F. Schumm (2026):

Images of Lichens
Vezda Lichenes Selecti Exsiccati part 26

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With this volume, I continue the documentation of Vezda's works on exiccata, now with Lichenes Selecti as part 26. I have chosen the genus names that Vezda used, even though others are now more common. However, I also include the currently used names in the synonym list and the index. In addition, I have again made every effort to add species descriptions to the detailed information on the labels from the literature.

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, 2026

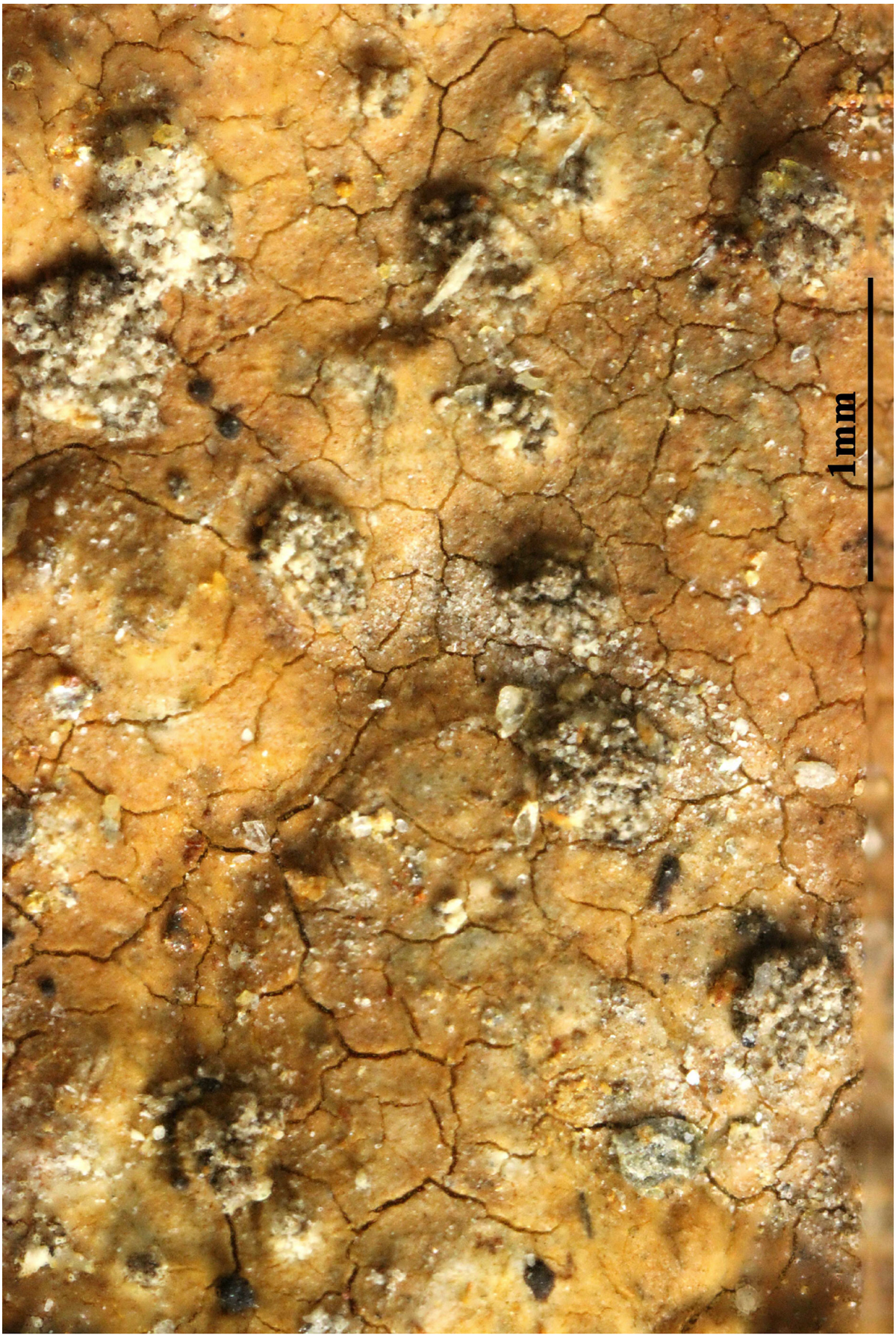
Haplocarpon melinodes (Körb.) V. Wirth, Dissnes Bot. (Lehre) 17: 287 (1972)
= *Aspicilia melinodes* Körb. 1875
= *Porpidia melinodes* (Körb.) Gowan & Ahti, Ann. Bot. Fenn. 30(1): 67 (1993)

[VZ1182], Bohemoslovacia. Slovacia, Carpati, montes Liptovské hole:In valle ždiarská dolina, inpede montis Baranec, 1300 m. Ad saxa silicea humida. Leg, A. Vězda et V. Wirth, 9.8.1973. Ex A. Vězda Lichenes Selecti Exsiccat Nr. 1182.

Thallus crustose, episubstratic, orange to orange-grey, sometimes with olivaceous patches, smooth to cracked-areolate, sorediate, delimited by a byssoid, dull grey to black prothallus, the areoles angular, divided by deep cracks, smooth. Soralia scattered or in groups of 2-4, whitish but often with dark grey specks, 0.2-0.6(-1) mm across, crater-like and often delimited by a whitish, raised thalline rim, the soredia coarsely granular. Medulla white, I-. Apothecia very rare, lecideine, black, at first semi-immersed, then sessile with a broad base, 0.3-1.5(-3) mm across, with a mostly flat, finally convex, thinly to heavily pruinose, sometimes subgyrose disc, and a thick, raised, smooth to crenulate, often finally flexuous and epruinose proper margin. Proper exciple of conglutinated, branched, 2-4 µm thick hyphae radiating from the hypothecium, dark in outer part, paler within; epithecium olive-brown, granulose; hymenium colourless, 75-120(-150) µm high; paraphyses coherent, branched and anastomosing, slightly swollen at tips; hypothecium colourless or pale yellow-brown in upper part, dark brown in lower part. Asci 8-spored, elongate-clavate, with a thin, outer amyloid layer and a thickened tholus penetrated by a pore, the sides of which are strongly amyloid, Porpidia-type. Ascospores 1-celled, hyaline, ellipsoid, halonate, (14-)18-23(-26) x (6.5-)8-11 µm. Photobiont chlorococcoid. Spot tests: soralia/medulla K- or (rarely) K+ pale yellow, C-, KC-, P- or (rarely) P+ pale yellow-orange; medulla K/UV+ mauve. Chemistry: thallus with confluentic acid (major), 2'-0-methylperlatolic and 2'-0-methylmicrophyllinic acids, rarely with additional stictic, norstictic and cryptostictic acids. - Note: on horizontal to moderately inclined surfaces of siliceous, often metal-rich rocks lying on or near the ground in scree fields, mostly in upland areas; for a long time treated as a sorediate morph of *Porpidia. flavicunda.*



Haplocarpon melinodes



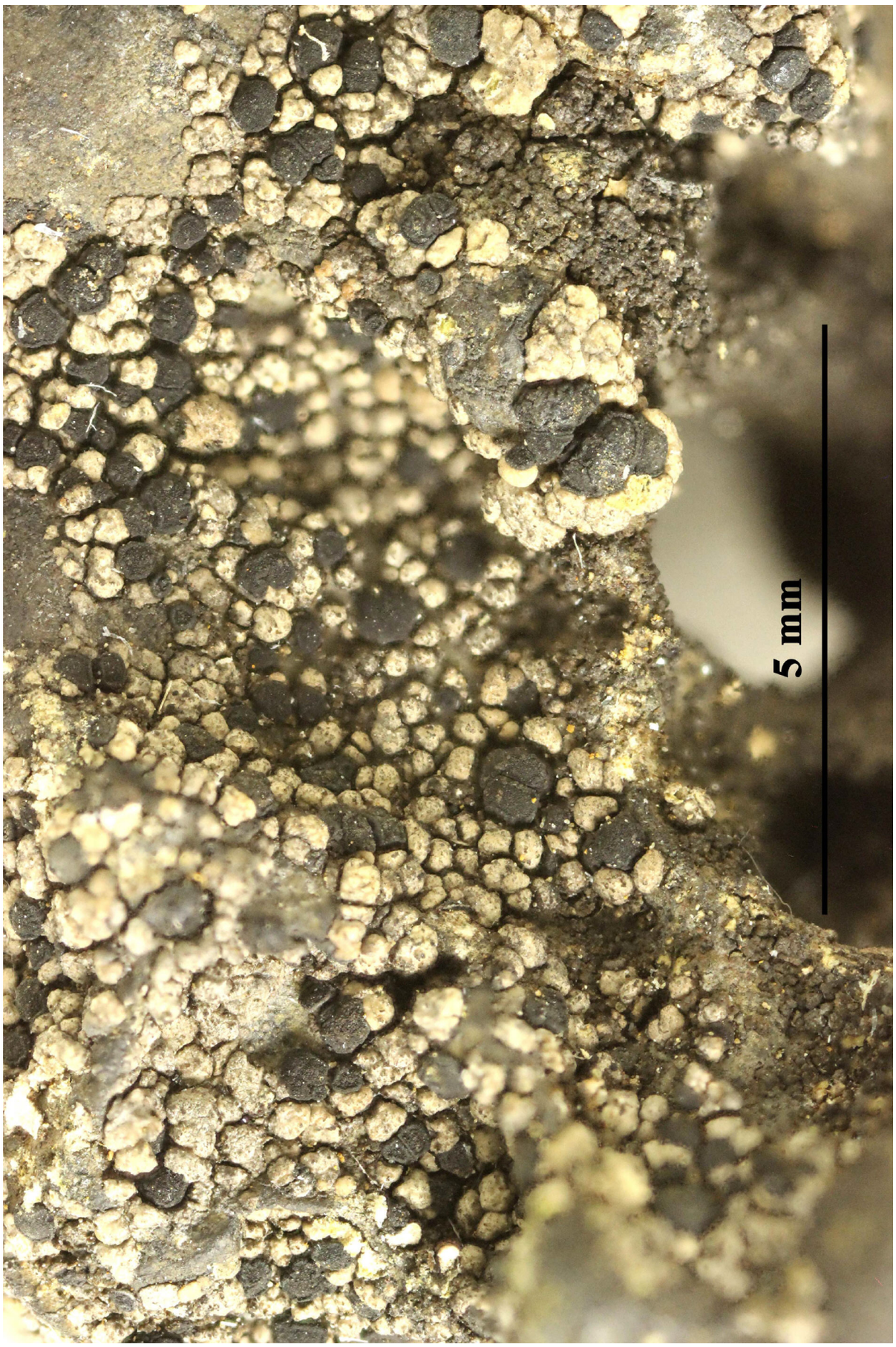
Haplocarpon melinodes

Haplocarpon musivum var. subsquamescens Vězda, Lichenes Selecti Exsiccati, Fasc. (Průhonice) 52: 5 (no. 1291) (1975)

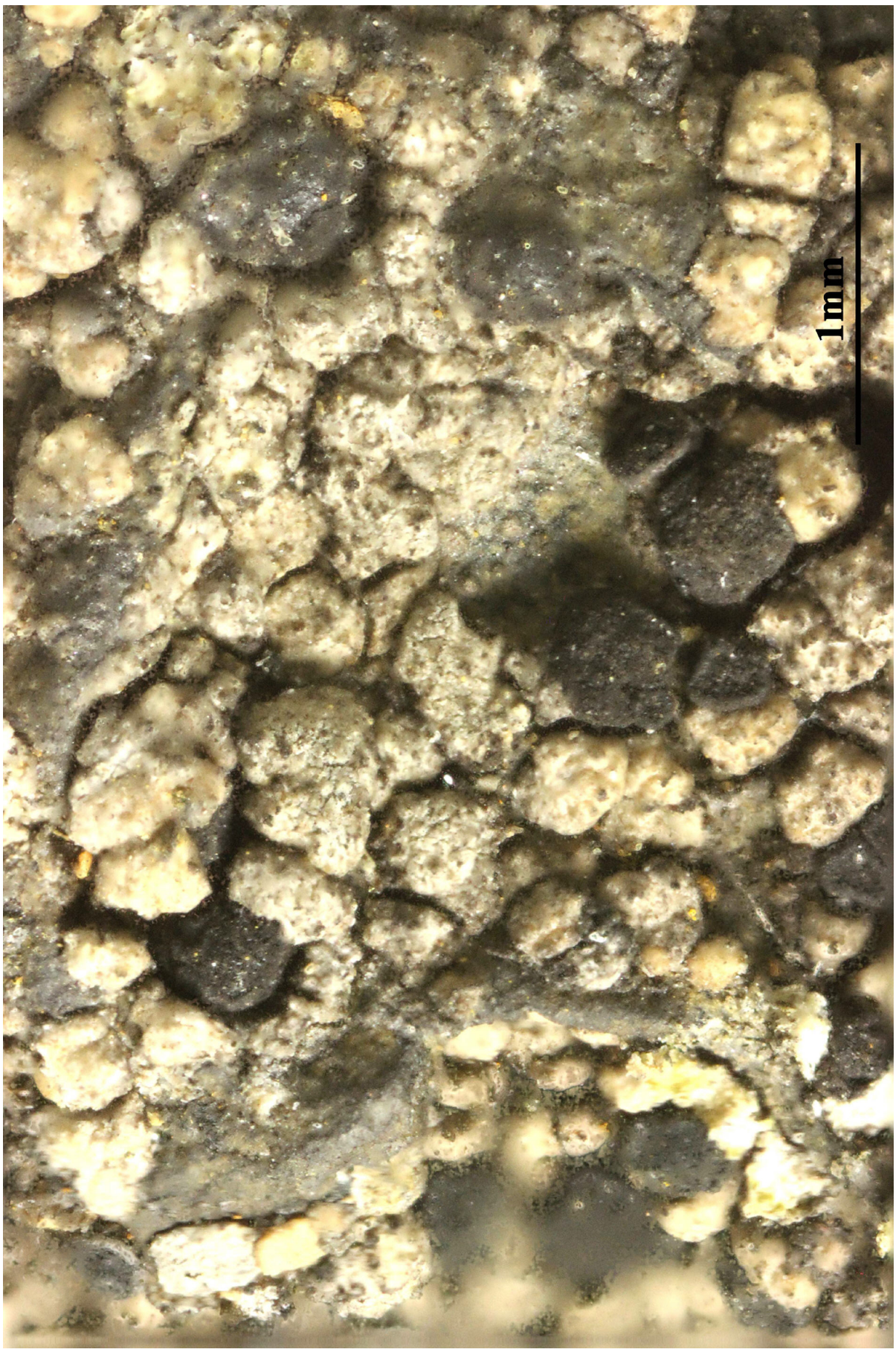
[VZ1291], Bohemoslovacia. Slovacia, Carpates, montes Slovenské Rudohorie: Mníšek, in valle rivi Smolník prope Smolnická pila, 500 m. Ad scorias vetustas. Leg. A. Kiszely et A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1291.

Thallus subsquamoso-areolatus, cinereus vel fumosus

Thallus crustose, episubstratic, usually thick, cracked to verrucose-areolate, the areoles 0.5-1.5(-2) mm wide, flat to convex, whitish to ash-grey, sometimes delimited by a black prothallus. Medulla white, I-. Apothecia lecideine,(0.3-)0.5-1.5(-2) mm across, isolated or in small clusters and sometimes confluent, most often immersed in the thallus, with a black, flat to convex, grey-blue pruinose to finally epruinose disc and a c. 0.05 mm thick, barely raised proper margin which is often excluded in old apothecia. Proper exciple dark brown to brown-black in outer part, with a paler brown medulla most evident in young apothecia, the excipular hyphae 3-5 mm thick; epithecium olive-brown to olive-green, K-, N+ orange-red; hymenium colourless, (75-)90-110 µm high; paraphyses coherent, richly branched and anastomosing; hypothecium dark. Asci 8-spored, elongate-clavate, with a thin, outer amyloid layer and a thickened tholus penetrated by a pore, the sides of which are strongly amyloid, Porpidia-type. Ascospores 1-celled, hyaline, ellipsoid, 12-18 x 6-10 µm. Photobiont chlorococcoid. Spot tests: thallus and medulla K-, C-, KC-, P-; medulla faintly K/UV+ mauve. Chemistry: confluentic acid (major), 2'-O-methylperlatolic acid (minor), traces of 2'-0-methylmicrophyllinic acid. - Note: on siliceous rocks wetted by rain, especially low boulders and large pebbles in rainy-humid areas, with a wide altitudinal range.



Haplocarpon musivum* var. *subsquamescens

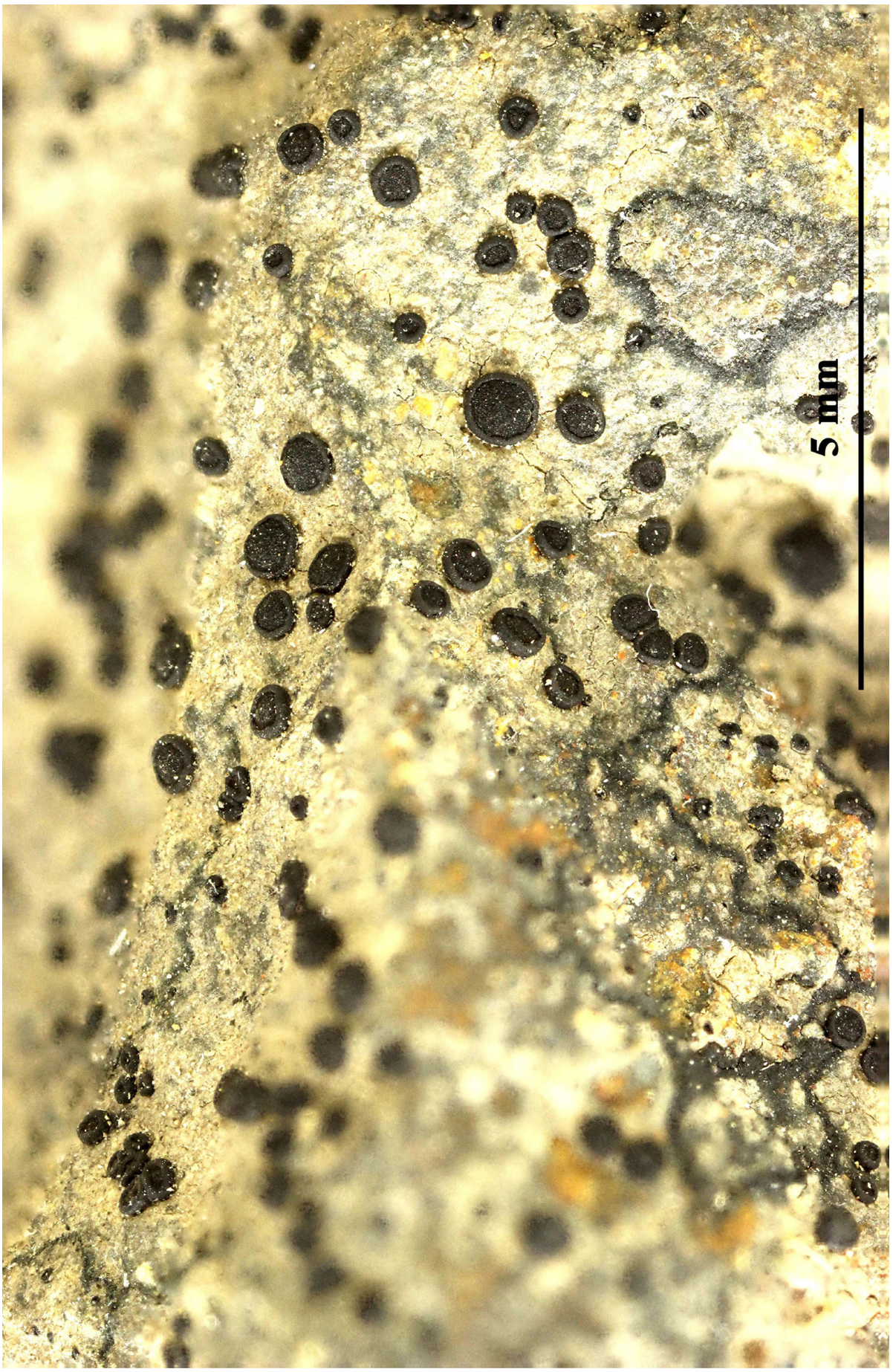


Haplocarpon musivum var. subsquamescens

Huilia crustulata (Ach.) Hertel, Herzogia 3(2): 373 (1975) [1973-74]
= *Lecidea parasema* var. *crustulata* Ach. 1810
= *Porpidia crustulata* (Ach.) Hertel & Knoph, in Hertel, Beih. Nova Hedwigia 79: 435 (1984)

[VZ1643], Germania, Baden, Silva Nigra (Südschwarzwald): Distr. Lörrach, Schönenberg, 800 m. Ad lapides in fossis viae. Leg. V. Wirth, 8.1972. EX A. VEZDA LICHENES SELECTI EXSICCATI NR. 1643.

Thallus crustose, endolithic or thinly epilithic, continuous to rimose-areolate, white, yellowish white, or pale grey, rarely ochre-coloured, sometimes delimited by a dark prothallus. Medulla white, I-. Apothecia lecideine, more or less round, sometimes clustered, slightly constricted at base, 0.3-0.8(-1.5) mm across, with a black, slightly concave to convex, usually epruinose disc, and a more or less persistent, usually entire, thin (0.07-0.17 mm wide), barely raised proper margin. Proper exciple black to dark brown in outer part, pale brown and K+ yellow (rarely K-) within, with 4-8 µm wide hyphae; epithecium brown or olivaceous brown; hymenium colourless, 60-90(-110) µm high, I+ blue; paraphyses weakly branched and anastomosing; hypothecium pale to usually dark brown. Asci 8-spored, elongate-clavate, with a thin, outer amyloid layer and a thickened tholus penetrated by a pore, the sides of which are strongly amyloid, Porpidia-type. Ascospores 1-celled, hyaline, ellipsoid, 10-18(-22) x 5-10 µm, not halonate. Pycnidia immersed. Conidia hyaline, bacilliform, 9-14 x c. 1 µm. Photobiont chlorococcoid. Spot tests: thallus K- or K+ yellow, C-, KC-, P- or P+ orange. Chemistry: stictic acid (major), constictic, norstictic and cryptostictic acids (all minor or trace), or without lichen substances. - Note: a widespread, holarctic early coloniser of siliceous pebbles and small stones on the ground, with a wide altitudinal range; rare only in the driest parts of Mediterranean Italy and in the Po-plain, but common elsewhere. The distinction from P. macrocarpa is still an open problem.



Huilia crustulata



Huilia crustulata

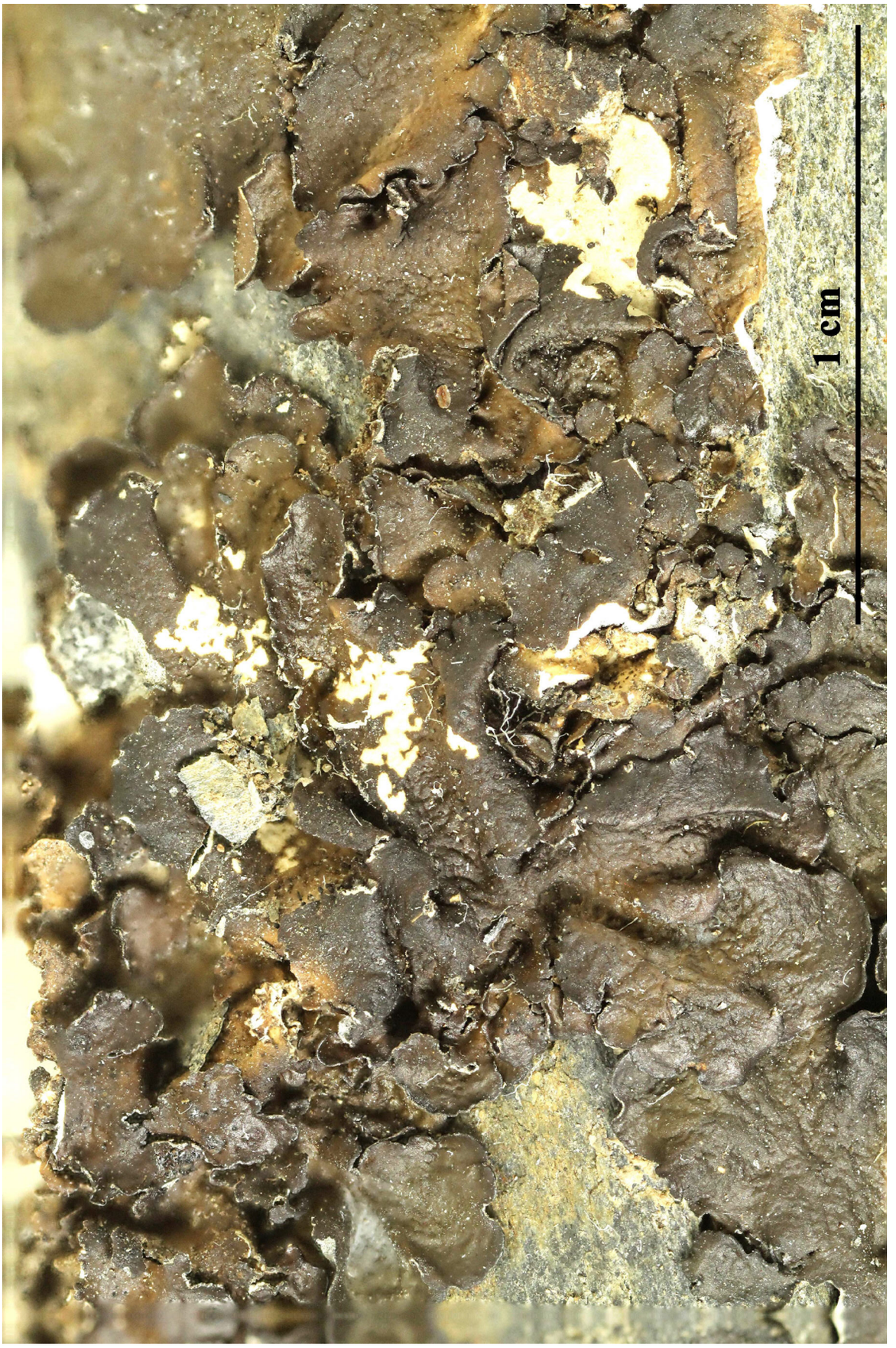
Parmelia koflerae Clauzade & Poelt, Nova Hedwigia 3: 368 (1961)
′= *Pleurosticta koflerae* (Clauzade & Poelt) Elix & Lumbsch, in Lumbsch, Kothe & Elix, Mycotaxon 33: 453 (1988)

[VZ1593], URSS., Osetia Sept., distr. Ordžonikidze: Caucasus Magnus, supra pagum Kazbeki, sub ecclesiam vetustam Cminda Sameba dictam, 2150 m. Ad saxa schistosa. Leg. A. Vězda, 3.8.1978. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1593.

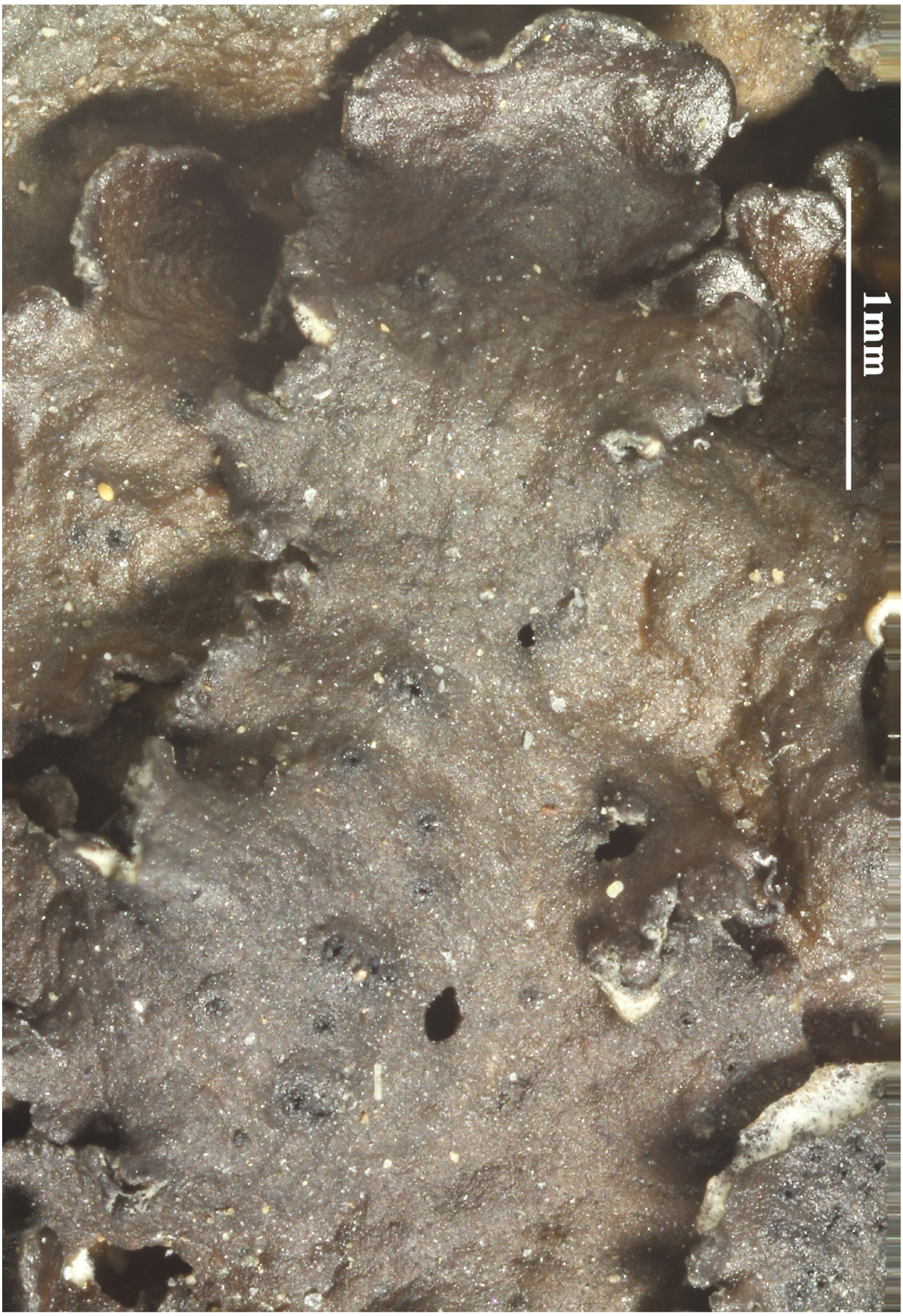
Thallus foliose, heteromerous, dorsiventral, grey-green (in shade forms), brown or brown-black (in sun-forms), turning green when wet, sometimes pruinose, usually forming extensive, confluent swards. Lobes 4-8 mm wide, concave to flat, usually with ascending margins, at first smooth, then undulate-verruculose, often cracked in older parts, sometimes with isidia-like, papilliform to short-cylindrical or finally flattened outgrowths. Lower surface brown-black to black, with black, mostly simple rhizines. Upper cortex paraplectenchymatous, with a pored epicortex, the cell walls containing isolichenan; medulla white; lower cortex paraplectenchymatous. Apothecia very rare, lecanorine. Ascospores not seen. Photobiont chlorococcoid. Spot tests: upper cortex K-, C-, KC-, P-; medulla K+ red to red-brown, C-, KC-, P+ bright yellow. Chemistry: medulla with salazinic acid (major), sometimes with additional norstictic acid and atranorin (traces). - Note: a species with thalli recalling those of a sterile *P. acetabulum*, but with a different secondary chemistry (major: salazinic acid); rather loosely attached to siliceous rocks, often with a low content in calcium, and there also overgrowing mosses and soil layers; widespread in Eurasia but rare, with two records from the Western Alps (France).



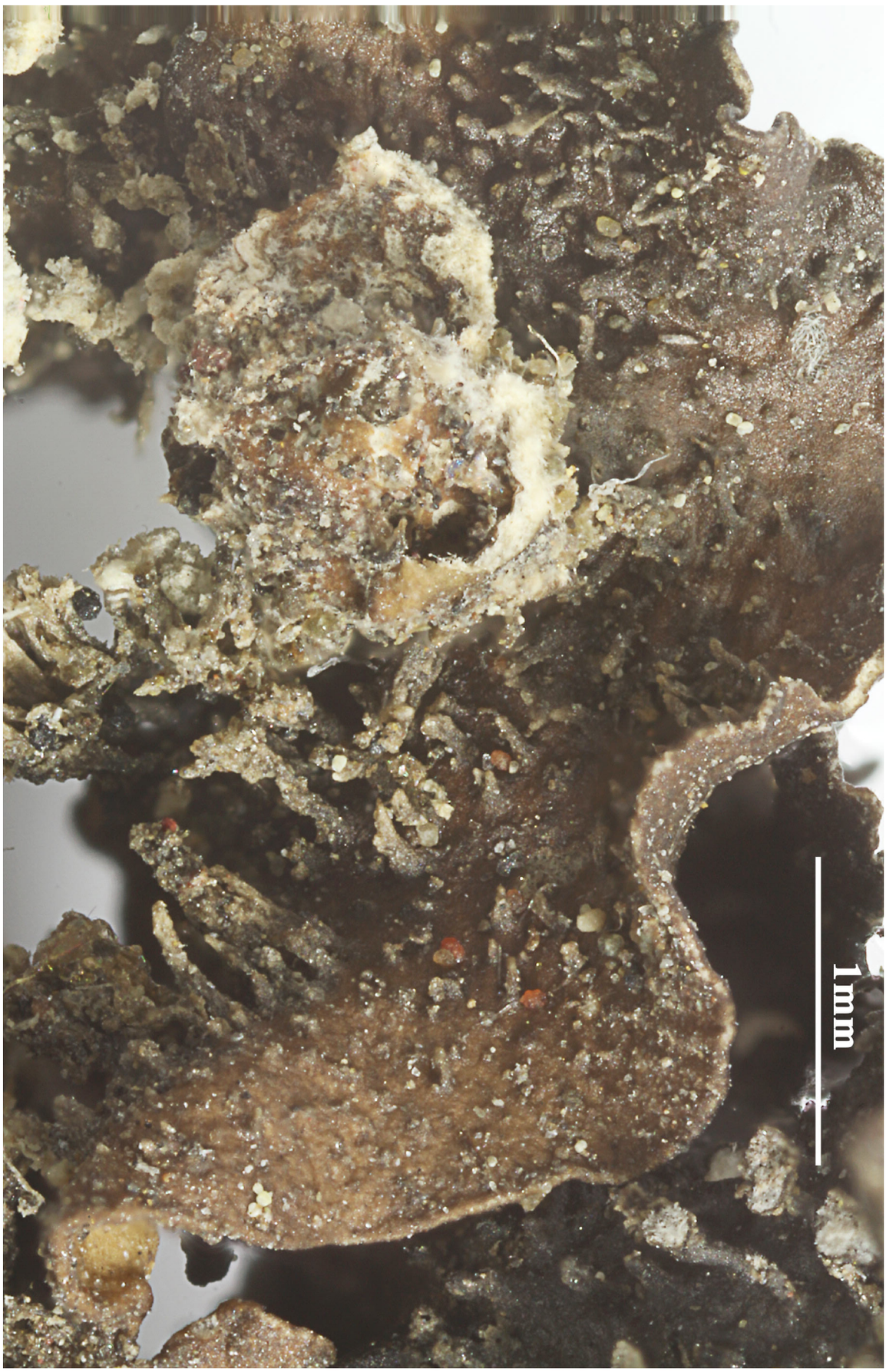
Parmelia koflerae



Parmelia koflerae



Parmelia koflerae



Parmelia koflerae



Parmelia koflerae

Parmelia koflerae Clauzade & Poelt, Nova Hedwigia 3: 368 (1961)
= *Pleurosticta koflerae* (Clauzade & Poelt) Elix & Lumbsch, in Lumbsch, Kothe & Elix, Mycotaxon 33: 453 (1988)

[VZ1856], URSS. Armenia, distr. Krasnosirijsk: ad latera merid. montium Sevanskij chrebet, supra lacum Sevan dictum, 2000 m. In fissuris rupium et supra muscos. Leg A. Vězda et V. Vašák, 6.7.1982. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1856.

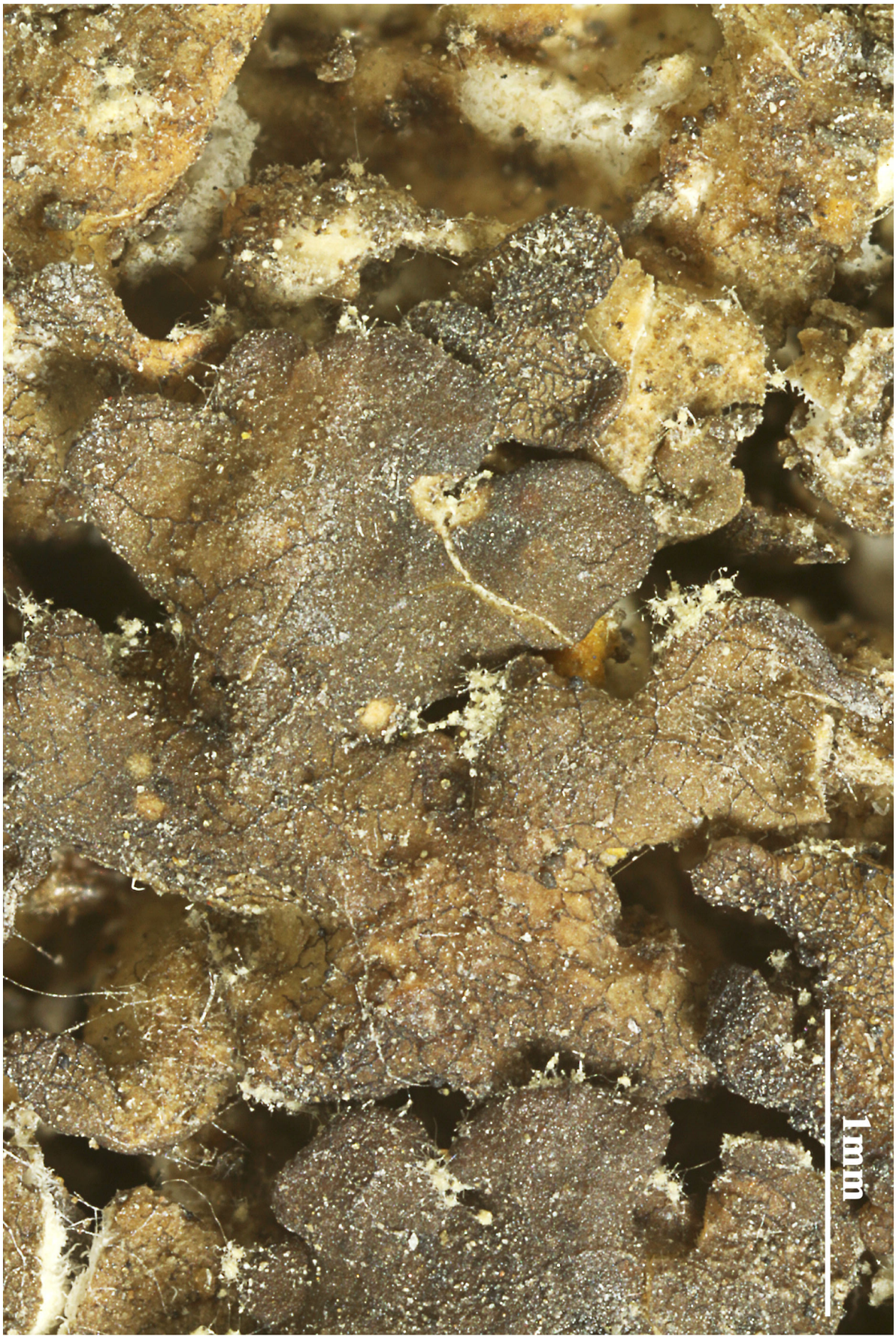
Thallus foliose, heteromerous, dorsiventral, grey-green (in shade forms), brown or brown-black (in sun-forms), turning green when wet, sometimes pruinose, usually forming extensive, confluent swards. Lobes 4-8 mm wide, concave to flat, usually with ascending margins, at first smooth, then undulate-verruculose, often cracked in older parts, sometimes with isidia-like, papilliform to short-cylindrical or finally flattened outgrowths. Lower surface brown-black to black, with black, mostly simple rhizines. Upper cortex paraplectenchymatous, with a pored epicortex, the cell walls containing isolichenan; medulla white; lower cortex paraplectenchymatous. Apothecia very rare, lecanorine. Ascospores not seen. Photobiont chlorococcoid. Spot tests: upper cortex K-, C-, KC-, P-; medulla K+ red to red-brown, C-, KC-, P+ bright yellow. Chemistry: medulla with salazinic acid (major), sometimes with additional norstictic acid and atranorin (traces). - Note: a species with thalli recalling those of a sterile *P. acetabulum*, but with a different secondary chemistry (major: salazinic acid); rather loosely attached to siliceous rocks, often with a low content in calcium, and there also overgrowing mosses and soil layers; widespread in Eurasia but rare, with two records from the Western Alps (France).



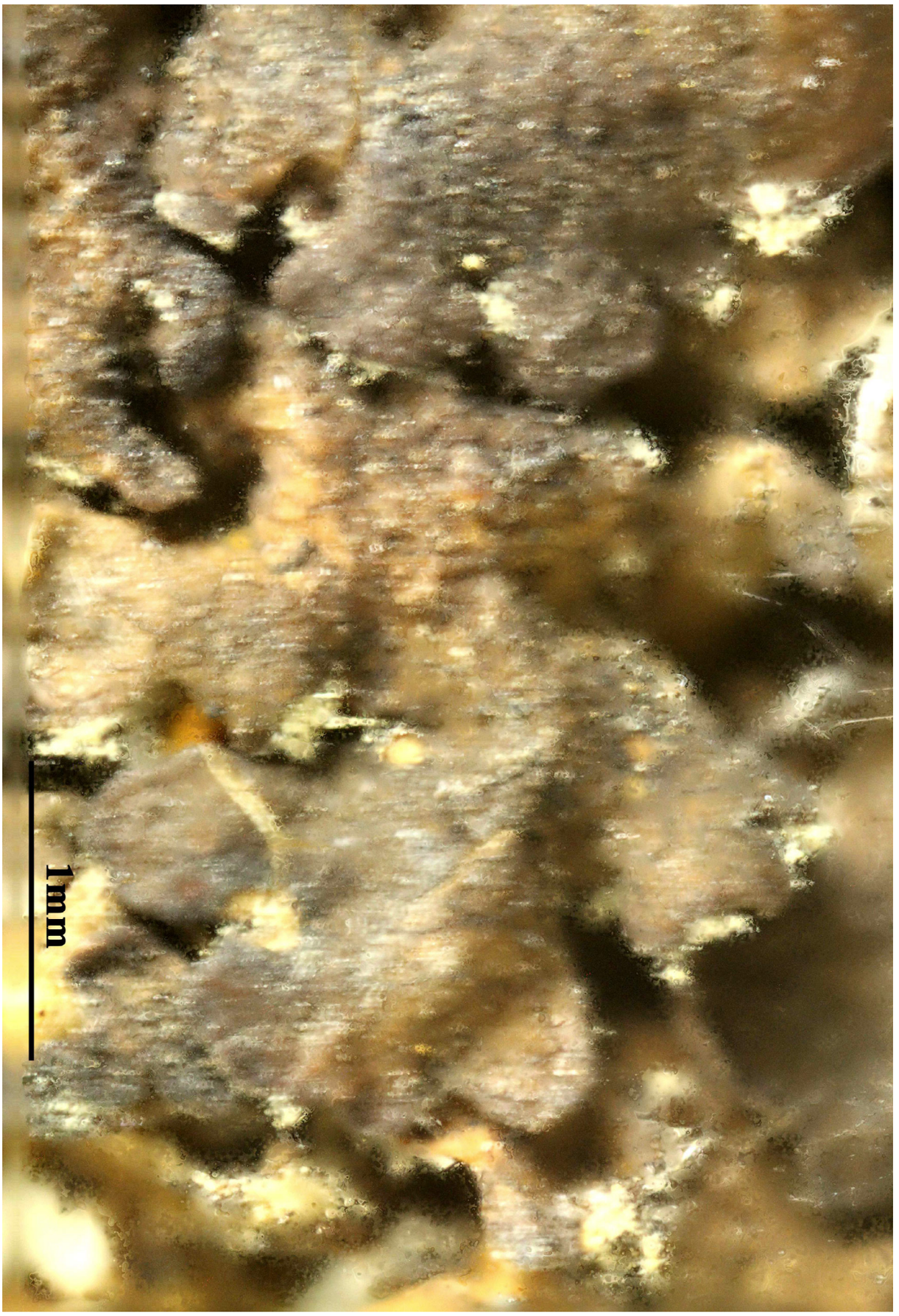
Parmelia koflerae



Parmelia koflerae



Parmelia koflerae



Parmelia koflerae

Pertusaria straminella Malme, Ark. Bot. 28A(no. 9): 25 (1936)

[VZ1486], Hawaii Insulae. Oahu, Honolulu, University Ave, prope domum cl. O. Degener. Ad corticem arborum. Leg. O. et I. Degener (no. 34101), det. K. Kalb. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1486.

Thallus tennis, vix 0.1 mm crassus, continulls, aequabilis, laevigatus, stramineus vel stramineo-albidus, opacus, K luteseens, K+C non aliter reagens, protothallo concolore. Stratum corticale usque 15 µm crassus, ex hyphis formatum irregulariter contextis, arctissime conglutinatis; gonidia globosa, diam. usque 9 µm; hyphae vix 2 µm crassae, J non reagentes. Verrucae apotheciigerae densae, haud raro 2~4 confluentes, depresso-semiglobosae, 0.4-0.8 mm latae, ambitu declives, rarins satis abrnptae, ostiolis singulis, raro binis, minutissimis, pallidis, superficiem aequantibus. Hymenium semiglobosum vel depresso-subglobosum, usque 0.5 mm latum, decolor, paullum oleoso-inspersumln et christallis quadrangulis decoloribus ornatum, K non reagens; paraphyses c. 0.8 µm crassis, ramoso-connexae; asci subcylindrici, cire. 40 µm crassi, J eoerulescentes. Sporae binae, rarius singulae, oblongae vel ellipsoideo-oblongae, 70-90 x 35-40 tt µm, utroque apice rotundatae, laeves, non striatae, membrana eire. 6 µm crassa. Habitu *P. leioplacellae* satis similis, at sporis binis ct reactionihns differt.



Pertusaria straminella

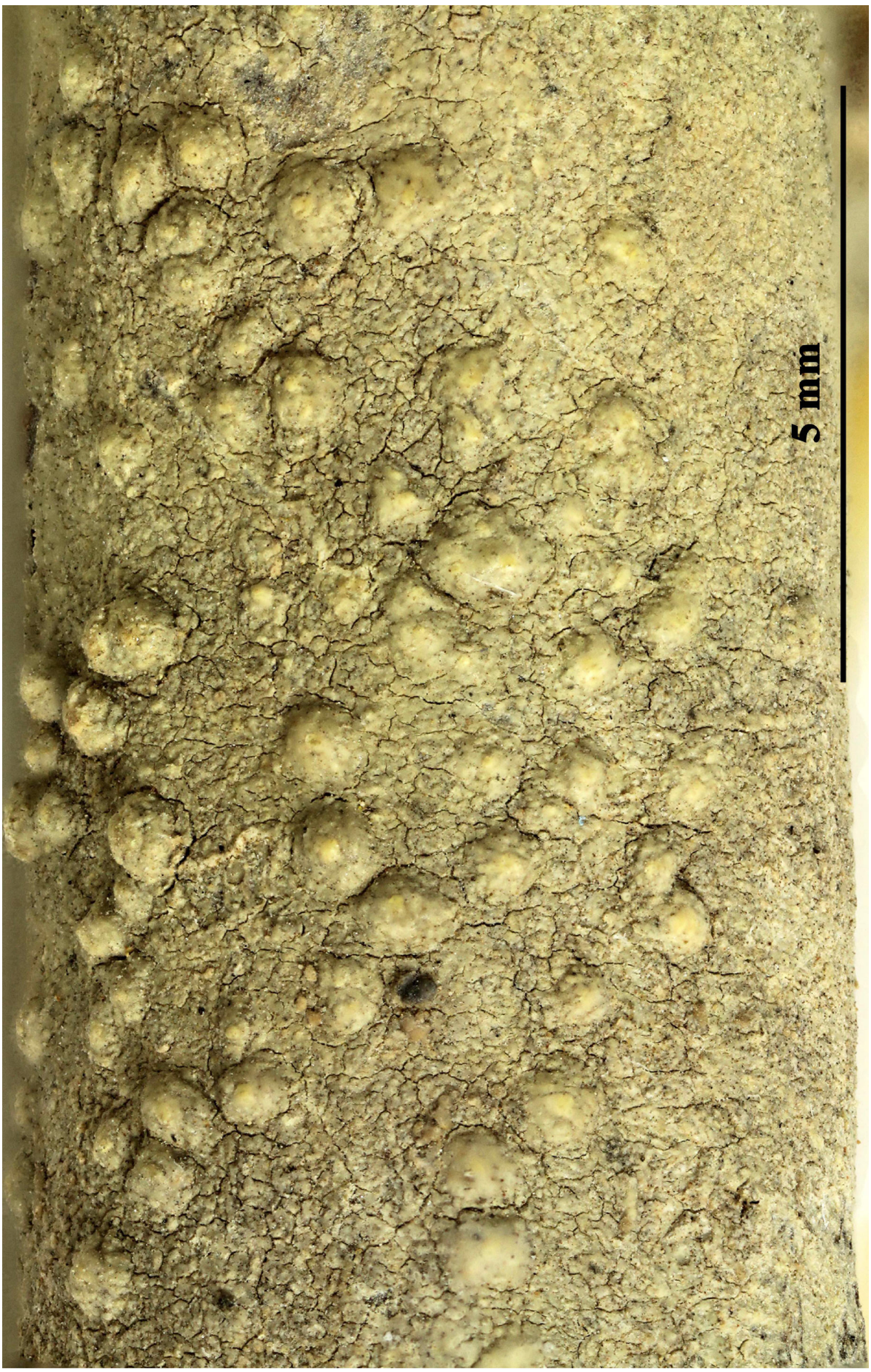


Pertusaria straminella

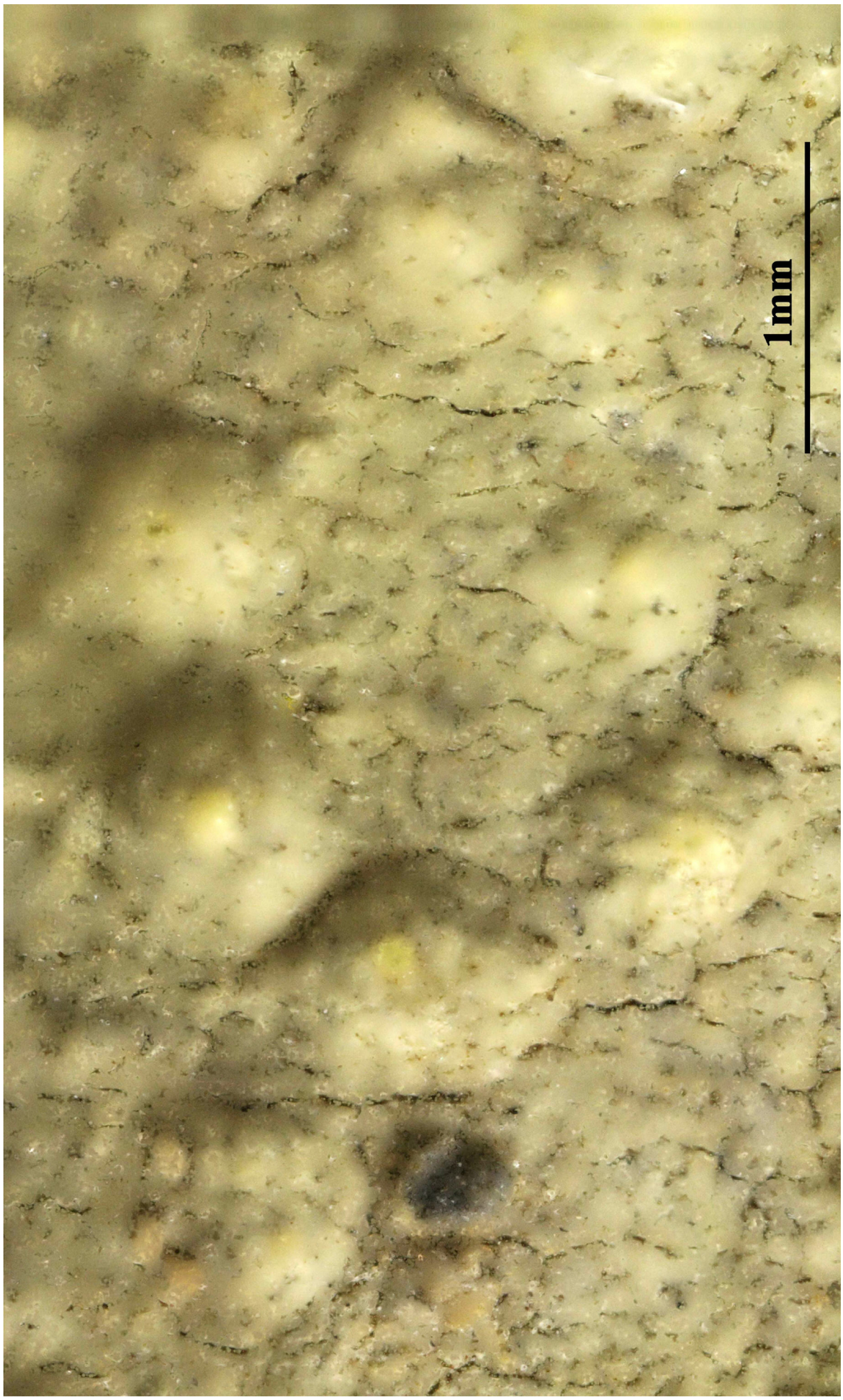
Pertusaria texana Müll. Arg., Flora, Regensburg 67(21): 399 (1884)

[VZ1622], USA., Louisiana, East Baton Rouge, Paroecia. Baton Rouge, Baird Drive, 30°22'45" septentr., 91°07'30" occid. Ad corticem *Carpini carolinianae*. Leg. S. C. Tucker (no. 15936B) 15.4.1976. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1622.

Thallus continuous to finely fissured, with thin to moderately thick verrucae; margins entire, unzoned; upper surface green-gray to yellow-gray or yellow-green, dull or shiny, smooth to tuberculate, shiny, epruinose; lacking soredia or isidia; fertile verrucae concolorous with thallus, ampliariate to erect, conical to flat-topped, numerous, c. 0.5-2.0 mm in diam.; ostioles 1-6 per verruca, hyaline to brownish, surrounded by a yellow border, level to papillate; Apothecia 1-5 per verruca; epithecium hyaline to black, K- or + weakly violet; hypothecium yellowish to yellow-brown; asci clavate, 210-400 x 32-65 µm, mostly 8-spored; ascospores hyaline, ellipsoid to fusiform, 35-88 x 19-44 µm; spore wall 2-layered; outer spore wall c. 1-5 µm thick; inner spore wall: 2-8 µm thick, smooth; apices; up to 24 µm thick; Pycnidia not seen; Spot tests K+ yellow, C+ orange, KC-, P+ yellow to orange, UV+ orange-red; Secondary metabolites stictic and thiophaninic acids (both major), constictic acid, 2-chloro-6-O-methylnorlichexanthone, and 4-chloro-6-O-methylnorlichexanthone (all minor). Substrate and ecology on bark including *Acacia*, *Jatropha*, and *Quercus* World distribution North and Central America at different elevations of 100-1200 m. Notes: *Pertusaria texana* is characterized by a yellowish thallus with poriform apothecia, often warted verrucae and small ostioles with yellow papillae at the top, 8-spored asci, ascospores with smooth walls, and the production of thiophaninic and stictic acids. Morphologically it is difficult to separate the species from the largely sympatric *P. xanthodes* which shares the same chemosyndromes, but is distinguished in having hyaline ostioles, 2-spored asci and rough-walled ascospores.



Pertusaria texana



Pertusaria texana

Petractis luetkemuelleri (Zahlbr.) Vězda, Preslia 37: 137 (1965)
= *Gyalecta luetkemuelleri* Zahlbr. 1903
= *Neopetractis luetkemuelleri* (Zahlbr.) Ertz, in Ertz, Sanderson & Lebouvier, Lichenologist 53(1): 56 (2021)

[VZ1672], Jugoslavia. Dalmatia, peninsula Pelješac, in litore prope vicum Žuljana, 1-3 m. Ad scopulos calcareos. Leg. A. Vězda, 15.7.1979.Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1672.

Thallus crustose, partly endosubstratic, partly thinly episubstratic, continuous, smooth to minutely rugose, white or pale grey with a pinkish hue (which disappears in herbarium specimens), without a clear prothallus. Apothecia totally to 3/4 immersed in the thallus, 0.2-0.5 mm across, at first perithecioid, finally with a slightly expanded, concave to flat, beige-pink to pale brown disc surrounded by a thick, whitish, radially fissured proper margin. Proper exciple thin, more or less colourless; hymenium colourless, 130-150 µm high, I-, K/I+ blue; paraphyses simple, 2-3 µm thick at mid-level, the apical cells not or only slightly widened; hypothecium colourless. Asci 8-spored, clavate, thin-walled, K/I+ blue, 100-120 x 10-14 µm. Ascospores transversally 3-5-septate, sometimes finally submuriform with 1(-2) additional longitudinal septa, hyaline, ellipsoid, 18-25(-31) x 7-15(-18) µm, surrounded by a gelatinous perispore (best visible in K, or adding Indian ink to the preparation). Photobiont trentepohlioid. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: on sheltered, often north-facing surfaces of calcareous cliffs, usually near the sea.



Petractis luetkemuelleri

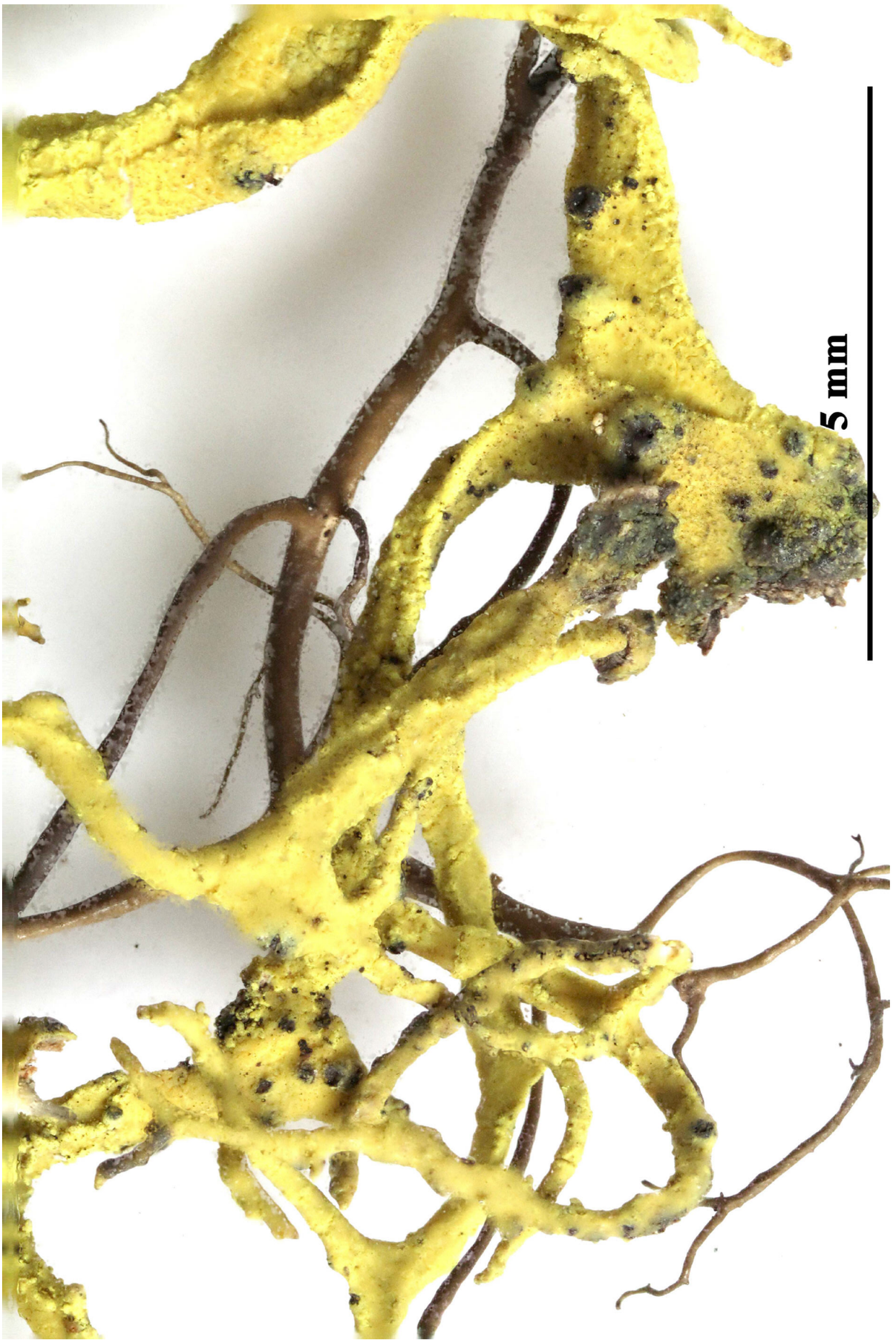


Petractis luetkemuelleri

Phacopsis vulpina Tul., Annls Sci. Nat., Bot., sér. 3 17: 126 (1852)

[VZ1850}, Austria, Salisburgia, Lungau, in Alpibus "Radstädter Tauern" dictis, Mauterndorf, Trogalm, inter Speiereck et Grosseck, 1900 m. In thallo *Lethariae vulpinae* vigens, ad corticem *Laricis deciduae*. Leg. et det. J. Hafellner, 7.9.1981. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1850.

Apothecia: orbicular, sessile, 0.25-0.35(-0.8) mm diam.; disc black, convex margin absent; exciple not developed; epihymenium brown, covered by a layer of colorless gel; hymenium colorless to brown, c. 50 µm tall; paraphyses scarcely branched and anastomosed, 3-4.5 µm wide; apical cells distinctly thickened, 5.5-9 µm wide, with small, brown to dark brown pigmented caps; hypothecium colorless to pale brown, with I+ violet hyphae of the subhypothecial zone; asci broadly clavate, 35-40 x 15-20 µm, 8-spored; ascospores hyaline, simple, ellipsoid to ovoid, with obtuse ends, 13-15(-16) x 5-7 µm; Pycnidia globular, immersed; conidia bacilliform, straight to slightly curved, 7-9 x 1.8 µm; Hosts on thallus of *Letharia vulpina* and *L. columbiana* World distribution: Europe, northern Africa, and North America.



