

F. Schumm (2026):

Images of Lichens  
*Vežda Lichenes Selecti Exsiccati*  
*part 17*

With this volume, I continue the documentation of Vezda's works on exiccata, now with Lichenes Selecti as part 17. 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/>**

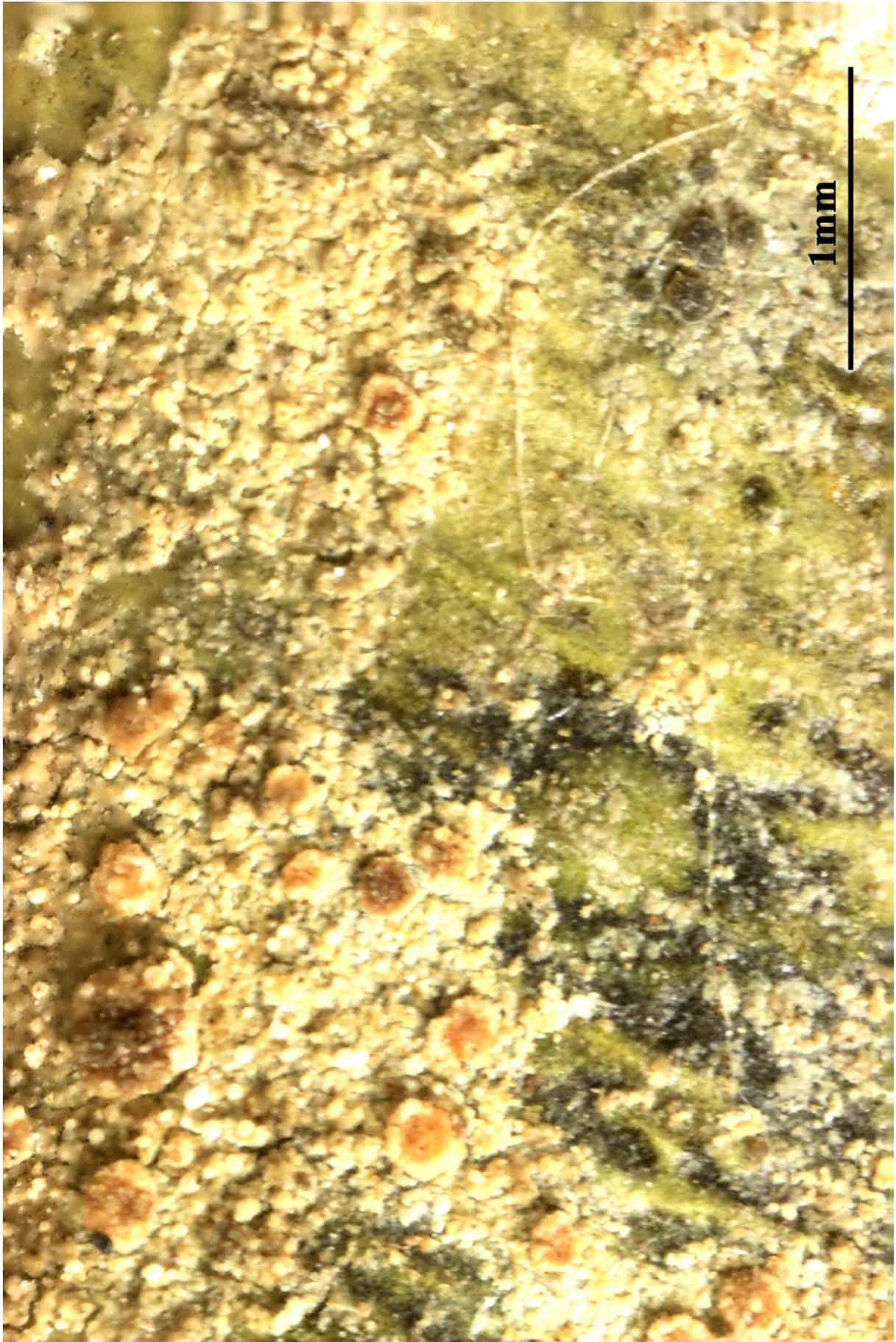
and the Australian Lichenslist under the Url: **[https://www.anbg.gov.au/abrs/lichenlist/lichenchecklist\\_e\\_o.html](https://www.anbg.gov.au/abrs/lichenlist/lichenchecklist_e_o.html)**

F. Schumm, 2026

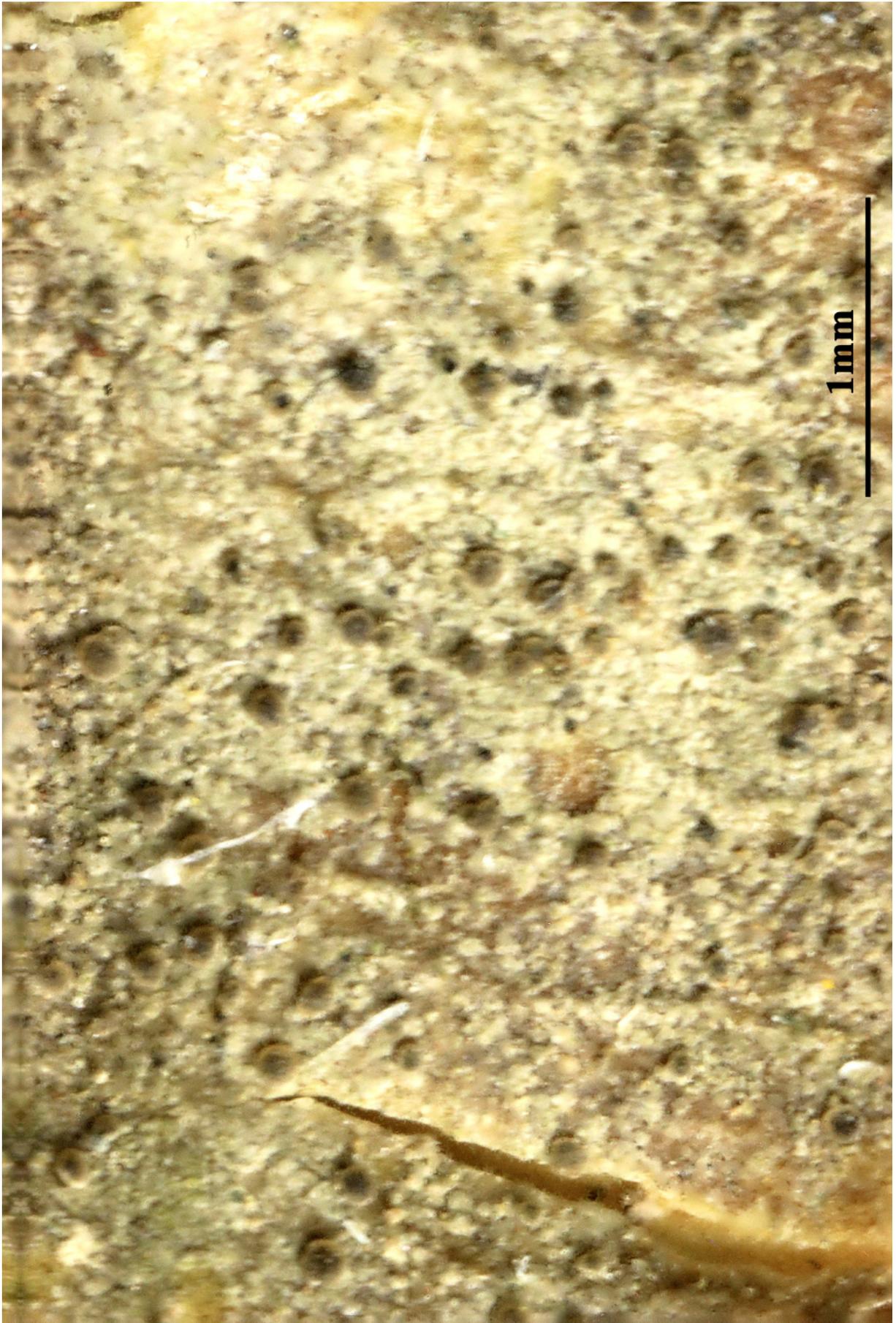
*Bacidia buxi* Vězda & Vivant, Bull. Soc. Bot. France 119: 256 (1973) [1972]  
=*Fellhaneropsis myrtillicola* (Erichsen) Sérus. & Coppins in Sérusiaux,  
Lichenologist, 28: 199, 1996.  
=*Bacidia myrtillicola* Erichsen - Mitt. Inst. allg. Bot. Hamb., 10: 414, 1939.  
=*Bacidia gorgonea* Vězda & Poelt.  
=*Bacidia myriocarpa* Erichsen.  
=*Fellhanera buxi* (Vězda & Vivant) Vězda.  
=*Fellhanera myrtillicola* (Erichsen) Hafellner

[VZ1161], Gallia. Pyrenaei montes occident. Sauveterre-de-Béarn.  
Insula parva in torrente Gave d'Oloron, 50 m. Ad folia *Buxi sempervi-*  
*rentis*. Leg. J. Vivant, 28.1.1972. EX A. VĚZDA LICHENES SELECTI  
EXSICCATI NR. 1161.

Thallus crustose, thin and smooth to rarely granulose or slightly verrucose, greenish grey to bluish grey, somehow glossy, forming small, suborbicular patches which eventually merge to cover larger areas, usually delimited by a bluish prothallus. Apothecia biatorine, constricted at base, 0.1-0.2(-0.3) mm across, with a flat to convex, pale brown to bluish grey or bluish black disc and a thin, whitish, soon excluded proper margin. Proper exciple of vertically arranged hyphae with elliptical to polyhedral cells, up to 15  $\mu\text{m}$  wide laterally, colourless throughout or very pale brown in innermost part; epithecium scarcely differentiated from the hymenium; hymenium colourless, I+ blue; paraphyses branched and anastomosing, 1-1.5  $\mu\text{m}$  thick, forming a densely interwoven network around the ascus tips; hypothecium very thin, dark brown, K+ greenish brown to green in central parts. Asci 8-spored, clavate, with a K/I+ blue apical dome containing a darker blue, tubular ring-structure, and an amyloid coat, Byssoloma-type. Ascospores 3(-5)-septate, hyaline, oblong-fusiform, straight or slightly curved, 16-28(-34) x 3-4  $\mu\text{m}$ . Pycnidia dark grey to blue-black, immersed in the apothecia or sessile on the thallus, with palisadic hyphae on rim of ostiole (enclosing the conidial mass at least when young), producing (12-)20-45  $\mu\text{m}$  long, thread-like macroconidia, or 4-8  $\mu\text{m}$  long, bacilliform microconidia, respectively. Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a mild-temperate to southern boreal-montane lichen found on needles of *Abies* in very humid montane forests, but also on leaves of *Buxus* and *Laurus* in warm-humid gorges near the coast.



*Bacidia buxi*



*Bacidia buxi*

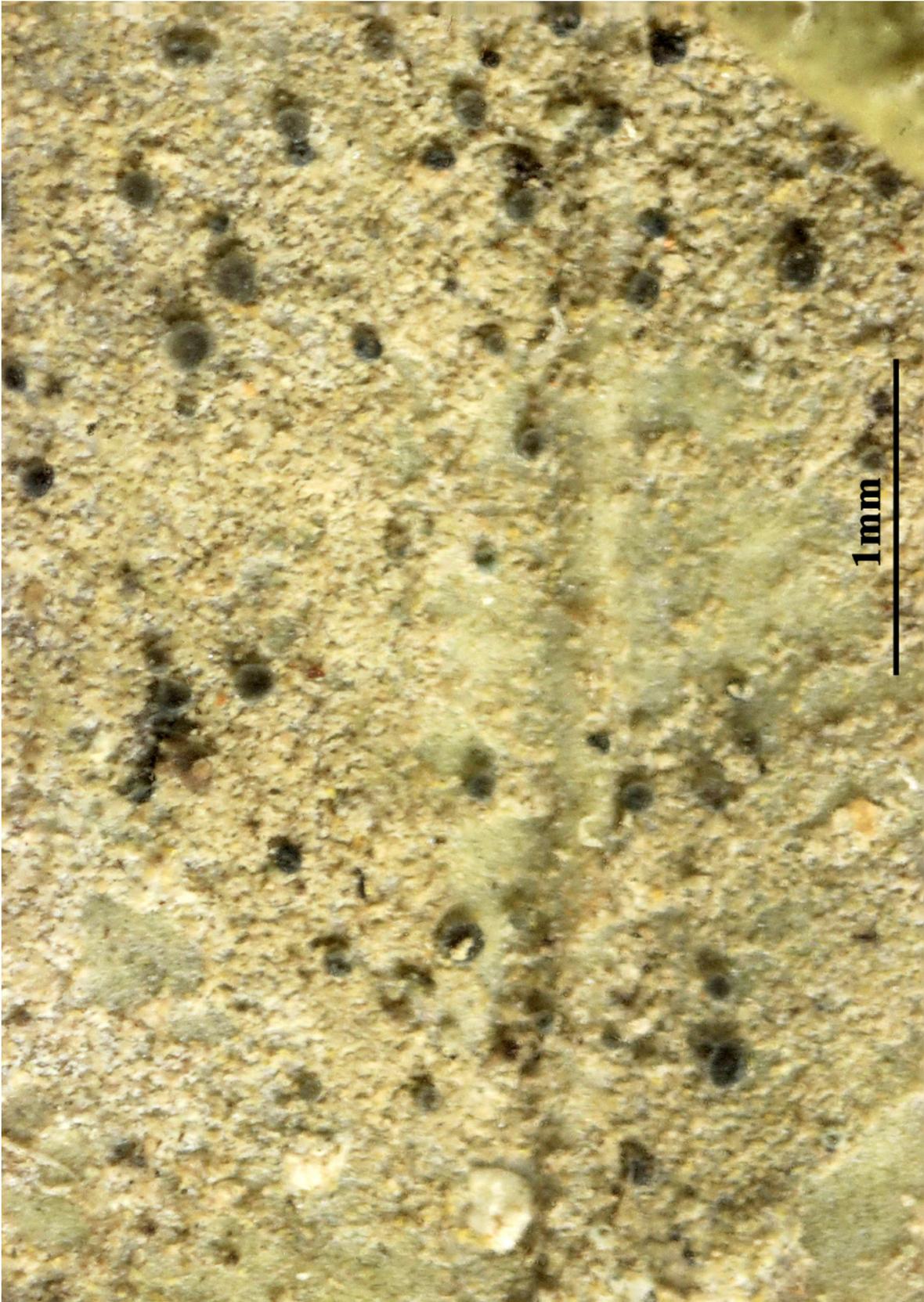
*Bacidia buxi* Vězda & Vivant, Bull. Soc. Bot. France 119: 256 (1973) [1972]  
 = *Fellhaneropsis myrtillicola* (Erichsen) Sérus. & Coppins in Sérusiaux,  
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 = *Fellhanera buxi* (Vězda & Vivant) Vězda.  
 = *Fellhanera myrtillicola* (Erichsen) Hafellner

[VZ1516], URSS. Caucasus. Georgia: Colchis, distr. Guiripsi, Amtkel, ad confluentem fluminum Amtkel et Kodora, 500-600 m. Ad folia *Buxi colchicae*. Leg. V. Vašák et A. Vězda, 26.6.1977. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1516.

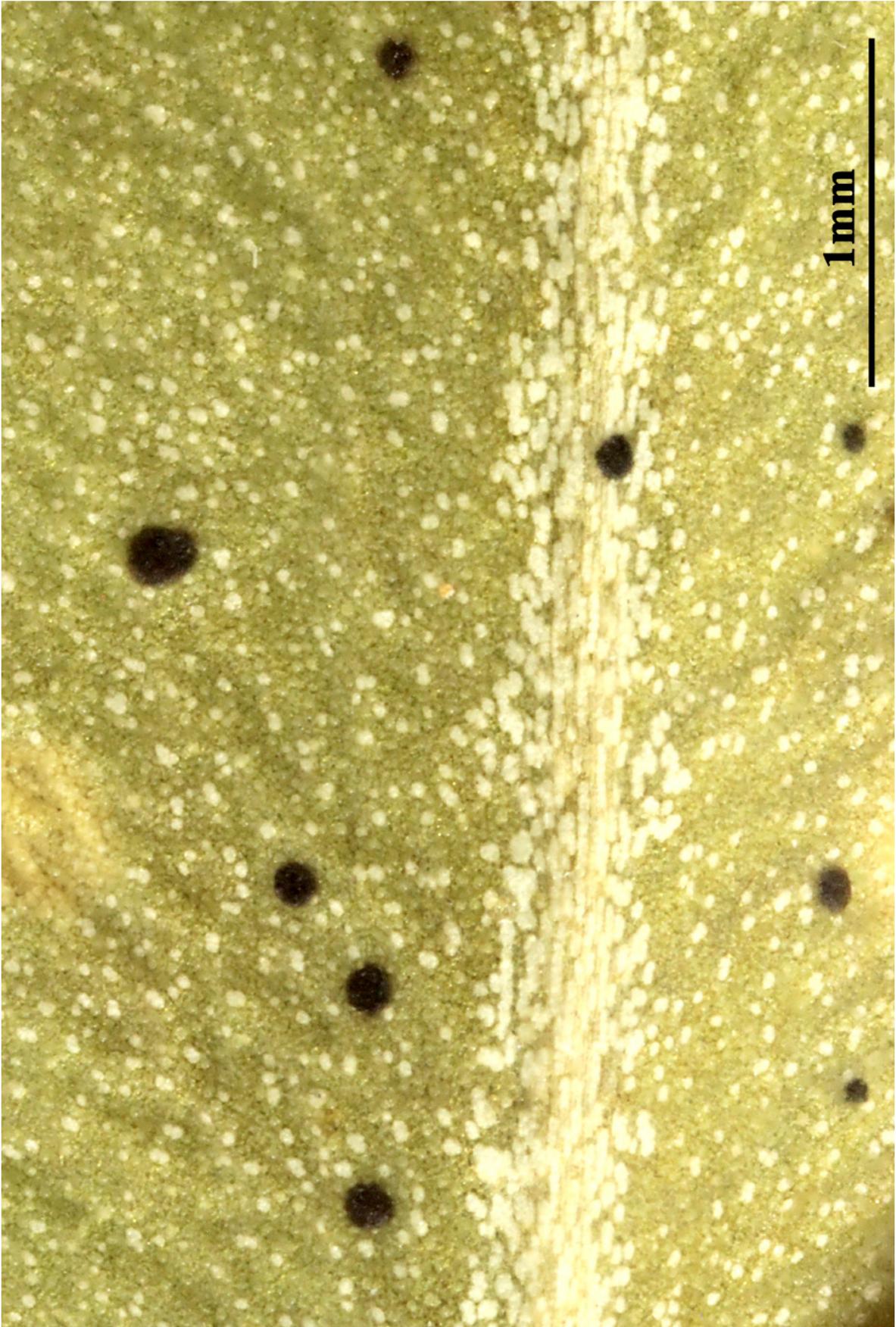
Thallus crustose, thin and smooth to rarely granulose or slightly verrucose, greenish grey to bluish grey, somehow glossy, forming small, suborbicular patches which eventually merge to cover larger areas, usually delimited by a bluish prothallus. Apothecia biatorine, constricted at base, 0.1-0.2(-0.3) mm across, with a flat to convex, pale brown to bluish grey or bluish black disc and a thin, whitish, soon excluded proper margin. Proper exciple of vertically arranged hyphae with elliptical to polyhedral cells, up to 15 µm wide laterally, colourless throughout or very pale brown in innermost part; epithecium scarcely differentiated from the hymenium; hymenium colourless, I+ blue; paraphyses branched and anastomosing, 1-1.5 µm thick, forming a densely interwoven network around the ascus tips; hypothecium very thin, dark brown, K+ greenish brown to green in central parts. Asci 8-spored, clavate, with a K/I+ blue apical dome containing a darker blue, tubular ring-structure, and an amyloid coat, Byssoloma-type. Ascospores 3(-5)-septate, hyaline, oblong-fusiform, straight or slightly curved, 16-28(-34) x 3-4 µm. Pycnidia dark grey to blue-black, immersed in the apothecia or sessile on the thallus, with palisadic hyphae on rim of ostiole (enclosing the conidial mass at least when young), producing (12-)20-45 µm long, thread-like macroconidia, or 4-8 µm long, bacilliform microconidia, respectively. Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a mild-temperate to southern boreal-montane lichen found on needles of *Abies* in very humid montane forests, but also on leaves of *Buxus* and *Laurus* in warm-humid gorges near the coast.



*Bacidia buxi*



*Bacidia buxi*

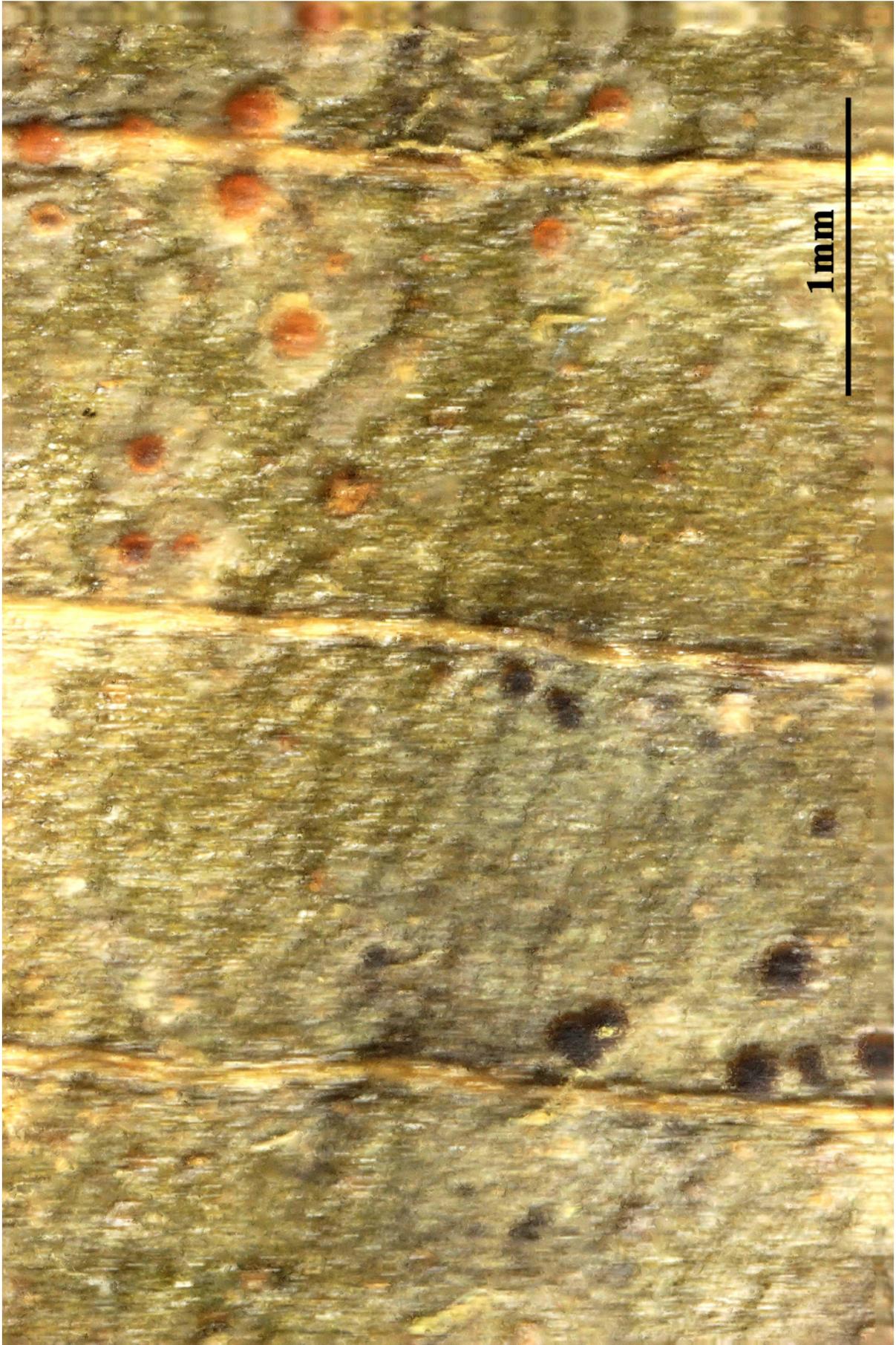


*Bacidia buxi*

*Bacidia fuscatula* (Müll. Arg.) Zahlbr., Cat. Lich. Univers. 4: 112 (1926)  
[1927]  
= *Fellhanera fuscatula* (Müll. Arg.) Vězda, Folia geobot. phytotax. 21(2):  
214 (1986)  
= *Patellaria fuscatula* Müll. Arg. 1881

[VZ1235], Tanzania. Kilimanjaro montes, in valle rivi Mnangue supra Mweka, 1900 m. Ad folia *Marttiaefraxinae* in silva montana humida. Leg. T. Pócs (no. 6343), 27.7.1970, det. A. Vězda. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1235-

Thallus usually foliicolous, epiphyllous, crustose, continuous, 5–20 mm across and 10–15  $\mu\text{m}$  thick, smooth to farinose or granulose, greenish to brownish grey. Photobiont cells 4–8  $\mu\text{m}$  diam. Apothecia sessile, rounded, 0.2–0.5 mm diam. and 150–200  $\mu\text{m}$  high; disc plane to slightly convex, ochraceous yellow to (reddish) brown; margin thin but usually persistent, chamois-colored. Excipulum paraplectenchymatous, 30–50  $\mu\text{m}$  broad. Hypothecium 15–35  $\mu\text{m}$  high, orange to reddish brown, K+ orange. Apothecial base aeruginous, K–. Epithecium indistinct. Hymenium 70–80  $\mu\text{m}$  high, colorless. Asci clavate, 60–70 x 12–16  $\mu\text{m}$ . Ascospores 8 per ascus, oblong, 7-septate, with constrictions at septa, 18–24 x 3–4.5  $\mu\text{m}$ , 5–6 times as long as broad. Pycnidia very rare, sessile, cupuliform to subglobose, 0.07–0.15 mm diam. and 50–100  $\mu\text{m}$  high, dark grey; wall paraplectenchymatous. Conidia bacillar, non-septate, 3–5 x 0.7–1  $\mu\text{m}$ . Chemistry: no substances detected by TLC and HPLC. Distribution and Ecology. Pantropical. One of the most common members of the genus. In contrast to the cosmopolitan *F. bouteillei*, which often grows on the same leaves, a typically foliicolous, tropical species restricted to the forest understory but with a rather extensive, altitudinal range from lowland to upper montane zones.



*Bacidia fuscatula*



*Bacidia fuscatula*

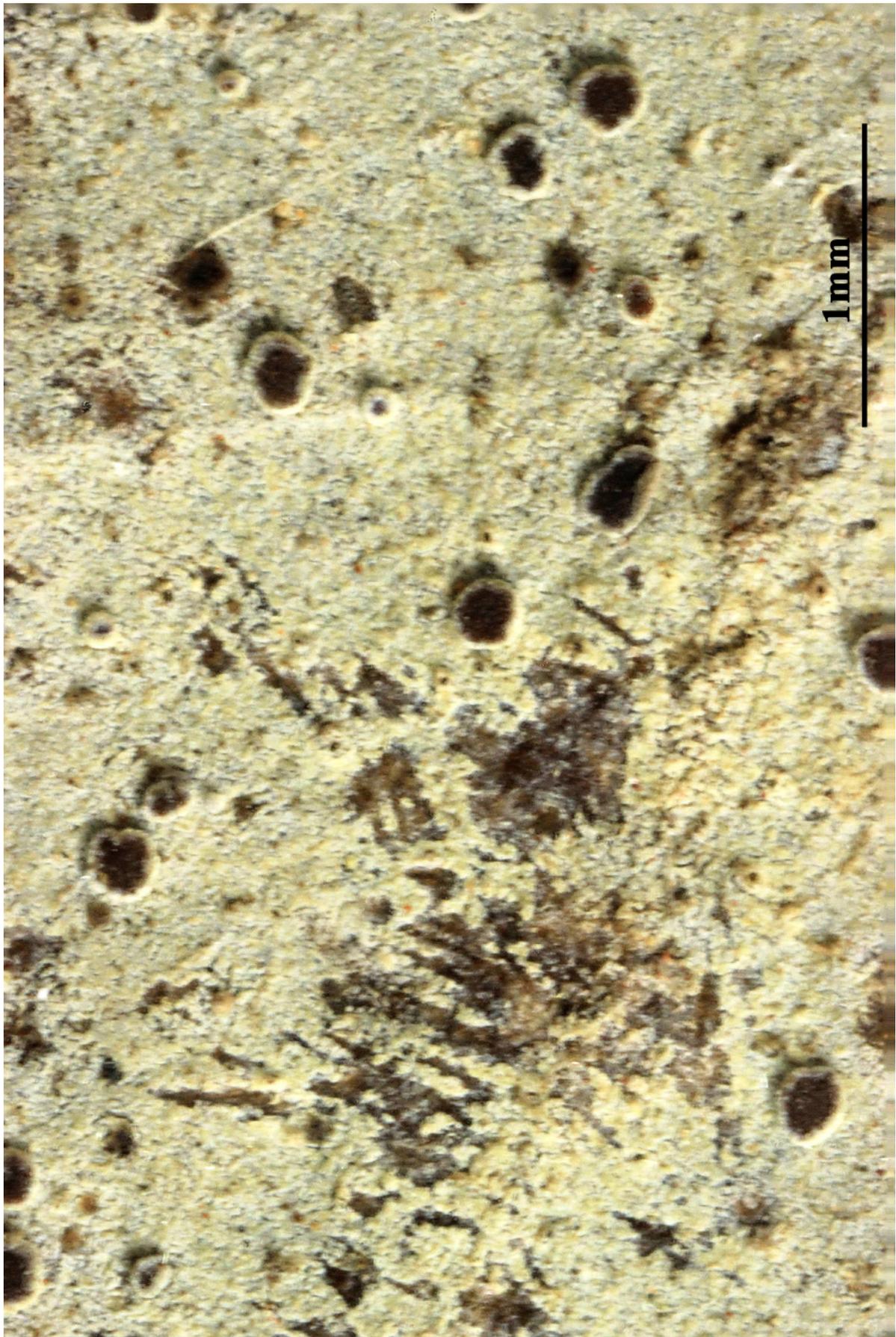
*Bacidia sublecanorina* (Nyl.) Zahlbr., Cat. Lich. Univers. 4: 153 (1926)  
[1927]  
= *Fellhanera sublecanorina* (Nyl.) Vězda, Lichenes Selecti Exsiccati,  
Fascicle 87 (nos 2151-2175) (Průhonice): 2 (no. 2156) (1987)  
= *Platygrapha sublecanorina* Nyl. 1868

[VZ2033], Brasilia. Mato Grosso. Serra dos Cerodaos: Chapada dos  
Guimaraes, 800 m. Foliicola. in silva submontana. Leg. K. Kalb,  
6.7.1980, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI  
NR. 2033.

Thallus continuous, 10–30 mm across and 10–20 µm thick, minutely  
farinose to almost granulose, pale bluish (to greenish) grey. Apothecia  
rounded, 0.2–0.4 mm diam. and 100–150 µm high; disc plane, dark  
brown to blackish brown; margin distinct, pale grey. Excipulum parap-  
lectenchymatous, 15–30 µm broad. Hypothecium 10–30 µm high,  
brown, K–. Apothecial base brown, K–. Epithecium thin, 5–10 µm,  
light brown. Hymenium 45–50 µm high, colorless. Asci 40–45 x 10–14  
µm. Ascospores 8 per ascus, oblong-ellipsoid, 3-septate, without or  
with slight constrictions at septa, 12–18 x 3–5 µm, 3.5–4.5 times as long  
as broad. Pycnidia sessile, cupuliform to subglobose, 0.07–0.15 mm  
diam. and 50–100 µm high, chamois-colored to grey; wall paraplecten-  
chymatous. Conidia pyriform, non-septate, 3–4 x 1.5–2 µm. Chemistry:  
usnic acid, isousnic acid, zeorin. Distribution and Ecology. Pantropical.  
A rather common species, most typically found at midelevations in  
more open situations, but with a rather wide, ecological amplitude.



*Bacidia sublecanorina*



*Bacidia sublecanorina*

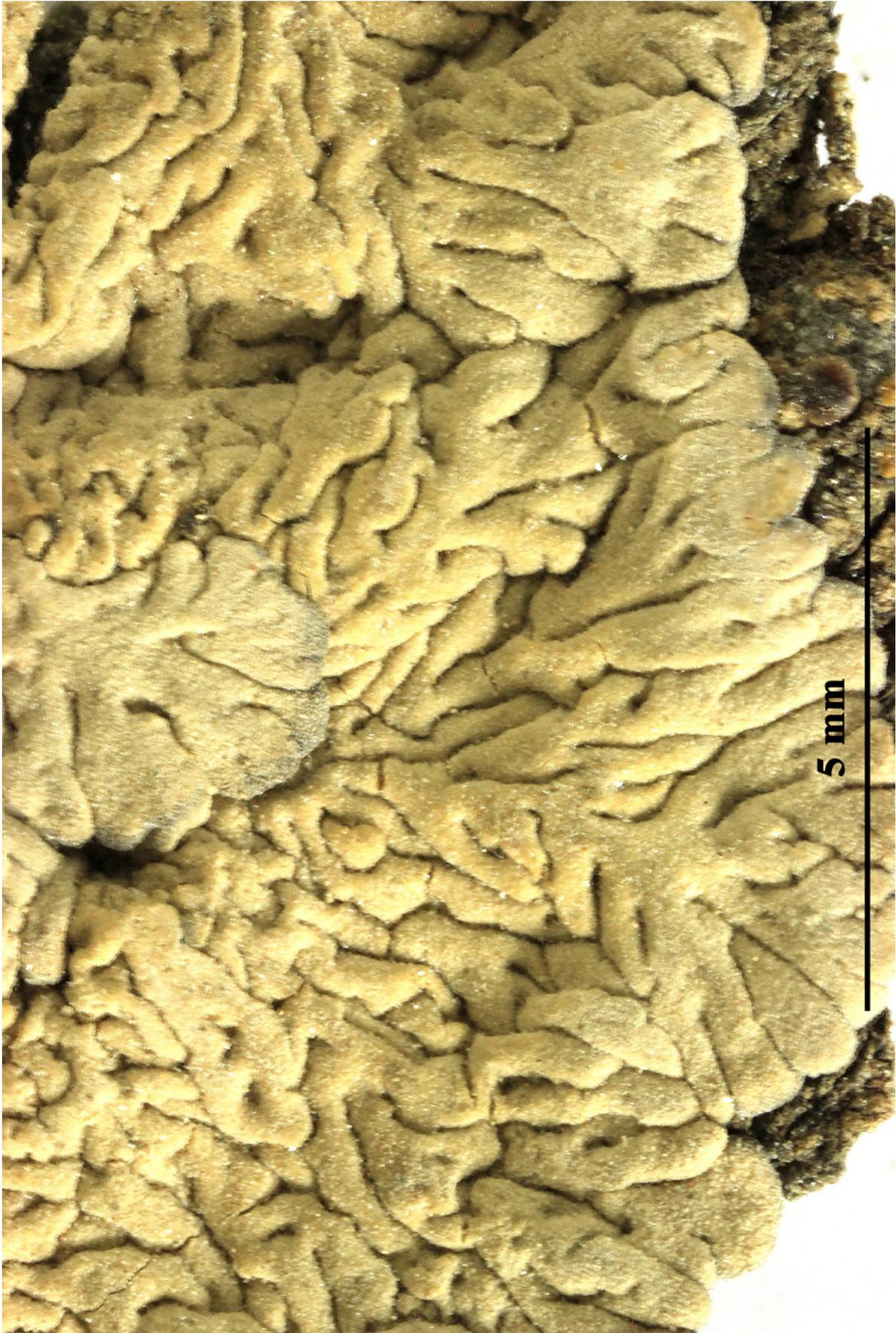
- Buellia canescens* (Dicks.) De Not., G. bot. ital. 2(1.1): 197 (1846)  
 = *Diploicia canescens* (Dicks.) A. Massal., Ric. auton. lich. crost. (Verona): 86 (1852)  
 = *Buelliomyces canescentis* E.A. Thomas ex Cif. & Tomas., Atti Ist. bot. Univ. Lab. crittog. Pavia, sér. 5 10(1): 45, 71 (1953)  
 = *Catolechia canescens* (Dicks.) Anzi, Comm. Soc. crittog. Ital. 1(fasc. 3): 147 (1862)  
 = *Diploicia canescens* subsp. *australasica* Elix & Lumbsch, Mycotaxon 33: 463 (1988)  
 = *Diplotomma canescens* (Dicks.) Flot., Übers. Arbeiten Veränd. Schles. Ges. Vaterl. Kultur [27]: 129 (1850) [1849]  
 = *Diplotomma canescens* subsp. *australasica* (Elix & Lumbsch) D.J. Galloway, New Zealand J. Bot. 42(1): 115 (2004)  
 = *Lecidea canescens* (Dicks.) Ach., Methodus, Sectio prior (Stockholmiaë): 83 (1803)  
 = *Lepidoma canescens* (Dicks.) Gray, Nat. Arr. Brit. Pl. (London) 1: 462 (1821)  
 = *Lichen canescens* Dicks., Fasc. pl. crypt. Brit. (London) 1: 10 (1785)  
 = *Patellaria canescens* (Dicks.) Wallr., Fl. crypt. Germ. (Norimbergae) 1: 386 (1831)  
 = *Placodium canescens* (Dicks.) DC., in Lamarck & de Candolle, Fl. franç., Edn 3 (Paris) 2: 379 (1805)  
 = *Psora canescens* (Dicks.) Hoffm., Deutschl. Fl., Zweiter Theil (Erlangen): 165 (1796) [1795]

[VZ1221], Gallia. Var. insula Port-Cros: Le Château, 10 m. Ad saxa schistosa. Leg. Y. R. Rondon, 21.7.1973. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1221.

Thallus crustose-placodioid, glaucous grey but usually densely white-pruinose, forming 1-4(-6) cm wide, usually orbicular rosettes, sometimes several thalli merging and covering larger surfaces. Lobes radiating from the center, 0.5-1.2 mm wide, contiguous, slightly convex, rounded and often slightly broader and fan-shaped at ends, with laminar, at first orbicular soralia developing from small bulges, finally bursting and irregular; soredia finely granular, greenish white to grey; lower surface usually pale, attached by medullary hyphae. Upper cortex pseudoparenchymatous, formed by vertically arranged hyphae, filled with minute crystals forming chains in K; medulla usually white, lax. Apothecia rare, lecideine, black, up to 1 mm across, laminar. Proper exciple thin, dark brown to black; epithecium granular, brown-black,

K-; hymenium colourless, I+ blue; paraphyses simple or forked, the apical cells swollen, with a dark cap; hypothecium brown or brown-black. Asci 8-spored, cylindrical-clavate, the apical dome K/I+ dark blue with a pale, conical-pointed apical cushion (axial mass), the wall I-, but the thin outer gel I+ blue, Bacidia-type. Ascospores 1-septate, grey green to brown, thick-walled, ellipsoid, 9-15 x 4-8  $\mu\text{m}$  Dirinaria-type, with ontogeny of type B (apical inner wall-thickenings produced before septum formation). Pycnidia immersed, brown-black, the wall dark near the ostiole, otherwise colourless, the conidiogenous cells enteroblastic, pleurogenous, branched. Conidia hyaline, short-bacilli-form, 5-8  $\mu\text{m}$  x 0.7-1  $\mu\text{m}$ . Photobiont chlorococcoid. Spot tests: cortex K+ yellow, C- or C+ pale pinkish yellow, KC+ brownish yellow or yellow-orange, P- or P+ yellow; medulla K-, C-, KC-, P-, UV+ dull orange. Chemistry: cortex with atranorin and often chloroatranorin, medulla with dechlorodiploicin (minor), isofulgidin (minor), dechloro-O-methyldiploicin (minor or trace), buellolide (minor), canesolide (minor or trace), and secalonic acids A, B and C (minor or trace). - Note: a rather western and southern lichen in Europe, found on a wide variety of substrata including base-rich or -enriched bark, calciferous sandstone, and limestone, sometimes also found under overhangs of calcareous rocks protected from rain; rare in Northern Italy and along the eastern side of the Peninsula.

*Buellia canescens*



*Buellia canescens*

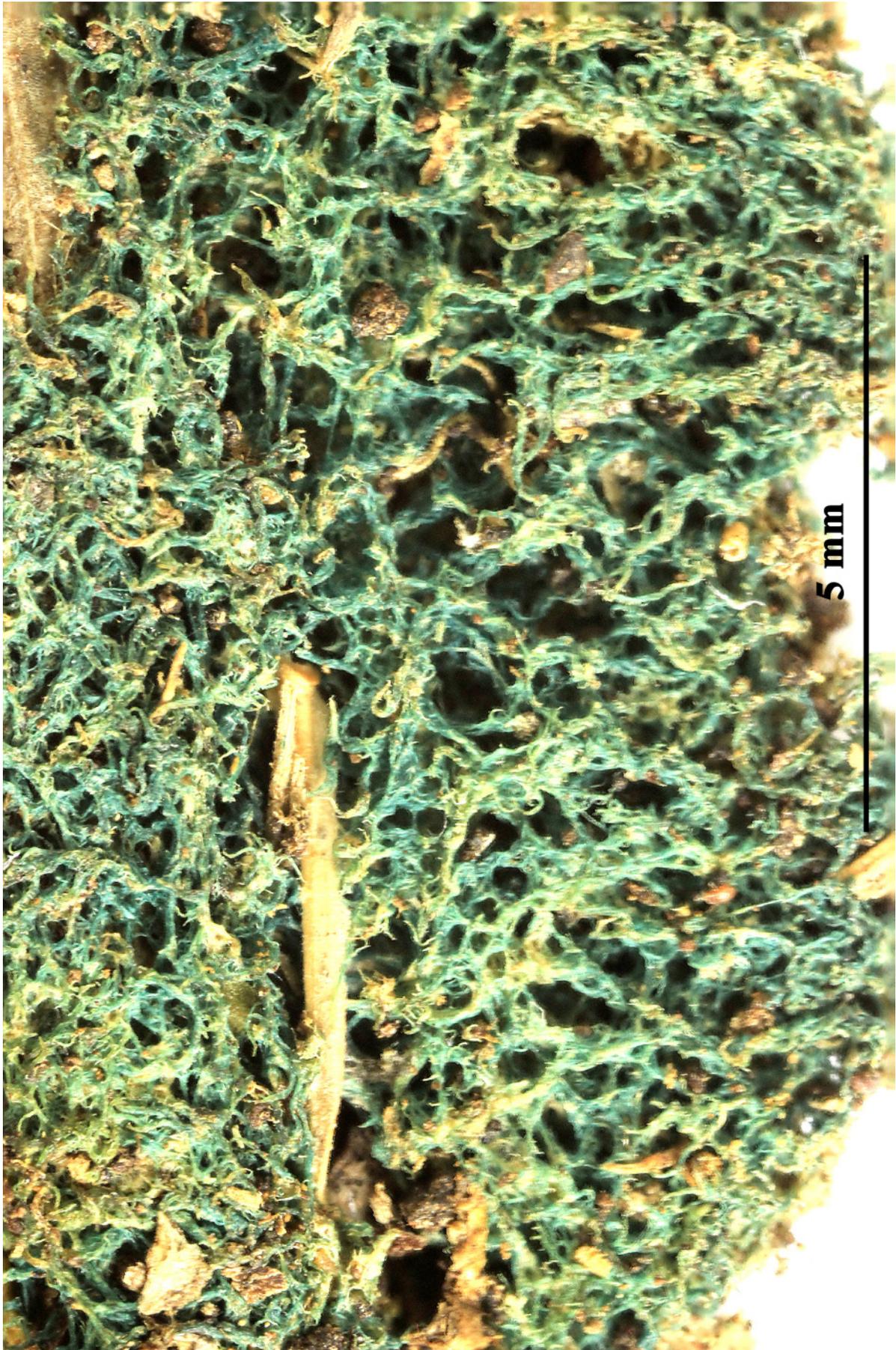


*Buellia canescens*

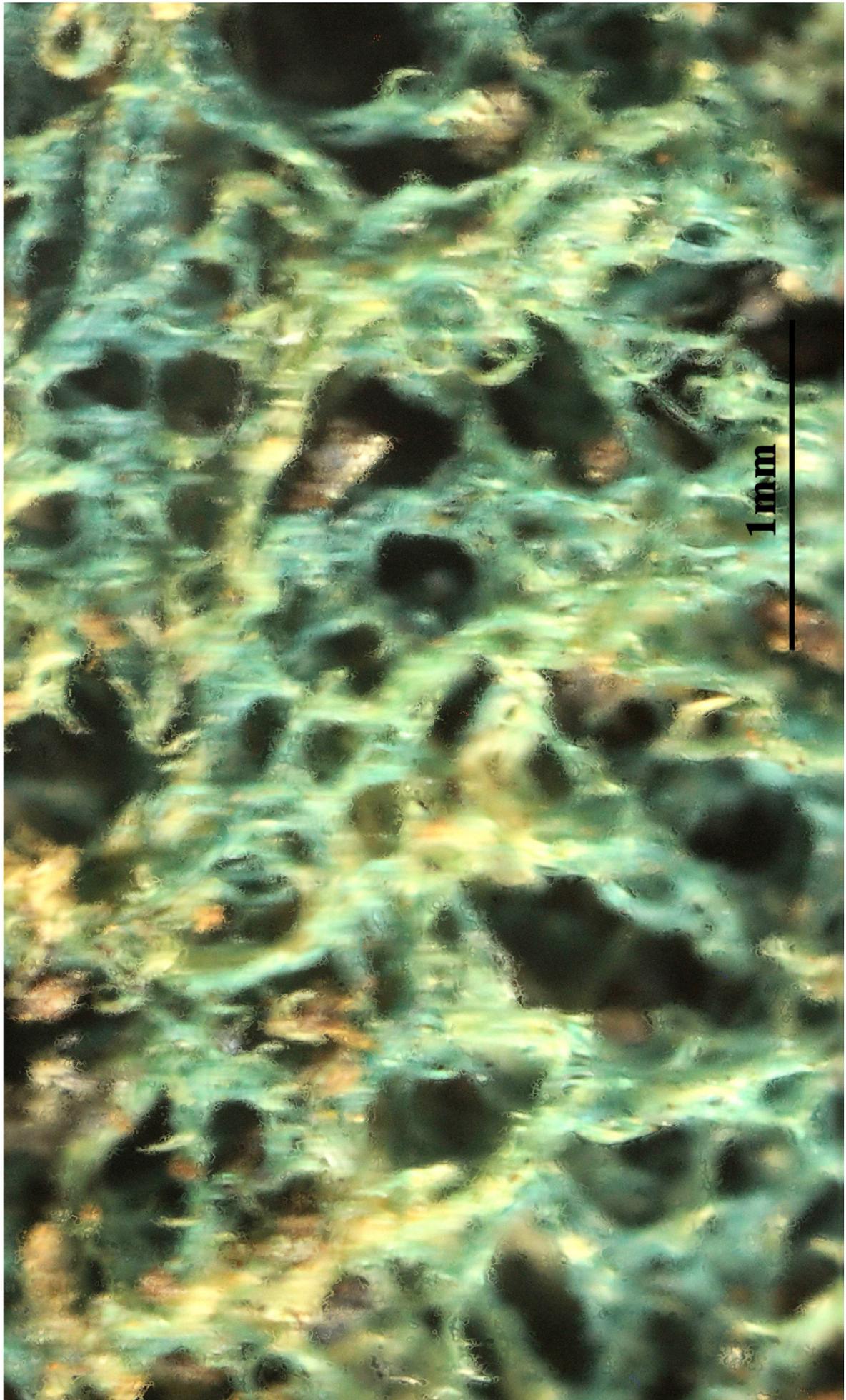
*Dictyonema sericeum* (Sw.) Berk., London J. Bot. 2: 639 (1843)  
= *Hydnum sericeum* Sw. 1788

[VZ1800], Cuba. Oriente, Prov. Granma: Sierra Maestra, Estribo de Turqino, 1600-1700 m. Ad muscos. Leg. T. Pócs, 20.4.1979. - Annot.: Ad f. *membranaceam* Metzner (Ber. Dtschl bot. Ges. 52: 238, 1934) pertinet. - EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1800.

Thallus a basidiocarp, sessile, imbricate and united in rosettes or spreading  $\pm$  irregularly and unevenly, to 25 cm diam., semicircular or reniform, soft membranous-spongy when wet, brittle when dry. Upper surface indistinctly zonate or azonate, dull green, dark green, greyish-green, malachite green to dark, bluish-green, fibrillose, fibrils appressed or ascendent, margins rounded, loosely radially fibrillose, dark cream to pale yellowish. Lower surface sparsely radially reticulate. Fruiting bodies developing at the tips of fibrils, at first scattered cupules 0.3-1 mm diam., coalescing to form scattered spots to 1 cm diam., or more frequently forming a  $\pm$  continuous whitish or creamish hymenium containing basidia and basidiospores. Algal trichomata (*Scytonema*) uniseriate Hypha without clamps



*Dictyonema sericeum*



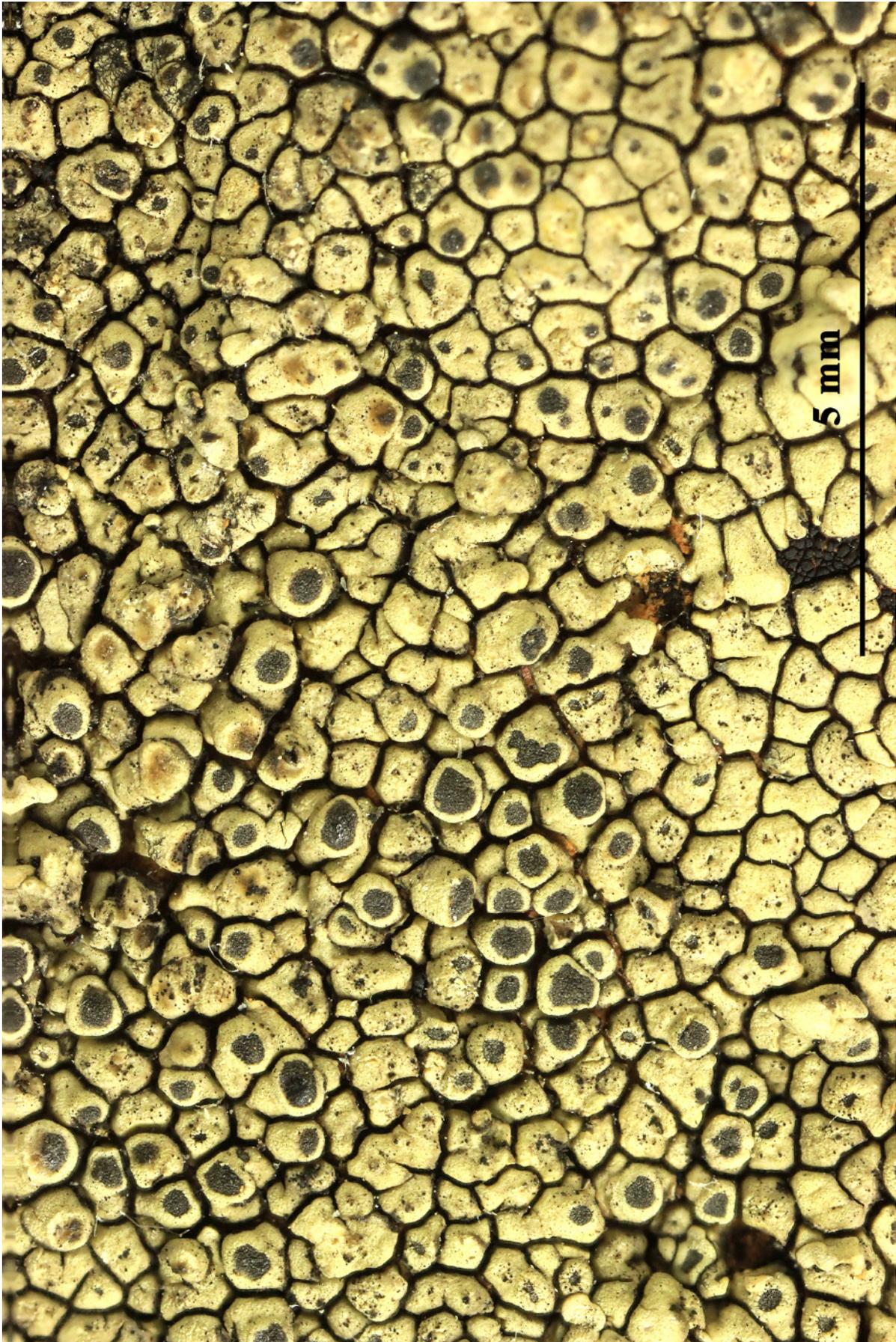
*Dictyonema sericeum*

*Dimelaena griseoviridis* (H. Magn.) Vězda, Lichenes Selecti Exsiccati, Fasc. (Průhonice) 48: 7 (no. 1198) (1973)  
= *Rinodina oreina* var. *griseoviridis* H. Magn. 1944

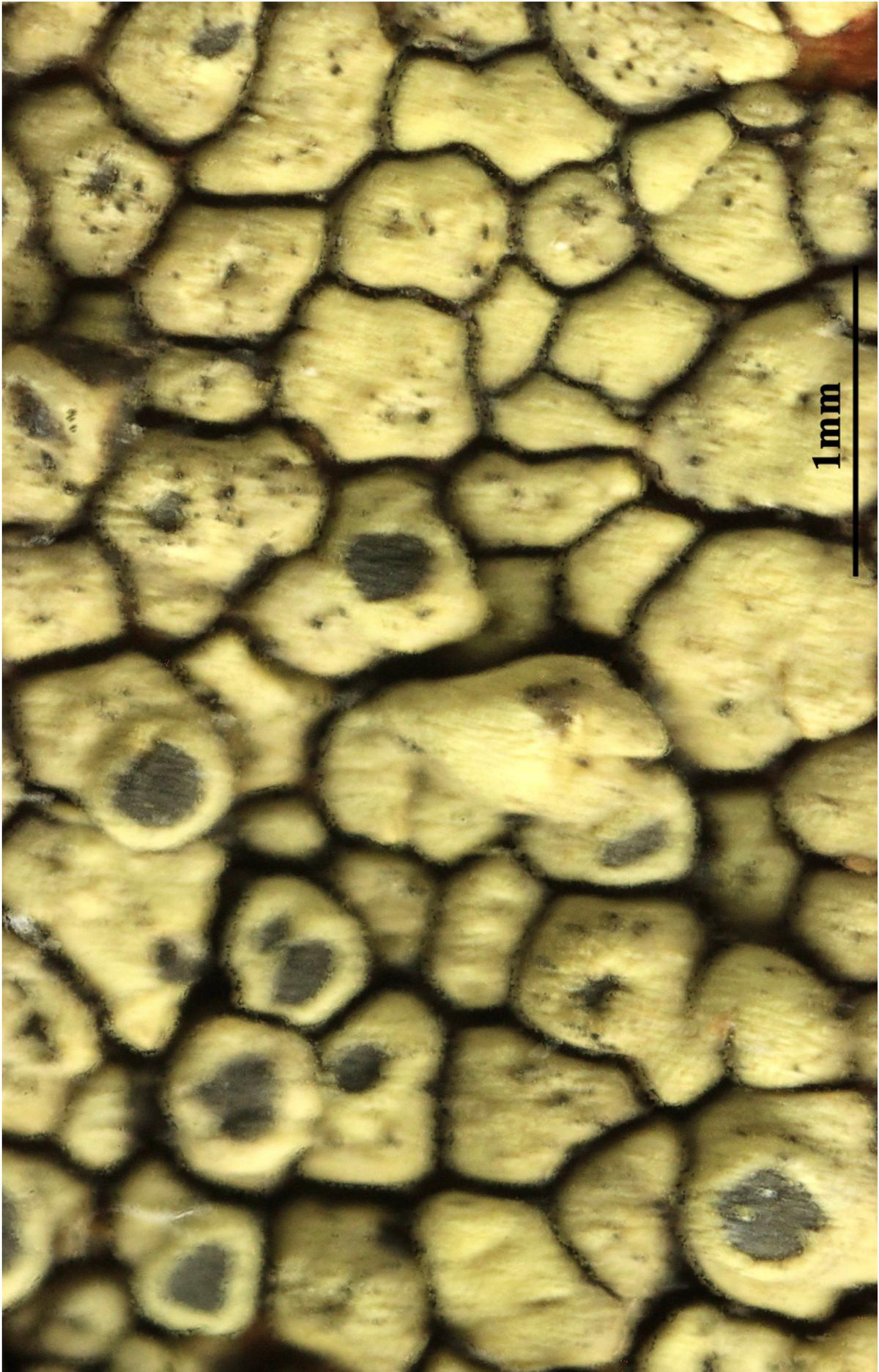
[VZ1198], Romania. Distr. Cluj: Turda. Cheile Turzii, prope introitum vallis rivi Hasdare, in summo collis prope viam ad opp. Mihai Viteazu ducentem, 380 m, Ad saxa siliucea. Leg. A. Vězda, 8.7.1973. EX A. VĚZDA LICHENES SELECTI EXSICCARI NR. 1198.

Thallus thin to thick, placodioid, with radiate-plicate marginal lobes, areolate towards the center areoles; 0.3-1 mm wide, plane, often delimited by a dark, narrow prothallus surface; greenish yellow due to usnic acid in the cortex, color sometimes occluded by an outer epinecral layer, or a pruina of oxalate crystals (or both). Apothecia frequent, cryptolecanorine becoming lecanorine, innate or more usually adnate, 0.2-0.9 mm in diam; disc black or sometimes white-pruinose, plane to slightly convex; epihymenium brown; hymenium hyaline, I+ blue; paraphyses simple or weakly branched; hypothecium hyaline; asci cylindrical, 8-spored; ascospores brown, 1-septate, 9-13 x 5-7  $\mu\text{m}$ , becoming constricted centrally; Pycnidia immersed, occurring singly in the center of younger areolae, pyriform; conidia hyaline, simple, bacilliform, 5-6 x 1  $\mu\text{m}$  long. Spot tests, K+ yellow, C-, KC-, P+ red (chemotype I), K-, C+ red, P- (chemotype II), K-, C-, KC-, P- (chemotype III, VI), K+ yellow, C+ red, P+ red (chemotype IV), K+ yellow, C-, KC-, P+ orange (chemotype V), K+ yellow, C+ red, P+ orange (chemotype VII). Secondary metabolites: major compounds: usnic acid, fumarprotocetraric acid (chemotype I), usnic acid, gyrophoric acid (chemotype II), usnic acid (chemotype III), usnic acid, gyrophoric acid, fumarprotocetraric acid (chemotype IV), usnic acid, stictic acid (chemotype V), usnic acid, sphaerophorin (VI), usnic acid, gyrophoric acid, stictic acid (chemotype VII); main compounds often accompanied by norstictic acid, lecanoric acid and ovoic acid as minor compounds. Substrate and ecology: on steeply inclined surfaces of hard siliceous rocks. World distribution: world-wide except in the tropics, Australasia and Antarctica

- Notes: *Dimelaena oreina* is characterized primarily by the presence of usnic acid, giving the thallus a greenish yellow color.



