F. Schumm (2026):

Images of Lichens
Vezda Lichenes Selecti Exsiccati part 30

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With this volume, I continue the documentation of Vezda's works on exiccata, now with Lichenes Selecti as part 30. 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

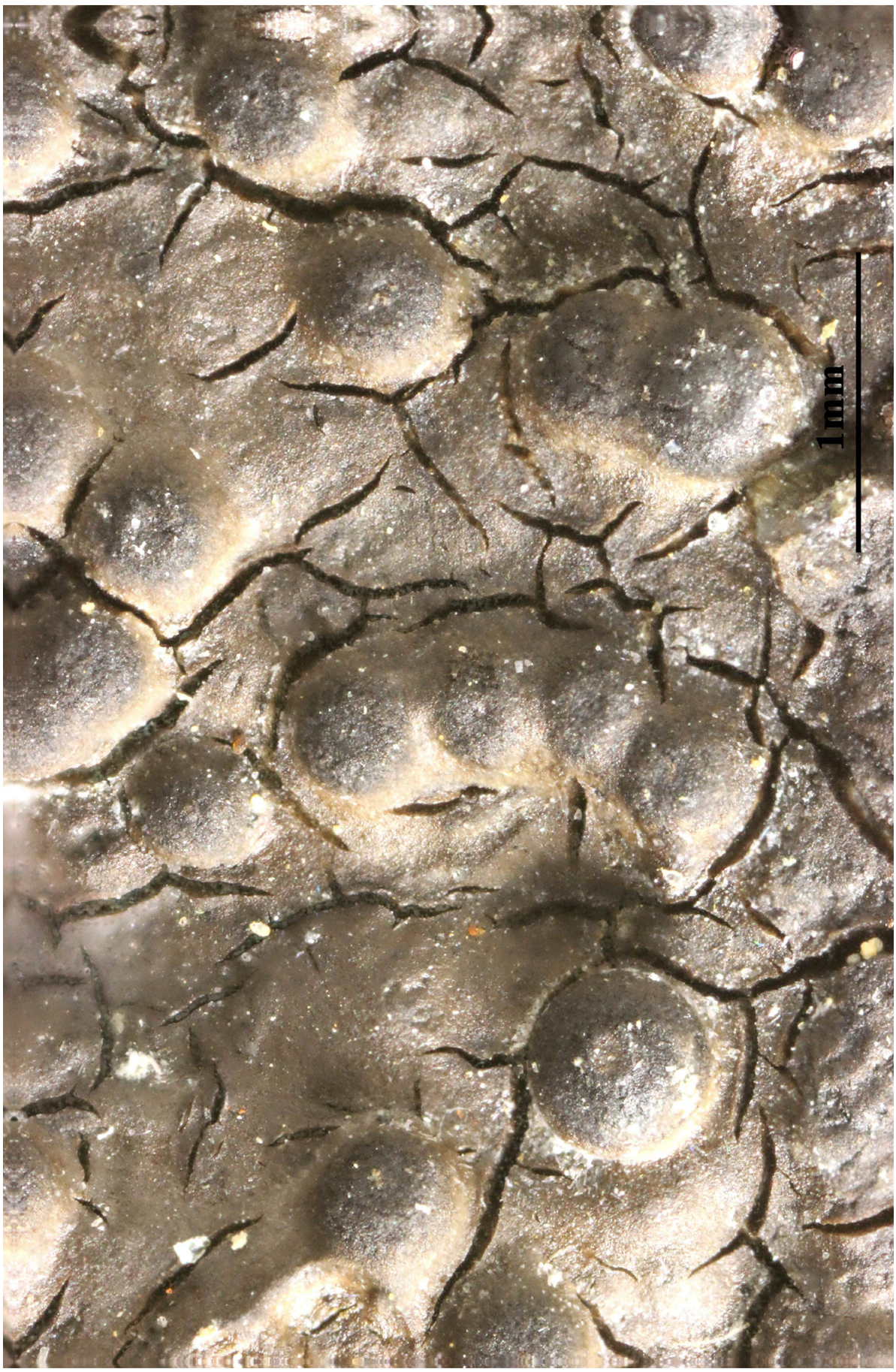
Staurothele fissa (Taylor) Zwackh, Flora, Regensburg 45(35): 552 (1862)
= *Verrucaria fissa* Taylor 1836

[VZ2181], Austria. Voralbergia. Montes Verwall, ad meridiem a pago Klösterle, in valle Nenzigast, 1450 m. Ad lapides in torrente. Leg A. Vězda, 26.7.1986. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2181.

Thallus crustose, episubstratic, continuous to usually cracked, pale to dark brown, somewhat shiny, smooth, sometimes delimited by a whitish prothallus. Perithecia black, 0.2-0.3 mm across, immersed in (0.2-)0.3-0.6(-0.6) mm wide, conical-hemispherical projections with a brown to black apex, half to almost completely covered by a thalline layer. Involucrellum adpressed to exciple or slightly divergent in lower part, most often apical, rarely extending to the base of the perithecium; hymenial gel I+ red (I+ blue at very low concentrations of iodine), K/I+ blue; hymenial algae subglobose to oblong-ellipsoid, 1-1.5 times as long as wide, 2-4(-5) µm; hamathecium of periphyses and periphysoids, interascal filaments absent. Asci 2-spored, clavate, the wall thickened above, with an ocular chamber, after dehiscence with a delicate extruded endotunica, I-, K/I-. Ascospores muriform, pale to dark brown, oblong-ellipsoid to narrowly oblong, (30-)37-50(-60) x 13-25(-30) µm. Pycnidia black, frequent, Dermatocarpon-type. Conidia bacilliform, straight or slightly curved, 3-4 x c. 1.2 µm. Photobiont chlorococcoid, present in both thallus and hymenium. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a probably circumpolar lichen growing amphibious in montane to Alpine creeks, or on moist siliceous rocks; much rarer in the high Mediterranean mountains than in the Alps.



Staurothele fissa



Staurothele fissa

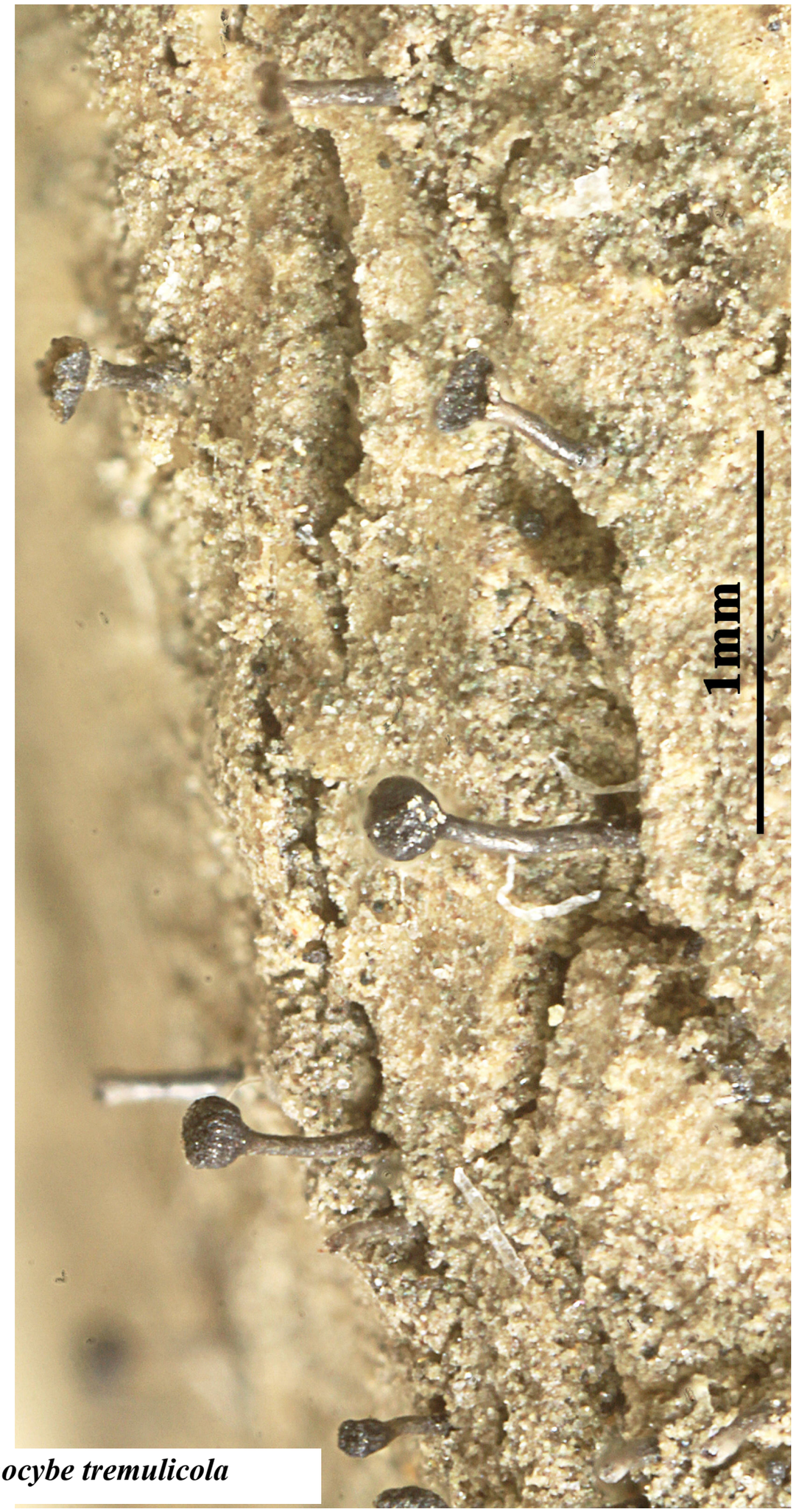
Stenocybe tremulicola Norrl. ex Nyl., Flora, Regensburg 66(34): 531 (1883)
= *Phaeocalicium tremulicola* (Norrl. ex Nyl.) Tibell, Ann. bot. fenn. 33(3): 219 (1996)
= *Calicium tremulicola* (Norrl. ex Nyl.) Rehm [as 'tremulicolum'], Rabenh. Krypt.-Fl., Edn 2 (Leipzig) 1.3(lief. 34): 405 (1891) [1896]
= *Stenocybe pullatula f. tremulicola* (Norrl. ex Nyl.) Zahlbr., Cat. Lich. Univers. 1: 651 (1922)

[VZ1055], Magna Britannia, Caledonia: Perthshire, Blairgowrie, Kirkmichael, Enochdhu, Kindrogan, 240 m. Ad corticem in ramusculis *Populi sp*.. Leg. U. K. Duncan et P. B. Topham, 11.1971, det. P. W. James. EX A. VĚZDA: LICHENES SELECTI EXSICCATI NR. 1055.

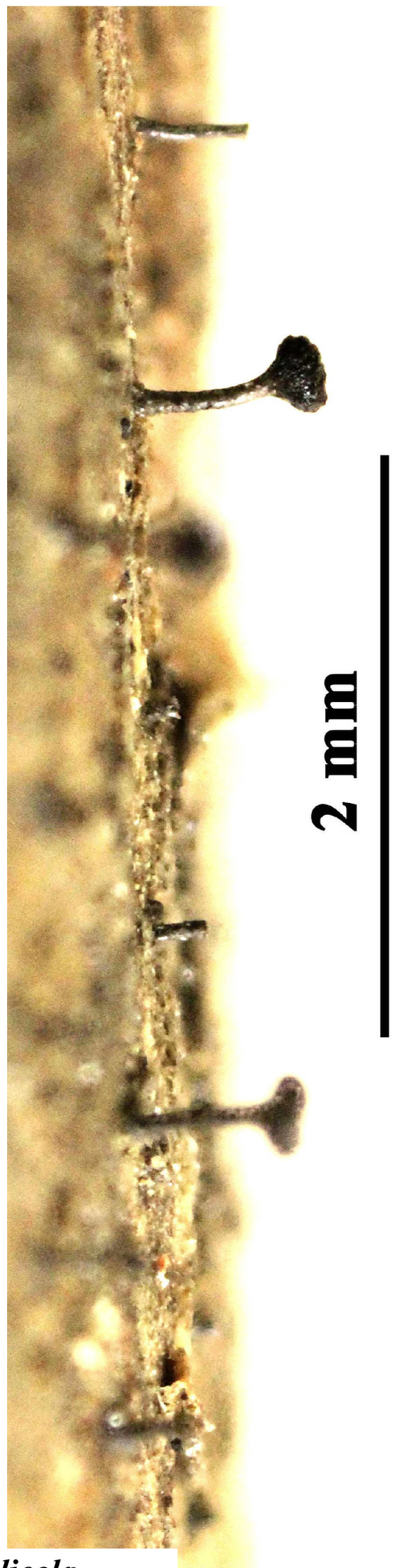
Saprobic or parasitic on branches of Populus. Ascomata 0.25-0.33 mm high, black, shining, often with olivaceous to greyish brown stalk. Capitulum obovate to narrowly lenticular, 0.04-0.13 mm diam., epruinose. Epithecium medium brown, 7-10 um high, consisting of small cells with partly melanized walls. Hypothecium 35-45 um high, hyaline, consisting of largely periclinally arranged, intricately interwoven, branched, thin-walled hyphae. Excipulum medium brown, 9-13 um thick, formed by an outer layer of large, sclerotized and thick-walled cells, 47 um diam covering a thin layer of periclinally arranged hyphae, 1-3 cells thick. Excipulum and epithecium K-, N-. Stalk 0.02-0.04 mm diam., in section pale brown, K-, N- , consisting of largely periclinally arranged, somewhat intertwined hyphae, 1-2 µm diam., with swollen walls. Stalk enclosed in a 5-8 um thick, hyaline layer. Asci narrowly cylindrical, 75-91 x 4.5-5.5 µm, with uniseriate spores. Ascus apex with uniformly thickened apical wall. Mature spores 3-septate, brown, narrowly ellipsoidal, 14-17 x 5.0-5.5 µm, smooth under the light microscope. The spores often remain unseptated or have one septum only. Sporesepta strongly pigmented. Chemistry. No secondary substances have been identified. - On thin and decaying twigs of Populus tremula. - Note. Characterized by the small size of the ascomata, the 3-septate spores, the anatomy of the excipulum, the often pale stalk and the occurrence on Populus.



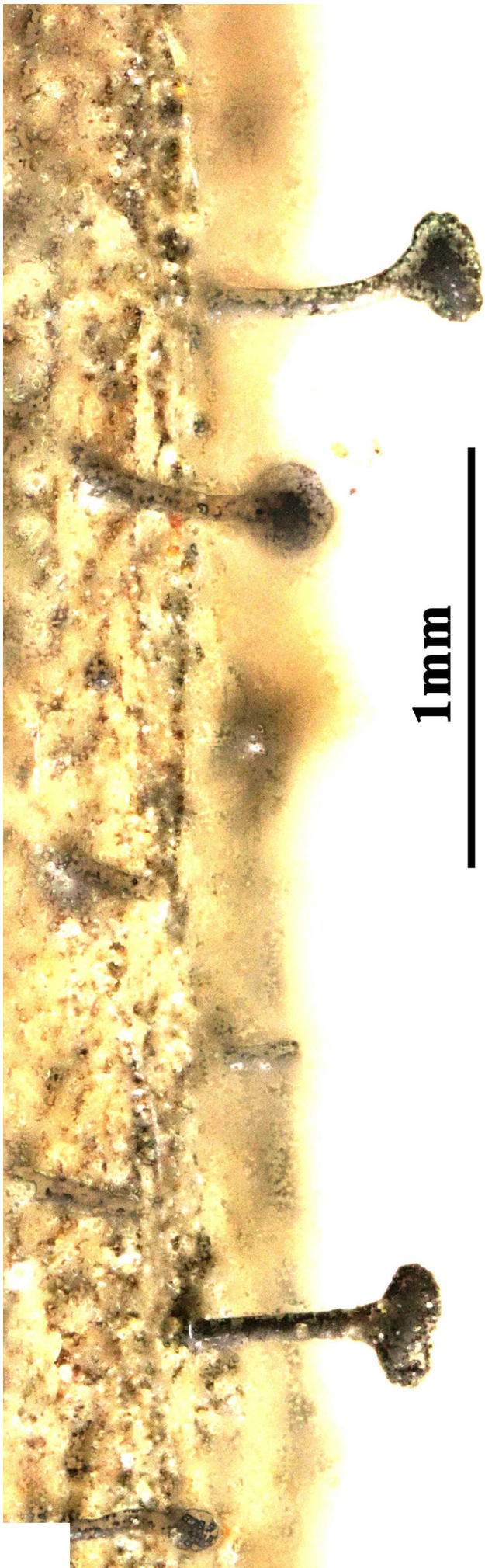
Stenocybe tremulicola



Stenocybe tremulicola



Stenocybe tremulicola



Stenocybe tremulicola

Stereocaulon anomalum I.M. Lamb, in Vězda, Lichenes Selecti Exsiccati, Fasc. (Průhonice) 50: 7 (no. 1247) (1974)

[VZ1247], Tanzania. Distr. Morogoro, in margina occidentali planitiae Lukwangule dictae, 2410 m. Ad saxa quartzitica prope Sphagnetum. Leg. T. Pócs et A. Kornaś (no. 6815/b). Ex A. VĚZDA: LICHENES SELECTI EXSICCATI NR. 1247.

Pseudopodetia arcte affixa, simplicia vel subsimplicia, subulato-attenuata. (2-)3-7 cm alta, glabra vel sbtilissima fibroso-tomentosa, phyllocladiis apicem versus granulosis, infra medium papillatis vel breviter coralloideis, haud foliaceo-complanatis. Apothecia parva, lateralia. Hypothecium haud coloratum. Sporae rectae, 3-5 septatae, 30-44 x 2.5-3 µm. Thallus P+ rubescens (atranoriam, acidum sticticum at acidum norsticticum continens). *Stereocaulon furfuracea* Duvign. maxime affine, ab eo phyllocladiis tantem coralloideis et non distincte complanatis differens.

English description:
Pseudopodetia closely attached, simple or subsimple, subulate-attenuated. (2-)3-7 cm high, glabrous or very thin fibrous-tomentose, phylloclades apex towards granulose, below the middle papillate or briefly coralloid, not foliaceous-flattened. Apothecia small, lateral. The hypothecium is not colored. Spores straight, 3-5 septate, 30-44 x 2.5-3 µm. Thallus P+ reddish (containing atranorin, stictic acid and norstictic acid). *Stereocaulon furfuracea* Duvign. most closely related, differing from it in its phylloclades which are so much coralloid and not distinctly flattened.



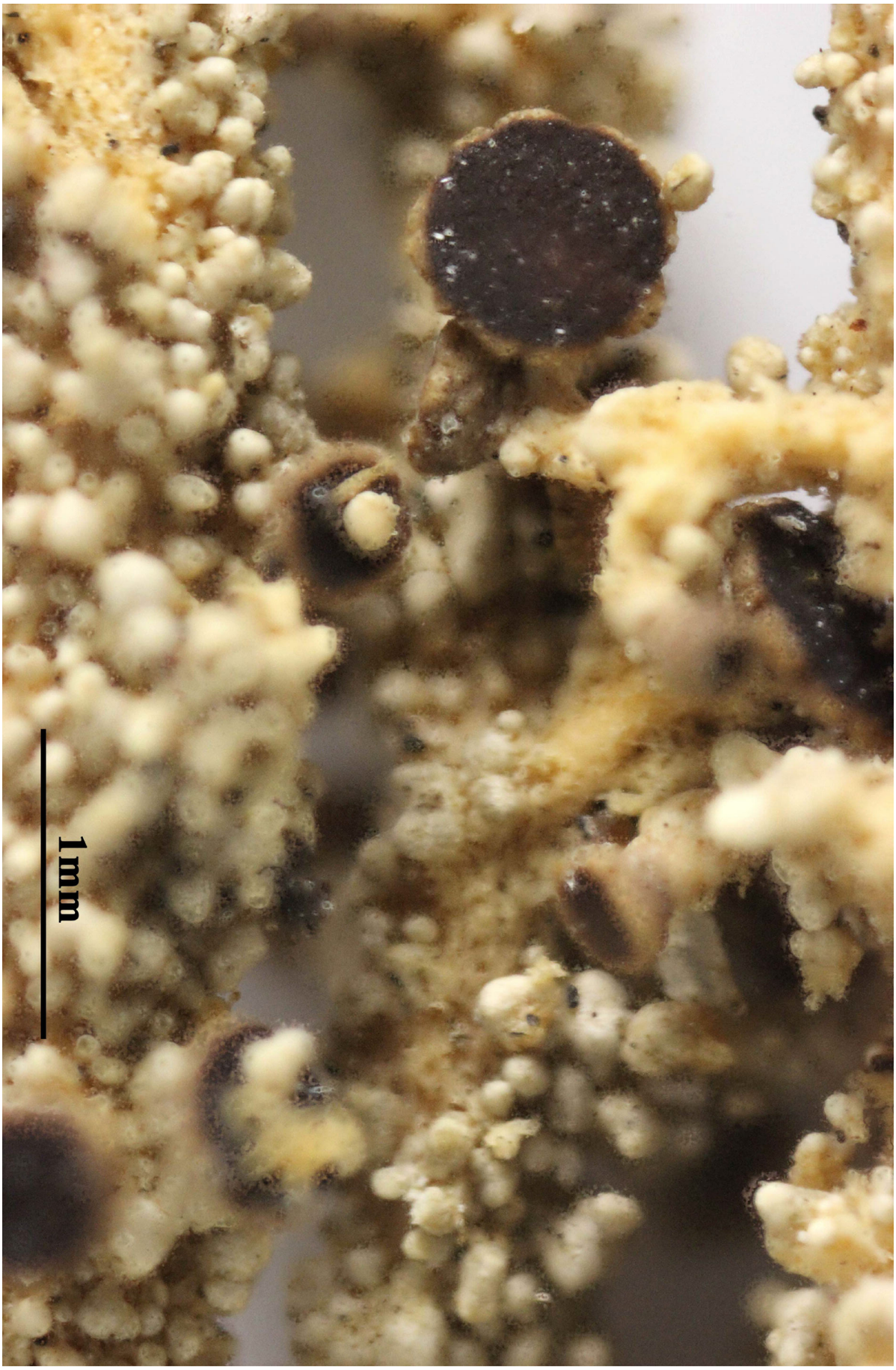
Stereocaulon anomalum



Stereocaulon anomalum



Stereocaulon anomalum



Stereocaulon anomalum

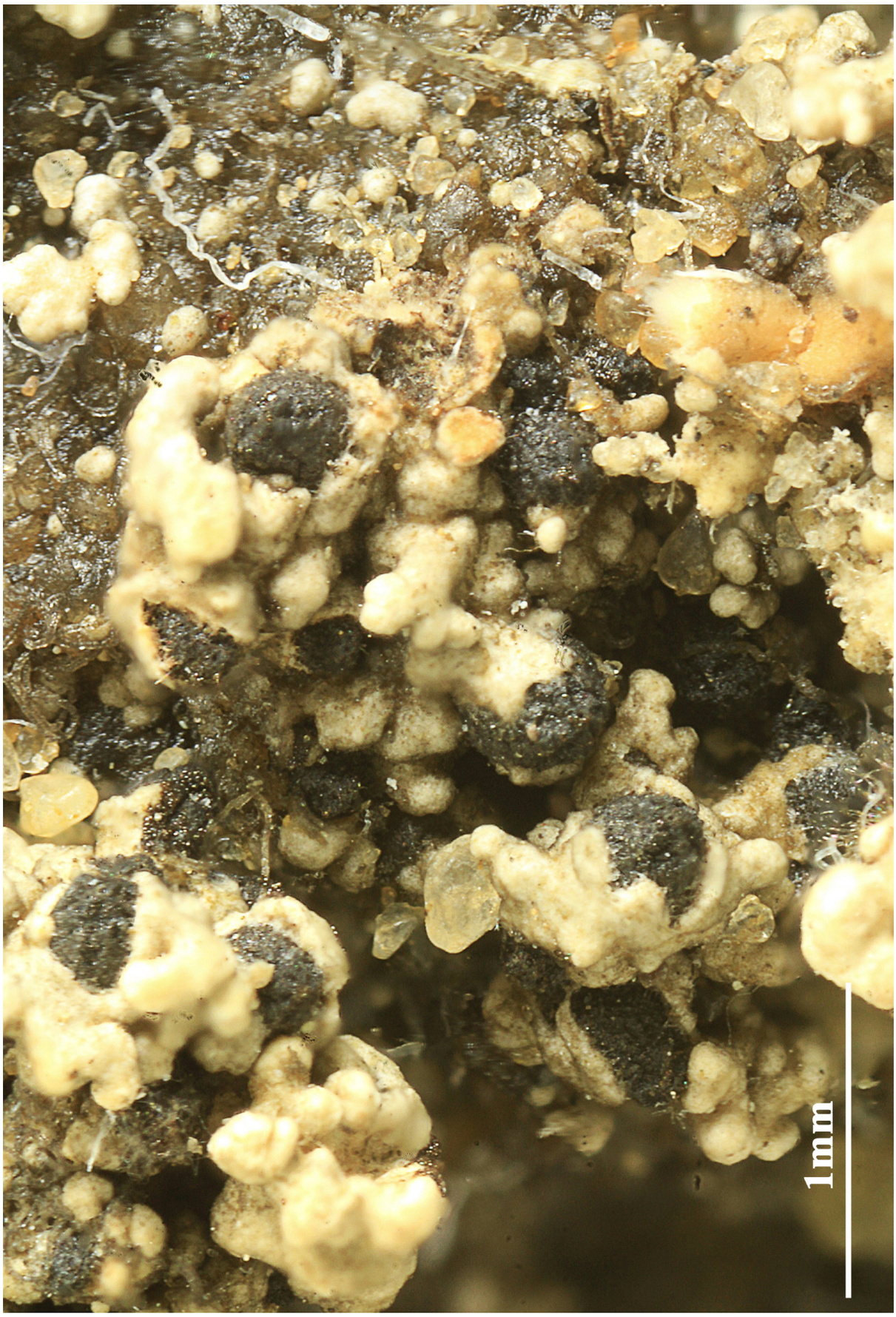
Stereocaulon condensatum Hoffm., Deutschl. Fl., Zweiter Theil (Erlangen): 130 (1796) [1795]

[VZ2475], Polonia. Distr. Byalystok. prope pagum Jelonka, 160 m. Ad terram arenosam in Pineto. Leg. S. Cieśliński, K. Czyzewska, A. Lackovičová er I. Pišút, 15.09.1990. Ex A. VěZDA: LICHENS SELECTI EXSICCATI NR. 2475.

Primary thallus persistent, of granular to incised-elongate phyllocladia with abundant interspersed cephalodia, forming a crust. Pseudopodetia rarely present, with a solid cartilaginous axis of parallel hyphae surrounded by a lax medulla, ascending to erect, terete, up to 1.5(-2) cm tall, 0.5-1 mm thick, simple or sparingly branched, tomentose at least in upper parts. Phyllocladia small, wart-like to incised, horizontal, greyish white to beige. Cephalodia abundant, dark reddish brown to blackish brown, with a scabrid surface, 1-1.5 mm across (those on the basal phyllocladia) or 0.2-0.5 mm across (those on the pseudopodetia), containing *Stigonema*, located between primary thallus granules or at the base of pseudopodetia. Apothecia rare, dark brown, rounded, without a thalline margin, on the basal phyllocladia or terminal on the pseudopodetia, 1-2 mm across. Proper exciple brown in outer part, colourless within; epithecium brown, K-; hymenium colourless; paraphyses simple, 1-1.5 µm thick, the apical cells up to 4 µm wide, with a dark cap; hypothecium colourless. Asci 8-spored, cylindrical-clavate, with a K/I+ blue outer layer and apical dome, and a central, K/I+ darker blue tube, Porpidia-type. Ascospores mainly 3-septate, hyaline, cylindrical-fusiform, 22-40 x 2.5-3 µm. Pycnidia dark, immersed in the basal phyllocladia. Conidia filiform, straight or slightly curved, 5-6 x 0.8 µm. Main photobiont chlorococcoid. Spot tests: K+ yellow, C-, KC- or KC+ violet (reaction often difficult to observe macroscopically, best evident on acetone extract on filter paper!), P- or P+ faintly yellow, UV+ blue-white. Chemistry: atranorin and variable amounts of lobaric acid. - Found on sandy to gravelly, often disturbed soil in open situations, often associated with Pycnothelia papillaria.



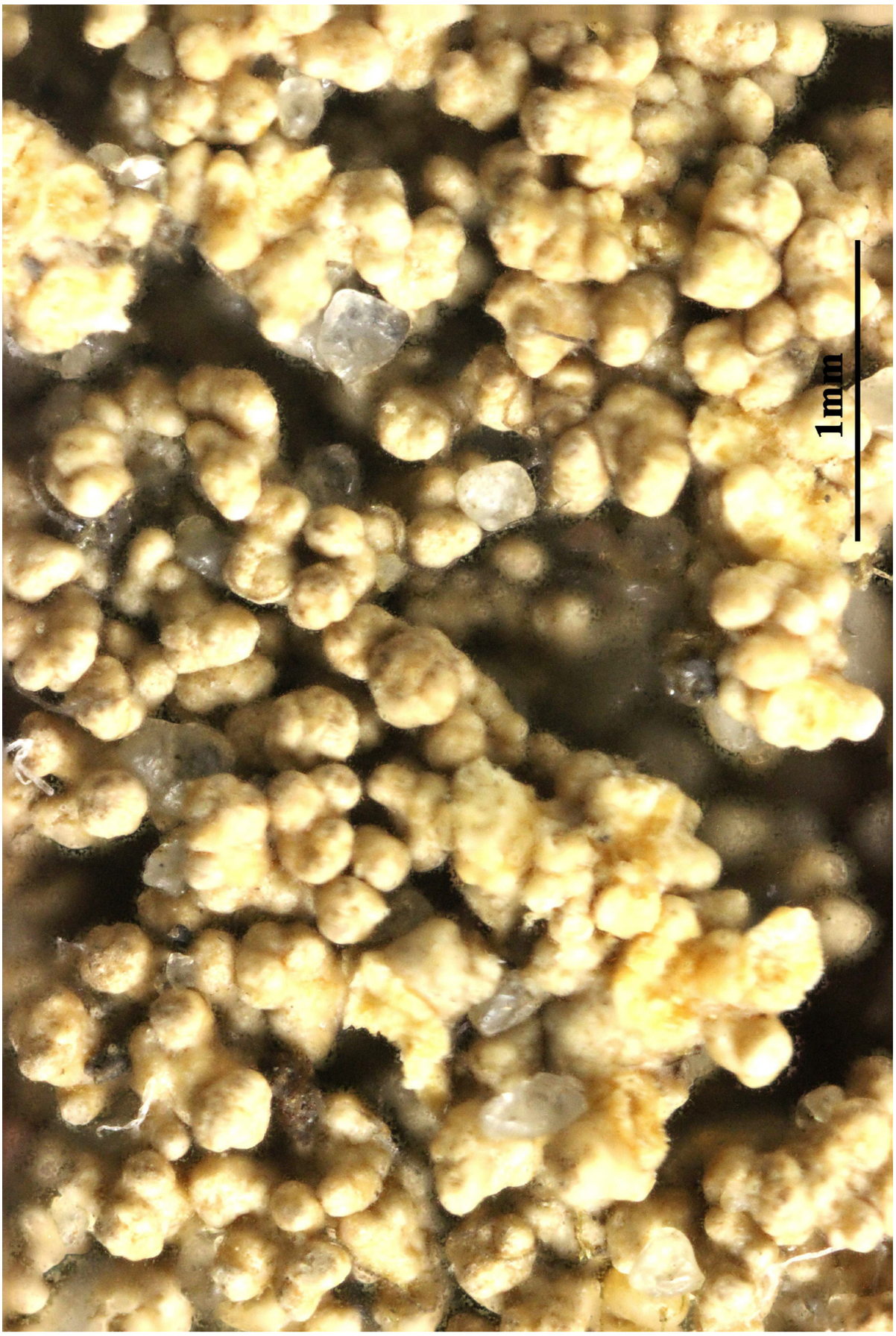
Stereocaulon condensatum



Stereocaulon condensatum



Stereocaulon condensatum



Stereocaulon condensatum

Stereocaulon confluens Müll. Arg., Flora, Regensburg 67(32): 614 (1884)

[VZ1373], Zaire (Africa centralis). Prov. Kivu, montes Birunga: in pede montis ignovomi Nyamuragira prope Sake secundum via ad Goma, 1500 m. Ad lapides vulcanicos anno 1948 eruptos. Leg. J. Lambinon (no.72/543), 8,11,1972. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1373.



Stereocaulon confluens



Stereocaulon confluens

Stereocaulon cornutum Müll. Arg., Flora, Regensburg 69(16): 252 (1886)

[VZ1685], Cuba. Oriente. Prov. Granma: Sierra Maestra, Pico Bayamesa, Subida Albear, 1300-1400 m. Ad saxa. Leg. T. Pócs (no.9066), det. A. Vězda. Ex A. VěZDA: LICHENES SELECTI EXSICCATI NR. 1685

Primary thallus evanescent. Large species with markedly cornute-attuniated pseudopodetia, 5-9(-13) cm long, simple or subsimple, firmly attached to the substratum. Phyllocladia partly grain like or flattened subfoliose or squamulos or at least partly terete-cylindrical (coralloid) on the same pseudopodetium. Subfoliose or squamulose phyllocladia with darker centres and paler margins, not sorediate, K+ yellow, P+ red (stictic acid). Cephalodia verrucose, scabrid verruculose or botryose, with poorly developed pseudoparnechymatic cortical layer. Apothecia exclusively lateral.



Stereocaulon cornutum



Stereocaulon cornutum

Stereocaulon furfuraceum P.A. Duvign., Lejeunia Mém. 14: 73 (1956)

[VZ1463]. Rwanda (Africa centralis). Sylva Rugege prope viam Butare - Cyangugu loco dicto Winka, 2450 m. Ad lapides cariosos. Leg. Lambinon (71/1093), det. M. Lamb. Ex A. VěZDA: LICHENES SELECTI EXSICCATI NR.1463.

Primary thallus present, often abundant; plants not very fertile. Phyllo-clades & margin remaining whole for a longer time, then becoming stretched for a long time and abundantly branched, most long. Chemis-try: atranorin, stictic acid and norstictic acid. *Distrib*. : central Africa (Uganda, Zaire, Kenya, Rwanda Burundi). *Remarks*: has a general resemblance to *St. cornutum* Müll.Arg., *St. scutelligerum* Th. Fr. and *St. virgatum* Ach. Distinction from *St. nigromaculatum* Duvign. may be difficult.





Stereocaulon furfuraceum

Stereocaulon incrustatum Flörke, Deutsche Lich. 4: 12 (1819)
= *Stereocaulon tomentosum* subsp. *incrustatum* (Flörke) Nyl., Syn. meth. lich. (Parisiis) 1(2): 245 (1860)
= *Stereocaulon tomentosum* var. *incrustatum* (Flörke) Schaer., Lich. helv. spicil. 6: 276 (1833)
= *Stereocaulon abduanum* Anzi
= *Stereocaulon incrustatum* f. *gracile* Frey
= *Stereocaulon incrustatum* var. *abduanum* (Anzi) Frey

[VZ1340], Bohemoslovacia. Slovacia, montes Slovenské rudohorie: In valle rivi inter Uhorná et Smolník, 600 m. Ad scorias vetustas. Leg. A. Vězda, 15.06.1975, det. A. Vězda. Ex A. VěZDA: LICHENES SELECTI EXSICCATI NR. 1340.

Primary thallus crustose-granulose, ephemeral, usually absent in mature individuals, secondary thallus fruticose, forming thick loose tufts. Pseudopodetia prostrate to ascending at the periphery, erect in the centre, 1-3(-5) cm tall, 0.8-1.2 mm thick, terete, densely white- to ash-grey-tomentose, with a solid cartilaginous axis of parallel hyphae surrounded by a lax medulla. Phyllocladia irregularly distributed, thicker at the apices, whitish to bluish grey, verruciform and very small, often hidden by the tomentum, <0.2 mm in diam. Cephalodia sparse, up to 2 mm across but often smaller, grey-green to dark brown, globose, localised in the parts free from phyllocladia, often covered by the tomentum, containing *Stigonema*. Apothecia rare, 1-2 mm across, with a dark brown, convex disc and an indistinct, thin proper margin. Proper exciple brown in outer part, colourless within; epithecium brown, K-; hymenium colourless, (50-)60-65 µm high; paraphyses mostly simple, 1-1.5 µm thick, the apical cells 2-3.5 µm wide, with a dark cap; hypothecium colourless. Asci (4-)6(-8)-spored, cylindrical-clavate, with a K/I+ blue outer layer and apical dome, and a central, K/I+ darker blue tube, Porpidia-type. Ascospores septate, hyaline, fusiform, 35-44 x 2.5-3 µm. Pycnidia dark, immersed. Conidia 1-celled, hyaline, bacilliform, 4.5-6(-7) x 0.8-1.2 µm. Main photobiont chlorococcoid. Spot tests: K+ yellow, C-, KC- or KC+ violet (reaction often difficult to observe macroscopically, best evident on acetone extract on filter paper!), P- or P+ slowly pale yellow, UV+ blue-white. Chemistry: atranorin and variable amounts of lobaric acid. *Note*: an arctic-alpine to boreal-montane, circumpolar lichen found on mineral, nutrient-poor soil, in open Pinus-woodlands, in the vicinity of glaciers and by rivers.



Stereocaulon incrustatum



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= *Stereocaulon abduanum* Anzi
= *Stereocaulon incrustatum* f. *gracile* Frey
= *Stereocaulon incrustatum* var. *abduanum* (Anzi) Frey

[VZ1282], Bohemoslovacia. Slovacia: Carpates, montes Slovenské Rudohorie: Mníšek, in valle rivi Smolník prope Smolnická pila, 500 m. Ad scorias vetustas. Leg. A. Kiszely & A. Vězda, 21.07.1974, det. M.I. Lamb (Annot.: Pro Monogr. Stereo. Univ. sumptum, no. 10177). Ex A. VěZDA: LICHENES SELECTI EXSICCATI NR. 1289.

Primary thallus crustose-granulose, ephemeral, usually absent in mature individuals, secondary thallus fruticose, forming thick loose tufts. Pseudopodetia prostrate to ascending at the periphery, erect in the centre, 1-3(-5) cm tall, 0.8-1.2 mm thick, terete, densely white- to ash-grey-tomentose, with a solid cartilaginous axis of parallel hyphae surrounded by a lax medulla. Phyllocladia irregularly distributed, thicker at the apices, whitish to bluish grey, verruciform and very small, often hidden by the tomentum, <0.2 mm in diam. Cephalodia sparse, up to 2 mm across but often smaller, grey-green to dark brown, globose, localised in the parts free from phyllocladia, often covered by the tomentum, containing *Stigonema*. Apothecia rare, 1-2 mm across, with a dark brown, convex disc and an indistinct, thin proper margin. Proper exciple brown in outer part, colourless within; epithecium brown, K-; hymenium colourless, (50-)60-65 µm high; paraphyses mostly simple, 1-1.5 µm thick, the apical cells 2-3.5 µm wide, with a dark cap; hypothecium colourless. Asci (4-)6(-8)-spored, cylindrical-clavate, with a K/I+ blue outer layer and apical dome, and a central, K/I+ darker blue tube, Porpidia-type. Ascospores septate, hyaline, fusiform, 35-44 x 2.5-3 µm. Pycnidia dark, immersed. Conidia 1-celled, hyaline, bacilliform, 4.5-6(-7) x 0.8-1.2 µm. Main photobiont chlorococcoid. Spot tests: K+ yellow, C-, KC- or KC+ violet (reaction often difficult to observe macroscopically, best evident on acetone extract on filter paper!), P- or P+ slowly pale yellow, UV+ blue-white. Chemistry: atranorin and variable amounts of lobaric acid. *Note*: an arctic-alpine to boreal-montane, circumpolar lichen found on mineral, nutrient-poor soil, in open Pinus-woodlands, in the vicinity of glaciers and by rivers.



Stereocaulon incrustatum



Stereocaulon incrustatum

Stereocaulon massartianum Hue, Nouv. Arch. Mus. Hist. Nat., Paris, 3 sér. 10: 252 (1898)

[VZ1886], Philippines Insulae. Luzon, Bagnio City, in monte Santo Tomas, 2100 m. Sd saxa et terram. Leg. W. S. Gruezo (no. 8861) et A. B. Gruezo, 12.5.1981. Ex A. VěZDA Lichenes Selecti Exsiccati Nr. 1886.

Podetia densely tomentose, 5-6 cm., apothecia terminal ; without squamules on one side. Cephalodia with *Stigonema* Cephalodia loose cored (sacculate). Phyllocladia P + pale yellow (lobaric acid present). Apothecia hypophysate, pseudopodetia up to 7 cm tall, sparingly branched, cephalodial cortex with palisade-like to elongate cells, *Stigonema* inside, apothecia 1 mm diam., terminal on short, lateral branches, spores 8-15(-2 l)-celled, (75-)90-120 µm long.
- The presence of three chemical strains was found from H. Sipman by TLC: 1. atranorin, stictic acid and usually a trace of norstictic acid, accompanied by cryptostictic and menegazziaic acid and traces of constictic acid. 2. atranorin and norstictic acid (Streimann 23729); 3. atranorin only (Streimann 24126). - S. massartianum is widespread in SE Asia (Lamb, 1977: 273).



Stereocaulon massartianum



Stereocaulon massartianum

Stereocaulon massartianum Hue, Nouv. Arch. Mus. Hist. Nat., Paris, 3 sér. 10: 252 (1898)

[6001]. Philippinen, Mindanao, Provinz Cotabato, Mt. Apo, tropischer Bergregenwald, Weg zwischen Lake-Agko-Campsite und Marbel-River-Campsite, ca. 07°01'-07°00' N , 125°13.3'-125°14.7'E, 1240 m -1490 m, auf Steinen am Marbel River. Leg. F. Schumm & U. Schwarz. 07.08.1999, det. F. Schumm 10.1999, conf. Sipman 03.2000, vid. Aptroot 2009.
- Sporen 14-20 septiert, 120 µm lang, umeinander gewunden. Cephalodien berindet (sacculat). Podetien P- bis gelblich; atranorin, norstictic (Apoth mit K sogar rote Nadeln!), connorstictic acids (solvent G, Sipman).

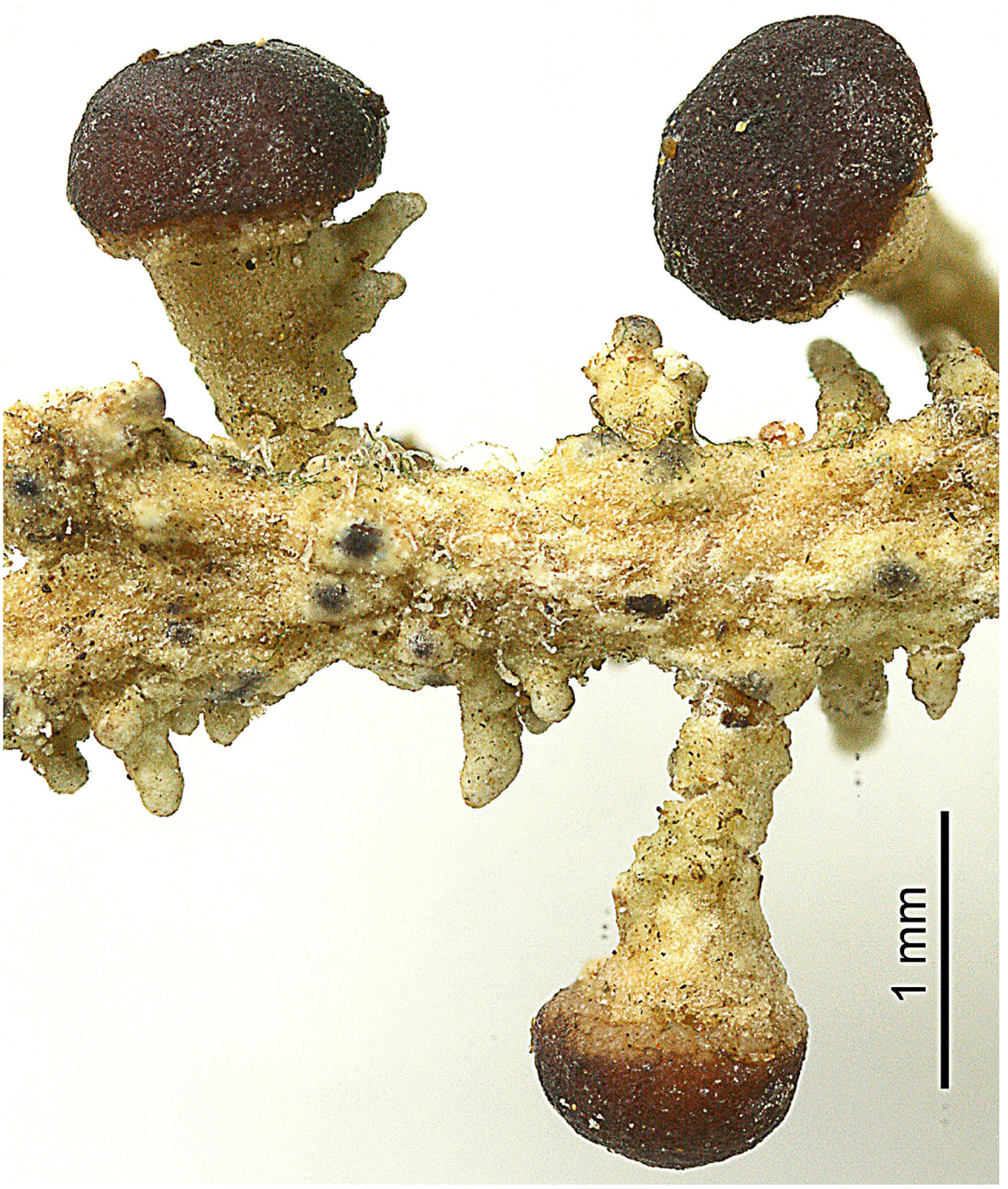
Pseudopodetia erect, up to about 7 cm high, subsimple or sparingly branched, decorticate, glabrous or subglabrous. Phyllocladial branchlets cylindrical-coralloid, slender, simple or branched, ± evenly distributed. Cephalodia lateral on main branches, sessile, foveolate sacculate, wrinkled, gray to brownish, with gelatinous cortex showing both round and palisadically elongated cells; containing *Scytonema* or *Stigonema*. Apothecia mostly terminal on individual short side-branches springing at right angles from pseudopodetium, up to 1 mm diam., originating in small pyriform clavulae, finally convex-immarginate without noticeable hypophysis. Excipulum up to 180 µm thick. Central cone compact, ±hyaline, without inclusions. Hypothecium colorless or faintly sordid. Hymenium (100-)120-160 µm high, with dark brown Epithecium. Paraphyses slender, filiform, discrete. Spores 8, spirally wound in ascus, 7-14-septate (rarely up to 19 or 20-septate), vermiform, sinuose, (75-) 90-120 x 3-4 µm.