Phacopsis vulpina



Phacopsis vulpina

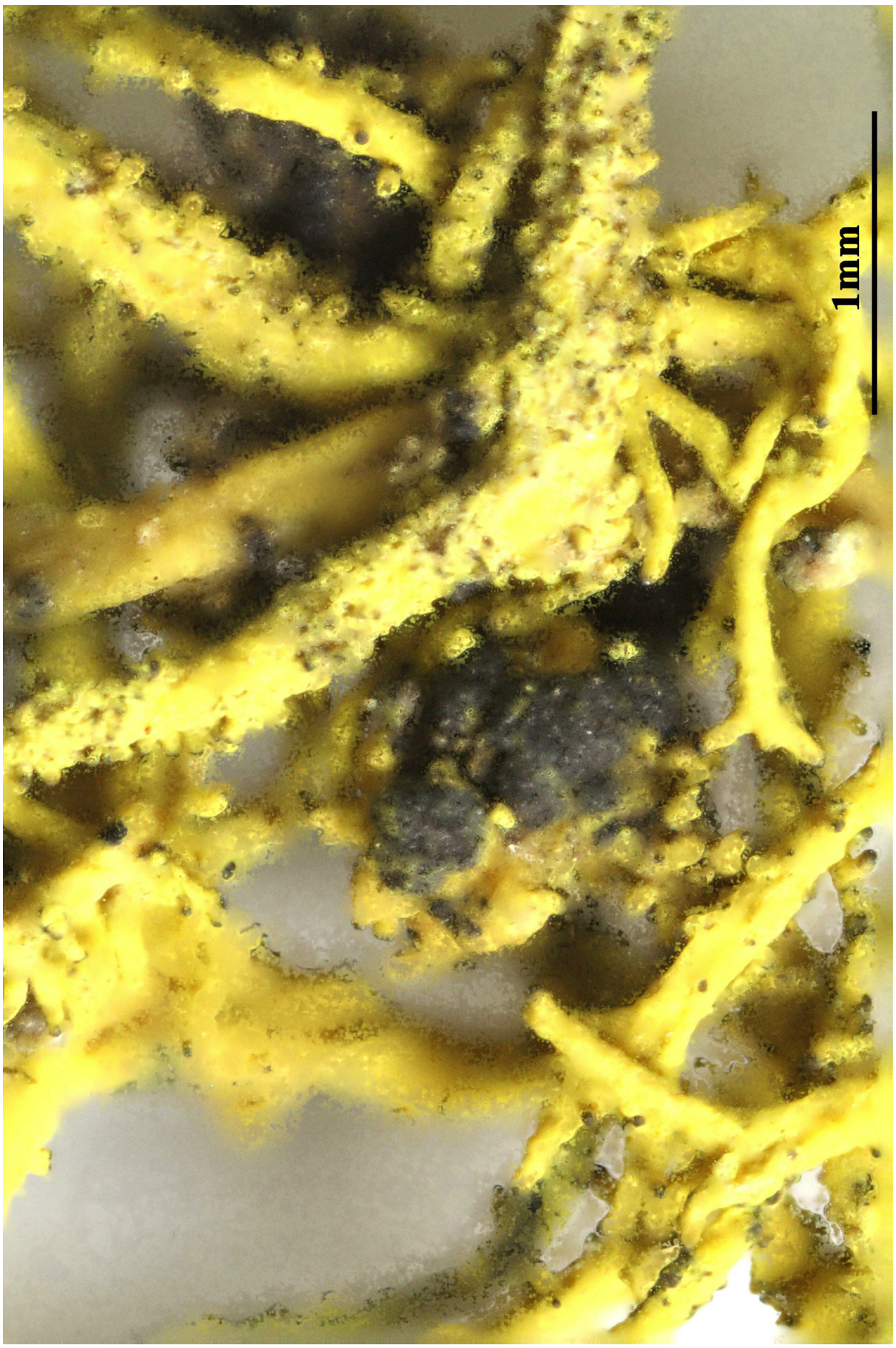
Phacopsis vulpina Tul., Annls Sci. Nat., Bot., sér. 3 17: 126 (1852)

[VZ2250], Cyprus. Montes Troodos, Chionistra, 1700-1800 m. Ad truncum Pini nigrae, in thallo Lethariae vulpinae. Leg. A. Vězda, 22.6.1987. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2250.

Apothecia: orbicular, sessile, 0.25-0.35(-0.8) mm diam.; disc black, convex margin absent; exciple not developed; epihymenium brown, covered by a layer of colorless gel; hymenium colorless to brown, c. 50 µm tall; paraphyses scarcely branched and anastomosed, 3-4.5 µm wide; apical cells distinctly thickened, 5.5-9 µm wide, with small, brown to dark brown pigmented caps; hypothecium colorless to pale brown, with I+ violet hyphae of the subhypothecial zone; asci broadly clavate, 35-40 x 15-20 µm, 8-spored; ascospores hyaline, simple, ellipsoid to ovoid, with obtuse ends, 13-15(-16) x 5-7 µm; Pycnidia globular, immersed; conidia bacilliform, straight to slightly curved, 7-9 x 1.8 µm; Hosts on thallus of *Letharia vulpina* and *L. columbiana* World distribution: Europe, northern Africa, and North America.



Phacopsis vulpina

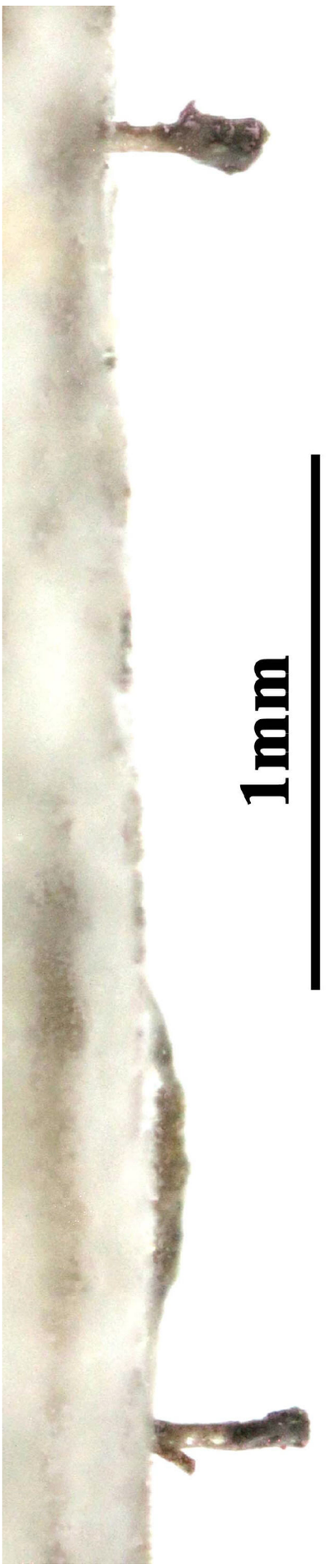


Phacopsis vulpina

Phaeocalicium compressulum (Nyl. ex Vain.) A.F.W. Schmidt, Mitt. Staatsinst. Allg. Bot. Hamburg 13: 130 (1970)
= *Mycocalicium praecedens* var. *compressulum* Nyl. ex Vain. 1927

[VZ1863], Austria, Styria: Hochschwab montium Alpium, Knappensteig, Polster, 1500-1600 m. In ramulis *Alni viridis*. Leg. J. Poelt et A. Vězda, 19.9.1982. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1863.

Thallus not evident, not lichenized. Apothecia stalked, black, 0.25-0.4(-0.5) mm high, the stalk 0.03-0.5 mm thick, somewhat paler than capitulum, medium browm in cenrtal part, consisting of periclinally arranged hyphae, surrounded by an up to 6 µm thick gelatinous layer. Capitulum at first obconical, but soon becoming strongly flattened, 0.08-0.15 wide; mazaedium absent. Exciple well-developed, of periclinally arranged, narrowly cylindrical, brown cells, K-; epithecium thin, dark brown; hypothecium obconical, c. 45 µm high, colourless to medium brown, of more or less isodiametrical cells. Asci 8-spored, cylindrical, with a weakly thickened apex, formed singly from hooked ascogenous hyphae, with uniseriately arranged ascospores, persisting until the ascospores are mature. Ascospores 1-celled, brown, broadly to narrowly ellipsoid, 10-12(-15) x (4.3-)5-6 µm, with a minutely verrucose ornamentation. Photobiont absent. Spot tests: ascomata K-. Chemistry: without lichen substances. - Note: saprobic on *Alnus alnobetula*, certainly widespread throughout the Alps and locally very common, especially in the subalpine belt.



Phaeocalicium compressulum



Phaeocalicium compressulum

Phaeographis dendritica (Ach.) Müll. Arg., Flora, Regensburg 65(24): 382 (1882)
= *Opegrapha dendritica* Ach. 1803

[VZ1576], URSS., Transcaucasus, Colchis. Distr. Sochi, in valle angusta rivi Agva (dextra fluminis Sochi), ad cataractas dictas "Orechivye vodopady", 250 m. Ad corticem *Alni barbatae*. Leg. V. Vašák et A. Vězda, 11.6.1978. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1576.

Thallus crustose, 0.2-0.6 mm thick, continuous or rimose, white, grey to cream-coloured, dull, sometimes slightly uneven or rugose, often delimited by a black prothalline line. Cortex absent; medulla densely inspersed with large crystals (polarized light!). Apothecia lirelliform, dark brown to black, level with thallus to slightly raised at maturity, often branched, straight or slightly curved, (0.2-)0.5-3(-4) x 0.3-0.5 mm, with an expanded, dark brown, initially often whitish-pruinose, slightly concave to flat disc and a proper margin without evident excipular lips; a thin, entire, inconspicuous thalline margin is sometimes present in young ascocarps. Proper exciple brown to slightly carbonized laterally and often also basally, c. 15 µm wide laterally, usually extending below the hymenium; epithecium brown, 5-15 µm high; hymenium colourless, inspersed with oil droplets, (65-)80-160(-200) µm high, I-; paraphyses coherent, c. 1.5 µm thick, sparsely branched in upper part, with brownish, slightly expanded, to 2 µm wide apical cells; subhymenium colourless; hypothecium dark brown to black. Asci 8-spored, clavate, to cylindrical-clavate, non fissitunicate, dehiscent by an apical split, K/I-, Graphis-type. Ascospores (5-)6-9(-10)-septate with lens-shaped cells, at first hyaline but soon turning brown, narrowly ellipsoid, (18-)25-50(-58) x (6-)7-10(-12) µm, I+ red or reddish brown. Photobiont trentepohlioid. Spot tests: K+ red, C-, KC+ red, P+ yellow-orange, UV-. Chemistry: norstictic and connorstictic acids. - Note: a mild-temperate to humid subtropical species found on smooth bark of deciduous and evergreen trees in very humid, open woodlands.

Thallus thin to moderately thick, wide-spreading or in patches, pale green-grey but sometimes tinged yellowish, often white-powdery, matt or glossy, smooth and even to cracked-areolate. Apothecia 0.5–3 × 0.3–0.5 mm, flat, ± level with the thallus, variable, scattered, elongate,

straight, curved, stellate or dendritically branched; disc 0.15–0.3 mm wide, ends usually acute, ± thinly white-pruinose; true exciple thin, entire, continuous below the hymenium; lateral walls 10–15 µm thick; hymenium 90–120 µm tall. Ascospores (26–) 30–40 (–45) × 6–9 µm, (5–) 7– to 9 (–10)-septate. Thallus C–, K+ yellow→red (crystals), KC+ red, Pd+ yellow to orange (reactions often patchy), UV– (norstictic and connorstictic acids). BLS 1100. - On the bark of deciduous trees and shrubs in moderate shade and more typical of trunks and old trees than *P. smithii*; locally frequent. - The apothecia of *P. dendritica* are very variable, ranging from short and almost square in outline to branched and stellate; the disc is usually widely exposed.

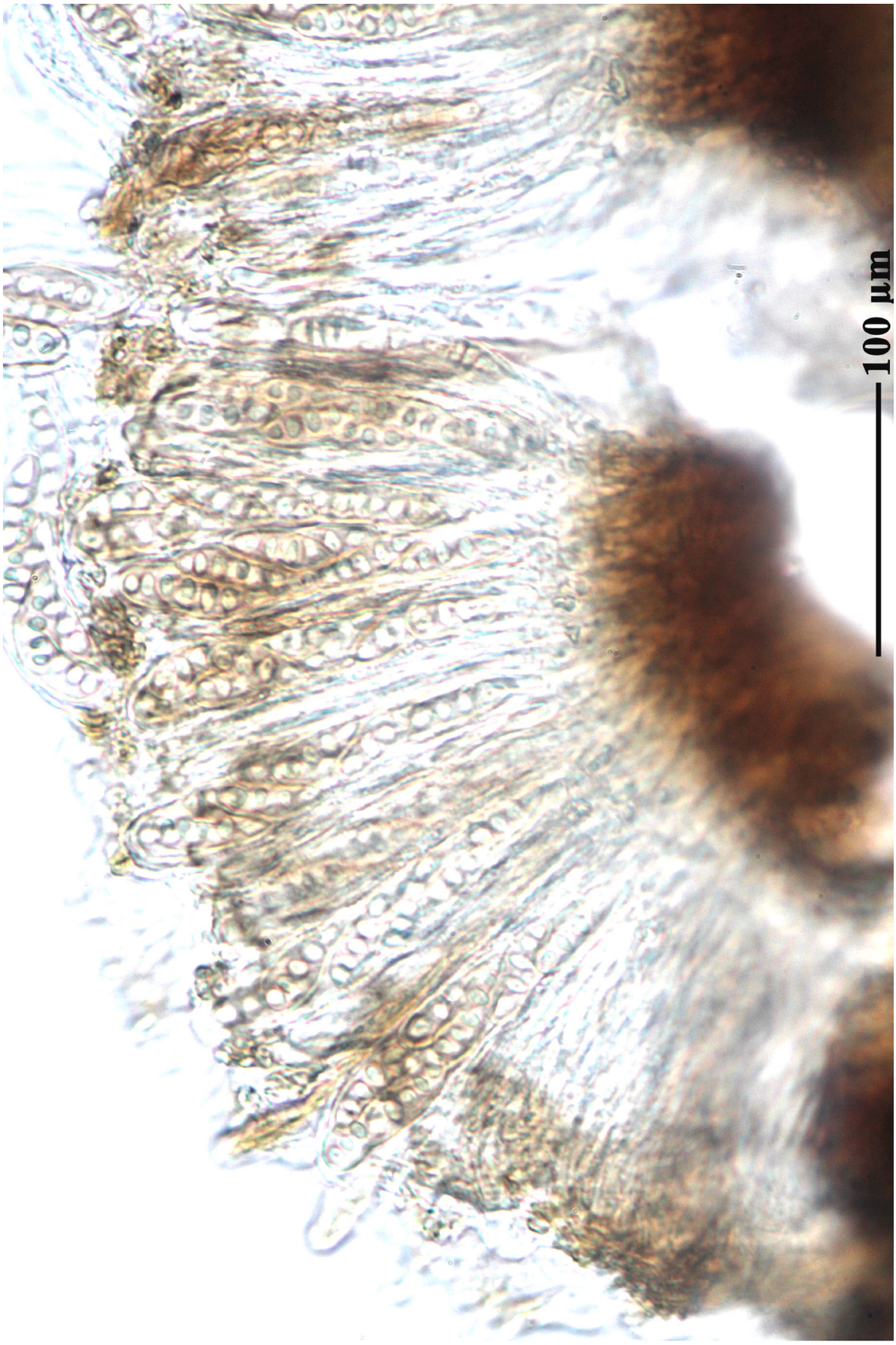
Phaeographis dendritica



Phaeographis dendritica



Phaeographis dendritica



Phaeographis dendritica



Phaeographis dendritica

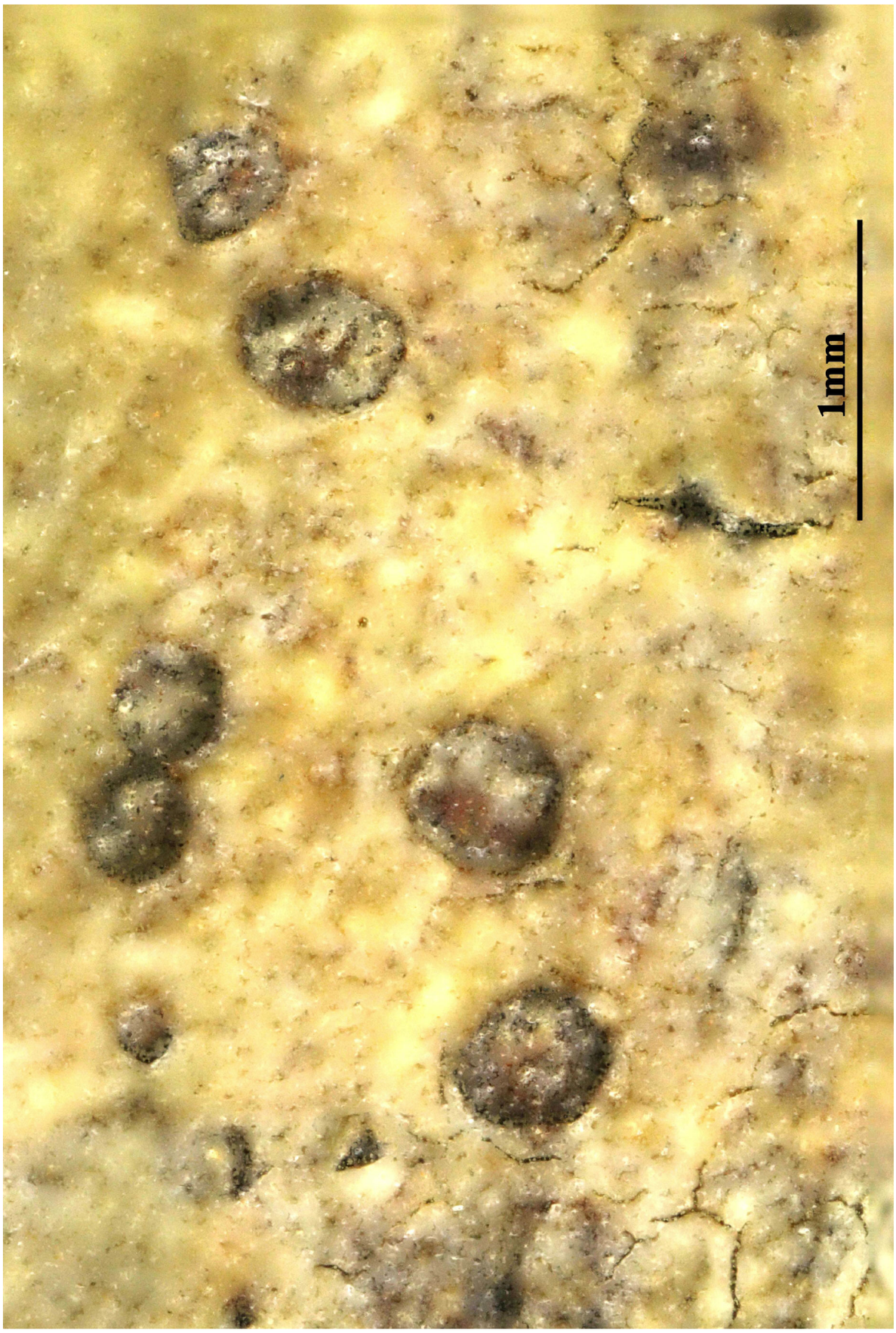
Phaeographis lobata (Eschw.) Müll. Arg., Flora, Regensburg 65(24): 383 (1882)
= *Lecanactis lobata* Eschw. 1824

[VZ1577}, Hawaii Insulae, Puna. Lava Tree State Park. Ad corticem arborum. Leg. O. et I. Degener (no. 34237), 4.2.1977. det. K. Kalb. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1577.

Thallus pale fawn, smooth, glossy. Ascomata conspicuous, scattered, sessile, ±discoid, circular to oval, 0.4–0.8 mm diam., or 0.6–1.0 mm long and 0.4–0.5 mm wide; thalline margin absent. Disc black, faintly white-pruinose. Proper exciple apically carbonised. Hymenium 120–140 µm thick, inspersed. Ascospores 8 per ascus, pale brown, transversely 8–10-locular, 27–47 × 7–10 µm. CHEMISTRY: No lichen compounds detected. An uncommon, corticolous species in Australia, in the Neotropics, Hong Kong and the Hawaiian Islands. The species is characterized by the conspicuous, usually discoid apothecia, the8-10-locular ascospores and the absence of lichen compound.



Phaeographis lobata



Phaeographis lobata

Phaeographis lobata (Eschw.) Müll. Arg., Flora, Regensburg 65(24): 383 (1882)
= *Lecanactis lobata* Eschw. 1824

[VZ2302}, Hawaii Insulae: Hilo. Ad truncum *Casuarinae* sp. secus viam in urbe Hile. Leg. . O. et I. Degener (no. 36662), 2.1986. det. A. Vězda. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 2302.

Thallus pale fawn, smooth, glossy. Ascomata conspicuous, scattered, sessile, ±discoid, circular to oval, 0.4–0.8 mm diam., or 0.6–1.0 mm long and 0.4–0.5 mm wide; thalline margin absent. Disc black, faintly white-pruinose. Proper exciple apically carbonised. Hymenium 120–140 µm thick, inspersed. Ascospores 8 per ascus, pale brown, transversely 8–10-locular, 27–47 × 7–10 µm. CHEMISTRY: No lichen compounds detected. An uncommon, corticolous species in Australia, in the Neotropics, Hong Kong and the Hawaiian Islands. The species is characterized by the conspicuous, usually discoid apothecia, the8-10-locular ascospores and the absence of lichen compound.



Phaeographis lobata

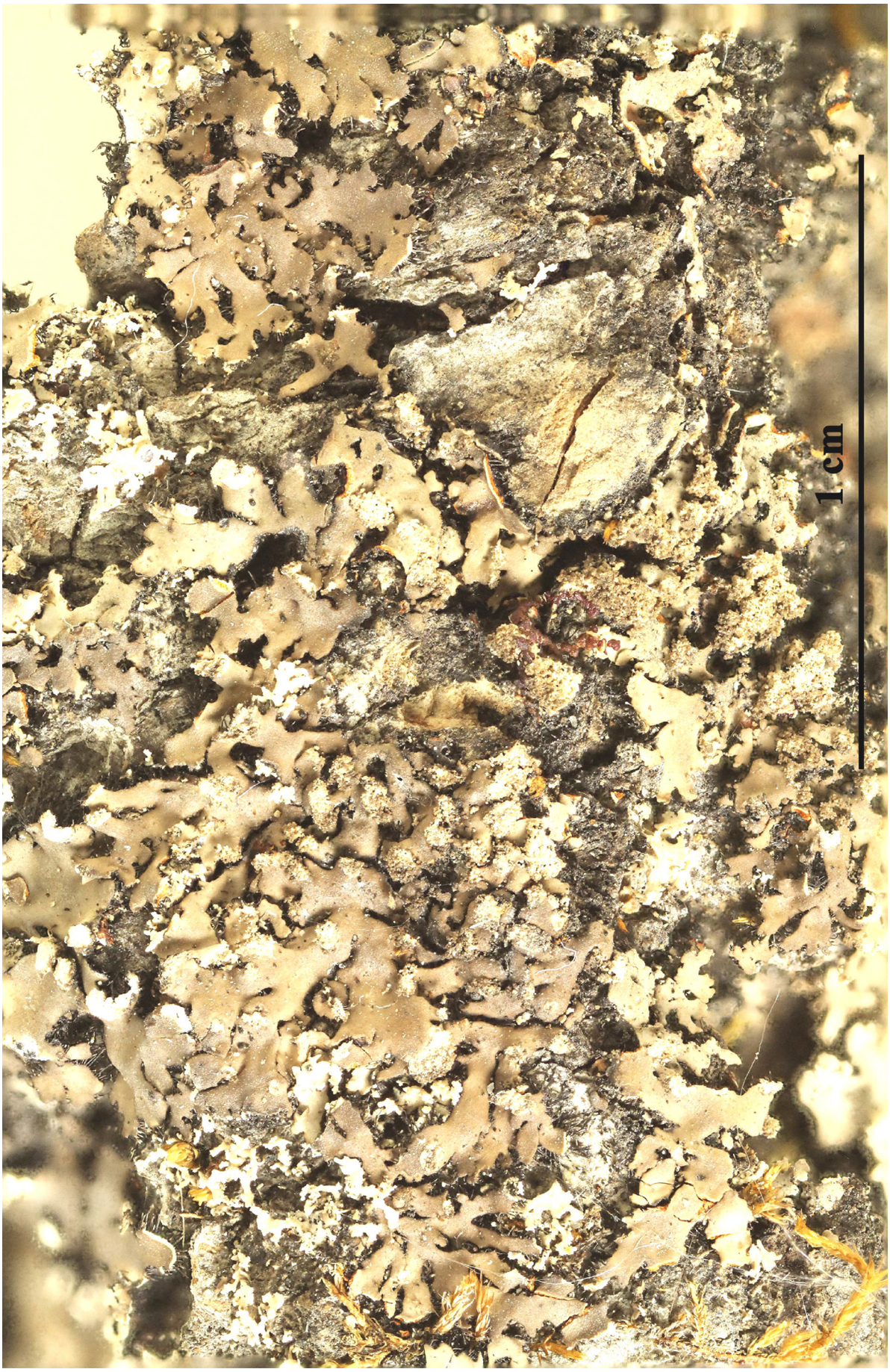


Phaeographis lobata

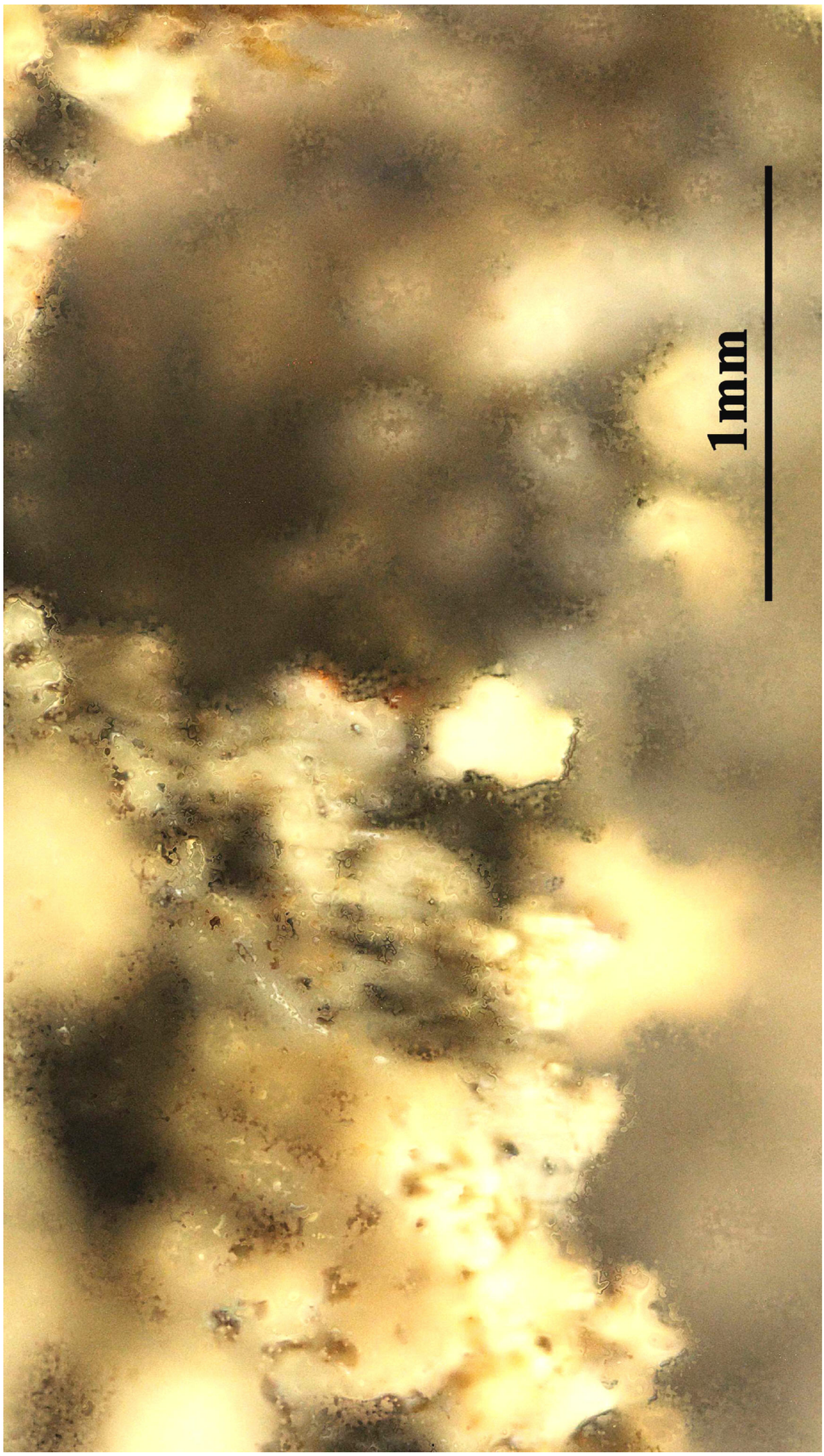
Phaeophyscia rubropulchra (Degel.) Moberg, Bot. Notiser 131(2): 262 (1978)
= *Physcia orbicularis f. rubropulchra* Degel. 1940

[VZ1968], USA. New York: Schoharie County, 8 km ad occidentem versus a Prattsville. Ad arbores (*Acer saccherum*) secundum viam. Leg. et det, S. L. Culberson, 11.19543. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1968.

Thallus foliose, thallus extremely variable; lobes narrow, 0.5-1.2 mm wide; upper surface pale to dark green or greenish gray to brown; medulla orange-red. Photobiont chlorococcoid alga. Lower surface black; rhizines short, black with white tips. Vegetative diaspores coarse soredia mostly on lobe margins, also on surface. Ascomata rare, lecanorine apothecia, occasional, less than 1-3 mm diam., often with cilia beneath. Ascospores brown, 2-celled, 20-35 x 10-15 µm, thick-walled with round locules (Pachysporaria-type). Pycnidia not reported. Chemistry: Spot tests all negative except for medulla K+ purple (rhodopyscin). - On bark, rock or over moss in shaded forests. Eastern North America; in North Carolina throughout.



Phaeophyscia rubropulchra

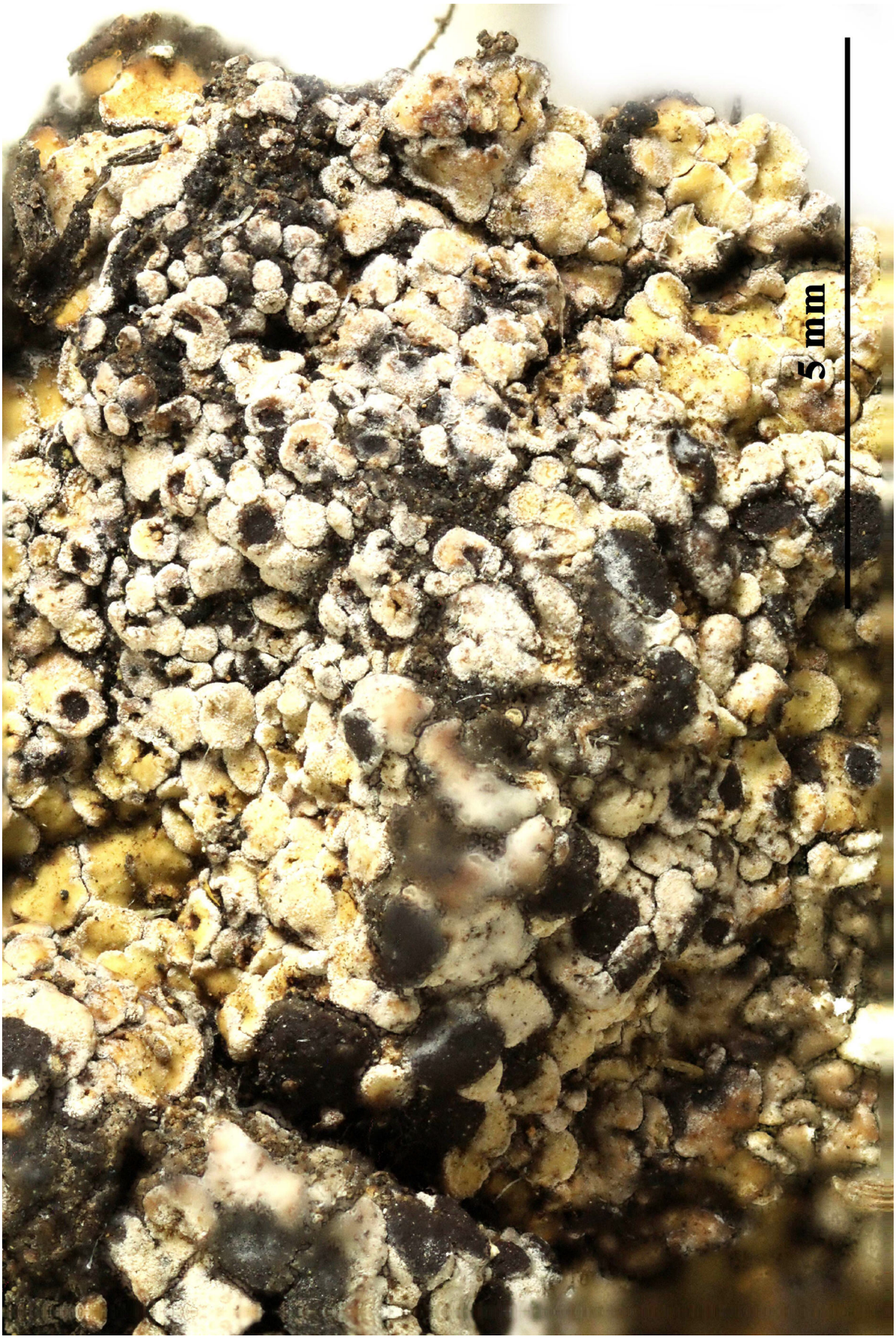


Phaeophyscia rubropulchra

Phaeorrhiza sareptana (Tomin) H. Mayrhofer & Poelt, Nova Hedwigia 30: 792 (1979) [1978]
= *Rinodina nimbosa* f. *sareptana* Tomin 1923

[VZ2072], URSS. Transcaucasia, Armenia, in montibus iugi Sevanskij chebret supra lacum Sevan, 2100 m. In fissuris rupium ad terram humosam. Leg. A. Vězda, 10.6.1983. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2072.

Thallus squamulose or subfoliose, heteromerous, the squamules 1-3 mm wide, flat to convex, pale brown but usually finely white-pruinose, except in shade-forms which are yellowish green, scattered or aggregated into convex hummocks, attached by brown rhizohyphae. Upper cortex 30-40 µm thick, paraplectenchymatous, with a 10-20 µm thick epinecral layer; medulla white in upper part, brown in lower part, rather lax, 100-130 µm thick; lower cortex poorly developed, with numerous brown rhizohyphae. Apothecia lecideine, to 1 mm across, at first partially immersed but soon adnate, with a dark, initially flat then convex disc and a thin, finally excluded proper margin. Proper exciple dark; epithecium reddish brown; hymenium colourless, 80-100 µm high, inspersed with oil droplets; paraphyses 2-3 µm thick at base, the apical cells swollen, 5-6 µm wide; hypothecium colourless, reaching the pigmented lower part of the medulla. Asci 8-spored, broadly clavate, with a I+ blue tholus, a broad ocular chamber, and a cylindrical to short-conical axial mass. Ascospores 1-septate, slightly constricted at septum, brown, ellipsoid, 17-20 x 8.5-10 µm, Buellia-type, not thickened at apex. Photobiont chlorococcoid. Spot tests: cortex K-, C-, KC-, P-, UV-; lower part of medulla sometimes K+ violet, C-, KC-, P+ red. Chemistry: unidentified substances in the medulla. - Note: on naked earth, dead mosses and plant debris in dry grasslands near and above treeline, reaching the nival belt in the Alps.



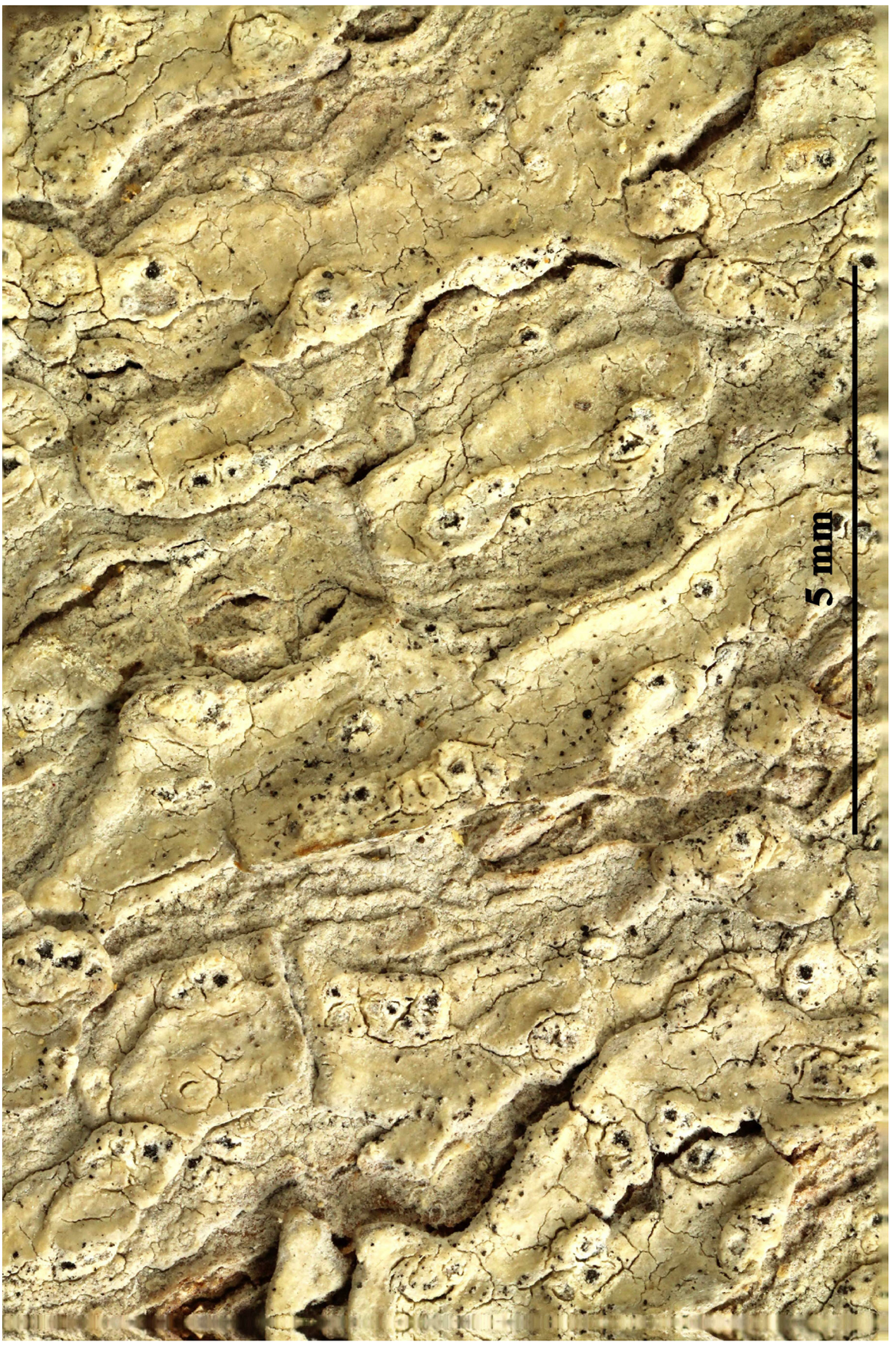
Phaeorrhiza sareptana


1mm

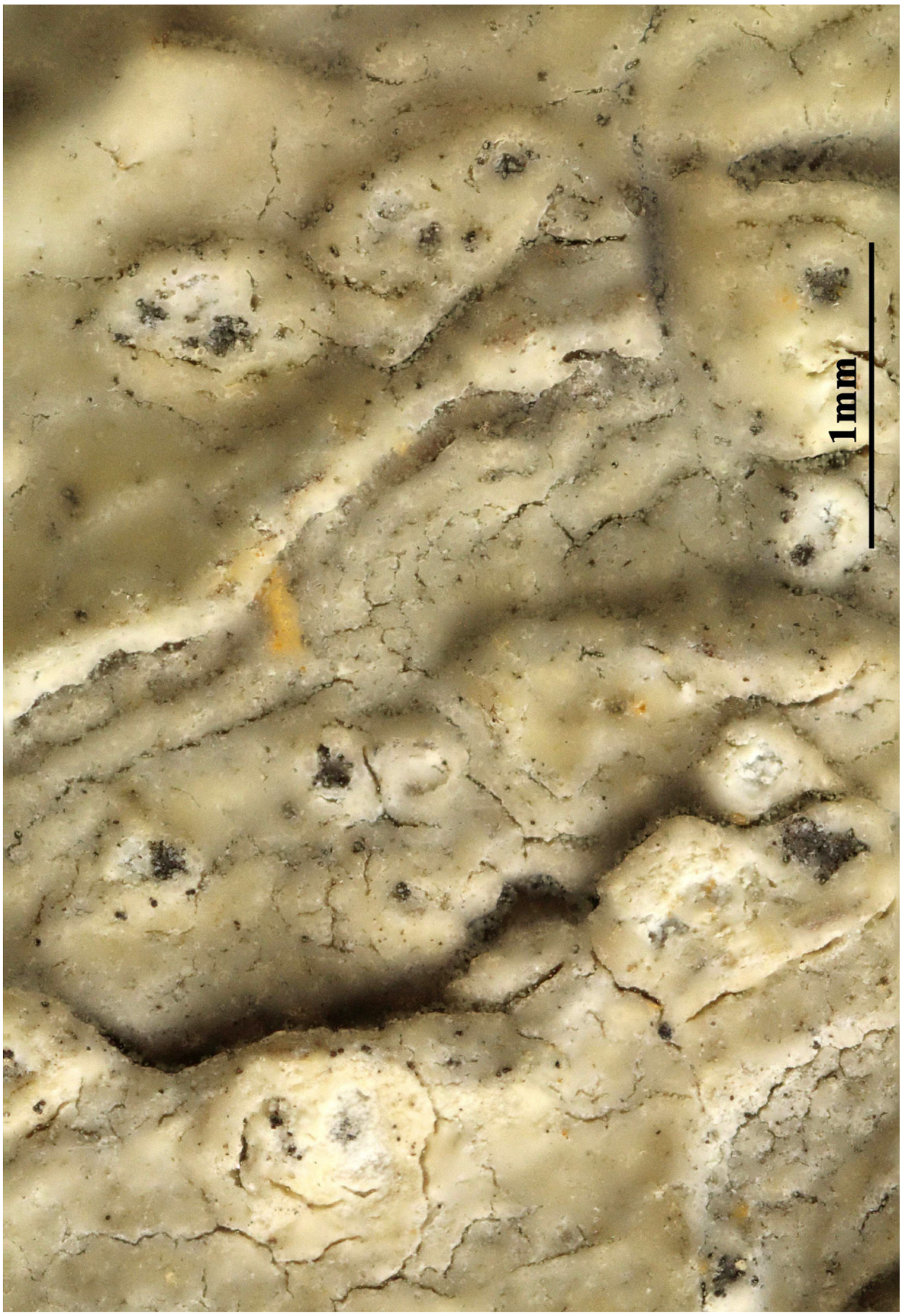
Phlyctis agelaea (Ach.) Flot., Bot. Ztg. 8: 574 (1850)
= *Lichen agelaeus* Ach. 1799

[VZ1112], Romania. Distr. Hunedoara, Montes Retezat, in valle Lapuşul Mare, supra Gura Apei, 1050 m. Ad corticem *Aceris pseudoplatani*. Leg. A. Vězda, 5.6.1972. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1112.

Thallus crustose, ecorticate, thinly episubstratic, continuous or more or less cracked or verrucose, white to grey-white, forming up to 5(-12) cm wide patches delimited by a white prothalline line. Apothecia deeply immersed, clustered by 2-4 at the center of flattened, irregular, powdery or granular, 0.2-0.5(-1) mm wide thalline warts which are usually mistaken for soralia; disc concave to flat, brown-grey to reddish brown, but covered by the granular warts; thalline margin white-granular. Proper exciple thin, grey, I+ pale blue, usually obscured by the thalline exciple; epithecium colourless to brownish, strongly granular; hymenium colourless, K/I+ blue; paraphyses simple or sparingly branched in upper part, not capitate, c. 1.5 µm wide at base, c. 2.5 µm at apex; hypothecium pale brown. Asci 2(-4)-spored, broadly clavate, thin-walled, not strongly thickened at apex, the outer wall K/I+ blue, the tholus I+ weakly blue. Ascospores strongly muriform, hyaline to finally yellow-brown, broadly ellipsoid, clearly apiculate, (35-)45-80(-85) x (12-)14-30(-35) µm, with a thin, I+ blue wall and a very thin perispore. Pycnidia immersed, black. Conidia simple, ellipsoid, straight to rarely curved, 6-8 x 3-4 µm. Photobiont chlorococcoid. Spot tests: K+ yellow then slowly blood-red (needle-like crystals), C-, KC+ reddish, P+ yellow then orange-red, UV-. Chemistry: norstictic acid. Note: a mild-temperate to Mediterranean lichen found on acid-barked trees (especially *Quercus ilex*) in slightly sheltered but not very shaded situations; most frequent in Tyrrhenian Italy, much rarer in Northern Italy and along the eastern side of the Peninsula.



Phlyctis agelaea



Phlyctis agelaea

Phyllophiale alba R. Sant., Symb. bot. upsal. 12(no. 1): 557 (1952)
= *Porina alba* (R. Sant.) Lücking 2004

[VZ1128], Respublica Guinea (Africa occident.). Distr. Macenta, montes Ziama, in silvis densis in regione collis Sérédou, 900 m. Ad folia arborum variarum. Leg. S. Lisowski, 3.1862, det. A. Vězda. EX A. VěZDA LICHENES SELECTI EXSICCATI NR.1128.

Thallus continuous, minutely uneven-rugose, 5–10 mm across and 10–15 µm thick, pale greyish yellow to greenish grey, slightly shiny, incrusted with calcium oxalate crystals, often isidiate; isidia scattered to dense (when perithecia are absent), discshaped, 0.15–0.25 mm diam., white. Photobiont cells angular-rounded, 12–22 x 3–5 µm, in irregular plates. Perithecia immersed-erumpent to adnate, young ones applanately lens-shaped, mature ones lensshaped to applanately wart-shaped, not sharply delimited from surrounding thallus, 0.4–0.7 mm diam. and 120–180 µm high, glabrous, surface smooth, of same color as thallus but often with red tinge. Excipulum 5–10 µm thick, colorless to pale yellow, K+ orange. Involucrellum 10–15 µm thick, yellow, K+ brownish orange, externally covered by 8–12 µm thick crystallostratum and 5–10 µm thick, algiferous, thallus layer. Asci obclavate, 80–100 x 9–12 µm. Ascospores bacillar, 7-septate, without constrictions at septa, 35–45 x 3–4.5 µm, 10–13 times as long as broad, colorless. Pycnidia not observed. Chemistry: no substances detected by TLC; Porina yellow in perithecial wall. Distribution and Ecology. Pantropical. The perithecial form is restricted to the shady rain forest understory, but the sterile, isidiate form can be found also in slightly more open situations.



Phyllophiale alba

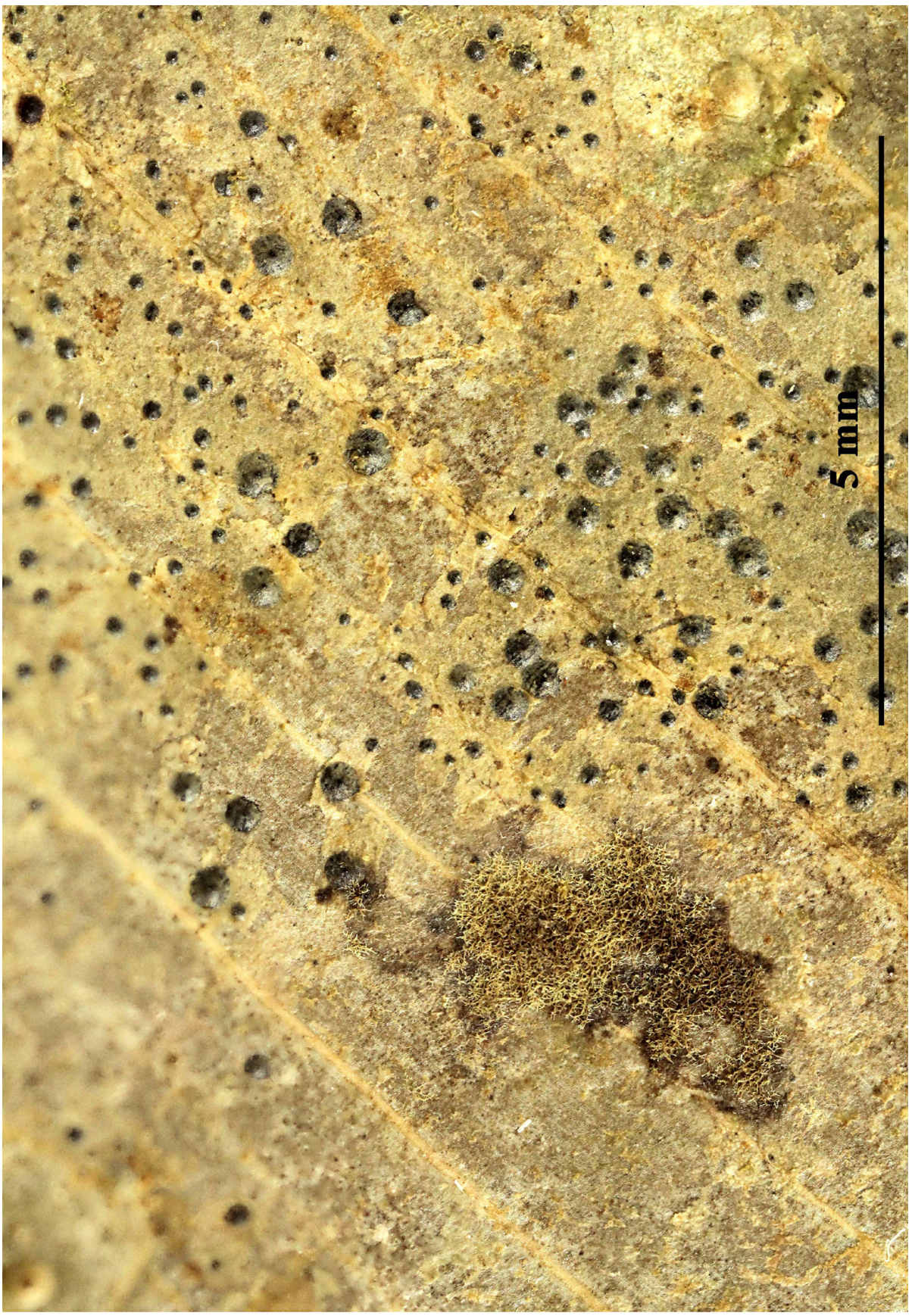


Phyllophiale alba

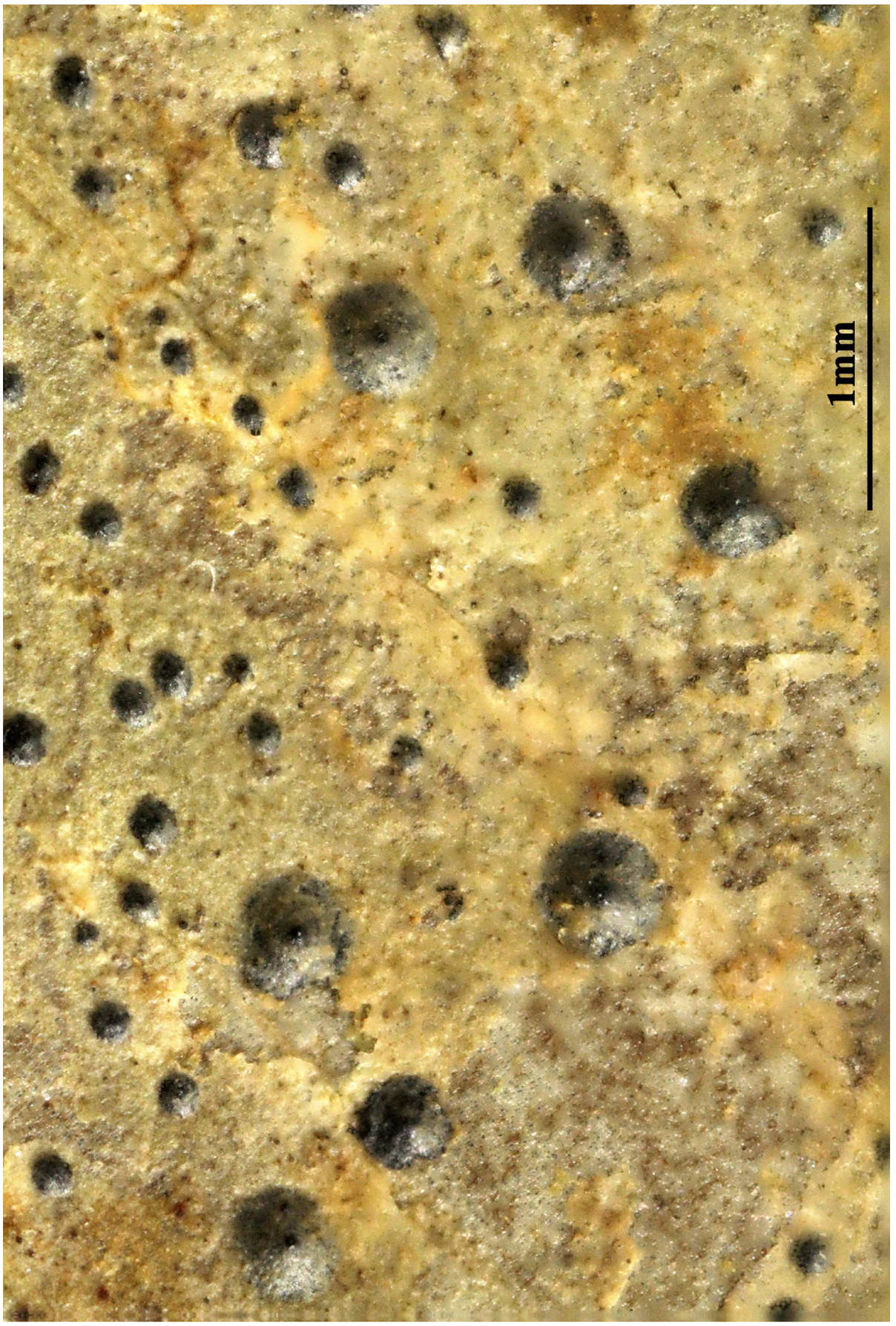
Phylloporis phyllogena (Müll. Arg.) Clem., Gen. fung. (Minneapolis): [173] (1909)
= *Porina phyllogena* Müll. Arg. 1883

[VZ2001], Brasilia. São Paulo. Serra do Mar: Serra do Garraozinho, inter Moji das Cruzes et Bertioga, 850 m. Foliicola, in pluviisilva humida. Leg. K. Kalb (143), 30.6.1989, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2001.

Thallus supracuticular, continuous, 5–25 mm across and 7–10 µm thick, smooth, pale grey. Photobiont a species of Phycopeltis, cells rectangular, 5–14 x 3–5 µm, forming nets with distinct interspaces. Perithecia completely exposed, rarely covered by thin, thallus layer, applanately conical, 0.3–0.5 mm diam. and 90–120 µm high, black rarely greyish black. Excipulum prosoplectenchymatous, 8–12 µm thick, colorless to brown. Involucrellum carbonaceous, 15–25 µm thick, black. Paraphyses unbranched. Asci cylindrical, 25–35 x 4–6 µm. Ascospores uniseriate to irregularly arranged, fusiform-ellipsoid, 1-septate, with slight constriction at septum, 9–12 x 2–3 µm, 3.5–4.5 times as long broad. Pycnidia exposed, conical, those producing macroconidia 0.1–0.2 mm, those producing microconidia 0.07–0.15 mm diam., black. Macroconidia bacillar, for a long time non-septate but finally septate, 9–11 x 2–2.5 µm. Microconidia fusiform ellipsoid, non-septate, 3–5 x 1.5–1.8 µm. Chemistry: no substances detected by TLC. Distribution and Ecology. Pantropical. A very frequent and characteristic element of shady understory communities of rain forests. Mexico, Guatemala, Honduras, Costa Rica, Panama, Cuba, Colombia.



Phylloporis phyllogena

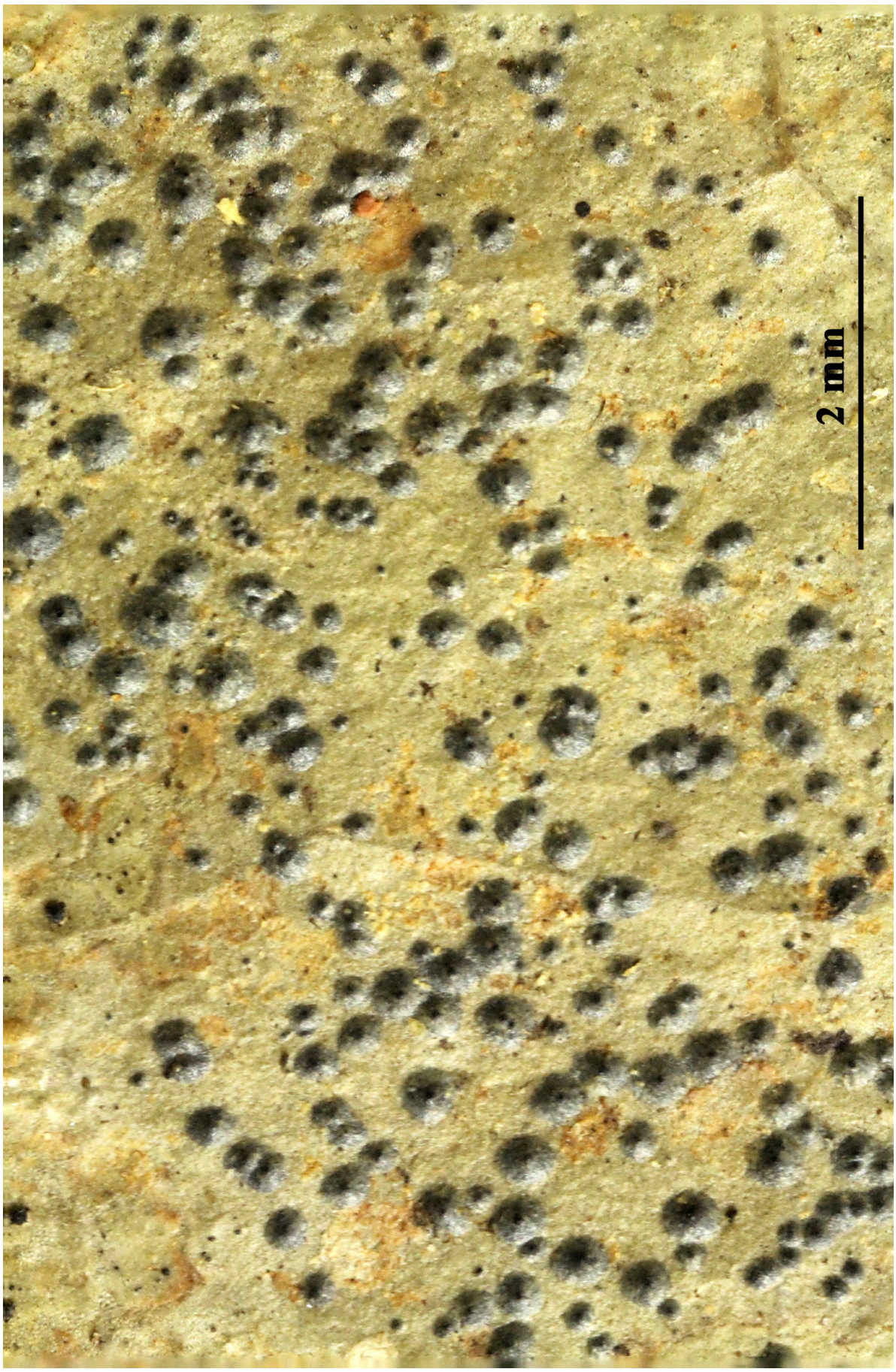


Phylloporis phyllogena

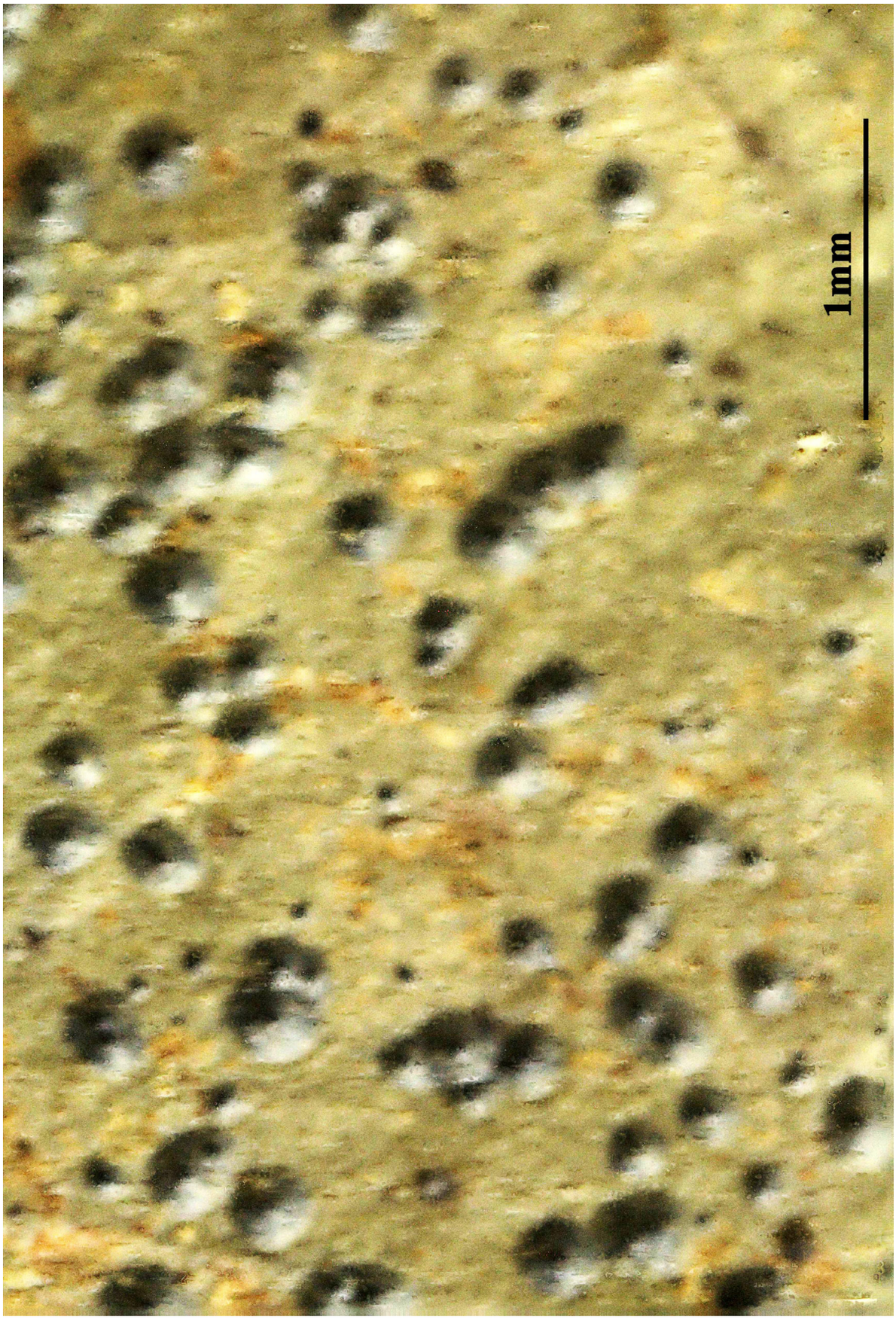
Phylloporis phyllogena (Müll. Arg.) Clem., Gen. fung. (Minneapolis): [173] (1909)
= *Porina phyllogena* Müll. Arg. 1883

[VZ2151], Tansania, Regio Tanga. Usambara Orientalis, reservatum naturae Kihuhwi Forest dictum circumsecus callem silvaticum inter Kihuhwi et Kwankoro, 220-320 m. Foliicola. Leg. E. Farkas (86228), 3.11.1986. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2151.

