

F. Schumm (2026):

Images of Lichens

Vežda Lichenes Selecti Exsiccati
part 21

With this volume, I continue the documentation of Vezda's works on exiccata, now with Lichenes Selecti as part 21. 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 european species I used mainly the excellent descriptions that are provided in Prof. Nimis *ITALIC* 8 under the URL: **<https://italic.units.it/>**

and the Australian Lichenslist under the Url:

https://www.anbg.gov.au/abrs/lichenlist/lichenchecklist_e_o.html

F. Schumm, 2026

Lecanora stenotropa Nyl., Flora, Regensburg 55(16): 251 (1872)

[VZ2410], N

Magna Britannia. Anglia: Essex, South Benfleet, 10 m. Ad latera artificialia silicea in statione vetusta viae ferrugineae. Leg. P. M. Earland-Bennett, 6.7.1989, det. B. J. Coppins. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 2410.

Thallus crustose, endosubstratic or thinly episubstratic, yellowish or greenish yellow, sometimes with a brownish hue, continuous to granulate, sometimes forming an areolate crust, the granules contiguous, 0.1-0.2 mm wide, slightly convex. Apothecia lecanorine, sessile, round to irregular in outline, 0.5-1.5(-3) mm across, with a pale yellow-green to pale greenish brown, epruinose, flat to convex disc and a thin, often finally excluded thalline margin. Thalline exciple corticate, with sparse algae, lacking crystals, 30-70 μm wide laterally, up to 110 μm wide at base; proper exciple colourless, 25-50 μm wide; epithecium brownish, without crystals; hymenium colourless, 45-60 μm high, I+ blue; paraphyses coherent, sparingly branched and anastomosing, 1.5-2 μm thick at mid-level, the apical cells up to 2.5 μm wide; hypothecium pale yellowish brown. Asci 8-spored, clavate, Lecanora-type. Ascospores 1-celled, hyaline, narrowly ellipsoid, 7-14 x 2.5-4 μm . Spot tests: thallus K-, C-, KC+ yellowish, P-. Chemistry: isorangiformic acid, usnic acid and zeorin. - Note: this silicicolous species, which is closely related to *L. polytropa*, is apparently quite widespread and locally common along the southern Alps (Roux & coll. 2014).



Lecanora stenotropa



Lecanora stenotropa

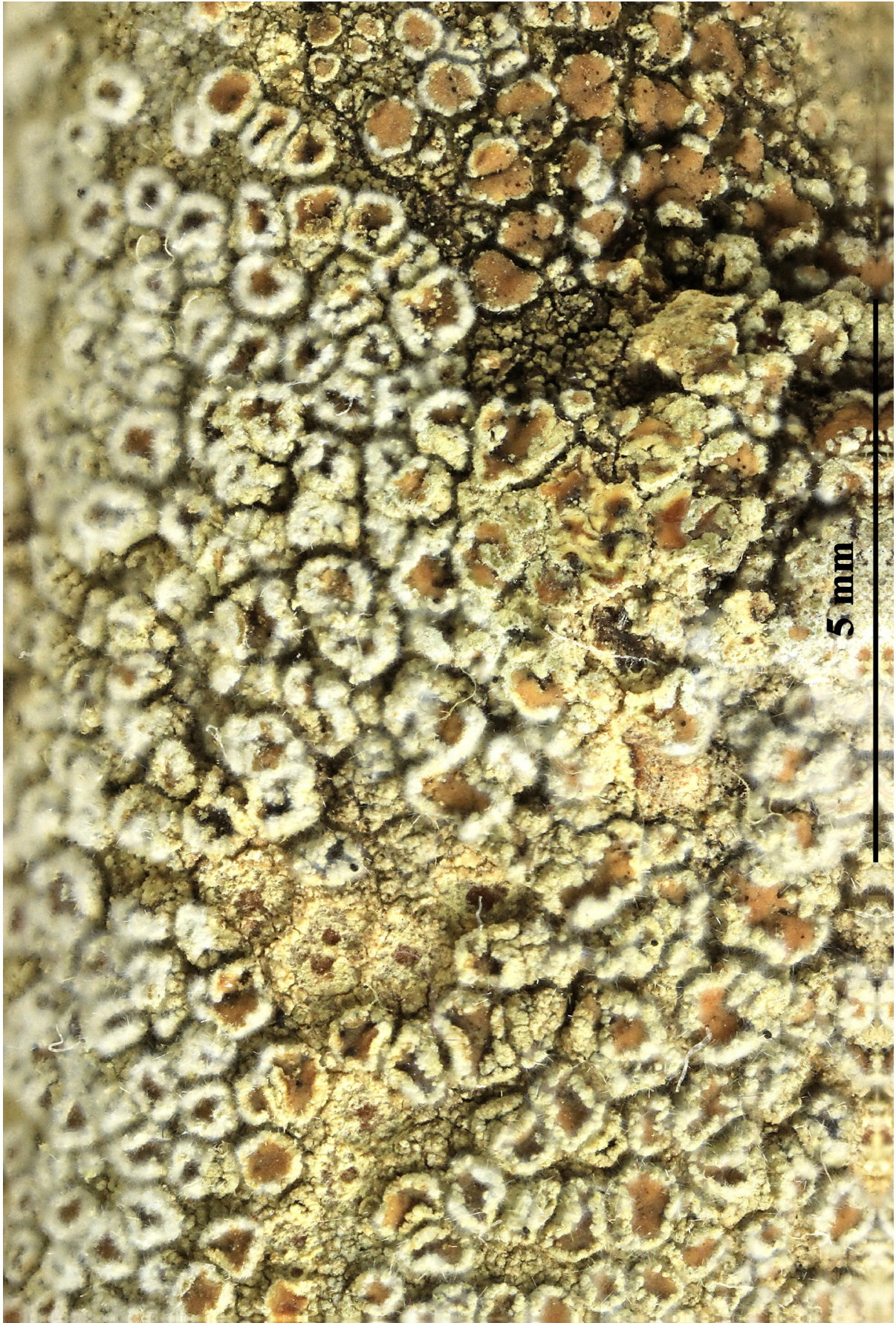
Lecanora strobilina (Spreng.) Kieff., Bull. Soc. Hist. Nat. Metz 19: 74 (1895)
= *Parmelia strobilina* Spreng. 1827
= *Zeora strobilina* (Spreng.) L.M. Weber & Ivanovich, in Ivanovich-Hichins, Weber, Li, Leavitt, Muggia, Palice, Pérez-Ortega, Sohrabi & Printzen, Lichenologist 57: 300 (2025)

[VZ2013], USA. Carolina Borealis, Durham County: inter Durham et Chapel Hill, in horto Villae Pinae, 130 m. Ad ramulos *Celtix sinensis*. Leg. W. Culberson (no. 10623) et C. F. Culberson, 28.8.1983, det. I. M. Brodo, 1984. - Annot.: Usnic acid, zeorin, and traces of unidentified terpenes by TLC; anal. A. Johnson and C. F. Culberson. - EX A. VěřZDA LICHENES SELECTI EXSICCATI NR- 2013.

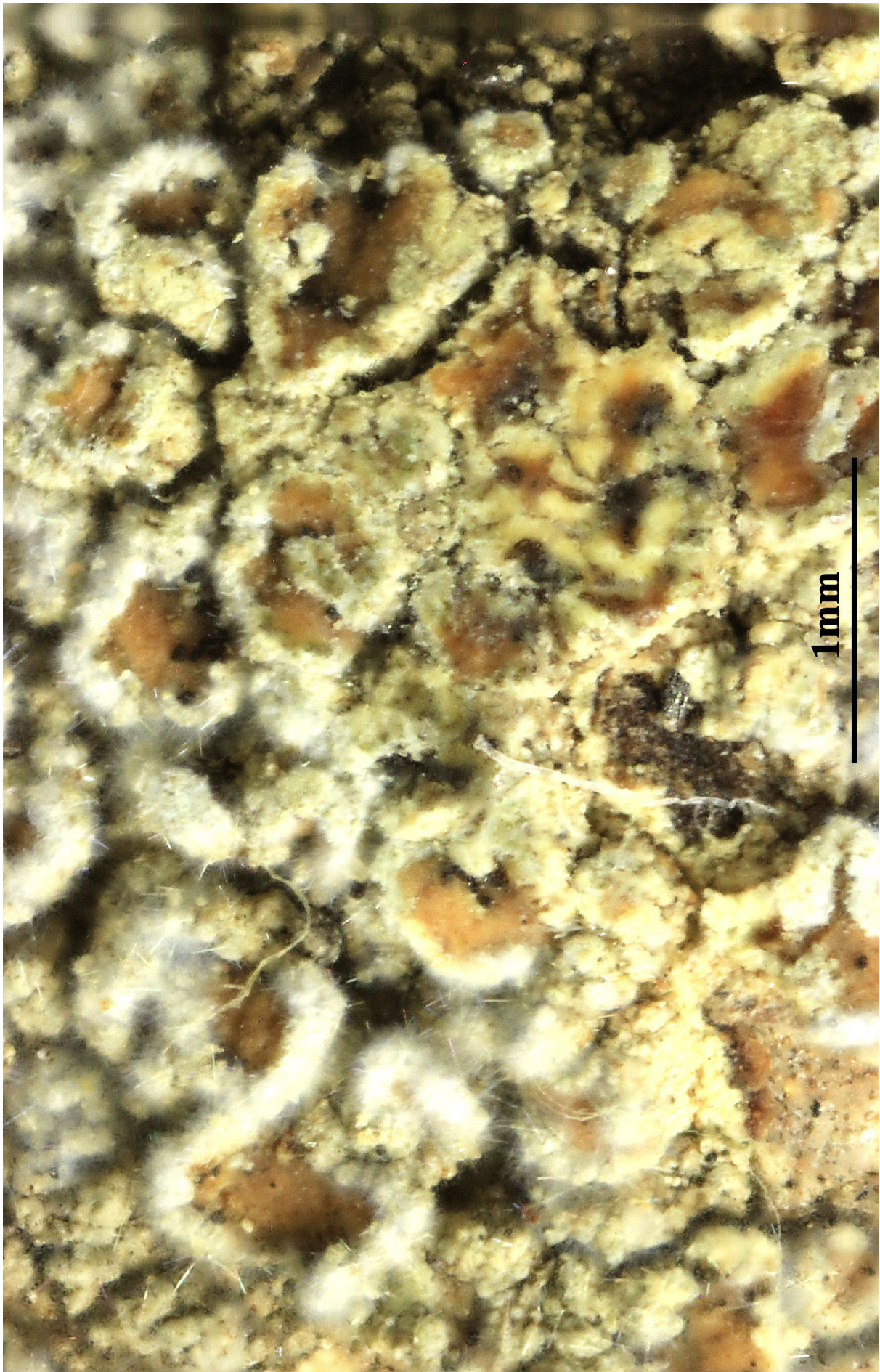
Thallus crustose, poorly developed or granular-warted with areoles often coalescing to form a scurfy or rimose crust; areoles (weakly to) strongly convex, 0.10-0.25 mm in diam., ecorticate but sometimes with a loose unorganised algal free layer of various hyphae; surface greenish to yellowish gray, dull, sometimes covered with terpenoid crystals, esorediate Apothecia rounded or slightly irregular in outline, rarely single, mostly densely crowded, sessile with a weakly constricted base, 0.30-0.40(-0.90) mm in diam; disc yellowish ochre to orange-brown, often with a pinkish hue, flat to moderately or rarely strongly convex, dull, finely white pruinose; margin white, pale gray or more rarely of same color as the thallus, weakly prominent, persistent or excluded, dull, without a parathecial ring; amphithecium present, with an algal layer, laterally 50-100 μ m, basally (45-)60-180 μ m wide, filled with small brownish granules (soluble in K), irregularly entangled, short-celled hyphae with lumina 1.5-2.0 μ m wide, without a true cortex; parathecium hyaline, 15-45 μ m wide; epihymenium greenish ochre to orange-brown, granular granules (soluble in K), 5-15 μ m high hymenium: hyaline or rarely pale yellow or ochre, (35-)40-50 μ m tall; paraphyses simple or weakly, rarely moderately branched and anastomosing near base of hymenium, with lumina basally 0.7-1 μ m wide and apically 1-1.5 μ m wide; subhymenium hyaline, 30-65 μ m thick; hypothecium hyaline or pale yellow, 35-135 μ m thick; asci clavate, 8-spored; ascospores hyaline, simple, narrowly ellipsoid, (8.5-)10.6-12.4(-16.5) x (3-)3.3-3.8(-4.5) μ m; Pycnidia not observed; Spot tests: thallus K-, C-, KC-, P-; Secondary metabolites usnic acid, decarboxysquamatic acid and \pm zeorin. Substrate and ecology: sometimes endosubstratal, mostly on twigs and pine scales, more rarely on trunks in lowland coastal

regions; World distribution: North Africa, North America and SW Europe. Diagnostic features are the content of decarboxysquamatic acid and comparatively small apothecia, which tend to exclude the thalline margin and become more or less biatorine in appearance. From *L. confusa* it can further be distinguished by narrower ascospores.