Stereocaulon massartianum



Stereocaulon massartianum



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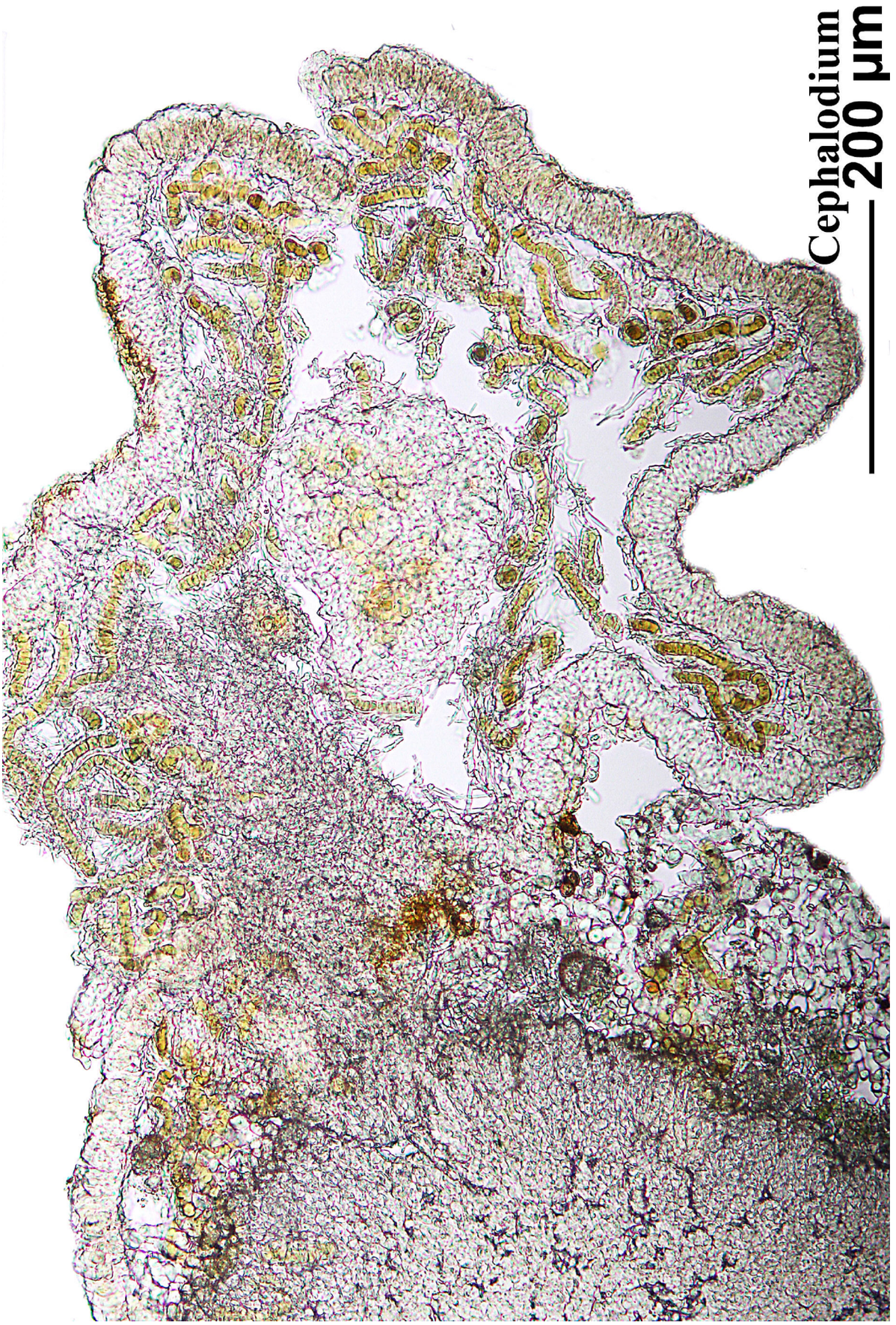
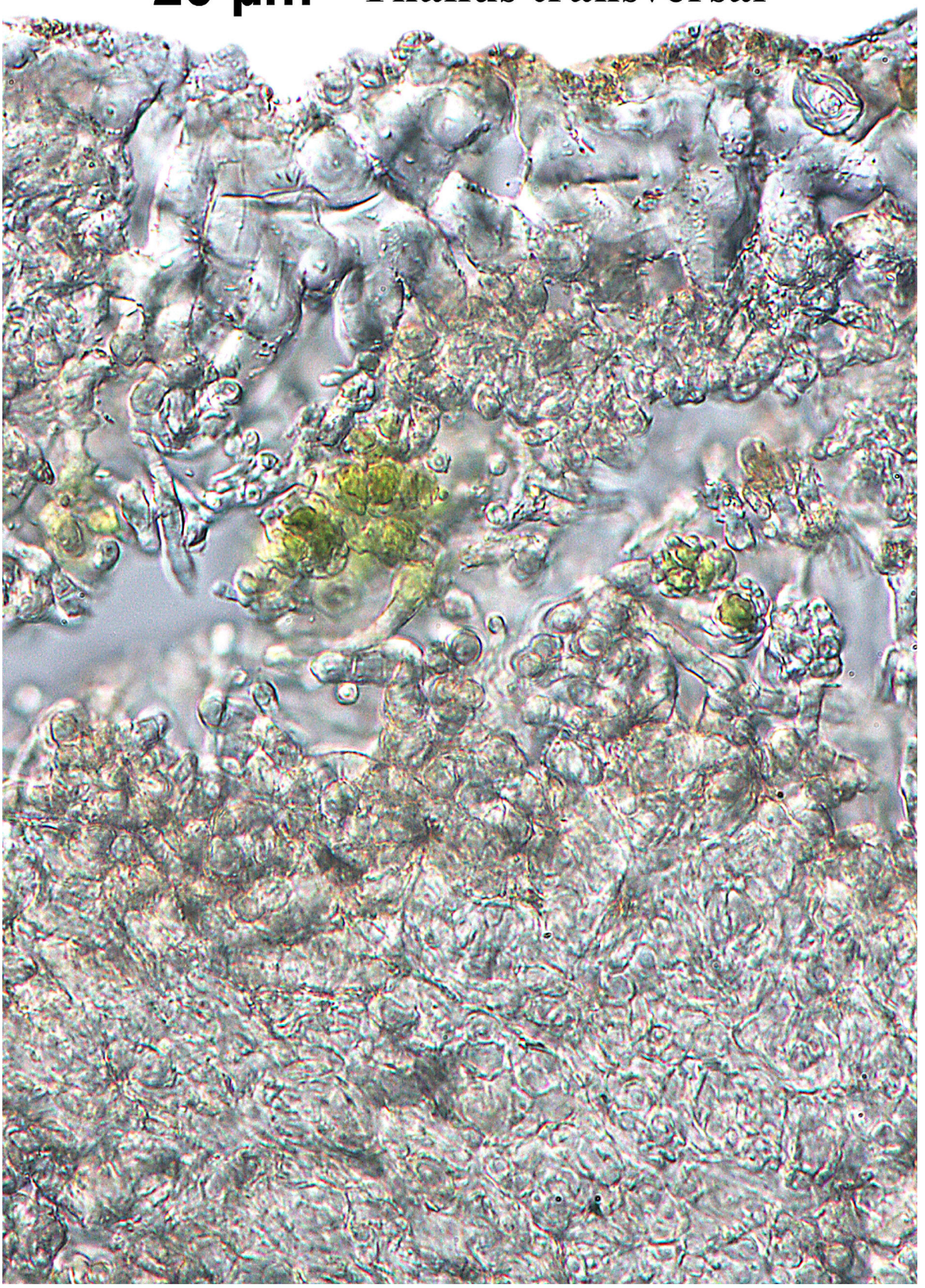


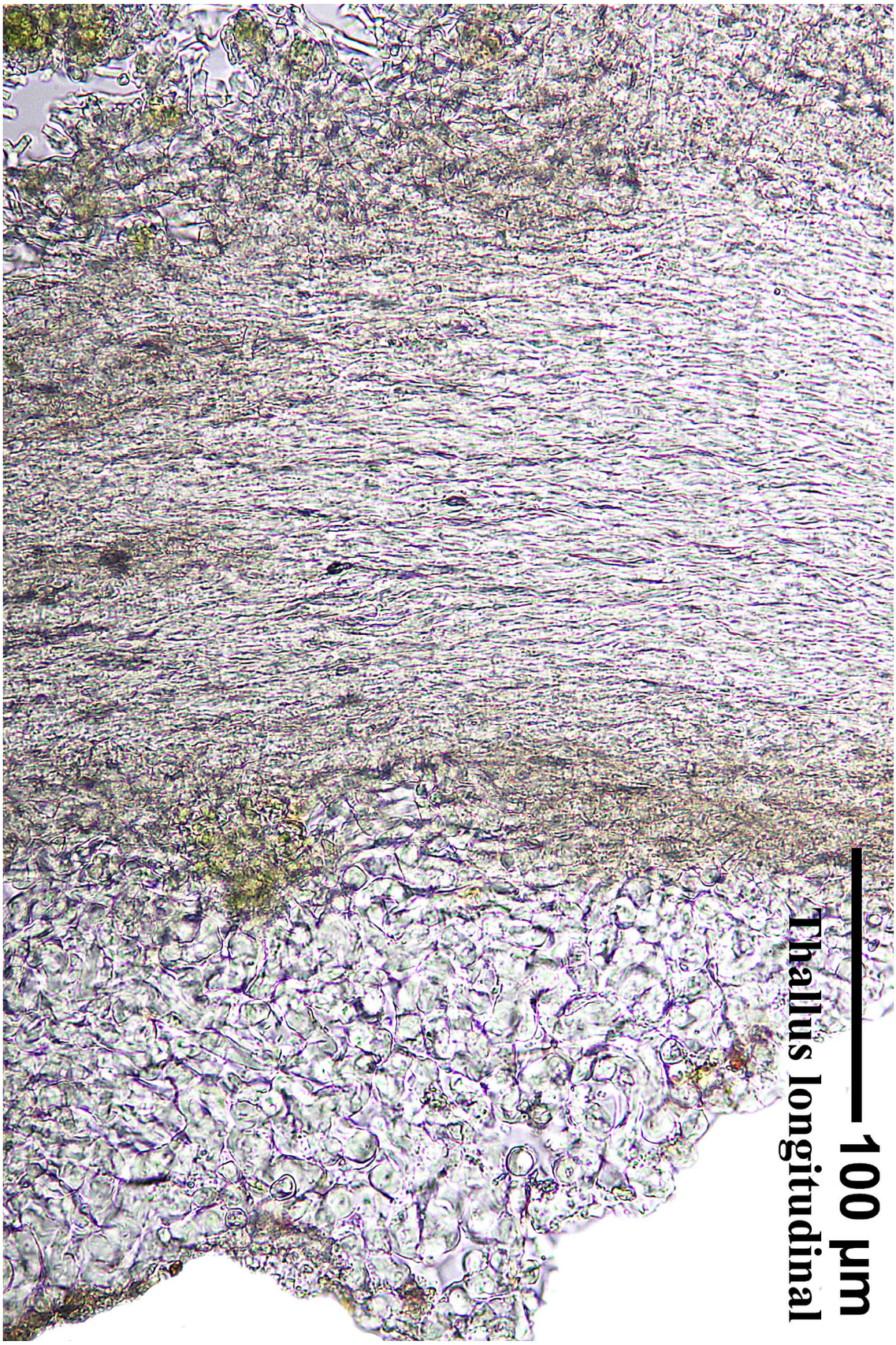
Stereocaulon massartianum



Stereocaulon massartianum



Stereocaulon massartianum



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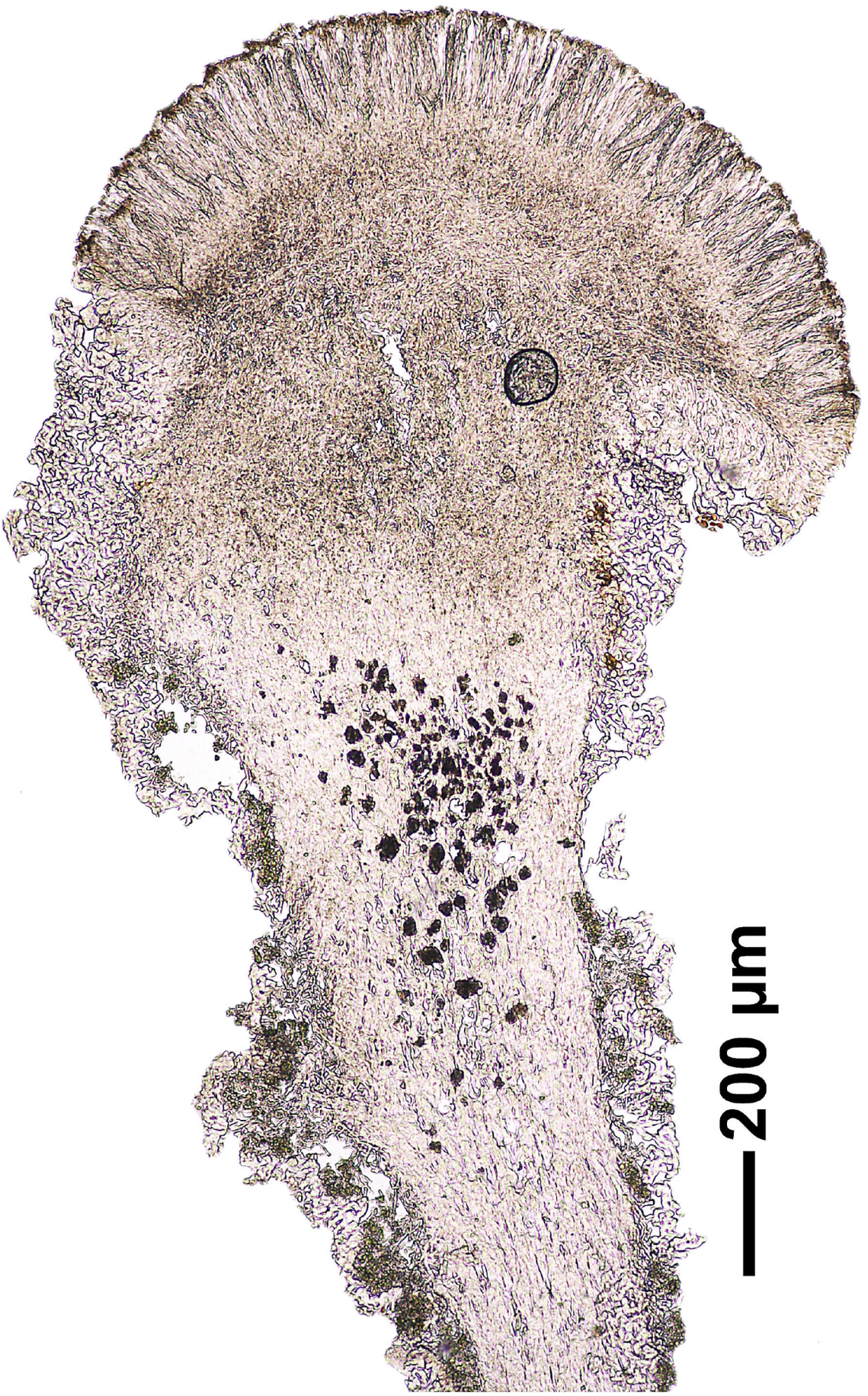
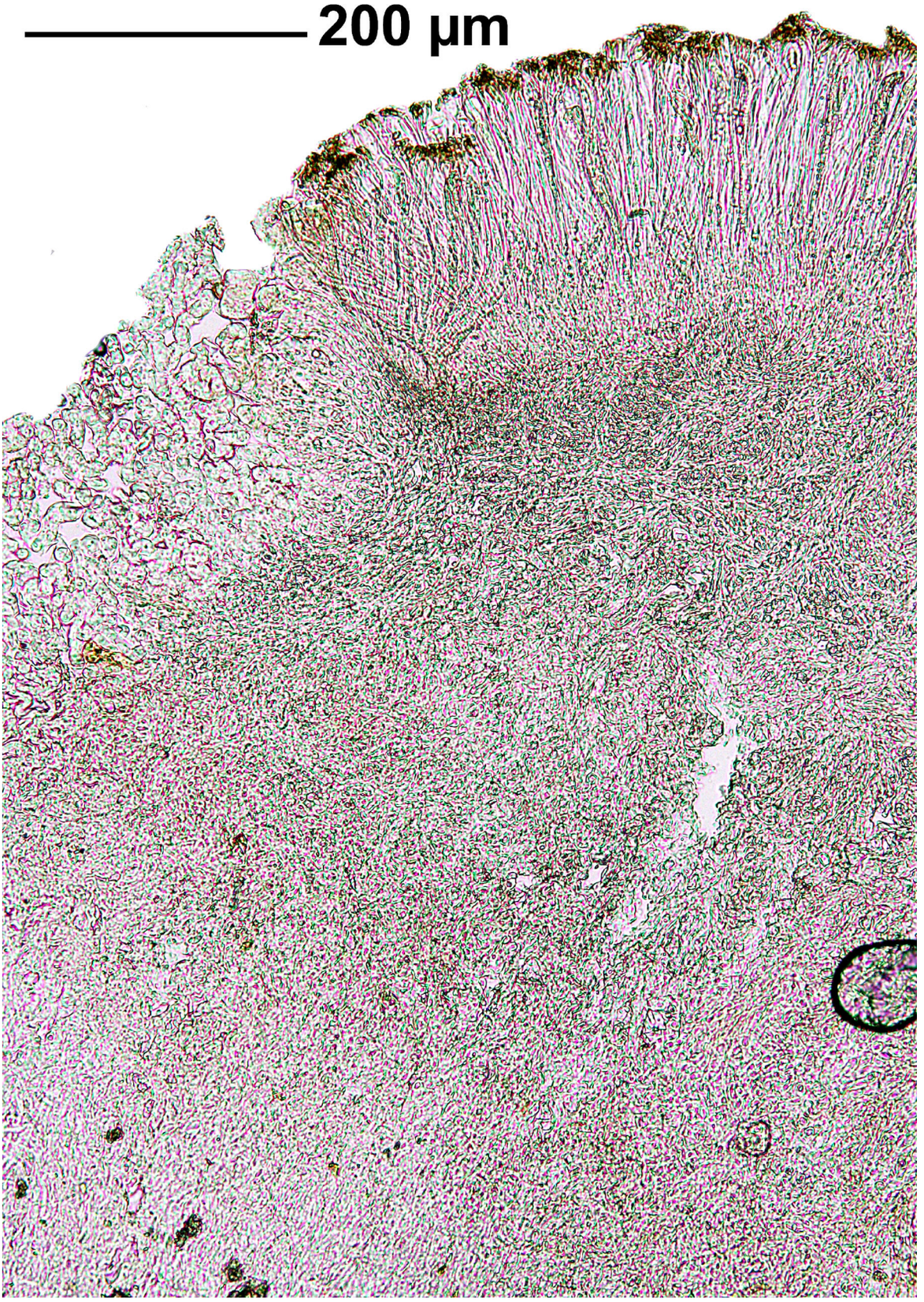
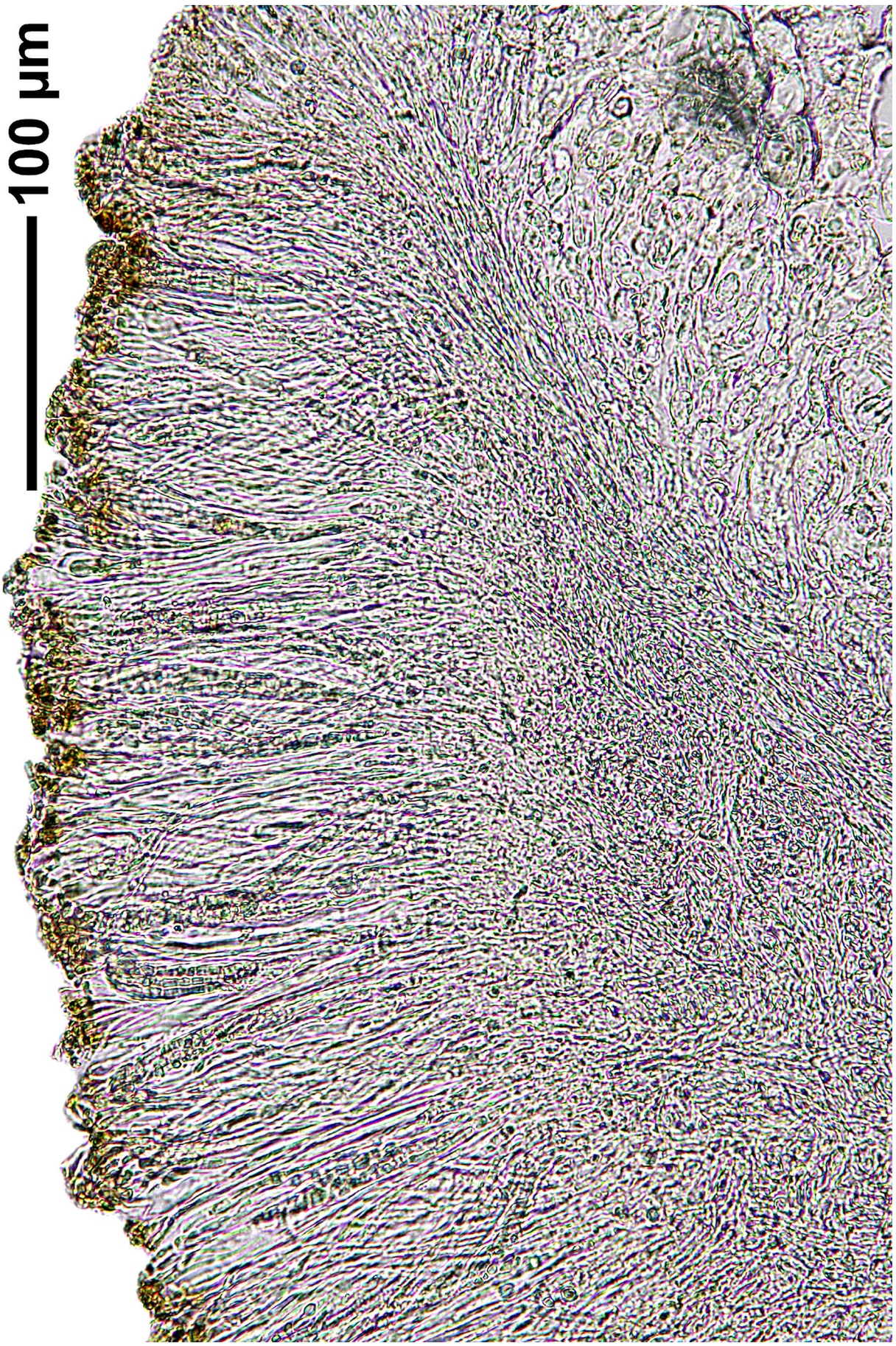


Stereocaulon massartianum



Stereocaulon massartianum



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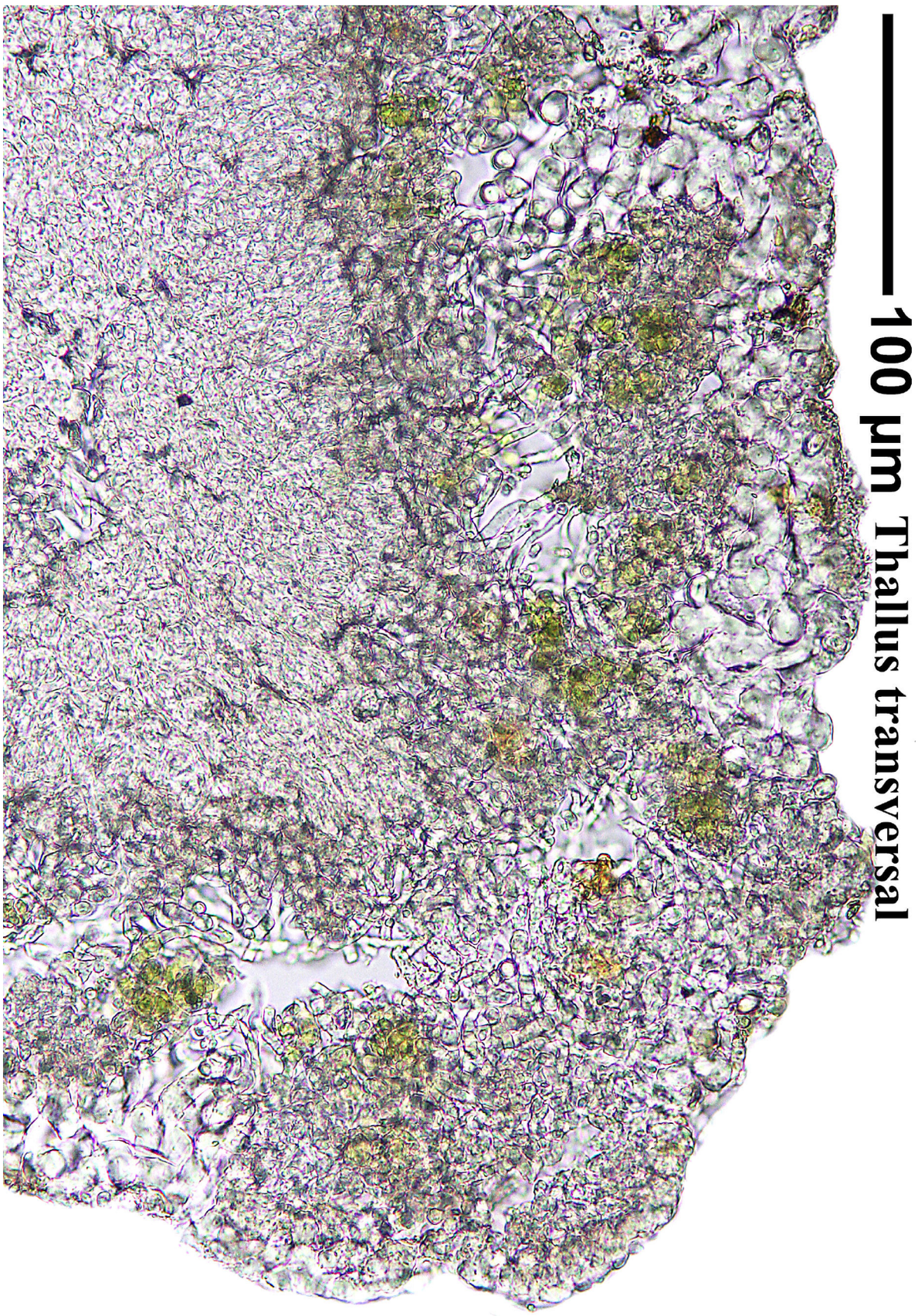

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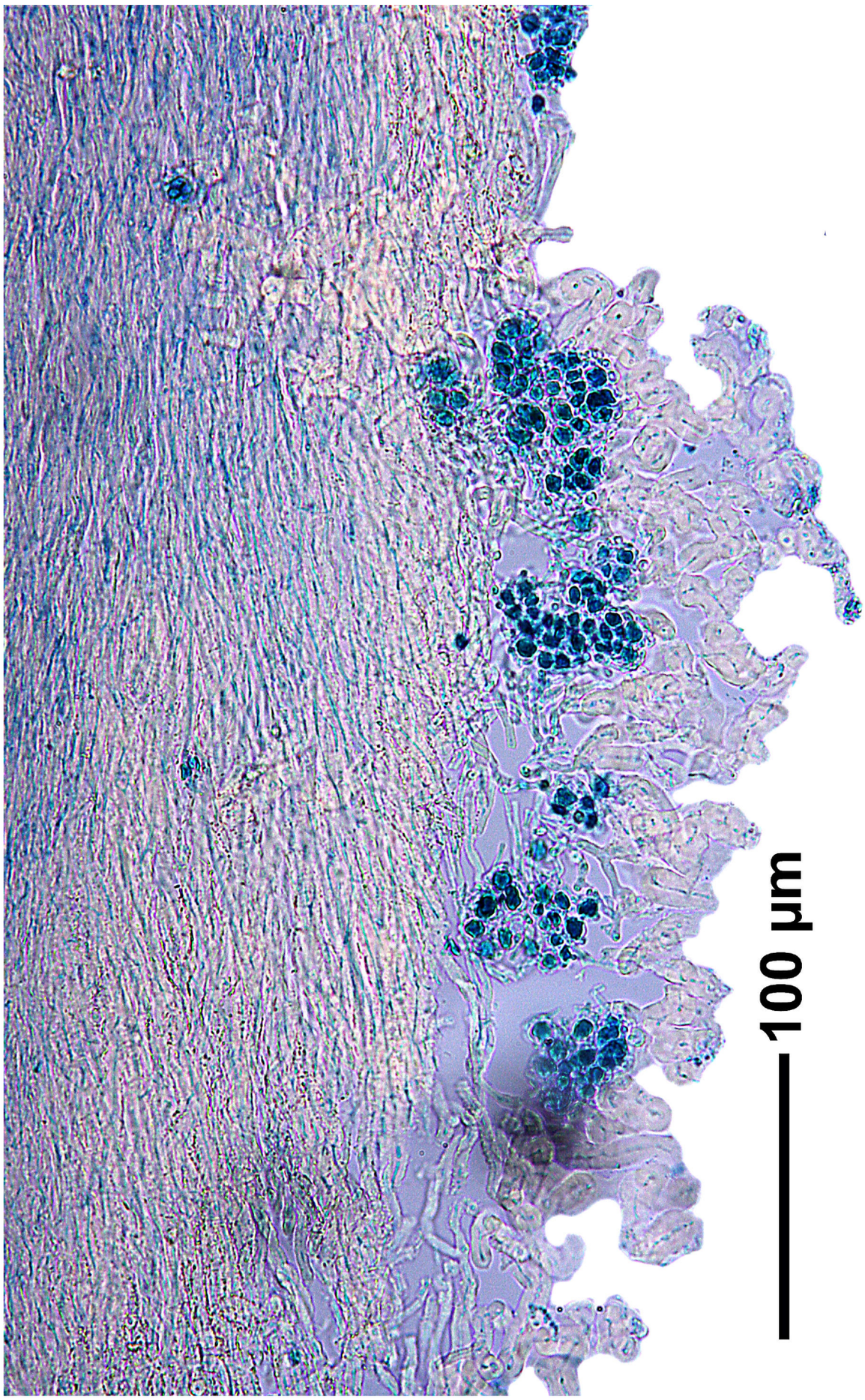

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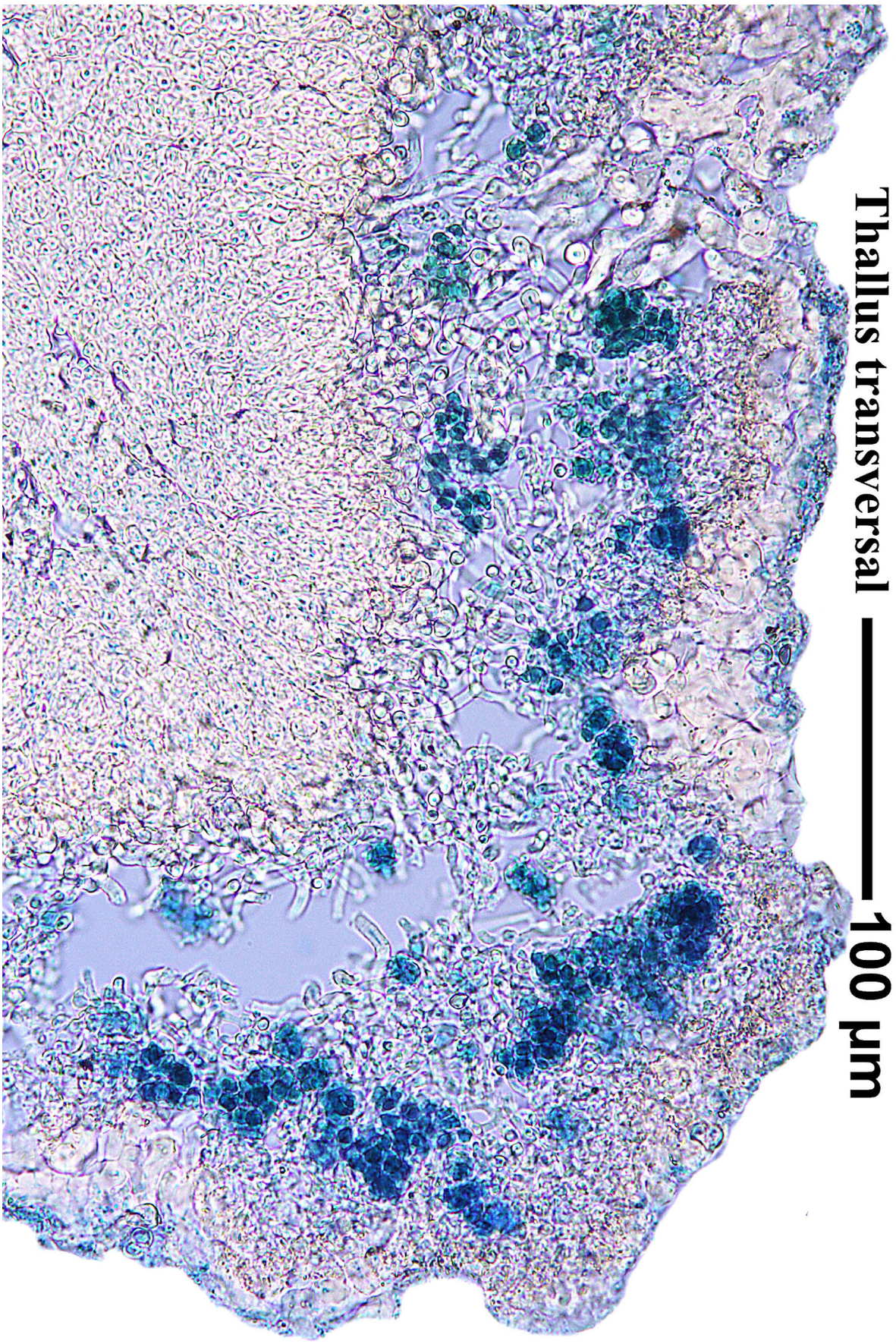
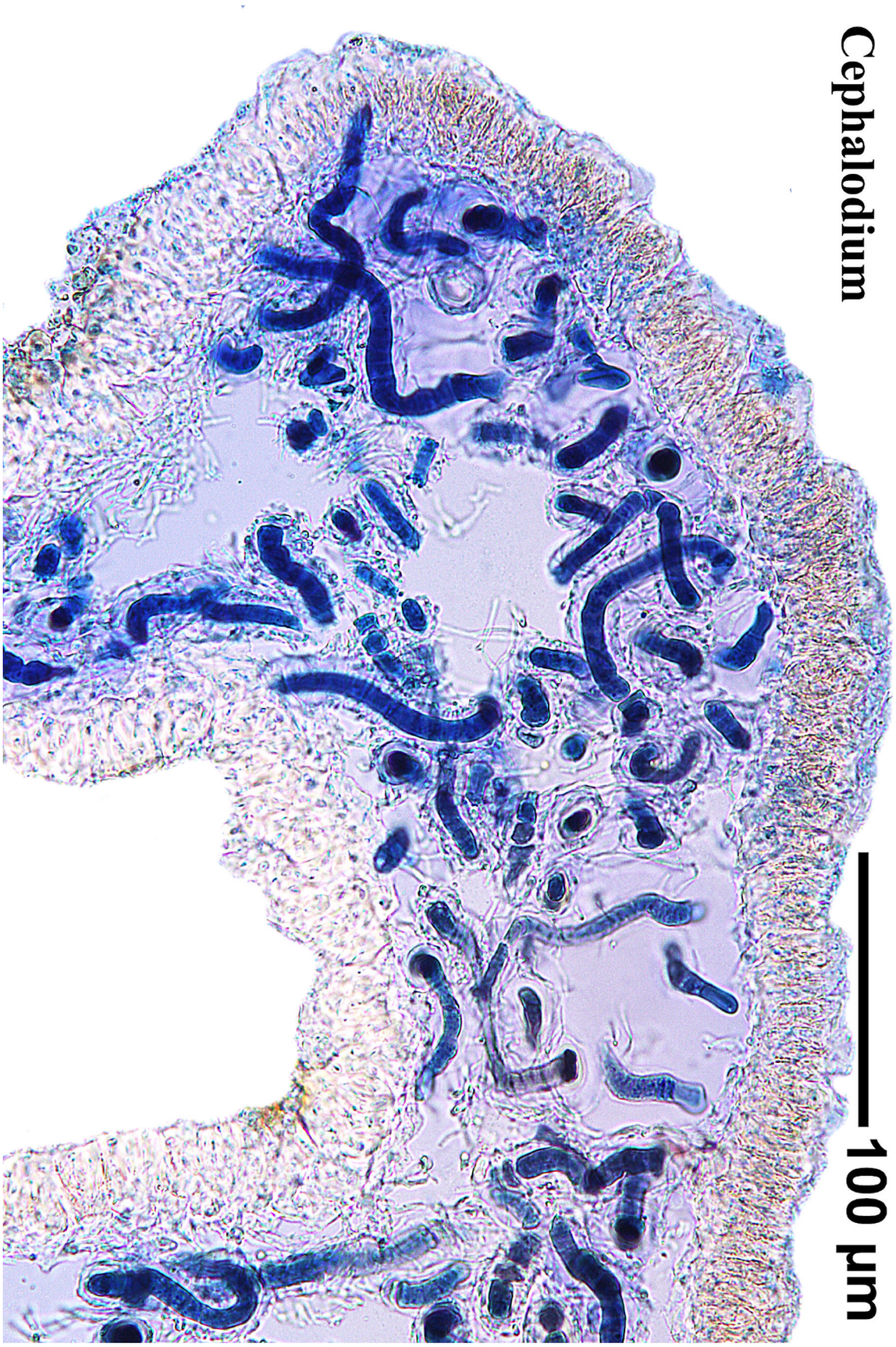
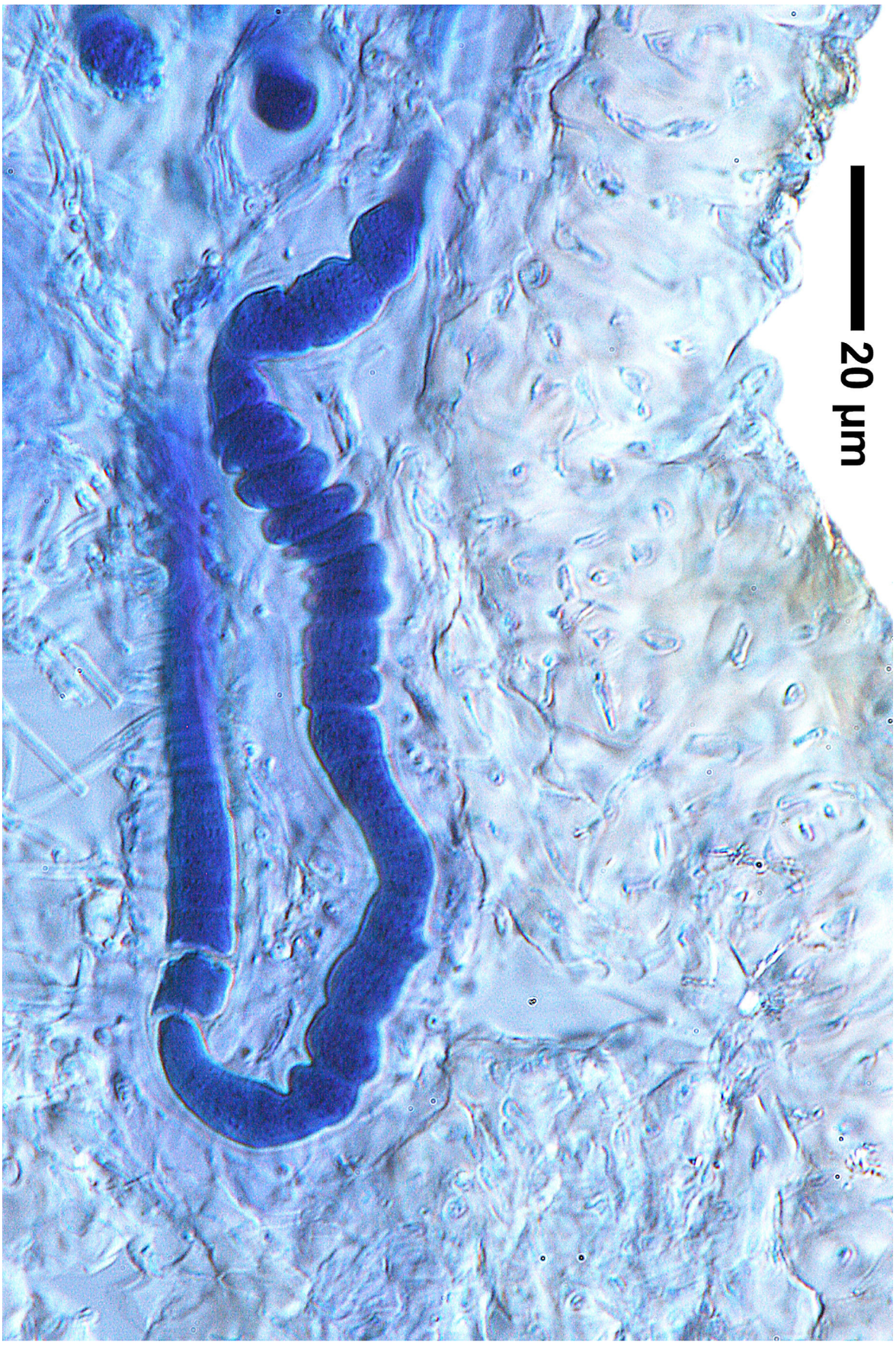


Stereocaulon massartianum



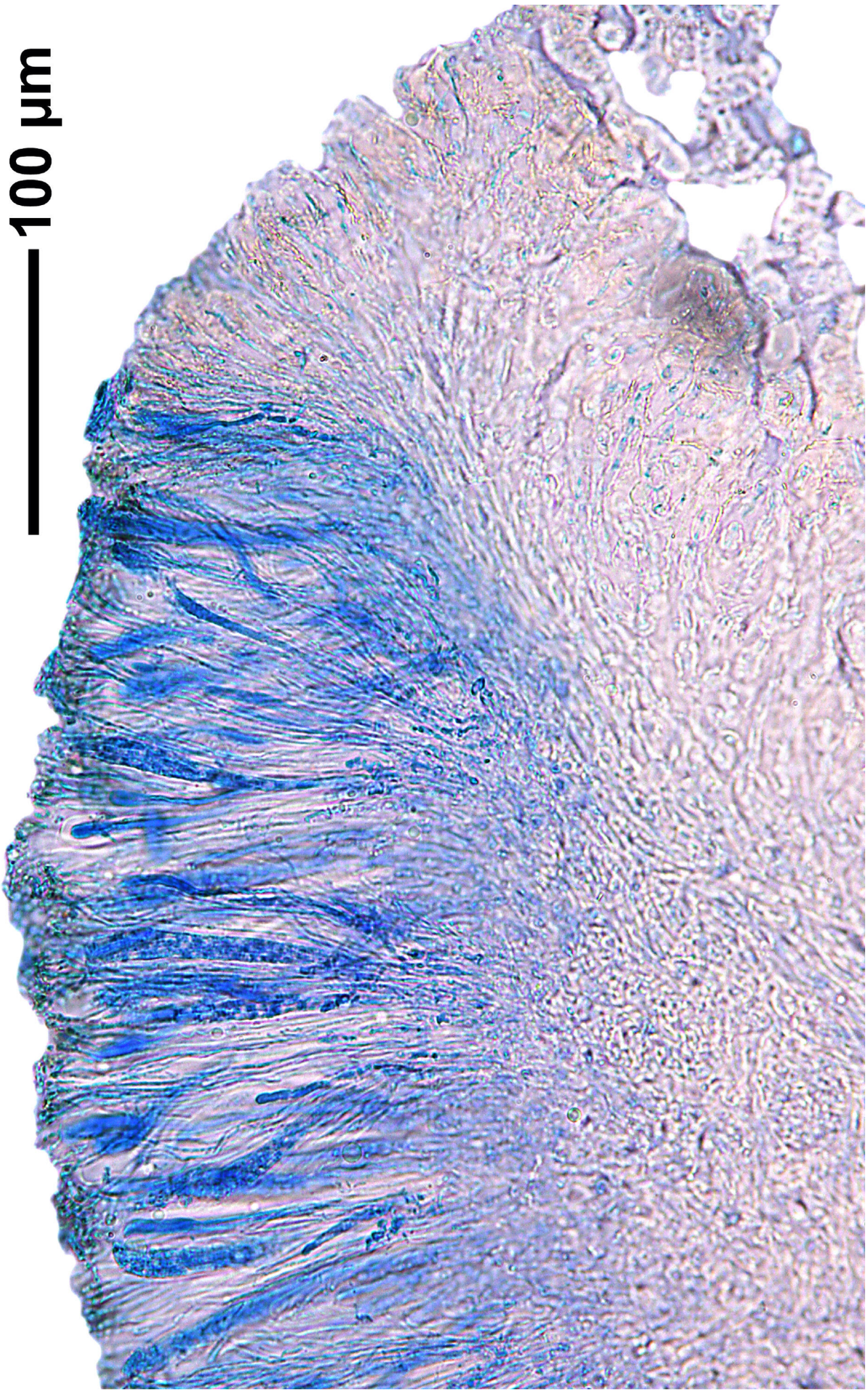
Stereocaulon massartianum



Stereocaulon massartianum



Stereocaulon massartianum



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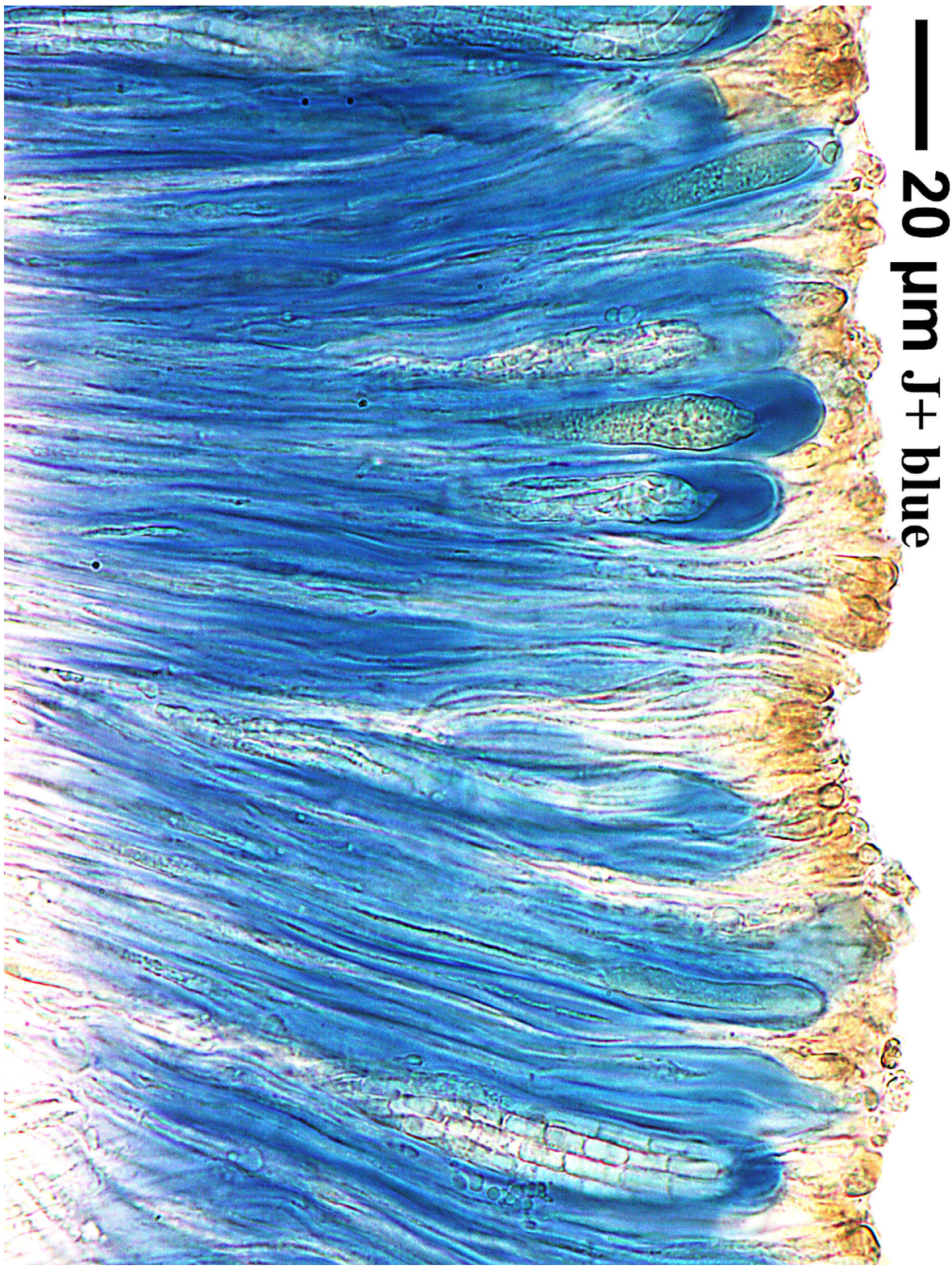