Thallus supracuticular, continuous, 5–25 mm across and 7–10 µm thick, smooth, pale grey. Photobiont a species of Phycopeltis, cells rectangular, 5–14 x 3–5 µm, forming nets with distinct interspaces. Perithecia completely exposed, rarely covered by thin, thallus layer, applanately conical, 0.3–0.5 mm diam. and 90–120 µm high, black rarely greyish black. Excipulum prosoplectenchymatous, 8–12 µm thick, colorless to brown. Involucrellum carbonaceous, 15–25 µm thick, black. Paraphyses unbranched. Asci cylindrical, 25–35 x 4–6 µm. Ascospores uniseriate to irregularly arranged, fusiform-ellipsoid, 1-septate, with slight constriction at septum, 9–12 x 2–3 µm, 3.5–4.5 times as long broad. Pycnidia exposed, conical, those producing macroconidia 0.1–0.2 mm, those producing microconidia 0.07–0.15 mm diam., black. Macroconidia bacillar, for a long time non-septate but finally septate, 9–11 x 2–2.5 µm. Microconidia fusiform ellipsoid, non-septate, 3–5 x 1.5–1.8 µm. Chemistry: no substances detected by TLC. Distribution and Ecology. Pantropical. A very frequent and characteristic element of shady understory communities of rain forests. Mexico, Guatemala, Honduras, Costa Rica, Panama, Cuba, Colombia.



Phylloporis phyllogena



Phylloporis phyllogena

Physcia ciliata (Hoffm.) Du Rietz, Svensk bot. Tidskr. 15: 168 (1921)
= *Lichen ciliatus* Hoffm. 1784
= *Phaeophyscia ciliata* (Hoffm.) Moberg, Symb. bot. upsal. 22(no. 1): 30 (1977)

[VZ2497], Austria. Tirolia, Sammaungruppe: Tösens, inter pagum Serfaus et capellam Sanctus Georgius, 1300 m. Ad corticem *Fraxini excelsioris*. Leg. J. Poelt et A. Vězda, 7.9.1991. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2497.

Thallus foliose, heteromerous, dorsiventral, narrow-lobed, closely adpressed, forming orbicular, rarely irregular, up to 5 cm (usually less) wide rosettes. Lobes elongate and discrete to (rarely) partly imbricate, 0.4-1(-1.5) mm wide, flat, grey to brown-black in sun-forms, turning bright green when wet, epruinose, sometimes with a continuous grey epinecral layer in older parts. Lower surface black, sometimes paler at lobe ends, with simple, black rhizines projecting beyond lobe margins. Upper and lower cortex paraplectenchymatous; medulla white. Apothecia frequent, lecanorine to 1-2(-3) mm across, sessile, with a black, usually epruinose disc, and a thalline margin which often has a corona of dark rhizines in the lower part. Epithecium brown; hymenium and hypothecium colourless; paraphyses slender, often forked in upper part, the apical cells clavate, with a thin dark cap. 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, (16-)18-24(-27) x (7-)9-12(-13) µm, Physcia-type. Pycnidia common and usually abundant, black, immersed. Conidia ellipsoid, 2-4 x c. 1 µm. Photobiont chlorococcoid. Spot tests: cortex and medulla K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a temperate to southern boreal lichen, most frequent on *Fraxinus* and *Juglans* in montane valleys, much less common than the closely related *P. orbicularis*, being absent from heavily disturbed areas and from eu-Mediterranean vegetation, and with narrower ecological requirements.



Physcia ciliata



Physcia ciliata



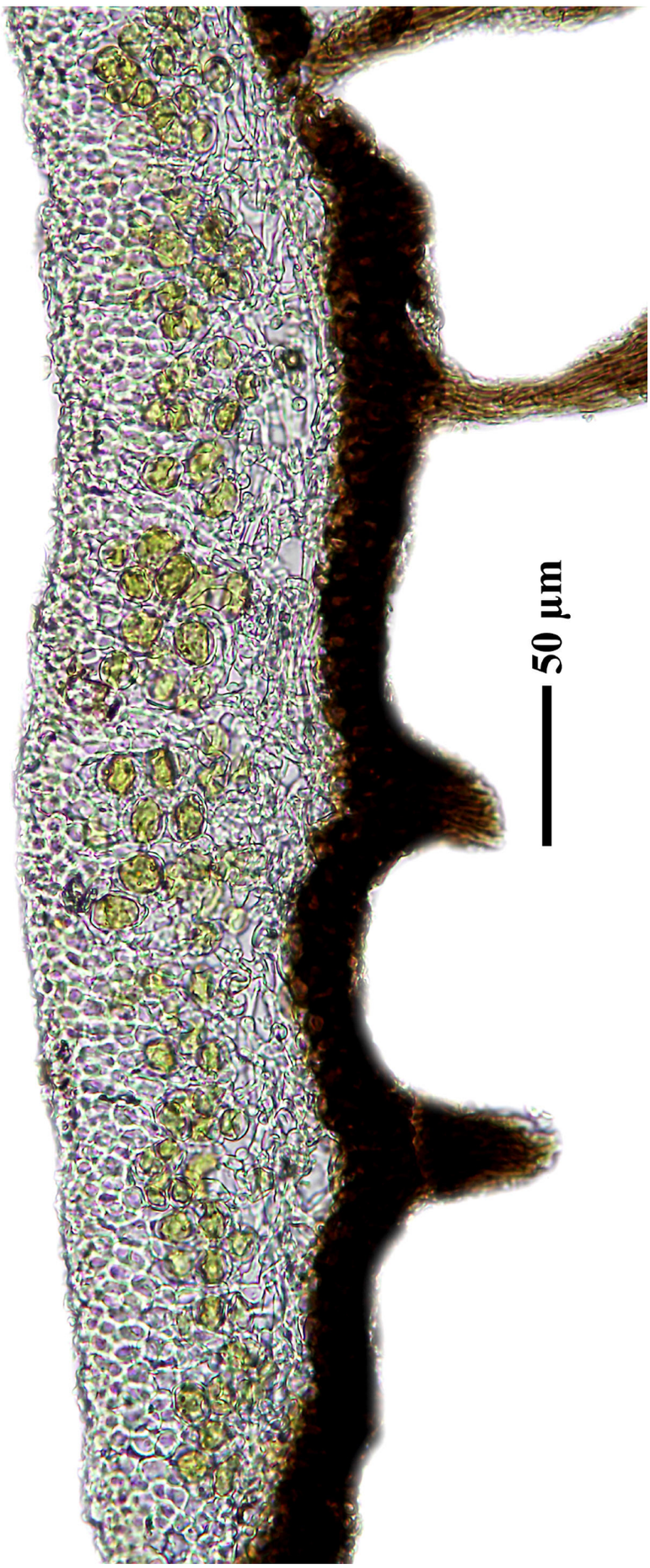
Physcia ciliata



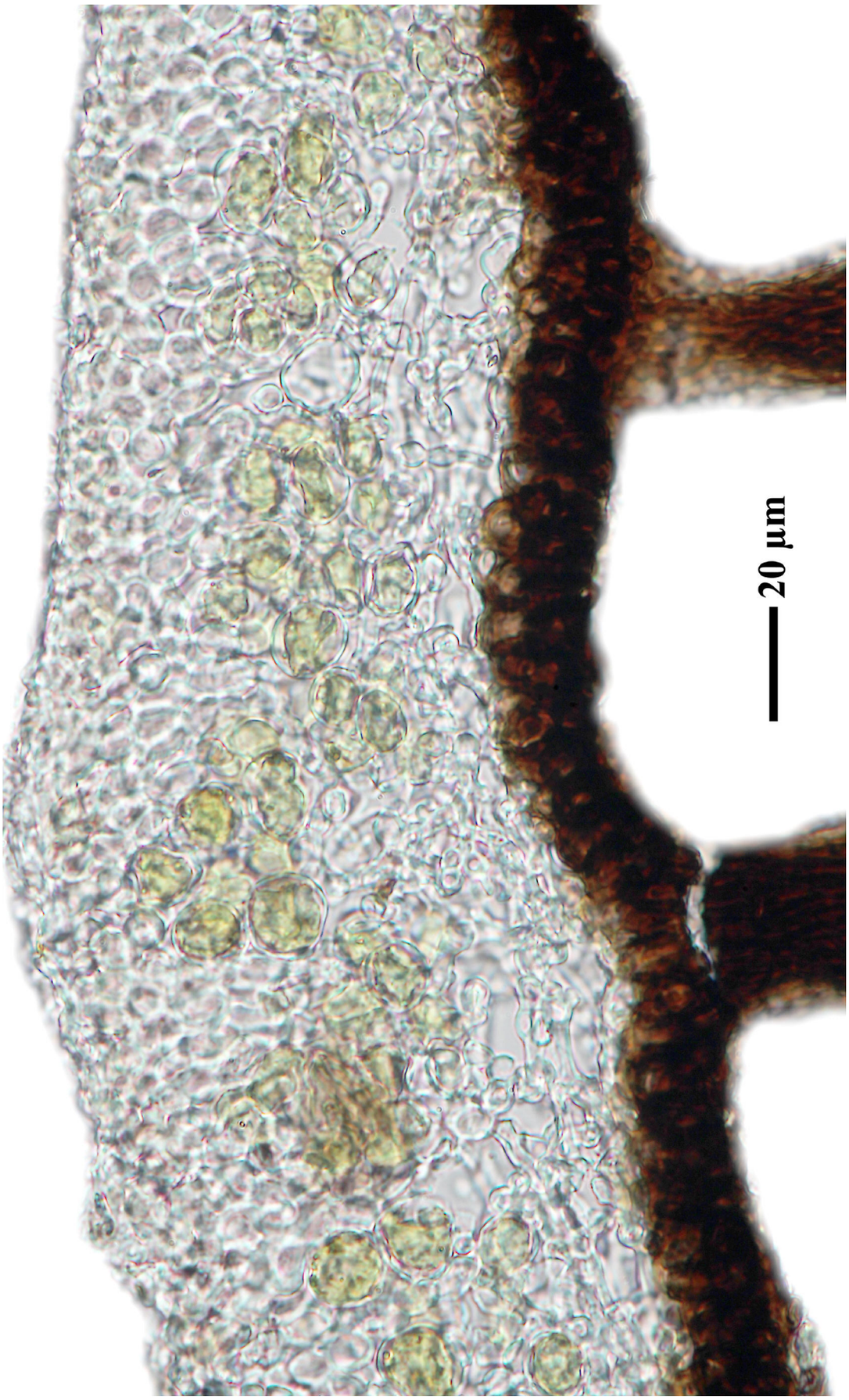
Physcia ciliata



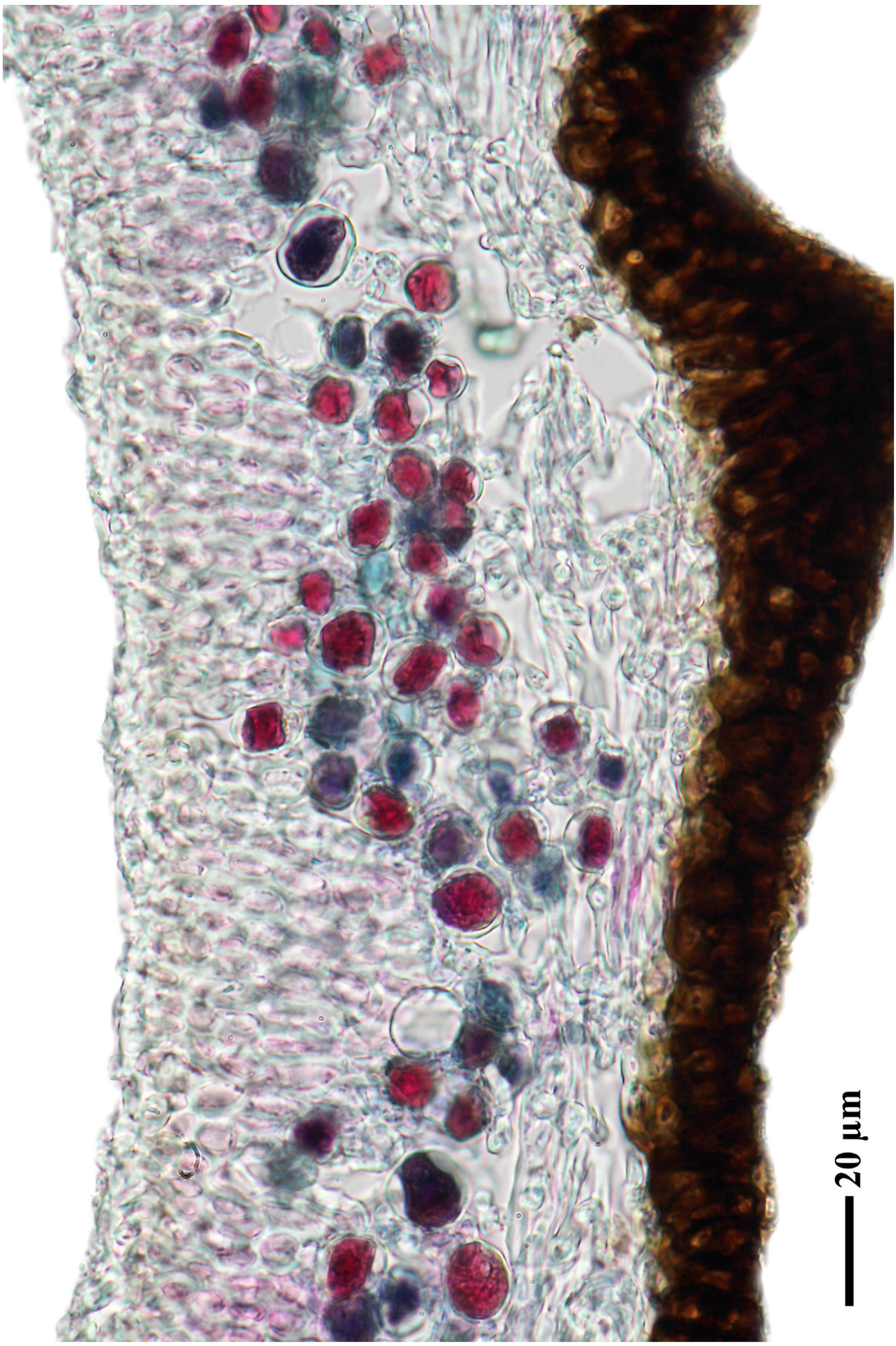
Physcia ciliata



Physcia ciliata



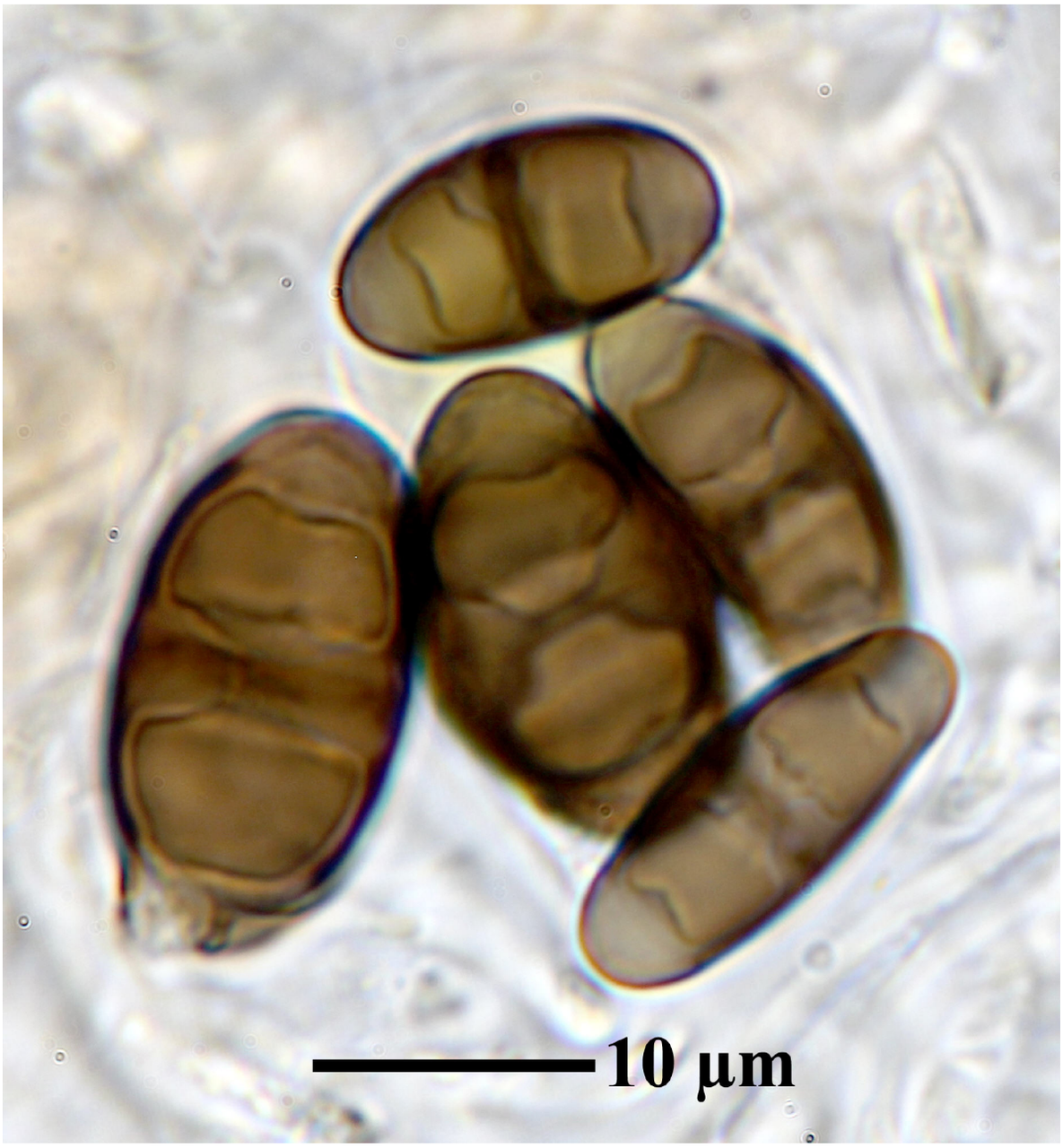
Physcia ciliata



Physcia ciliata



Physcia ciliata

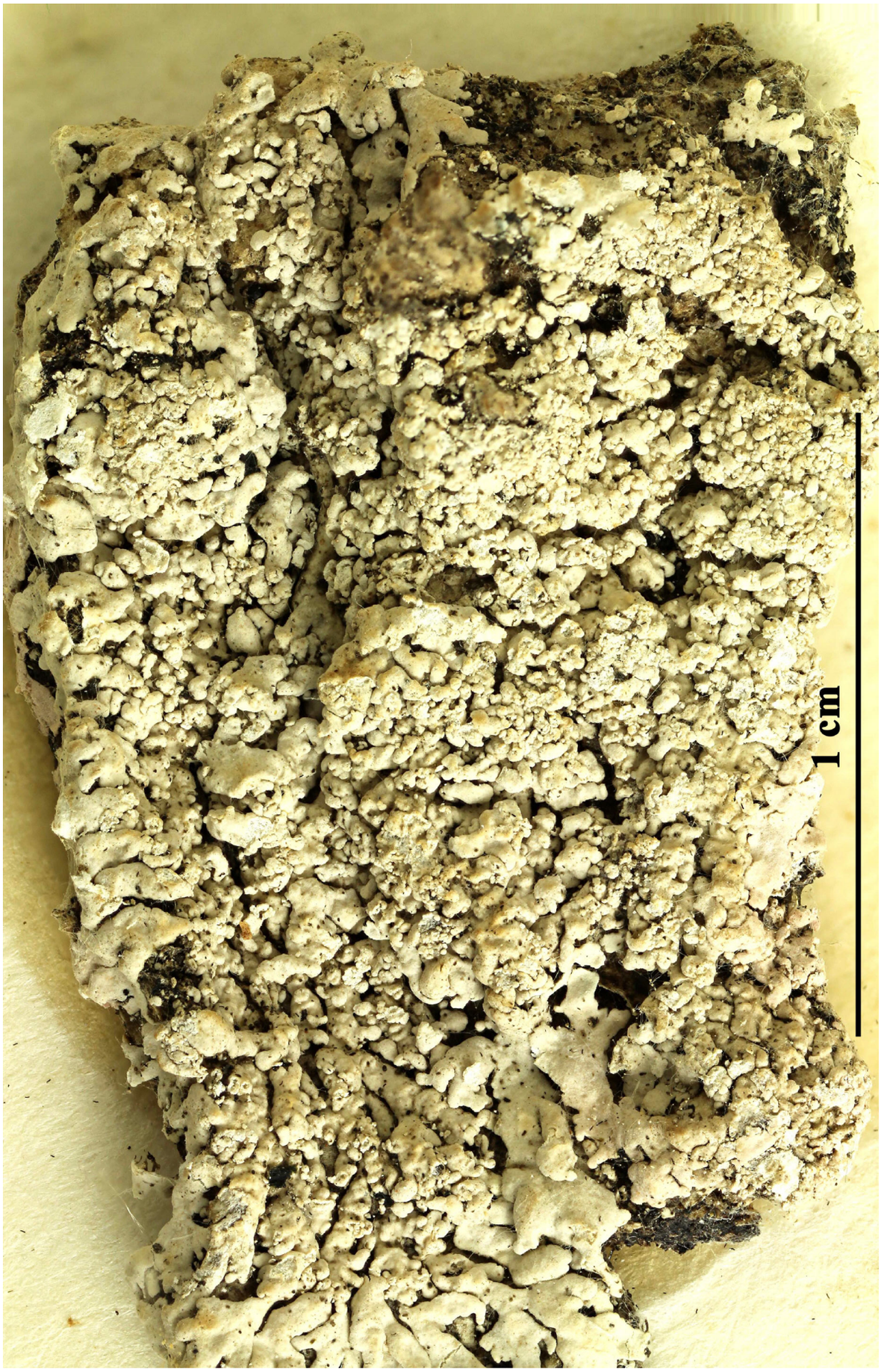


Physcia ciliata

Physcia clementei (Sm.) Lynge [as 'clementi'], Rabenh. Krypt.-Fl., Edn 2 (Leipzig) 9.6(1): 93 (1935)
= *Lichen clementei* Sm. 1807

[VZ1762], Jugoslavia. Dalmatia, peninsula Pelješac, in fundo vallis pone pagum Žuljana, 20 m. Ad corticem Oleae vetustae. Leg. A. Vězda, 17.7.1970. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1762.

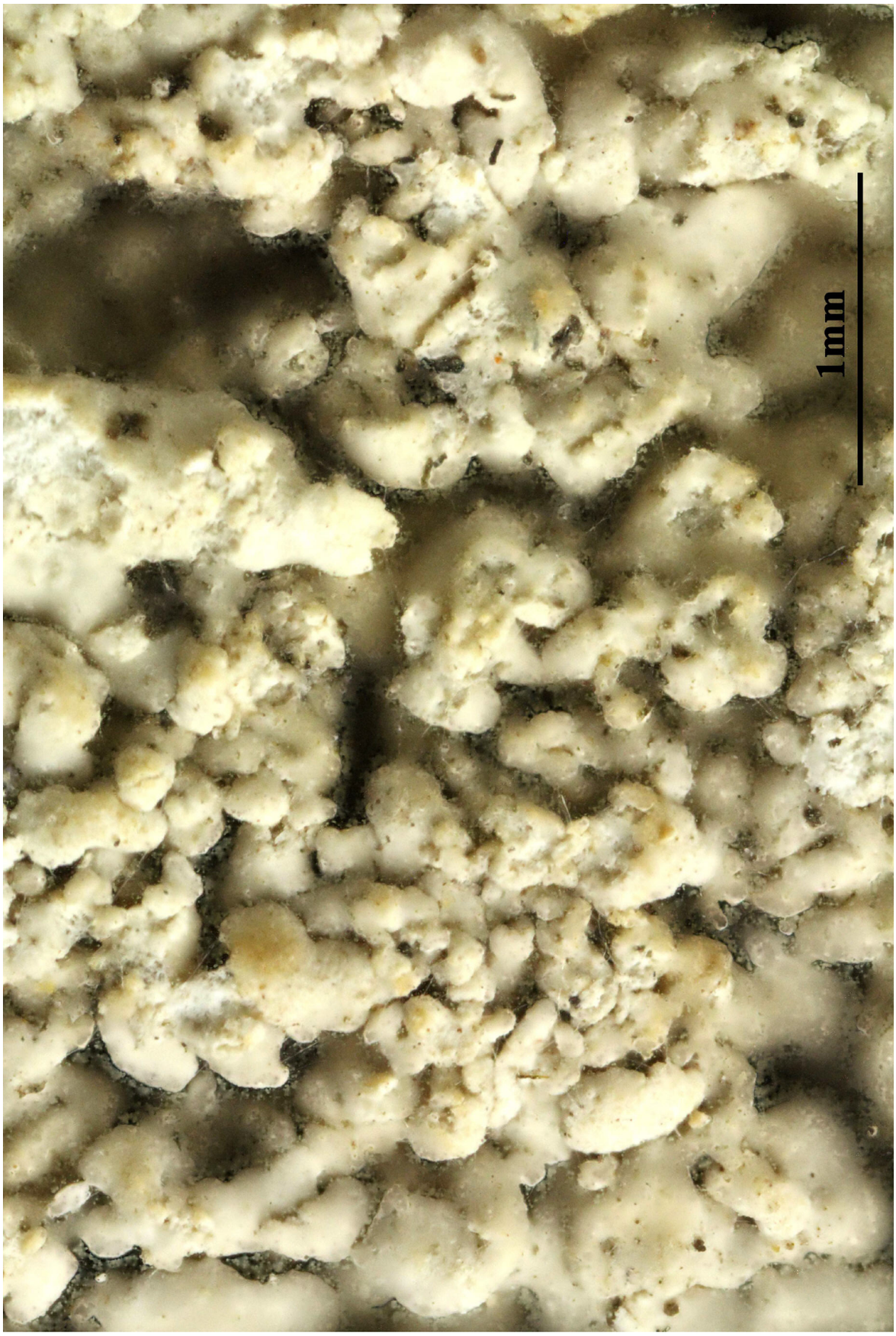
Thallus foliose, heteromerous, dorsiventral, narrow-lobed, forming orbicular, closely adpressed, up to 4 cm wide rosettes, the lobes flat to concave, (0.3-)0.5-0.8(-1.2) mm wide, sparingly branched, dull white, the central parts often covered by isidia-like pustules dissolving into granulose soredia that may fuse and cover the whole thallus. Lower surface white at lobe-tips, darker in central parts, with a few, concolorous, mostly simple rhizines. Upper cortex paraplectenchymatous; medulla white; lower cortex pseudoparenchymatous. Apothecia rather rare, lecanorine, 0.5-1.5(-2) mm across, with a black, sometimes thinly pruinose disc and an often crenulate, isidiate-sorediate margin. Epithecium brown; hymenium and hypothecium colourless; paraphyses slender, simple or forked in upper part, the apical cells clavate, with a thin, dark brown cap. 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, 15-20(-24) x 7-11 µm, Pachysporaria-type. Pycnidia rare. Conidia bacilliform. Photobiont chlorococcoid. Spot tests: upper cortex and medulla K+ yellow, C-, KC-, P+ faintly yellow. Chemistry: uppper cortex with atranorin; medulla with matranorin, lecotylin and traces of other triterpenoids. - Note: a Mediterranean to mild-temperate, mainly western species growing on more or less isolated trees; rare throughout the country, but most frequent in Tyrrhenian Italy and in the upper Friulian plain (humid-rainy climate).



Physcia clementei



Physcia clementei



Physcia clementei



Physcia clementei



Physcia clementei



Physcia clementei



Physcia clementei

Physcia clementei

Physcia endoaurantiaca Barkh., Dokl. Akad. Nauk Azerb. SSR 24(1): 37 (1968)

= *Phaeophyscia endoaurantiaca* (Barkh.) Schumm, in Schumm & Aptroot, Virtuelles Herbarium de Flechtengattungen Hyperphyscia, Paeophyscia, Physcia und Physconia 1: 140 (2019)

[VZ1572], , U.R.S.S. Transcaucasus, Colchis Distr. Sochi, Macesta, loco "Orlinye skaly" dicto, alt. 300 m. Ad corticem *Carpini caucasicae* Grossh. Leg. A. Vězda, 07.06.1978. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1572.

Thallus bräunlich bis düster grau, K-. An den Lappenrändern körnigsorediös, teils auch laminal kreisförmige Sorale. Oberrinde und Unterrinde paraplektenchymatisch. Unterseite schwarz, mit dicht stehenden, schwarzen, einfachen Rhizinen, die oftmals unter dem Thallusrand hervorstehen. Untere Hälfte des Markes vielfach mit orangefarbenem Pigment (Skyrin), welches mit K+ violet wird.



Physcia endoaurantiaca



Physcia endoaurantiaca



Physcia endoaurantiaca



Physcia endoaurantiaca



Physcia endoaurantiaca



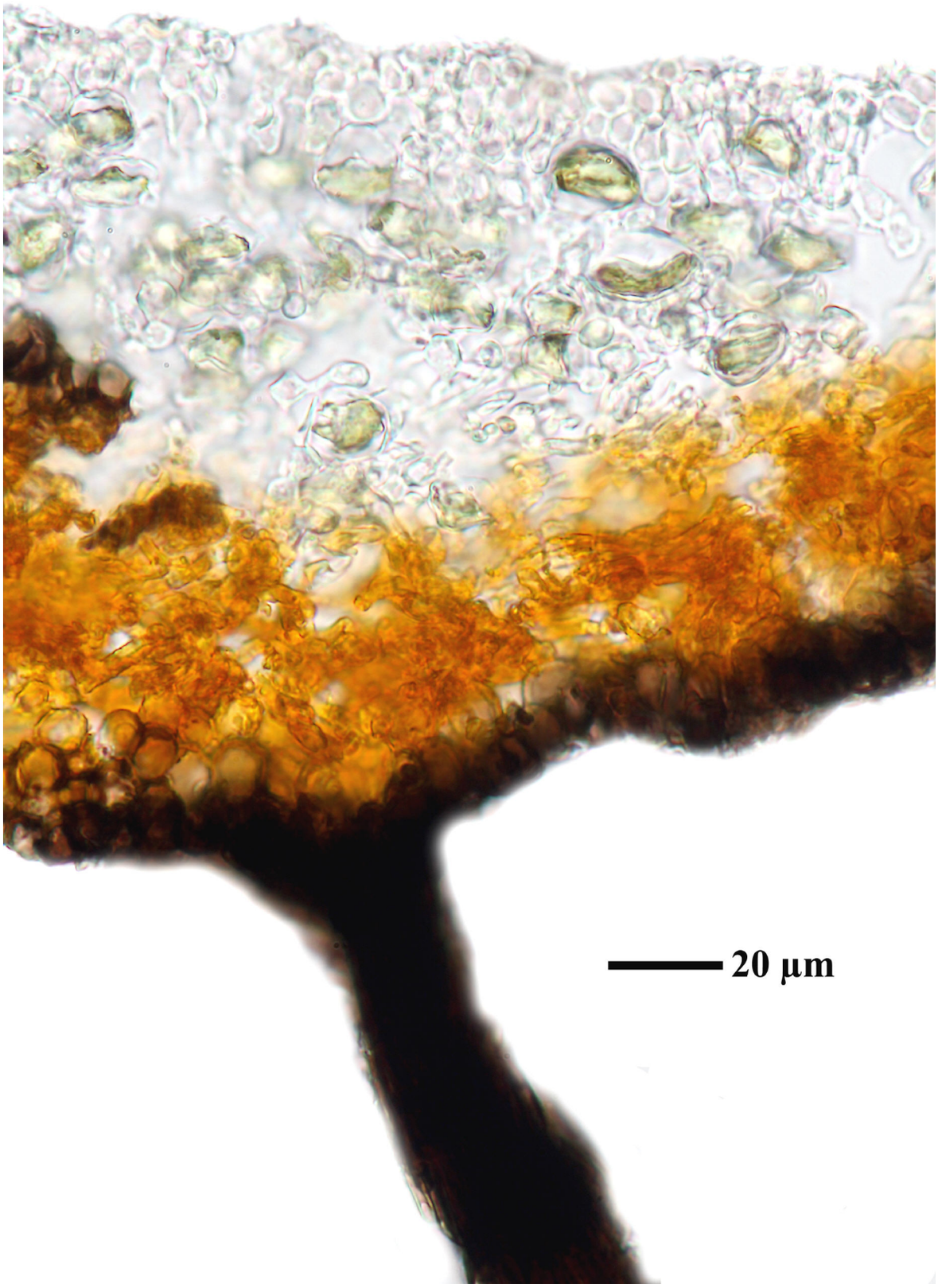
Physcia endoaurantiaca



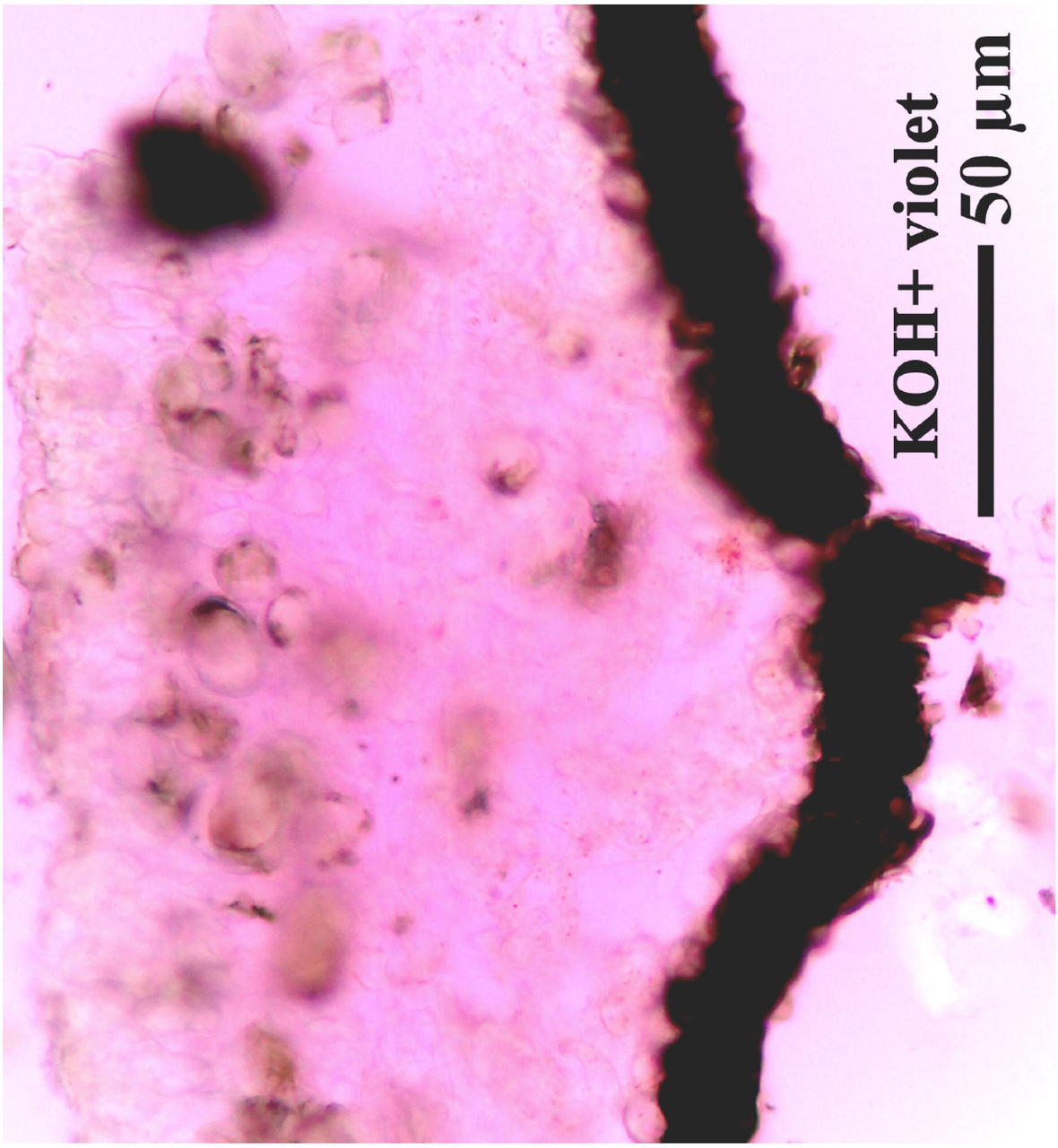
Physcia endoaurantiaca



Physcia endoaurantiaca



Physcia endoaurantiaca



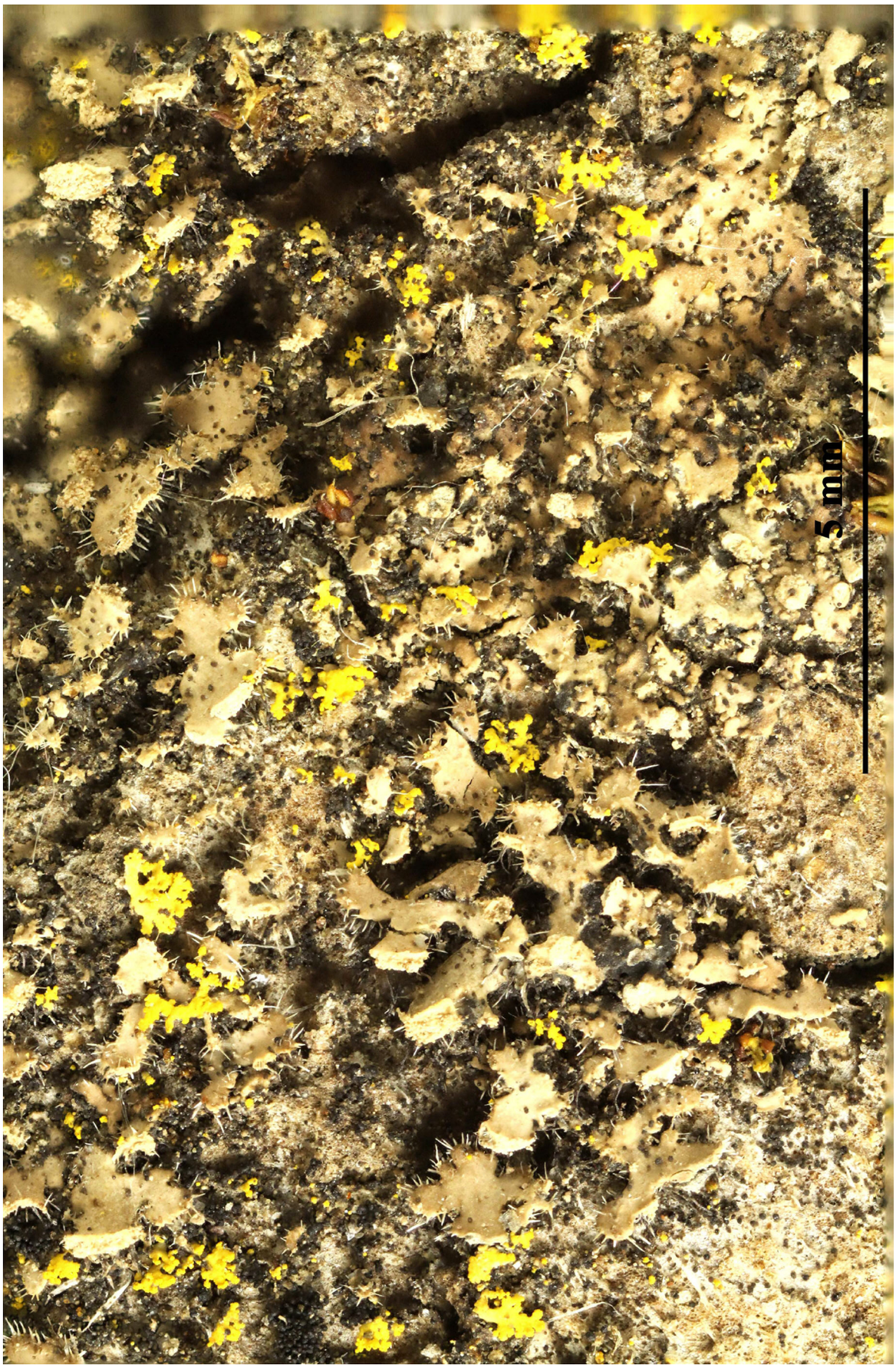
Physcia endoaurantiaca

Physcia endoaurantiaca

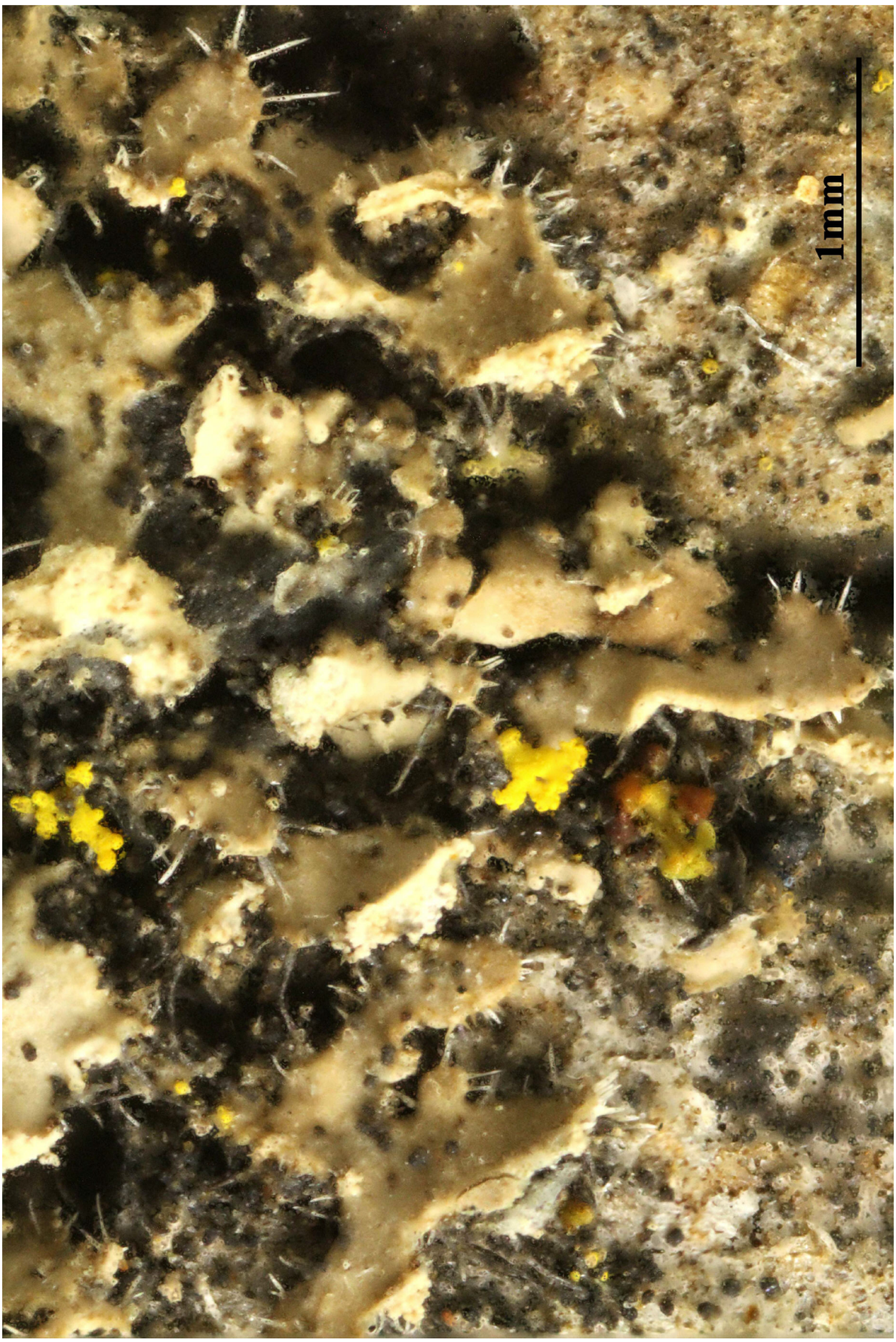
Physcia hirsuta Mereschk., Anal. Lichen. 21: 181 (1919)
= *Phaeophyscia hirsuta* (Mereschk.) Moberg, Bot. Notiser 131(2): 259 (1978)

[VZ1917], Gallia. Dept. Puy-de-Dome: Dallet, ad meridiem versus a Pont-da-Château, 300-350 m. Ad truncas Populorum secus rivum Allier. Leg. M. S. Christiansen (no. 75058). EX A, VěZDA LICHES SELECTI EXSICCATI NR. 1917.

Thallus foliose, heteromerous, dorsiventral, narrow-lobed, forming irregular to orbicular, up to 3 cm wide, often confluent rosettes. Lobes discrete to partly imbricate, 0.5-1(-1.5) mm broad, usually flat, grey to brown, green when wet, with sparse to numerous, multicellular, transparent cortical hairs near the lobe ends, epruinose, with terminal to marginal, often labriform soralia. Lower surface black, with simple rhizines. Upper and lower cortex paraplectenchymatous; medulla white. Apothecia rare, lecanorine, to 2 mm across, the thalline margin with cortical hairs. Epithecium brown; hymenium and hypothecium colourless; paraphyses slender, often forked in upper part, the apical cells clavate, with a thin dark cap. 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, 18-25(-28) x 7-12(-14) µm. Pycnidia rare, immersed. Conidia ellipsoid. Photobiont chlorococcoid. Spot tests: cortex and medulla K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a mainly temperate lichen found on isolated trees, more rarely on rock; most common in Tyrrhenian Italy.



Physcia hirsuta



Physcia hirsuta

Physcia integrata (Nyl.) Arnold, Flora, Regensburg 67(32): 620 (1884)
= *Physcia dilatata subsp. integrata* Nyl. 1860

[VZ2489], Tanzania. Reservatum Ngorongoro dictum, cratera Embagai dicta, 2200-2300 m. Ad corticem arborum. Leg. T. Pócs (88281) et S. Chuwa, 2.12.1989, det. H. Krog. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1489.

Thallus orbicular to irregular, to 5 cm diam., more or less closely adnate to substrate. Lobes imbricate, to 2 mm wide, tips rounded, sometimes with the margins dissected into lobules. Upper side pale grey to grey, usually glossy, sometimes white maculate. Medulla white. Under side black except at tips, cortex paraplactenchymatous with thick black cell walls, rhizines abundant, black. Soredia absent. Apothecia up to 2 mm diam., disc dark brown to black, sometimes white pruinose. Spores of Pachysporaria type, 18-27 x 9-12 µm. CHEMISTRY: Atranorin, zeorin (plus unidentified triterpenoids). Cortex and medulla K+ yellow. ECOLOGY: On tree trunks and rocks in open sites from sea level to 3600 m, uncommon.



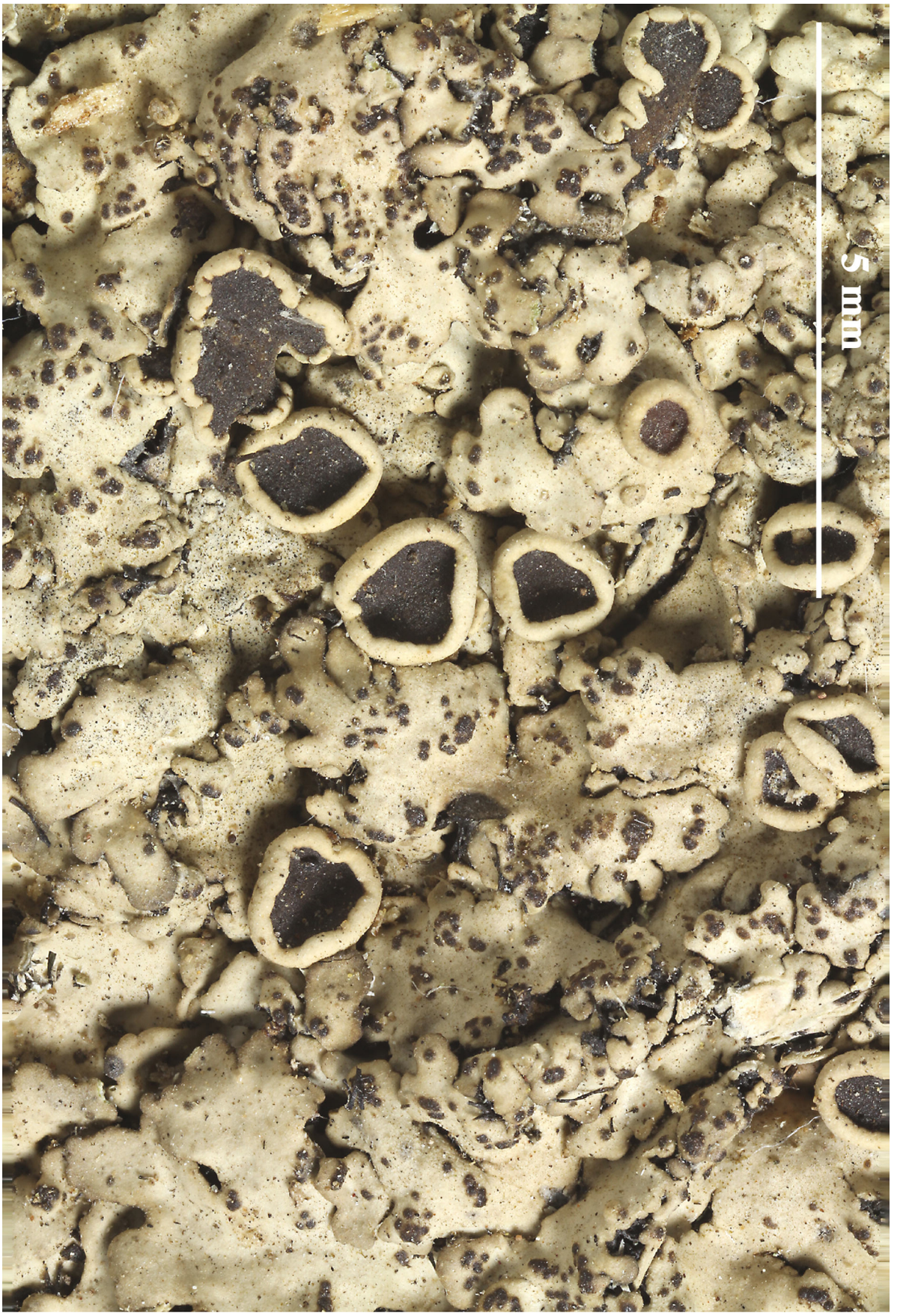
Physcia integrata



Physcia integrata



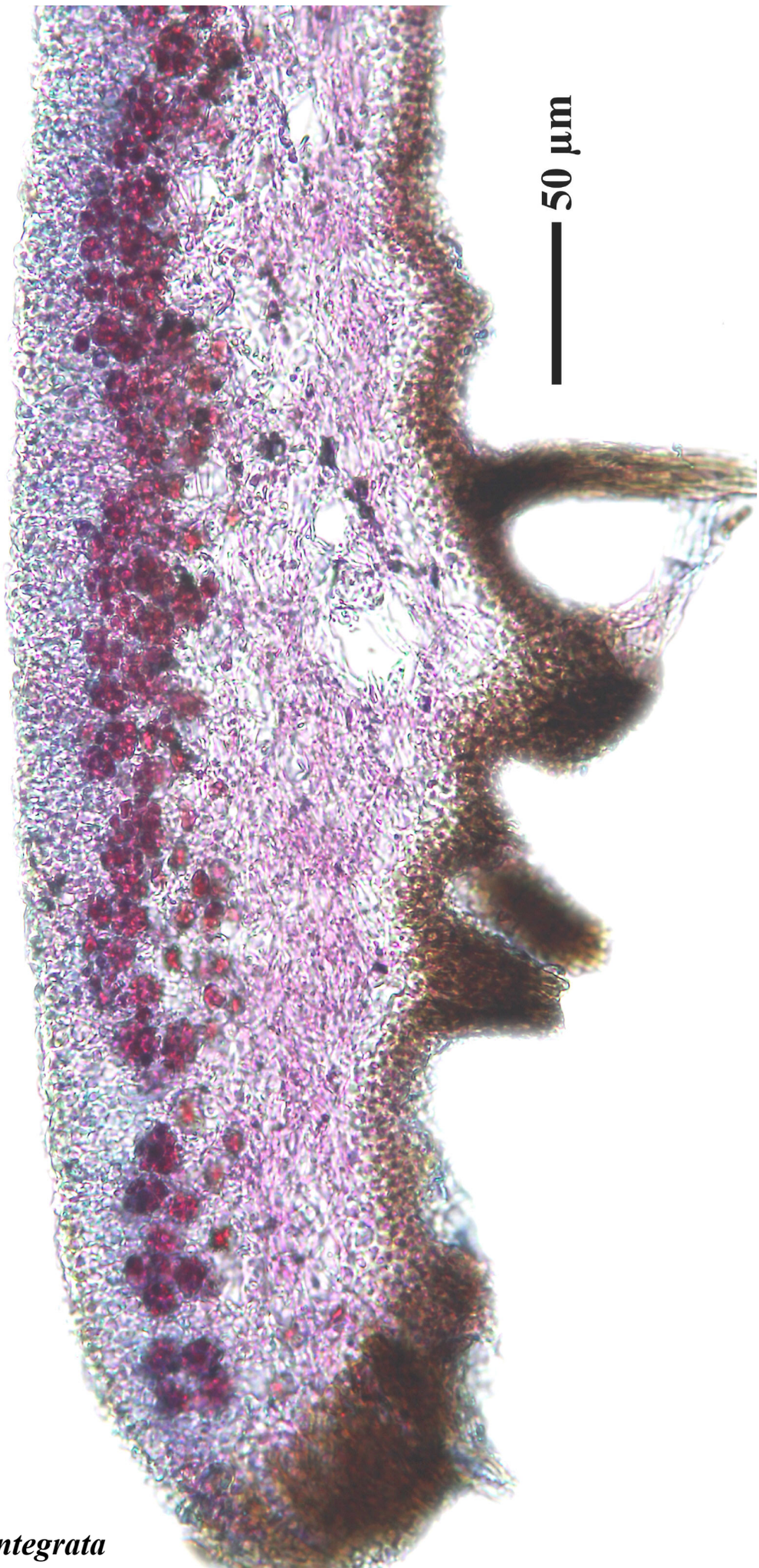
Physcia integrata



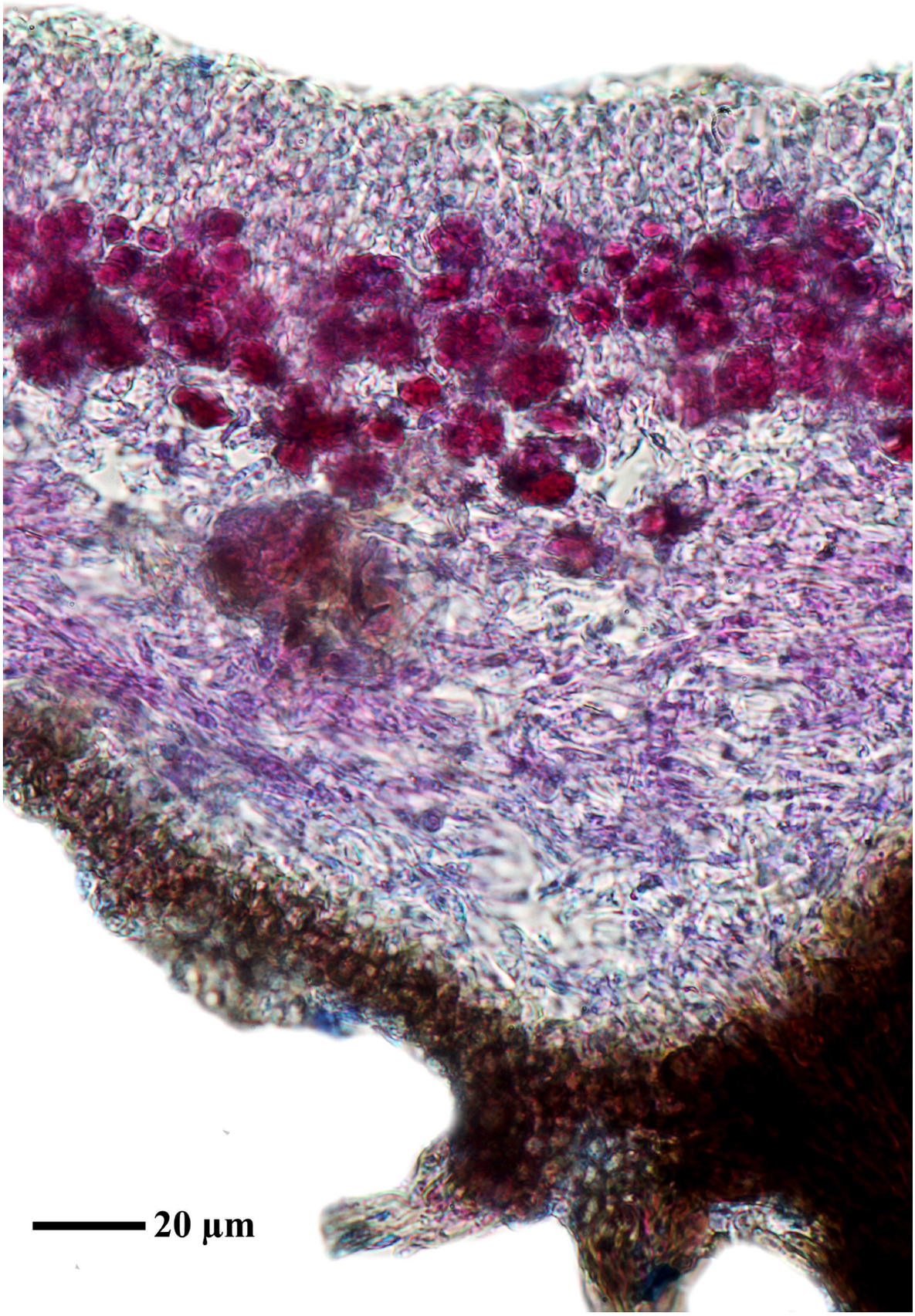
Physcia integrata



Physcia integrata



Physcia integrata



Physcia integrata





Physcia integrata

Physcia leptalea (Ach.) DC., in Lamarck & de Candolle, Fl. franç., Edn 3 (Paris) 2: 395 (1805)
= *Lichen leptaleus* Ach. 1799

[VZ1261], Romania. Dobrogea, distr. Tulcea: Codru prope Babadag, 80 m. Ad truncos *Quercus pubescentis*. Leg. A. Vězda, 4.5.1974. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1261.

Thallus foliose to subfruticose, heteromerous, dorsiventral, loosely attached, forming irregular patches. Lobes strap-shaped, (0.3-)0.5--1(-1.5) mm wide, more or less ascending to erect, white to very pale grey, white-maculate owing to breaks in the photobiont layer, with pale, but often dark-tipped marginal cilia, esorediate. Lower surface whitish, with very sparse brown-tipped rhizines towards the base, otherwise erhizinate. Upper cortex paraplectenchymatous; medulla very thin, white; lower cortex prosoplectenchymatous. Apothecia frequent, lecanorine, 2-3 mm across, with a brown-black, sometimes thinly pruinose disc and a rather thick, smooth thalline margin. Epithecium brown; hymenium and hypothecium colourless; paraphyses slender, simple or forked in upper part, the apical cells clavate, with a thin, dark brown cap. 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, 15-23 x 6-10 µm, the wall thickened at apex and at septum, Physcia-type. Pycnidia dark, semi-immersed. Conidia bacilliform, 4-6 x 1 µm. Photobiont chlorococcoid. Spot tests: upper cortex K+ yellow (reaction often rather faint), C-, KC-, P- or P+ faintly yellow; medulla K-, C-, KC-, P-. Chemistry: upper cortex with atranorin. - Note: a Mediterranean to mild-temperate lichen, most common on twigs of shrubs in Southern Italy, where it reaches the beech belt in the mountains.



Physcia leptalea

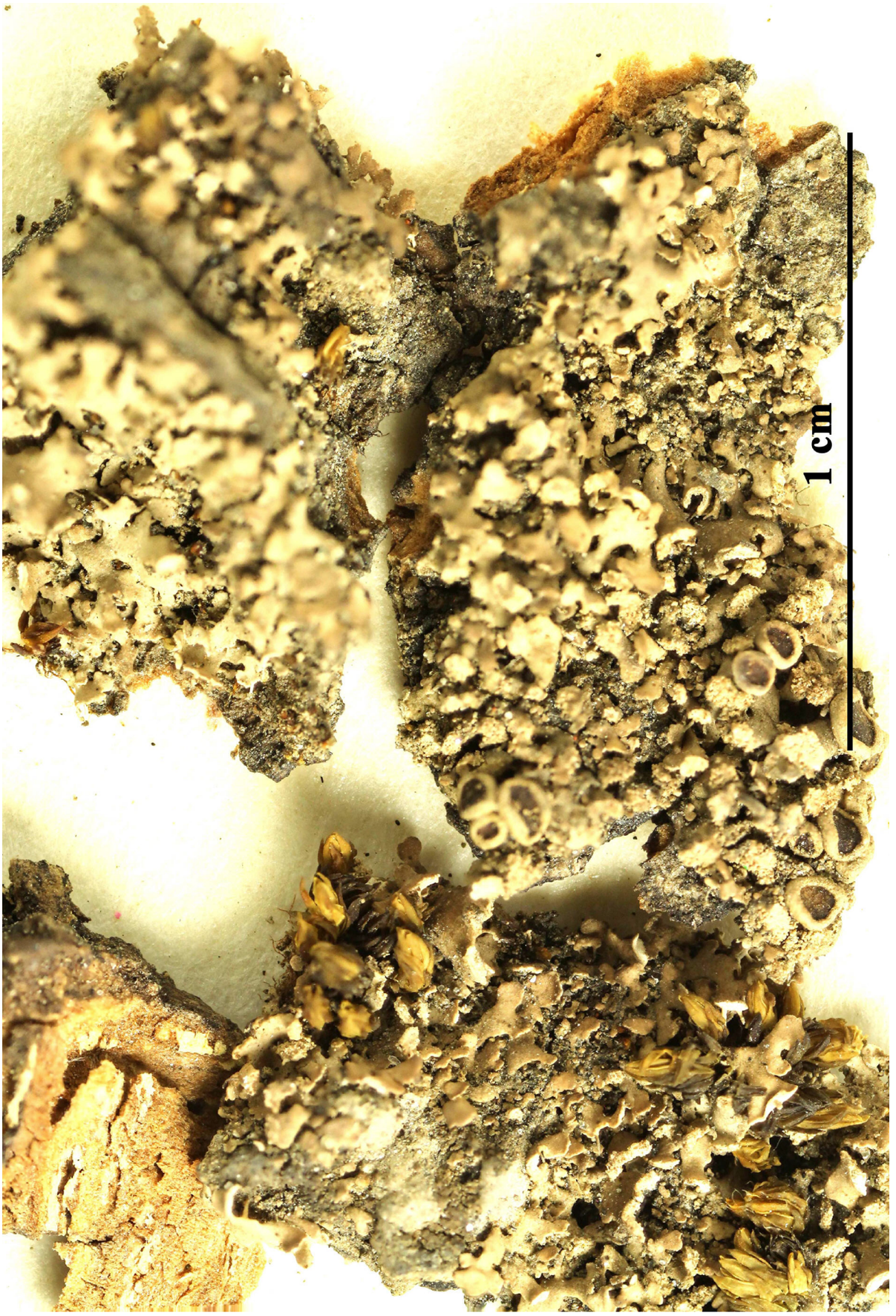


Physcia leptalea

Physcia luganensis Mereschk., Annuaire Conser. et Jard. bot. Genève 21: 190 (1919)
= *Physciella chloantha* (Ach.) Essl. Mycologia, 78: 94, 1986.
= *Parmelia chloantha* Ach. - Syn. Meth. Lich.: 217, 1814.
= *Phaeophyscia chloantha* (Ach.) Moberg
= *Physcia labrata* var. *intermedia* Mereschk.
= *Physcia obscura* var. *chloantha* (Ach.) Rabenh.
= *Physcia pragensis* Nádv.