*Dimelaena griseoviridis*



*Dimelaena griseoviridis*

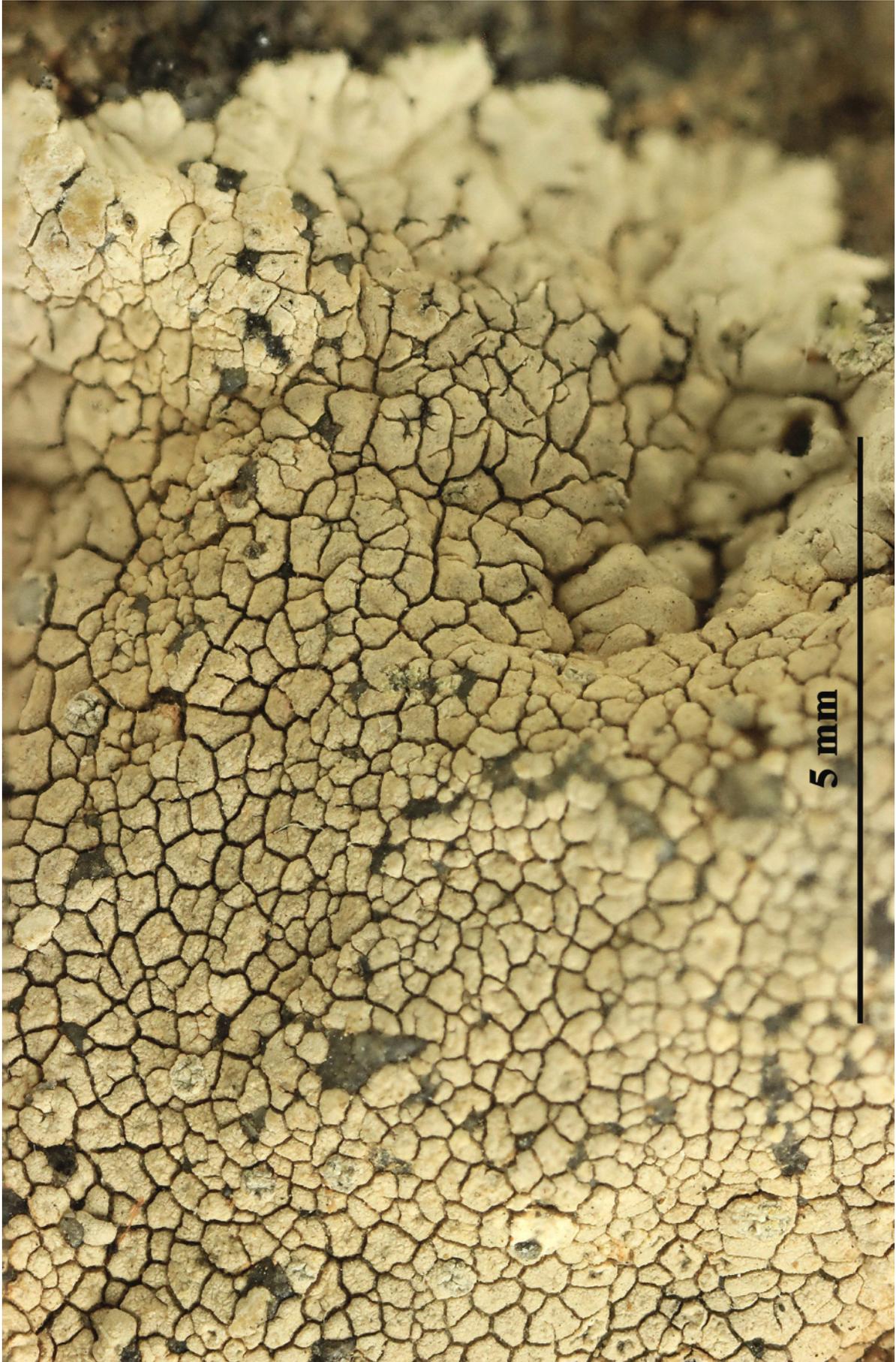
*Dimelaena radiata* (Tuck.) Müll. Arg., Flora, Regensburg 67(24): 466 (1884)  
= *Buellia radiata* Tuck., Lichens of California (Berkeley): 25 (1866)  
= *Catolechia radiata* (Tuck.) Müll. Arg., Flora, Regensburg 64(32): 509  
(1881)  
= *Rinodina radiata* (Tuck.) Tuck., Proc. Amer. Acad. Arts & Sci. 12: 173  
(1877)

[VZ1172], Hispania. Almeria. Sierra de Gata, prope vicum San José loco El Monsul dicto, 20 m. Ad lapides lavae in vicinitate maris. Leg. X. Llimona, 28.7.1972. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1172.

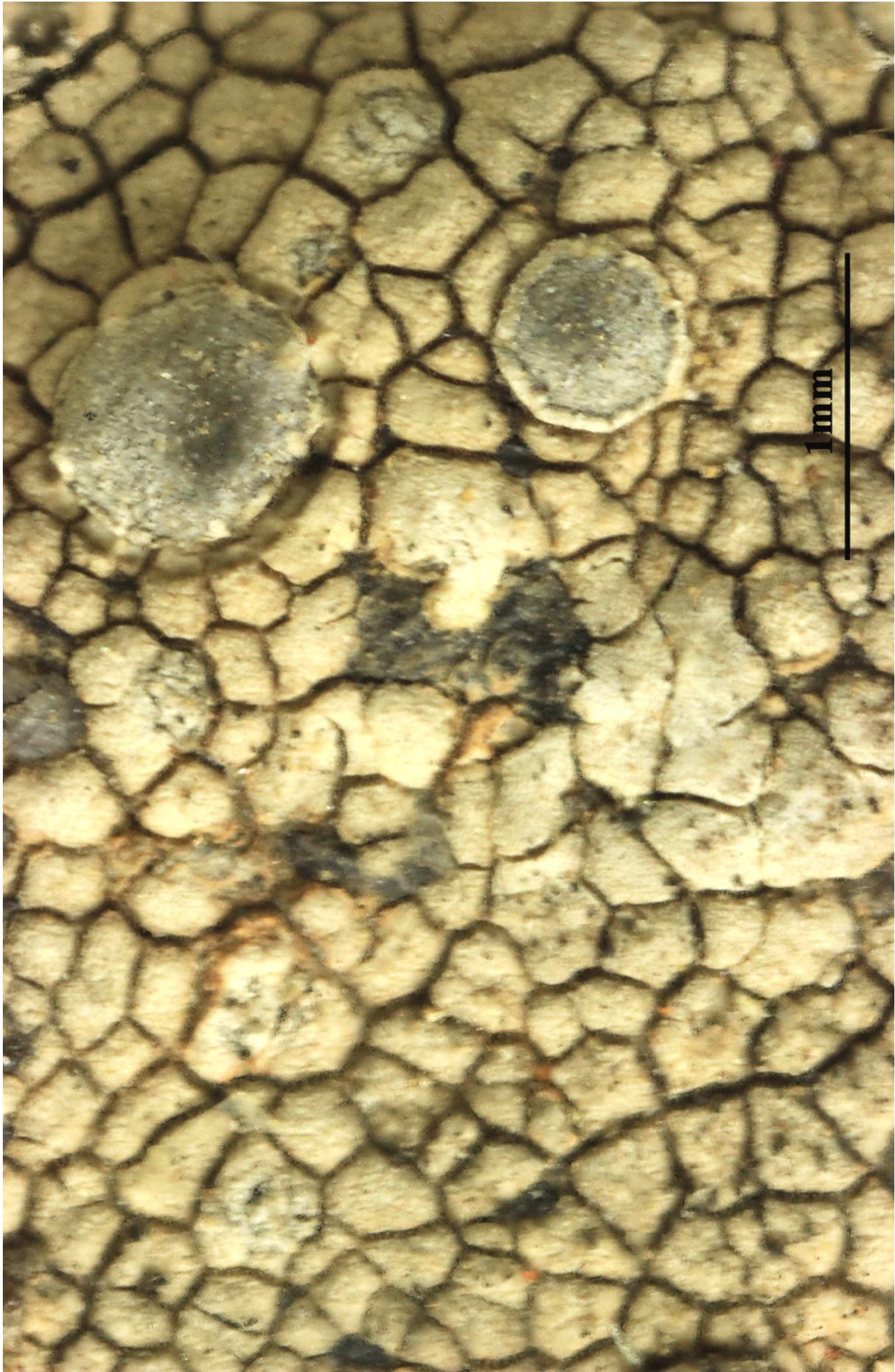
Thallus crustose-placodioid, episubstratic, whitish to pale grey and heavily pruinose or brown and mainly epruinose except sometimes in marginal parts, areolate in central parts, forming regular to irregular rosettes, the individual thalli often merging to cover large surfaces. Areoles 0.1-0.8 mm wide, mostly flat, developing on a dark hypothallus; marginal lobes 0.3-1 mm wide, mostly flat or slightly convex. Upper phenocortex pseudoparenchymatous, often with crystal inclusions; medulla white, of loosely interwoven hyphae, I+ blue. Apothecia frequent, at first cryptolecanorine and immersed in the thallus, then lecanorine and or more or less adnate, 0.1-0.8 mm across, with a black, sometimes white-pruinose, flat to slightly convex disc and a thin, sometimes finally excluded thalline margin. Epithecium yellowish brown to brown, 5-15  $\mu\text{m}$  high; hymenium colourless, 50-85(-100)  $\mu\text{m}$  high, I+ blue; paraphyses simple or sparingly branched, (1-)2-3  $\mu\text{m}$  thick at base, the apical cells 3-6  $\mu\text{m}$  wide; hypothecium brown or dark brown, 75-200  $\mu\text{m}$  high. Asci 8-spored, cylindrical-clavate, the apical dome K/I+ dark blue with a pale, conical-pointed apical cushion (axial mass), the wall I-, but the thin outer gel I+ blue, Bacidia-type. Ascospores 1-septate and slightly constricted at septum, thin-walled throughout, brown, ellipsoid, 8-12 x 5-8  $\mu\text{m}$ , the wall distinctly ornamented, Beltraminia-type. Pycnidia black, immersed in the areoles, obpyriform. Conidia hyaline, simple, bacilliform, 7-11 x c. 1  $\mu\text{m}$ . Photobiont chlorococcoid. Spot tests: K- or K+ yellow, C-, KC-, P- or P+ orange; medulla KC- or KC + fleeting pink. Chemistry: 3-chlorodivaricatic acid (major), divaricatic acid (traces), occasionally norstictic acid (minor), 3-chlorolecanoric, 3-chloronordivaricatic and 3-chloroisosubdivaricatic acids (all minor) (chemotype I); divaricatic acid (major), 3-chlorodivaricatic acid (traces) (chemotype II); 5-chlorodivaricatic acid (major),

3-chlorodivaricatic acid (minor) (chemotype III); psoromic acid, 2'-O-demethylpsoromic acid (chemotype IV); virensic acid (chemotype V).  
- Note: a Mediterranean-Macaronesian species with a disjunction in W North America, also known from North Africa, the Iberian Peninsula and Corsica, growing on siliceous rocks in sunny, dry situations.

*Dimelaena radiata*



*Dimelaena radiata*

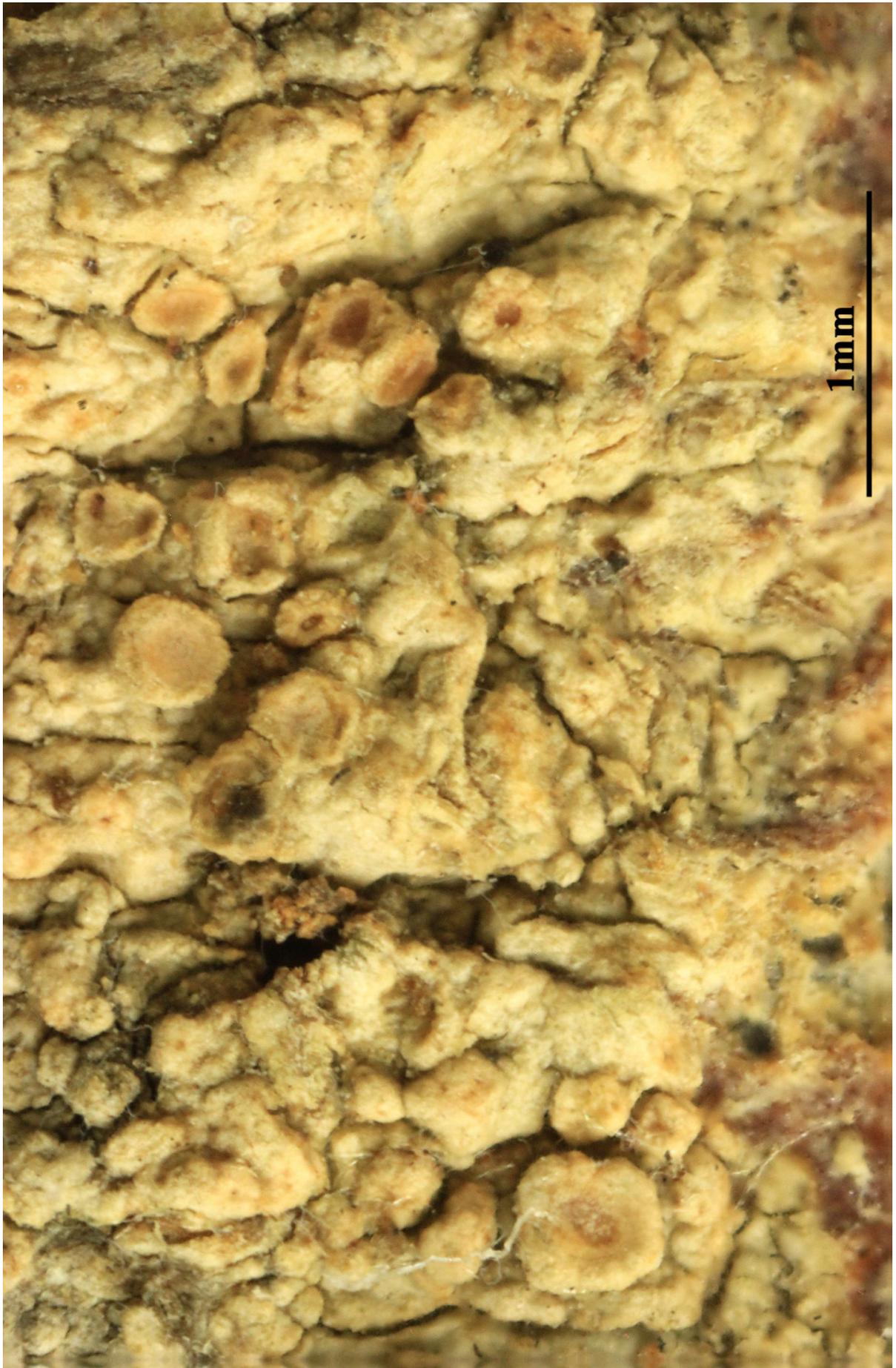


*Dimelaena radiata*

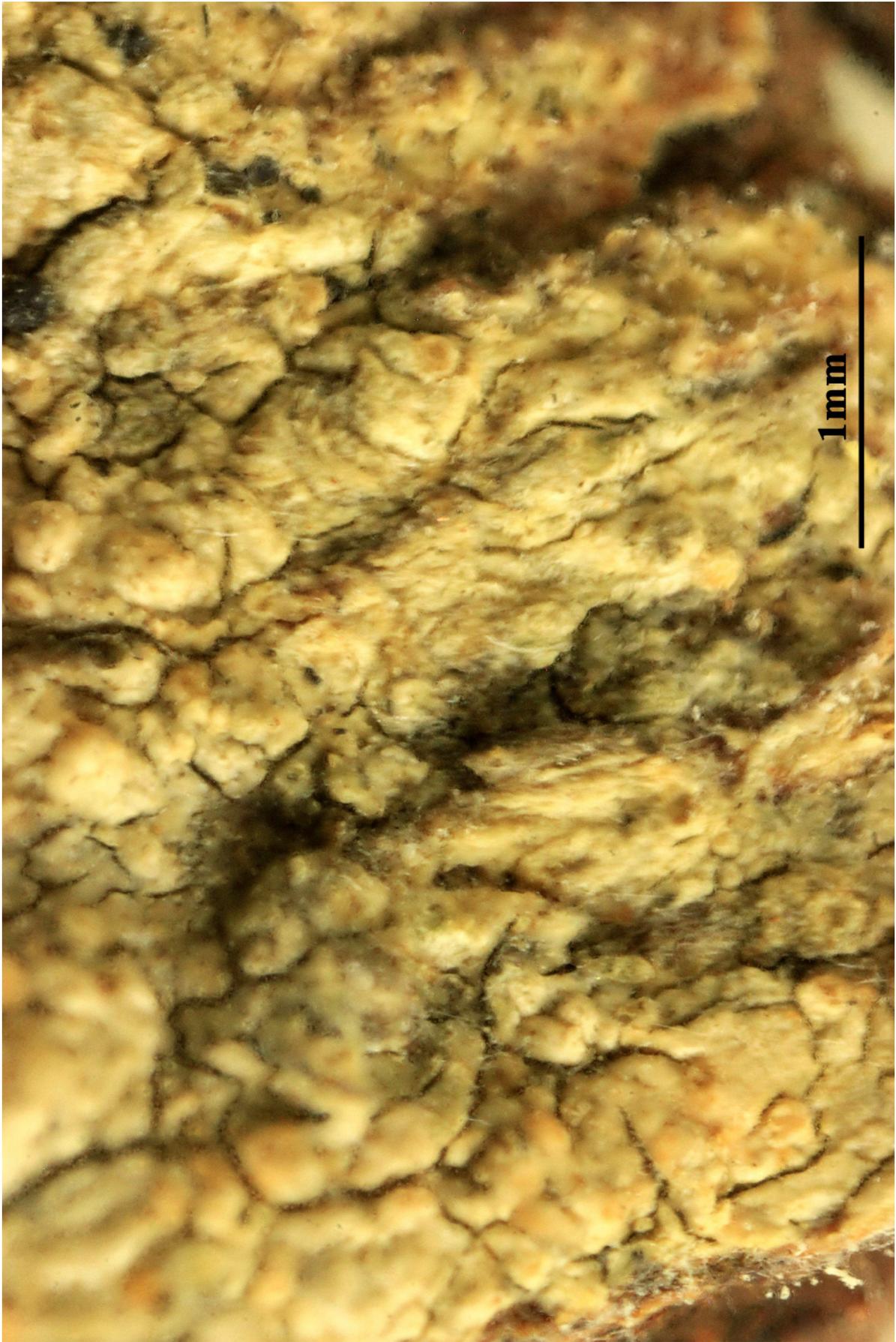
*Dimerella degeneri* Kalb & Vězda, Folia geobot. phytotax. 15(3): 310 (1980)  
= *Coenogonium degeneri* (Kalb & Vězda) Kalb & Lücking, in Rivas  
Plata, Lücking, Aptroot, Sipman, Chaves, Umaña & Lizano, Fungal Diver-  
sity 23: 297 (2006)

[VZ1729], Hawaii Insulae. Insula Oahu, Kaukonahua Gulch prope  
territorium Univeristatis, 210 m. Ad corticem arboris (*Ficus* sp. cult.)  
Leg. O. et I. Degener (no. 34269), 15.5.1977. EX A. VĚZDA LICHENES  
SELECTI EXSICCATI NR. 1729.

Species thallo rimoso-verruculoso, apotheciis late adnatis, marginibus  
extus thalli, tectis sporisque modice magnis praedita. Thallus epiphloe-  
odes, modice crassus, rimoso-veruculosus, glauco-cinereus, protothallo  
indistincto. Algae cellulis concatenatis, long. 10-15 x 6-10  $\mu\text{m}$ . Apothe-  
cia orbicularia, 0.5-0.7 mm lata, 0.3-0.35 mm alta, basi late adnata,  
haud oonstricta, disco primum concavo mox tamen plano, pallide  
luteo-aurantiaco, tenuiter pruinoso vel nudo, margine integro deplana-  
to, discum paulum superante, pallide luteolo, ad latera strato thallino  
algifero tecta. Excipulum laterale 60  $\mu\text{m}$ , basale 150  $\mu\text{m}$  crassum,  
subhyalinum. Hymenium 80-100  $\mu\text{m}$  altum, hyalinum, superne pallide  
fuscum. Paraphyses crass. 2  $\mu\text{m}$ , simplices, superne vulgo furcatae,  
cellulis apicalibus 1-2 globoso-inflatis. Asci cylindrici, 8-spori. Sporae  
distichae, fusiformes, apicibus obtusis, rectae vel arcuatae, long. 13-16  
x 4-5  $\mu\text{m}$ .



*Dimerella degeneri*

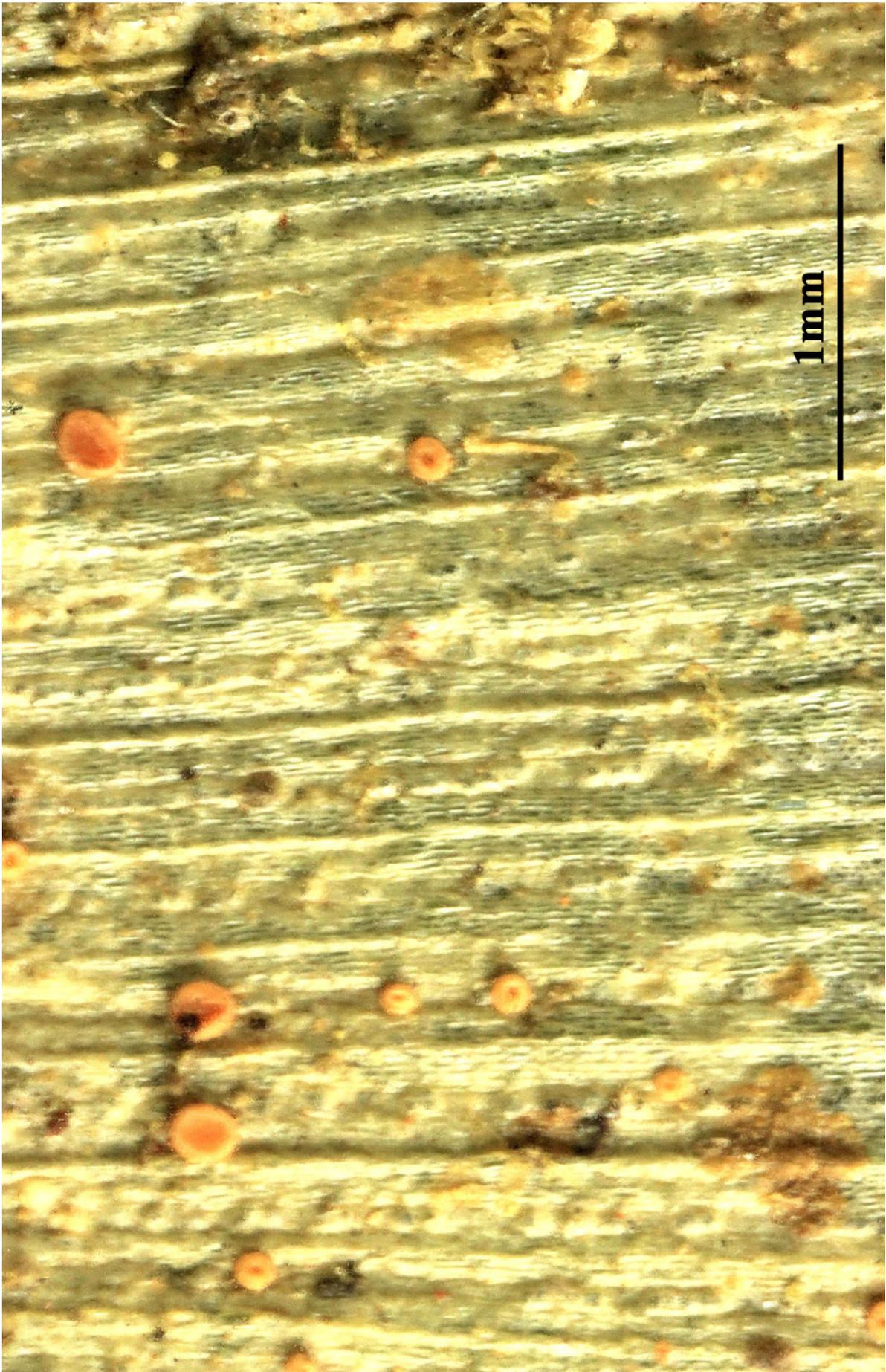


*Dimerella degeneri*

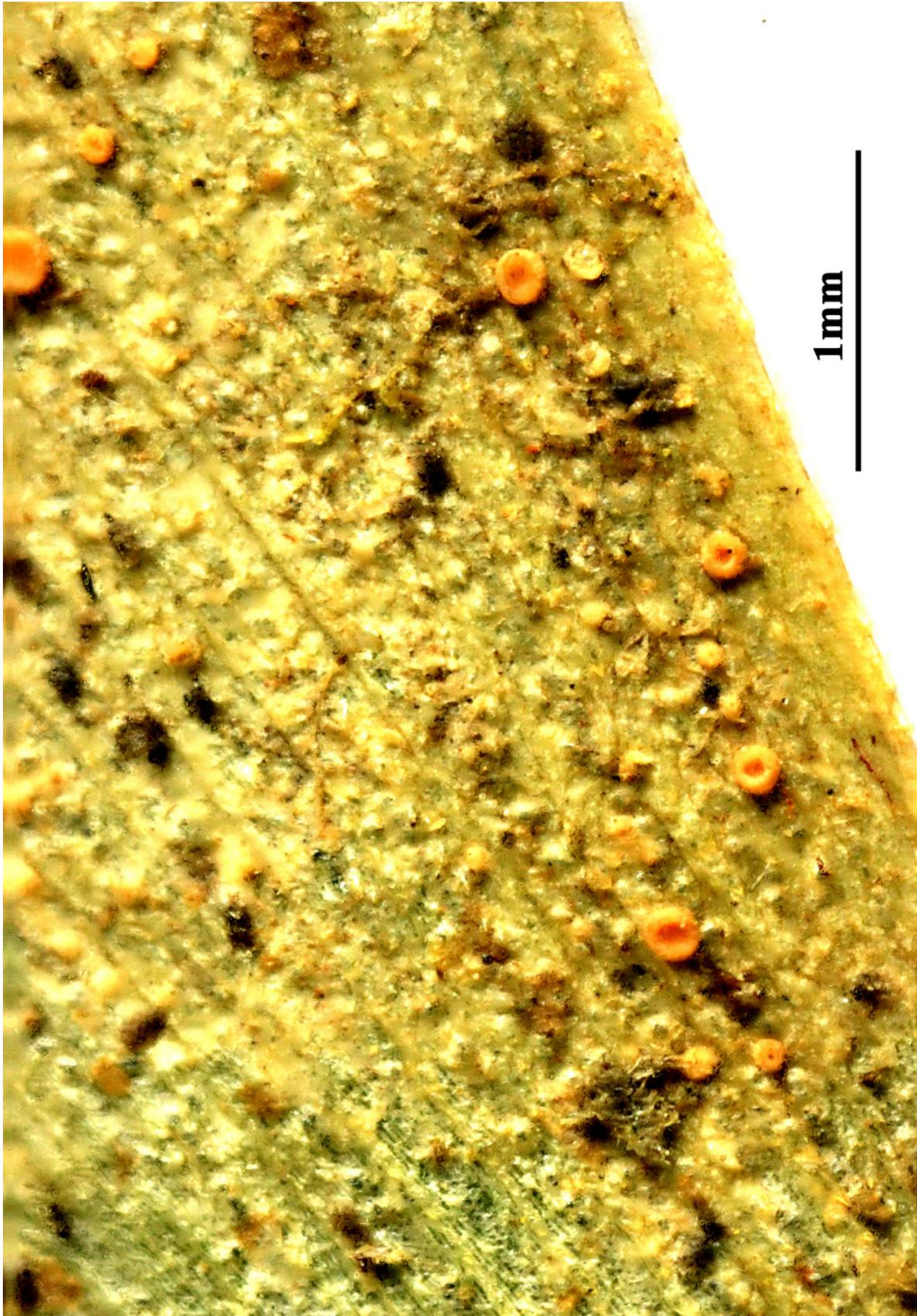
- Dimerella dilucida* (Kremp.) R. Sant., Symb. bot. upsal. 12(no. 1): 394 (1952)  
 = *Coenogonium dilucidum* (Kremp.) Kalb & Lücking, in Lücking & Kalb, Bot. Jb. 122(1): 32 (2000)  
 = *Lecidea dilucida* Kremp., J. Mus. Godeffroy 1(4. Heft): 103 (1874) [1873]  
 = *Microphiale dilucida* (Kremp.) Zahlbr., in Reehinger, Denkschr. Kaiserl. Akad. Wiss. Wien, Math.-Naturwiss. Kl. 81: 247 (1907)

[VZ1844], Brasilia. São Paulo: Serra do Mar: Serra do Garraozinho inter Moji das Cruzes et Bertioga, 850 m. Inpluviisilva virginea umbrosa humida. Leg. K. Kalb et D. Hannack, 30.6.1979, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1844.

Thallus continuous, thin, smooth, green. Photobiont cells angular-rounded, in irregular plates or short threads. Apothecia sessile, rounded, 0.1-0.3 mm diam. and 70-100 µm high; disc plane, pale waxcolored; margin slightly prominent, smooth, of same color as disc. Excipulum 30-40 µm broad, colorless. Hypothecium 5-10 µm high, colorless. Hymenium 45-65 µm high, colorless. Asci 40-60 x 4-6 µm. Ascospores irregularly uniseriate, ellipsoid, 1-septate, 6-10 x 2.5-3.5 µm, 2.5-3 times as long as broad. Pycnidia wart-shaped, 0.1-0.15 mm diam., pale green. Conidia bacillar, 1-septate, 14-18 x 2-2.5 µm. Chemistry: no substances detected by TLC. - Distribution and Ecology. Pantropical. Typically foliicolous, but well-developed specimens have been found on bark as well (e.g., a collection from Japan. Next to *Coenogonium subluteum*, the most frequent, foliicolous, crustose representative of the genus, with ecological preferences similar to those of *C. lisowskii*. Both taxa are very closely related, as confirmed by their comparatively large, 1-septate conidia. Well-developed individuals of *C. subluteum* differ by their larger, more brightly colored apothecia and usually abundant pycnidia, which give the thallus a verrucose appearance.



*Dimerella dilucida*



*Dimerella dilucida*

*Dimerella epiphylla* (Müll. Arg.) Malme, Ark. Bot. 26A(no. 13): 9 (1935)  
[1934]  
= *Coenogonium subluteum* (Rehm) Kalb & Lücking, in Lücking & Kalb  
2000  
= *Biatorinopsis epiphylla* Müll. Arg. 1881

[VZ1129], Republica Guinea (Africa occident.). Distr. Macenta, in silvis densis prope urbem Macenta, 600-700 m. Ad folia arborum. Leg. S. Lisowski, 3.1962, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1129.

Thallus continuous but often lacinate when young, thin, smooth (but appearing coarsely verrucose due to abundant pycnidia), green. Photobiont cells angular-rounded, in irregular plates or short threads. Apothecia sessile, rounded, 0.2–0.5 mm diam. and 80–130  $\mu\text{m}$  high; disc plane, wax-colored to pale orange; margin slightly prominent, smooth, pale wax-colored to yellow. Excipulum 20–40  $\mu\text{m}$  broad, colorless. Hypothecium 5–10  $\mu\text{m}$  high, colorless. Hymenium 45–65  $\mu\text{m}$  high, colorless. Asci 40–50 x 5–7  $\mu\text{m}$ . Ascospores irregularly uniseriate, ellipsoid, 1-septate, 6–12 x 3–4  $\mu\text{m}$ , 2–3 times as long as broad. Pycnidia wart-shaped, 0.1–0.15 mm diam., pale green. Conidia bacillar, 1-septate, 12–17 x 2–3  $\mu\text{m}$ . Chemistry: no substances detected by TLC.



*Dimerella epiphylla*

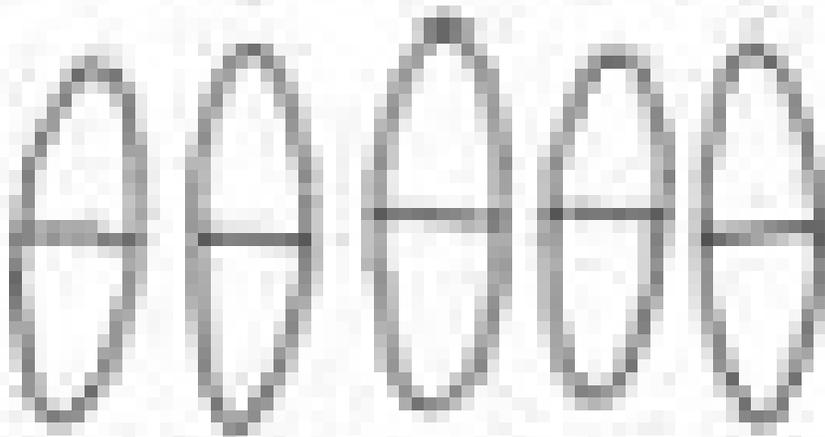


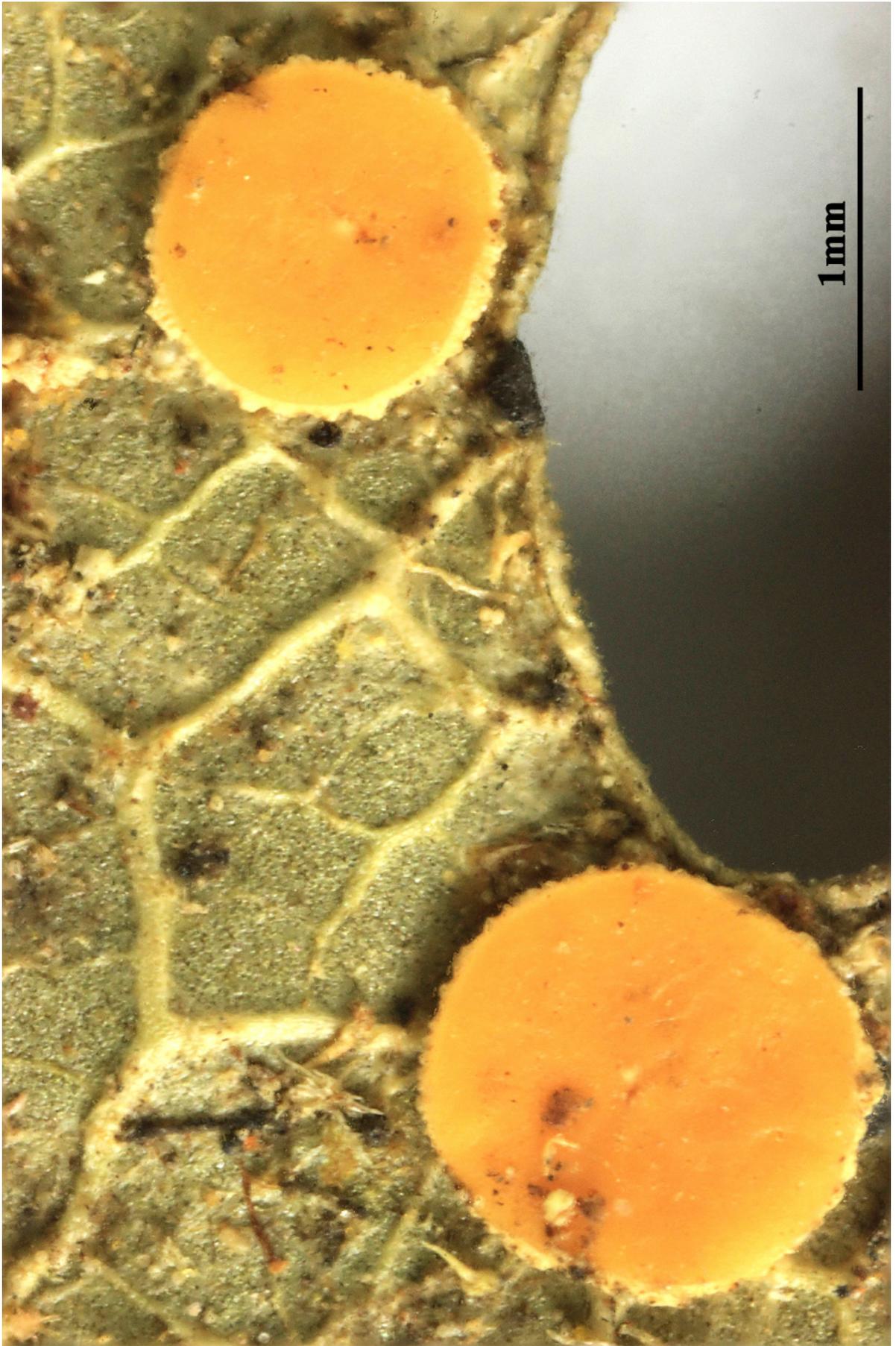
*Dimerella epiphylla*

*Dimerella fallaciosa* (Müll. Arg.) Vězda, Lichenes Selecti Exsiccati, Fascicle 69 (Průhonice): 6 (1980)  
= *Coenogonium fallaciosum* (Müll. Arg.) Kalb & Lücking, in Lücking & Kalb, Bot. Jb. 122(1): 32 (2000)  
= *Bacidia fallaciosa* (Müll. Arg.) Zahlbr., Cat. Lich. Univers. 4: 111 (1926) [1927]  
= *Patellaria fallaciosa* Müll. Arg., Lich. Epiph. Novi: 6 (1890)

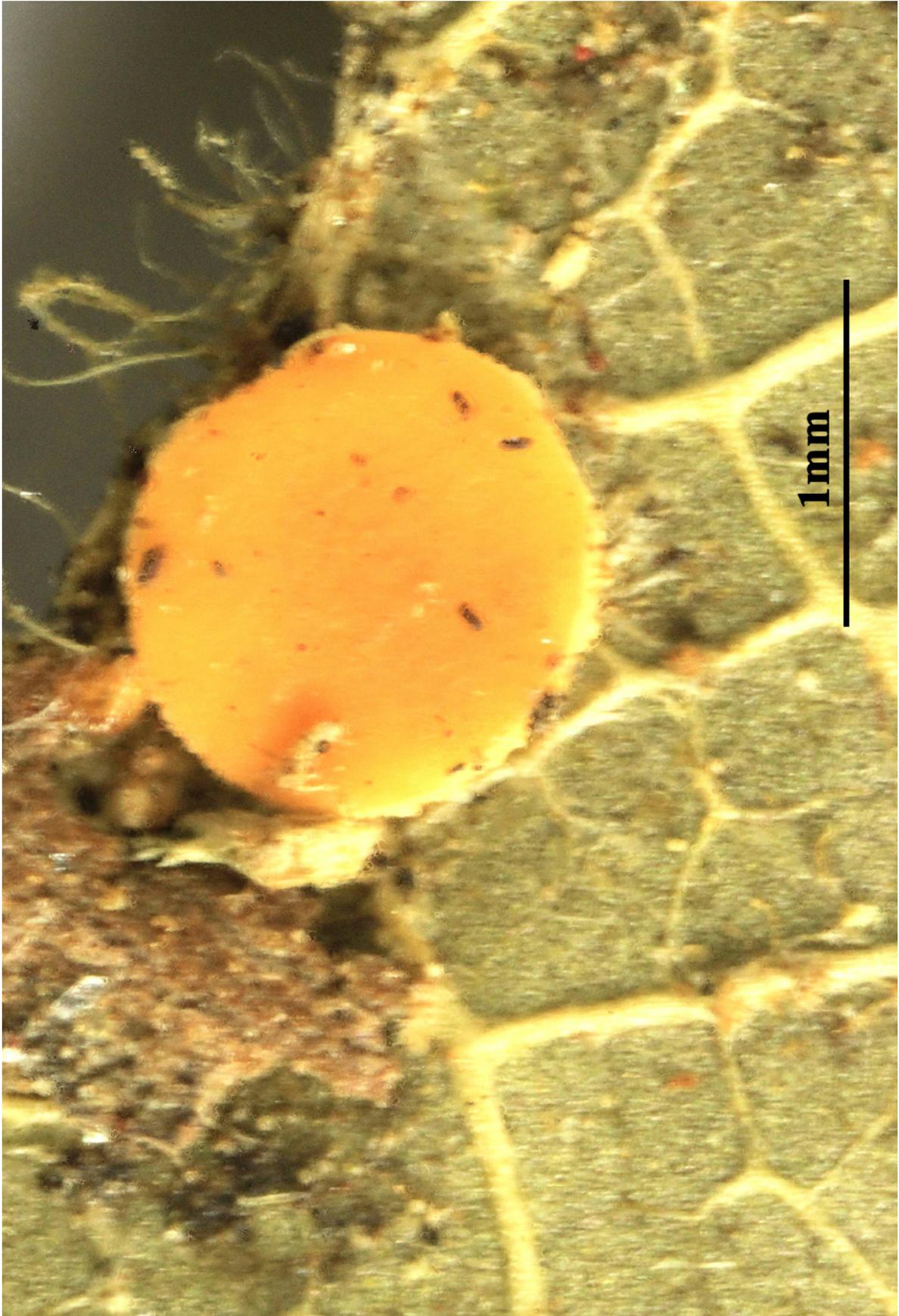
[VZ1721], Brasilia. São Paulo. Serra do Mar. Serra do Garrãozinho inter Moji das Cruzes et Bertioga, 850 m, Foliicola (thallus epiphyllus, apothecia vulgo hypophylla), in silva virginea humida umbrosa. Leg. K. Kalb (no. 148), 30.6.1979, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1721.

Thallus continuous, very thin, smooth, green. Photobiont cells angular-rounded, in irregular plates or short threads. Apothecia mostly marginally hypophyllous on mycelium free of algae, sessile, rounded, 0.5–1.5 mm diam. and 150–220  $\mu\text{m}$  high; disc plane, pale yellow to pale orange; margin very thin, not prominent, smooth, of same color as disc or slightly paler. Excipulum 50–80  $\mu\text{m}$  broad, colorless. Hypothecium 10–15  $\mu\text{m}$  high, colorless to pale yellow. Hymenium 50–60  $\mu\text{m}$  high, colorless. Asci 45–55 x 4–6  $\mu\text{m}$ . Ascospores irregularly uniseriate, ellipsoid, 1-septate, 7–11 x 2.5–3.5  $\mu\text{m}$ , 2.5–3.5 times as long as broad. Pycnidia wart-shaped, 0.1–0.2 mm diam., pale green. Conidia ellipsoid, non-septate, 3.5–4.5 x 1.5–1.8  $\mu\text{m}$ . Chemistry: no substances detected by TLC. Distribution and Ecology. Pantropical. Usually not frequent but may be locally abundant, forming clustered populations on adjacent leaves.





*Dimerella fallaciosa*



*Dimerella fallaciosa*

*Dimerella frederici* Kalb, in Kalb & Vězda, Folia geobot. phytotax. 15(3): 310 (1980)

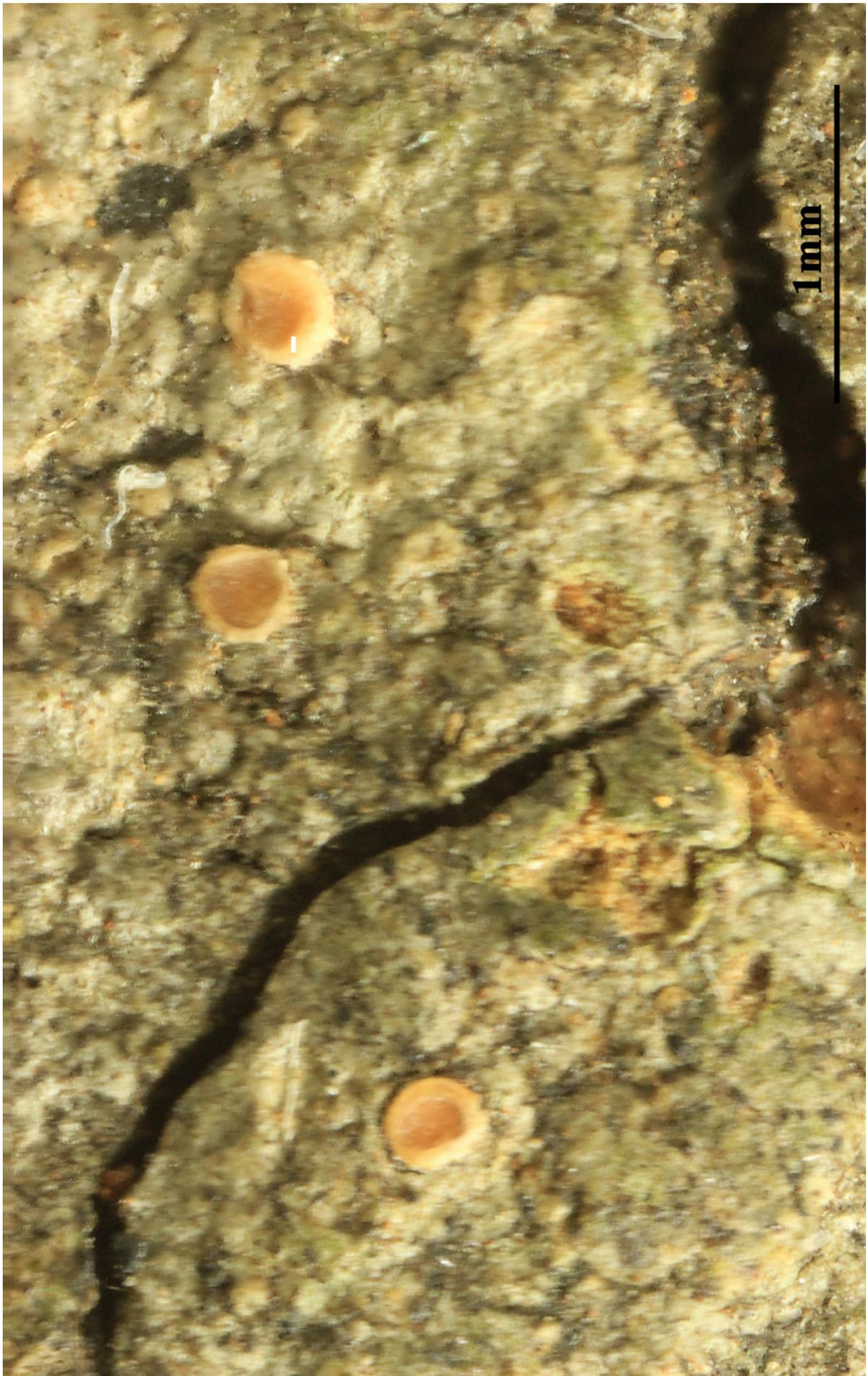
= *Coenogonium frederici* (Kalb) Kalb & Lücking, in Rivas Plata, Lücking, Aptroot, Sipman, Chaves, Umaña & Lizano, Fungal Diversity 23: 297 (2006)

[VZ1730], Hawaii Insulae. Kilea, Kau, 110 m. Ad corticem arboris (*Semanea seman* cult.). Leg. O. et I. Degener (no. 34230), 2.2.1977. -Isotypus. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1730.

Thallus epiphloeodes, tenuis, continuus, cinereo-virens, protothallo nullo. Algae cellulis conglomeratis, singulis crass. 8-12  $\mu$ m. Apothecia orbicularia, 0,4-0,6 mm lata, 0,2 mm alta, basi constricta, adnata, disco primum concavo, demum plano vel leviter convexo, pallide aurantiaco, nudo, margine integro, discum paulum superante, pallide rubro-fusco, in apotheciis senioribus evanescente. Excipulum laterale 60  $\mu$ m, basale 80  $\mu$ m crassum, in parte centrali deficiens. Hymenium 80  $\mu$ m altum, superne paulum infuscatum, ceterum hyalinum. Paraphyses crass. 1,5  $\mu$ m, apicibus globosis. Asci cylindrici, 8-spori. Sporae mono- vel distichae, fusiformes, apicibus obtusis, 8-12 x 3,5-4  $\mu$ m. Affinis *Dimerellae pineti* (Schrad.) Vezda, a qua margine discum tantum paulum superante sporisque minoribus differt.



*Dimerella frederici*

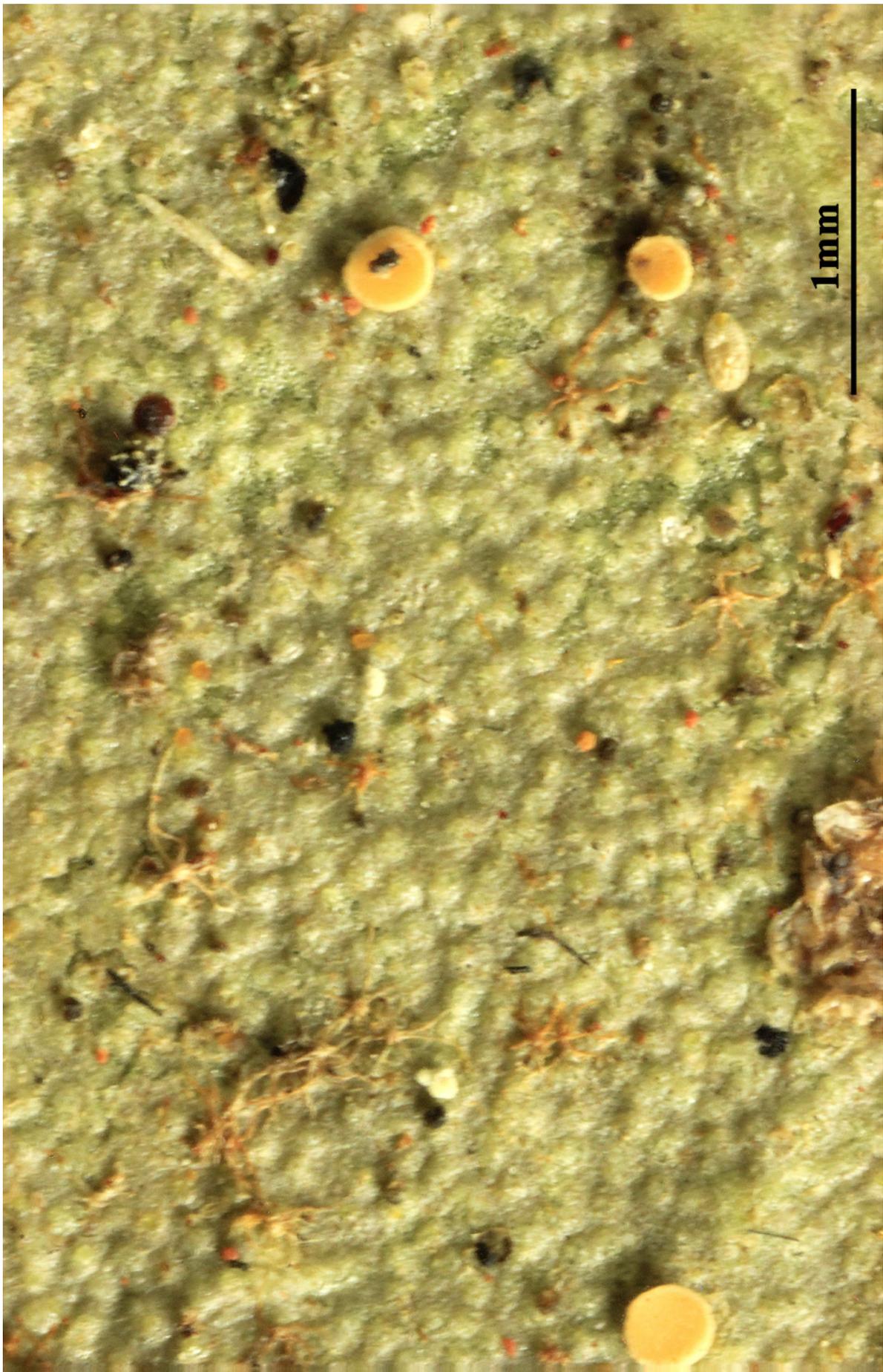


*Dimerella frederici*

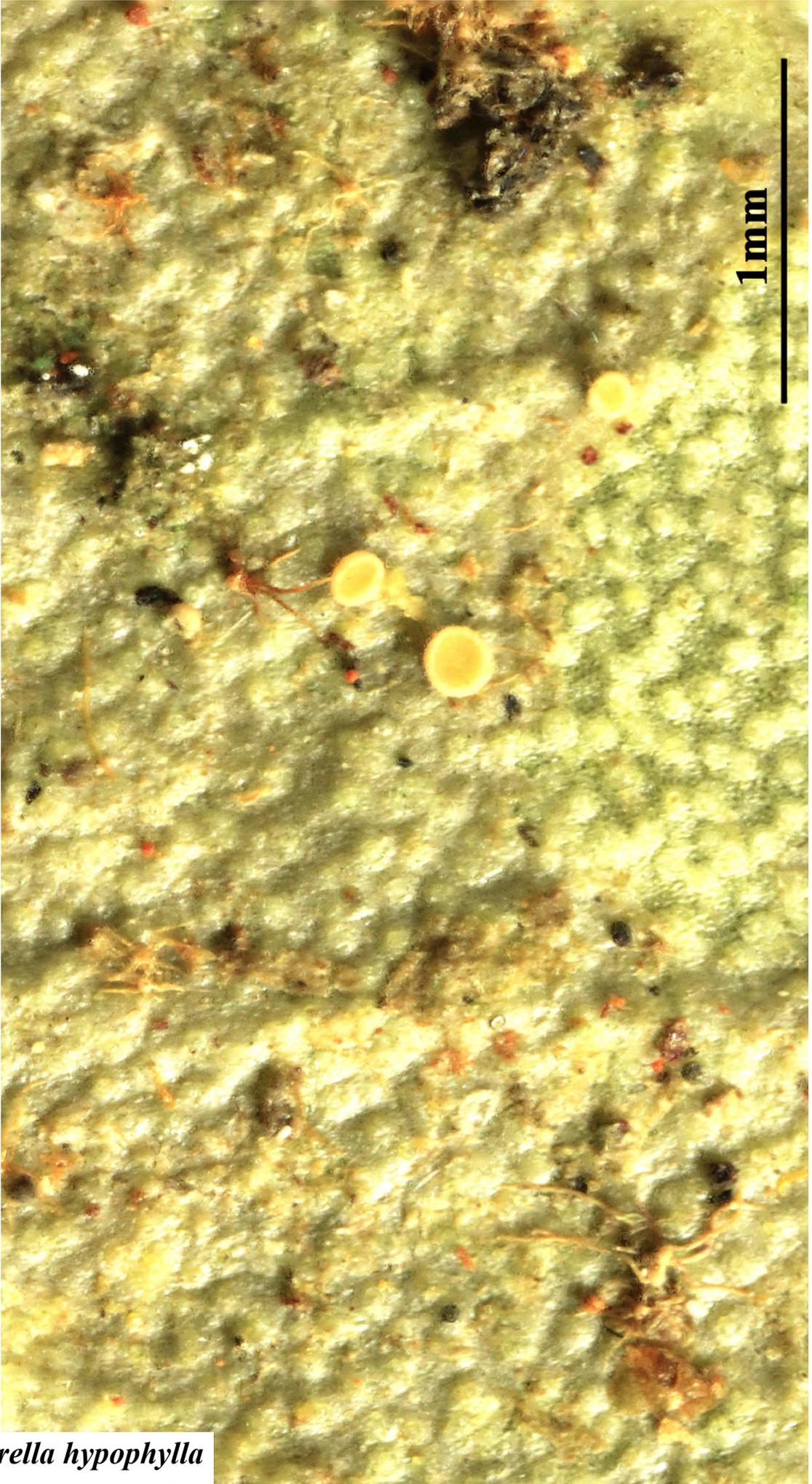
*Dimerella hypophylla* Vězda, Folia geobot. phytotax. 10(4): 406 (1975)  
= *Coenogonium hypophyllum* (Vězda) Kalb & Lücking, in Lücking &  
Kalb, Bot. Jb. 122(1): 32 (2000)

[VZ1860], Tanzania. Usambara Occidentalis: Muzumba, reservatum naturae Universitatis, 1400-1500 m. Ad folia arborum. Leg. T. Pócs (6962), 24.2.1982, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR., 1860.

Thallus hypophyllous, continuous, very thin, smooth, pale greenish grey with slight blue tinge. Photobiont cells angular-rounded, in irregular plates or short threads. Apothecia hypophyllous, sessile, rounded, 0.3–0.8 mm diam. and 100-150  $\mu\text{m}$  high; disc plane, pale yellow; margin thin, not prominent, smooth to minutely dentate, wax-colored. Excipulum 30-40  $\mu\text{m}$  broad, colorless. Hypothecium 10-15  $\mu\text{m}$  high, colorless to pale yellow. Hymenium 50-65  $\mu\text{m}$  high, colorless. Asci 45-60 x 6-8  $\mu\text{m}$ . Ascospores irregularly biseriate, fusiform, 1-septate, 13-20 x 2-3  $\mu\text{m}$ , 6-7 times as long as broad. Pycnidia wartshaped, 0.2-0.3 mm diam., pale yellow. Conidia ellipsoid, non-septate, 4-6 x 2-2.5  $\mu\text{m}$ . Chemistry: no substances detected by TLC. **Distribution and Ecology.** Pantropical. One of the few foliicolous lichens that regularly grow hypophyllous, often together with *Strigula janeirensis* and the superficially similar *Bacidina hypophylla* and *B. apiahica*.



*Dimerella hypophylla*



*Dimerella hypophylla*

*Dimerella isidiata* G. Thor & Vězda, Folia geobot. phytotax. 19(1): 72 (1984)  
= *Coenogonium isidiatum* (G. Thor & Vězda) Lücking, Aptroot &  
Sipman, in Rivas Plata, Lücking, Aptroot, Sipman, Chaves, Umaña &  
Lizano, Fungal Diversity 23: 297 (2006)

[VZ2259], Corea Borealis. Prov. Ryanggang, montes Paekdusan, prope urbem Samjiyon, Paekdu-Miljong, 1600 m. Ad solum frondeum. Leg. L. Lökös, 27.6.1968, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2259.

Thallus crustose, corticolous, continuous, thin, smooth, partly shiny, yellowish green to greenish grey, 5-30 mm in diam.; prothallus absent, isidia crowded, 0.2-0.4 mm high, 0.05 mm in diam., simple or rarely branched, covered by colorless, warty papillae. Apothecia sessile, rounded in outline, 1.2-1.5 mm in diam., 380-410  $\mu\text{m}$  high; disc plane, later slightly convex, orange-red; margin thick, prominent. Asci 80-95  $\mu\text{m}$   $\times$  6-10  $\mu\text{m}$ . Ascospores oblique-uniseriate, narrowly ellipsoid, 1-septate, 9-14  $\times$  3-4  $\mu\text{m}$ , 3-4 times as long as wide. Pycnidia not found. Chemistry: No lichen compounds detected. Substrate: On bark and on rock.