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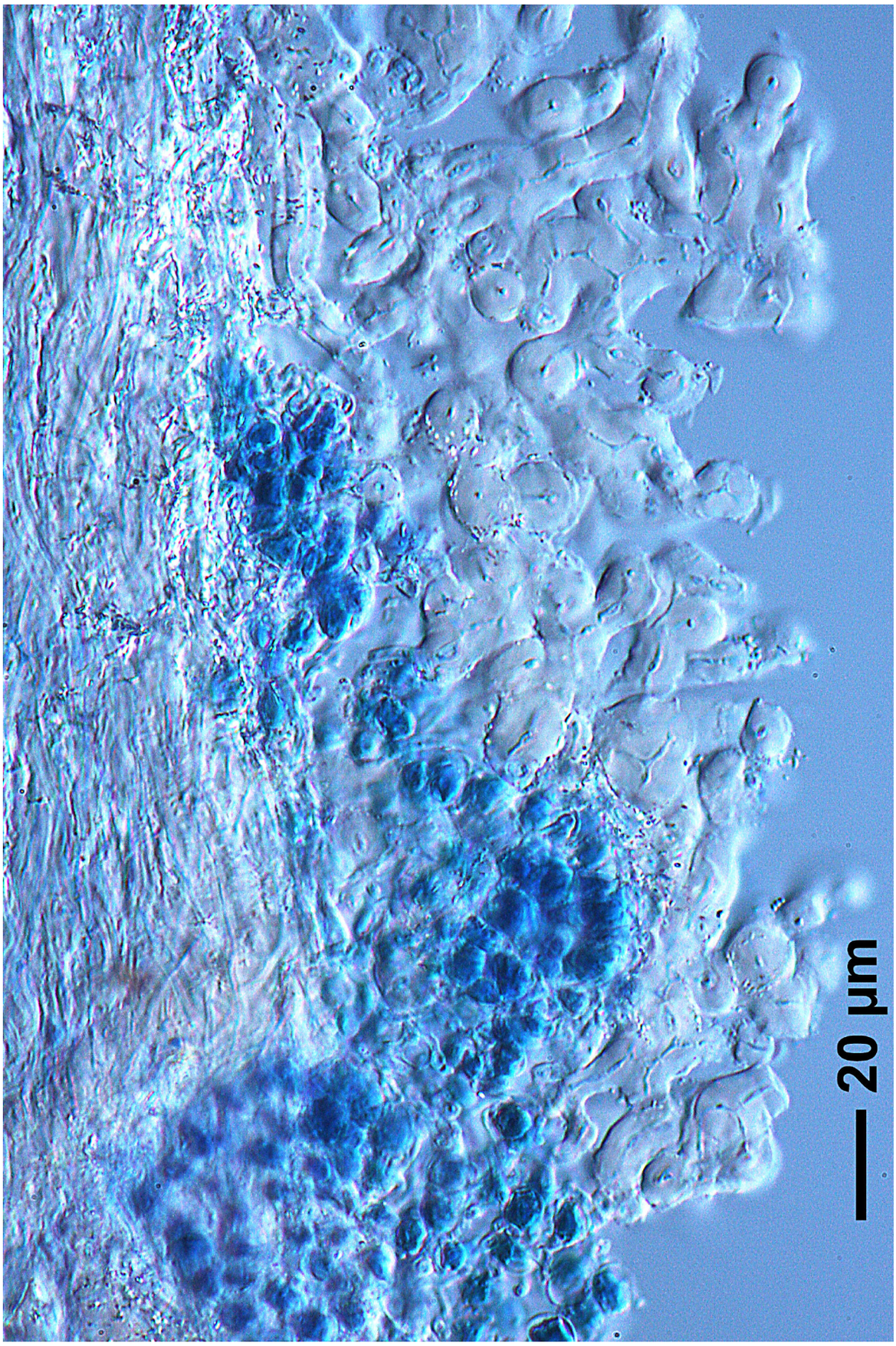
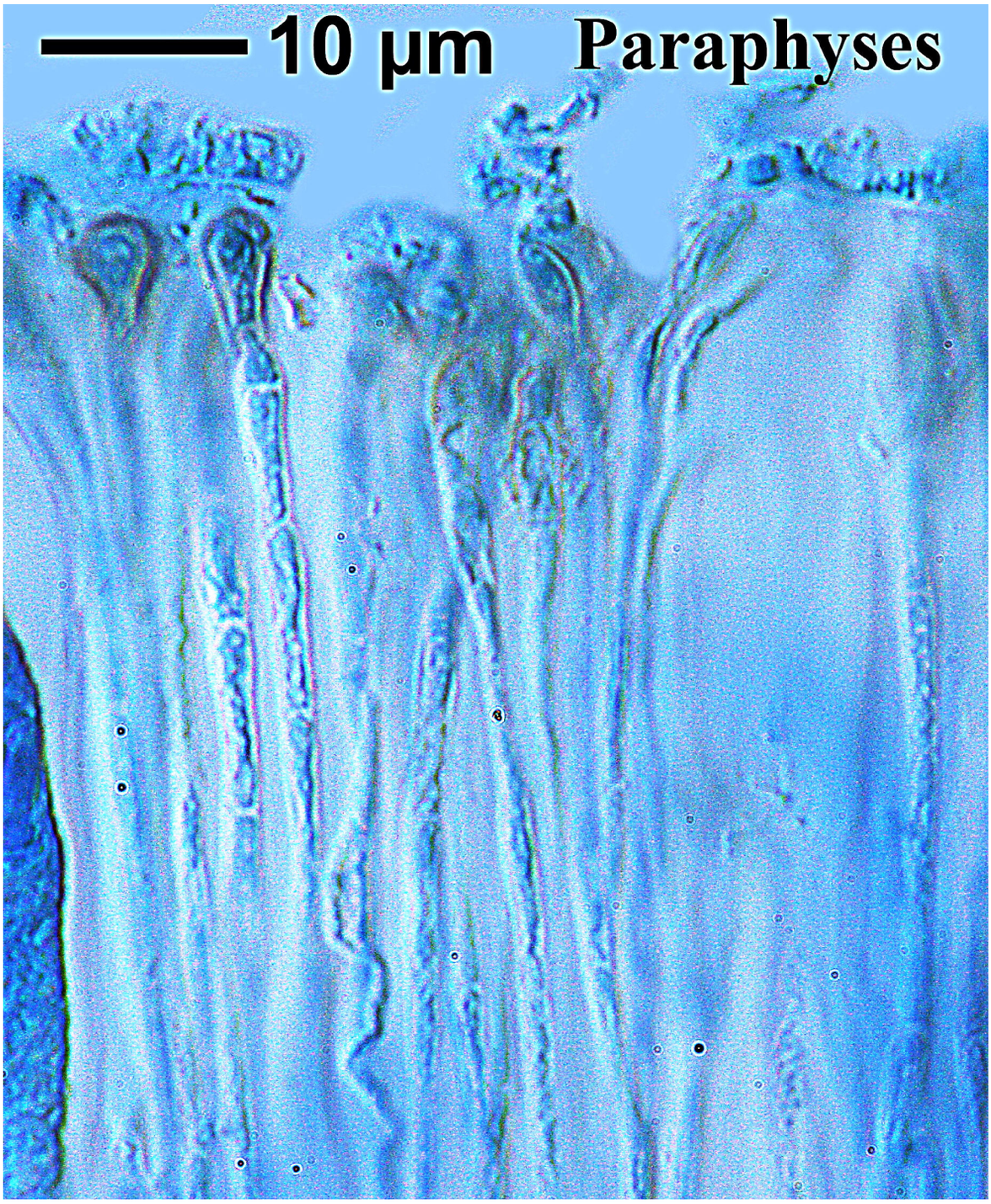
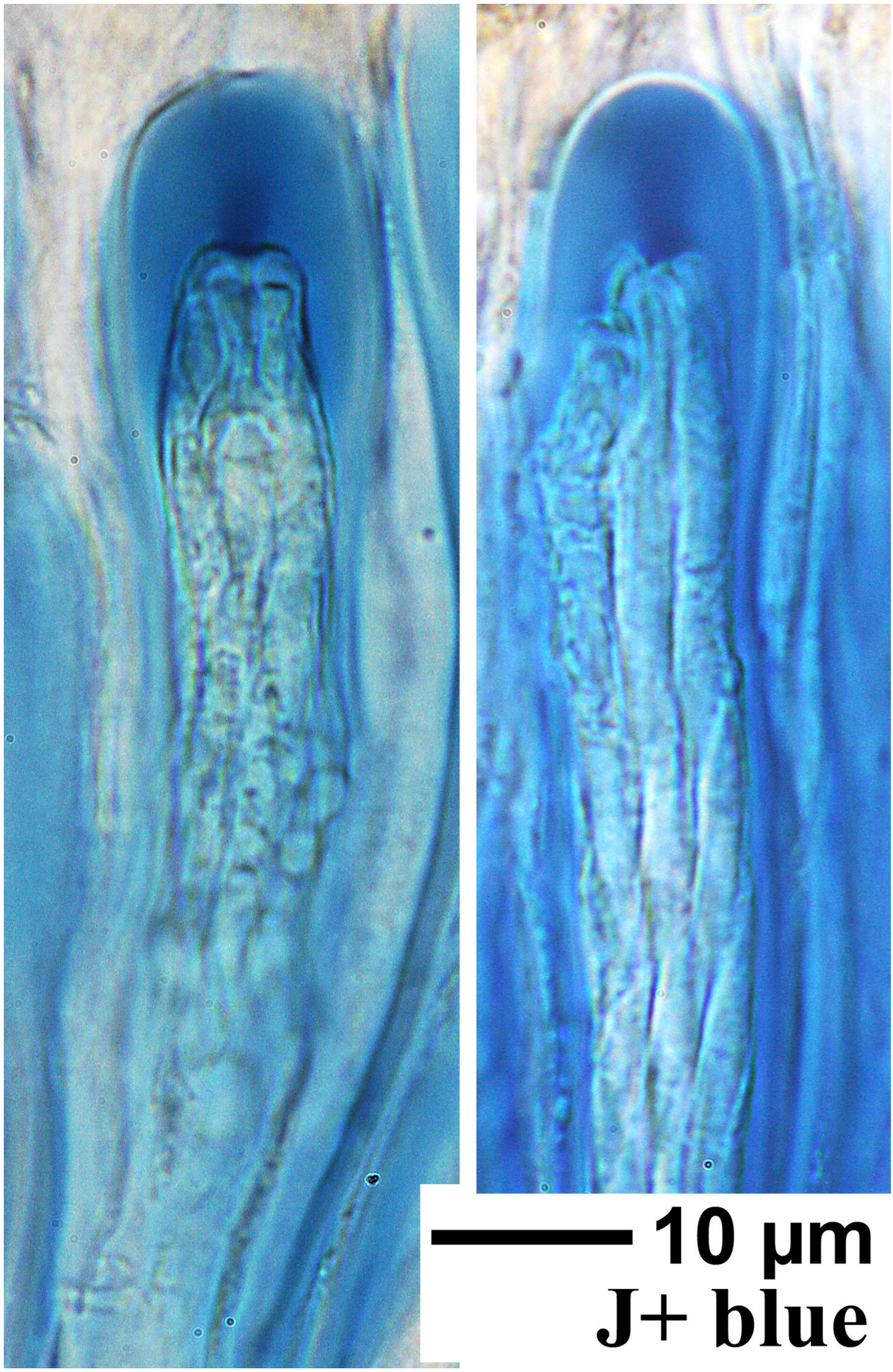


Stereocaulon massartianum



Stereocaulon massartianum



Stereocaulon massartianum



Stereocaulon massarti.....

Stereocaulon massartianum Hue, Nouv. Arch. Mus. Hist. Nat., Paris, 3 sér. 10: 252 (1898)

[VZ1497], Philippines Insulae. Luzon, Prov. Liugao. Mt. Polis,1600 m. Ad terram. Leg. W. S. Gruezo (no. 1838), 13.10.1976. Ex A. VěZDA Lichenes Selecti Exsiccati Nr. 1497

Pseudopodetia erect, up to about 7 cm high, subsimple or sparingly branched, decorticate, glabrous or subglabrous. Phyllocladial branchlets cylindrical-coralloid, slender, simple or branched, ± evenly distributed. Cephalodia lateral on main branches, sessile, foveolate sacculate, wrinkled, gray to brownish, with gelatinous cortex showing both round and palisadically elongated cells; containing *Scytonema* or *Stigonema.* Apothecia mostly terminal on individual short side-branches springing at right angles from pseudopodetium, up to 1 mm diam., originating in small pyriform clavulae, finally convex-immarginate without noticeable hypophysis. Excipulum up to 180 µm thick. Central cone compact, ±hyaline, without inclusions. Hypothecium colorless or faintly sordid. Hymenium (100-)120-160 µm high, with dark brown Epithecium. Paraphyses slender, filiform, discrete. Spores 8, spirally wound in ascus, 7-14-septate (rarely up to 19 or 20-septate), vermiform, sinuose, (75-) 90-120 x 3-4 µm.



Stereocaulon massartianum

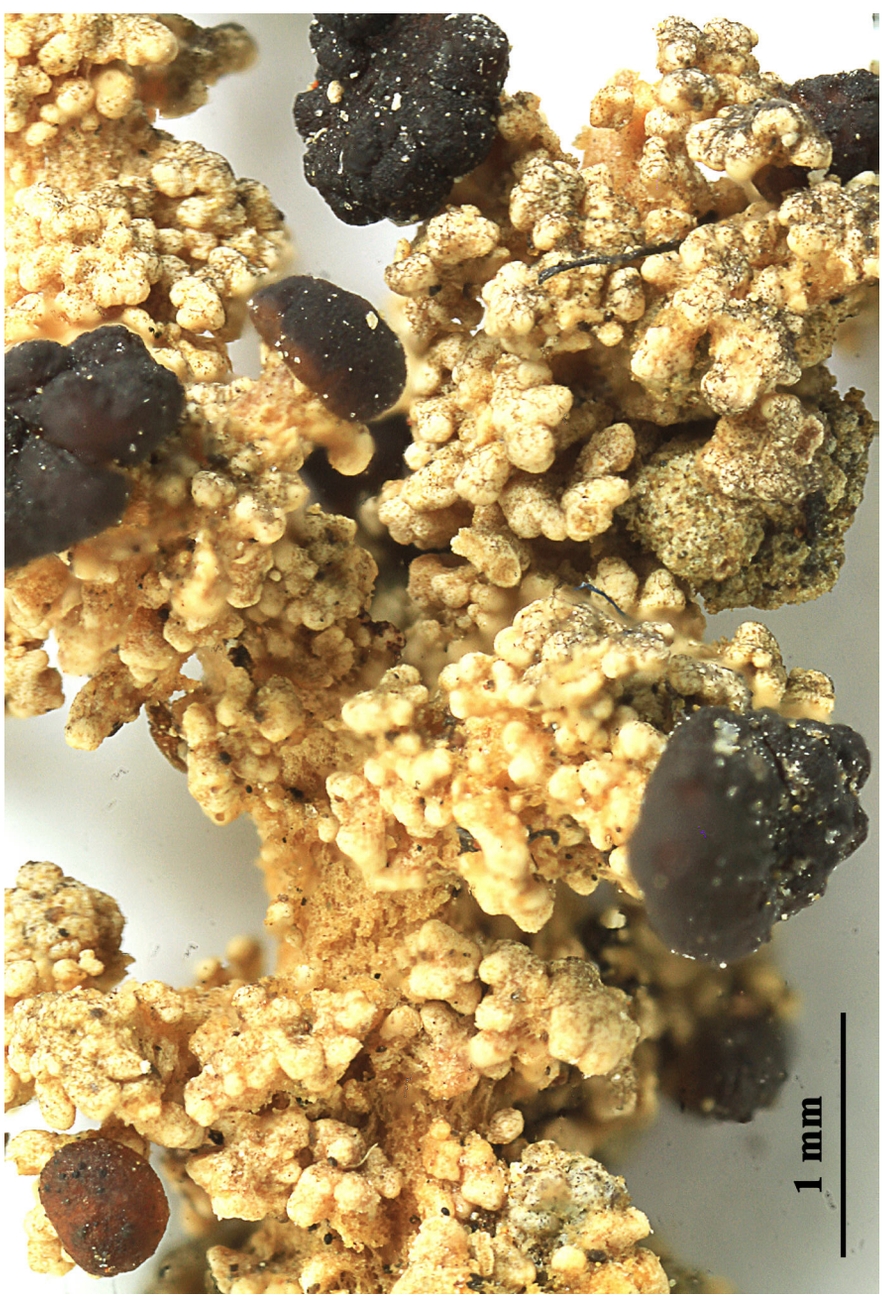


Stereocaulon massartianum

Stereocaulon myriocarpum Th. Fr., Stereoc. Piloph. Comm.: 15 (1857)

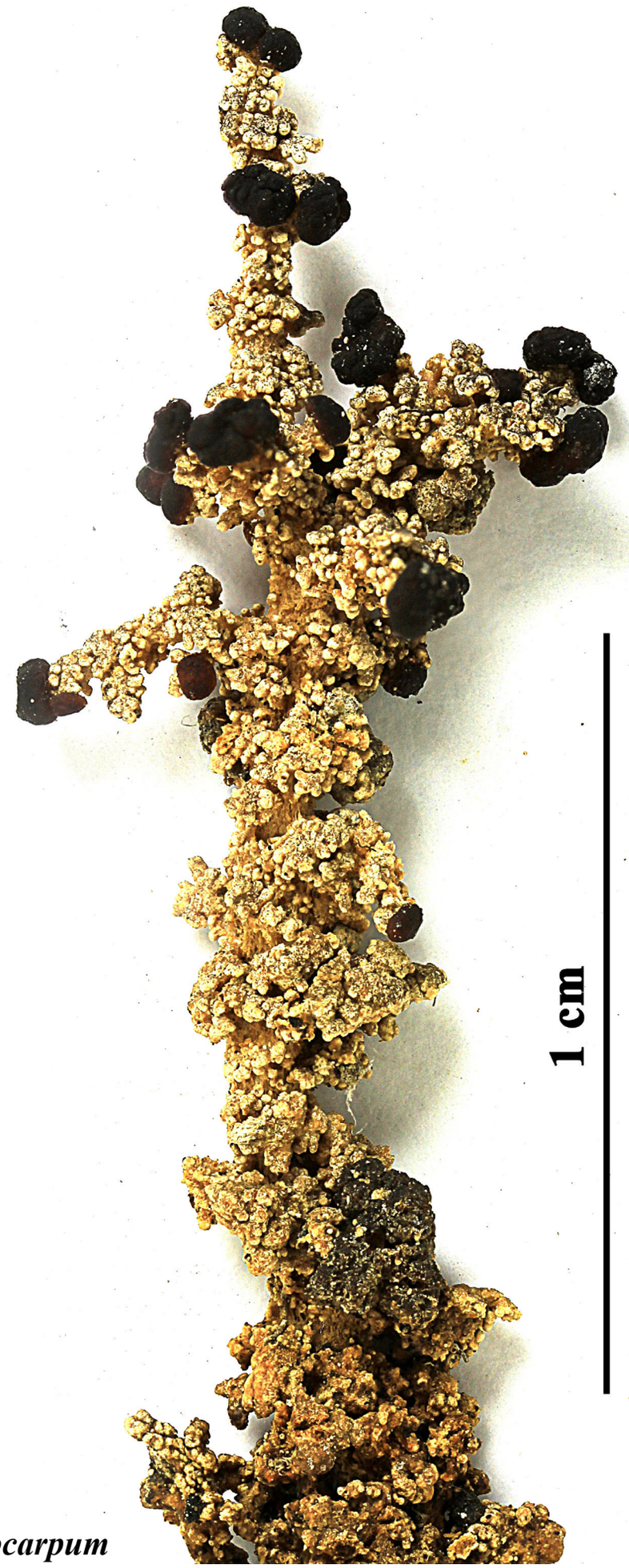
[VZ1417], Costa Rica. San José: Cerro de la Muerte, in loco dicto "Asunción", 1000 m. Ad trerram. Leg. W. L. Culberson (no. 13194), 03.1967, det. I. M. Lamb (Monogr. Stereoc. 10307, 1975). Ex A. VěZDA: LICHENES ELECTI EXSICCATI NR. 1417.

Pseudopodetia not pseudosorediate or sorediate. Phyllocladia irregularly arising from pseudopodetia, verrucose-digitate, not cylindrical and not terete; P+ red. Cephalodia verrucose, botryose with poorly developed parenchymatous tissue. Apothecia numerous, 1(- 2) mm diam., spores 23-38 x 3.5-4 µm. Differs from *S. tomentosum* in having large black cephalodia (1 mm across) and more appressed tomentum. Chemistry: atranorin, stictic acid, sometimes constictic acid, usually also some norstictic acid





Stereocaulon myriocarpum

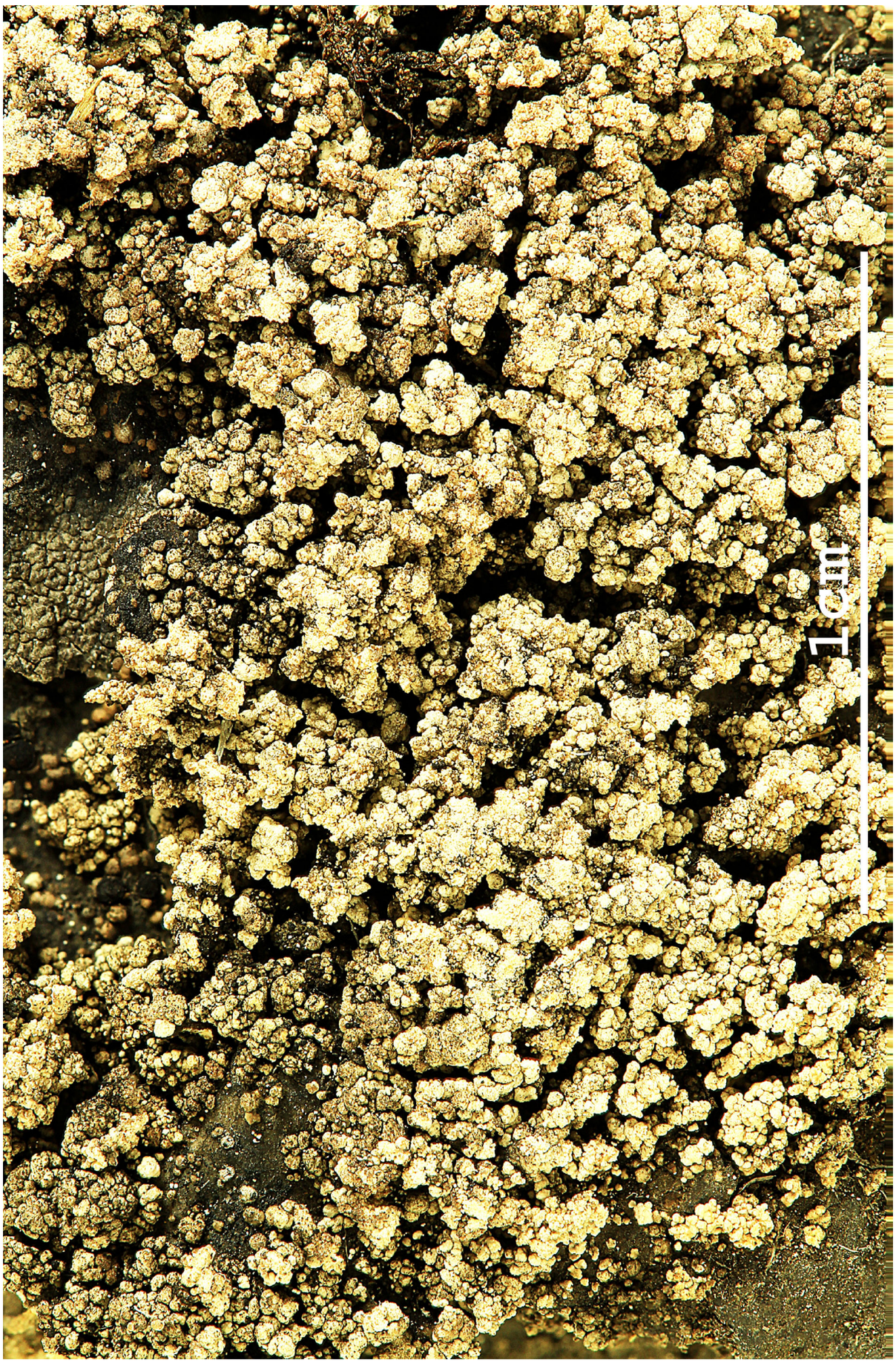


Stereocaulon myriocarpum

Stereocaulon nanodes Tuck., Amer. J. Sci. Arts 18: 201 (1859)
= *Stereocaulon carinthiacum* Frey
= *Stereocaulon hypopetraeum* Vain. & Räsänen
= *Stereocaulon nanodes f. tyroliense* (Nyl.) I.M. Lamb
= *Stereocaulon tyroliense* Nyl.

[VZ1289], Bohemoslovacia. Slovacia, Carpates, montes Slovenské Rudohorie: Mníšek, in valle rivi Smolník prope Smolnická pila, 500 m. Ad scorias vetustas. Leg. A. Kiszely & A. Vězda. Ex A. VĚZDA: LICHENES SELECTI EXSICCATI NR. 1289.

Primary thallus persistent, squamulose, consisting of 1-2(-5) mm tall, ascending to erect, flattened, grey, at first fan-shaped, later irregularly branched phyllocladia, which may be scattered or form swards, the lower surface sorediate. Pseudopodetia rarely present, up to 1(-1.5) cm tall, flattened, sparingly branched, whitish-green, blackish at base, covered with farinose soredia on the lower side of branches. Cephalodia infrequent, bluish-grey, containing *Stigonema*, located both among the basal phyllocladia and on the pseudopodetia. Apothecia very rare, dark brown. Proper exciple brown in outer part, colourless within; epithecium brown, K-; hymenium colourless; paraphyses simple, slightly thickened above, with a dark cap; hypothecium colourless. Asci 8-spored, cylindrical-clavate, with a K/I+ blue outer layer and apical dome, and a central, K/I+ darker blue tube, Porpidia-type. Ascospores mostly 3-septate, hyaline, fusiform, 25-54 x 2-4 µm. Conidia 1-celled, hyaline, bacilliform, slightly curved, 6-8 x c. 1 µm. Main photobiont chlorococcoid. Spot tests: K+ yellow, C-, KC+ violet (reaction often difficult to observe macroscopically, best evident on acetone extract on filter paper!), P- or P+ slowly pale yellow, UV+ blue-white. Chemistry: atranorin and variable amounts of lobaric acid. *Note*: an arctic-alpine to boreal-montane, circumpolar lichen found on mineral-rich rocks, also under overhanging faces, on pebbles and large boulders, often on metal-rich substrata and in rather disturbed habitats in upland areas, reaching the nival belt.



Stereocaulon nanodes



Stereocaulon nanodes

Stereocaulon nigromaculatum P.A. Duvign., Lejeunia Mém. 14: 64 (1956)

[VZ1399], Rwanda (Africa centralis). Montes Birunga, ad latera australia montis ignivomi Bisoke, 3500 m. Ad lavam in loco herboso in formatione com *Dendrosenecio* et *Lobelia lanuriensis*. Leg. J. Lambinon (no. 72/893), 25.02.1972, det. M. I. Lamb (Monogr. Stereoc. 10350). Ex A. Vězda: Lichenes Selecti Exsiccati Nr. 1399.

Primary thallus evanescent. Pseudopodetia up to 8 cm tall. Phyllocladia foliolose, with complanate-lobulate branching. Cephalodia moriform. Soredia absent. Apothecia common, sessile or on short stipes on upper half of pseudopodetia. Spores 35-60 x 2.5-4 µm, with up to 7 septa. Usually on montane rocks at 2300 to 4000 m alt., but seen also on earth in partial shade, frequent. Chemistry: P+red, K+ yellow; stictic acid (P+ orange), ± norstictic acid, atranorin. Distrib.: central Africa (Uganda, Rwanda Burundi, Zaire, Tanzania).





Stereocaulon nigromaculatum

Stereocaulon paschale (L.) Hoffm., Deutschl. Fl., Zweiter Theil (Erlangen): 130 (1796) [1795]
= *Baeomyces paschalis* (L.) Wahlenb., Fl. lapp.: 450 (1812)
= *Cladonia paschalis* (L.) Baumg., Fl. Lips.: 577 (1790)
= Coralloides paschalis (L.) Hoffm. [as 'paschale'], Descr. Adumb. Plant. Lich. 1(1): 23 (1789) [1790]
= *Lichen paschalis* L., Sp. pl. 2: 1153 (1753)
= *Patellaria paschalis* (L.) Wallr., Fl. crypt. Germ. (Norimbergae) 1: 442 (1831)
= *Verrucaria paschalis* (L.) Humb., Fl. Friberg. Spec. (Berlin): 43 (1793)

[VZ1211], Suecia. Sör-Tröndelag. Röros, Olavsgruva, 800 m. Ad terram in saxis prope metalla cupri vetusta. Leg. R. Santesson (no. 24535), 03.08.1973. Ex A. VěZDA: LICHENES SELECTI EXSICCATI NR. 1211.

Primary thallus disappearing. Pseudopodetia up to 5 cm tall, loosly attached to the substrate, basally dying and blackish, growing in loose clusters, creeping to erect, with a distinct main branch sparingly branched at the base, richly branched towards the top, covered with greysh-white tomentum. Phyllocladia gathered in clusters, grain-like, granular or dactyliform, yellowish-grey, more numerous towards the pseudopodetial tips. Cephalodia numerous, irregular, shrubby, granular or warty, black, containing *Stigonema* Apothecia rare, terminal, when young flat marginate, older convex and immarginate, disk dark brown. Chemistry: atranorin and lobaric acid. Spot test reaction: K+ yellow. - *Notes*. *Stereocaulon paschale* is chemicaly identical with *S. alpinum* and *S. taeniarum*, but morphologically these species are fundamentally different. *S. paschale* is characterized by the pseudopodetia loosely attached to the substratum, granular to dactyliform phyllocladia covering the pseudopodetia all around. In addition the species has always numerous, conspicuous blackish cephalodia containing *Stigonema.* The shape of phyllocladia in *S. paschale* and *S. taeniarum* is essentially the same, but they differ in the presence of cephalodia and morphology of pseudopodetia. *Stereocaulon paschale* has usually abundant and conspicuous cephalodia, whereas in *S. taeniarum* they are absent. Moreover in *S. paschale* phyllocladia are more or less evenly distributed around the pseudopodetial axis, whereas *S. taeniarum* has “pine-like” pseudopodetia due to phyllocladia are clustered on the apices.



Stereocaulon paschale

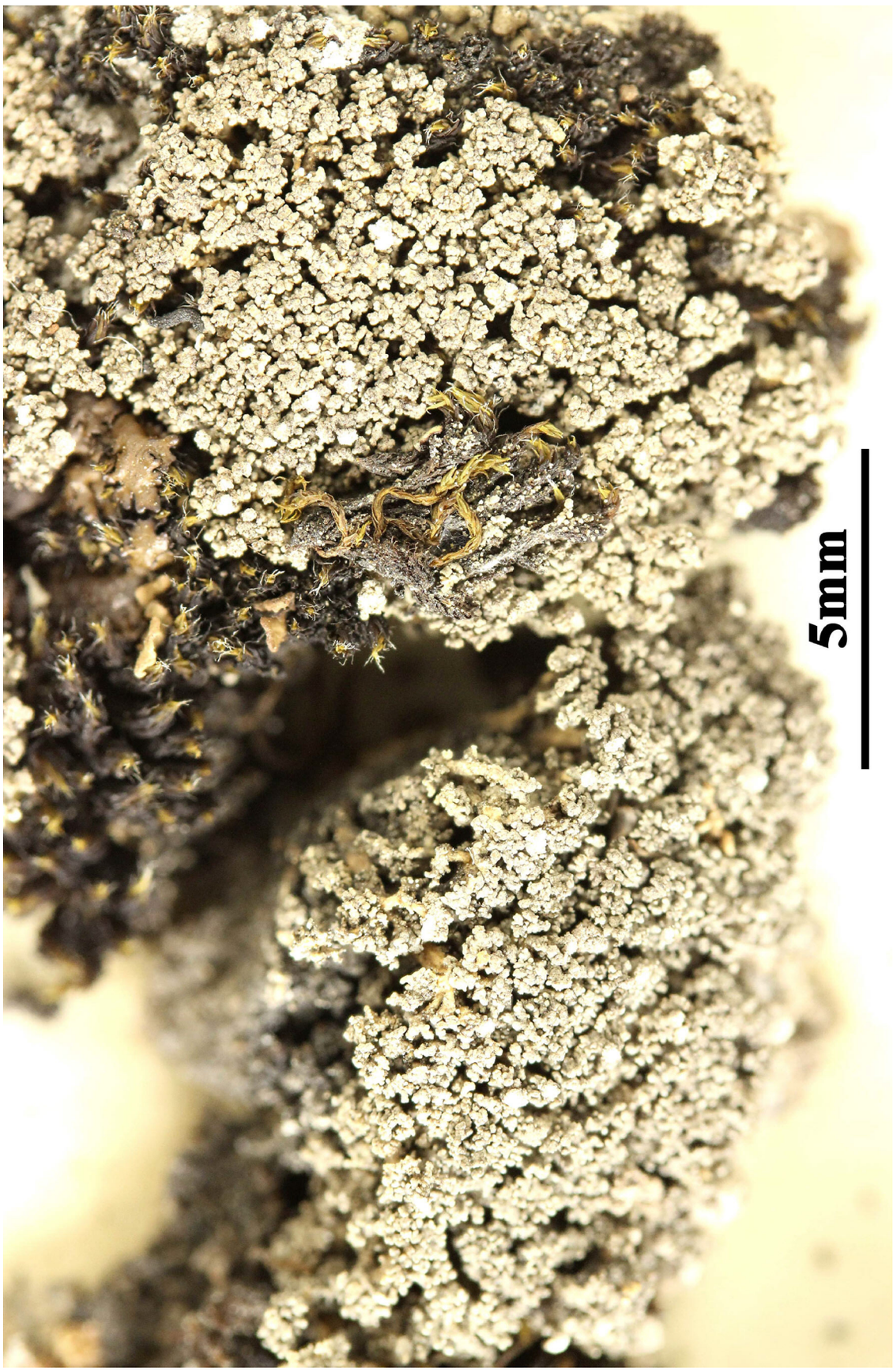


Stereocaulon paschale

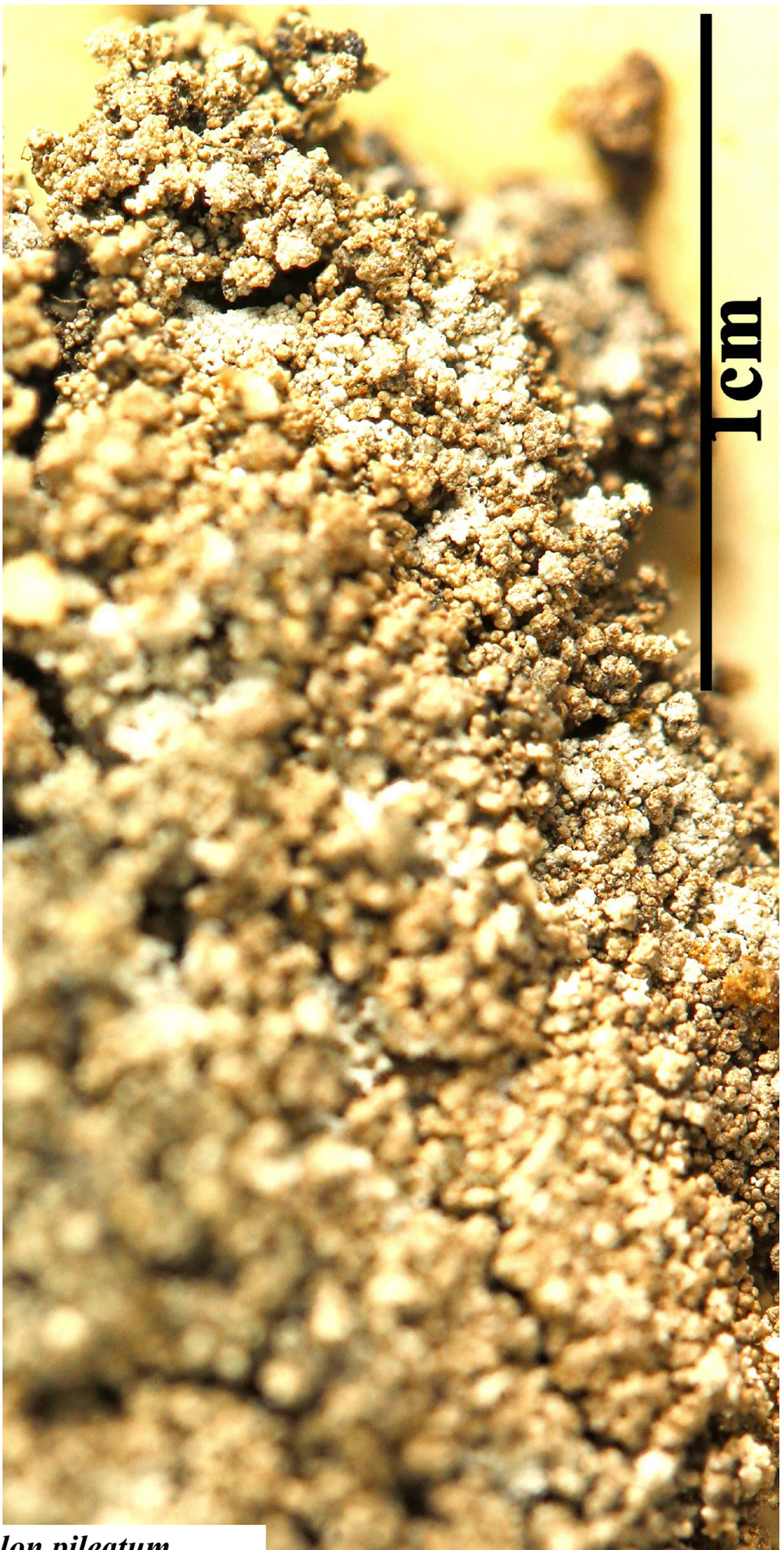
Stereocaulon pileatum Ach., Lich. Univ.: 582 (1810)

[VZ1368], Bohemoslovacia. Slovacia. Carpates, montes Kremnické, pohorie: in valle rivi Ihráč prope pagum Jastrabá, 600 m. Leg. A. Vězda, 18.9.1975. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1368.

Primary thallus crustose, persistent, greyish-white, composed of scattered, verruciform to more or less coralloid, up to 3 mm wide warts with white apices; secondary thallus fruticose. Pseudopodetia firmly attached, short, (2-)3-5 mm tall, generally simple, with a terminal globose soralium, sometimes with scattered, greyish-white, mostly granular, rarely cylindrical phyllocladia. Cephalodia small, flattened, verrucose, greyish-brown, often with a violet tinge, located amongst basal warts and on pseudopodetia, with Stigonema. Apothecia very rare, with a red-brown disc. Proper exciple brown in outer part, colourless within; epithecium yellow-brown, K-; hymenium colourless, 50-65 µm high; paraphyses mostly simple, 1.5 µm thick at mid-level, the apical cells to 3 µm wide, with a dark cap; hypothecium colourless or yellowish grey. Asci 8-spored, cylindrical-clavate, with a K/I+ blue outer layer and apical dome, and a central, K/I+ darker blue tube, Porpidia-type. Ascospores 3-septate, hyaline, fusiform, wider at one end, 20-30 x 4-5 µm. Pycnidia rare. Conidia 1-celled, hyaline, cylindrical, straight or slightly curved, 6-8 x 1 µm. Main photobiont chlorococcoid. Spot tests: K+ yellow, C-, KC+ violet (reaction often difficult to observe macroscopically, best evident on acetone extract on filter paper!), P- or P+ slowly pale yellow, UV- or UV+ blue-white. Chemistry: atranorin and variable amounts of lobaric acid. - Note: a cool-temperate to arctic-alpine, circumpolar early coloniser of mineral-rich siliceous rocks, including roofing tiles, in upland areas but mostly below the Alpine belt.



Stereocaulon pileatum



Stereocaulon pileatum

Stereocaulon ramulosum Raeusch., Nomencl. bot., Edn 3: 328 (1797)

[VZ1464], Zaire (Africa centralis). Prov. Kivu, montes Birunga, terra Kabara, 3230 m. Ad lavam loco herboso. Leg. J. Lambinon (72/263), 23.1.1972, det. M. Lamb. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1464.

Pseudopodetia up to 12 cm tall. Soredia and soredium-like granules absent. Phyllocladia cylindrical (= phyllocladoid branchlets). Cephalodia uniformly grey-coloured, opaque, clavate to globose, with differentiated cortex and aereated tissue (=sacculate). Apothecia common. Ascospores 7-septate, 40-90 x 4-5 µm. Chemistry: Thallus P- or P+ yellowish, protocetraric and stictic acids acid absent; containing atranorin, perlatolic acid (major), anziaic acid (trace).



Stereocaulon ramulosum



Stereocaulon ramulosum

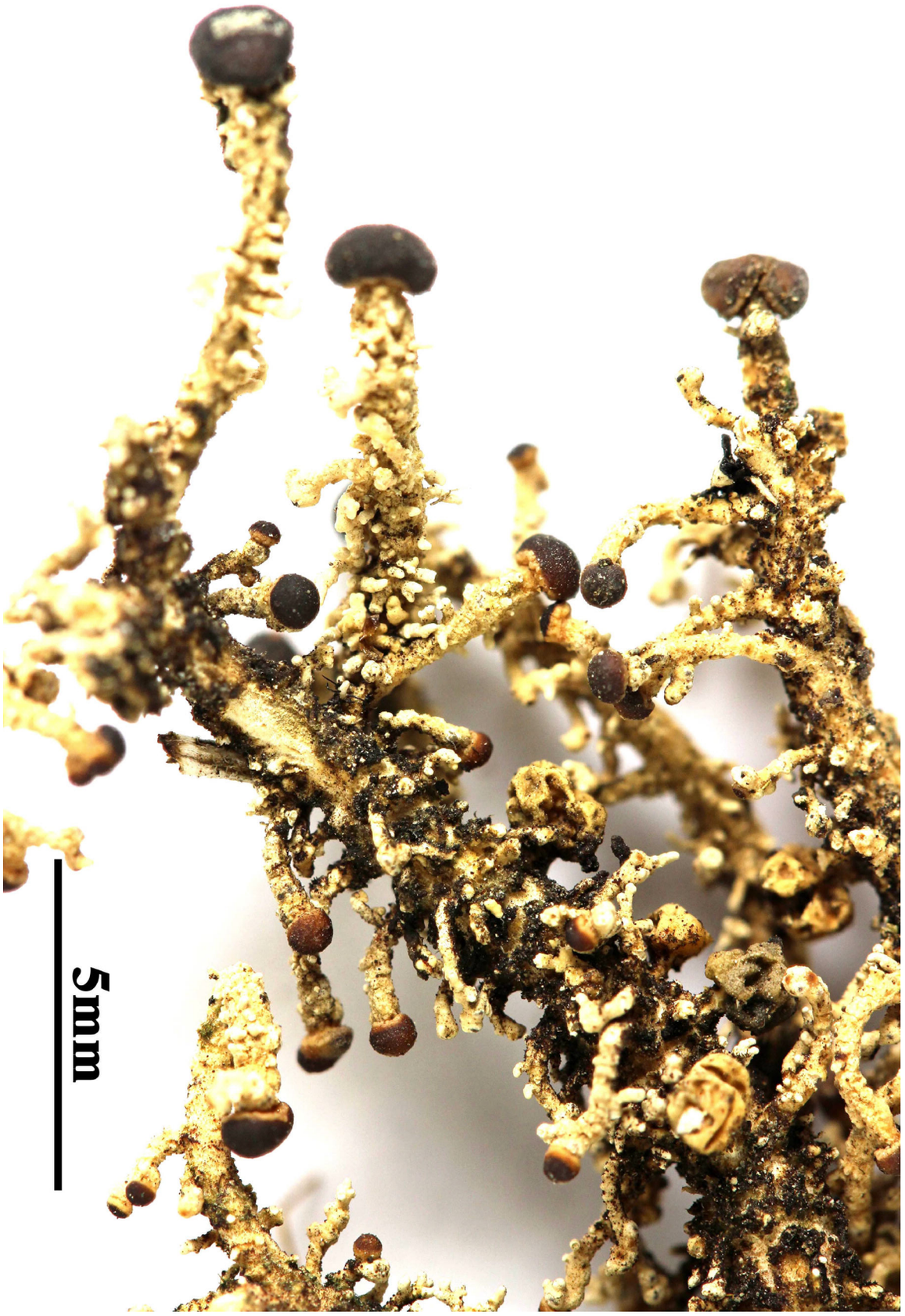
Stereocaulon ramulosum Raeusch., Nomencl. bot., Edn 3: 328 (1797)

[VZ1916], Respublica Dominica. La Vega: 22 km ad meridiem et orientem versus a Constanza, 2160 m. Ad terram secus viam, cum muscis. Leg. W. L. Culberson (no. 1900) et C. F. Culberson, 17.6.1982.- Annot.: Atranorin, perlatolic and stenosporic acids, traces of anziaic and glomelliferic acids, and unknown compound SR-1 by TLC; anal. A. Johnson and C. F. Culberson. - Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1916.

Pseudopodetia up to 12 cm tall. Soredia and soredium-like granules absent. Phyllocladia cylindrical (= phyllocladoid branchlets). Cephalodia uniformly grey-coloured, opaque, clavate to globose, with differentiated cortex and aereated tissue (=sacculate). Apothecia common. Ascospores 7-septate, 40-90 x 4-5 µm. Chemistry: Thallus P- or P+ yellowish, protocetraric and stictic acids acid absent; containing atranorin, perlatolic acid (major), anziaic acid (trace).



Stereocaulon ramulosum



Stereocaulon ramulosum

Stereocaulon ramulosum Raeusch., Nomencl. bot., Edn 3: 328 (1797)

[VZ1686], Cuba. Oriente. Prov. Granma: Sierra Maestra, Pico Bayamesa, Subida Albear, 1300-1400 m. Ad saxa. Leg. T. Pócs (no. 9066), 30.12.1978, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1686.

Pseudopodetia up to 12 cm tall. Soredia and soredium-like granules absent. Phyllocladia cylindrical (= phyllocladoid branchlets). Cephalodia uniformly grey-coloured, opaque, clavate to globose, with differentiated cortex and aereated tissue (=sacculate). Apothecia common. Ascospores 7-septate, 40-90 x 4-5 µm. Chemistry: Thallus P- or P+ yellowish, protocetraric and stictic acids acid absent; containing atranorin, perlatolic acid (major), anziaic acid (trace).



Stereocaulon ramulosum



Stereocaulon ramulosum

Stereocaulon ramulosum* var. *macrocarpum (A. Rich.) C. Bab., in Hooker, Bot. Antarct. Voy. Erebus Terror 1839-1843, II, Fl. Nov.-Zeal.: 294 (1855)

= *Stereocaulon macrocarpum* A. Rich. 1832

= *Stereocaulon ramulosum* Raeusch., Nomencl. bot., Edn 3: 328 (1797)

[VZ1191], Mexica. Oaxaca: Secus ciam dictam Oaxaca Highway 175, ad septentriones (c. 65 km) a loco dicto Ixlán de Juarez, 1700 m. Ad terram hunidam in silva nebulosa. Leg. C. R. Broome (no. 696), 2.2.1971. Dupl. det I. M. Lamb, 6.1973 (pro Monogr. Stereoc. Univ. sumptum no. 9557. Ex A. Vezda Lichenes Selecti Exsiccati Nr. 1191.

Pseudopodetia up to 12 cm tall. Soredia and soredium-like granules absent. Phyllocladia cylindrical (= phyllocladoid branchlets). Cephalodia uniformly grey-coloured, opaque, clavate to globose, with differentiated cortex and aereated tissue (=sacculate). Apothecia common. Ascospores 7-septate, 40-90 x 4-5 µm. Chemistry: Thallus P- or P+ yellowish, protocetraric and stictic acids acid absent; containing atranorin, perlatolic acid (major), anziaic acid (trace).



Stereocaulon ramulosum



Stereocaulon ramulosum

Stereocaulon saxatile H. Magn., Göteborgs Kungl. Vetensk.-och Vitterh. Samh. handl., Ser. 4 30(no. 7): 41 (1926)
= Stereocaulon evolutoides (H. Magn.) Frey, Rabenh. Krypt.-Fl., Edn 2 (Leipzig) 9(4.1): 145 (1932)
= *Stereocaulon evolutoides var. saxatile* (H. Magn.) I.M. Lamb, Can. J. Bot. 29: 581 (1951)
= *Stereocaulon paschale subsp. evolutoides* (H. Magn.) I.M. Lamb, Ann. Rep. Nat. Mus. Canada, 1952-53 132: 274 (1954)
= *Stereocaulon paschale var. evolutoides* H. Magn., Göteborgs Kungl. Vetensk.-och Vitterh. Samh. handl., Ser. 4 30(no. 7): 50 (1926)
= *Stereocaulon saxatile var. evolutoides* (H. Magn.) Carlin & Carl.-Silv., Svensk bot. Tidskr. 76(5): 304 (1982)

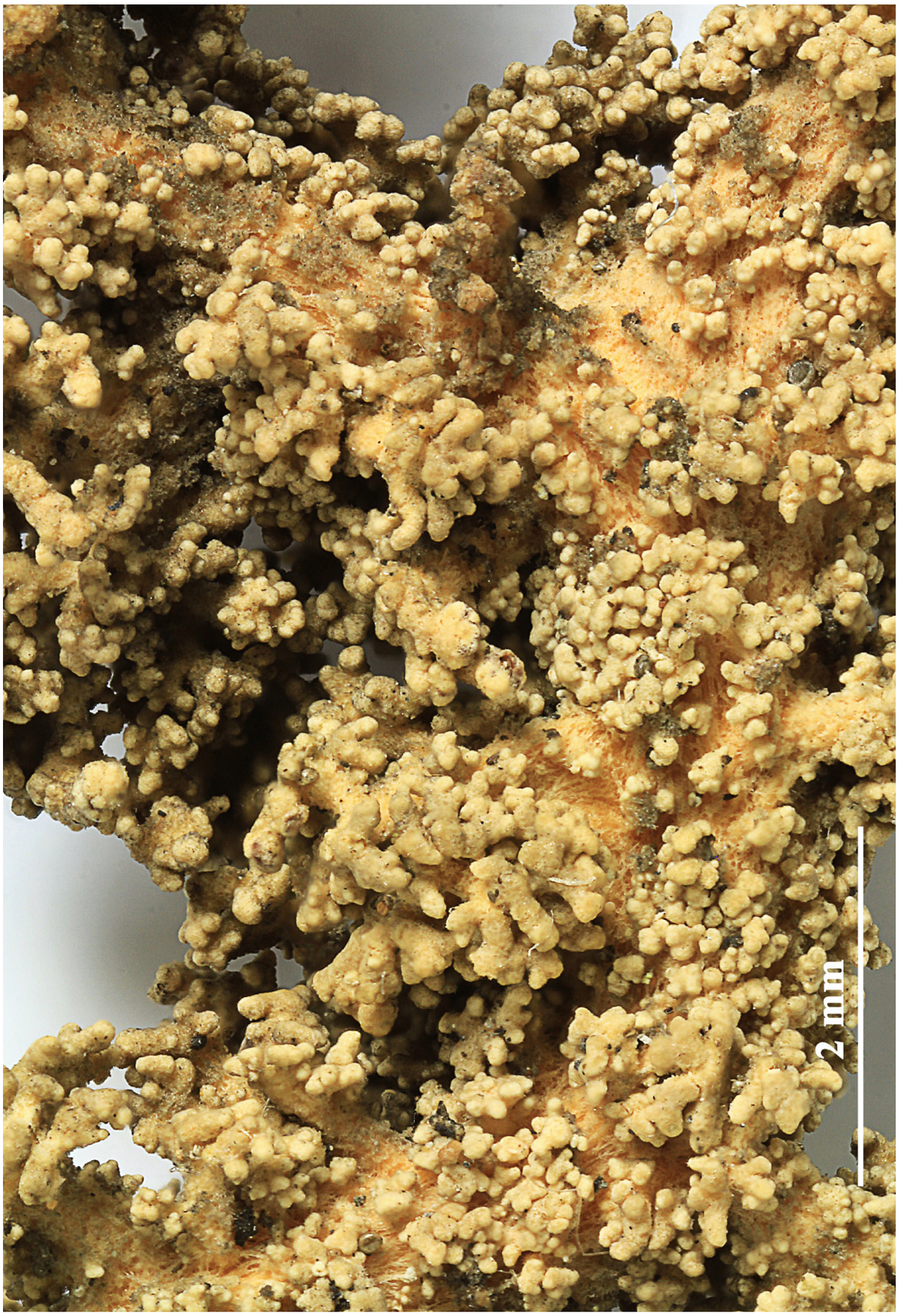
[VZ1290], Bohemoslovacia. Slovacia, Carpates, Tatra minor: distr. Banská Bystrica. Špania dolina, 800 m. Ad terram sabulosam prope metalla cupri vetusta. Leg. A. Vězda, 14.10.1974, det. M. I. Lamb.-Annot.: Pro Monogr. Stereoc. Univ. sumptum no. 10203). Ex A. VěZDA: LICHENES SELECTI EXSICCATI NR. 1290.