[VZ1169], Austria. Stiria. Distr, Radkersburg, ad marginem silvae fluminis Drau non procul ab Gosdorf, 220 m. As basin *Fraxini excelsioris*. Leg. J. Poelt, 18.3.1973. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1169.

Thallus foliose, heteromerous, dorsiventral, narrow-lobed, rather loosely attached, forming at first orbicular, then irregular, up to 3 cm wide rosettes. Lobes discrete to imbricate, (0.2-)0.5-1(-1.5) mm broad, flat, whitish to pale brown, epruinose, with terminal labriform soralia at the tips of ascending lobules. Lower surface white to pale tan, with simple, pale rhizines. Upper cortex paraplectenchymatous; medulla white; lower cortex prosoplectenchymatous. Apothecia very rare, lecanorine. 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, 17-23 x 8-11 µm, the wall thickened at apex and at septum, Physcia-type. Pycnidia rare. Conidia short-ellipsoid. Photobiont chlorococcoid. Spot tests: cortex and medulla K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. -Note: a mild-temperate, typically submediterranean species occurring on a wide range of substrata (mostly on bark of isolated trees, but also on limestone in open woodlands), but never common in heavily disturbed habitats, rare along the eastern side of the Peninsula. It could be confused with specimens of *Phaeophyscia endophoenicea* with a white medulla, which however, have a black lower surface.



Physcia luganensis

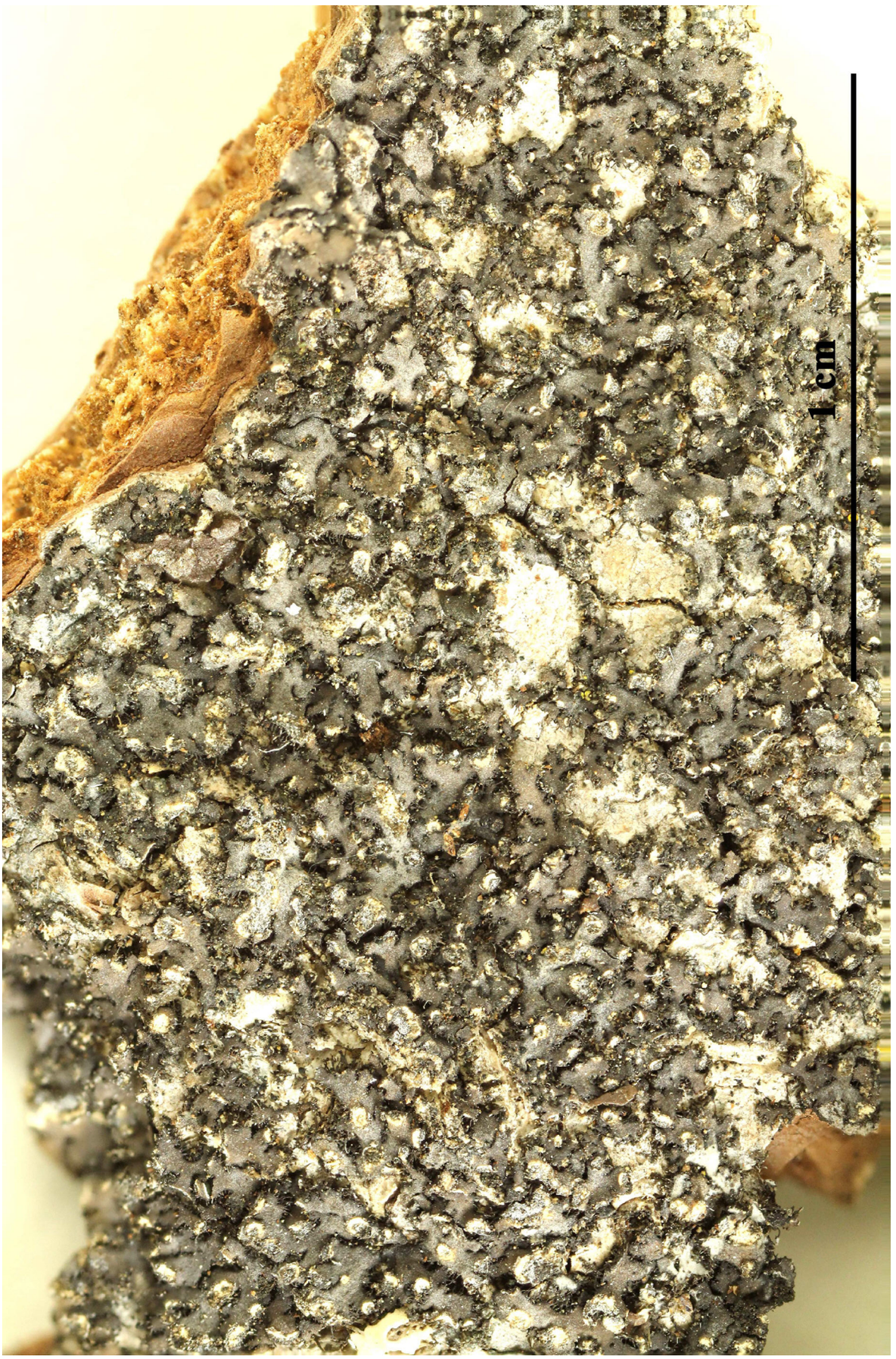


Physcia luganensis

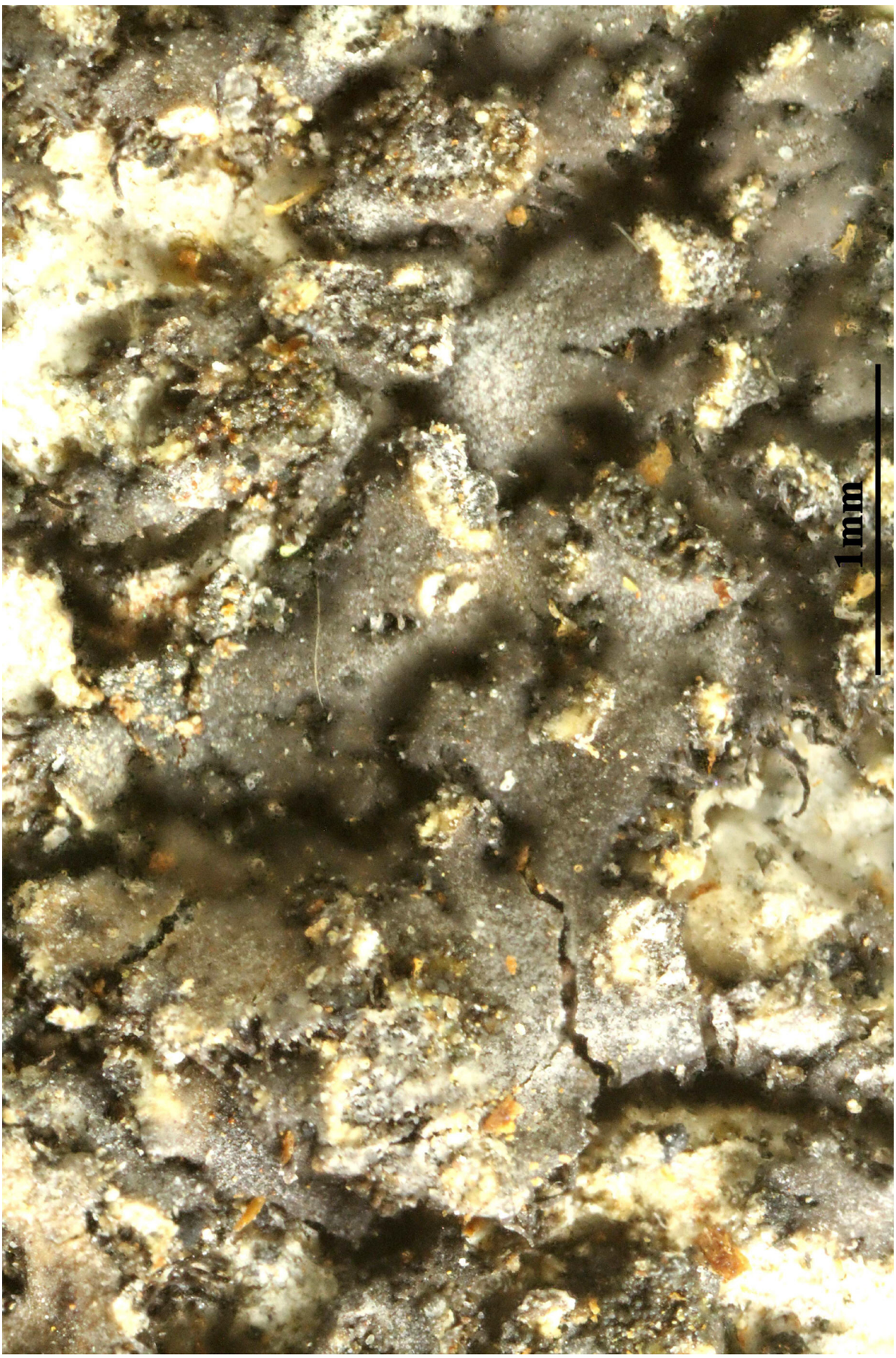
Physcia luganensis Mereschk., Annuaire Conser. et Jard. bot. Genève 21: 190 (1919)
= *Physciella chloantha* (Ach.) Essl. Mycologia, 78: 94, 1986.
= *Parmelia chloantha* Ach. - Syn. Meth. Lich.: 217, 1814.
= *Phaeophyscia chloantha* (Ach.) Moberg
= *Physcia labrata* var. *intermedia* Mereschk.
= *Physcia obscura* var. *chloantha* (Ach.) Rabenh.
= *Physcia pragensis* Nádv.

[VZ1936], URSS., Transcaucasia, Colchis, distr. Guiripshi, in vicinitate pagi Obrugvant, in monte Malyi Lakhult, 1700-2000 m. Ad corticem *Aceris*. Leg. V. Vašák, 8.6.1981, det. A. Vězda. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1936.

Thallus foliose, heteromerous, dorsiventral, narrow-lobed, rather loosely attached, forming at first orbicular, then irregular, up to 3 cm wide rosettes. Lobes discrete to imbricate, (0.2-)0.5-1(-1.5) mm broad, flat, whitish to pale brown, epruinose, with terminal labriform soralia at the tips of ascending lobules. Lower surface white to pale tan, with simple, pale rhizines. Upper cortex paraplectenchymatous; medulla white; lower cortex prosoplectenchymatous. Apothecia very rare, lecanorine. 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, 17-23 x 8-11 µm, the wall thickened at apex and at septum, Physcia-type. Pycnidia rare. Conidia short-ellipsoid. Photobiont chlorococcoid. Spot tests: cortex and medulla K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. -Note: a mild-temperate, typically submediterranean species occurring on a wide range of substrata (mostly on bark of isolated trees, but also on limestone in open woodlands), but never common in heavily disturbed habitats, rare along the eastern side of the Peninsula. It could be confused with specimens of *Phaeophyscia endophoenicea* with a white medulla, which however, have a black lower surface.



Physcia luganensis

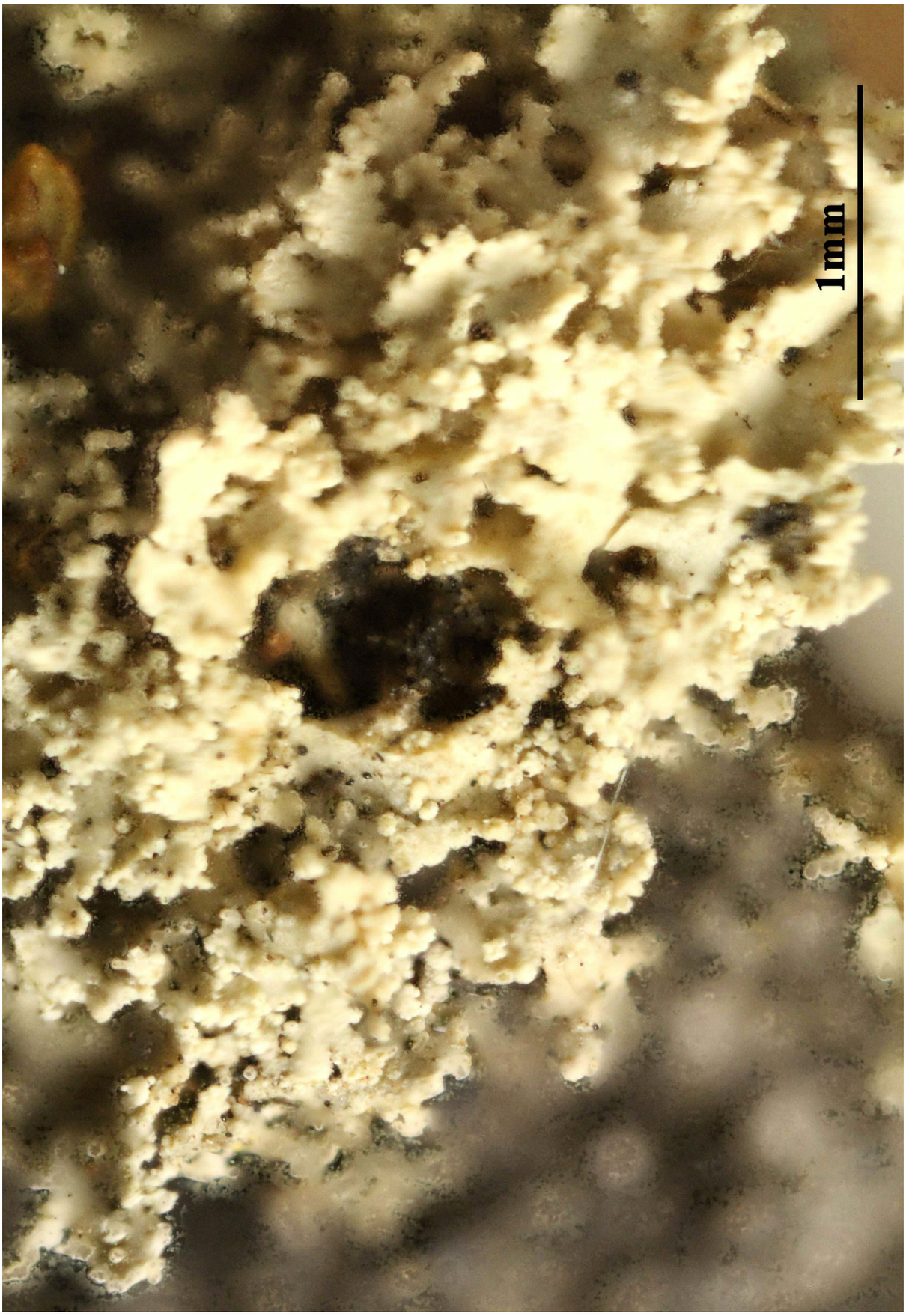


Physcia luganensis

Physcia millegrana Degel., Ark. Bot. 30A(no. 1): 56 (1940)

[VZ19428], U.S.A. New York, Schoharie County, ad occidentem versus a Prattsville. Ad truncum arboris (*Acer saccharum*) secus viam. Leg et det. W. L. Culberson, 11.1954. - Chemistry TLC p405/6. Atranorin. Ex S. Vezda : Lichenes Selecti Exsiccati Nr. 1948.

Thallus foliose, pale gray, spotted with white maculae; lobes thin, appressed to somewhat ascending, 0.3-1.0(-2.0) mm wide, margins and tips finely divided and dissolving into granular soredia; lower surface white with pale rhizines. Ascomata lecanorine apothecia, absent to abundant, < 1 mm diam.; disk dark brown, often pruinose. Chemistry. Cortex K+ yellow, medulla K-; atranorin. Substrate and Habitat. On exposed bark in forest canopies as well as in human altered habitats.Distribution. Eastern North America; in North Carolina throughout.



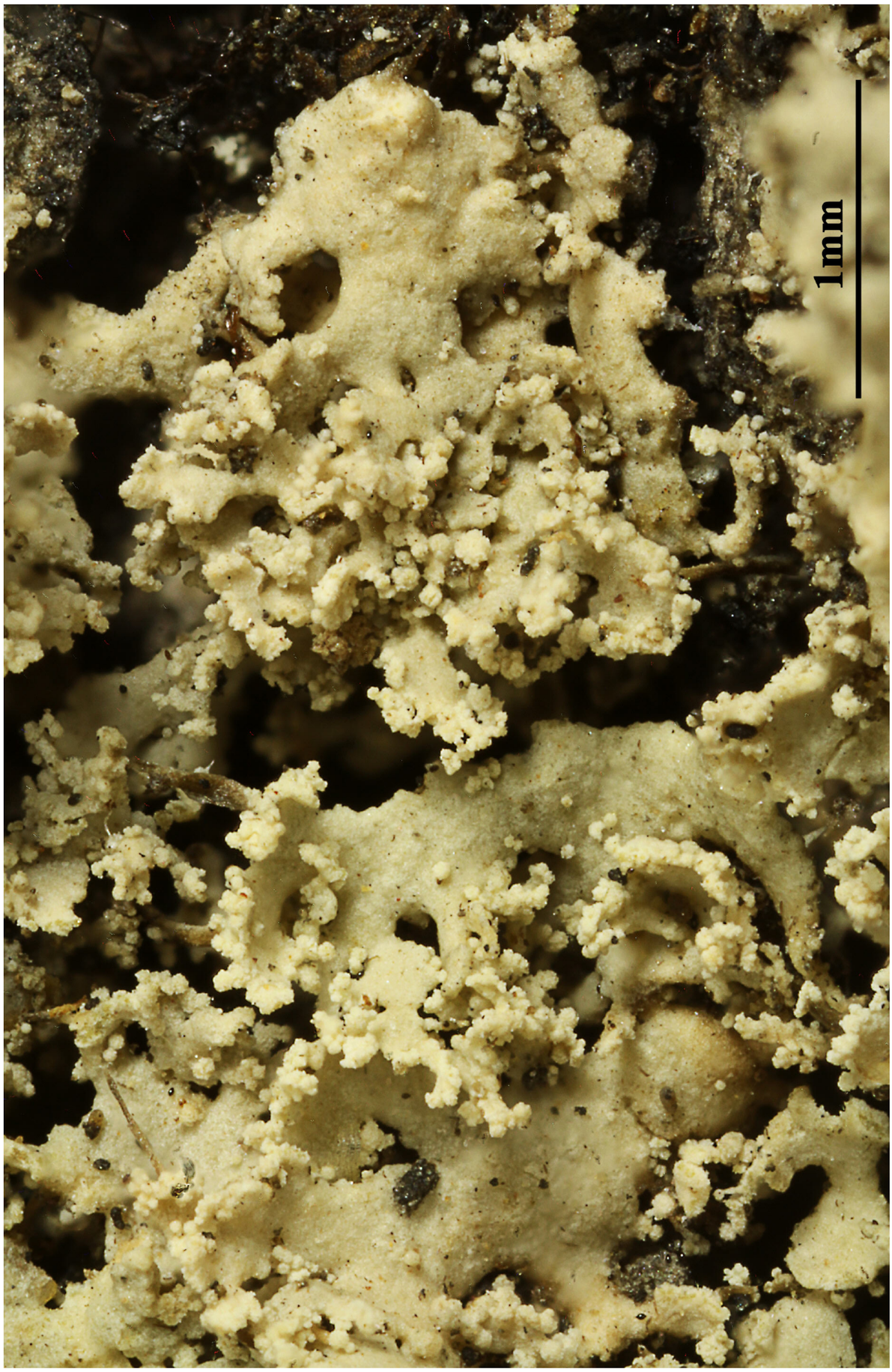
Physcia millegrana



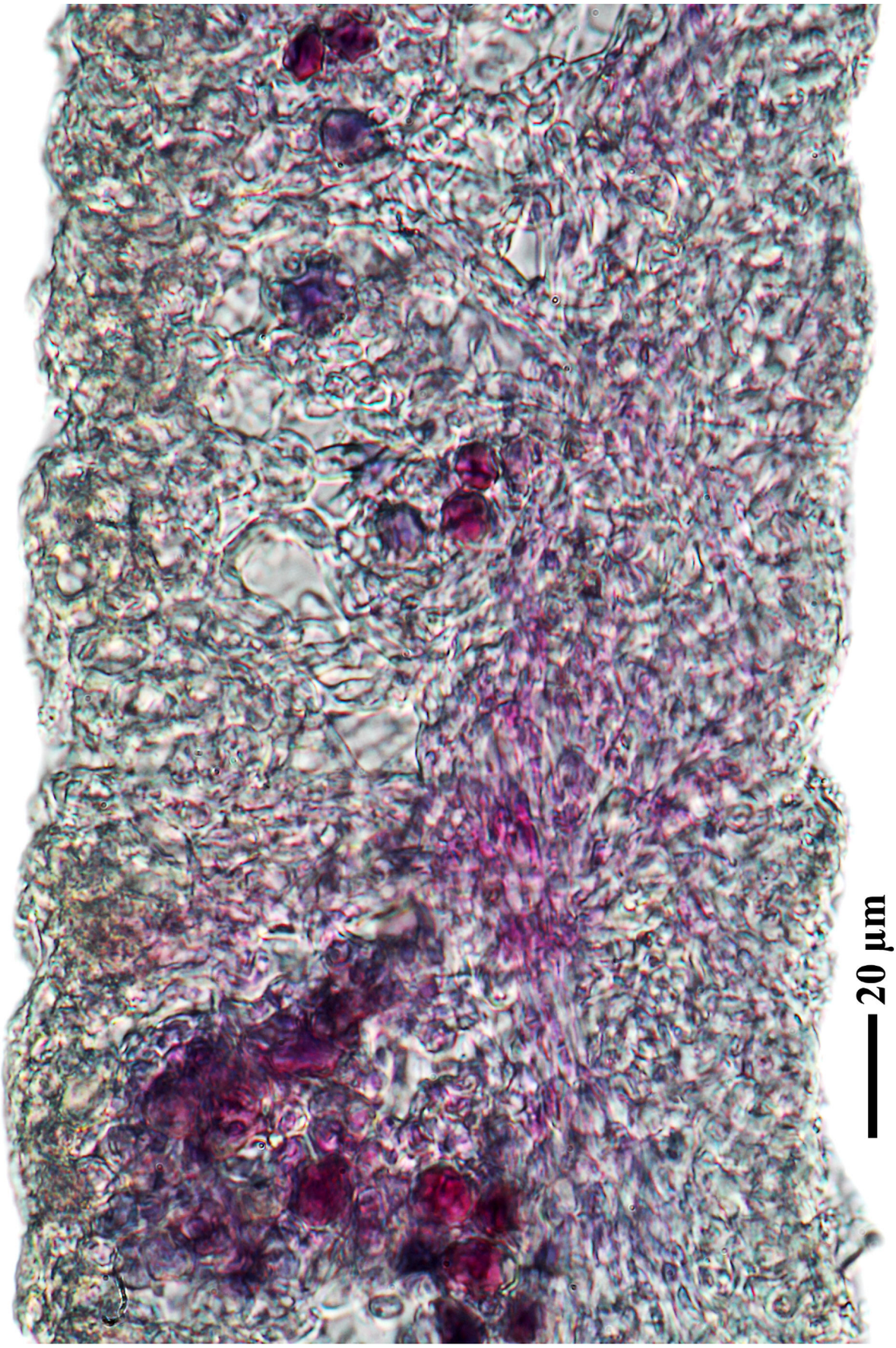
Physcia millegrana



Physcia millegrana



Physcia millegrana



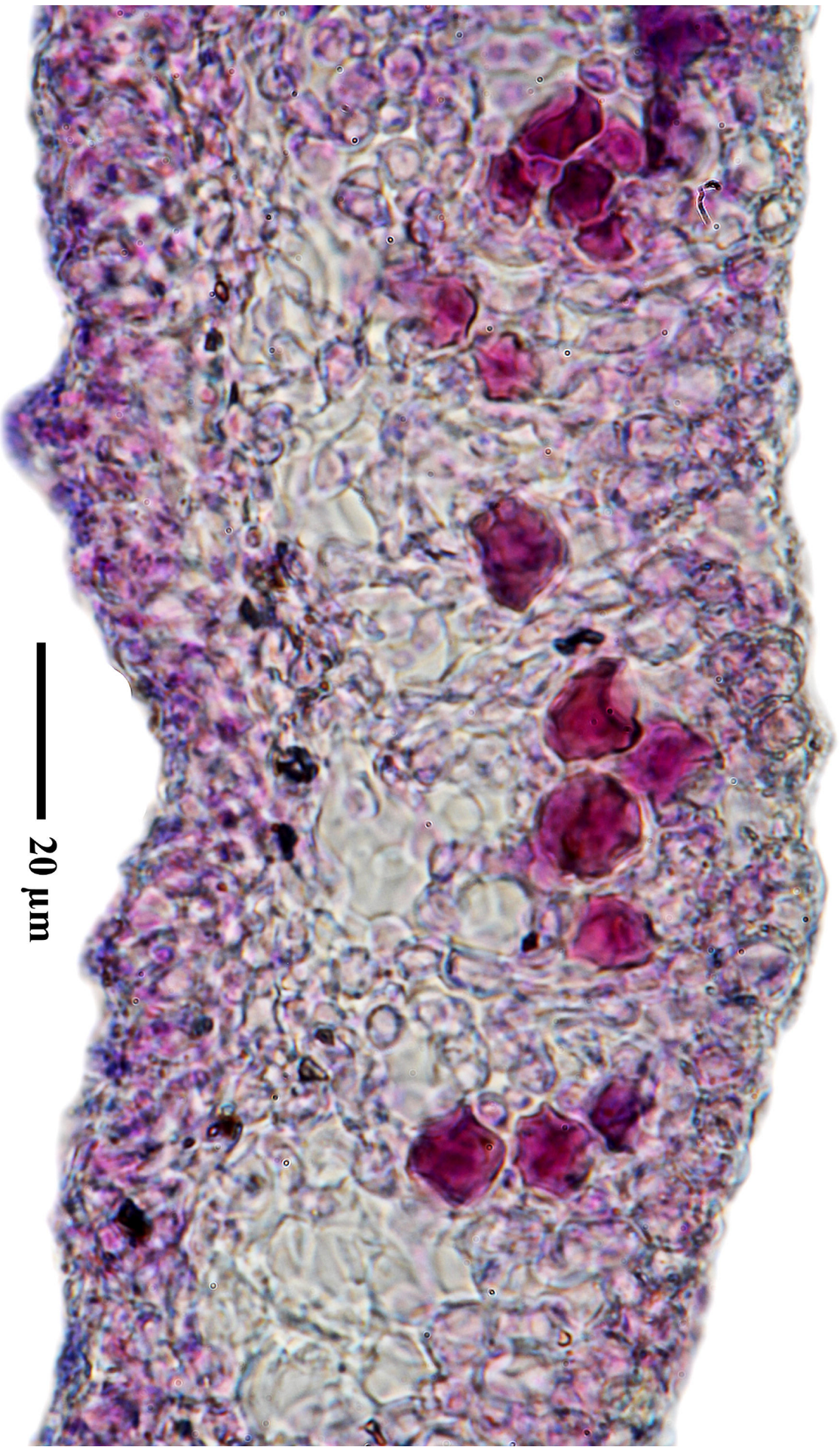
Physcia millegrana



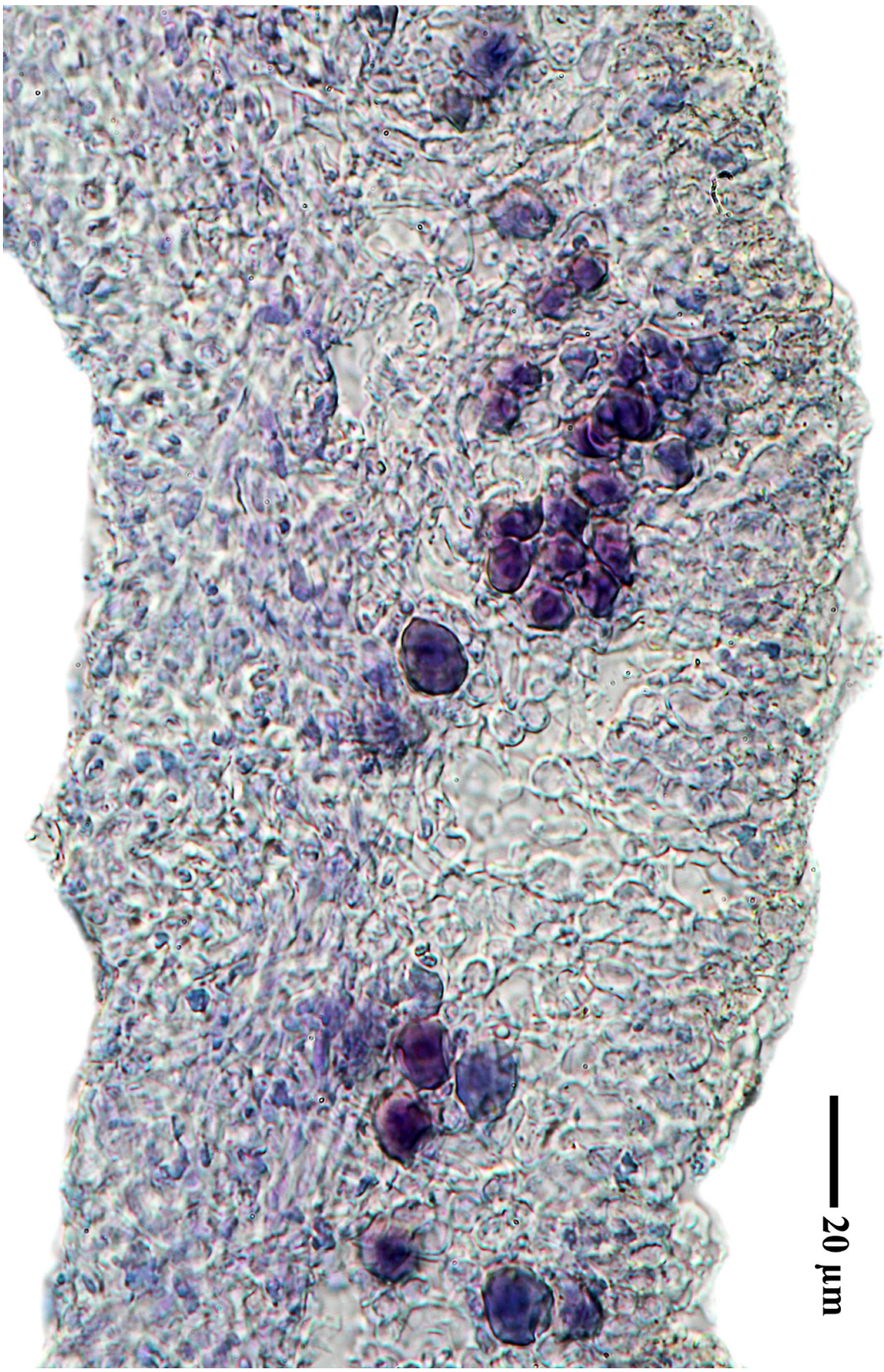
Physcia millegrana



Physcia millegrana



Physcia millegrana



Physcia millegrana

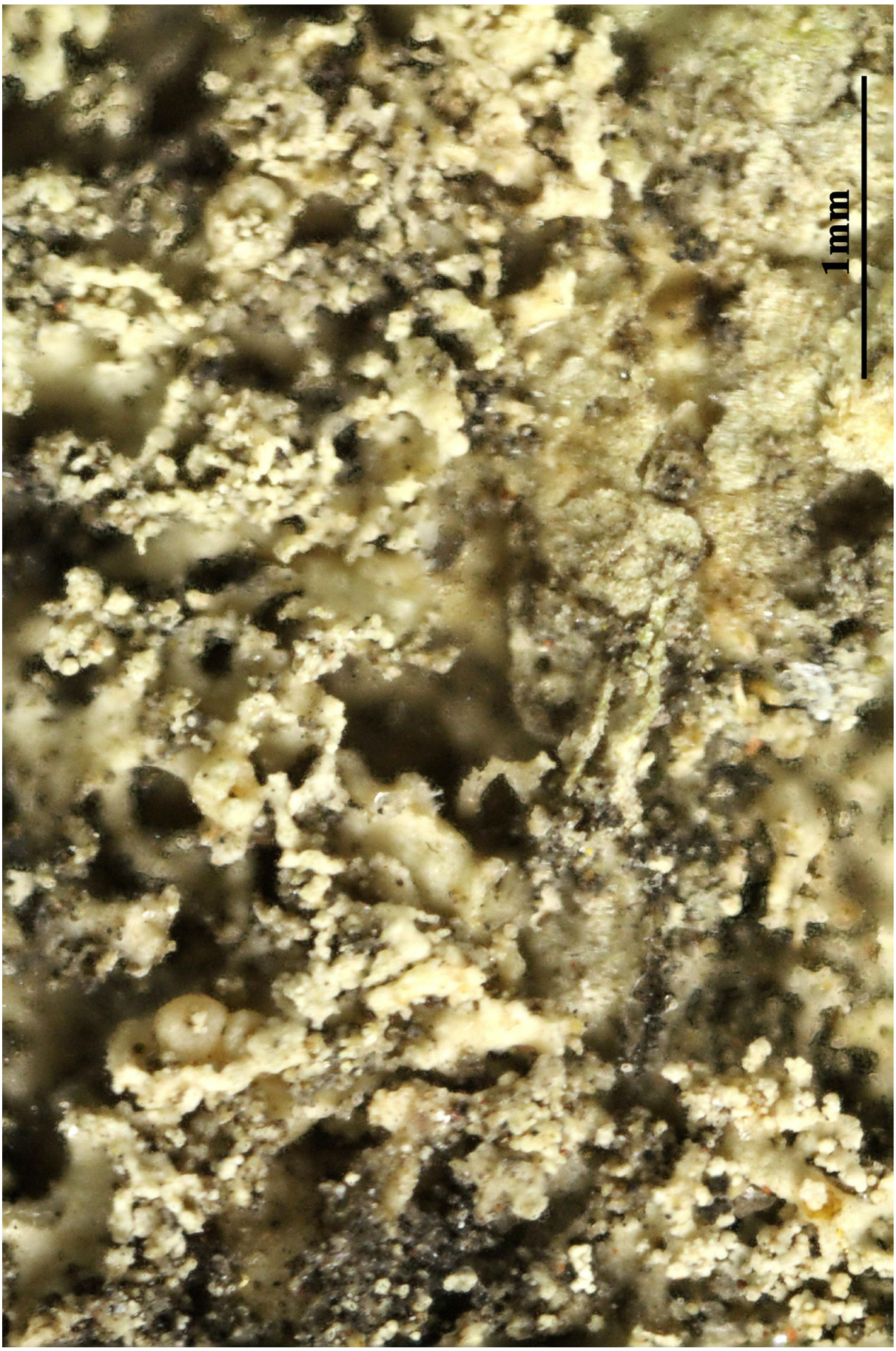
Physcia millegrana Degel., Ark. Bot. 30A(no. 1): 56 (1940)

[VZ2142], USA. Connecticut. Litchfield County: ad septentriones versus a Terryville, secus viam dictam Route 72. Ad truncum arboris (*Quercus alba*). Leg. W. L Culberson (no. 20114). Annot: Atranorin and traces of unidentified terpene-like compounds by TLC; anal. C. F. Culberson and A. Johnson. - EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 2142.

Thallus foliose, pale gray, spotted with white maculae; lobes thin, appressed to somewhat ascending, 0.3-1.0(-2.0) mm wide, margins and tips finely divided and dissolving into granular soredia; lower surface white with pale rhizines. Ascomata lecanorine apothecia, absent to abundant, < 1 mm diam.; disk dark brown, often pruinose. Chemistry. Cortex K+ yellow, medulla K-; atranorin. Substrate and Habitat. On exposed bark in forest canopies as well as in human altered habitats.Distribution. Eastern North America; in North Carolina throughout.



Physcia millegrana



Physcia millegrana

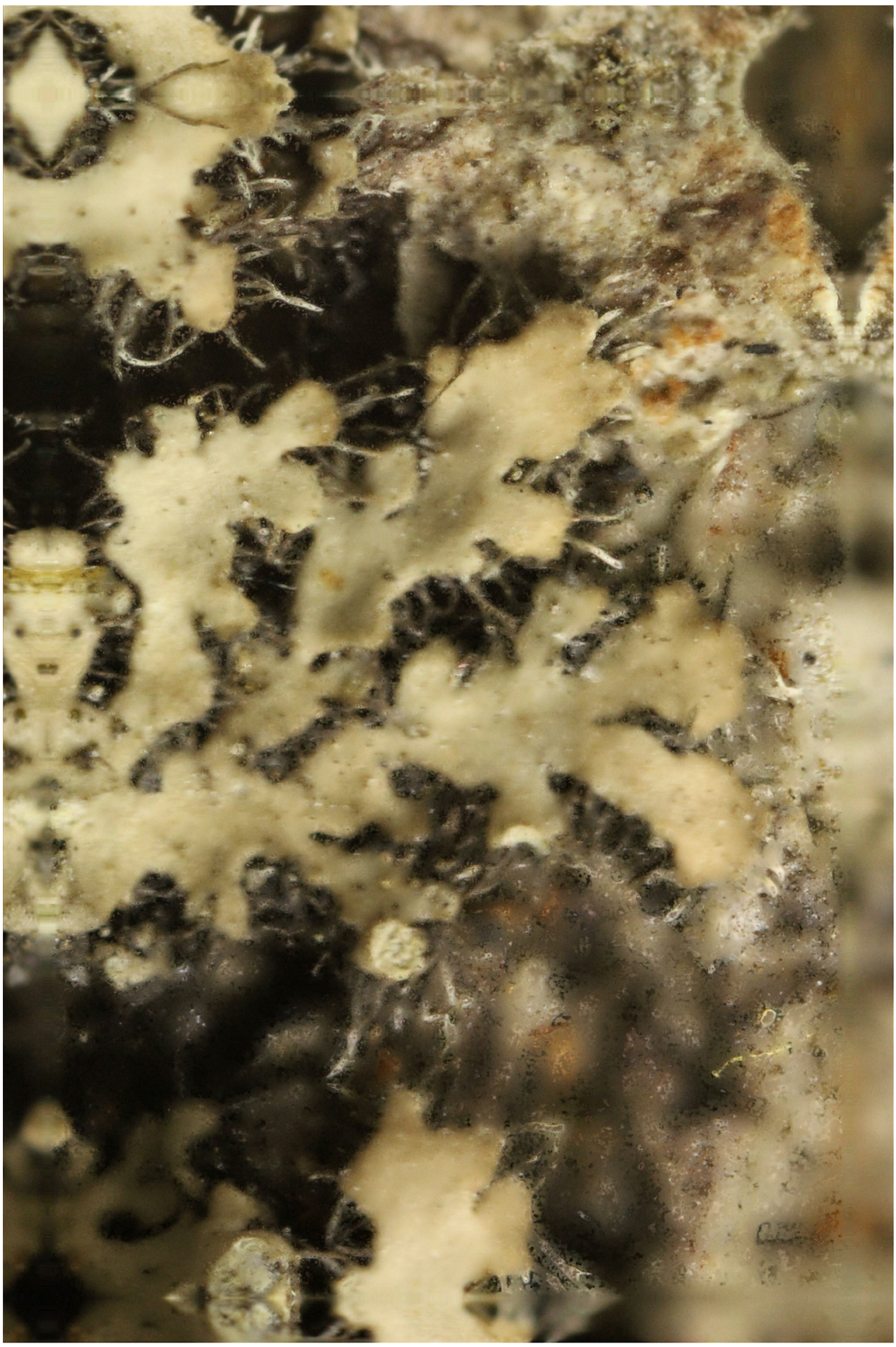
Physcia pusilloides Zahlbr., Cat. Lich. Univers. 7: 678 (1931)
= *Physcia pusilla* Mereschk. 1919
= *Phaeophyscia pusilloides* (Zahlbr.) Essl., Mycotaxon 7(2): 313 (1978)

[VZ1564], Bohemoslovacia. Slovacia, Tatra Minor: in ripa rivi inter Svermovo et Vernár, 800 m. Ad corticem *Salicis*. Leg. A. Vězda, 12.6.1975. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1564.

Thallus foliose, heteromerous, dorsiventral, narrow-lobed, forming orbicular to irregular, up to 2(-3) cm wide rosettes. Lobes elongate and discrete to partly imbricate, 0.3-1(-1.5) mm wide, flat, grey to grey-brown, epruinose, the main lobes branching into short lateral lobes bearing capitate, substipitate soralia at the tips. Lower surface black, with simple, black rhizines. Upper and lower cortex paraplectenchymatous; medulla white. Apothecia rare, lecanorine, to 3 mm across, the thalline margin sometimes with a corona of dark rhizines. Epithecium brown; hymenium and hypothecium colourless; paraphyses slender, often forked in upper part, the apical cells clavate, with a thin dark cap. 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, 18-23(-25) x 7-11 µm, uniformly thick-walled, Physcia-type. Pycnidia immersed. Conidia ellipsoid. Photobiont chlorococcoid. Spot tests: all negative. Chemistry: without lichen substances. - Note: a temperate species found on isolated deciduous trees with nutrient-rich bark, especially *Juglans* and *Fraxinus* in montane valleys, absent from urban areas, somehow less frequent in semi-natural.



Physcia pusilloides



Physcia pusilloides

Physcia stellaris (L.) Nyl., Bot. Notiser(10-11): 155 (1853)
= *Lichen stellaris* L. 1753

[VZ1859], Mexico.Guanajuato: 17 km ad orientem versus a Dolores Hidalgo. Ad corticem *Acaciae* sp.. Leg. W. L. Culberson (no. 17765) et C. F. Culberson, 21.12.1878. - Annot.: Atranorin, zeorin, possible traces of leucotylin, and unidentfied triterpenes by TLC; anl. A. Johnson and C. F. Culberson. - EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1859.

Thallus foliose, heteromerous, dorsiventral, narrow-lobed, closely adpressed, forming orbicular, up to 4(-6) cm wide rosettes, the lobes 0.5-1.5(-2.5) mm broad, flat to usually convex, whitish grey to (rarely) cream-coloured, emaculate and epruinose. Lower surface white to brownish, with simple rhizines. Upper cortex paraplectenchymatous; medulla white; lower cortex prosoplectenchymatous, with the lowermost part gradually forming rounded, isodiametric cells. Apothecia common, lecanorine, to 3(-4) mm diam. with a sometimes white-pruinose, otherwise black disc and a smooth thalline margin. Epithecium brown; hymenium and hypothecium colourless; paraphyses slender, simple or forked in upper part, the apical cells clavate, with a thin, dark brown cap. 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-)15-22(-28) x (6.5-)7-11(-12) µm, the wall thickened at apex and at septum, Physcia-type. Pycnidia common, immersed, black. Conidia subcylindrical, 4-6 x c. 1 µm. Photobiont chlorococcoid. Spot tests: upper cortex K+ yellow, C-, KC-, P- or P+ faintly yellow; medulla K-, C-, KC-, P-. Chemistry: upper cortex with atranorin. - Note: a (cool-) temperate to southern boreal-montane, circumpolar lichen of isolated trees. *P. biziana*, *P. aipolia* and *P. stellaris*, although often overlapping in their altitudinal distributions.



Physcia stellaris



Physcia stellaris

Physcia subalbinea Nyl., Flora, Regensburg 57: 306 (1874)
= *Physcia caesia* (Hoffm.) Fürnr., Naturhist. Topogr. Regensburg (Regensburg) 2: 250 (1839)

[VZ1123], Bohemoslovacia. Carpati, montes Tatra Magna: in valle Predné Medodoly, in vicinitate casae alpinae, 1600 m. Ad saxa calcarea. Leg. A. Věda, 28.6.1972. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1123.

Thallus foliose, heteromerous, dorsiventral, narrow-lobed, closely adpressed, forming orbicular to irregular, up to 5(-8) cm wide rosettes. Lobes 0.5-1(-1.5) mm wide, flat, radiating and well separated, the upper surface whitish to bluish grey, conspicuously white-maculate owing to breaks in the photobiont layer, with terminal, labriform, blue-grey soralia arising at the tip of short secondary lobes, especially in thallus center; old soralia often becoming convex. Lower surface whitish to dark grey, with mostly simple rhizines. Upper and lower cortex paraplectenchymatous; medulla white. Apothecia rare, lecanorine, to 1.5 mm across, with a brown-black, sometimes pruinose disc and an entire to crenulate thalline margin. Epithecium brown; hymenium and hypothecium colourless; paraphyses slender, simple or forked in upper part, the apical cells clavate, with a thin, dark brown cap. 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, 17-25 x 6-11 µm, Physcia-type. Photobiont chlorococcoid. Spot tests: upper cortex and medulla K+ yellow, C-, KC-, P- or P+ faintly yellow. Chemistry: upper cortex with atranorin; medulla with atranorin, zeorin and sometimes unidentified triterpenes. - Note: ecologically similar to *P. caesia*, but most common in dry-warm alpine valleys.



Physcia subalbinea

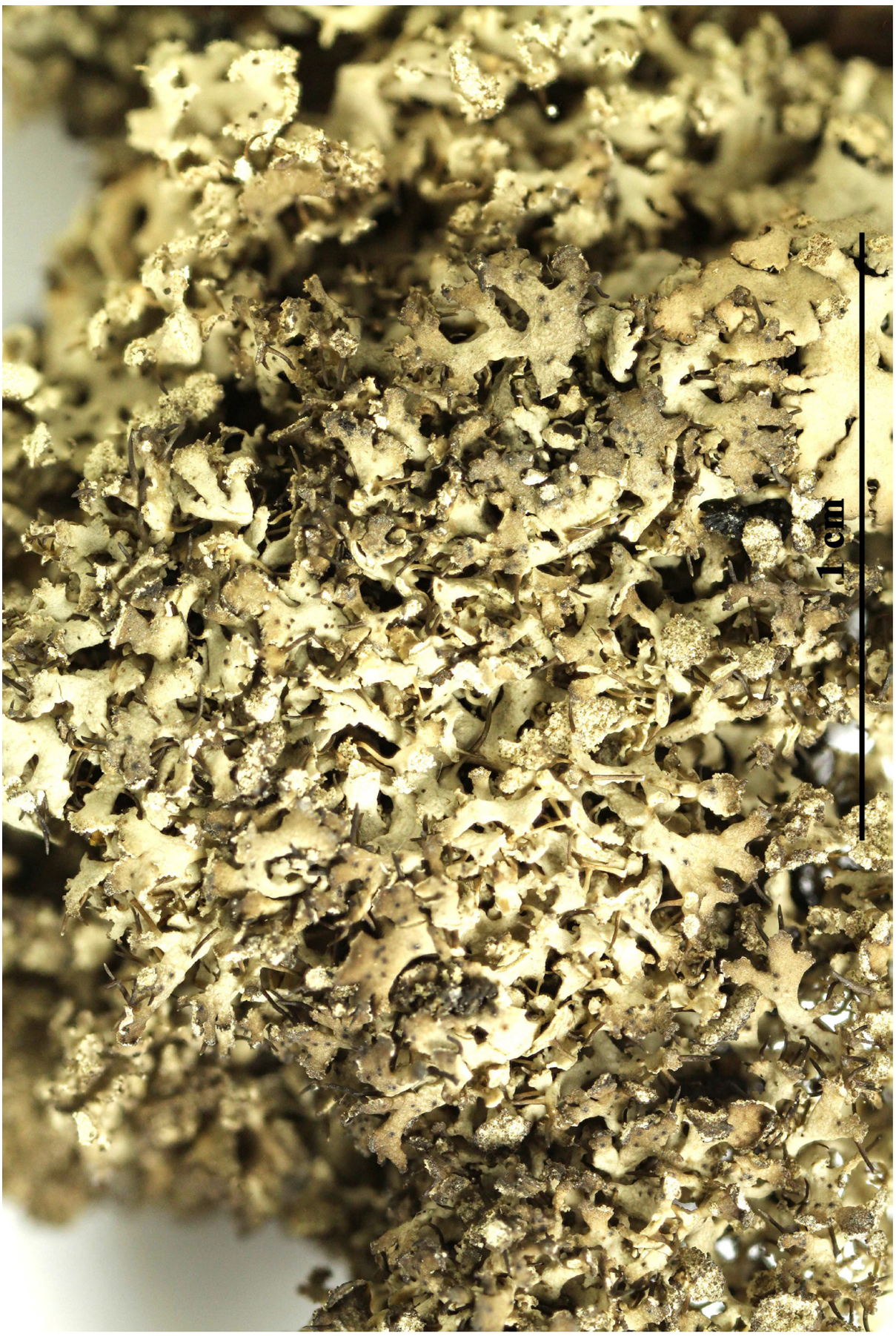


Physcia subalbinea

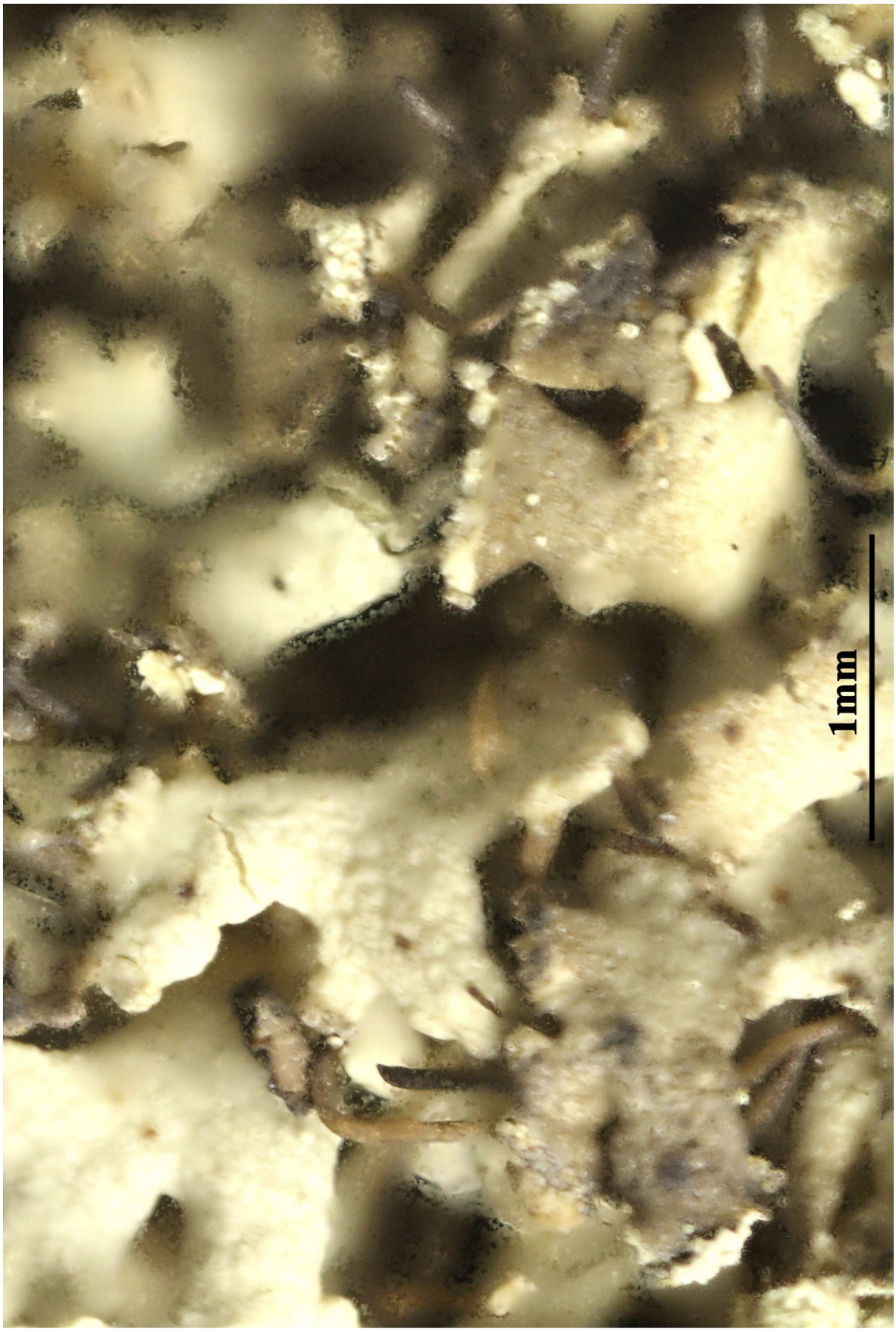
Physcia tenella (Scop.) DC., in Lamarck & de Candolle, Fl. franç., Edn 3 (Paris) 2: 396 (1805)
= *Lichen tenellus* Scop. 1772

[VZ1225], Suecia. Bohuslän, Syd-Koster, prope Ecclesiam. Ad scopulos maritimos. Leg. R. Santesson (no. 24141), 15.6.1972. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1225.

Thallus foliose to subfruticose, heteromerous, dorsiventral, narrow-lobed, loosely attached, mostly in the form of confluent thalli forming irregular patches. Lobes strap-shaped, 0.3-1(-1.5) mm wide, ascending, white to very pale grey, white-maculate owing to breaks in the photobiont layer, with pale, but often dark-tipped marginal cilia and terminal, labriform soralia. Lower surface whitish, with very sparse brown-tipped rhizines towards the base, otherwise erhizinate. Upper cortex paraplectenchymatous; medulla very thin, white; lower cortex prosoplectenchymatous. Apothecia rare, lecanorine, 2-3 mm across, with a brown-black, sometimes pruinose disc and a rather thick, smooth thalline margin. Epithecium brown; hymenium and hypothecium colourless; paraphyses slender, simple or forked in upper part, the apical cells clavate, with a thin, dark brown cap. 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, thick-walled, (15-)17-21(-23) x 6-10 µm, the wall thickened at apex and at septum, Physcia-type. Pycnidia dark, semi-immersed. Conidia bacilliform, 4-6 x 1 µm. Photobiont chlorococcoid. Spot tests: cortex K+ yellow (reaction often faint), C-, KC-, P- or P+ faintly yellow; medulla K-, C-, KC-, P-. Chemistry: upper cortex with atranorin. - Note: a mainly temperate species. Its separation from *P. adscendens* is not always clear.



Physcia tenella



Physcia tenella

Physcia ticinensis (Mereschk.) Frey, Ber. schweiz. bot. Ges. 73: 479 (1963)
= *Physcia virella f. ticinensis* Mereschk. 1919
= *Phaeophyscia ticinensis* (Mereschk.) Schumm, in Schumm & Aptroot, Virtuelles Herbarium de Flechtengattungen Hyperphyscia, Paeophyscia, Physcia und Physconia 1: 277 (2019)

[VZ1194], Jugoslavia. Dalmatia, Starigrad, in vallecula haud procul a faucibus Paklenica. In cortice Quercus pubescentis. Leg. J. Poelt et J. Hafellner,13.6.1973. EX A. VěěZDA LICHENES SELECTI EXSICCATI NR. 1194.

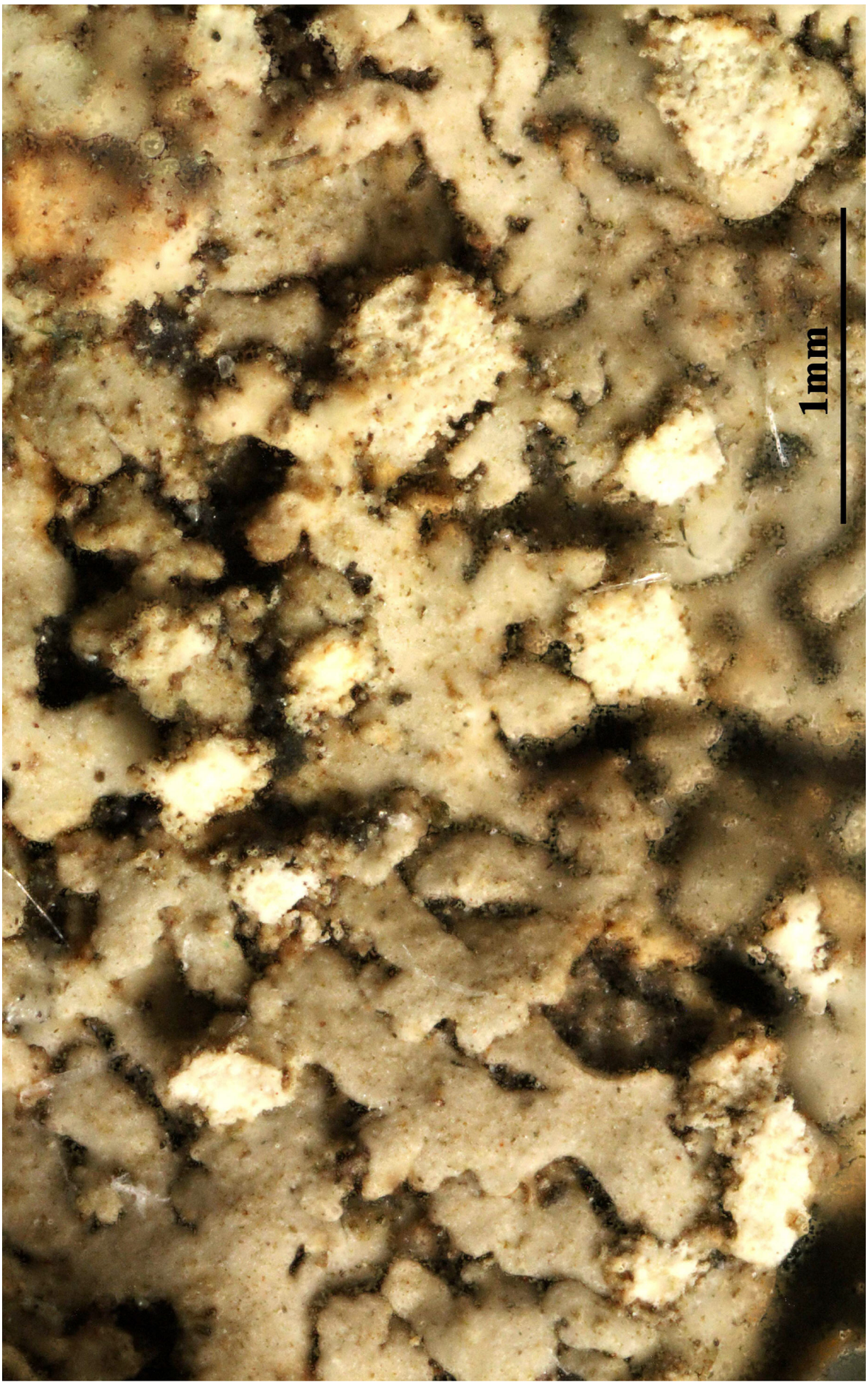
Thallus foliose, heteromerous, dorsiventral, narrow-lobed, forming orbicular to irregular, up to 1(-2) cm wide rosettes. Lobes discrete to partly imbricate, 0.3-0.5(-0.7) mm wide, usually flat, whitish grey to pale grey-brown, epruinose, with laminal, round, subcapitate soralia which are often broader than the lobes, bearing farinose soredia. Lower surface white to tan, with simple rhizines. Upper and lower cortex paraplectenchymatous; medulla white. Apothecia rare, lecanorine, to 1.5 mm across, the thalline margin sometimes with a corona of rhizines. Epithecium brown; hymenium and hypothecium colourless; paraphyses slender, often forked in upper part, the apical cells clavate, with a thin dark cap. 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, 17-24 x 8-9 µm, Physcia-type. Pycnidia rare. Conidia ellipsoid. Photobiont chlorococcoid. Spot tests: cortex and medulla K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a mild-temperate species found on isolated trees with base-rich, soft bark; certainly more widespread albeit never common.