*Dimerella isidiata*



*Dimerella isidiata*

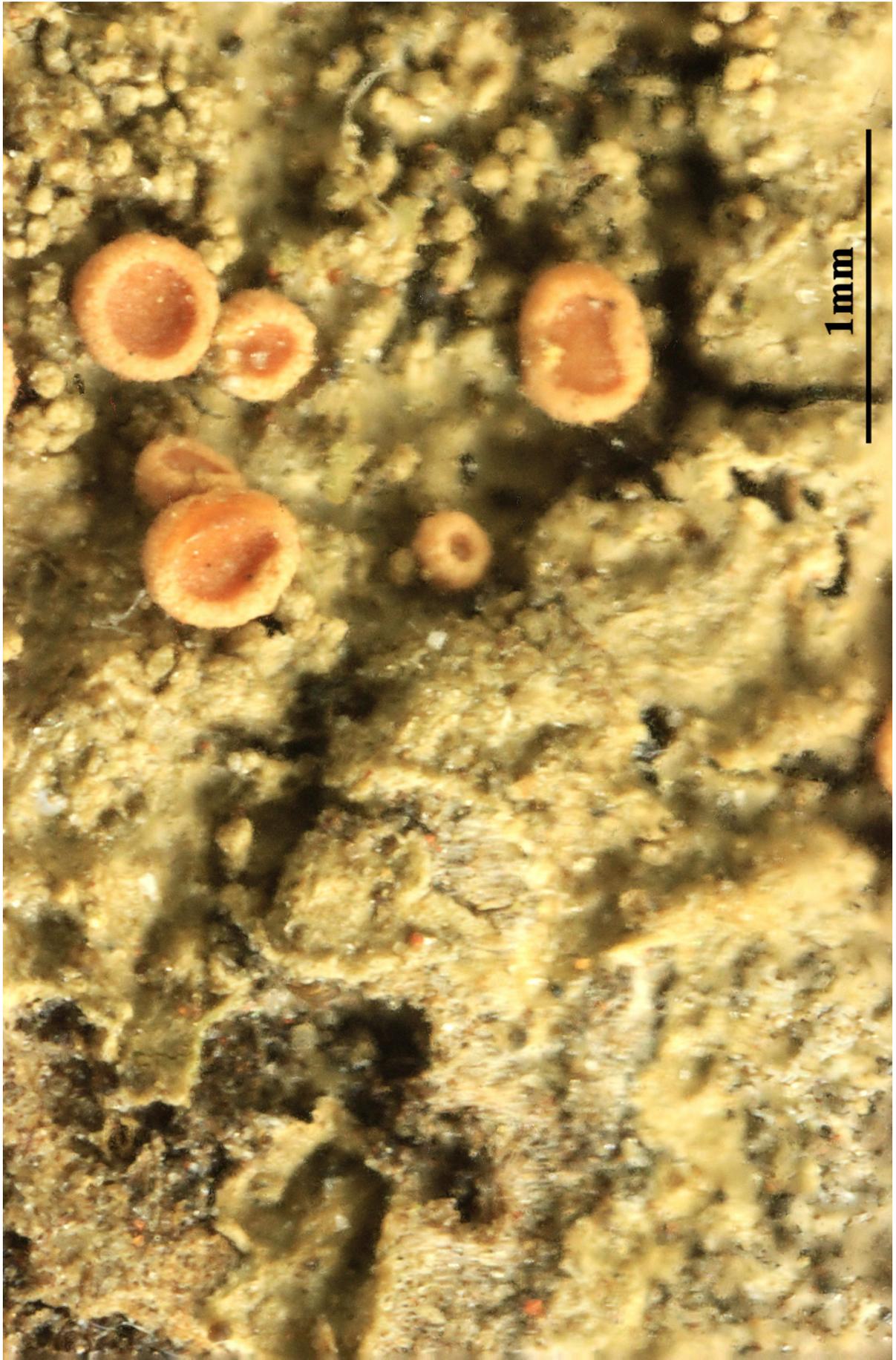
*Dimerella isidiigera* Vězda & Osorio, in Vězda, Lichenes Selecti Exsiccati, Fascicle 94 (nos 2326-2350) (Průhonice): 2 (no. 2329) (1989)  
= *Coenogonium isidiigerum* (Vězda & Osorio) Lücking, Aptroot & Sipman, in Rivas Plata, Lücking, Aptroot, Sipman, Chaves, Umaña & Lizano, Fungal Diversity 23: 297 (2006)

[VZ2329], Uruguay. Montevideo, Parque Rivera. Ad corticem *Cupressi* loco umbroso. Leg. H. S. Osorio (8849), 12.10.1988, ISOTYPUS. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2329.

Thallus cinereoviridis, prothallo albo cinctus, continuus, isidiis in structurus; isidia conferta, coralloidea, thallo concoloria, circa 0.3 x 0.1 mm, apicibus paulum incrassatis. Apothecia copiosa, 0.5-1.5 mm in diametro, basi versus constricta, discis concavis vel planis, flavescenti-aurantiacis, marginibus elevatis, pallidioribus, integris. Excipulum laterale modice crassum. Hymenium 90-100  $\mu\text{m}$  altum. Paraphyses 1.5  $\mu\text{m}$  crassae, in parte basali guttulis aurtiacis inspersae. apicibus ad 4.5  $\mu\text{m}$  incrassatis, capitatis. Ascospores fusiformes, 20-24 x 2.5-3  $\mu\text{m}$ . - Species praesertim thallo cinereo viridi, isidioso, prothallo albo asocporisque modice longis praedita.



*Dimerella isidiigera*

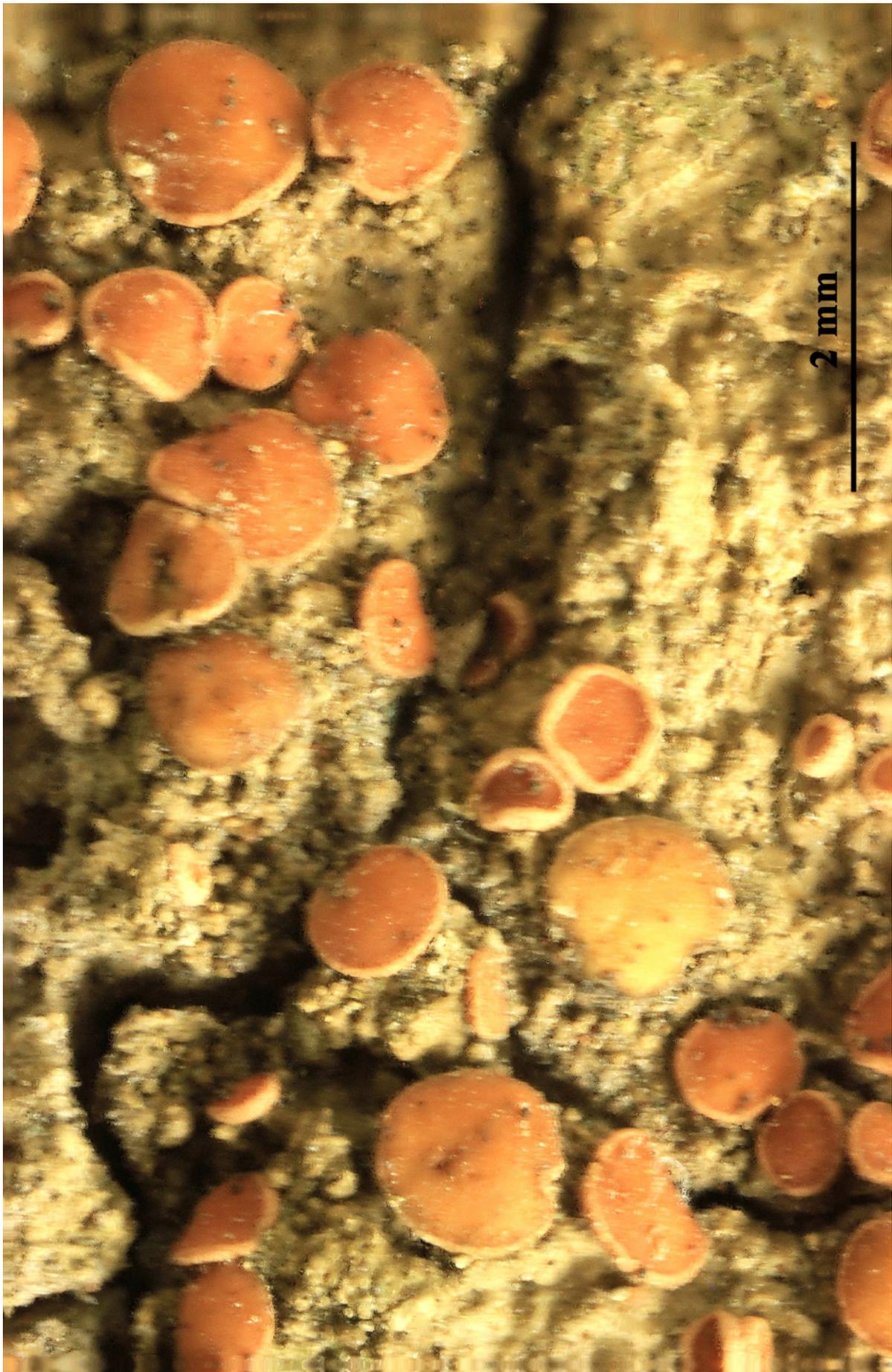


*Dimerella isidiigera*

*Dimerella isidiigera* Vězda & Osorio, in Vězda, Lichenes Selecti Exsiccati, Fascicle 94 (nos 2326-2350) (Průhonice): 2 (no. 2329) (1989)  
= *Coenogonium isidiigerum* (Vězda & Osorio) Lücking, Aptroot & Sipman, in Rivas Plata, Lücking, Aptroot, Sipman, Chaves, Umaña & Lizano, Fungal Diversity 23: 297 (2006)

[VZ2330], Argentina. Prov. Buenos Aires: La Pampa. Partido Castelli. In cortice *Celtis tala* prope ponticulum canalis. Leg. J. Poelt, 15.-20.1.1980. det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2330.

Thallus cinereoviridis, prothallo albo cinctus, continuus, isidiis in structurus; isidia conferta, coralloidea, thallo concoloria, circa 0.3 x 0.1 mm, apicibus paulum incrassatis. Apothecia copiosa, 0.5-1.5 mm in diametro, basi versus constricta, discis concavis vel planis, flavescenti-aurantiacis, marginibus elevatis, pallidioribus, integris. Excipulum laterale modice crassum. Hymenium 90-100  $\mu\text{m}$  altum. Paraphyses 1.5  $\mu\text{m}$  crassae, in parte basali guttulis aaurantiacis inspersae. apicibus ad 4.5  $\mu\text{m}$  incrassatis, capitatis. Ascosporae fusiformes, 20-24 x 2.5-3  $\mu\text{m}$ . - Species praesertim thallo cinereo viridi, isidioso, prothallo albo ascoporisque modice longis praedita.



*Dimerella isidiigera*



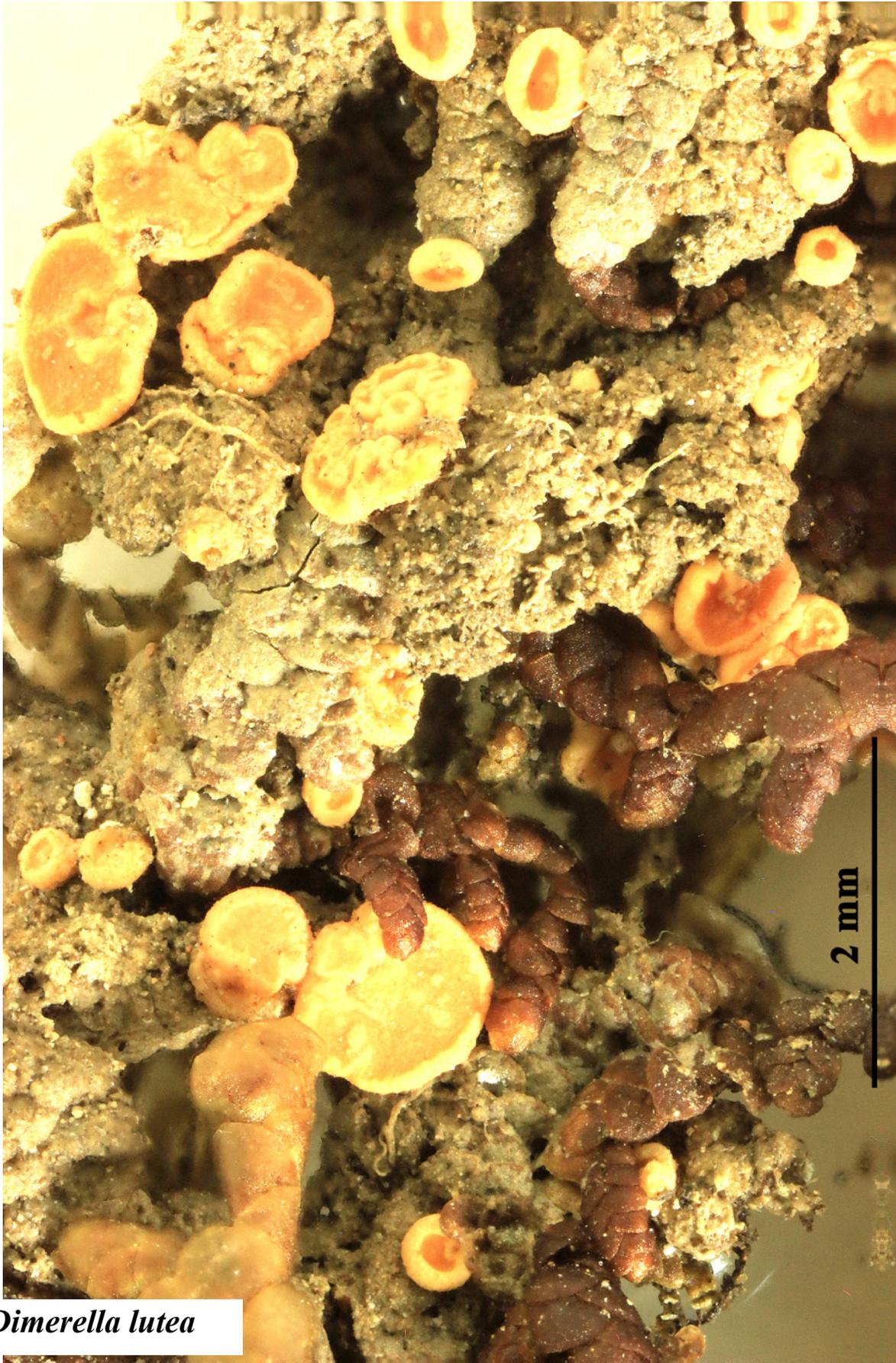
*Dimerella isidiigera*

- Dimerella lutea* (Dicks.) Trevis., Rc. Ist. Lomb., Milano, ser. 2 13: 65 (1880)  
 = *Coenogonium luteum* (Dicks.) Kalb & Lücking, in Lücking & Kalb, Bot. Jb. 122(1): 32 (2000)  
 = *Biatora lutea* (Dicks.) Hepp, Flecht. Europ.: no. 501 (1860)  
 = *Biatora pineti* var. *lutea* (Dicks.) Fr., Summa veg. Scand., Sectio Prior (Stockholm): 112 (1845)  
 = *Biatorina lutea* (Dicks.) Arnold, Flora, Regensburg 42(10): 152 (1859)  
 = *Biatorinopsis lutea* (Dicks.) Müll. Arg., Flora, Regensburg 64(7): 102 (1881)  
 = *Gyalecta lutea* (Dicks.) Hornem., Dansk Oekon. Plantel.: 548 (1837)  
 = *Gyalecta pineti* var. *lutea* (Dicks.) Boistel, Nouv. Fl. Lich. (Paris) 2: 179 (1903)  
 = *Lecidea lutea* (Dicks.) Taylor ex Hook., Engl. Fl., Mosses, Hepaticae, Lichens, Characeae and Algae (London) 5(1): 185 (1833)  
 = *Lichen luteus* Dicks., Fasc. pl. crypt. Brit. (London) 1: 11 (1785)  
 = *Microphiale lutea* (Dicks.) Zahlbr., Sber. Akad. Wiss. Wien, Math.-naturw. Kl., Abt. 1 111: 393 (1902)  
 = *Secoliga lutea* (Dicks.) Norman, Conat. Praem. Gen. Lich.: 19 (1852)

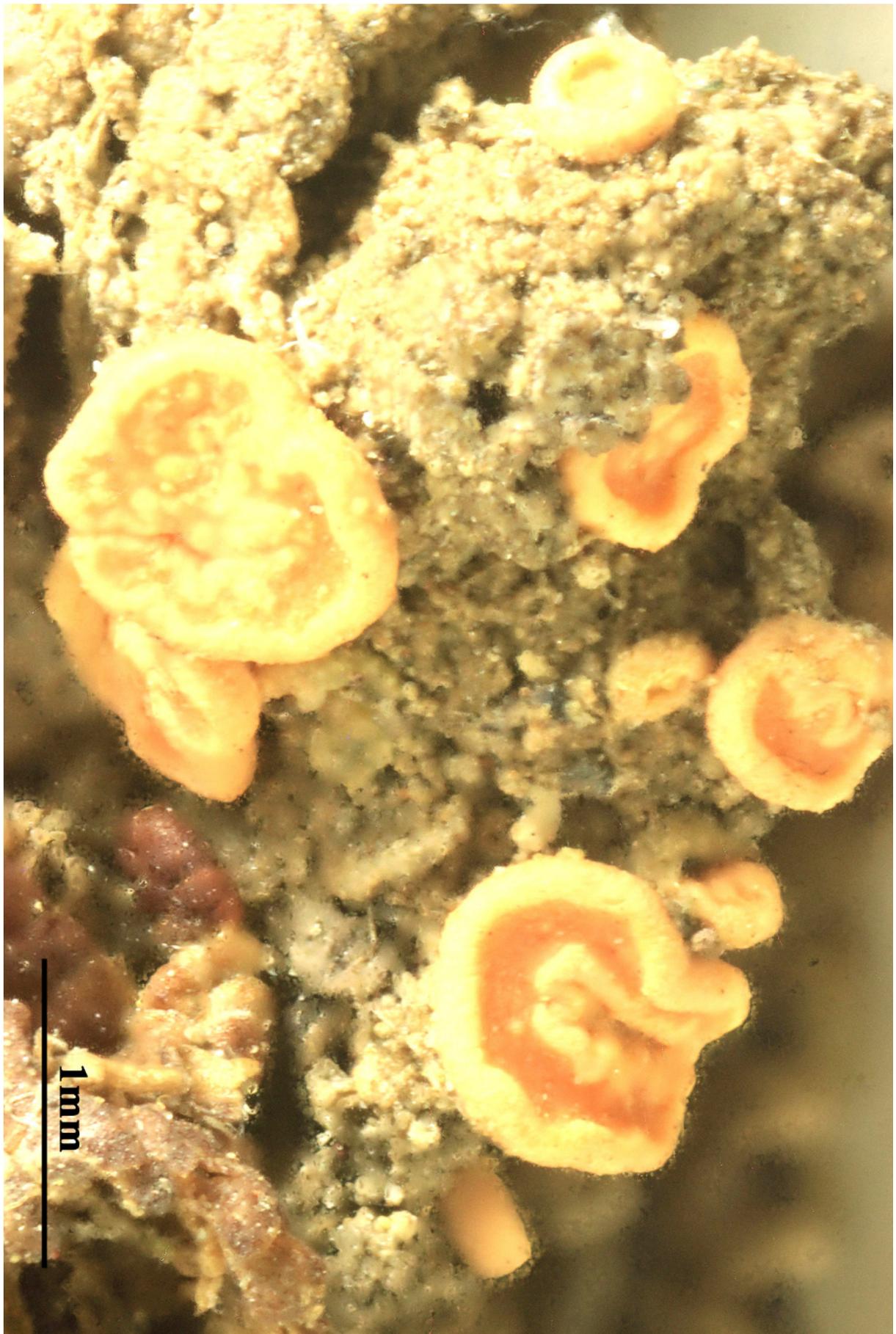
[VZ2406], Italia, Calabria, Regio Calabria in loco dicto "Due Mari" (Cimina), 1020 m. Muscicola, ad corticem *Crataegi oxyacantha*. Leg. D. Puntillo, 23.6.1989. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2406.

Thallus crustose, thinly episubstratic, spreading, continuous to cracked-areolate, pale yellowish green to dark olive-green, sometimes evanescent. Apothecia biatorine, sessile, round, (0.4-)0.6-1.5(-2) mm across, usually scattered, clearly constricted at base, with an orange-yellow to yellow-red, shallowly concave then convex, epruinose disc and a paler, flesh-coloured to cream-coloured, prominent, entire or flexuose, persistent proper margin. Proper exciple colourless, 40-70(-100)  $\mu\text{m}$  thick, paraplectenchymatous, composed of globose to angular, thick-walled cells with an outer layer of thin-walled, weakly vertically oriented hyphae; hymenium colourless, 60-70(-90)  $\mu\text{m}$  high, I+ blue, then rapidly dirty green and finally red-brown; paraphyses sparingly branched in upper part, 1.5-2.7  $\mu\text{m}$  thick at mid-level, the apical cells c. 4.5  $\mu\text{m}$  wide; hypothecium colourless, 20-30  $\mu\text{m}$  high. Asci 8-spored, unitunicate, thin-walled, narrowly cylindrical, without an amyloid ring around the apical pore, 55-65  $\times$  6-8  $\mu\text{m}$ , Catillaria-type. Ascospores 1-septate, hyaline, fusiform to broadly ellipsoid, (6-)9-11(-14)  $\times$  2-3.5(-4.5)  $\mu\text{m}$ . Pycnidia 0.05-0.1 mm across, more or less immersed, yellowish brown, the wall colourless. Conidia simple, ellipsoid, 3-4(-5)  $\times$  1.3-2(-2.5)  $\mu\text{m}$ ,

not constricted in the middle. Photobiont trentepohlioid. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a mild-temperate to humid subtropical lichen found on bark and epiphytic liverworts in semi-natural, old, humid forests at low elevations.



*Dimerella lutea*



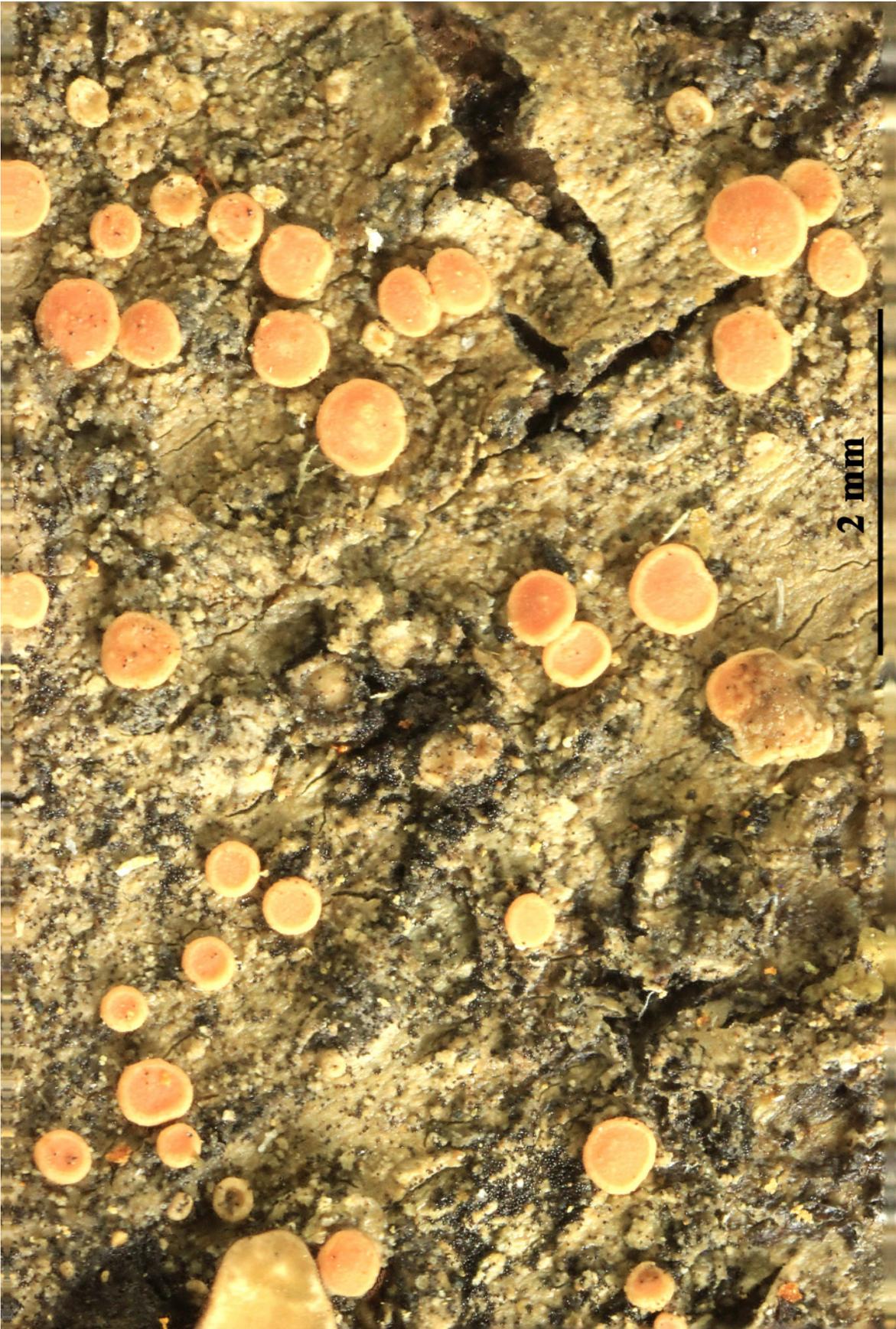
*Dimerella lutea*

- Dimerella lutea* (Dicks.) Trevis., Rc. Ist. Lomb., Milano, ser. 2 13: 65 (1880)  
 = *Coenogonium luteum* (Dicks.) Kalb & Lücking, in Lücking & Kalb, Bot. Jb. 122(1): 32 (2000)  
 = *Biatora lutea* (Dicks.) Hepp, Flecht. Europ.: no. 501 (1860)  
 = *Biatora pineti* var. *lutea* (Dicks.) Fr., Summa veg. Scand., Sectio Prior (Stockholm): 112 (1845)  
 = *Biatorina lutea* (Dicks.) Arnold, Flora, Regensburg 42(10): 152 (1859)  
 = *Biatorinopsis lutea* (Dicks.) Müll. Arg., Flora, Regensburg 64(7): 102 (1881)  
 = *Gyalecta lutea* (Dicks.) Hornem., Dansk Oekon. Plantel.: 548 (1837)  
 = *Gyalecta pineti* var. *lutea* (Dicks.) Boistel, Nouv. Fl. Lich. (Paris) 2: 179 (1903)  
 = *Lecidea lutea* (Dicks.) Taylor ex Hook., Engl. Fl., Mosses, Hepaticae, Lichens, Characeae and Algae (London) 5(1): 185 (1833)  
 = *Lichen luteus* Dicks., Fasc. pl. crypt. Brit. (London) 1: 11 (1785)  
 = *Microphiale lutea* (Dicks.) Zahlbr., Sber. Akad. Wiss. Wien, Math.-naturw. Kl., Abt. 1 111: 393 (1902)  
 = *Secoliga lutea* (Dicks.) Norman, Conat. Praem. Gen. Lich.: 19 (1852)

[VZ1585], URSS. Transcaucasus, Colchis. Distr. Sochi, in valle angusta rivi Adya (dextra fluminis Sochi), 300 m. Ad corticem *Alni barbatae*. Leg. V. Vašák et A. Vězda, 11.6.1978. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1585.

Thallus crustose, thinly episubstratic, spreading, continuous to cracked-areolate, pale yellowish green to dark olive-green, sometimes evanescent. Apothecia biatorine, sessile, round, (0.4-)0.6-1.5(-2) mm across, usually scattered, clearly constricted at base, with an orange-yellow to yellow-red, shallowly concave then convex, epruinose disc and a paler, flesh-coloured to cream-coloured, prominent, entire or flexuose, persistent proper margin. Proper exciple colourless, 40-70(-100)  $\mu\text{m}$  thick, paraplectenchymatous, composed of globose to angular, thick-walled cells with an outer layer of thin-walled, weakly vertically oriented hyphae; hymenium colourless, 60-70(-90)  $\mu\text{m}$  high, I+ blue, then rapidly dirty green and finally red-brown; paraphyses sparingly branched in upper part, 1.5-2.7  $\mu\text{m}$  thick at mid-level, the apical cells c. 4.5  $\mu\text{m}$  wide; hypothecium colourless, 20-30  $\mu\text{m}$  high. Asci 8-spored, unitunicate, thin-walled, narrowly cylindrical, without an amyloid ring around the apical pore, 55-65  $\times$  6-8  $\mu\text{m}$ , Catillaria-type. Ascospores 1-septate, hyaline, fusiform to broadly ellipsoid, (6-)9-11(-14)  $\times$  2-3.5(-4.5)  $\mu\text{m}$ . Pycnidia 0.05-0.1 mm across, more or less immersed, yellowish brown, the wall colourless. Conidia simple, ellipsoid, 3-4(-5)  $\times$  1.3-2(-2.5)  $\mu\text{m}$ ,

not constricted in the middle. Photobiont trentepohlioid. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a mild-temperate to humid subtropical lichen found on bark and epiphytic liverworts in semi-natural, old, humid forests at low elevations.



*Dimerella lutea*



*Dimerella lutea*

- Dimerella pineti* (Ach.) Vězda, Lichenes Selecti Exsiccati, Fasc. (Průhonice) 52: 5 (no. 1279) (1975)
- = *Coenogonium pineti* (Ach.) Lücking & Lumbsch, in Lücking, Stuart & Lumbsch, Mycologia 96(2): 290 (2004)
- = *Belonidium piceae* (Henn.) Boud., Hist. Class. Discom. Eur. (Paris): 117 (1907)
- = *Belonium piceae* Henn., Hedwigia 43(2): 71 (1904)
- = *Biatora pineti* (Ach.) Fr., K. svenska Vetensk-Akad. Handl., ser. 3: 271 (1822)
- = *Biatora vernalis* f. *pineti* (Ach.) Fr., Lich. eur. reform. (Lund): 261 (1831)
- = *Biatora vernalis* var. *pineti* (Ach.) Tuck., Enum. N. America Lich.: 53 (1845)
- = *Biatorina diluta* (Pers.) Th. Fr., Lich. arct. (Uppsala): 185 (1860)
- = *Biatorina pineti* (Ach.) A. Massal., Ric. auton. lich. crost. (Verona): 135 (1852)
- = *Biatorinopsis diluta* (Pers.) Müll. Arg., Flora, Regensburg 64(7): 102 (1881)
- = *Bilimbia pineti* (Ach.) Branth & Rostr., Bot. Tidsskr. 3: 225 (1869)
- = *Cistella piceae* (Henn.) Dennis, British Ascomycetes: 157 (1968)
- = *Dimerella diluta* (Pers.) Trevis., Rc. Ist. Lomb., Milano, ser. 2 13: 66 (1880)
- = *Gyalecta diluta* (Pers.) Blomb. & Forssell, Enum. Pl. Scand.: 101 (1880)
- = *Gyalecta pineti* (Ach.) Tuck., Gen. lich. (Amherst): 131 (1872)
- = *Lecidea diluta* (Pers.) Leight., Lich.-Fl. Great Brit. Irel. Chann. Isl., Edn 3: 343 (1879)
- = *Lecidea pineti* Ach., Lich. Univ.: 195 (1810)
- = *Lecidea vernalis* var. *pineti* (Ach.) Link, Grundr. Krauterkr. 3: 201 (1833)
- = *Lichen peltatus* \* *pineti* (Ach.) Lam., Encycl. Méth., Bot. Suppl. (Paris) 3(2): 389 (1813)
- = *Microphiale diluta* (Pers.) Zahlbr., Annln K. K. naturh. Hofmus. Wien 19: 413 (1904)
- = *Niptera taxi* Rea, Trans. Br. mycol. Soc. 7(1-2): 60 (1921)
- = *Patellaria pineti* (Ach.) Spreng., Syst. veg., Edn 16 4(1): 267 (1827)
- = *Peziza diluta* Pers., Syn. meth. fung. (Göttingen) 2: 668 (1801)
- = *Secoliga diluta* (Pers.) Arnold, Flora, Regensburg 67(22): 414 (1884)
- = *Sporoblastia diluta* (Pers.) Trevis., Linnaea 28: 291 (1857) [1856]

[VZ1279], Hungaria. Montes Matra, regio montis Agasvár, in valle rivuli Csörgö, 500 m. Ad corticem *Alni incanae*. Leg. A. Kieszely, T. Pócs et A. Vězda, 5.6.1974. EX A. VÉZDA LICHENES SELECTI EXSICCATI NR. 1279.

Thallus crustose, thinly episubstratic, continuous, smooth to finely granulose, dark green or grey-green, sometimes evanescent. Apothecia biatorine, 0.1-0.4(-0.5) mm across, sessile, round, slightly constricted at base, with a concave to flat, whitish to cream-coloured disc (turning yellowish or pinkish in the herbarium) and a thin, smooth, persistent proper margin. Proper exciple well-developed, paraplectenchymatous, composed of globose to angular cells with an outer layer of weakly vertically oriented hyphae; hymenium colourless, 70-90  $\mu\text{m}$  high, I+ blue, then rapidly dirty green and finally red-brown, K/I+ blue; paraphyses simple or sparingly branched in upper part, 1-2  $\mu\text{m}$  thick at mid-level, the apical cells c. 4  $\mu\text{m}$  wide; hypothecium colourless. Asci 8-spored, subcylindrical-clavate, the wall thin, K/I+ blue, the apex slightly thickened to give an amyloid ring around the pore, approaching the *Catillaria*-type. Ascospores 1-septate, hyaline, fusiform to ellipsoid, 9-13(-15) x 2-3.5(-4.5)  $\mu\text{m}$ . Pycnidia more or less immersed, hemispherical, 0.1-0.2 mm across, the wall colourless. Conidia oblong, 6-7(-8) x 1.8-2.8  $\mu\text{m}$ , often constricted in the middle. Photobiont trentepohlioid. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a probably holarctic lichen, most common on acid bark, both of conifers and of broad-leaved trees, below the subalpine belt.

*Dimerella pineti*



*Dimerella pineti*



*Dimerella pineti*

- Dimerella pyrophthalma* (Mont.) Vězda, Folia geobot. phytotax. 4(4): 446 (1969)
- = *Coenogonium pyrophthalmum* (Mont.) Lücking, Aptroot & Sipman, in Rivas Plata, Lücking, Aptroot, Sipman, Chaves, Umaña & Lizano, Fungal Diversity 23: 298 (2006)
- = *Biatora pyrophthalma* Mont., Annls Sci. Nat., Bot., sér. 2 20: 357 (1843)
- = *Biatorina pyrophthalma* (Mont.) Hellb., Bih. K. svenska VetenskAkad. Handl., Afd. 3 21(no. 13): 108 (1896)
- = *Catillaria pyrophthalma* (Mont.) Zahlbr., in Engler & Prantl, Nat. Pflanzenfam., Teil. I (Leipzig) 1(1\*): 134 (1905)
- = *Lecidea pyrophthalma* (Mont.) Nyl., Mém. Soc. Imp. Sci. Nat. Cherbourg 5: 121 (1858) [1857]
- = *Parmelia pyrophthalma* (Mont.) C. Bab., in Hooker, Bot. Antarct. Voy. Erebus Terror 1839-1843, II, Fl. Nov.-Zeal.: 292 (1855)
- = *Patellaria pyrophthalma* (Mont.) Müll. Arg., Bull. Herb. Boissier 2(app. 1): 62 (1894)
- = *Sporoblastia pyrophthalma* (Mont.) Trevis., Linnaea 28: 291 (1857) [1856]

[VZ2331], Australia. New South Wales: Katoomba, in monte Mt. Tomak, 20 km ad septentriones a Katoomba, 900 m. Ad corticem arboris, in pluviisilva. Leg. G. Thor (no, 6180), 18.12.1985, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR- 2331.



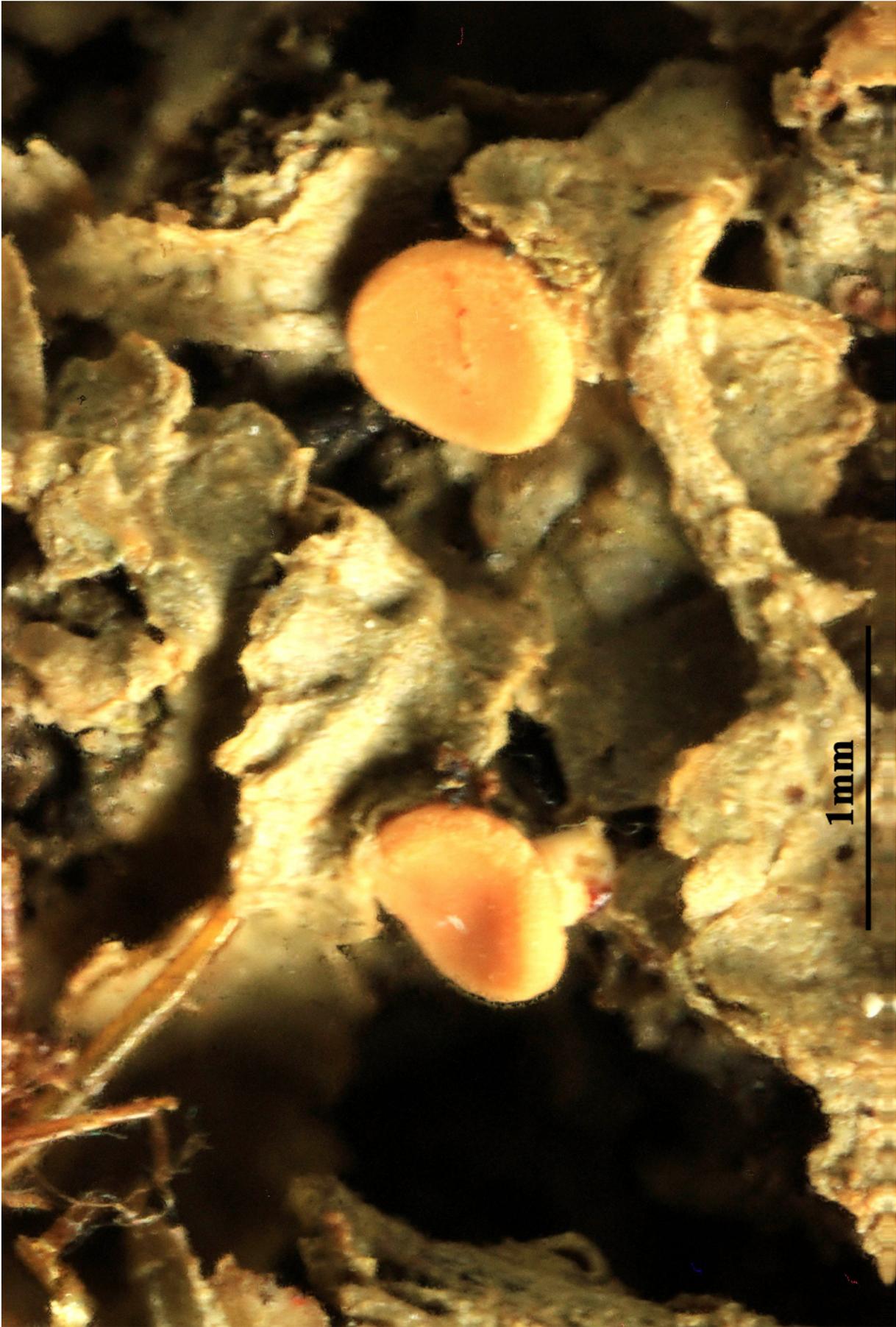
*Dimerella pyrophthalma*



*Dimerella pyrophthalma*

- Dimerella pyrophthalma* (Mont.) Vězda, Folia geobot. phytotax. 4(4): 446 (1969)
- = *Coenogonium pyrophthalmum* (Mont.) Lücking, Aptroot & Sipman, in Rivas Plata, Lücking, Aptroot, Sipman, Chaves, Umaña & Lizano, Fungal Diversity 23: 298 (2006)
- = *Biatora pyrophthalma* Mont., Annls Sci. Nat., Bot., sér. 2 20: 357 (1843)
- = *Biatorina pyrophthalma* (Mont.) Hellb., Bih. K. svenska VetenskAkad. Handl., Afd. 3 21(no. 13): 108 (1896)
- = *Catillaria pyrophthalma* (Mont.) Zahlbr., in Engler & Prantl, Nat. Pflanzenfam., Teil. I (Leipzig) 1(1\*): 134 (1905)
- = *Lecidea pyrophthalma* (Mont.) Nyl., Mém. Soc. Imp. Sci. Nat. Cherbourg 5: 121 (1858) [1857]
- = *Parmelia pyrophthalma* (Mont.) C. Bab., in Hooker, Bot. Antarct. Voy. Erebus Terror 1839-1843, II, Fl. Nov.-Zeal.: 292 (1855)
- = *Patellaria pyrophthalma* (Mont.) Müll. Arg., Bull. Herb. Boissier 2(app. 1): 62 (1894)
- = *Sporoblastia pyrophthalma* (Mont.) Trevis., Linnaea 28: 291 (1857) [1856]

[VZ2332], Australia. New South Wales: Braidwood, Monga State Forest, Mongarlove River, 22 km ad orientem et occidentem a Braidwood, 710 m. Supra partes emortuas *Dicksoniae antarcticae*. Leg. H. T. Lumbsch (no. 5644a) et H. Streimann, 10.9.1987., det A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2332.



*Dimerella pyrophthalma*

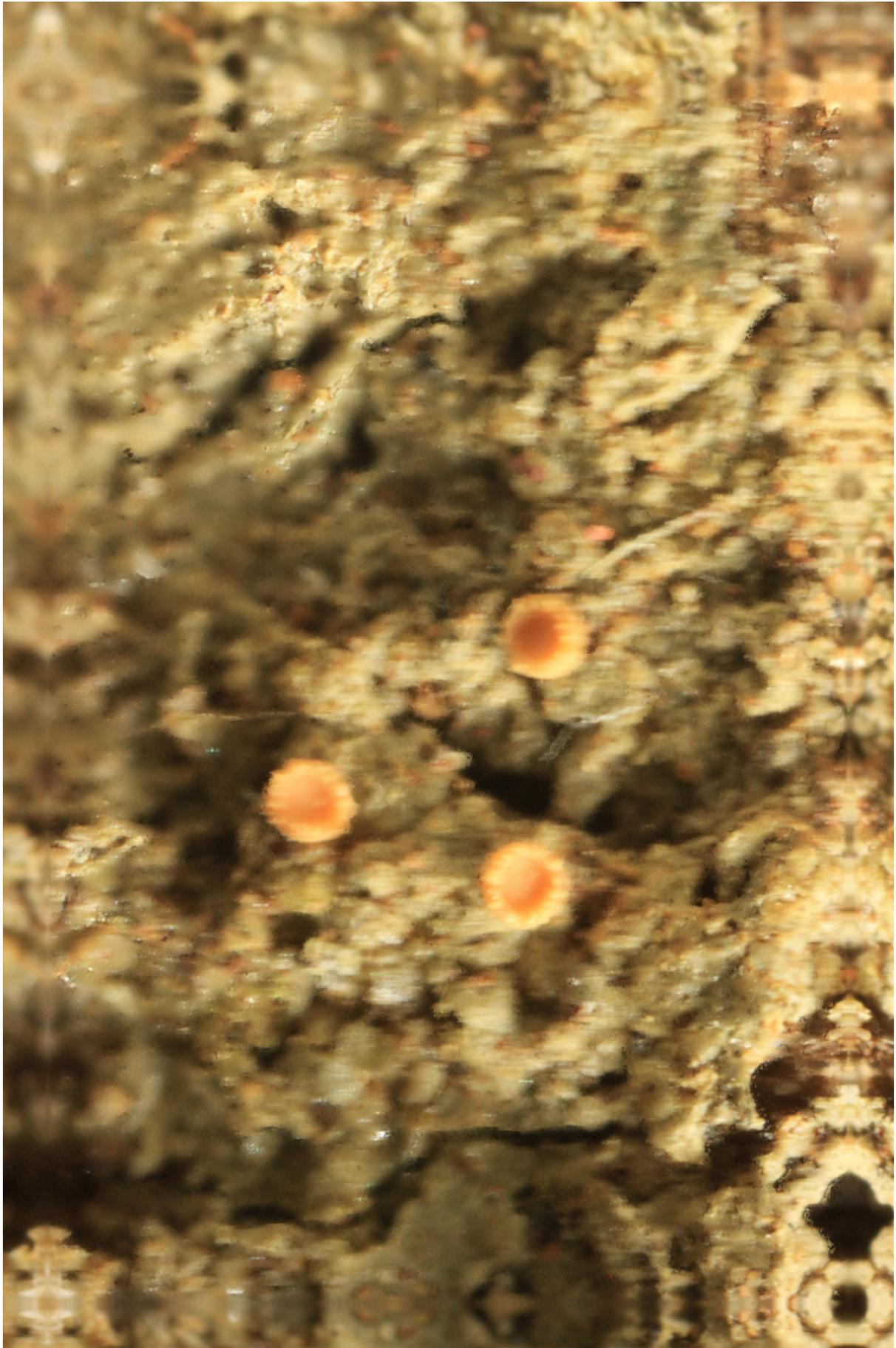


*Dimerella pyrophthalma*

*Dimerella subdentata* Vězda & G. Thor, in Vězda, Lichenes Selecti Exsiccati, Fascicle 94 (nos 2326-2350) (Průhonice): 3 (no. 2333) (1989)  
= *Coenogonium subdentatum* (Vězda & G. Thor) Rivas Plata, Lücking, L. Umaña & Chaves, in Rivas Plata, Lücking, Aptroot, Sipman, Chaves, Umaña & Lizano, Fungal Diversity 23: 298 (2006)

[VZ2333], Australia. Queensland, 15 km ad occidentem et septentriones a Tully prope litorem Mission, secus Stony Creek, 20 m. Ad corticem arboris in pluviisilva. Leg. G. Thor (no. 5721), 28.11.1985. - ISOTYPUS-. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2333.

Thallus epiphloeodes vel muscos emortuos incolens, cinereo-virescens, pro parte nitidus, prothallo nullo. Apothecia 0.5-0.7 mm lata, 0.2 mm alta, flavescenti aurantiaca, primum urceolata, marginibus pro parte dentis minutissimis ornatis, demum subplana marginibus discos haut superantibus. Excipulum laterale 50-100  $\mu\text{m}$  crassum, superficiem versus fuscum, ceterum hyalinum. Excipulum hypotheciale ad 100  $\mu\text{m}$  altum. Hymenium 65-75  $\mu\text{m}$  altum. Paraphyses 1.5  $\mu\text{m}$  crassae, apicibus capitatis, ad 3  $\mu\text{m}$  crassis. Ascosporae uniseriales, ellipsoideae, 7-9 x 2-2.2  $\mu\text{m}$ . Pycnosporae minutis praediti.



*Dimerella subdentata*



*Dimerella subdentata*

*Dimerella subdentata* Vězda & G. Thor, in Vězda, Lichenes Selecti Exsiccati, Fascicle 94 (nos 2326-2350) (Průhonice): 3 (no. 2333) (1989)  
= *Coenogonium subdentatum* (Vězda & G. Thor) Rivas Plata, Lücking, L. Umaña & Chaves, in Rivas Plata, Lücking, Aptroot, Sipman, Chaves, Umaña & Lizano, Fungal Diversity 23: 298 (2006)

[VZ2334], Fiji Insulae: Viti Levu, districtum Rewa, in silva Tholo-i-Seva 11 km ad septentriones a Suva. Ad corticem arboris in pluviisilva. Leg. 25.7.1985. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2334.

Thallus epiphloeodes vel muscos emortuos incolens, cinereo-virescens, pro parte nitidus, prothallo nullo. Apothecia 0.5-0.7 mm lata, 0.2 mm alta, flavescenti aurantiaca, primum urceolata, marginibus pro parte dentis minutissimis ornatis, demum subplana marginibus discos haut superantibus. Excipulum laterale 50-100  $\mu\text{m}$  crassum, superficiem versus fuscum, ceterum hyalinum. Excipulum hypotheciale ad 100  $\mu\text{m}$  altum. Hymenium 65-75  $\mu\text{m}$  altum. Paraphyses 1.5  $\mu\text{m}$  crassae, apicibus capitatis, ad 3  $\mu\text{m}$  crassis. Ascosporae uniseriales, ellipsoideae, 7-9 x 2-2.2  $\mu\text{m}$ . Pycnosporae minutis praediti.



*Dimerella subdentata*

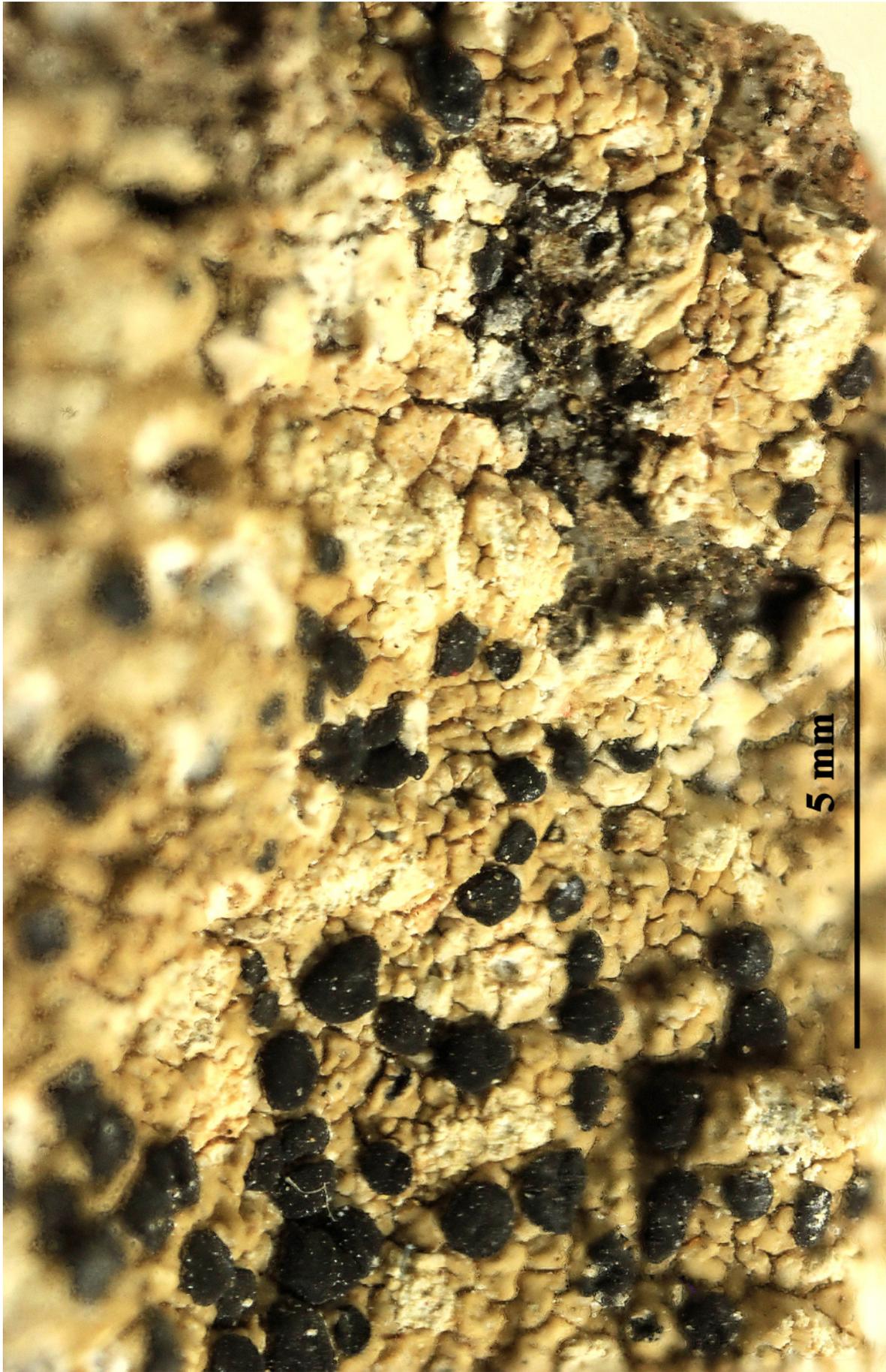
*Dimerella subdentata*



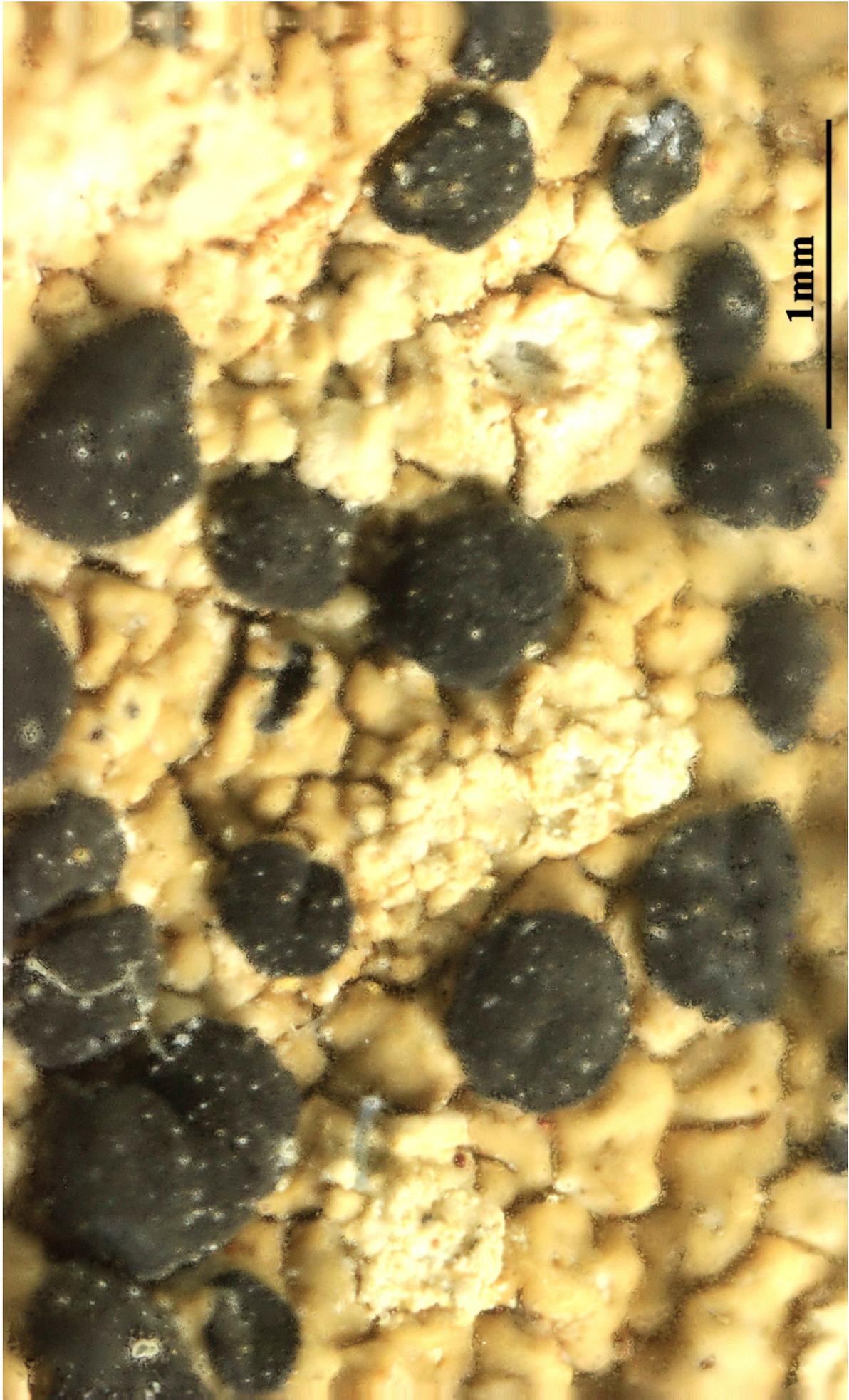
*Diploicia subcanescens* (Werner) Hafellner & Poelt, in Hafellner et al.,  
Herzogia 5(1-2): 59 (1979)  
= *Buellia subcanescens* Werner 1956

[VZ1966], Hispania. Murcia. Isla Grosa, Cabo de Palos, 15 m. Ad rupes vulcanicas acidas. Leg. M. Egea et X. Llimona, 8.4.1978, det. M. Egeaq. - Atranorin, Diploicin, Dechlorodiploicin anal with TLC from K. Kalb, 8.2006. - EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1866.

Thallus crustose-placodioid, glaucous white, often at least partly slightly pruinose at lobe-tips, forming 1-5 cm wide, usually orbicular rosettes, sometimes several thalli merging and covering larger surfaces. Lobes radiating from the center, 0.5-1 mm wide, contiguous, slightly convex, rounded and often slightly broader and fan-shaped at ends, esorediate; lower surface usually pale, attached by medullary hyphae. Upper cortex pseudoparenchymatous, formed by vertically arranged hyphae, filled with minute crystals forming chains in K; medulla usually white, lax. Apothecia frequent, lecideine, black, up to 1 mm across, laminal. Proper exciple thin and becoming excluded with age, brown-black; epithecium granular, brown-black, K-; hymenium colourless, I+ blue; paraphyses simple to sparingly branched, the apical cells enlarged, with a dark cap; hypothecium brown or brown-black. Asci 8-spored, cylindrical-clavate, the apical dome K/I+ dark blue with a pale, conical-pointed apical cushion (axial mass), the wall I-, but the thin outer gel I+ blue, Bacidia-type. Ascospores 1-septate, grey green to brown, thick-walled, ellipsoid, 9-12 x 5-8  $\mu\text{m}$ , Dirinaria-type, with ontogeny of type B (apical inner wall-thickenings produced before septum formation). Pycnidia laminal, immersed, brown-black, the wall dark in upper part, colourless in lower part, the conidiogenous cells enteroblastic, pleurogenous, branched. Conidia hyaline, simple, short-bacilliform, 5-8  $\mu\text{m}$  x c. 1  $\mu\text{m}$ . Photobiont chlorococcoid. Spot tests: cortex K+ yellow, C- or C+ fleeting pink, KC+ pale yellow to yellow-orange, P-; medulla K-, C+ fleeting pink, KC+ fleeting pink, P-, UV+ dull orange. Chemistry: cortex with atranorin and often chloroatranorin, medulla with diploicin (major), gyrophoric acid, and other minor compounds. - Note: a southern Mediterranean-Atlantic lichen found on siliceous rocks subject to humid, maritime winds, exclusively Tyrrhenian in Italy.