Lecanora strobilina



Lecanora strobilina

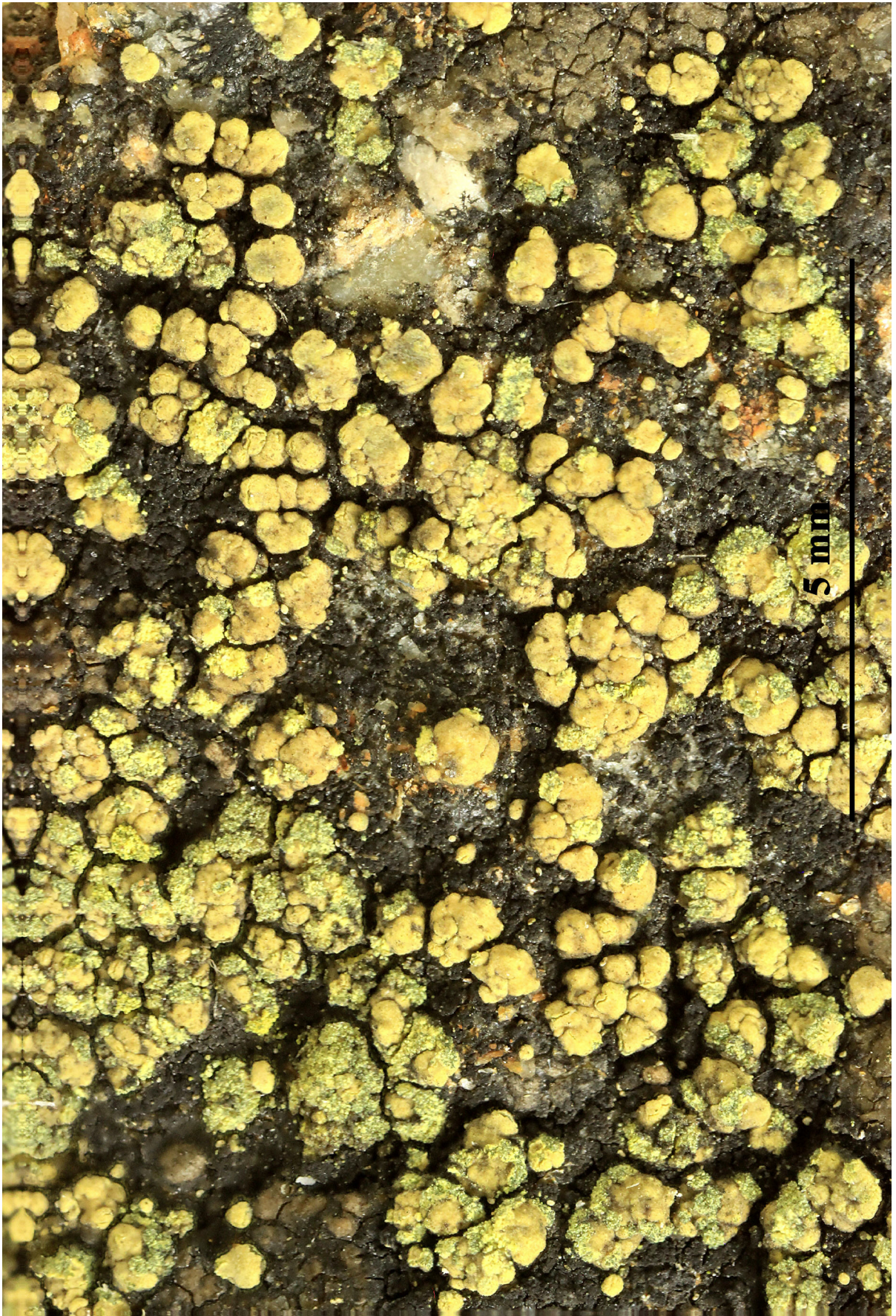


Lecanora strobilina

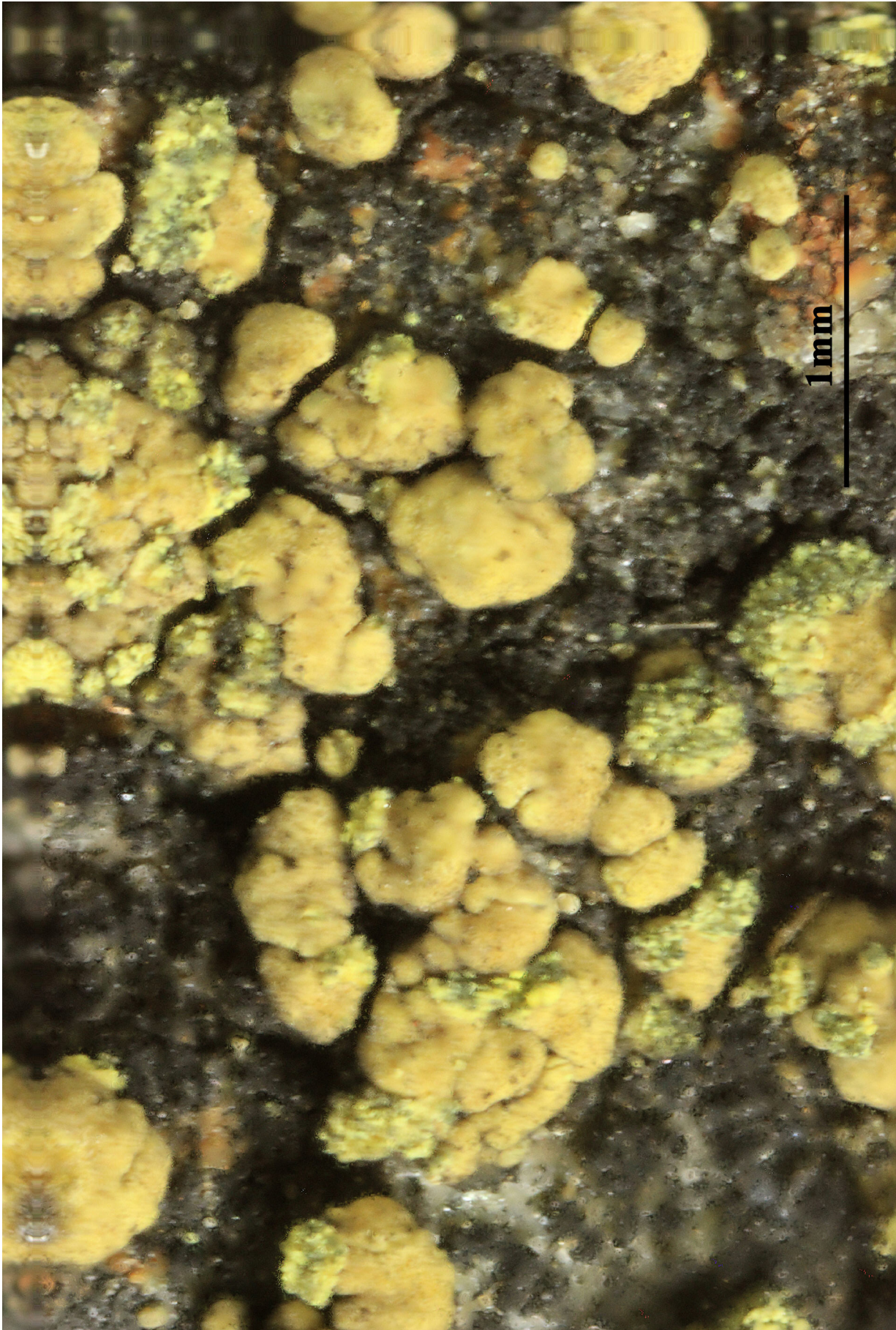
Lecanora subaurea Zahlbr., Cat. Lich. Univers. 5: 547 (1928)
= *Lecanora hercynica* Poelt & Ullrich

[VZ1468], Bohemoslovakia. Slovakia. Carpathes, montes Tatra Minor: Banská Bystrica, supra pagum Spania dolina, 900 m. Ad lapides prope metalla cupri vetusta. Leg. A. Kiszely et A. Vězda, 22.6.1976. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1468.

Thallus crustose, episubstratic, areolate-subsquamulose, yellowish grey to sulphur yellow, forming continuous crusts or more rarely consisting of dispersed, flat to slightly convex, crenulate, 0.5-1.5(-3) mm wide areoles with marginal, bright sulphur-yellow, finely granular, 30-70 µm thick soredia which rarely coalesce into a sorediate crust. Apothecia rare, lecanorine, 0.2-0.8 mm across, sessile, more or less immersed amongst the soredia, with a concave to flat, red-brown to olivaceous brown, epruinose disc and a well-developed, persistent, often sorediate thalline margin. Epithecium red-brown to olive-green, with a few granules; hymenium colourless, 45-60 µm high; paraphyses mostly simple, slightly thickened at apices; hypothecium colourless, inspersed with oil droplets. Asci 8-spored, clavate, Lecanora-type. Ascospores 1-celled, hyaline, broadly ellipsoid to subglobose, 7-10 x 6-8 µm. Photobiont chlorococcoid. Spot tests: K-, C-, KC-, P+ orange-red, UV+ bright orange. Chemistry: rhizocarpic acid, pannarin, zeorin. - Note: on iron-rich rocks, including pebbles.