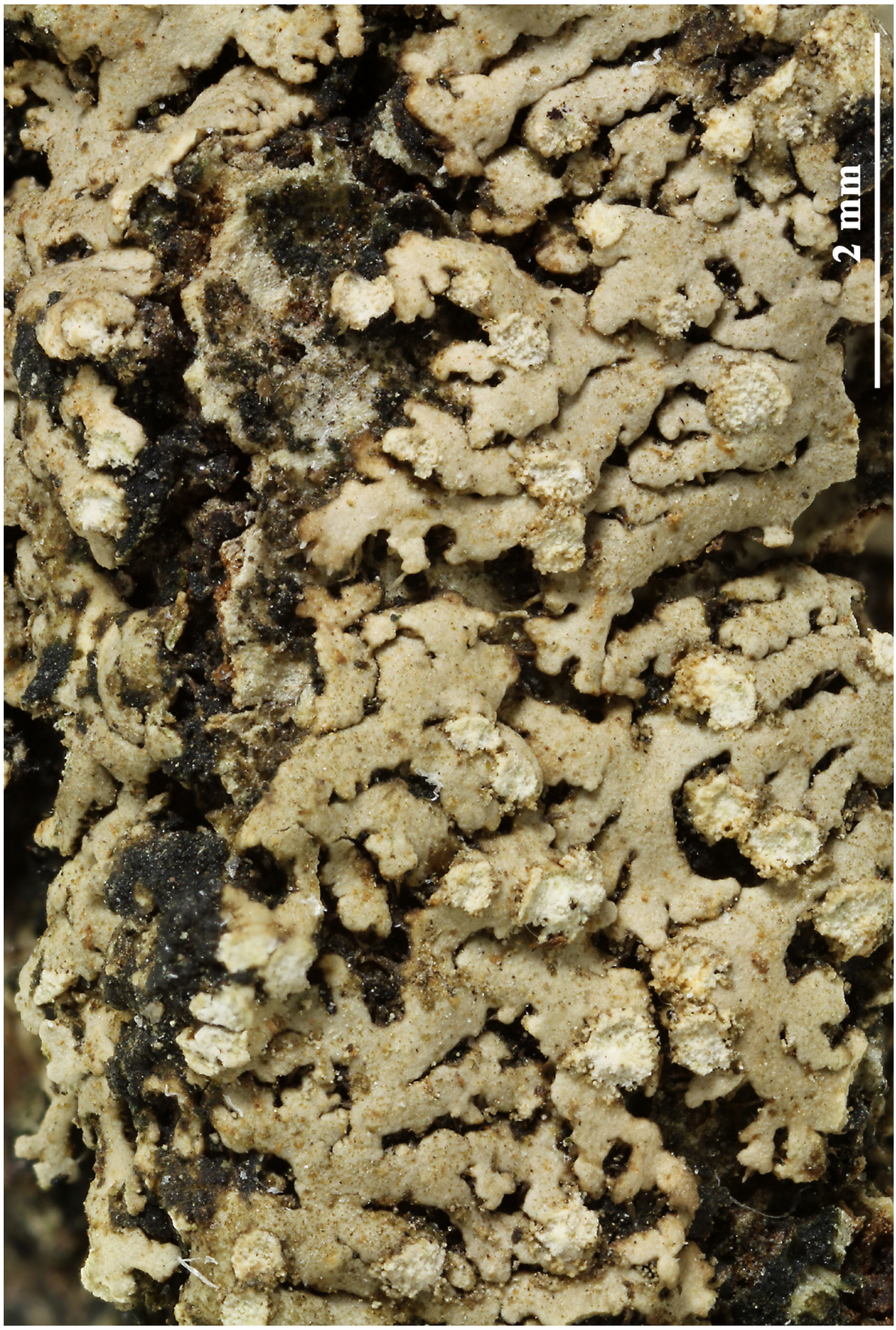
Physcia ticinensis



Physcia ticinensis



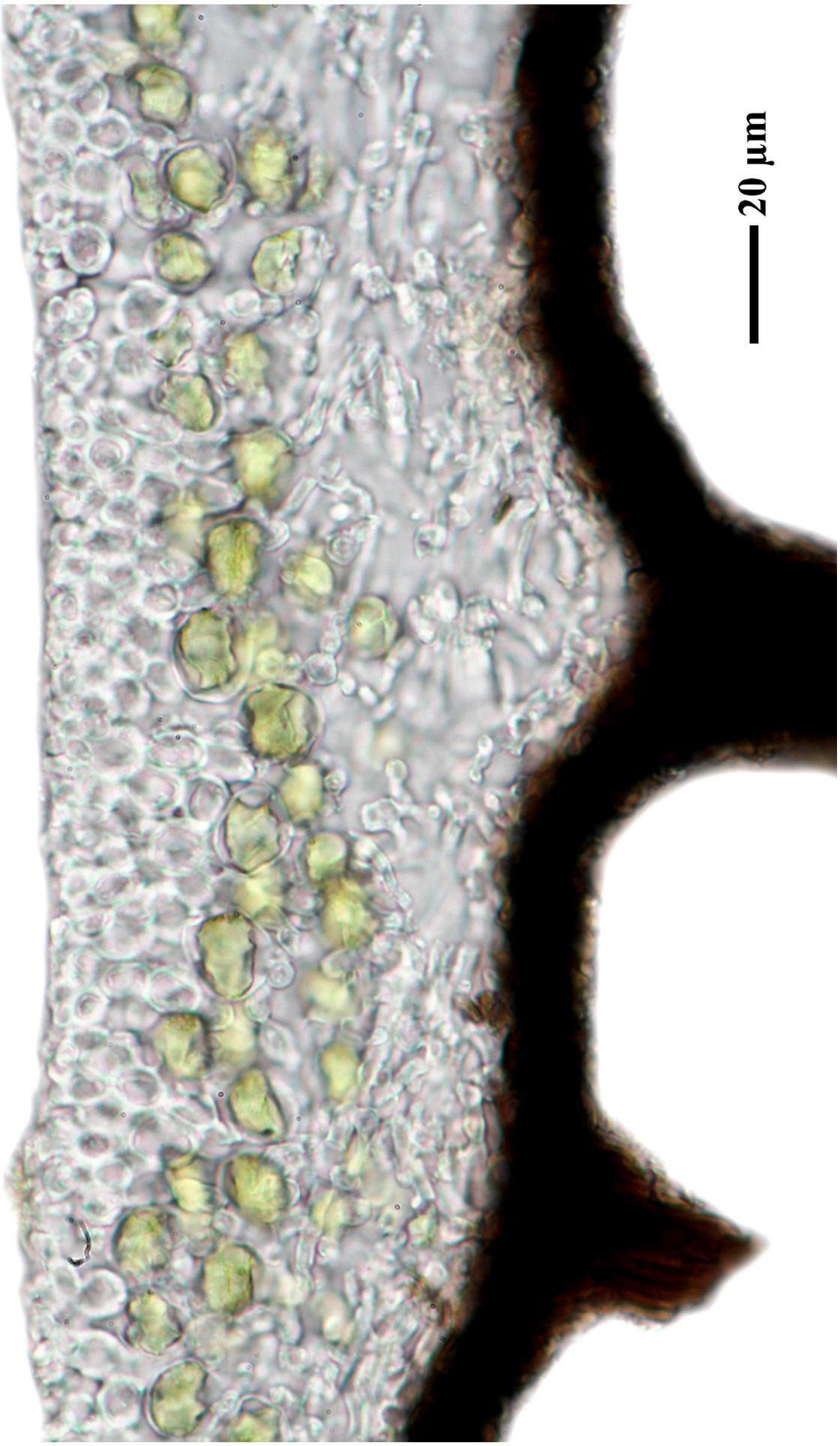
Physcia ticinensis



Physcia ticinensis



Physcia ticinensis



Physcia ticinensis



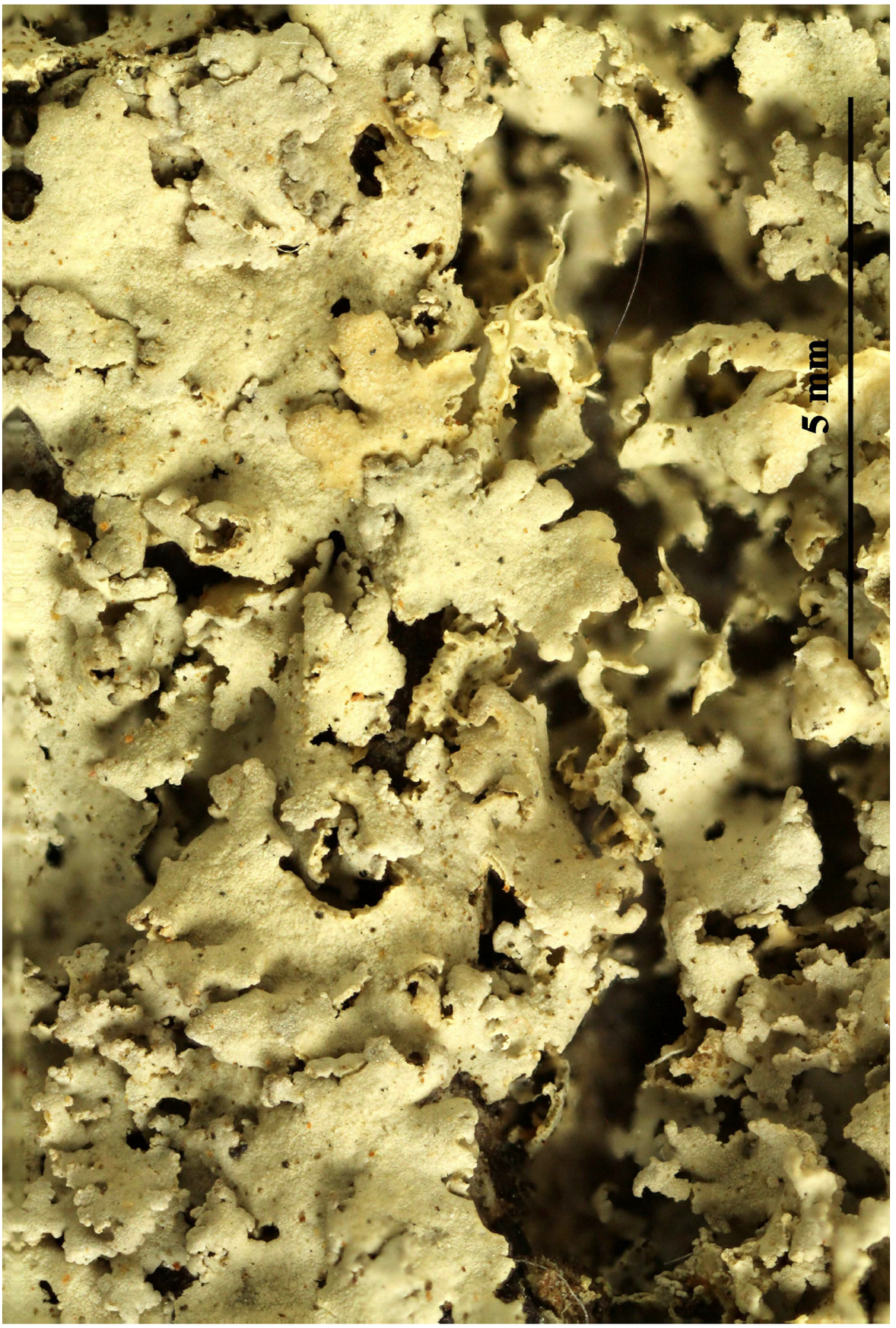


Physcia ticinensis

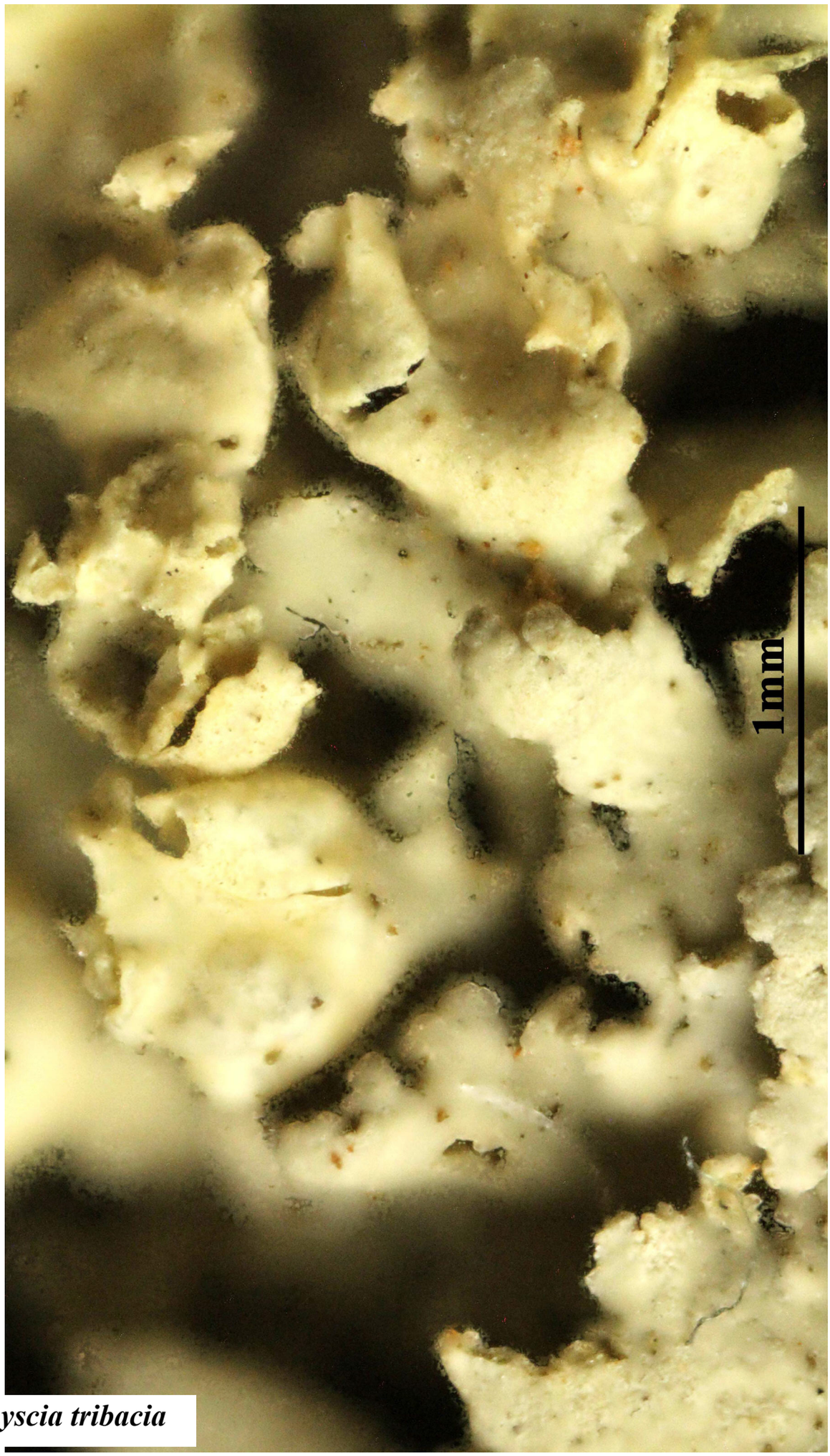
Physcia tribacia (Ach.) Nyl., Flora, Regensburg 57: 307 (1874)
= *Lecanora tribacia* Ach. 1810

[VZ1075], Magna Britannia. Anglia, Dorset, Blandford Forum. Ad truncum *Ulmi* sp. Leg. P. W. James, 12.4.1971. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1075.

Thallus foliose, heteromerous, dorsiventral, narrow-lobed, forming orbicular to more commonly irregular, up to 4(-6) cm wide patches, the lobes 0.5-1.5(-1.8) mm wide, usually not distinctly radiating, with crenulate or lobulate margins bearing granular soredia which develop on the underside of scattered to contiguous, marginal protuberances. Upper surface whitish grey to cream-coloured, epruinose, usually emaculate, somewhat shiny; lower surface white to pale brownish grey, often weakly pink-coloured. Upper and lower cortex paraplectenchymatous; medulla white. Apothecia rare, lecanorine, up to 1.5(-2) mm across, with a dark brown to black, epruinose disc and an often sorediate thalline margin. Epithecium brown; hymenium and hypothecium colourless; paraphyses slender, simple or forked in upper part, the apical cells clavate, with a thin, dark brown cap. 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, 15-24 x (7.5-)9-11(-13) µm, the wall thickened at apex and at septum, intermediate between the Pachysporaria and the Physcia-types. Pycnidia black, immersed. Conidia subcylindrical, 4-6 x c. 1 µm. Photobiont chlorococcoid. Spot tests: upper cortex K+ yellow, C-, KC-, P- or P+ faintly yellow; medulla K-, C-, KC-, P-. Chemistry: upper cortex with atranorin. - Note: a widespread Mediterranean to xeric subtropical lichen found on basic siliceous rocks in sunny situations, often with *Peltula euploca* and ecologically related species, but less bound to periodical seepage of water; fairly common in parts of Mediterranean Italy, wherever suitable substrata are available, rarer in dry-warm Alpine valleys.



Physcia tribacia

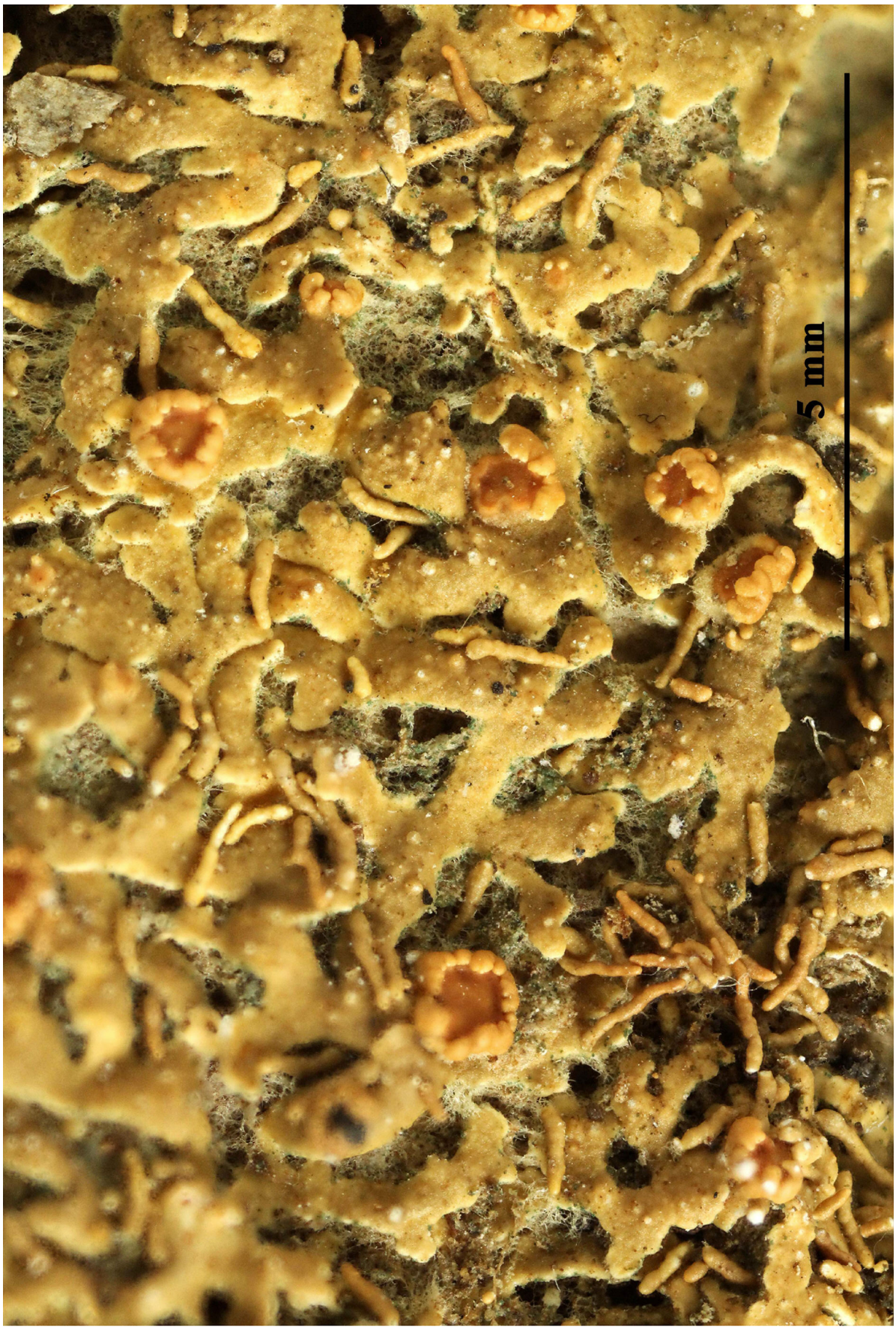


Physcia tribacia

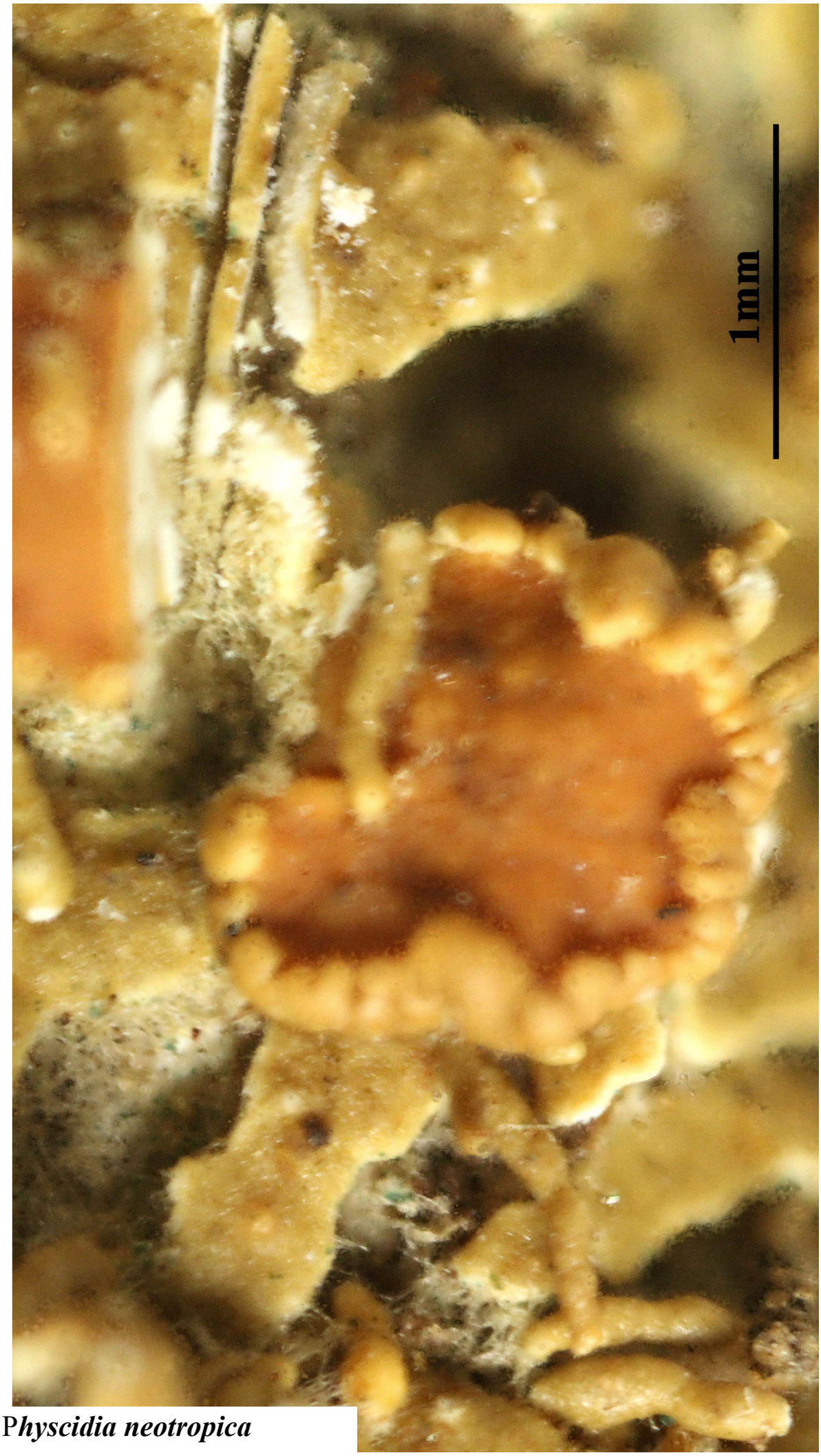
P***hyscidia neotropica*** Kalb & Elix, Biblioth. Lichenol. 57: 287 (1995)

[VZ1881], Brasilia, São Paulo. Ilha Comprida prope Cananéia. In silva sicca in litore (Restinga), 3 m. Ad corticem arborum. Leg. K. Kalb et J. Poelt, 15.8.1979. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1881.

Thallus corticolous, ±orbicular to irregular, ±loosely attached,on awhite webby prothallus, lobate, up to 5 cm in diam. Lobes greenish, greenish grey, ochre yellow to pale leather-coloured, anisotomically branched, plane to convex, at apices free, partly concave, rounded flabellate at tips, 0.3-1 mm broad, usually distinct to centre, not confluent centrally. Isidia almost absent and the thallus usually fertile, or isidia abundant and then the thallus usually sterile, varying within one collection or even within one large thallus. Isidia cylindrical, with a constricted base, simple or rarely branched, 0.2-2 mm long, 0.1-0.3 mm thick. Lower surface lacking a cortex, whitish at the tips, light brownish towards the centre; medullary hyphae irregularly interwoven, forming a thick spongiostratum. Thallus c. 0.3 mm thick; cortex c. 25-50 µm thick, prosoplectenchymatous, formed by 2-4 layers of very thick-walled gelatinized hyphae (cortex type 1 according to Swinscow & Krog 1981). Algal layer c. 25-50 µm thick; photobiont Pseudochlorella, c. 8-12 µm diam. Medulla colourless, c. 120-250 µm thick, formed by ±very loosely, irregularly interwoven, thickwalled hyphae, 8-10 µm in diam., with 3-4 µm thick walls. Apothecia usually present, laminal, scattered, ±orbicular, distinctly constricted at the base, 0.5-2 mm in diam. Disc usually plane, ±concave when young,becoming slightly convex with age, pale brownish, brownish to pale brick-coloured, always surrounded by ±crenulate thalline lobules when young, which may disappear partly or wholly with age. Asci 8-spored. Spores 2-4-celled, 15-21.75-28 x 1.2-1.9-2.5 µm. Pycnidia usually present, laminal, pale flesh-coloured to brownish, 0.2 mm in diam., wart-like to partly immersed. Pycnidiospores 16-20 x 0.8-1 µm, mostly falciform-curved. - Specimens examined: BRAZIL, Sao Paulo: Ilha Comprida opposite to Cananéia, in a humid dune forest (Restinga), 3 m, H. Sipman 13995, 15 Aug. 1979 (B); dto. K. Kalb & J. Poelt, 15 Aug. 1979 (Vězda Lich. sel. exs. 1881, as *Physcidia cylindrophora*).
Chemistry: Divaricatic acid (submajor), Scrobiculin (major) Alectorialic acid (minor), 5,7-dihydroxy-6-methylphthalide (trace), Nordivaricatic acid (trace); anal. J. Elix 1989 (TLC and HPLC).



P*hyscidia neotropica*

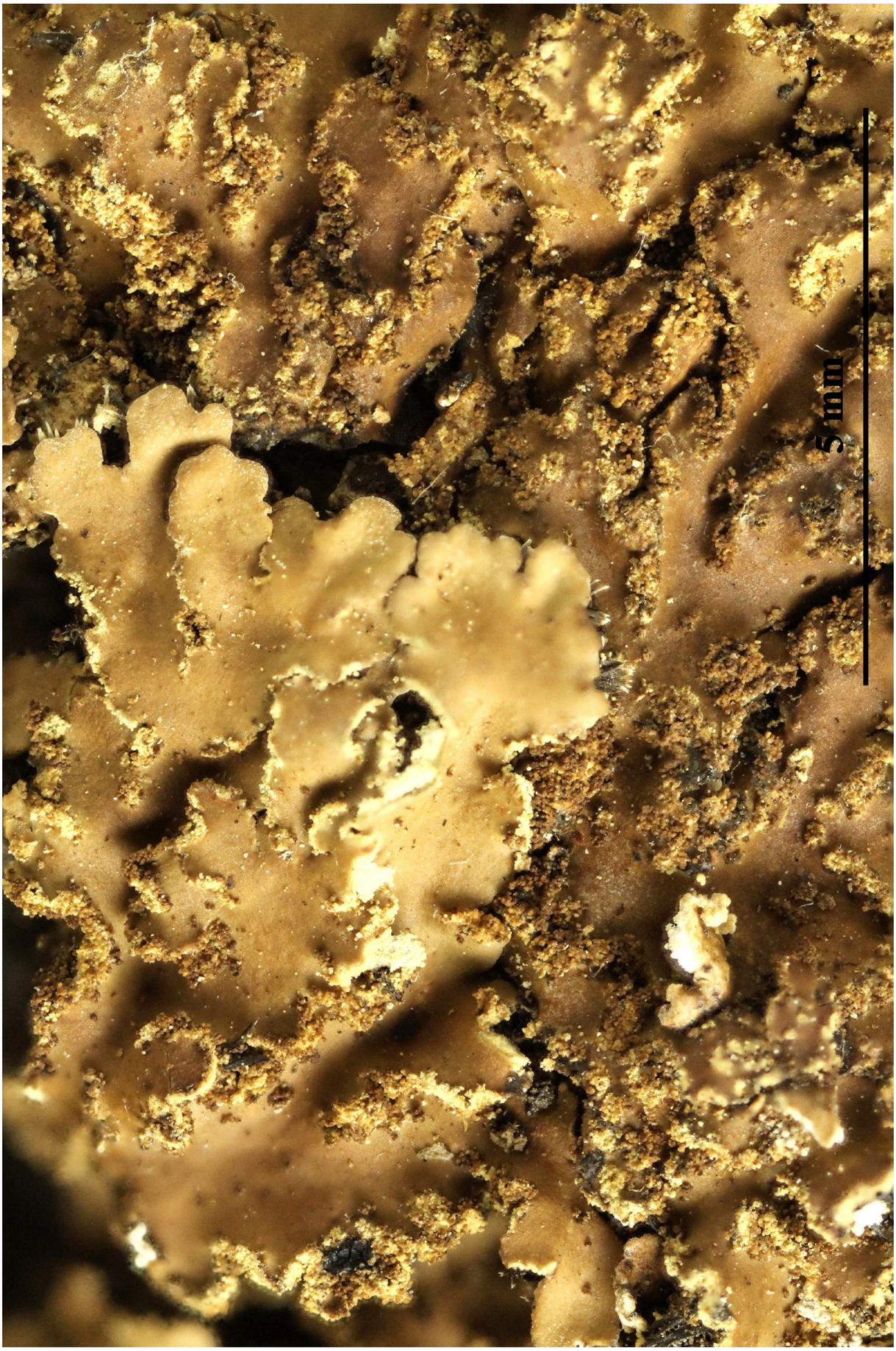


P*hyscidia neotropica*

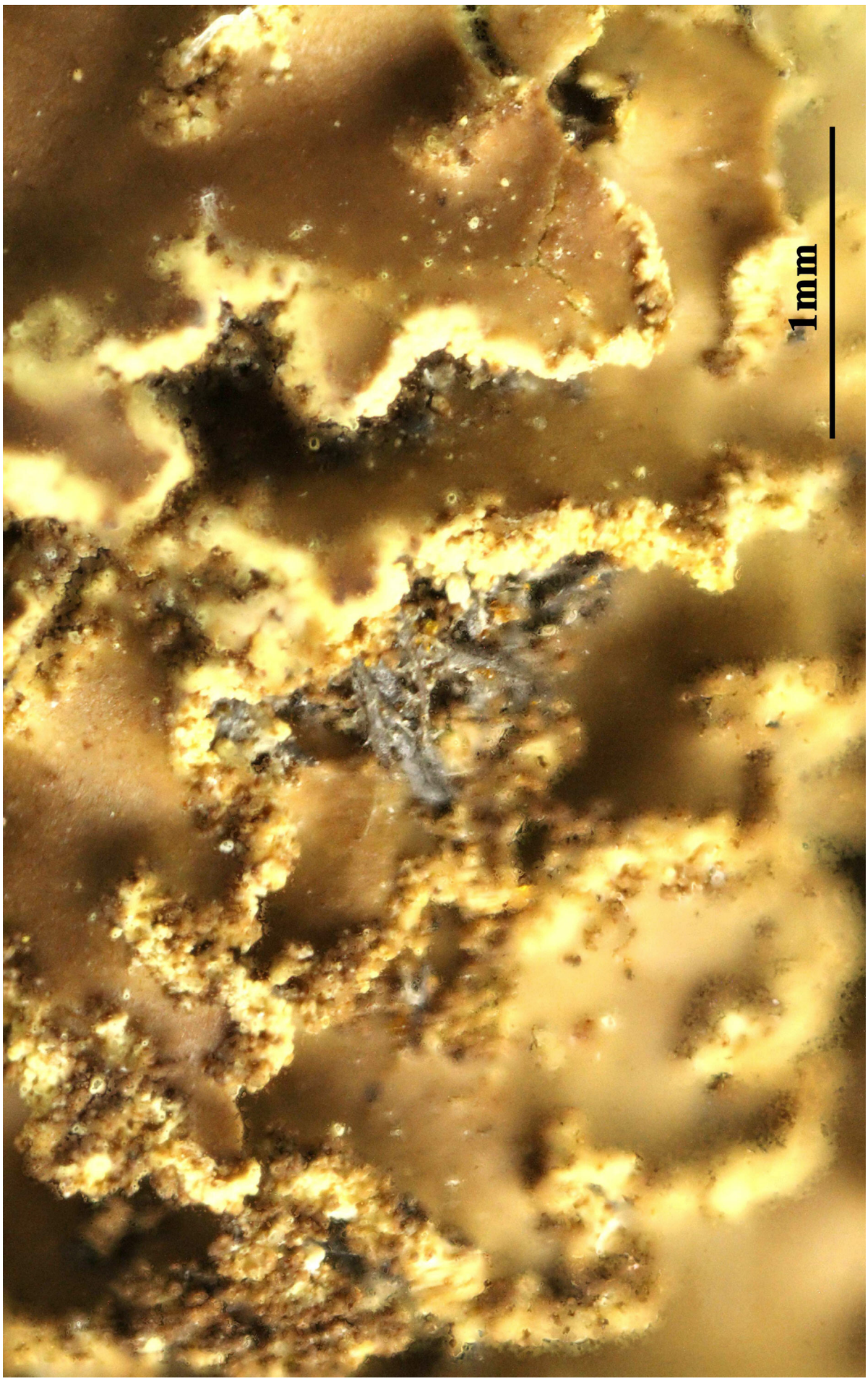
Physconia enteroxantha (Nyl.) Poelt, Nova Hedwigia 12(1+2): 125 (1966)
= *Physcia enteroxantha* Nyl. 1873

[VZ2418], Italia. Sardinia. Prov. Oristano, S. Lussurgio, loco "S. Leonardo de Siete Fuentes" dicto, 500 m. Ad corticem *Quercus suber*. Leg. P. L. Nimis, C. Roux, M. Tretiach et A. Vězda, 5.9.1989. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2418.

Thallus foliose, heteromerous, dorsiventral, narrow-lobed, forming irregular, rarely orbicular, up to 6 cm wide rosettes. Lobes linear, discrete to partly imbricate, (0.8-)2-3 mm broad, flat to irregularly concave, grey-brown to brown, coarsely pruinose at margins and tips, with primarily marginal, elongate, dirty yellow soralia tending to become laminal in older parts, the soredia coarsely granular to almost isidioid. Lower surface pale brown at the periphery, soon darkening inward to dark brown or black, with dark, squarrose rhizines. Upper cortex paraplectenchymatous; medulla usually pale yellow, sometimes white; lower cortex irregularly prosoplectenchymatous. Apothecia rare, lecanorine, c. 2 mm across, with a sorediate thalline margin. Epithecium brown; hymenium and hypothecium colourless; paraphyses slender, simple or forked in upper part, the apical cells clavate, with a thin, dark brown cap. 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, (25-)28-35(-38) x (15-)16-19(-21) µm, thickened at septum but not at apices, Physconia-type. Pycnidia rare, immersed. Conidia 4-6 x c. 1 µm. Spot tests: upper cortex K-, C-, KC-, P-, UV-; medulla K+ yellowish (sometimes faintly), C-, KC+ yellow,-orange, P-; soralia K+ and KC+ yellowish or K-, KC-, UV+ orange. Chemistry: medulla and soralia with variable amounts of secalonic acid A. - Note: a Mediterranean to temperate species found on isolated trees, sometimes on mossy rocks; most frequent in Southern Italy and along the Tyrrhenian coast at low altitudes (below 800 m), much rarer elsewhere.



Physconia enteroxantha

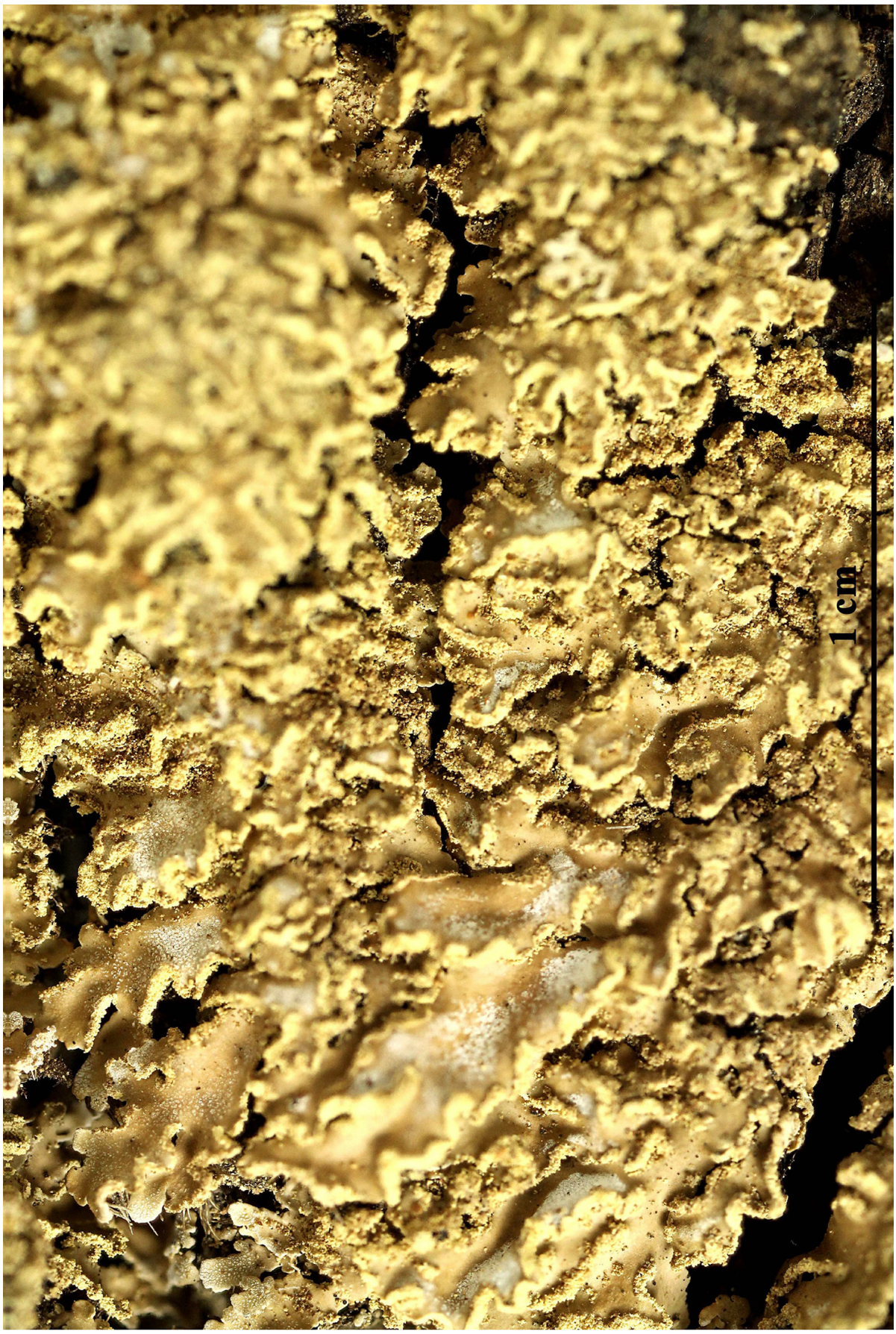


Physconia enteroxantha

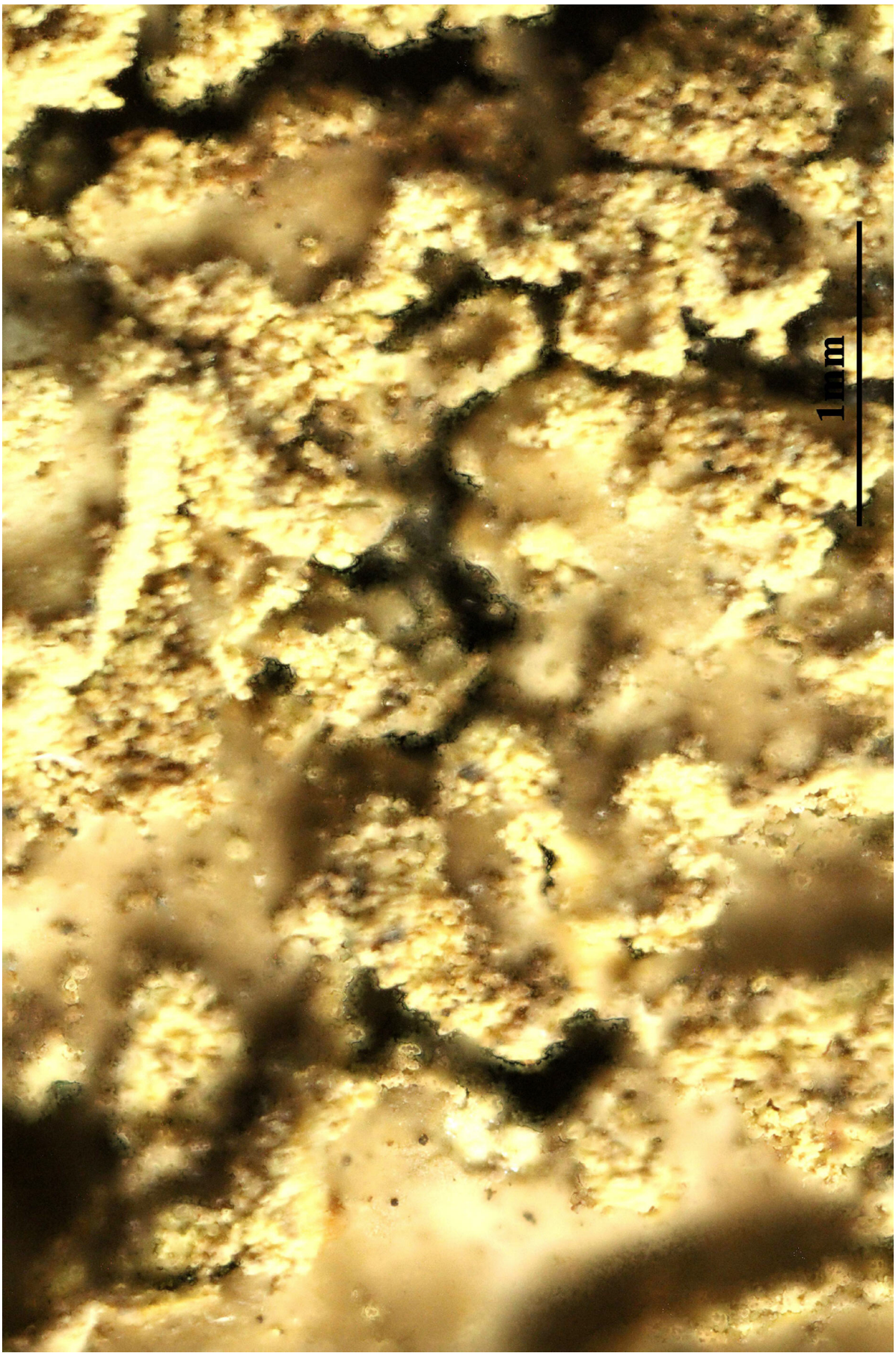
Physconia enteroxantha (Nyl.) Poelt, Nova Hedwigia 12(1+2): 125 (1966)
= *Physcia enteroxantha* Nyl. 1873

[VZ1195], Gallia. Var: Hyères, Le Fenouillet, 250 m. In cortice *Quercus pubescentis*. Leg. Y. Rondon, 28.3.1973. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1195.

Thallus foliose, heteromerous, dorsiventral, narrow-lobed, forming irregular, rarely orbicular, up to 6 cm wide rosettes. Lobes linear, discrete to partly imbricate, (0.8-)2-3 mm broad, flat to irregularly concave, grey-brown to brown, coarsely pruinose at margins and tips, with primarily marginal, elongate, dirty yellow soralia tending to become laminal in older parts, the soredia coarsely granular to almost isidioid. Lower surface pale brown at the periphery, soon darkening inward to dark brown or black, with dark, squarrose rhizines. Upper cortex paraplectenchymatous; medulla usually pale yellow, sometimes white; lower cortex irregularly prosoplectenchymatous. Apothecia rare, lecanorine, c. 2 mm across, with a sorediate thalline margin. Epithecium brown; hymenium and hypothecium colourless; paraphyses slender, simple or forked in upper part, the apical cells clavate, with a thin, dark brown cap. 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, (25-)28-35(-38) x (15-)16-19(-21) µm, thickened at septum but not at apices, Physconia-type. Pycnidia rare, immersed. Conidia 4-6 x c. 1 µm. Spot tests: upper cortex K-, C-, KC-, P-, UV-; medulla K+ yellowish (sometimes faintly), C-, KC+ yellow,-orange, P-; soralia K+ and KC+ yellowish or K-, KC-, UV+ orange. Chemistry: medulla and soralia with variable amounts of secalonic acid A. - Note: a Mediterranean to temperate species found on isolated trees, sometimes on mossy rocks; most frequent in Southern Italy and along the Tyrrhenian coast at low altitudes (below 800 m), much rarer elsewhere.



Physconia enteroxantha



Physconia enteroxantha

Physconia grisea* subsp. *algeriensis (Flagey ex Hue) Poelt, Nova Hedwigia 12(1+2): 119 (1966)
= *Physcia farrea* var. *algeriensis* Flagey ex Hue 1900

[VZ1923], Graecia, Kentriki Hellas; Mesolongion, in vinicitate vici Agrilia, 20 m. Ad truncum *Oleae vetustae*. Leg. A. Vězda, 27.7.1983. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1923.

Thallus foliose, heteromerous, dorsiventral, narrow-lobed, forming 5-6 cm wide rosettes. Lobes (1-)2-3 mm wide, radiating and partly overlapping, markedly and coarsely white-pruinose, flat to irregularly concave, often lobulate but never phyllidiate. Lower surface whitish, with simple to forked, pale rhizines. Upper cortex paraplectenchymatous; medulla white; lower cortex prosoplectenchymatous, with hyphae oriented parallel to the long axis of lobes. Apothecia frequent, lecanorine, with a pruinose disc and a smooth thalline margin. Epithecium brown; hymenium and hypothecium colourless; paraphyses slender, simple or forked in upper part, the apical cells clavate, with a thin, dark brown cap. 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, 26-34 x 13-17 µm, thickened at septum but not at apices, Physconia-type. Pycnidia black, immersed. Conidia 4-7 x c. 1 µm. Photobiont chlorococcoid. Spot tests: cortex and medulla K-, C-, KC-, P-. Chemistry: not known, perhaps without lichen substances. - Note: this mainly Mediterranean taxon, which is both saxicolous and epiphytic, is worthy of further investigation.



Physconia grisea* subsp. *algeriensis

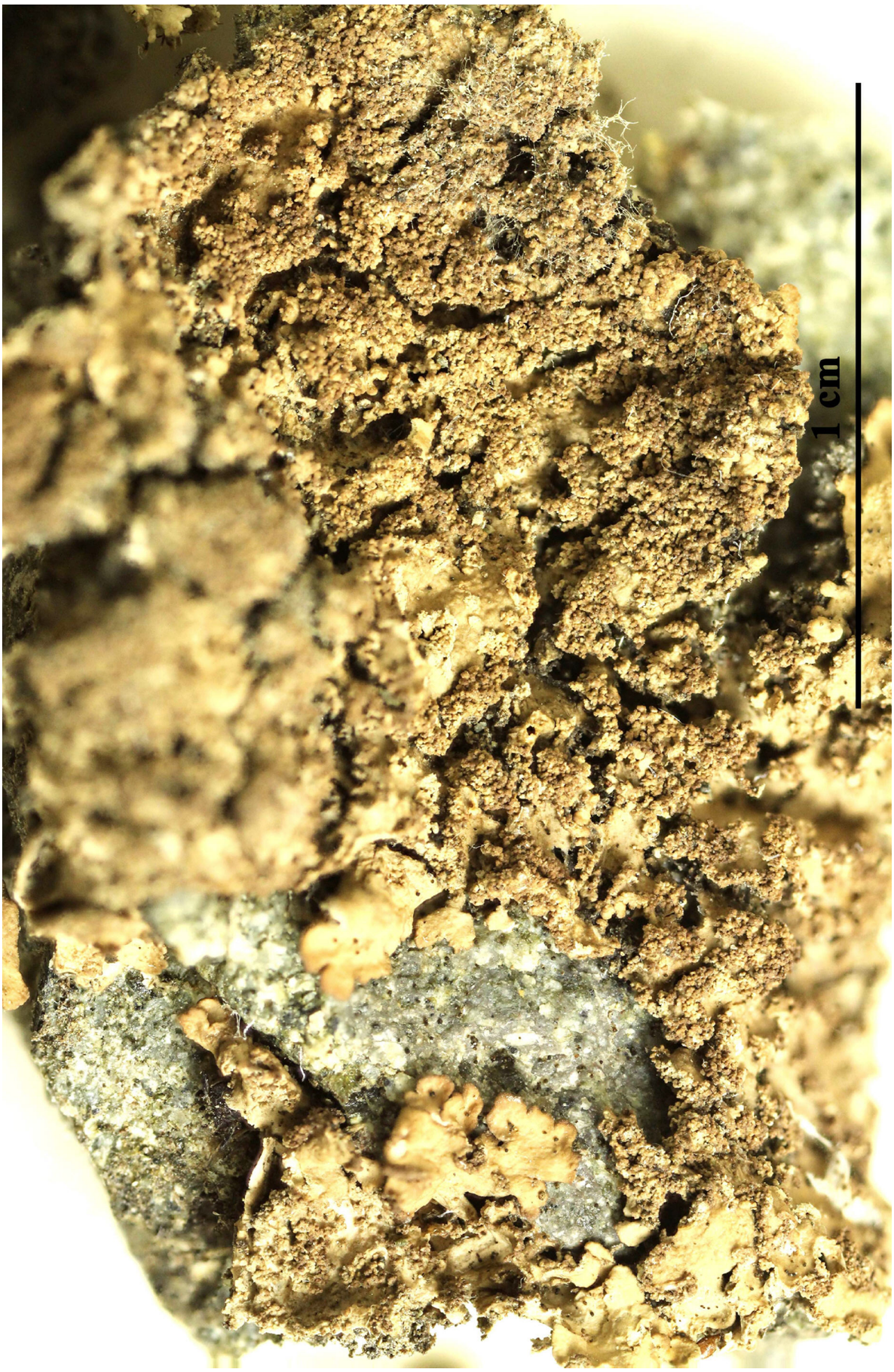


Physconia grisea* subsp. *algeriensis

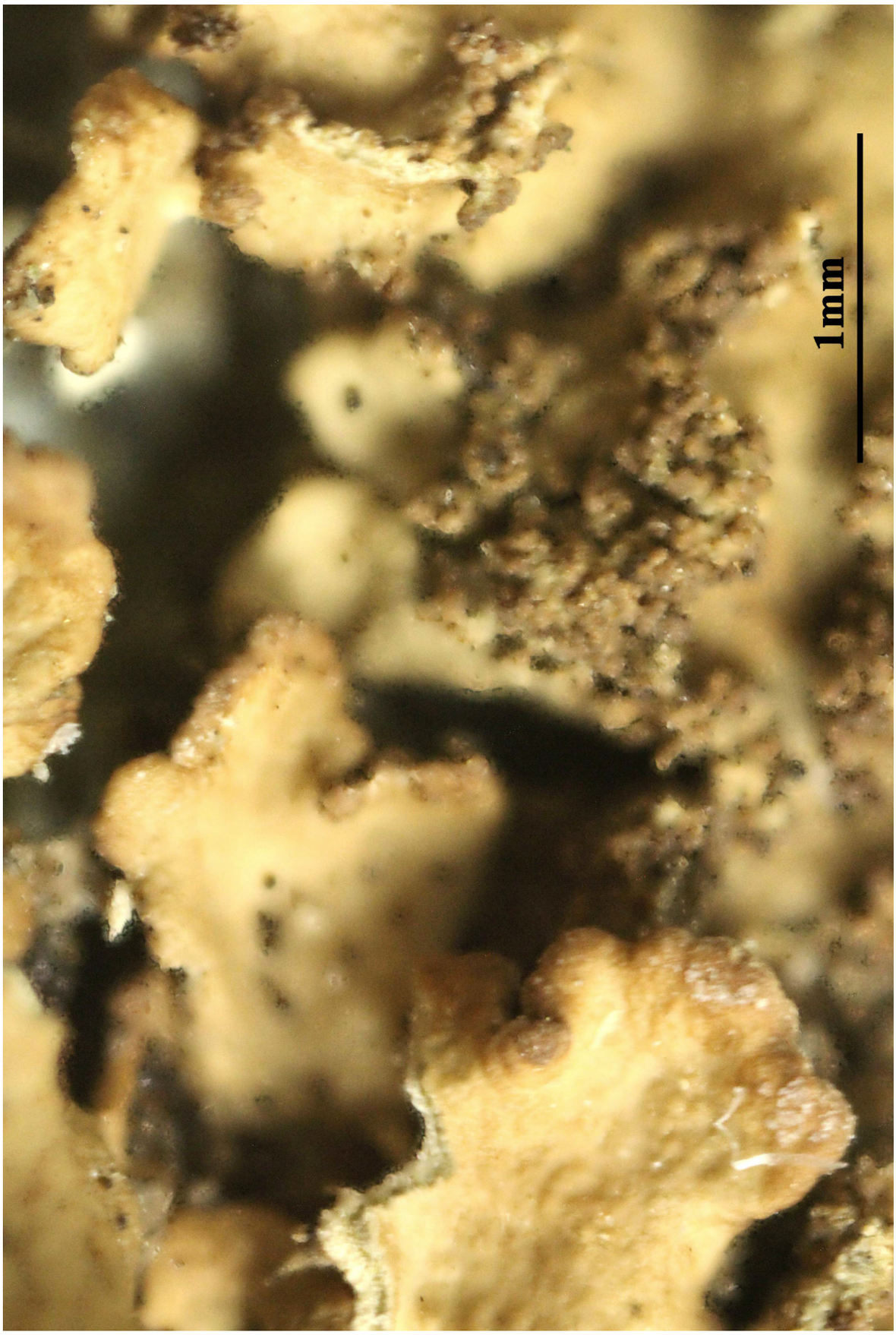
Physconia grisea (Lam.) Poelt, Nova Hedwigia 9: 30 (1965)
= *Lichen griseus* Lam. 1792
= *Poeltonia grisea* (Lam.) S.Y. Kondr., Lőkös & Hur, in Kondratyuk, Lőkös, Kärnefelt, Thell, Jeong, Oh, Kondratiuk, Farkas & Hur, Acta Bot. Hung. 63(3-4): 386 (2021)

[VZ1630], Bulgaria. Pontus Euxinus. Distr. Burgas: inter pagos Mičurin et Varvara, 5-10 m. Ad scopulos maritimos. Leg. A. Vězda, 16.8.1975. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1630.

Thallus foliose, heteromerous, dorsiventral, narrow-lobed, forming regular to irregular up to 5(-8) cm wide rosettes. Lobes (1-)2-3 mm wide, slightly broader at tips, radiating and partly overlapping, with a coarse white pruina at least in apical parts, flat to irregularly concave, grey-brown to brown, with primarily marginal, elongate soralia tending to become laminal in older parts, the soredia coarsely granular to almost isidioid. Lower surface whitish in marginal parts, pale brown in central parts, with mostly simple, whitish to pale brown rhizines. Upper cortex paraplectenchymatous; medulla white; lower cortex prosoplectenchymatous, with hyphae oriented parallel to the long axis of lobes. Apothecia rare, lecanorine, 1-3 mm across, with a pruinose disc and a sorediate thalline margin. Epithecium brown; hymenium and hypothecium colourless; paraphyses slender, simple or forked in upper part, the apical cells clavate, with a thin, dark brown cap. 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, (22-)25-32(-34) x (12-)14-17(-19) µm, thickened at septum but not at apices, Physconia-type. Pycnidia frequent, immersed, inconspicuous. Conidia 4-7 x 1-2 µm. Photobiont chlorococcoid. Spot tests: cortex and medulla K-, C-, KC-, P-. Chemistry: medulla with four unidentified lichen substances. - Note: a mainly mild-temperate, perhaps holarctic lichen found both on bark (often on basal parts of isolated trees) and on calciferous rocks (especially calcareous sandstone, e.g. on walls).



Physconia grisea

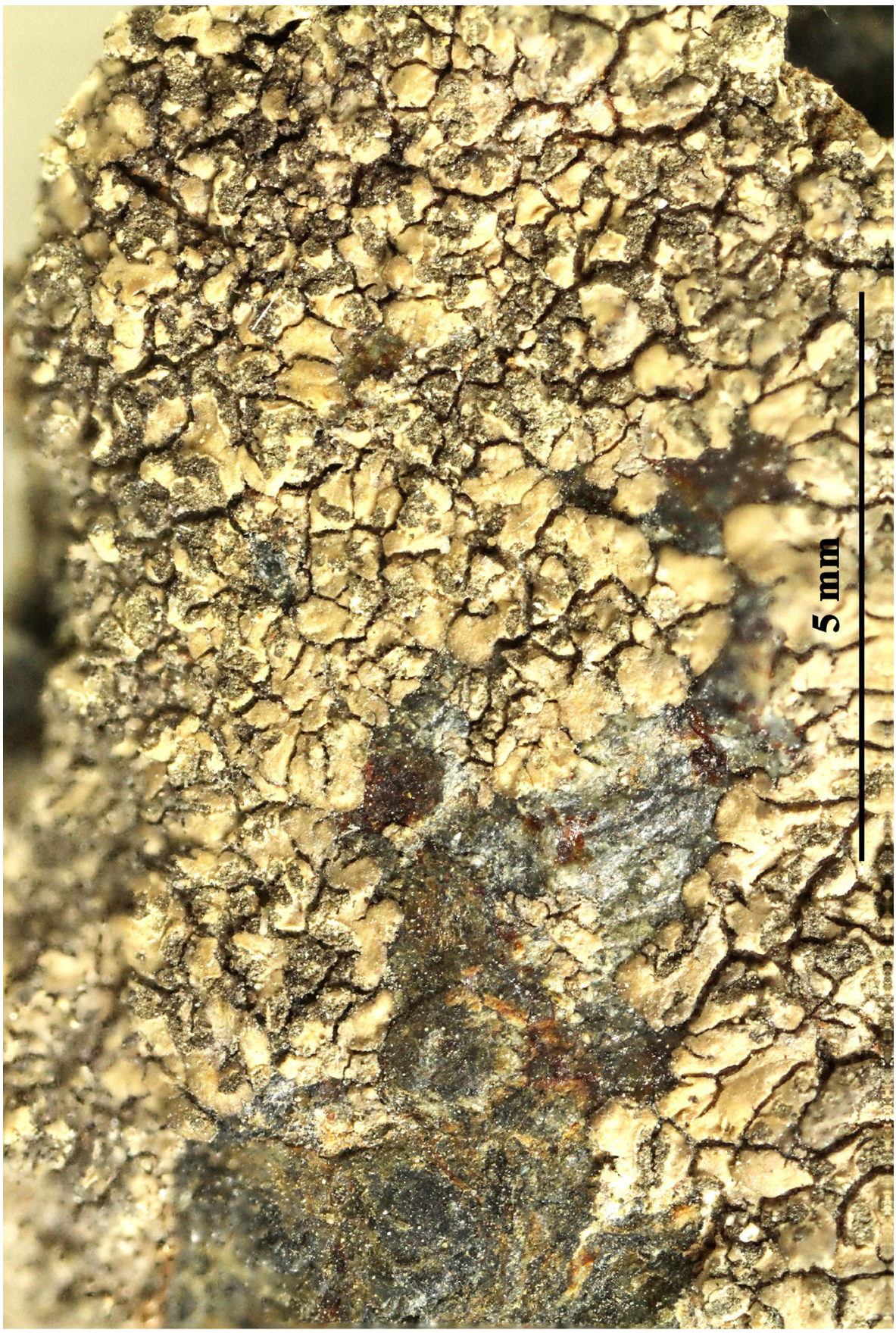


Physconia grisea

Placopsis lambii Hertel & V. Wirth, in Wirth, Die Flecht. Baden-Württembergs. Verbreitungsatlas (Stuttgart): 511 (1987)

[VZ2237], Austria, Voralbergia, Rätikon, Schruns, in monte Golmer Joches, 2050 m. Ad saxa schistosa ferrum continentia. Leg. H. Mayrhofer et A. Vězda, 27.7.1986. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2237.

Thallus crustose-placodioid, sorediate, pinkish white, pale grey or cream-coloured, often with small white maculae, shiny throughout, forming up to 5 cm wide, orbicular rosettes, the central part rimose-areolate, with more or less concentrically arranged, blackish (rarely greenish), 0.3-0.6 mm large, flat to convex, maculiform soralia appearing as large fleck-like scars, and sometimes with small, globose or distorted, not distinctly lobed, yellowish grey to brownish, 1-3 mm wide cephalodia, the peripheral part with 0.5-1.5(-2) mm wide, elongated, contiguous, radiating lobes. Cortex paraplectenchymatous; medulla white, I-. Apothecia rare, lecanorine, sessile, 0.5-1.5 mm across, with a flat, pinkish brown to dark reddish brown, often whitish-pruinose disc and a very thick, transversally plicate, persistent thalline margin. Proper exciple very thin, colourless; epithecium yellowish brown; hymenium colourless, I+ blue; paraphyses easily made free, thin, branched and anastomosing, submoniliform in upper part; hypothecium colourless. Asci 8-spored, cylindrical to narrowly clavate, amyloid, with a K/I+ pale blue tholus and a narrow, internal darker blue cap, approaching the Trapelia-type, but without an amyloid ring-structure. Ascospores 1-celled, hyaline, ellipsoid, 14-18(-19) x 7-11 µm. Photobiont chlorococcoid; cephalodia with Stigonema. Spot tests: K-, C+ red, KC+ red, P-. Chemistry: gyrophoric and 5-O-methylhiascic acids (major), sometimes with traces of lecanoric and hiascic acids. - Note: a suboceanic species, ecologically similar to *Lecanora subaurea*, found on low outcrops and small boulders of metal-rich siliceous rocks in sites with a humid climate. Most widespread in Western Europe, but also known from a few localities, all below treeline, in the Eastern Alps (Austria).



Placopsis lambii



Placopsis lambii

Placopsis trachyderma (Kremp.) P. James, New Zealand J. Bot. 2: 82 (1964)
= *Lecanora trachyderma* Kremp. 1876

[VZ2494], Australia. Tasmania: in pede septentr. montis Pearse, 650 m. Ad terram basalticam in fossis viae. Leg. G. Kantvilas (163/91) et J. Jarman, 12.5.1991. Ex A. VěZDA Lichenes Selecti Exsiccati Nr. 2494.

Thallus determinate, effigurate spreading, to 10 cm diam., saxicolous and terricolous, often with a black marginal prothallus. Marginal lobes swollen, discrete, separated by narrow cracks or becoming confluent, closely to loosely attached. Upper surface creamish to grey-white or pinkish-brown, smooth, matt, wrinkled-areolate centrally, areolae small, warted, 0.3-1 mm diam., becoming continuous, wrinkled or folded, soredia absent, isidiate (). Isidia central, sparse to numerous, wrinkled-warted, terete, simple to branched, to 4 mm tall. Cephalodia sparse to numerous, irregularly pulvinate or rounded-cerebriform, to 3 mm diam., pale flesh-coloured, matt, epruinose. Apothecia numerous, scattered, subpedicellate, 2-3 mm diam., thalline margins prominent, entire, subcrenulate, often white-pruinose, disc plane to subconvex, pinkish-brown to brown-black, wrinkled often pruinose. Hymenium 130-140(-160) µm tall, pale brown-yellow at apices. Hypothecium colourless. Paraphyses slightly thickened at apices. Ascospores biseriate, fusiform, apices rounded, (17-)18-21(-25) × (5-)5.5-6.5 µm. Chemistry: Cortex K-, C+ red; medulla K-, C+ red, KC+ red, P-.



