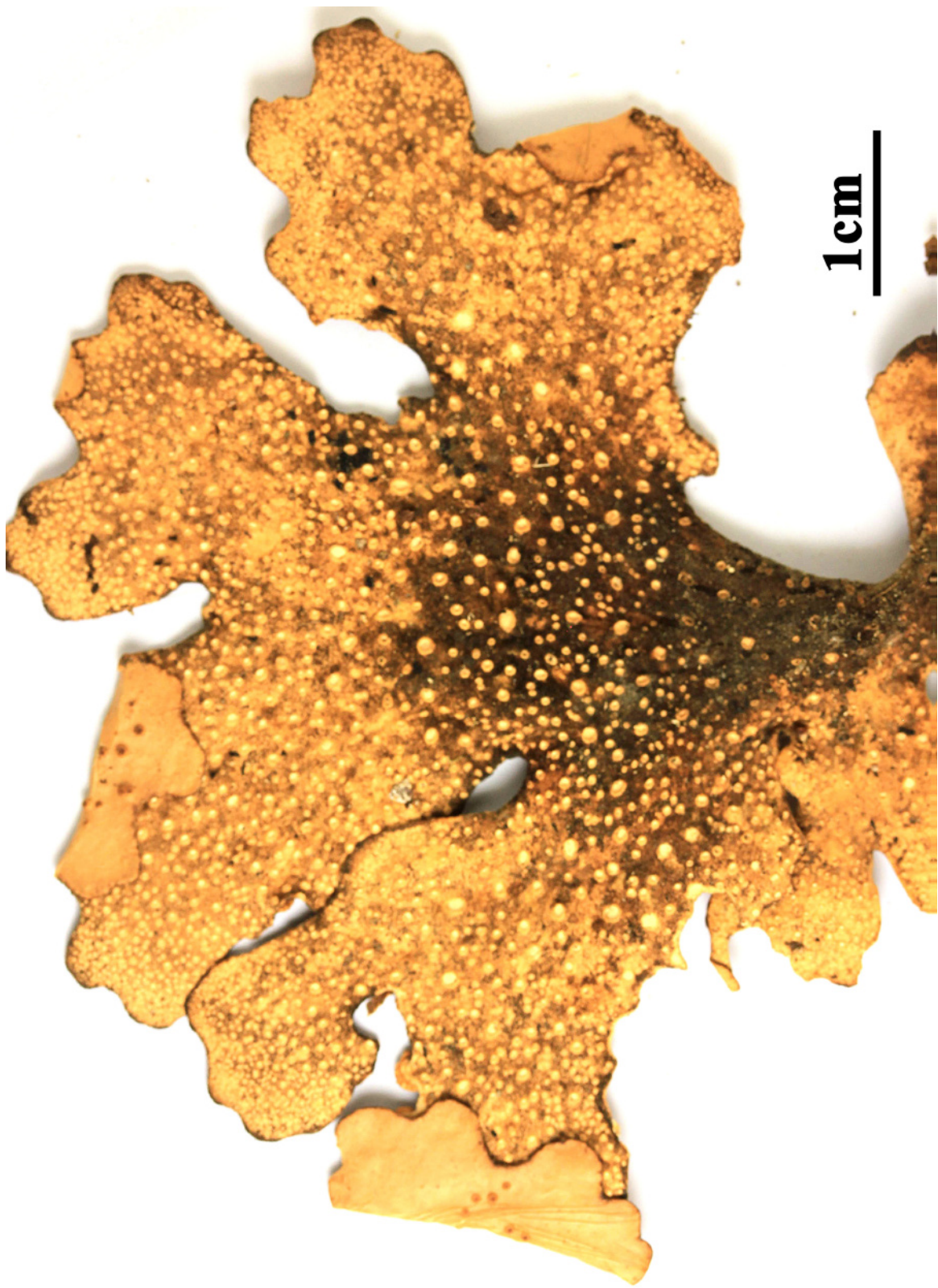
Thallus distinctly stalked, lobate-expanded, frond-like above, attached to substrate by a well-developed, root-like holdfast, to 25 cm tall. Stalk $\pm$ terete, brown or blackened. Lobes rather variable, thin or thick, tough, leathery when wet, often rather brittle when dry, flabellate, palmate, margins entire, sinuous, slightly notched, occasionally lacerate or ragged, often secondarily lobulate with non-stalked individuals at centre. Upper surface $\pm$ smooth, coriaceous, uneven or minutely roughened, slightly faveolate towards base, colour variable, bright-green, olive-green or brownish to $\pm$ blackened. Medulla white. Lower surface pale brown or buff, rarely whitish, to dark brownish-black, $\pm$ entirely glabrous to uniformly tomentose, tomentum rather short, pale buff to dark brown. Cyphellae numerous, scattered, urceolate with a raised margin, pit flat, pale buff or whitish, 0.2-5.0 mm diam. Apothecia scattered, mainly towards margins, small at periphery, larger, to 5 mm diam., towards centre, disc orange-yellow to red-brown, shining, plane or subconvex, margins entire, crenulate, sometimes excluded, pale whitish, thalline exciple minutely scabrid. Ascospores fusiform, straight or slightly curved, colourless, simple or 1- to 3-septate, rarely 4-5-septate, (20-)22-37 $\times$ 5-10(-12) μ m.



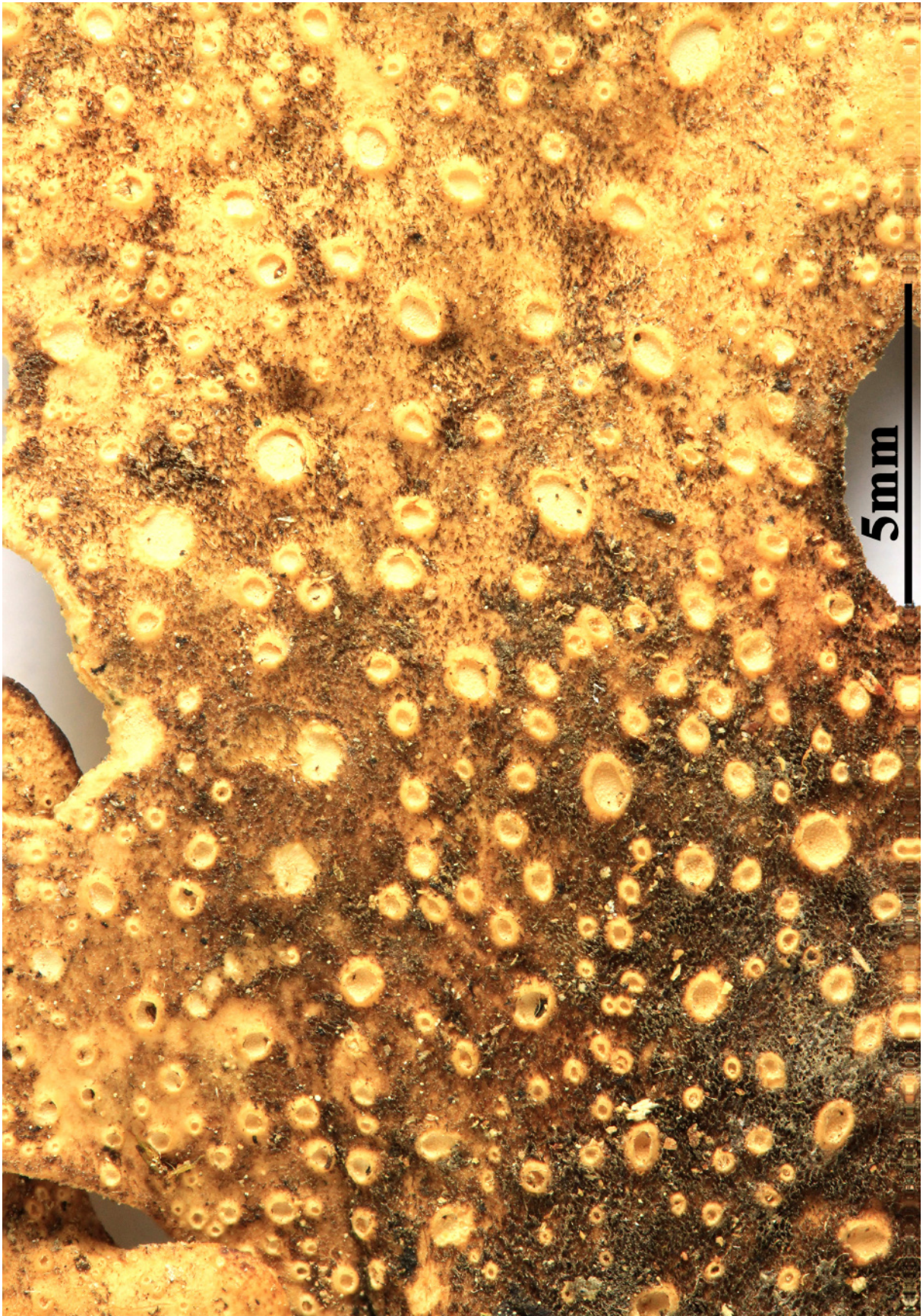
Sticta latifrons



Sticta latifrons



Sticta latifrons



Sticta latifrons

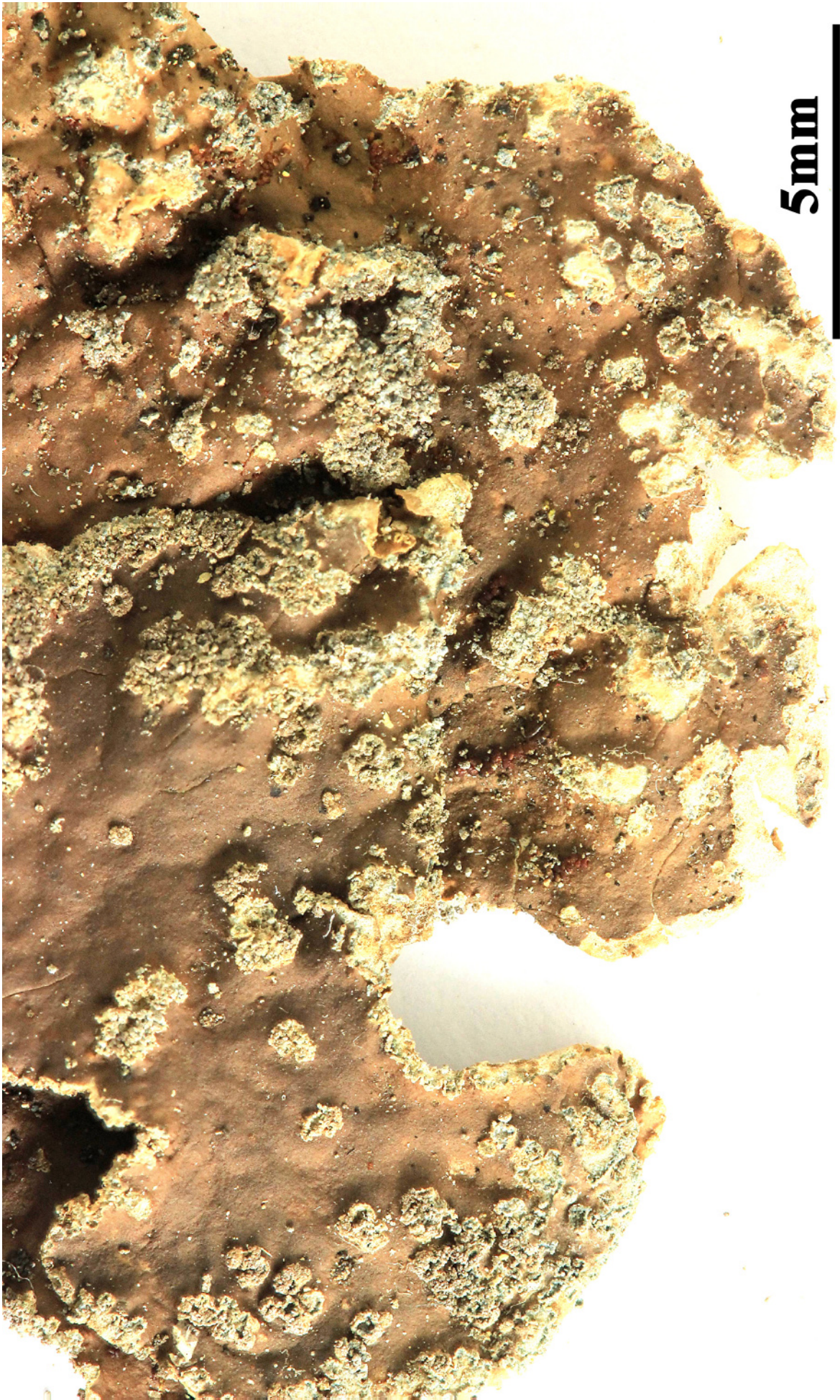
Sticta limbata (Sm.) Ach., Methodus, Sectio post. (Stockholmiae): 280 (1803)
 = *Lichen filix* * *limbata* (Sm.) Lam., Encycl. Méth., Bot. Suppl. (Paris) 3(2): 421 (1813)
 = *Lichen limbatus* Sm., in Smith & Sowerby, Engl. Bot. 16: tab. 1104 (1803)
 = *Sticta sylvatica* subsp. *limbata* (Sm.) Tuck., Syn. N. Amer. Lich. (Boston) 1: 100 (1882)
 = *Stictina fuliginosa* * *limbata* (Sm.) Nyl., Not. Sällsk. Fauna et Fl. Fenn. Förh., Ny Ser. 5: 94 (1861)
 = *Stictina limbata* (Sm.) Nyl., Syn. meth. lich. (Parisiis) 1(2): 346 (1860)

[VZR207], Sibiria occidentalis, res publica Altay, prope lacum Telekotskoje ozero dictum, ad occidentem a pago Jajlju versus, 440 m. Ad truncam arboris (*Larix sibirica*, *Abies sibirica*) Leg. et det. J. Halda, 2.10.1995. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 207.

Thallus foliose, heteromerous, dorsiventral, broad-lobed, papyraceous, loosely attached, rather brittle when dry, sorediate. Lobes smooth, pale to dark brown or greyish, darker when wet, without any distinct stipe when young, eventually (sub-)orbicular and overlapping, 1-3 cm wide, simple or with 1(-2) branches, adnate or ascending, overlapping, the apices slightly undulating, plane or slightly revolute, entire to crenate, covered with mainly marginal soralia forming a somewhat swollen edge, at first forming a star-like structure with a slightly convex center, bordered by small, pale to whitish triangular lobes made of the disrupted upper cortex. then coalescing and invading the margins along most of their lengths; soredia bluish grey, rarely brownish. Lower surface costillate to scrobiculate, white or pale orange-brown, rarely darker towards center in old thalli, with sparse to dense, pubescent to hirsute tomentum. Cyphellae abundant, especially towards the margins, round or angular, cupuliform to urceolate with a wide pore, 0.3-1 mm in diam., the margin erect, slightly revolute, whitish to brownish, the membrane with non-papillose outer cells. Upper and lower cortex paraplectenchymatous; medulla white, lax to compact. Apothecia extremely rare, up to 3 mm across, short-stalked, with a red-brown disc and a verruculose to finely tomentose thalline margin. Asci 8-spored, fissitunicate, the thickened apex with a K/I+ blue ring, Peltigera-type. Ascospores 3-7-septate, fusiform, 17-36(-40) x 6-10 µm . Photobiont cyanobacterial (Nostoc). Spot tests: cortex and medulla K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a humid subtropical to Mediterranean-Atlantic species found on bark, often associated with bryophytes, on mossy rocks and soil in very humid situations.



Sticta limbata



Sticta limbata



Sticta limbata



Sticta limbata

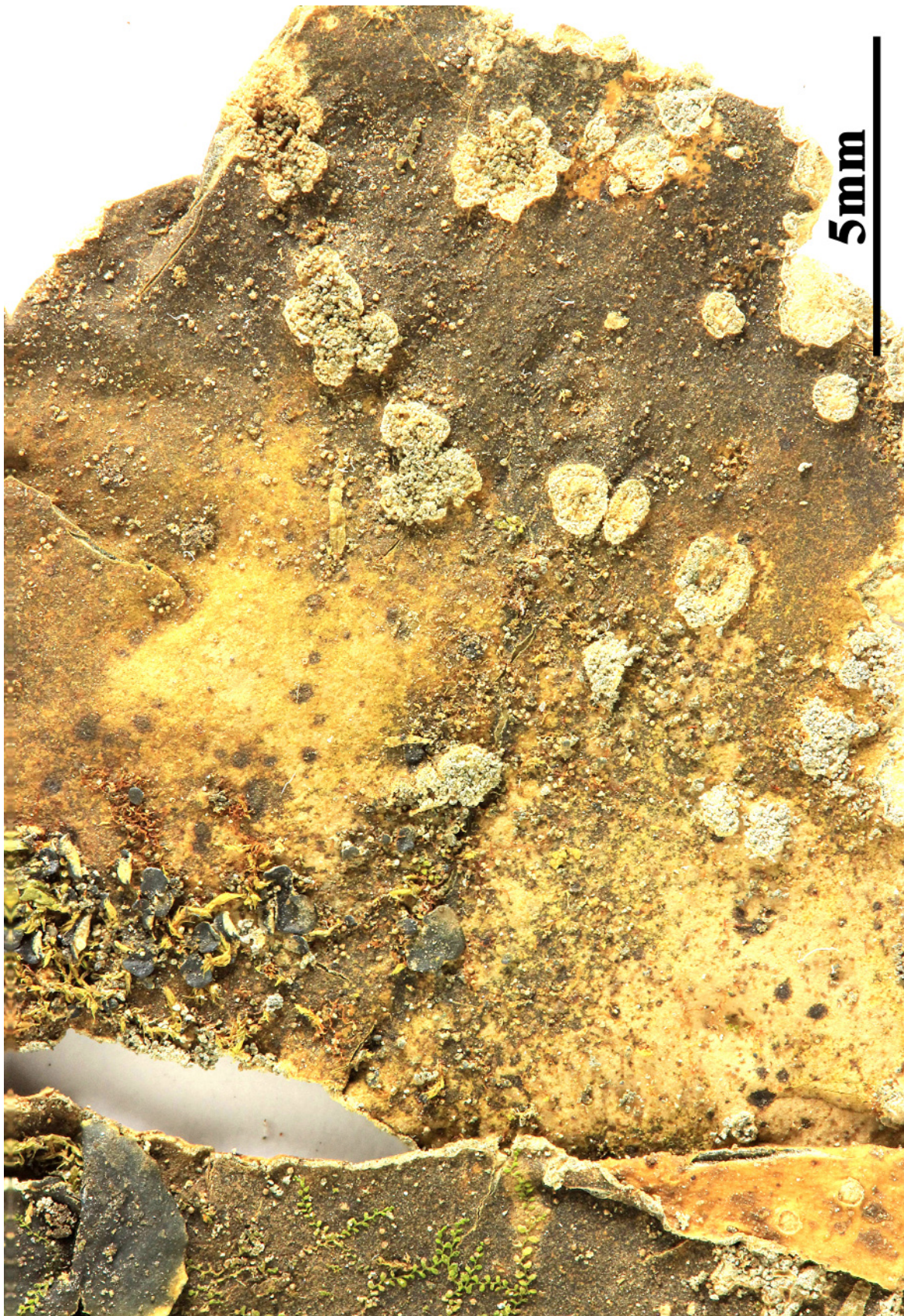
Sticta limbata (Sm.) Ach., Methodus, Sectio post. (Stockholmiae): 280 (1803)
 = *Lichen filix* * *limbata* (Sm.) Lam., Encycl. Méth., Bot. Suppl. (Paris) 3(2):
 421 (1813)
 = *Lichen limbatus* Sm., in Smith & Sowerby, Engl. Bot. 16: tab. 1104 (1803)
 = *Sticta sylvatica* subsp. *limbata* (Sm.) Tuck., Syn. N. Amer. Lich. (Boston)
 1: 100 (1882)
 = *Stictina fuliginosa* * *limbata* (Sm.) Nyl., Not. Sällsk. Fauna et Fl. Fenn.
 Förh., Ny Ser. 5: 94 (1861)
 = *Stictina limbata* (Sm.) Nyl., Syn. meth. lich. (Parisiis) 1(2): 346 (1860)

[VZR150], Italia. Sicilia. Cossyria insula (Pantelleria), loco Montagna Grande dicto, 820 m. Ad corticem arborum (*Quercus ilex*). Leg. C. Puntillo, 1.4.1994. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 150.