Lecanora subaurea

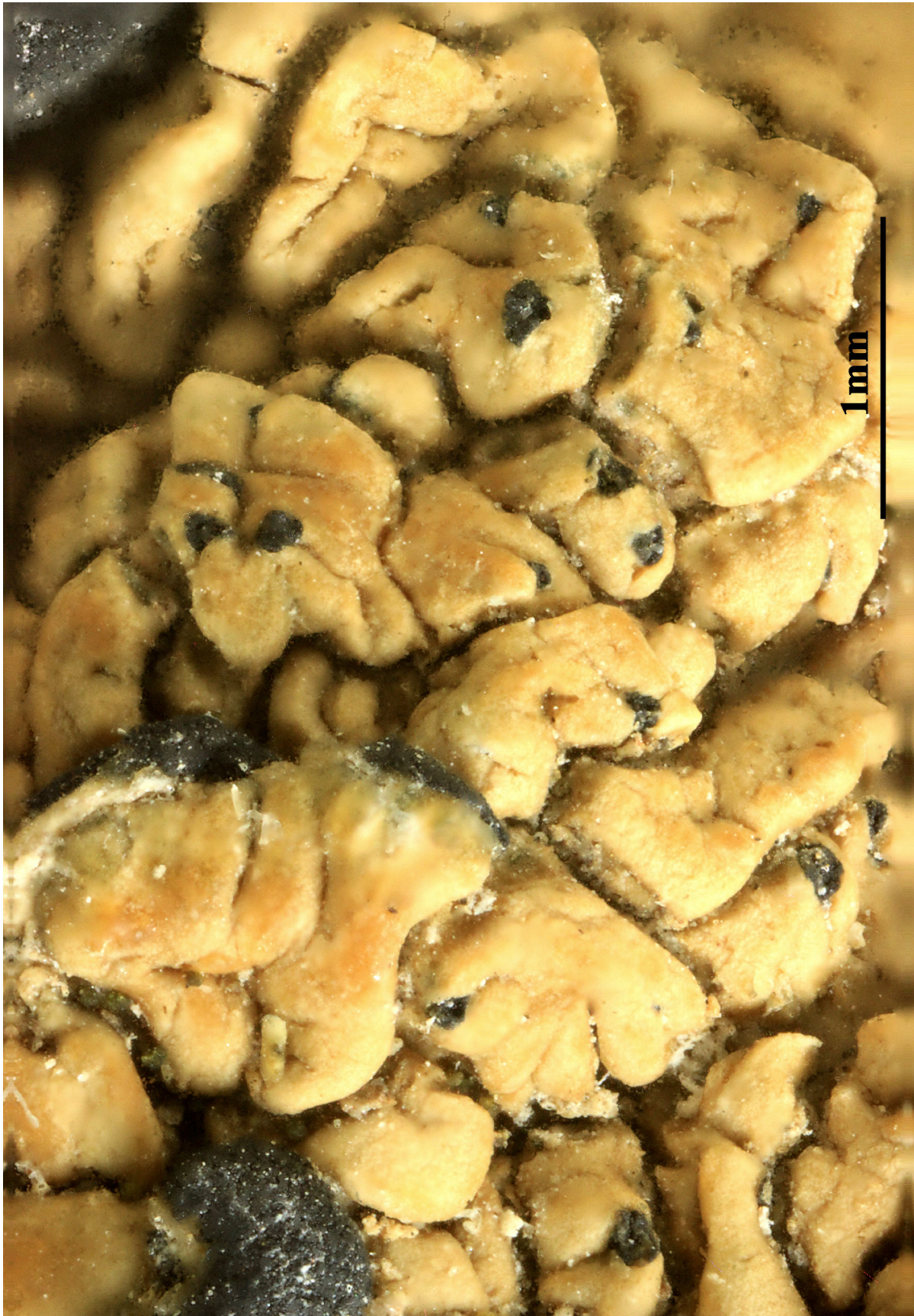


Lecanora subaurea

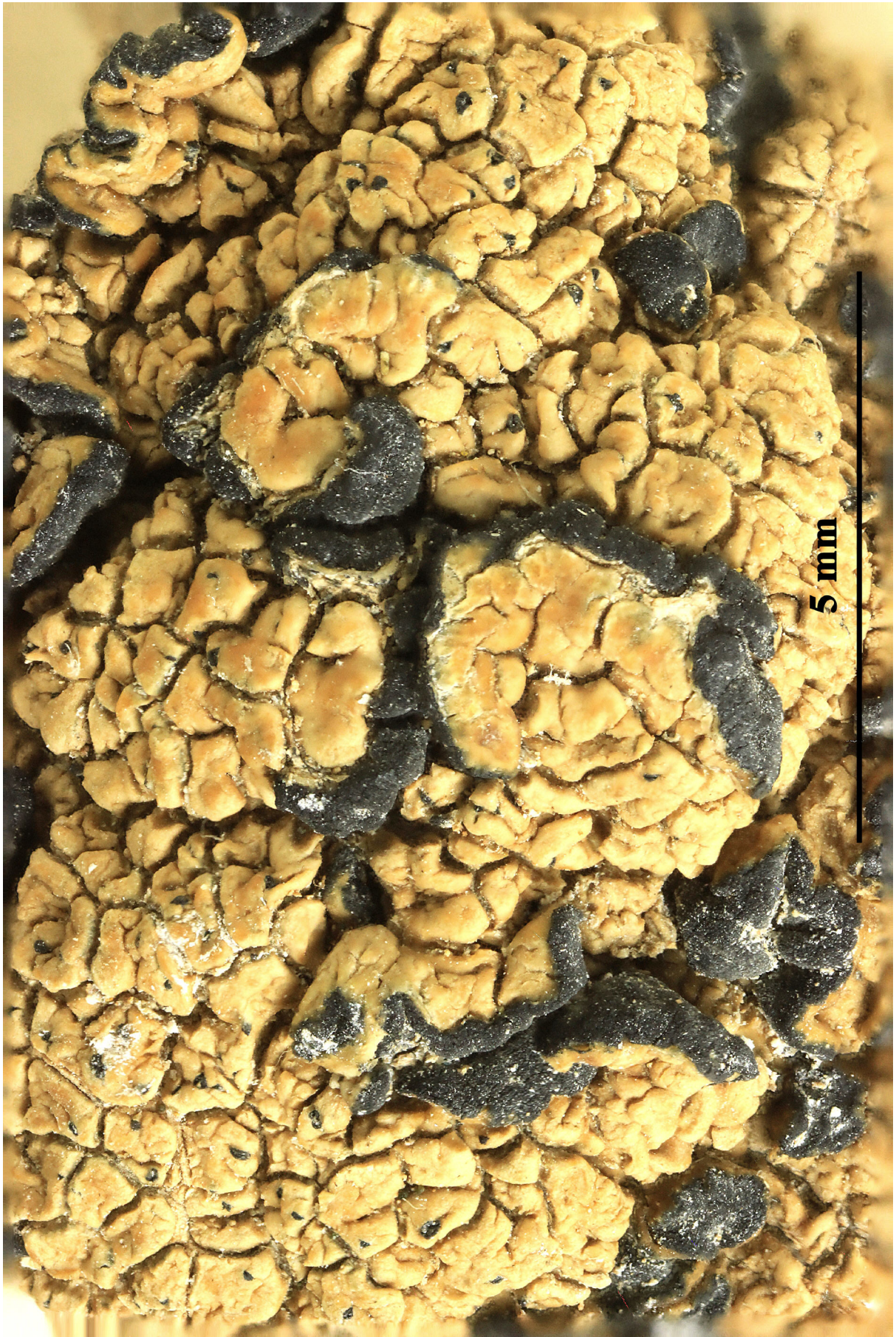
Lecanora subelevata (H. Magn.) Hertel, in Vězda, Lichenes Selecti Exsiccati, Fascicle 87 (nos 2151-2175) (Průhonice): 3 (no. 2160) (1987)
= *Lecidea subelevata* H. Magn. Lich. from Central Asia (1940):52

[VZ2160], URSS. Tadshikistania. Iugum montium Hissarski khrebei dictum. Transitus Anzod, 3700 m. Ad saxa, Leg. V. Vašák, 24.7.1085, det. H. Hertel. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR- 2160.

Thallus determinatus, cretaceus, suborbicularis, rimosus vel rimoso-subareolatus, laevigatus vel inaequalis, ex parte crassus, areolis subplanis vel convexis, rimis tenuissimis separatis, reagentibus immutatus, Apothecia crebra, majuscula, primo immersa, demum elevata, basi constricta, partim confluentia, disco aterrimo, plano, laevigato, margine atro crassiusculo demum excluso circumscissis. Excipulum indistinctum. Hypothecium pallidum. Hymenium tenue, paraphysibus confluentibus. Sporae minutae, ellipsoideae. - Thallus sometimes also cream-coloured, covering several cm square, continuous, sometime distinctly subradiate, sometimes limited by a blackish hypothalline line against other lichens. Circumference thin, cracky, smooth thallus gradually thicker to thick, 0.6-1 mm, toward centre with convex, sometimes bullate areolae, 1-3 mm large, or thallus surface subfarinose, crossed only by narrow fissures. J-, K-, C-. Apothecia sometimes contiguous, forming black areas for 3-5 mm square. Discs in parts of the thallus 50-100, or partly less, disc 0.7-1.5 mm broad, sometimes slightly undulating, smooth but not nitidous. The proper margin quite disappearing in older, above the surface ± elevated apothecia, which are very irregular in shape but remain very thin and are marginated by the thallus, Asci 40-45 x 13-15 µm, clavate. Spores 8.7-8 x 5-6 µm, broadly ellipsoid



Lecanora subelevata

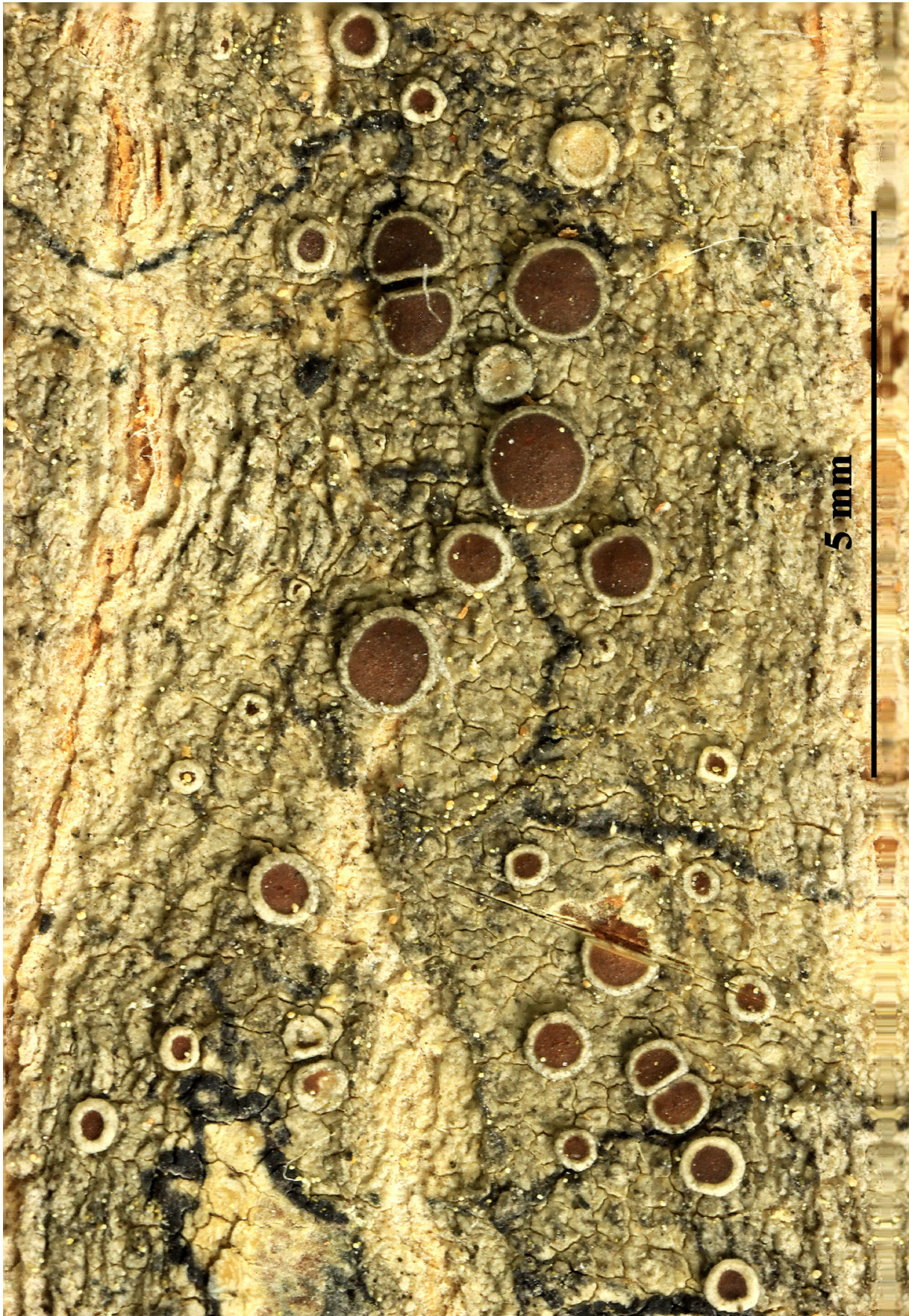


Lecanora subelevata

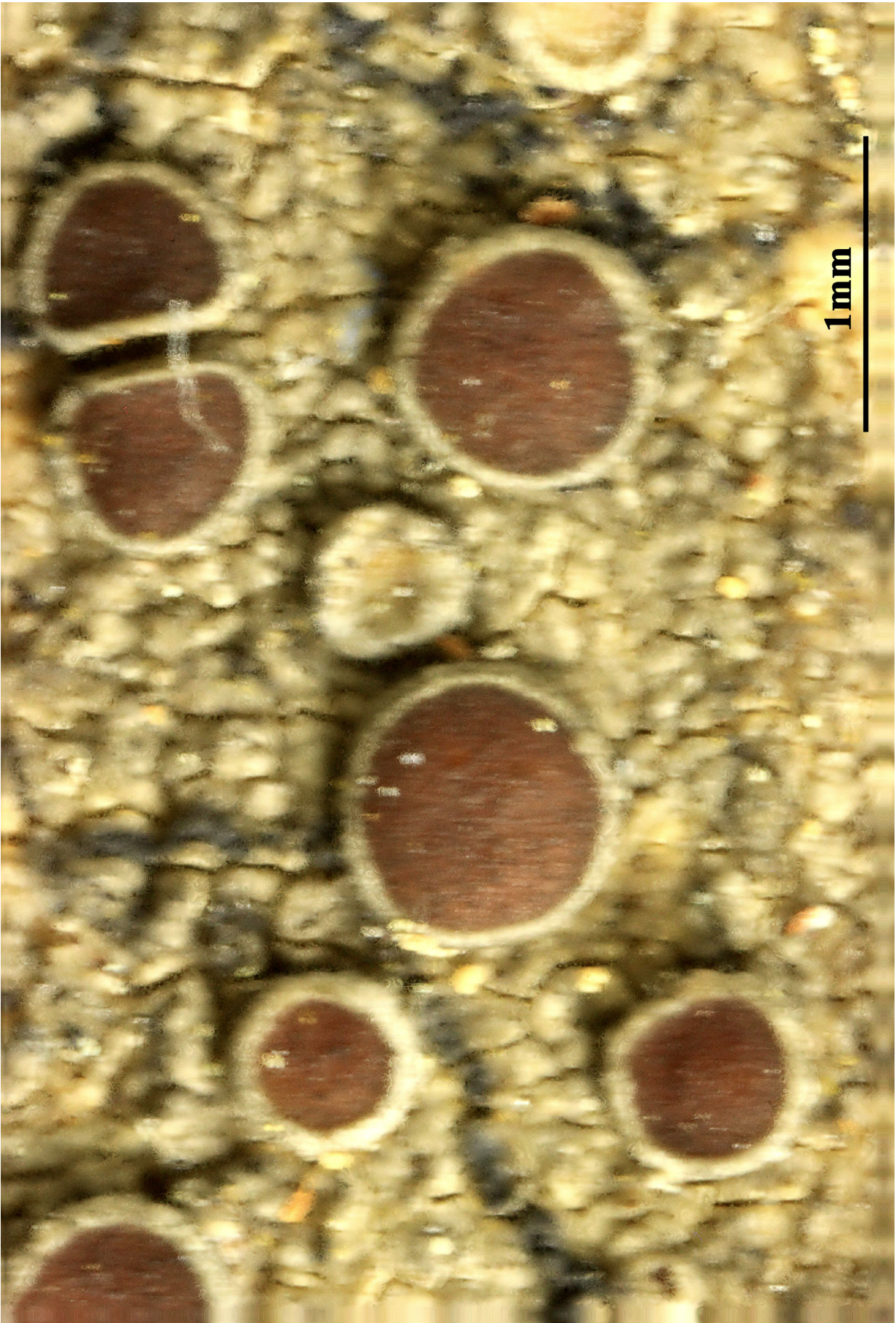
Lecanora subfuscata H. Magn., Acta horti götoburg. 7: 79 (1932)
= *Lecanora argentata* (Ach.) Malme, Lich. Suec. exs. 1: 5 (1897)

[VZ139], Suecia. Öland, Böda Paroecia, Skäftekärr. Ad corticem *Fraxini excelsioris*. Leg. R. Santesson (no.16374), 4.7.1964, det- O. Vitikainen (1872). EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1139.

Thallus crustose, continuous to rimose-verrucose, white, yellowish white or grey-white, sometimes delimited by a dark prothallus. Apothecia lecanorine, sessile, 0.4-1.5(-2) mm across, with a flat, red-brown, epruinose disc and a persistent, smooth or rarely flexuose or crenulate thalline margin. Thalline exciple corticate, with large crystals insoluble in K (well-visible under polarized light), the cortex basally thickened; proper exciple colourless, with crystals insoluble in K, epithecium red-brown to orange-brown, the pigment not dissolving in K, without crystals; hymenium colourless, not interspersed with oil droplets, (60-)75-90(-100) μm high; paraphyses simple or sparingly branched, 1.5-2 μm thick at mid-level, the apical cells slightly thickened to capitate and up to 4 μm wide; hypothecium colourless, not interspersed with oil droplets. Asci 8-spored, clavate, very thin-walled, with a K/I+ blue, tall tholus penetrated by a faintly amyloid apical cushion, the wall K/I-, surrounded by a blue outer layer, Lecanora-type. Ascospores 1-celled, hyaline, ellipsoid, 10-15(-18) x (5.5-)7-9(-10) μm , the wall 0.6-1.2 μm thick. Pycnidia immersed, cerebriform. Conidia thread-like, 17-22 μm long. Photobiont chlorococcoid. Spot tests: thallus K+ yellow, C-, KC-, P- or P+ pale yellow. Chemistry: atranorin (major), chloroatranorin (minor), 4-dichlorogangaleoidin (minor), gangaleoidin (major) and norgangaleoidin (minor). - Note: a widespread, temperate to southern boreal-montane lichen with optimum on smooth bark, especially of *Fagus*. The synonymisation of *L. subrugosa* with this species is supported by molecular data (Malíček in litt., see also Malíček 2014).