*Diploicia subcanescens*

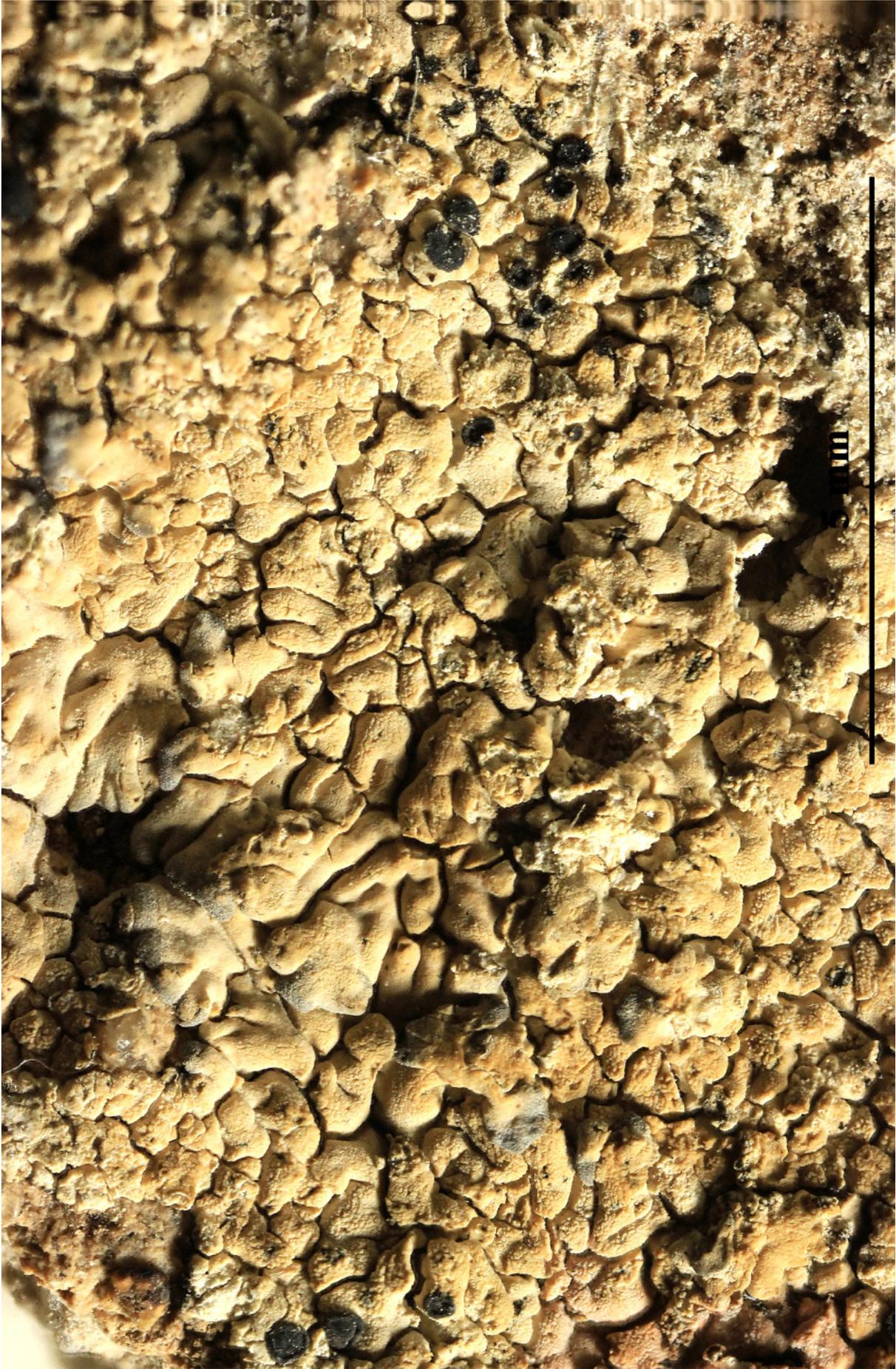


*Diploicia subcanescens*

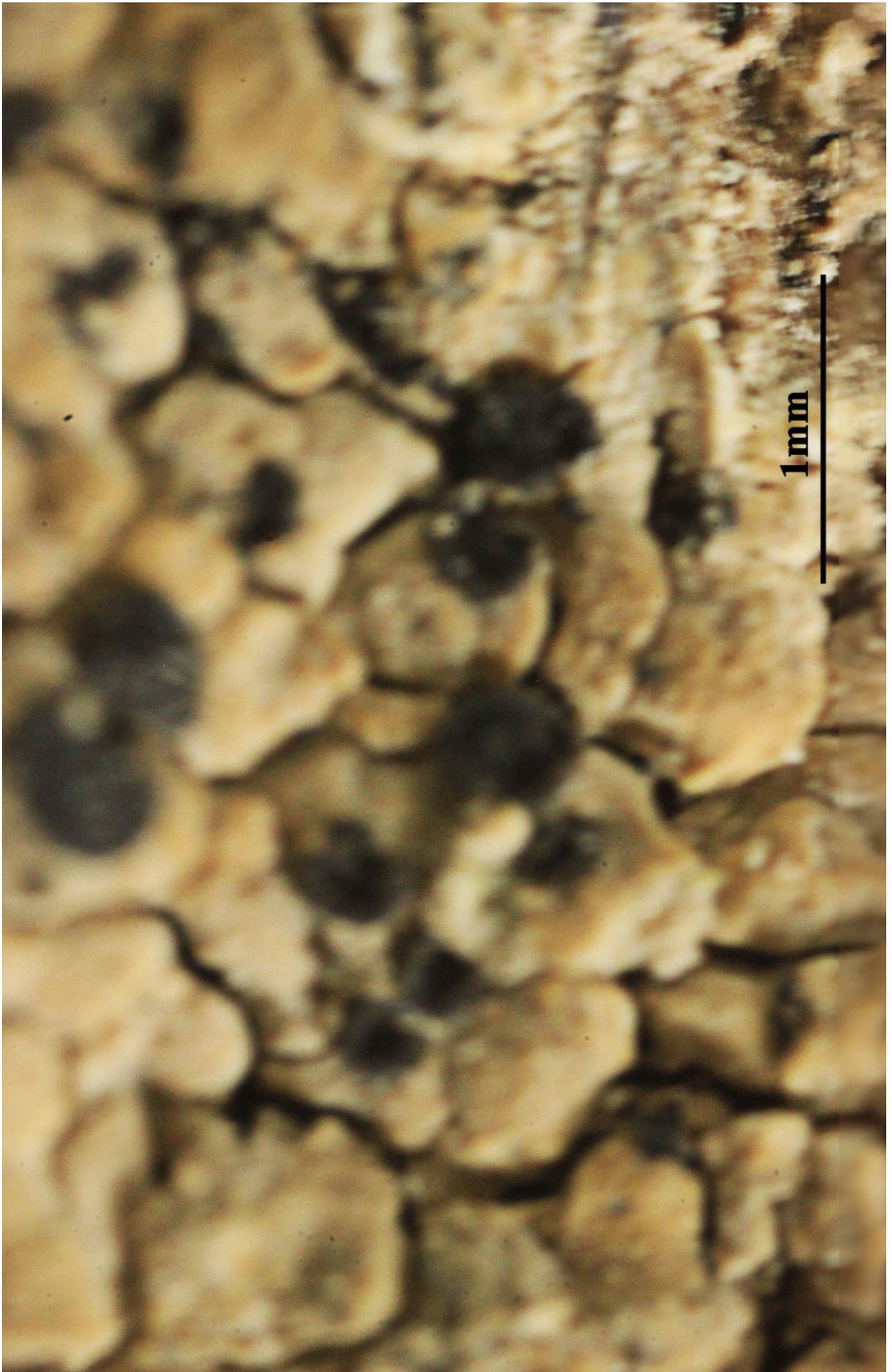
*Diploicia subcanescens* (Werner) Hafellner & Poelt, in Hafellner et al.,  
Herzogia 5(1-2): 59 (1979)  
= *Buellia subcanescens* Werner 1956

[VZ2471], Italia. Sardinia. Prov. Nuoro: scopulum Torre Argentina dictum, prope oppidum Basa, 5-10 m. Ad saxa eruptiva mollia. Leg. J. Poelt, M. Tretiach et A. Vězda, 19.7.1987. - Annot.: Atranorin, Diploicin, Dechlorodiploicin, Gyrophoric acid, anal. by TLC from K. Kalb. - EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2471.

Thallus crustose-placodioid, glaucous white, often at least partly slightly pruinose at lobe-tips, forming 1-5 cm wide, usually orbicular rosettes, sometimes several thalli merging and covering larger surfaces. Lobes radiating from the center, 0.5-1 mm wide, contiguous, slightly convex, rounded and often slightly broader and fan-shaped at ends, esorediate; lower surface usually pale, attached by medullary hyphae. Upper cortex pseudoparenchymatous, formed by vertically arranged hyphae, filled with minute crystals forming chains in K; medulla usually white, lax. Apothecia frequent, lecideine, black, up to 1 mm across, laminal. Proper exciple thin and becoming excluded with age, brown-black; epithecium granular, brown-black, K-; hymenium colourless, I+ blue; paraphyses simple to sparingly branched, the apical cells enlarged, with a dark cap; hypothecium brown or brown-black. Asci 8-spored, cylindrical-clavate, the apical dome K/I+ dark blue with a pale, conical-pointed apical cushion (axial mass), the wall I-, but the thin outer gel I+ blue, Bacidia-type. Ascospores 1-septate, grey green to brown, thick-walled, ellipsoid, 9-12 x 5-8  $\mu\text{m}$ , Dirinaria-type, with ontogeny of type B (apical inner wall-thickenings produced before septum formation). Pycnidia laminal, immersed, brown-black, the wall dark in upper part, colourless in lower part, the conidiogenous cells enteroblastic, pleurogenous, branched. Conidia hyaline, simple, short-bacilliform, 5-8  $\mu\text{m}$  x c. 1  $\mu\text{m}$ . Photobiont chlorococcoid. Spot tests: cortex K+ yellow, C- or C+ fleeting pink, KC+ pale yellow to yellow-orange, P-; medulla K-, C+ fleeting pink, KC+ fleeting pink, P-, UV+ dull orange. Chemistry: cortex with atranorin and often chloroatranorin, medulla with diploicin (major), gyrophoric acid, and other minor compounds. - Note: a southern Mediterranean-Atlantic lichen found on siliceous rocks subject to humid, maritime winds, exclusively Tyrrhenian in Italy.



*Diploicia subcanescens*



*Diploicia subcanescens*

- Diploschistes actinostoma* (Ach.) Zahlbr., Hedwigia 31: 34 (1892)  
 = *Acrorixis actinostoma* (Ach.) Trevis., Conspect. Verruc.: 15 (1860)  
 = *Aspicilia aperta* (Schaer.) Motyka, Porosty (Lichenes). 1, Rodzina Lecanoraceae. Hymenelia, Aspicilia, Lecanorella, Protoplacodium, Manzonina (Lublin): 277 (1995)  
 = *Diploschistes actinostomus* f. *apertus* (Schaer.) Zahlbr., Cat. Lich. Univers. 2: 653 (1924)  
 = *Lagerheimina actinostoma* (Ach.) Kuntze, Revis. gen. pl. (Leipzig) 2: 478 (1891)  
 = *Lecanora actinostoma* (Ach.) Nyl., Bot. Notiser(10-11): 155 (1853)  
 = *Limboria actinostoma* (Ach.) A. Massal., Ric. auton. lich. crost. (Verona): 155 (1852)  
 = *Urceolaria actinostoma* Pers. ex Schaer., Enum. critic. lich. europ. (Bern): 87 (1850)  
 = *Urceolaria actinostoma* Pers. ex Ach., Lich. Univ.: 288 (1810)  
 = *Urceolaria actinostoma* b *aperta* Schaer., Enum. critic. lich. europ. (Bern): 88 (1850)  
 = *Urceolaria scruposa* var. *actinostoma* (Ach.) Grognot, Pl. crypt.-cellul. Saône-et-Loire: 64 (1863)  
 = *Verrucaria actinostoma* Ach., Lich. Univ.: 288 (1810)

[VZ1203], Romania. Dobrogea, distr. Tulcea. In vallis fluminis Casimcea inter pagos Gura Dobrogei et Tiguşor, 50 m. Ad strata silicea in rupibus calcareis. Leg. A. Vězda. EX A. VĚZDA: LICHENES SELECTI EXSICCATI NR. 1203.

Thallus crustose, episubstratic, well-delimited and forming large patches, rimose-areolate, consisting of 0.5-1.5 mm wide and 0.2-1(-1.5) mm thick, irregularly angular, flat to slightly convex, whitish grey to grey, smooth, epruinose areoles developing on a black hypothallus. Medulla white, I+ blue. Apothecia common, perithecioid, immersed in the thallus, usually 1 per areole, up to 1 mm across (in section), with a blackish, urceolate to finally flat disc not visible from above, being concealed by a thick, radially sulcate proper margin. Proper exciple up to 70 µm thick, carbonized, pseudoparenchymatous; epithecium poorly differentiated, colourless to brownish; hymenium colourless, 120-160 µm high, non-amyloid; paraphyses flexuose, 1-1.5 µm thick, not swollen at apex; hypothecium colourless, 10-15 µm high. Asci 4-6(-8)-spored, cylindrical to subclavate, the wall evenly thickened, with an abrupt apical thickening and a thin internal apical beak, lacking an apical apparatus, the contents I+ orange-red, the walls I-, not fissitunicate. Ascospores muriform, with 4-6 transverse and 1-3 longitudinal

septa, at first hyaline but soon turning brown, ellipsoid, (16-)20-32(-40) x (10-)12-15(-20)  $\mu\text{m}$ . Pycnidia black, immersed. Conidia bacilliform, 4-7 x c. 1  $\mu\text{m}$ . Photobiont chlorococcoid. Spot tests: thallus K-, C+ red, P-, UV-. Chemistry: lecanoric acid (major), diploschistesic and orsellinic acids (minor).

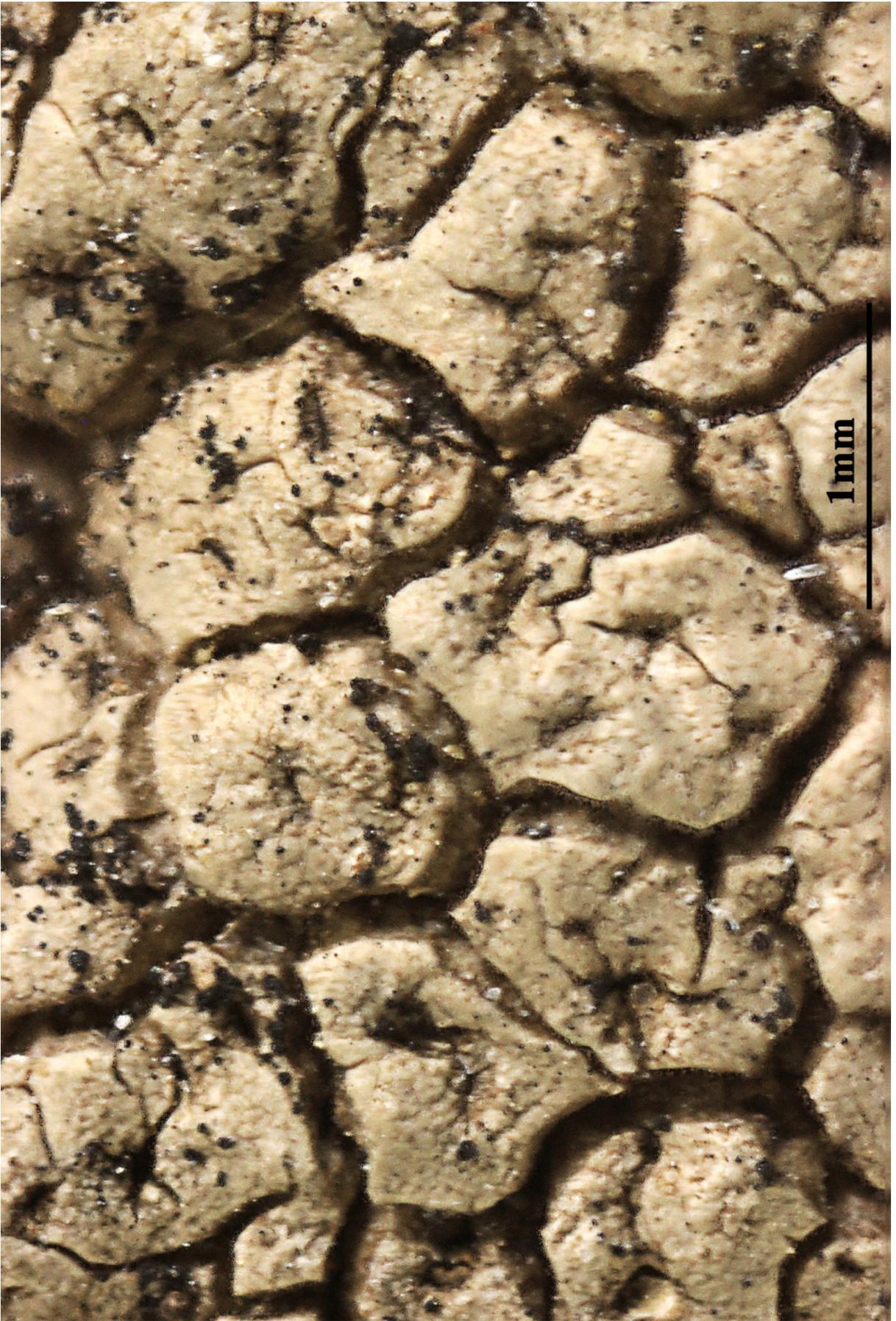
Note: a mild-temperate lichen found on basic siliceous substrata, incl. roofing tiles, more rarely on porous, weakly calciferous rocks.



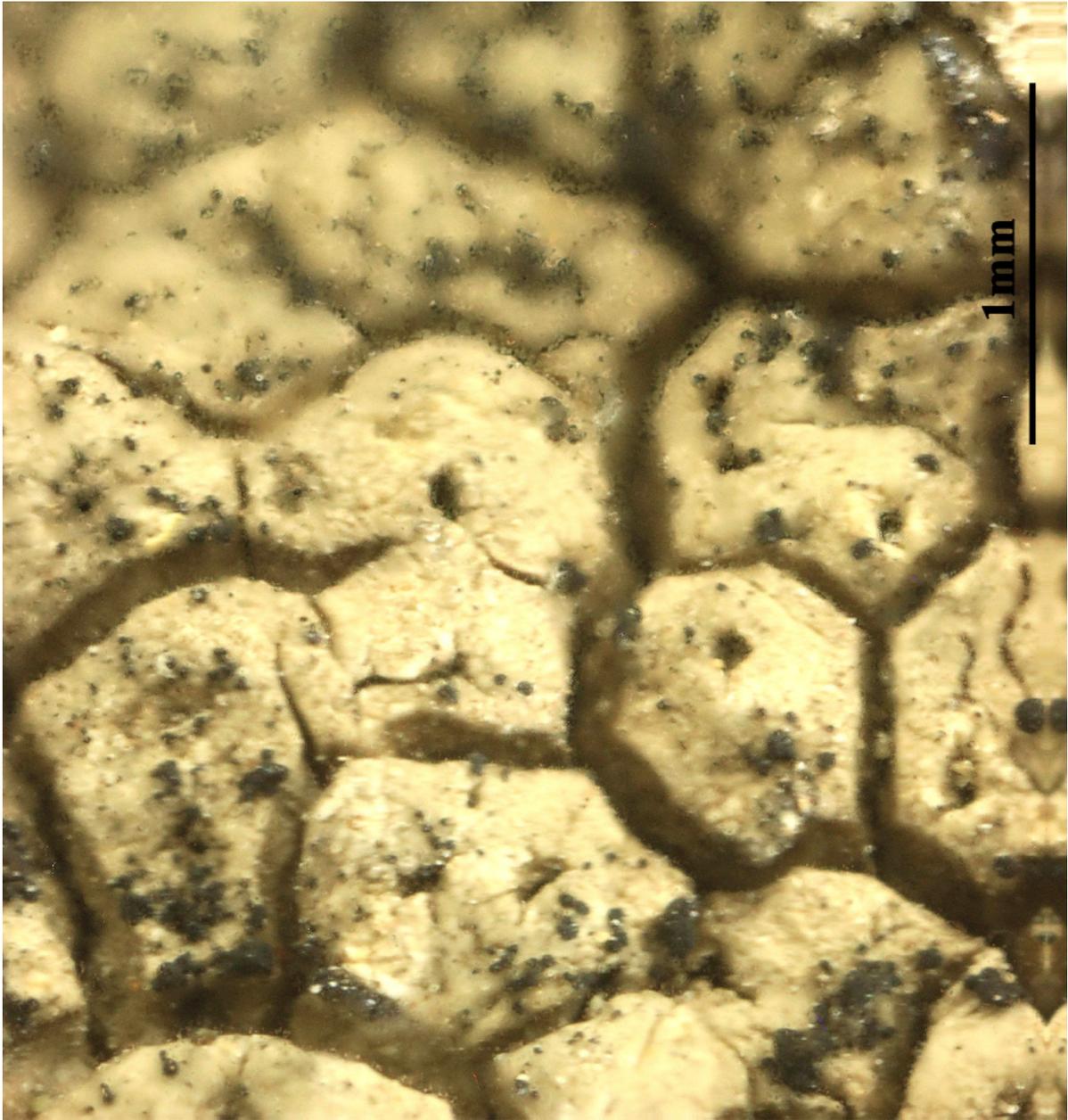
*Diploschistes actinostoma*



*Diploschistes actinostoma*



*Diploschistes actinostoma*

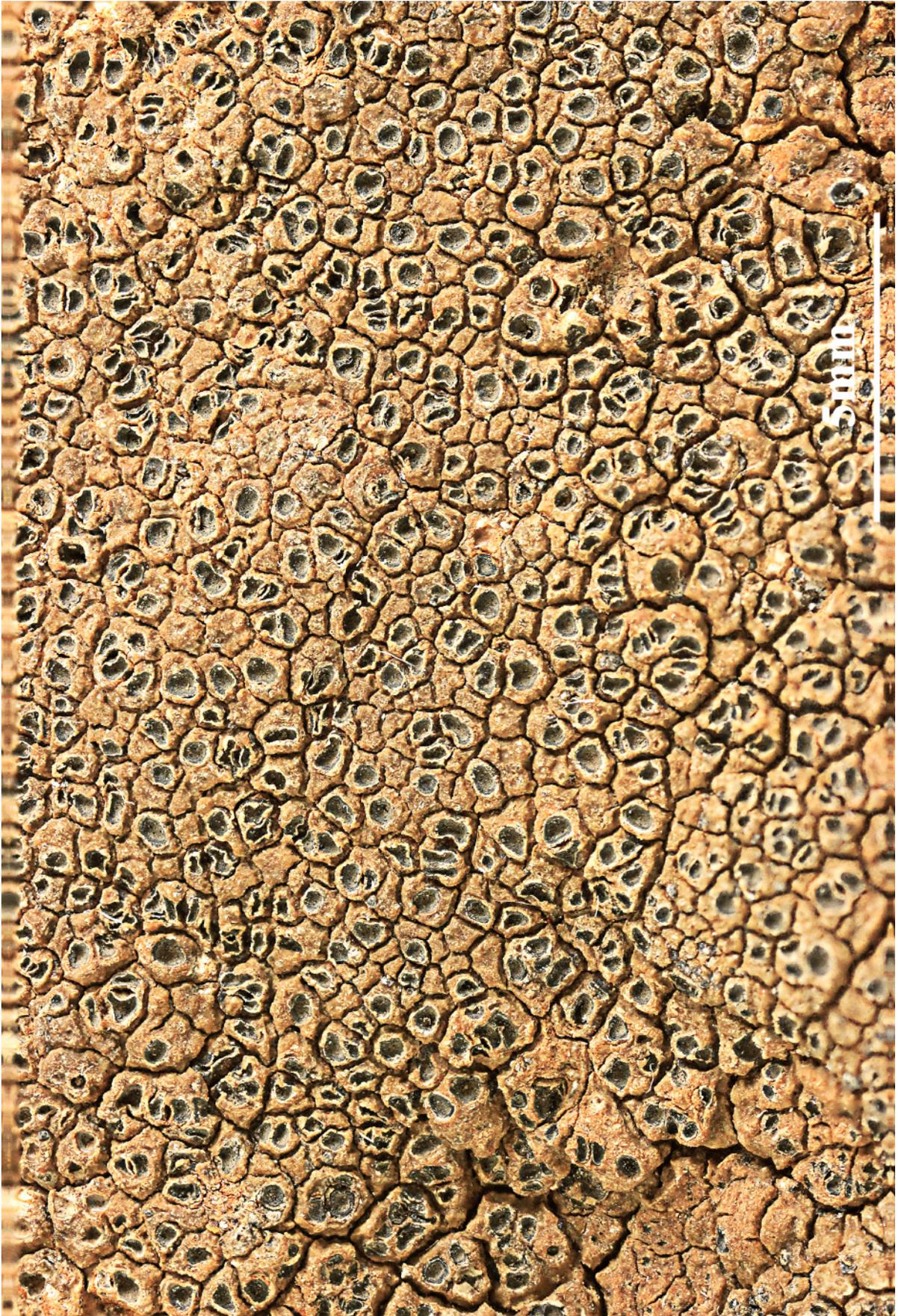


*Diploschistes actinostoma*

- Diploschistes bisporus* (Bagl.) J. Steiner, Sber. Akad. Wiss. Wien, Math.-naturw. Kl., Abt. 1 102: 155 (1893)  
 = *Ingvariella bispora* (Bagl.) Guderley & Lumbsch, in Guderley, Lumbsch & Feige, Nova Hedwigia 64(1-2): 152 (1997)  
 = *Diploschistes ochraceus* var. *bisporus* (Bagl.) Lettau, Feddes Repert., Beih. 69(no. 2): 102 (1937)  
 = *Ingvariella bispora* var. *multispora* Guderley & Lumbsch, in Guderley, Lumbsch & Feige, Nova Hedwigia 64(1-2): 153 (1997)  
 = *Urceolaria bispora* Bagl., Nuovo G. bot. ital. 3: 246 (1871)

[VZ2206], Italia.Sardinia. Prov. Cagliari: Giara di Gesturi, supra vicum Gesturi, 550 m. Ad saxa basaltica. Leg. P. L. Nimis, M. Tretiach & A. Vězda, 14.07.1987. EX. A. Vězda: LICHENES SELECTI EXSICCATI NR. 2206.

Thallus crustose, episubstratic, rimose-areolate, grey-brown to brown, sometimes with a waxy appearance, epruinose, without a distinct prothallus, consisting of irregularly angular, 0.2-1.6 mm wide and up to 1 mm thick, smooth, contiguous areoles. Apothecia at first almost perithecioid, but soon becoming apothecioid, urceolate, semi-immersed in the areoles, up to 1.3 mm across, with a concave, black but often slightly pruinose disc, and a raised, black margin. Proper exciple substituted by a 70-100 µm thick, pseudoparenchymatous pseudoexciple of degenerating, black hymenial elements; epithecium poorly differentiated, colourless to brownish; hymenium colourless, 90-120 µm high; paraphyses simple, flaccid, 1-1.5 µm thick, the apical cells not swollen; hypothecium colourless, 10-15 µm thick. Asci (1-)2-spored, cylindrical, 80-110 x 15-30 µm, with an amyloid wall. Ascospores muriform, with 5-12 transverse and 2-5 longitudinal septa, at first almost colourless then turning brown, broadly ellipsoid, (26-)28-38(-42) x (12.5-)14-20(-23) µm, with a distinct halo at least when young. Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: on base-rich siliceous substrata, mostly on horizontal surfaces.



*Diploschistes bisporus*



*Diploschistes bisporus*

- Diploschistes cinereocaesius* (Sw.) Vain., Ann. Acad. Sci. fenn., Ser. A 15(no. 6): 172 (1921)  
 = *Diploschistes scruposus* var. *cinereocaesius* (Sw.) Müll. Arg., Bull. Soc. R. Bot. Belg. 32(no. 1): 136 (1893)  
 = *Lagerheimina cinereocaesia* (Sw.) Kuntze, Revis. gen. pl. (Leipzig) 2: 478 (1891)  
 = *Lichen cinereocaesius* Sw., in Acharius, Lich. suec. prodr. (Linköping): 34 (1799) [1798]  
 = *Urceolaria cinereocaesia* (Sw.) Ach. [as 'cinereo-caesia'], Methodus, Sectio prior (Stockholmiaë): 148 (1803)  
 = *Urceolaria scruposa* var. *cinereocaesia* (Sw.) Müll. Arg., Revue mycol., Toulouse 10(no. 37): 3 (1888)

[VZ1795], Costa Rica. Cartago Provincia, Villa Mills, mons Asunción, 3300-3400 m. Ad terram in regione subalpina. Leg. E. Sérusiaux (no. 2392), 29.12.1978. EX A. VĚZDA: LICHENES SELECTI EXSICCATI NR. 1795.

Thallus crustose, uniform, adnate, continuose to rimose areolate or verrucose, opaque, yellowish grey to whitish, epruinose. Areoles 0.3 - 1 mm in diam., verrucose. Algae belonging to the genus *Trebouxia*. Apothecia sessile, apothecioid, disc blackish, epruinose or bluish pruinose, up to 3.6 mm in diam., often composed. Excipulum proprium blackish, up to 140 µm thick, pseudoparenchymatous. Hymenium 90 - 120 µm high. Hypothecium 14 - 18 µm high, hyalinc. Paraphyses 1 - 1.5 µm thick, simple and lax. Asci cylindrical, 80 - 100 x 15 - 40 µm, 4 - 8 spored. Ascospores hyaline to brown, muriform, ellipsoid, 3 - 5 transverse septa, | - 2 longitudinal septa, 18 - 31 x 9 - 15 µm, I-. Chemistry: major substance: lecanoric acid; minor substances: diploschistesic and orsellinic acids. - *D. cinereocaesius* is easily recognized by its yellowish to yellowish brown thallus and the relatively large, often composite apothecia. In South Africa all saxicolous specimens could be identified as *D. cinereocaesius*.



*Diploschistes cinereocaesius*



*Diploschistes cinereocaesius*

- Diploschistes diacapsis* (Ach.) Lumbsch, Lichenologist 20(1): 20 (1988)  
 = *Diploschistes diacapsis* subsp. *interpediens* (Nyl.) Clauzade & Cl. Roux, Bull. Soc. linn. Provence 40: 86 (1989)  
 = *Diploschistes diacapsis* subsp. *interpediens* (Nyl.) Cl. Roux, in Roux, Coste, Masson & Bauvet, Bull. Soc. linn. Provence 57: 83 (2006)  
 = *Diploschistes gypsaceus* subsp. *interpediens* (Nyl.) Clauzade & Cl. Roux, Bull. Soc. bot. Centre-Ouest, Nouv. sér., num. spec. 7: 355 (1985)  
 = *Lecanora diacapsis* (Ach.) Lumbsch, Lichenologist 20(1): 20 (1988)  
 = *Lecanora scruposa* var. *diacapsis* (Ach.) Nyl., Mém. Soc. Sci. nat. Cherbourg 2: 313 (1854)  
 = *Parmelia scruposa* var. *diacapsis* (Ach.) Fr., Lich. eur. reform. (Lund): 192 (1831)  
 = *Urceolaria diacapsis* Ach., Lich. Univ.: 339 (1810)  
 = *Urceolaria scruposa* var. *diacapsis* (Ach.) Nyl., Enum. critic. lich. europ. (Bern): 90 (1850)  
 = *Urceolaria scruposa* var. *interpediens* (Nyl.) Boistel, Nouv. Fl. Lich. (Paris) 2: 165 (1903)

[VZ2466], Hispania. Insula Formentera, Es Torrent, lat. 64°03' sept., long. 82°42' orient. Ad terram argillosam. Leg. G. B. Feige (no. 4736), 4.1988. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2466.

Thallus crustose, episubstratic, rimose- to verrucose-areolate, whitish to grey, consisting of irregularly angular, 0.5-2.5 mm wide and 1-3 mm thick, flat to convex, dull, usually pruinose areoles. Epinecral layer to c. 50 µm thick; algal layer continuous, well developed; medulla white, with scattered, small calcium oxalate crystals, I- or rarely I+ blue. Apothecia lecanorine, urceolate, semi-immersed to sessile, up to 2.5 mm across, with a black, but often slightly grey-pruinose, concave disc, and a thick thalline margin. Proper exciple blackish brown, 60-80 µm wide laterally, pseudoparenchymatous; epithecium poorly differentiated, colourless to brownish; hymenium colourless, 110-180 µm high, non amyloid; paraphyses simple, flexuose, 1-2 µm thick, the apical cells not swollen; hypothecium brown, c. 15 µm high. Asci (4-)8-spored, narrowly clavate to subcylindrical, the wall evenly thickened when mature, the somewhat abrupt apical thickening with a thin, internal apical beak, lacking any apical apparatus, the contents I+ orange-red, the walls I-, not fissitunicate. Ascospores muriform, with 3-6 transverse and 1-2 longitudinal septa, at first hyaline then turning brown, broadly ellipsoid, 20-38(-40) x 9-17 µm; Pycnidia black, immersed in thallus, hyaline to brownish, cerebriform. Conidia bacilliform, 4-6 x 1-1.5 µm.

Photobiont chlorococcoid. Spot tests: K- or K+ yellow to red, C+ red, KC- or KC+ red, P-, UV-. Chemistry: diploschistesic and lecanoric acids (both major) and orsellinic acid (minor). - Note: a widespread species of arid grasslands, found on calciferous or base-rich soil, especially on gypsum, in open, dry situations.



*Diploschistes diacapsis*



*Diploschistes diacapsis*

- Diploschistes farinosus* (Anzi) Vězda, Lichenes Selecti Exsiccati, Fasc. (Průhonice) 49: 6 (no. 1204 (1974))  
 = *Diploschistes actinostomus* var. *farinosus* (Anzi) Zahlbr., Cat. Lich. Univers. 2: 654 (1924)  
 = *Urceolaria actinostoma* var. *farinosa* Anzi, Comm. Soc. crittog. Ital. 1(fasc. 3): 163 (1862)  
 = *Diploschistes candidissimus* (Kremp.) Zahlbr.

[VZ1204], Romania. Dobrogea, distr. Tulcea. In valle fluminis Casimecea inter pagos Dubrogei et Tirgușor, 30 m. Ad saxa calcarea. Leg. A. Vězda, 12.07.1973. EX A. VĚZDA: LICHENES SELECTI EXSICCATI NR. 1204.

Thallus crustose, episubstratic, well-delimited and forming large patches, rimose-areolate, consisting of 0.5-4 mm wide and (0.3-)06-1.8 mm thick, irregularly angular, flat to slightly convex, chalky white, heavily pruinose areoles. Epinecral layer up to c. 30  $\mu\text{m}$  thick; algal layer continuous, well developed; medulla white, with abundant calcium oxalate crystals, I+ blue. Apothecia common, perithecioid, immersed in the areoles, up to 1.5 mm across (in section), with a blackish, urceolate to finally flat disc not visible from above, being concealed by a thick, radially sulcate proper margin. Proper exciple up to 70  $\mu\text{m}$  thick, carbonized, pseudoparenchymatous; epithecium poorly differentiated, colourless to brownish; hymenium colourless, 120-160  $\mu\text{m}$  high, non-amyloid; paraphyses simple, flexuose, 1-1.5  $\mu\text{m}$  thick, not swollen at apex; hypothecium colourless 10-15  $\mu\text{m}$  high. Asci 4-8-spored, cylindrical to subclavate, the wall evenly thickened, with an abrupt apical thickening and a thin internal apical beak, the contents I+ orange-red, the walls I-, not fissitunicate. Ascospores muriform, with 4-6 transverse and 1-3 longitudinal septa, at first hyaline then brown, broadly ellipsoid, 20-34 x (10-)14-20  $\mu\text{m}$ . Pycnidia black, immersed. Conidia bacilliform. Photobiont chlorococcoid. Spot tests: thallus K-, C+ red, P-, UV-. Chemistry: lecanoric acid (major), orsellinic acid (accessory). - Note: a mainly Mediterranean species growing on compact calciferous rocks.



*Diploschistes farinosus*



*Diploschistes farinosus*

*Diploschistes steppicus* Reichert, Palest. J. Bot., Rehovot Ser. 111: 173 (1940)  
= *Diploschistes diacapsis* (Ach.) Lumbsch

[VZ1560], Persia austro-occidentalis. Bushir, 60 km austro-merid. versus a vico Khormuj. Ad terram gypsaceam. Leg. J. Soják, 20.04.1977, det. A. Vězda. EX A. VĚZDA: LICHENES SELECTI EXSICCATI NR. 1560.

Thallus crustose, episubstratic, rimose- to verrucose-areolate, whitish to grey, consisting of irregularly angular, 0.5-2.5 mm wide and 1-3 mm thick, flat to convex, dull, usually pruinose areoles. Epinecral layer to c. 50  $\mu\text{m}$  thick; algal layer continuous, well developed; medulla white, with scattered, small calcium oxalate crystals, I- or rarely I+ blue. Apothecia lecanorine, urceolate, semi-immersed to sessile, up to 2.5 mm across, with a black, but often slightly grey-pruinose, concave disc, and a thick thalline margin. Proper exciple blackish brown, 60-80  $\mu\text{m}$  wide laterally, pseudoparenchymatous; epithecium poorly differentiated, colourless to brownish; hymenium colourless, 110-180  $\mu\text{m}$  high, non amyloid; paraphyses simple, flexuose, 1-2  $\mu\text{m}$  thick, the apical cells not swollen; hypothecium brown, c. 15  $\mu\text{m}$  high. Asci (4-)8-spored, narrowly clavate to subcylindrical, the wall evenly thickened when mature, the somewhat abrupt apical thickening with a thin, internal apical beak, lacking any apical apparatus, the contents I+ orange-red, the walls I-, not fissitunicate. Ascospores muriform, with 3-6 transverse and 1-2 longitudinal septa, at first hyaline then turning brown, broadly ellipsoid, 20-38(-40)  $\times$  9-17  $\mu\text{m}$ ; Pycnidia black, immersed in thallus, hyaline to brownish, cerebriform. Conidia bacilliform, 4-6  $\times$  1-1.5  $\mu\text{m}$ . Photobiont chlorococcoid. Spot tests: K- or K+ yellow to red, C+ red, KC- or KC+ red, P-, UV-. Chemistry: diploschistesic and lecanoric acids (both major) and orsellinic acid (minor). - Note: a widespread species of arid grasslands, found on calciferous or base-rich soil, especially on gypsum, in open, dry situations.



*Diploschistes steppicus*



*Diploschistes steppicus*

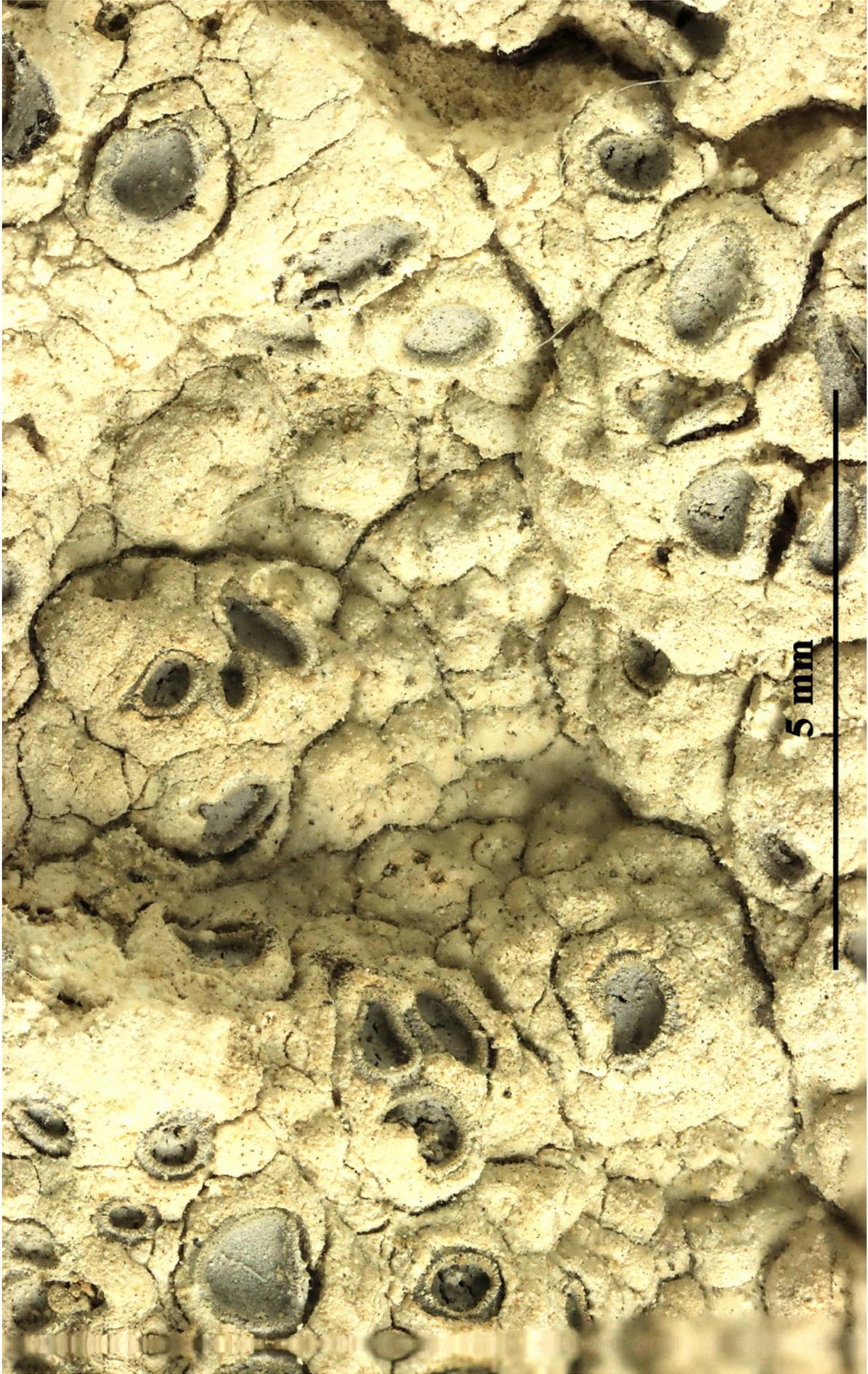
*Diploschistes steppicus* Reichert, Palest. J. Bot., Rehovot Ser. 111: 173 (1940)  
= *Diploschistes diacapsis* (Ach.) Lumbsch

[VZ1378], Hispania. Prov. Zaragoza: Los Monegros, Bujaraloz, loco dicto Retuerta de Pina, 300 m. Ad terram gypsaceam. Leg- J. Lambinon (no. 72/1110), 23.5.1972. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1378.

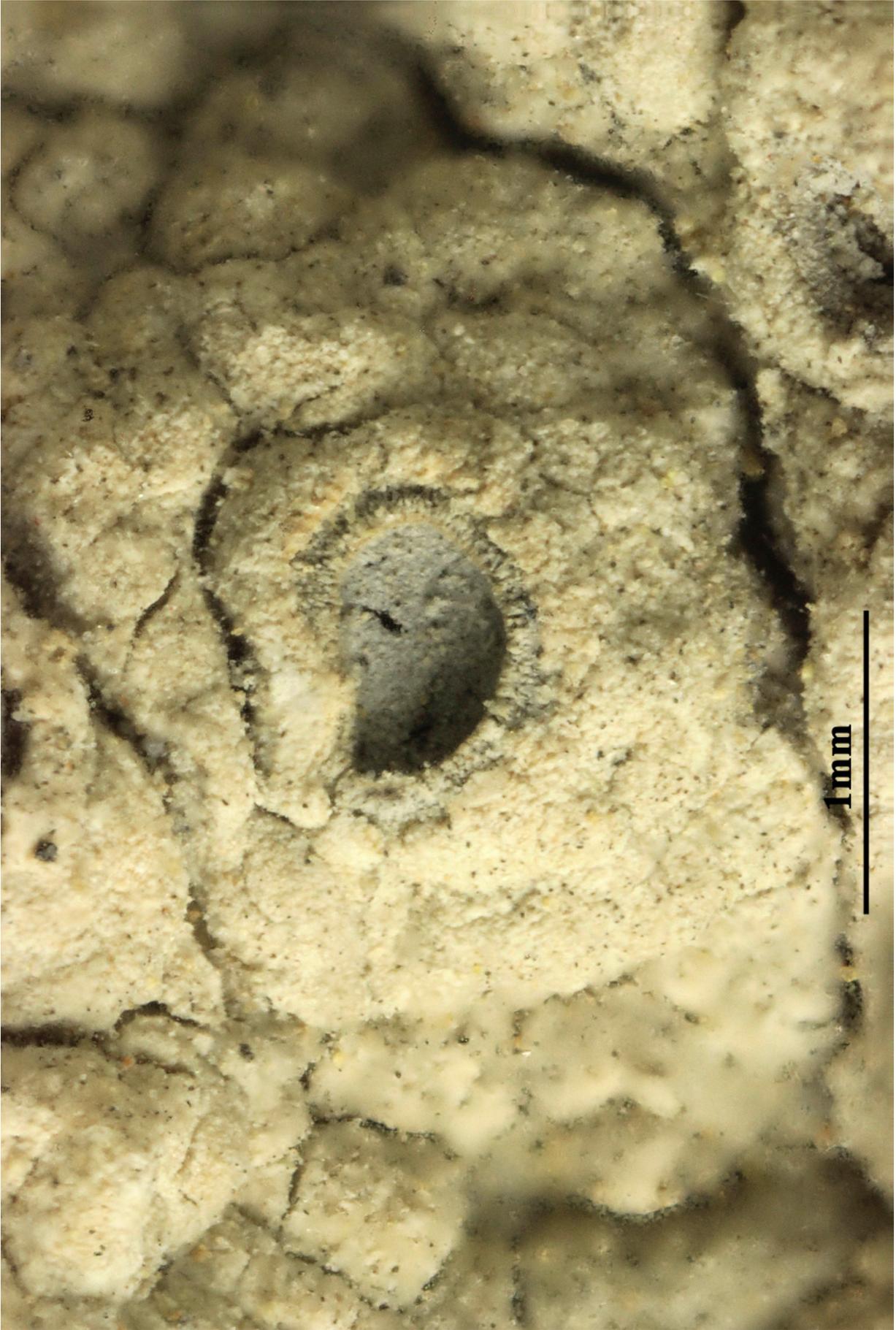
Thallus crustose, episubstratic, rimose- to verrucose-areolate, whitish to grey, consisting of irregularly angular, 0.5-2.5 mm wide and 1-3 mm thick, flat to convex, dull, usually pruinose areoles. Epinecral layer to c. 50  $\mu\text{m}$  thick; algal layer continuous, well developed; medulla white, with scattered, small calcium oxalate crystals, I- or rarely I+ blue. Apothecia lecanorine, urceolate, semi-immersed to sessile, up to 2.5 mm across, with a black, but often slightly grey-pruinose, concave disc, and a thick thalline margin. Proper exciple blackish brown, 60-80  $\mu\text{m}$  wide laterally, pseudoparenchymatous; epithecium poorly differentiated, colourless to brownish; hymenium colourless, 110-180  $\mu\text{m}$  high, non amyloid; paraphyses simple, flexuose, 1-2  $\mu\text{m}$  thick, the apical cells not swollen; hypothecium brown, c. 15  $\mu\text{m}$  high. Asci (4-)8-spored, narrowly clavate to subcylindrical, the wall evenly thickened when mature, the somewhat abrupt apical thickening with a thin, internal apical beak, lacking any apical apparatus, the contents I+ orange-red, the walls I-, not fissitunicate. Ascospores muriform, with 3-6 transverse and 1-2 longitudinal septa, at first hyaline then turning brown, broadly ellipsoid, 20-38(-40)  $\times$  9-17  $\mu\text{m}$ ; Pycnidia black, immersed in thallus, hyaline to brownish, cerebriform. Conidia bacilliform, 4-6  $\times$  1-1.5  $\mu\text{m}$ . Photobiont chlorococcoid. Spot tests: K- or K+ yellow to red, C+ red, KC- or KC+ red, P-, UV-. Chemistry: diploschistesic and lecanoric acids (both major) and orsellinic acid (minor). - Note: a widespread species of arid grasslands, found on calciferous or base-rich soil, especially on gypsum, in open, dry situations.



*Diploschistes steppicus*



*Diploschistes steppicus*



*Diploschistes steppicus*



*Diploschistes steppicus*

- Dirina ceratoniae* (Ach.) Fr., Lich. eur. reform. (Lund): 194 (1831)  
 = *Dirina repanda* Fr., Syst. orb. veg. (Lundae): 244 (1825)  
 = *Dirina repanda* var. *ceratoniae* (Ach.) Stizenb., Ber. Tät. St Gall. naturw. Ges.: 240 (1890) [1888-89]  
 = *Lecania ceratoniae* (Ach.) Stizenb.=  
 = *Lecanora ceratoniae* Ach., Lich. Univ.: 361 (1810)  
 = *Lichen peltatus* \* *ceratoniae* (Ach.) Lam., Encycl. Méth., Bot. Suppl. (Paris) 3(2): 393 (1813)  
 = *Parmelia ceratoniae* (Ach.) Spreng., Syst. veg., Edn 16 4(1): 299 (1827)  
 = *Patellaria repanda* (Fr.) Hepp, Flecht. Europ.: no. 408 (1857)  
 = *Patellaria repanda* var. *ceratoniae* (Ach.) Hepp, Flecht. Europ.: no. 408 (1857)  
 = *Secoliga repanda* (Fr.) Norman, Conat. Praem. Gen. Lich.: 19 (1852)  
 = *Urceolaria repanda* (Fr.) Schaer., Enum. critic. lich. europ. (Bern): 92 (1850)

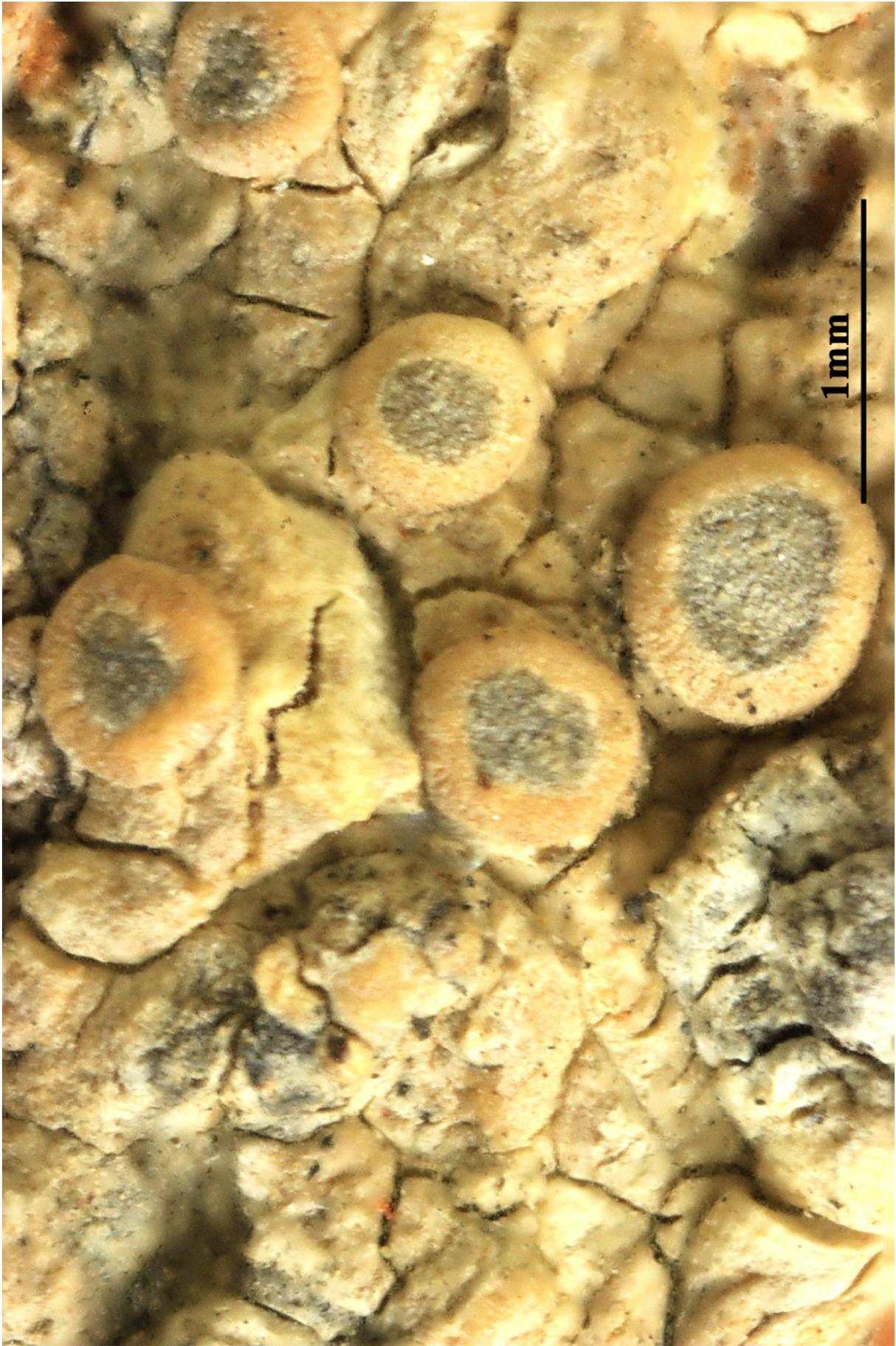
[VZ1303], Hispania. Tarragona, prope Cunit. In colle arido prope litum, ad corticem arboris. Leg. W. L. Culberson (no. 12831) et C. F. Culberson, 26.6.1964. - Annot.: Erythrin, lecanoric acid (trace) and trace of unidentified substances by TLC ; anal. C. F. Culberson. - . EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1303.

Thallus crustose, episubstratic, continuous to rimose-areolate, smooth to verruculose, creamy white, greenish white or pale pinkish brown, sometimes slightly pruinose, 0.1-1.5 mm thick, often delimited by a whitish prothallus. Cortex 40-60  $\mu\text{m}$  thick, with anticlinally arranged, colourless hyphae immersed in a pale yellow-brown gelatinous matrix, without crystals; medulla chalk-white, with loose, sometimes almost byssoid hyphae near the substratum. Apothecia lecanorine, sessile, constricted at base, round to angular in outline, 0.5-4 mm across, with a dark-grey to grey-black, but usually densely white-pruinose disc, and a thick, often wavy proper margin. Proper exciple inconspicuous; epithecium brownish, with crystals visible under polarized light; hymenium colourless, often interrupted by thin, vertical, dark hyphal strands; paraphysoids unbranched or sparsely branched, 1-2  $\mu\text{m}$  thick, the apical cells 2-3  $\mu\text{m}$  wide; hypothecium thick, black. Asci 8-spored, clavate, bitunicate, the apex thickened with a small internal K/I+ blue ring. Ascospores 3-septate, hyaline, fusiform, straight or slightly curved, 21-26 x 4-5  $\mu\text{m}$ . Pycnidia black, immersed or slightly protruding. Conidia thread-like, sickle-shaped. Photobiont trentepohlioid. Spot

tests: thallus K- C+ red, KC+ red, P-, UV-; medulla C-; apothecial disc C+ faintly red or C-. Chemistry: erythrin, lecanoric acid, plus an unidentified substance. - Note: *D. ceratoniae* and *D. massiliensis* have been extensively studied from the molecular point of view, with numerous samples taken all over their respective distribution areas (Tehler & al. 2013). This showed that *D. ceratoniae* is not only corticolous, but quite frequently saxicolous as well. Mostly, the saxicolous specimens can be morphologically distinguished from the strictly saxicolous *D. massiliensis*. However, there are cases where saxicolous specimens of the two species are virtually indistinguishable without DNA data (Tehler in litt.).



*Dirina ceratoniae*



*Dirina ceratoniae*

- Dirina ceratoniae* (Ach.) Fr., Lich. eur. reform. (Lund): 194 (1831)  
 = *Dirina repanda* Fr., Syst. orb. veg. (Lundae): 244 (1825)  
 = *Dirina repanda* var. *ceratoniae* (Ach.) Stizenb., Ber. Tät. St Gall. naturw. Ges.: 240 (1890) [1888-89]  
 = *Lecania ceratoniae* (Ach.) Stizenb.=  
 = *Lecanora ceratoniae* Ach., Lich. Univ.: 361 (1810)  
 = *Lichen peltatus* \* *ceratoniae* (Ach.) Lam., Encycl. Méth., Bot. Suppl. (Paris) 3(2): 393 (1813)  
 = *Parmelia ceratoniae* (Ach.) Spreng., Syst. veg., Edn 16 4(1): 299 (1827)  
 = *Patellaria repanda* (Fr.) Hepp, Flecht. Europ.: no. 408 (1857)  
 = *Patellaria repanda* var. *ceratoniae* (Ach.) Hepp, Flecht. Europ.: no. 408 (1857)  
 = *Secoliga repanda* (Fr.) Norman, Conat. Praem. Gen. Lich.: 19 (1852)  
 = *Urceolaria repanda* (Fr.) Schaer., Enum. critic. lich. europ. (Bern): 92 (1850)

[VZ2208], Italia, Sardinia. Prov. Cagliari: In litore prope oppidum Villasimi, 20 m. Ad corticem *Arbuti unedo*. Leg. A. Vězda, 13.7.1987. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2208.

Thallus crustose, episubstratic, continuous to rimose-areolate, smooth to verruculose, creamy white, greenish white or pale pinkish brown, sometimes slightly pruinose, 0.1-1.5 mm thick, often delimited by a whitish prothallus. Cortex 40-60  $\mu\text{m}$  thick, with anticlinally arranged, colourless hyphae immersed in a pale yellow-brown gelatinous matrix, without crystals; medulla chalk-white, with loose, sometimes almost byssoid hyphae near the substratum. Apothecia lecanorine, sessile, constricted at base, round to angular in outline, 0.5-4 mm across, with a dark-grey to grey-black, but usually densely white-pruinose disc, and a thick, often wavy proper margin. Proper exciple inconspicuous; epithecium brownish, with crystals visible under polarized light; hymenium colourless, often interrupted by thin, vertical, dark hyphal strands; paraphysoids unbranched or sparsely branched, 1-2  $\mu\text{m}$  thick, the apical cells 2-3  $\mu\text{m}$  wide; hypothecium thick, black. Asci 8-spored, clavate, bitunicate, the apex thickened with a small internal K/I+ blue ring. Ascospores 3-septate, hyaline, fusiform, straight or slightly curved, 21-26 x 4-5  $\mu\text{m}$ . Pycnidia black, immersed or slightly protruding. Conidia thread-like, sickle-shaped. Photobiont trentepohlioid. Spot tests: thallus K- C+ red, KC+ red, P-, UV-; medulla C-; apothecial disc C+ faintly red or C-. Chemistry: erythrin, lecanoric acid, plus an

unidentified substance. - Note: *D. ceratoniae* and *D. massiliensis* have been extensively studied from the molecular point of view, with numerous samples taken all over their respective distribution areas (Tehler & al. 2013). This showed that *D. ceratoniae* is not only corticolous, but quite frequently saxicolous as well. Mostly, the saxicolous specimens can be morphologically distinguished from the strictly saxicolous *D. massiliensis*. However, there are cases where saxicolous specimens of the two species are virtually indistinguishable without DNA data (Tehler in litt.).