Primary thallus disappearing. Pseudopodetia up to 1.5 cm tall, densely branched, with ash-grey tomentum towards apices, at the base glabrous, firmly attached to the substrate, stout, dorsiventral, forming dense, prostrate tufts. Phyllocladia abundant, greyish-white, flat to convex, scale-like to granular, almost completely covering pseudopodetia. Soredia rounded, farinose, usually restricted to certain localized areas of the thallus. Cephalodia rare, granular, containing *Stigonema*. Apothecia terminal or lateral, dark brown. Chemistry: The species produces atranorin and lobaric acid. Thallus reacts K+ yellow, PD+ pale yellow. - *Notes***.** *Stereocaulon saxatile* is a taxon characterized by distinct morphology, the dorsiventral pseudopodetia covered with a ash-grey tomentum, the flat to convex, scale-like to granular phyllocladia and the production of lobaric acid and atranorin. Lamb distinguished three forms, *S. saxatile* f. *saxatile*, *S. saxatile* f. *sorediatum* I.M. Lamb and *S. saxatile* f. *paschaleoides* I.M. Lamb. *S. saxatile* f. *sorediatum* differs from the typical form in the presence of rounded soralia with, farinose soredia, whereas *S. saxatile* f. *paschaleoides* has the whitish-cream colored tomentum. Magnusson and Lamb considered *S. saxatile* as a species similar to *S. paschale*. These two taxa are indeed morphologically and chemically very similar, but both have different types of cephalodia. In *S. saxatile* cephalodia are rare, brown, granular, containing *Stigonema*, while, in *S. paschale* they are numerous, irregular,

shrubby, granular or warty, black. *Stereocaulon saxatile* can be confused with *S. tomentosum*, which also develops grey tomentum, but contains stictic and norstictic acids instead of lobaric acid.



Stereocaulon saxatile



Stereocaulon saxatile

Stereocaulon staufferi I.M. Lamb, Bot. Jb. 86: 247 (1967)

[VZ2339], Papua Nova Guinea. Iugum montium Bismarck Range dictum, in monte Wilhelm, prope lacum Piunde, 3500 m. Ad saxa silicea. Leg. J. Lambinon (87/273), 4.4.1987, det et comm. E. Serúsiaux. Ex A. VěZDA: LICHENES SELECTI EXSICCATI NR. 2339.

Primary thallus evanescent. Pseudopodetia robust, whitish, erect, irregularly branched, corticate, 5-15 cm high; cortex 150-180 µm thick. Phyllocladia very sparse or lacking, cylindrical-coralloid, 1-3 x 0.3 mm, Cephalodia lateral, whitish, subglobose or pyriform, of the sacculate type, more or less flattened, scrobiculate-foveolate on the surface, usually finely granular on the surface, containing *Stigonema* sp. Apothecia terminal, with pale pseudothaline margin at least in juvenile stage, 2-3.7 mm in diameter; disc convex, reddish brown; amphithecium verrucose; hypothecium colorless; hyrnenium 130-l50 µm high; asci 70-80 × 10 µm; spores 3-5-septate, 42-75 × 2,5 µm. Pycnidia situated immediately below the apothecia, globose; pycnoconidia filiform, slightly to moderately curyed, 7.5-10× 0.8 µm. Pseudopodetia P+yellowish. Chemical substances: atranorin, perlatolic acid, and anziaic acid. - This species is one of the most conspicuous and large robust species of *Stereocaulon* in Papua New Guinea. It is easily distinguished from other Papua New Guinea species of *Stereocaulon* by the corticate whitish pseudopodetia and by the whitish cephalodia with granular surface. *Stereocaulon staufferi* resembles large indivisuals of *S. ramulosum* var. *pilopholoicles*, which is endemic to the Hawaiian Islands. However, it differs from the latter in the septation of spores (up to 8-septate in *S, ramulosum* var. *pilopholoicles*) and in the shape of juvenile apothecia. The apothecia have pale margins in juvenile stages in *S. staufferi*, while they never form pale margins in *S, ramulosum* var. *pilopholoicles*.



Stereocaulon staufferi



Stereocaulon staufferi

Stereocaulon strictum Th. Fr., Stereoc. Piloph. Comm.: 24 (1857)

[VZ1190], Mexico. Oaxaca: secus viam ad Valle Nacional, versus septentriones (c. 63 km) a loco dicto Ixtlán de Juarez. Supra terram. Leg. D. E. Stone, 1.2.1871, Dupl det I. M. Lamb, 6.1973 (pro Monogr. Stereoc. Univ. sumptum no. 9555. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1190.

Pseudopodetia slender, not or little branched at base, in the upper part dichotomously branched, decorticated, covered by a thin tomentum, creamy white, 35-100 mm long and 1.0-2.0 mm thick at base. Phyllocladia scattered on the pseudopodetium, slender, coralloid, becoming shorter towards the apex of the pseudopodetium, pale yellow-green to greenish white, sometimes with dark apices, in the upper part of the pseudopodetium sometimes with coarse white granules (as in St. microcarpum). Cephalodia dactylaeform, concolorous with the pseudopodetium, to about 1.5 mm in diameter; cortex 25-50 µm thick, strongly gelatinized with more or less isodiametric lumina, internal tissue gelatinized, but just under the cortex loose hyphae can occur. Apothecia terminal at the branches of the pseudopodetium, small, to about 1.5 mm in diameter; disc applanate to faintly convex, black; margin tomentose; hymenium 66-125 µm thick; hypothecium 70-125 µm thick, compact and brown pigmented, bounded by gelatinized central cone; pseudoexcipulum 120-140 µm thick, just near the hymenium composed of gelatinized yellowish white pachydermatous hyphae, elsewhere more loosely hyphose. Ascospores 60-63 x 3.5-4.7, 5-12 septate. Pycnidia subterminal; conidia 4.5-10.0 x about 0.7 µm. Chemistry: K+ yellow, P-, containing atranorin only.



Stereocaulon strictum



Stereocaulon strictum

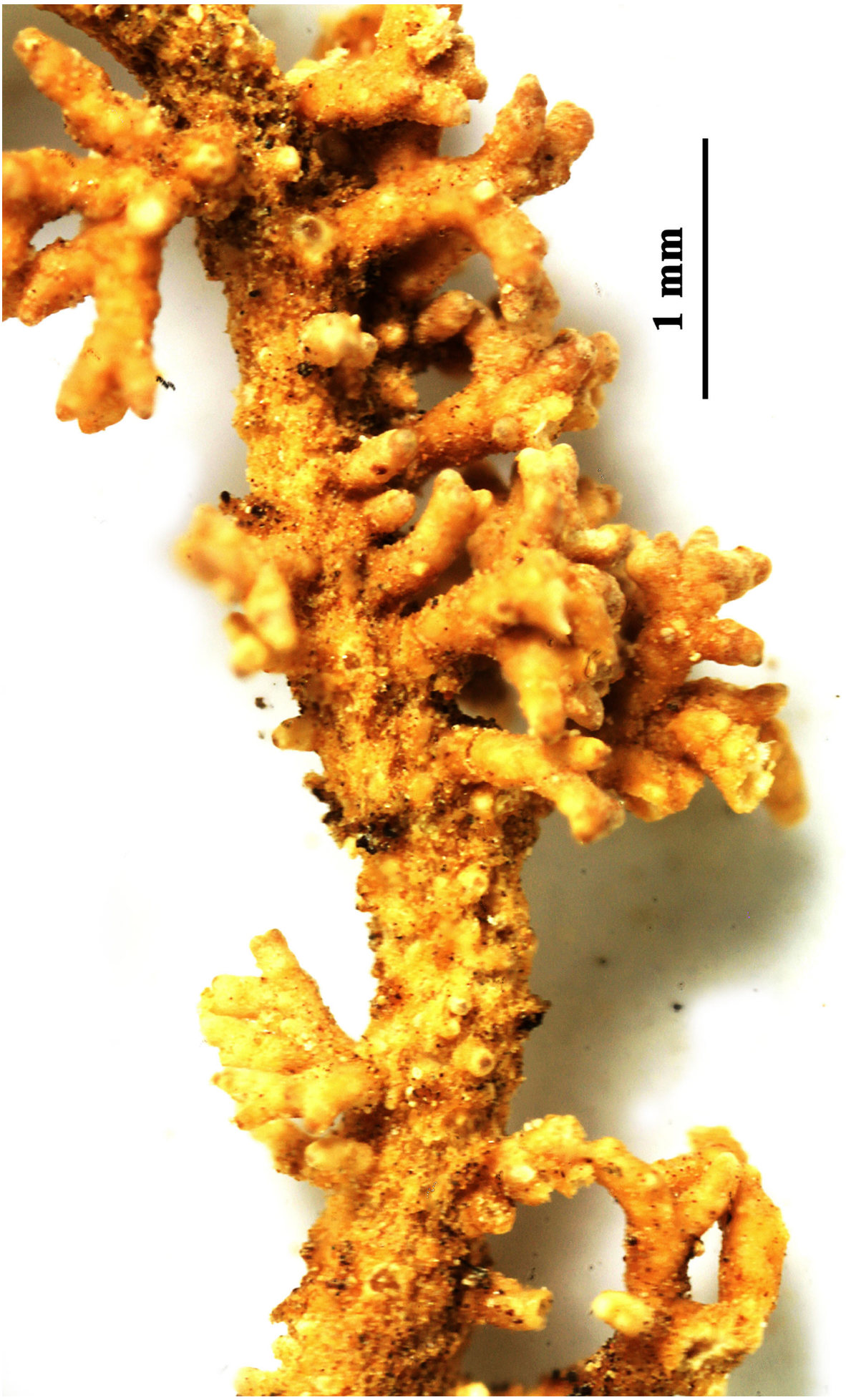
Stereocaulon strictum Th. Fr., Stereoc. Piloph. Comm.: 24 (1857)

[VZ1785], Costa Rica. San José: Inter El Empalme et Santa Maria. Ad terram secus viam. Leg. W. L. Cukberson (no.123256), 28.03.1967. - TLC: Atranorin, porphyrilic acid, unknown pigment anal. by A. Johnson & C. F. Culberson. Ex A. VěZDA: LICHENES SELECTI EXSICCATI NR. 1785.

Pseudopodetia slender, not or little branched at base, in the upper part dichotomously branched, decorticated, covered by a thin tomentum, creamy white, 35-100 mm long and 1.0-2.0 mm thick at base. Phyllocladia scattered on the pseudopodetium, slender, coralloid, becoming shorter towards the apex of the pseudopodetium, pale yellow-green to greenish white, sometimes with dark apices, in the upper part of the pseudopodetium sometimes with coarse white granules (as in St. microcarpum). Cephalodia dactylaeform, concolorous with the pseudopodetium, to about 1.5 mm in diameter; cortex 25-50 µm thick, strongly gelatinized with more or less isodiametric lumina, internal tissue gelatinized, but just under the cortex loose hyphae can occur. Apothecia terminal at the branches of the pseudopodetium, small, to about 1.5 mm in diameter; disc applanate to faintly convex, black; margin tomentose; hymenium 66-125 µm thick; hypothecium 70-125 µm thick, compact and brown pigmented, bounded by gelatinized central cone; pseudoexcipulum 120-140 µm thick, just near the hymenium composed of gelatinized yellowish white pachydermatous hyphae, elsewhere more loosely hyphose. Ascospores 60-63 x 3.5-4.7, 5-12 septate. Pycnidia subterminal; conidia 4.5-10.0 x about 0.7 µm. Chemistry: K+ yellow, P-, containing atranorin only.



Stereocaulon strictum



Stereocaulon strictum

Stereocaulon strictum* var. *compressum (Nyl.) I.M. Lamb, in Vězda, Lichenes Selecti Exsiccati, Fasc. (Průhonice) 58: 3 (no. 1435) (1976)
= *Stereocaulon proximum var. compressum* Nyl. 1860

[VZ1435],Costa Rica. Cartago: secus ciam dictam Carretera interamericana loco 75 km significato. Ad terram Leg. W. L. Culberson (no.13264), 3. 1967, det. M. Lamb (Monogr. Stereoc. Univ. 10306, 1975). EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1435.

Pseudopodetia slender, not or little branched at base, in the upper part dichotomously branched, decorticated, covered by a thin tomentum, creamy white, 35-100 mm long and 1.0-2.0 mm thick at base. Phyllocladia scattered on the pseudopodetium, slender, coralloid, becoming shorter towards the apex of the pseudopodetium, pale yellow-green to greenish white, sometimes with dark apices, in the upper part of the pseudopodetium sometimes with coarse white granules (as in *St. microcarpum*). Cephalodia dactylaeform, concolorous with the pseudopodetium, to about 1.5 mm in diameter; cortex 25-50 µm thick, strongly gelatinized with more or less isodiametric lumina, internal tissue gelatinized, but just under the cortex loose hyphae can occur. Apothecia terminal at the branches of the pseudopodetium, small, to about 1.5 mm in diameter; disc applanate to faintly convex, black; margin tomentose; hymenium 66-125 µm thick; hypothecium 70-125 µm thick, compact and brown pigmented, bounded by gelatinized central cone; pseudoexcipulum 120-140 µm thick, just near the hymenium composed of gelatinized yellowish white pachydermatous hyphae, elsewhere more loosely hyphose. Ascospores 60-63 x 3.5-4.7, 5-12 septate. Pycnidia subterminal; conidia 4.5-10.0 x about 0.7 µm. Chemistry: K+ yellow, P-, containing atranorin only.

St. strictum is characterized by the frequent presence of spathulate unifacial soredia at the apices of the pseudopodetia or at the tips of the phyllocladia, dactylaeform cephalodia, dark pigmented hypothecium, vermiform multiseptate spores, and the presence of porphyrilic acid. In fertile specimens soredia may be almost or entirely absent; in the var. *compressurn* they are very well developed. The cephalodia are solid internally and bounded by a uniform, transparent, gelatinized cortical layer. The apothecia are often pseudolecanorine with pale pseudothalline margin. Although occasional symbiotic algae (Trebouxia) may be presententangled among the loosened hyphae on the outer side of the

excipulum, the structure of the apothecium in *St. stricturn*, as in all other *Stereocaulon* species, is not truly lecanorine. - Remarks: apices of pseudopodetia flattened, spathulate, corticated on one side, sorediate on the other. Apothecia rarely developed. Transitional states between the variety and the typical species are sometimes found.

Stereocaulon strictum* var. *compressum



Stereocaulon strictum* var. *compressum

Stereocaulon strictum* var. *compressum (Nyl.) I.M. Lamb, in Vězda, Lichenes Selecti Exsiccati, Fasc. (Průhonice) 58: 3 (no. 1435) (1976)
= *Stereocaulon proximum var. compressum* Nyl. 1860

[VZ1435],Costa Rica. Cartago: secus ciam dictam Carretera interamericana loco 75 km significato. Ad terram Leg. W. L. Culberson (no.13264), 3. 1967, det. M. Lamb (Monogr. Stereoc. Univ. 10306, 1975). EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1435.

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St. strictum is characterized by the frequent presence of spathulate unifacial soredia at the apices of the pseudopodetia or at the tips of the phyllocladia, dactylaeform cephalodia, dark pigmented hypothecium, vermiform multiseptate spores, and the presence of porphyrilic acid. In fertile specimens soredia may be almost or entirely absent; in the var. *compressurn* they are very well developed. The cephalodia are solid internally and bounded by a uniform, transparent, gelatinized cortical layer. The apothecia are often pseudolecanorine with pale pseudothalline margin. Although occasional symbiotic algae (Trebouxia) may be presententangled among the loosened hyphae on the outer side of the

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Stereocaulon strictum* var. *compressum



Stereocaulon strictum* var. *compressum

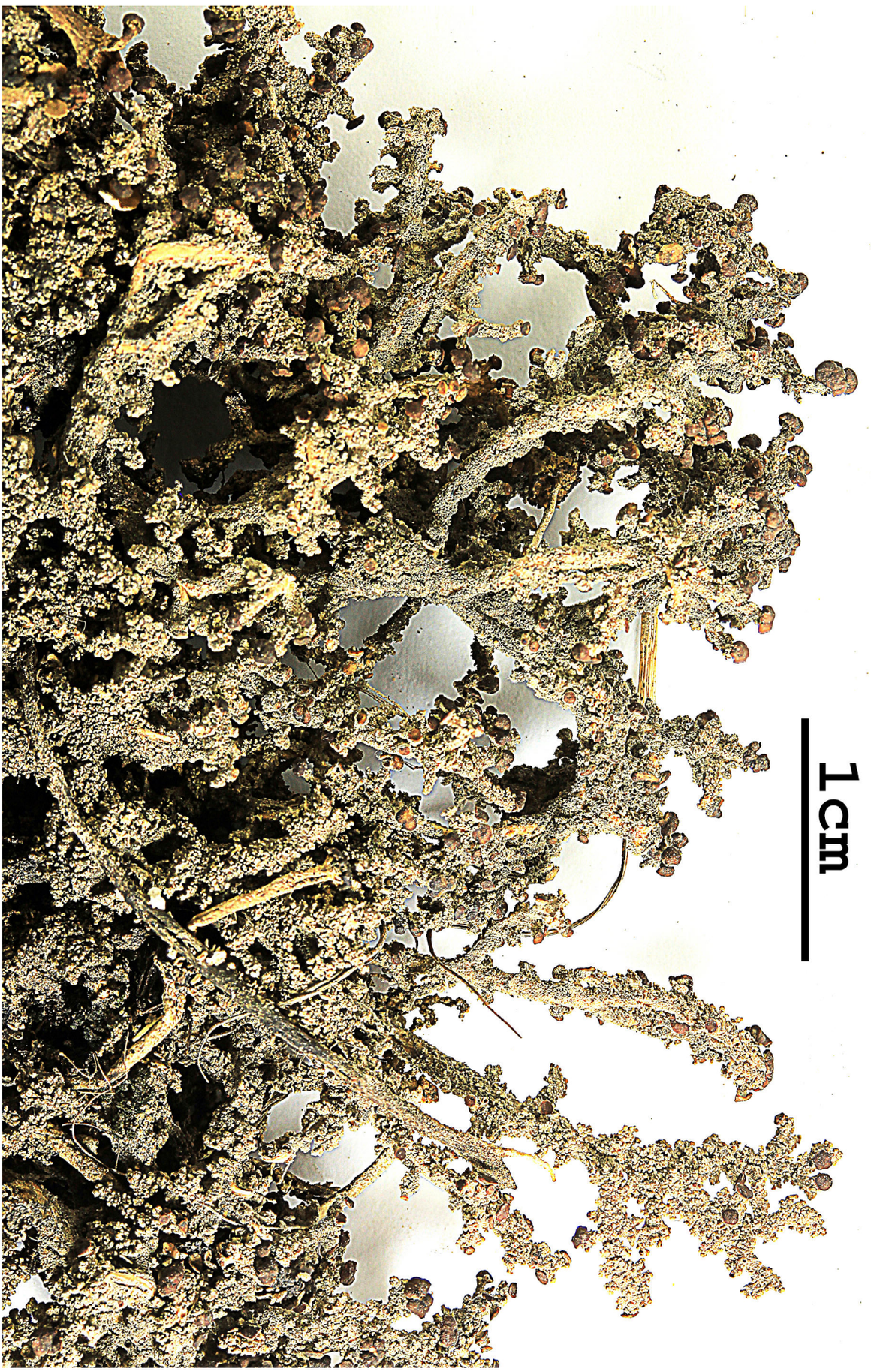
Stereocaulon tomentosum Fr., Sched. Crit. Lich. Suec., Fasc. 3: 20 (1825) [1824]
= *Stereocaulon paschale* subsp. *tomentosum* (Fr.) Branth & Rostrup, Bot. Tidsskr. 3: 162 (1869)
= *Stereocaulon paschale* var. *tomentosum* (Fr.) Duby, Bot. Gall., Edn 2 (Paris) 2: 618 (1830)
= *Stereocaulon botryocarpum* H. Magn.
= *Stereocaulon cupriniforme* Nyl.
= *Stereocaulon tomentosum var. campestre* Körb.

[VZ1283], Bohemoslovacia. Slovacia, Carpates, montes Slovenské Rudohorie: Miníšek, in valle rivi Smolník prope Smolnická pila, 500 m. Ad scorias vetustas. Leg. A. Kiszely & A. Vězda, 21.07.1974, det. M. I. Lamb.- *Annot.*: "Pro Monogr Stereoc. Univ. sumptum, no. 10177, M. I. Lamb in litt.- Ex A. VĚZDA: LICHENES SELECTI EXSICCATI NR. 1283.

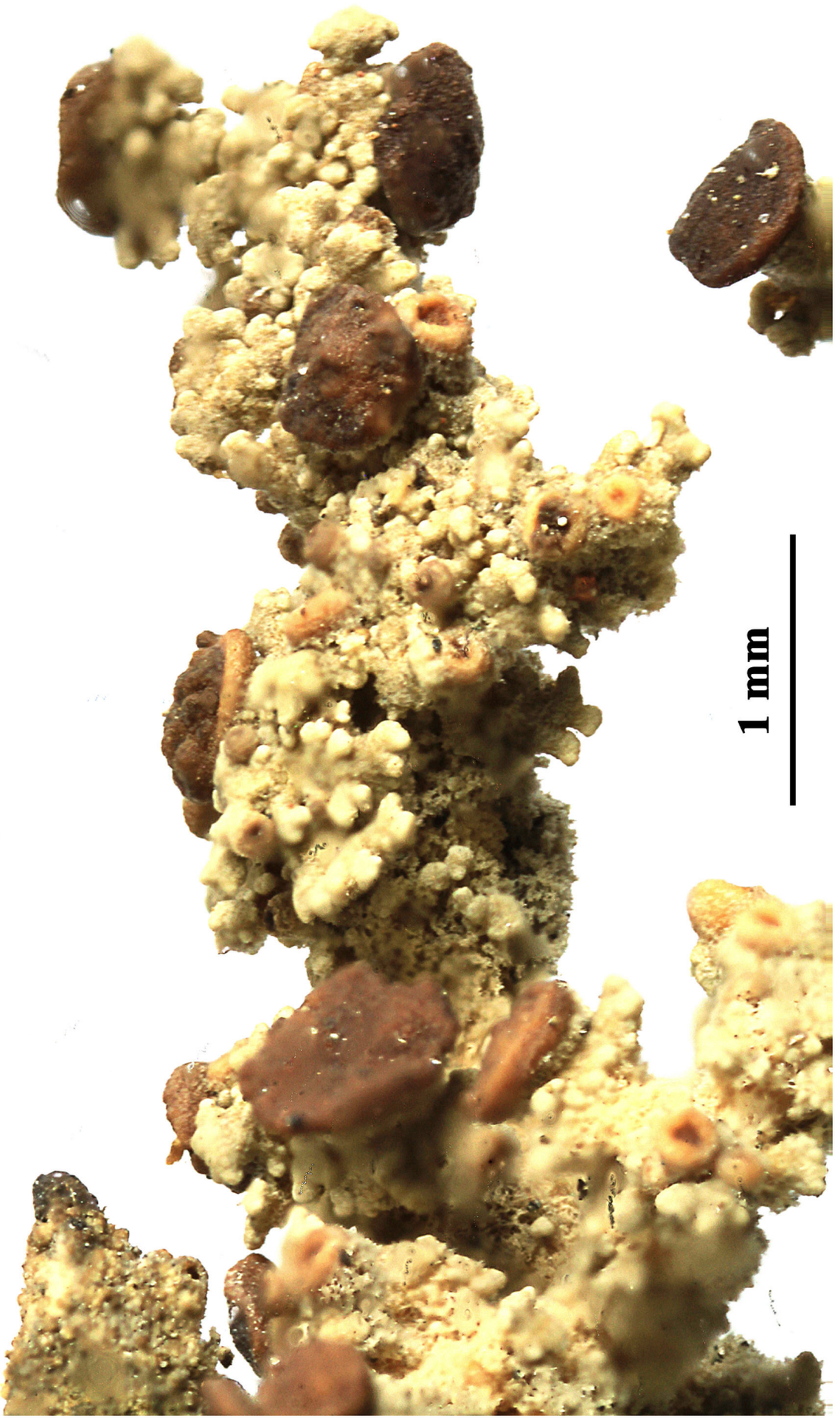
Primary thallus crustose, ephemeral, usually absent in mature individuals, secondary thallus fruticose. Pseudopodetia loosely attached, prostrate to ascending, to 3(-8) cm tall, 1-2 mm thick, clearly dorsiventral, thickly grey-tomentose especially on lower surface, with a solid cartilaginous axis of parallel hyphae surrounded by a lax medulla. Phyllocladia abundant, granulose to squamulose, ash-grey, mostly rounded and flattened, often overlapping. Cephalodia inconspicuous, more or less spherical, to 0.7 mm across (usually less), embedded in the tomentum of the underside, with *Nostoc*. Apothecia frequent, up to 0.7(-1.2) mm across, with a dark brown to blackish brown, convex disc and an indistinct margin, mainly located on lateral branches. Proper exciple brown in outer part, colourless within; epithecium brown, K-; hymenium colourless, 45-50 µm high; paraphyses simple, 1.5-1.8 µm thick, the apical cells capitate, 3-4 µm wide, with a dark cap; hypothecium colourless. Asci 8-spored, cylindrical-clavate, with a K/I+ blue outer layer and apical dome, and a central, K/I+ darker blue tube, Porpidia-type. Ascospores 3(-6)-septate, hyaline, fusiform, 20-50 x (2.5-)3-4 µm. Pycnidia rare, dark, immersed. Conidia 1-celled, hyaline, straight, 4-5 x c. 0.8 µm. Main photobiont chlorococcoid. Spot tests: K+ yellow, C-, KC-, P± faintly yellow or + orange, UV-. Chemistry: atranorin, stictic acid and variable amounts of norstictic acid.

Remarks: distinguished by its dark gray color, flattened and dorsiventral habitus, and often dark (grayish) tomentum of the underside;

strongly resembling *St. saxatile* MAGN. Fairly common and widely distributed in Europe, Russia and N. America.



Stereocaulon tomentosum



Stereocaulon tomento-

Stereocaulon verruciferum Nyl., Syn. meth. lich. (Parisiis) 1(2): 248 (1860)

[VZ2243], Aequatoria. Pichincha: in reservato Parque National de Cotopaxi, in latera sptentrionali montis ignivomi Cotopaxi, 4500 m. Ad terram volcanicam plerumque non affixum, cum *Usnea bogotensi*. Leg. W. L. Culberson (20383) & C.F. Culberson, 22.08.1987. *Notes*: TLC Atranorin, stictic acid, cryptostictic acid, menegazzaic acid, norstictic acid (trace) anal. by A. Johnson et C.F. Culberson. Ex A. VěZDA: LICHENES SELECTI EXSICCATI NR. 2243.

Pseudopodetia coarse, loosely branched, creeping, not firmly attached to the substrate, tomentose, with a light grey to ashy upper side and dark grey underside, including phyllocladia 3.0-5.0 mm broad. Phyllocladia peltate to verrucose, aggregated in distinct lumps, towards the apex of the pseudopodetium nearly crustose but not confluent, unicolorous whitish to grey, sometimes tending to bicolorous. Cephalodia of the spherical type with an uneven, dark olive-brown surface, with stigonemoid phycobiont. Apothecia not numerous, small, up to 0.5 mm in diameter, of lecideine appearance; disc applanate, brown; hymenium about 50-57 µm thick; hypothecium about 35-40 µm thick, colourless, bounded by stratum which passes into the pseudoexcipulum; pseudoexcipulum 60-90 µm thick, consisting of pachydermatous yellow-brown hyphae. Ascospores 20-25 x 2.1-2.3 µm, 2-4 septate. Pycnidia not seen. Chemistry: K+ yellow, P+ yellow, containing atranorin, constictic and stictic acids.



Stereocaulon verruciferum



Stereocaulon verruciferum

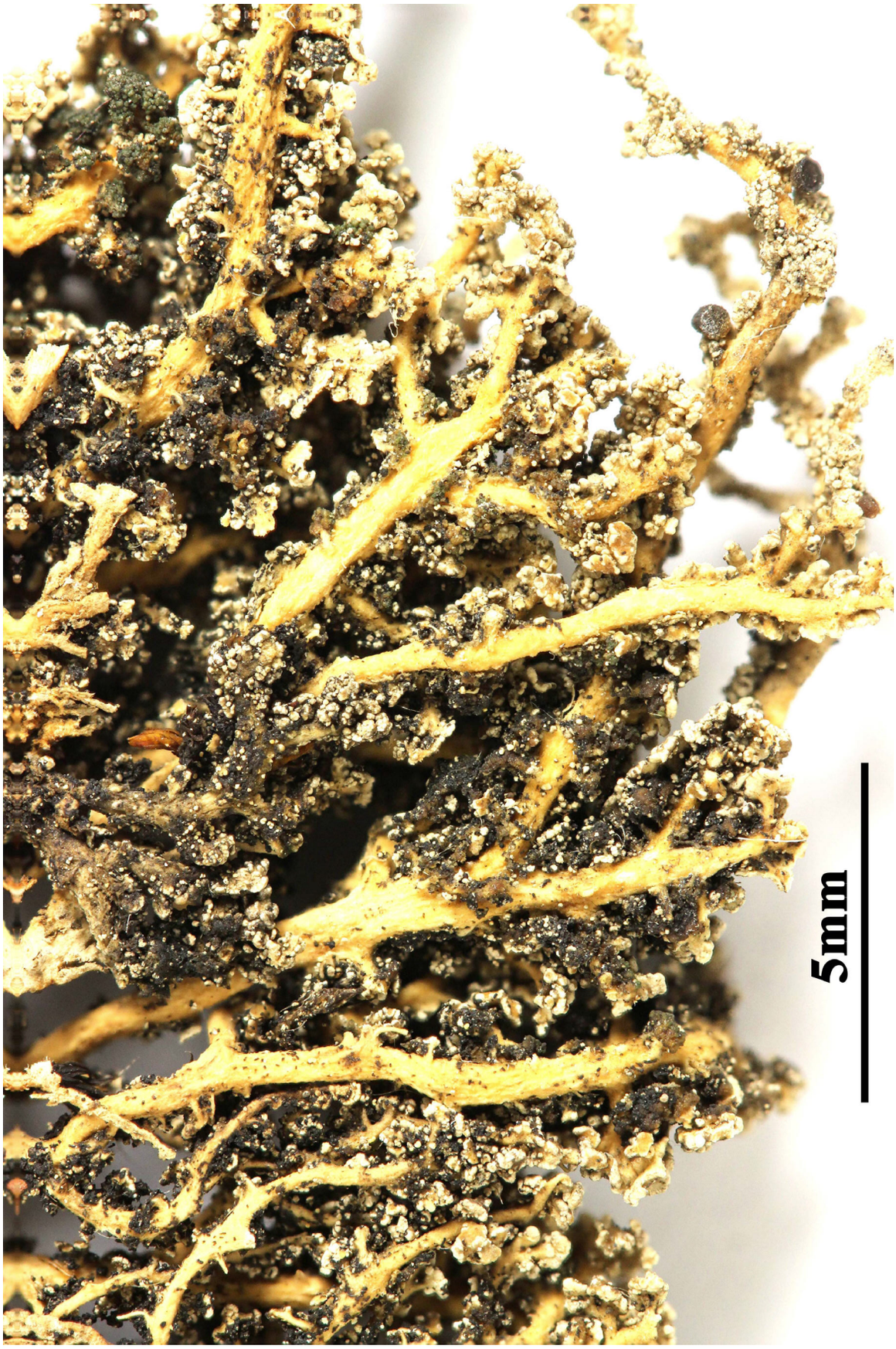
Stereocaulon vesuvianum Pers., Ann. Wetter. Gesellsch. Ges. Naturk. 2(1): 19 (1810)

[1070], Germania. Baden, Silva Nigra, distr. Lörrach: Präg, 700 m. Ad saxa silicea. Leg. V. Wirth, 4.1971. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1070.

Primary thallus crustose, ephemeral, usually absent in mature individuals, secondary thallus fruticose, forming pillows or extended mats on the rock. Pseudopodetia 1-4(-7) cm tall, firmly attached, erect to decumbent, rigid, lacking tomentum but with a more or less felty surface, whitish or greyish, darker at base, simple or branched in upper part, esorediate, with a solid cartilaginous axis of parallel hyphae surrounded by a lax medulla. Phyllocladia often almost entirely covering the pseudopodetia, small, often verrucose, the largest ones usually peltate, flattened or concave, usually not confluent, at least some of them with a dark olive-coloured central part and paler margins. Cephalodia rare, verruculose, dark olive brown, containing Stigonema. Apothecia rare, 0.5-1 mm across, located on lateral branches, with a dark brown disc. Proper exciple brown in outer part, colourless within; epithecium brown, K-; hymenium colourless; paraphyses mostly simple, 1.5-1.8 µm thick at mid-level, the apical cells up to 4.5 µm wide, with a dark cap; hypothecium colourless. Asci 8-spored, cylindrical-clavate, with a K/I+ blue outer layer and apical dome, and a central, K/I+ darker blue tube, Porpidia-type. Ascospores 3-6-septate, hyaline, fusiform but thicker at one end, 26-38 x 3-3.5 µm. Pycnidia rather rare. Conidia 1-celled, hyaline, straight or curved, 8-12 x 0.6-0.8 µm. Main photobiont chlorococcoid. Spot tests: thallus K+ yellow (rarely K+ red), C-, KC-, P+ orange, UV-. Chemistry: atranorin and variable amounts of stictic and sometimes norstictic acids. - Note: on volcanic rocks, exceptionally also on wood; abundant on the Vesuvium and the Etna Volcanoes, but much rarer elsewhere in Italy.



Stereocaulon vesuvianum



Stereocaulon vesuvianum

Stereocaulon vesuvianum Pers., Ann. Wetter. Gesellsch. Ges. Naturk. 2(1): 19 (1810)

[2564], Kanarische Inseln, Gran Canaria: bestandsbildend an rauhen Lawawänden im Stereocauletum vesuvianum Klem., 1200 m, NO-NW, pH 6,8, Blockströme im Nebelgürtel zwischen Cueva Corcho und Pinos de Galdar. Leg. G. Follmann et G. Kunkel 09.1968. det G. Follmann 03.1969. Ex G. Follmann Lichenes Exsciccati Selecti A Museo Botanico Berolinensi Editi Nr. 76.

Primary thallus crustose, ephemeral, usually absent in mature individuals, secondary thallus fruticose, forming pillows or extended mats on the rock. Pseudopodetia 1-4(-7) cm tall, firmly attached, erect to decumbent, rigid, lacking tomentum but with a more or less felty surface, whitish or greyish, darker at base, simple or branched in upper part, esorediate, with a solid cartilaginous axis of parallel hyphae surrounded by a lax medulla. Phyllocladia often almost entirely covering the pseudopodetia, small, often verrucose, the largest ones usually peltate, flattened or concave, usually not confluent, at least some of them with a dark olive-coloured central part and paler margins. Cephalodia rare, verruculose, dark olive brown, containing Stigonema. Apothecia rare, 0.5-1 mm across, located on lateral branches, with a dark brown disc. Proper exciple brown in outer part, colourless within; epithecium brown, K-; hymenium colourless; paraphyses mostly simple, 1.5-1.8 µm thick at mid-level, the apical cells up to 4.5 µm wide, with a dark cap; hypothecium colourless. Asci 8-spored, cylindrical-clavate, with a K/I+ blue outer layer and apical dome, and a central, K/I+ darker blue tube, Porpidia-type. Ascospores 3-6-septate, hyaline, fusiform but thicker at one end, 26-38 x 3-3.5 µm. Pycnidia rather rare. Conidia 1-celled, hyaline, straight or curved, 8-12 x 0.6-0.8 µm. Main photobiont chlorococcoid. Spot tests: thallus K+ yellow (rarely K+ red), C-, KC-, P+ orange, UV-. Chemistry: atranorin and variable amounts of stictic and sometimes norstictic acids. - Note: on volcanic rocks, exceptionally also on wood; abundant on the Vesuvium and the Etna Volcanoes.