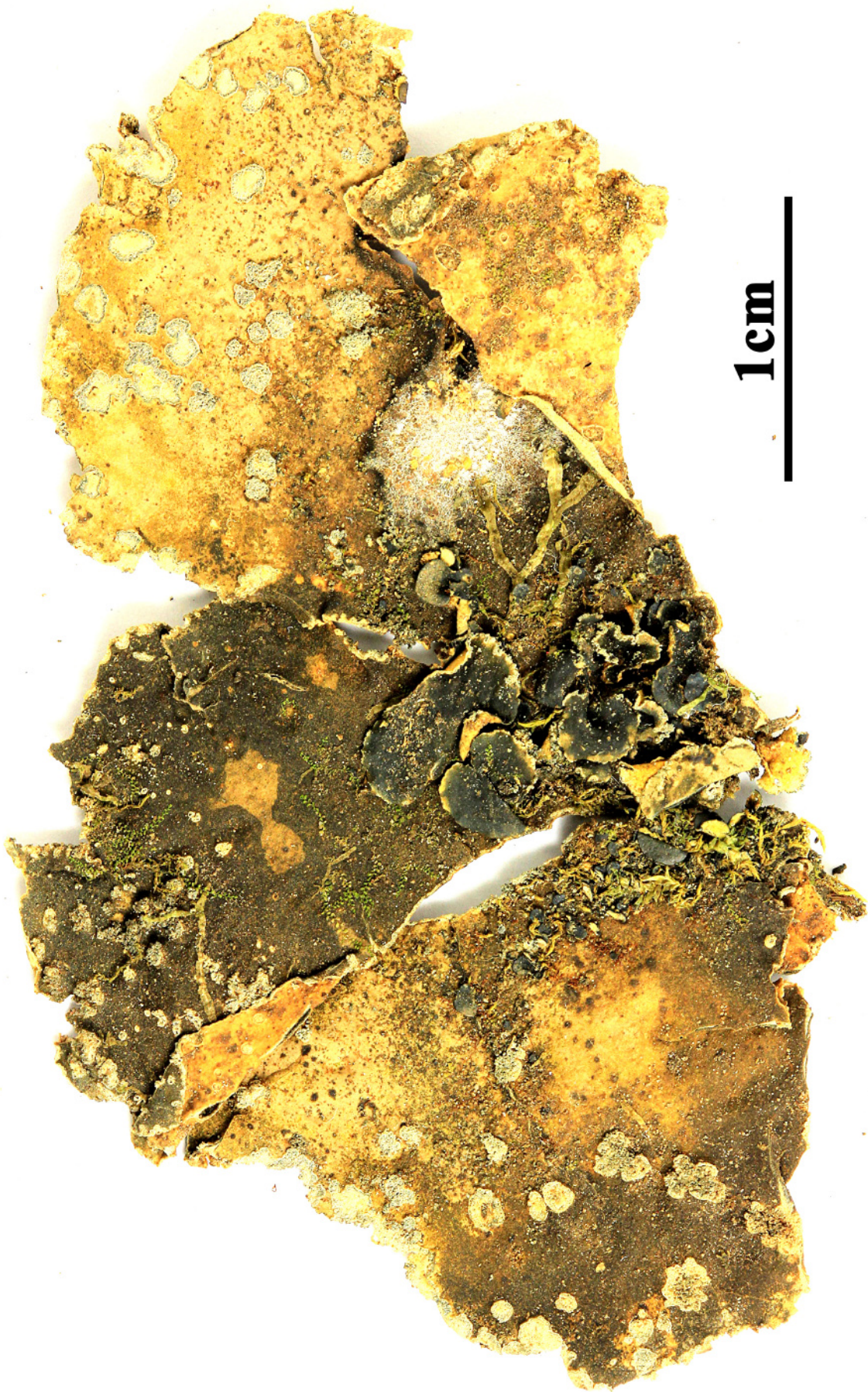
Thallus foliose, heteromerous, dorsiventral, broad-lobed, papyraceous, loosely attached, rather brittle when dry, sorediate. Lobes smooth, pale to dark brown or greyish, darker when wet, without any distinct stipe when young, eventually (sub-)orbicular and overlapping, 1-3 cm wide, simple or with 1(-2) branches, adnate or ascending, overlapping, the apices slightly undulating, plane or slightly revolute, entire to crenate, covered with mainly marginal soralia forming a somewhat swollen edge, at first forming a star-like structure with a slightly convex center, bordered by small, pale to whitish triangular lobes made of the disrupted upper cortex. then coalescing and invading the margins along most of their lengths; soredia bluish grey, rarely brownish. Lower surface costillate to scrobiculate, white or pale orange-brown, rarely darker towards center in old thalli, with sparse to dense, pubescent to hirsute tomentum. Cyphellae abundant, especially towards the margins, round or angular, cupuliform to urceolate with a wide pore, 0.3-1 mm in diam., the margin erect, slightly revolute, whitish to brownish, the membrane with non-papillose outer cells. Upper and lower cortex paraplectenchymatous; medulla white, lax to compact. Apothecia extremely rare, up to 3 mm across, short-stalked, with a red-brown disc and a verruculose to finely tomentose thalline margin. Asci 8-spored, fissitunicate, the thickened apex with a K/I+ blue ring, Peltigera-type. Ascospores 3-7-septate, fusiform, 17-36(-40) x 6-10 µm . Photobiont cyanobacterial (Nostoc). Spot tests: cortex and medulla K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a humid subtropical to Mediterranean-Atlantic species found on bark, often associated with bryophytes, on mossy rocks and soil in very humid situations.



Sticta limbata



Sticta limbata



Sticta limbata

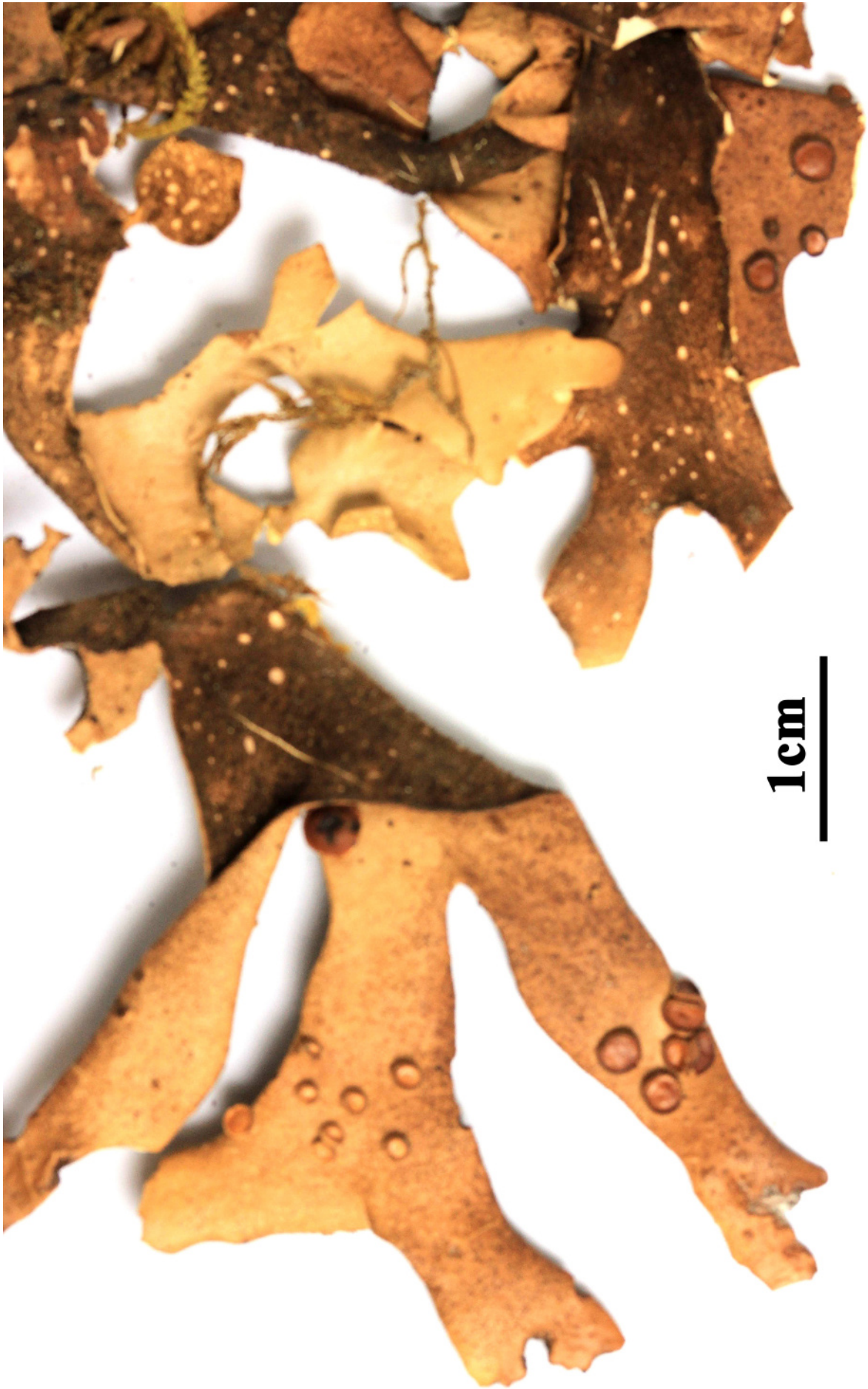


Sticta limbata

Sticta stipitata C. Knight, in Wilson, Proc. R. Soc. Qd. 7: 10 (1891)
= *Sticta shirleyana* Müll. Arg., Hedwigia 32(2): 122 (1893)
= *Sticta stipitata* C. Knight, Pap. Proc. R. Soc. Tasm.: 167 (1893) [1892]

[VZR358], Australia. New South Wales, reservatum naturae "Wilson River", 37 km ad occidente, a Kempsey, 1100 m. In ramulis arborum in pluviisilva. Leg J. Elix (42655), 5.10.1997. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 358.

Thallus irregularly spreading, ±palmate, 2–6 (–12) cm wide, often confluent from a rooted holdfast. Lobes proliferating directly from holdfast or from a short thick stalk (to 5 mm wide and tall), very irregular, laciniate, strongly dissected, 1–6 cm long, 5–10 (–15) mm wide; sinuses prominent, rounded or acute; margins entire, sinuous, ±ascending and inrolled near apices, variously notched, incised or lobulate, occasionally with small projecting tomental hairs, thickened-ridged below. Upper surface pale grey-green or olivaceous or buff when dry, bright green to deep olive-green when wet, undulate, occasionally shallowly wrinkled, pitted or dimpled; without maculae, isidia, phyllidia or soredia. Photobiont green. Lower surface pale whitish to tan or brownish at margins, darkening centrally, tomentose from margins to centre. Cyphellae scattered, round to irregular, 0.2–2 mm diam., deeply urceolate; pit membrane white. Apothecia frequent, marginal and laminar, most common at apices, sessile, 0.5–3 (–4) mm diam.; disc pale orange-brown to dark red-brown; exciple pale whitish buff, minutely scabrid. Ascospores fusiform, 1–3-septate, (25–) 30.5–36 (–44.5) × 7–8.5 (–11) µm, colourless. - An endemic species in eastern Qld, south-eastern N.S.W., southern Vic. and Tasmania at altitudes of 170–1540 m; especially common in Tasmania where it occurs in moist, shaded habitats, typically among bryophytes at the base of trees or on logs and rocks.



Sticta stipitata



Sticta stipitata



Sticta stipitata

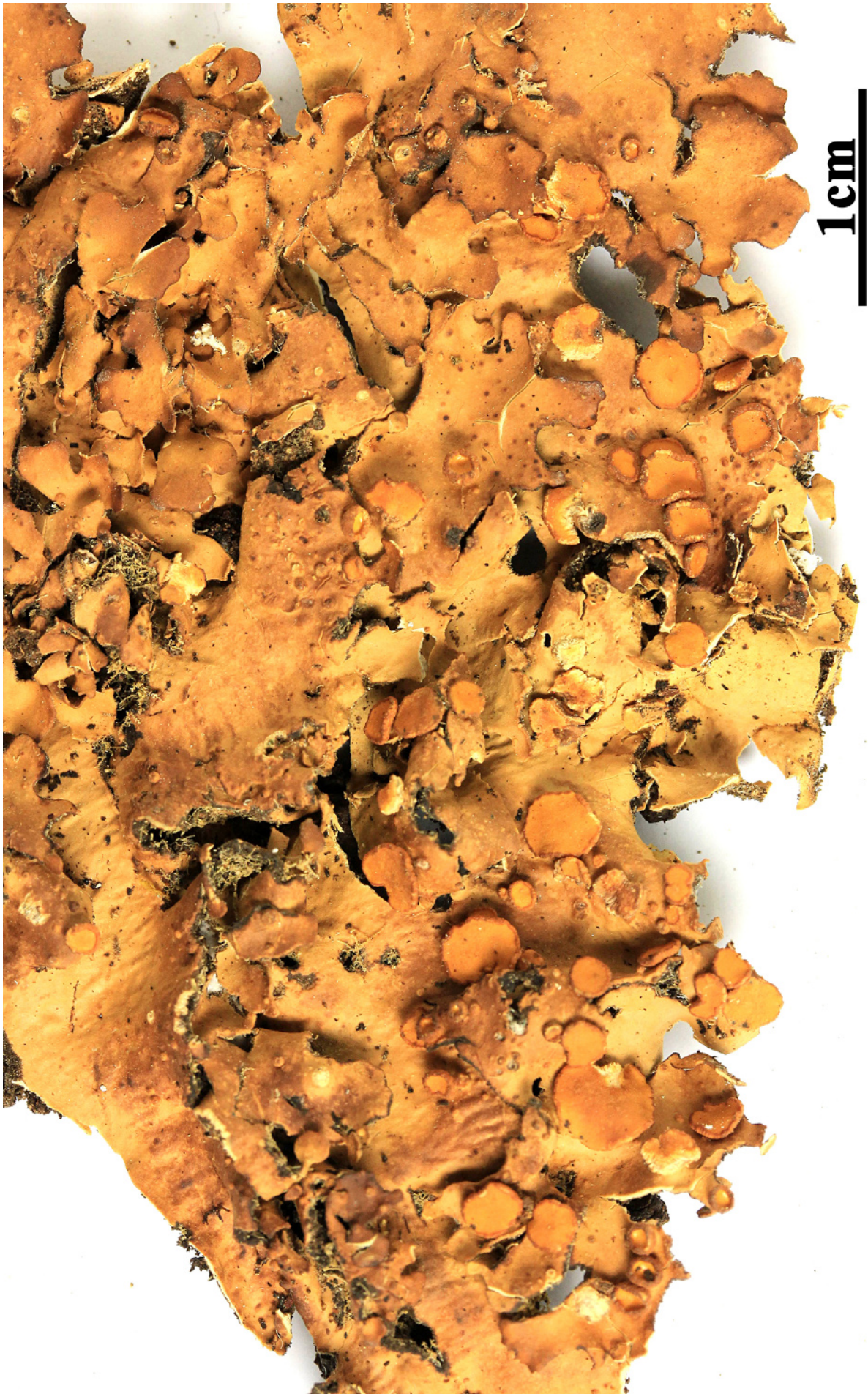


Sticta stipitata

Sticta subcaperata (Nyl.) Nyl., Lich. Nov. Zeland. (Paris): 31 (1888)
= *Sticta damicornis* var. *subcaperata* Nyl. [as 'damaecornis'] 1867

[VZR289], Nova Zelandia. South Island, distr. Nelson, Kahurangi National Park, secus viam a satione "Flora Carpark" ad casam alpinam Mt. Arthur ducentem, 1250 nm. Ad truncum arboris. Leg. W. Malcolm & A. Vězda, 21.4.1997. Ex A. Vězda: Lichenes Rariores Exsiccati Nr. 289.

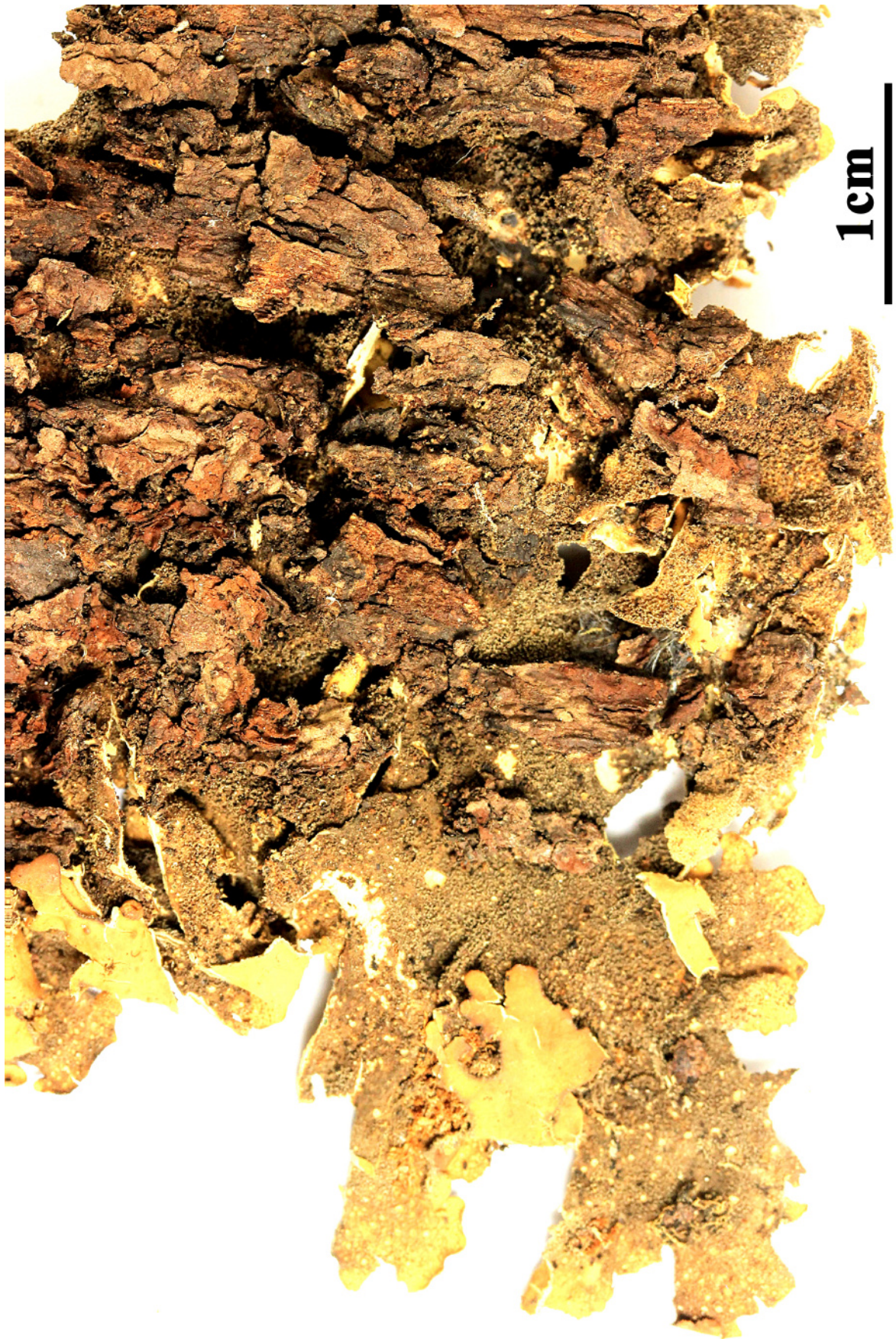
Thallus lobate, spreading, loosely to closely attached, 5-10-(12) cm diam., rarely to 20 cm and $\pm$ orbicular in well-developed specimens, corticolous. Lobes broad, 1-2 cm wide, undulate, subimbricate centrally, margins entire, sinuous, slightly incised. Upper surface bright green or olive-green, brownish or reddish-brown, coriaceous, smooth, matt, rather uneven in parts, without soredia or isidia, sometimes faintly white-maculate ($\times 10$ lens), margins suffused-brownish. Internal cephalodia visible as hemispherical swellings. Lower surface pale creamish or buff, margins white, glabrous, shining in a narrow zone, then $\pm$ uniformly short, pale, tomentose from margins to centre, tomentum variable, pale whitish, to buff or brown. Cyphellae conspicuous, large, 0.2-2 mm diam., $\pm$ circular, white, margins raised $\pm$ prominent, evenly scattered from centre to margins. Apothecia sessile or subpedicellate, scattered or crowded towards margins, rarely central, 0.8-4 mm diam., disc matt or glossy, smooth, bright yellow-orange, concave, obscured by margin at first then becoming plane to subconvex with age, margins thick, pale whitish or cream, crenulate, thalline exciple pale cream, areolate-verrucose. Ascospores fusiform, ellipsoid, 1-3-septate, (26-)32-46(-50) $\times$ 8-11 μ m.