Placopsis trachyderma



Placopsis trachyderma

Placopyrenium bucekii (Nádv. & Servít) Breuss, in Nimis & Poelt, Stud. Geobot. 7(suppl. 1): 182 (1987)
= *Dermatocarpon bucekii* Nádv. & Servít 1936

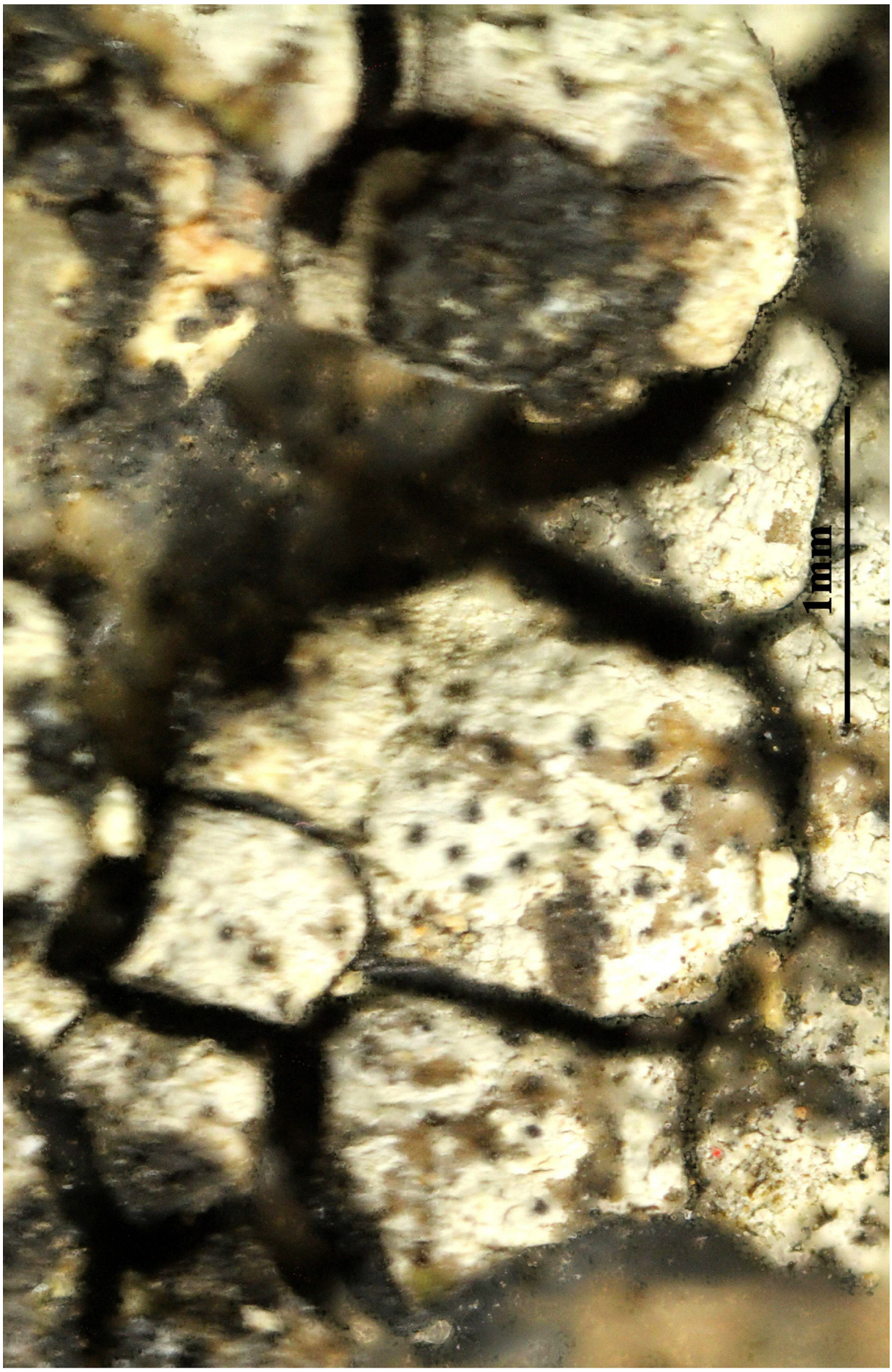
[VZ2201], Italia, Sardinia. Prov. Nuoro, scopulum Torre Argentina dictum, prope oppidum Bosa, 5-20 m. Ad saxa eruptiva mollia. Leg. M. Tretiach, P. L. Nimis, J. Poelt et A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2201.

Thallus crustose, most often placodioid, well-developed, episubstratic, areolate-subsquamulose, pale grey and whitish-pruinose when dry, brownish when wet, forming several cm wide patches (rarely >10 cm), the areoles slightly concave to flat, constricted at base, with conspicuous black sides and a black lower surface, the central ones (formed only in old thalli) rectangular or polygonal, 0.3-2.6 x 0.2-1.6 mm, the peripheral ones lobed, elongate, irregularly radiating, (1-)1.5-3(-4) x 0.3-1(-2) mm, often loosely attached and overlapping. Upper cortex up to 40 µm thick, poorly differentiated, paraplectenchymatous, of angular cells arranged in vertical rows, with thin, brown-pigmented walls, overlain by a 3-9 µm thick epinecral layer; photobiont layer of vertically arranged columns of algal cells, 80-250(-500) µm thick; lower cortex of irregularly arranged, rounded cells with 0.5-2 µm thick, dark brown walls. Perithecia immersed in the central areoles, up to 10 per areole, visible from above as 0.1-0.2 mm wide, black dots. Involucrellum absent or rudimentary and lid-like above the ostiole; exciple brown and 30-50(-80) µm thick in upper part, colourless and 20-30 µm thick in lower part, paraplectenchymatous; periphyses well-visible around the ostiole, 30-40 x 1-3 µm; paraphyses degenerating early, usually not visible; hymenial gel hemiamyloid, I+ red (I+ blue at very low concentrations of I), K/I+ blue. Asci 8-spored, clavate, I-, fissitunicate, the wall thickened above with an indistinct ocular chamber, Verrucaria-type. Ascospores 0-1-septate, hyaline, ellipsoid to subfusiform, 11.5-17.5 x 4-7.5 µm, with a very thin perispore. Pycnidia immersed, multilocular, Dermatocarpon-type. Conidia bacilliform, (3-)3.5-5.5(-9) x l-l.5 µm. Photobiont chlorococcoid. Spot tests: cortex and medulla K-, C-, KC-, P-, UV-. Chemistry: without lichen substances.- Note: a mainly Mediterranean lichen with outposts in dry-warm temperate areas, found on base-rich siliceous rocks, exceptionally on limestone and sometimes even on soil, often occurring together with Peltula euploca, but with a different ecology, being most common on dust-impregnated faces. It

should be looked for in suitable habitats of the Alps, especially in dry-warm situations. For a very detailed description see Menard & Roux (1995).



Placopyrenium bucekii

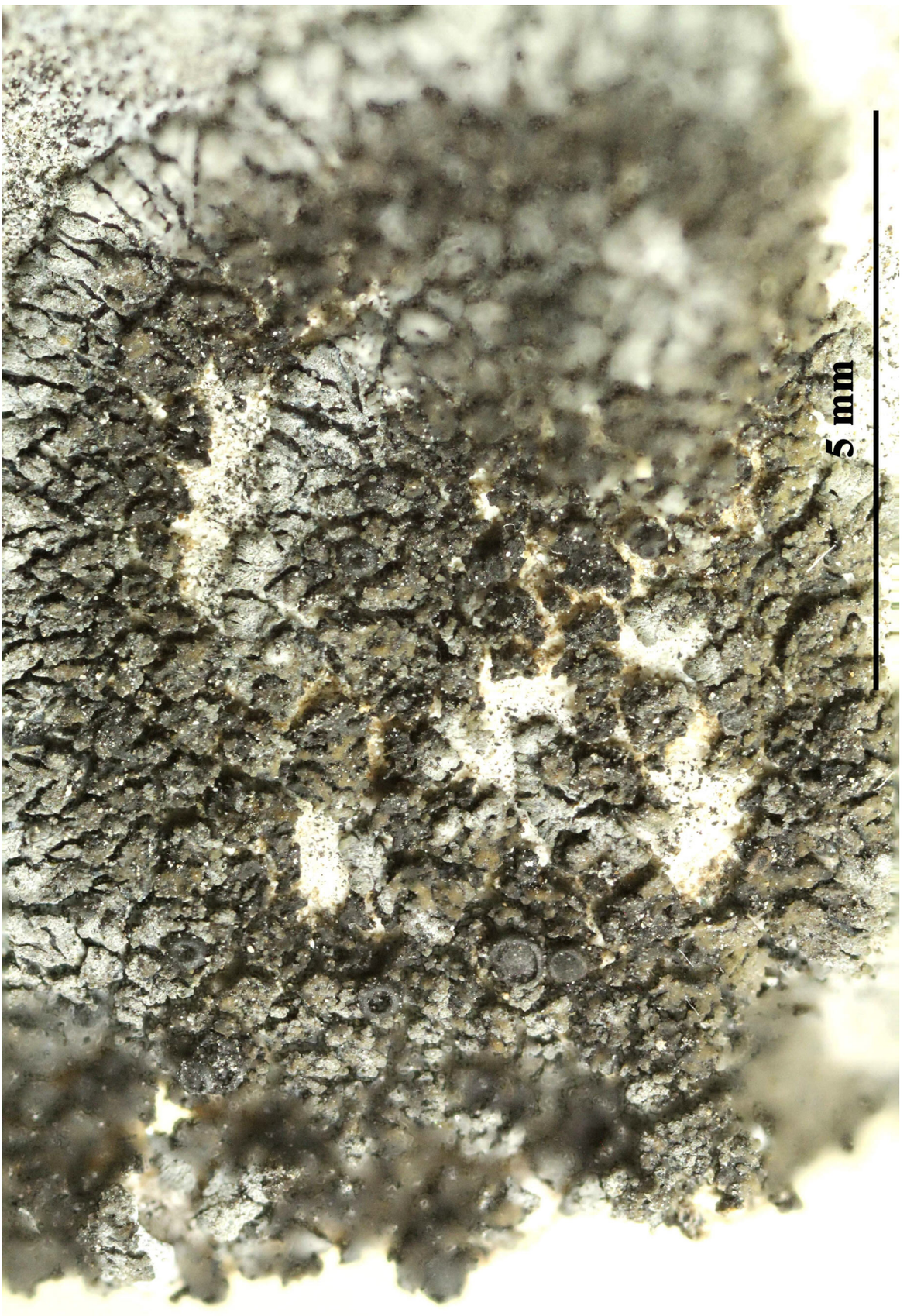


Placopyrenium bucekii

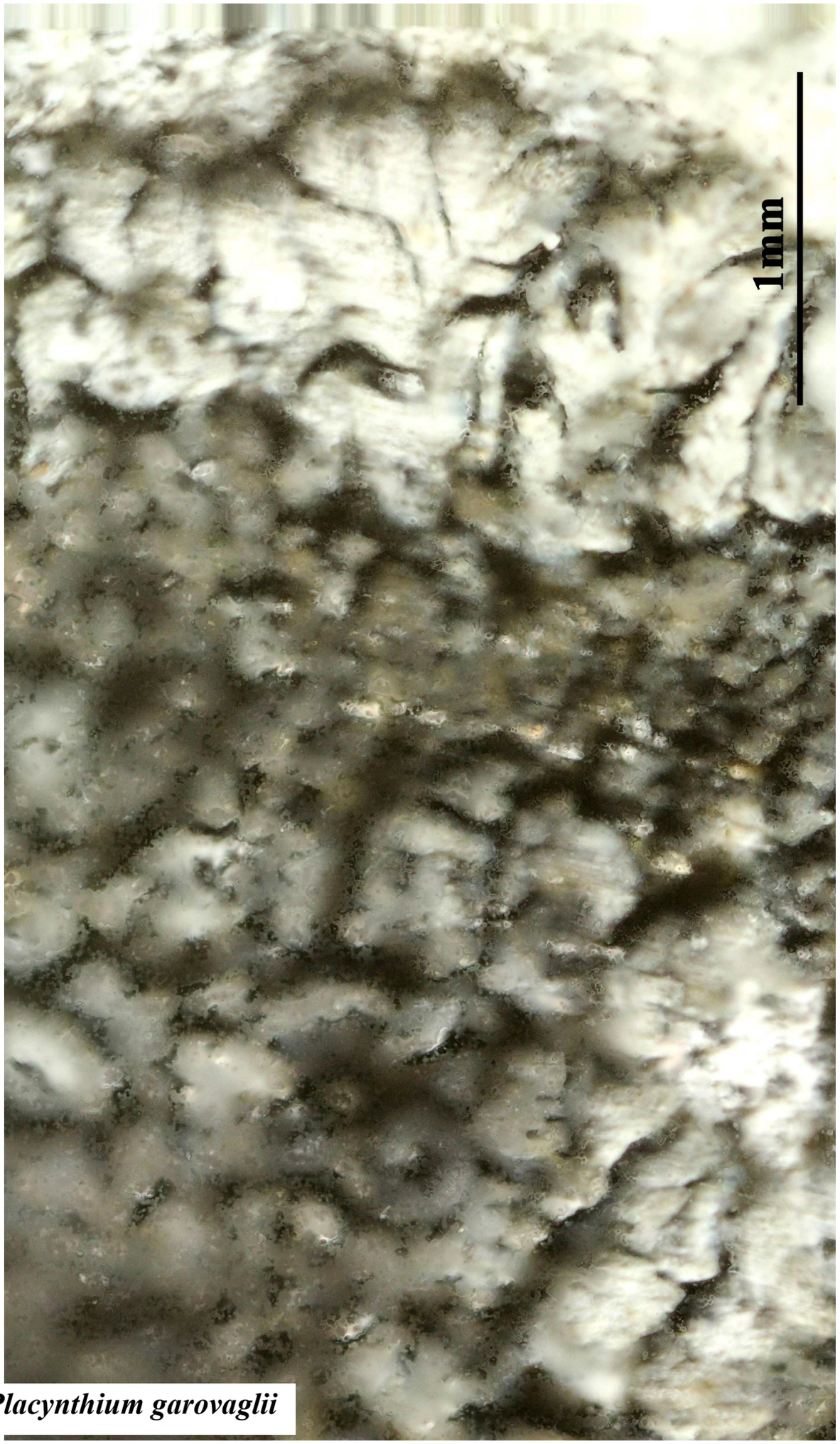
Placynthium garovaglii (A. Massal.) Malme, Lich. Suec. exs. 30: no. 743 (1918)
= *Racoblenna garovaglii* A. Massal. 1853

[VZ1107], Bohemoslovacia. Slovacia, montes Tatra Minor: in monte Velký Rossutec Poludňové akály dicto, 1100 m. In rupibus calcareis. Leg. A. Vězda, 6.9.1972. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1107.

Thallus crustose-placodioid, up to 1.5(-2) mm thick, paraplectenchymatous throughout, forming up to 15(-20) mm wide rosettes, black when dry, but densely white to bluish-grey pruinose due to numerous small crystals of calcium oxalates, dull grey-brown when wet, usually without a distinct prothallus. Central parts consisting of strongly convex, erect, 0.1-0.2(-0.4) mm wide outgrowths which sometimes fall off leaving concentrical semi-circles of marginal lobes. Lobes contiguous, usually convex, simple or sparingly branched, usually 0.5-1(-2) mm long and wide, often rugose or striate, closely adhering to the substrate except at the ends. Apothecia rather common, biatorine, sessile, up to 1 mm across, black but sometimes bluish-pruinose. Epithecium blue-green; hymenium colourless, I+ blue; paraphyses distinctly septate, sparingly branched; hypothecium pale brown. Asci 8-spored, apically thickened, with a distinct amyloid tube structure in the apex. Ascospores (2-)3-septate, hyaline, elongate-fusiform, (20-)25-35(-53) x 3-5(-6) µm. Pycnidia to 250 µm diam., the wall dark blue near the ostiole. Conidia bacilliform, (5-)7-9 x c. 1 µm, straight or slightly curved, Photobiont cyanobacterial, Scytonema-like. Spot tests: all negative. Chemistry: without lichen substances. - Note: on steeply inclined, sunny surfaces of calcareous rocks with some water seepage; certainly more widespread in Southern Italy.



Placynthium garovaglii



Placynthium garovaglii

Plectocarpon lichenum (Sommerf.) D. Hawksw., in Hawksworth & Galloway, Lichenologist 16(1): 86 (1984)

[VZ2050], Jugoslavia. Crna Gora (Montenegro): montes Durmitor, loco Surdup dicto supra lacum Zminje jezero, 1600 m. In thallo *Lobariae pulonariae* vigens, ad truncum *Fagi* in silva virgina. Leg. A. Vězda, 21.8.1984. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2050.

Ascomata developing on the upper or lower surface of the host thallus, inducing distinct, basally constricted galls, dispersed, single or more rarely grouped, black, flat to convex, rarely slightly concave, rounded, 0.6-4(-5) mm diam., c. 140-340 µm thick; surface slightly shiny or mat, smooth to minutely warted; warts of 55-150(-190) µm diam.; stroma multilocular; loculi c. 70-160 µm wide; sterile stromatic tissue dark greenish (but appearing olivaceous owing to other brown pigments), K+ green intensifying, N+ orange to reddish brown; pigment not granulose, dissolving at high concentration; layer below the stroma reddish brown, consisting of host cortex over which the ascomata are growing; hymenium hyaline, sometimes partly greenish brown, K+ greenish (owing to the greenish black stromatic pigment), soon becoming bright yellow to almost orange (additional pigment of the hymenial gel?), entirely filling the loculi, 80-105 µm high, I+ red; paraphyses richly branched and anastomosing, 2-2.5 µm thick, apically slightly enlarged; asci clavate, (4-)6-8-spored, 55-75 x 14.5-17.5 µm; ascospores hyaline, becoming brown, K+ greenish when overmature, oblong, 3-septate, often slightly constricted at the septa, (16-)18.5-21.3(-23) x (5-)5.3-6.3(-7) µm, l/w ratio 3.1-3.8; perispore hyaline, 0.5-1.5 µm thick, becoming uniformly brown when overmature; Pycnidia: immersed in the stroma, wall dark brown, irregular, 40-50 µm wide, 80-90 µm high; conidia 4.5-5.5 x 1 µm. World distribution: Africa (Kenya, Tanzania), La Réunion, North America, Asia (Russia, Turkey), Europe and Macaronesia.



Plectocarpon lichenum



Plectocarpon lichenum

Plectocarpon lichenum (Sommerf.) D. Hawksw., in Hawksworth & Galloway, Lichenologist 16(1): 86 (1984)

[19305], Spanien, La Palma, Lobeerwald am "Camino Real" oberhalb "Ermita de la Virgen del Pino", 28°40'06.45" N, 17°49'46.90" W, 1250 m. Auf *Lobaria pulmonaria* an Lobeer. Leg. H.-G. Wagner 14.10.2014. - Chemistry of *Lobaria pulmonaria* the hostlichen: p33/9: stictic acid (major), norstictic acid, cryptostictic acid, constictic acid, menegazziaic acid by HPTLC, anal. F. Schumm, conf. J.A. Elix

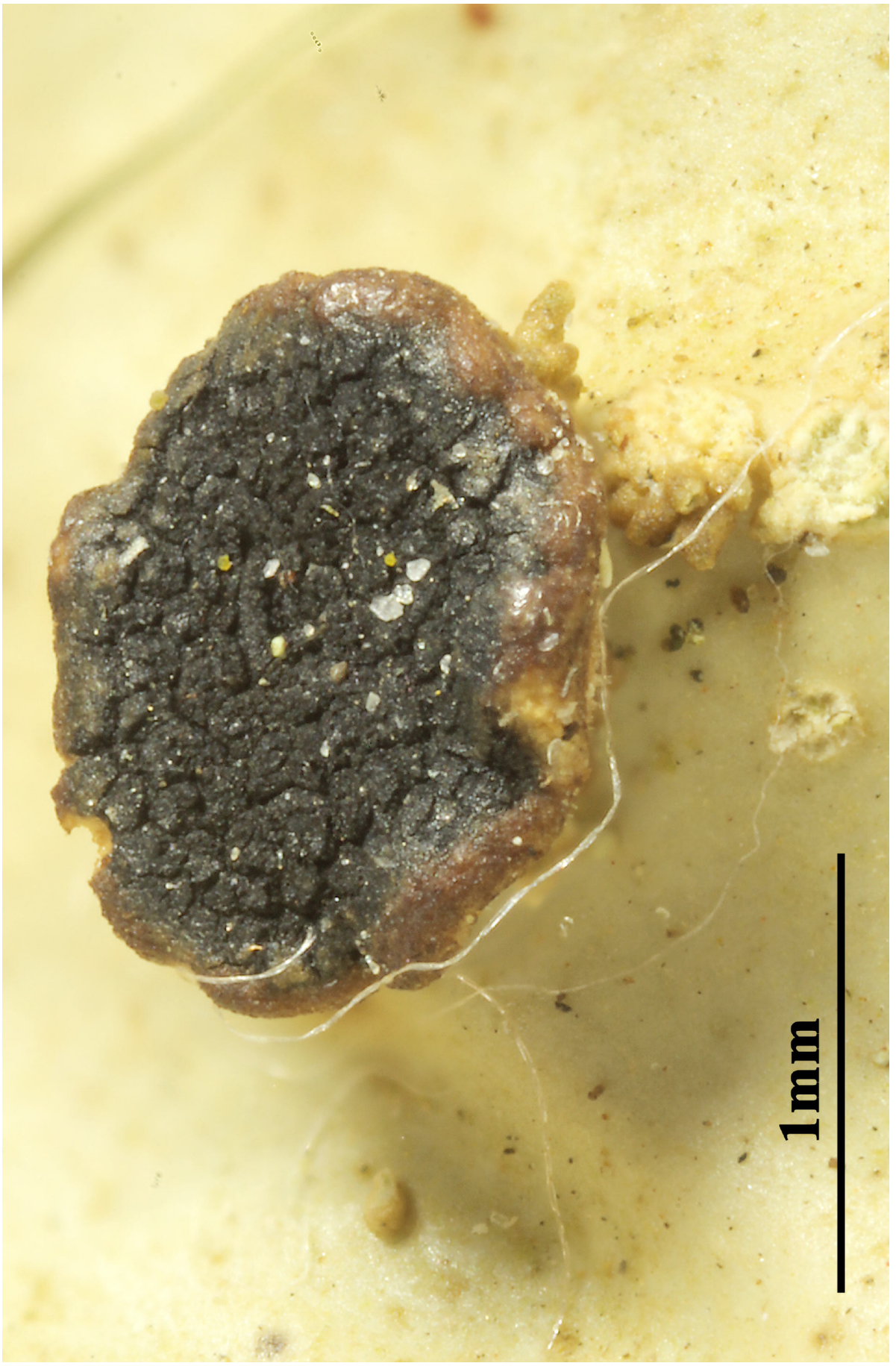
Ascomata developing on the upper or lower surface of the host thallus, inducing distinct, basally constricted galls, dispersed, single or more rarely grouped, black, flat to convex, rarely slightly concave, rounded, 0.6-4(-5) mm diam., c. 140-340 µm thick; surface slightly shiny or mat, smooth to minutely warted; warts of 55-150(-190) µm diam.; stroma multilocular; loculi c. 70-160 µm wide; sterile stromatic tissue dark greenish (but appearing olivaceous owing to other brown pigments), K+ green intensifying, N+ orange to reddish brown; pigment not granulose, dissolving at high concentration; layer below the stroma reddish brown, consisting of host cortex over which the ascomata are growing; hymenium hyaline, sometimes partly greenish brown, K+ greenish (owing to the greenish black stromatic pigment), soon becoming bright yellow to almost orange (additional pigment of the hymenial gel?), entirely filling the loculi, 80-105 µm high, I+ red; paraphyses richly branched and anastomosing, 2-2.5 µm thick, apically slightly enlarged; asci clavate, (4-)6-8-spored, 55-75 x 14.5-17.5 µm; ascospores hyaline, becoming brown, K+ greenish when overmature, oblong, 3-septate, often slightly constricted at the septa, (16-)18.5-21.3(-23) x (5-)5.3-6.3(-7) µm, l/w ratio 3.1-3.8; perispore hyaline, 0.5-1.5 µm thick, becoming uniformly brown when overmature; Pycnidia: immersed in the stroma, wall dark brown, irregular, 40-50 µm wide, 80-90 µm high; conidia 4.5-5.5 x 1 µm. World distribution: Africa (Kenya, Tanzania), La Réunion, North America, Asia (Russia, Turkey), Europe and Macaronesia.



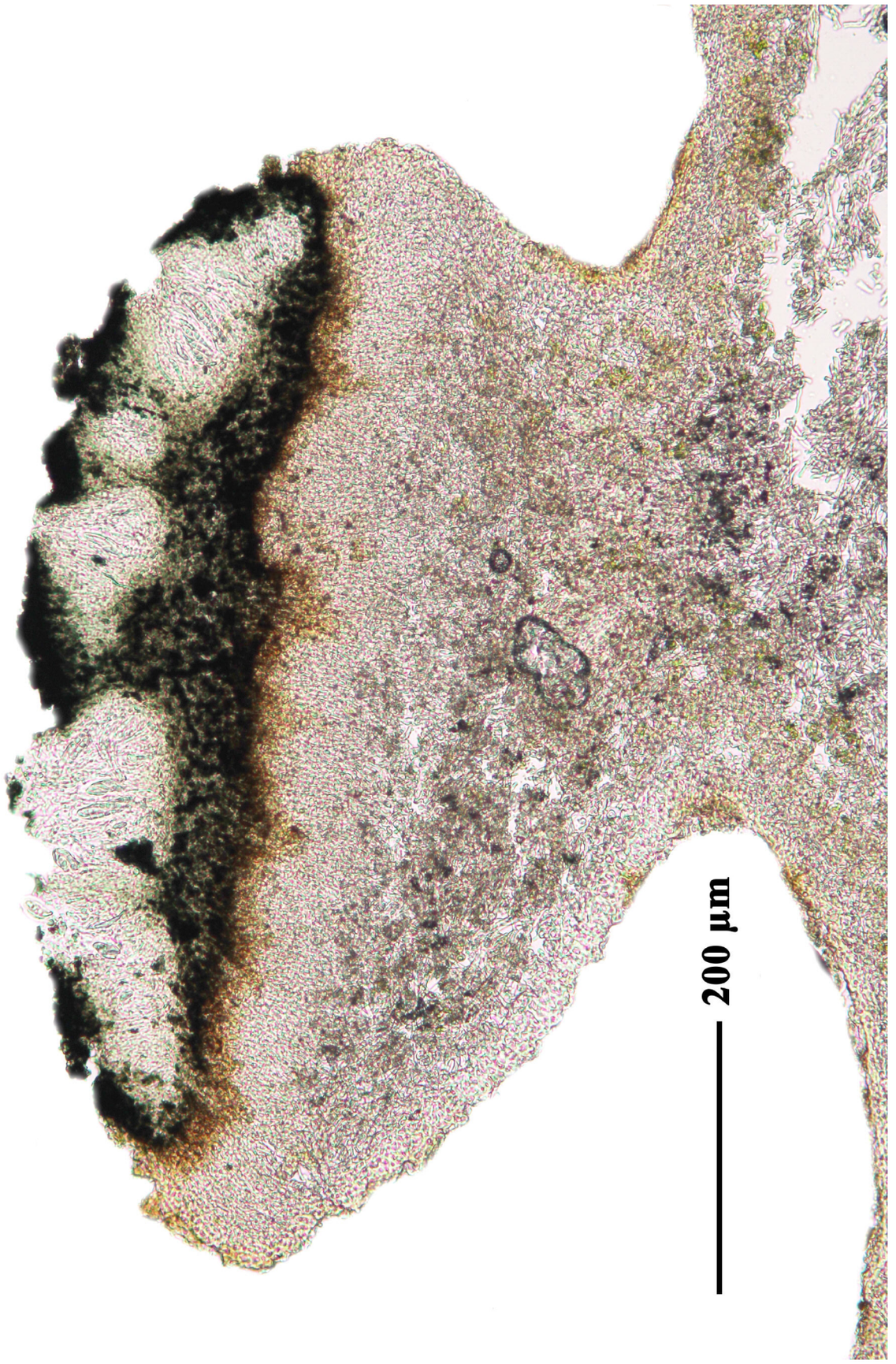
Plectocarpon lichenum



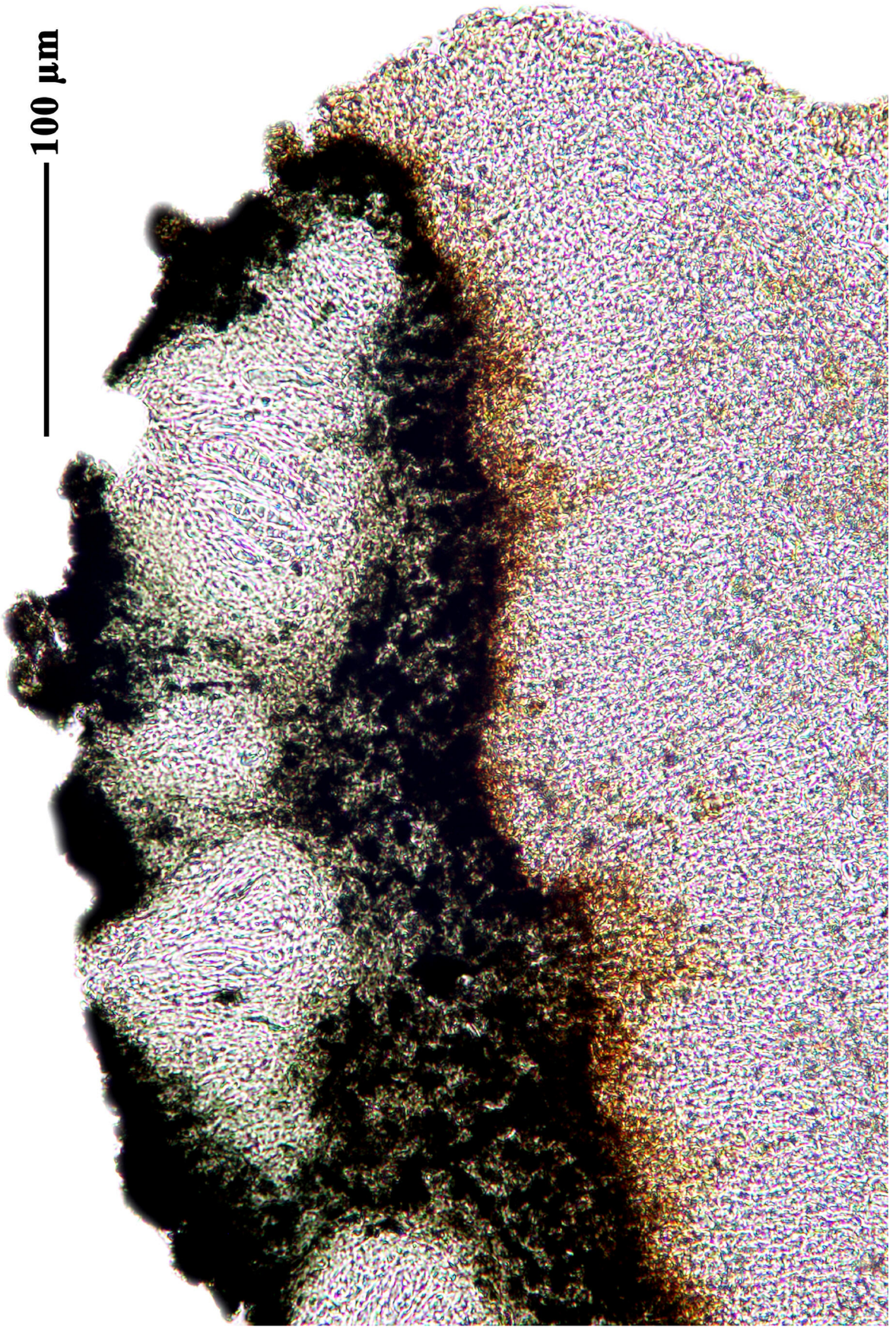
Plectocarpon lichenum



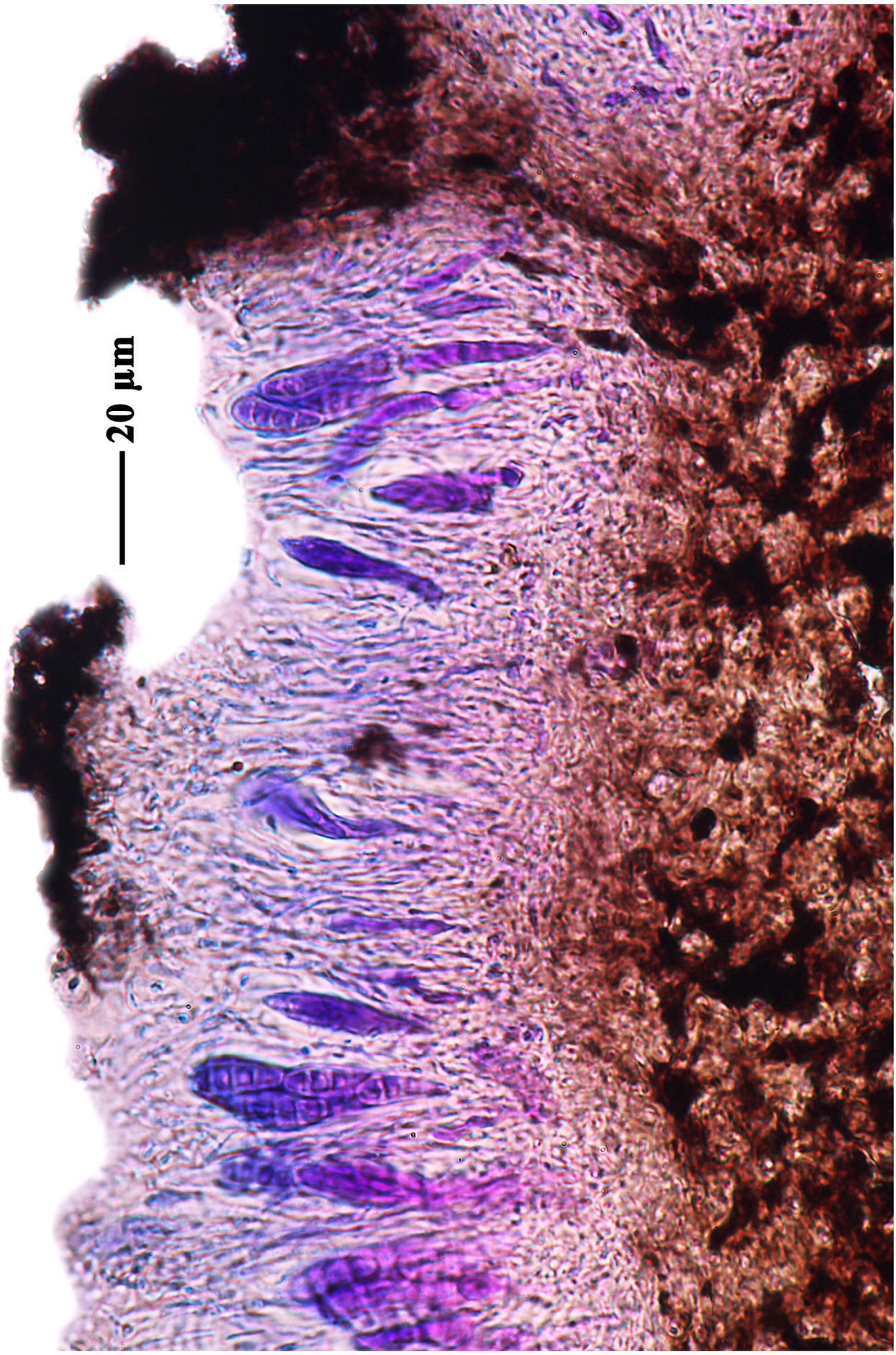
Plectocarpon lichenum



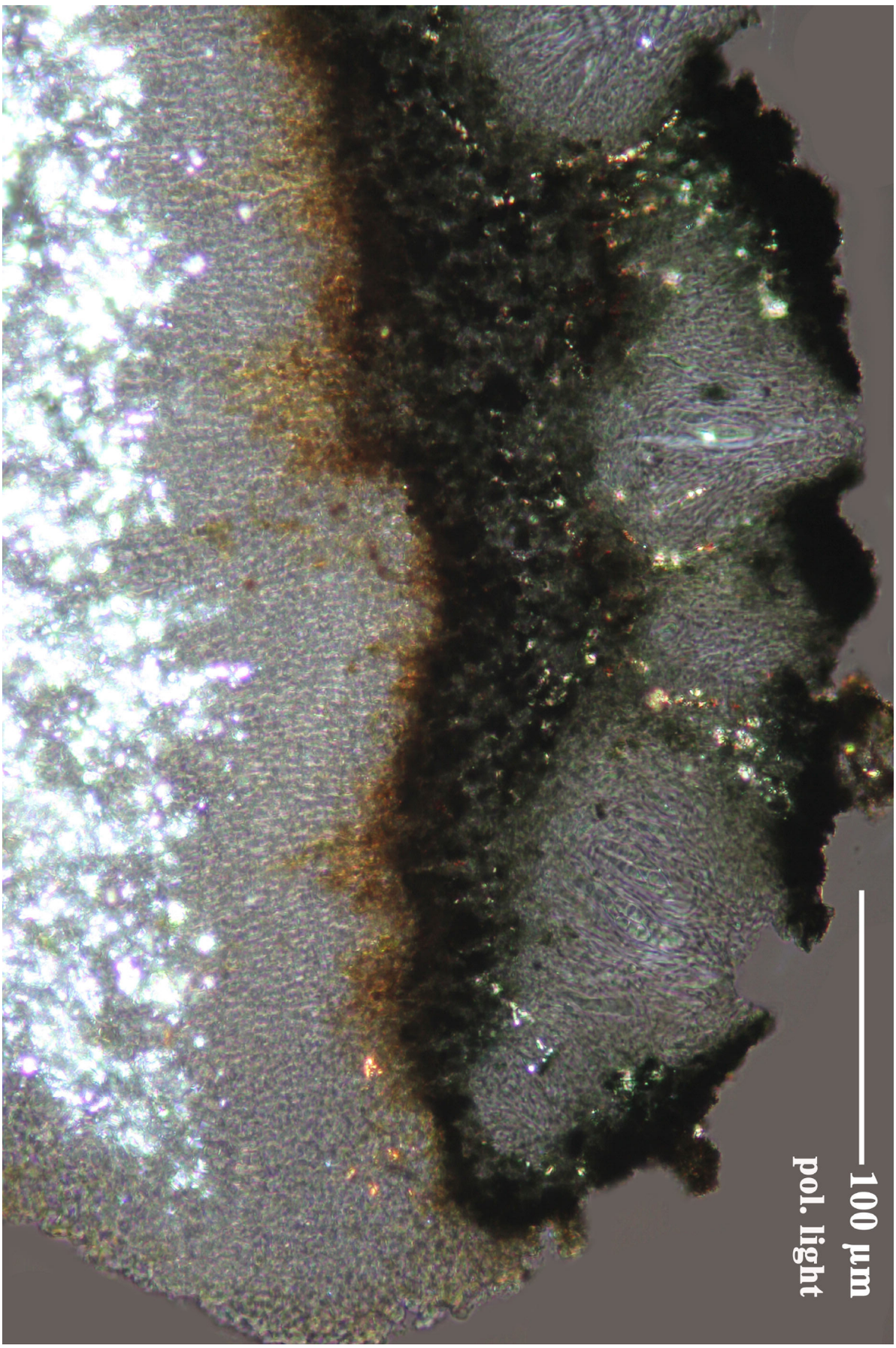
Plectocarpon lichenum



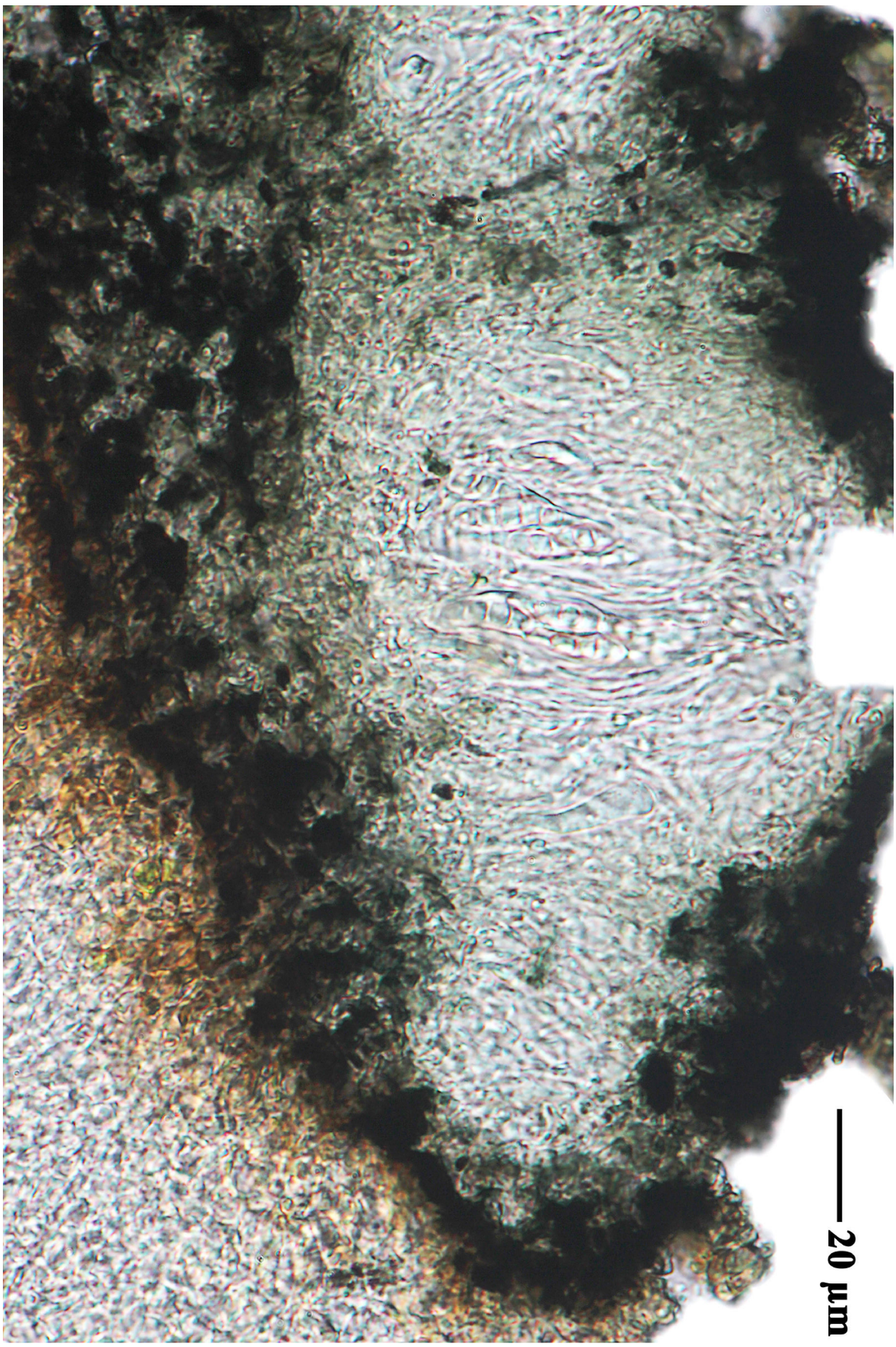
Plectocarpon lichenum



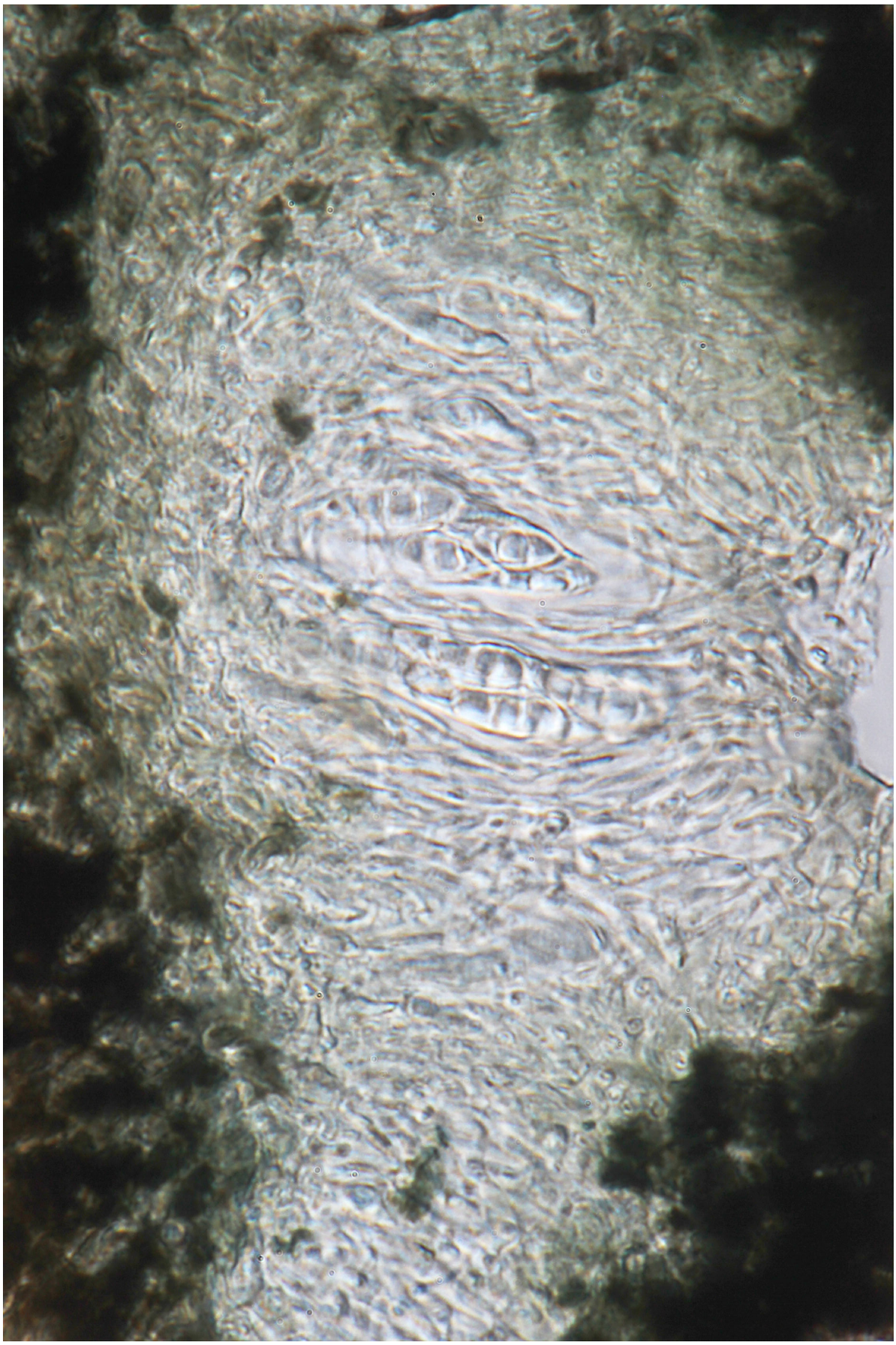
Plectocarpon lichenum



Plectocarpon lichenum



Plectocarpon lichenum



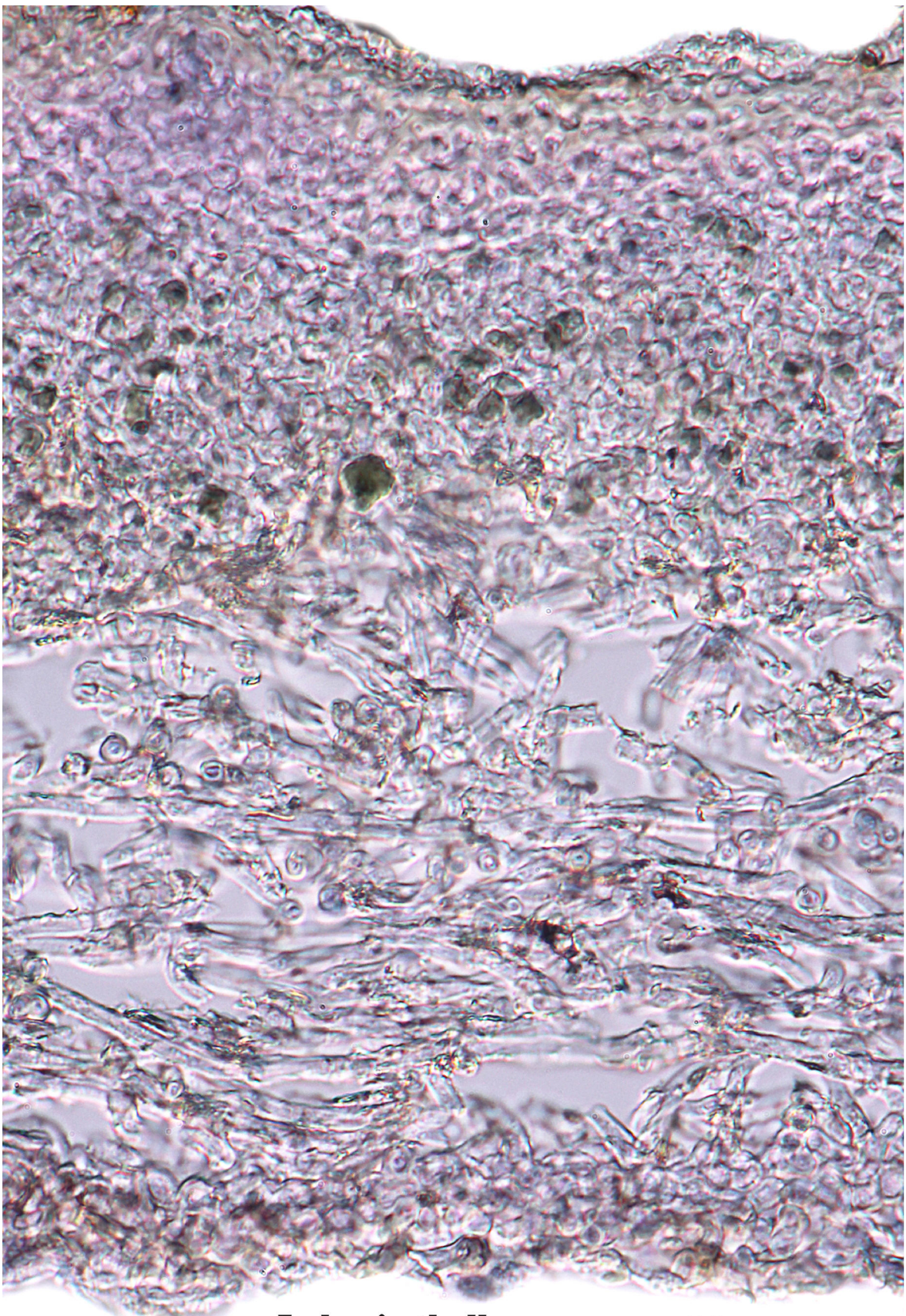
Plectocarpon lichenum



Plectocarpon lichenum



Plectocarpon lichenum



Lobaria thallus —— **20 µm**

Plectocarpon lichenum

Plectocarpon lichenum

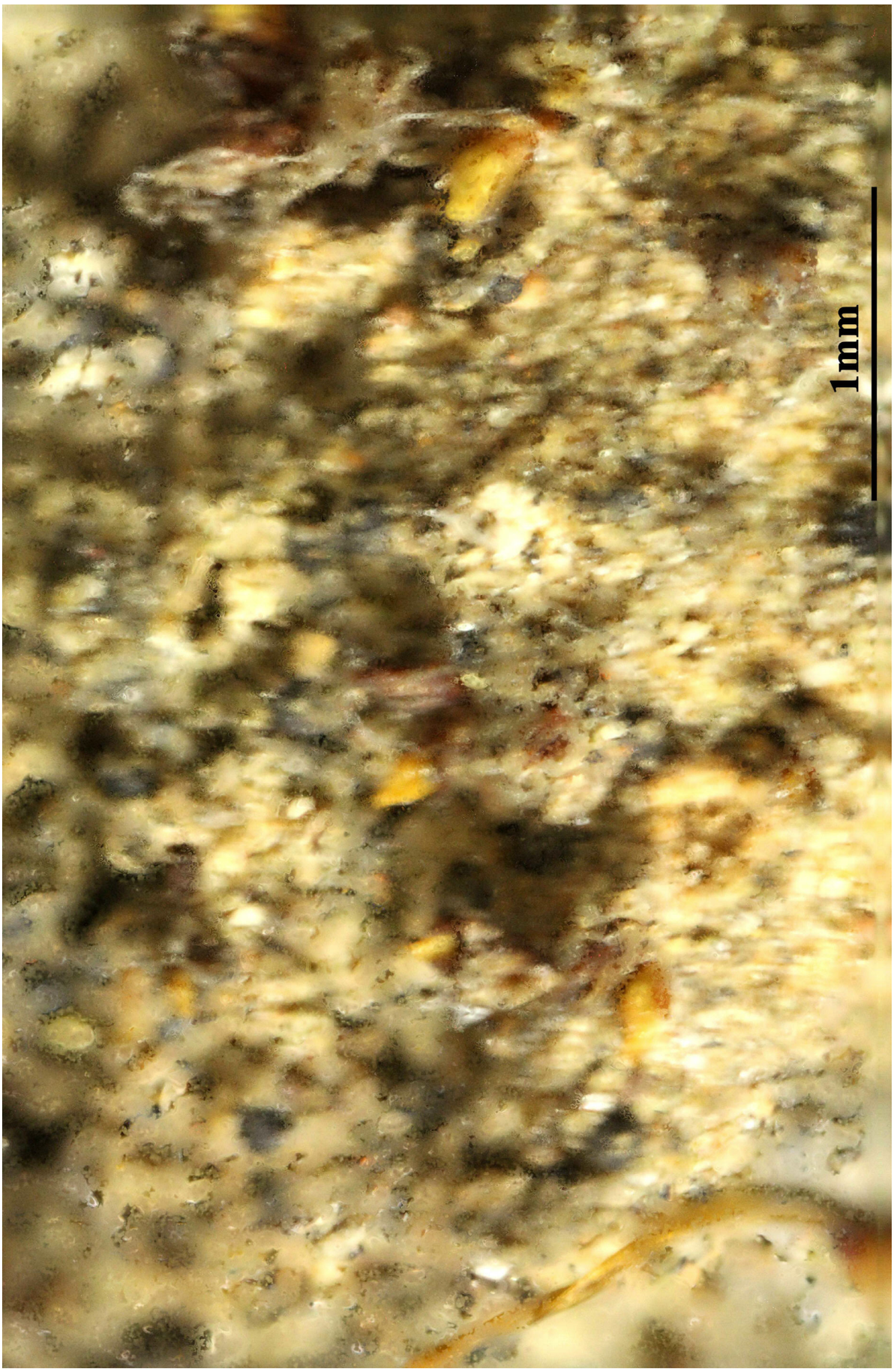
Polyblastia brunnensis Vězda, Lichenes Selecti Exsiccati, Fasc. (Průhonice) 41: no. 1002 (1971)

[VZ1002], Bohemoslovacia. Moravia, distr. Brno (Brunna), supra pagum Bosonohy, 300 m. Terricola in parietibus loesaceis humidis. Leg. A. Vězda, 25.4.1971. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1002.

Terricola, Affinis *Thelidii juistingii* Koerb., sed sporis submuriformibus differens. Cellulae algarum 4-5 µm crassae, dense glomeratae , glomerulas parvas hyphis pseudoparenchymatrice circumdatas formantes.



Polyblastia brunnensis

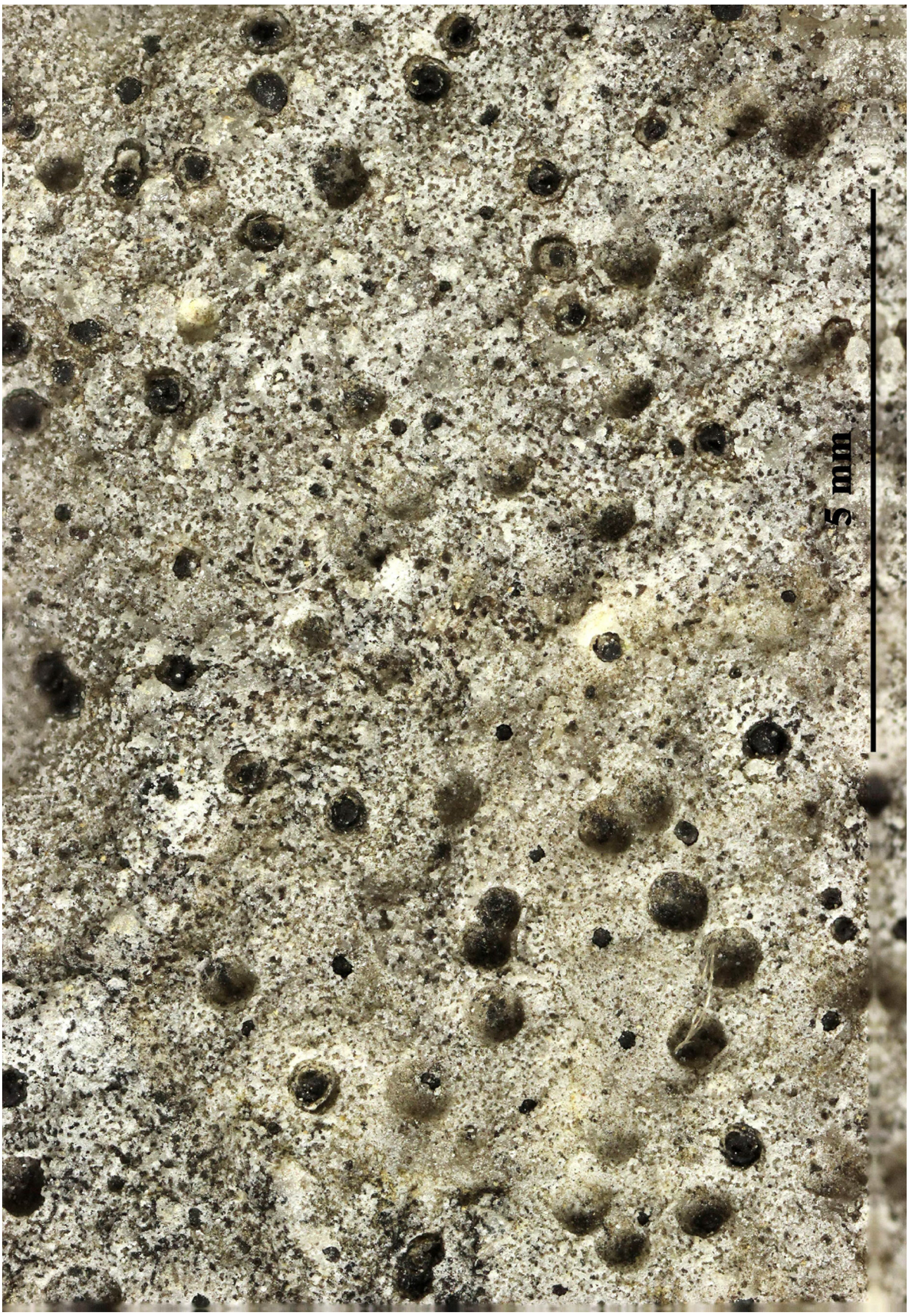


Polyblastia brunnensis

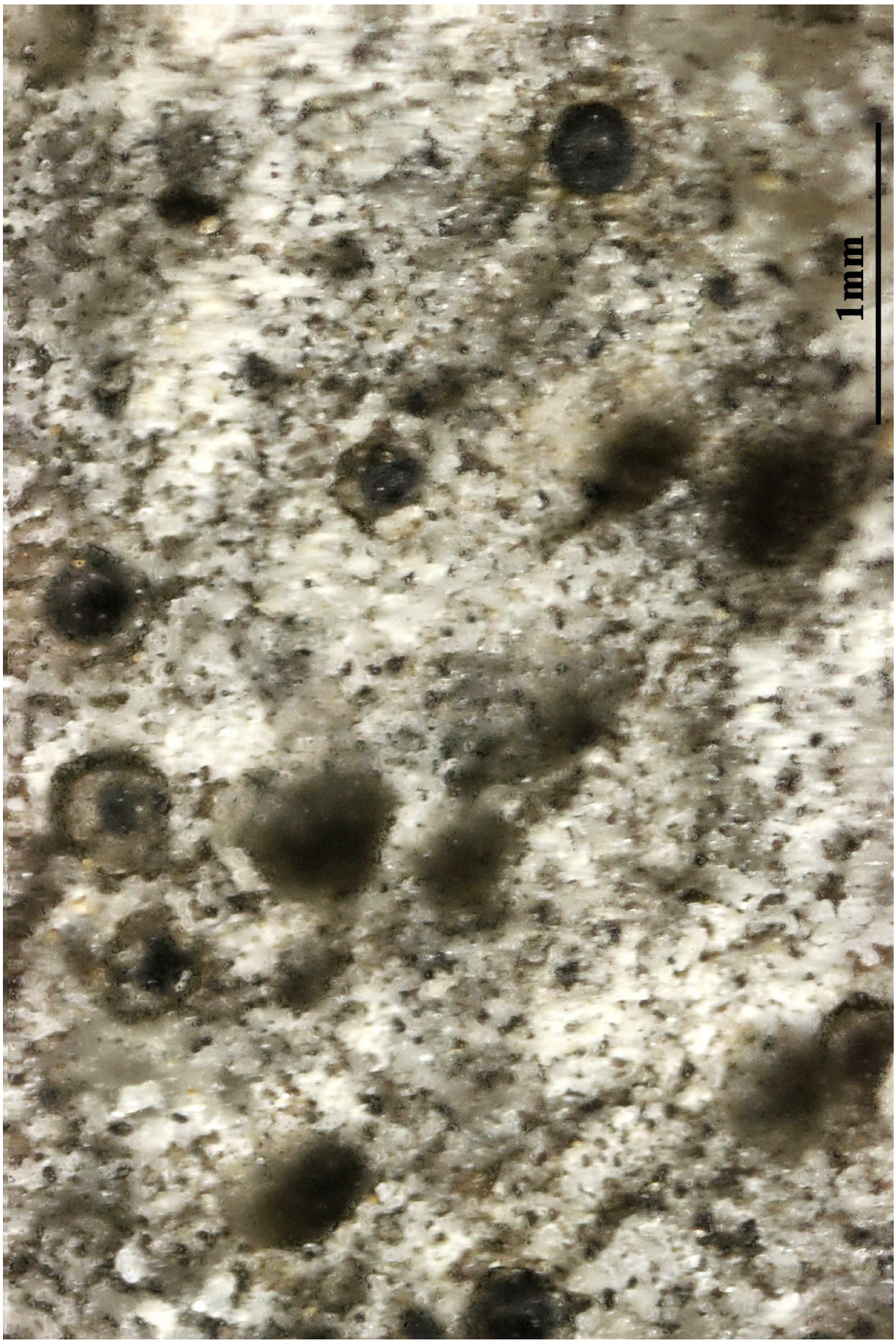
Polyblastia nidulans (Stenh.) Arnold, Ber. naturhist. Augsburg 14: 64 (1861)

[VZ2051], Suecia. Gotland: Tingstäde, inter Lickershamn et Irevik. Ad rupes calcareas. Leg. M. S. Christiansen (no. 4537), 6.8.1973. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2051.

Thallus crustose, endosubstratic, pale grey to pale brown. Perithecia black, 0.2-0.3 mm across, completely immersed in the rock. Involucrellum absent; exciple dark throughout; hamathecium of periphyses and periphysoids, interascal filaments absent; hymenial gel hemiamyloid, I+ red (I+ blue at very low concentrations of I), K/I+ blue. Asci 8-spored, clavate, K/I-, fissitunicate, the wall thickened above, with an ocular chamber, dehiscent by extrusion of an endotunica to form a delicate rostrum. Ascospores muriform, at first hyaline, then turning brown to brown-black, broadly ellipsoid, 21-40(-50) x 15-24 µm. Photobiont chlorococcoid. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: on compact limestone and dolomite in sheltered situations, with optimum above treeline, reaching the nival belt; probably occurring also in the Alps.