Lecanora subfuscata



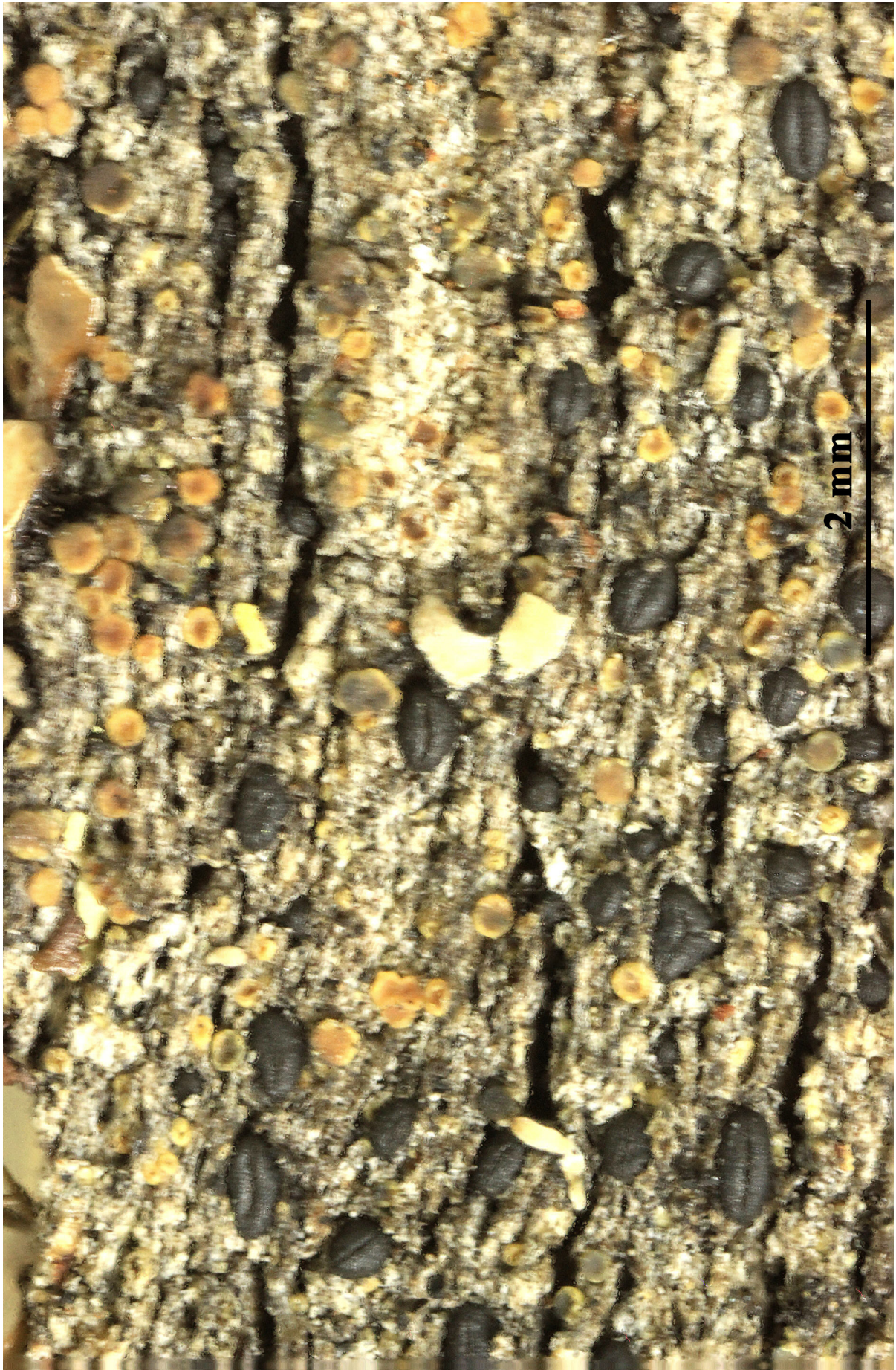
Lecanora subfuscata

Lecanora subintricata (Nyl.) Th. Fr., Lich. Scand. (Upsaliae)(1): 265 (1871)
= *Lecanora varia* var. *subintricata* Nyl. 1868
= *Lecanoropsis subintricata* (Nyl.) Ivanovich & Printzen, in Ivanovich,
Weber, Palice, Hollinger, Otte, Sohrabi, Sheehy & Printzen, Phytotaxa
695(1): 45 (2025)

[VZ1858], Suecia. Härjedalen. Tännäs paroecia, in valle rivi Ljusnan prope deversorii Rasmundberget, 750 m. Ad truncum *Betulae* in silva subalpina. Leg. et det. R. Santesson (no. 2969b), 18.7.1979. - adest *Hysterium pulicare* Pers. ex Fr. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1858.

Thallus crustose, mostly endosubstratic, poorly developed or of dispersed thin warts, whitish grey to grey with or without a yellow hue, rarely brown or dark brown, forming up to several cm wide patches, the areoles (when developed) rounded to slightly deformed, 0.1-0.3 mm wide, moderately to strongly convex, ecorticate. Apothecia at first more or less lecanorine, then biatorine, 0.2-0.6 mm across, rounded, sessile and constricted at base, with a pale yellow or greyish yellow/ochre to brown or dark grey, rarely finely white-pruinose, flat to slightly convex disc, the margin initially strongly prominent and concolorous with thallus, finally sometimes more or less excluded or concolorous with disc. Thalline exciple corticate, 40-85(-150) μm wide laterally, not much wider at base, with many algal cells, the cortex (19-)25-50(-58) μm wide laterally, (19-)29-48(-59) μm wide at base; proper exciple poorly developed and mostly indistinct, 10-30 μm wide, brownish in the outer part, which is filled with granules; epithecium colourless to spotted yellow-brown or faint brown, sometimes with greenish spots, with fine and larger yellowish granules soluble in K, the pigmented parts N+ red-brown; hymenium colourless, with orange-brown granules, (30-)35-45(-50) μm high; paraphyses simple or sparingly branched and anastomosing, 1.5-2 μm thick at mid-level, the apical cells 2-3.5 μm wide, the apical gel sheath 2.5-3.5 μm wide; hypothecium colourless or pale yellow, (35-)50-145(-175) μm high. Asci 8-spored, clavate, very thin-walled, with a K/I+ blue, tall tholus penetrated by a faintly amyloid apical cushion, the wall K/I-, surrounded by a blue outer layer, Lecanora-type. Ascospores 1-celled, hyaline, narrowly ellipsoid to ellipsoid, (5-)6-10(-12) x (2.5-)3-4(-6) μm . Micropycnidia rare; microconidia bacilliform, 6-7 x 1.1.5 μm . Mesopycnidia common, black in upper half, sessile; mesoconidia ellipsoid to short cylindrical, 2.8-3.4 x c. 2-2.5 μm . Photobiont chlorococcoid. Spot tests: thallus K-

or K⁺ pale yellow, C⁻, KC⁺ yellow, P⁻. Chemistry: thallus with usnic acid (major), rarely isousnic acid or brialmontin1 (minor); apothecia with a mixture of the Cinereorufa-green and Superba-brown pigments. - Note: a circumboreal-montane lichen found on lignum and, more rarely, on the bark of conifers in upland areas. For further details see Printzen (2001) and van den Boom & Brand (2008) and Ivanovich & al. (2025).



Lecanora subintricata

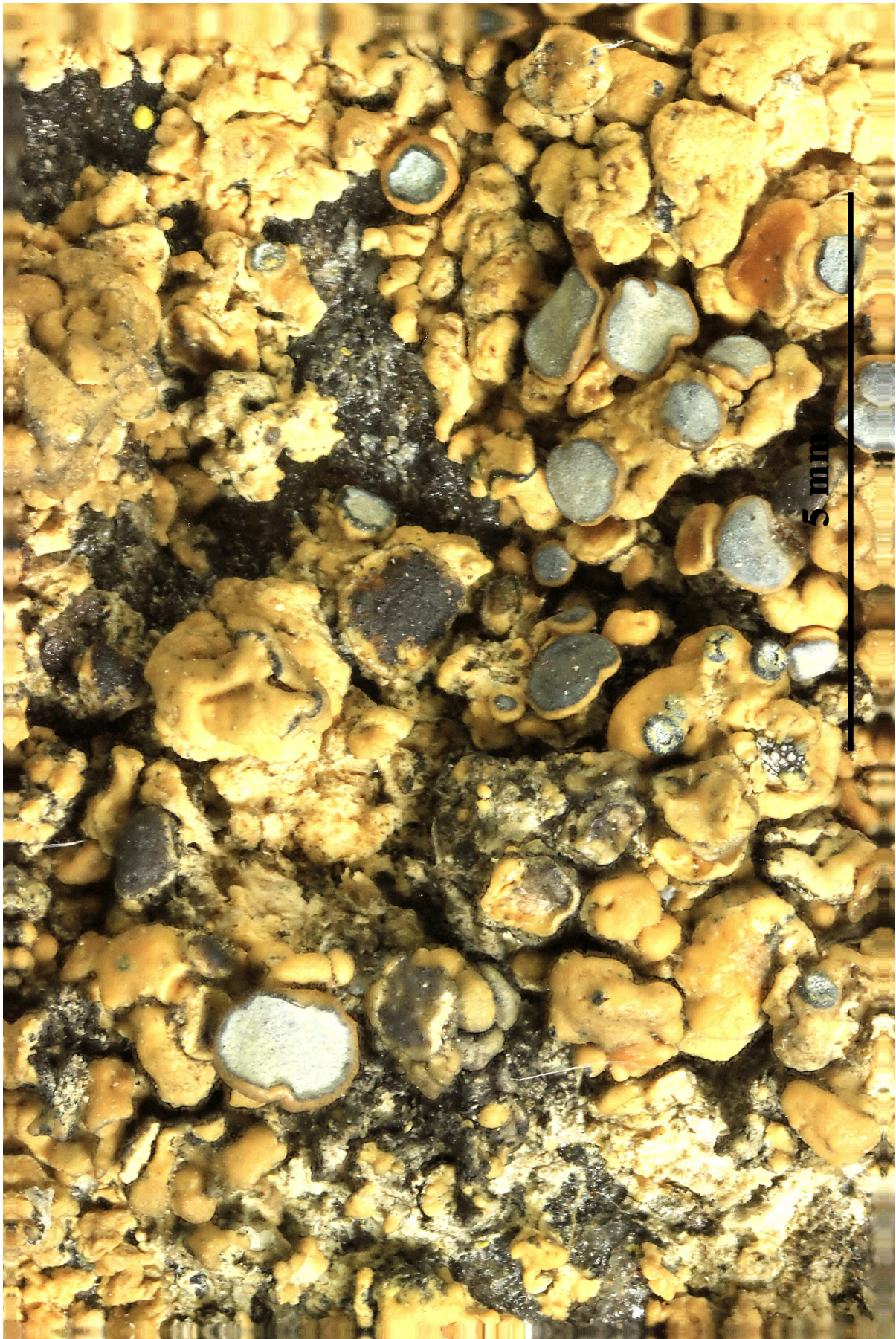


Lecanora subintricata

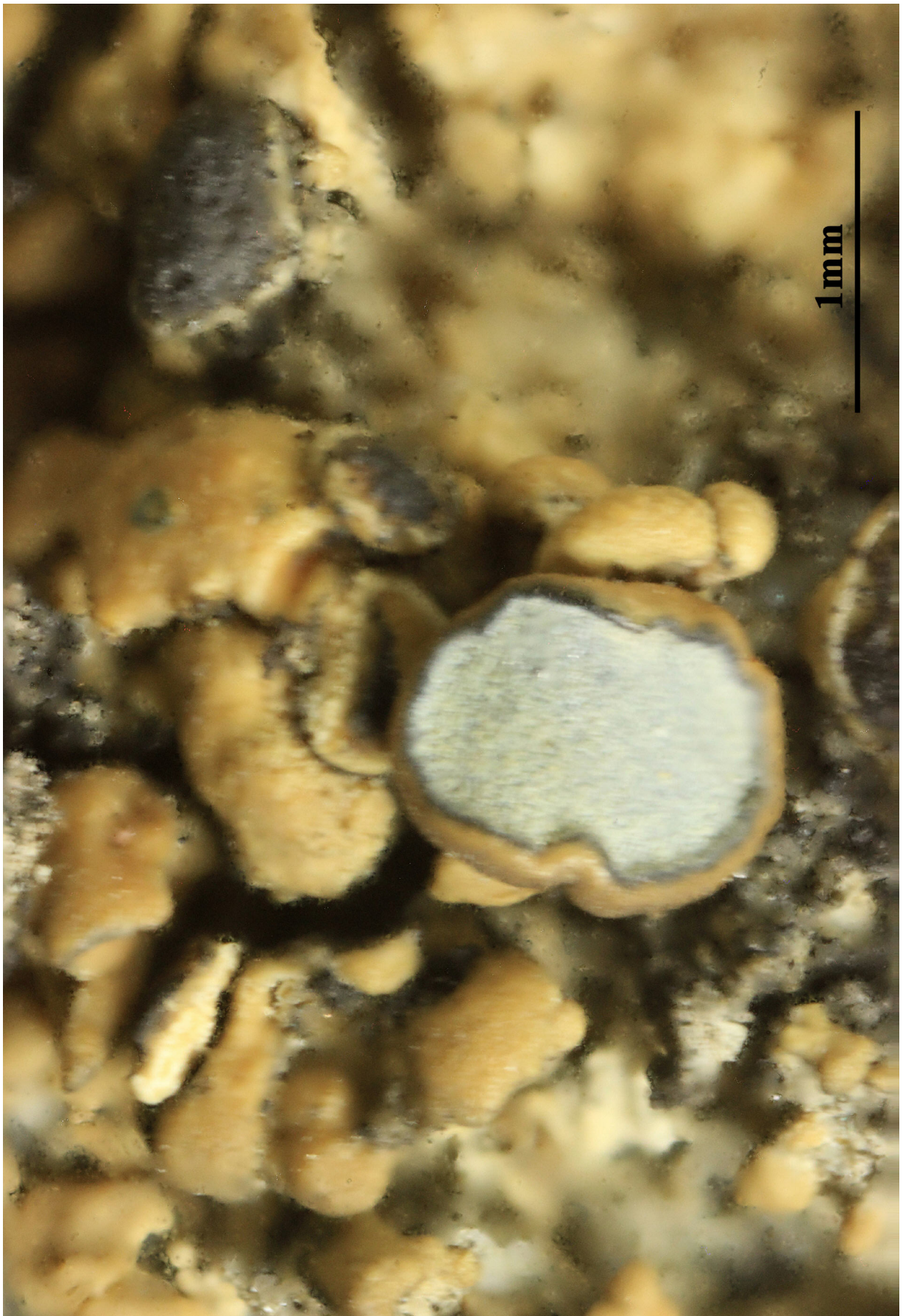
Lecanora subradiosa Nyl., Flora, Regensburg 55: 549 (1872)
= *Glaucomaria swartzii* (Ach.) S.Y. Kondr., Lökös & Farkas, in Kondratyuk, Lökös, Jang, Hur & Farkas, Acta Bot. Hung. 61(1-2): 154 (2019)

[VZ1111], Austria. Stiria. Deutschlandberg, in montes Handalpe supra Weineben, 1850 m. In praeruptis et tectis speluncarum in rupibus grandibus. Leg. J. Poelt et H. Vänskä, 13.6.1972. EX A. VĚZDA LICHE-
NES SELECTI EXSICCATI NR. 1111.