Sticta subcaperata



Sticta subcaperata



Sticta subcaperata



Sticta subcaperata

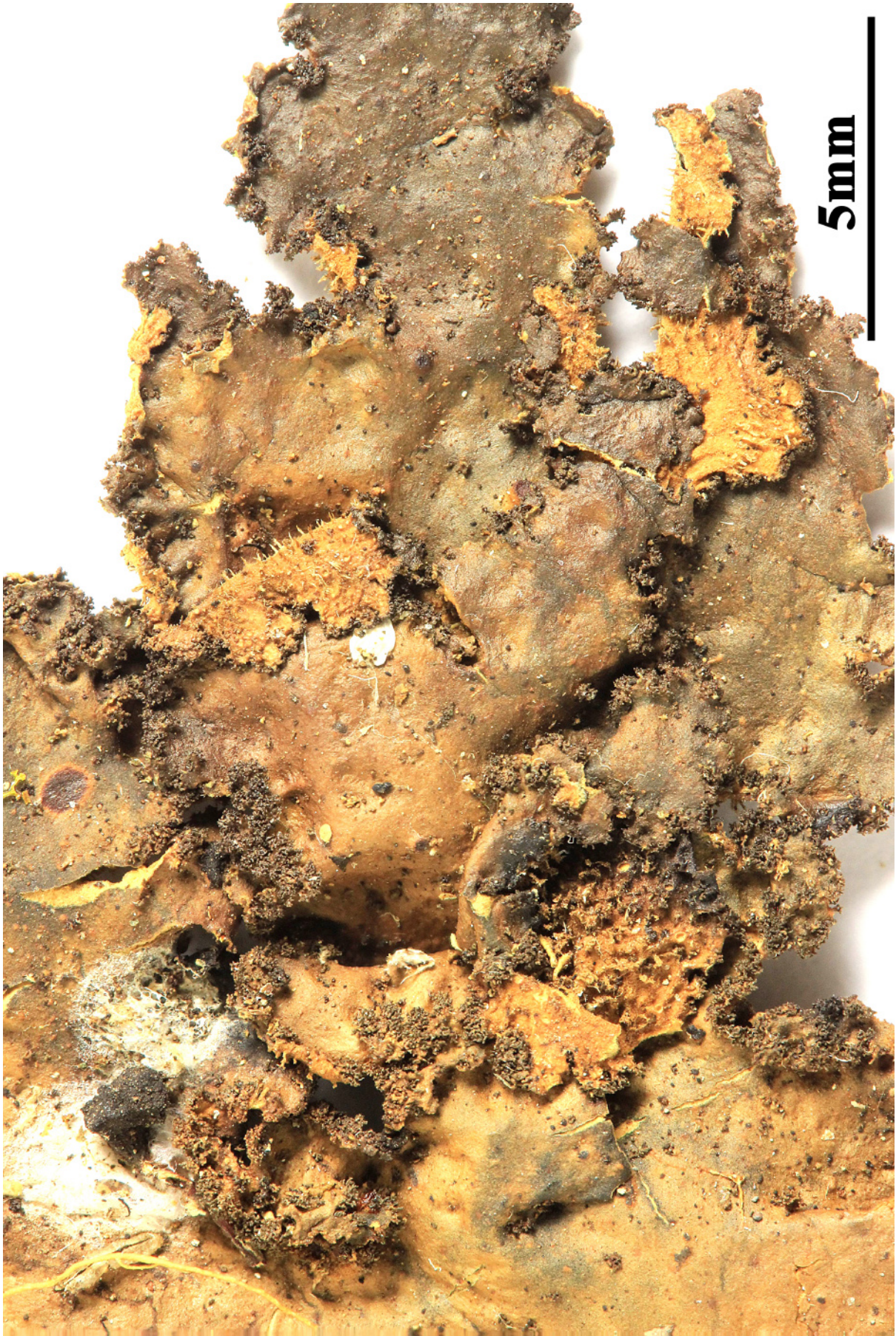
- Sticta weigeli* (Ach.) Vain., Acta Soc. Fauna Flora fenn. 7(no. 2): 189 (1890)
 = *Lichen damicornis* * *weigeli* (Ach.) Lam., Encycl. Méth., Bot. Suppl. (Paris) 3(2): 420 (1813)
 = *Parmelia damicornis* var. *weigeli* (Ach.) Eschw., in Martius, Fl. bras. enum. pl. 1(1): 214 (1833)
 = *Sticta damicornis* f. *weigeli* (Ach.) Ach., Syn. meth. lich. (Lund): 231 (1814)
 = *Sticta damicornis* var. *weigeli* Ach., Lich. Univ.: 446 (1810)
 = *Stictina weigeli* (Ach.) Stizenb., Flora, Regensburg 81: 133 (1895)

[VZR99], Tanzania. Montes Kilimanjaro, in vicinitate casae alpinae Machame dictae, 2900-3300 m. Ad corticem arborum. Leg T. Pócs (87133), 22.6.1987, det. A. Vězda. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 99.

Thallus orbicular to irregular, closely to loosely attached centrally, 2–8 (–12) cm wide. Lobes variable, broadly rounded to laciniate, often deeply dissected or folded, complex-imbricate centrally; margins sinuous, irregularly notched or torn, rather ragged, densely isidiate. Upper surface pale grey to chestnut-brown when dry, grey-black suffused red-brown when wet, wrinkled, pitted, punctate-impressed to ±faveolate in parts, isidiate, maculate, without soredia. Isidia minute, styliform, granular to coralloid-branched, dark brown or grey-brown, glossy, densely crowded in a thick marginal crust, occasionally in small laminal clumps or forming a more diffract laminal crust. Photobiont Nostoc. Lower surface dark brown to black, paler at margins, thickly tomentose, sometimes with tufts of long black anchoring hyphae projecting near margins and scattered over lower surface. Cyphellae scattered, (0.1–) 0.5–1.5 (–3) mm diam., deeply sunk in tomentum; pit membrane white to pale fawnish. Apothecia not seen. - Apparently rare in north-eastern Qld on trees in montane rainforest, and in eastern N.S.W. Still very poorly known in Australia, it also occurs widely in tropical and southern-temperate regions.



Sticta weigeli



Sticta weigeli



Sticta weigeli

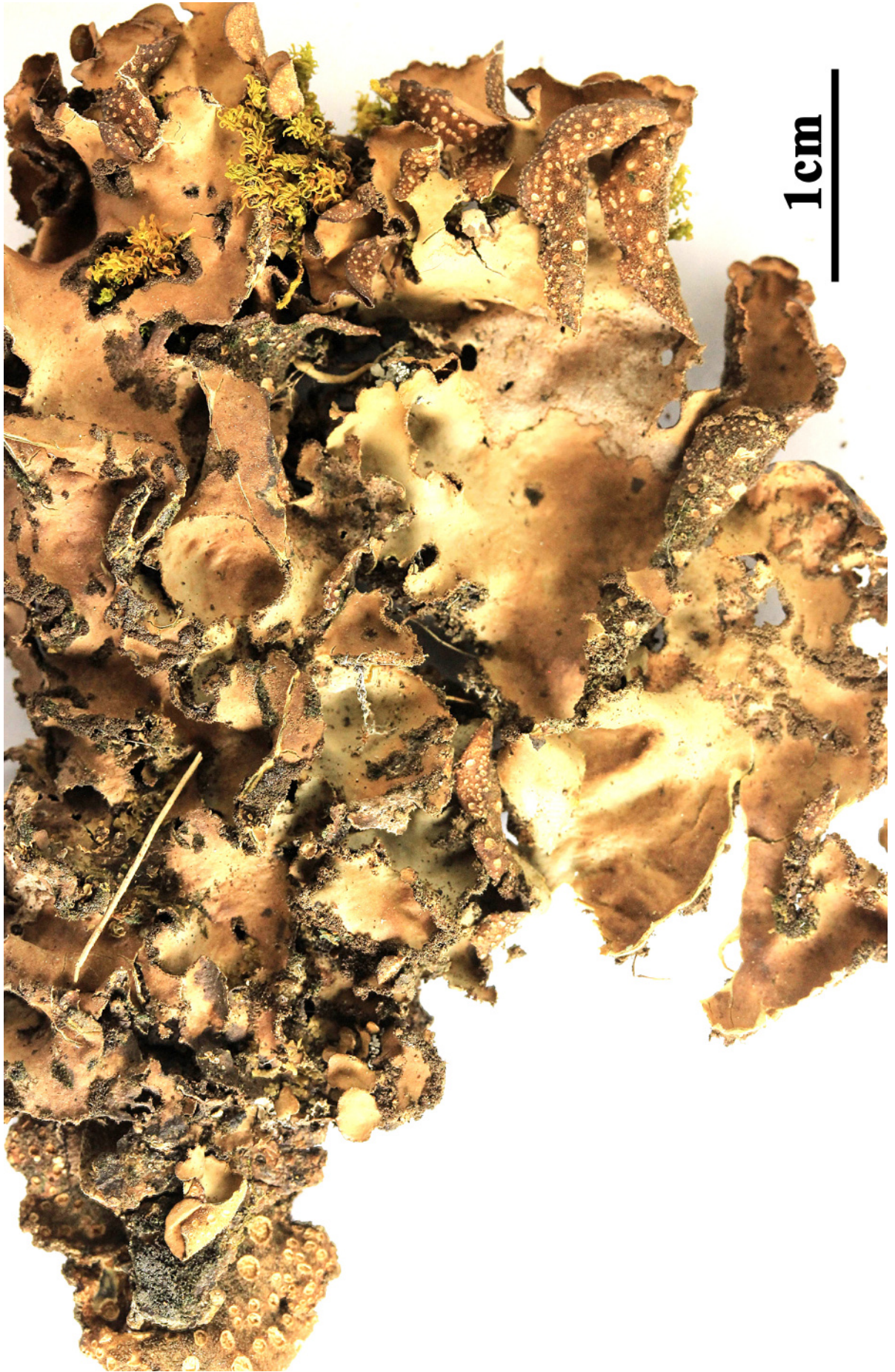


Sticta weigeli

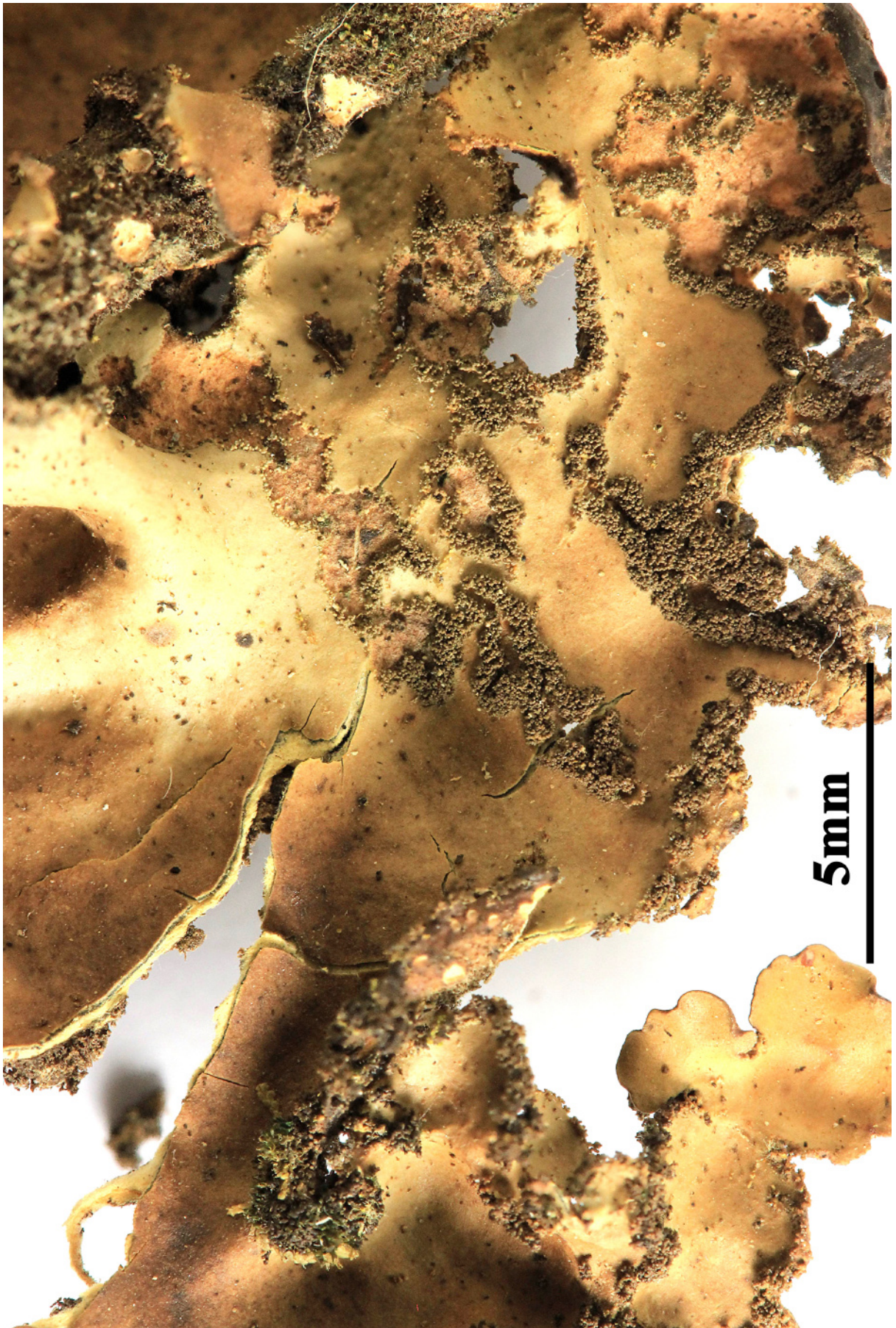
- Sticta weigeli* (Ach.) Vain., Acta Soc. Fauna Flora fenn. 7(no. 2): 189 (1890)
 = *Lichen damicornis* * *weigeli* (Ach.) Lam., Encycl. Méth., Bot. Suppl. (Paris) 3(2): 420 (1813)
 = *Parmelia damicornis* var. *weigeli* (Ach.) Eschw., in Martius, Fl. bras. enum. pl. 1(1): 214 (1833)
 = *Sticta damicornis* f. *weigeli* (Ach.) Ach., Syn. meth. lich. (Lund): 231 (1814)
 = *Sticta damicornis* var. *weigeli* Ach., Lich. Univ.: 446 (1810)
 = *Stictina weigeli* (Ach.) Stizenb., Flora, Regensburg 81: 133 (1895)

[VZR250], Dominica (Antilles Minores), Central Forest Reserve, secus viam inter Bells et Morpo, 600 m. Ad truncum et ramulis arborum (*Citrus* sp.). Leg. & det. A. Vězda. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 250.

Thallus orbicular to irregular, closely to loosely attached centrally, 2–8 (–12) cm wide. Lobes variable, broadly rounded to laciniate, often deeply dissected or folded, complex-imbricate centrally; margins sinuous, irregularly notched or torn, rather ragged, densely isidiate. Upper surface pale grey to chestnut-brown when dry, grey-black suffused red-brown when wet, wrinkled, pitted, punctate-impressed to ±faveolate in parts, isidiate, maculate, without soredia. Isidia minute, styliform, granular to coralloid-branched, dark brown or grey-brown, glossy, densely crowded in a thick marginal crust, occasionally in small laminal clumps or forming a more diffract laminal crust. Photobiont Nostoc. Lower surface dark brown to black, paler at margins, thickly tomentose, sometimes with tufts of long black anchoring hyphae projecting near margins and scattered over lower surface. Cyphellae scattered, (0.1–) 0.5–1.5 (–3) mm diam., deeply sunk in tomentum; pit membrane white to pale fawnish. Apothecia not seen. - Apparently rare in north-eastern Qld on trees in montane rainforest, and in eastern N.S.W. Still very poorly known in Australia, it also occurs widely in tropical and southern-temperate regions.