Stereocaulon vesuvianum



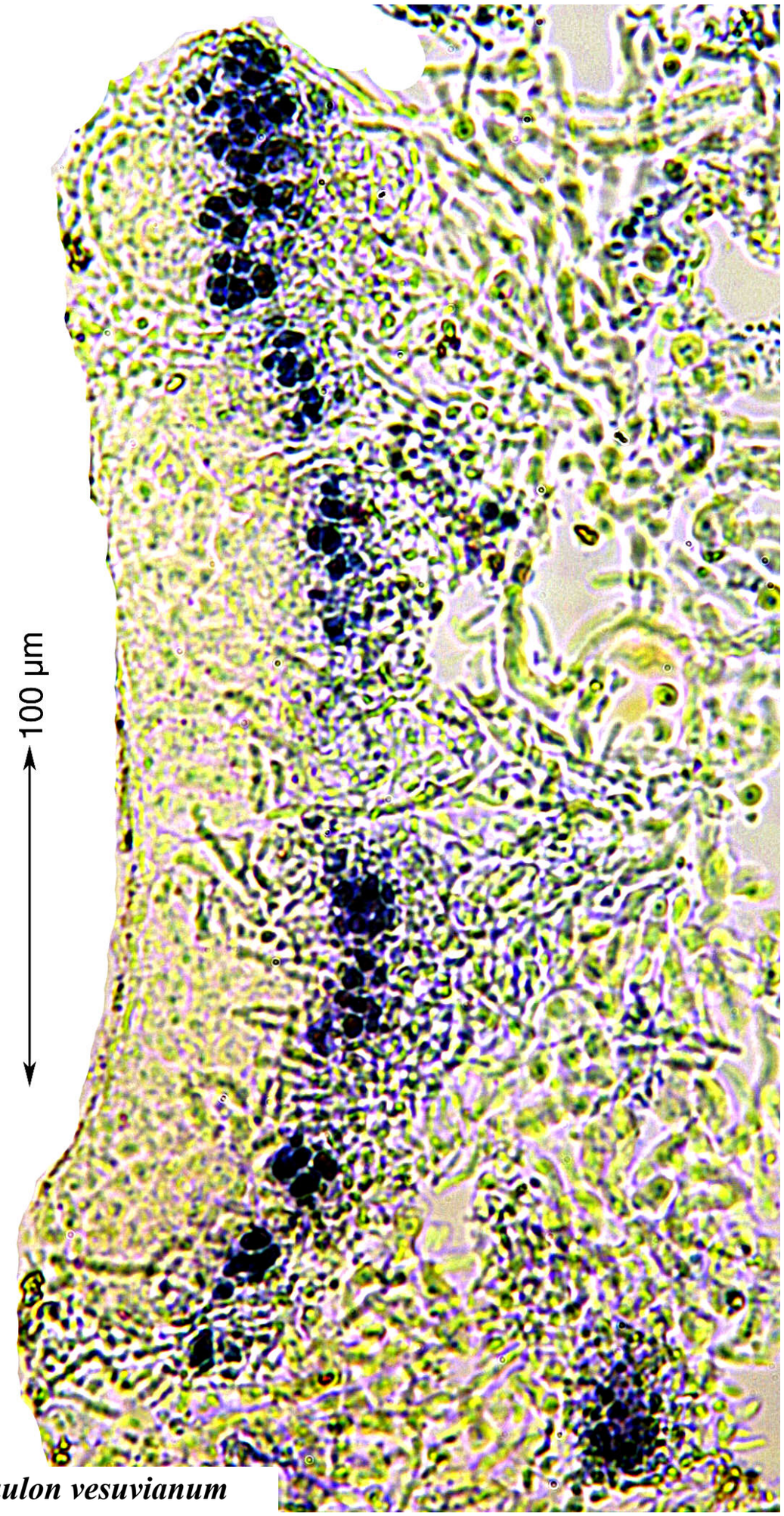
Stereocaulon vesuvianum



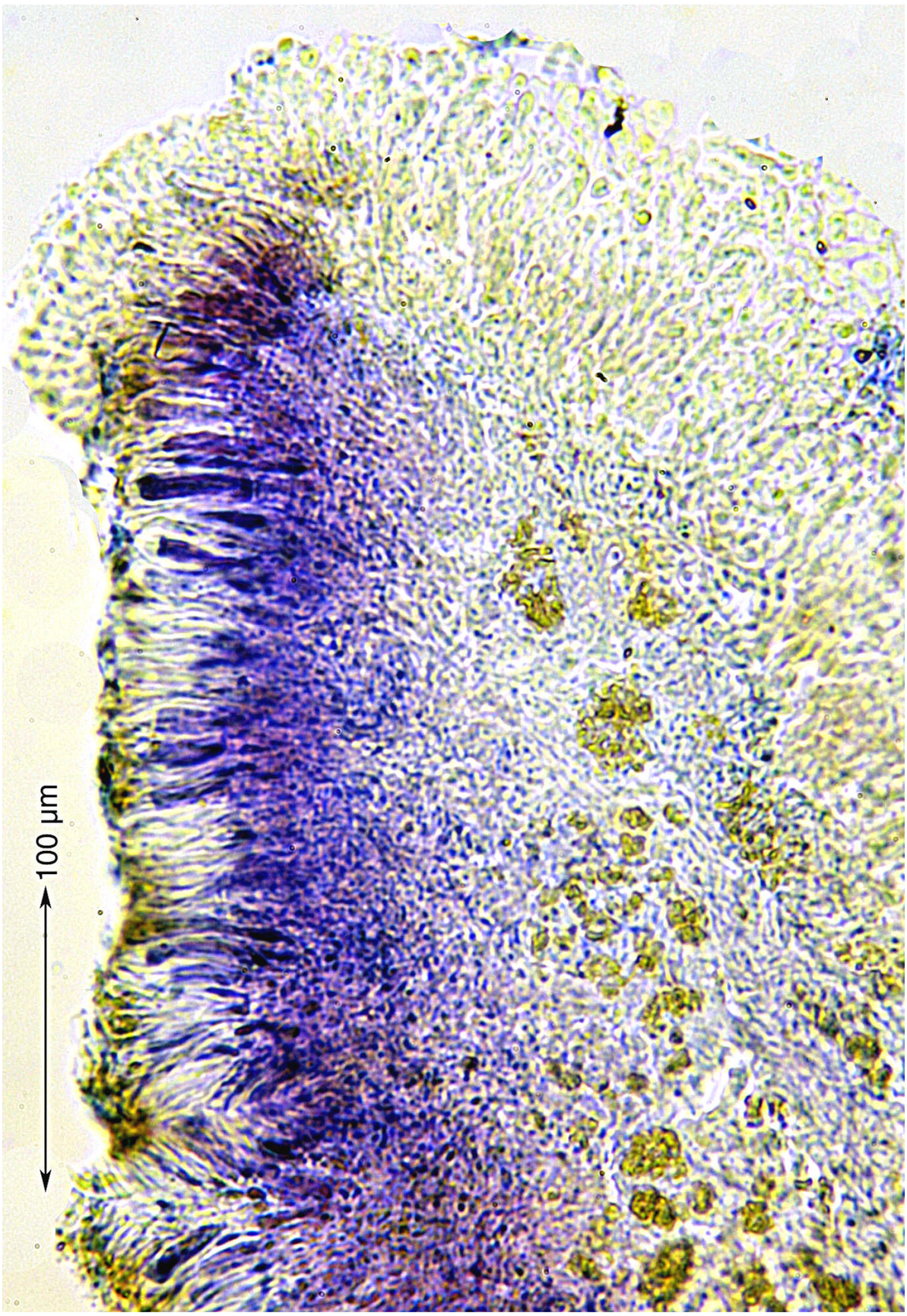
Stereocaulon vesuvianum



Stereocaulon vesuvianum



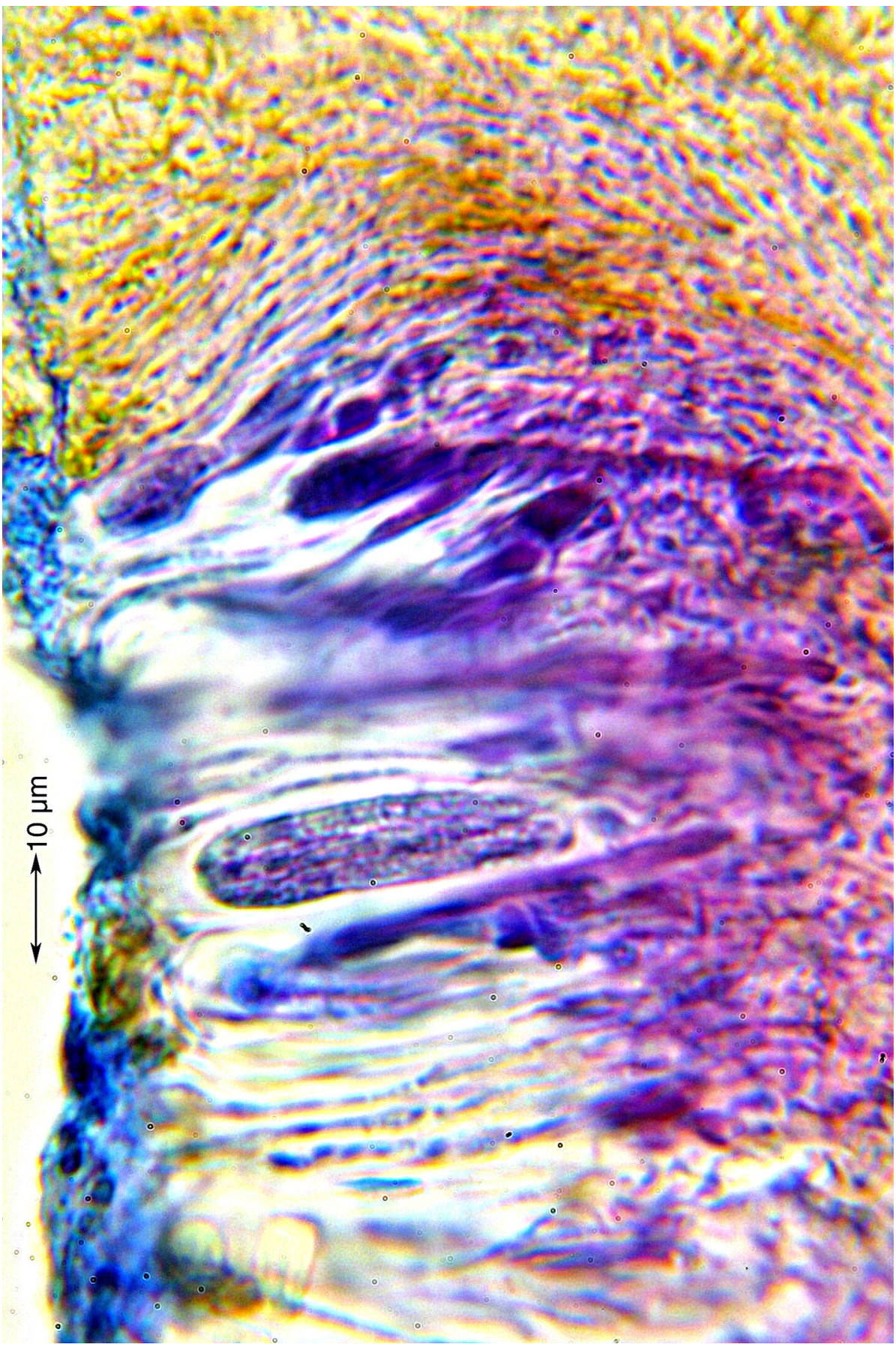
Stereocaulon vesuvianum



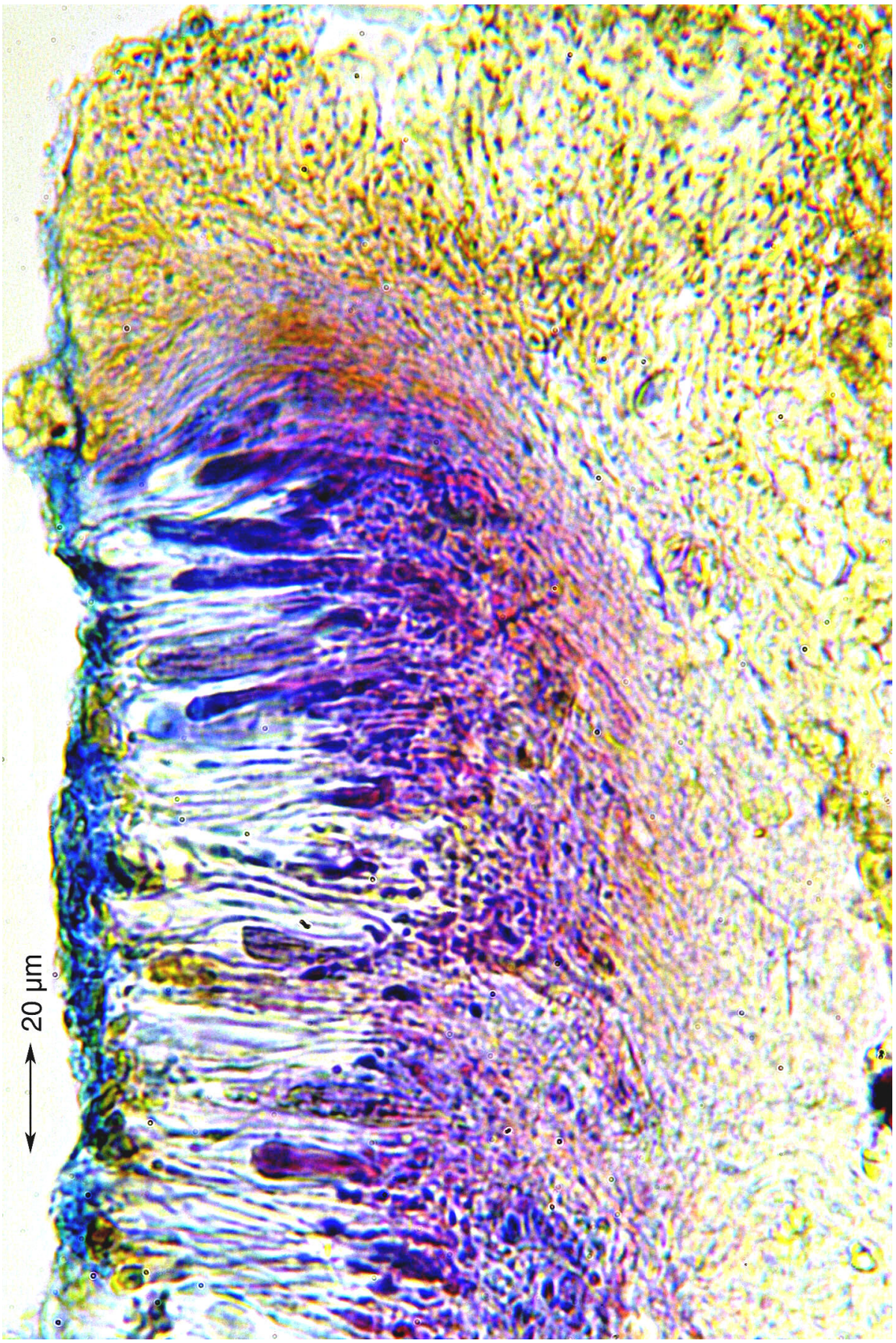
Stereocaulon vesuvianum



Stereocaulon vesuvianum



Stereocaulon vesuvianum



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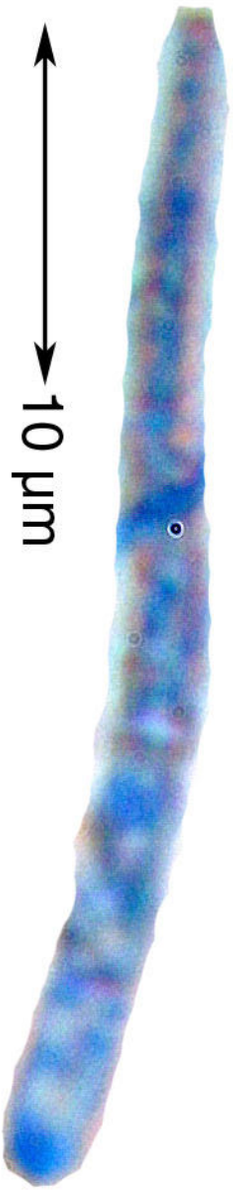
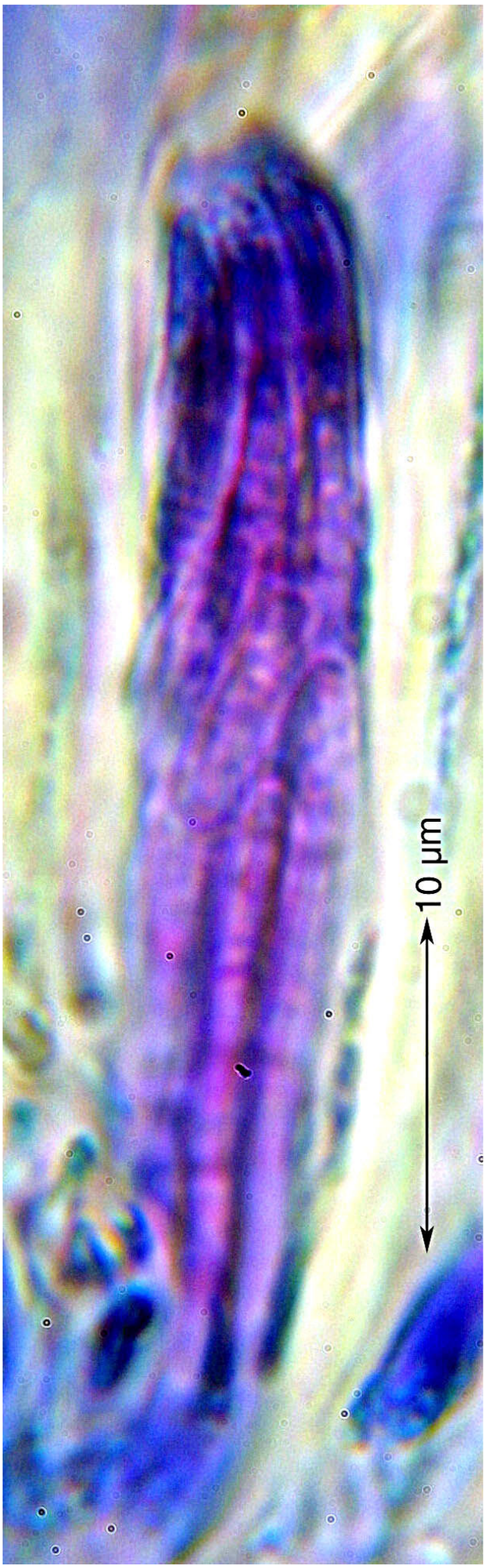
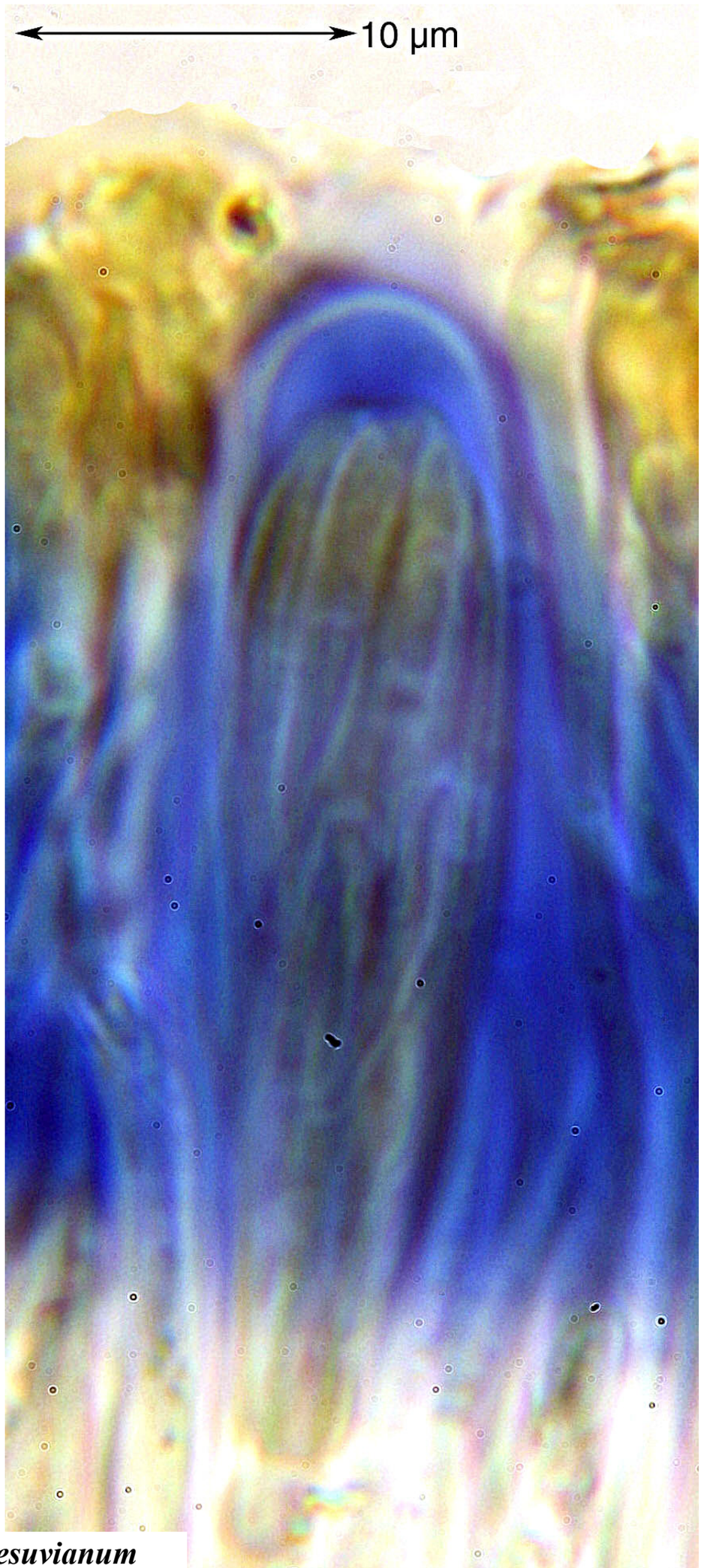




Stereocaulon vesuvianum



Stereocaulon vesuvianum

Stereocaulon vesuvianum* var. *nodulosum (Wallr.) I.M. Lamb, in Poelt, Best. europ. Flecht. (Vaduz): 633 (1969)
= *Patellaria paschalis* var. *nodulosa* Wallr. 1831
= *Stereocaulon vesuvianum* Pers., Ann. Wetter. Gesellsch. Ges. Naturk. 2(1): 19 (1810)

[VZ1775], Gallia. Cantal. St. Paul, Puy Violent. Ad saxa basaltica venti exposita. Leg. R. Schumacker (no. 800720/1) 20.7.1980, det. E. Sérusiaux - Annot. from E. Sérusiaux: Forme exceptionnellement sorédée; TlC: atranorine, acides norsticticque, stictique et consticticque, E. Serusiaux. - Ex A. VěZDA Lichenes Selecti Exsiccati Nr. 1775.

Primary thallus crustose, ephemeral, usually absent in mature individuals, secondary thallus fruticose. Pseudopodetia loosely clustered, 1-4 cm tall, firmly attached, more or less caespitose, erect to decumbent, completely glabrous, whitish or greyish, dark at the base, branched in upper part, most often sorediate, with a solid cartilaginous axis of parallel hyphae surrounded by a lax medulla. Phyllocladia in most cases almost entirely covering the pseudopodetia, small, often verrucose, the largest ones peltate, flattened or concave, at least some of them with a dark olive-coloured central part and paler margins, partly confluent, forming plate-like squamules. Soralia globose, mostly terminal. Cephalodia rare, verruculose, dark olive brown, containing Stigonema. Apothecia very rare, 0.5.1 mm across, on lateral branches, with a dark brown disc. Paraphyses simple, slightly thickened above, with a dark cap; hymenium and hypothecium colourless. Asci 8-spored, clavate to cylindrical, Porpidia-type. Ascospores 3-6-septate, hyaline, fusiform. Spot tests: thallus K+ yellow (rarely K+ yellow turning red), C-, KC-, P+ orange, UV-. Chemistry: atranorin, plus variable amounts of stictic and sometimes norstictic acids. - Note: a name used for morphs with glabrous podetia and partly confluent phyllocladia forming plate-like squamules, sorediate or not, most often found on metal-rich rocks; reported from both Hemispheres, including Europe.



Stereocaulon vesuvianum* var. *nodulosum



Stereocaulon vesuvianum* var. *nodulosum

Stereocaulon vesuvianum* var. *nodulosum (Wallr.) I.M. Lamb, in Poelt, Best. europ. Flecht. (Vaduz): 633 (1969)
= *Patellaria paschalis* var. *nodulosa* Wallr. 1831
= *Stereocaulon vesuvianum* Pers., Ann. Wetter. Gesellsch. Ges. Naturk. 2(1): 19 (1810)

[VZ1284] Bohemoslovacia. Slovacia, Carpates, Tatra Minor: distr. Banská Bystria, Špania dolina, 900 m. Ad lapides prope metalla cupri vetusta. Leg, A. Vězda, 14.9.1974, det. M. I. Lamb. - Annot.: Pro Monogr. Stereoc. Univ. sumptum, no. 10104, M. I. Lamb. - Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1284.

Primary thallus crustose, ephemeral, usually absent in mature individuals, secondary thallus fruticose. Pseudopodetia loosely clustered, 1-4 cm tall, firmly attached, more or less caespitose, erect to decumbent, completely glabrous, whitish or greyish, dark at the base, branched in upper part, most often sorediate, with a solid cartilaginous axis of parallel hyphae surrounded by a lax medulla. Phyllocladia in most cases almost entirely covering the pseudopodetia, small, often verrucose, the largest ones peltate, flattened or concave, at least some of them with a dark olive-coloured central part and paler margins, partly confluent, forming plate-like squamules. Soralia globose, mostly terminal. Cephalodia rare, verruculose, dark olive brown, containing Stigonema. Apothecia very rare, 0.5.1 mm across, on lateral branches, with a dark brown disc. Paraphyses simple, slightly thickened above, with a dark cap; hymenium and hypothecium colourless. Asci 8-spored, clavate to cylindrical, Porpidia-type. Ascospores 3-6-septate, hyaline, fusiform. Spot tests: thallus K+ yellow (rarely K+ yellow turning red), C-, KC-, P+ orange, UV-. Chemistry: atranorin, plus variable amounts of stictic and sometimes norstictic acids. - Note: a name used for morphs with glabrous podetia and partly confluent phyllocladia forming plate-like squamules, sorediate or not, most often found on metal-rich rocks; reported from both Hemispheres, including Europe.



Stereocaulon vesuvianum* var. *nodulosum

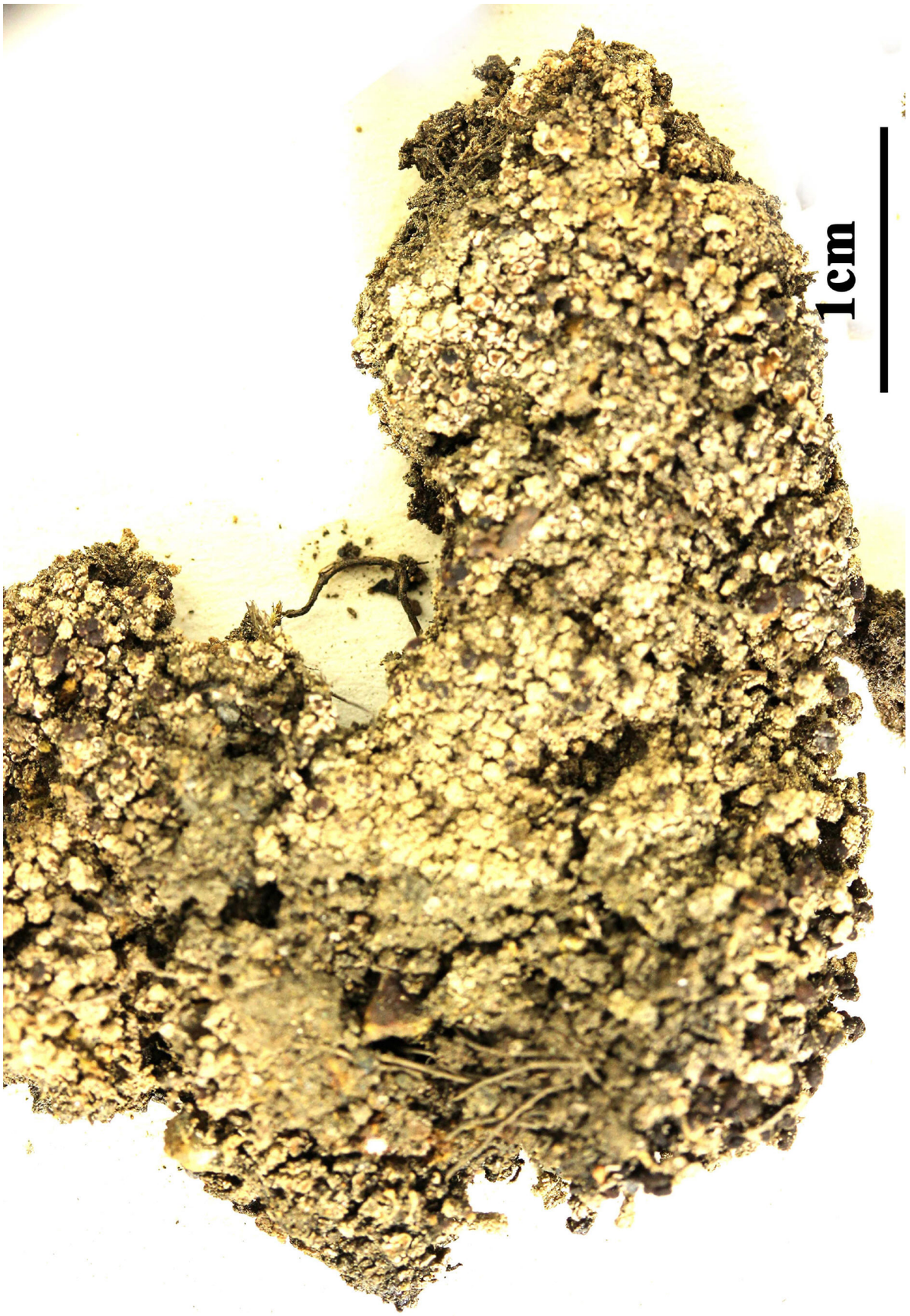


Stereocaulon vesuvianum* var. *nodulosum

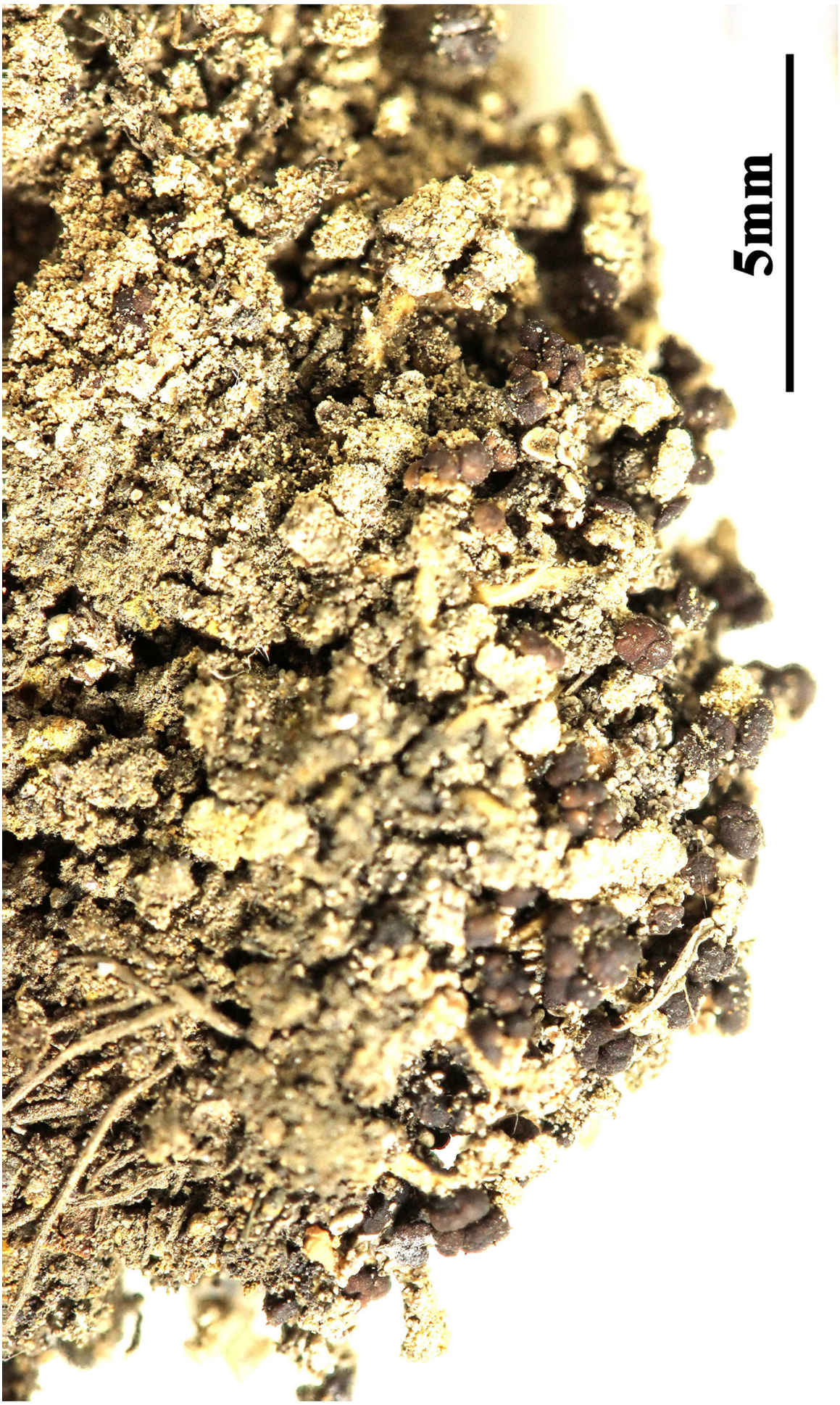
Stereocaulon vesuvianum* var. *symphycheileoides I.M. Lamb, in Vězda, Lichenes Selecti Exsiccati, Fasc. (Průhonice) 52: 2 (no. 1281) (1975)

[VZ1282], 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, 27.8.1974. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1281.

Thallus primarius persistens, e phyllocladiis constans majoribus peltatis (marginibus albidis conspicuis); pseudopodetia brevis, valida, apicibus soredioso-capitata. Apothecia praesertim in partibus junioribus thalli evoluta, haud raro ad thallum primarium. *St. symohycheilo* M. Lamb habitu siumilis, a quo reactione P+ aurantiaco-rubescente (acidum sticticum) statim distinguendum.



Stereocaulon vesuvianum* var. *symphycheileoides

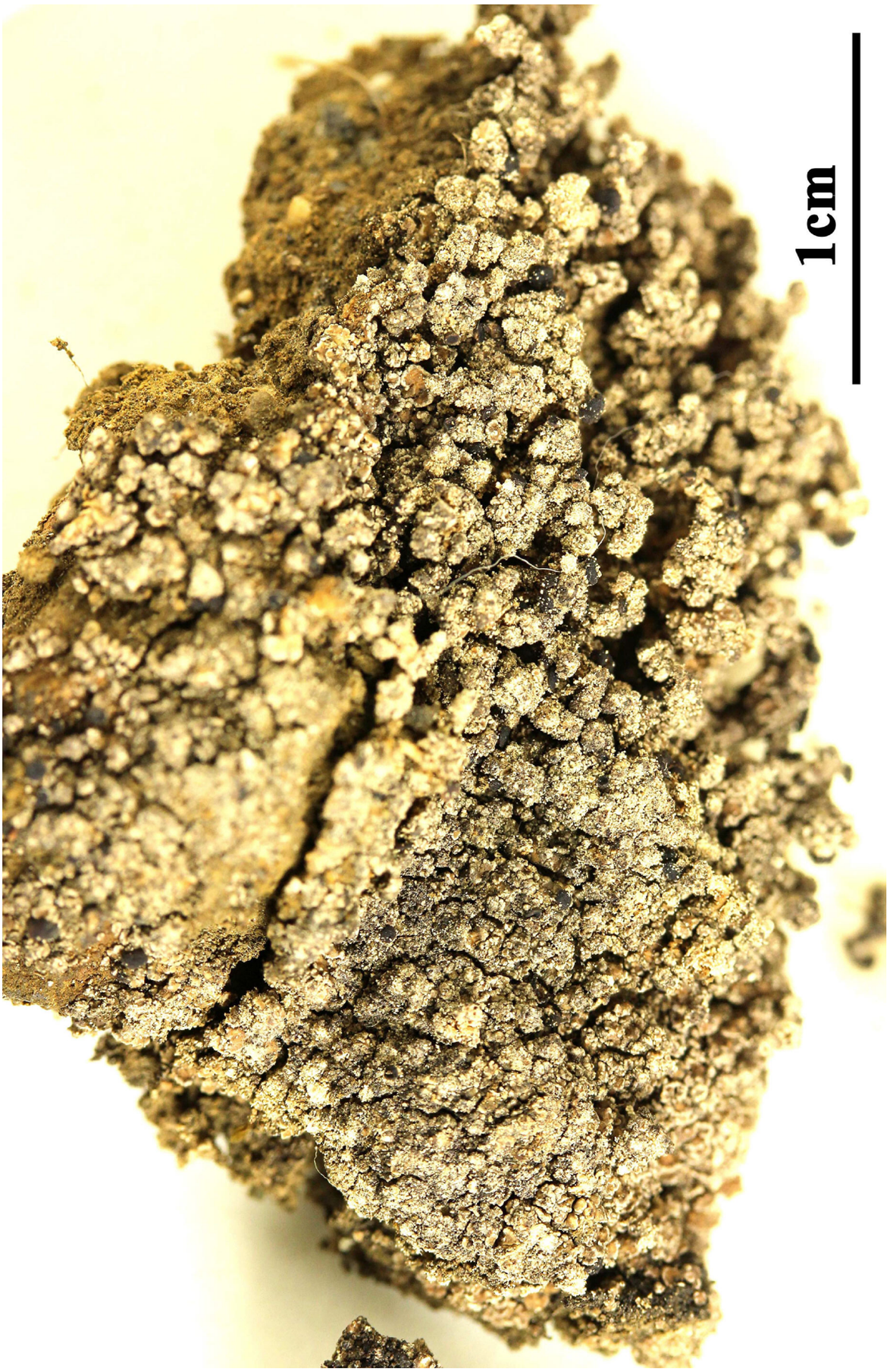


Stereocaulon vesuvianum* var. *symphycheileoides

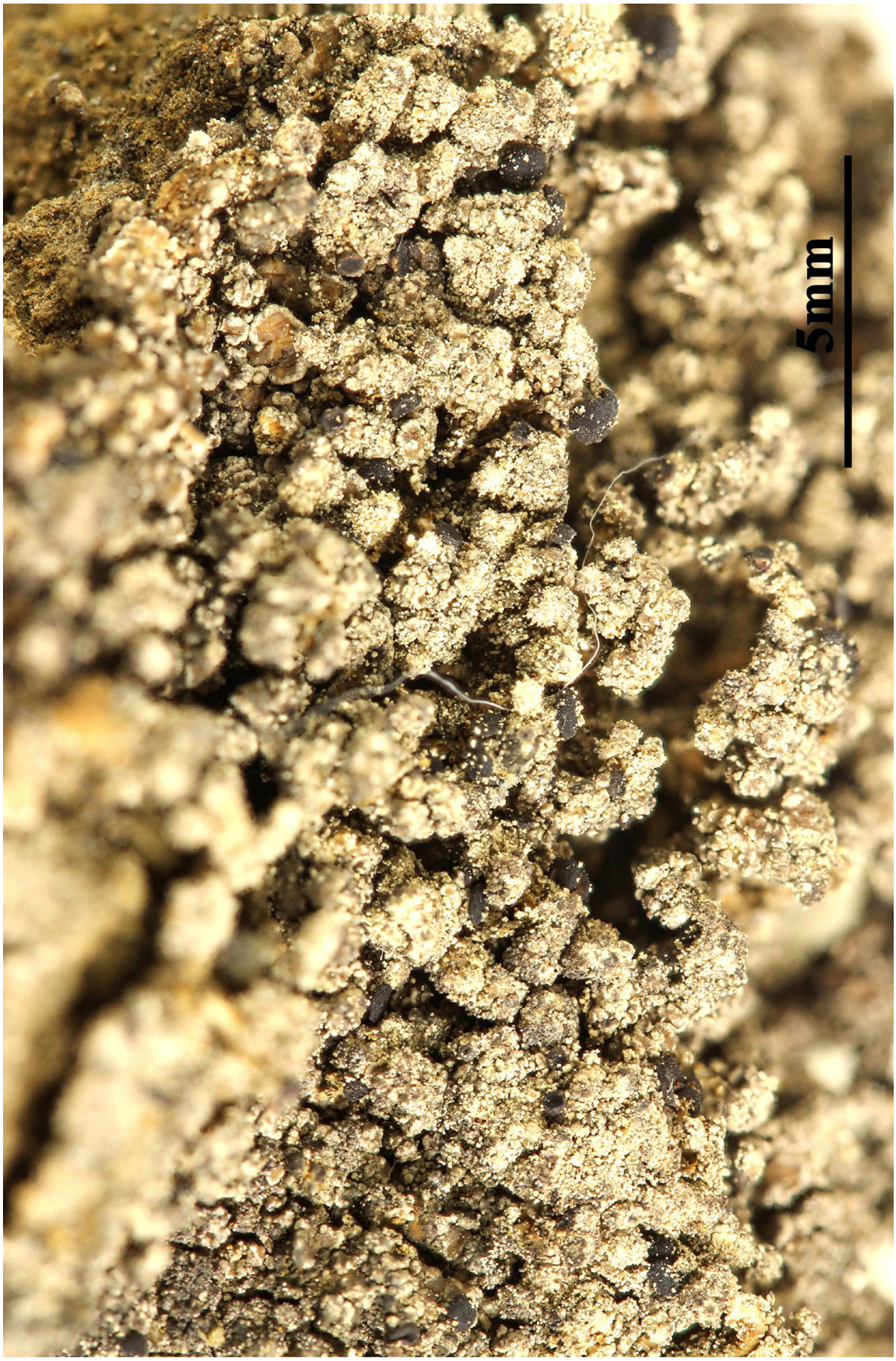
Stereocaulon vesuvianum* var. *symphycheileoides I.M. Lamb, in Vězda, Lichenes Selecti Exsiccati, Fasc. (Průhonice) 52: 2 (no. 1281) (1975)

[VZsn], Czechoslovakia. Slovakia orient,. montes Spišeká, Rudohorie. Mníšek, in ripa rivi Smolník loco Smolnická pila, 480 m. Ad lapides et terram in acervo scoriae cuprum continentis. - Topotypus. Leg. et det. A. Vězda, 27.5.1980. Ex herbario Vězda sn.

Thallus primarius persistens, e phyllocladiis constans majoribus peltatis (marginibus albidis conspicuis); pseudopodetia brevis, valida, apicibus soredioso-capitata. Apothecia praesertim in partibus junioribus thalli evoluta, haud raro ad thallum primarium. *St. symohycheilo* M. Lamb habitu siumilis, a quo reactione P+ aurantiaco-rubescente (acidum sticticum) statim distinguendum.



Stereocaulon vesuvianum* var. *symphycheileoides



Stereocaulon vesuvianum* var. *symphycheileoides

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

[VZ1398], Dominica. In loco dicto Pont Cassé. Ad terram. Leg. R. L. Wilburg & H. A. Hespenheide, 07.1964, det. I. M. Lamb (Monogr. Stereoc. 10305, 1975), comm. W. L. Culberson. Ex A. VěZDA: LICHENES SELECTI EXSICCATI NR. 1398.

Primary thallus evanescent. Habitus more or less cornute. Pseudopodetia simple or subsimple, 4-7 cm tall. Phyllocladia both partly coralloid and slightly flattened-folios, coralloid above, flattened-subfoliose below, not grain-like, never with darker centers. Subfoliose or squamulose phyllocladia without paler edges (although the undersides may be paler). Cephalodia verrucose, scabrid-verruculose or botryose, with poorly developed, pseudoparenchymatous cortical layer, occasionally absent or present. Apothecia exclusively lateral. hymenium 80-90 µm high. Hypothecium faintly pigmented (pale yellowish or yellow-brown). Chemistry: atranorin, stictic acid and norstictic acid, the latter two substances occurring in varied concentration, either in approximately equal proportions or with one or other of them strongly preponderant or perhaps in some cases present to the total exclusion of the other. The macroscopic reactions are therefore variable: K+yellow then red, P+yellow (norstictic acid predominating) or K+yellow, P+orange-red (stictic acid predominating). -
St. virgatum is closely related to *St. scutelligerum* Th. Fr., and like the latter is usually destitute of cephalodia. Cephalodia have however been seen in a few specimens from Dominica and Guadeloupe. They are of the anatomically undifferentiated, "spherical" to "botryose" type normally associated with species of the section *Denudata.* Th. Fries (1857, 1858) and Nylander (1860) erroneously stated that *St. virgatum* is a synonym of *St. furcatum* Fr. The latter is referable to *St. ramulosum* (Sw.) Räusch, as was pointed out by Müller Arg. (1887), and confirmed by Riddle (ex Dodge, 1929) and by I.M. Lamb. *Stereocaulon sphaerophoroides* Tuck., the commonly used name for a species endemic to the Azores, Madeira and Canary Islands, is a synonym of *St. virgatum.*



Stereocaulon virgatum



Stereocaulon virgatum

Stereocaulon vulcani (Bory) Ach., Lich. Univ.: 583 (1810)
= *Lichen vulcani* Bory 1804

[VZ1565], Hawaii Insulae, Volcano, ad meridiem versus a Belt Road, 1050 m, ad rupes. Leg. O.& I. Degener, 20.11.1976, det. K. Kalb. Ex A. Vězda. Lichenes Selecti Exsiccati Nr. 1565.

Primary thallus often persistent, not forming a diffract-areolate crust. Pseudopodetia 1.5-3.0(4.5) cm tall. Phyllocladia mostly wart-like, less than 1 mm diam, occasionally with darker centers, occasionally at least partly terete-cylindrical also slightly coralloid (dactylaeform-papillate). Cephalodia verrucose, scabrid-verruculose or botryose, with poorly developed, pseudoparenchymatous cortical layer occasionally absent. Apothecia lateral. -

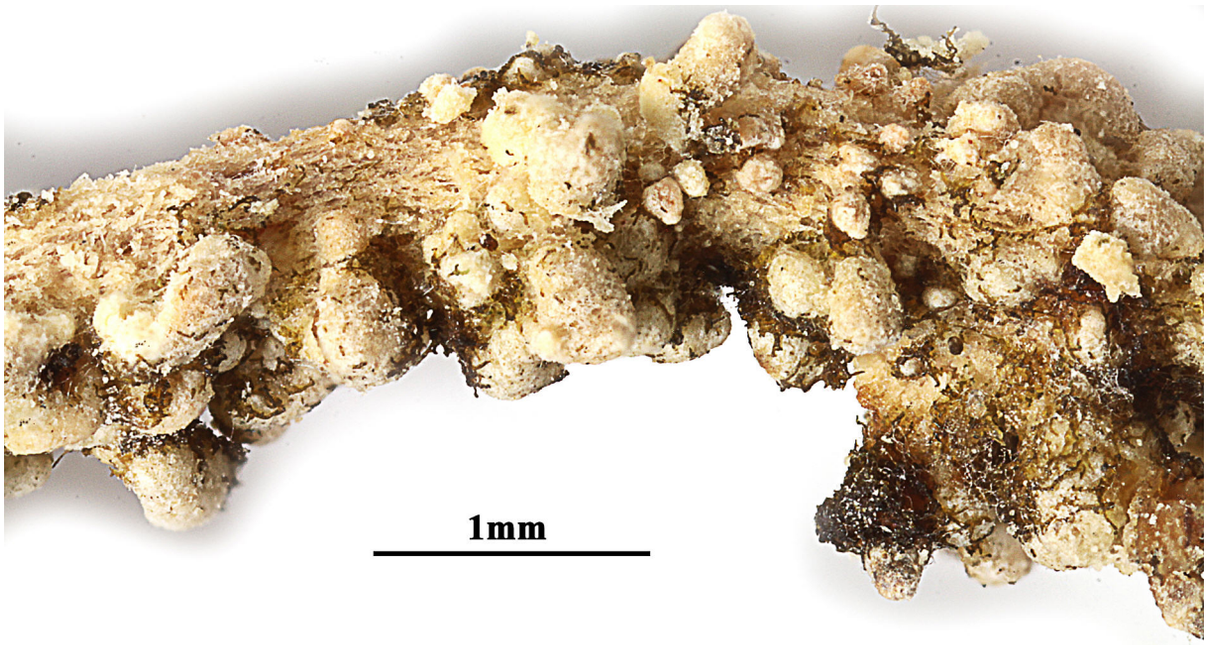
Habitus caespitose, not crustose; phyllocladia lateral on pseudopodetia, verrucose or sometimes partly slightly papillate-elongated, up to 03-0.7) mm diam. : forma typica speciei
Habitus compact, pulvinate; phyllocladia concentrated towards apices of pseudopodetia, forming an irregular crust, irregular in size and shape, verrucose to squamulose, up to 0.7(-1.0) mm diam.: forma ***maunae-loae*** (Magn..) Lamb

Strain I, with atranorin, stictic acid, and smaller amounts of norstictic acid (K persistent yellow, P+ forange-red). The typical strain.
Strain II**,** with atranorin, norstictic acid, possibly also salazinic acid in low concentration.

Both strains occur in Hawaii, the Azores and Canary Islands, sometimes growing closely associated.



Stereocaulon vulcani





Stereocaulon vulcani

Stereocaulon vulcani (Bory) Ach., Lich. Univ.: 583 (1810)
= *Lichen vulcani* Bory 1804

[VZ2324], Haeaii Insulae. Kulauea: Volcano, Volcxano House, 700 m. Ad rupes, in pluviisilva. Leg. I. et O. Degener, 15.8.1978, det. V. Wirth. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2324.

Primary thallus often persistent, not forming a diffract-areolate crust. Pseudopodetia 1.5-3.0(4.5) cm tall. Phyllocladia mostly wart-like, less than 1 mm diam, occasionally with darker centers, occasionally at least partly terete-cylindrical also slightly coralloid (dactylaeform-papillate). Cephalodia verrucose, scabrid-verruculose or botryose, with poorly developed, pseudoparenchymatous cortical layer occasionally absent. Apothecia lateral. -

Habitus caespitose, not crustose; phyllocladia lateral on pseudopodetia, verrucose or sometimes partly slightly papillate-elongated, up to 03-0.7) mm diam. forma typica speciei
Habitus compact, pulvinate; phyllocladia concentrated towards apices of pseudopodetia, forming an irregular crust, irregular in size and shape, verrucose to squamulose, up to 0.7(-1.0) mm diam. forma ***maunae-loae*** (Magn.) Lamb

Strain I, with atranorin, stictic acid, and smaller amounts of norstictic acid (K persistent yellow, P+ forange-red). The typical strain.
Strain II**,** with atranorin, norstictic acid, possibly also salazinic acid in low concentration.

Both strains occur in Hawaii, the Azores and Canary Islands, sometimes growing closely associated.



Stereocaulon vulcani

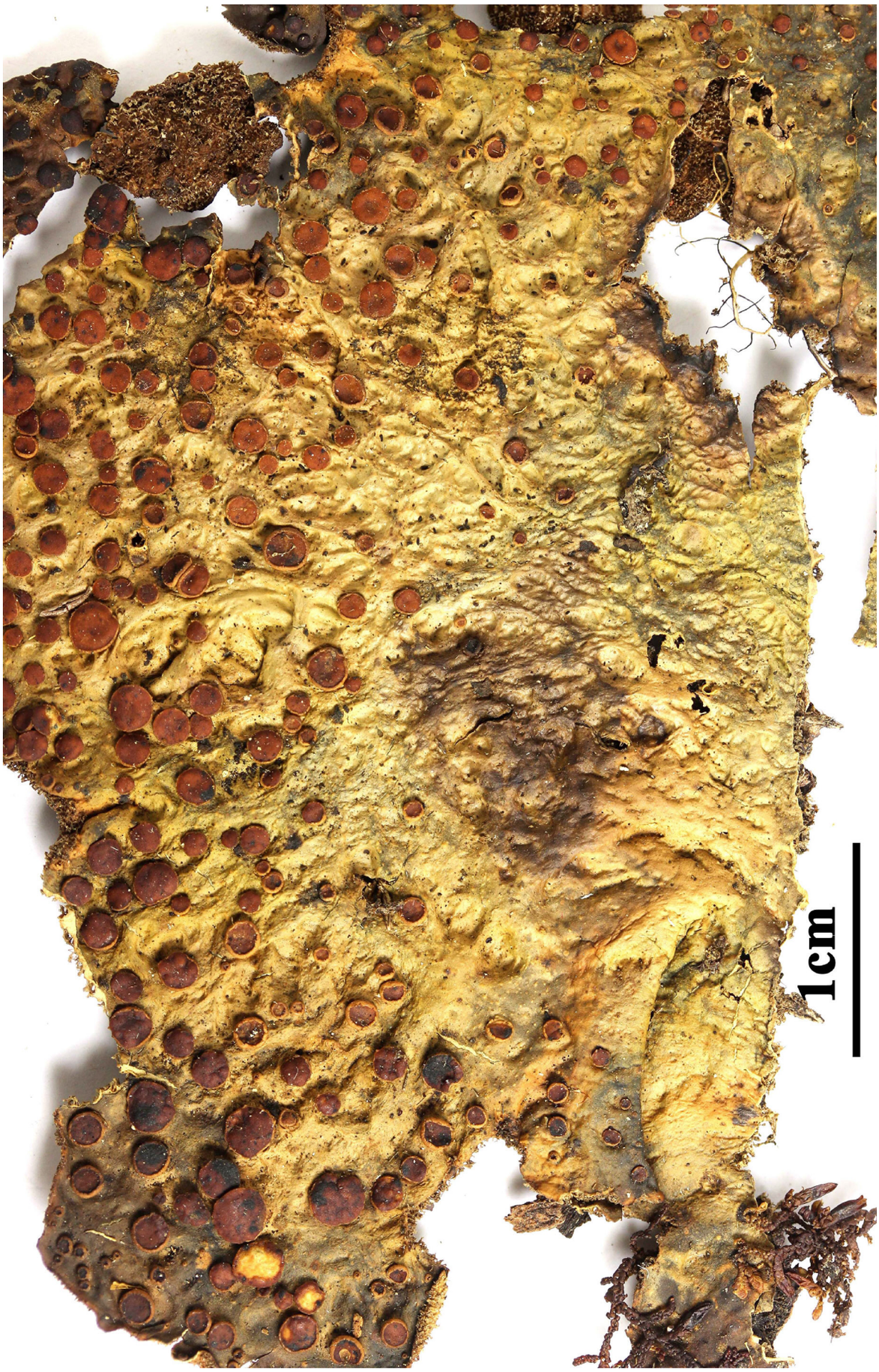


Stereocaulon vulcani

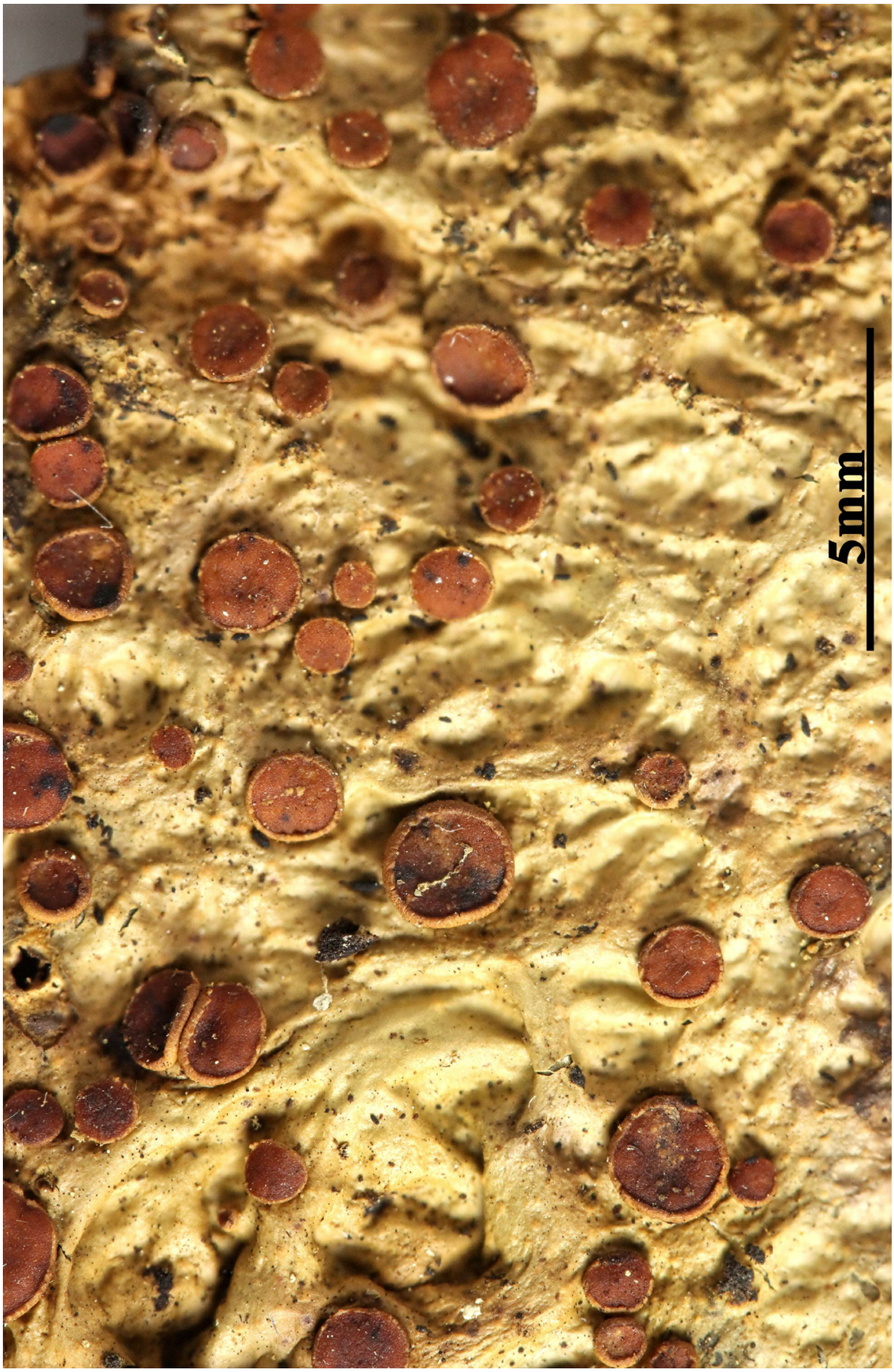
Sticta ambavillaria (Bory) Ach., Lich. Univ.: 455 (1810)
= *Lichen ambavillarius* Bory 1804

[VZ2490], Tanzania. Montes Kilimanjaro, in vicinitate casae alpinae Machame dictae, 2900-3300 m. Ad corticem arborum. Leg. T. Pócs (87173), 22.6.1987, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2490.

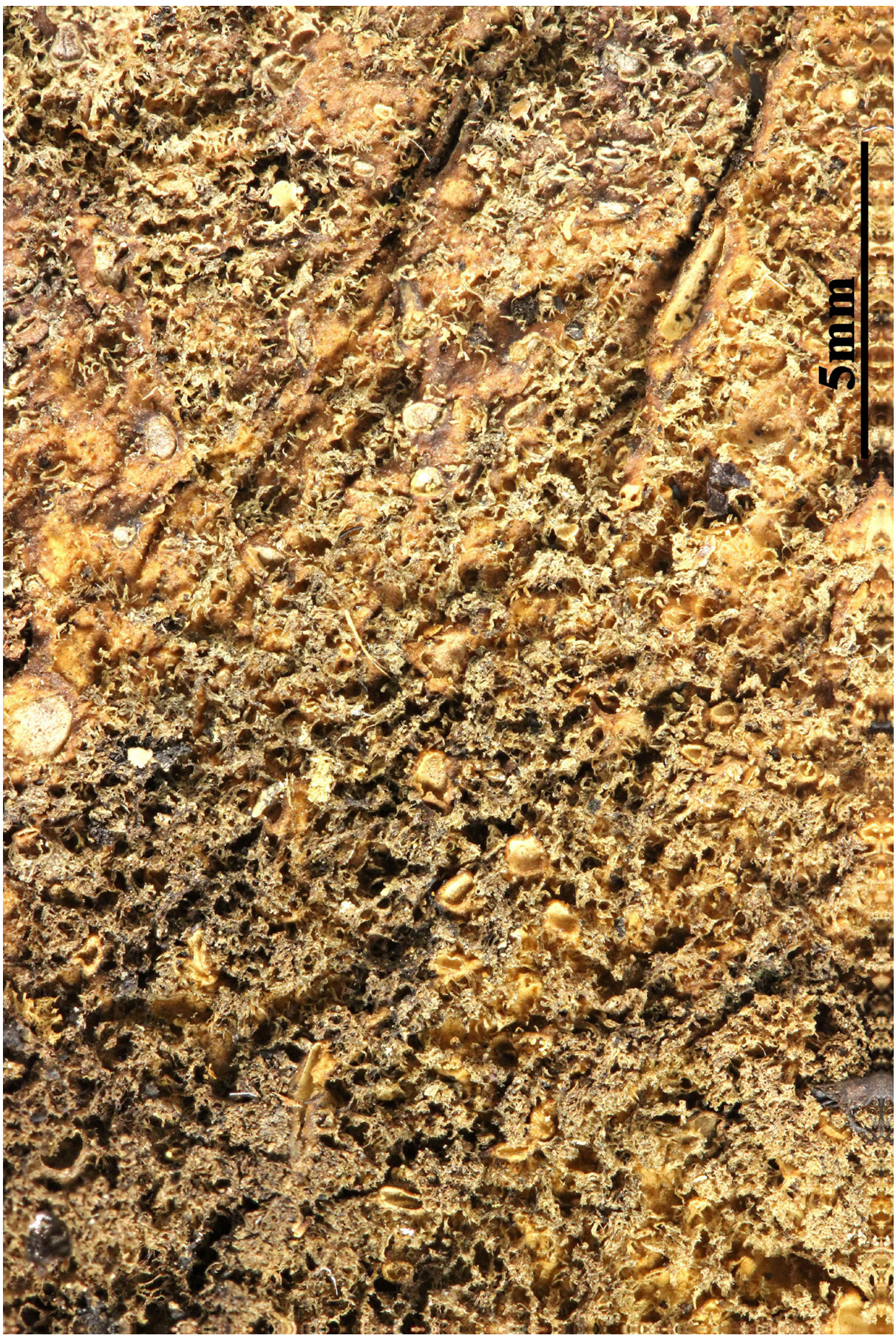
Thallus loosely adnate, greyish brown to medium brown. Photobiont *Nostoc.* Lobes irregularly orbicular, up to 10 em wide. Upper side scrobiculate. Under side pale to medium brown. Isidia and soredia absent. Apothecia usually present, shortly stipitate, thalline exciple somewhat nodular, sometimes pubescent. Spores 30-40 x 610 µm, 1-3 septate. Corticolous and muscicolous in montane forest at 1900 to 3200 m, Widespread in the tropics.