Thallus crustose, episubstratic, rimose to verrucose-areolate, yellowish green, often delimited by a white, more or less arachnoid prothallus, usually subplacodioid. Areoles flat to strongly convex, thick, ecorticate. Apothecia lecanorine, constricted at base to almost stalked, 0.3-1.5 mm across with a brown or grey-brown, but heavily white- or bluish grey-pruinose, flat to convex disc, and a thin, even, smooth thalline margin, without an inner parathecial ring. Thalline exciple with an algal-free, strongly conglomerate eucortex and a more or less loose medullar plectenchyma in inner parts; proper exciple colourless, containing crystals soluble in K; epithecium brown to dark brown, with crystals, the pigment and the crystals dissolving in K; hymenium colourless; paraphyses slightly thickened at tips; hypothecium colourless. Asci 8-spored, elongate-clavate, very thin-walled, with a K/I+ blue, tall tholus penetrated by a faintly amyloid apical cushion, the wall K/I-, surrounded by a K/I+ blue outer layer, Lecanora-type. Ascospores 1-celled, hyaline, ellipsoid, 9-14 x 6-7.5 μm . Photobiont chlorococcoid. Spot tests: thallus and thalline margin of apothecia K+ yellow, C+ orange, KC+ orange, P+ pale yellow; apothecial disc (pruina) C+ yellow-orange, KC+ orange. Chemistry: atranorin (major), arthotelin (with thiophanic acid and dichlornorlichexanthone), sometimes roccellic acid. - Note: on steeply inclined or rain-sheltered surfaces of siliceous rocks, with optimum near and above treeline; known from the Mediterranean mountains.



Lecanora subradiosa

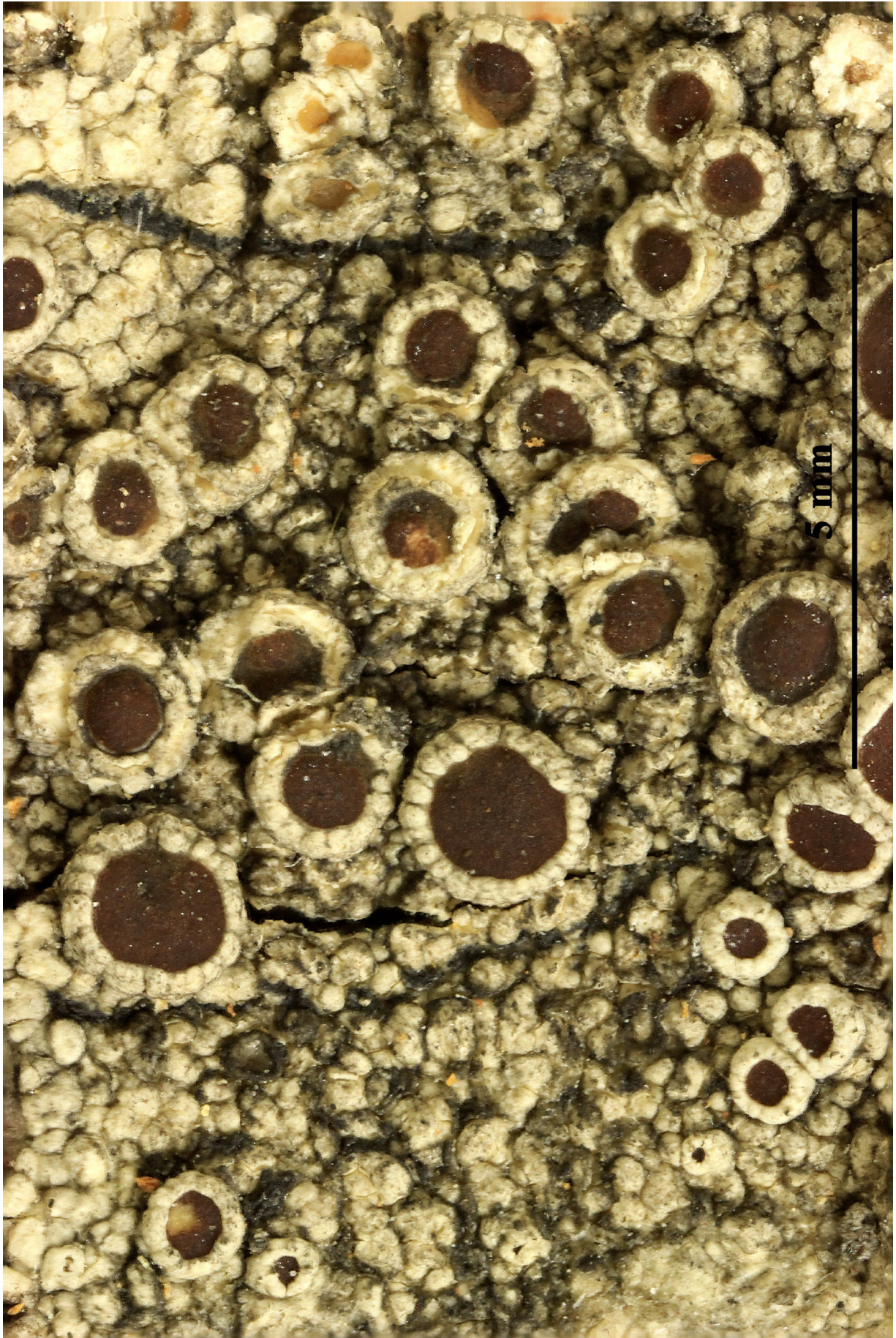


Lecanora subradiosa

Lecanora subrugosa Nyl., Flora, Regensburg 58(1): 15 (1875)
=*Lecanora argentata* (Ach.) Malme Lich. Suec. Exs.: nr. 5, 1897.
=*Parmelia subfusca* var. *argentata* Ach. - Meth. Lich.: 169, 1803.

[VZ1063], Suecia. Vermlandia. Kila Paroecia, prope lacum Knässjön, 70 m. Ad corticem *Populi tremulae*. Leg. S. W. Sundell (no. 7882), 2.6.1971. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1063.

Thallus crustose, continuous to rimose-verrucose, white, yellowish white or grey-white, sometimes delimited by a dark prothallus. Apothecia lecanorine, sessile, 0.4-1.5(-2) mm across, with a flat, red-brown, epruinose disc and a persistent, smooth or rarely flexuose or crenulate thalline margin. Thalline exciple corticate, with large crystals insoluble in K (well-visible under polarized light), the cortex basally thickened; proper exciple colourless, with crystals insoluble in K, epithecium red-brown to orange-brown, the pigment not dissolving in K, without crystals; hymenium colourless, not interspersed with oil droplets, (60-)75-90(-100) μm high; paraphyses simple or sparingly branched, 1.5-2 μm thick at mid-level, the apical cells slightly thickened to capitate and up to 4 μm wide; hypothecium colourless, not interspersed with oil droplets. Asci 8-spored, clavate, very thin-walled, with a K/I+ blue, tall tholus penetrated by a faintly amyloid apical cushion, the wall K/I-, surrounded by a blue outer layer, Lecanora-type. Ascospores 1-celled, hyaline, ellipsoid, 10-15(-18) x (5.5-)7-9(-10) μm , the wall 0.6-1.2 μm thick. Pycnidia immersed, cerebriform. Conidia thread-like, 17-22 μm long. Photobiont chlorococcoid. Spot tests: thallus K+ yellow, C-, KC-, P- or P+ pale yellow. Chemistry: atranorin (major), chloroatranorin (minor), 4-dichlorogangaleoidin (minor), gangaleoidin (major) and norgangaleoidin (minor). - Note: a widespread, temperate to southern boreal-montane lichen with optimum on smooth bark, especially of *Fagus*.



Lecanora subrugosa



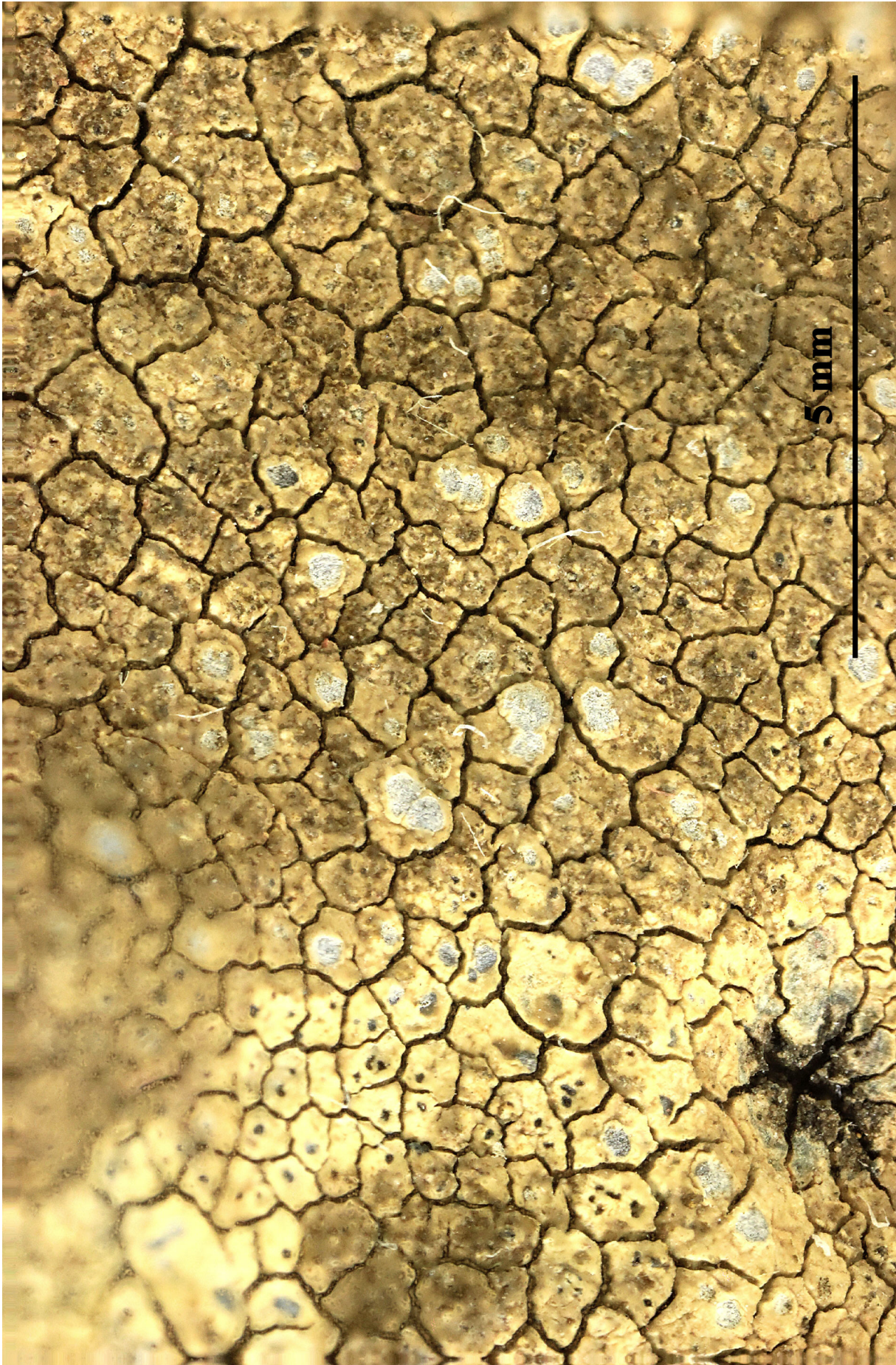
Lecanora subrugosa

Lecanora sulphurata Ach. ex Nyl., Bull. Soc. linn. Normandie, sér. 2 6(2): 286 (1873) [1872]