*Dirina ceratoniae*

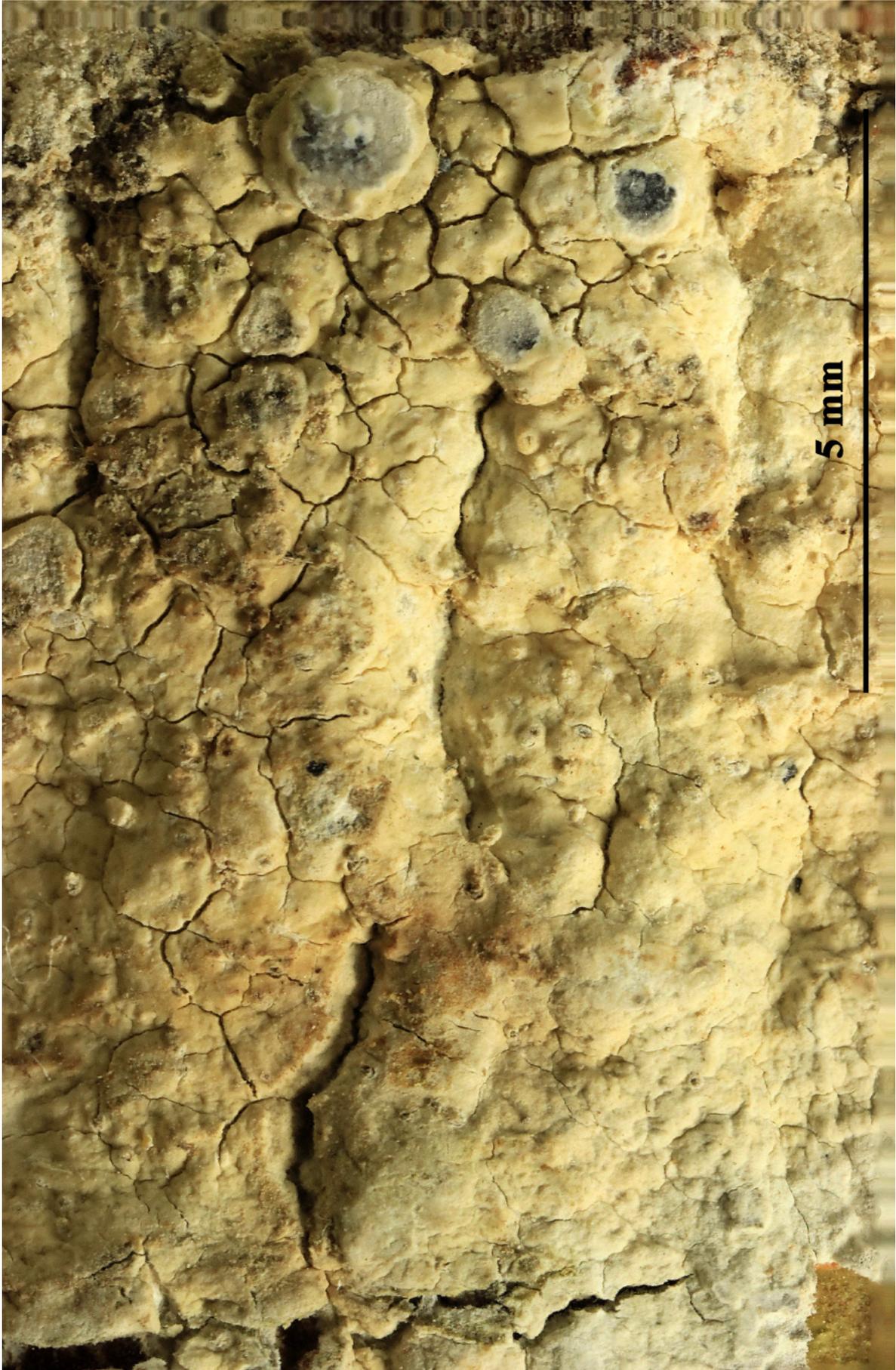


*Dirina ceratoniae*

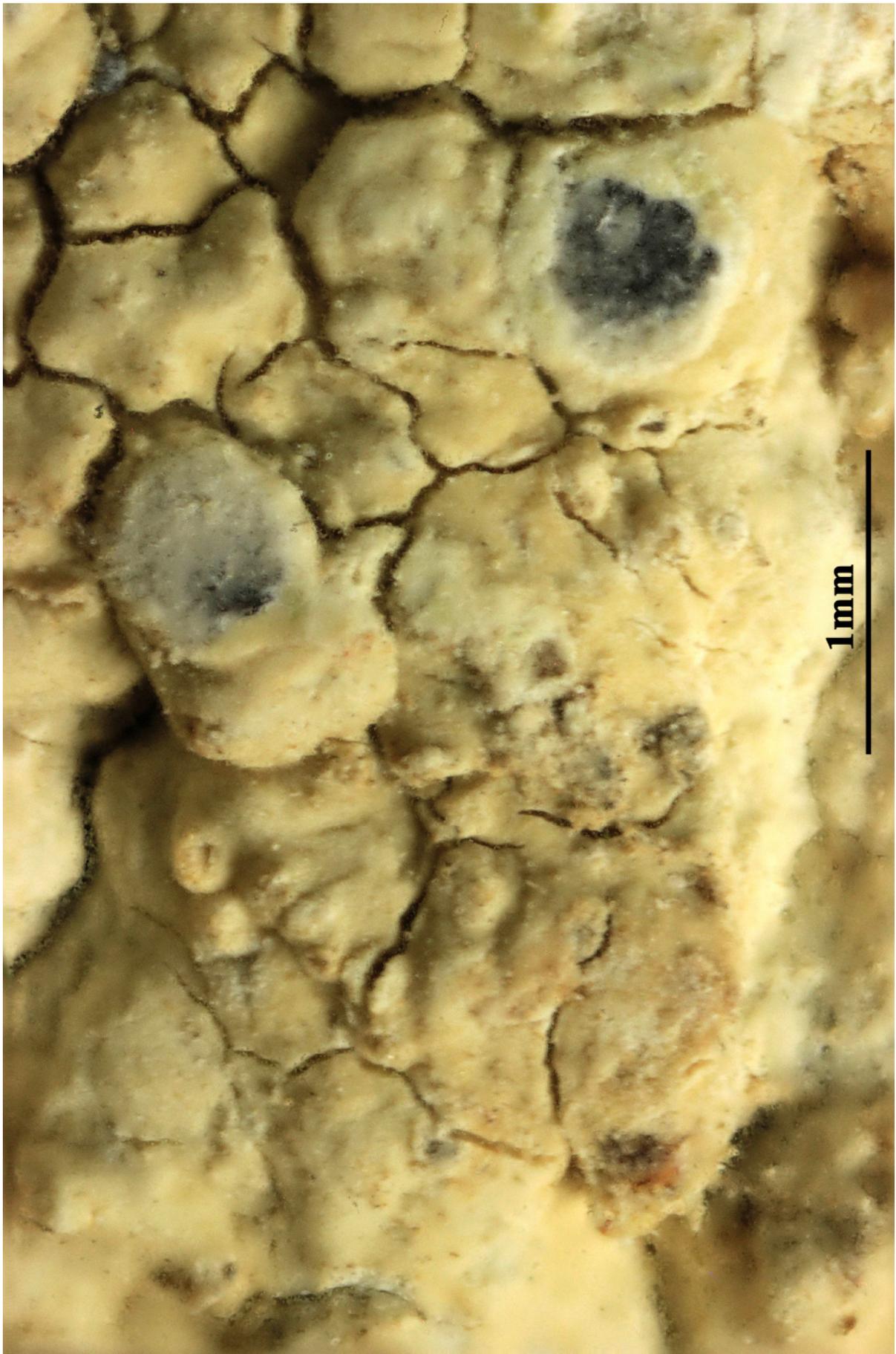
*Dirina paradoxa* (Fée) Tehler, Lichenologist 18(3): 296 (1986)

[VZ2338], Venezuela. Falcon, peninsula Paraguaná dicta: Punta Prudentio, Tacuato, in litore maris. Ad corticem *Jacquinia* aristatae. Leg. Lopez-Figueiras (32492) et R. Wingfield, 12.12.1985, det. A. Tehler. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2338.

Thallus: crustose, effuse, 0.1-0.7 mm; surface varying from white to creamy white, smooth, epruinose to slightly pruinose; soredia and isidia not seen; cortex 10-50  $\mu\text{m}$  thick; Ascomata numerous, circular in outline, sessile, 0.5-1.6 mm diam.; exciple usually undulating; hymenium 50-140  $\mu\text{m}$  high; paraphysoids sparsely branched, parallel, hyaline, c. 1  $\mu\text{m}$  in diam; asci clavate, 70-120 x 15  $\mu\text{m}$ , 8-spored; ascospores fusiform, hyaline, 3-septate, 28-33 x 4-5  $\mu\text{m}$ ; Spot tests cortex K-, C+ red, KC+ red, P-; medulla K-, C-, KC-, P-; Secondary metabolites erythrin and lecanoric acid. Substrate and ecology: growing on trees and shrubs near the sea World distribution only known from the Galapagos Islands, Baja California Sur (Todos Santos area) and Sonora. - Notes: *Dirina paradoxa* subsp. *approximata* is similar to *Roccellina conformis* which also occurs on bark, but *D. paradoxa* is easily distinguished by its C+ red thallus. *Dirina paradoxa* includes two other subspecies, *D. paradoxa* subsp. *hioramii* in the Greater and Lesser Antilles, and *Dirina paradoxa* subsp. *africana* on the Canary Islands, the Atlantic coast of northern Africa and in Yemen and Socotra Island (Tehler 1983).



*Dirina paradoxa*



*Dirina paradoxa*

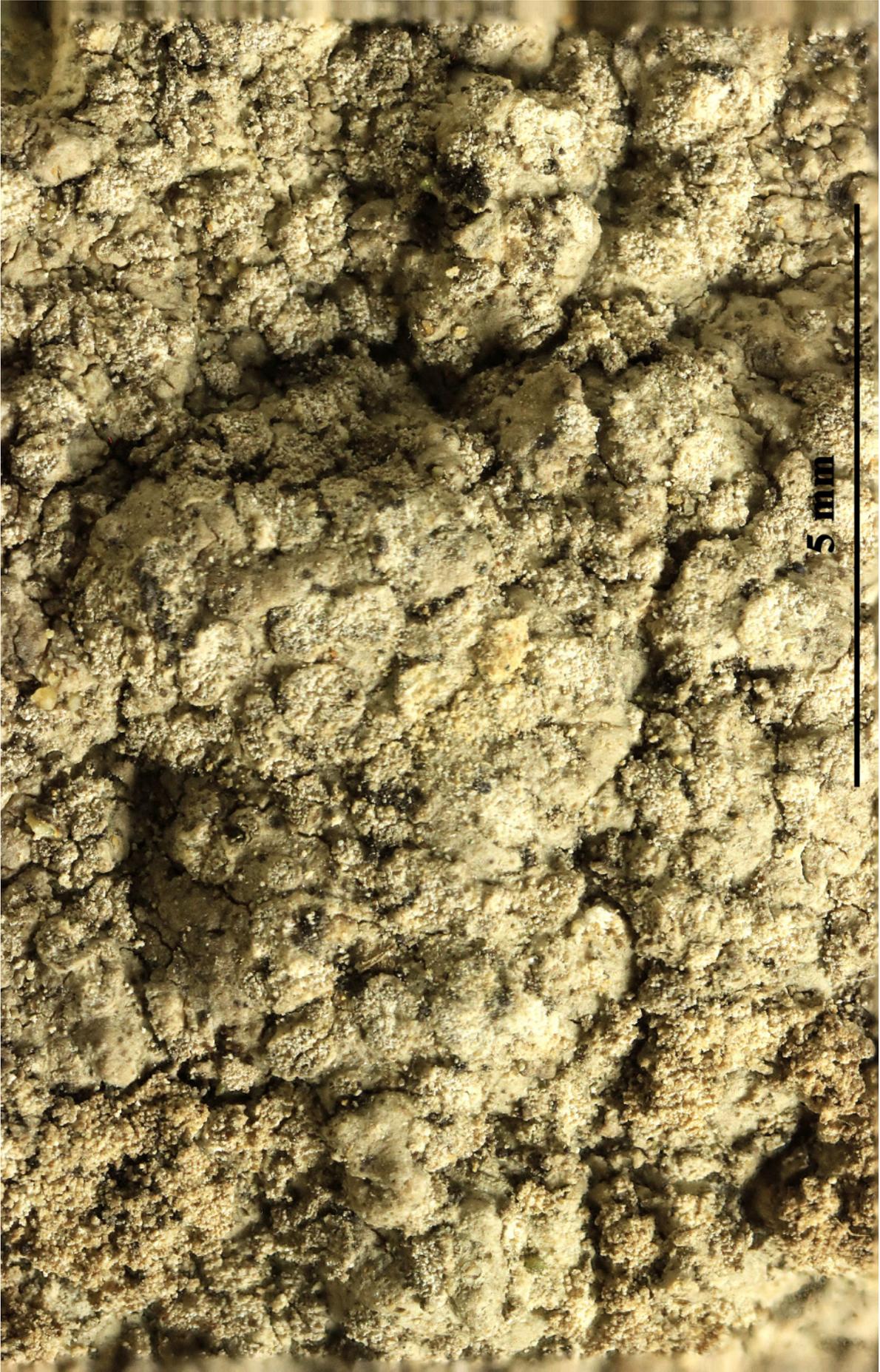
- Dirina stenhammarii* (Fr.) Poelt & Follmann [as 'stenhammari'], Herzogia 1: 64 (1968)
- = *Dirina massiliensis* Durieu & Mont., in Durieu, Expl. Sci. Alg., Fl. Algér. 1(livr. 7): 257 (1848) [1846-49]
- = *Biatora praerimata* (Nyl.) Walt. Watson, Lich. Somerset: 51 (1930)
- = *Bilimbia stenhammarii* (Fr.) Boistel [as 'stenhammari'], Nouv. Fl. Lich. (Paris) 2: 193 (1903)
- = *Dirina immersa* var. *sorediata* Müll. Arg., Proc. R. Soc. Edinb. 11: 466 (1882)
- = *Dirina massiliensis* f. *sorediata* (Müll. Arg.) Tehler, Nordic J. Bot. 70: 33 (1983)
- = *Dirina patronii* Bagl., Mém. R. Accad. Sci. Torino, Ser. 2 17: 397 (1857)
- = *Dirina repanda* f. *stenhammarii* (Fr.) Clauzade & Cl. Roux [as 'stenhammari'], Bull. Mus. Hist. Nat. Marseille 35: 205 (1976) [1975]
- = *Dirina repanda* var. *patronii* (Bagl.) Zahlbr., Cat. Lich. Univers. 2: 509 (1923) [1924]
- = *Lecanactis praerimata* (Nyl.) H. Olivier, Bull. Acad. Intern. Géogr. Bot. 21: 189 (1911)
- = *Lecanactis stenhammarii* (Fr.) Arnold [as 'stenhammari'], Flora, Regensburg 54: 196 (1871)
- = *Lecanora repanda* Fr., in Duby, Bot. Gall., Edn 2 (Paris) 2: 667 (1830)
- = *Lecanora stenhammarii* (Körb.) Jatta [as 'stenhammari'], Syll. Lich. Ital. (Trano): 206 (1900)
- = *Lecidea margaritacea* var. *conspurcata* (Sm.) Ach., Lich. Univ.: 186 (1810)
- = *Lecidea praerimata* Nyl., Flora, Regensburg 59: 235 (1876)
- = *Lecidea stenhammarii* Fr. [as 'stenhammari'], Summa veg. Scand., Sectio Prior (Stockholm): 115 (1845)
- = *Lichen conspurcatus* Sm., in Smith & Sowerby, Engl. Bot. 14: [964] (1802)
- = *Variolaria conspurcata* (Sm.) Turner & Borrer, Spec. lichonogr. brit. (Yarmouth): 55 (1839)
- = *Zeora stenhammarii* Körb. [as 'stenhammari'], Syst. lich. germ. (Breslau): 135 (1855)

[VZ1509], Bulgaria. Pontus, distr. Burgas: in litore inter pagos Varvata et Mičurin, 10 m. In pariete alto scopuli maritimi. Leg. I. Pišút et A. Vězda, 22.8.1977. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1509.

Thallus crustose, sorediate, very variable depending on the type of substrate, thin to thick (1-3 mm), smooth to rimose-verrucose, whitish to grey, often delimited by a grey to black prothallus. Medulla thick,

chalk-white, densely packed with calcium oxalate crystals. Soralia punctiform to maculiform, flat to convex, at first discrete and 0.3-0.4 mm across, finally often confluent, bearing greyish, granular soredia. Apothecia and pycnidia usually absent. Photobiont trentepohlioid. Spot tests: cortex K-, C+ slowly and fleeting red, KC+ red, P -; medulla and soralia C-, KC-. Chemistry: lecanoric acid, erythrin. - Note: according to Tehler (2013), molecular data do not support a separation of sorediate, sterile forms from fertile *D. massiliensis*. However, while sorediate forms often do grow together with fertile forms along the coasts, they also occur in the Alps, very far from the coast and in quite different ecological situations and in the past were treated as *D. stenhammari*.

*Dirina stenhammarii*



*Dirina stenhammarii*

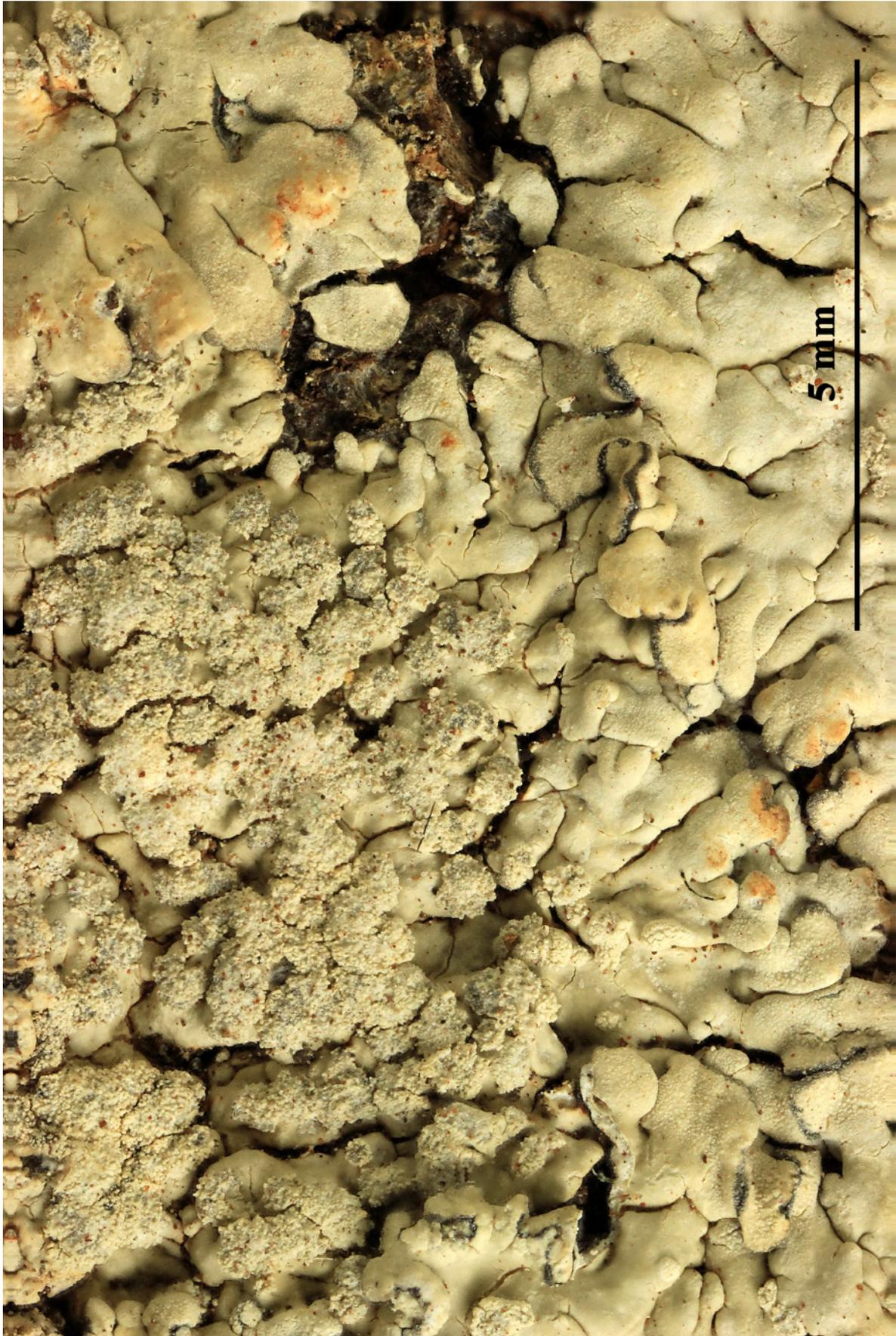


*Dirina stenhammarii*

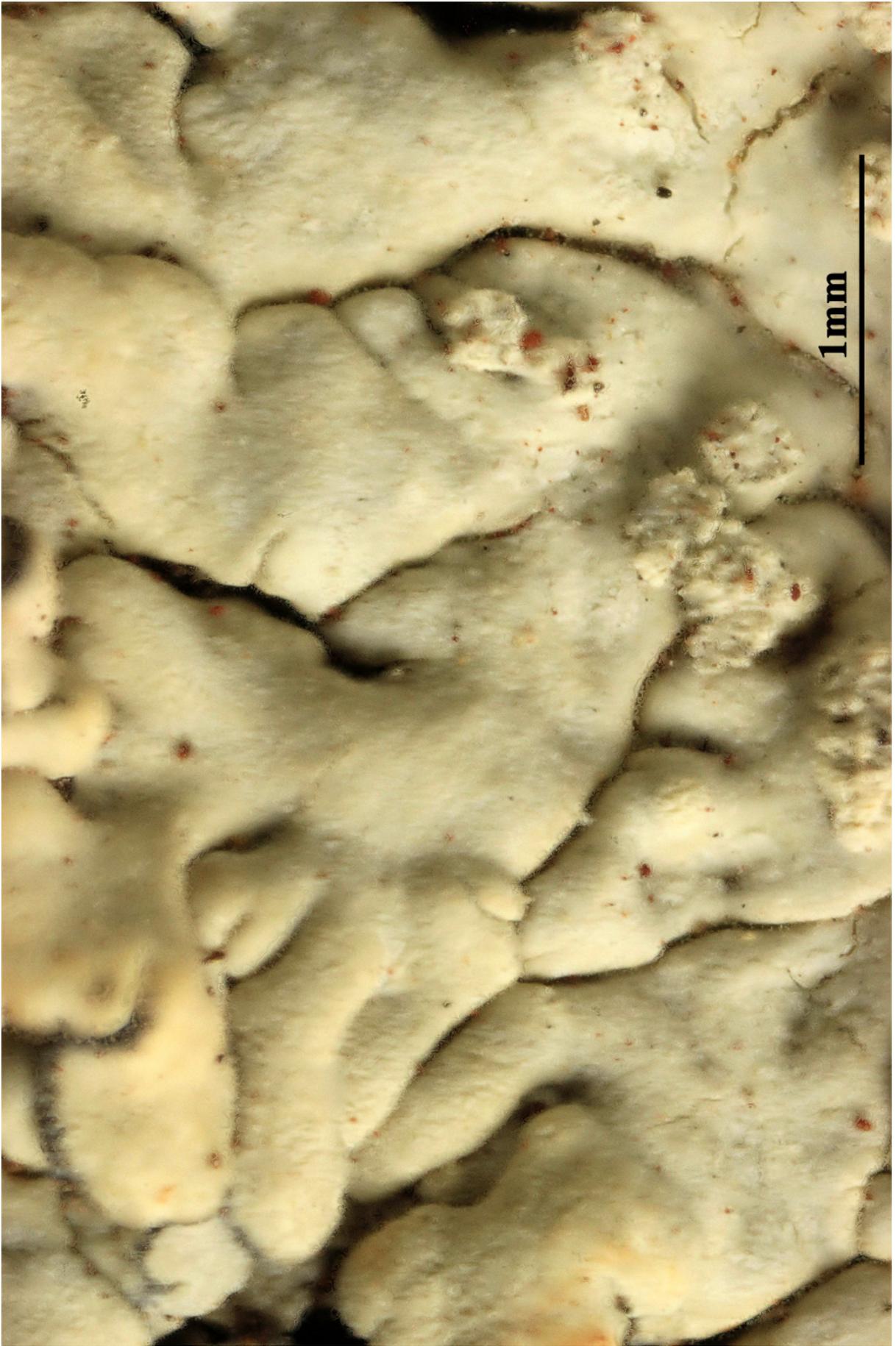
*Dirinaria applanata* (Fée) D.D. Awasthi, J. Indian bot. Soc. 49: 135 (1970)  
 = *Anaptychia applanata* (Fée) A. Massal., Memor. Lich.: 40 (1853)  
 = *Dirinaria consimilis* var. *ochracea* D.D. Awasthi, Bibliotheca Lichenol. 2:  
 94 (1975)  
 = *Lecanora flavostraminea* (Müll. Arg.) Zahlbr., Cat. Lich. Univers. 5: 621  
 (1928)  
 = *Parmelia applanata* Fée, Essai Crypt. Exot. (Paris): 126 (1825) [1824]  
 = *Parmelia redacta* Stirt., Trans. Proc. N.Z. Inst. 32: 76 (1900) [1899]  
 = *Physcia applanata* (Fée) Nyl., Mém. Soc. Imp. Sci. Nat. Cherbourg 5: 107  
 (1858) [1857]  
 = *Placodium flavostramineum* Müll. Arg. [as 'flavo-stramineum'], Hedwigia  
 34: 29 (1895)

[VZ2356], Hawaii Insulae: Molokai, Kapuhi, in litore. Ad corticem  
 truncu *Prosopis* sp. Legt. O. et I. Degener, 14.5.1984, det. K. Kalb. -  
 Atranorin, divaricatic acid by TLC anal. from K. Kalb. EX A. V&ZDA  
 LICHENES SELECTI EXSICCATI NR. 2356.

Thallus 5–10 cm wide, adnate to tightly adnate, pinnately to subpinna-  
 tely lobate. Lobes radiating, contiguous, longitudinally plicate and  
 rugose, plane to convex, ±concave towards the tips, 0.5–2.0 mm wide,  
 distinctly flabellate towards the apices. Upper surface grey, bluish grey  
 to yellow-grey or off-white, ±pruinose, sorediate; dactyls absent. Sora-  
 lia laminal, hemispherical or becoming elongate, sometimes erose and  
 crateriform; soredia farinose. Medulla white, rarely the lower medulla  
 orange towards the apices. Lower surface black in the centre, ±brown  
 at the margins. Apothecia rare, sessile to ±constricted at base, 0.5–1.5  
 mm wide; disc black, rarely sparsely grey-pruinose. Epithemium dark  
 yellow-brown, c. 10 µm thick. Hymenium colourless, 75–85 µm thick.  
 Hypothecium dark brown to brown-black, 160–200 µm thick. Ascospo-  
 res 15–22 × 6–8 µm. Conidia bacilliform, 3.5–5.0 × 0.8–1.0 µm.  
 CHEMISTRY: Cortex K+ yellow, C–, KC–, P+ yellow; medulla K–,  
 C–, KC–, P–; containing atranorin (minor), chloroatranorin (minor),  
 divaricatic acid (major), 3β-acetoxypopane-1β,22-diol  
 (minor), ±unknown terpenes (minor).



*Dirinaria applanata*

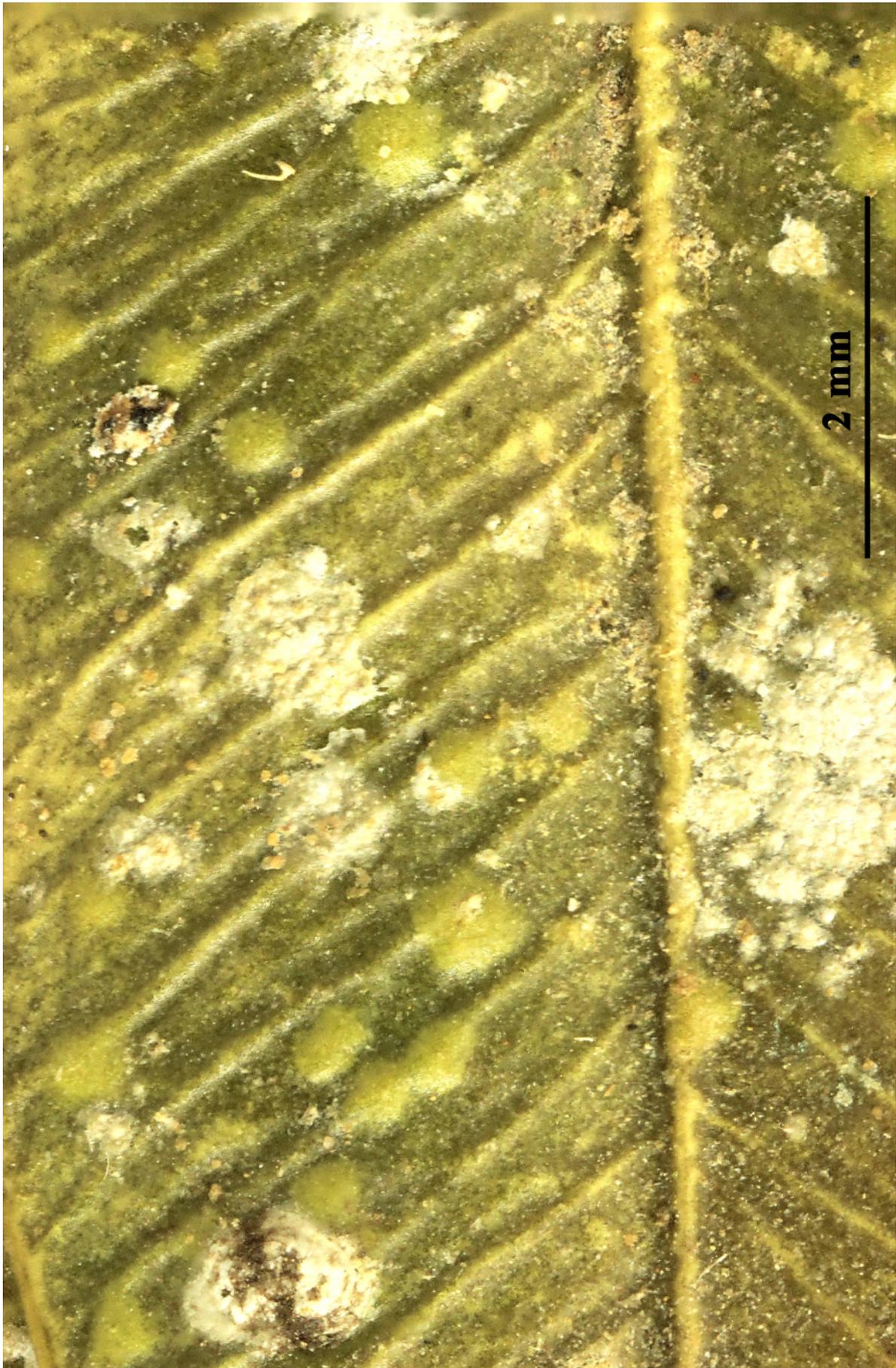


*Dirinaria applanata*

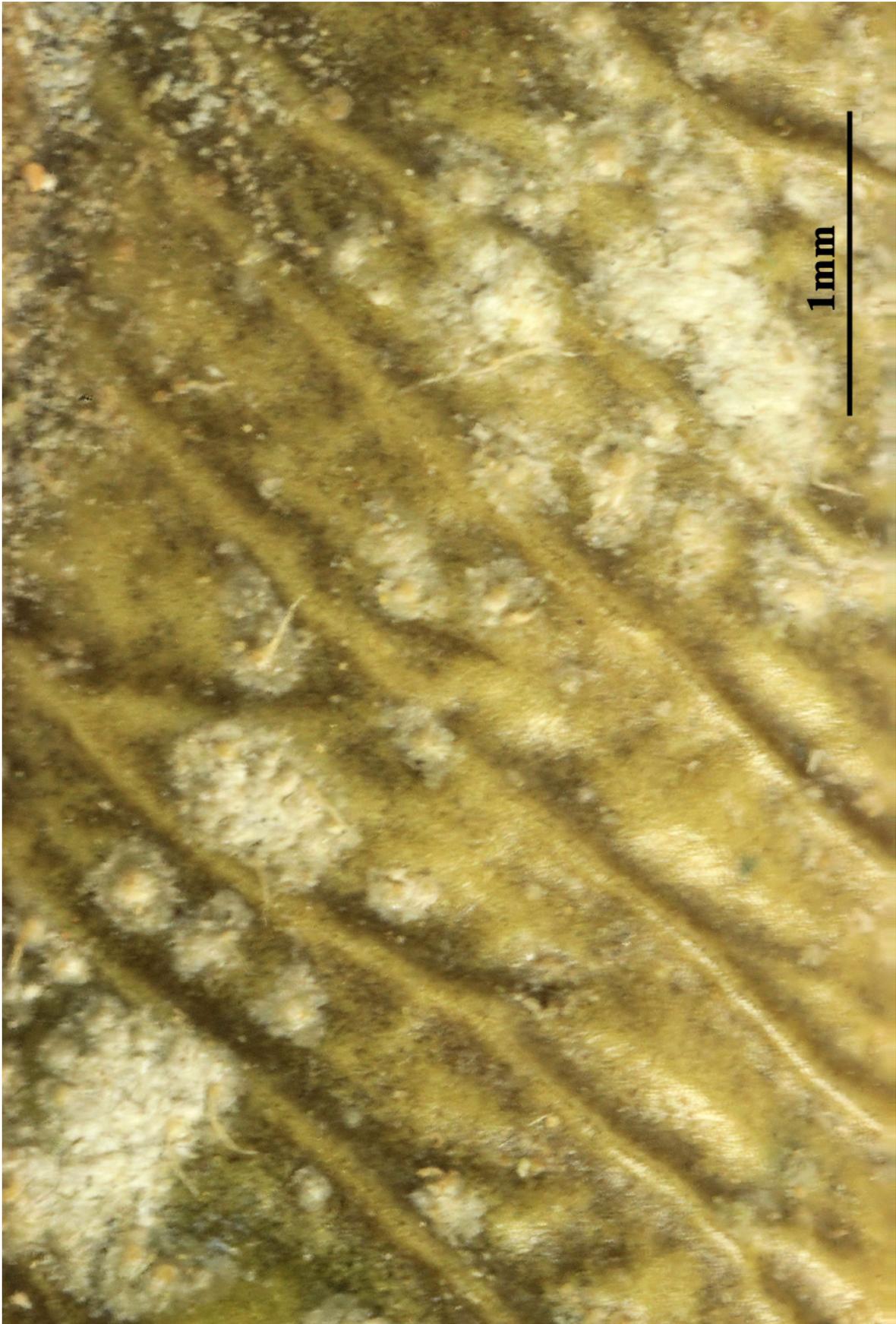
*Echinoplaca epiphylla* Fée, Essai Crypt. Exot. (Paris): xciii (1825) [1824]

[VZ1530], URSS. Georgia, Colchis (Caucasus occid.): Guiripsi, in valle fluminis Amtkei, 500-600 m. Ad folia *Buxi colchicae*. Leg. V. Vašák et A. Vězda, 25.6.1977. -Annot.: Absunt plantae tantum steriles. Apothecia in territorio colchico rarissima. - Ex A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1530.

Thallus continuous, 5–15 mm across and 15–25  $\mu\text{m}$  thick, with cartilaginous, corticiform layer, finely verrucose due to incrustation with calcium oxalate crystals, with scattered to numerous, sterile setae, pale greenish grey to white; verrucae 0.05–0.1 mm diam., white; setae 0.5–0.9 mm long, white. Apothecia adnate and spot-like, emarginate, rounded, 0.2–0.5 mm diam. and 70–90  $\mu\text{m}$  high; disc plane, pale yellow to orange-red. Excipulum composed of branched, radiating hyphae embedded in gelatinous matrix, reduced and spreading over thallus surface, 50–150  $\mu\text{m}$  broad, colorless. Hypothecium 5–10  $\mu\text{m}$  high, colorless. Epithecium 2–5  $\mu\text{m}$  high, pale yellow. Hymenium 60–80  $\mu\text{m}$  high, colorless. Asci broadly clavate to ovoid, 50–75 x 20–45  $\mu\text{m}$ . Ascospores 1(–2) per ascus, ellipsoid, muriform, with slight constrictions at septa, 40–70 x 20–40  $\mu\text{m}$ , 2 times as long as broad. Hyphophores rare, setiform with acute apex, 0.3–0.5 mm high, white but subapical part sometimes darkened. Diahyphae inserted subapically, branched throughout, filiform but terminal segments narrowly fusiform, 7–12 x 1.5–2.5  $\mu\text{m}$ . Chemistry: no substances detected by TLC. Distribution and Ecology Pantropical. A common and regular member of light-gap and forestmargin communities in the lowland rain forest zone.



*Echinoplaca epiphylla*

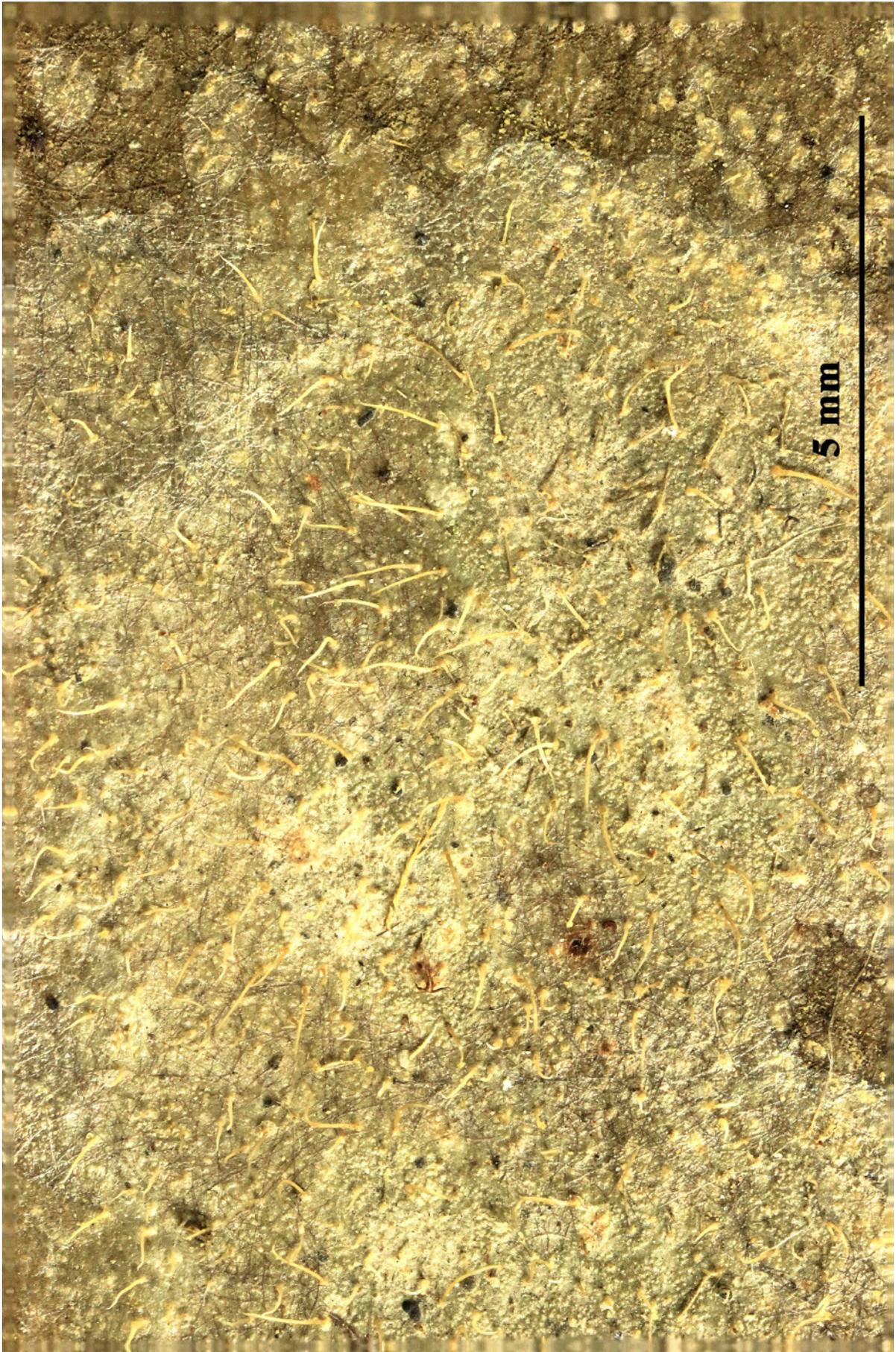


*Echinoplaca epiphylla*

*Echinoplaca epiphylla* Fée, Essai Crypt. Exot. (Paris): xciii (1825) [1824]

[VZ1754], URSS. Transcaucasia, Colchis (Georgia): distr. Guiripsi, in faucibus rivi sinistri fluminis Mačara prope pagum Oktomberi, 150 m. Ad folia *Buxi colchicae* et *Ilicis colchicae*. Leg. C. Vašák, det. A. Vězda. - Annot.: Thallus apotheciis nullis, hyphophoros saetisque copiosis autem instructa. - EX A. VEZDA LICHENES SELECTI EXSICCATI NR. 1754.

Thallus continuous, 5–15 mm across and 15–25  $\mu\text{m}$  thick, with cartilaginous, corticiform layer, finely verrucose due to incrustation with calcium oxalate crystals, with scattered to numerous, sterile setae, pale greenish grey to white; verrucae 0.05–0.1 mm diam., white; setae 0.5–0.9 mm long, white. Apothecia adnate and spot-like, emarginate, rounded, 0.2–0.5 mm diam. and 70–90  $\mu\text{m}$  high; disc plane, pale yellow to orange-red. Excipulum composed of branched, radiating hyphae embedded in gelatinous matrix, reduced and spreading over thallus surface, 50–150  $\mu\text{m}$  broad, colorless. Hypothecium 5–10  $\mu\text{m}$  high, colorless. Epithecium 2–5  $\mu\text{m}$  high, pale yellow. Hymenium 60–80  $\mu\text{m}$  high, colorless. Asci broadly clavate to ovoid, 50–75 x 20–45  $\mu\text{m}$ . Ascospores 1(–2) per ascus, ellipsoid, muriform, with slight constrictions at septa, 40–70 x 20–40  $\mu\text{m}$ , 2 times as long as broad. Hyphophores rare, setiform with acute apex, 0.3–0.5 mm high, white but subapical part sometimes darkened. Diahyphae inserted subapically, branched throughout, filiform but terminal segments narrowly fusiform, 7–12 x 1.5–2.5  $\mu\text{m}$ . Chemistry: no substances detected by TLC. Distribution and Ecology Pantropical. A common and regular member of light-gap and forestmargin communities in the lowland rain forest zone.



*Echinoplaca epiphylla*

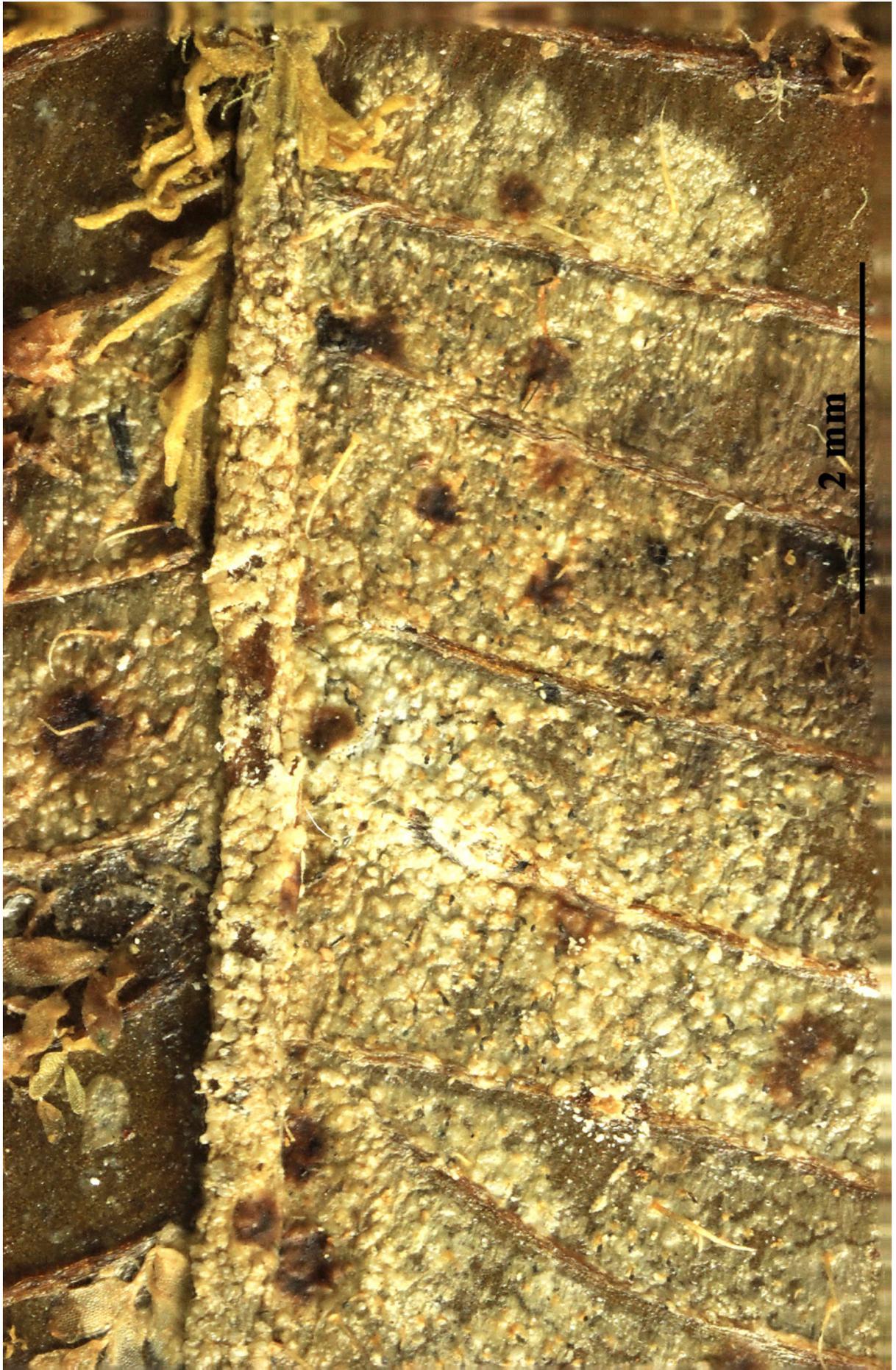


*Echinoplaca epiphylla*

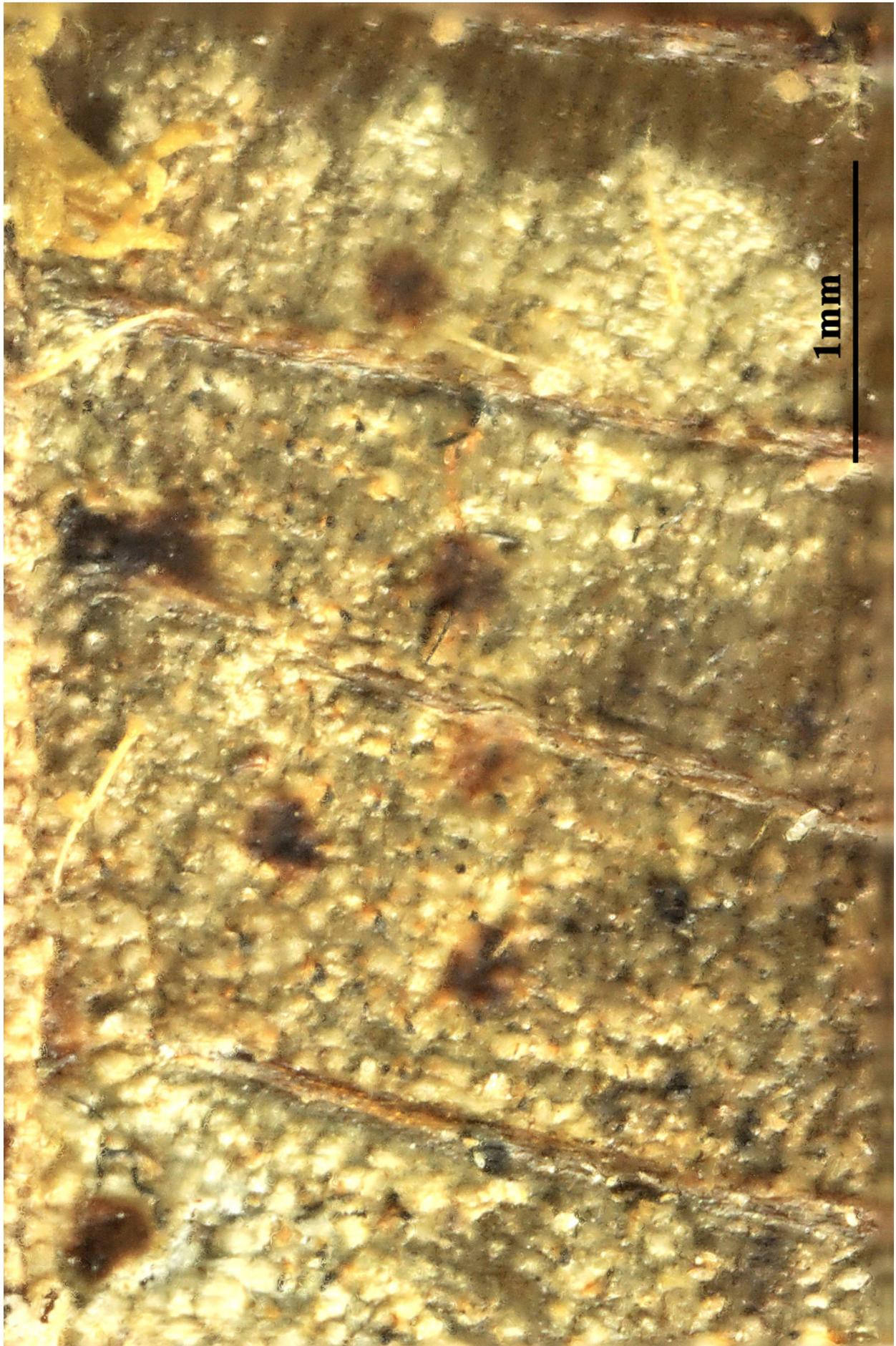
- Echinoplaca leucotrichoides* (Vain.) R. Sant., in Thorold, J. Ecol. 40: 129 (1952)  
 = *Sporocybomyces leucotrichoides* (Vain.) Xavier-Leite, M. Cáceres & Lücking, in Xavier-Leite, Goto, Lücking & Cáceres, Mycol. Progr. 22(12, no. 88): 23 (2023)  
 = *Calenia leucotrichoides* Vain., Ann. Acad. Sci. Fenn., Ser. A 15(no. 6): 166 (1921)  
 = *Sporocybomyces pulcher* H. Maia, in Batista & Maia, Atas Inst. Micol. Univ. Recife 5: 61 (1967)

[VZ1245], Tanzania, Marogoro distr., montes Uluguru, in valle Mwere, 1500-1630 m. Ad folia *Marattiae fraxineae* in pluviisilva montana. Leg. T. Pócs (no. 6176), 1.5.1970, det. A. Vězda. EX A. VĚZDA LICHNES SELECTI EXSICCATI NR. 1245.

Thallus continuous, 5–25 mm across and 15–25 µm thick, with cartilaginous, corticiform layer, finely verrucose to marginally rugose due to incrustation with calcium oxalate crystals, with scattered, sterile setae, pale greenish grey to white; verrucae 0.05–0.1 mm diam., white; setae 0.4–0.8 mm long, white. Apothecia appanate to adnate and spot-like, as a rule slightly raised above thallus level, emarginate, rounded, 0.2–0.8 mm diam. and 80–110 µm high; disc plane, orange-brown to dark brown; margin absent but excipulum usually visible as distinct, translucent zone. Excipulum composed of branched, radiating hyphae embedded in gelatinous matrix, spreading over thallus surface, 100–300 µm broad, colorless to pale yellow. Hypothecium 5–10 µm high, colorless to pale yellow. Epithecium 2–6 µm high, pale yellow. Hymenium 70–90 µm high, colorless. Asci clavate, 60–80 x 15–25 µm. Ascospores (1–)4(–6) per ascus, vermiform-cylindrical and often spirally curved, 15–27-septate, with distinct constrictions at septa, 60–100 x 10–18 µm, 5–7 times as long as broad. Hyphophores frequent, setiform with slightly thickened apex, 0.1–0.2 mm high, white but apically black. Diahypae inserted apically, branched throughout, filiform, terminal segments distinctly elongate-clavate and 3–5-septate, 20–30 x 3–4 µm. Chemistry: no substances detected by TLC. Distribution and Ecology. Pantropical. Together with *Echinoplaca epiphylla* and *E. pellicula*, one of the most common species in the genus, characteristic of light-gap and forest-margin communities in all tropical rain forests.



*Echinoplaca leucotrichoides*

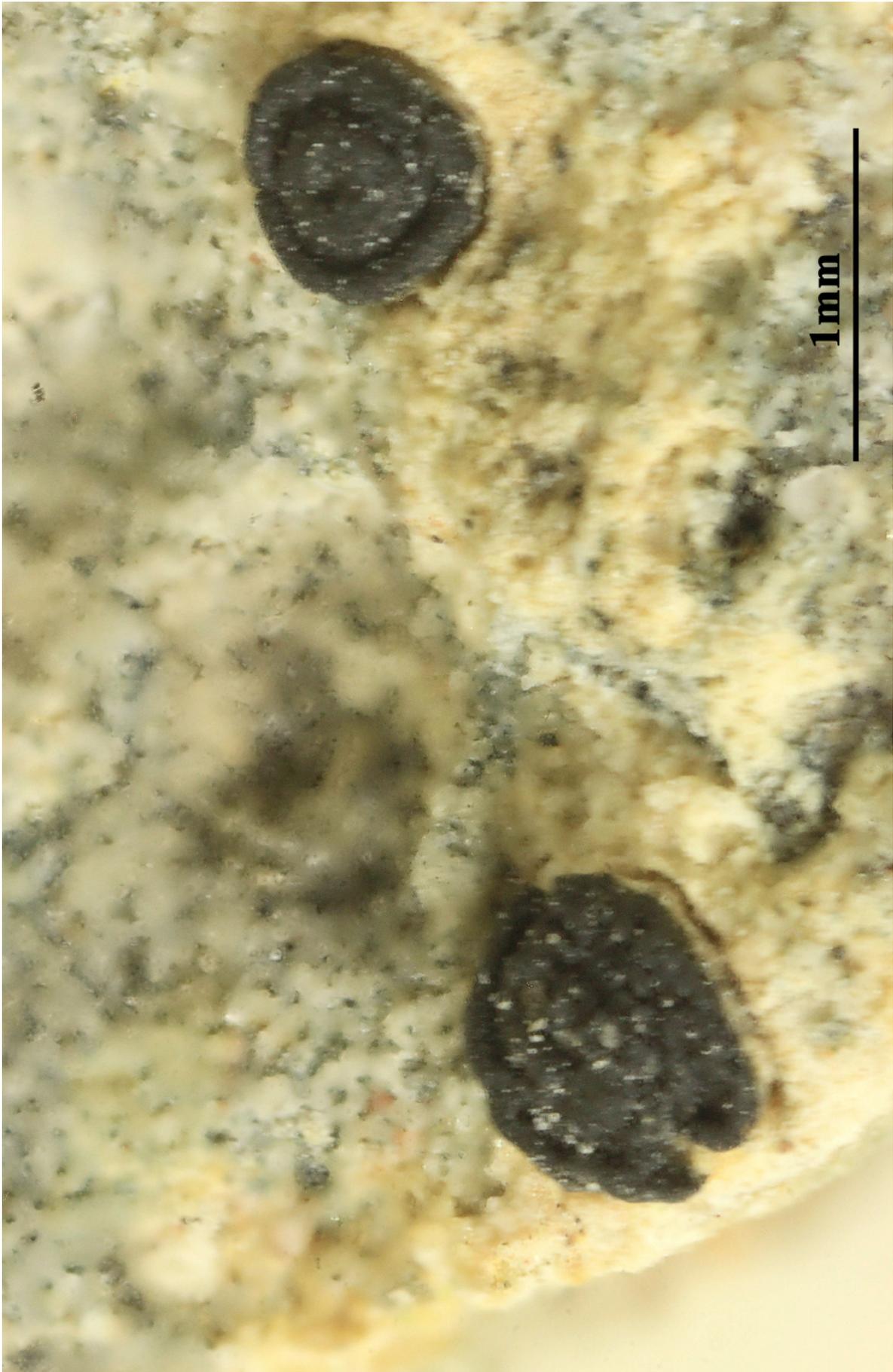


*Echinoplaca leucotrichoides*

- Encephalographa cerebrina* (DC.) A. Massal., *Miscell. Lichenol.*: 49 (1856)  
 = *Poeltinula cerebrina* (DC.) Hafellner, *Beih. Nova Hedwigia* 79: 330 (1984)  
 = *Buellia cerebrina* (DC.) Th. Fr., *Lich. Scand. (Upsaliae)*(2): 563 (1874)  
 = *Encephalographomyces cerebrinae* Cif. & Tomas., *Atti Ist. bot. Univ. Lab. crittog. Pavia, sér. 5* 10(1): 52, 78 (1953)  
 = *Lecidea cerebrina* (DC.) Schaer., *Lich. helv. spicil.* 3: 136 (1828)  
 = *Lithographa cerebrina* (DC.) Leight., *Lich.-Fl. Great Brit. Irel. Chann. Isl., Edn 3*: 394 (1879)  
 = *Melanospora cerebrina* (DC.) Mudd, *Man. Brit. Lich.*: 226 (1861)  
 = *Opegrapha cerebrina* DC., in Lamarck & de Candolle, *Fl. franç., Edn 3 (Paris) 2*: 312 (1805)  
 = *Patellaria cerebrina* (DC.) Duby, *Bot. Gall., Edn 2 (Paris) 2*: 648 (1830)

[VZ1287], Gallia.Savle, Vanoise, 2200-2500 m. Ad saxa calcarea. Leg. J. Asta et C. Roux, 7.1974. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1287.

Thallus crustose, usually episubstratic, rather thick, chalky white, sometimes with a bluish hue, continuous to areolate, poorly delimited, rarely hemiendosubstratic and poorly evident. Apothecia 0.5-2 mm across, black, sessile, very variable in outline (rounded, elliptical, angular to branched and almost lirelliform), with a slit-like to expanded, sometimes umbonate disc and a raised proper margin. Proper exciple thick, dark reddish brown. K<sup>+</sup> intensifying reddish; epithecium olive-grey or olive-brown, K<sup>-</sup>, N<sup>+</sup> red; hymenium colourless, 70-120(-160) µm high, I<sup>+</sup> blue; paraphyses 1.5-3 µm thick at mid-level, branched in upper part and anastomosing, the apical cells slightly swollen, to 5 µm thick, with a sharply delimited dark cap; hypothecium dark reddish brown, up to 100 µm thick. Asci 8-spored, clavate, fissitunicate, with a well-developed, I<sup>+</sup> pale blue tholus surrounded by a I<sup>+</sup> blue gelatinous layer, lacking an ocular chamber, Rhizocarpon-type. Ascospores 1-septate, constricted at septum, at first hyaline then dark brown to violet-black (but almost colourless around the septum), N<sup>+</sup> red, oblong-ellipsoid, 14-24 x 7-12(-14) µm, with a distinct epispore and a colourless gelatinous sheath. Photobiont chlorococcoid. Spot tests: K<sup>-</sup>, C<sup>-</sup>, KC<sup>-</sup>, P<sup>-</sup>, UV<sup>-</sup>. Chemistry: without lichen substances. - Note: on steeply inclined faces of compact calciferous rocks, especially dolomite, but also on rocks which are poor in calcium, mostly in upland areas.