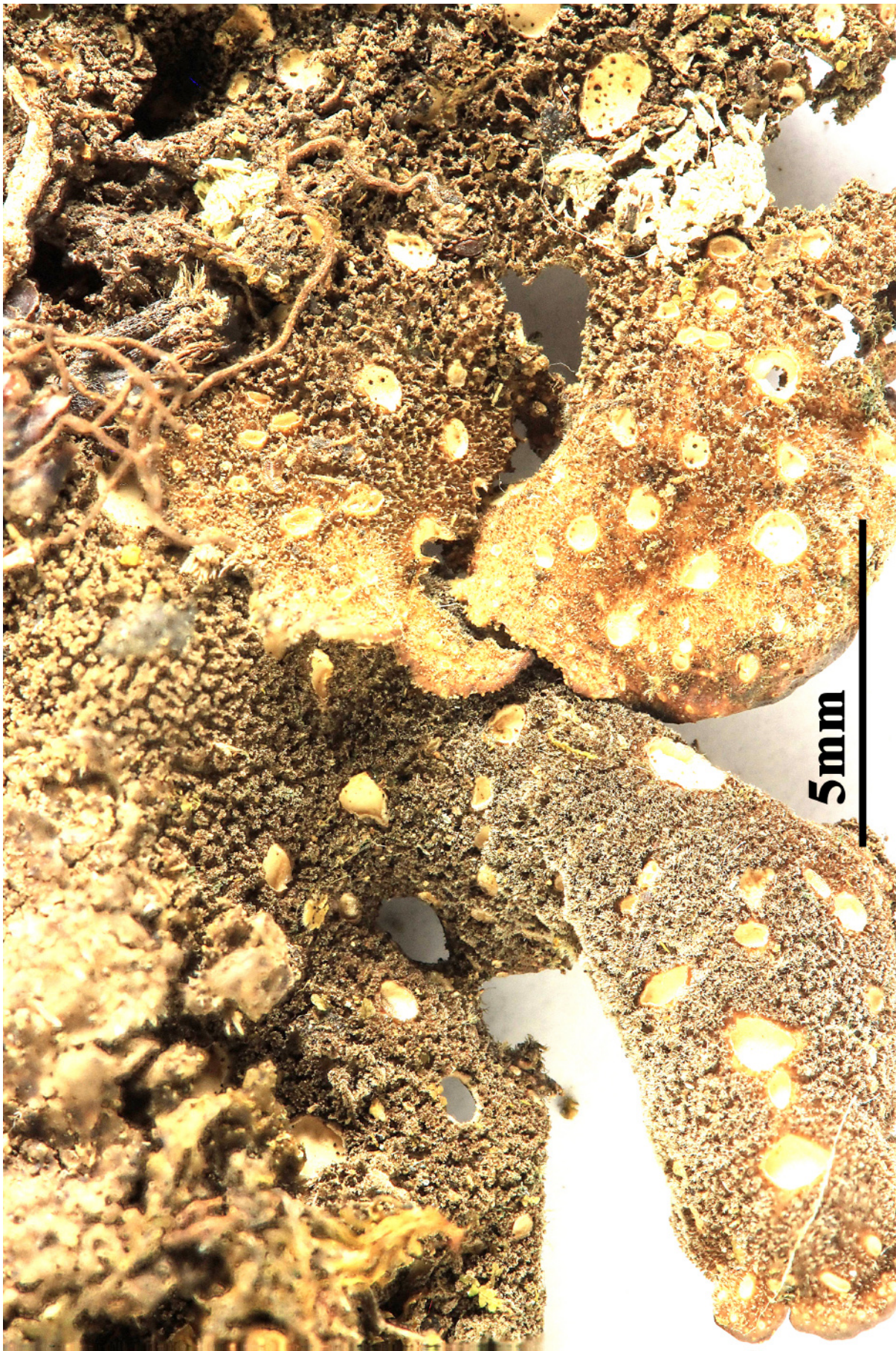
Sticta weigeli



Sticta weigelia



Sticta weigeli

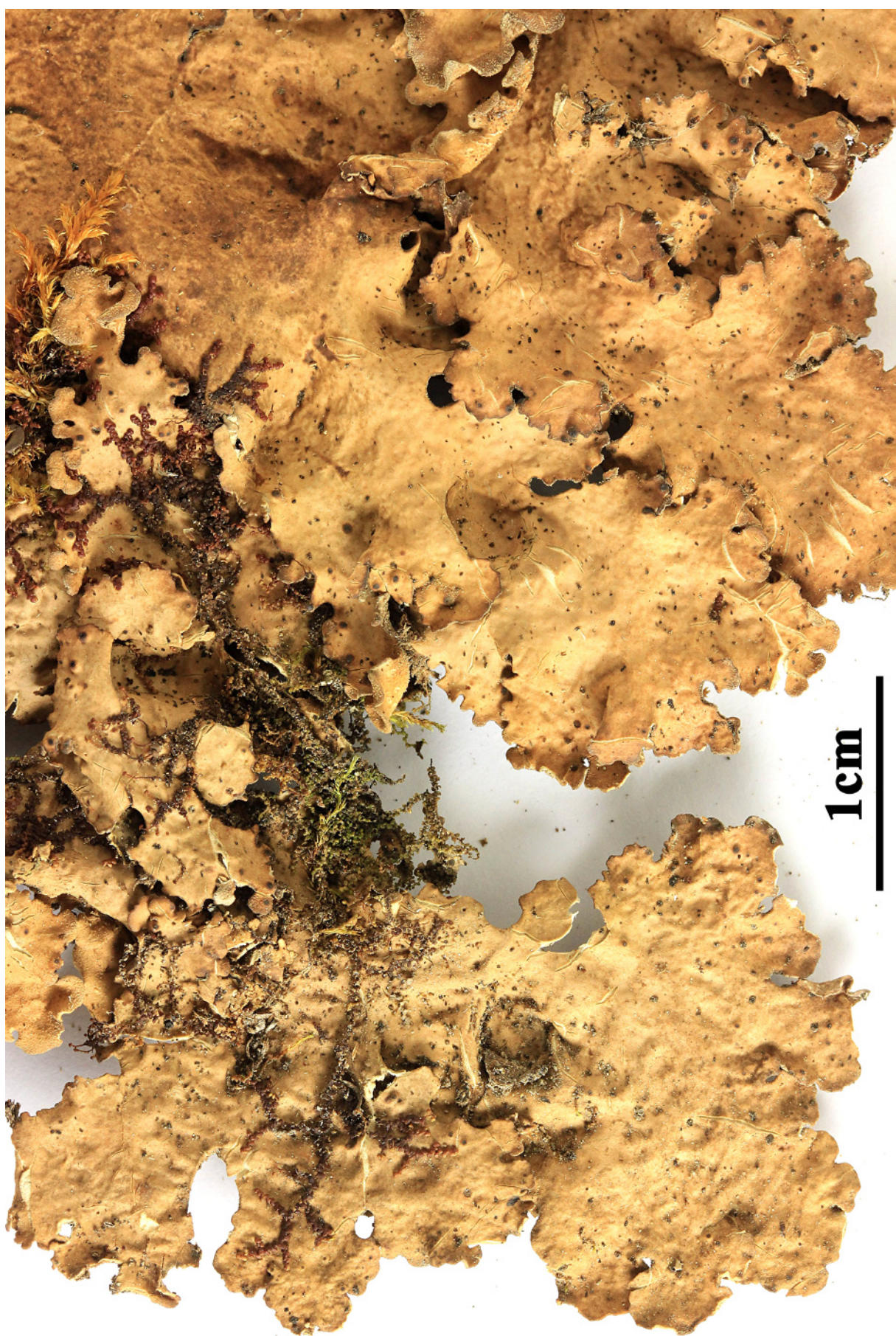


Sticta weigeli

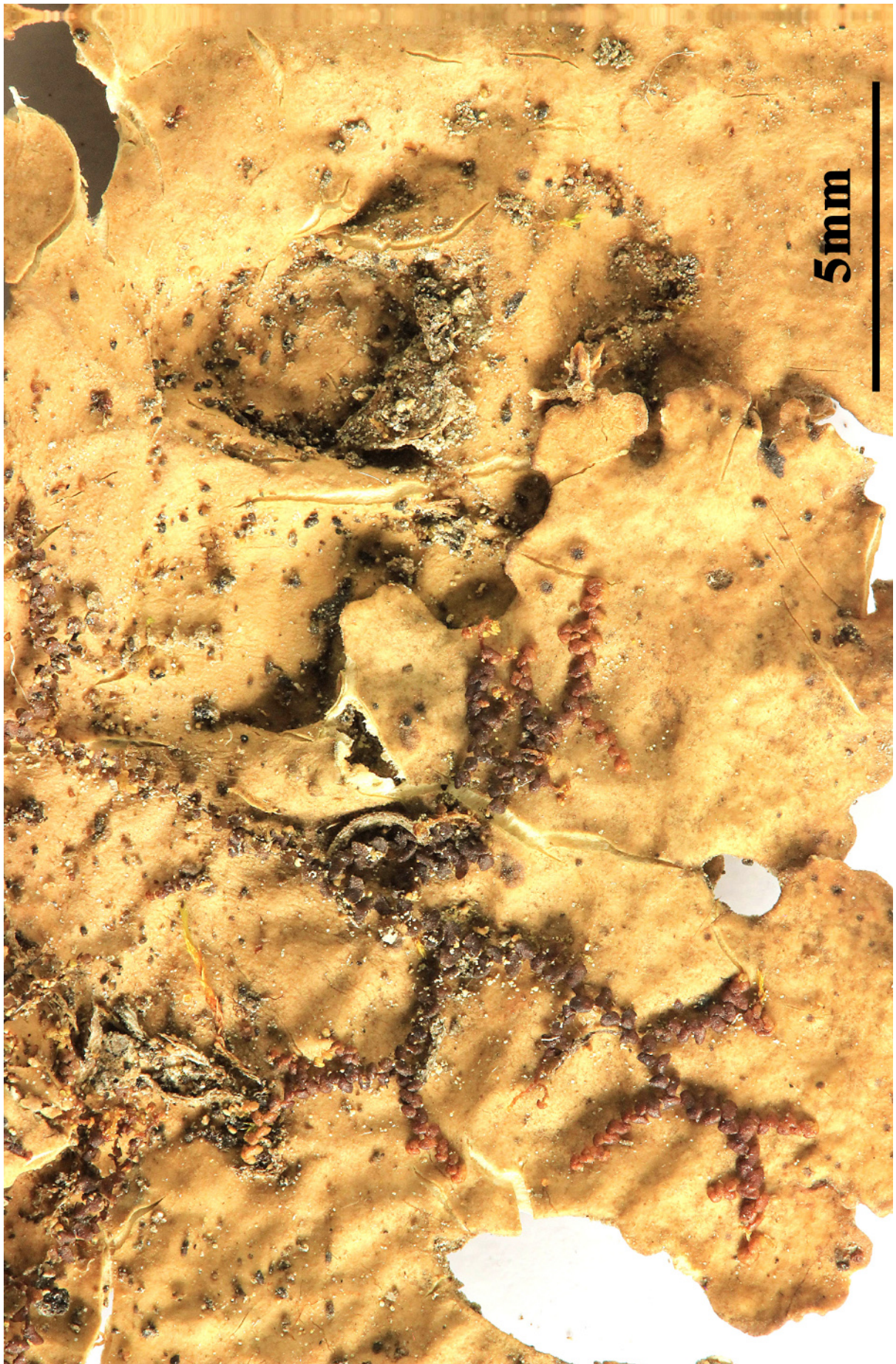
- Sticta weigeli* (Ach.) Vain., Acta Soc. Fauna Flora fenn. 7(no. 2): 189 (1890)
 = *Lichen damicornis* * *weigeli* (Ach.) Lam., Encycl. Méth., Bot. Suppl. (Paris) 3(2): 420 (1813)
 = *Parmelia damicornis* var. *weigeli* (Ach.) Eschw., in Martius, Fl. bras. enum. pl. 1(1): 214 (1833)
 = *Sticta damicornis* f. *weigeli* (Ach.) Ach., Syn. meth. lich. (Lund): 231 (1814)
 = *Sticta damicornis* var. *weigeli* Ach., Lich. Univ.: 446 (1810)
 = *Stictina weigeli* (Ach.) Stizenb., Flora, Regensburg 81: 133 (1895)

[VZR208], Sibiria occidentalis, respublica Altay, prope lacum Telekotskoje ozero dictum, ad occidentem versus a pago Jajlju 440 m. Supra muscos ad truncum arboris in silva (*Larix sibirica*, *Abies sibirica*). leg & det. J. Halda, 2.10.1995. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 208.

Thallus orbicular to irregular, closely to loosely attached centrally, 2–8 (–12) cm wide. Lobes variable, broadly rounded to lacinate, often deeply dissected or folded, complex-imbricate centrally; margins sinuous, irregularly notched or torn, rather ragged, densely isidiate. Upper surface pale grey to chestnut-brown when dry, grey-black suffused red-brown when wet, wrinkled, pitted, punctate-impressed to ±faveolate in parts, isidiate, maculate, without soredia. Isidia minute, styliform, granular to coralloid-branched, dark brown or grey-brown, glossy, densely crowded in a thick marginal crust, occasionally in small laminal clumps or forming a more diffract laminal crust. Photobiont Nostoc. Lower surface dark brown to black, paler at margins, thickly tomentose, sometimes with tufts of long black anchoring hyphae projecting near margins and scattered over lower surface. Cyphellae scattered, (0.1–) 0.5–1.5 (–3) mm diam., deeply sunk in tomentum; pit membrane white to pale fawnish. Apothecia not seen. - Apparently rare in north-eastern Qld on trees in montane rainforest, and in eastern N.S.W. Still very poorly known in Australia, it also occurs widely in tropical and southern-temperate regions.



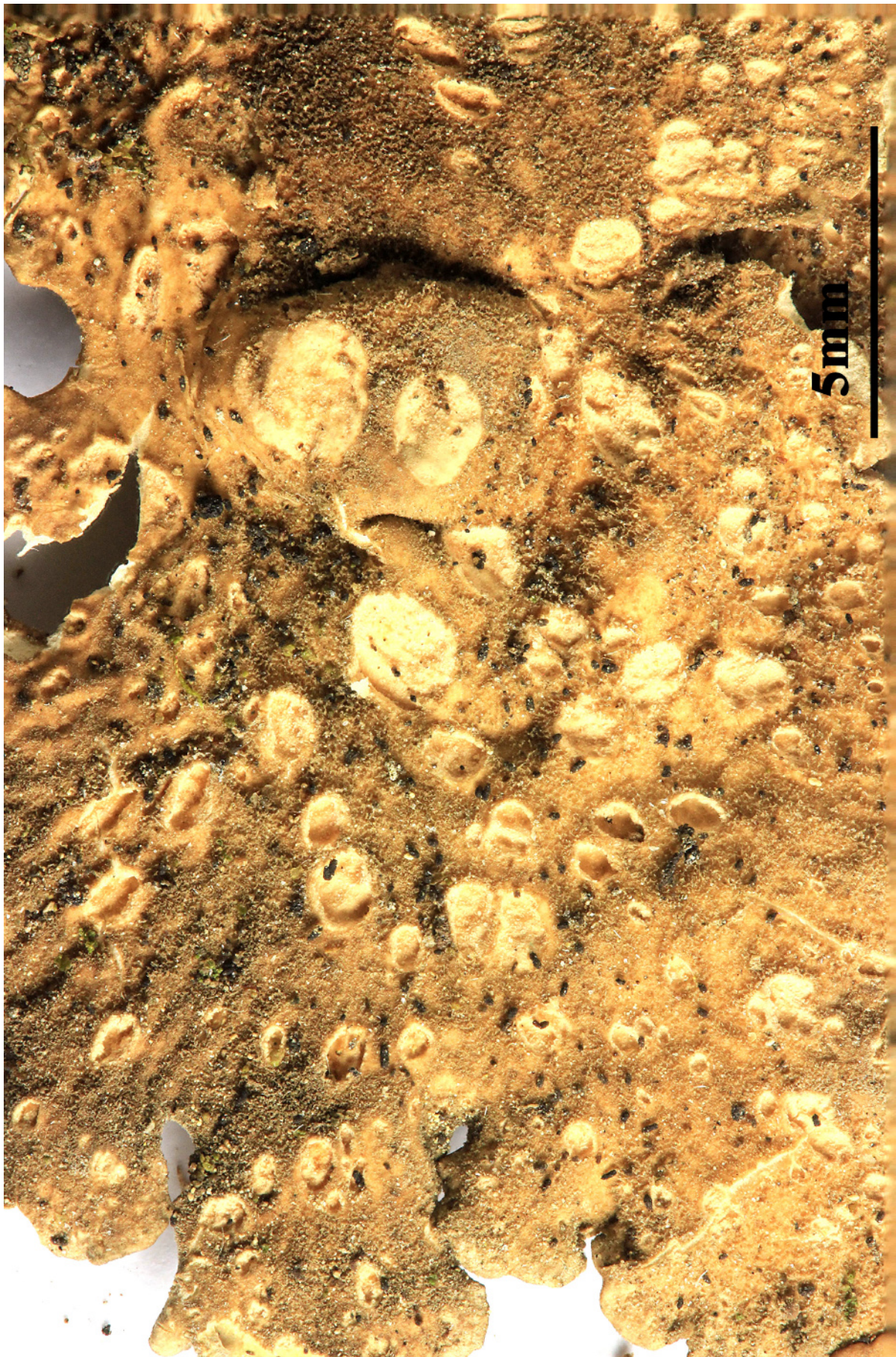
Sticta weigeli



Sticta weigeli



Sticta weigeli



Sticta weigeli

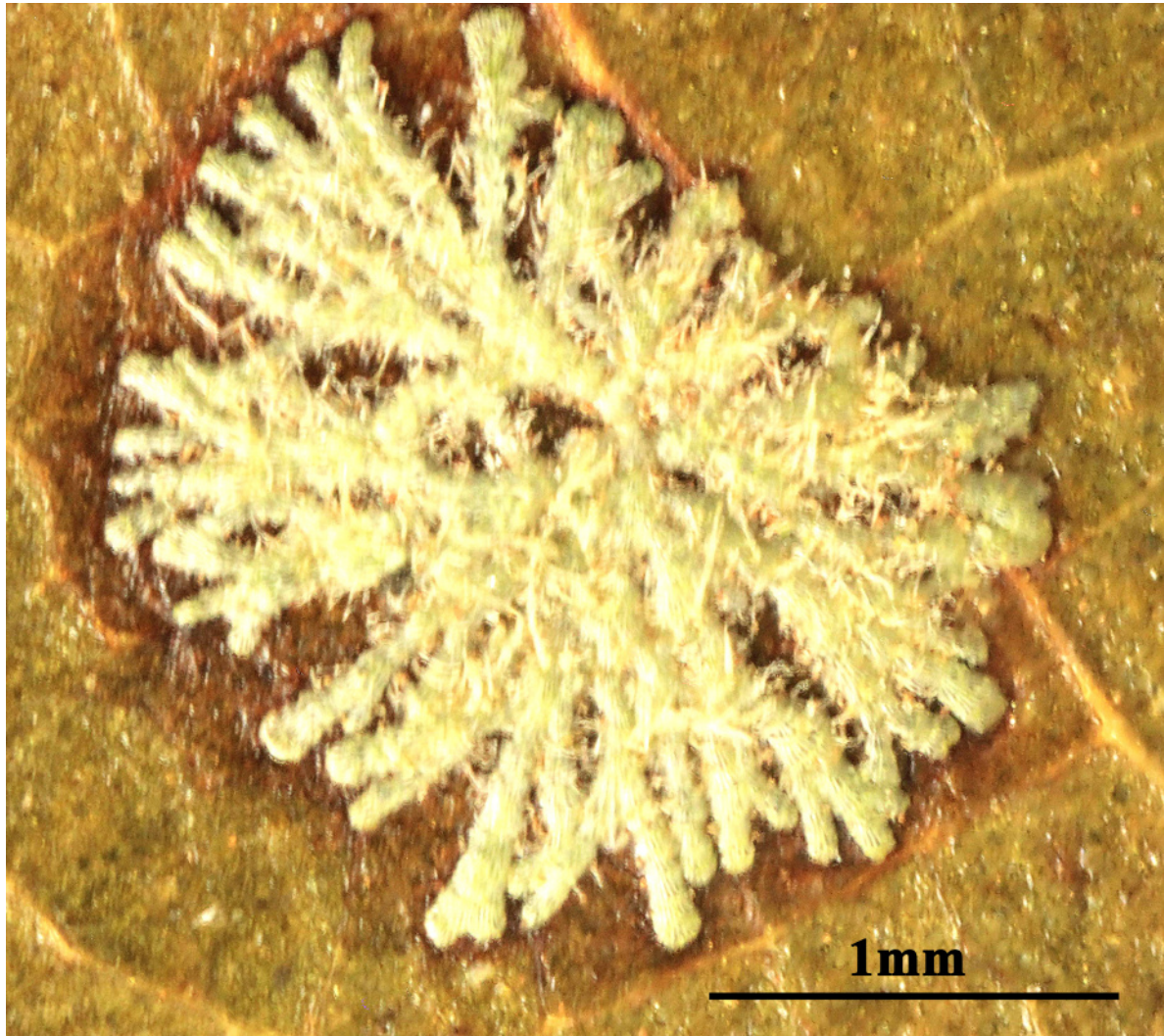
Strigula complanata (Fée) Mont., in Sagra, Hist. phys. Cuba, Bot. Pl. Cell. 9: 94 (1845)
 = *Phyllocharis orbicularis* (Fr.) S.H. Jiang, Lücking & Sérus., in Hong-sanan et al., Fungal Diversity 105: 149 (2020)
 = *Phyllocharis complanata* Fée, Essai Crypt. Exot. (Paris): xciv, xcix (1825) [1824]
 = *Strigula orbicularis* Fr., Linnaea 5: 549 (1830)

[VZR209], Tanzania, Kilimanjaro, prope vicum Marungo, 1390 m. Foliicola in pluviisilva. Leg. J. Tronrček, 16.12.1995, det. A. Vězda. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 209.