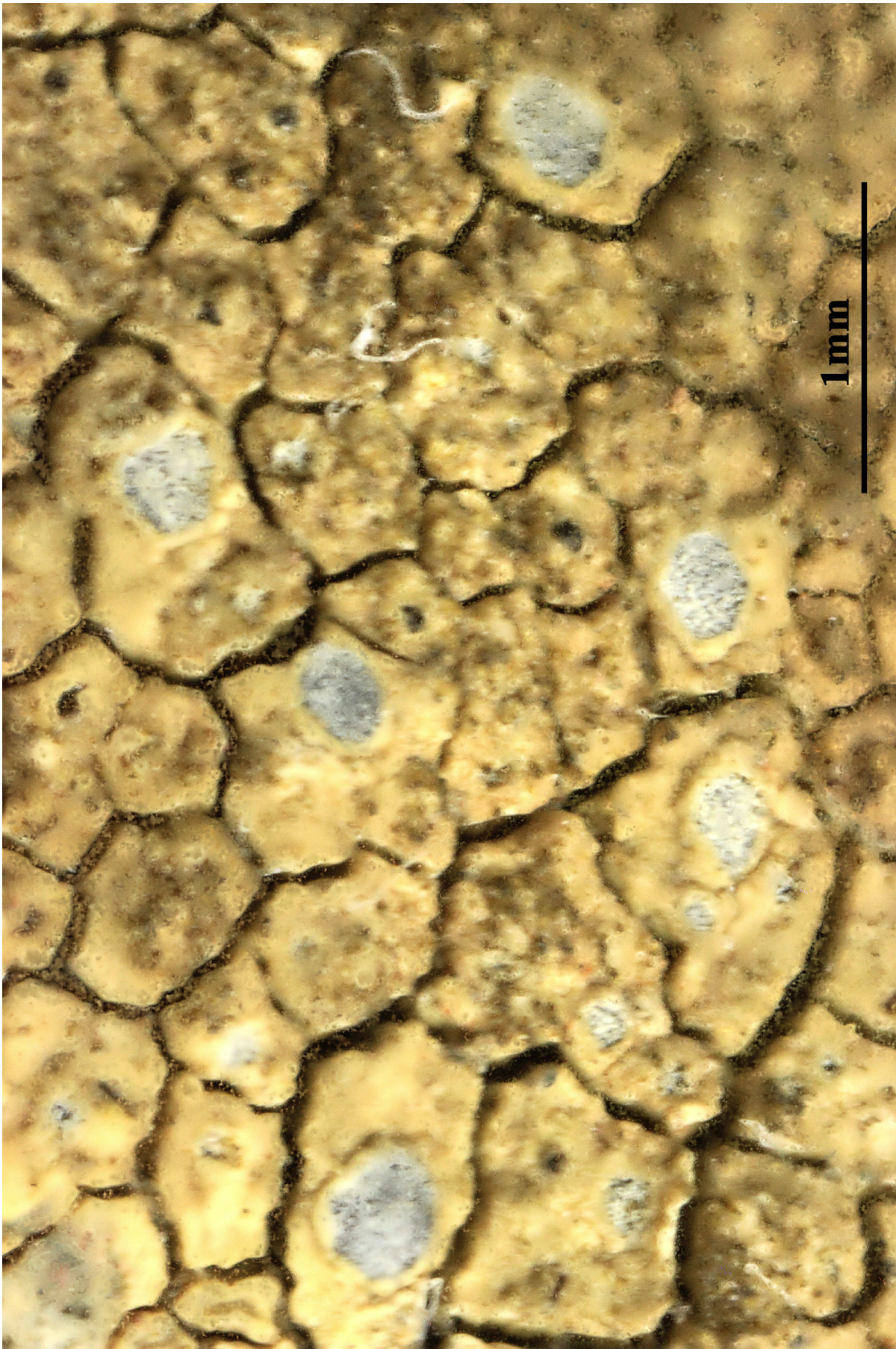
= *Glaucomaria rupicola* (L.) P.F. Cannon, in Cannon, Malíček, Ivanovich, Printzen, Aptroot, Coppins, Sanderson, Simkin & Yahr, Revisions of British and Irish Lichens 25: 75 (2022)

[VZ1165], Gallia. Var. Evenos, 330 m. Ad saxa basaltica locis apricis. Leg. Y. Rondon, 3.3.1973. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1165.

Thallus crustose, episubstratic, finely rimose-areolate to slightly verrucose, yellowish grey to yellowish green, sometimes delimited by a dark prothallus. Areoles flat, ecorticate, smooth, epruinose. Apothecia lecanorine, subimmersed when young, then broadly sessile, (0.5-)1-2(-3) mm across, with a brown, grey-brown or black (in forms parasitized by *Arthonia varians*), but heavily bluish-white-pruinose, usually flat disc, and a thin, persistent, smooth, sometimes flexuose thalline margin; proper margin not visible macroscopically. Thalline exciple pseudocorticate, with numerous algal cells, containing small crystals soluble in K; proper exciple colourless, lacking crystals; epithecium almost colourless to yellowish or greenish brown, the pigment dissolving in K, with a layer of crystals dissolving in K and reacting C+ yellow; hymenium colourless, 75-95 µm high, not interspersed with oil droplets; paraphyses 2-3 µm thick, the apical cells not or slightly thickened, to 3.5 µm wide; hypothecium colourless. Asci 8-spored, elongate-clavate, very thin-walled, with a K/I+ blue, tall tholus penetrated by a faintly amyloid apical cushion, the wall K/I-, surrounded by a K/I+ blue outer layer, *Lecanora*-type. Ascospores 1-celled, hyaline, ellipsoid, 9-15 x 5-8 µm, the wall <1 µm thick. Pycnidia immersed, the wall colourless except around the ostiole. Conidia thread-like, sometimes curved, 14-25 µm long. Photobiont chlorococcoid. Spot tests: cortex K+ yellow, C+ yellow, KC+ yellow, P- or P+ pale yellow; medulla C+ and KC+ orange; apothecial disc C+ yellow to orange, P-. Chemistry: thallus with atranorin (major), roccellic acid, chloroatranorin, thiophanic acid, dichlorlichexanthone, 2.5.7.-trichlornorlichenxanthone (the xanthenes present also in the cortex); pruina of apothecia with sordidone (major). - Note: more southern, more photo- and thermophilous than the typical subspecies; in the Alps it is common only in dry situations, such as on south-exposed faces.



Lecanora sulphurata



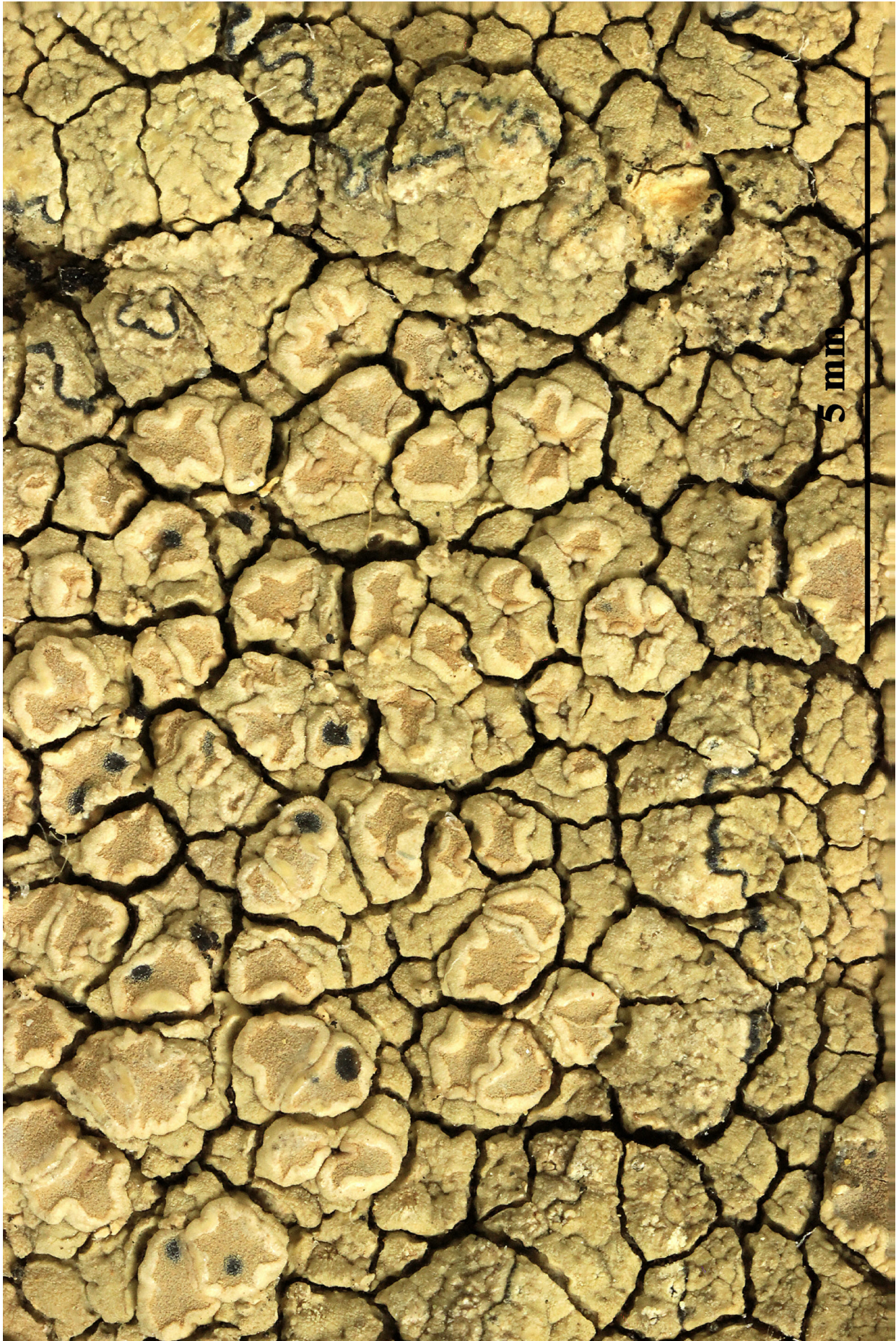
Lecanora sulphurata

Lecanora sulphurata Ach. ex Nyl., Bull. Soc. linn. Normandie, sér. 2 6(2): 286 (1873) [1872]

= *Glaucomaria rupicola* (L.) P.F. Cannon, in Cannon, Malíček, Ivanovich, Printzen, Aptroot, Coppins, Sanderson, Simkin & Yahr, Revisions of British and Irish Lichens 25: 75 (2022)

[VZ1631], Gallia. Var. *insula*. Port Cros: Les Crêtes du Sud, 125 m. Ad saxa schistosa. Leg. Y- Rondon, 18.7.1973. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1631.

Thallus crustose, episubstratic, finely rimose-areolate to slightly verrucose, yellowish grey to yellowish green, sometimes delimited by a dark prothallus. Areoles flat, ecorticate, smooth, epruinose. Apothecia lecanorine, subimmersed when young, then broadly sessile, (0.5-)1-2(-3) mm across, with a brown, grey-brown or black (in forms parasitized by *Arthonia varians*), but heavily bluish-white-pruinose, usually flat disc, and a thin, persistent, smooth, sometimes flexuose thalline margin; proper margin not visible macroscopically. Thalline exciple pseudocorticate, with numerous algal cells, containing small crystals soluble in K; proper exciple colourless, lacking crystals; epithecium almost colourless to yellowish or greenish brown, the pigment dissolving in K, with a layer of crystals dissolving in K and reacting C+ yellow; hymenium colourless, 75-95 µm high, not interspersed with oil droplets; paraphyses 2-3 µm thick, the apical cells not or slightly thickened, to 3.5 µm wide; hypothecium colourless. Asci 8-spored, elongate-clavate, very thin-walled, with a K/I+ blue, tall tholus penetrated by a faintly amyloid apical cushion, the wall K/I-, surrounded by a K/I+ blue outer layer, *Lecanora*-type. Ascospores 1-celled, hyaline, ellipsoid, 9-15 x 5-8 µm, the wall <1 µm thick. Pycnidia immersed, the wall colourless except around the ostiole. Conidia thread-like, sometimes curved, 14-25 µm long. Photobiont chlorococcoid. Spot tests: cortex K+ yellow, C+ yellow, KC+ yellow, P- or P+ pale yellow; medulla C+ and KC+ orange; apothecial disc C+ yellow to orange, P-. Chemistry: thallus with atranorin (major), roccellic acid, chloroatranorin, thiophanic acid, dichlorlichexanthone, 2.5.7.-trichlornorlichenxanthone (the xanthenes present also in the cortex); pruina of apothecia with sordidone (major). - Note: more southern, more photo- and thermophilous than the typical subspecies; in the Alps it is common only in dry situations, such as on south-exposed faces.