Sticta ambavillaria



Sticta ambavillaria



Sticta ambavillaria

Sticta canariensis (Bory) Bory ex Delise, Hist. Lich. Sticta: 114 (1822)
= *Pulmonaria canariensis* Bory 1809

[VZ1554], Magna Britannia. Caledonia. Kircudbrightshire, Gatehouse of Fleet, Kirkdale, Dirk Hatteraick's cave. Ad rupes umbrosas in silva frondosa. Leg. P. W. James, 26.4.1976. Ex A. VěZDA LICHENES SELECTI EXSICCATI NR. 1554.

Thallus foliose, heteromerous, dorsiventral, broad-lobed, palmate or irregular in outline, loosely attached, blue-grey to grey-brown, sometimes white-marbled, matt, 1-5(-8) cm in diam., often forming large colonies. Lobes suborbicular to ligulate in outline, smooth or rarely scrobiculate-foveolate, rather thin (to 240 µm thick) and brittle when dry, overlapping, simple or slightly branched, 1-2 cm wide, with ascending, irregularly and minutely incised, phyllidiate margins. Phyllidia 0.5-0.8(-1.2) mm long, dichotomously and several times branched, forming dense, shortly stipitate and imbricate, minute clusters on thallus margins, sometimes invading the upper surface, concolorous with thallus or darker. Lower surface wrinkled or foveolate, minutely felted-tomentose, pale orange-brown, with whitish, scattered, circular to angular, 0.3-0.8(-1) mm wide, white cyphellae, whose membrane is made of 1-4 layers of irregular cells. Upper cortex paraplectenchymatous, 20-25 µm thick, with 2–3 layers of isodiametrical cells, or with an upper layer made of a single layer of smaller cells; medulla white; lower cortex paraplectenchymatous, 20-30 µm thick, with 2-3 layers of isodiametrical cells. Apothecia and pycnidia unknown. Photobiont cyanobacterial (Nostoc, the cells in clusters or short chains). Spot tests: cortex and medulla K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a humid subtropical lichen found on bark and epiphytic mosses in very moist forests, sometimes on mossy rocks. The morph with cyanobacteria is the only one occurring in Italy. Presently it is probably restricted to a few localities in western Calabria.



Sticta canariensis fricana



Sticta canariensis



Sticta canariensis

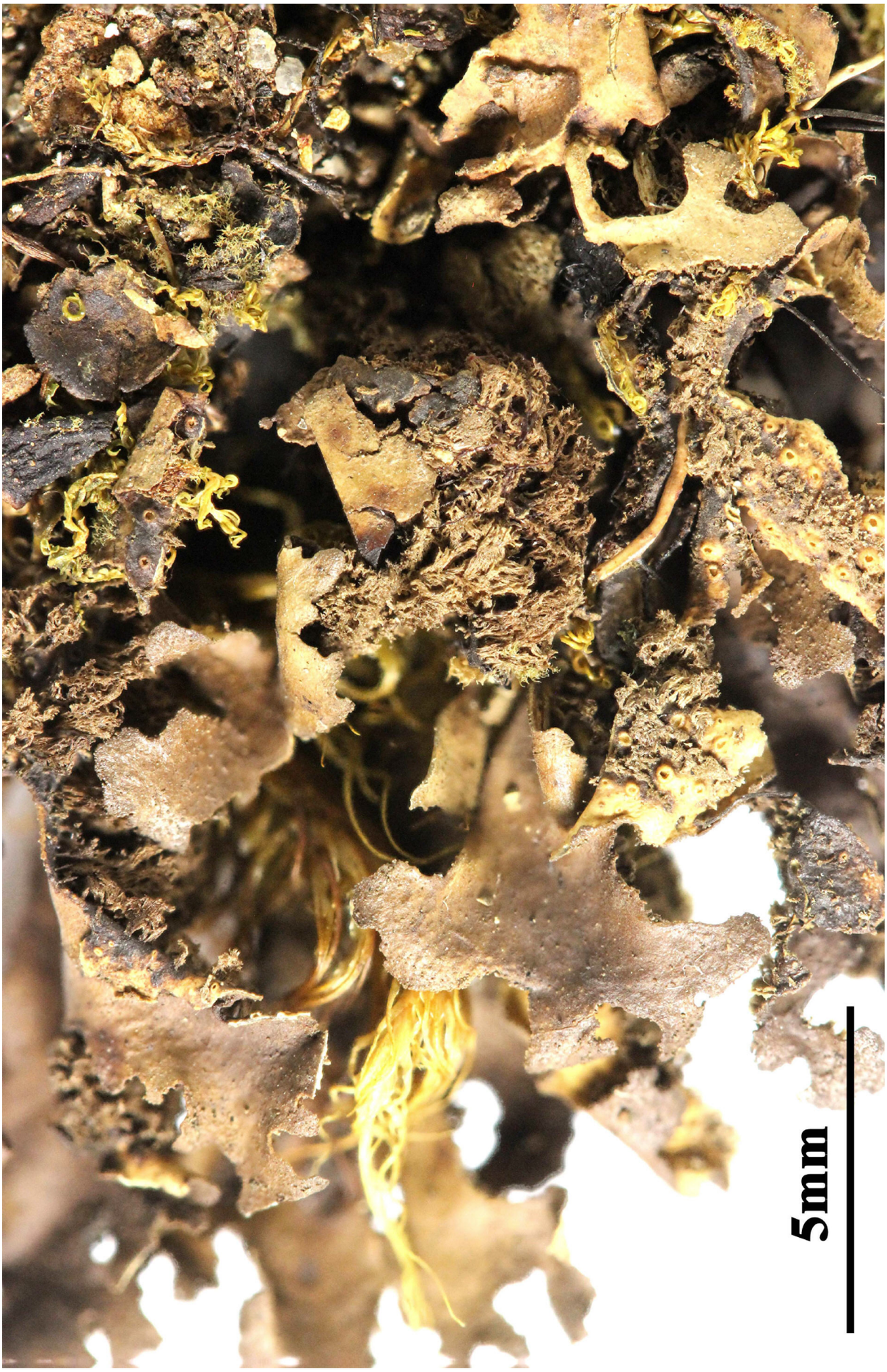
Sticta cyphellulata (Müll. Arg.) Hue, Nouv. Arch. Mus. Hist. Nat., Paris, 4 sér. 3: 99 (1901)
= *Stictina cyphellulata* Müll. Arg. 1882

[VZ2398], Tanzania. Distr. Morogoro, montes Uluguru: planites "Lukwangule", prope rupem Ulindi dictam, 2250.2300 m. Ad terram macram. Leg. T. Pócs (no. 8638), 14.3.1986, det. D. Galloway. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 2398.

Thallus shortly stipitate, pale greyish brown. Photobiont *Nostoc*. Lobes linear to obovate, up to 1 cm wide. Upper side smooth. Under side dark brown. Isidia mainly marginal, occasionally in laminal clumps, branched, dark greyish brown. Apothecia sessile to shortly stipitate. Spores 40-50 x 10-15 µm, becoming 5-7 septate. Corticolous in shady montane forest at c. 2000 m alt., rare. - Africa, Australasia.



Sticta cyphellulata



Sticta cyphellulata



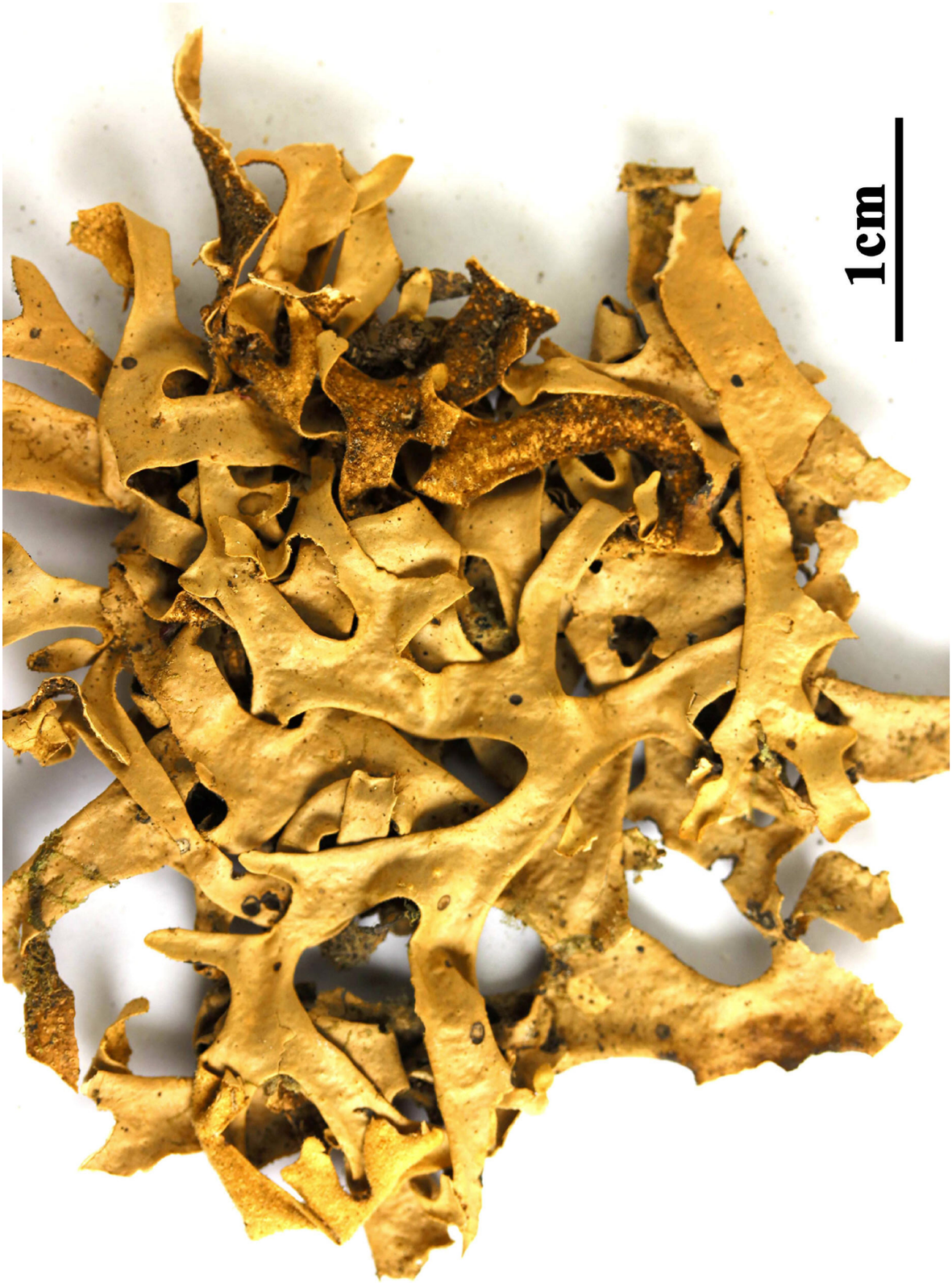
Sticta cyphellulata

Sticta damicornis (Sw.) Ach., Methodus, Sectio post. (Stockholmiæ): 276 (1803)
= *Lichen damicornis* Sw. [as 'damaecornis'] 1788

[VZ1680}, Cuba. Oriente. Prov. Santiago de Cuba: Sierra de la Gran Piedra, Pico Mogota, 900-1000 m. Ad truncum arboris in pluviisilva. Leg. T. Pócs (no. 9123), 26.5.1979, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1680.

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

described in 1788 and the latter in 1809, and as a consequence the name *S. damaecornis* takes precedence (Galloway 1994b & 1995). In addition, the two taxa appear distinct and are not given as synonyms here.



Sticta damicornis



Sticta damicornis



Sticta damicornis

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

[VZ1838], Nova Zelandia. South Island: Otago, 7 km austr.-occid. versus ab Owaka, Hinahina State Forest, secundus viam Mill Creek dictam, 46°32' austr., 169°41' orient., 150 m. Supra muscos ad radices *Nothofagi menziesii* in silva. Leg. et det. L. Tibell (no. 10214), 10.1.1981. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1838.

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



Sticta filix



Sticta filix



Sticta filix

Sticta sinuosa Pers., in Gaudichaud-Beaupré in Freycinet, Voy. Uranie., Bot. (Paris) 4: 200 (1827) [1826-1830]

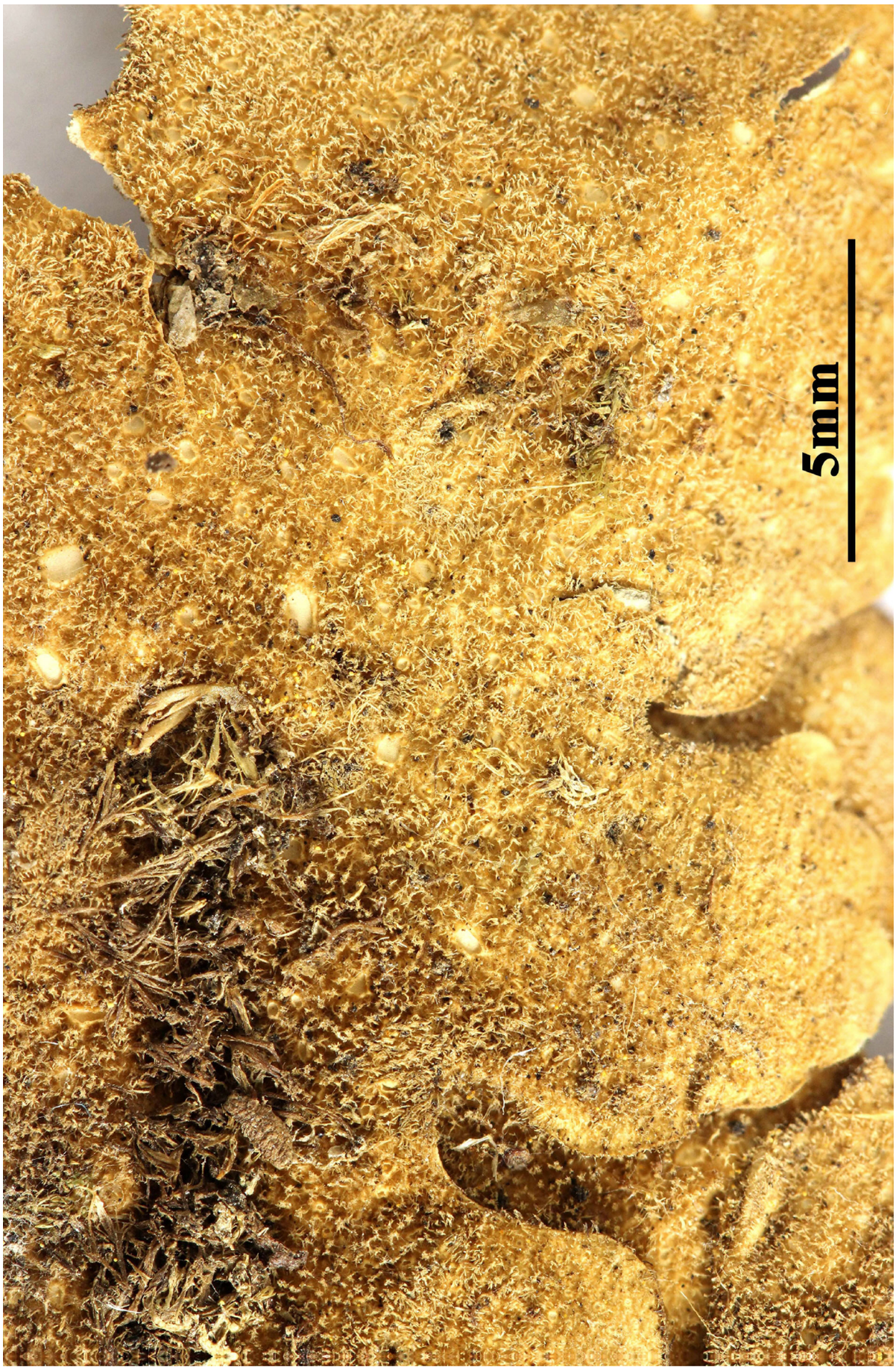
[VZ1709], Costa Rica. Cartago: Cerro de la Muerto, in monte Asunción, 1000 m. Ad arbores. Leg. W. L. Culberson (12408), 28.3.1967., det. A. Vězda. EX A. V ěZDA LICHENES SELECTI EXSICCATI NR. 1709.

[VZ2041], Panama. Chiriquí: Boquete, super oppidum, 1650 m. Ad truncum arboris. Leg. W. L. Culberson (no. 19372) et C. F. Culberson, 14.7.1983. - Annot.: Faint terpene-like spots by TLC; A. Johnson and C. F. Culberson. - EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 2041.

A green photobiont species described from Brazil



Sticta sinuosa

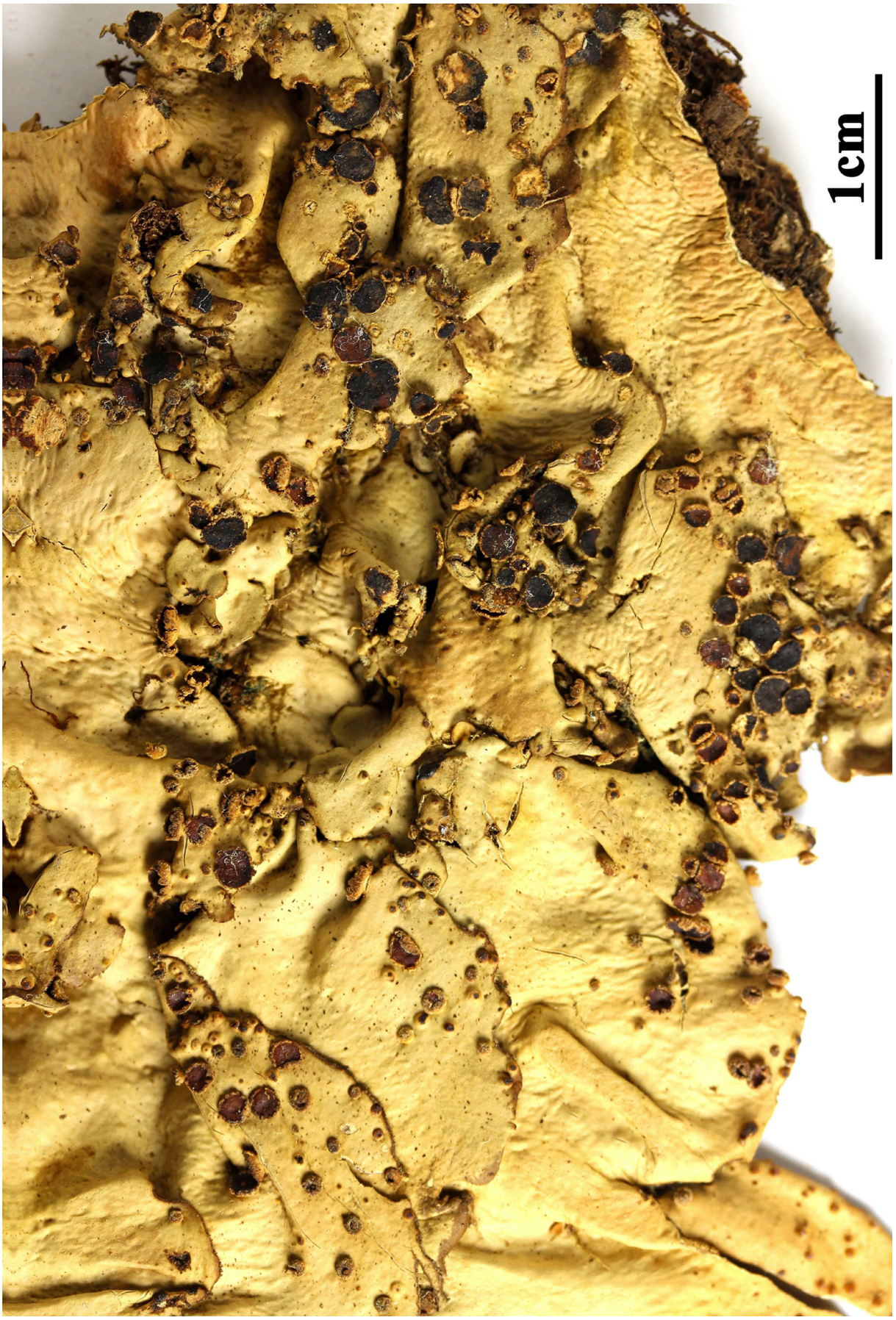


Sticta sinuosa

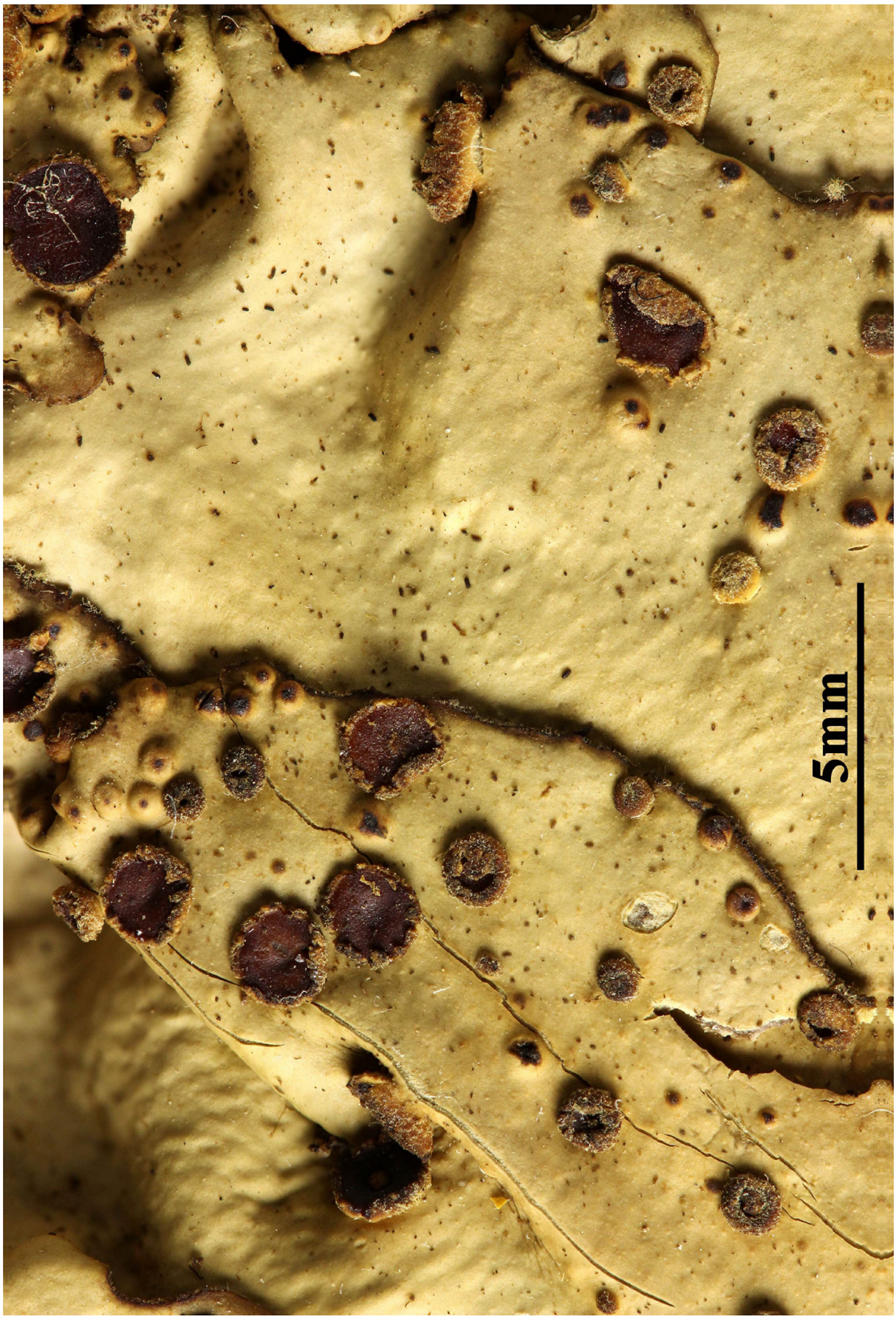
Sticta sinuosa Pers., in Gaudichaud-Beaupré in Freycinet, Voy. Uranie., Bot. (Paris) 4: 200 (1827) [1826-1830]

[VZ2041], Panama. Chiriquí: Boquete, super oppidum, 1650 m. Ad truncum arboris. Leg. W. L. Culberson (no. 19372) et C. F. Culberson, 14.7.1983. - Annot.: Faint terpene-like spots by TLC; A. Johnson and C. F. Culberson. - EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 2041.

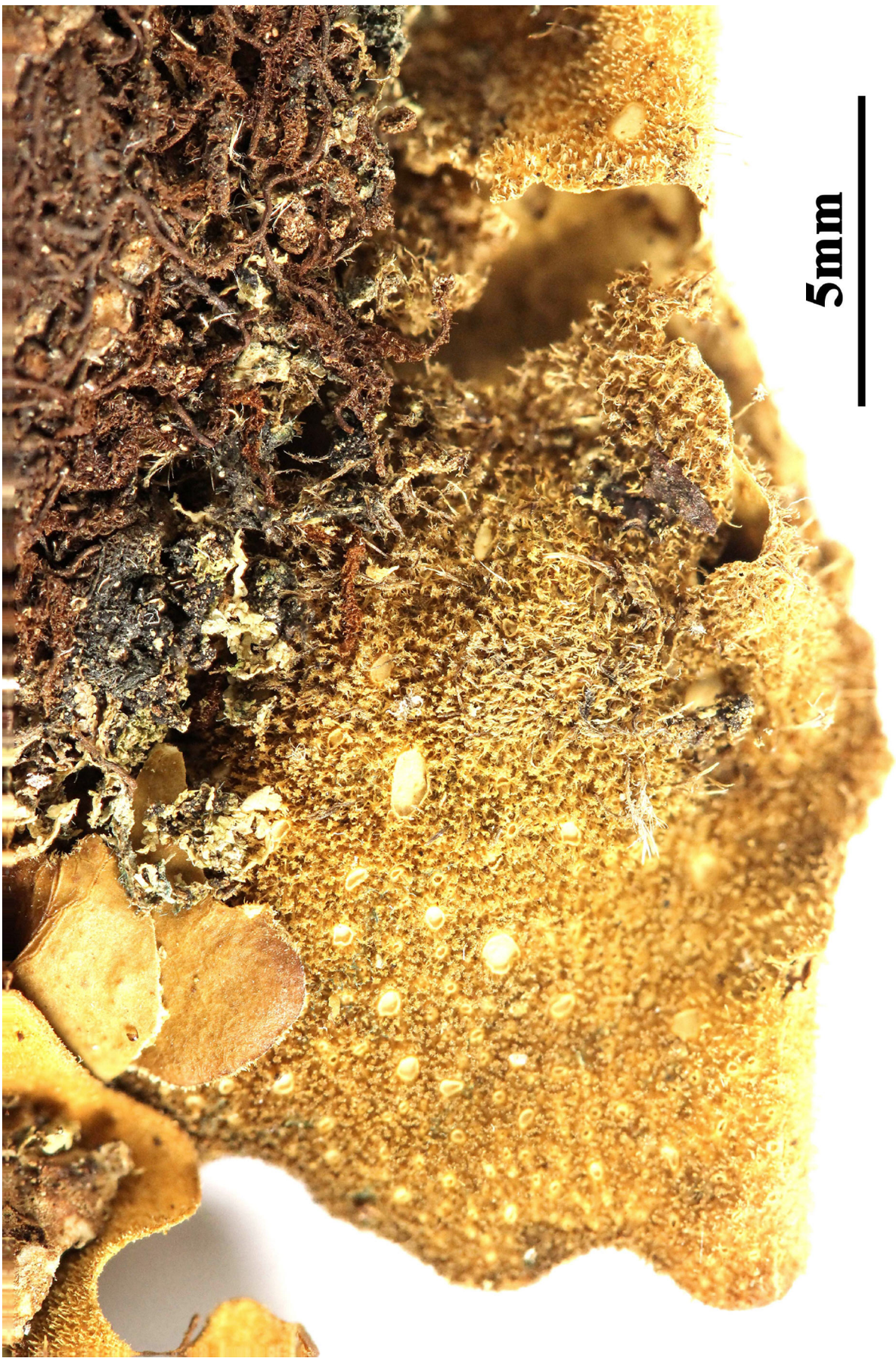
A green photobiont species described from Brazil



Sticta sinuosa



Sticta sinuosa

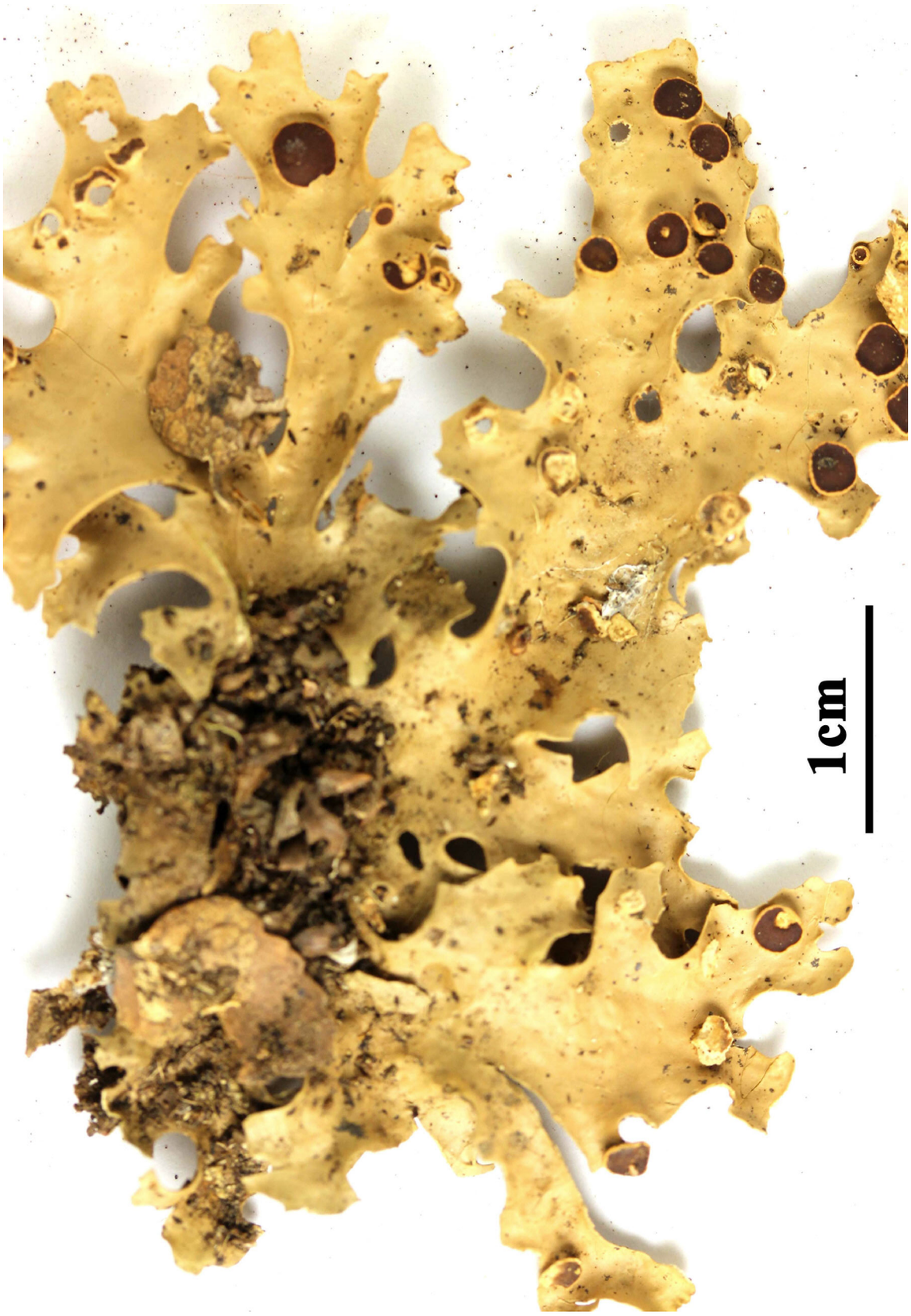


Sticta sinuosa

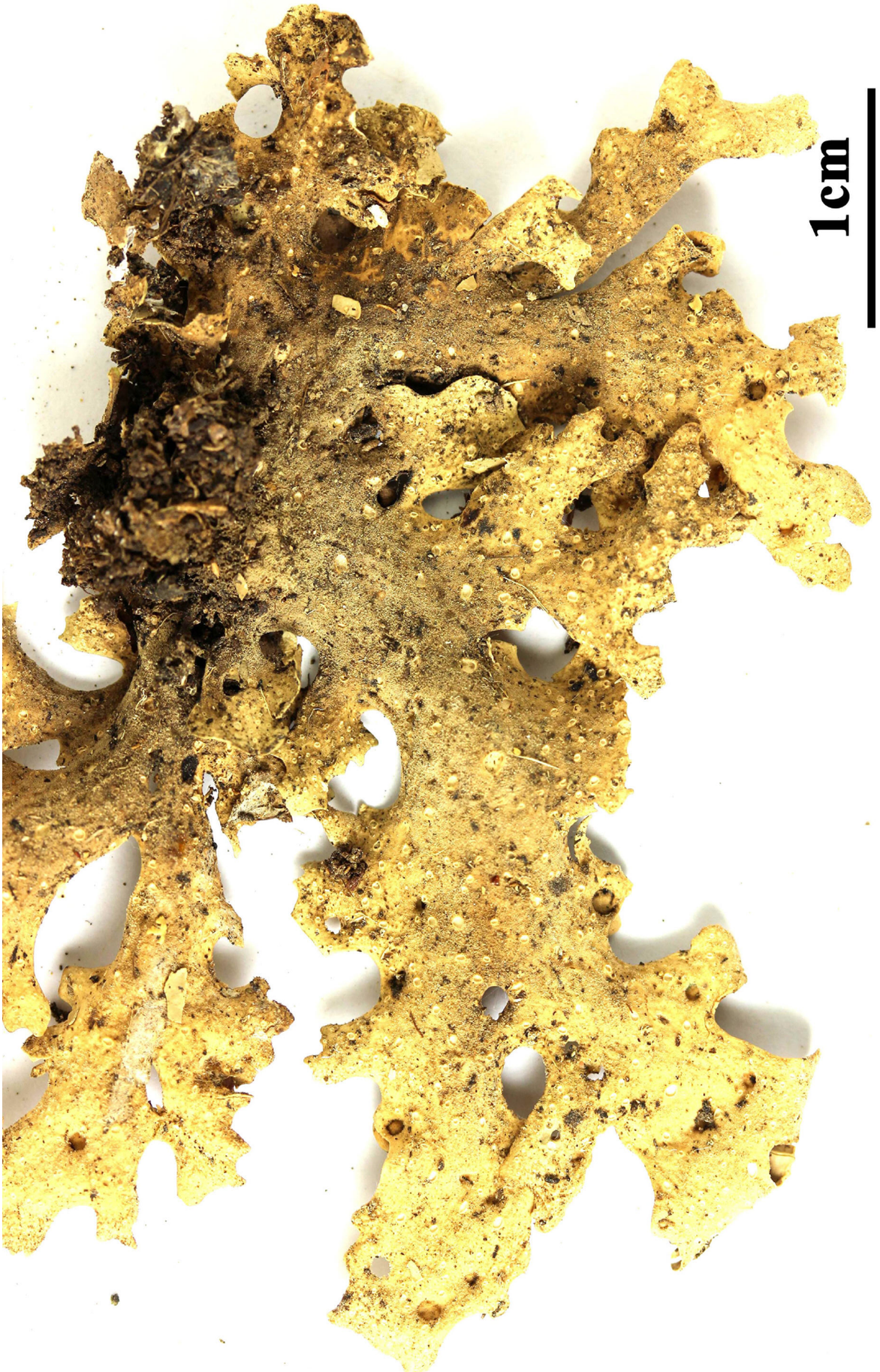
Sticta stipitata C. Knight, in Wilson, Proc. R. Soc. Qd. 7: 10 (1891)
= *Sticta shirleyana* Müll. Arg., Hedwigia 32(2): 122 (1893)
= *Sticta stipitata* C. Knight, Pap. Proc. R. Soc. Tasm.: 167 (1893) [1892]

[VZ2463], Australia. Tasmania. Belmont, lat. 41°23.5' austr., long. 145°32' orient, 460 m. Ad truncos arborum in pluviisilva. Leg. G. Kantvilas (no. 281/89), 9.10.1969. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2463.

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



Sticta stipitata



Sticta stipitata



Sticta stipitata



Sticta stipitata

Sticta sylvatica (Huds.) Ach., Methodus qua omnes detectos Lichenes Secundum Organa Carpomorpha ad Genera, Species et Varietates Redigere atque Observationibus Illustrare Tentavit Erik Acharius: 281 (1803)
= *Lichen sylvaticus* Huds. 1762

[VZ1943], Gallia. Cantal, ad meridiem versus a Claux. Bois Mary. Ad basim trunci *Fagi*. Leg. et det. E. Sérusiaux (no. 6030), 7.1983. Ex A. VěZDA Lichenes Selecti Exsiccati Nr. 1943.

Thallus foliose, heteromerous, dorsiventral, broad-lobed, isidiate, subcoriaceous but brittle when dry, 1-5 cm in diam., but often forming 10-20 cm wide colonies with several intermingled and overlapping thalli. Young lobes not stipitate; mature lobes strap-shaped, 0.4-0.8 cm wide, 1-3(-5) times dichotomously branched, glossy, involute, usually with ascending, rounded to irregularly dissected margins, forming slightly concave, fan-shaped forms. Upper surface usually dark brown when wet, paler and sometimes bluish grey when dry, foveolate or scrobiculate with shallowly reticulated ridges. Isidia developing mainly on lobe margins or on ridges of the upper surface, sometimes covering large parts of the thallus, at fist globose, but soon developing up to 0.5 mm high and wide, coralloid masses, very brittle and easily detached, dark brown to black. Lower surface uneven or slightly foveolate, dark brown, black at least in basal parts, tomentose throughout, with rounded to slightly irregular, 0.8-1.1 mm wide, erumpent and slightly involute pseudocyphellae, the pore 0.5-0.7 mm in diam., the membrane white, made of 1-2 layers of rounded or rarely irregular cells which rarely may produce c. 4 µm wide papillae. Upper cortex paraplectenchymatous, 30-40 µm thick, of 4-5 layers of isodiametrical cells, the uppermost layer distinct, made of a single row of smaller, c. 5-8 µm wide cells with thicker walls; medulla white, lax, 50-60 µm thick; lower cortex paraplectenchymatous, 20-30 µm thick, with 2-4 layers of isodiametrical, thick-walled cells. Primary tomentum formed of bunches of 0.1-0.4 mm long, cylindrical hyphae, adglutinated except at the tips, the apical cells distinctly shorter, slightly moniliform and probably producing vegetative diaspores. Apothecia and pycnidia absent. Photobiont cyanobacterial (Nostoc, the cells forming an almost continuous layer). Spot tests: cortex and medulla K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a western species in Europe, found on mossy trunks and on epilithic bryophytes in natural forests.



Sticta sylvatica



Sticta sylvatica



Sticta sylvatica

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

[1403], Mexico. Chiapas: 10 km ad occidentem a San Cristobal de las Casas. Ad corticem *Quercus* in pascuo montano. Leg. W. L. Culberson et C. F. Culberson (no. 16500), 28.12.1975. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1403.

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



Sticta weigelii



Sticta weigelii



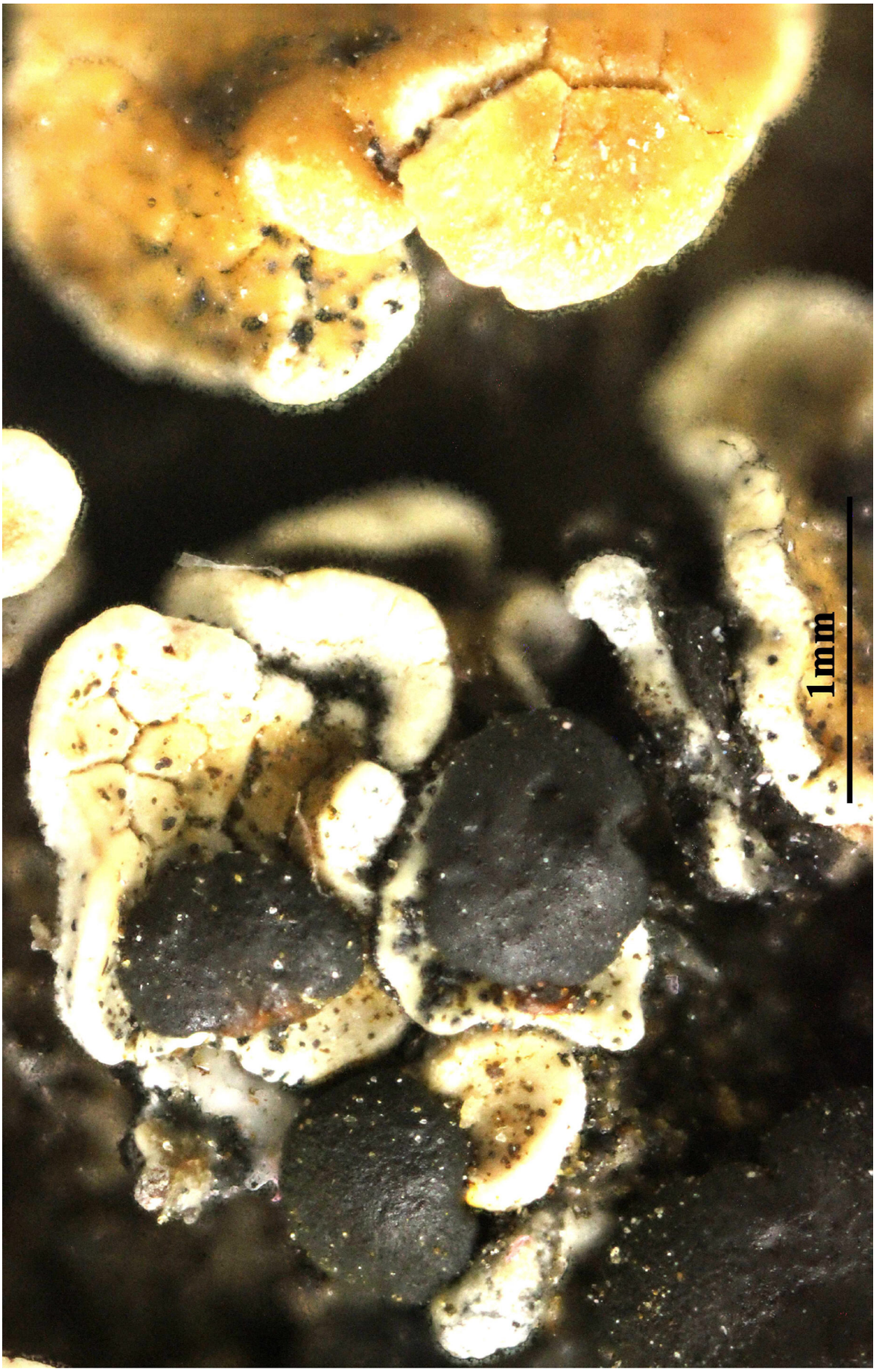
Sticta weigelii

Stigmidium psorae (Anzi) Hafellner, in Vězda, Lichenes Selecti Exsiccati, Fascicle 79 (Průhonice): 7 (no. 1975) (1984)
= *Sphaerella psorae* Anzi 1868
= *Stigmidium allogenum* (Nyl.) D. Hawksw., Kew Bull. 30(1): 201 (1975)

[VZ1975], Groenlandia occidentalis. Disko, in planitie ad orientem versus a Statione Arctica Godhavn, 50-100 m. Ad terram basalticam loco venti exposito, in thallo lichenis (*Psora rubiformis*) parasitans. Leg. J. Poelt et H. Ullrich, 17.7.1983, det. J. Hafellner. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1975.



Stigmidium psorae



Stigmidium psorae

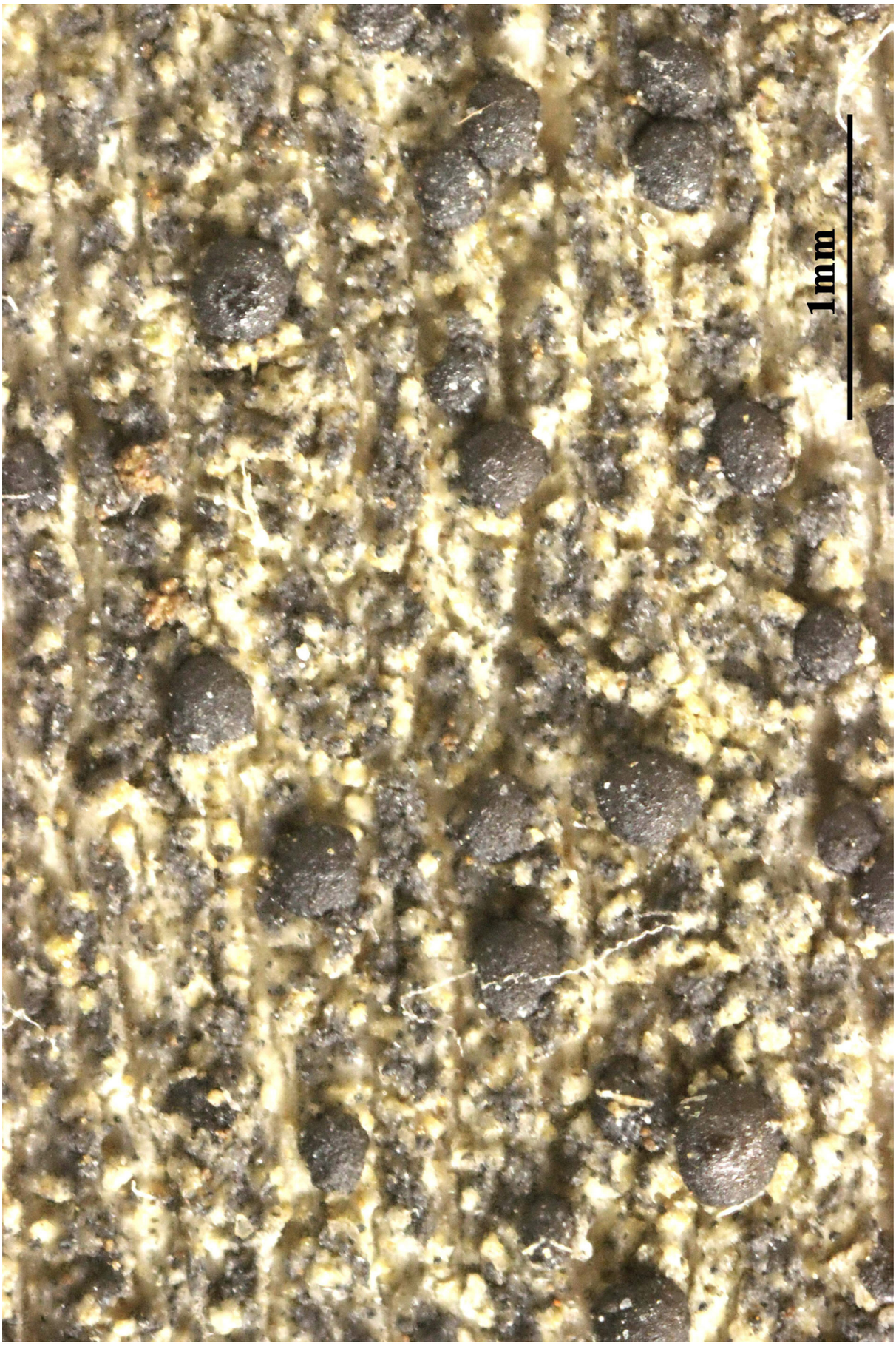
Strangospora moriformis (Ach.) Stein, in Cohn, Krypt.-Fl. Schlesien (Breslau) 2(2): 176 (1879)
= *Arthonia moriformis* Ach. 1814

[VZ1992], Bohemoslovacia. Bohemia, distr. Praga. Inhorto publico prope pagum Průhonice, 250 m. Ad trabes ponticuli. Leg. J. Liška et A. Vězda, 29.11.1984. EX A. VĚZDA. LICHENES SELECTI EXSICCATI NR. 1992.