Thallus foliicolous, subcuticular, effigurate, rounded to irregular, 2-5(-15) mm diam., formed of linear lobes, 0.05-0.1 mm wide, usually completely confluent but distinct (without black margins), lobes sometimes discrete at thallus margins or centrally, often with white, tapering hairs (100-250 µm long, 10-15 µm wide). pale green-grey to green-white (white when moribund), glossy; 20-40 µm thick, dominated by photobiont layer, without a prothallus. Photobiont *Cephaleuros*, cells ±rectangular to subirregular, 20-40(-54) x 10-16 µm, forming continuous plates. Perithcia 0.1-0.2(-0.25) mm diam., 100-150 mm tall, at first almost completely immersed in thallus, becoming convex, the covering thalline tissue irregularly rupturing to expose the black, shining involucrellum. Involucrellum 10-15 µm thick, brownish black to black. Exciple colourless to pale-brownish. (Centrum subaplanate to globose). Paraphyses simple, c. 1 µm thick. Periphyses indistinct. Asci obclavate to almost fusiform, 45-70 x 10-15 µm. Ascospores 8 per ascus, biserial, 3-septate (rarely 1-septate), fusiform to subballar, one end obtuse the other acute, not constricted at septa (12-)15-24 x 3.5-6 µm. Pycnidia 0.1 mm diam., almost completely immersed, to partly exposed, black, macroconidia 3-7 (-9)-septate ±filiform, (25-)30-65 x 2.-2.5 µm. Cosmopolitan.



Strigula complanata

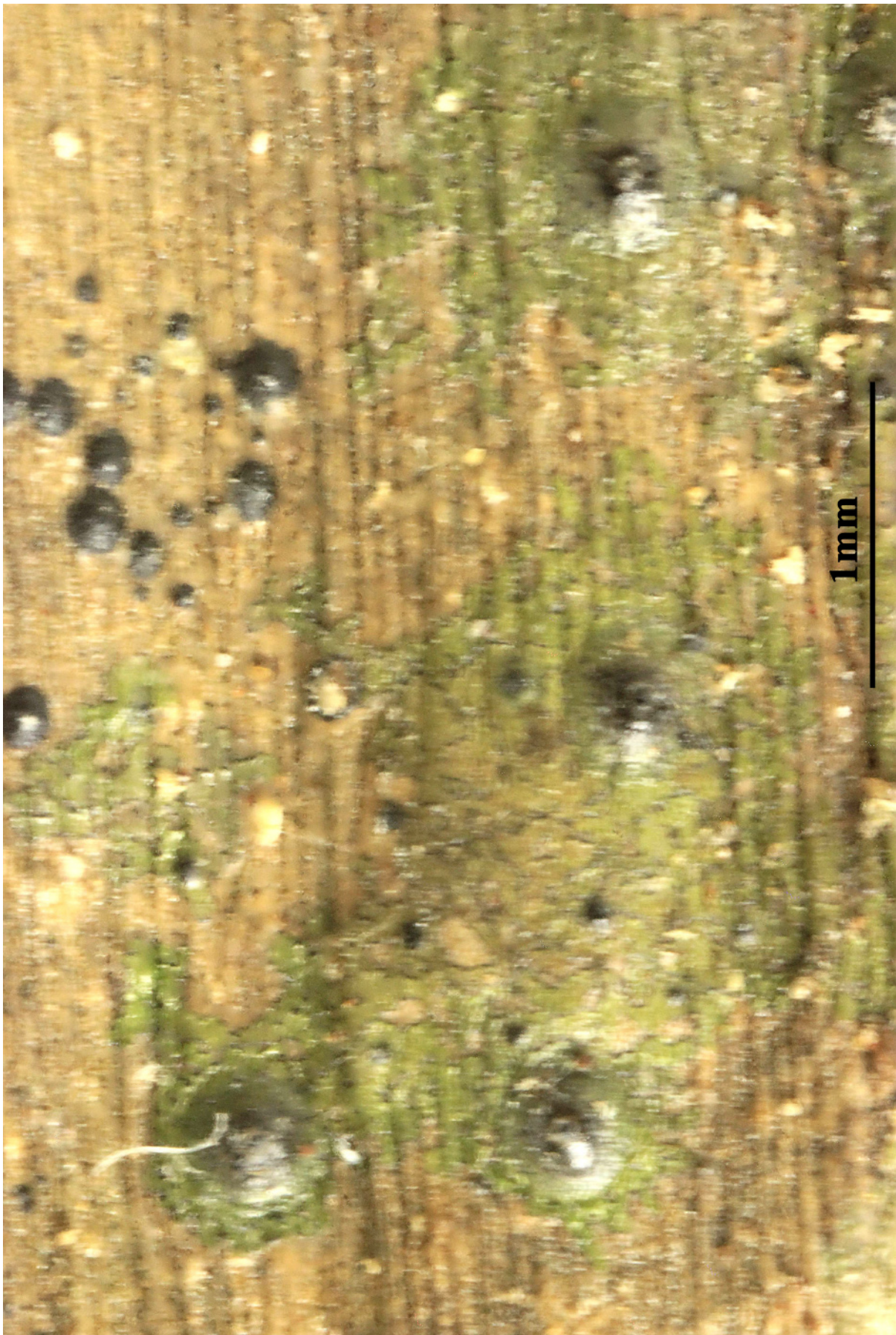


Strigula complanata

Strigula maculata (Cooke & Massee) R. Sant., Symb. bot. ups. 12(no. 1): 186 (1952)
= *Racoplaca maculata* (Cooke & Massee) S.H. Jiang, Lücking & J.C. Wei, in Jiang, Lücking, Xavier-Leite, Cáceres, Aptroot, Portilla & Wei, Fungal Diversity 102: 286 (2020)
= *Micropeltis maculata* Cooke & Massee, in Cooke, Grevillea 18(no. 86): 35 (1889)

[VZR240], Dominica (Antilles Minores), pars centralis insulae, ad catarata "Emerald Pool", 350 m. Foliicola in pluviisilva. Leg. A. Vězda, 20.7.1996. EX A. Vězda: LICHENES RARIORES EXSICCATI NR. 240.

Thallus epiphyllous, subcuticular, irregular, 5–15 (–20) mm wide, 8–15 µm thick, lobate, the lobes closely confluent, dark grey-green, ±smooth, dull to slightly glossy, bordered by a thin black line; spaces between lobes minute; photobiont Cephaleuros; prothallus not apparent. Perithecia superficial, prominent, ±conical, covered to the apex by a layer of thallus, 0.25–0.5 mm diam., greyish black to green-black. Perithecial apex subacute. Involucrellum black, carbonaceous, extending to exciple base level, 20–30 µm thick. Exciple hyaline to brown, 10–15 µm thick. Centrum 0.15–0.30 mm diam. Paraphyses simple. Asci narrowly obclavate, 45–65 × 6–8 µm. Ascospores 1-septate, oblong-cylindrical, biseriate in the ascus, slightly constricted at the septum, 11–18 × 2.0–3.5 µm; cells not separating. Conidiomata: 1) semi-immersed to superficial, hemispherical to verrucose, black, 0.1–0.2 mm diam., containing simple bacilliform macroconidia 4–6 × 1–2 µm; 2) similar, but 0.07–0.15 mm diam., containing simple fusiform microconidia 4–5 × 1.0–1.5 µm. - Common on the leaves of rainforest trees and shrubs in eastern Qld and north-eastern N.S.W.; also on Lord Howe Island. Pantropical and subtropical.



Strigula maculata

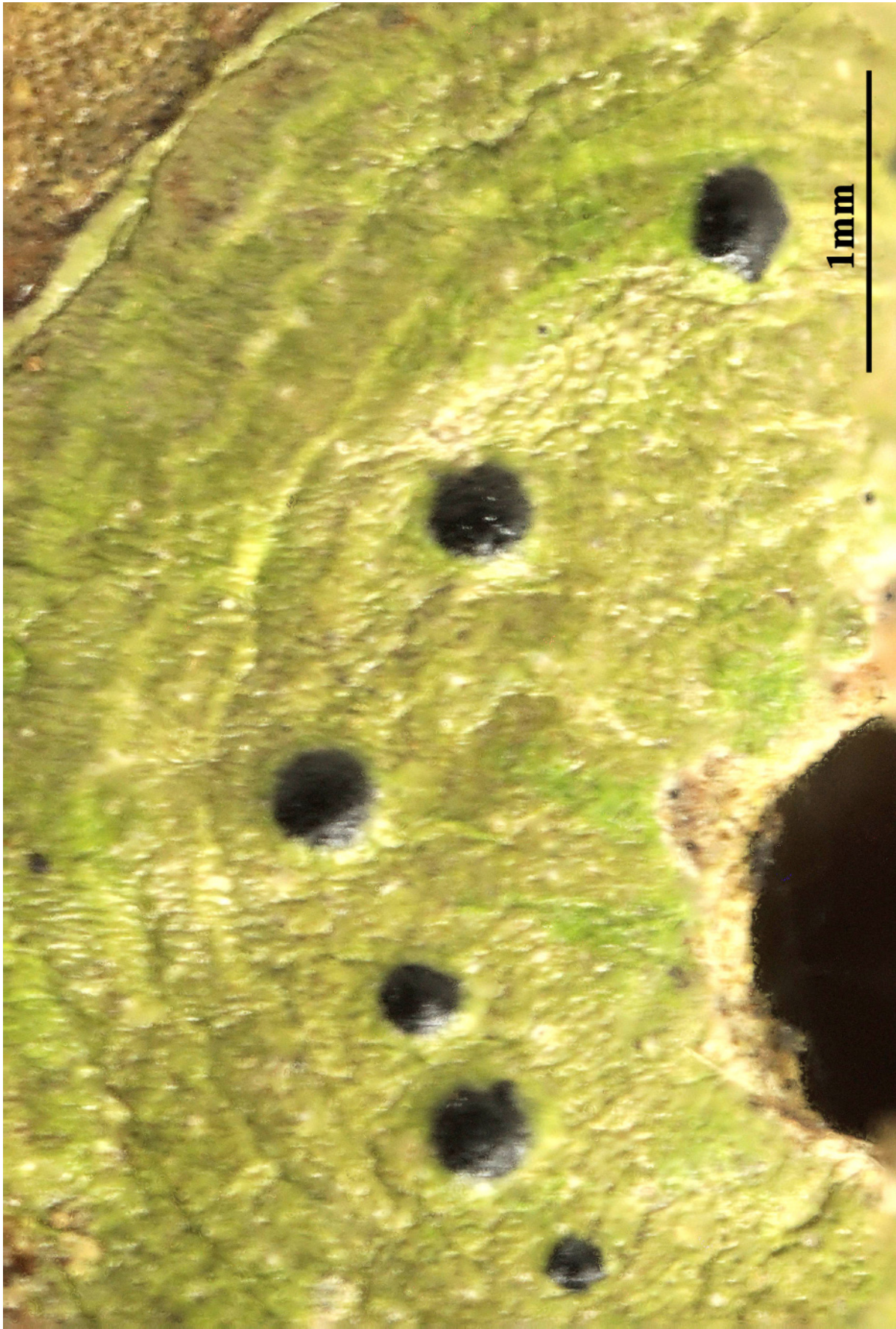


Strigula maculata

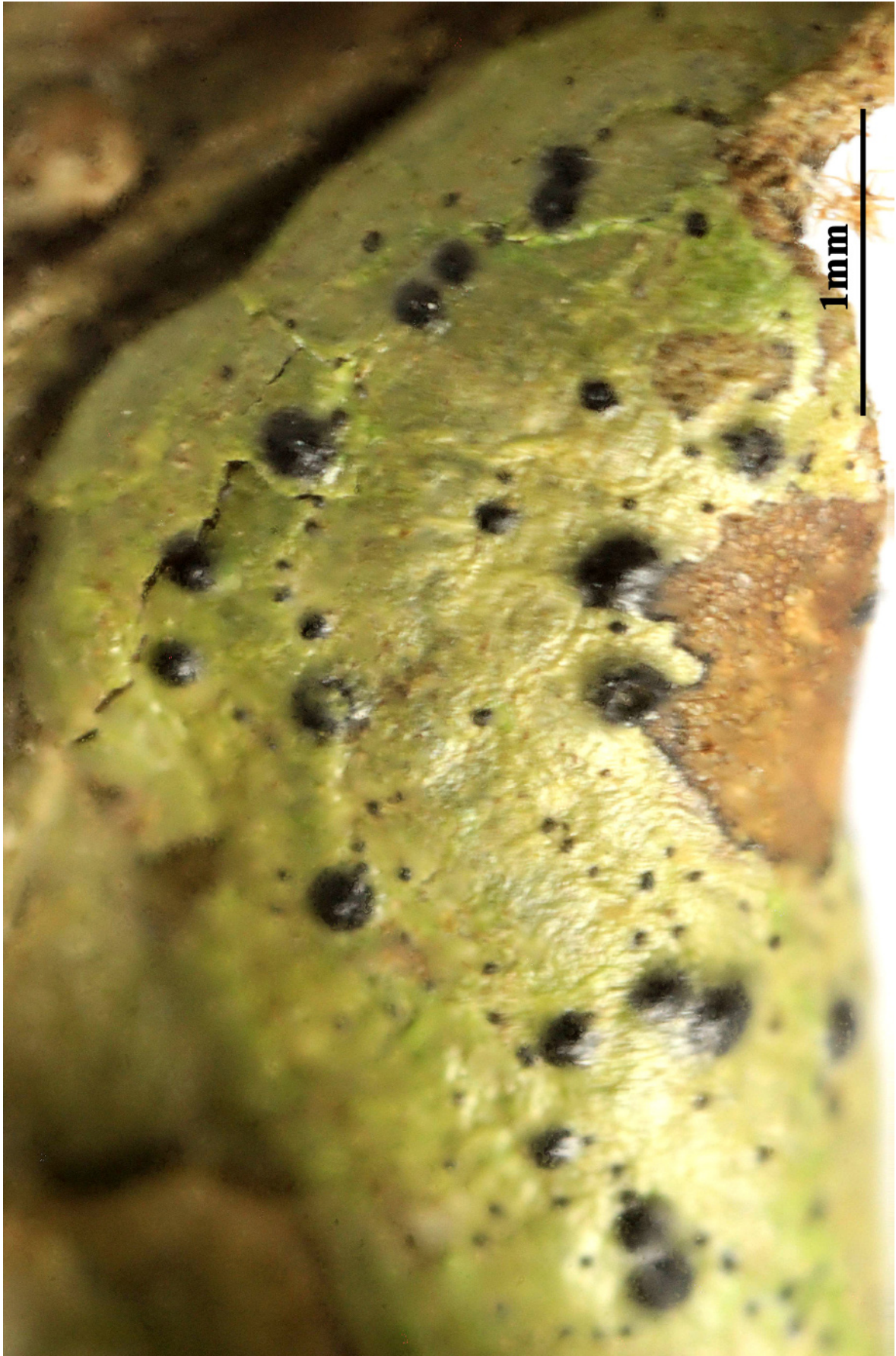
Strigula schizospora R. Sant., Symb. bot. upsal. 12(no. 1): 175 (1952)

[VZR359], Costa Rica. Prov. Cartago, Turrialba, 15 km orientem versus a San José, 750 m. In pluviisilva secundaria. Foliicola. Leg. & det. R. Lücking (81-3799), 8.1881. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 359.

Thallus subcuticular, continuous, 3–10 mm across and 30–50 μm thick, with entire or crenulate or shortly lobulate margins, bright green to yellowish green, but often white in center, different color shades often arranged in concentric zones. Photobiont a species of *Cephaleuros*, cells angular-rounded, 8–14 x 4–7 μm , in irregular plates forming 1 to several layers. Perithecia immersed-erumpent, hemispherical, 0.2–0.4 mm diam. and 80–170 μm high, exposed part black and shiny. Excipulum prosoplectenchymatous, 5–10 μm thick, colorless to blackish brown. Involucrum confluent with excipulum, carbonaceous, 10–20 μm thick, black. Paraphyses unbranched. Asci cylindrical, 40–60 x 4–6 μm . Ascospores irregularly biserial, ellipsoid, 1-septate, with strong constriction at septum and usually breaking into parts within asci (asci therefore appearing 16-spored), 8–12 x 2–2.5 μm (parts 4–6 μm long), 4–5 times as long as broad. Pycnidia immersed, visible as black dots and often aggregated in groups of 5–15, those producing macroconidia 0.1–0.15 mm, those producing microconidia 0.05–0.1 mm diam., black. Macroconidia shortly bacillar, non-septate, 4–6 x 1.5–2 μm . Microconidia fusiform, non-septate, 4–5 x 1.2–1.5 μm . Chemistry: no substances detected by TLC. Distribution and Ecology. Pantropical. Previously known only from the Neotropics and tropical Africa, but typical specimens also found in the eastern Paleotropics. Usually found in more exposed situations; less common than other species of the genus but may be locally abundant.