Lecanora sulphurata

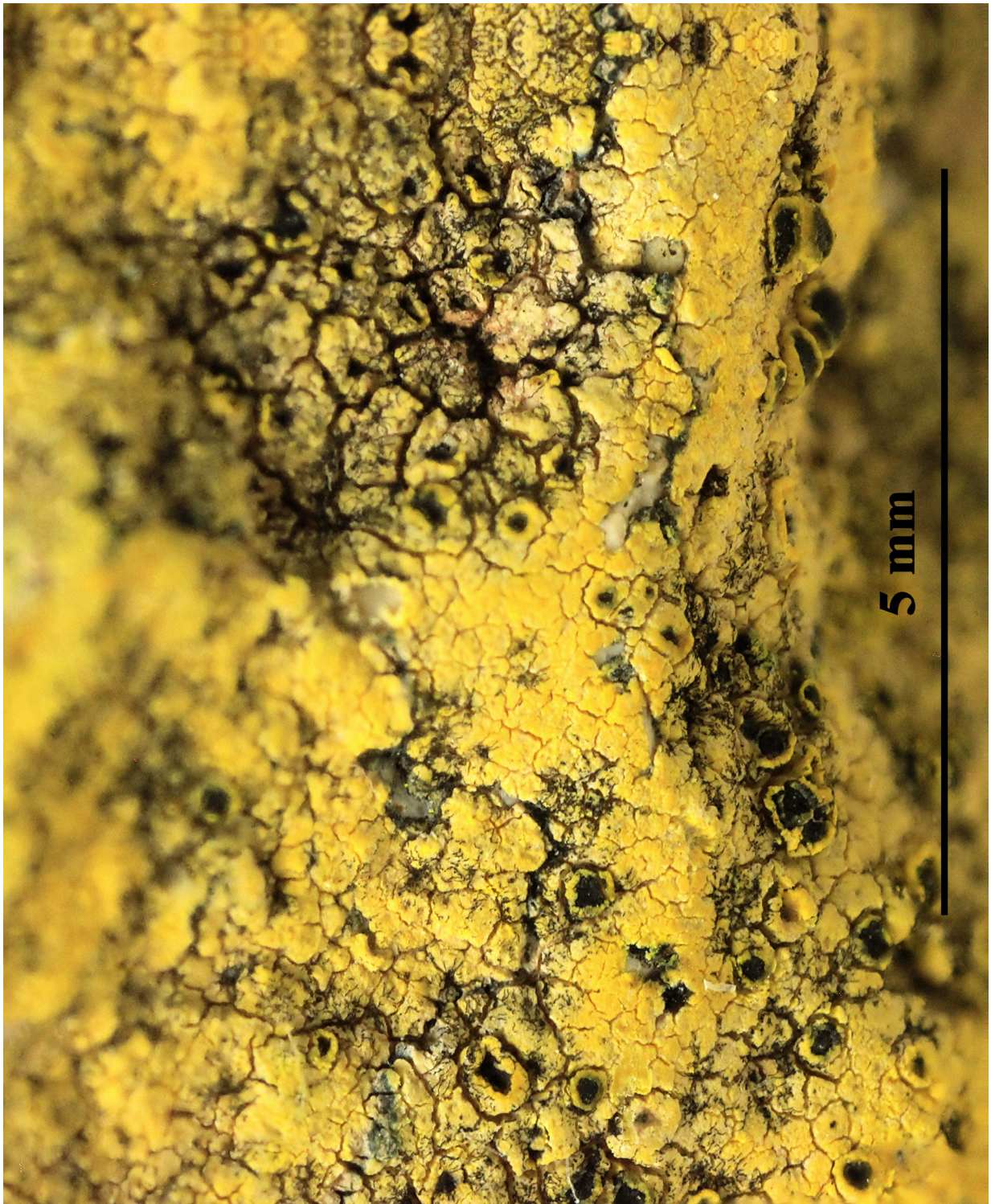


Lecanora sulphurata

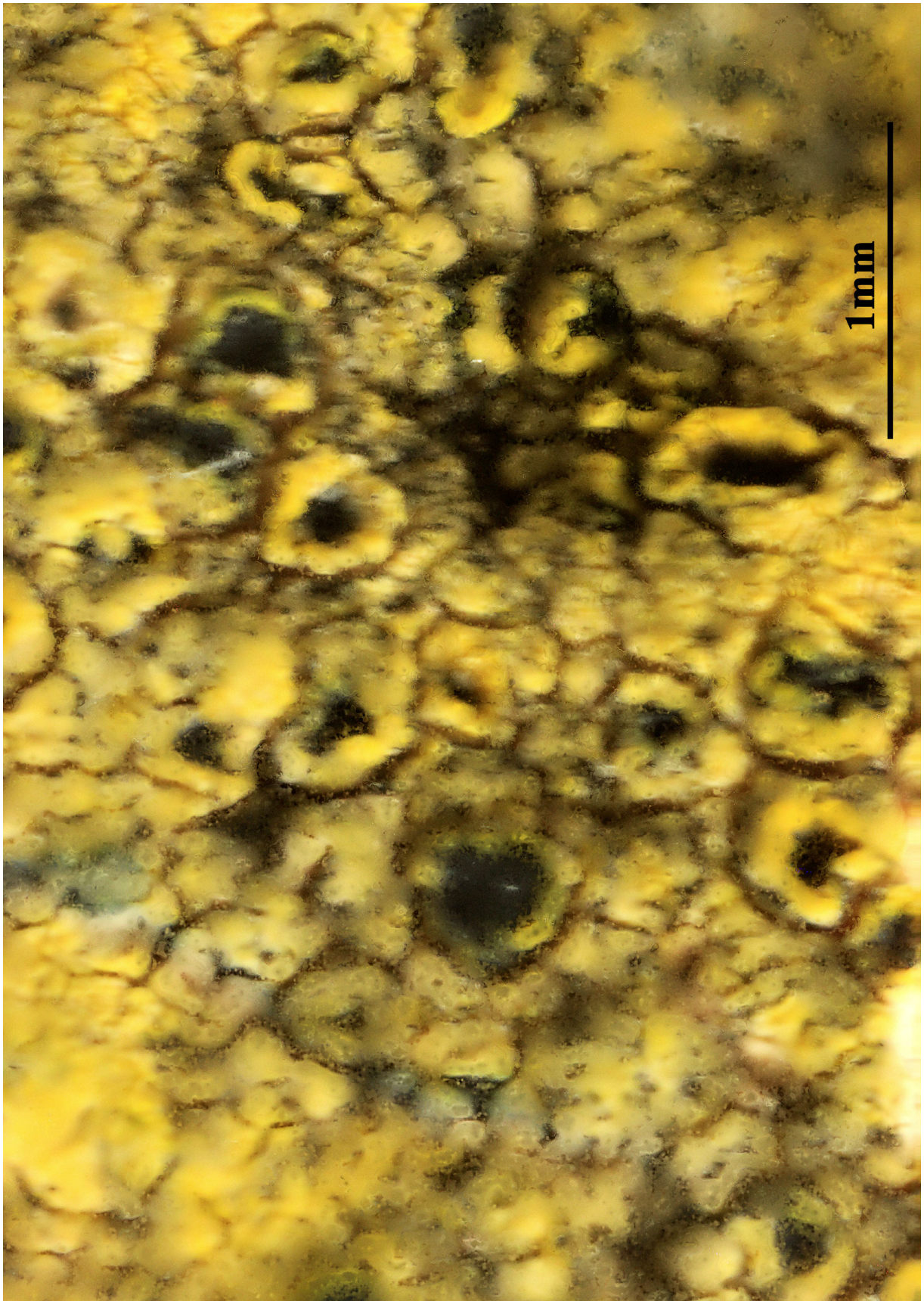
Lecanora sulphurella Hepp, in Hartung, Neue Denkschr. Allg. Schweiz.
Ges. Gesamten Naturwiss. 15: 148 (1857)
= *Lecanora luteola* J. Steiner in Österr. bot Z.: 54:402.

[VZ1258}, Hispania. Prov. Almería. Pozo de los Frailes, prope Cortijo de los López, 200 m. Ad lavam acidam. Leg. A. Farrás & X. Llimona, 16.4.1973. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1258.

Sporen hyalin, 1-zellig (mit 2 großen Öltropfen), 8/Ascus, 10-10.5 x 3.6-4 µm. Chemie: gelbe Thallusteile C+ rot, K- bis fleckig orange, UVL+ orange.



Lecanora sulphurella



Lecanora sulphurella

Lecanora umbrosa Degel., Bot. Notiser: 105 (1943)

= *Lecanora neglecta* (Räsänen) Räsänen

= *Lecanora subfusca* var. *sorediifera* Th. Fr.

[VZ2291], Austria. Tirolia orientalis, alpes dicti "Hohe Tauern" in valle "Umbatal", 1900-1950 m. In lateribus saxorum schistosorum. Leg. J. Poelt et R. Türk, 29.8.1988. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2291.

Thallus crustose, episubstratic, continuous or areolate-verruculose, whitish to yellowish grey, sorediate, sometimes delimited by a thin white prothallus, the soredia 25-50 μm in diam., arranged in confluent, white to yellowish white, flat to concave, 0.3-0.7(-1) mm wide soralia. Apothecia rather rare, lecanorine, sessile, (0.5-)1-2(-3) mm across, with a red-brown, mostly flat, epruinose disc and a persistent, entire or flexuose, smooth or partially sorediate thalline margin. Thalline exciple more or less distinctly corticate, with numerous algal cells, the medulla with small crystals partly soluble in K; proper exciple colourless, with crystals insoluble in K; epithecium red-brown to orange-brown, the pigment not dissolving in K, without crystals; hymenium colourless, 60-90 μm high, not inspersed with oil droplets; paraphyses slightly or not thickened at apex; hypothecium colourless, not inspersed. Asci 8-spored, clavate, very thin-walled, with a K/I+ blue, tall tholus penetrated by a faintly amyloid apical cushion, the wall K/I-, surrounded by a blue outer layer, Lecanora-type. Ascospores 1-celled, hyaline, broadly ellipsoid, (9-)11-15(-17) x 6-9(-12) μm , the wall < 1 μm thick. Spot tests: K+ yellow, C-, KC-, P- or P+ pale yellow. Chemistry: atranorin (major), chloroatranorin (minor), and unidentified triterpenoids. - Note: a cool-temperate to circumboreal-montane lichen found on steeply inclined to rain-sheltered surfaces of weakly calciferous or base-rich, weathered siliceous rocks near or above treeline; certainly more widespread in the Alps but overlooked, being often sterile.



Lecanora umbrosa



Lecanora umbrosa

Lecanora valesiaca (Müll. Arg.) Stizenb., Ber. Tät. St Gall. naturw. Ges.:
342 (1882) [1880-81]
= *Placodium valesiacum* Müll. Arg. - Bull. Trav. Soc. Murithienne Valais,
10: 56, 1881.
= *Squamaria valesiaca* (Müll. Arg.) H. Olivier

[VZ1732], Italia. Liguria. prov. Savona: Alassio prope Sa. Anna, 100 m.
Ad saxa pro parte calcarea. Leg. M. Steiner, 1.5.1965. EX A. V&ZDA
LICHENES SELECTI EXSICCATI NR. 1732.

Thallus crustose-placodioid, episubstratic, pale greenish yellow but densely pruinose throughout and appearing whitish to yellowish white, 0.1-0.5(-1) mm thick, rimose-areolate in central parts, forming regular, 1-2(-4) cm wide rosettes, the central areoles contiguous, 0.5-0.7 mm wide, flat, the marginal lobes flat to slightly convex, 1-2(-5 mm) long, 0.3-0.7(-1) mm wide, clearly radiating, moderately crenate-incised, with undulating margins. Cortex 20-30 µm thick, interspersed with greyish crystals insoluble in K, not overlain by an epinecral layer; medulla white, thickly interspersed with granules. Apothecia common, lecanorine, at first semi-immersed, then sessile, 0.5-1.5(-2) mm across, with a yellowish brown to brown, flat to convex, sometimes pruinose disc and an entire to crenate, persistent, incurved margin which is usually level with disc, sometimes with an indistinct parathecial ring which is paler than disc. Thalline exciple corticate, with an algal layer extending below the hypothecium, the medullary part with coarse crystals insoluble in K; proper exciple pale grey in outer part, colourless or pale yellow in inner part; epithecium yellow-brown to partially greenish (the green parts N+ violet-red). interspersed with fine yellow-brown granules soluble in K; hymenium colourless, 55-75 µm high; paraphyses mostly simple, scarcely thickened at tips; subhymenium pale grey, 30-60 µm high; hypothecium 30-130 µm high in central part. Asci 8-spored, clavate, very thin-walled, with a K/I+ blue, tall tholus penetrated by a faintly amyloid apical cushion, the wall K/I-, surrounded by a blue outer layer, *Lecanora*-type. Ascospores 1-celled, hyaline, ellipsoid to broadly ellipsoid, (8-)9-11(-12) x 4-7 µm. Pycnidia immersed, often inconspicuous. Conidia thread-like, mostly curved, 15-20 µm long. Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC- or KC+ pale yellow, P-. Chemistry: cortex with usnic acid; medulla with roccellic acid. - Note: on base-rich rocks (gneiss, porphyry, schists, etc.) containing some calcium, in warm-dry situations.



Lecanora valesiaca



Lecanora valesiaca

Lecidea aglaea Sommerf., Suppl. Fl. lapp. (Oslo): 144 (1826)
= *Calvitimela aglaea* (Sommerf.) Hafellner, Stapfia 76: 151 (2001)
= *Lecidea brunneri* Nyl.
= *Lecidea relanderi* Räsänen
= *Lecidella aglaea* (Sommerf.) Körb.
= *Oedemocarpus aglaeus* (Sommerf.) Trevis.
= *Tephromela aglaea* (Sommerf.) Hertel & Rambold