Thallus crustose, endosubstratic or irregularly granular, pale grey, usually poorly evident. Apothecia biatorine, 0.25-0.5 mm across, with a black to (rarely) black-brown, strongly convex disc, and a thin to almost absent proper margin. Proper exciple poorly developed, K-; epithecium olive-green, emerald-green or violet, K+ pale greenish grey, usually N+ purple; hymenium blue-green, olive-grey or colourless, 50-80(-110) µm high; paraphyses strongly coherent, branched and anastomosing, 0.5-1 µm thick at mid-level, the apical cells 2-2.5 µm wide; hypothecium grey, 50-70 µm high. Asci 100-200(-300)-spored, broadly clavate, thickened in upper part, without a gelatinous outer layer, the wall and well-developed apical dome strongly K/I+ blue. Ascospores 1-celled, hyaline globose, (1.3-)2-3(-3.5) µm wide. Pycnidia rare, globose, colourless to brown, the wall emerald green in upper half, brown to hyaline in lower part. Conidia simple, hyaline, oblong, 2.5-3.5(-4) x 1-1.7 µm. Photobiont chlorococcoid, with ellipsoid cells. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: on hard lignum (e.g. on wooden poles), and on the bark of conifers, rarely of deciduous trees, mostly on the basal parts of old trunks.



Strangospora moriformis



Strangospora moriformis

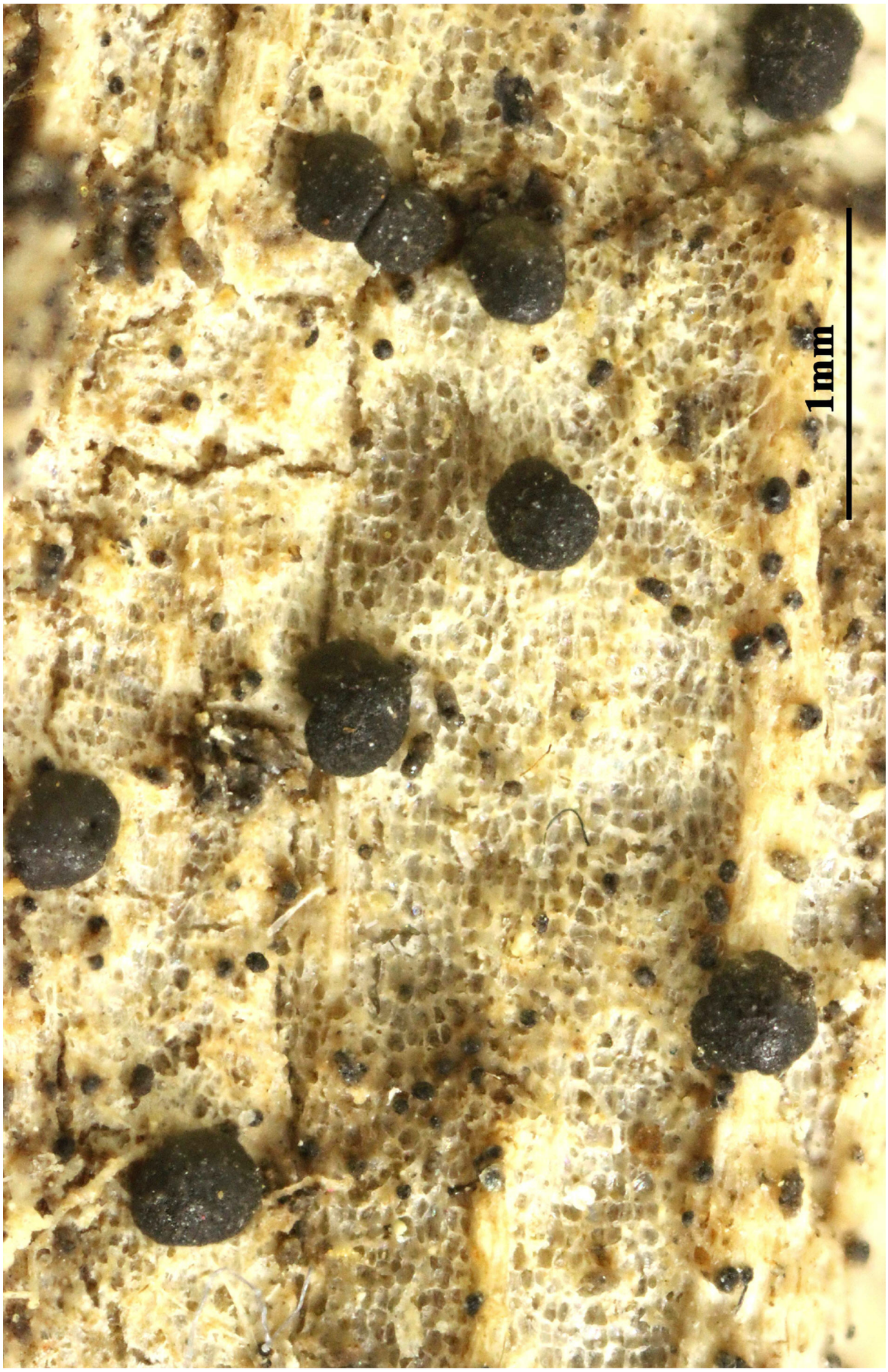
Strangospora senecionis Lambinon & Vězda, Folia geobot. phytotax. 14(2): 206 (1979)

[VZ1657], Zaire. Prov. Kivu, Birunga montes, in planitie Rukumi montis ignivomi Karisimbi, 3550 m. Ad corticem et lignum truncorum vetustorum *Senecionis johnstonii* ssp. *refractisquamati*. Leg. J. Lambinon (no. 72/230) - Isotypus - EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1657.

Thallus epixylinus vel epiphloeodes, tenuissimus, albidus, vulgo fere indistinctus. Apothecia lecideina, livida, livido-fusca, vulgo autem nigra, nitida, basi arcte constricta, primum tenuiter marginata disco subplano, mox tamen hemisphaerica vel subglobosa, margine indistincto, 0.4—0.7 mm lata. Excipulum ex hyphis radiantibus contextum, fuligineum. Hypothecium fuligineo-nigrum, intus nigro-fuscum, K-. Hymenium 50-60 µm altum, in parte epitheciali fuligineum. Paraphyses ramosae, ramis superioribus erectis simplicibus, apicibus incrassatis, atro-coloratis. Asci cylindrico-clavati, membranis extus haud gelatinosis, polyspori, sporis circ. 30, simplicibus, cylindraceis, 8-12 µm longis, 2 µm crassis. Pyecnidia sessilia, globosa, nigra, ostiolo punctiformi. Pycnosporae 3.3 µm longae, 1 µm crassae. Hab.: Ad corticem et lignum truncorum vetustorum *Senecionis johnstonii* ssp. *refractisquamati*. Species haec praesertimsporiscylindraceis



Strangospora senecionis



Strangospora senecionis

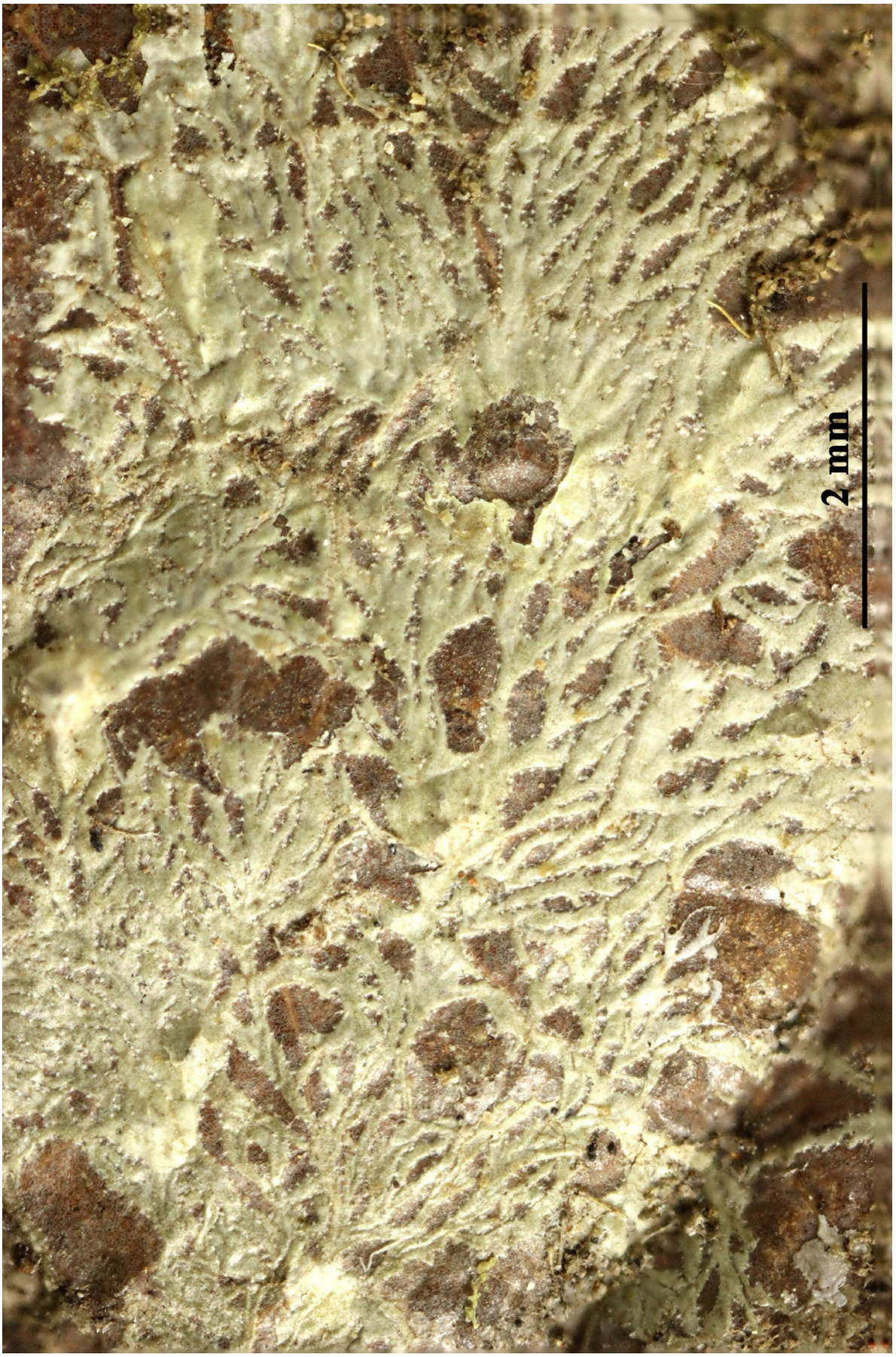
Strigula concreta (Fée) R. Sant., Symb. bot. upsal. 12(no. 1): 177 (1952)
= *Craspedon concretum* Fée 1825

[VZ1839], Brasilia, Rio de Janeiro, Itatiaia, inter Engeneiro Passos et Registro do Picú, 1050 m. In pluviisilva humida. Leg. K. Kalb, 15.3.1080., det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1839.

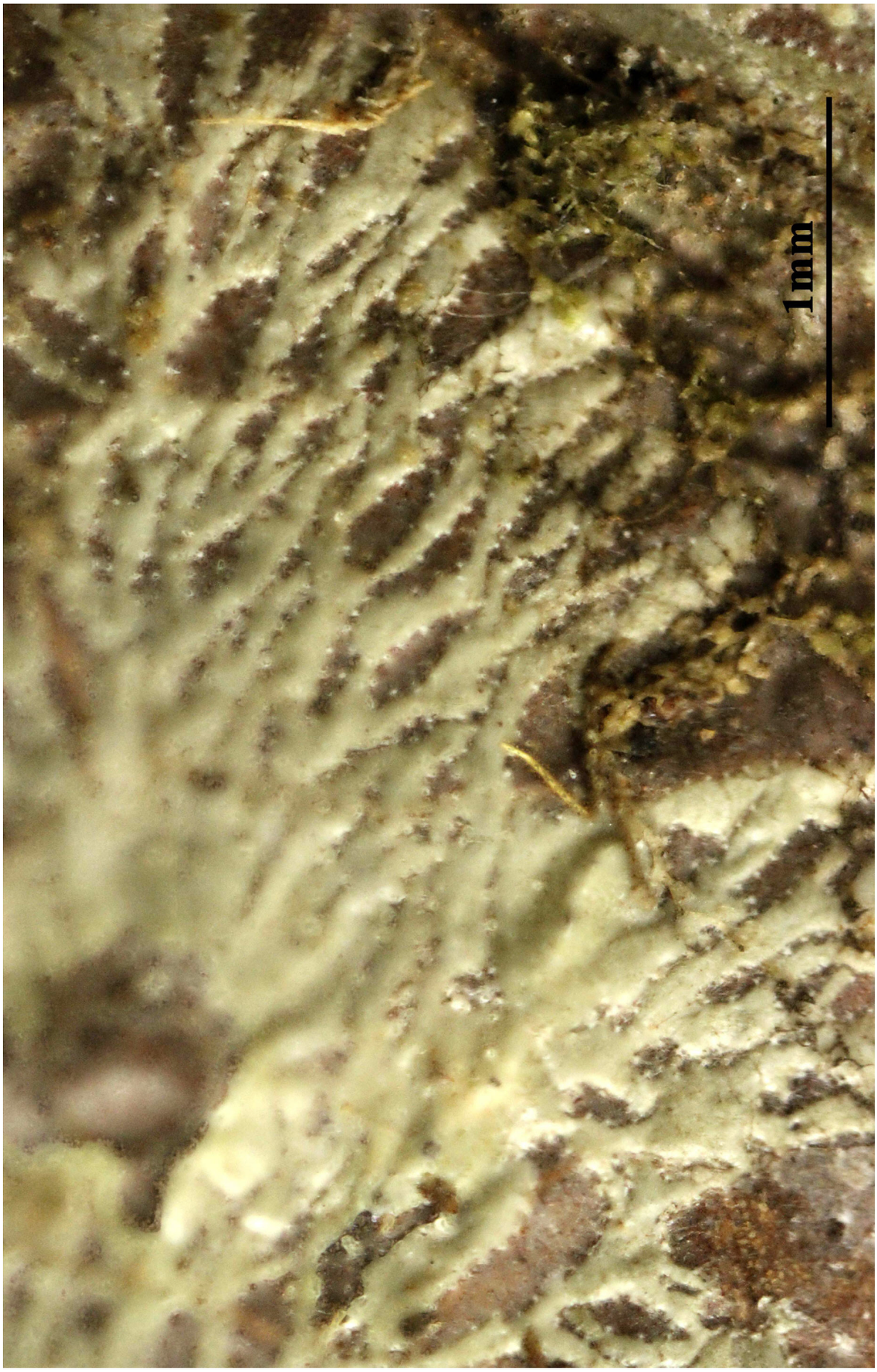
Thallus subcuticular, dispersed into rounded to irregular, confluent patches, 5–20 mm across and 15–30 µm thick, typically with crenulate or shortly lobulate margins, pale greyish green to green. Photobiont a species of *Cephaleuros*, cells angularrounded, 8–15 x 4–6 µm, in irregular plates forming 1 to several layers. Perithecia immersed only at base, otherwise exposed, hemispherical to wart-shaped or conical, 0.3-0.6 mm diam. and 120-180 µm high, black. Excipulum prosoplect-enchymatous, 7–15 µm thick, colorless to brown. Involucrellum carbo-naceous, 15–30 µm thick, black. Paraphyses unbranched. Asci cylindrical, 50–70 x 4–6 µm. Ascospores uniseriate, ellipsoid, 1-sep-tate, with distinct constriction at septum and often broken into parts outside asci, 8–12 x 2.5–3 µm, 3–4 times as long as broad. Pycnidia semi-immersed, wart-shaped, those producing macroconidia 0.1–0.15 mm, those producing microconidia 0.05–0.1 mm diam., black. Macro-conidia bacillar, non-septate, 4–6 x 1.8–2.3 µm. Microconidia fusiform, non-septate, 4–5 x 1.5–2 µm. Chemistry: no substances detected by TLC. Distribution and Ecology. Pantropical. A common species with wide, ecological amplitude, most frequently found in humid, semi-exposed habitats.



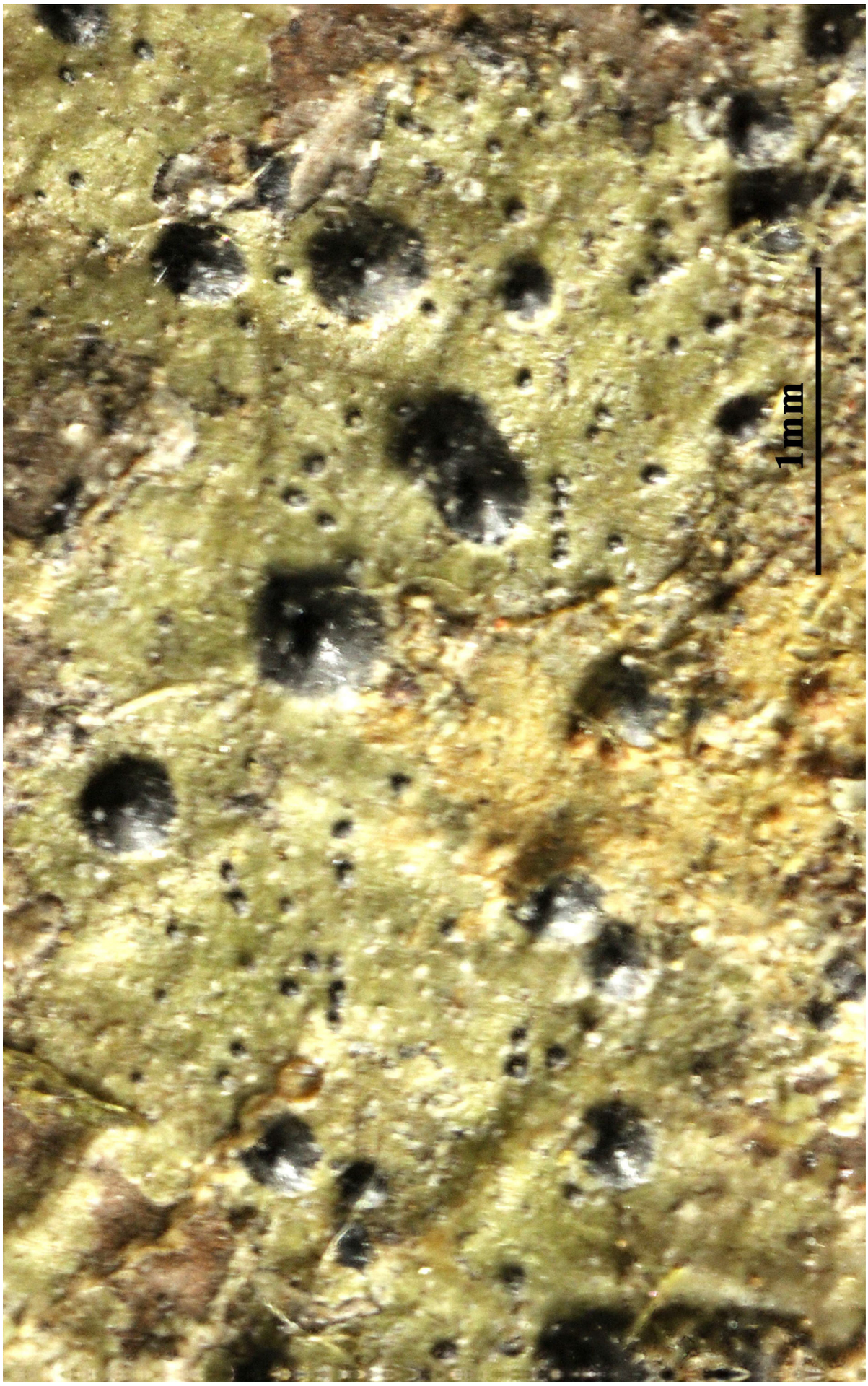
Strigula concreta



Strigula concreta



Strigula concreta

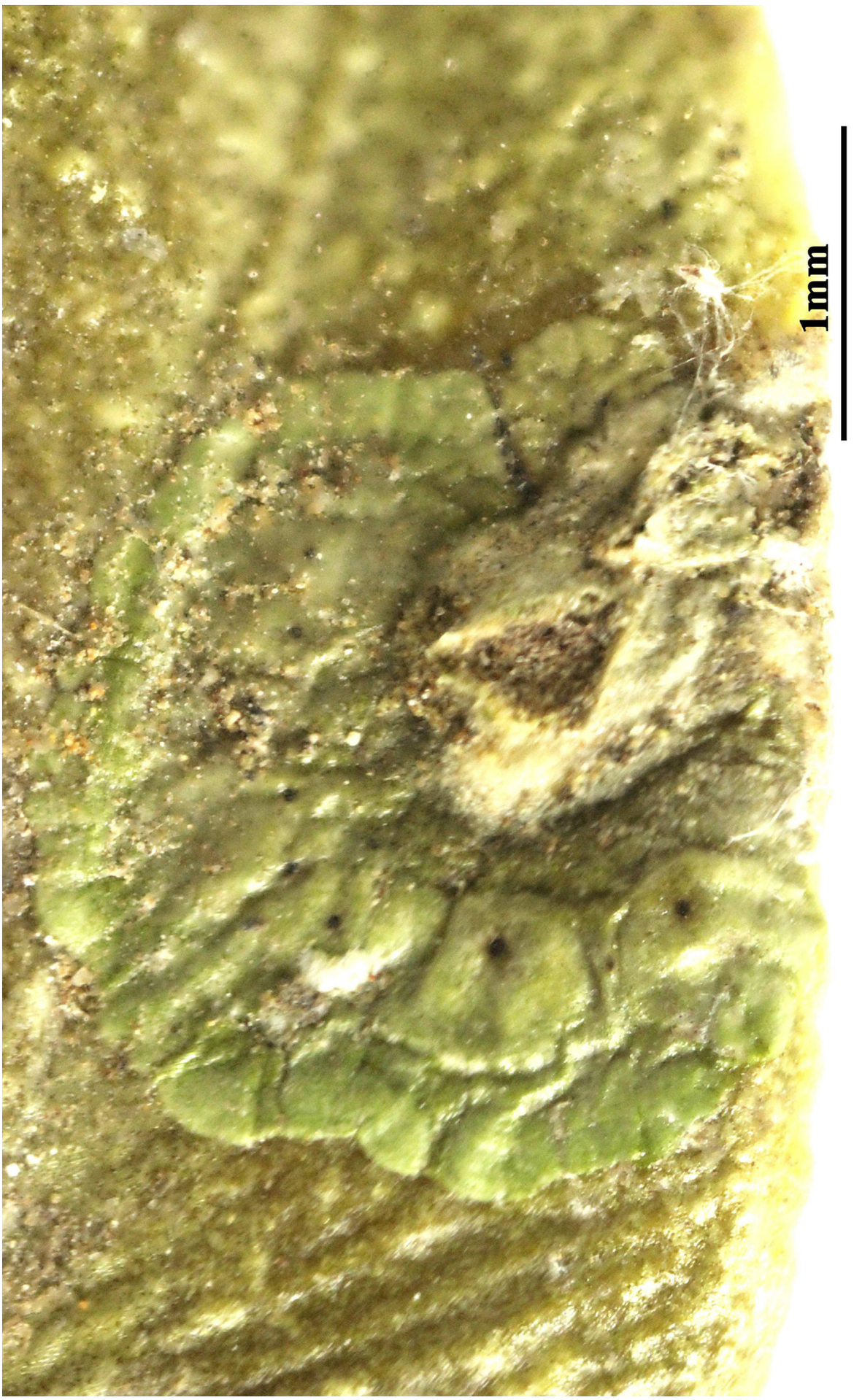


Strigula concreta

Strigula elegans (Fée) Müll. Arg., Flora, Regensburg 63(3): 41 (1880)
= *Phyllocharis elegans* Fée 1825
= *Strigula smaragdula* Fr., Linnaea 5: 550 (1830)

[VZ1764], URSS. Transcaucasia, Colchis. Distr. Suchumi, in valle fluvii Kelasuri prope pagum Bachmarani, 150 m. Ad folia *Buxi colchicae*. Leg. V. Vašák, 17.7.1980, det. A. Vězda. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1764.

Thallus subcuticular, continuous or dispersed into rounded to irregular, partly confluent patches, 5–25 mm across and 20–80 µm thick, with entire to crenulate or lobulate margins, sometimes whole thallus lobate-laciniate, bright green. Photobiont a species of Cephaleuros, cells angular-rounded, 5–15 x 4–10 µm, in irregular plates forming 1 to several layers. Perithecia immersed-erumpent, covered by algiferous, thallus tissue mostly up to ostiolum, hemispherical, 0.3–0.6 mm diam. and 120–180 µm high, dark green but uppermost part often black. Excipulum prosoplectenchymatous, 5–15 µm thick, colorless to brown. Involucrellum carbonaceous, 20–30 µm thick, black. Paraphyses unbranched. Asci obclavate, 60–80 x 8–12 µm. Ascospores biseriate, fusiform, 1-septate, with distinct constriction at septum, 14–24 x 4–6 µm, 3–4 times as long as broad. Pycnidia semi-immersed, wart-shaped, those producing macroconidia 0.1–0.15 mm, those producing microconidia 0.05–0.1 mm diam., black. Macroconidia bacillar, 1-septate, 12–20 x 3–4 µm. Microconidia fusiform, non-septate, 4–5 x 1.5–2 µm. Chemistry: no substances detected by TLC. Distribution and Ecology. Pantropical. Together with *Porina epiphylla, Gyalectidium filicinum*, and *Byssoloma leucoblepharum*, one of the most common foliicolous lichens, but unlike those species with a much wider, ecological amplitude. Found at all elevations and in all microsite types, although, especially with its pycnidial stage, most frequent in exposed, drier situations.



Strigula elegans



Strigula elegans

Strigula nemathora Mont., in Sagra, Hist. phys. Cuba, Bot. Pl. Cell. 9: 96 (1845)

= *Puiggariella nemathora* (Mont.) S.H. Jiang, Lücking & J.C. Wei, in Jiang, Lücking, Xavier-Leite, Cáceres, Aptroot, Portilla & Wei, Fungal Diversity 102: 282 (2020)

[VZ1102], Republica Guinea (Africa occident.) Regio Macenta, montes Ziama, in vicinitate collis Séredou, 900 m. Ad folia arborum. Leg. S. Lisowski, 25.3.1062, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1102

Thallus subcuticular, continuous or laciniate and forming thin to rather broad, radiating, often confluent lobes, 5–25 mm across and 25–50 µm thick, minutely papillose, pale greenish grey and sometimes with a slight blue tinge; papillae formed on thallus surface or bordering individual lobes, 0.02–0.03 mm diam., white. Photobiont a species of Cephaleuros, cells angular-rounded, 5–17 x 5–9 µm, in irregular plates forming 1 to several layers. Perithecia semi-immersed and covered by a thick, thallus layer up to ostiole, wart-shaped and often ridged, 0.4–0.7 mm diam. and 150–300 µm high, pale greenish grey to white but upper part often darker grey. Excipulum prosoplectenchymatous, 10–15 µm thick, colorless. Involucrellum confluent with excipulum, 20–40 µm thick, colorless to pale brown. Paraphyses unbranched. Asci cylindrical, 70–100 x 7–10 µm. Ascospores irregularly biseriate, fusiform, 1-septate, with distinct constriction at septum, 15–22 x 4–6 µm, 3–4 times as long as broad. Pycnidia immersed-erumpent, wart-shaped, those producing macroconidia 0.1–0.15 mm, those producing microconidia 0.05–0.1 mm diam., pale to dark brownish grey. Macroconidia bacillar, 1-septate, 9–12 x 2.5–3 µm. Microconidia fusiform, non-septate, 3–5 x 1.3–1.7 µm. Chemistry: no substances detected by TLC.



Strigula nemathora



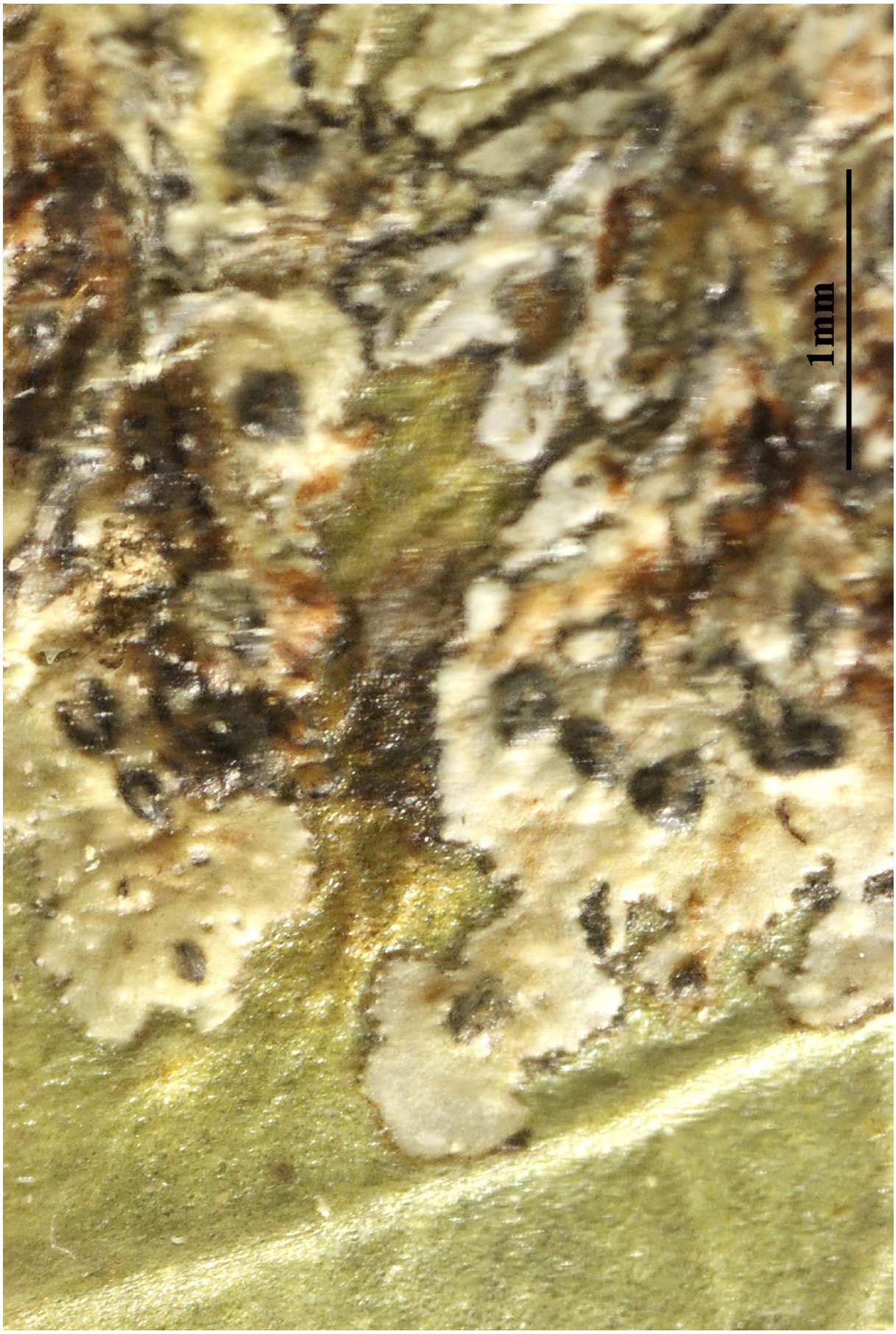
Strigula nemathora

Strigula nemathora Mont., in Sagra, Hist. phys. Cuba, Bot. Pl. Cell. 9: 96 (1845)

= *Puiggariella nemathora* (Mont.) S.H. Jiang, Lücking & J.C. Wei, in Jiang, Lücking, Xavier-Leite, Cáceres, Aptroot, Portilla & Wei, Fungal Diversity 102: 282 (2020)

[VZ1377], Zaire (Africa centralis). Prov. Kivu: ad latera austro-occidentalia montis Kahuzi, 2560 m. Epiphylla (Xymalos monospora) in pluviisilva montana, Leg. J. Lambinon (no. 71/1281), 28.12.1971. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1377.

Thallus subcuticular, continuous or laciniate and forming thin to rather broad, radiating, often confluent lobes, 5–25 mm across and 25–50 µm thick, minutely papillose, pale greenish grey and sometimes with a slight blue tinge; papillae formed on thallus surface or bordering individual lobes, 0.02–0.03 mm diam., white. Photobiont a species of Cephaleuros, cells angular-rounded, 5–17 x 5–9 µm, in irregular plates forming 1 to several layers. Perithecia semi-immersed and covered by a thick, thallus layer up to ostiole, wart-shaped and often ridged, 0.4–0.7 mm diam. and 150–300 µm high, pale greenish grey to white but upper part often darker grey. Excipulum prosoplectenchymatous, 10–15 µm thick, colorless. Involucrellum confluent with excipulum, 20–40 µm thick, colorless to pale brown. Paraphyses unbranched. Asci cylindrical, 70–100 x 7–10 µm. Ascospores irregularly biseriate, fusiform, 1-septate, with distinct constriction at septum, 15–22 x 4–6 µm, 3–4 times as long as broad. Pycnidia immersed-erumpent, wart-shaped, those producing macroconidia 0.1–0.15 mm, those producing microconidia 0.05–0.1 mm diam., pale to dark brownish grey. Macroconidia bacillar, 1-septate, 9–12 x 2.5–3 µm. Microconidia fusiform, non-septate, 3–5 x 1.3–1.7 µm. Chemistry: no substances detected by TLC.



Strigula nemathora



Strigula nemathora

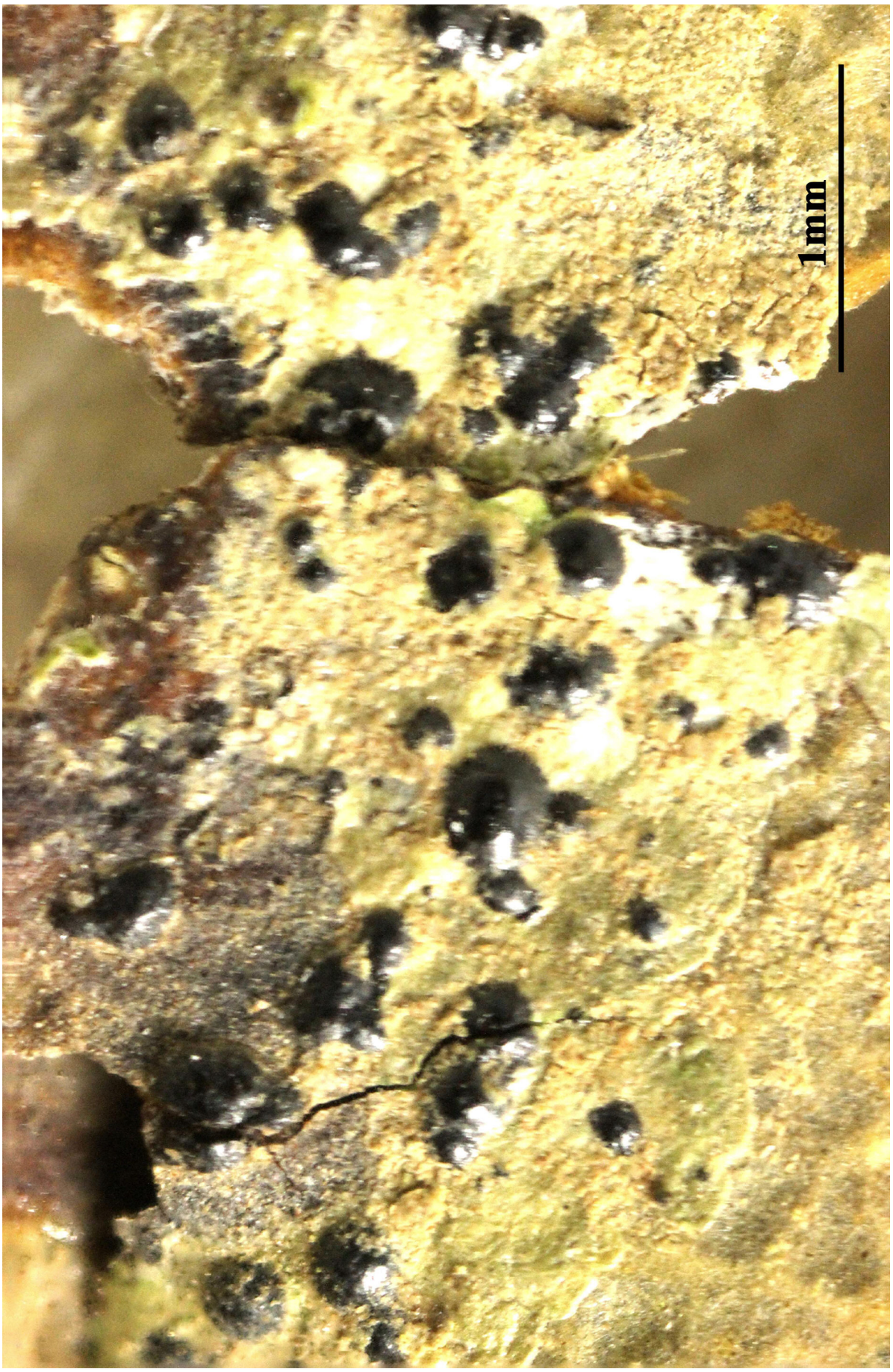
Strigula nitidula Mont., in Sagra, Hist. phys. Cuba, Bot. Pl. Cell. 9: 93 (1845)

[VZ2129], Canarienses Insulae. Tenerife, Sierra de Anaga, Monte de las Mercedes, prope locum Llano de los Viejos dictum, 600-900 m. Foliicola (*Apolonias barbujana*). Leg. M. S. Christiansen (74447), 28.11.1974. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2129.

Thallus subcuticular, continuous or dispersed into rounded to irregular, partly confluent patches, more rarely laciniate, 5–25 mm across and 8–15 µm thick, often with crenulate to lobulate margins and margin or individual lobes usually bordered by thin, black line, bright green with distinct metallic look. Photobiont a species of *Cephaleuros*, cells angular-rounded, 8–18 x 4–7 µm, in irregular plates forming single layer. Perithecia completely exposed, wart-shaped to almost conical, 0.3–0.6 mm diam. and 130–200 µm high, black and shiny. Excipulum prosoplectenchymatous, 7–15 µm thick, colorless to brown. Involucrellum carbonaceous, 15–30 µm thick, black. Paraphyses unbranched. Asci cylindrical, 50–80 x 4–5 µm. Ascospores uniseriate, ellipsoid, 1-septate, with distinct constriction at septum and often broken into parts outside asci, 8–12 x 2.5–3 µm, 3–4 times as long as broad. Pycnidia exposed, wart-shaped, those producing macroconidia 0.1–0.15 mm, those producing microconidia 0.05–0.1 mm diam., black. Macroconidia bacillar, non-septate, 4–6 x 1.8–2.2 µm. Microconidia fusiform, non-septate, 4–5 x 1.5–2 µm. Chemistry: no substances detected by TLC.



Strigula nitidula

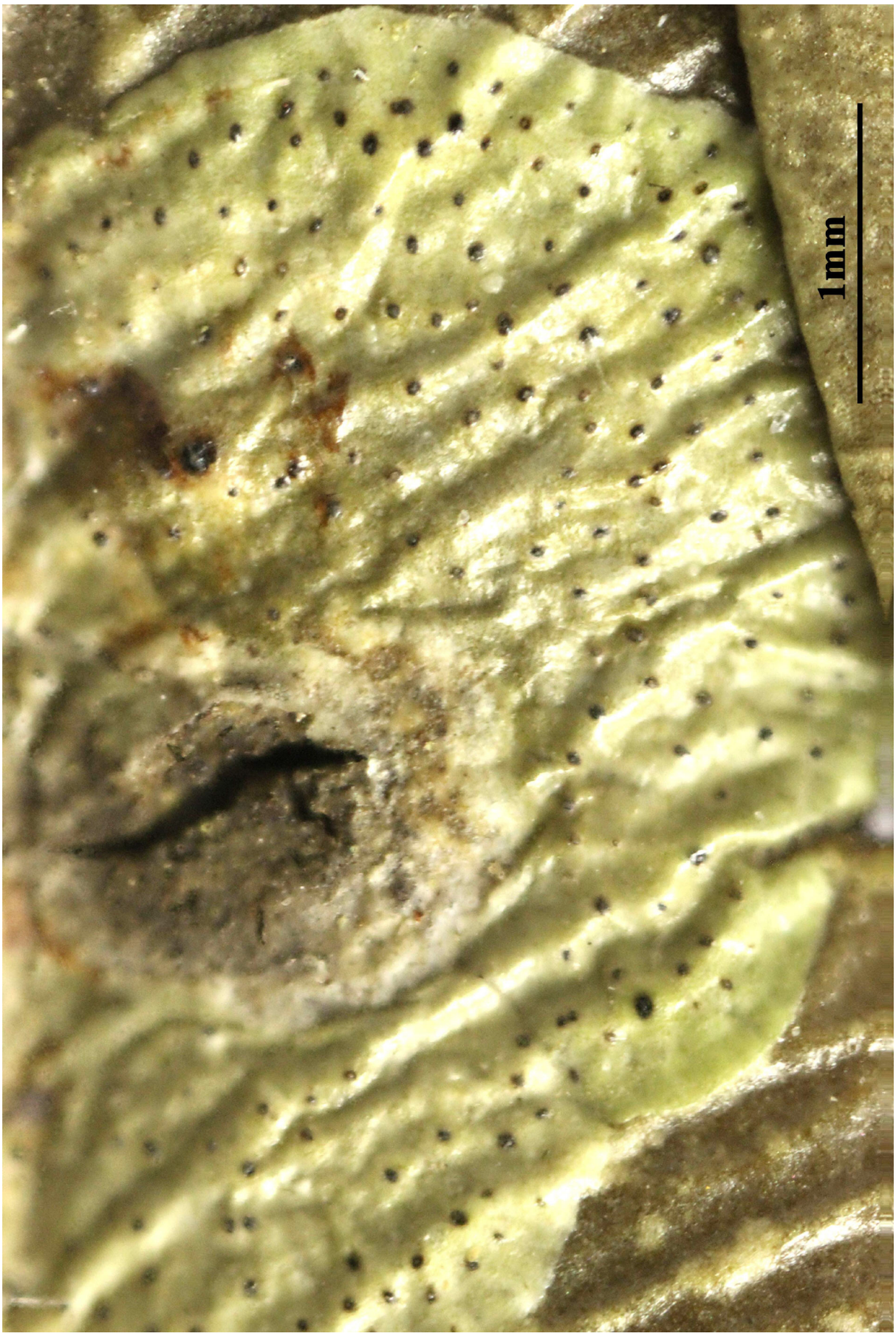


Strigula nitidula

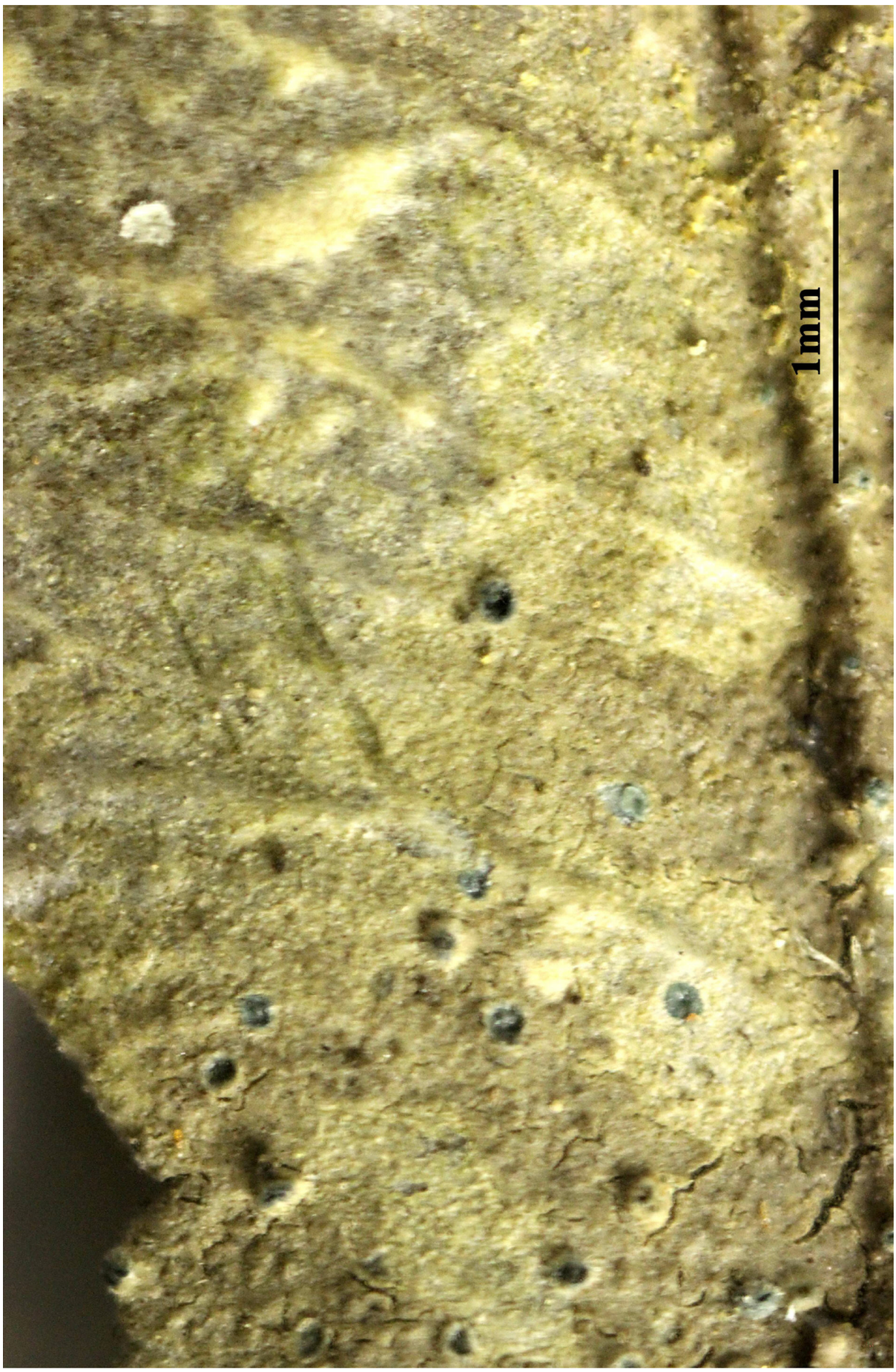
Strigula nitidula Mont., in Sagra, Hist. phys. Cuba, Bot. Pl. Cell. 9: 93 (1845)

[VZ1570], URSS. Transcaucasus, Colchis. Distr. Gagra, in valle angusta rivi Žo Ekvara, 50 m. Ad folia *Buxi colchicae*. Leg. V. Vašák et A. Věza, 13.66.1978. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1570.

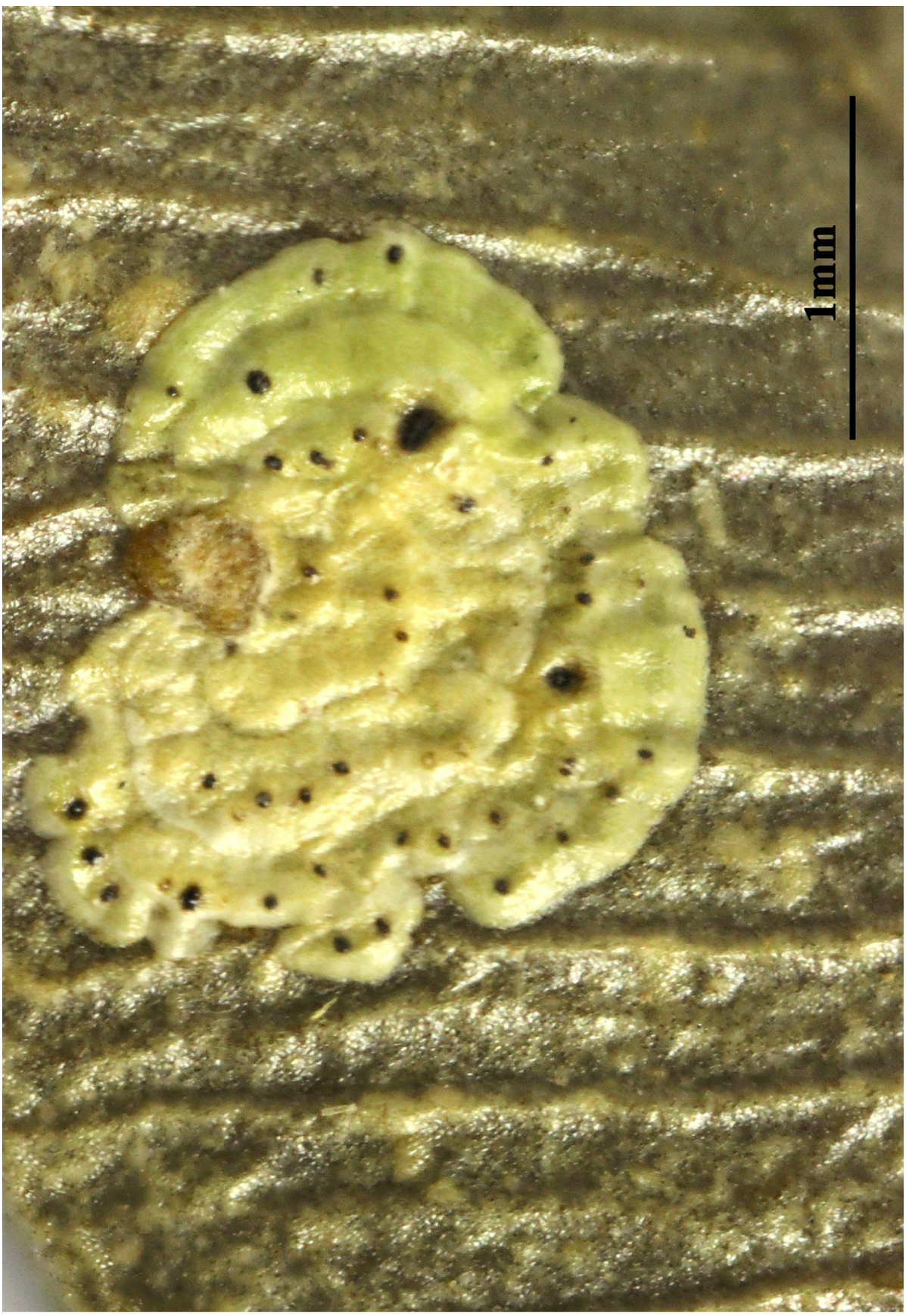
Thallus subcuticular, continuous or dispersed into rounded to irregular, partly confluent patches, more rarely laciniate, 5–25 mm across and 8–15 µm thick, often with crenulate to lobulate margins and margin or individual lobes usually bordered by thin, black line, bright green with distinct metallic look. Photobiont a species of *Cephaleuros*, cells angular-rounded, 8–18 x 4–7 µm, in irregular plates forming single layer. Perithecia completely exposed, wart-shaped to almost conical, 0.3–0.6 mm diam. and 130–200 µm high, black and shiny. Excipulum prosoplectenchymatous, 7–15 µm thick, colorless to brown. Involucrellum carbonaceous, 15–30 µm thick, black. Paraphyses unbranched. Asci cylindrical, 50–80 x 4–5 µm. Ascospores uniseriate, ellipsoid, 1-septate, with distinct constriction at septum and often broken into parts outside asci, 8–12 x 2.5–3 µm, 3–4 times as long as broad. Pycnidia exposed, wart-shaped, those producing macroconidia 0.1–0.15 mm, those producing microconidia 0.05–0.1 mm diam., black. Macroconidia bacillar, non-septate, 4–6 x 1.8–2.2 µm. Microconidia fusiform, non-septate, 4–5 x 1.5–2 µm. Chemistry: no substances detected by TLC.