*Encephalographa cerebrina*

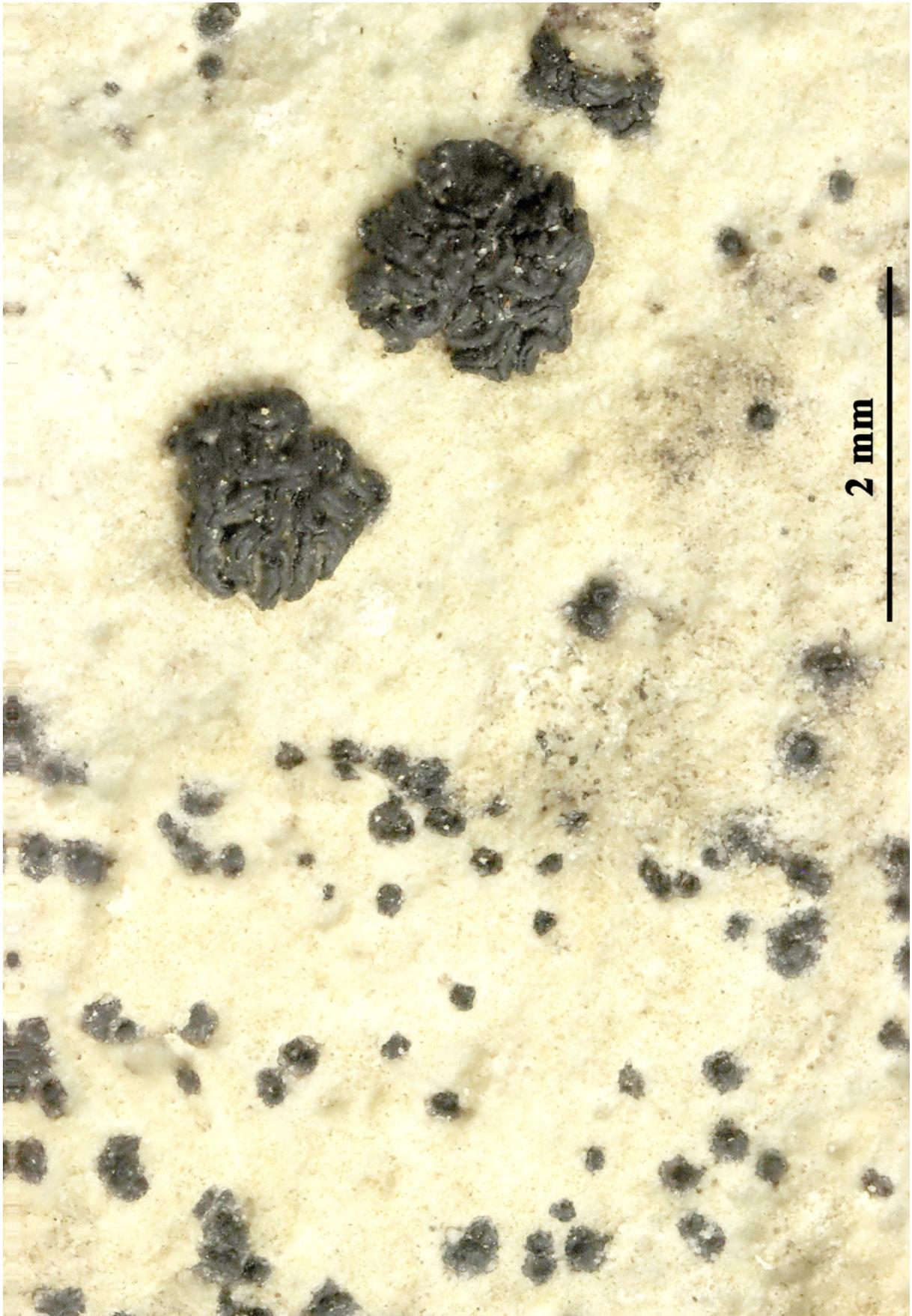


*Encephalographa cerebrina*

*Encephalographa elisae* A. Massal., Symmict. Lich.: 66 (1855)

[VZ2382], Italia. Sardinia. Prov. Nuoro: Cala Ganone prope Dorgali, 5 m. Ad saxa calcarea in litore. Leg. P. L. Nimis, C. Roux, M. Tretiach et A. Vězda, 30.9.1989. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2383.

Thallus crustose, endosubstratic, poorly evident, yellowish white, often delimited by a black prothallus. Apothecia lirelliform, black, epruinose, 0.3-1 x 0.1-0.2 mm, simple or weakly dichotomously branched, laterally anastomosing, straight to curved, prominent, aggregated into 2-3 mm wide, stellate to irregular clusters of 10-20 apothecia, with a slit-like disc. Proper exciple dark brown to black, extending below the hymenium, brittle, the external layer of cells c. 2-3  $\mu\text{m}$  wide, with strongly occluded lumina; epithecium brown; hymenium colourless, I- or I+ yellowish; paraphysoids highly branched and densely anastomosing, c. 2  $\mu\text{m}$  thick; hypothecium dark. Asci 8-spored, clavate, bitunicate, with an evident ocular chamber, K/I- (but cytoplasm usually yellowish brown). Ascospores 1-septate, slightly constricted at septum, one cell slightly shorter and wider than the other, at first hyaline then pale brown, 12-16 x 4-6  $\mu\text{m}$ , with a very thin perispore, the wall ornamented. Pycnidia frequent, half to totally immersed, carbonaceous in upper part, colourless in lower part, producing either macro- or microconidia. Macroconidia simple, ellipsoid, 7-11 x 3-5  $\mu\text{m}$ ; microconidia narrowly ellipsoid to bacilliform, 4-8 x 1-2.5  $\mu\text{m}$ . Photobiont trentepohlioid. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a mild-temperate lichen found on compact calcareous rocks in shaded, microclimatically stable situations, often under overhangs; the species seems to be most frequent in Tyrrhenian Italy. For further details see Tretiach & Modenesi (1999).



*Encephalographa elisae*

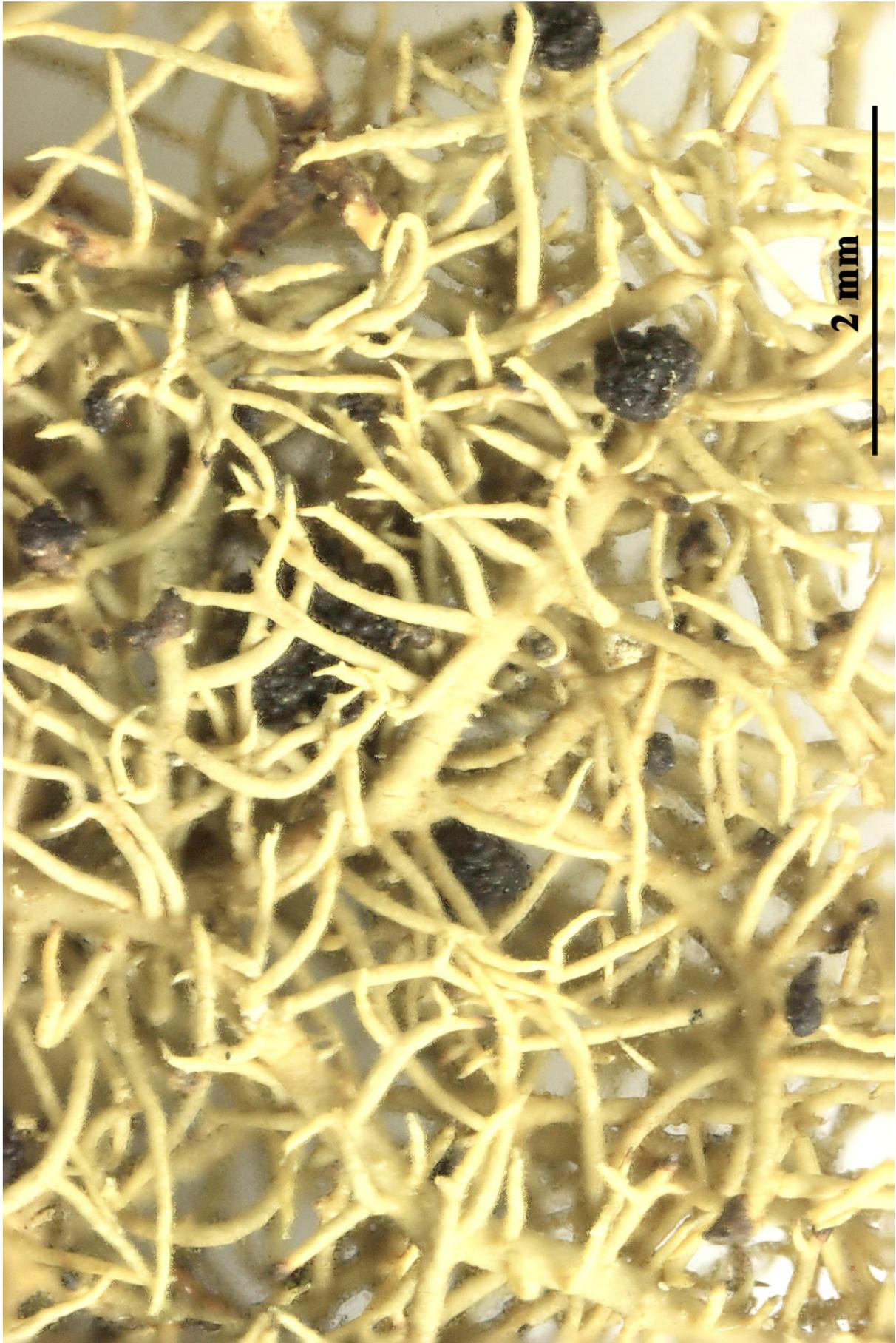


*Encephalographa elisae*

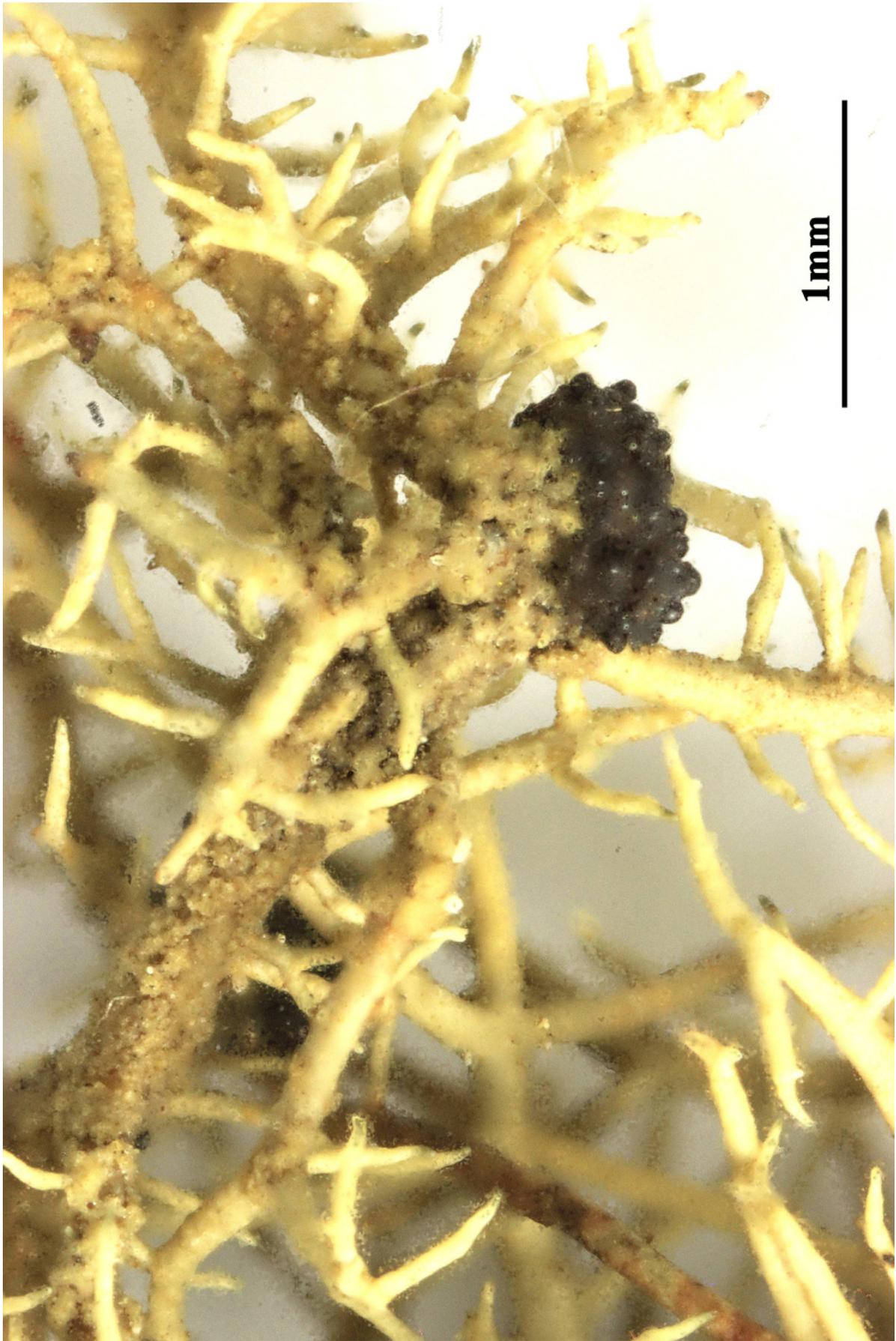
*Endococcus alpestris* D. Hawksw., Notes R. bot. Gdn Edinb. 40(2): 379  
(1982)  
= *Endococcus apicicola* (J. Steiner) R. Sant. [as 'apiciicola'], Thunbergia  
22: 23 (1994)  
= *Sorothelia apicicola* J. Steiner, Öst. bot. Z. 54(12): 447 (1904)

[VZ1973], Magna Britannia. Cambria. Carmarthenshire, Pumpsaint,  
Ogofau Gold Mines. In thallo *Usneae subfloridanae* et *Usnea florida*,  
in *Quercus petraea*. Leg. R. G. Woods, 7.1983, det. B. J. Coppins. EX  
A. V&ZDA LICHENES SELECTI EXSICCATI NR. 1973.

Ascospores 9-10.5(-11) x 3.5-4 µm, cells equal in size or the lower  
slightly attenuated; ascomata largely superficial, 70-100(-120) µm  
diam; in clusters on gall-like terminal swellings on *Usnea florida* (incl.  
*U. subfloridana*), *U. fragilescens* and *U. submollis* var. *ferroensis*; Ca-  
nary Islands (Hierro), England (Cornwall, Devon), Wales (Carmarthen).



*Endococcus alpestris*



*Endococcus alpestris*

*Enterographa jorgei* Vězda & Vivant, in Vězda, Lichenes Selecti Exsiccati, Fasc. (Průhonice) 44: no. 1080 (1972)  
= *Enterographa elaborata* (Lyell ex Leight.) Coppins & P. James, Lichenologist 11(1): 38 (1979)  
= *Platygramma elaborata* Lyell ex Leight., Ann. Mag. nat. Hist., Ser. 2 13(no. 77): 394 (1854)

[VZ1080], Gallia. Landes. Tethieu, Dax. in valle fluvii Adour, 10 m. Ad corticem *Quercus pedunculatae*, in silva humida. Leg. J. Vivant, 2.4.1972. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1080.

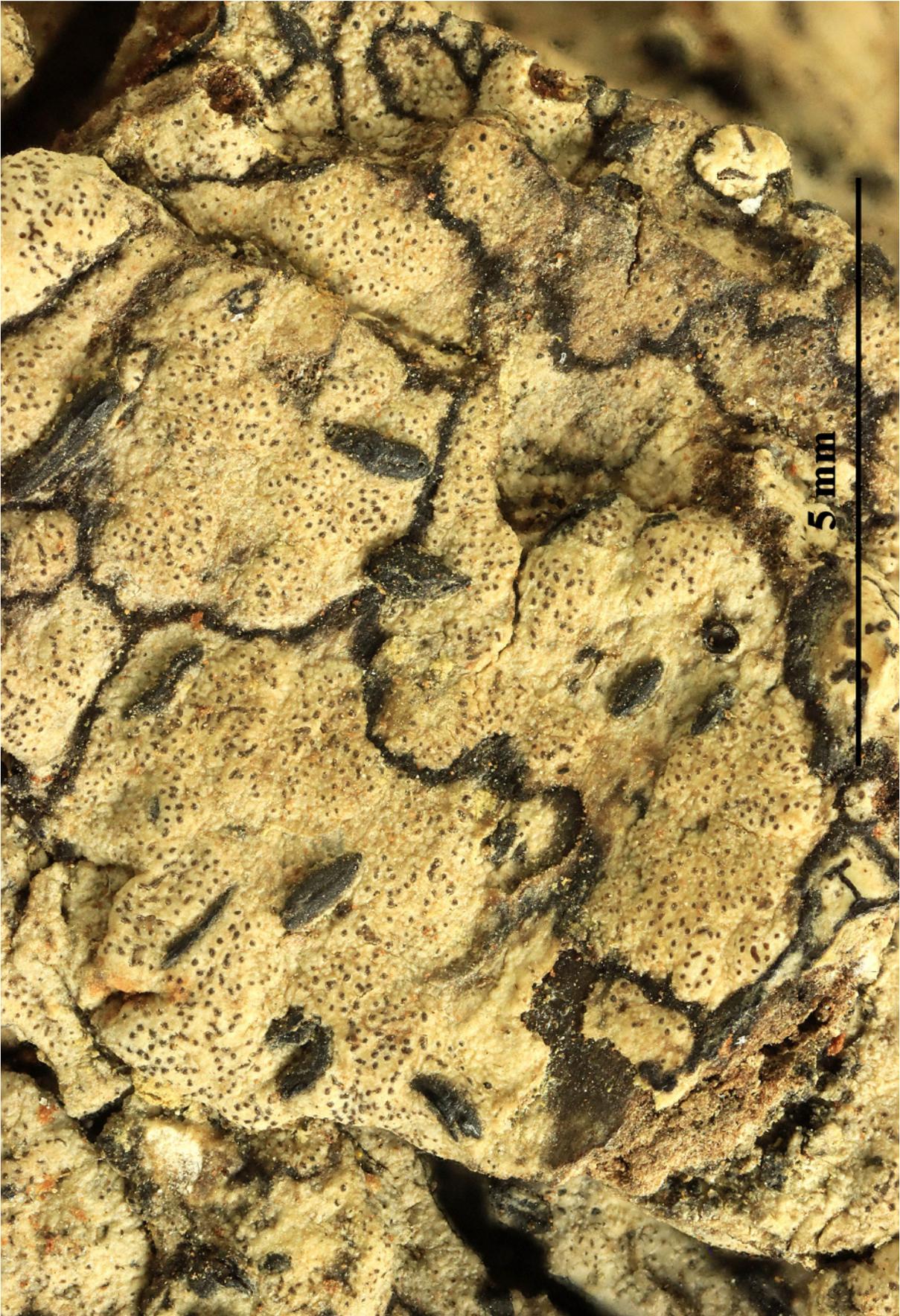
Annot.: Ad hanc species pertinent exemplaria anno 1920 a Cl. A. R. Jorge in Lusitania (Russaco) collecta et in exsiccato Sampaio: Lichenes de Portugal no. 7 sub nomine *Enterographa venosa* edita.

Thallus epiphloeodes, effusus, primum laevigatus, dein rimulosus, vivus sordide olivaceus, in herbario cinereo-albidus, K+ flavescens dein fuscens, P+ aurantiacus, Ascocarpia lirellina, thallo immersa vel semi immersa, 0.1-0.2 mm lata, 1-5 mm longa, flexuosa, simplicia vel furcata vel astroiideo-ramosa, apicibus sensim attenuatis, disco atrofusco, margine proprio incospicuo. Excipulum laterale tantum evolutum, tenuissimum, pallida fuscens, superne fuscum. Stratum ascigerum 70-90  $\mu\text{m}$  altum, fuscens. Sporae elongato-fusiformes, transversae 9-15-septatae, leptodermatae, 45-65 x 3.5-4  $\mu\text{m}$ . crasse halonatae.

Thallus crustose, rather thick (up to 0.5 mm), smooth and shiny, pale pink-brown, pale brown or cream-coloured, turning whitish in the herbarium, often delimited from conspecific thalli by a dark prothallus, forming extended mosaics. Apothecia brown-red to brown-black, lirelliform, totally immersed in the thallus, long and sinuous, sometimes branched or stellate, 0.5-3(-5) x 0.1-0.2 mm. Proper exciple very thin, brownish, C+ fleeting red; epithecium brown; hymenium colourless I+ wine-red; paraphyses 0.8-1  $\mu\text{m}$  thick, branched in upper part and anastomosing, conglutinated, the apical cells not swollen; hypothecium colourless. Asci 8-spored, cylindrical or cylindrical-clavate, fissitunicate, the apical dome with a short ocular chamber surrounded by a minute, K/I+ dark blue ring, the inner wall often K/I+ pale blue Ascospores (5-)7-12(-17)-septate, hyaline, fusiform to almost acicular, straight or slightly curved, (25-)30-50(-65) x (2.5-)3-4(-4.5)  $\mu\text{m}$ , with a thin epispore. Pycnidia rare, immersed, dark brown. Conidia 1-celled, hyaline, thread-like, 12-17  $\mu\text{m}$  long. Photobiont trentepohlioid. Spot

tests: thallus K- or K+ pale yellow, C-, KC-, P+ yellow-orange. Chemistry: thallus with psoromic and 2'-O-demethylpsoromic acid; exciple with gyrophoric acid. - Note: a mild-temperate to humid subtropical, mainly western species in Europe (but ranging from Macaronesia eastwards to the Black Sea area), known from a few stations only in Italy, on smooth bark in humid-warm woodlands.

*Enterographa jorgei*



*Enterographa jorgei*



*Enterographa jorgei*

*Enterographa jorgei* Vězda & Vivant, in Vězda, Lichenes Selecti Exsiccati, Fasc. (Průhonice) 44: no. 1080 (1972)  
= *Enterographa elaborata* (Lyell ex Leight.) Coppins & P. James, Lichenologist 11(1): 38 (1979)  
= *Platygramma elaborata* Lyell ex Leight., Ann. Mag. nat. Hist., Ser. 2 13(no. 77): 394 (1854)

[VZ1520}, URSS. Caucasus, Georgia: Colchis, distr. Sukhumi, in valle fluminis Besleti prope pagum Odishi, 29 m. Ad corticem *Aceris laeti*. Leg. A. Vězda, 18.6.1977. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1520.

Thallus epiphloeodes, effusus, primum laevigatus, dein rimulosus, vivus sordide olivaceus, in herbario cinereo-albidus, K+ flavescens dein fuscens, P+ aurantiacus, Ascocarpia lirellina, thallo immersa vel semi immersa, 0.1-0.2 mm lata, 1-5 mm longa, flexuosa, simplicia vel furcata vel astroiideo-ramosa, apicibus sensim attenuatis, disco atrofusco, margine proprio incospicuo. Excipulum laterale tantum evolutum, tenuissimum, pallida fuscens, superne fuscum. Stratum ascigerum 70-90  $\mu\text{m}$  altum, fuscens. Sporae elongato-fusifformes, transversae 9-15-septatae, leptodermatae, 45-65 x 3.5-4  $\mu\text{m}$ . crasse halonatae.

Thallus crustose, rather thick (up to 0.5 mm), smooth and shiny, pale pink-brown, pale brown or cream-coloured, turning whitish in the herbarium, often delimited from conspecific thalli by a dark prothallus, forming extended mosaics. Apothecia brown-red to brown-black, lirelliform, totally immersed in the thallus, long and sinuous, sometimes branched or stellate, 0.5-3(-5) x 0.1-0.2 mm. Proper exciple very thin, brownish, C+ fleeting red; epithecium brown; hymenium colourless I+ wine-red; paraphyses 0.8-1  $\mu\text{m}$  thick, branched in upper part and anastomosing, conglutinated, the apical cells not swollen; hypothecium colourless. Asci 8-spored, cylindrical or cylindrical-clavate, fissitunicate, the apical dome with a short ocular chamber surrounded by a minute, K/I+ dark blue ring, the inner wall often K/I+ pale blue Ascospores (5-)7-12(-17)-septate, hyaline, fusiform to almost acicular, straight or slightly curved, (25-)30-50(-65) x (2.5-)3-4(-4.5)  $\mu\text{m}$ , with a thin epispore. Pycnidia rare, immersed, dark brown. Conidia 1-celled, hyaline, thread-like, 12-17  $\mu\text{m}$  long. Photobiont trentepohlioid. Spot tests: thallus K- or K+ pale yellow, C-, KC-, P+ yellow-orange. Chemistry: thallus with psoromic and 2'-O-demethylpsoromic acid; exciple

with gyrophoric acid. - Note: a mild-temperate to humid subtropical, mainly western species in Europe (but ranging from Macaronesia eastwards to the Black Sea area), known from a few stations only in Italy, on smooth bark in humid-warm woodlands.

*Enterographa jorgei*



*Enterographa jorgei*

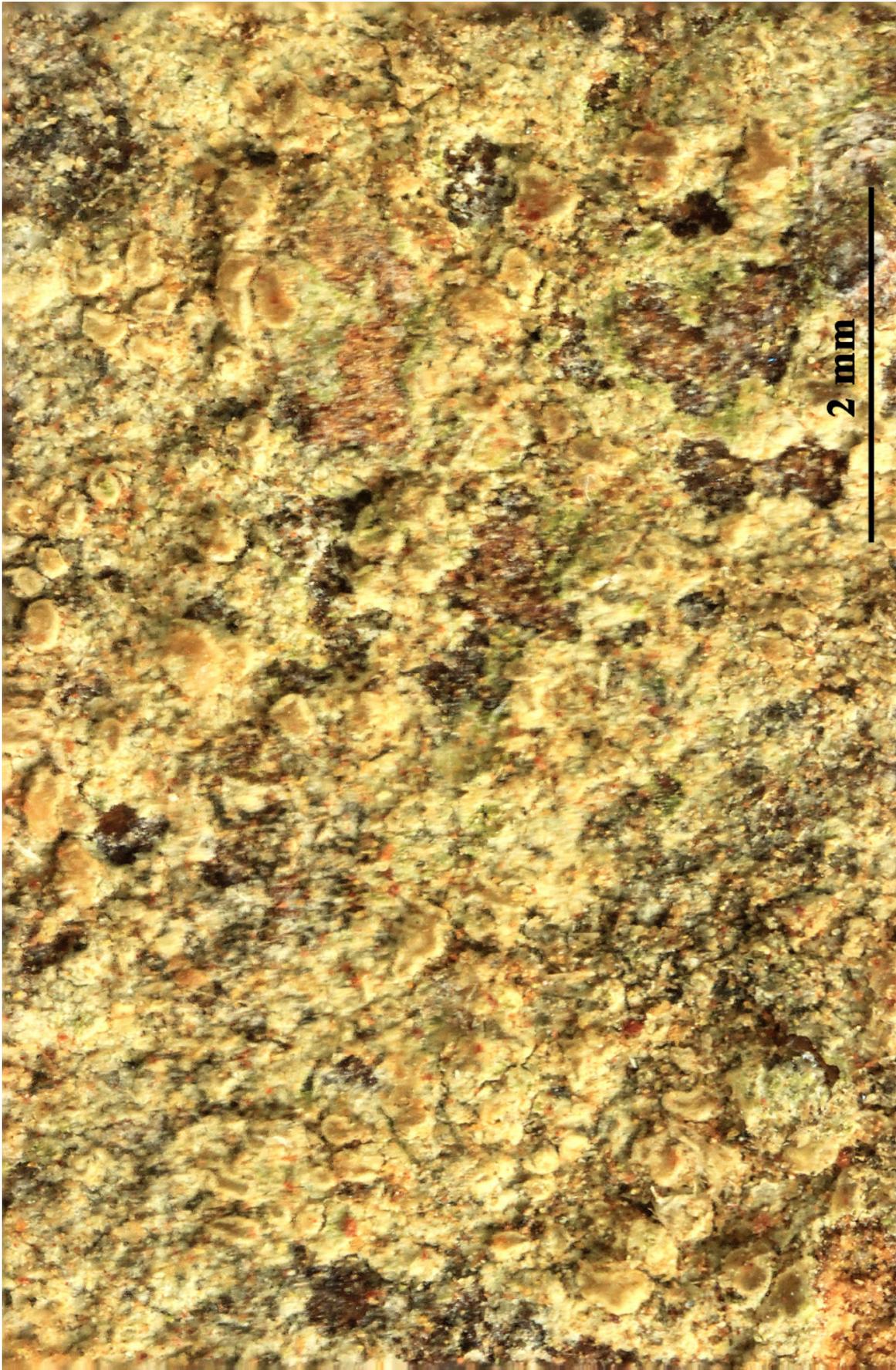


*Enterographa jorgei*

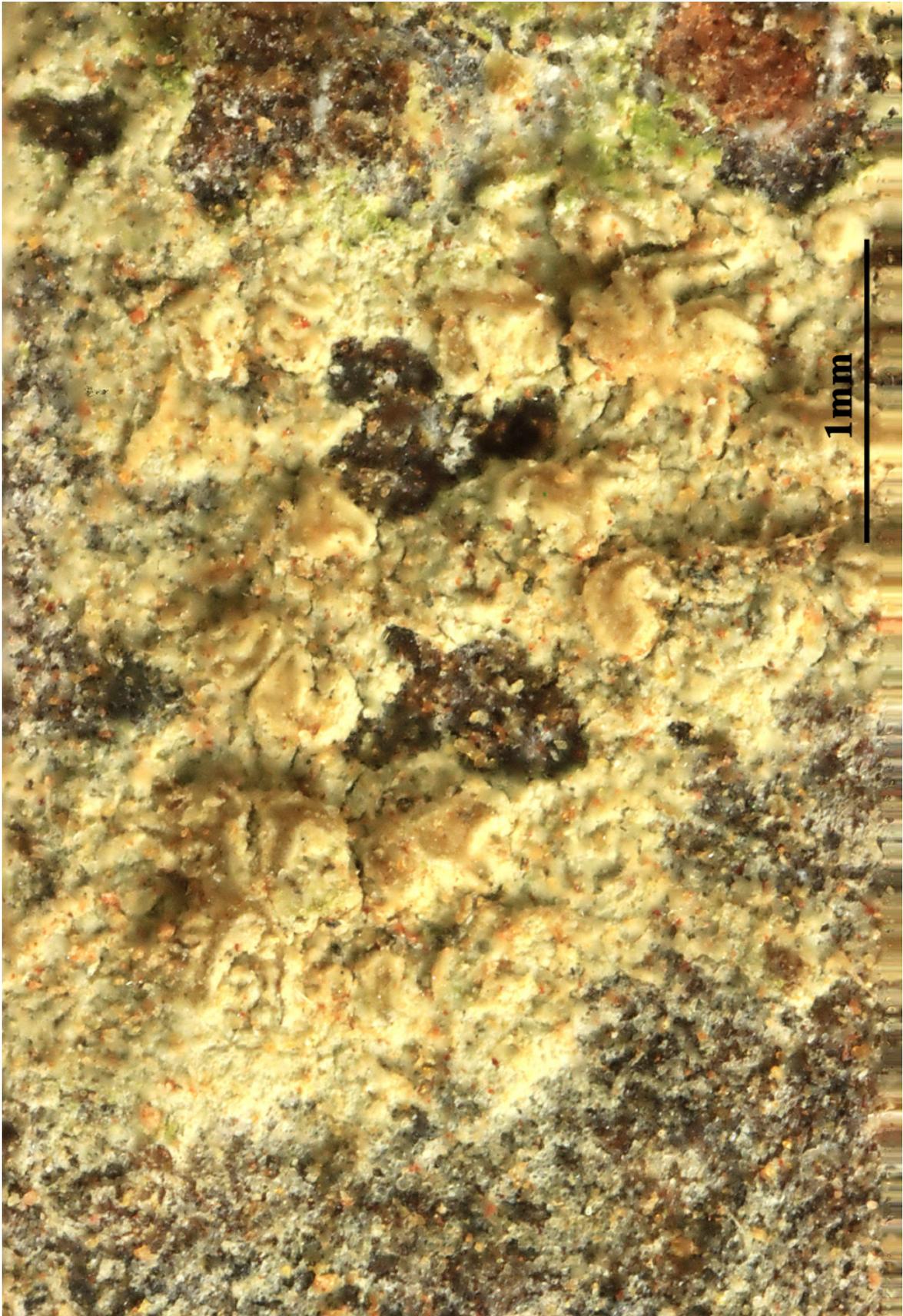
*Enterographa pallidella* (Nyl.) Redinger, Reprint nov. Spec. Regni veg.  
43: 61 (1938)  
= *Chiodecton pallidellum* (Nyl.) Vain., Bot. Tidsskr. 29: 137 (1909)  
= *Platygrapha pallidella* Nyl., Flora, Regensburg 50: 6 (1867)  
= *Schismatomma pallidellum* (Nyl.) Zahlbr. [as 'palidellum'], Cat. Lich.  
Univers. 2: 560 (1923) [1924]

[VZ1551], Hawaii Insulae. Oahu. Waialua, Mokuleia Beach, in horto  
cl. O Degeneri. Ad corticem in ramulis *Coccolobae uviferae*. Leg. O. et  
I. Degener (no. 34254), 14.3.1977, det. K. Kalb. EX A. V&ZDA LICHE-  
NES SELECTI EXSICCATI NR. 1551.

Thallus pale yellowish or fawn or whitish-green, thin, in patches, 2-12  
mm diam., minutely areolate-cracked. Lirellae in whitish or buff, slight-  
ly raised verrucae, innate, 0.1-0.6(-1.0) mm long, visible as very nar-  
row, flexuose cracks, brown to black, sigmoid or  $\pm$  branching,  
immarginate. Paraphyses discrete, slender, divaricating, anastomosing.  
Hymenium colourless, 70-80  $\mu$ m tall. Ascospores fusiform, straight to  
curved, 3-5(-7)-septate, 16-24  $\times$  3-4  $\mu$ m.



*Enterograppha pallidella*



*Enterographa pallidella*

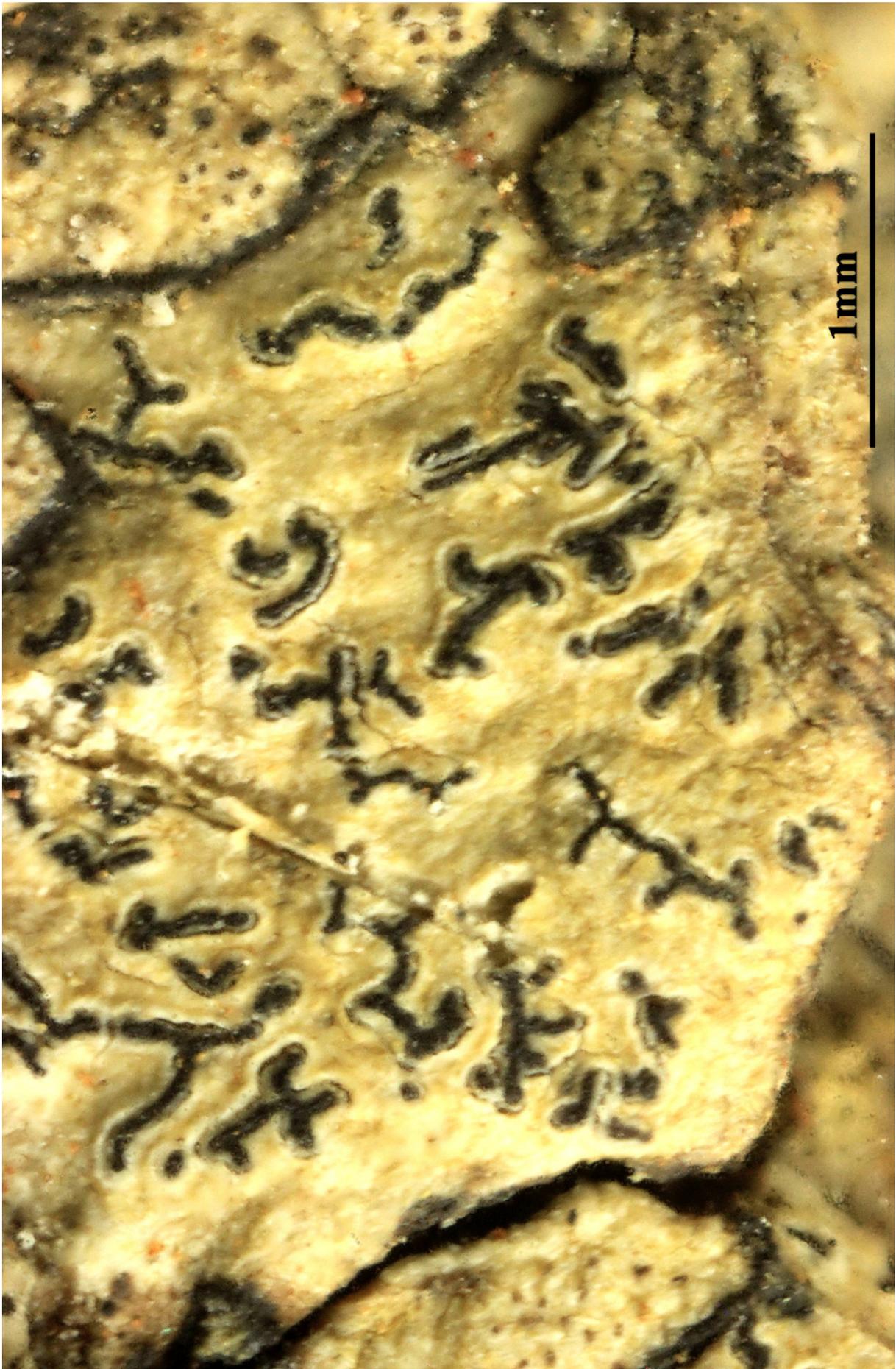
*Enterographa venosa* (Pers.) A. Massal. 1860  
 = *Enterographa venosa* f. *atroviridis* (Erichsen) Erichsen 1941  
 = *Enterographa venosa* f. *geographica* Redinger 1938  
 = *Enterographa venosa* f. *pallidocincta* Erichsen 1941  
 = *Enterographa venosa* f. *rufescens* (B. de Lesd.) Redinger 1938  
 = *Enterographa venosa* (Pers.) A. Massal. 1860  
 = *Enterographa venosa* var. *geographica* (Erichsen) Erichsen 1941

[VZ1054], Gallia. Landes. Tethieu, in valle fluvii Adour prope Dax, 10 m. Ad corticem *Quercus pendunculatae*, Leg. J. Vivant, 2.3.1972.- Obs.: from A. Vězda: In collectionibus nostris *Enterographa venosa* vicina *Enterographa crassae* (DC.) Fée crescit; ambae sunt manifestae species autonomae. - . EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1054.

Thallus crustose, continuous, smooth or faintly rimose-cracked, grey to dark olive-brown, often delimited from conspecific thalli by a dark prothallus, forming extended mosaics. Apothecia deeply immersed in the thallus, at first punctiform, then elongate and lirelliform, 0.1-0.3 x 0.05-0.1 mm, brown-black, without a distinct margin. Proper exciple very thin, brownish, not extending below the hymenium; epithecium brown; hymenium colourless I+ wine-red; paraphyses coherent, 0.8-1 µm thick, branched in upper part and anastomosing, the apical cells not swollen; hypothecium colourless. Asci 8-spored, cylindrical or cylindrical-clavate, fissitunicate, the apical dome with a short ocular chamber surrounded by a minute, K/I+ dark blue ring, the inner wall often K/I+ pale blue. Ascospores (1-)3-6(-7)-septate, hyaline, fusiform, straight or slightly curved, 25-38(-40) x 4-6 µm, rather thick-walled, without a perispore. Pycnidia frequent, immersed, the wall colourless or pale brown in upper part. Conidia 1-celled, hyaline, cylindrical to bacilliform, 4-6 µm long. Photobiont trentepohlioid. Spot tests: thallus K-, C-, KC-, P-, UV-, K/UV+ mauve. Chemistry: thallus with confluent acid. - Note: a mild-temperate to humid subtropical epiphytic lichen found on smooth bark in riparian, open, humid-warm woodlands below the montane belt.



*Enterograpta venosa*

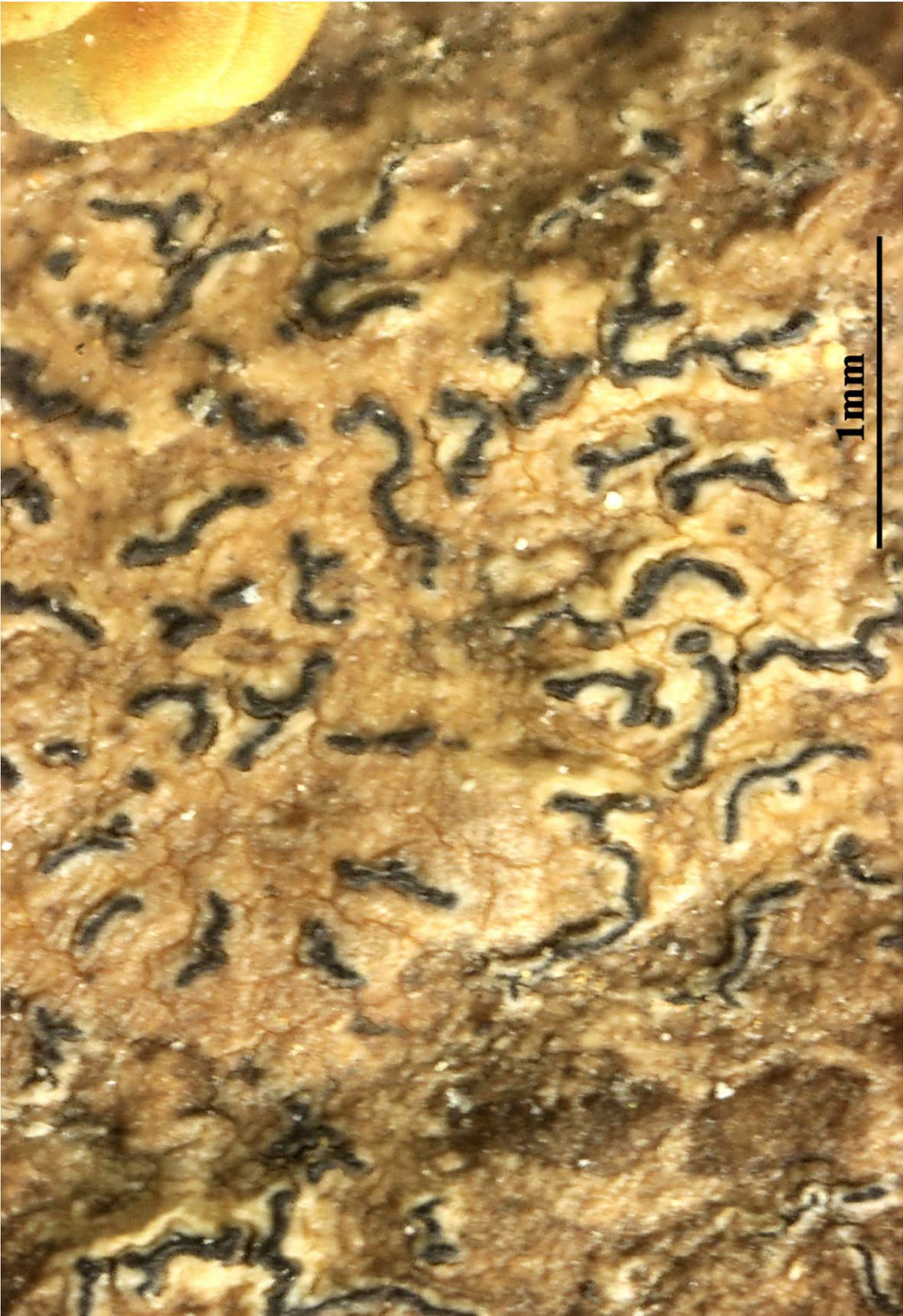


*Enterograpta venosa*

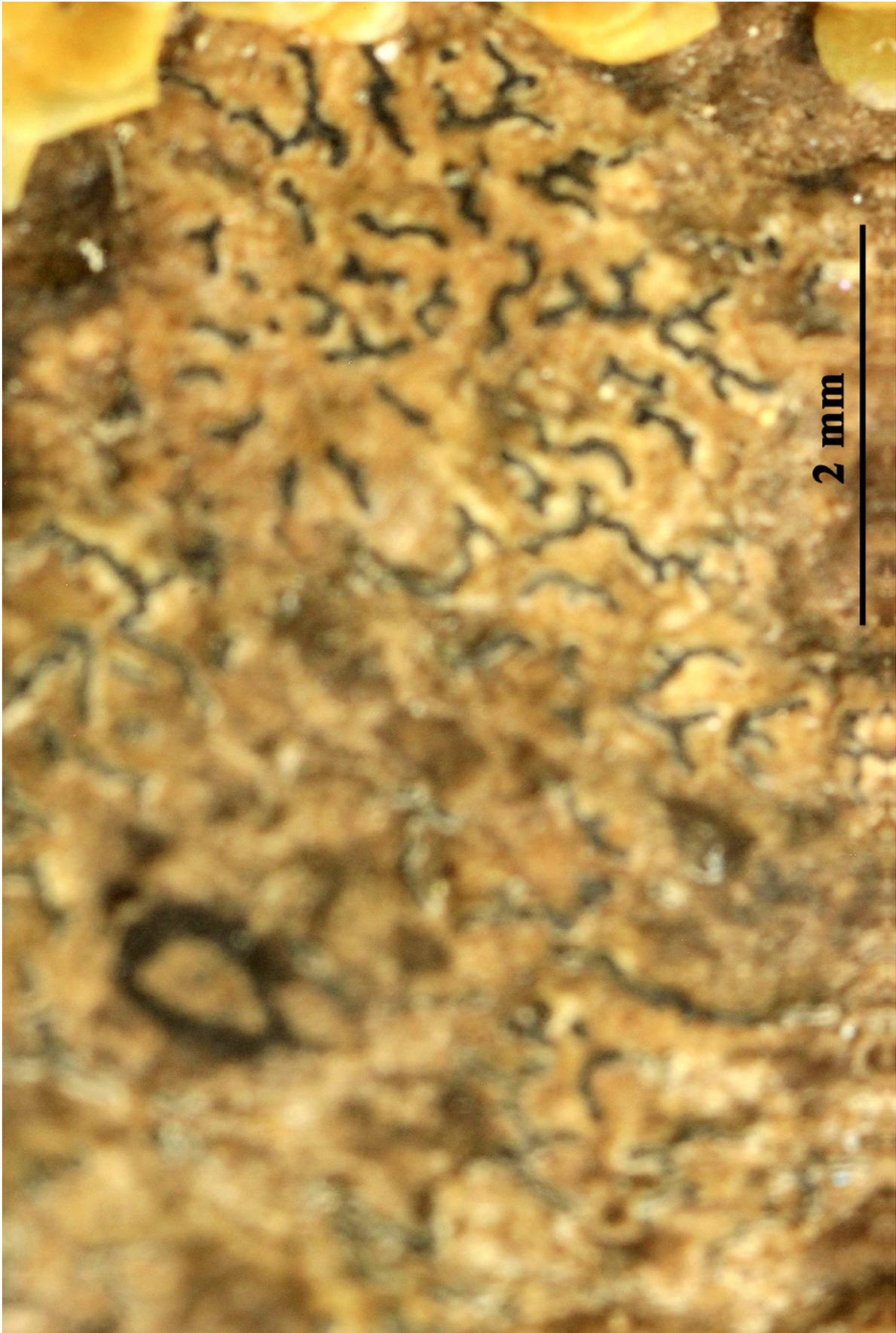
*Enterographa venosa* (Pers.) A. Massal. 1860  
= *Enterographa venosa* f. *atroviridis* (Erichsen) Erichsen 1941  
= *Enterographa venosa* f. *geographica* Redinger 1938  
= *Enterographa venosa* f. *pallidocincta* Erichsen 1941  
= *Enterographa venosa* f. *rufescens* (B. de Lesd.) Redinger 1938  
= *Enterographa venosa* (Pers.) A. Massal. 1860  
= *Enterographa venosa* var. *geographica* (Erichsen) Erichsen 1941

[VZ1578], URSS. Transcaucasus, Colchis: distr. Sochi, in monte Achun, 600-650 m. Ad corticem *Carpini caucasicae* Grossh.. Leg. V. Vařák et A. Vězda, 8.6.1978. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1578.

Thallus crustose, continuous, smooth or faintly rimose-cracked, grey to dark olive-brown, often delimited from conspecific thalli by a dark prothallus, forming extended mosaics. Apothecia deeply immersed in the thallus, at first punctiform, then elongate and lirelliform, 0.1-0.3 x 0.05-0.1 mm, brown-black, without a distinct margin. Proper exciple very thin, brownish, not extending below the hymenium; epithecium brown; hymenium colourless I+ wine-red; paraphyses coherent, 0.8-1  $\mu$ m thick, branched in upper part and anastomosing, the apical cells not swollen; hypothecium colourless. Asci 8-spored, cylindrical or cylindrical-clavate, fissitunicate, the apical dome with a short ocular chamber surrounded by a minute, K/I+ dark blue ring, the inner wall often K/I+ pale blue. Ascospores (1-)3-6(-7)-septate, hyaline, fusiform, straight or slightly curved, 25-38(-40) x 4-6  $\mu$ m, rather thick-walled, without a perispore. Pycnidia frequent, immersed, the wall colourless or pale brown in upper part. Conidia 1-celled, hyaline, cylindrical to bacilliform, 4-6  $\mu$ m long. Photobiont trentepohlioid. Spot tests: thallus K-, C-, KC-, P-, UV-, K/UV+ mauve. Chemistry: thallus with confluent acid. - Note: a mild-temperate to humid subtropical epiphytic lichen found on smooth bark in riparian, open, humid-warm woodlands below the montane belt.



*Enteroglyphis venosa*



*Enterographa venosa*

*Ephebe ocellata* Henssen, Symb. bot. upsal. 18(no. 1): 51 (1963)

[VZ2386], Tanzania. Montes Uluguru, distr. Morogora: planities "Lukwangule", cataracta rivi "Mgeta", 2340 m. Ad saxa gneissiacea in rivo. Leg. T. Pócs (no. 88258), 25.-26.10.1988. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2386.

Thallus filamentous-fruticose, branches terete, pointed, forming appressed or loosely attached,  $\pm$ irregularly shaped rosettes, 5-10 mm in diam.; filaments old and basal parts 75-125  $\mu$ m wide with rows of large, roundish mycobiont cells, 5-15 x 5-10(-15)  $\mu$ m wide; younger parts and side branches (25-)50  $\mu$ m wide with short-celled, rectangularly arranged hyphal cells, 2.5-5 x 2-3  $\mu$ m wide; upper surface blackish blue-green or brown, dull, lobes finely granulose with few short, spinule-like side branches; isidia absent, but short side branches may appear isidia-like; lower surface concolorous with upper surface, attached by small, sometimes pale green gelatinous holdfasts; Apothecia not seen in the Arizona material and not reported from the Colorado samples (Henssen 1963);, elsewhere  $\pm$ sessile, lateral, up to 0.2 mm wide, with a persisting thalline margin; proper exciple: present; asci cylindrical, thin walled, IKI-, 16-spored; ascospores simple, hyaline, ellipsoid, 7-11 x 3.5-7  $\mu$ m; Pycnidia not seen in the Arizona material; conidia small, bacilliform, 1.5-3 x 1  $\mu$ m; Spot tests all negative; Secondary metabolites none detected. Substrate and ecology: on sandstone in moist habitats; World distribution: North America, Tanzania, China, Papua New Guinea, and New Zealand . - Notes: *Ephebe perspinulosa* is quite similar, but forms more erect tufts and has branches with numerous short side-branchlets. The anatomy in old branches consists of a loose paraplectenchyma of small fungal cells. *Ephebe hispidula*, like *E. perspinulosa*, has numerous side branchlets. The main branches are more robust (100-220  $\mu$ m wide) having a reticulate hyphal pattern with elongated and roundish cells. Thalli of *Ephebe lanata* (L.) Vain. differ in its combed appearance, in the presence of a central strand of elongated hyphae in basal branches and elongated,  $\pm$ collar-like hyphae in the tips.



*Ephebe ocellata*



*Ephebe ocellata*

*Erioderma chilense* Mont., Anns Sci. Nat., Bot., sér. 3 18: 309 (1852)  
= *Erioderma leylandii* (Taylor) Mull. Arg.

[VZ1919], Brasilia. Rio de Janeiro, Serra da Mantiqueira: Itatiaia, inter Registro do Picú et Agulhas Negras, 2300 m. Ad truncum arborum in pluviisilva montana. Leg. K. Kalb et G. Plöbst, 23.07.1978 - Argopsin anal Jørgensen 20.08.1986. EX A. VěZDA: LICHENES SELECTI EXSICCATI NR. 1919.

Notes of P. M. Jørgensen:

*Erioderma chilense* Mont., Ann. Sci. Nat. Bot., ser. 3, vol. 18: 309 (Nov. 1852).

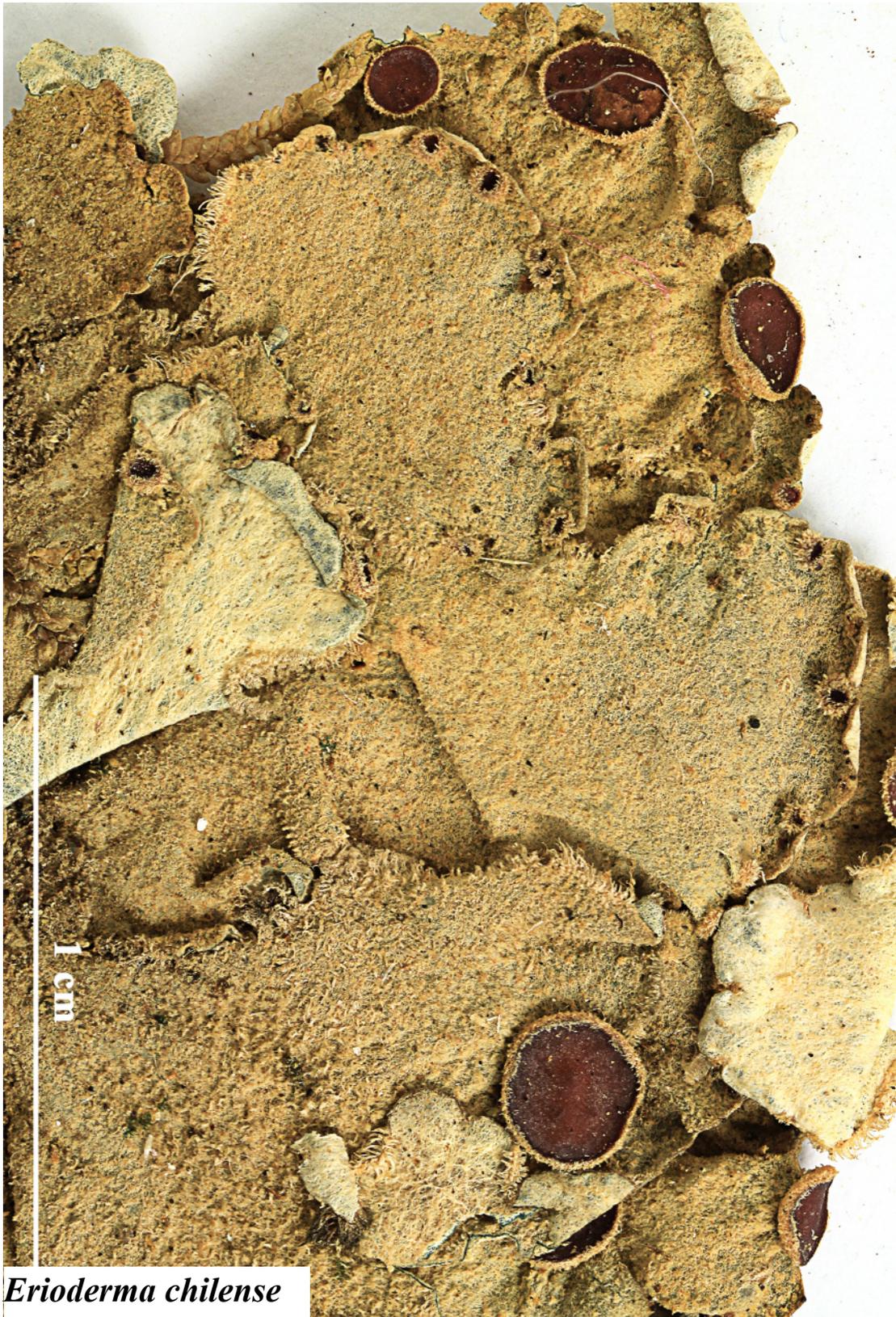
Montagne published this name twice in the same year, but according to Stafleu & Cowan (1981: 563), the paper cited here is the older one (by one month), with clear reference to the later treatment in Gay (1852). I saw the original material collected by Gay at PC in 1974, but unfortunately it was later lost in the mail, so the excellent, detailed illustration in Gay has to serve as lectotype with a well-developed specimen from the region where the original material was collected, serving as epitype. Taxonomy: Closely related to *E. leylandii* s.str. from which most specimens can be distinguished by the thicker, greyer, stronger hairy thallus, often with a yellowish lower surface, and by containing argopsin instead of pannarin. However, there are specimens that are impossible to place according to morphology alone. Most significantly, I have been unable to do so in cases where they grow together. This suggests that the morphological differences may be environmentally controlled, and that the only real difference is chemical.

description of *E. leylandii*:

Thallus mainly monophyllous, orbicular, shallowly incised, to 5 cm diam., the margins often involute when dry, exposing the whitish lower surface. Upper surface grey, mostly smooth with scattered, sometimes aggregated stiff hairs. Lower surface white, occasionally with a shallow vein-like pattern, with bundles of blackish rhizohyphae marginally. In section 200-250 µm with irregularly celled, 25-30 µm thick, cortex. Apothecia common, marginal, sessile to subpedicellate, to 1 mm diam.; disc flat, blackish brown, becoming convex and then more or less excluding the narrow, sparsely hairy margin. Ascospores simple, colourless, thick-walled, ellipsoid, 10-12 x 6-7 µm. Pycnidia rare, immersed, rounded, black, producing bacilliform conidia, 3-4 x 1-2 µm.