Strigula schizospora

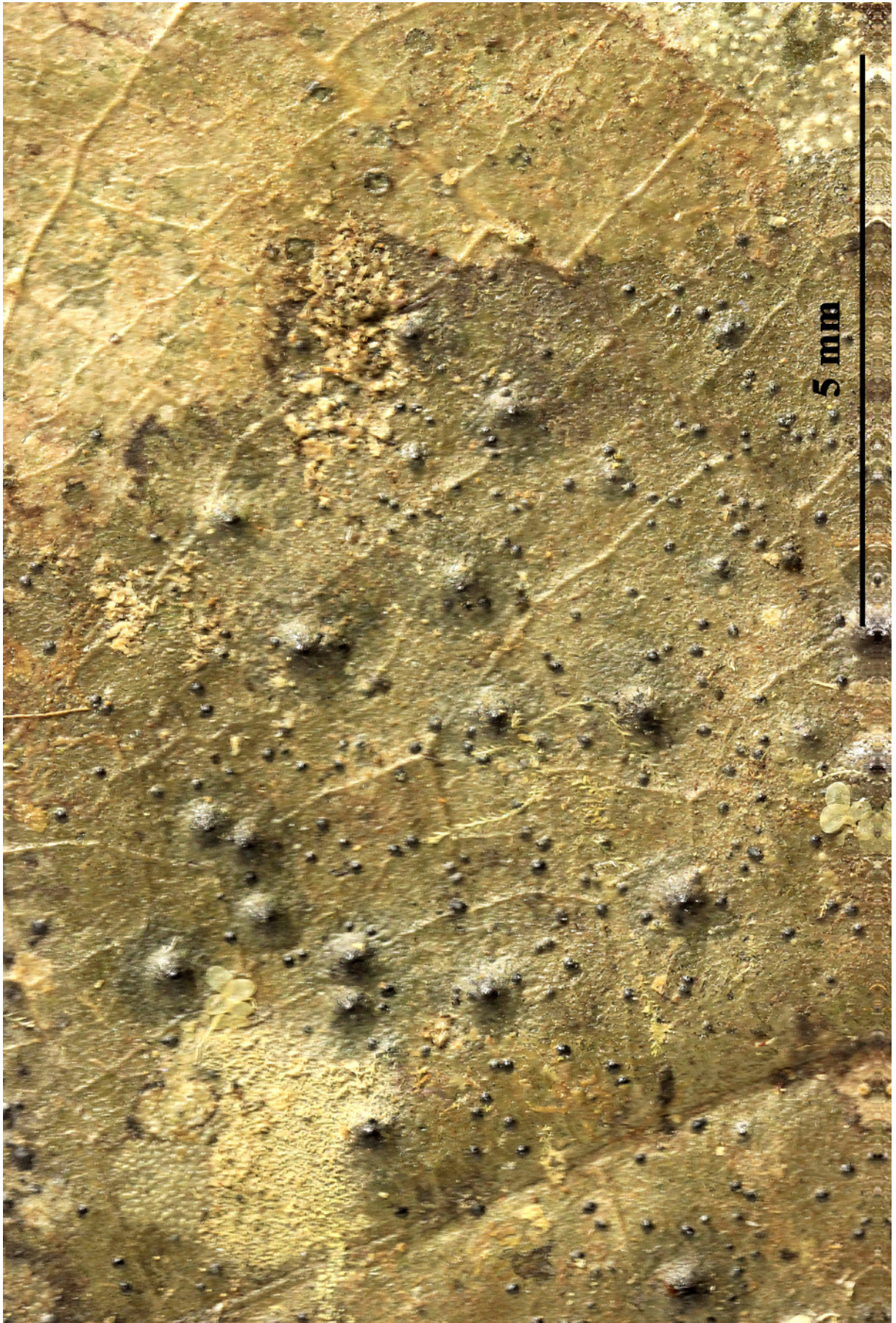


Strigula schizospora

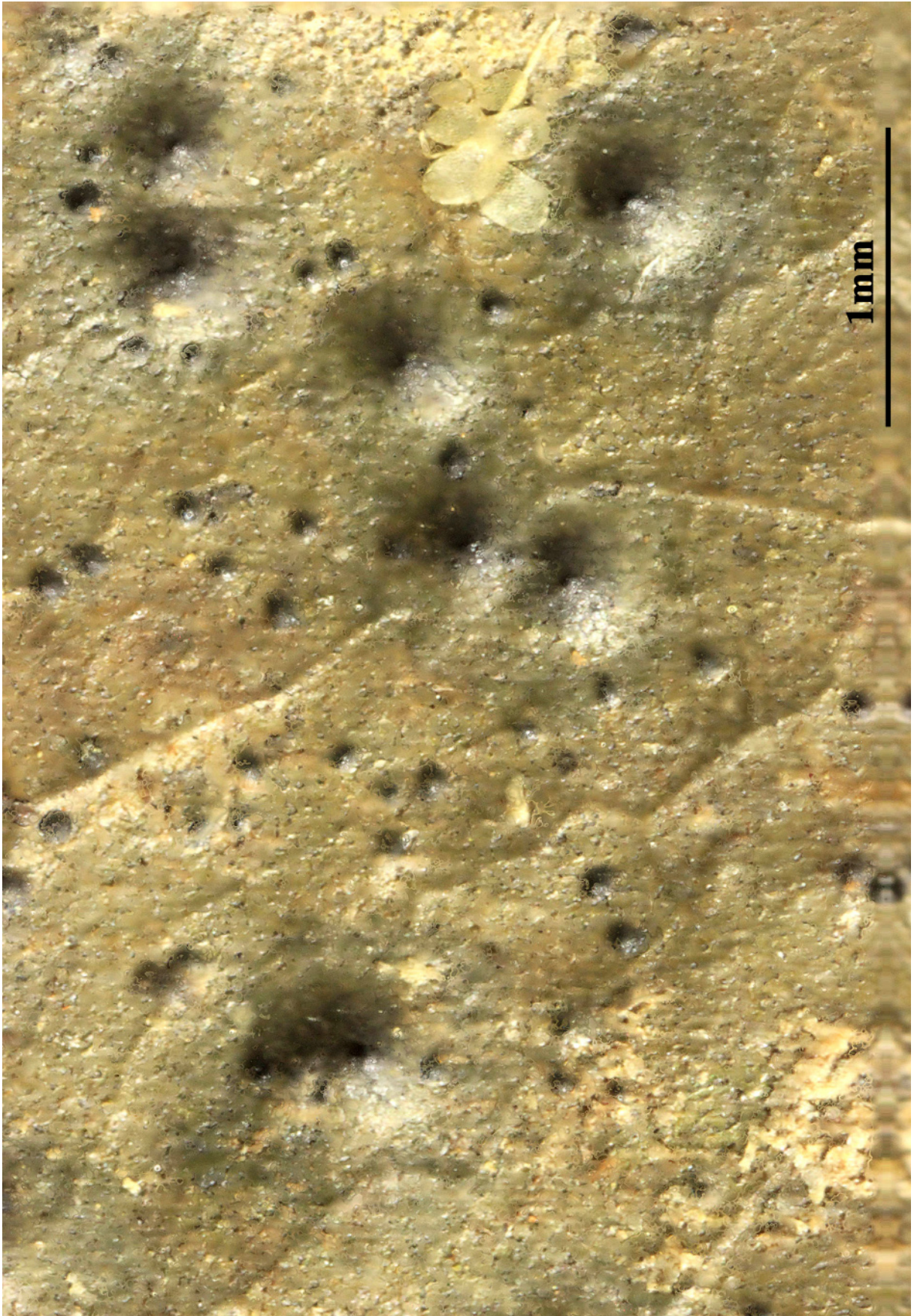
Strigula subtilissima (Fée) Müll. Arg., Flora, Regensburg 66: 32 (no. 678) (1883)
= *Racoplaca subtilissima* Fée, Essai Crypt. Exot. (Paris): xciv, xcix (1825) [1824]

[VZR414], Aequatoria. Prov. Napo, reservatum naturae "Yasuni", Rio Tiputini, in vicinitate stationis biologicae, 00°40' merid., 76°26' occid., 300 m. Foliicola. Leg. Z. Palice, 12.8.1999, det. A. Vězda. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 414.

Thallus foliicolous, subcuticular, effigurate, rounded to irregular, 4–10(–15) mm diam., distinctly lobate, lobes anastomosing and partly confluent, separated by small, irregular interspaces, lobes 0.07–0.1 mm wide, bordered by a thin, black prothallus 10–20 µm wide; surface dark grey-green, glossy, very thin, 8–12 µm thick, dominated by photobiont layer. Photobiont Cephaleuros, cells rectangular or oblong, 8–12 × 4–7 µm, forming continuous radiating plates. Perithecia (0.25–)0.3–0.5 mm diam., 90–200 µm tall, convex to subconical, black or partly dark-green, matt to glossy. Involucrum 25–40 µm thick, brownish black, covered in upper parts by a thin layer of photobiont-containing tissue. Exciple brown in upper parts, colourless below centrum. Centrum somewhat applanate, 150–350 × 70–180 µm. Paraphyses simple, 1–1.5 µm thick. Asci obclavate, 40–70 × 4–7 µm. Ascospores 8 per ascus, biseriate, (1–)3-septate, fusiform to bacillar, apices obtuse, not constricted at septa, 10–16 × 2–3 µm. Pycnidia numerous, 0.1–0.2 mm diam., convex, black, glossy. Macroconidia simple but with a strongly staining central cytoplasmic zone, bacillar to ellipsoidal, 4–7 × 2 µm. Microconidia not seen. - First collected in New Zealand on 14.viii.1976 by the late John Bartlett (Sérusiaux 1998a: 152). Known also from Central America, South America, West Africa, Madagascar, Réunion, Sri Lanka, China, Thailand, Java, Philippines, Hawai'i, Cocos Is., Galapagos Is, New Caledonia, Western Samoa, and Australia (Santesson 1952; Lücking 1992; Farkas & Sipman 1997; Smith et al. 1997; Vězda et al. 1997; Elix & McCarthy 1998; Lücking & Kalb 2001; Wolseley et al. 2002; McCarthy 2003c, 2006; Rønheide et al. 2003).



Strigula subtilissima



Strigula subtilissima

Tapellaria epiphylla (Müll. Arg.) R. Sant., in Thorold, J. Ecol. 40: 129 (1952)
= *Lopadium epiphyllum* Müll. Arg. 1881

[VZR360], Costa Rica. Prov. Cartago, iugum montium Cordillera Centralis, 25 km ad orientem a San Jose et 20 km septentr.-orient. a Cartago, secus viam ad montem ignivornum Irazu ducentem, 2600 m. Pluviisilva in valle rivuli. Leg et det. R. Lücking, 7.1991. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 360.

Thallus dispersed into rounded, partly confluent patches, 10–20 mm across and 10–20 µm thick, ecorticate, smooth, pale grey to white. Apothecia rounded, 0.3–0.7 mm diam. and 120–160 µm high; disc plane, black; margin thin, black or rarely greyish black. Excipulum 20–40 µm broad, purplish brown. Hypothecium 10–40 µm high, dark brown, K +purplish. Apothecial base dark purplish brown. Epithecium well developed, 10–15 µm high, dark brown. Hymenium 70–100 µm high, colorless. Asci 60–90 x 20–30 µm. Ascospores single, ellipsoid, muriform, 50–80 x 18–25 µm, 3–4 times as long as broad, colorless. Campylidia sessile, 0.3–0.5 mm broad; lobe dark grey to blackish grey. Conidia filiform with slightly clavate apex, 3–7-septate, 50–60 x 1.5–2 µm. Chemistry: no substances detected by TLC and HPLC. Distribution and Ecology. Possibly Pantropical, known from the Neotropics, tropical Africa (Brusse, 1991b), and Hawaii, also extending into subtropical regions. The most common species of the genus, quite abundant at higher elevations in more open situations.



Tapellaria epiphylla

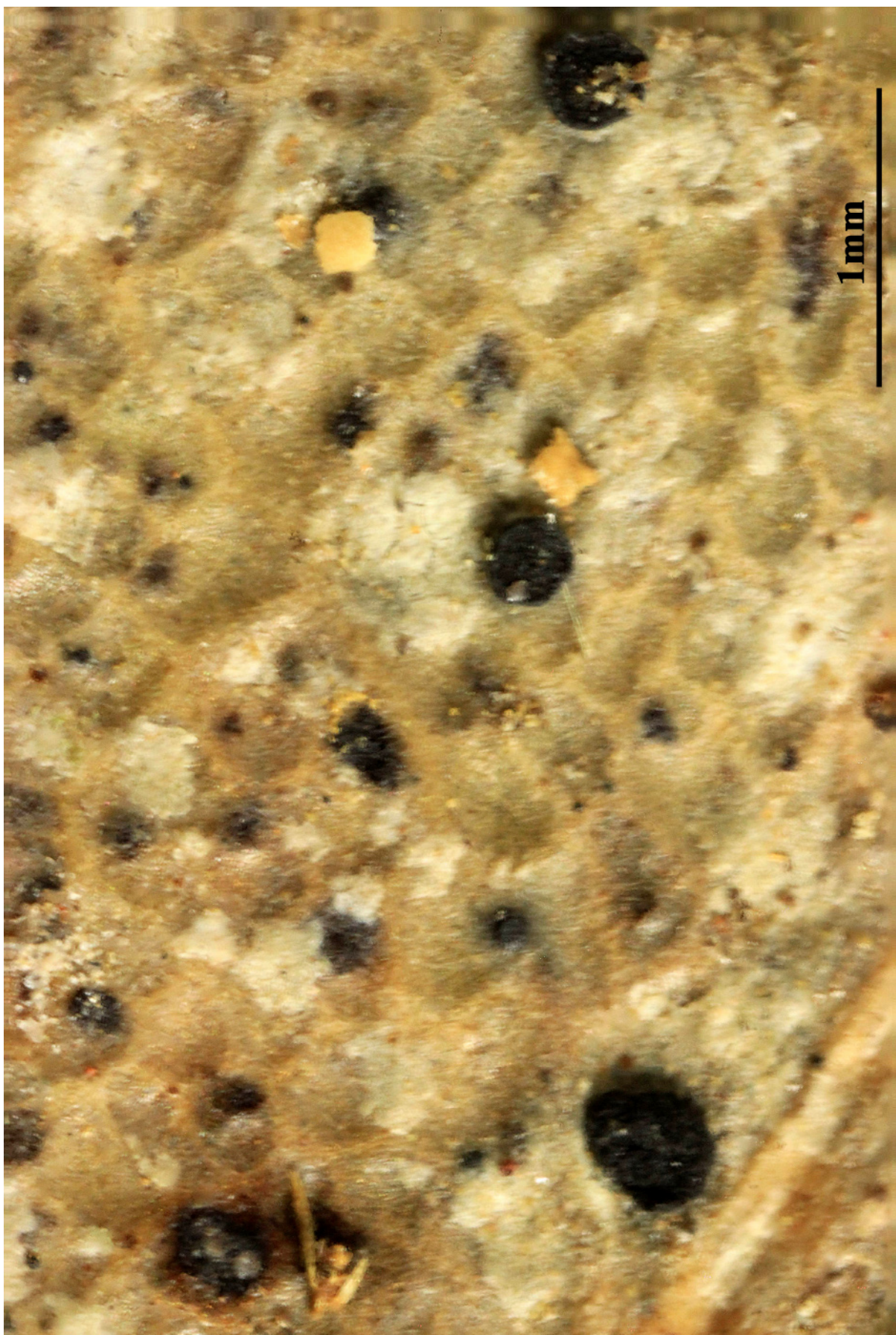


Tapellaria epiphylla

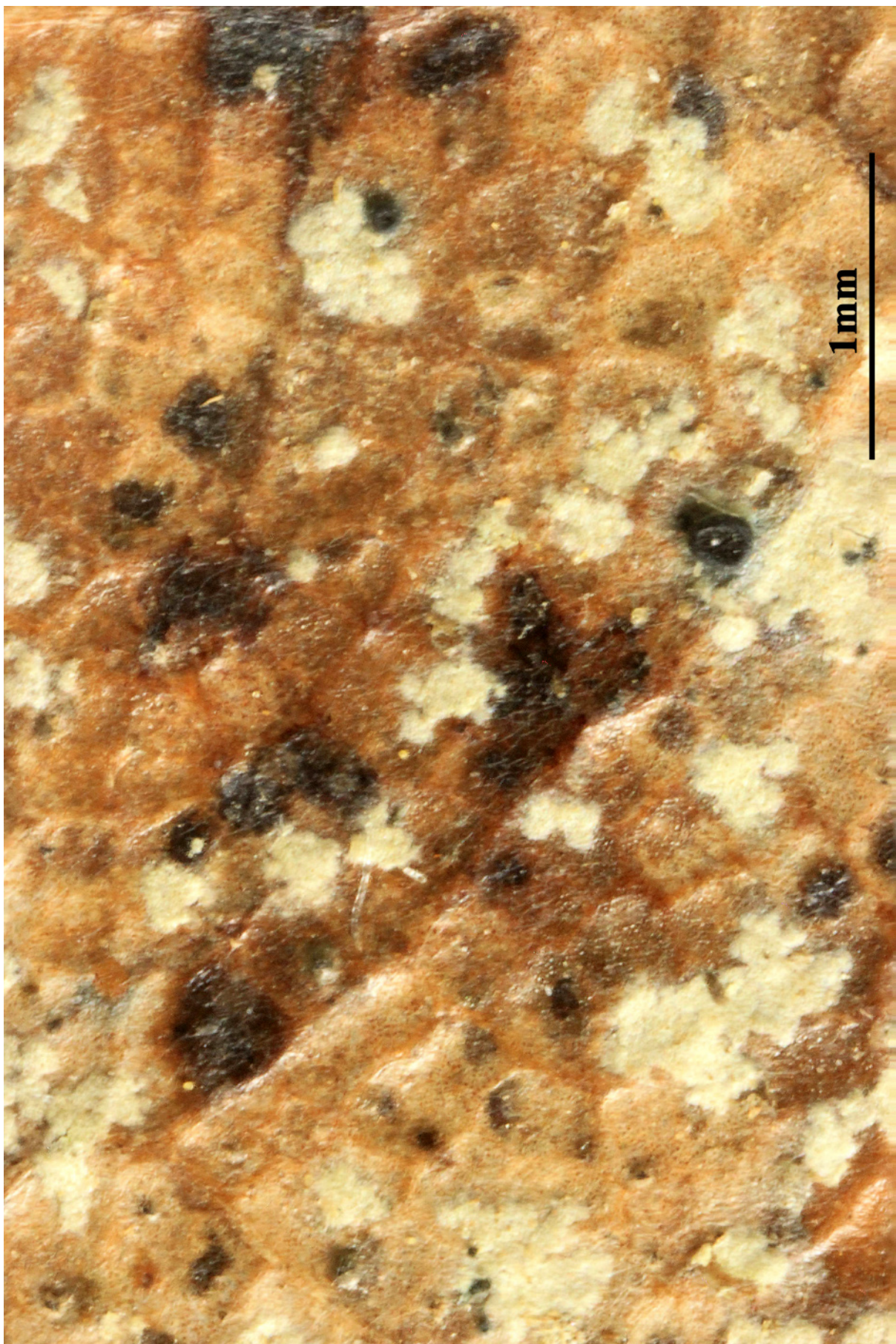
Tapellaria epiphylla (Müll. Arg.) R. Sant., in Thorold, J. Ecol. 40: 129 (1952)
= *Lopadium epiphyllum* Müll. Arg. 1881

[VZR110], Insulae Canarienses, Tenerife. Las Montañas de Anaga, Las Mercedes, loco Cruz del Crmen dicto, 700 m. Ad folia arborum (*Laurus azorica*) in Laurisilva. Leg. A. Vězda & F. Ceni, 14.3.1994. EX A. VĚZDA: LICHENES RARIORES EXSICCATI NR. 110.