Strigula nitidula



Strigula nitidula



Strigula nitidula

Strigula subelegans Vain., Ann. Acad. Sci. Fenn., Ser. A 19(no. 15): 23 (1923)

[VZ1502], Philippines. Luzon, prov. Laguna, Los Banos, in territorio Universitatis, 30 m. Ad folia *Nephelii lappacei*. Leg. S. Gruezo (no. 2968), 19.2.1977. EX A. VěZDA LICHENES SELECTI EXSICCATI NT. 1502.

Thallus subcuticular, continuous or dispersed into rounded to irregular, partly confluent patches, 5–15 mm across and 30–70 µm thick, with entire to crenulate or lobulate margins, pale greenish grey to whitish green. Photobiont a species of *Cephaleuros*,
cells angular-rounded, 5–12 x 4–7 µm, in irregular plates forming 1 to several layers. Perithecia immersed-erumpent, hemispherical, 0.3–0.4 mm diam. and 100–170 µm high, exposed part black. Excipulum prosoplectenchymatous, 5–10 µm thick, colorless to brown. Involucrellum carbonaceous, 20–30 µm thick, black. Paraphyses unbranched. Asci obclavate, 50–70 x 10–14 µm. Ascospores biseriate, fusiform, 1-septate, with distinct constriction at septum, distal cell slightly enlarged, 15–25 x 4–6 µm, 3.5–4.5 times as long as broad. Pycnidia semiimmersed, wart-shaped, those producing macroconidia 0.07–0.15 mm, those producing microconidia 0.05–0.1 mm diam., black. Macroconidia bacillar, 1-septate, 14–18 x 3–4 µm. Microconidia fusiform, non-septate, 4–5 x 1.5–2 µm. Chemistry: not tested.



Strigula subelegans

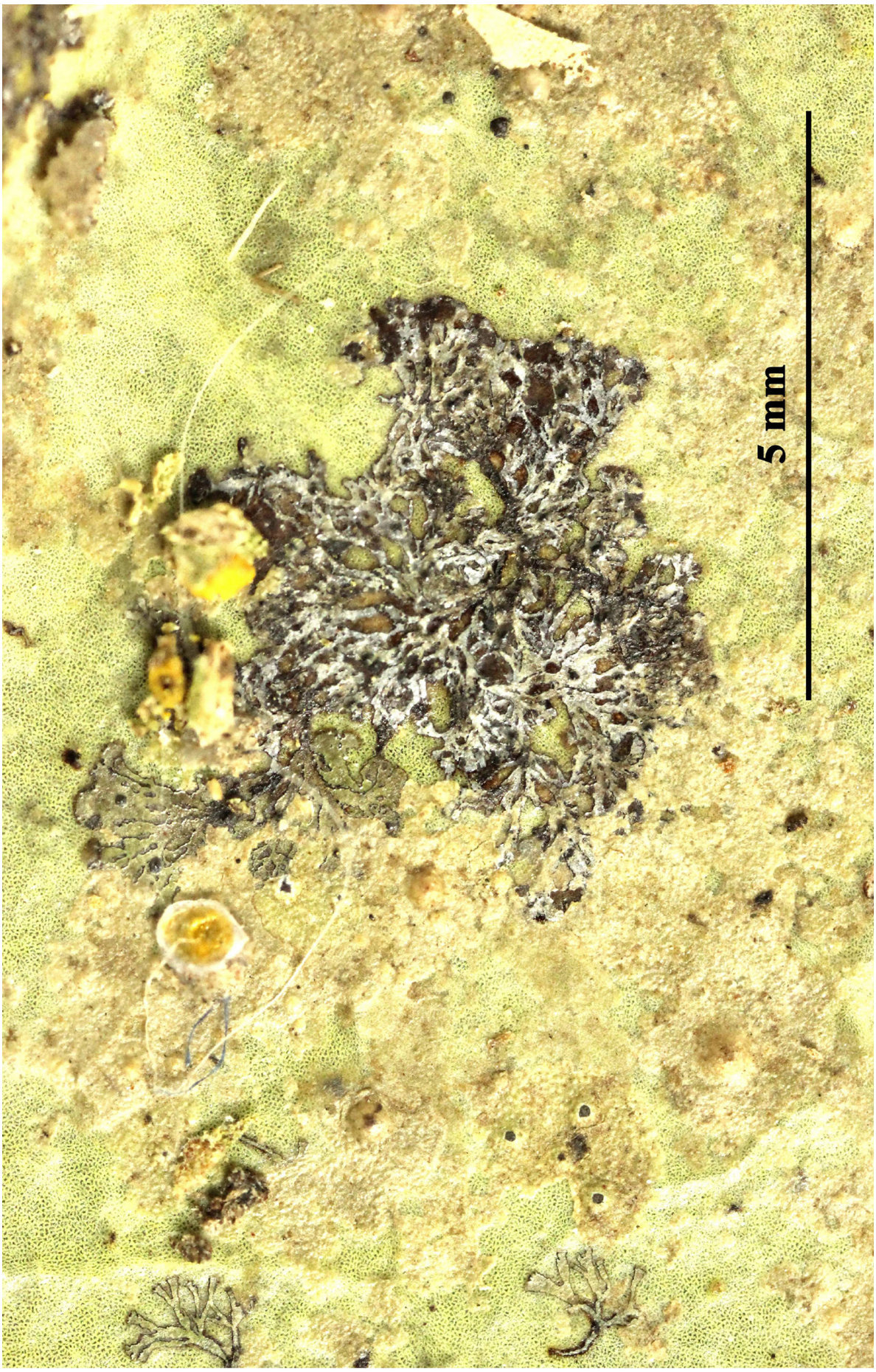


Strigula subelegans

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

[VZ2180], Australia. Queensland, D'Aguilar Range, 2 km ad septentriones a Mt. Glorious, in occidente viae Mt. Tenison Woods ducentis, 700 m. Foliicola in pluviisilva subtropicali. Leg. J. Hafellner et R. Rogers, 1.8.1986. det A. Vezda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2186.

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



Strigula subtilissima

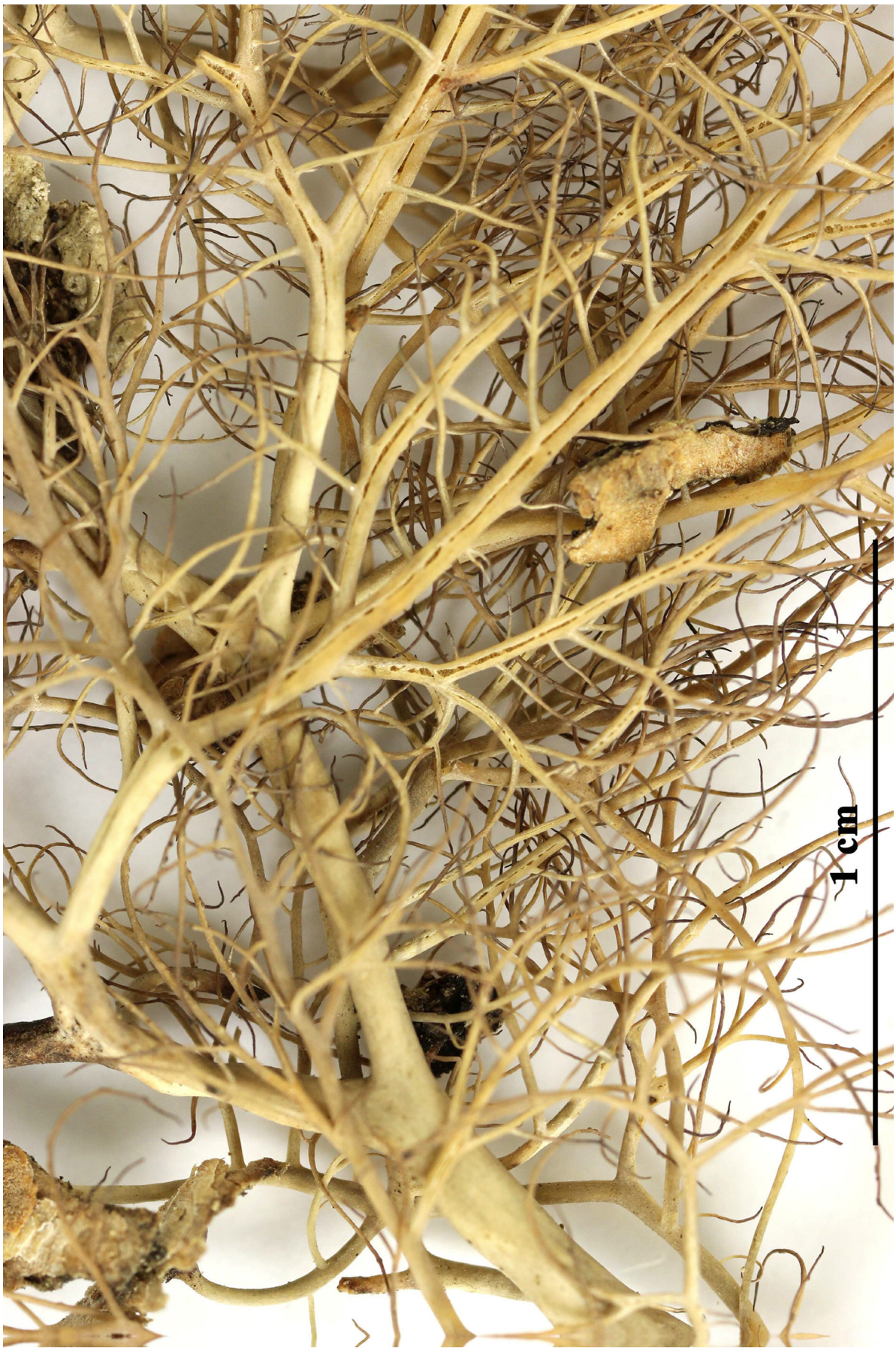


Strigula subtilissima

Sulcaria sulcata (Lév.) Bystrek ex Brodo & D. Hawksw., Op. bot. 42: 156 (1977)
= *Cornicularia sulcata* Lév. 1844

[VZ2452], Sina. Yunnan, montes Yulong Shan, 30 km ad septentriones versus ab oppido Likiang, 4000 m. In ramulis arborum Leg. J. Soják, 25.7.1990, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2452.

Description of the genus:
Thallus fruticose. erect and caespitose to decumbent or pendent; branching variable; branches generally terete, but in one species bursting open longitudinally and forming dorsiventrally compressed and expanded flattened areas; greyish-brown, badious, or emerald green. Lateral spinules present consistently in some species, rarer or absent in others. Isidia and soralia absent. Pseudocyphellae present in the form of a single longitudinal furrow, ± continuous from the base to the apex of the thallus, deeply depressed, sometimes appearing almost scalariform, white or emerald green, sometimes bursting open to expose the medulla, occasionally tending to become weakly sorediate. Cortex not disintegrating, not differentiated and rough at the surface. Medullary hyphae not ornamented. Apothecia lateral, often appearing geniculate owing to the death of the branch distal to them, common in one species, unknown in the others; excipulum thallinum concolourous with the thallus, persistent and incurved, sometimes becoming ciliate; disc brownish-black, often distinctly blue-grey pruinose. Asci clavate, thick-walled, arrested bitunicate, 6-8-spored. Ascospores ellipsoid, yellowish to brown at maturity, I- or later 3-septate when mature, 22-40 x 8-15 /am. Pycnidia unknown. Usnic acids absent; atranorin abundant in two species, chloroatranorin absent; β-orcinol depsidone present in two species; pulvinic acid derivatives known in two species; orcinol depsidone known in one specimen of one species; orcinol depsides, tridepsides, β-orcinol depsides and hydroxyanthraquinones absent.



Sulcaria sulcata



Sulcaria sulcata

Taeniolella verrucosa M.S. Christ. & D. Hawksw., in Hawksworth, Bull. Br. Mus. nat. Hist., Bot. 6(3): 253 (1979)

[VZ2125], Suecia. Torne Lappmark, Kiruna, Abisko, in ripa septentr. lacus Torneträk, 1.5 km ad occidentem versus a Jieprenkäkkstugam, 340-400 m, In kichene Pertusariae carneopallidae parasitans, ad cortocem Alni sp.. Leg. H. Mayrhofer et J. Poelt, 6,8,1980, det. D. L. Hawksworth. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 2125.

Annot. from D. L. Hawksworth: This material differs from the holotype (on *Arthonia impolita* from Sweden) in that in addition to 2-celled conidia, 11-12 x 7-7.5 µm, and 3- and 3- celled coidia, 15-16 x 5.5-7 µm, are regulary formed. The conidia are also silghtly narrower than that in the holotype where they measure 8-10 µm,



Taeniolella verrucosa

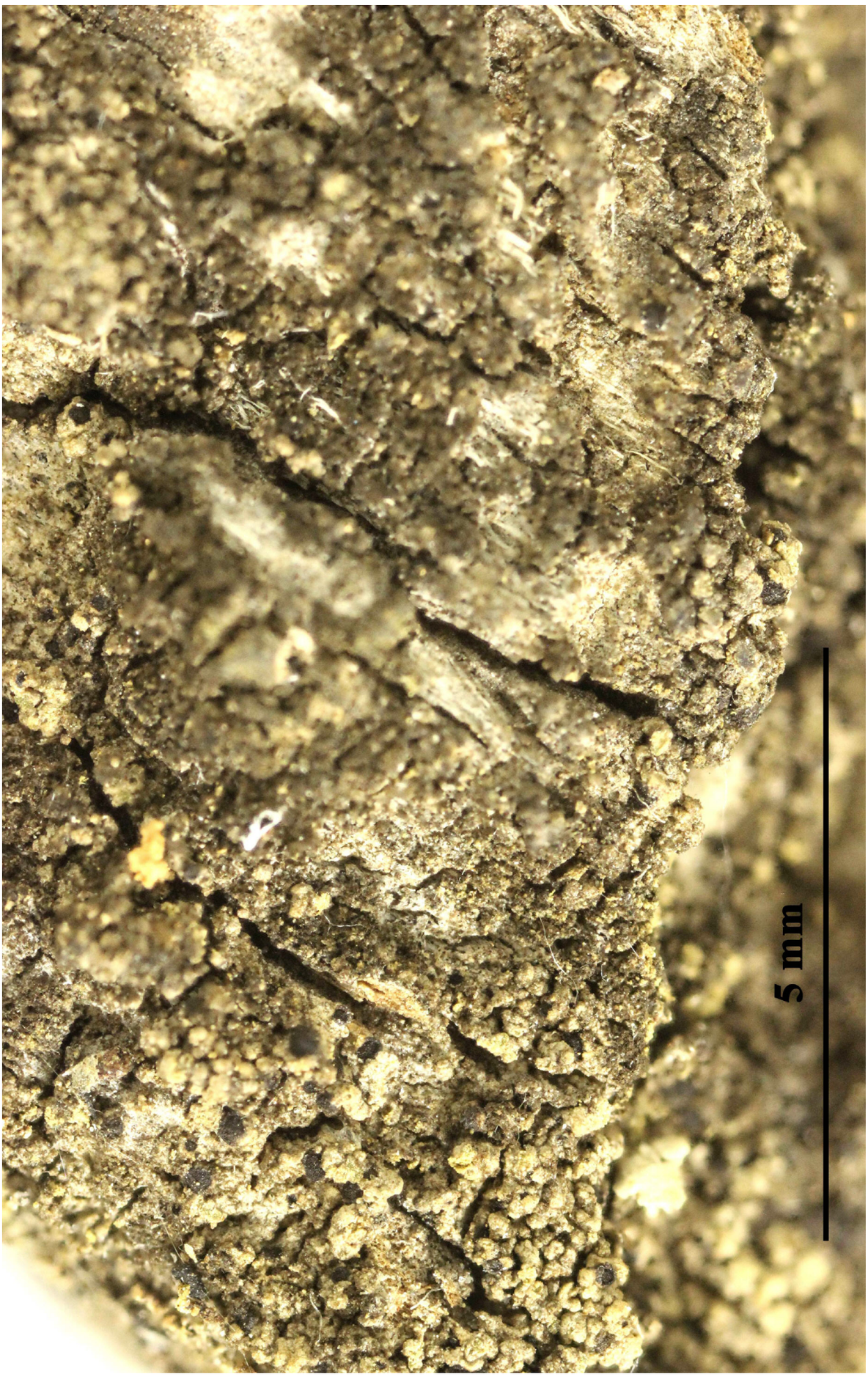


Taeniolella verrucosa

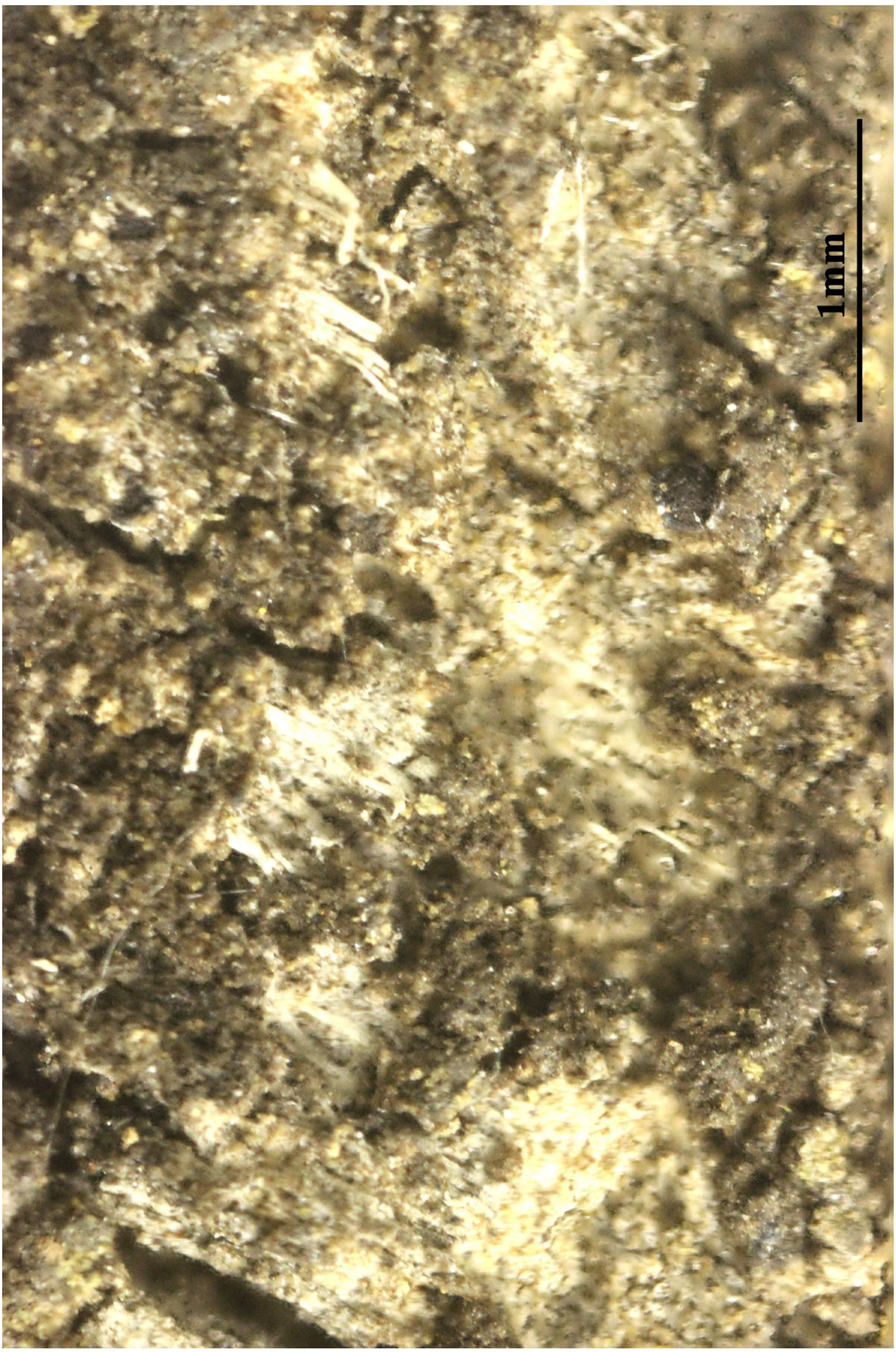
Taeniolella delicata M.S. Christ. & D. Hawksw., in Hawksworth, Bull. Br. Mus. nat. Hist., Bot. 6(3): 253 (1979)

[VZ1900], Dania. Lageland: Snöde, ad septentriones et orientem versus a Stora Snöde, 10-20 m. Ad truncum *Populi* sp. in lichene (*Buellia punctata*) parasitans. Leg. et det. S. M. Christiansen (no. 82357), 12.10.1982. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1900.

Mycelium immersum ad superficiale, ex hyphis pallide brunneis, 2-3.5 µm latis. Conidiophora semi-macronemata, plerumque caespitosa, recta, non vel ad basim sparse ramosa, brunnea ,15-30(-509 x 3.5-6 µm. Cellulae conbidiogenae, monoblasticae, integratae, subcylindricae. Conidia plerumque catenata, sicca, acrogena. doliiformia, 1(-2) septata, levia, brunnea, 7-11 x 3.5-5(-6) µm.
Colonies scattered over the infected tissues of the host, or compacted and filling apothecia, dark brown to almost black; mycelium partly immersed and originating deep in the thallus but sometimes largely superficial, rather sparsely develeoped, composed of very pale brown flexuose hyphae, hypha thick- and smooth-walled, septate, often constricted at the septa, mainly 2-3.5 µm wide.Conidiophores semi-macronematous, tending to arise in caespitose tufts, straight, not branched or with 1-3 branches at the base, brown, smooth-walled, thicker-walled than the mycelial hyphae, septate, becoming somwhat constricted at the septa, 15-30(-50) x 3.5-6 µm. Conidsiogenous cells monoblastic, integrated, terminal, subcylindrical, brown, not well-marked and with the terminal cells acting in turn as conidiogenous cells. Conidia mostly adhering in chains, separating only with difficulty, dry, acrgenous, doliiform, brown, 1(-2)- septate, slightly or not constricted at the septa, smooth- and thick-walled, 7-11 x 3.5-5(-6) µm. Distribution: Austria, British Isles. Denmark. France and Sweden. (Ex: Hawksworth, Bull. Br. Mus. nat. Hist., Bot. 6(3): 253 (1979)



Taeniolella delicata



Taeniolella delicata

Taeniolella punctata M.S. Christ. & D. Hawksw., in Hawksworth, Bull. Br. Mus. nat. Hist., Bot. 6(3): 257 (1979)

[VZ1925], Dania. Zealand, Vemmetofte, in silva "Vemmetofte dyrehave" dicta, 5-10 m. In thallo lichenis (*Grapihis scripta*) vigens. Leg. M. S. Christiansen (no. 82077), 6.8.1982. Ex A. VěZDA LICHENES SELECTI EXSICCATI NR. 1925.

Colonies scattered over the host thallus, punctate, brow; mycelium immersed, rather scant, extending into the host tissues intermixed with the periderm of the phorophyte, composed of subhyalin to pale brown flexuose tortulose hyphae, hyphae thin-walled, smooth-walled, septate generally merkedly swollen between the septa, maily 4-6 µm wide. Conbidiophores semimacronematous, arise in small caespitose tufs, erect, usually 1-3 branched at th base, darkbrown, smooth-walled, thick-walled, septate, constricted at th septa, 20-40(-6) x 5-8 µm. Conidiogenous cells monoblastic, integrated, terminal, subcylindrical, brown to dark brwn, not well-defined with th terminal cells in turn acting as conidiogenous cells. Conidi adhering in chains, separating only with difficulty, dry, acrogenous, doliiform, dark brown, 1-2-septate, notusually constricted at th septa, smooth- and thick-walled, 1-sptate conidia 10-12.5 x 6-9 µm. Denmark, known only fro the type collection (Ex Hawksworth, Bull. Br. Mus. nat. Hist., Bot. 6(3.)



Taeniolella punctata



Taeniolella punctata

Taeniolella verrucosa M.S. Christ. & D. Hawksw., in Hawksworth, Bull. Br. Mus. nat. Hist., Bot. 6(3): 253 (1979)

[VZ2125], Suecia. Torne Lappmark, Kiruna, Abisko, in ripa septentr. lacus Torneträk, 1.5 km ad occidentem versus a Jieprenkäkkstugam, 340-400 m, In kichene Pertusariae carneopallidae parasitans, ad cortocem Alni sp.. Leg. H. Mayrhofer et J. Poelt, 6,8,1980, det. D. L. Hawksworth. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 2125.

Annot. from D. L. Hawksworth: This material differs from the holotype (on *Arthonia impolita* from Sweden) in that in addition to 2-celled conidia, 11-12 x 7-7.5 µm, and 3- and 3- celled coidia, 15-16 x 5.5-7 µm, are regulary formed. The conidia are also silghtly narrower than that in the holotype where they measure 8-10 µm,



Taeniolella verrucosa

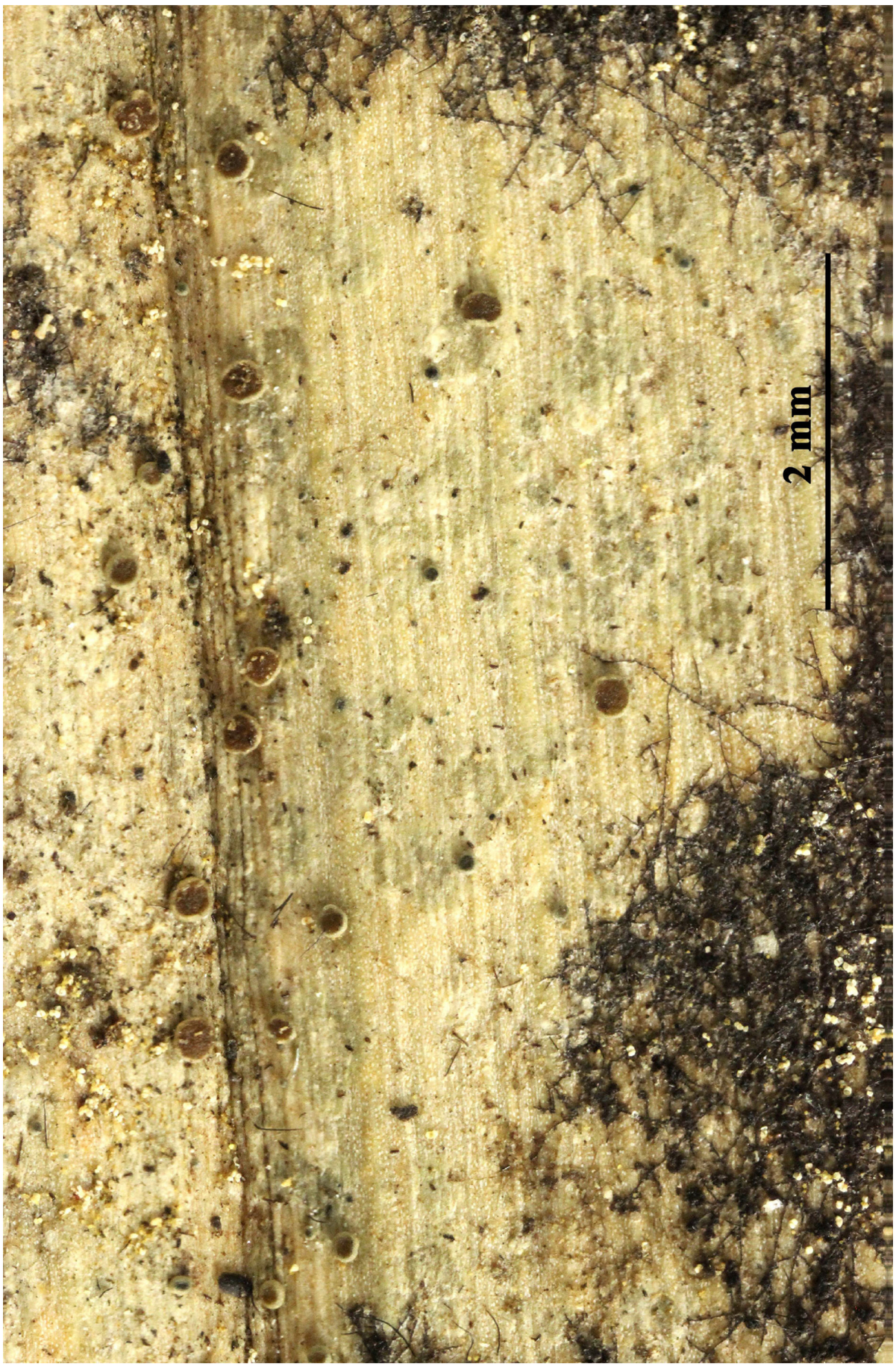


Taeniolella verrucosa

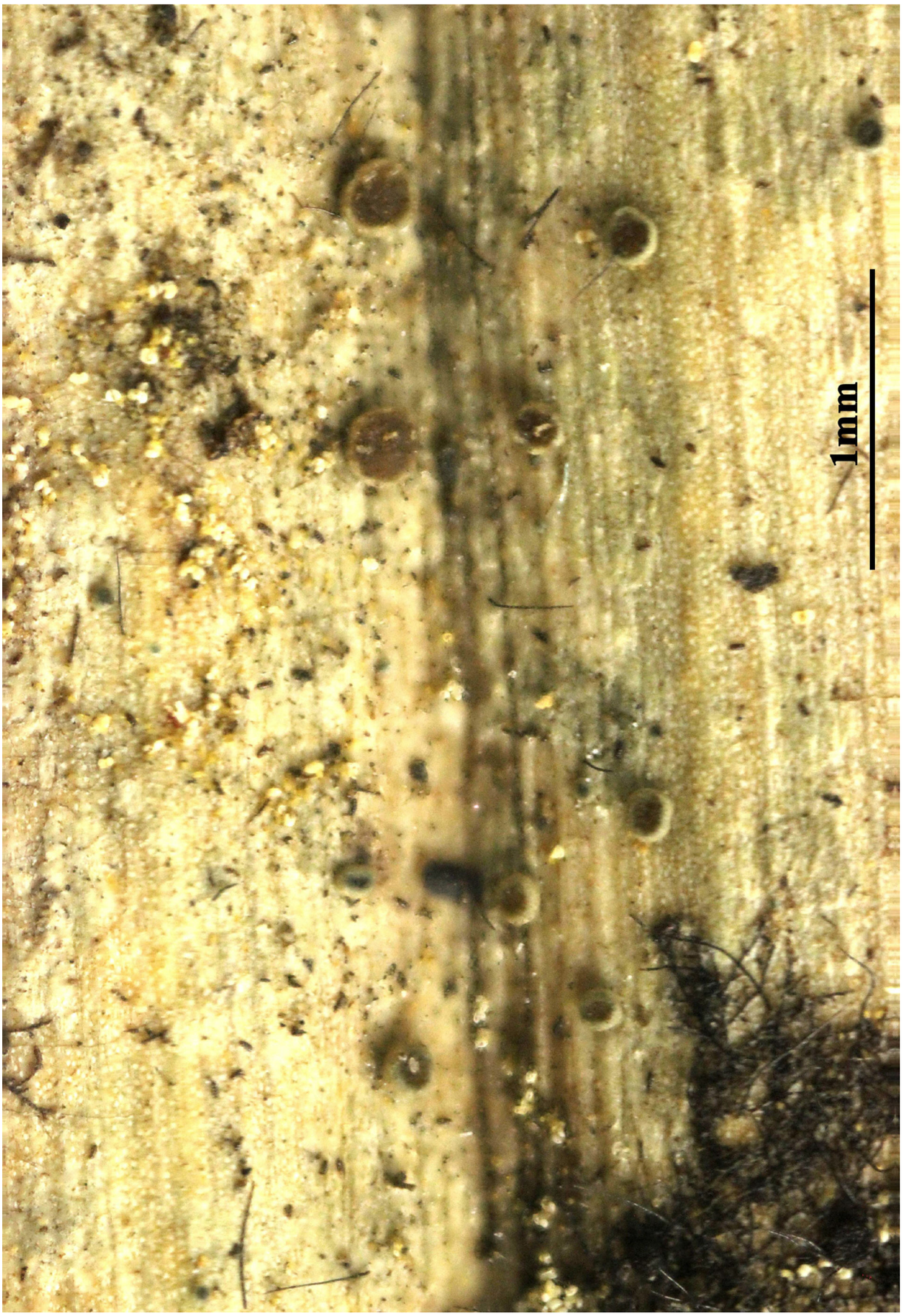
Tapellaria epiphylla (Müll. Arg.) R. Sant., in Thorold, J. Ecol. 40: 129 (1952)
= *Lopadium epiphyllum* Müll. Arg. 1881

[VZ1566], USA. Florida. Apalachiola National Forest, secus flumine Sopchopy. Ad folia arborum. Leg. E. Sérusiax (no. 1794), 8.6.1976. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1566.

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



Tapellaria epiphylla

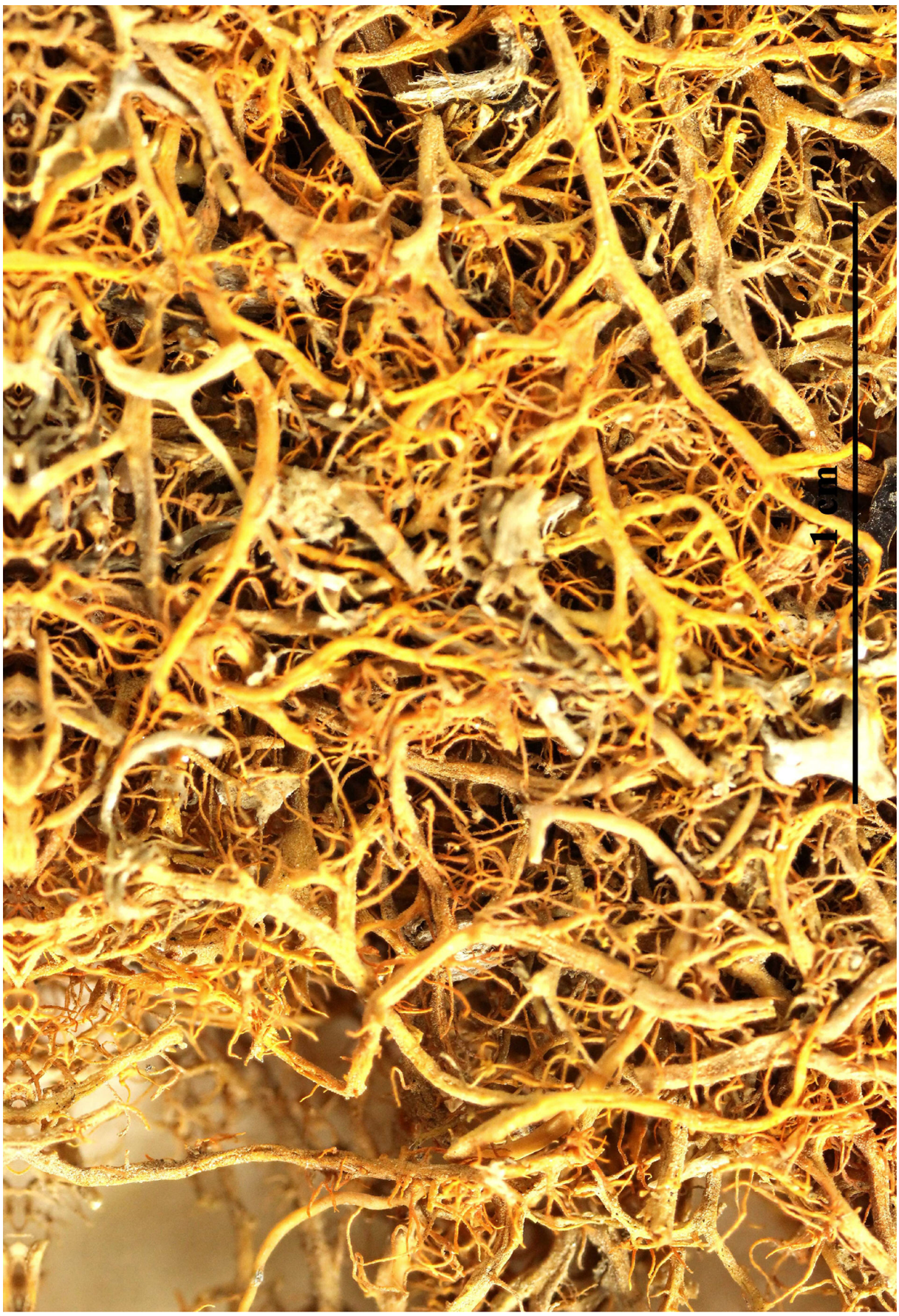


Tapellaria epiphylla

Teloschistes capensis (L. f.) Müll. Arg., Ark. Bot. 20A(no. 9): 47 (1926)
= *Lichen capensis* L. f. 1781

[VZ1274], Africa Austro-Occidentalis. Lüderitz, loco Grosse Bucht dicto prope Lüderitzbucht, in territorio deserum Namib. In proximitate maris. In ramulis emortuis fruticum locis vento salso expositis. Leg. O. Volk, et V. Wirth, 7.11.1975. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1274.

Thallus fruticose, erect, 3-8 cm, densely ramose. Main branches c. 0.5 mm diam., in section circular or angularly rounded, sometimes slightly flattened, occasionally longitudinally striate or furrowed, dull, glabrous or pubescent, orange, yellow or greyish. Soralia and isidia absent. Secondary branches similar but thinner, all branches split into 1-2 mm long, orange to yellow-grey fibrils at the margins. Apothecia usually present, lateral or subterminal, sessile, 1-2 mm diam, young stages forming small orange-red verrucae. Disc plane to concave, orange-red, darker than the thallus; margin prominent, covered with numerous long, yellow to orange fibrils. Asci clavate, 48-52 x 12-14 µm. Ascospores bilocular, ellipsoid to subfusiform, 8.5-14 x 4-5.5 µm. *Tornabenia africana* Mass. differs in no essential respects from *Teloschistes capensis* as far as can be gathered.



Teloschistes capensis

Teloschistes chrysocarpoides Vain., in Schinz, Mém. Herb. Boissier 20: 4 (1900)

[VZ1350], Africa Austro-Occidentalis. Lüderitz, loco Grosse Bucht dicto prope Lüderitz, in territorio desertum Namib. In proximitate maris. In ramulis emortuis fruticum (*Salsola* et *Lycium* sp.) locis vento salso expositis. Leg. O. Volk, 7.2.1974. Ex A. VěZDA Lichenes Selecti Exsiccati Nr. 1274.

Thallus pale to grey yellow or whitish with a dirty tinge, densely fruticose, compact, 1-2 cm diam. often confluent with adjacent thalli forming extensive colonies on branches of shrubs. Lobes applanate, 4-8 mm long, 1-3 mm broad, sparsely branched, margins and tips densely covered with whitish to greyish cilia c. 1 mm long, underside plane or somewhat concave, whitish grey, smooth or somewhat striate to reticulate. Apothecia often numerous, on the lobe tips or marinal, sessile, 1-2 mm diam., disc orange to orange-red, somewhat concave, plane or slightly convex, thalline margin smooth without fibrils, finaly disapearing. Ascospores bipolar, ellipsoid, 14-16 x 8 µm. Chemistry all yellow or orange coloured K+ purple; anthraquinones (parietin or related compounds). In respect to thallus colour variable; from related *T. chrysophthalmus* distinguished by the lack of cilia on apothecia margins. Endemic to south-west Africa.



Teloschistes chrysocarpoides



Teloschistes chrysocarpoides

Teloschistes chrysophthalmus (L.) Th. Fr., Gen. Heterolich. Eur.: 51 (1861) [1860]

= *Lichen chrysophthalmos* L. 1771

= *Niorma chrysophthalma* (L.) S.Y. Kondr., Kärnefelt, Elix, A. Thell, M.H. Jeong & Hur, in Kondratyuk, Jeong, Yu, Kärnefelt, Thell, Elix, Kim, Kondratyuk & Hur, Acta Bot. Hung. 55(3-4): 272 (2013)

[VZ1122], Chile. Santiago, prope pagum Til-Til, 1275 m. Ad ramulos Quillajae saponariae. Leg. W. L. Culberson (no. 16010) et C. F. Culberson, 1.1972. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1122.

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



Erioderma barbellatum



Erioderma barbellatum

Teloschistes chrysophthalmus (L.) Th. Fr., Gen. Heterolich. Eur.: 51 (1861) [1860]

= *Lichen chrysophthalmos* L. 1771

= *Niorma chrysophthalma* (L.) S.Y. Kondr., Kärnefelt, Elix, A. Thell, M.H. Jeong & Hur, in Kondratyuk, Jeong, Yu, Kärnefelt, Thell, Elix, Kim, Kondratyuk & Hur, Acta Bot. Hung. 55(3-4): 272 (2013)

[VZ2124], Australia, Tasmania. Table Cape, Wynyard, 30 m. In ramulis *Dodonaeae viscosae* in silva. Leg. G. Kantvilas (203/85), 29.9.1985. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2124.

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



Erioderma barbellatum



Erioderma barbellatum

Teloschistes flavicans (Sw.) Norman, Conat. Praem. Gen. Lich.: 17 (1852)
= *Lichen flavicans* Sw. 1788

[VZ1550], Costa Rica. Cartago: 11 km ad septentr.-orientem a Cartago, 2080 m. Ad corticem arboris. Leg. W. L. Culberson (no. 16894) et C. F. Culberson, 14.12.1976. - Annot.: Parietin and faint traces of related but unidentified anthraquinones by TLC; C. F. Culberson and A. Johnson. - Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1550.

Thallus fruticose, attached by a basal holdfast, almost filamentous, up to 12 cm long, tufted to pendent, more or less dichotomously and richly branched. Branches corticate, rigid, entangled, up to 2 mm wide, narrowing to 0.05-0.2 mm at tips, terete to angular or somewhat flattened (especially the main ones) yellow-orange to reddish orange, with farinose to granular, yellow soredia arranged in orbicular to elongated, at least at the beginning raised soralia; fibrils and hairs absent or scarce. Cortex of longitudinally arranged hyphae; medulla interrupted by cortical strands. Apothecia extremely rare, lecanorine, 1-4 mm across, with an orange disc and a thin, usually smooth, rarely sparingly ciliate thalline margin. Epithecium orange, K+ purple-red; hymenium and hypothecium colourless. Asci 8-spored, Teloschistes-type. Ascospores 2-celled polarilocular, hyaline, oblong to narrowly ellipsoid, (10-)12-18(-20) x 6-11 µm. Pycnidia immersed to slightly projecting, orange. Conidia simple, hyaline, bifusiform, 2.7-3.7 x 1-1.5 µm. Photobiont chlorococcoid. Spot tests: thallus and soredia K+ purple-red, C-, KC-, P-. Chemistry: parietin and caloploicin (major), teloschistin, fallacinal, parietinic acid, vicanicin and isofulgidin (minor), occasionally also emodin. - Note: a tropical to Mediterranean-Atlantic lichen found on branches, bryophytes and siliceous rocks in a few warm-humid stands of Tyrrhenian Italy, mostly near the coast in areas with frequent fog.



Teloschistes flavicans



Teloschistes flavicans

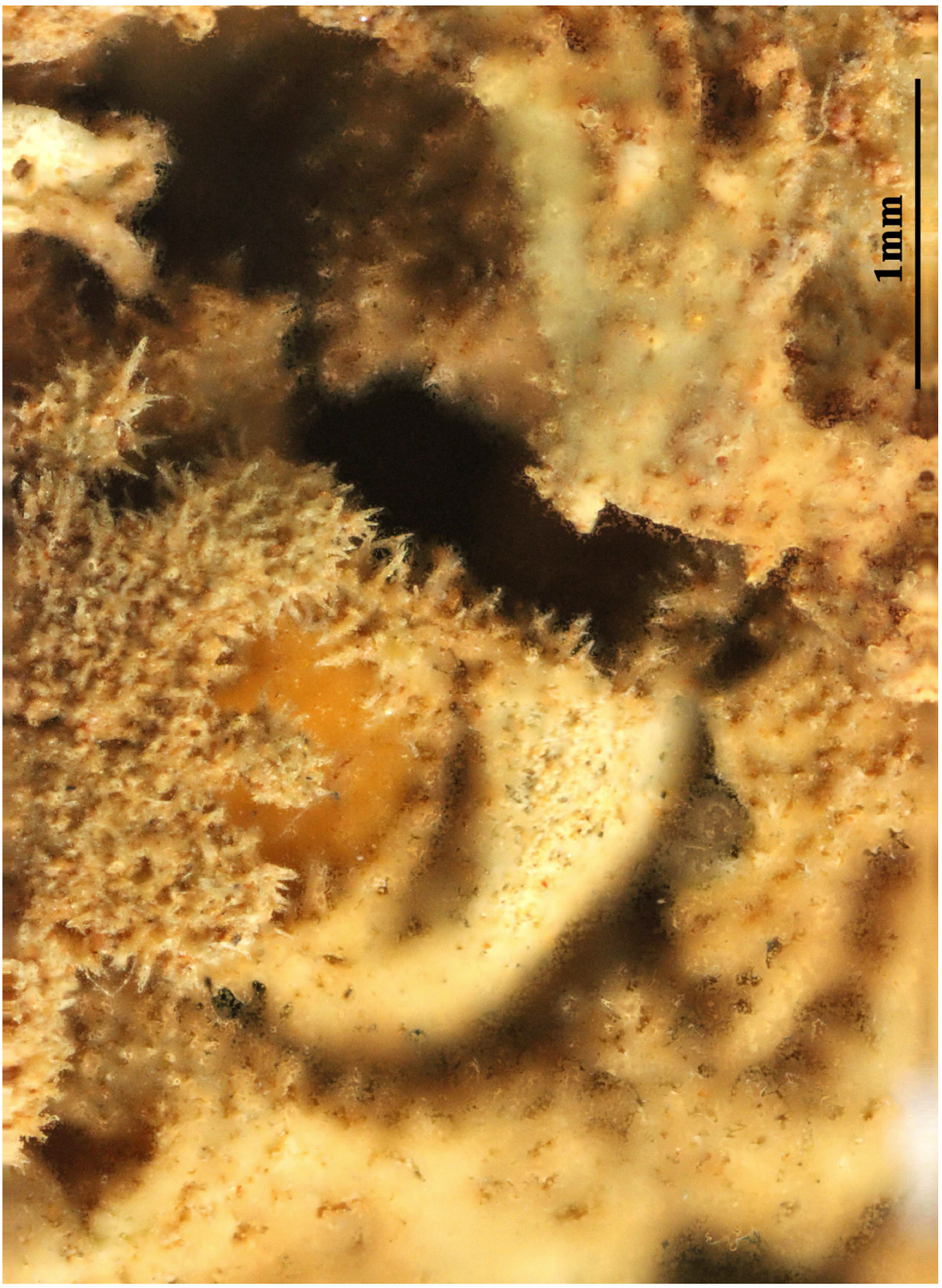
Teloschistes lacunosus (Rupr.) Savicz, Acta Inst. Bot. Acad. Sci. USSR Plant. Crypt., Ser. II 2: 313 (1935)
= *Ramalina lacunosa* Rupr. 1845
= *Seirophora lacunosa* (Rupr.) Frödén, in Frödén & Lassen, Lichenologist 36(5): 297 (2004)

[VZ2086], Libya, Cyrenaica, 33 km ad occidentem et septentriones versus Ghassl. In desertis, ad ramulos fruticum (*Juniperus phoenicea*, *Rhamnus lycioides*). Leg. G. Thor (no. 2907), 14.11.1982, det. L. Arvidson. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2086.

Thallus is fruticose, forming cushions with characteristic smooth irregularly divided, rigid, greyish laciniae, 2-5 cm high and 2-15 mm broad and about 2-(4-5) cm long. Laciniae upper surface quite smooth, slightly tomentose covered with thick multiseriated hairs, showing scattered elongated holes which cross over to the lower surface. Lower surface can be wrinkled and canaliculated particularly on older laciniae. Sometimes fertile with deep concave orange apothecia up to 6 mm across with a greyish tomentose, persistent thalline margin. a species of saxicolous (rock-dwelling).



Teloschistes lacunosus



Teloschistes lacunosus

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