Polyblastia nidulans

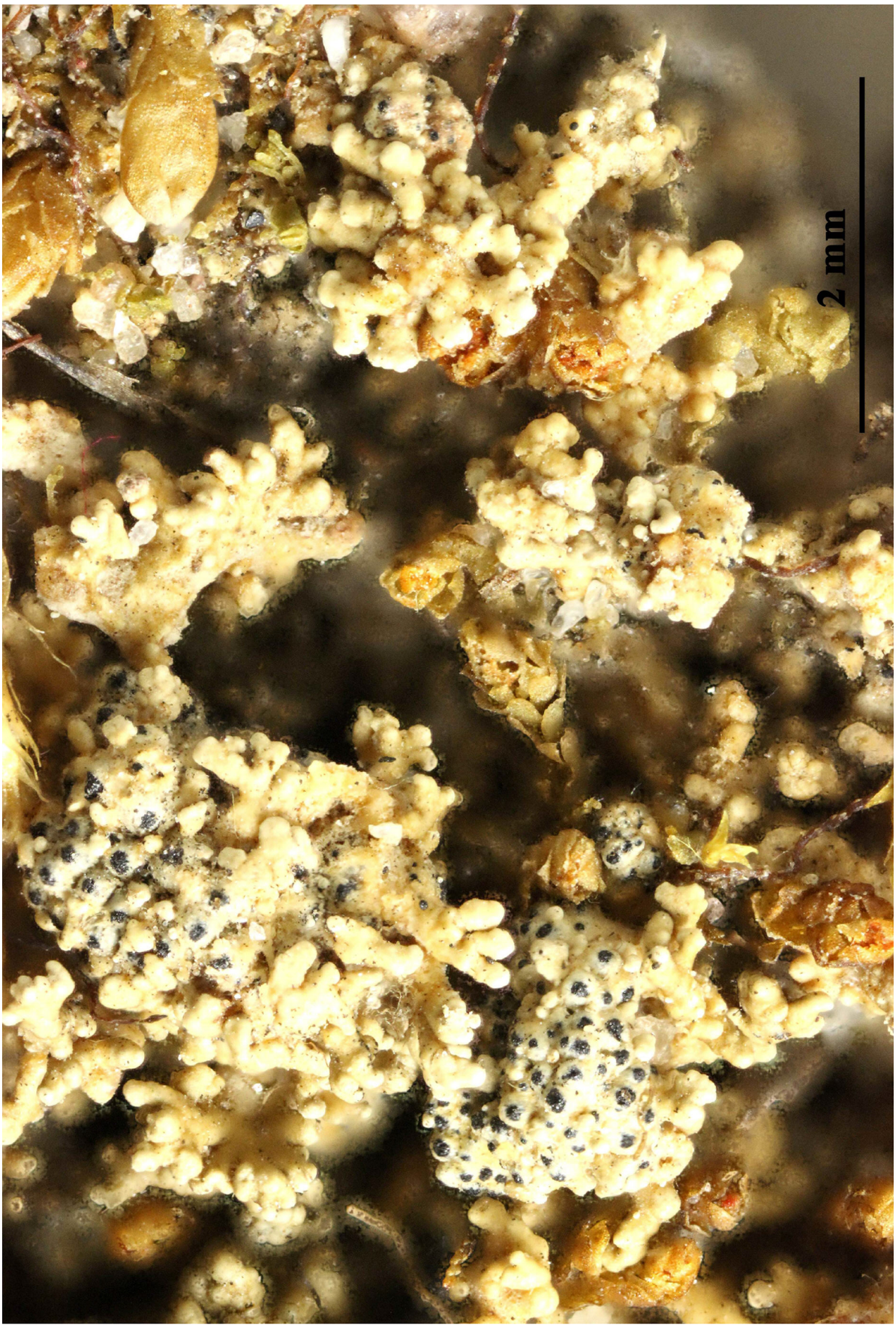


Polyblastia nidulans

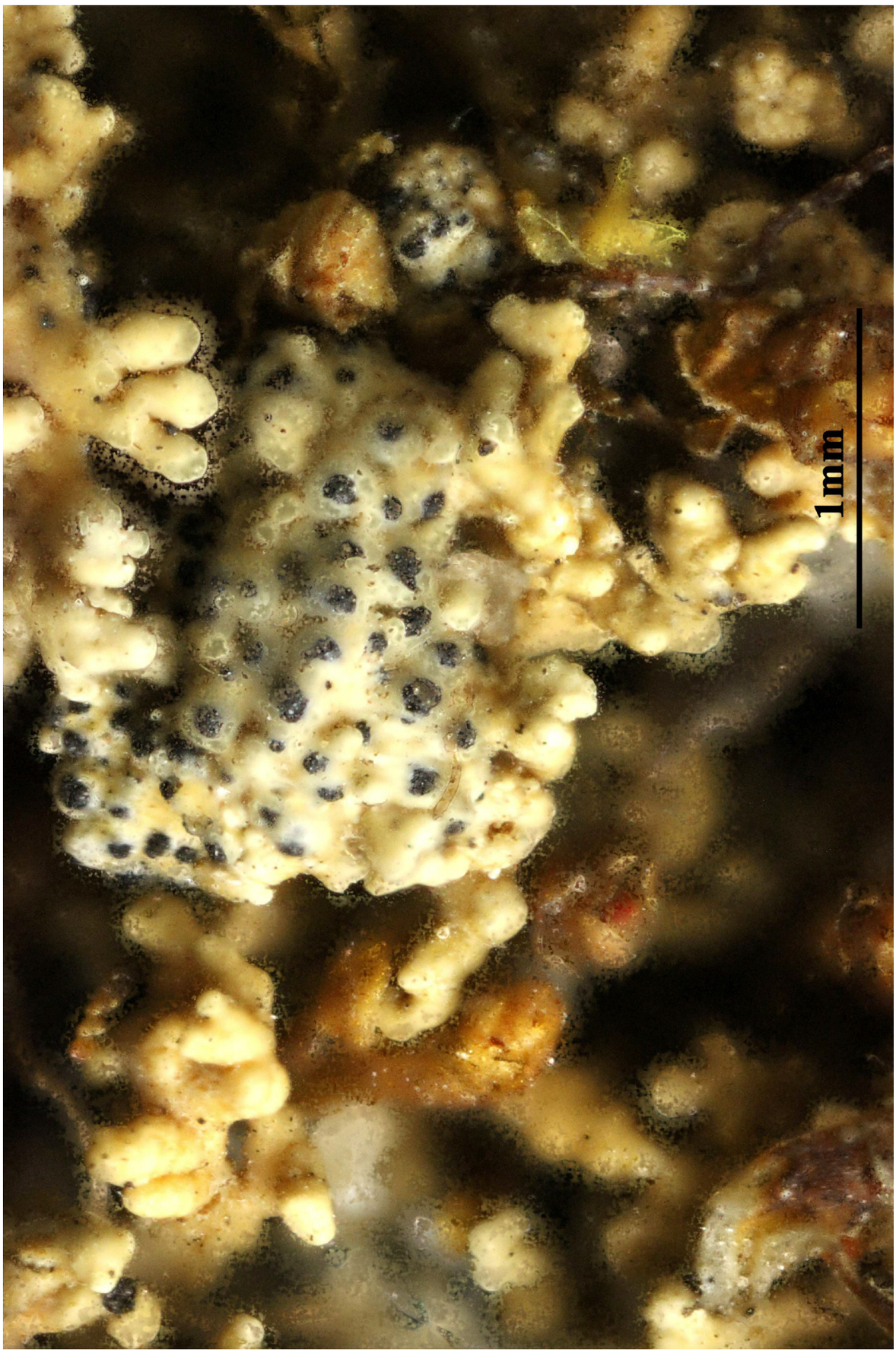
Polycoccum trypethelioides (Th. Fr.) R. Sant., Svensk bot. Tidskr. 54(4): 505 (1960)
= *Diatrype trypethelioides* Th. Fr. 1858

[VZ1874], Magna Britannia. Caledonia: Morayshire, Culbin Forest, 10 m. In thallo *Stereocaulon condensati*, ad terram arenariam in vicinitate Pineti. Leg. B. J. Coppins (9957), 27.8.1983. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1974.

Interascal tissue (hamathecium) of branched and anastomosing hyphae (paraphysoids or pseudoparaphyses) Ascomata arising singly; walls consisting of angular pseudoparenchymatous cells Asci mainly 8-spored Ascospores,brown 14-22 x 8-10 µm; ascomata 150-200 µm, forming gall-like swellings to 2.5 mm diam; growing on *Stereocaulon* spp. See Hawksworth (1978).



Polycoccum trypethelioides



Polycoccum trypethelioides

Polysporina cyclocarpa (Anzi) Vězda, Folia geobot. phytotax. 13(4): 399 (1978)
= *Sarcogyne cyclocarpa* (Anzi) J. Steiner in Penther & Zederbauer, Ann. K.K. naturh. Hofmus. Wien, 20: 374, 1905.
= *Lithographa cyclocarpa* Anzi - Cat. Lich. Sondr.: 97, 1860.
= *Acarospora cyclocarpa* (Anzi) Jatta
= *Biatorella cyclocarpa* (Anzi) Lindau

[VZ1633], Bohemoslovacia. Slovacia. Montes Carpatorum, Tatra Magna, pars Belanské Tatry: Skalá vráta, 1600 m. Ad parietes altos rupium calcarearum. Leg. A. Vězda, 10.1974. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1633.

Thallus crustose, endosubstratic, poorly evident. Apothecia lecideine, dull black, epruinose, sessile, irregular to almost star-shaped, 0.5-1(-1.5) mm across, often in small clusters, the disc rough, with carbonized concentric ridges (gyrose), often umbonate, the margin split, forming a series of segments at angles to each other, finally poorly evident. Proper exciple 40-80 µm wide, of radiating thin-walled hyphae, with a carbonized outer layer, sharply separated from the dull reddish-brown to colourless inner part; epithecium c. 10 µm thick, pale yellow-orange; hymenium yellow-orange in thick sections, colourless in thin sections, 85-100 µm high, the hymenial gel hemiamyloid, I+ light blue fading to light red; paraphyses coherent, simple to sparingly branched, regularly septate, 1-2 µm thick at mid-level, the apical cells to 3 µm wide, with a pigmented cap; subhymenium hyaline, 40-80 µm high, I+ blue; hypothecium hyaline to yellowish, 20-25 µm thick, continuous with exciple, I-. Asci 100-200-spored, cylindrical to almost saccate, strongly thickened at apex, the apical dome K/I-, the outer coat K/I+ blue, 40-60 x 15-20 µm. Ascospores 1-celled, hyaline, ellipsoid, 3.5-5(-6) x (1-)1.5(-2.5) µm, the immature ones halonate. Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. Note: on dolomite and calcareous schists, more rarely on pure limestone, with optimum above treeline; probably restricted to the Alps; closely related to S. urceolata.



Polysporina cyclocarpa



Polysporina cyclocarpa

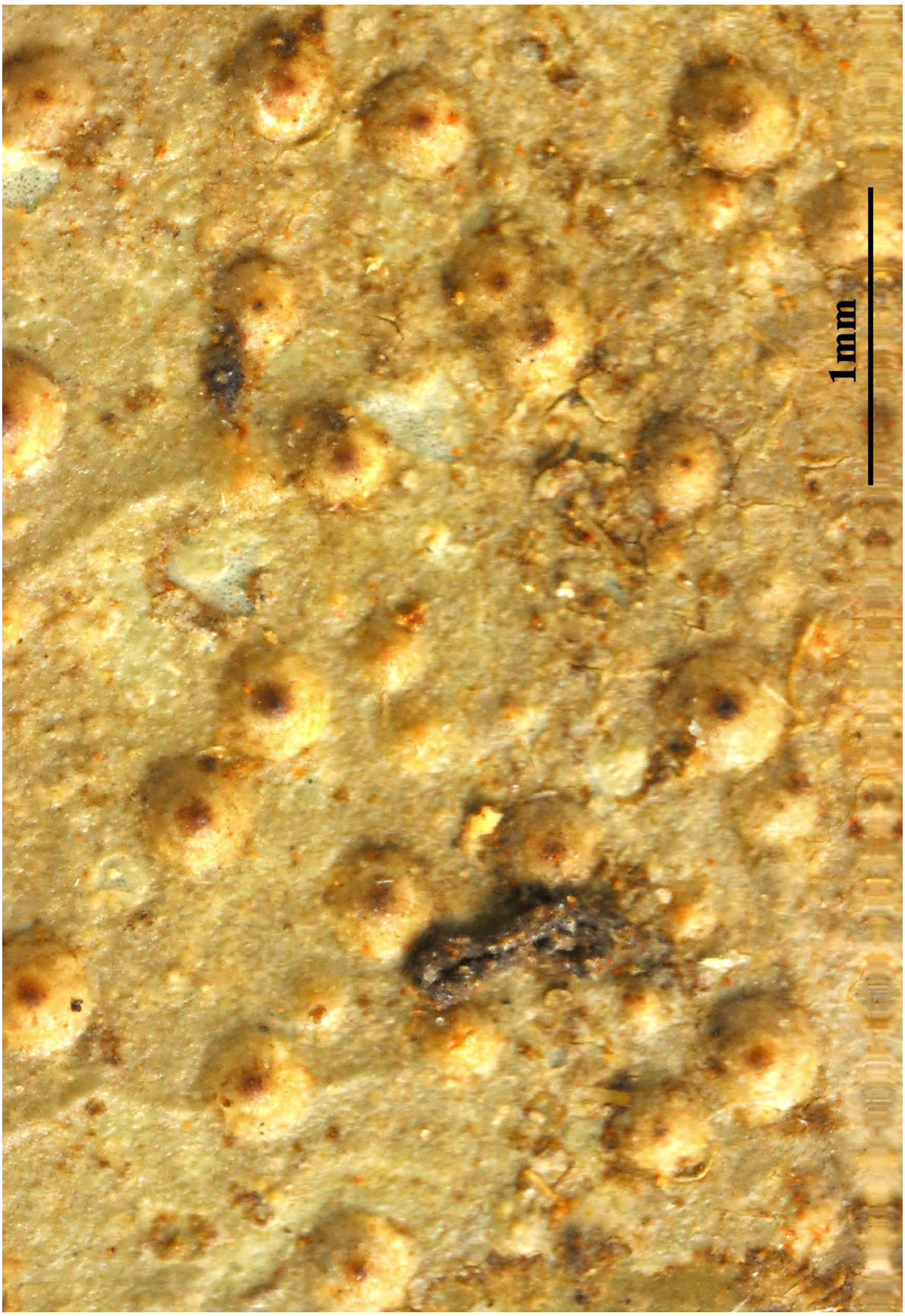
Porina epiphylla Fée, Essai Crypt. Exot. (Paris): 76 (1825) [1824]

[VZ1526], Kenya. Karura silva, 1750 m. In silva xerophila prope rivulum, ad folia *Uvariodendron* sp. Leg. J. Lambinon (75/216), 12.4.1975, det. E. Sérisaux. Ex A. Vězda Lichenes Selecti Exsiccati Nr.1526.

Thallus continuous but sometimes marginally dispersed, minutely uneven, 10–25 mm across and 10–15 µm thick, pale greyish green (herbarium specimens often with yellow tinge), slightly shiny, incrusted with calcium oxalate crystals. Photobiont cells angular-rounded, 6–12 x 4–7 µm, in irregular plates. Perithecia adnate, young ones lens-shaped, mature ones lens-shaped to hemispherical, 0.25–0.45 mm diam. and 120–160 µm high, glabrous, surface smooth, of same color as thallus but sometimes with slight red tinge. Excipulum 5–10 µm thick, colorless to pale yellow, K+ orange. Involucrellum 8–15 µm thick, yellow, K+ brownish orange, externally covered by 7–12 µm thick crystallostratum and 5–12 µm thick, algiferous, thallus layer. Asci obclavate, 55–75 x 8–11 µm. Ascospores oblong, 7-septate, without constrictions at septa, 26–33 x 3–4 µm, 8–9 times as long as broad, colorless. Pycnidia not observed. - Pantropical. A frequent and regular element of shady understory communities in rain forests; probably the most abundant foliicolous species of the genus.



Porina epiphylla

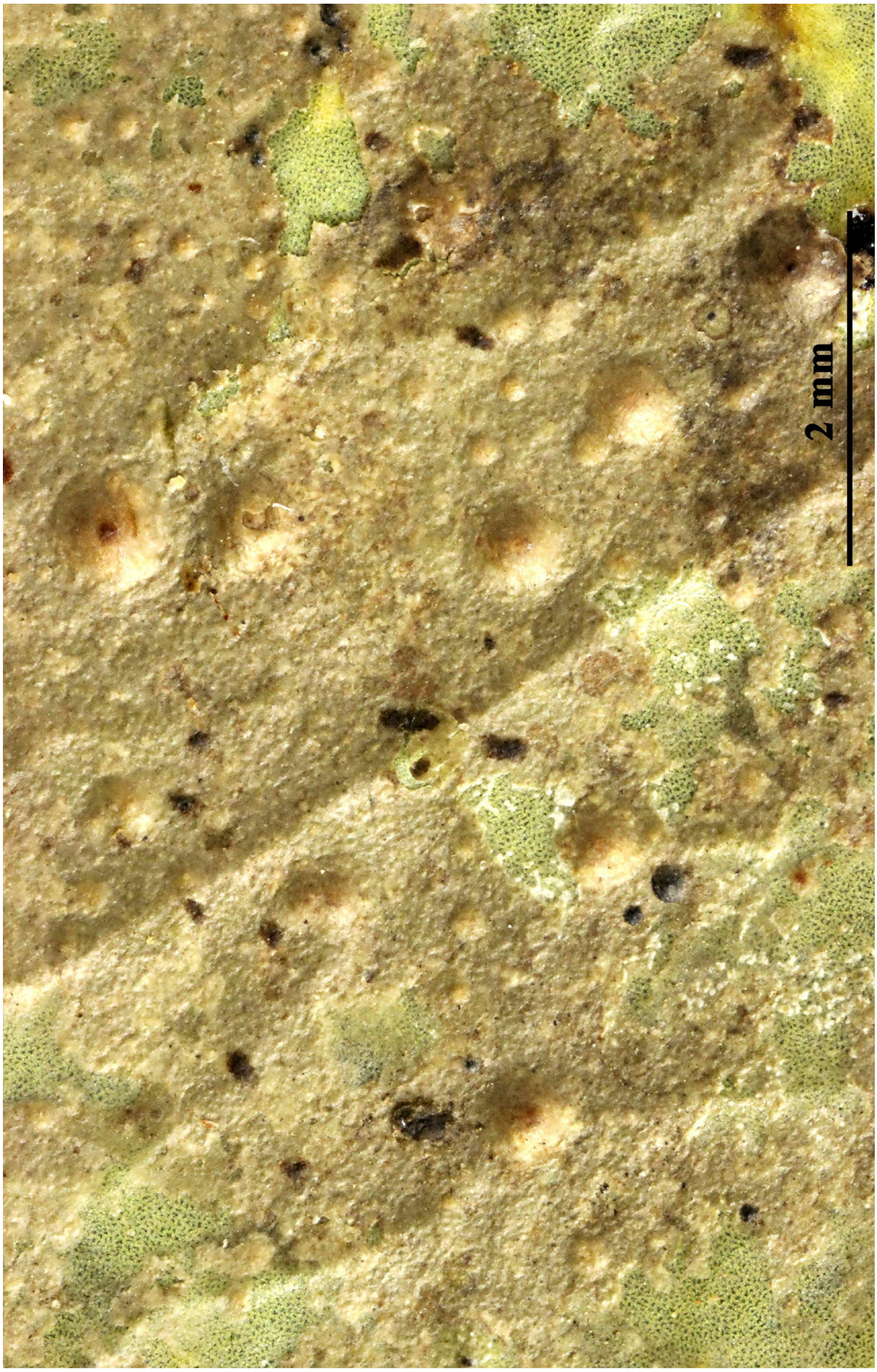


Porina epiphylla

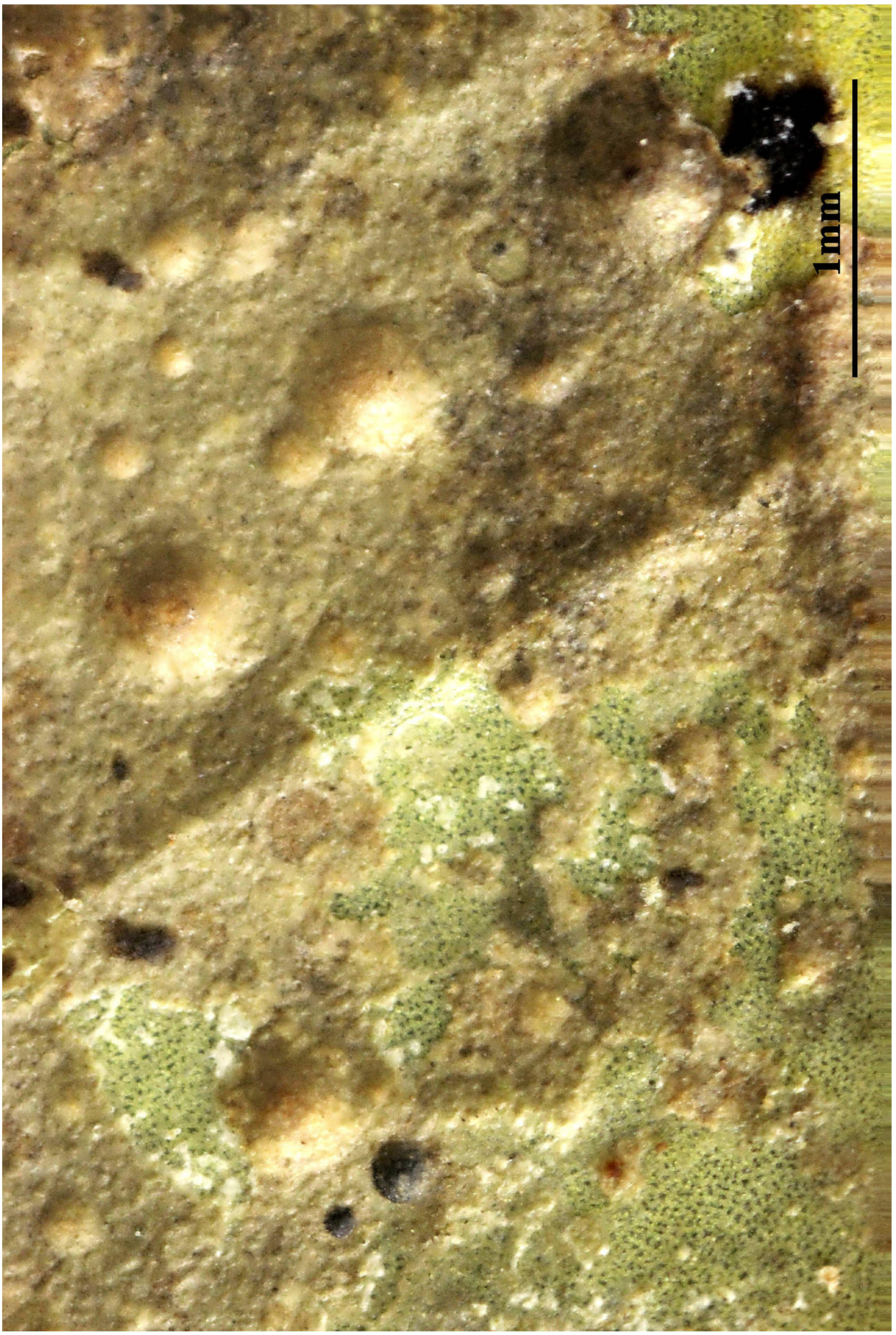
Porina epiphylla Fée, Essai Crypt. Exot. (Paris): 76 (1825) [1824]

[VZ2177], Australia. Queensland. D'Aguilar Range, 2 km ad septentriones a Mt. Glorious in occidente viae ad Mt. Tenison Woods ducentis, 700 m. Foliicola in pluviisilva subtropicali. Leg. J. Hafellner et R. Rogers, 1.8.1966, det A. Vězda, - Annot. Thallus semper pycnidiis copiosis instructus. Pycnosporae simplices, ellipsoideae 2 x 0.2 µm.- Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2177.

Thallus continuous but sometimes marginally dispersed, minutely uneven, 10–25 mm across and 10–15 µm thick, pale greyish green (herbarium specimens often with yellow tinge), slightly shiny, incrusted with calcium oxalate crystals. Photobiont cells angular-rounded, 6–12 x 4–7 µm, in irregular plates. Perithecia adnate, young ones lens-shaped, mature ones lens-shaped to hemispherical, 0.25–0.45 mm diam. and 120–160 µm high, glabrous, surface smooth, of same color as thallus but sometimes with slight red tinge. Excipulum 5–10 µm thick, colorless to pale yellow, K+ orange. Involucrellum 8–15 µm thick, yellow, K+ brownish orange, externally covered by 7–12 µm thick crystallostratum and 5–12 µm thick, algiferous, thallus layer. Asci obclavate, 55–75 x 8–11 µm. Ascospores oblong, 7-septate, without constrictions at septa, 26–33 x 3–4 µm, 8–9 times as long as broad, colorless. Pycnidia not observed. - Pantropical. A frequent and regular element of shady understory communities in rain forests; probably the most abundant foliicolous species of the genus.



Porina epiphylla

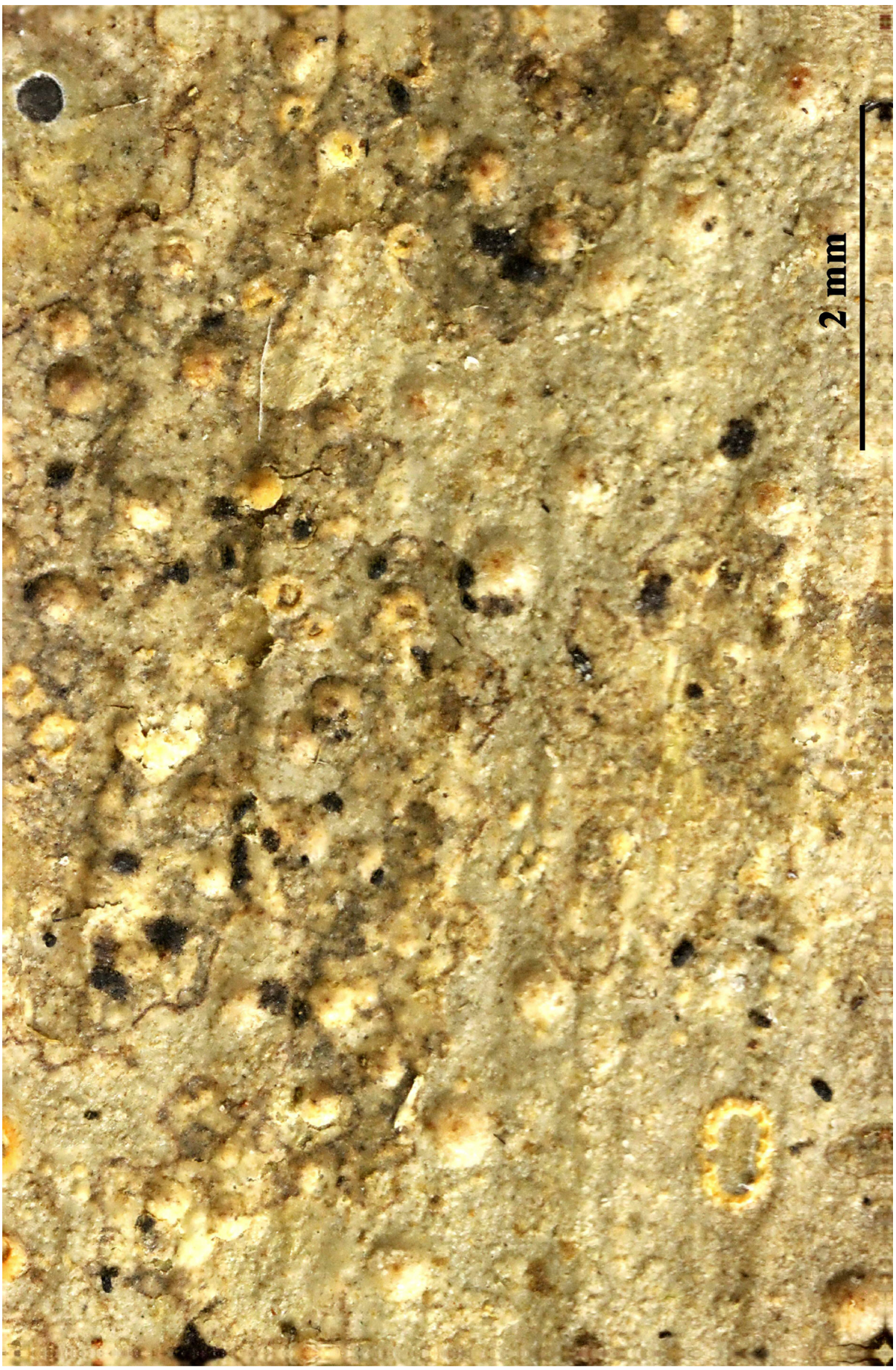


Porina epiphylla

Porina epiphylla Fée, Essai Crypt. Exot. (Paris): 76 (1825) [1824]

[VZ 1227], Tanzania. Distr. Morogoro, reservatum silvestre Kitulanghalo dictum, 500-700 m. In siva semperviridi umbrosa sicca, ad folia *Encephalartos* sp. - Leg. T. Pócs (no. 6856) et M. & C. Crosby, 17.11.1972, det. A. Vězda. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1227.

Thallus continuous but sometimes marginally dispersed, minutely uneven, 10–25 mm across and 10–15 µm thick, pale greyish green (herbarium specimens often with yellow tinge), slightly shiny, incrusted with calcium oxalate crystals. Photobiont cells angular-rounded, 6–12 x 4–7 µm, in irregular plates. Perithecia adnate, young ones lens-shaped, mature ones lens-shaped to hemispherical, 0.25–0.45 mm diam. and 120–160 µm high, glabrous, surface smooth, of same color as thallus but sometimes with slight red tinge. Excipulum 5–10 µm thick, colorless to pale yellow, K+ orange. Involucrellum 8–15 µm thick, yellow, K+ brownish orange, externally covered by 7–12 µm thick crystallostratum and 5–12 µm thick, algiferous, thallus layer. Asci obclavate, 55–75 x 8–11 µm. Ascospores oblong, 7-septate, without constrictions at septa, 26–33 x 3–4 µm, 8–9 times as long as broad, colorless. Pycnidia not observed. - Pantropical. A frequent and regular element of shady understory communities in rain forests; probably the most abundant foliicolous species of the genus.



Porina epiphylla



Porina epiphylla

Porina fulvella Müll. Arg., Flora, Regensburg 66(21): 335 (1883)

[VZ1326], Brasilia. São Paulo. Serra do Mar: Serra do Garraozinho, inter Mogi das Cruzes et Bertioga, 300-800 m. Foliicola. Leg. K. Kalb, 6.9.1980, det A. Vězda. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2326.

Thallus continuous to marginally dispersed, smooth, 5–15 mm across and 10–15 µm thick, pale grey to greenish grey, matt. Photobiont cells angular rounded, 6–12 x 3–6 µm, in irregular plates. Perithecia adnate, lens-shaped with depressed top, 0.25–0.45 mm diam. and 100–150 µm high, surface smooth to very minutely pilose, orange, matt. Excipulum 5–10 µm thick, colorless to pale yellow, K+ orange-yellow. Involucrellum 10–15 µm thick, brownish yellow, K+ brownish orange; between excipulum and involucrellum a continuous algal layer almost up to ostiolum. Asci obclavate, 50–70 x 9–12 µm. Ascospores fusiform, 3-septate, without constrictions at septa, 17–25 x 3–5 µm, 5–6 times as long as broad, colorless. Pycnidia not observed. Chemistry: no substances detected by TLC; Porina yellow in perithecial wall. - Distribution and Ecology. Pantropical. With a rather wide, ecological amplitude but more common in the lowland rain forest zone, often growing together with *Opegrapha filicina*. - *Porina fulvella* resembles *P. rufula* and *P. fulvelloides*, but can be distinguished by the apically depressed, matt and opaque, partly pilose perithecia with an internal algal layer. The perithecial anatomy suggests a relationship with *P. umbilicata* and relatives, although in those species, the perithecial walls are K–.



Porina fulvella



Porina fulvella

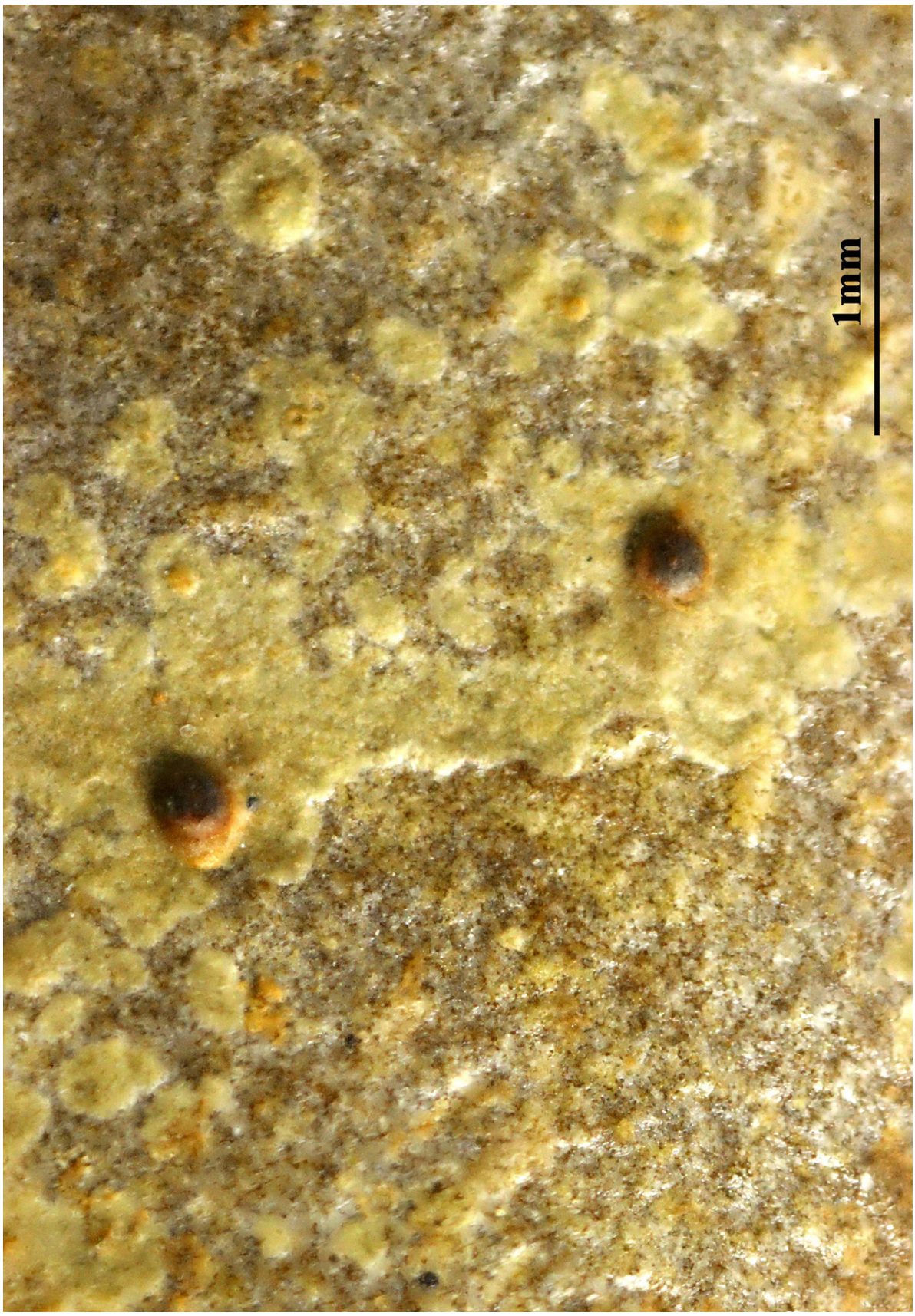
Porina hoehneliana (Jaap) R. Sant., Symb. bot. upsal. 12(no. 1): 262 (1952)
= *Calonectria hoehneliana* Jaap 1916

[VZ1829], URSS. Transcaucasia. Colchis. Distr. Chosta, in valle rivi sub vicum Voroncovka, 150 m. Ad folia *Buxi colchicae*. Leg. A. Vězda, 27.3.1982. Ex A. Vězda Lichenes Exsiccati Nr. 1829.

Thallus crustose, thinly episubstratic, continuous or forming small dispersed patches, smooth, grey to grey-green, without a distinct prothallus. Perithecia 0.15-0.3 mm across, hemispherical, only slightly constricted at base, dark reddish brown, somehow shiny, partly covered by a thalline layer at least when young. Involucrellum 10-30 µm thick, yellowish red, K+ orange (Porina-yellow pigment), extending down to the substrate; algal cells present in a layer between involucrellum and exciple; exciple prosoplectenchymatous, colourless or pale yellow, 4-7 µm thick in upper part, up to 15 µm thick at base; paraphyses richly branched and anastomosing, c. 1.5 µm thick; hymenial gel I-, K/I-. Asci 8-spored, clavate-cylindrical, thin-walled throughout, functionally unitunicate, dehiscent by rupture of the apex, with no extruded inner layers and an apical ring structure, I-, K/I-. Ascospores 3-septate, hyaline, fusiform to almost bacilliform with subacute ends, 17-23 x 2-3.5 µm. Photobiont trentepohlioid. Spot tests: thallus K-, C-, KC-, P-. Chemistry: thallus without lichen substances. - Note: a humid subtropical to Mediterranean-Atlantic lichen found on smooth bark and leaves of evergreen plants (e.g. on leaves of *Buxus* and cladodes of *Ruscus*) in warm-humid woodlands.



Porina hoehneliana



Porina hoehneliana

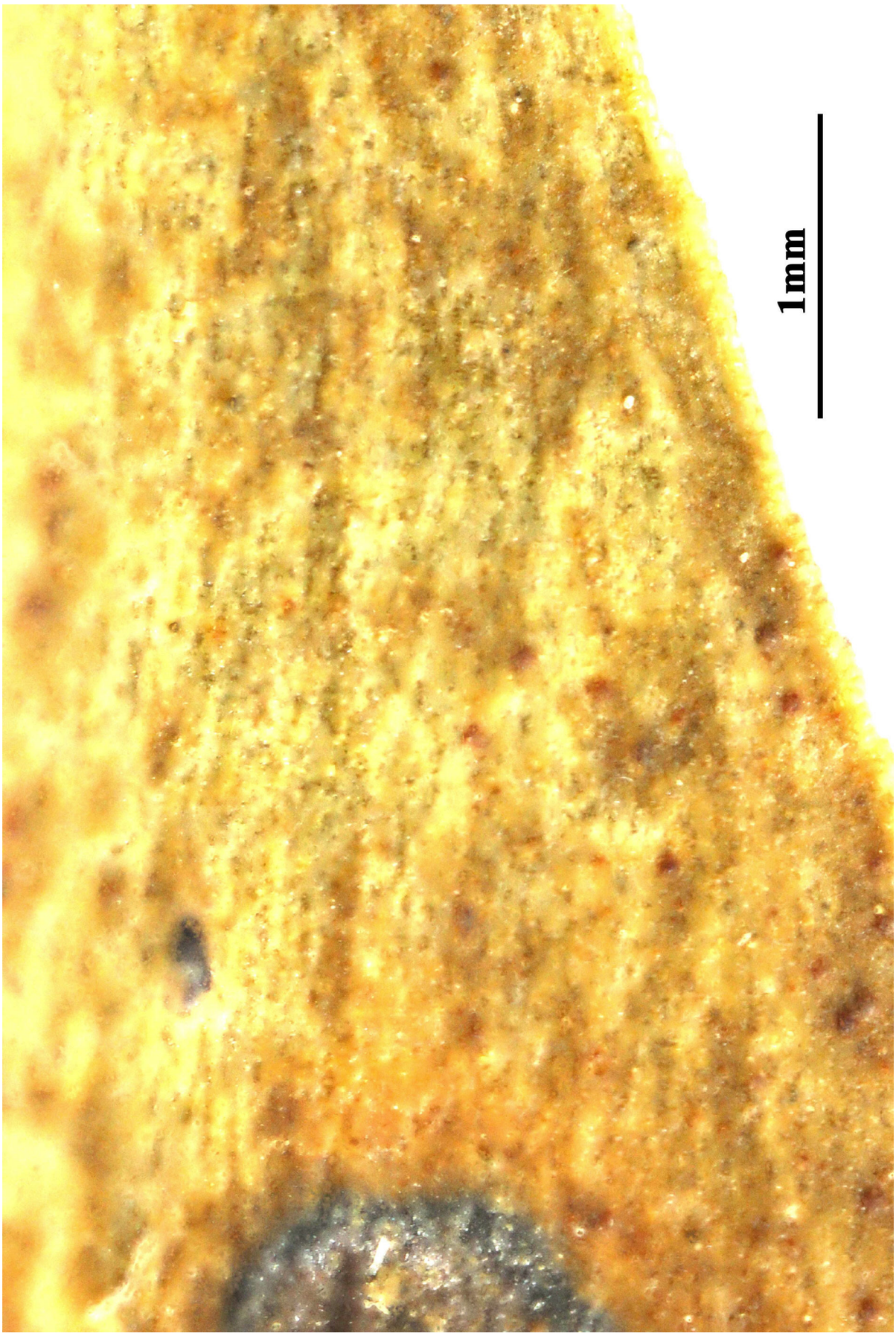
Porina hoehneliana (Jaap) R. Sant., Symb. bot. upsal. 12(no. 1): 262 (1952)
= *Calonectria hoehneliana* Jaap 1916

[VZ1084], Gallia. Landes. Tethieu, Dax, in valle fluvii Adour prope praedium Cosious dictum, 10 m. Ad phyllocladia *Rusci aculeati*. Leg. J. Vivant, 2.3.1972. Ex A. VěZDA Lichenes Selecti Exsiccati Nr. 1084.

Thallus crustose, thinly episubstratic, continuous or forming small dispersed patches, smooth, grey to grey-green, without a distinct prothallus. Perithecia 0.15-0.3 mm across, hemispherical, only slightly constricted at base, dark reddish brown, somehow shiny, partly covered by a thalline layer at least when young. Involucrellum 10-30 µm thick, yellowish red, K+ orange (Porina-yellow pigment), extending down to the substrate; algal cells present in a layer between involucrellum and exciple; exciple prosoplectenchymatous, colourless or pale yellow, 4-7 µm thick in upper part, up to 15 µm thick at base; paraphyses richly branched and anastomosing, c. 1.5 µm thick; hymenial gel I-, K/I-. Asci 8-spored, clavate-cylindrical, thin-walled throughout, functionally unitunicate, dehiscent by rupture of the apex, with no extruded inner layers and an apical ring structure, I-, K/I-. Ascospores 3-septate, hyaline, fusiform to almost bacilliform with subacute ends, 17-23 x 2-3.5 µm. Photobiont trentepohlioid. Spot tests: thallus K-, C-, KC-, P-. Chemistry: thallus without lichen substances. - Note: a humid subtropical to Mediterranean-Atlantic lichen found on smooth bark and leaves of evergreen plants (e.g. on leaves of *Buxus* and cladodes of *Ruscus*) in warm-humid woodlands.



Porina hoehneliana



Porina hoehneliana

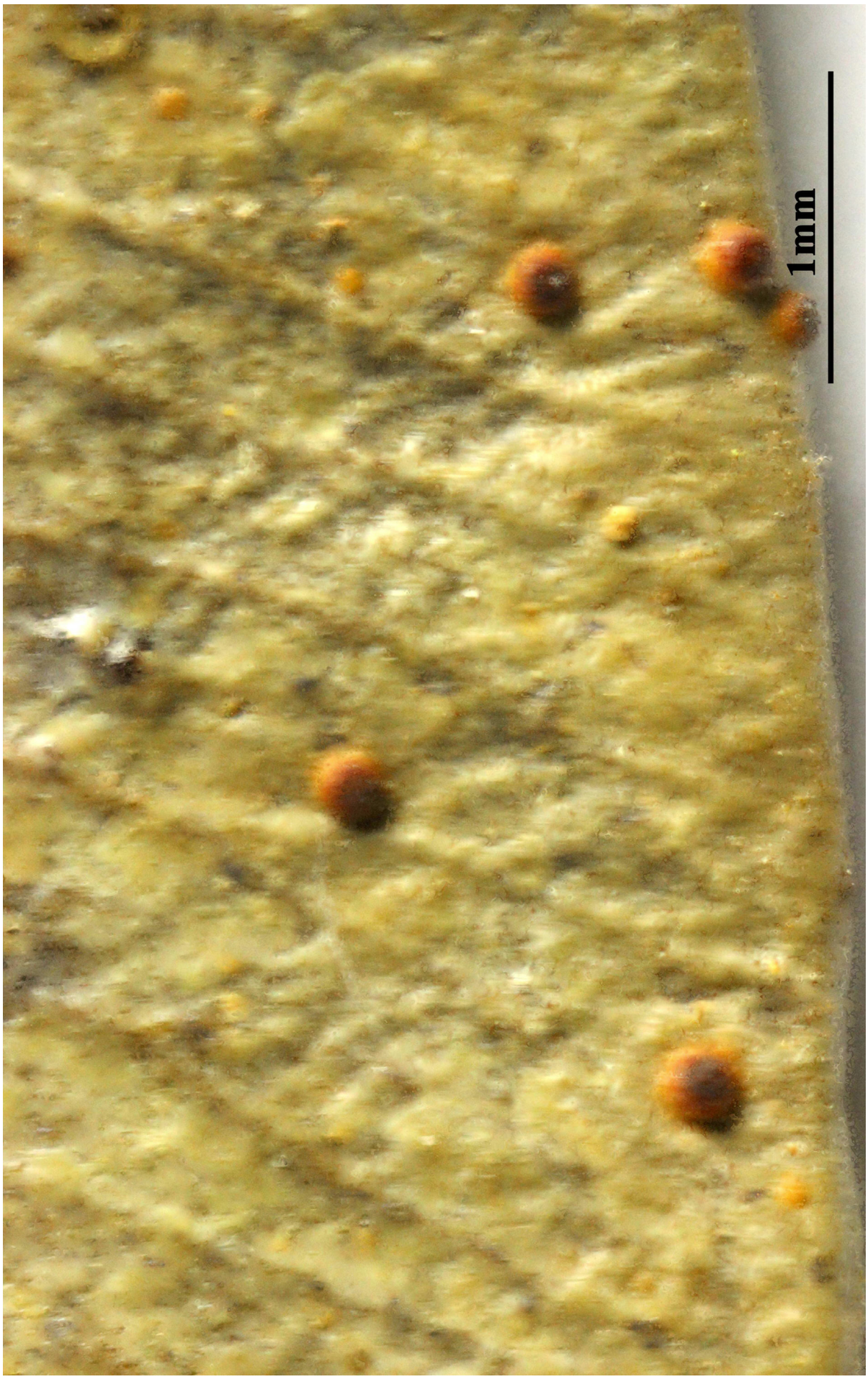
Porina hoehneliana (Jaap) R. Sant., Symb. bot. upsal. 12(no. 1): 262 (1952)
= *Calonectria hoehneliana* Jaap 1916

[VZ1652], URSS. Transcaucasia, Colchis, Distr, Lazarevskoje. in valle fluminis Sache, sub vicum Solochaul, 250 m. Ad folia *Buxi colchicae*. Leg. V. Vašák et A. Vězda, 26.6.1979. EX A. VEZDA LICHENES SELECTI EXSICCATI NR. 1652.

Thallus crustose, thinly episubstratic, continuous or forming small dispersed patches, smooth, grey to grey-green, without a distinct prothallus. Perithecia 0.15-0.3 mm across, hemispherical, only slightly constricted at base, dark reddish brown, somehow shiny, partly covered by a thalline layer at least when young. Involucrellum 10-30 µm thick, yellowish red, K+ orange (Porina-yellow pigment), extending down to the substrate; algal cells present in a layer between involucrellum and exciple; exciple prosoplectenchymatous, colourless or pale yellow, 4-7 µm thick in upper part, up to 15 µm thick at base; paraphyses richly branched and anastomosing, c. 1.5 µm thick; hymenial gel I-, K/I-. Asci 8-spored, clavate-cylindrical, thin-walled throughout, functionally unitunicate, dehiscent by rupture of the apex, with no extruded inner layers and an apical ring structure, I-, K/I-. Ascospores 3-septate, hyaline, fusiform to almost bacilliform with subacute ends, 17-23 x 2-3.5 µm. Photobiont trentepohlioid. Spot tests: thallus K-, C-, KC-, P-. Chemistry: thallus without lichen substances. - Note: a humid subtropical to Mediterranean-Atlantic lichen found on smooth bark and leaves of evergreen plants (e.g. on leaves of *Buxus* and cladodes of *Ruscus*) in warm-humid woodlands.



Porina hoehneliana

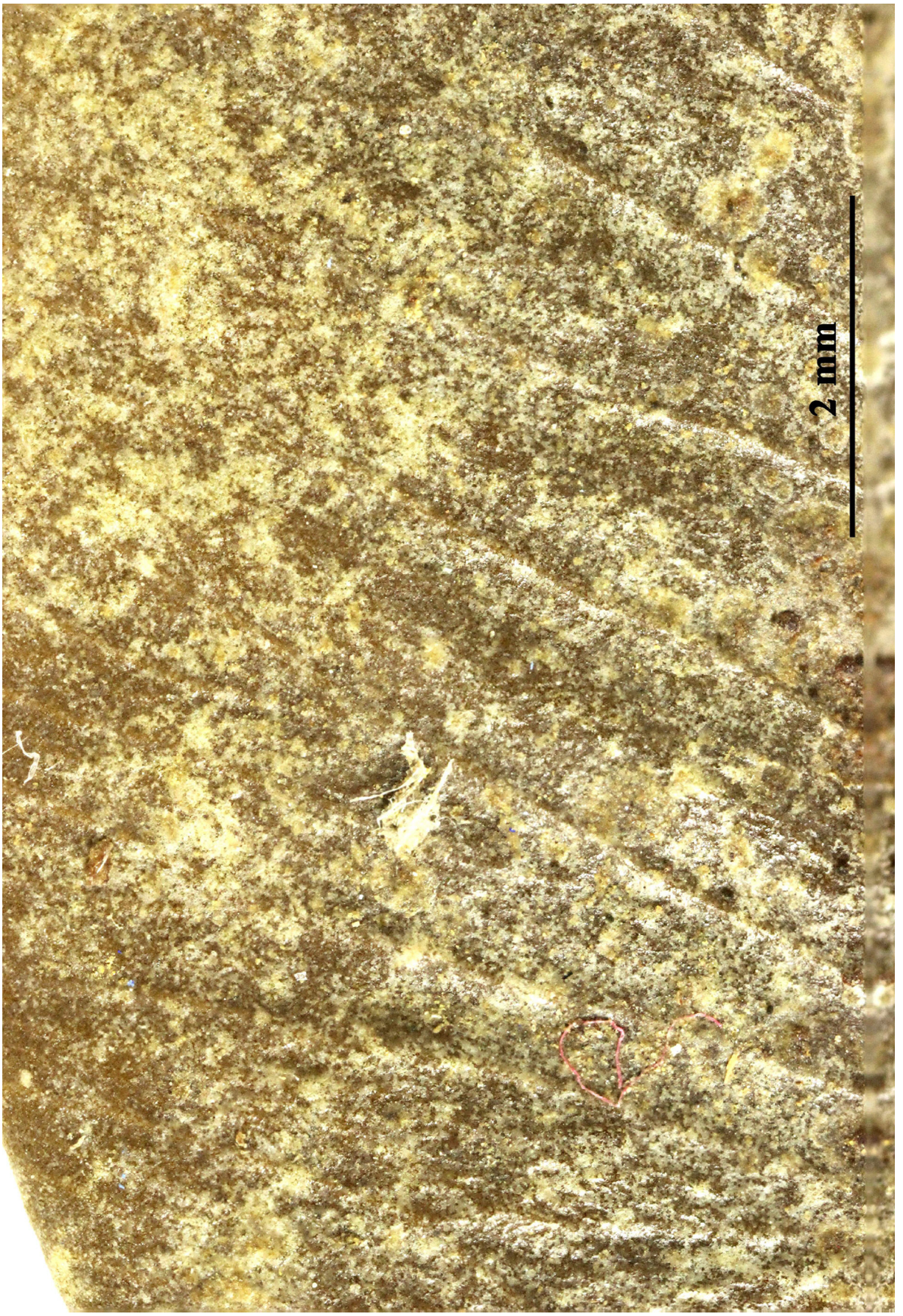


Porina hoehneliana

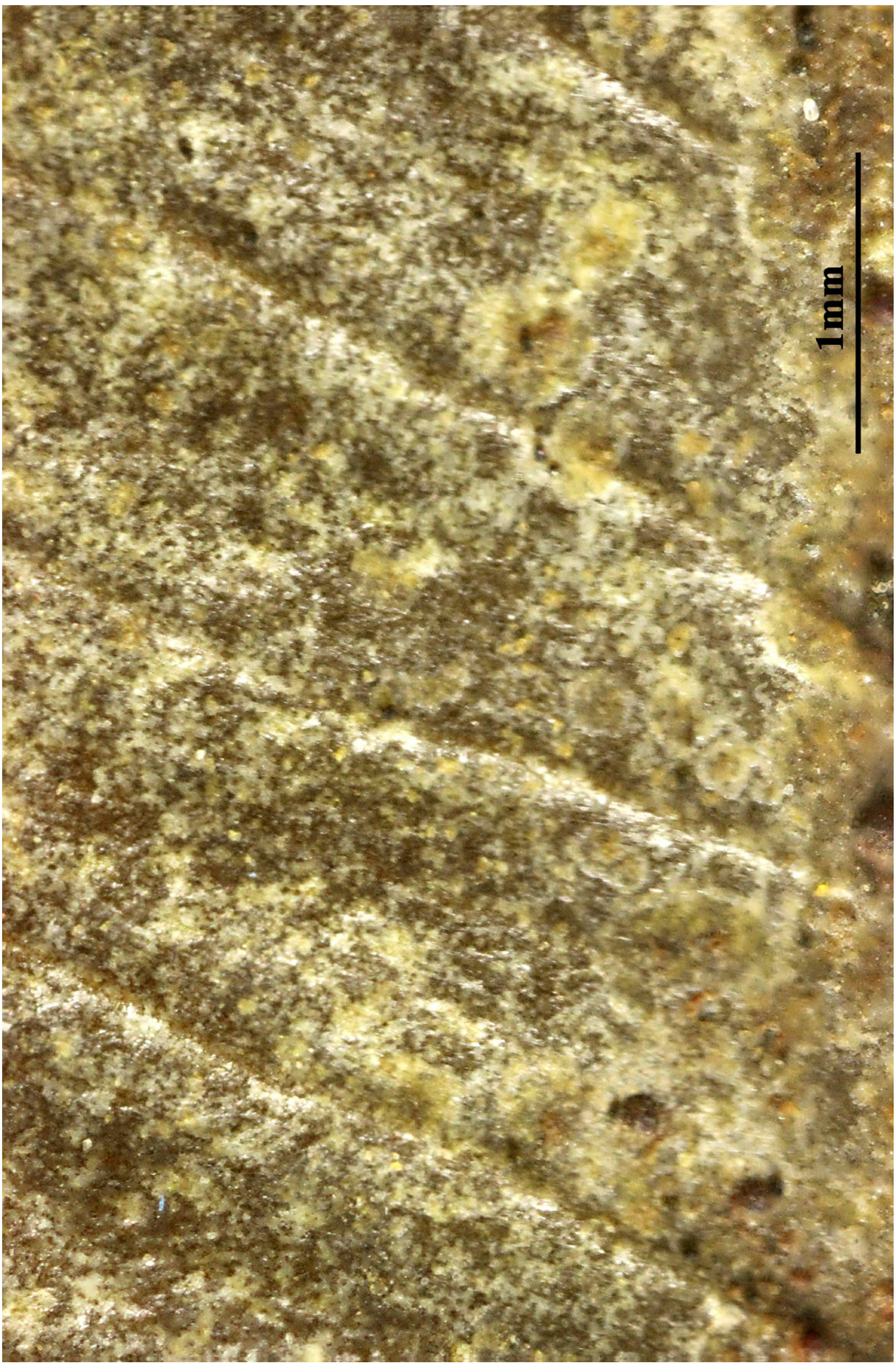
Porina hoehneliana (Jaap) R. Sant., Symb. bot. upsal. 12(no. 1): 262 (1952)
= *Calonectria hoehneliana* Jaap 1916

[VZ1083], Pyrenaei montes occidentales Sauveterre-de-Béarn. Insula parva in torrente Gave d'Oloron, 50 m. Ad folia *Buxi sempervirentis*. Leg. J. Vivant, 17.11.1972, det. A. Vězda. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1083.

Thallus crustose, thinly episubstratic, continuous or forming small dispersed patches, smooth, grey to grey-green, without a distinct prothallus. Perithecia 0.15-0.3 mm across, hemispherical, only slightly constricted at base, dark reddish brown, somehow shiny, partly covered by a thalline layer at least when young. Involucrellum 10-30 µm thick, yellowish red, K+ orange (Porina-yellow pigment), extending down to the substrate; algal cells present in a layer between involucrellum and exciple; exciple prosoplectenchymatous, colourless or pale yellow, 4-7 µm thick in upper part, up to 15 µm thick at base; paraphyses richly branched and anastomosing, c. 1.5 µm thick; hymenial gel I-, K/I-. Asci 8-spored, clavate-cylindrical, thin-walled throughout, functionally unitunicate, dehiscent by rupture of the apex, with no extruded inner layers and an apical ring structure, I-, K/I-. Ascospores 3-septate, hyaline, fusiform to almost bacilliform with subacute ends, 17-23 x 2-3.5 µm. Photobiont trentepohlioid. Spot tests: thallus K-, C-, KC-, P-. Chemistry: thallus without lichen substances. - Note: a humid subtropical to Mediterranean-Atlantic lichen found on smooth bark and leaves of evergreen plants (e.g. on leaves of *Buxus* and cladodes of *Ruscus*) in warm-humid woodlands.



Porina hoehneliana



Porina hoehneliana

Porina impressa R. Sant., Symb. bot. upsal. 12(no. 1): 219 (1952)
= *Pseudosagedia impressa* (R. Sant.) Hafellner & Kalb, Biblioth. Lichenol. 57: 173 (1995)

[VZ2178}, Australia. New South Wales: McPherson Range, ad marginem reservati naturae Border Ranges National Park, Gradys Creek, 900 m. Foliicola in pluviisilva subtroipicali. Leg. J. Hafellner, P.Merrotsy et R. Rogers, 31.8.1986, det A. Vězda. EX A, VĚZDA LICHENES SELECTI EXSICCATI NR. 2178.

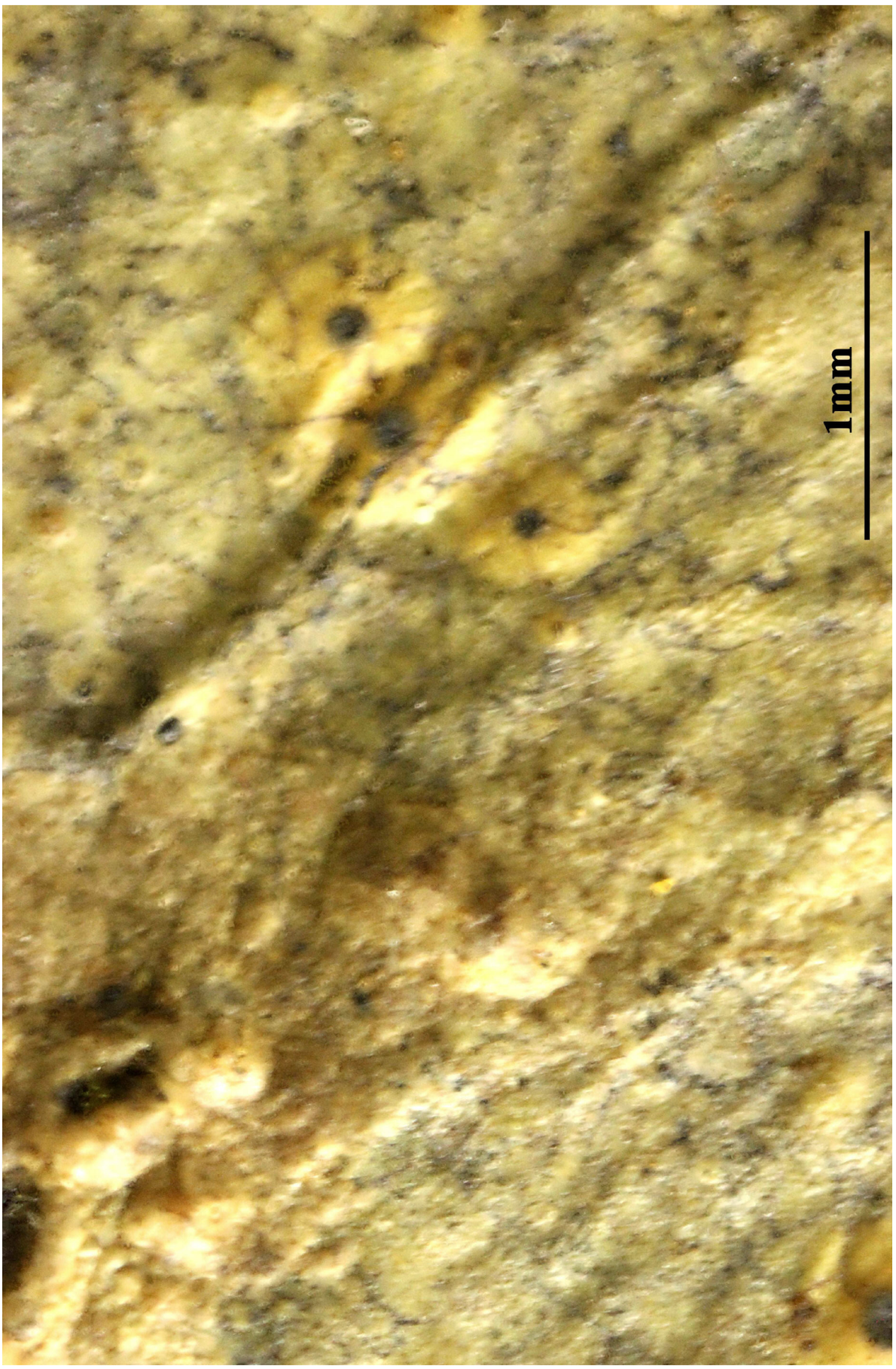
Thallus tenuissimus, -+continuus, laevigatus, cinereus vel glauco-cinereus. Perithecia 0.4-0.6 mm diam., conodesecto subapplanato similia, flavescente-cinerea, circa ostiolum leviter impressa, nigra; paries niger, "integer", K-, strato thallino algifero obductus. Asci anguste clavati. Sporae 8-nae, 3-septatae, fusiformes, 20-23 x 3.5-4 µm. Alga ad Phycopeltis pertinens.

Thallus irregular in outline, up to 15 mm across, continuous but in the peripheral part usually slightly dispersed, smooth, grey to greenish grey, slightly nitidous, 10-13 µm thick. No distinct hypothallus. Perithecia 0.4-0.6 mm diam., 120-160 µmhigh, immersed in the thallus but somewhat prominent, usually resembling a very low cone, with the top cut off, the upper surface (0.15—0:23 mm diam.) in the middle around the ostiolum slightly depressed, black and usually nitidous, the much spreading basal part yellowish grey. Per. wall black to brownish black, K-, prosoplectenchymatous, not differentiated into an outer and an inner wall; in the upper part 20-40 µm thick, laterally and basally 15-20 µm thick, covered at the top by an 8-10 µm thick, colourless th. tissue, containing algae almost to the ostiolum; a 15-25 µm thick continuation of this th.tissue sloping down very gradually to the th. and forming the roof of a wide chamber filled only with a very loose, medullary tissue of c. 2 µm thick, uncoloured hyphae. Per. chamber c. 100 µm high, c. 200 µm broad. Paraphyses simple, c. 1 µm thick. Periphyses often rather numerous, 5-15 µm long, c. l µm thick. Asci narrowly clavate, 50-70 x 7-10 µm. Spores 8, 3-septate, fusiform, 20-23 x 3.5-4 µm. Symbiotic alga: a Phycopeltis sp., cells angular to oblong, c. 5-10 x 3-5 µm, forming continuous plates. This very characteristic species must be referred to the *P. nitidula* group, but it is very difficult to decide which species are most closely related to it. The impressed top of the perithecia is reminiscent of that of *P. wmbilicata*, but the perithe-

cia of the latter species are only 1/2—1/3 the size of those of *P. impressa*. Certain similarities existing between this species and members of the *P. applanata* group are evidently only external.