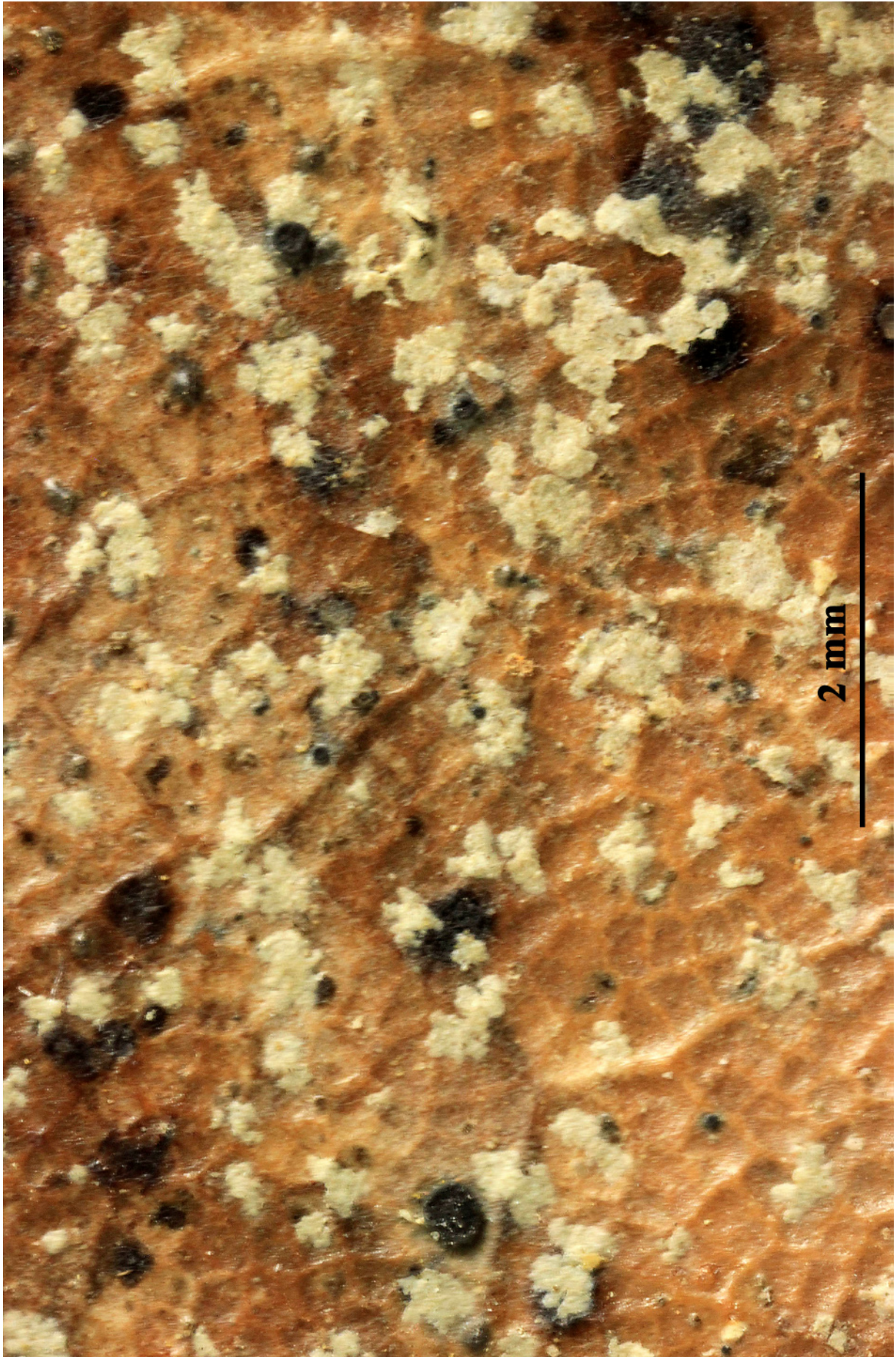
Thallus dispersed into rounded, partly confluent patches, 10–20 mm across and 10–20 µm thick, ecorticate, smooth, pale grey to white. Apothecia rounded, 0.3–0.7 mm diam. and 120–160 µm high; disc plane, black; margin thin, black or rarely greyish black. Excipulum 20–40 µm broad, purplish brown. Hypothecium 10–40 µm high, dark brown, K +purplish. Apothecial base dark purplish brown. Epithecium well developed, 10–15 µm high, dark brown. Hymenium 70–100 µm high, colorless. Asci 60–90 x 20–30 µm. Ascospores single, ellipsoid, muriform, 50–80 x 18–25 µm, 3–4 times as long as broad, colorless. Campylidia sessile, 0.3–0.5 mm broad; lobe dark grey to blackish grey. Conidia filiform with slightly clavate apex, 3–7-septate, 50–60 x 1.5–2 µm. Chemistry: no substances detected by TLC and HPLC. Distribution and Ecology. Possibly Pantropical, known from the Neotropics, tropical Africa (Brusse, 1991b), and Hawaii, also extending into subtropical regions. The most common species of the genus, quite abundant at higher elevations in more open situations.



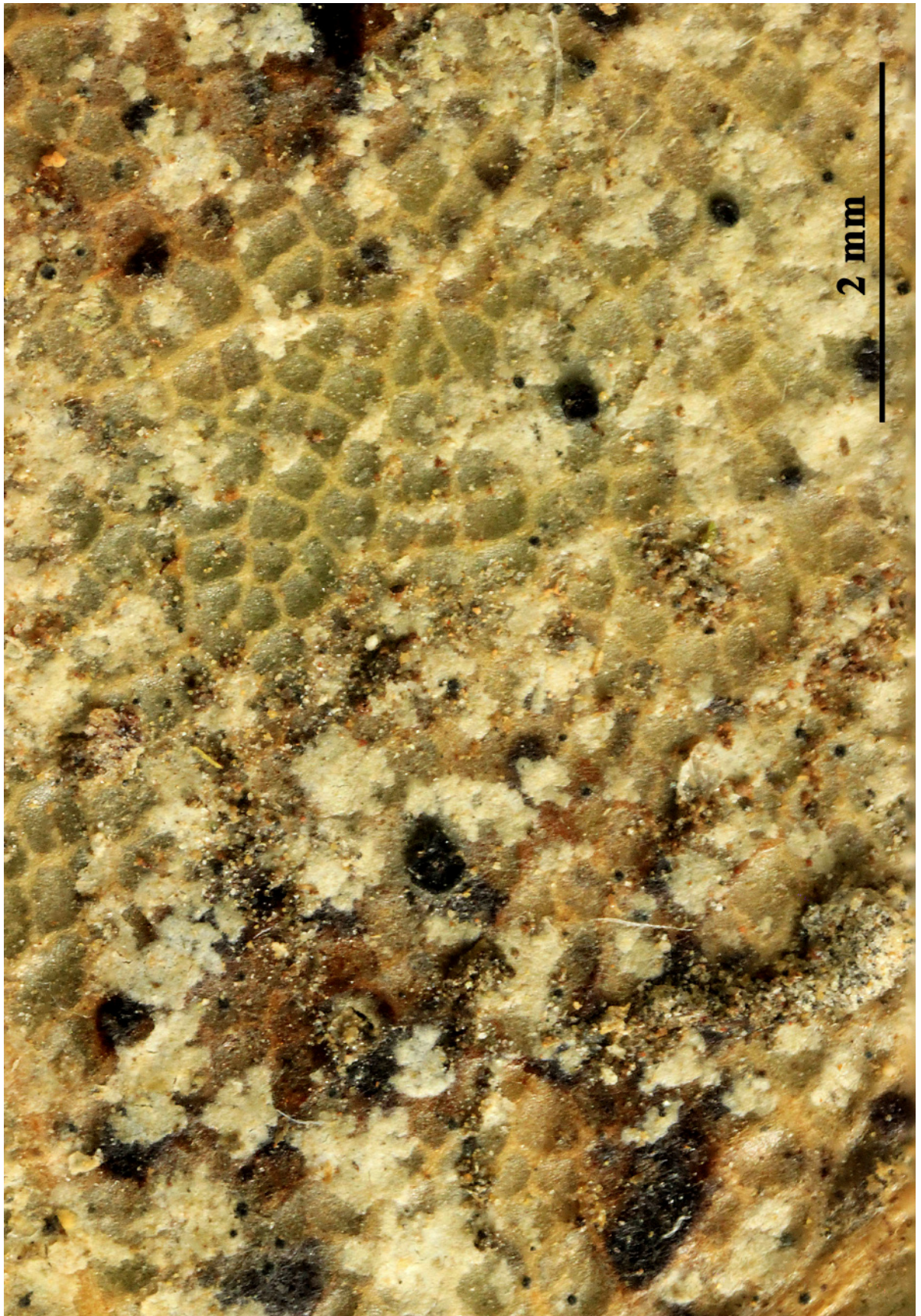
Tapellaria epiphylla



Tapellaria epiphylla



Tapellaria epiphylla



Tapellaria epiphylla

Teloschistes californicus Sipman, Willdenowia 23(1-2): 312 (1993)
= *Seiophora californica* (Sipman) Frödén, in Frödén & Lassen, Lichenologist 36(5): 297 (2004)

[VZR170], Mexico. Baja California Sur, secus viam Puerto Caneun, El Cayuco, 24°35' sept., 111°45' occid., 50 m. In ramulis fruticum. Leg P. L. Nimis & M. Tretiach, 19.11. 1883. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 170.

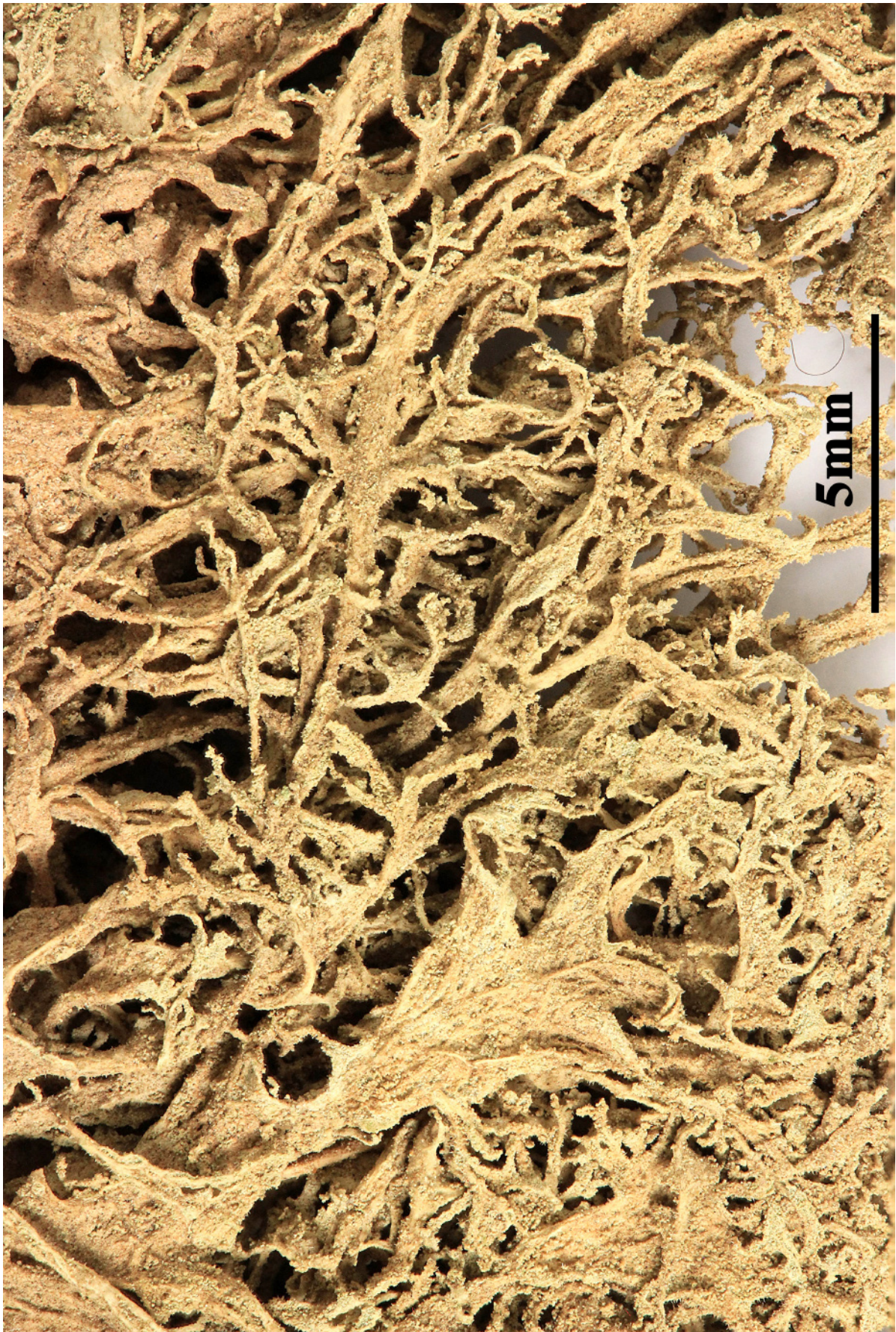
Thallus subfruticose, 1-2(-6) cm long, rather stiff, composed of one or more blades attached by a permanent basal holdfast and sometimes also with short side lobes (fibrils), erect and spreading or subpendulous, divided from the base into many linear or tapering mostly compressed lobes; lobes often channeled, much divided, undulate, ±entangled, often irregular in width, 0.2-13 mm wide, 10-200 µm thick, at the tips often with minute dactyloid or coralloid-branched, c. 0.1 mm wide, with terete branches; surface light gray to gray often with a creamy tinge, although often appearing darker gray or pale brown due to parasites and dust particles caught in the usually rather dense tomentum (which may disappear in older thallus parts), often perforate, not ciliate; lower surface concolorous with upper side, cracked in most parts exposing the medulla with remaining cortex strands forming a reticulate pattern, parts of the lower cortex is usually regenerated, sometimes hairy on the cortex strands; hairs straight, 0.08-0.25 mm long, at base 10-20(-35) µm wide, composed of bundled and strongly conglutinated hyphae, unbranched or with short perpendicular branchlets or sometimes with coarser branches; soredia farinose, green to greenish gray, diffusely spread over large parts of the lower side where the medulla is exposed, but most common near the lobe tips, also on the upper side where holes or slits have been formed in the cortex lobe; anatomy composed of three irregular layers; upper cortex prosoplectenchymatous, composed of +longitudinally running hyphae, 10-100 µm thick or running through all the way to the bottom; medulla mostly just around the algal layer which is 45-75 µm thick, interrupted by cortical strands with algae in scattered groups; lower cortex prosoplectenchymatous, 0-50 µm or running all the way from top to bottom, having the same composition as the upper layer, thin patches of medulla exposed to the lower side instead in places where the cortex is missing; cortex hyphae 3.5-6 µm thick with 1-1.5 µm thick walls, rigid and strongly conglutinated (pretreated in K followed by water); Apothecia: infrequent, laminal to

submarginal in older parts of thallus, stipitate, 1-3(-9) mm wide, strongly constricted at base when young; disc orange to reddish orange, concave initially, becoming plane; thalline margin: initially prominent but less so with age, thin, whole to somewhat crenulate and flexuose when mature, concolorous with thallus, often becoming excluded with age, usually hairy; asci oblong to clavate, 40-55 x 12-18 μm , 8-spored; ascospores hyaline, polarbilocular, oblong to narrowly ellipsoid, 11-20 x 5-8 μm ; septal width 3-4 μm ; Pycnidia: protruding in yellow to orange warts, 0.1-0.17 mm in diam., mostly laminal or more rarely marginal; conidia ellipsoid when young, narrowly ellipsoid to bacilli-form when mature, 3-4 x 1.5-1.7 μm . Spot tests: K- (thallus) or K+ purple (apothecia and pycnidia), C-, KC-, P-; Secondary metabolites: anthraquinones in the apothecial discs and pycnidia, parietin (major), fallacinal, teloschistin, and parietinic acid (all minor), and emodin and erythroglaucon (both minor) (chemosyndrome A); thallus devoid of secondary metabolites. Substrate and ecology: on twigs of trees and shrubs, in coastal desert with abundant fog World and Sonoran distribution: southern California, Baja California and Baja California Sur. Notes: The claimed hair length of c. 1 mm (Sipman 1993, p. 313) is a typographic error, the hairs of the isotype in LD are mostly 0.1-0.2 mm long, and Sipman reports it as 0.2 mm in another place in the publication (p. 314). In some specimens soralia are rare, but some soredia can nearly always be found near the lobe tips of the lower side. Almost always attacked by the conspicuous lichenicolous fungi *Sphaerellothecium subtile* Triebel & Rambold that forms a black network on the thallus, sometimes interspersed with small, black perithecia. On the islands off the mainland, *T. californicus* is attacked to a lesser degree. *Teloschistes californicus*, together with *T. contortuplicatus* and several other *Teloschistes* species, will be separated into a new genus in the near future. The nearest relative, *T. villosus* (Ach.) Norm. (similar, but non-sorediate), does not occur in the area (nearest locality is in Peru), so there is little risk for misidentification once you have established it is a *Teloschistes*. Some specimens of sterile *Tornabea* species (Physciaceae) are very similar to *T. californicus*, but can be distinguished by their more steel gray color, brown pycnidia, and presence of a lower cortex.

Teloschistes californicus



Teloschistes californicus



Teloschistes californicus

- Teloschistes chrysophthalmus*** (L.) Th. Fr., Gen. Heterolich. Eur.: 51 (1861) [1860]
- = *Niorma chrysophthalma* (L.) S.Y. Kondr., Kärnefelt, Elix, A. Thell, M.H. Jeong & Hur, in Kondratyuk, Jeong, Yu, Kärnefelt, Thell, Elix, Kim, Kondratyuk & Hur, Acta Bot. Hung. 55(3-4): 272 (2013)
- = *Borrera chrysophthalmos* (L.) Ach., Lich. Univ.: 502 (1810)
- = *Evernia chrysophthalmos* (L.) Flot., Linnaea 17: 24 (1843)
- = *Hagenia chrysophthalmos* (L.) Rabenh., Deutschl. Krypt.-Fl. (Leipzig) 2(1): 115 (1845)
- = *Lichen chrysophthalmos* L., Mantissa Altera: 311 (1771)
- = *Lobaria chrysophthalmos* (L.) Raeusch., Nomencl. bot., Edn 3: 329 (1797)
- = *Parmelia chrysophthalmos* (L.) Ach., Methodus, Sectio post. (Stockholmiae): 267 (1803)
- = *Physcia chrysophthalmos* (L.) DC., in Lamarck & de Candolle, Fl. franç., Edn 3 (Paris) 2: 401 (1805)
- = *Physcia chrysophthalmos* f. *dickieana* (Linds.) Cromb., Grevillea 15(no. 75): 78 (1887)
- = *Physcia chrysophthalmos* var. *dickieana* (Linds.) Zahlbr., Cat. Lich. Univers. 7: 317 (1931)
- = *Physcia chrysophthalmos* β *dickieana* (Linds.) Mudd [as 'Physcia chrysophthalma β dickieana'], Man. Brit. Lich.: 112 (1861)
- = *Physcia villosa* var. *dickieana* Linds., Trans. R. Soc. Edinb. 22(1): 254 (1859) [1861]
- = *Teloschistes chrysophthalmus* var. *dickieanus* (Linds.) Zahlbr., Cat. Lich. Univers. 7: 317 (1931)
- = *Theloschistomyces crysophthalmi* Cif. & Tomas., Atti Ist. bot. Univ. Lab. crittog. Pavia, sér. 5 10(1): 74 (1953)
- = *Tornabenia chrysophthalmos* (L.) A. Massal., Memor. Lich.: 42 (1853)
- = *Xanthoanaptychia chrysophthalmos* (L.) S.Y. Kondr. & Kärnefelt, Ukr. bot. Zh. 60(4): 435 (2003)
- = *Xanthoria chrysophthalmos* (L.) Stizenb., Ber. Tät. St Gall. naturw. Ges.: 173 (1862) [1861-62]
- = *Xanthoria chrysophthalmos* var. *dickieana* (Linds.) H. Olivier, Mém. Soc. natn. Sci. nat. Cherbourg 36: 227 (1907)

[VZR260], Australia occid., 24 km ad meridiem versus oppido Lake Grace, secus viam. In ramenculis emortuis fruticum. Leg. W. L. Culberson & C.F. Culberson (no. 21428), 30.3.1995. - Annot. C.F. Culberson: parietin and traces of probably anthraquinones by TLC anal from A. Johnson & C.F. Culberson. EX A. VěZDA: LICENES RARIORES EXSICCATI NR. 260.