Chemistry: Pd<sup>+</sup> orange, containing pannarin and traces of related substances. -

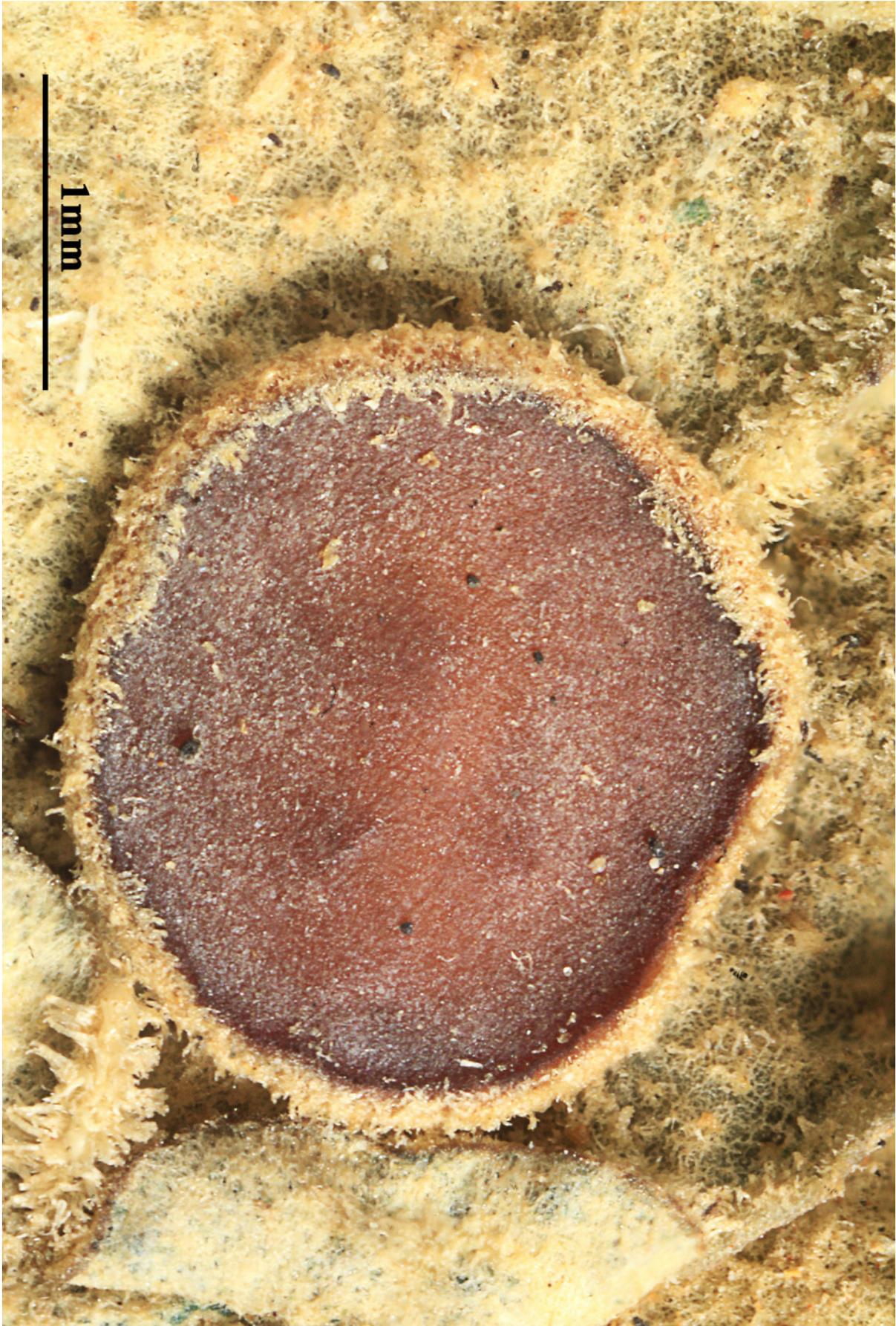
Notes: *E. leylandii* may be confused with *E. papyraceum* which occurs down to 2000 m, but it is thinner and has smaller, darker apothecia with narrower margins, and patchier, erect hairs and rhizohyphae. The thallus is always Pd<sup>+</sup> orange (due to pannarin). For possible confusion with *E. barbellatum* see under that species.



*Erioderma chilense*



*Erioderma chilense*



*Erioderma chilense*



*Erioderma chilense*



lower surface

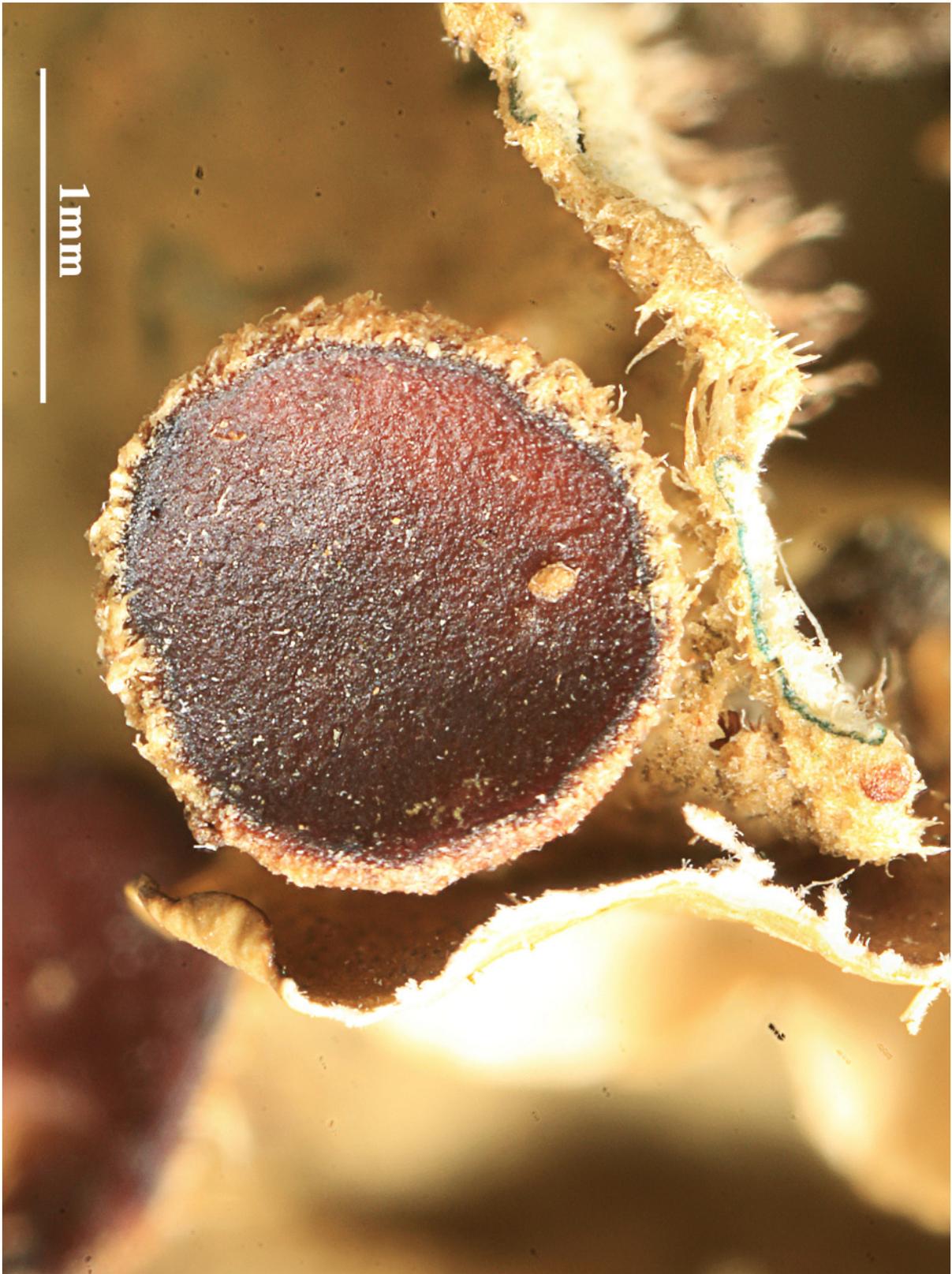
*Erioderma chilense*

*Erioderma wrightii* Tuck., Amer. J. Sci. Arts, Ser. 2 25: 423 (1858)

[VZ1944], Costa Rica. Prov. Puntaneras, Monteverde, prope domum diversorii "La Montana", 1500 m. Ad truncum arborum in silva submontana. Leg. et det. E. Sérusiaux (no 3204), 4.1.1979. Ex A. Vězda: Lichenes Selecti Exsiccati Nr. 1944.

A very characteristic species, probably the largest of the genus broad, involute, brown-hairy lobes, containing the unusual depsidone wrightin, resting on a voluminose, brown "spongiostratum". Distribution: Only known from subtropical parts of South and Central America as well as the Antilles.



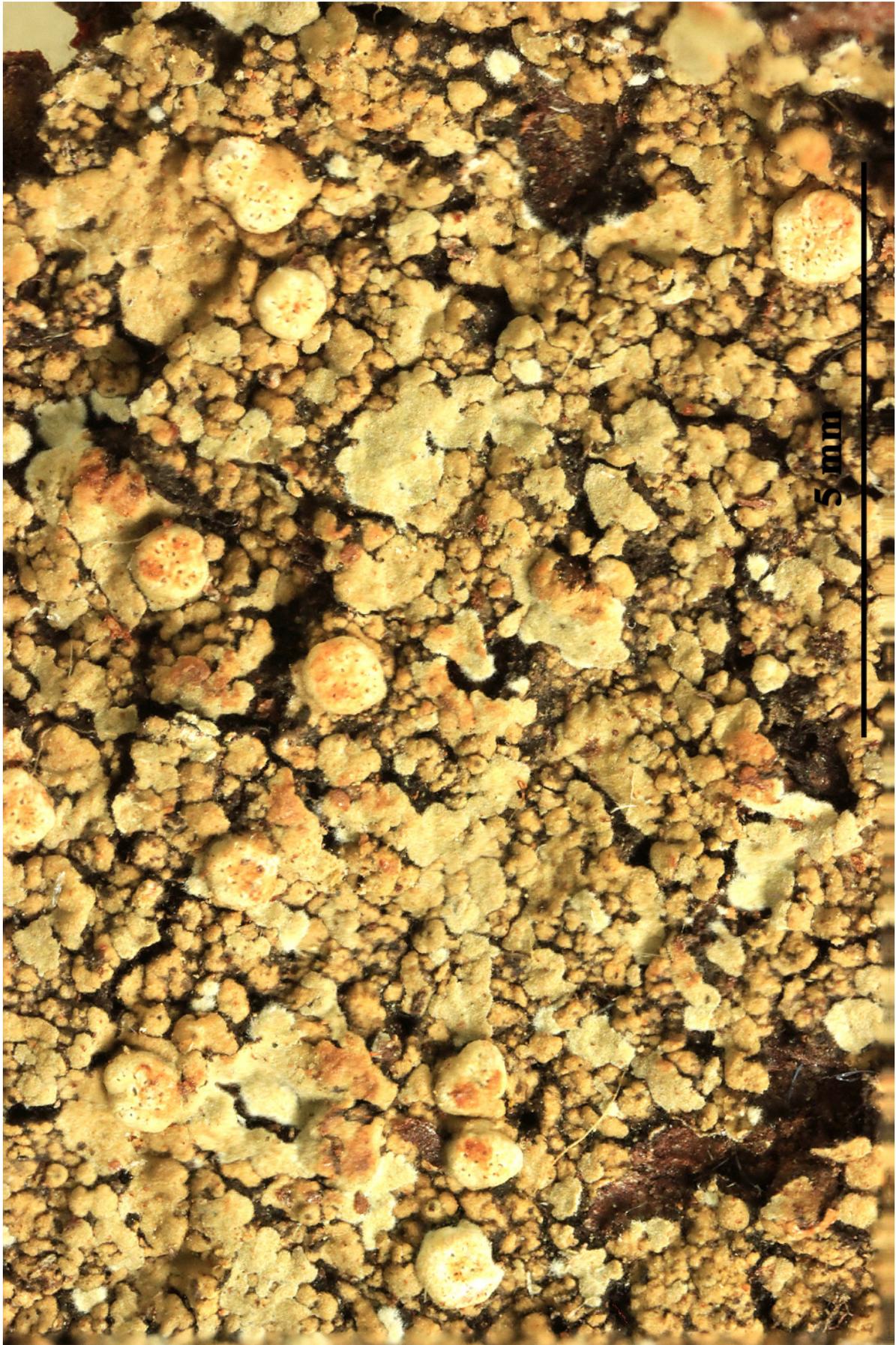


*Erioderma wrightii*

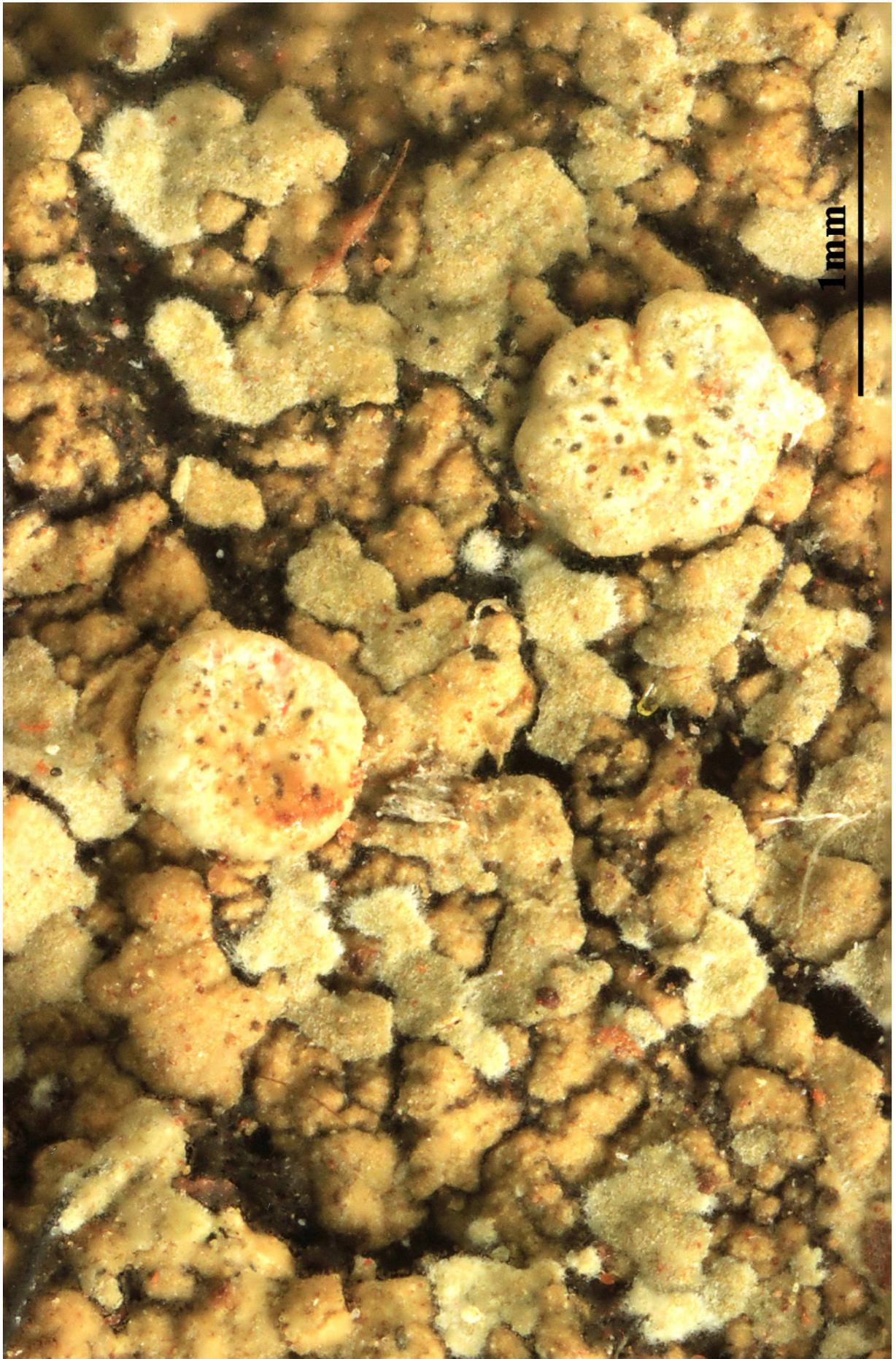
*Erythrodictyon malacum* (Kremp.) G. Thor, Op. bot. 103: 78 (1990)  
= *Chiodecton malacum* Kremp. 1875

[VZ2479], Australia. Queensland, Atherton Tableland, 22 km ad septentriones et occidentem ab Atherton, 2.5 km ad septentriones a Tinaroo Falls Dam, in vicinitate Kauri Creek, 720-760 m, 17°07' austr., 145°36' orient. Ad arbores inpluviisilva montana. Leg. G. Thor (5206), 17.11.1985. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2479.

Thallus cretaceous, at least sometimes richly squamulose, greyish green sometimes with a red tinge, squamules 0.5-2 mm long; prothallus in the inner part whitish and in the outer part black; epinecral layer developed on the whole thallus, medulla whitish but lower part pale brown to black, lacking calcium oxalate, with small granules of a red pigment; hyphae with many to numerous crystals on the walls, 2-3  $\mu\text{m}$  in diameter, isidia not seen; soralia not seen. Ascocarps perithecioid, aggregated into distinctly elevated stroma-like structures with a distinctly constricted base; stroma-like structures 0.8-2 mm in diameter; disc brown to black; hypothecium extending down to and fusing with the pale brown to black medulla, hard, black throughout to black in the upper part and dark brown in the lower part; hymenium 100-130  $\mu\text{m}$  high; paraphysoids 1  $\mu\text{m}$  in diameter, richly branched; paraphysoid tips 1-2  $\mu\text{m}$  in diameter; asci 100-110 x 11-14  $\mu\text{m}$ . Spores biclavate, usually straight but sometimes curved up to 90°, 5-7-septate, (52-)54-59(-63) x (3-)3-4(-5)  $\mu\text{m}$ . Conidia bacilliform, 5-6 x 1  $\mu\text{m}$ . Chemistry roccellic acid and unknown red pigment; C-, K-, P-, UV+; medulla around the ascocarps K/I+ blue; brown parts of the excipulum becoming blackish in K; hymenium I+ skyblue slowly turning red except the diffusely delimited uppermost 10-40  $\mu\text{m}$  which remain skyblue. Distribution Asi, Australia, Sri Lanka, Papua New Guinea.



*Erythrodecton malacum*



*Erythrodecton malacum*

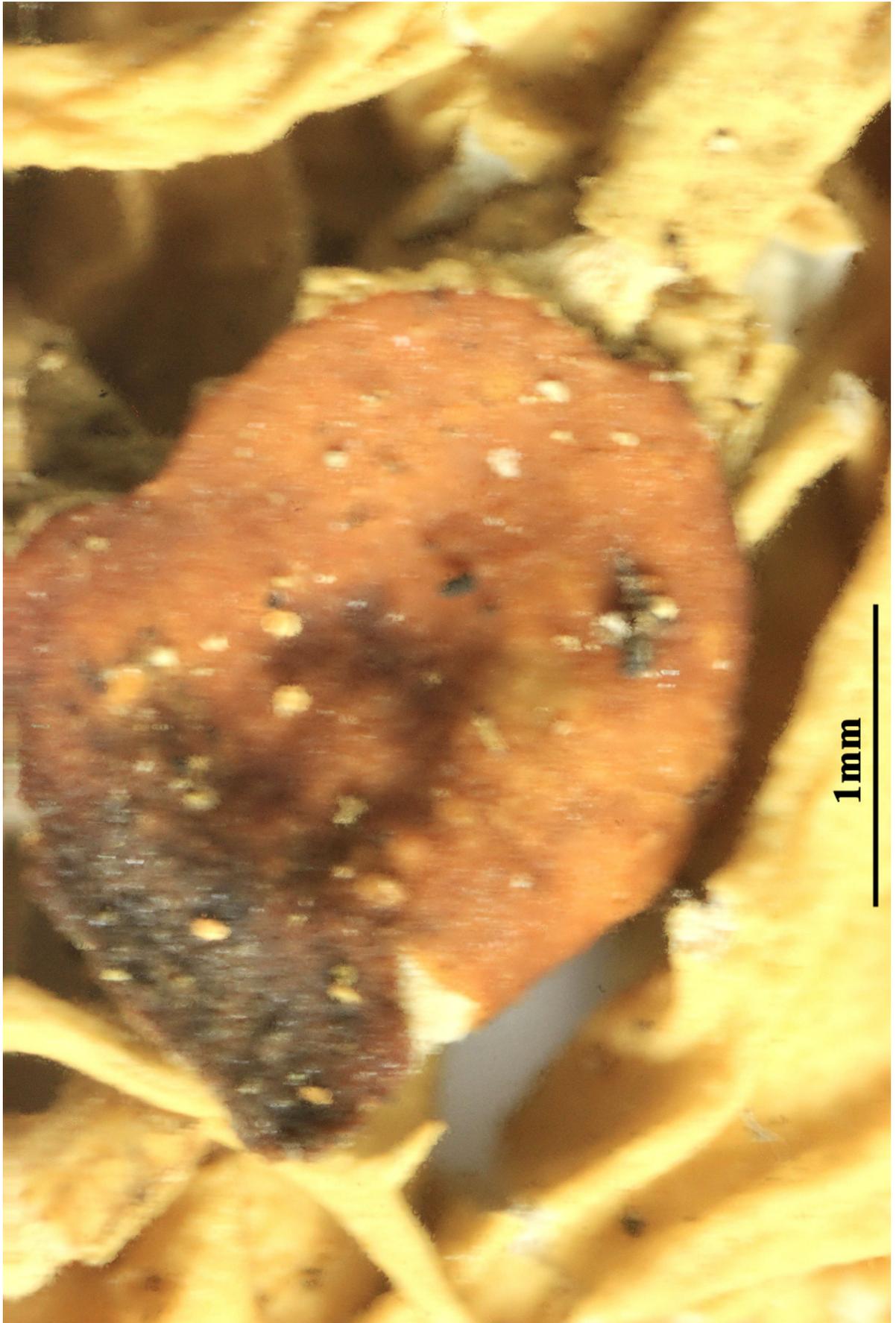
*Evernia divaricata* (L.) Ach., Lich. Univ.: 441 (1810)  
= *Lichen divaricatus* L. 1768

[VZ1934], Italia. Trentino, prov. Merano, Venosta Alta: 1 km ad orientem versus a Gomagoi, 1600 m. Ad reamulos arborum (*Picea abies*). Leg. H. T. Lumbsch (892b), 11.5.1983. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1934.

Thallus fruticose, pendulous and attached with a basal holdfast, rarely prostrate on soil and without a distinct holdfast, up to 35 cm long, not dorsiventral, pale greyish green to yellowish green on all sides, matt, richly but irregularly branched, with mostly obtuse axils, the main branches mostly parallel, sometimes entangled, subterete to angular, very soft, 0.5-1(-2.5) mm wide, smooth or with shallow longitudinal grooves, with scattered side branches, the tips sometimes darkened, subulate or abruptly acuminate. Cortex thin, of anticlinally arranged, small-celled hyphae, often degenerating in places, frequently cracking transversely in old specimens, exposing the medulla; medulla lax, more or less arachnoid but often coherent as a very soft central strand. Apothecia very rare, lecanorine, sessile, lateral on the main branches, 2-6(-8) mm across, with a brown, flat disc and a thin, wrinkled thalline margin. Proper exciple colourless; epithecium brownish, hymenium colourless; paraphyses mostly simple, thick, septate, hypothecium colourless. Asci 8-spored, clavate, the K/I+ blue tholus penetrated by a faintly amyloid apical cushion with parallel or diverging flanks, the wall K/I-, surrounded by a K/I+ blue outer layer, Lecanora-type. Ascospores 1-celled, hyaline, ellipsoid, 6-8(-10) x 4-5(-8)  $\mu\text{m}$ . Pycnidia very rare, laminal or terminal on short branches, immersed, blackish around the ostiole. Conidia pleurogenous, needle-like. Photobiont chlorococoid. Spot tests: cortex K-, C-, KC- or KC+ yellowish, P-; medulla K-, KC-, P-, UV+ ice-blue. Chemistry: cortex with usnic acid (often in low amounts); medulla with divaricatic acid. - Note: a cool-temperate to southern boreal-montane, circumpolar lichen found on twigs of coniferous and deciduous trees in semi-natural montane to subalpine forests with frequent fog; most frequent in the Alps, rarer in Southern Italy, with optimum in beech-fir forests.



*Evernia divaricata*



*Evernia divaricata*

*Evernia divaricata* (L.) Ach., Lich. Univ.: 441 (1810)  
= *Lichen divaricatus* L. 1768

[VZ1445], Jugoslavia. Montenegro: Durmitor montes, ad lacum Crno jezero prope Zabljak, 1500 m. Ad corticem et in ramulis *Abietis*. Leg. A. Vězda et V. Wirth, 8.8.1976. EX A. VĚZDA LICHENES SELECTI RXSICCATI NR. 1445.

Thallus fruticose, pendulous and attached with a basal holdfast, rarely prostrate on soil and without a distinct holdfast, up to 35 cm long, not dorsiventral, pale greyish green to yellowish green on all sides, matt, richly but irregularly branched, with mostly obtuse axils, the main branches mostly parallel, sometimes entangled, subterete to angular, very soft, 0.5-1(-2.5) mm wide, smooth or with shallow longitudinal grooves, with scattered side branches, the tips sometimes darkened, subulate or abruptly acuminate. Cortex thin, of anticlinally arranged, small-celled hyphae, often degenerating in places, frequently cracking transversely in old specimens, exposing the medulla; medulla lax, more or less arachnoid but often coherent as a very soft central strand. Apothecia very rare, lecanorine, sessile, lateral on the main branches, 2-6(-8) mm across, with a brown, flat disc and a thin, wrinkled thalline margin. Proper exciple colourless; epithecium brownish, hymenium colourless; paraphyses mostly simple, thick, septate, hypothecium colourless. Asci 8-spored, clavate, the K/I+ blue tholus penetrated by a faintly amyloid apical cushion with parallel or diverging flanks, the wall K/I-, surrounded by a K/I+ blue outer layer, Lecanora-type. Ascospores 1-celled, hyaline, ellipsoid, 6-8(-10) x 4-5(-8)  $\mu\text{m}$ . Pycnidia very rare, laminal or terminal on short branches, immersed, blackish around the ostiole. Conidia pleurogenous, needle-like. Photobiont chlorococoid. Spot tests: cortex K-, C-, KC- or KC+ yellowish, P-; medulla K-, KC-, P-, UV+ ice-blue. Chemistry: cortex with usnic acid (often in low amounts); medulla with divaricatic acid. - Note: a cool-temperate to southern boreal-montane, circumpolar lichen found on twigs of coniferous and deciduous trees in semi-natural montane to subalpine forests with frequent fog; most frequent in the Alps, rarer in Southern Italy, with optimum in beech-fir forests.



*Evernia divaricata*



*Evernia divaricata*

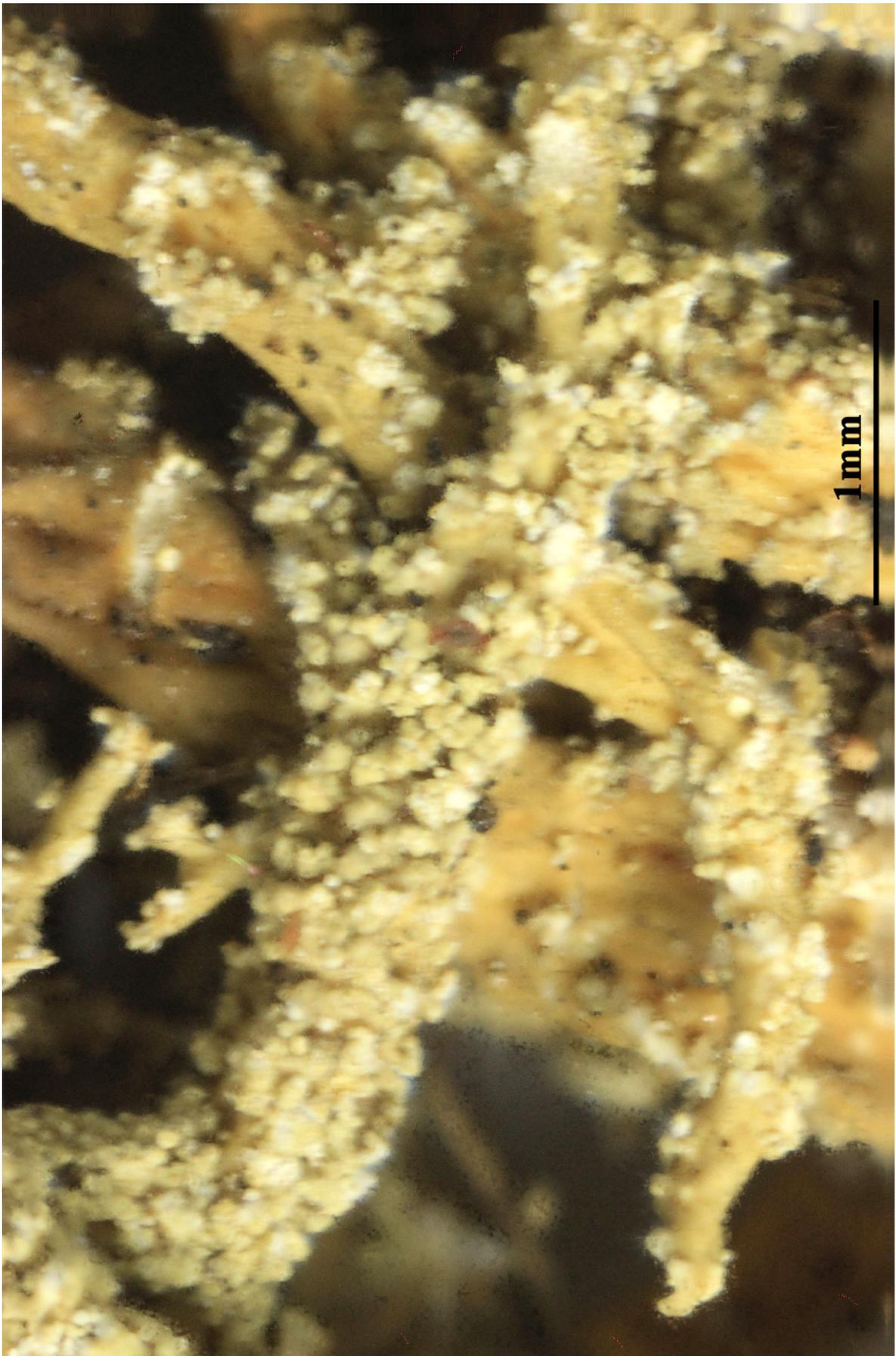
*Evernia mesomorpha* Nyl., Lich. Scand. (Helsinki): 74 (1861)

[VZ1192], Bohemoslovakia. Slovakia, distr. Poprad: Primovce, 600 m. Ad terram in rupibus melaphyricis, locis venti expositis. Leg. A. Vězda et V. Wirth. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1192.

Thallus fruticose, attached by a basal holdfast, shrubby to subpendulous, up to 8(-10) cm long, irregularly branched, grooved and weakly ridged between grooves, pale greyish green to yellowish green on all sides. Branches with diffuse, granular to subcylindrical, finally sorediate isidia originating from cracks along the ridges. Cortex thin, of anticlinally arranged, small-celled hyphae; medulla white, rather dense, without strands. Apothecia rare, lecanorine, to 6 mm across, with a brown disc and a wrinkled thalline margin. Proper exciple colourless; epithecium brownish, hymenium colourless; paraphyses mostly simple, thick, septate, hypothecium colourless. Asci 8-spored, clavate, the K/I+ blue tholus penetrated by a faintly amyloid apical cushion with parallel or diverging flanks, the wall K/I-, surrounded by a K/I+ blue outer layer, Lecanora-type. Ascospores 1-celled, hyaline, ellipsoid, 8-9 x 5-6  $\mu\text{m}$ . Pycnidia terminal on short lateral branches. Photobiont chlorococoid. Spot tests: cortex K-, C-, KC+ yellowish, P-; medulla K-, C-, KC-, P-. Chemistry: cortex with usnic acid; medulla with divaricatic acid. - Note: a boreal-montane, circumpolar lichen found on bark (often on twigs) of conifers, sometimes on lignum (e.g. on wooden poles, decorated branches), with optimum in the subalpine belt; most common in the Alps, but also found in the southern Apennines.



*Evernia mesomorpha*



*Evernia mesomorpha*

*Everniastrum catawbiense* (Degel.) Hale ex Sipman, Mycotaxon 26: 239 (1986)

= *Parmelia sorocheila* var. *catawbiensis* Degel. 1941

= *Hypotrachyna catawbiensis* (Degel.) Divakar, A. Crespo, Sipman, Elix & Lumbsch, in Divakar, Crespo, Núñez-Zapata, Flakus, Sipman, Elix & Lumbsch, Phytotaxa 132(1): 31 (2013)

[VZ2387], Tanzania. Distr. Morogoro, montes Uluguru: planities "Lunkwangule", 2350-2500 m. In ramulis *Agauriae salicifoliae*. Leg. T. Pócs (no. 88257/V), 25.10.1988, det, E. Farkas et A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR.2387.

Thallus foliose, almost fruticose, 2-4 cm across. Lobes flat to strongly convex, 0.8-1.5 mm wide, branching dichotomously; upper surface greenish, smooth. Vegetative diaspores green soredia in soralia, on upper surface of lobe tips. Lower surface black, shiny; rhizines occasional, black. Photobiont *Trebouxia* alga. Ascomata not reported. Chemistry: Cortex UV- K+ yellow, C-, KC-, P-; medulla UV-, K-, KC- or + orange, P-; soralia K- or + yellow, KC+ pink, C+ pink; atronorin, gyrophoric acid. Substrate and Habitat. On branches and wood of conifers, mostly at high elevation forests. Distribution: East Africa (Kenya), northern South America to eastern North America; in North Carolina found in the Blue Ridge ecoregion.



*Everniastrum catawbiense*



*Everniastrum catawbiense*

- Everniastrum cirrhatum* (Fr.) Hale, Mycotaxon 3(3): 347 (1976)  
 = *Hypotrachyna cirrhata* (Fr.) Divakar, A. Crespo, Sipman, Elix & Lumbsch, in Divakar, Crespo, Núñez-Zapata, Flakus, Sipman, Elix & Lumbsch, Phytotaxa 132(1): 31 (2013)  
 = *Cetrariastrum cirrhatum* (Fr.) W.L. Culb. & C.F. Culb., Bryologist 84(3): 283 (1981)  
 = *Evernia cirrhata* (Fr.) M. Choisy, Bull. Soc. bot. Fr. 104: 334 (1957)  
 = *Parmelia camtschadalis* var. *cirrhata* (Fr.) Zahlbr. [as 'kamtschadalis'], Annln K. K. naturh. Hofmus. Wien 19: 43 (1904)  
 = *Parmelia cirrhata* Fr., Syst. orb. veg. (Lundae): 283 (1825)  
 = *Parmelia cirrhata* f. *gracilis* Zahlbr., Cat. Lich. Univers. 6: 60 (1929)  
 = *Pseudevernia cirrhata* (Fr.) R. Schub. & Klem., Nova Hedwigia 11: 59 (1966)

[VZ2461], Sina. Prov. Yunnan: montes Yulong Shan, 30 km ad septentriones ab oppido Likiang (=Lijiang), 3000 m. Ad truncum arboris. Leg. J. Soják, 25.7.1990. det. H. Sipman. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2461.

foliose to subcaespitose, very loosely adnate, up to 15 (-25) cm across, richly dichotomously or subdichotomously lobate lobes: 0.5-2 (-4) mm broad, strongly to moderately involute or flat or nearly so; apices abundantly ciliate; cilia up to 4 mm long, simple or more commonly branched upper surface: pale gray to gray; not sorediate or isidiate; lower surface black or brown or pale brown at the tips of the lobes, mostly erhizinate but some specimens with a few short, usually simple, black rhizines; Apothecia relatively infrequent, 4-6 mm diam. asci: clavate, 8-spored ascospores: ellipsoid or slightly reniform, 16-21 x 8-10  $\mu$ m; Pycnidia common, 0.1-0.2 mm diam: conidia bacilliform, straight, 5-7 (-8) x <1  $\mu$ m; Spot tests upper cortex K+ yellow, C-, KC-, P+ yellow; medulla K+ yellow then turning deep red, C-, KC-, P+ yellow then orange; Secondary metabolites cortex with atranorin and chloroatranorin; medulla with salazinic acid (major), consalazinic acid (minor), galbinic and protocetraric acids (accessory) and a fatty acid. Substrate and ecology: on trees and shrubs, rarely on rock or soil World distribution: Mexico, Central and South America.



*Everniastrum cirrhatum*



*Everniastrum cirrhatum*

- Everniastrum cirrhatum* (Fr.) Hale, Mycotaxon 3(3): 347 (1976)  
 = *Hypotrachyna cirrhata* (Fr.) Divakar, A. Crespo, Sipman, Elix & Lumbsch, in Divakar, Crespo, Núñez-Zapata, Flakus, Sipman, Elix & Lumbsch, Phytotaxa 132(1): 31 (2013)  
 = *Cetrariastrum cirrhatum* (Fr.) W.L. Culb. & C.F. Culb., Bryologist 84(3): 283 (1981)  
 = *Evernia cirrhata* (Fr.) M. Choisy, Bull. Soc. bot. Fr. 104: 334 (1957)  
 = *Parmelia camtschadalis* var. *cirrhata* (Fr.) Zahlbr. [as 'kamtschadalis'], Annl. K. K. naturh. Hofmus. Wien 19: 43 (1904)  
 = *Parmelia cirrhata* Fr., Syst. orb. veg. (Lundae): 283 (1825)  
 = *Parmelia cirrhata* f. *gracilis* Zahlbr., Cat. Lich. Univers. 6: 60 (1929)  
 = *Pseudevernia cirrhata* (Fr.) R. Schub. & Klem., Nova Hedwigia 11: 59 (1966)

[VZ1618], Costa Rica. Cartago: Cerro de la Muerte, in loco dicto Villa Mills, prope Carretera Interamericana, supra hospitium dictum La Georgina, 3400 m. Ad truncum arboris. Leg. W. L. Culberson (no. 16780) et C. F. Culberson, 12.12.1976. - Annot.: Atranorin, protolicheterinic acid, salazinic acid, and a trace of galbiniuc acid by TLC, anl. C. F. Culberson and A. Johnson. - EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1618.

foliose to subcaespitose, very loosely adnate, up to 15 (-25) cm across, richly dichotomously or subdichotomously lobate lobes: 0.5-2 (-4) mm broad, strongly to moderately involute or flat or nearly so; apices abundantly ciliate; cilia up to 4 mm long, simple or more commonly branched upper surface: pale gray to gray; not sorediate or isidiate; lower surface black or brown or pale brown at the tips of the lobes, mostly erhizinate but some specimens with a few short, usually simple, black rhizines; Apothecia relatively infrequent, 4-6 mm diam. asci: clavate, 8-spored ascospores: ellipsoid or slightly reniform, 16-21 x 8-10  $\mu\text{m}$ ; Pycnidia common, 0.1-0.2 mm diam: conidia bacilliform, straight, 5-7 (-8) x <1  $\mu\text{m}$ ; Spot tests upper cortex K<sup>+</sup> yellow, C<sup>-</sup>, KC<sup>-</sup>, P<sup>+</sup> yellow; medulla K<sup>+</sup> yellow then turning deep red, C<sup>-</sup>, KC<sup>-</sup>, P<sup>+</sup> yellow then orange; Secondary metabolites cortex with atranorin and chloroatranorin; medulla with salazinic acid (major), consalazinic acid (minor), galbinic and protocetraric acids (accessory) and a fatty acid. Substrate and ecology: on trees and shrubs, rarely on rock or soil World distribution: Mexico, Central and South America.



*Everniastrum cirrhatum*



*Everniastrum cirrhatum*

*Everniastrum neocirrhatum* (Hale & M. Wirth) Hale ex Sipman,  
Mycotaxon 26: 241 (1986)  
= *Everniastrum neocirrhatum* (M.E. Hale & M. Wirth) M.E. Hale, 1976.  
= *Parmelia neocirrhata* Hale & M. Wirth 1971  
= *Hypotrachyna neocirrhata* (Hale & M. Wirth) Divakar, A. Crespo,  
Sipman, Elix & Lumbsch, in Divakar, Crespo, Núñez-Zapata, Flakus,  
Sipman, Elix & Lumbsch, Phytotaxa 132(1): 32 (2013)

[VZ1619}, Mexico. Mexico; 26.5 km ad meridiem et occidentem versus a urbe Toluca, 3100 m. Ad corticem *Abietis* sp. Leg. W. L. Culberson (no. 17101) et C. F. Culberson, 22.12.1976. - Annot.: Atranorin and protolichesterinic, norstictic and salazinic acids by TLC; anal. C. F. Culberson and A. Johnson. - EX A. VĚZDA LICHENES SELECTI XSICCATI NR. 1619.

Thallus foliose to subcaespitose, very loosely adnate, up to 13 (-19) cm across, dichotomously or subdichotomously lobate; lobes 1-2 (-3) mm broad, strongly to moderately involute or occasionally nearly flat; apices ciliate; cilia sparse to moderately abundant, up to 2.5 mm long, usually simple; upper surface pale gray; not soresciate or isidiate; lower surface black or brownish colored at the tips of the lobes or pale throughout with darker zones here and there, smooth and slightly wrinkled, very rarely with a few short scattered rhizines; Apothecia abundant, 3-10 mm diam.; asci clavate, 8-spored; ascospores ellipsoid to reniform, (14-) 16-22 x (6-) 8-10  $\mu\text{m}$ ; Pycnidia abundant, 0.1-0.2 mm diam., immersed; conidia bacilliform, straight, 6-7 x 1  $\mu\text{m}$ ; Spot tests upper cortex K+ yellow, C-, KC-, P+ yellow; medulla K+ yellow then red, C-, P+ orange; Secondary metabolites cortex with atranorin and chloroatranorin; medulla with salazinic acid (major), norstictic and consalazinic acids (minor) and a fatty acid. Substrate and ecology: common on trees and relatively rare on rocks. World distribution: common only in Mexico.



*Everniastrum neocirrhatum*

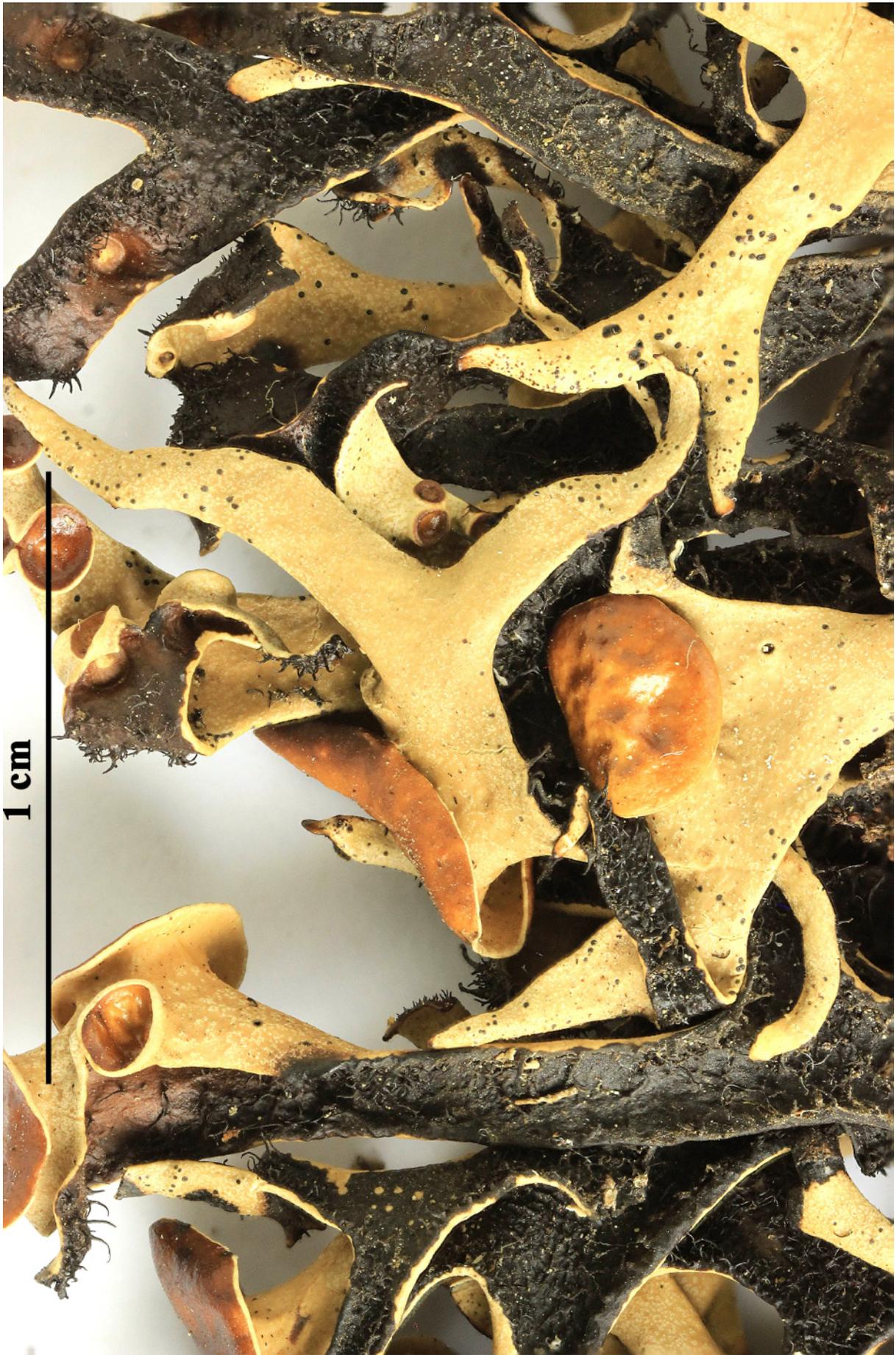


*Everniastrum neocirrhatum*

*Everniastrum pseudonepalense* (Hale & M. Wirth) Hale ex Sipman,  
Mycotaxon 26: 242 (1986)  
=*Everniastrum pseudonepalense* (M.E. Hale & M. Wirth) M.E. Hale,  
1976.  
=*Parmelia pseudonepalensis* Hale & M. Wirth 1971  
=*Hypotrachyna pseudonepalensis* (Hale & M. Wirth) Divakar, A.  
Crespo, Sipman, Elix & Lumbsch, in Divakar, Crespo, Núñez-Zapata,  
Flakus, Sipman, Elix & Lumbsch, Phytotaxa 132(1): 32 (2013)

[VZ1687], Mexico. Guanajuato: In monte dicto Cerro Zamorano. Ad corticem arborum (*Abies* sp.) in silva densa et humida. Leg. W. L. Culberson (no. 17518) et C. F. Culberson, 16.12.1978. - Annot.: Atranorin, protolichesrerinic acid, trace of unidentified fatty acid, salazinic acid, traces of norstictic and protocetraric acids,, and probably trace of consalazinic acid by TLC; anal. A. Johnson et C. F. Culberson. - EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1687.

Thallus: robust, foliose to subcaespitose, very loosely adnate, up to 8 (exceptionally to 12) cm across, dichotomously or subdichotomously lobate; lobes (1-) 2-4 (-6) mm broad, subinvolute to flat; apices ciliate; cilia frequent, up to 3 mm long, simple or branched; upper surface pale and inconspicuously white-stippled; not sorediate or isidiate; lower surface black, brown-colored at the tips of the lobes, densely to very sparsely rhizinate; rhizines to 1 mm long, simple or branched; Apothecia common, up to 8 (-14) mm diam., the largest ones perforate; asci clavate, 8-spored; ascospores ellipsoid to slightly reniform, 16-21 (-23) x 7-10  $\mu\text{m}$ ; Pycnidia abundant, 0.2-0.3 mm broad; conidia bacilliform, straight, 5-8 x 1  $\mu\text{m}$ ; Spot tests upper cortex K<sup>+</sup> yellow, C<sup>-</sup>, KC<sup>-</sup>, P<sup>+</sup> yellow; medulla K<sup>+</sup> yellow then turning dark red, C<sup>-</sup>, P<sup>+</sup> orange to orange-red; Secondary metabolites: cortex with atranorin and chloroatranorin; medulla with salazinic acid (major), consalazinic acid (minor), norstictic acid (minor or accessory) and a fatty acid. Substrate and ecology, on trees (*Quercus*, *Alnus* and *Pinus*). World distribution Mexico and Hawaii.



*Everniastrum pseudonepalense*



*Everniastrum pseudonepalense*

*Everniastrum sorocheilum* (Vain.) Hale ex Sipman, Mycotaxon 26: 242 (1986)

= *Everniastrum sorocheilum* (E.A. Vainio) M.E. Hale, 1976

= *Parmelia sorocheila* Vain. 1899

= *Hypotrachyna sorocheila* (Vain.) Divakar, A. Crespo, Sipman, Elix & Lumbsch, in Divakar, Crespo, Núñez-Zapata, Flakus, Sipman, Elix & Lumbsch, Phytotaxa 132(1): 32 (2013)

[VZ2388], Tanzania. Distr. Morogoro, montes Uluguru: ad latera austro-occidentalia montis "Meru", inter "Narok" et "Olmonyi", 3200 m. In ramulis *Ericae arboreae*. Leg. T. Pócs (no. 88299/Z), 15.12.1988, det. E. Farkas et A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2388.

Thallus: foliose to subcaespitose, very loosely adnate, up to 7 (exceptionally to 9) cm across, subdichotomously lobate lobes: 0.5-2.5(-4) mm broad, flat to involute, infrequently ciliate; cilia 0.5-1 (-2) mm long, simple or sparingly branched; upper surface pale, sometimes inconspicuously white-stippled, sometimes blackened in part, sorediate; soredia farinose to granular, in soralia at the lobe tips or along the subterminal edge of the lobes; lower surface black or pale- or brown-colored at the tips of the lobes, smooth or obscurely wrinkled transversely, particularly on the older lobes; Apothecia very rare, to 1 mm diam; asci clavate, 8-spored; ascospores not seen; Pycnidia infrequent, to 0.15 mm diam; conidia bacilliform, straight, 4-6 x 1 µm; Spot tests upper cortex K+ yellow, C-, KC-, P+ yellow; medulla K+ yellow then red, C-, P+ orange; Secondary metabolites cortex with atranorin and chloroatranorin, medulla with salazinic acid (major), consalazinic acid (minor), galbinic acid (accessory) and a fatty acid. Substrate and ecology: on trees and shrubs, especially angiosperms; World distribution pantropical and extending into adjacent subtropical regions, particularly in the mountains.



*Everniastrum sorocheilum*



*Everniastrum sorocheilum*

*Everniopsis pseudoreticulata* (P.A. Duvign.) C.W. Dodge, Ann. Mo. bot. Gdn 46: 184 (1959)  
= *Hendrickxia pseudoreticulata* P.A. Duvign. 1942

[VZ1370], Zaire (Africa centralis). Prov. Kivu: ad latera austro-occidentalia montis Kahuzi, 2250 m. Ad ramos arborum in pluviisilva montana. Leg. J. Lambinon (no. 72/1272), 28.12.1971. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1370.

Thallus probably pendent, about 10 cm. long, dichotomously branched, lower internodes about 10 mm. long, the upper somewhat shorter, tips retuse, lobes 2—3 mm. wide below, about 1 mm. above, olive buff, opaque, canaliculate, below Isabella color, somewhat shining, without rhizinae or cilia; upper cortex 16  $\mu\text{m}$  thick, fastigiate, cells very thick-walled, 8  $\mu\text{m}$  in diameter, protoplasts about 3  $\mu\text{m}$ ; algal layer 30-35  $\mu\text{m}$  thick, of closely packed cells 6-7  $\mu\text{m}$  in diameter; medulla 80-100  $\mu\text{m}$  thick, of conglutinate, interwoven hyphae, 6-7  $\mu\text{m}$  in diameter; lower cortex about 25  $\mu\text{m}$  thick, of longitudinal conglutinate hyphae 8—9  $\mu\text{m}$  in diameter, lumen about 1  $\mu\text{m}$ . Fertile portion at dichotomy widened to 5 mm., somewhat rugose, cortex rimose; apothecia subpedicellate, marginal on the upper surface, 2 mm. in diameter, deeply cupulate, exciple longitudinally rugose, disc very concave, chestnut; amphithecial cortex 30—35  $\mu\text{m}$  thick, of the same structure as the thalline cortex; outer medulla 80—100  $\mu\text{m}$  thick, very loosely woven, of thickwalled hyphae, with single algal cells in the meshes, inner medulla next the hypothecium 30  $\mu\text{m}$  thick, of predominantly periclinal, conglutinate thickwalled hyphae (easily cracking away from the outer medulla on sectioning); hypothecium 20-25  $\mu\text{m}$  thick, of very slender interwoven but mostly periclinal hyphae; thecium 65-70  $\mu\text{m}$  tall; paraphyses slender, conglutinate, lumen about 1  $\mu\text{m}$  in diameter, several times dichotomously branched above the asci; asci subcylindric, 75-80 x 15  $\mu\text{m}$ , wall 2-3  $\mu\text{m}$  thick, tip not thickened, 4-spored; ascospores ellipsoid, hyaline, unicellular, 16 x 10  $\mu\text{m}$ , wall rather thick, outer surface of the protoplast slightly rough, suggesting the ascospores of the Pannariaceae. Spermogonia semiemersed, marginal on the older portions of the thallus below the fertile areas, 115  $\mu\text{m}$  tall, 80  $\mu\text{m}$  in diameter, wall blackened in the upper half, nearly hyaline below, about 8  $\mu\text{m}$  thick, of slender periclinal hyphae; spermatophores 16 - 15-septate; spermatia bifusiform, 6.5 x 1  $\mu\text{m}$ .



*Everniopsis pseudoreticulata*

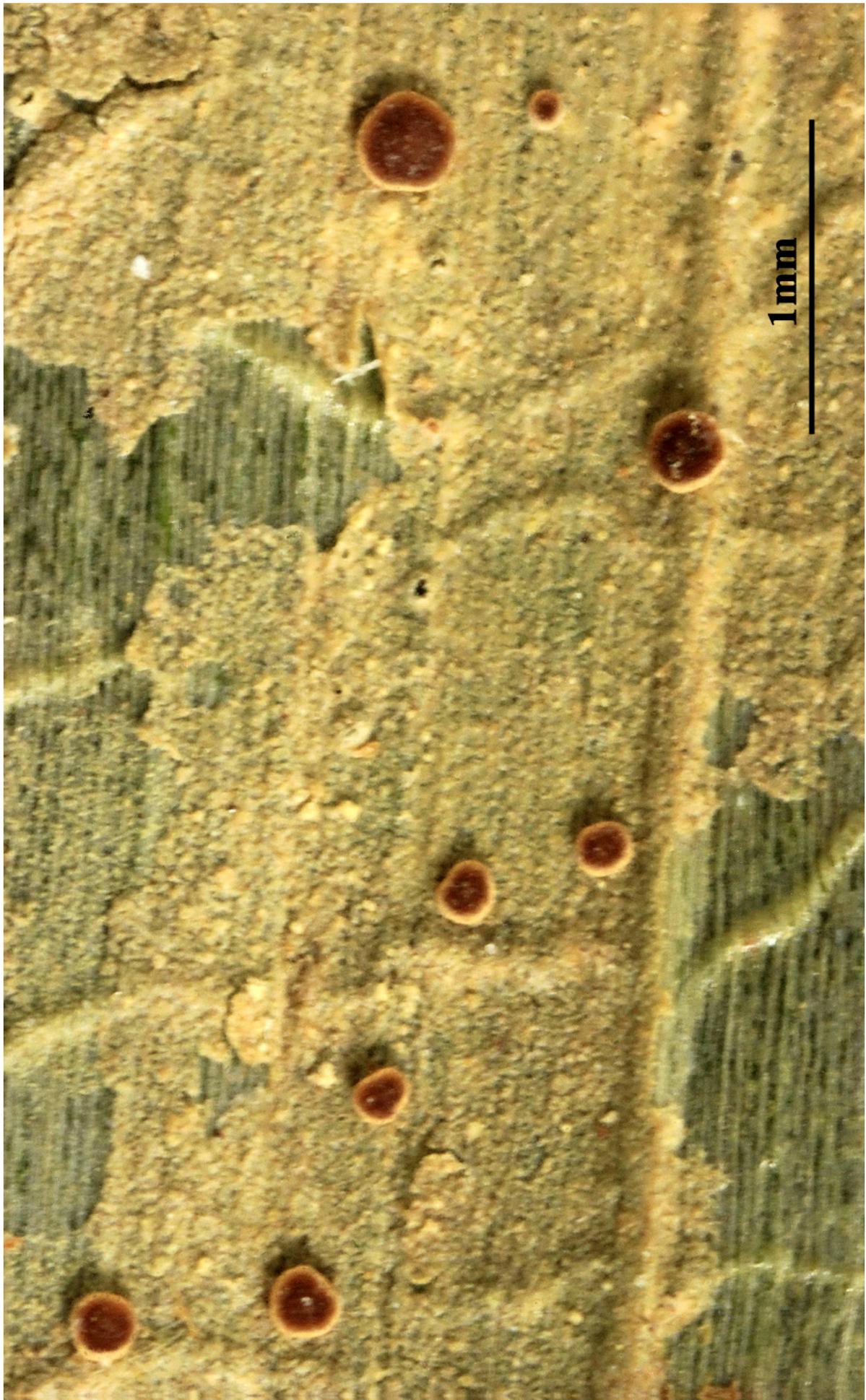


*Everniopsis pseudoreticulata*

*Fellhanera endopurpurea* Hafellner & Vězda, in Vězda & Hafellner,  
Nova Hedwigia 52(1-2): 76 (1991)

[VZ2454], Australia. New South Wales: Border Ranges National Park,  
Wiangaree, Brindle Creek, 850 m. Foliicola in silva (*Nothofagus  
moorei*). Leg. J. Hafellner, P. Merotsy et R. Rogers, 30.8.1988. EX A.  
VĚZDA LICHENES SELECTI EXSICCATI NR. 2454.

Thallus epiphyllus, tenuis, continuus, aequalis, pallide cinereoviridis,  
opacus, indistincte limitatus: 25  $\mu\text{m}$  altus, algis glomerulosis, goniocys-  
tidulas formantibus. Apothecia orbicularia vel demum ambitu irregula-  
ria, basin versus arcte constricta, 0.3-0.5 mm in diametro, 0.15-0.2 mm  
alta, discis planis vel demum convexis, pallide rufescenti-fuscis, nudis;  
marginibus tenuissimis, integris, testaceis, mox tamen evanidis. Exci-  
pulum paraplectenchymaticum, hyalinum. Hypothecium fuscopurpure-  
um, K<sup>+</sup> pulchre purpurascens. Hymenium 45  $\mu\text{m}$  altum, hyalinum.  
Paraphyses simplices ad ramosae, rectae, 1.5  $\mu\text{m}$  crassae, apicibus  
globosis vel clavatis, ad 3  $\mu\text{m}$  crassis. Asci octospori, tholis J<sup>+</sup> amylo-  
ideis tubis obscurioribus instructi. Ascosporae ellipsoideo-fusifformes,  
uno apice attenuato, 3-septatae (rarius 4-vel juniores 1-septatae), juve-  
niliter plerumque halonatae, 18-25 x 3.5-4  $\mu\text{m}$  magnae.