Porina impressa



Porina impressa

Porina limbulata (Kremp.) Vain., Ann. Acad. Sci. Fenn., Ser. A 15(no. 6): 363 (1921)
= *Verrucaria limbulata* Kremp. 1875

[VZ1251], Tanzania, Montes Uluguru, in valle Mzinga supra pagum Mzinga, 1400-1600 m. Foliicola in pluviisilva montana. Leg, T. Pócs (no. 6290), 22.11.1970, det. A. Vězda. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 151.

Thallus continuous or dispersed into rounded, usually confluent patches, smooth, 5–10 mm across and 5–8 µm thick, yellow to yellowish green, shiny. Photobiont cells rectangular, 8–15 x 3–6 µm, in radiate plates. Perithecia adnate, lens-shaped, (0.2–)0.25–0.4 mm diam. and 80–120 µm high, glabrous, surface smooth, cherry-red, shiny. Excipulum 5–10 µm thick, colorless, K+ yellowish orange. Involucrellum 8–12 µm thick, reddish brown, K+ brownish red, externally covered by 4–7 µm thick, algal layer. Asci obclavate, 50–70 x 7–12 µm. Ascospores oblong, 3-septate, without constrictions at septa, 21–27(–32) x 3–5 µm, 6–7 times as long as broad, colorless. Pycnidia not observed. Chemistry: no substances detected by TLC; Porina yellow in perithecial wall. Distribution: Pantropical. With ecological preferences similar to those of *Porina rufula* and often growing side by side on the same leaves.



Porina limbulata



Porina limbulata

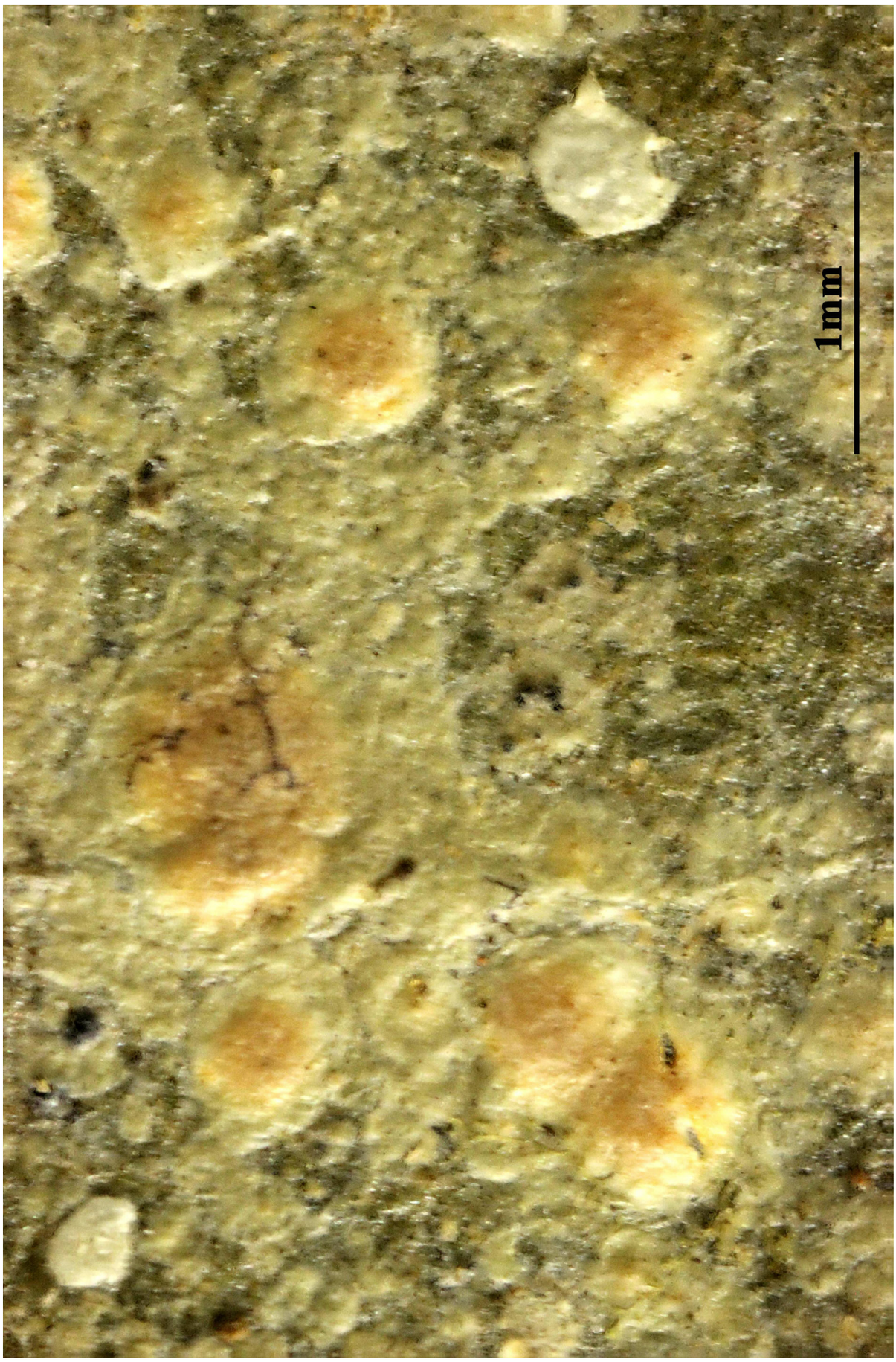
Porina lucida R. Sant., Symb. bot. upsal. 12(no. 1): 240 (1952)

[VZ2451], Tanzania. Regio Morogoro, montes Nguru, reservatum forestale Manyangu, 560-680 m. Foliicola in pluviisilva. Leg. E. Farkas (no. 89104], 24.3.1989, det A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2451.

Thallus continuous but sometimes marginally dispersed, minutely uneven, 10–30 mm across and 10–15 µm thick, pale greyish green (herbarium specimens often with yellow tinge), slightly shiny, incrusted with calcium oxalate crystals. Photobiont cells angular-rounded, 6–12 x 4–6 µm, in irregular plates. Perithecia adnate, young ones lens-shaped, mature ones lens-shaped to hemispherical and often with applanate top, 0.4–0.6 mm diam. and 130–180 µm high, glabrous, surface smooth, of same color as thallus but old perithecia sometimes with 0.1–0.2 mm broad dark spot around ostiole. Excipulum 7–12 µm thick, colorless to pale yellow, K+ orange. Involucrellum 10–15 µm thick, yellow, K+ brownish orange, externally covered by 6–10 µm thick crystallostratum and 7–15 µm thick, algiferous, thallus layer. Asci obclavate, 70–100 x 8–13 µm. Ascospores oblong, 7-septate, without constrictions at septa, 35–50 x 4–5.5 µm, 8–10 times as long as broad, colorless. Pycnidia not observed. Chemistry: no substances detected by TLC; Porina yellow in perithecial wall. Distribution: Pantropical. Less common than *Porina epiphylla* but with the same ecological preferences and often growing together on the same leaves. Also found at higher elevations.



Porina lucida



Porina lucida

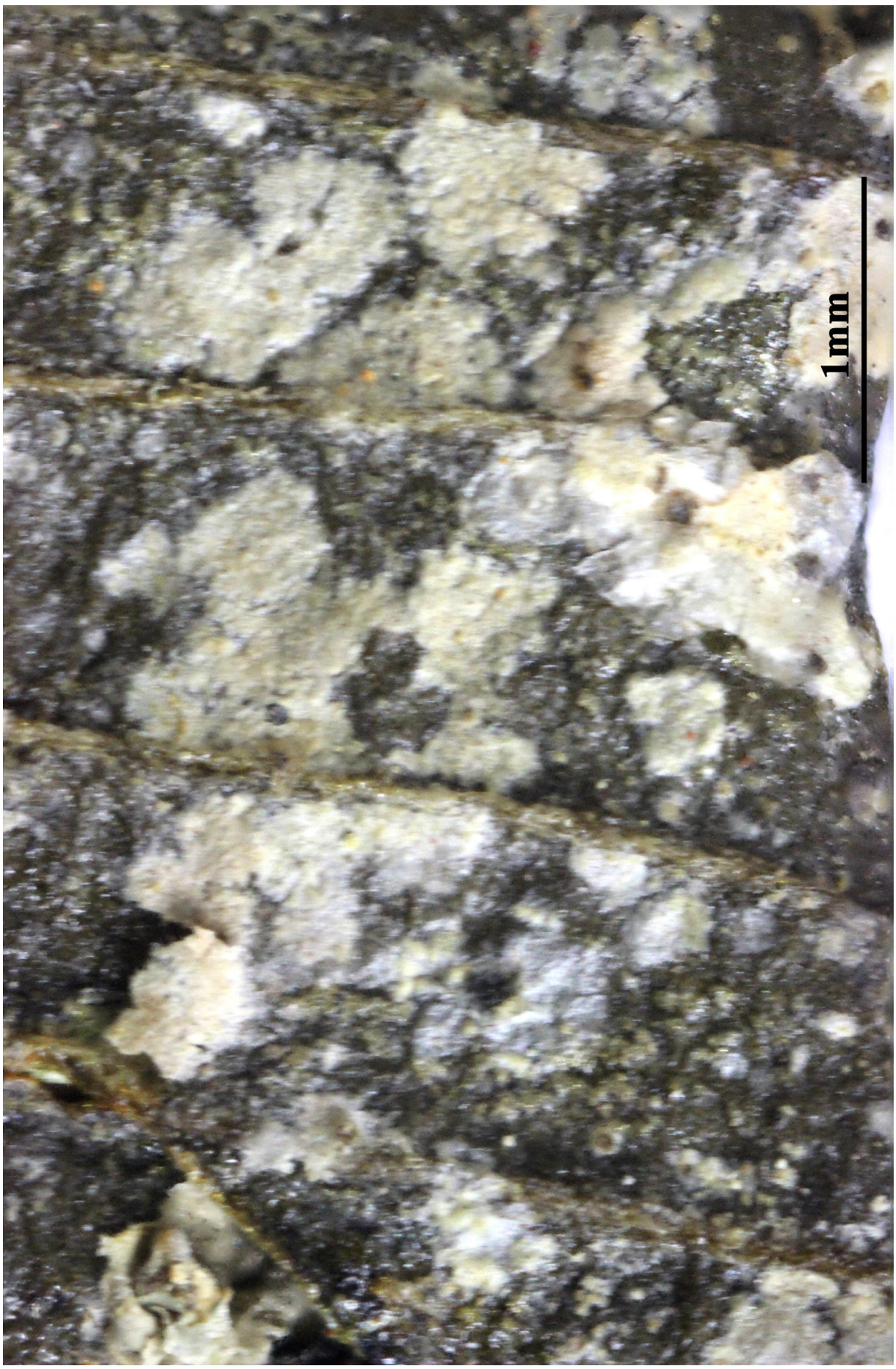
Porina nitidula Müll. Arg. in Flora, Regensburg, 66: 336, 1883.

[VZ2120], Tanzania, Regio Tanga, montes Usambara Occidentalis, prope vicum Mazumbai, 1500 m. Foliicola in pluviisilva submontana. Leg. T. Pócs, 11.11.1986, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI 2120.

Thallus continuous or dispersed into rounded patches, smooth, 10–20 mm across and 10–15 µm thick, pale grey to greenish grey, matt. Photobiont cells angular-rounded, 7–15 x 4–6 µm, in irregular plates. Perithecia sessile, subglobose, 0.15–0.3 mm diam. and 120–200 µm high, around the ostiolum usually shortly pilose to tomentose or almost papillose, black or rarely dark grey, matt to slightly shiny, tomentose cover pale grey to white. Excipulum 5–15 µm thick, dark brown, K–. Involucrellum not distinctly separated from excipulum, 10–20 µm thick, bluish to purplish black, K–, externally covered by 5–10 µm thick, thallus layer. Asci obclavate, 50–70 x 8–13 µm. Ascospores fusiform, 5-septate, without constrictions at septa, 20–32 x4–5.5 µm,5–6 times as long as broad, colorless. Pycnidia not observed. Chemistry: no substances detected by TLC; Pseudosagedia violet in perithecial wall. Distribution and Ecology. Pantropical. One of the few foliicolous species in the genus typically found in semi-exposed to exposed situations, such as leaves of planted trees of *Mangifera indica* and *Citrus* spp.



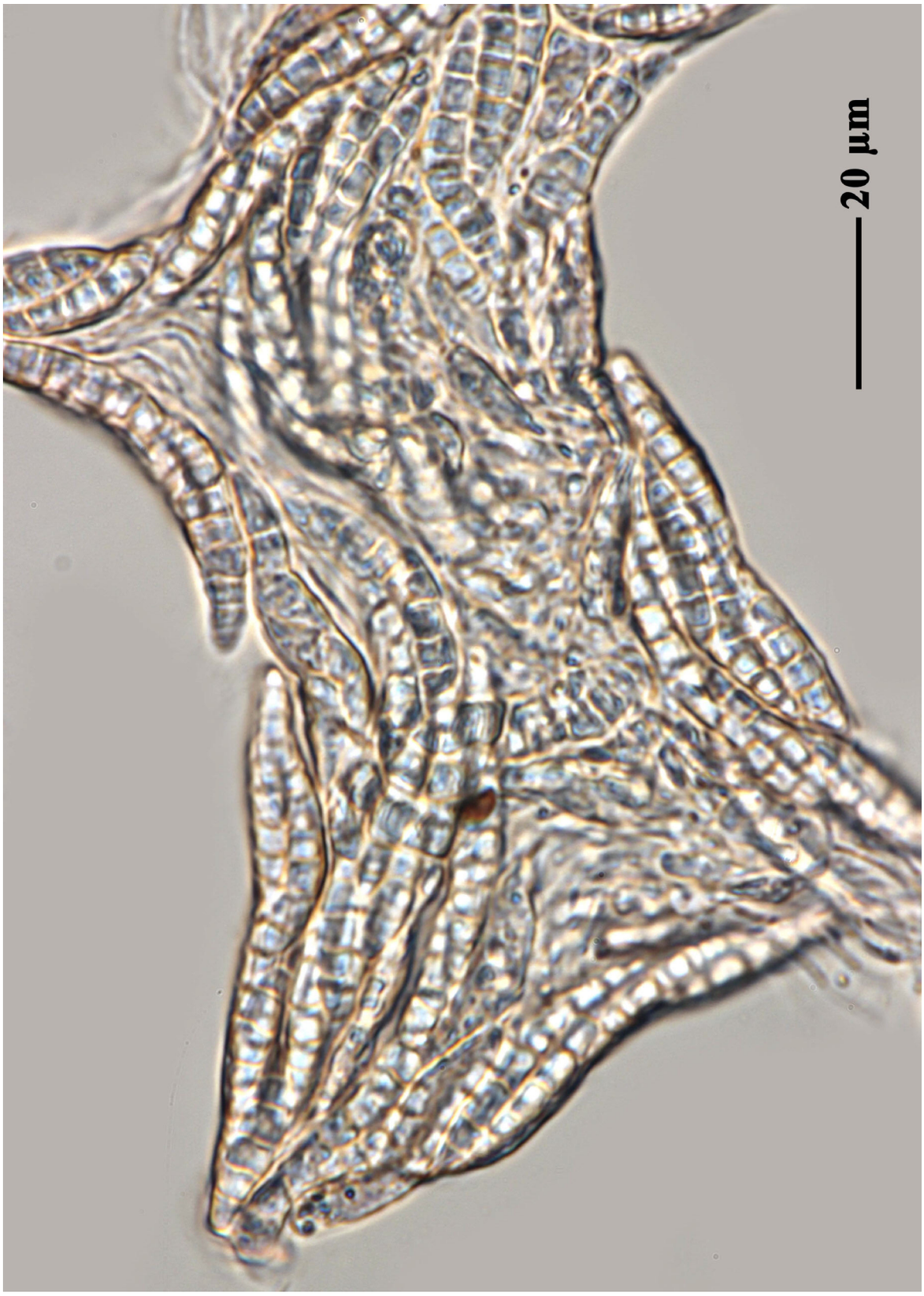
Porina nitidula



Porina nitidula



Porina nitidula



Porina nitidula

Porina oxneri R. Sant., Symb. bot. upsal. 12(no. 1): 221 (1952)
= *Pseudosagedia obsoleta* (Oxner) Hafellner & Kalb, Biblioth. Lichenol. 57: 173 (1995)

[VZ1946], Gallia. Provence, inter Grasse et Draguignan, Siagne, 75 m. Ad folia *Buxi sempervirentis*. Leg. J. De Sloover, 12.6.1981, det. E. Sérusiaux et J. De Sloover. EX A. VěZDA LICHENES SELECTI EXSICCATI NR.1946.

Thallus crustose, thinly episubstratic, forming small, dispersed orbicular, up to 10 mm wide patches or more rarely continuous, smooth, pale grey to dark brownish grey, dull, without a distinct prothallus. Perithecia 0.15-0.25(-0.3) mm across, lenticular to hemispherical, not constricted at base, black to greyish-black, partly covered by hyphal tissue in lower part, the ostiole usually well-evident. Involucrellum 20-30 µm thick, black, K-; exciple prosoplectenchymatous, colourless to almost black, up to 15 µm thick; paraphyses simple or sparingly branched and anastomosing, c. 1 µm thick; hymenial gel I-, K/I-. Asci 8-spored, clavate, thin-walled throughout, functionally unitunicate, dehiscent by rupture of the apex, with no extruded inner layers and an apical ring structure, I-, K/I-. Ascospores 3-septate, hyaline, ellipsoid to fusiform with subobtuse ends, 13-20 x 3-4.5(-5) µm. Pycnidia up to 0.1 mm across, black. Conidia simple, bacilliform. 5-6 x 1-1.5 µm. Photobiont trentepohlioid. Spot tests: thallus K-, C-, KC-, P-. Chemistry: thallus without lichen substances. - Note: an obligately foliicolous lichen, confined to warm-moist forests, on needles of *Abies*, leaves of evergreen trees and shrubs (e.g. *Buxus*), and cladodes of *Ruscus*; mainly Tyrrhenian in Italy.



Porina oxneri



Porina oxneri

Porina pallescens R. Sant., Symb. bot. upsal. 12(no. 1): 263 (1952)

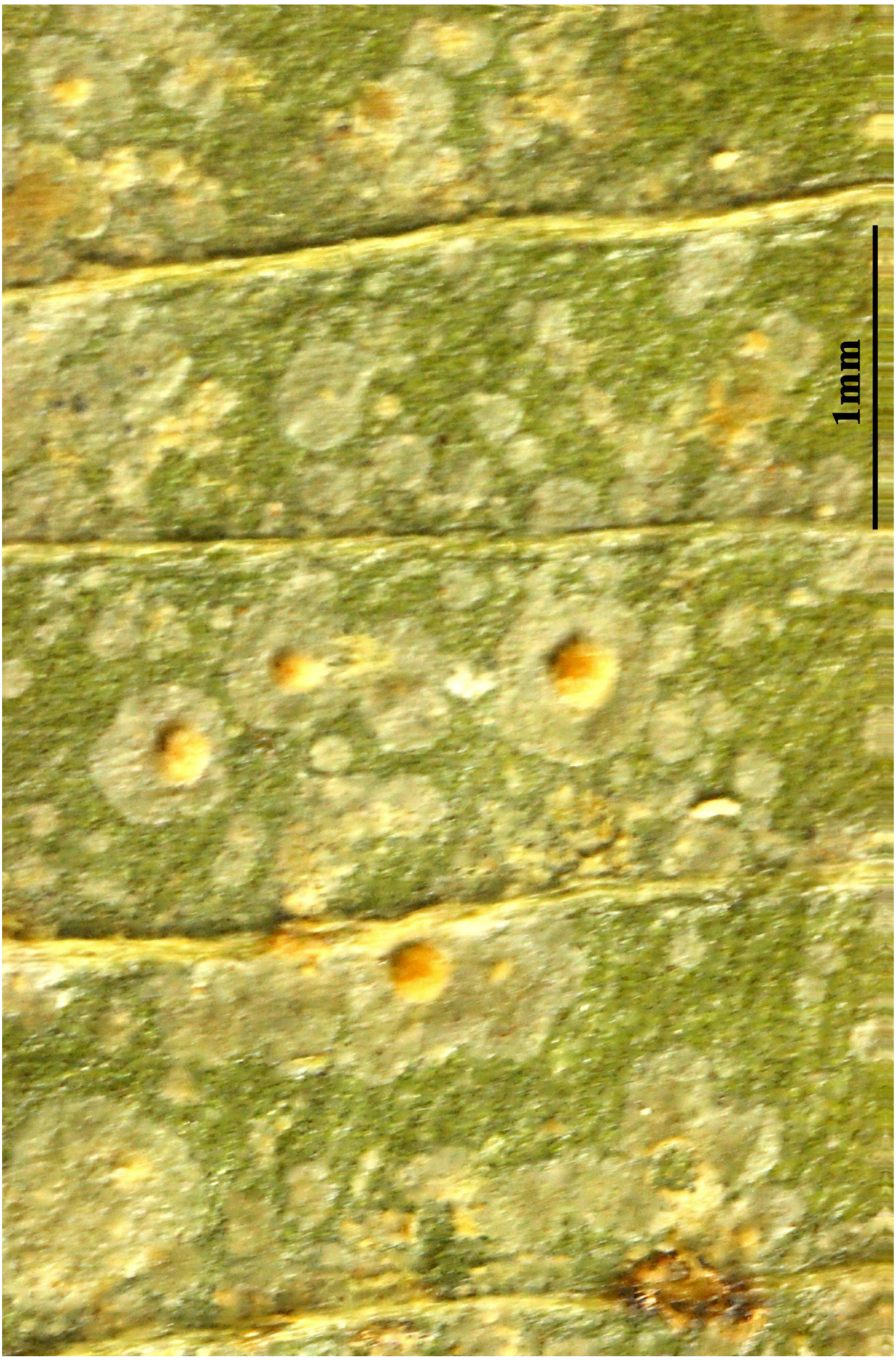
[VZ2366], Tanzania. Morogoro regio, Nguru montes, in valle Chazi, prope Mhonda Mission., 800-850 m. Foliicola. Leg, E. Farkas (89102), 23.3.1989, det, A, Vězda, EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 2366.

Thallus tenuissimus, ±dispersus, laevigatus, glaucus, glauco-cinereus vel flavo-cinereus. Perithecia 0.12—0.18 mm diam., globosa, flavescente vel fuscescente albida, leviter rugulosa vel cellulis extenuatis pseudotomentosa; paries fere incoloratus, K-, pro parte strato algarum obductus. Asci obclavati. Sporae 8-nae, 5-septatae, fusiformes, 22-30 x 4-5 µm. Alga ad Phycopeltis pertinens.

Thallus rounded, up to 10 mm diam., ±dispersed, smooth, green to greenish grey or yellowish grey, matt, c. 10 µm thick. No visible hypothallus. Perithecia 0.12-0.18 mm diam., globose, slightly constricted at the base, pale yellowish white to pale brownish white, surface slightly rough to minutely tomentose. Per. wall not differentiated into an outer and an inner wall, almost uncoloured, K-, in upper part 15-20 µm thick, in basal part 10-15 µm thick, to a large extent (not uppermost part) covered by ac. 10 µm thick layer of algiferous th. tissue. Per. chamber ±globose, 120—160 µm diam. Paraphyses simple, c. 1 µm thick. Periphyses ±numerous in the ostiolum, short. Asci obclavate, 50-65 x 8-12 µm. Spores 8, 5-septate, fusiform, ends rather acute, 22-30 x 4-5 µm. Symbiotic alga: a *Phycopeltis* sp., cells rounded to rectangular, 7-12 x 4 µm diam., forming + continuous, non-radiate plates. - *P. pallescens* is distinguished from all other foliicolous species of *Porina* by its almost colourless perithecial wall. This wall is not differentiated into an outer and an inner part, so that there is no tissue which could be designated as an involucrellum. The wall is K-, thereby differing from that of all other species of the *P. rufula* group. Nevertheless, it seems most natural to include *P. pallescens* in this group. It is most closely related to *P. octomera*.Distribution: An African species



Porina pallescens



Porina pallescens

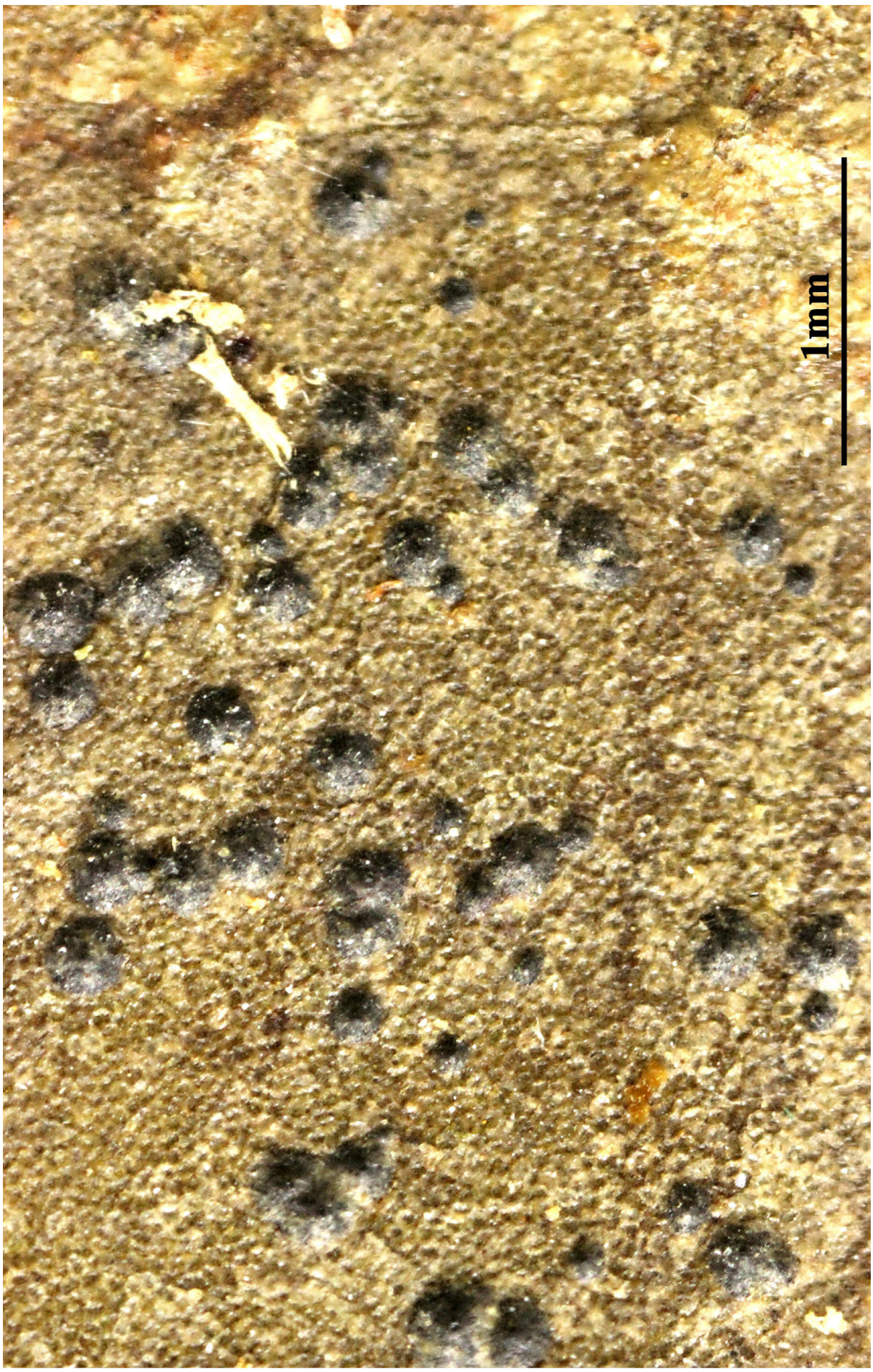
Porina phyllogena Müll. Arg., Flora, Regensburg 66(21): 335 (1883)
= *Phylloporis phyllogena* (Müll. Arg.) Clem., Gen. fung. (Minneapolis): [173] (1909)
= *Strigula phyllogena* (Müll. Arg.) R. C. Harris, More Florida Lichens: 159.

[VZ1126], Respublica Guinea (Africa occident.) Distr. Macenta, montes Ziama, in silva densis in regione collis Sérédou, 900 m. Ad folia arborum variarum. Leg. S. Lisowski, 3.1982, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1126.

Thallus supracuticular, continuous, 5–25 mm across and 7–10 µm thick, smooth, pale grey. Photobiont a species of Phycopeltis, cells rectangular, 5–14 x 3–5 µm, forming nets with distinct interspaces. Perithecia completely exposed, rarely covered by thin, thallus layer, applanately conical, 0.3–0.5 mm diam. and 90–120 µm high, black or rarely greyish black. Excipulum prosoplectenchymatous, 8–12 µm thick, colorless to brown. Involucrellum carbonaceous, 15–25 µm thick, black. Paraphyses unbranched. Asci cylindrical, 25–35 x 4–6 µm. Ascospores uniseriate to irregularly arranged, fusiform-ellipsoid, 1-septate, with slight constriction at septum, 9–12 x 2–3 µm, 3.5–4.5 times as long as broad. Pycnidia exposed, conical, those producing macroconidia 0.1–0.2 mm, those producing microconidia 0.07–0.15 mm diam., black. Macroconidia bacillar, for a long time non-septate but finally 1-septate, 9–11 x 2–2.5 µm. Microconidia fusiform ellipsoid, non-septate, 3–5 x 1.5–1.8 µm. Chemistry: no substances detected by TLC. Distribution pantropical. A very frequent and characteristic element of shady understory communities of rain forests.



Porina phyllogena



Porina phyllogena

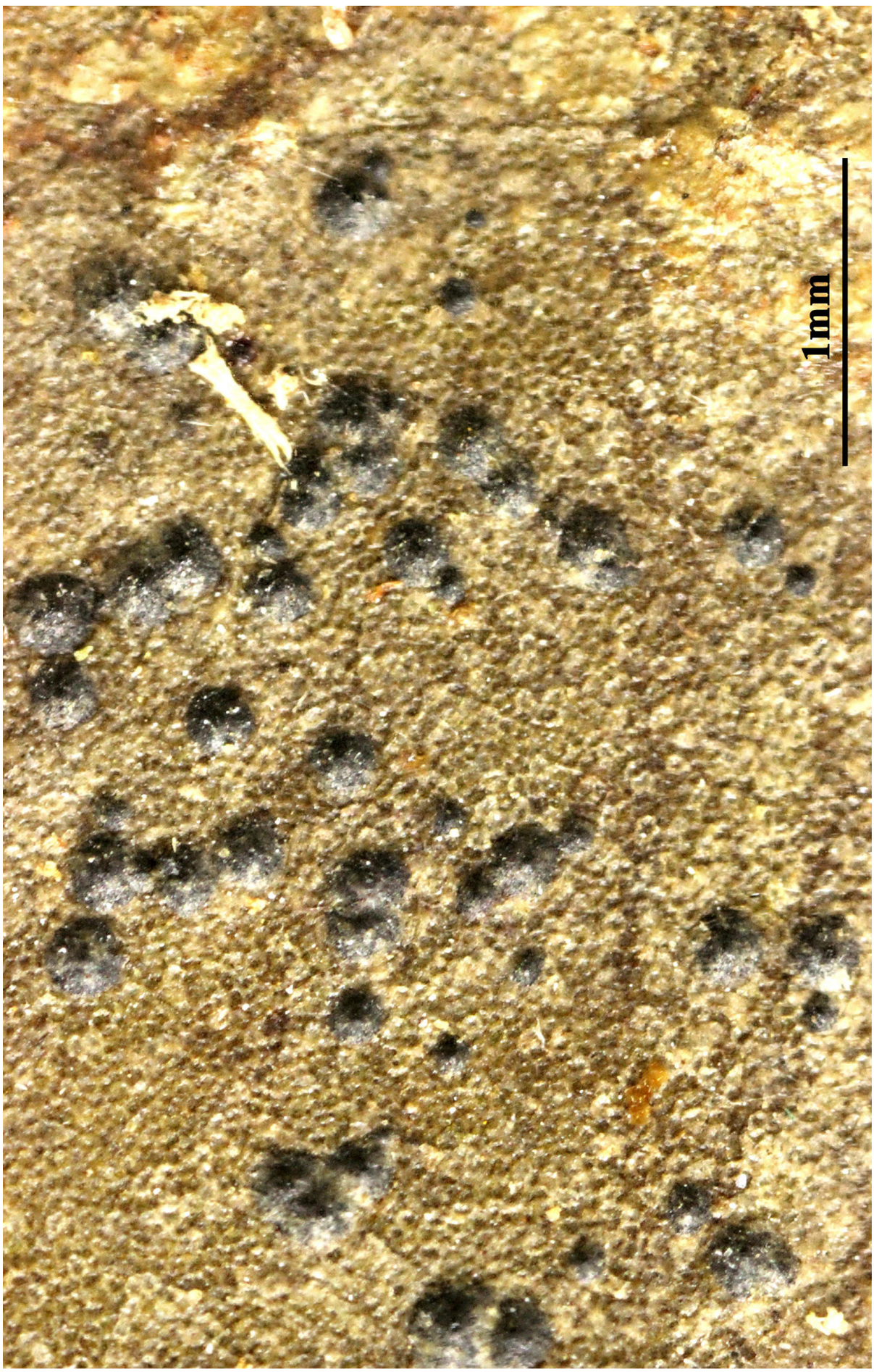
Porina rufula (Kremp.) Vain., Acta Soc. Fauna Flora fenn. 7(no. 2): 227 (1890)
= *Verrucaria rufula* Kremp. 1874

[VZ2328], Brasilia. São Paulo, Serra do Mar: Serra de Boissocanga prope Maresias 30 km ad occidentem a São Sebastiano, 330 m. Foliicola in pluviisilva primaria. Leg. K. Kalb, 18.2.1980, det. A. Vězda. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2328.

Thallus dispersed into rounded, usually confluent patches, smooth, 3–10 mm across and 5–8 µm thick, usually green but becoming yellow in necrotic specimens, slightly shiny. Photobiont cells rectangular, 8–13 x 3–5 µm, in radiate plates. Perithecia adnate, lens-shaped but with central part prominent, hemispherical, 0.15–0.3 (–0.4) mm diam. and 80–120 µm high, glabrous, surface smooth, orange (to light cherry-red), central part translucent. Excipulum 5–10 µm thick, colorless, K+ yellowish orange. Involucrellum 8–12 µm thick, orange, K+ brownish red, externally covered by 3–5 µm thick, algal layer. Asci obclavate, 50–70 x 8–12 µm. Ascospores oblong, 3-septate, without constrictions at septa, 18–27(–31) x 3–5(–6) µm, 5–6 times as long broad, colorless. Pycnidia not observed. Chemistry: no substances detected by TLC; Porina yellow perithecial wall. Distribution and Ecology. Pantropical. One of the most abundant species of the genus, a typical element of foliicolous communities in the rain forest understory.



Porina rufula

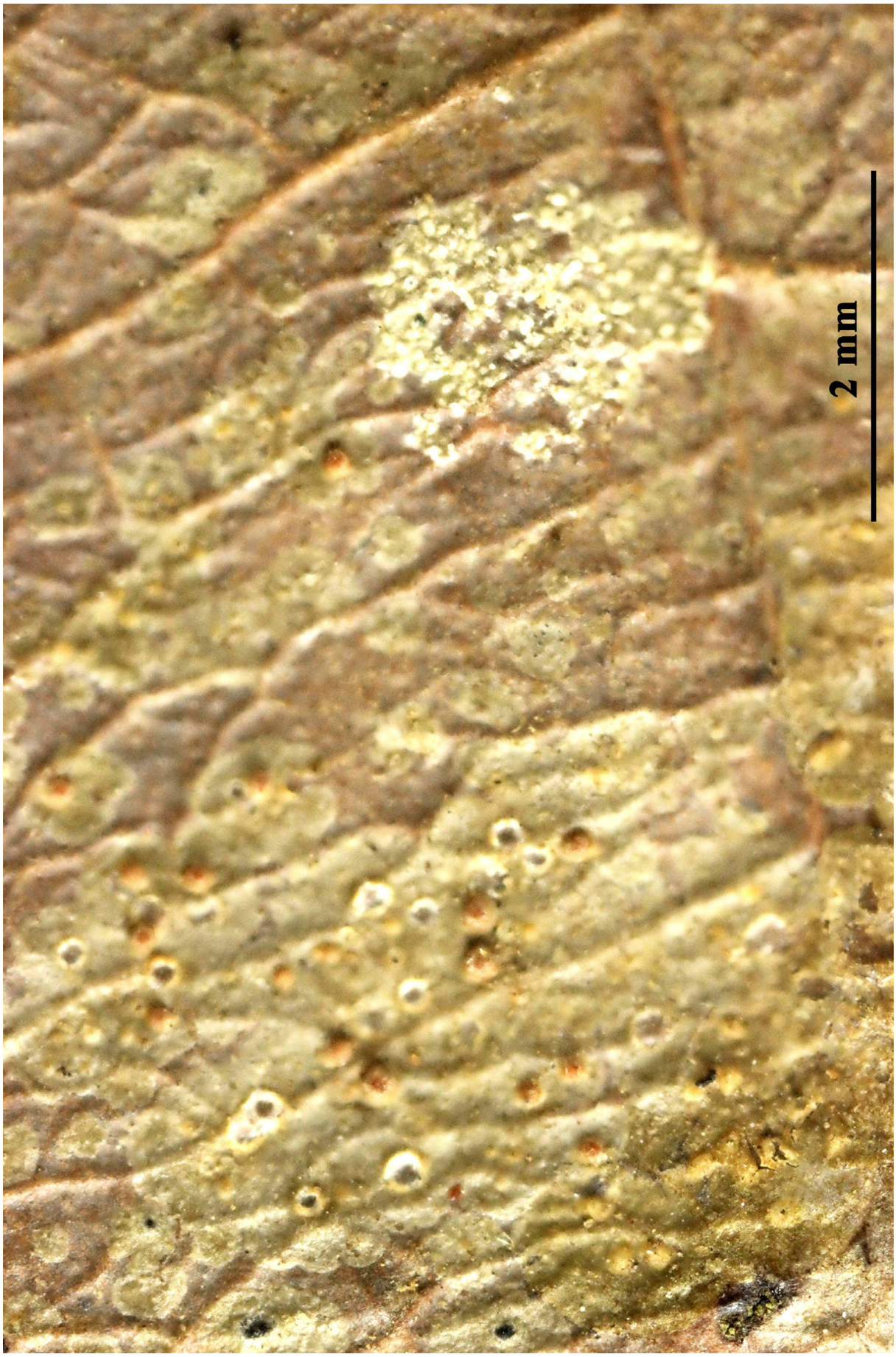


Porina rufula

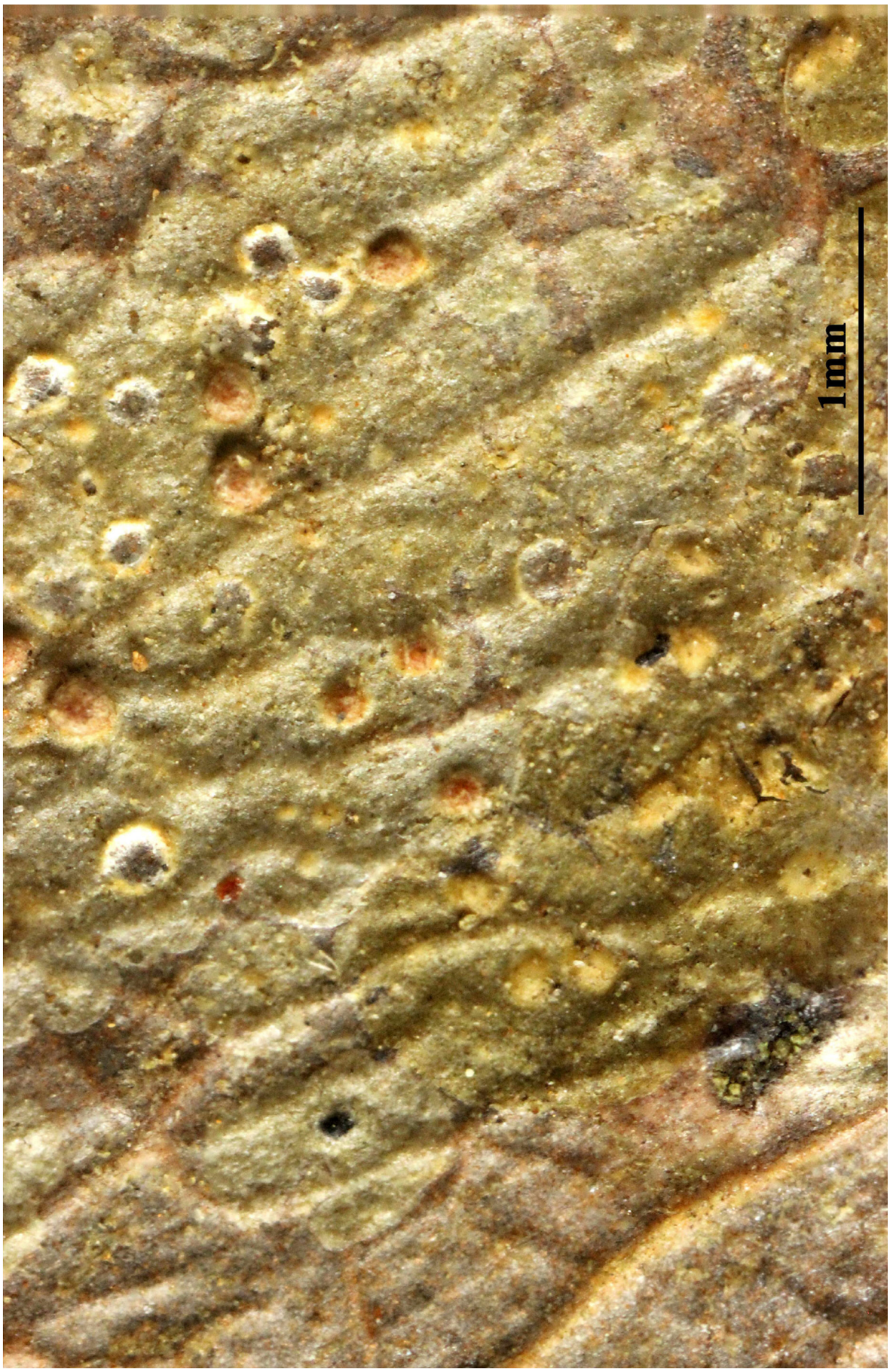
Porina semecarpi Vain., Ann. Acad. Sci. Fenn., Ser. A 15(no. 6): 367 (1921)

[VZ2179], Australia. Queensland. Monte Bunya Mts. dicti, ad septentriones et orientem a J. S. Fisher Lookout, 1050 m. Foliicola in pluviisilva aubtropicali. Leg. J. Hafellner et R. Rogers, 3.9.1986. det A. Vězda. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2179.

Thallus epiphyllous, usually comprising small roundish patches, pale to medium greyish green, smooth, matt to slightly glossy; prothallus not apparent. Algae Phycopeltis; cells rectangular, forming radiating plates. Perithecia subglobose, basally constricted, 0.17–0.26 mm diam.; sides ±yellow-orange, but with a thin greyish often slightly rough covering of thallus material; apex smooth, yellow-orange to orange-brown, dull to slightly glossy; ostiole inconspicuous or a slightly darker spot. Involucrellum extending to the base of the exciple, yellow-orange to orange-brown in thin section, subtended by a thin layer of algae. Exciple c. 10 µm thick, pale yellow-brown. Asci narrowly obclavate to cylindroclavate, 55–80 × 8–12 µm. Ascospores ±fusiform to oblong, 3-septate, 17–26 × 3–6 µm; perispore not apparent. Pycnidia not seen. Occurs in Australia, grows on the leaves of rainforest trees and shrubs. Also in Macaronesia, West and East Africa, Malesia, Japan and islands of the South Pacific.



Porina semecarpi



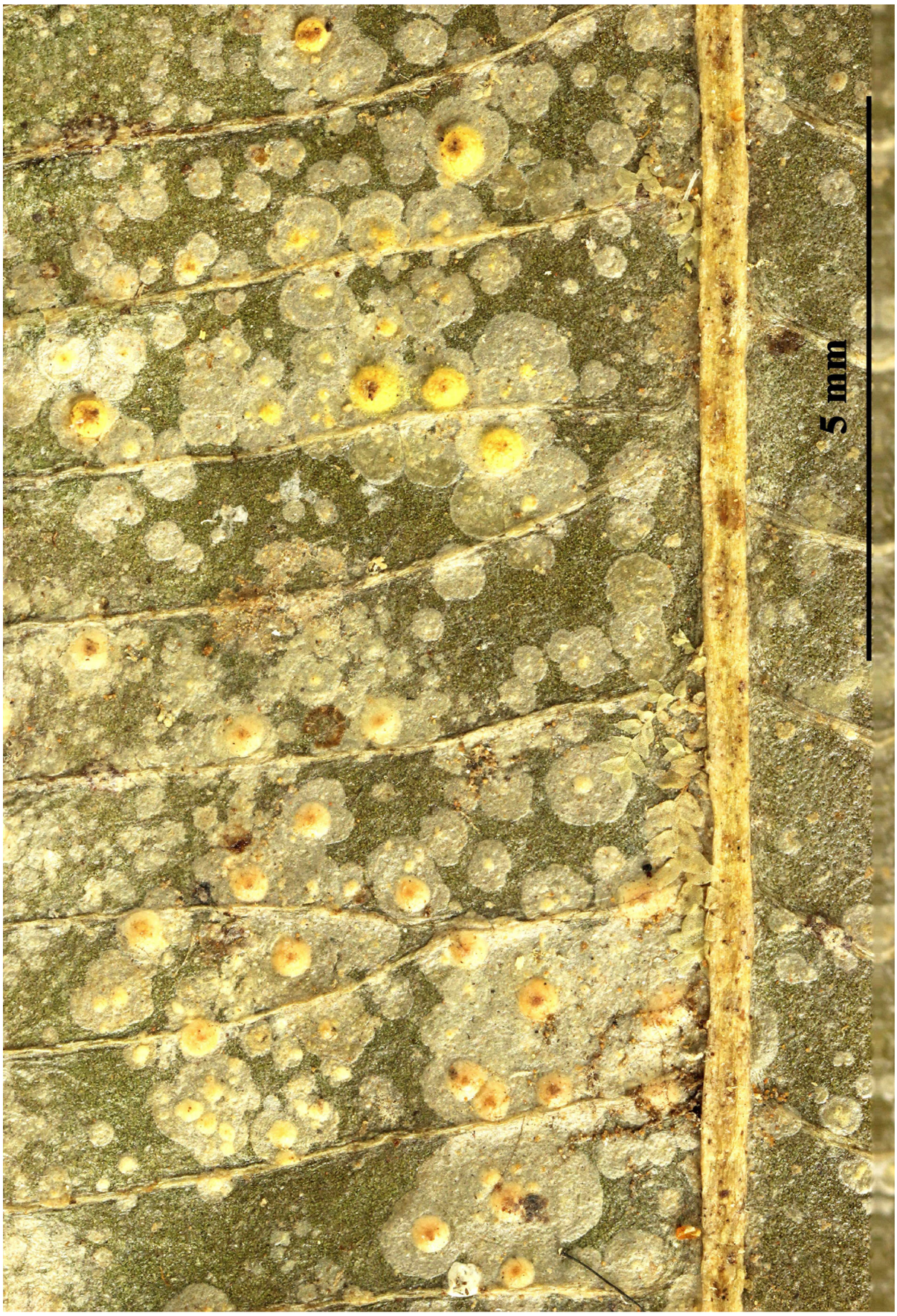
Porina semecarpi

Porina sphaerocephaloides Farkas, Lichenologist 19(1): 54 (1987)

[VZ2126], Tanzania. Montes Usambara Occidentalis, ad cataracta Kambi dicta prope vicum Mazumbai, 1550-1630. In pluviisilva submontana et montana, foliicola leg. T. Pócs (8426), 20.3.1984, det. E. Farkas. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 2126.

Thallus primum orbicularis,c. 05 mm diametro, demum confluens, tenuis, dilute verruculosus, bene limitatus, cinereus. Perithecia globosa (basin versus arete constricta), thallo inaequaliter verruculoso tecta, fiava vel ochraceo-flava, 0-25-0-4 mm diam. Paries internus hyalinus, c. 5-15 µm crassus, pariete externo tectus, K+ rubescens. Ascosporae ellipsoideo-fusiformes, uno apice paulum crassiore, alterno attenuate 42-60 µm longae, 6-9 µm crassae, 7(-9)-septatae. Typus: Tanzania, West Usambara Mts, Mazumbai University Forest Reserve.

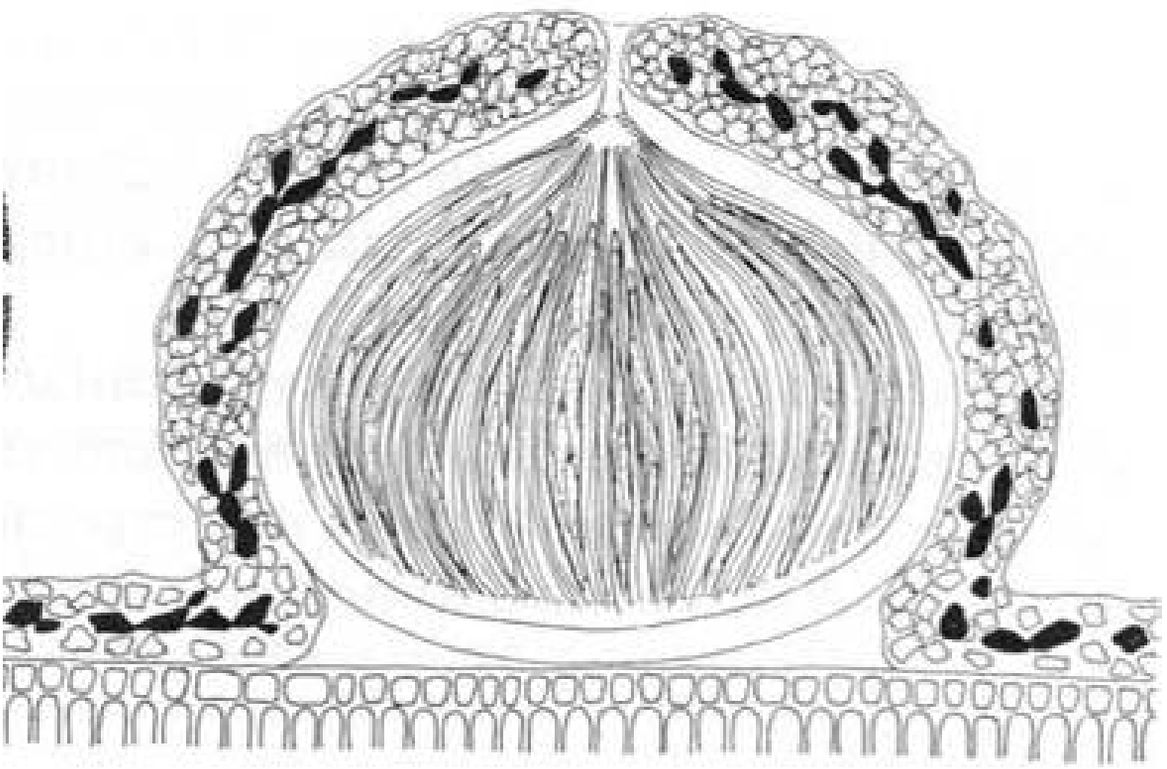
Thallus primarily round, c. 0-5 mm diam, monocarpous, later somewhat confluent, thin, verrucose, definitely outlined, greenish-grey to bluish-grey, cinereous. Perithecia globose, constricted at the base, yellow to ochraceous yellow, 0-25-0-4 mm diam. Perithecium wall rough, unequally thickened; outer wall K+ red, containing 5-10 µm wide hyaline crystals and chains of alga cells; inner wall hyaline, translucent, c. 5-15 µm thick. Paraphyses 1-25 µm thick. Asci 100-110 x 10-20 |im. Ascospores acicular with obtuse ends (one end wider than the other), 42-60 x 6-9 |µm, 7(-9)-septate. Photobiont: *Phycopeltis* sp. *Porina sphaerocephaloides* is similar to *P. sphaerocephala* but some characteristic features separate them unambiguously. The thallus of *P. sphaerocephaloides* is dotted with verrucae, while the other has radiate ridges on the thallus. This separation is analogous with that of *Mazosia rotula* from the species group of *M. tumidula, M. praemorsa, M. melanophthalma* and *M. dispersa*. Differences in the size of ascospores and asci are also distinguishingfeatures. P. *sphaerocephaloides* has larger ascospores (30-38 x 3-4-5 µm) and longer asci (50-60 x 8-12 |µm) than *P. sphaerocephala* (data from Santesson1952:265). The two species may also differ in their distribution. *P. sphaerocephala* known from China and Malasia, and reported African occurrences are questionable.



Porina sphaerocephaloides



Porina sphaerocephaloides



Porina sphaerocephaloides

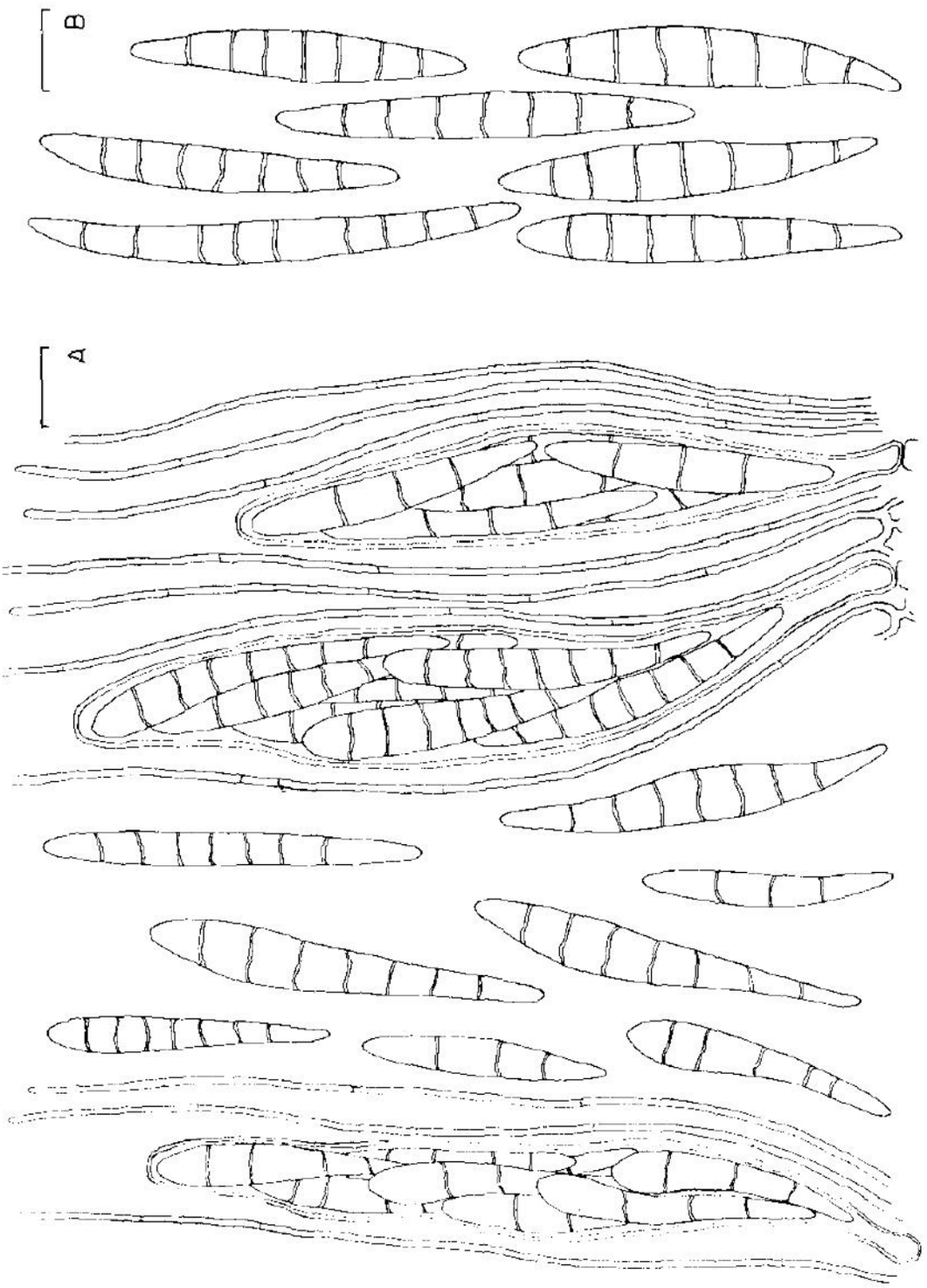


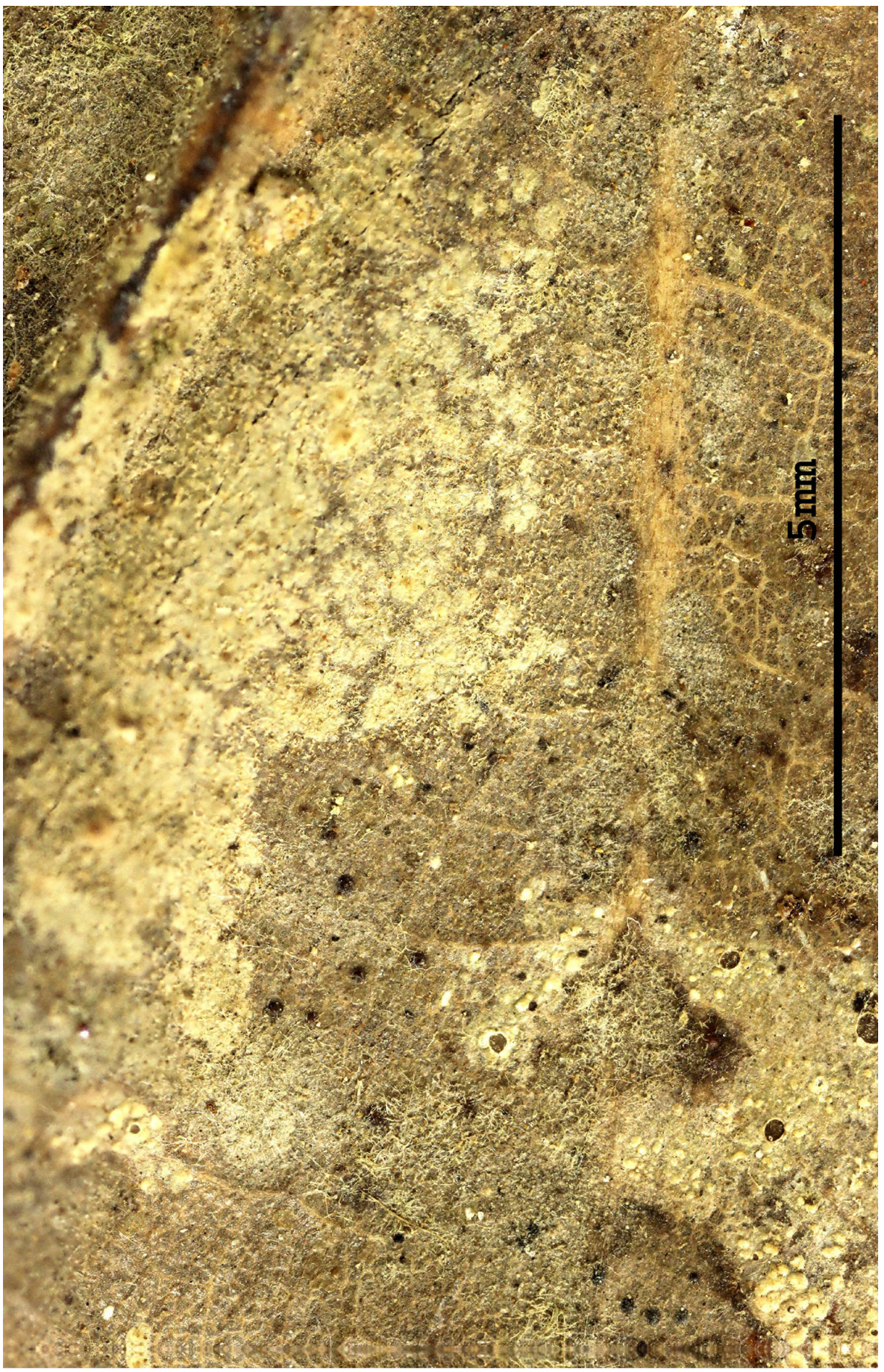
FIG. 5. *Porina sphaerocephaloides*: Scales = 10 μm. A, Ascospores, asci and paraphyses in different developmental stages (8518/AD—holotype); B, ascospores (Rep. Guinea).

Porina sphaerocephaloides

Porina virescens (Kremp.) Müll. Arg., Flora, Regensburg 66(21): 331 (1883)
= *Verrucaria virescens* Kremp. 1875

[VZ1501], Philippines. Luzon, prov Laguna, Los Banos, in monte Makiling, 250 m. Ad folia *Diplodisci paniculati* Turcz. Leg. W. S. Gruezo (no. 2479), 16.1.1977. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1501.

Thallus round to irregular in outline, up to 25(—30) mm diam., continuous but in the peripheral part sometimes dispersed, smooth, densely to scantily pilose or almost glabrous, greenish grey to (pale) green, between the hairs matt, (10—)15—30 µm. Hypothallus indistinct. Perithecia 0.4—0.6 mm diam., 100—200 µm high, lens-shaped, usually distinctly spreading at the base, covered by th. tissue, at the base ±densely pilose, at the slightly applanate top sometimes ±smooth. Outer per. wall 10-15 µm thick, yellow, K+ intensely brownish red, basally broadly spreading, covered by a thick, ±continuous layer of colourless crystals, over which is a 10-25 µm thick layer of algiferous th. tissue having a surface, especially at the base of the per., abundantly furnished with hyphal tufts like those of the th.; inner wall prosoplectenchymatous, in upper and lateral parts 8-10 µm thick, uncoloured, in basal part 10-12 µm thick pale to light yellowish (K +). Per. chamber c. 80-150 µm high, 220-300 µm broad. Paraphyses simple, c. 1-1.5 µm thick. Periphyses indistinct. Asci obclavate, 80-110 x 16-20 µm, mainly based in the peripheral part of the per.-base. Spores 8, 7-septate, very narrowly fusiform to almost bacillar, one end rather acute, no halo, 41-70 x 4-6 µm. Symbiotic alga: a *Phycopeltis* sp., cells rounded, angular or oblong, 5—8(—10) x 3—5 µm, forming almost continuous, non-radiate plates.



Porina virescens



Porina virescens

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