Thallus fruticose, tufted, often forming up to 3(-4) cm high, loose cushions, attached by a basal holdfast, bright orange (yellow to grey in shade-forms). Branches at first stellate-radiating and c. 0.5 mm wide, but soon becoming erect, of variable width (usually 1-2.5 mm), rigid, slightly dorsiventral, usually with ciliate tips, smooth or weakly wrinkled especially on the paler lower surface, with laminal and terminal, 0.3-1 mm long cilia. Upper cortex of longitudinally arranged hyphae; medulla interrupted by cortical strands with algae in scattered groups, 40-130 μm thick; lower cortex prosoplectenchymatous. Apothecia almost always present, mostly terminal to subterminal, lecanorine, up to 8 mm across, orange to orange-red, the margin with numerous, radiating, 0.5-1.5 mm long cilia. Epithecium orange, K+ red; hymenium and hypothecium colourless. Asci 8-spored, oblong to clavate, Teloschistes-type. Ascospores 2-celled, polarilocular, hyaline, ellipsoid, (10-)12-17 x 5-8 μm , the equatorial thickening ("septum") 4.5-7 μm . Pycnidia immersed to slightly projecting in 0.1-0.15 mm wide, darker orange warts. Conidia simple, hyaline, narrowly ellipsoid, 3.5-4.5 x 1.5-2 μm . Photobiont chlorococcoid. Spot tests: thallus and apothecia K+ red, C-, KC-, P-. Chemistry: anthraquinones such as parietin (major), fallacinal, teloschistin, and parietinic acid (all minor), and emodin and erythroglaucin (both minor). - Note: typical of situations with a dry climate with frequent spells of fog, this species grows on twigs of shrubs and isolated trees in open habitats. It was much more common in the past, and presently it is extinct in many regions (especially in Northern Italy), but there is some indication that in some parts of the country, especially in the Tyrrhenian ecogion, the species is slowly recovering.

Erioderma barbellatum



Erioderma barbellatum



Erioderma barbellatum

Teloschistes scorigenus (Mont.) Vain., in Hiern, Cat. Afr. Pl. 2(2): 407 (1901)
 = *Seiophora scorigena* (Mont.) Frödén, in Frödén & Lassen, Lichenologist 36(5): 297 (2004)
 = *Anaptychia scorigena* (Mont.) Hue, Annls mycol. 12: 516 (1914)
 = *Evernia scorigena* Mont., in Webb & Berthelot, Hist. nat. Iles Canar. (Paris) 3(2): 97 (1840)
 = *Lecanora scorigena* (Mont.) Nyl., Bull. Soc. linn. Normandie, sér. 2 2: 510 (1868)
 = *Physcia scorigena* (Mont.) De Not., G. bot. ital. 2(2): 197 (1847)
 = *Placodium scorigenum* (Mont.) Nyl., Annls Sci. Nat., Bot., sér. 4 3: 182 (1855)
 = *Tornabenia scorigena* (Mont.) A. Massal., Memor. Lich.: 42 (1853)

[VZR471], Insulae Canarienses, Lanzarote, 1 km ad septentriones a Costa Tenuise, 50-100 m, in vicinitate maris. Ad saxa eruptiva. Leg. & det. G. B. Feige (Ess no. 21490), 7.3.2003. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 471.

Lager unscheinbar, knorpelig, kleine angedrückte Polster bildend, die bald dunkelgrau, bald mehr oder weniger gelblich gefärbt sind und von Kalilauge nur stellenweise verändert werden. Lagerabschnitte nur bis 4 mm lang und 1,5 mm breit, mit hornartigen Verzweigungen, oberseits filzig, etwas gewölbt, unterseits gleichfarbig oder heller, schwach rinnig. Apothezien klein, gedrängt, kurz gestielt. Gehäuse nicht filzig. Scheiben goldgelb bis bräunlich. Rand nicht bewimpert, bald zurückgedrängt. Schläuche und Sporen wie bei *villosus*. Pyknidien wenig hervortretend, wachsfarben, durch KOH gerötet. Pyknoknidien 3.5-4.6 x 1.0-1.4 µm. Dem *Teloschistes villosus* sehr nahestehend und nur in der Tracht, durch die Größe der Lappen und das kahle Gehäuse von ihm verschieden. Anatomische Einzelheiten bei W a i n i o und Steiner a. a. O. Auf Gestein (Kalk, Lava). Von den Kanarischen Inseln und aus Angola bekannt. Obige Beschreibung ist nach den Angaben Montagnes und Steiners entworfen.



Teloschistes scorigenus



Teloschistes scorigenus

Teloschistes sieberianus (Laurer) Hillmann, Hedwigia 69: 315 (1930)
 = *Blasteniospora sieberiana* (Laurer) Trevis., Tornab. Blasteniosp. (Padova): 2 (1853)
 = *Parmelia sieberiana* Laurer, Linnaea 2: 38 (1827)
 = *Physcia chrysophthalmos* var. *sieberiana* (Laurer) Shirley, Lich. Fl. Queensland 4: 193 (1890)
 = *Physcia excelsior* Stirt., in Bailey, Queensland Agric. J. 5: 40 (1899)
 = *Physcia sieberiana* (Laurer) A. Massal., Memor. Lich.: 44 (1853)
 = *Teloschistes chrysophthalmus* var. *sieberianus* (Laurer) Müll. Arg., Flora, Regensburg 66(5): 77 (1883)
 = *Teloschistes excelsior* (Stirt.) I.M. Lamb, Lilloa 26: 429 (1953)

[VZR30], Australia. New South Wales, secus viam ad "Coreys Cave" ducentem, 2 km ad septentriones et orientem a Wee Jasper (35°06' austr., 148°40' orient.), 400 m. In ramulis in silva (*Eucalyptus*). Leg. H. T. Lumbsch & H. Streimann, 12.7.1994, det. H. T. Lumbsch. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 30.

Thallus lobate, subfruticose, forming small rosettes or pulvinate clumps, 1-3 cm diam., to 5 mm tall, corticolous. Lobes stellate-radiate, rather flattened, 1-5 mm long and 0.3-0.8 mm wide, and 0.1-0.15 mm thick, sparingly branched, pale orange-yellow, flat to canaliculate above, loosely attached, ascending or erect, with scattered, concolorous marginal and occasionally laminal fibrils, 1-1.5 mm long, a few whitish rhizines on lower surface, without soredia. Apothecia sessile at first, at length pedicellate, laminal, (0.5-)1.2-5 mm diam., plane or subconvex and ± undulate, disc concave to plane or subconvex, without cilia, matt, darker than thallus, margins thin, entire, inflexed at first, becoming thinner, ± crenulate with age. Ascospores broadly ellipsoid, 13-15 × 6-7 µm.

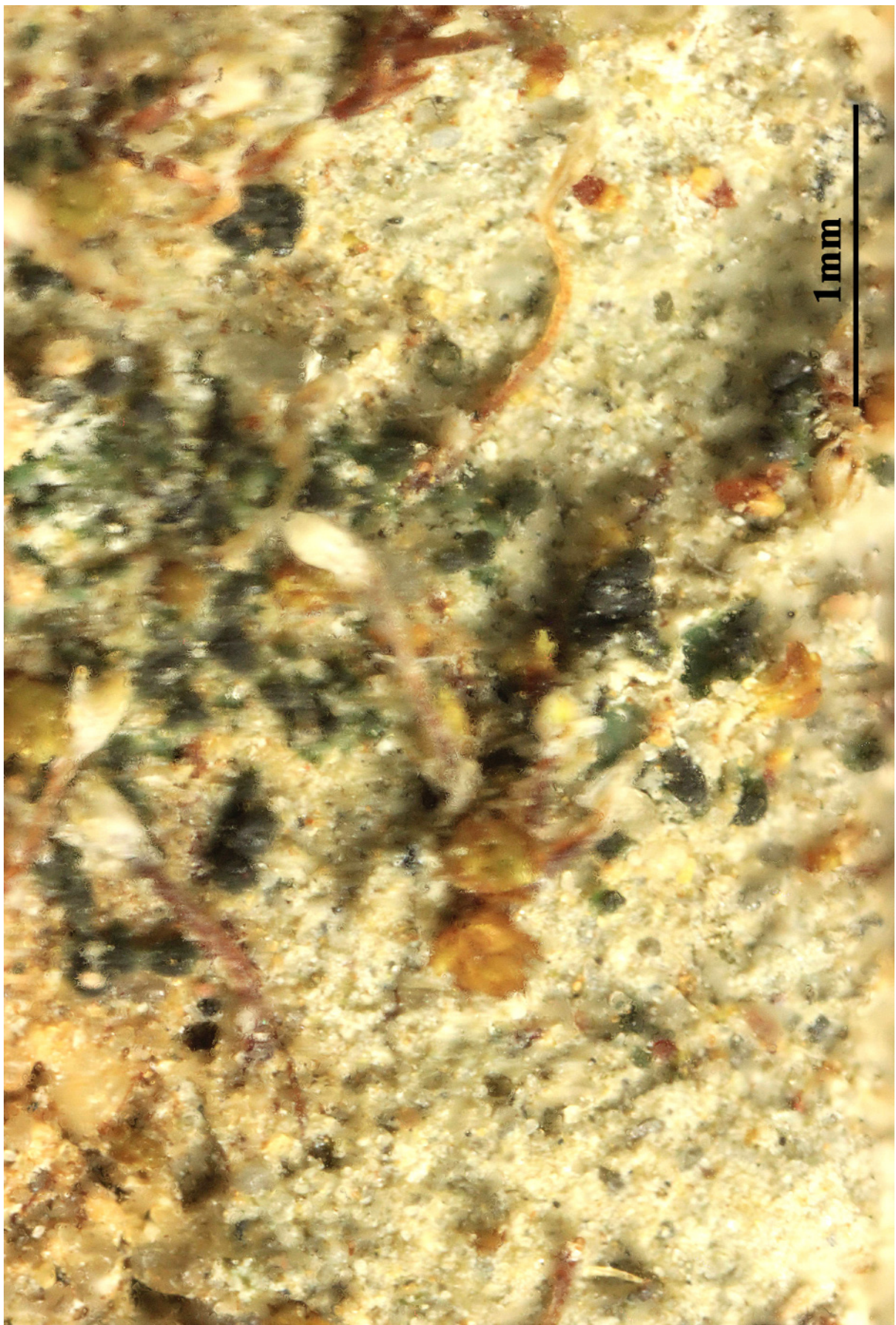


Teloschistes sieberianus

- Thelocarpon imperceptum*** (Nyl.) Mig., Flora von Deutschl., Abt. II 12: 485 (1927)
 = *Athelium imperceptum* Nyl., Flora, Regensburg 69: 463 (1886)
 = *Kelleria polyspora* Tomin, Ueber d. Bodenfl. Halbwüst. Süd-Ost-Rußlands: 12 (1926)
 = *Thelocarpon polysporum* (Tomin) Tomin, Opredelitel' Korkovych Lishainikov Evrop. Chasti SSSR: 303 (1956)
 = *Thelococcum imperceptum* (Nyl.) H. Magn., Rabenh. Krypt.-Fl., Edn 2 (Leipzig) 9(5.1): 289 (1935)
 = *Thelococcum polysporum* (Tomin) Tomin, Opredelitel' Korkovych Lishainikov Evrop. Chasti SSSR: 303 (1956)

[VZR430], Hollandia. Brabantia borealis. Son, Hautens, pontus parvus super canalem, ad terram argillaceam. Leg & det. P. v. d. Boom. EX A. VěZDA: LICHENES RARIORES EXSICCATI NR. 430.

Thallus crustose, very thin and film-like, inconspicuous when dry but forming greenish spots when wet, the hyphae c. 0.5-0.75 µm thick, forming a loose network among soil particles in lower part and enclosing chlorococcoid algae in upper part. Ascocarps perithecioid, globose, (0.25–)0.3-0.42 across, fully to 3/4 immersed in soil, the 0.1-0.15 mm wide, dark brown to black apical part emerging. Exciple colourless in outer part, pale pink-brown in inner part, (35–)40-45(–50) µm thick, devoid of algae; paraphyses absent; periphyses simple or sparingly branched, (20–)27-30(–35) µm long, perpendicular to the uppermost part of the exciple; hymenial gel I–. Asci 200-300-spored, the wall I+ pale blue. Ascospores simple, hyaline, bacilliform, (5.5–)10-12(-14) x (2.5–)4-5.5(–6.3) µm. Photobiont chlorococcoid. Spot tests: K–, C–, KC–, P–, UV–, or UV+ indistinctly yellowish. Chemistry: without lichen substances. - Note: an ephemeral, pioneer terricolous lichen growing on clay to loamy soil in open situations, with a scattered distribution from Western Europe to Russia, but very easy to overlook.



Thelocarpon imperceptum



Thelocarpon imperceptum

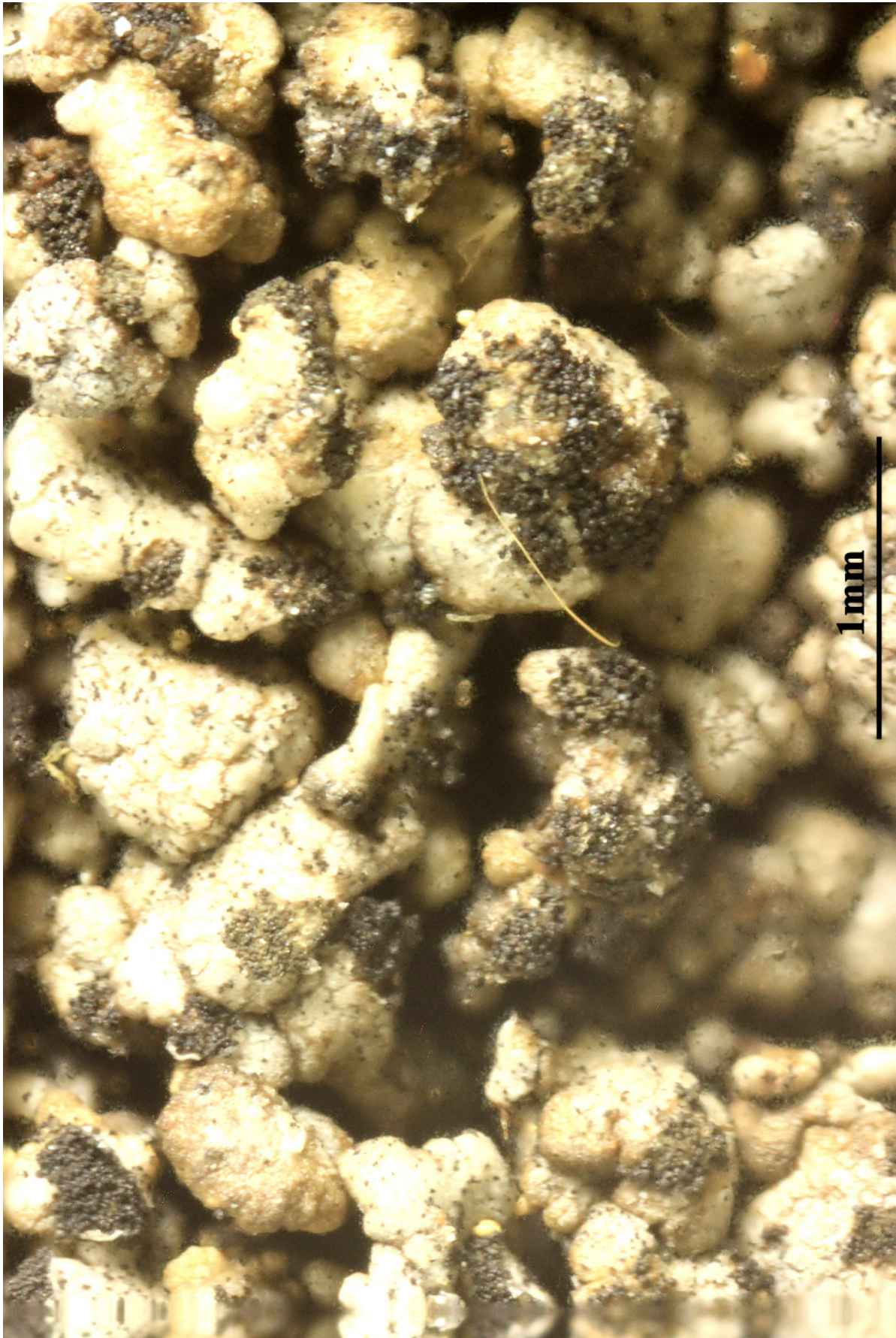
- Thelomma ocellatum*** (Flot. ex Körb.) Tibell, Bot. Notiser 129(3): 240 (1976)
 = *Pseudothelomma ocellatum* (Flot. ex Körb.) M. Prieto & Wedin, Fungal Diversity 82: 235 (2016)
 = *Acolium ocellatum* Flot. ex Körb., Parerga lichenol. (Breslau) 3: 285 (1861) [1865]
 = *Cyphelium ocellatum* (Flot. ex Körb.) Trevis., Flora, Regensburg 45(1): 4 (1862)
 = *Trachylia tympanella* var. *ocellata* (Flot. ex Körb.) Fr., Ber. Tät. St Gall. naturw. Ges.: 273 (1835) [1880-81]

[VZR189], Bohemia merid., montes Šumava, distr. Vimperk, loco "Borová Voda" dicto, 850 m. Ad lignum putridum saepis. Leg. J. Horáková & A. Vězda, 20.6.1995. EX A. VEZDA: LICHENES RARIORES EXSICCATI NR. 189.

Thallus crustose, episubstratic, well-delimited, areolate to coarsely warted, grey, covered in subglobose, 27-40 µm wide, blue or brown-black isidioid outgrowths gathered in more or less convex, soralia-like clusters located on the top of 1.5-2(-2.5) mm wide warts with a rough upper surface. Cortex 22-32 µm thick, without crystals or granules, formed by anticlinally arranged hyphae sometimes with swollen and brownish apices, overlain by a c. 10-13 µm thick, colourless layer; medulla white, I+ dark blue. Apothecia rare, immersed in the warts, the disc 0.5-1 mm across, covered in a sometimes greenish yellow-pruinose mazaedium. Exciple not sclerotized, poorly developed laterally, forming a very thick, blackish brown cushion at the base, the upper part very thin and colourless, the central part brownish black, the outer parts yellowish-green; hymenium 80-110 µm high; hypothecium blackish brown. Asci cylindrical, formed singly, with a single functional wall layer dissolving at an early stage, with uniseriately arranged spores. Ascospores 1-septate, somewhat constricted at the septum, dark brown, broadly oblong at maturity, 22-28 x 12-15 µm, with a slightly uneven surface. Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: occasionally with low amounts of usnic acid, atranorin, or norstictic acid; mazaedium and edge of exciple with rhizocarpic acid and epanorin. - Note: a circumboreal-montane species found on hard rotting wood, e.g. on poles and fences, more rarely on *Larix* and *Pinus cembra* in the subalpine belt, also known from the mountains of Southern Italy; certainly more widespread in the Alps, especially in subcontinental areas, but overlooked, being mostly sterile. This is one of the few calicioid fungi that reproduce via lichenised diaspores.



Thelomma ocellatum



Thelomma ocellatum

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