*Fellhanera endopurpurea*

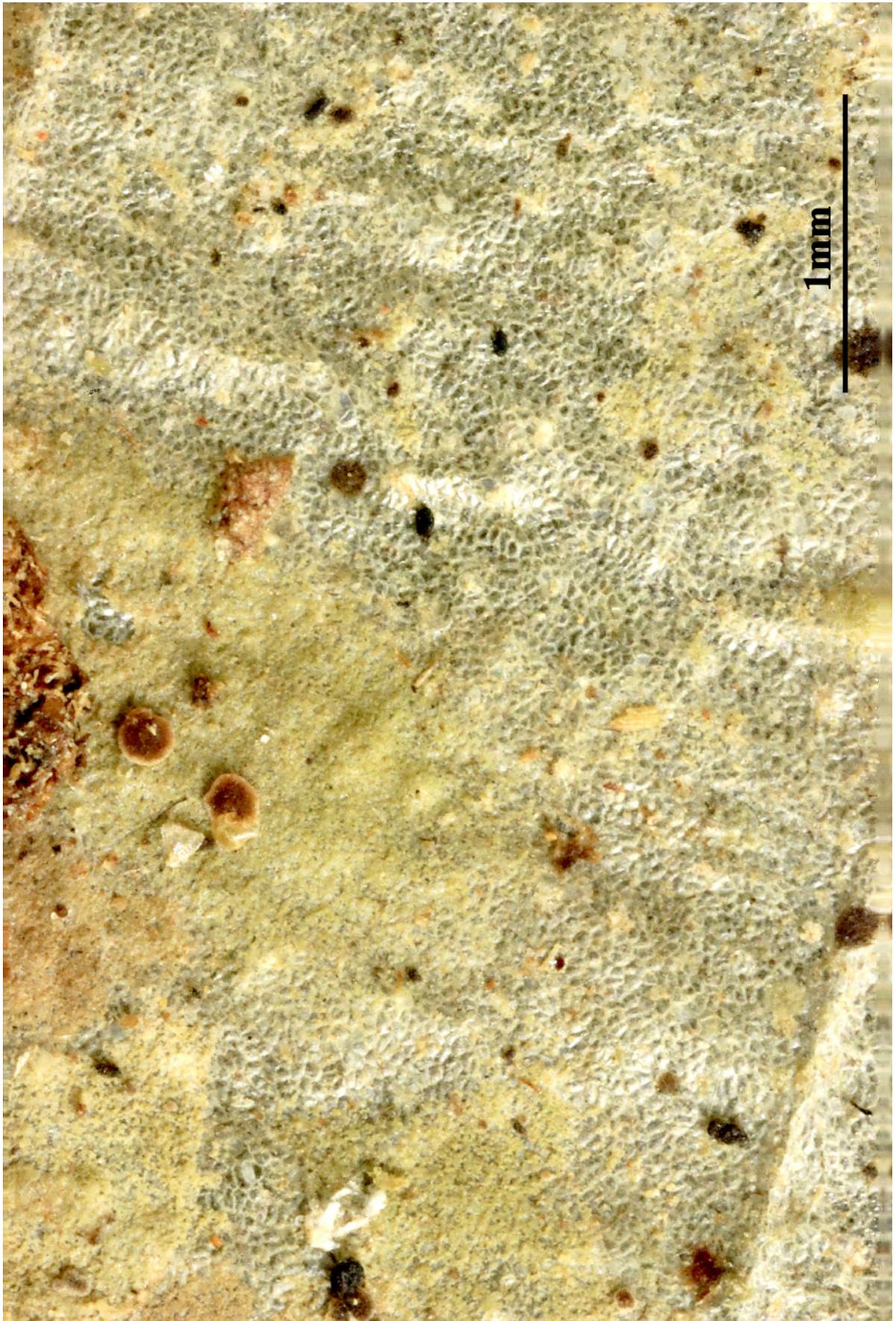


*Fellhanera endopurpurea*

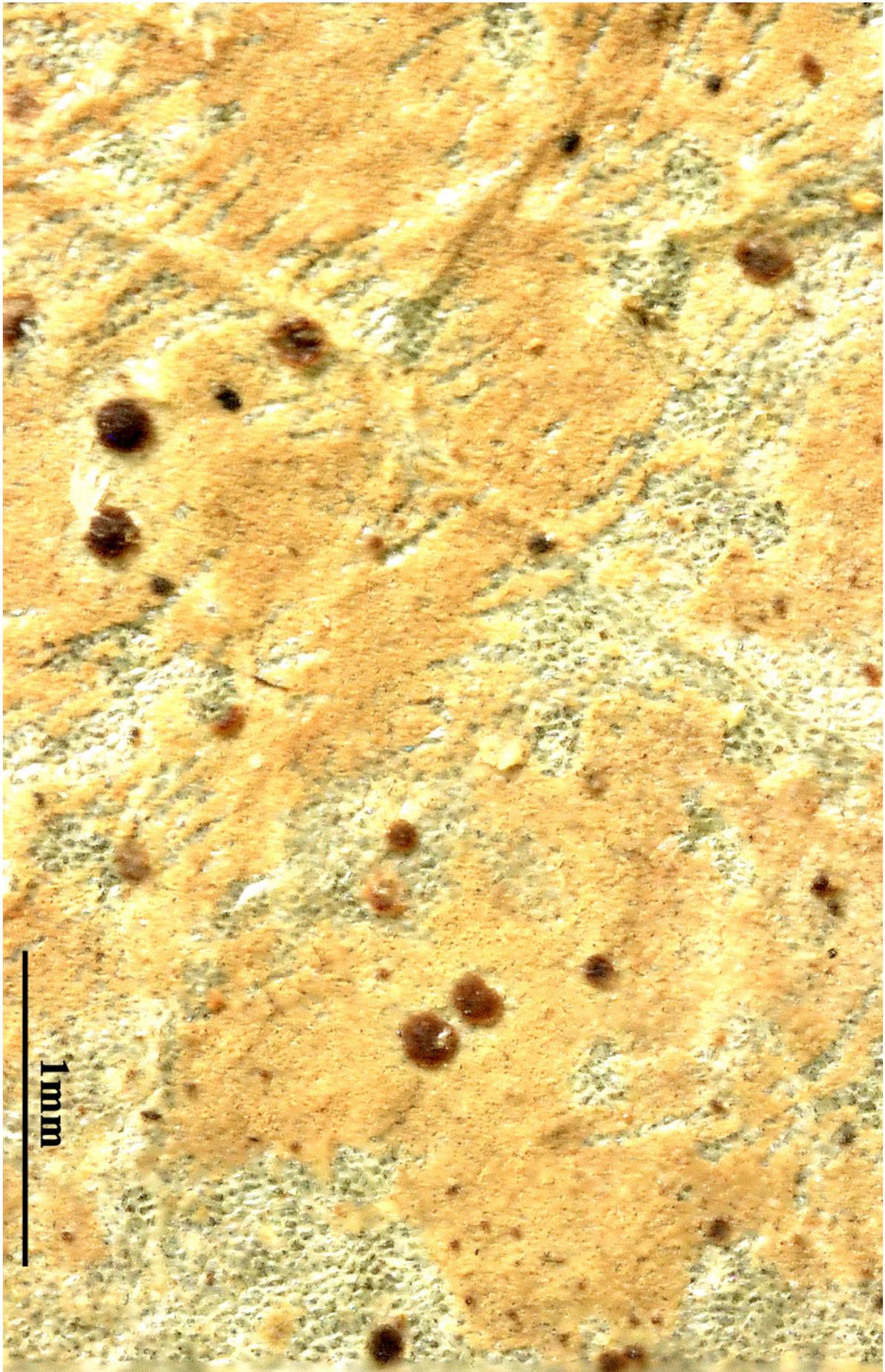
*Fellhanera fuscata* (Müll. Arg.) Vězda, Folia geobot. phytotax. 21(2):  
214 (1986)  
= *Patellaria fuscata* Müll. Arg. 1881

[VZ2155], Tansania, Regio Tanga. Usambara Orientalis, reservatum naturae Kwamgumi Forest dictum, in valle ad septentriones et occidentem versus a summo montis Mhinduro, 400-500 m. Ad folia arborum. Leg. E. Farkas et T. Pócs (86238), 11.11.1986, det. E. Farkas. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2155.

Thallus usually foliicolous, epiphyllous, crustose, continuous, 5–20 mm across and 10–15  $\mu\text{m}$  thick, smooth to farinose or granulose, greenish to brownish grey. Photobiont cells 4–8  $\mu\text{m}$  diam. Apothecia sessile, rounded, 0.2–0.5 mm diam. and 150–200  $\mu\text{m}$  high; disc plane to slightly convex, ochraceous yellow to (reddish) brown; margin thin but usually persistent, chamois-colored. Excipulum paraplectenchymatous, 30–50  $\mu\text{m}$  broad. Hypothecium 15–35  $\mu\text{m}$  high, orange to reddish brown, K<sup>+</sup> orange. Apothecial base aeruginous, K<sup>-</sup>. Epithecium indistinct. Hymenium 70–80  $\mu\text{m}$  high, colorless. Asci clavate, 60–70 x 12–16  $\mu\text{m}$ . Ascospores 8 per ascus, oblong, 7-septate, with constrictions at septa, 18–24 x 3–4.5  $\mu\text{m}$ , 5–6 times as long as broad. Pycnidia very rare, sessile, cupuliform to subglobose, 0.07–0.15 mm diam. and 50–100  $\mu\text{m}$  high, dark grey; wall paraplectenchymatous. Conidia bacillar, non-septate, 3–5 x 0.7–1  $\mu\text{m}$ . Chemistry: no substances detected by TLC and HPLC. Distribution and Ecology. Pantropical. One of the most common members of the genus. In contrast to the cosmopolitan *F. bouteillei*, which often grows on the same leaves, a typically foliicolous, tropical species restricted to the forest understory but with a rather extensive, altitudinal range from lowland to upper montane zones.



*Fellhanera fuscata*

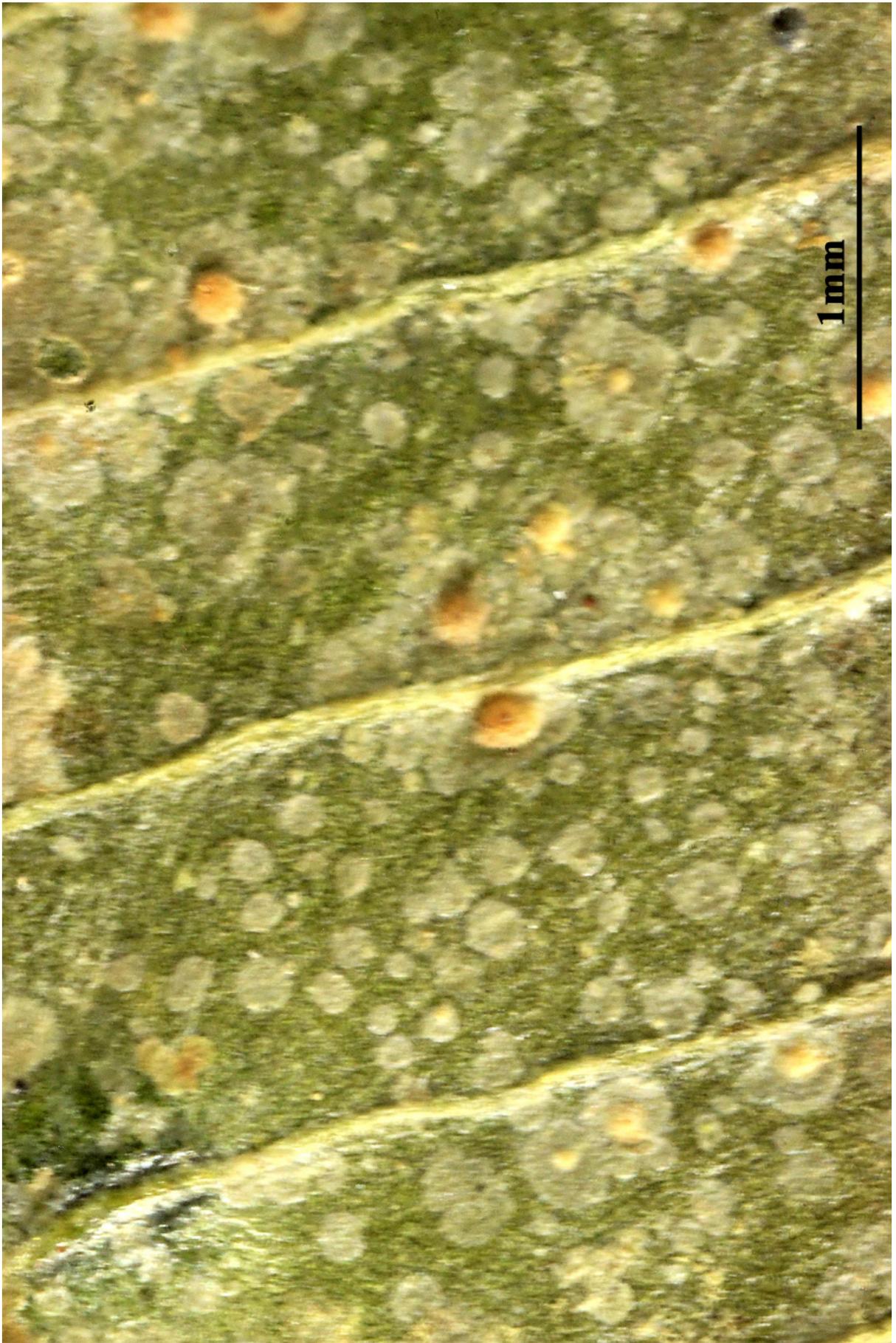


*Fellhanera fuscata*

*Fellhanera fuscata* (Müll. Arg.) Vězda, Folia geobot. phytotax. 21(2):  
214 (1986)  
= *Patellaria fuscata* Müll. Arg. 1881

[VZ2357], Tanzania. Morogoro regio. montes Nguru, in valle Chazi, prope Mhonda Mission, 800-850 m. Foliicola. Leg. E. Farkas (89102), 23.3.1989., det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2357.

Thallus usually foliicolous, epiphyllous, crustose, continuous, 5–20 mm across and 10–15  $\mu\text{m}$  thick, smooth to farinose or granulose, greenish to brownish grey. Photobiont cells 4–8  $\mu\text{m}$  diam. Apothecia sessile, rounded, 0.2–0.5 mm diam. and 150–200  $\mu\text{m}$  high; disc plane to slightly convex, ochraceous yellow to (reddish) brown; margin thin but usually persistent, chamois-colored. Excipulum paraplectenchymatous, 30–50  $\mu\text{m}$  broad. Hypothecium 15–35  $\mu\text{m}$  high, orange to reddish brown, K<sup>+</sup> orange. Apothecial base aeruginous, K<sup>-</sup>. Epithecium indistinct. Hymenium 70–80  $\mu\text{m}$  high, colorless. Asci clavate, 60–70 x 12–16  $\mu\text{m}$ . Ascospores 8 per ascus, oblong, 7-septate, with constrictions at septa, 18–24 x 3–4.5  $\mu\text{m}$ , 5–6 times as long as broad. Pycnidia very rare, sessile, cupuliform to subglobose, 0.07–0.15 mm diam. and 50–100  $\mu\text{m}$  high, dark grey; wall paraplectenchymatous. Conidia bacillar, non-septate, 3–5 x 0.7–1  $\mu\text{m}$ . Chemistry: no substances detected by TLC and HPLC. Distribution and Ecology. Pantropical. One of the most common members of the genus. In contrast to the cosmopolitan *F. bouteillei*, which often grows on the same leaves, a typically foliicolous, tropical species restricted to the forest understory but with a rather extensive, altitudinal range from lowland to upper montane zones.



*Fellhanera fuscatula*

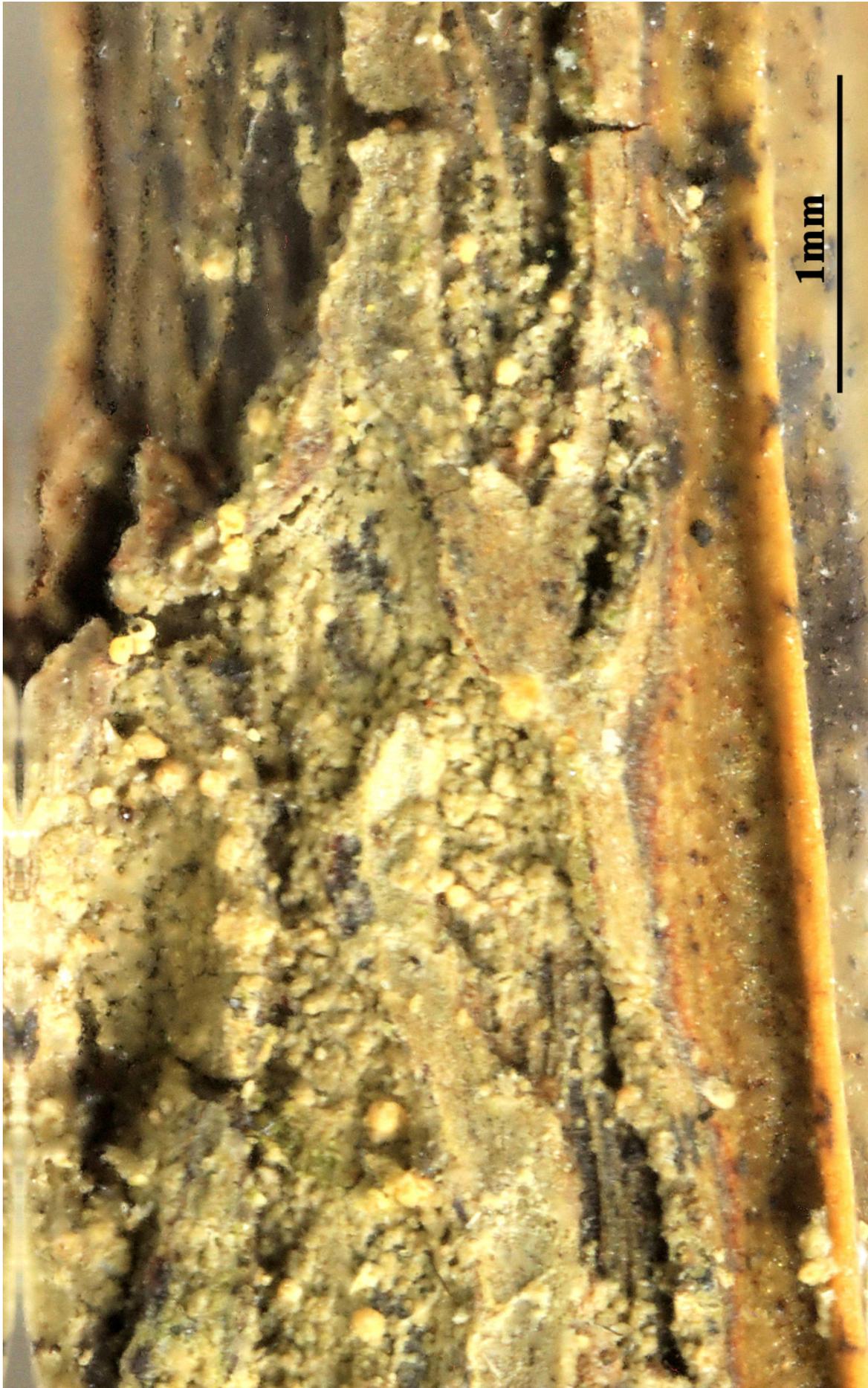


*Fellhanera fuscata*

*Fellhanera myrtillicola* (Erichsen) Hafellner, in Vězda, Lichenes Selecti Exsiccati, Fascicle 95 (nos 2351-2375) (Průhonice): 3 (no. 2358) (1989)  
= *Fellhaneropsis myrtillicola* (Erichsen) Sérus. & Coppins, in Sérusiaux, Lichenologist 28(3): 199 (1996)  
= *Bacidia myrtillicola* Erichsen 1939

[VZ2358], Austria. Styria: Niedere Tauern, Schladminger Tauern, Kraudorf secus viam inter Spreitzerhütte et Grafenhütte ad septentriones ab Etrachsee, 1540 m. Ad corticem *Vacinii myrtilli*. Leg. J. Hafellner (6749/2) et W. Obermayer. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2358.

Thallus crustose, thin and smooth to rarely granulose or slightly verrucose, greenish grey to bluish grey, somehow glossy, forming small, suborbicular patches which eventually merge to cover larger areas, usually delimited by a bluish prothallus. Apothecia biatorine, constricted at base, 0.1-0.2(-0.3) mm across, with a flat to convex, pale brown to bluish grey or bluish black disc and a thin, whitish, soon excluded proper margin. Proper exciple of vertically arranged hyphae with elliptical to polyhedral cells, up to 15  $\mu\text{m}$  wide laterally, colourless throughout or very pale brown in innermost part; epithecium scarcely differentiated from the hymenium; hymenium colourless, I+ blue; paraphyses branched and anastomosing, 1-1.5  $\mu\text{m}$  thick, forming a densely interwoven network around the ascus tips; hypothecium very thin, dark brown, K+ greenish brown to green in central parts. Asci 8-spored, clavate, with a K/I+ blue apical dome containing a darker blue, tubular ring-structure, and an amyloid coat, Byssoloma-type. Ascospores 3(-5)-septate, hyaline, oblong-fusiform, straight or slightly curved, 16-28(-34) x 3-4  $\mu\text{m}$ . Pycnidia dark grey to blue-black, immersed in the apothecia or sessile on the thallus, with palisadic hyphae on rim of ostiole (enclosing the conidial mass at least when young), producing (12-)20-45  $\mu\text{m}$  long, thread-like macroconidia, or 4-8  $\mu\text{m}$  long, bacilliform microconidia, respectively. Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a mild-temperate to southern boreal-montane lichen found on needles of *Abies* in very humid montane forests, but also on leaves of *Buxus* and *Laurus* in warm-humid gorges near the coast, to be looked for further in the most humid parts of the Alps.



*Fellhanera myrtillicola*

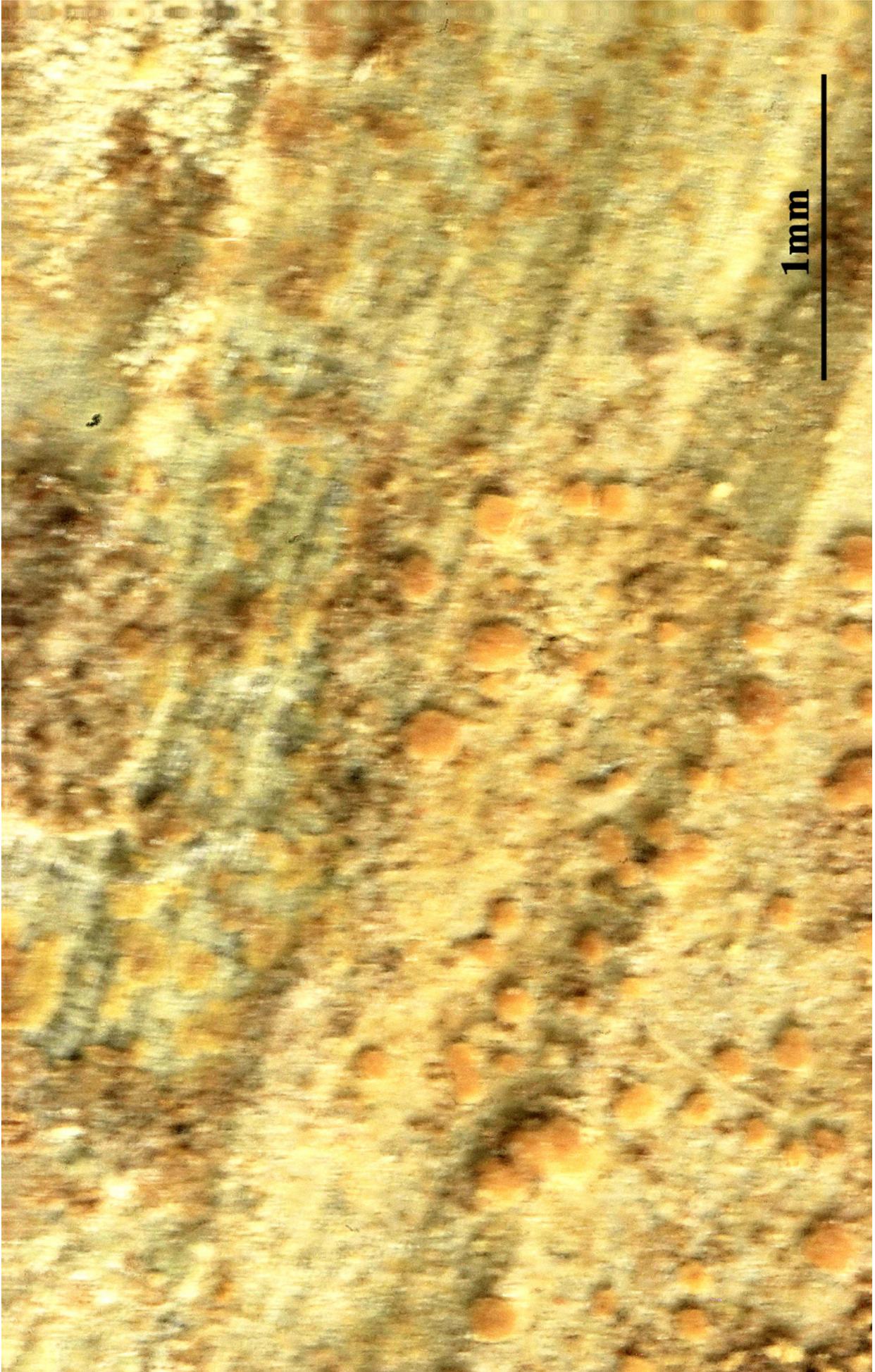


*Fellhanera myrtillicola*

*Fellhanera parvula* (Vězda) Vězda, Folia geobot. phytotax. 21(2): 214 (1986)  
= *Catillaria parvula* Vězda 1974

[VZ2260], Brasilia. São Paulo: inter Osasco et Cabreúva, 40 km ad septentriones et occidentem versus a São Paulo, 750 m. Foliicola in pluviisilva. Leg. K. Kalb (no. 169), 20.7.1979, det. A. Vězda. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2260.

Thallus continuous, 3–10mm across and 10–20  $\mu\text{m}$  thick, farinose, pale greenish grey (no blue tinge). Apothecia rounded to irregular in outline, 0.1–0.4 mm diam. and 70–120  $\mu\text{m}$  high; disc plane to slightly convex, very pale yellow to orange-yellow and often slightly translucent; margin thin, evanescent, white to chamois-colored. Excipulum paraplectenchymatous, 10–20  $\mu\text{m}$  broad. Hypothecium 15–25  $\mu\text{m}$  high, colorless to very pale yellow, K–. Apothecial base colorless to very pale yellow, K–. Epithecium indistinct. Hymenium 30–40  $\mu\text{m}$  high, colorless. Asci 25–35 x 8–10  $\mu\text{m}$ . Ascospores 8 per ascus, oblong-ovoid, 1-septate, 6–14 x 2–4  $\mu\text{m}$ , 3–4 times as long as broad. Pycnidia sessile, cupuliform to subglobose, 0.1–0.15 mm diam. and 50–100  $\mu\text{m}$  high, white; wall indistinctly paraplectenchymatous. Conidia narrowly clavate to pyriform, non-septate, 3–4 x 1–1.5  $\mu\text{m}$ . Chemistry: not tested. Distribution and Ecology. Neotropics and tropical Africa. Most commonly found under sheltered conditions. This species, as originally described from tropical Africa, was characterized by its rather small, very pale apothecia.



*Fellhanera parvula*

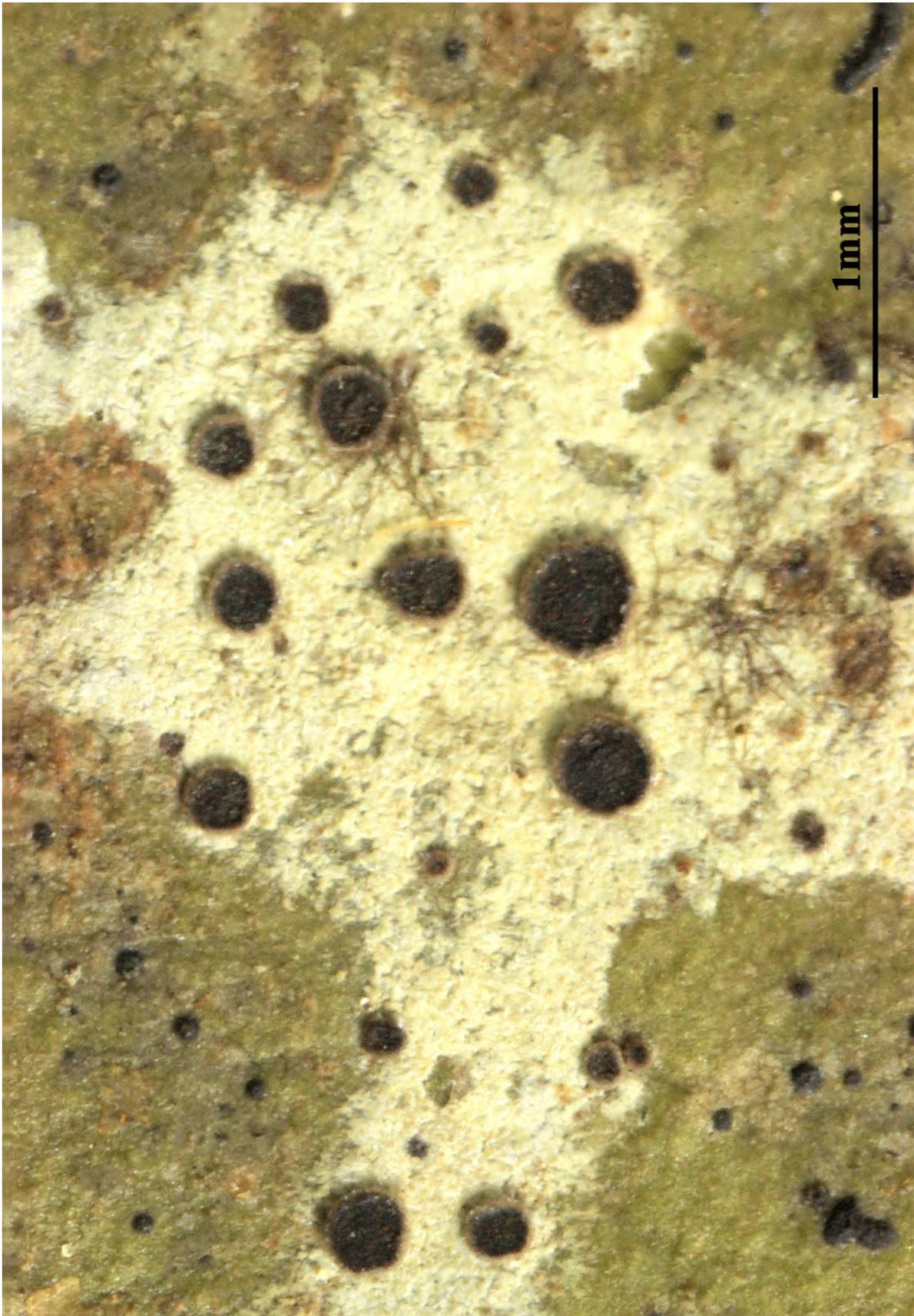


*Fellhanera parvula*

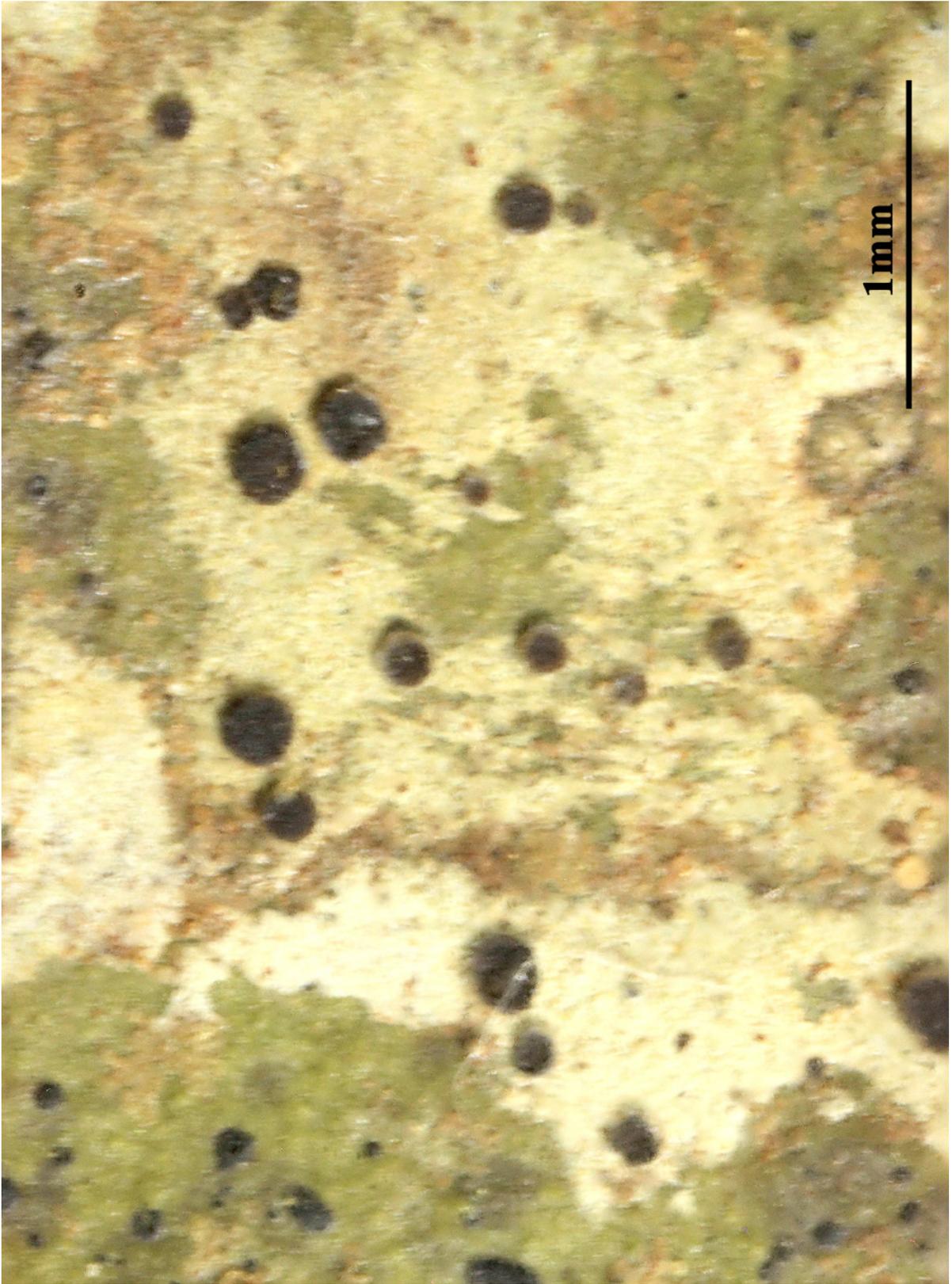
*Fellhanera sublecanorina* (Nyl.) Vězda, Lichenes Selecti Exsiccati, Fascicle 87 (nos 2151-2175) (Průhonice): 2 (no. 2156) (1987)  
= *Platygrapha sublecanorina* Nyl. 1868

[VZ2261], Tansania. Montes Nguru, Manyangu, in montes Masimba, 800-1200 m. In pluviisilva submontana, foliicola. Leg. T. Pócs (87016), R. P. C. Temu et V. R. Nsolomo, 19.1.1987, det. A. Vězda. EX A. VEZDA LICHENES SELECTI EXSICCATI NR. 2261.

Thallus continuous, 10–30 mm across and 10–20  $\mu\text{m}$  thick, minutely farinose to almost granulose, pale bluish (to greenish) grey. Apothecia rounded, 0.2–0.4 mm diam. and 100–150  $\mu\text{m}$  high; disc plane, dark brown to blackish brown; margin distinct, pale grey. Excipulum paraplectenchymatous, 15–30  $\mu\text{m}$  broad. Hypothecium 10–30  $\mu\text{m}$  high, brown, K–. Apothecial base brown, K–. Epithecium thin, 5–10  $\mu\text{m}$ , light brown. Hymenium 45–50  $\mu\text{m}$  high, colorless. Asci 40–45 x 10–14  $\mu\text{m}$ . Ascospores 8 per ascus, oblong-ellipsoid, 3-septate, without or with slight constrictions at septa, 12–18 x 3–5  $\mu\text{m}$ , 3.5–4.5 times as long as broad. Pycnidia sessile, cupuliform to subglobose, 0.07–0.15 mm diam. and 50–100  $\mu\text{m}$  high, chamois-colored to grey; wall paraplectenchymatous. Conidia pyriform, non-septate, 3–4 x 1.5–2  $\mu\text{m}$ . Chemistry: usnic acid, isousnic acid, zeorin. Distribution and Ecology. Pantropical. A rather common species, most typically found at midelevations in more open situations, but with a rather wide, ecological amplitude.



*Fellhanera sublecanorina*

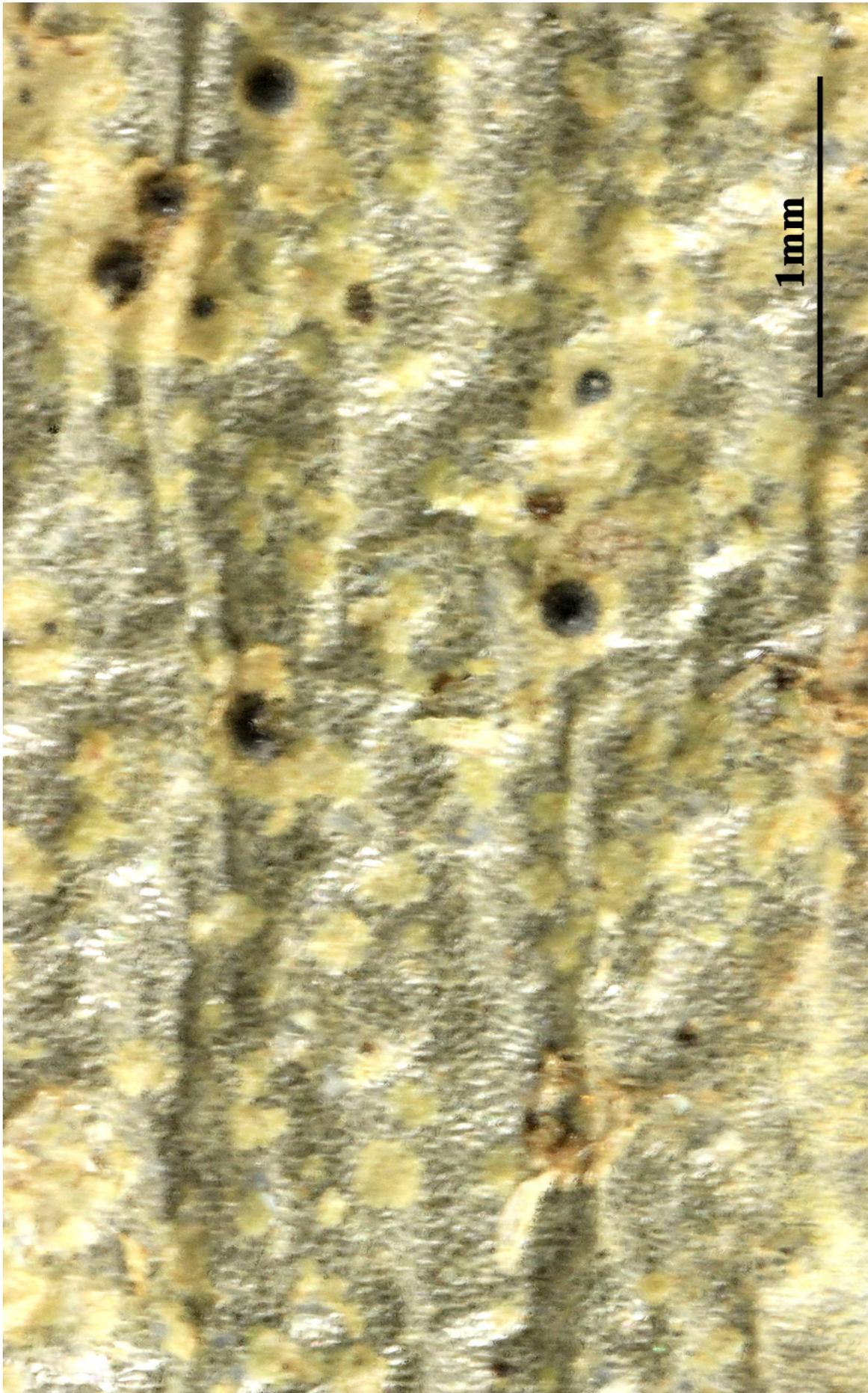


*Fellhanera sublecanorina*

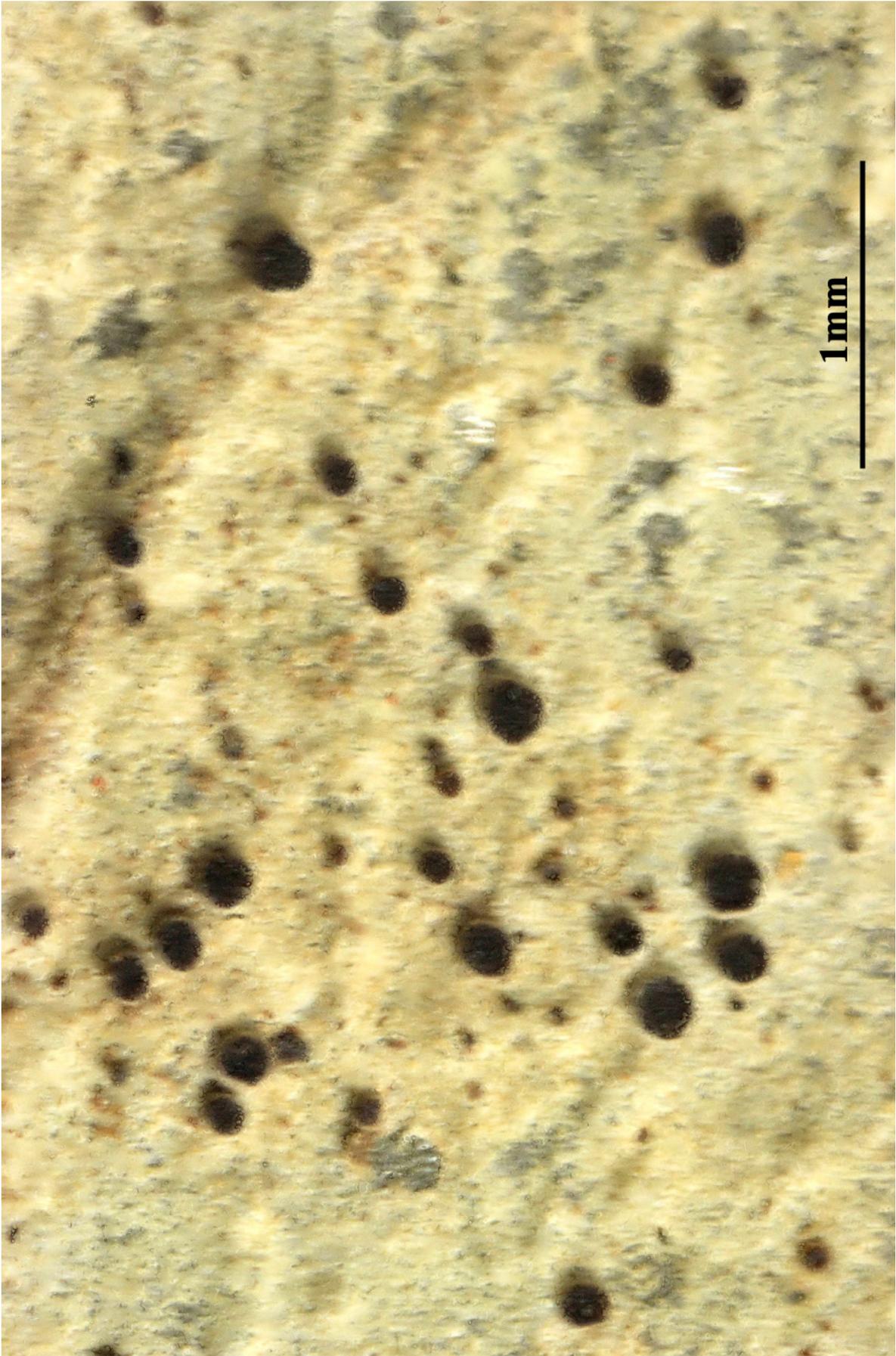
*Fellhanera sublecanorina* (Nyl.) Vězda, Lichenes Selecti Exsiccati, Fascicle 87 (nos 2151-2175) (Průhonice): 2 (no. 2156) (1987)  
= *Platygrapha sublecanorina* Nyl. 1868

[VZ2156], Tansania. Regio Tanga. Usambara Orientalis, reservatum naturae Kwamgumi Forest dictum, in valle ad septentriones et occidentem versus a summo montis Mhinduro, 400-500 m. Ad folia arborum. Leg. E. Farkas et T. Pócs (86239). EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2156.

Thallus continuous, 10–30 mm across and 10–20  $\mu\text{m}$  thick, minutely farinose to almost granulose, pale bluish (to greenish) grey. Apothecia rounded, 0.2–0.4 mm diam. and 100–150  $\mu\text{m}$  high; disc plane, dark brown to blackish brown; margin distinct, pale grey. Excipulum paraplectenchymatous, 15–30  $\mu\text{m}$  broad. Hypothecium 10–30  $\mu\text{m}$  high, brown, K–. Apothecial base brown, K–. Epithecium thin, 5–10  $\mu\text{m}$ , light brown. Hymenium 45–50  $\mu\text{m}$  high, colorless. Asci 40–45 x 10–14  $\mu\text{m}$ . Ascospores 8 per ascus, oblong-ellipsoid, 3-septate, without or with slight constrictions at septa, 12–18 x 3–5  $\mu\text{m}$ , 3.5–4.5 times as long as broad. Pycnidia sessile, cupuliform to subglobose, 0.07–0.15 mm diam. and 50–100  $\mu\text{m}$  high, chamois-colored to grey; wall paraplectenchymatous. Conidia pyriform, non-septate, 3–4 x 1.5–2  $\mu\text{m}$ . Chemistry: usnic acid, isousnic acid, zeorin. Distribution and Ecology. Pantropical. A rather common species, most typically found at midelevations in more open situations, but with a rather wide, ecological amplitude.



*Fellhanera sublecanorina*



*Fellhanera sublecanorina*

- Graphina confluens*** (Fée) Müll. Arg., Mém. Soc. Phys. Hist. nat. Genève 29(no. 8): 45 (1887)  
 = *Diorygma confluens* (Fée) Kalb, Staiger & Elix, Symb. bot. upsal. 34(no. 1): 146 (2004)  
 = *Arthonia confluens* Fée, Essai Crypt. Exot. (Paris): 55 (1825) [1824]  
 = *Graphis confluens* (Fée) Fée, Dict. Class. Hist. Nat. 7: 476 (1825)  
 = *Hemithecium confluens* (Fée) Trevis., Spighe Paglie: 13 (1853)  
 = *Lecanactis confluens* (Fée) Mont., Annl. Sci. Nat., Bot., sér. 2 18: 275 (1842)  
 = *Phaeographina confluens* (Fée) Müll. Arg., Rev. Mycol., Toulouse 10(no. 40): [177] (1888)  
 = *Solenographa confluens* (Fée) A. Massal., in Krempelhuber, Verh. Kaiserl.-Königl. zool.-bot. Ges. Wien 21(3-4): 866 (1871)

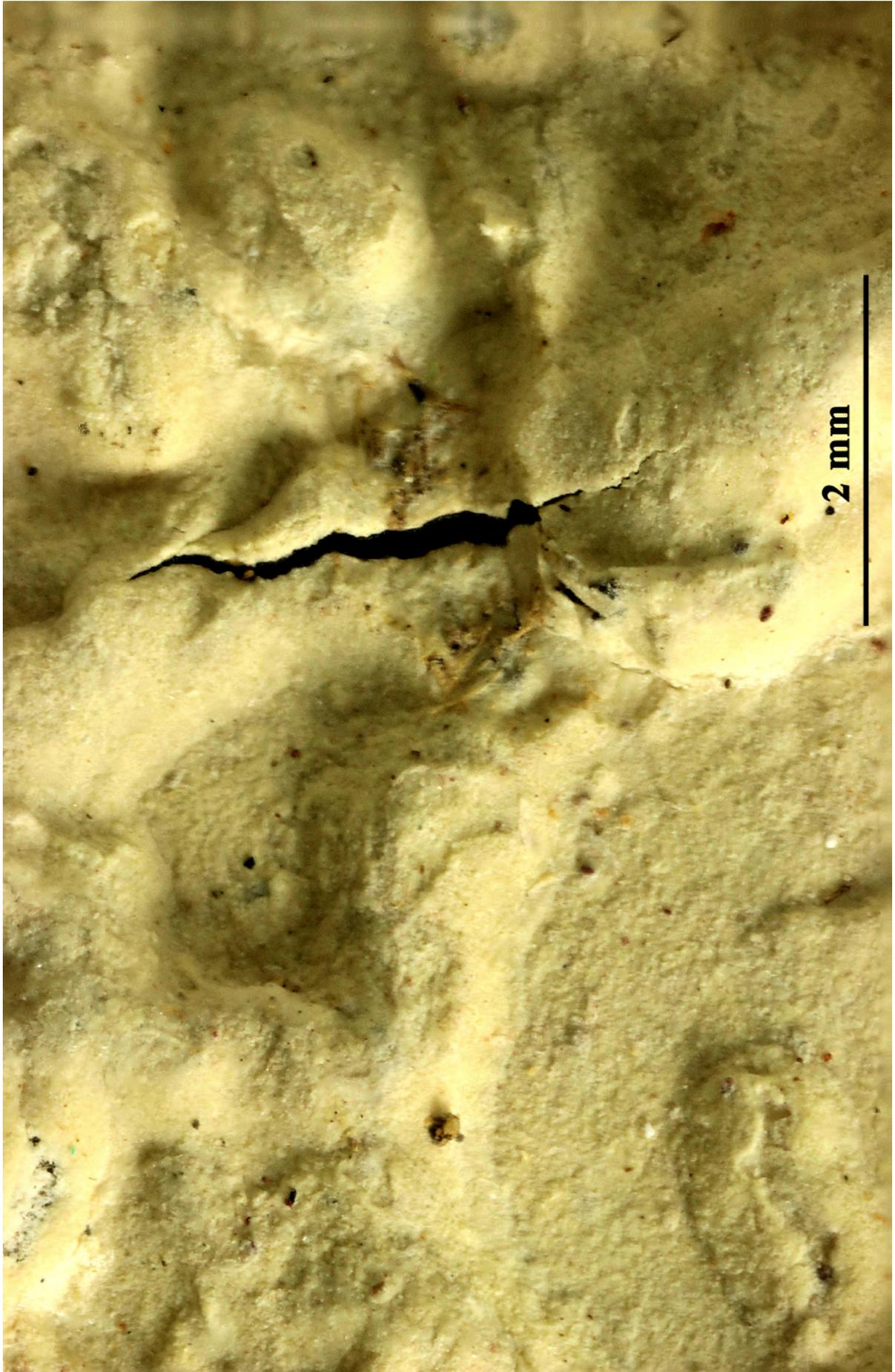
[VZ1152], Trinidad. Chimborazo Estate, Montserrat Hills, 500 m. Ad corticem. Leg. M. E. Hale, 25.4.1972. -Annot.: rev from B. Staiger 2003 to *Diorygma epiglaucum* (Müll. Arg.) Kalb et al. with Lichexanthon, stictic acid, hypostictic acid.- . EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1152.

Asci 1(-2)-spored; apothecia longer, distinctly lirelliform and never aggregate; thallus with brittle black hypothallus.

- Ascospores up to 135 µm long (or very rarely to 145 mm long), 80-135(-145) x 25-45(-50) µm; peripheral and central ascospore locules of more or less equal size: *Diorgma. confluens* (Fée) Kalb et al.
- Ascospores mostly >135 mm long, (120-)135-203 x 35-70 µm; peripheral ascospore locules distinctly smaller than central ones *Diorygma epiglaucum* (Müll. Arg.) Kalb et al.



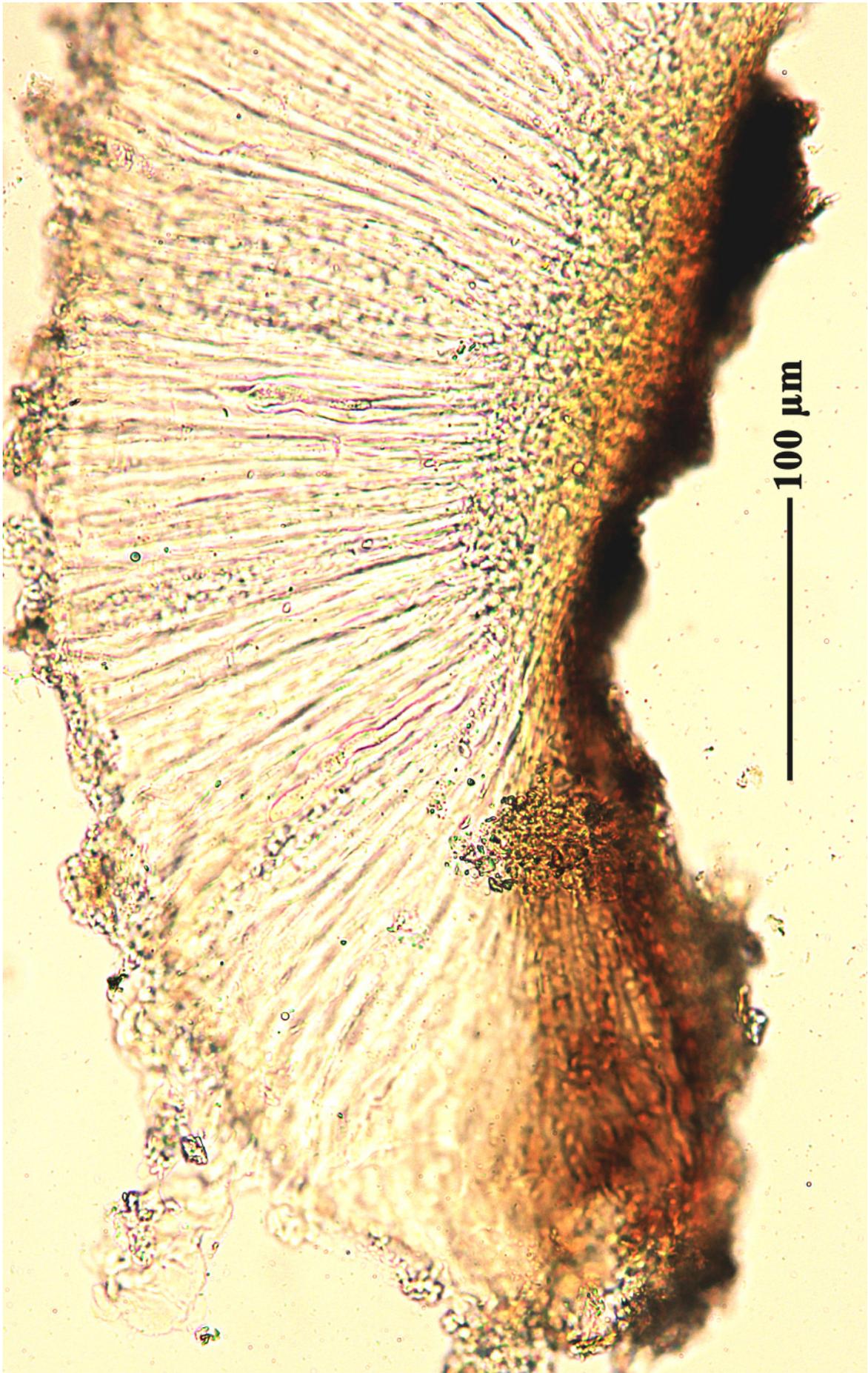
*Graphina confluens*



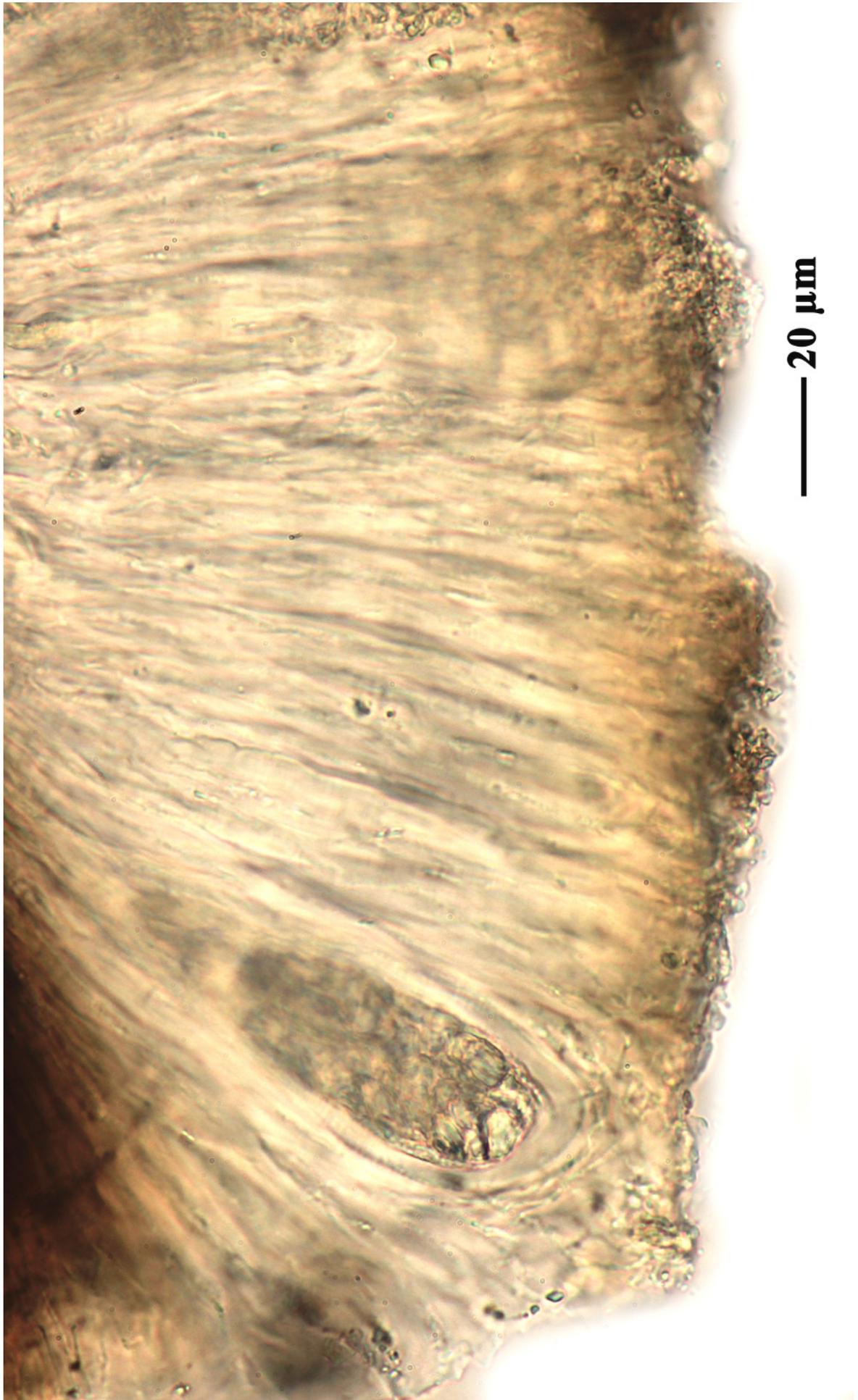
*Graphina confluens*



*Graphina confluens*



*Graphina confluens*



*Graphina confluens*

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