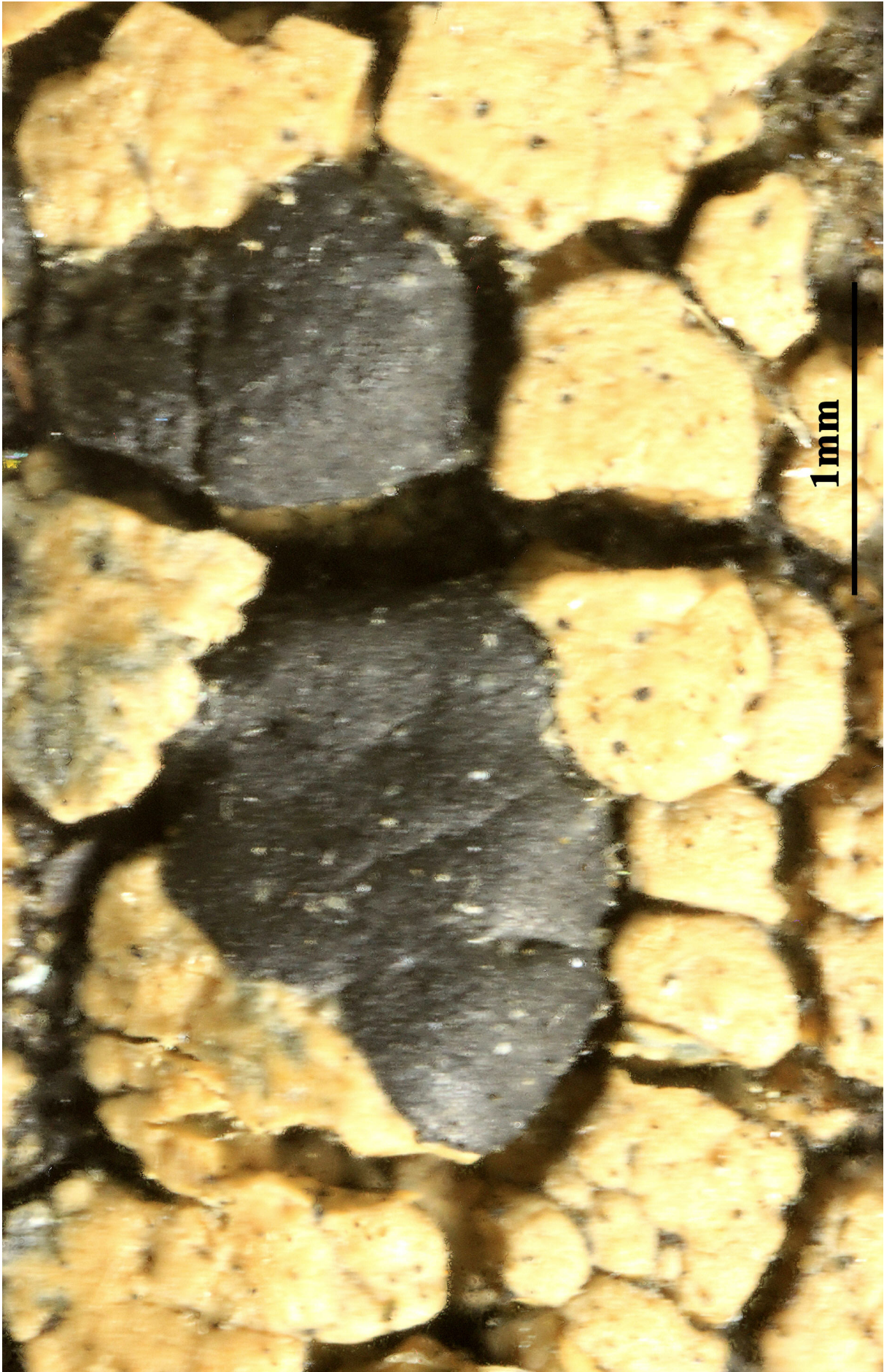
[VZ1797], Norvegia. Hordaland: Granvin, in monte dicto Steinsæterøhorgi, 790 m. Ad saxum schistosum. Leg. et det. J. J. Havaas. Annot.: Atranorin, bourgeanic acid, stictic acid (trace), unknown pigment SV-1, and traces of unidentified compounds by TLC; anal. A. Johnson and C. F. Culbersson. - EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1797.

Thallus crustose, episubstratic, rather thick, warted-areolate, pale greenish yellow to yellowish brown, usually turning brown in the herbarium, forming up to 8(-10) cm wide patches, rarely delimited by a black prothallus. Areoles mostly contiguous, up to 2 mm wide, flat to convex. Cortex up to 60 µm thick, of thick-walled hyphae with cylindrical lumina, containing crystals dissolving in K; medulla white, of loosely interwoven, thin-walled hyphae, I-. Apothecia biatorine, black to brown-black, somehow shiny, 0.5-2(-3) mm across, with a flat to finally irregularly convex, epruinose disc, and a thin, poorly evident, soon excluded proper margin. Proper exciple poorly developed, with a dark brown to dark green-brown rim, paler brown within; epithecium bluish green-black, sometimes in part brown; hymenium colourless, 60-80 µm high, I+ blue; paraphyses coherent, sparingly branched and anastomosing, 3-4 µm thick in lower part, the apical cells to 8 µm wide, with a sharply delimited pigmented zone in the wall, covered by a green gel; hypothecium colourless in upper part, pale yellow-brown in lower part, I-. Asci 8-spored, clavate, the K/I+ blue tholus penetrated by a faintly amyloid apical cushion with parallel or diverging flanks, the wall K/I-, surrounded by a K/I+ blue outer layer, Lecanora-type. Ascospores 1-celled, hyaline, ellipsoid, (7.5-)9-13.5(-16) x (4.5-)5-7.5(-8.5) µm. Pycnidia dark, immersed, the wall greenish around the ostiole. Conidia hyaline, short-bacilliform, straight, 6-9 x 1-2 µm. Photobiont chlorococcoid. Spot tests: cortex K+ yellow, C-, KC+ yellow, P-; medulla K+ yellow-orange, C+ yellow, KC-, P+ orange or rarely P-. Chemistry: Chemotype I: atranorin, usnic and bourgeanic acids (the most common

in the is). Chemotype II: atranorin, usnic, bourgeanic, and stictic acids, Chemotype III: atranorin and bourgeanic acid, chemotype IV: atranorin only. - Note: an arctic-alpine, circumpolar species found on inclined faces of hard siliceous rocks in upland areas.



Lecidea aglaea



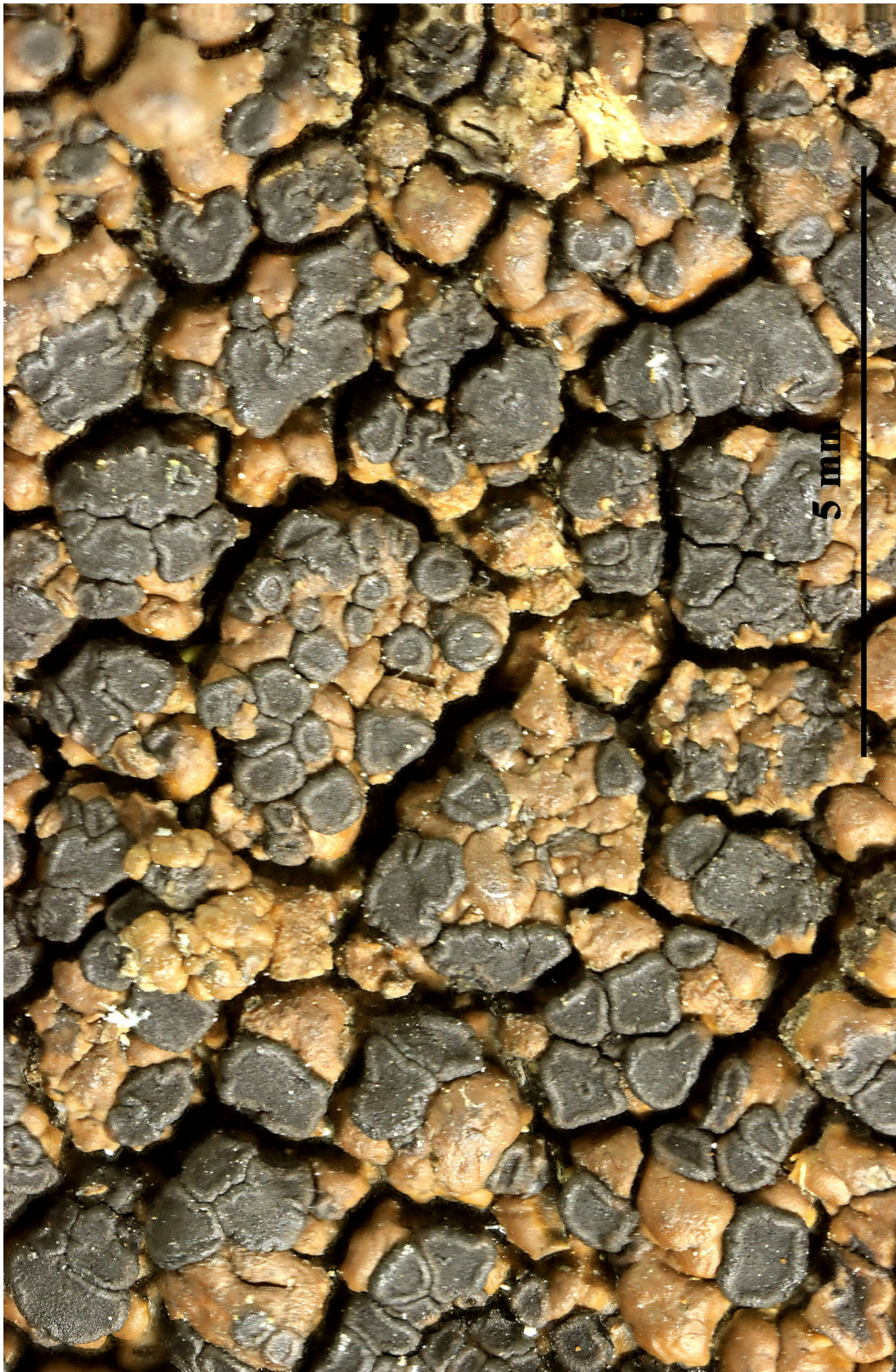
Lecidea aglaea

Lecidea armeniaca (DC.) Fr., Syst. orb. veg. (Lundae): 286 (1825)
 = *Rhizocarpon armeniacum* DC. Fl. Ranc., ed 3,2: 367, 1805
 = *Calvitimela armeniaca* (DC.) Hafellner, Stapfia 76: 151 (2001)
 = *Lecidea aglaeotera* Nyl.
 = *Lecidea armeniaca* f. *aglaeoides* Nyl.
 = *Lecidea nigrita* Schaer.
 = *Lecidea spectabilis* Flörke
 = *Lecidella armeniaca* (DC.) Bagl.
 = *Lecidella spectabilis* (Flörke) Körb.
 = *Oedemocarpus armeniacus* (DC.) Trevis.
 = *Psora armeniaca* (DC.) A. Massal.
 = *Psora spectabilis* (Flörke) Anzi
 = *Psora spectabilis* var. *armeniaca* (DC.) Anzi
 = *Psora spectabilis* var. *lutescens* Anzi
 = *Psora viridiatra* (Wulfen) Anzi
 = *Tephromela armeniaca* (DC.) Hertel & Rambold

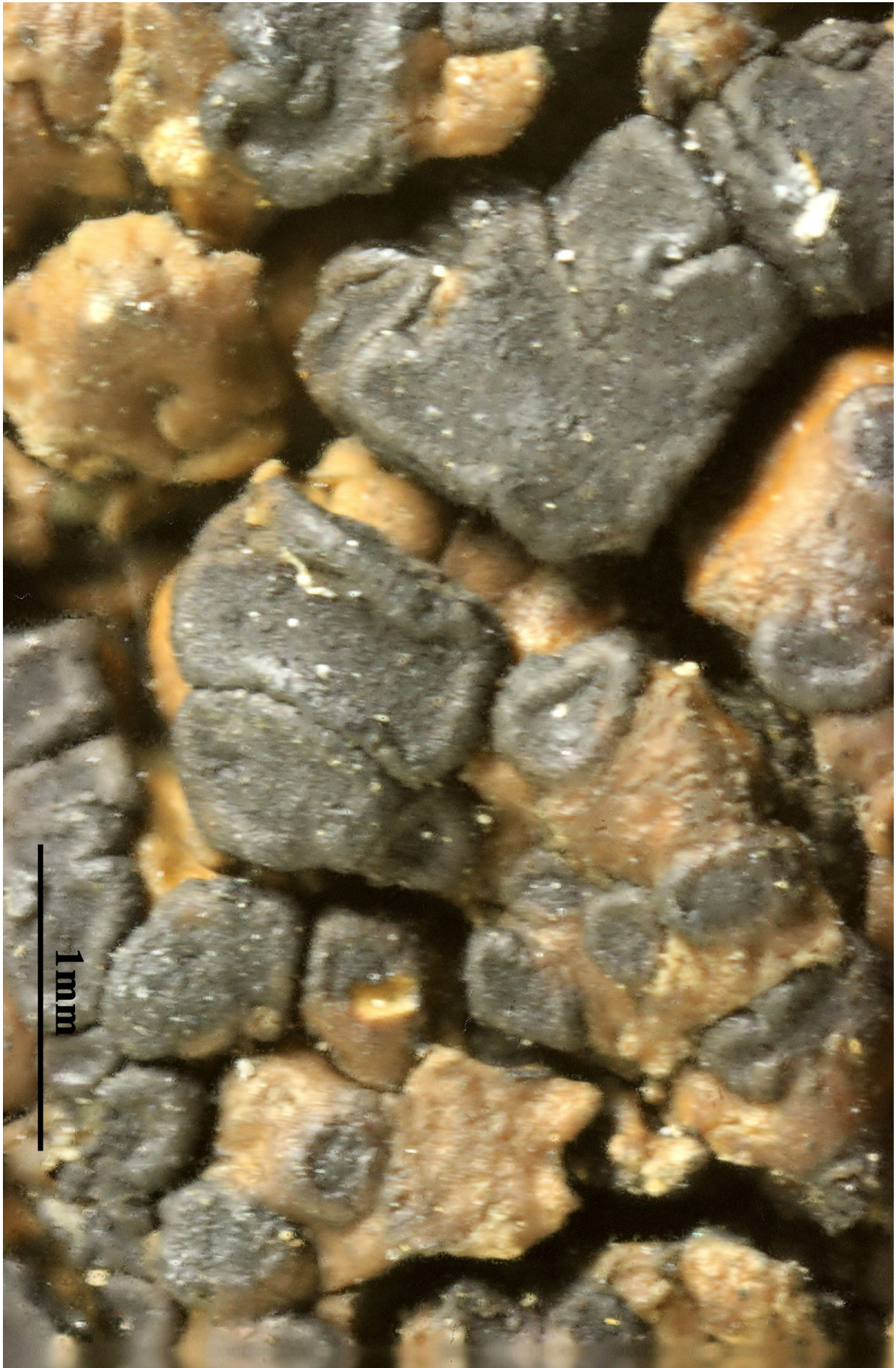
[VZ1937], Bohemoslovakia. Slovacia. Tatra Magna (pars occidentalis).
 iugum montis Baranec, 2050 m. Ad saxa gneissacea. Leg. I. Pišút et P.
 Pišút, 30.8.1979. EX A. VEZDA LICHENES SELECTI EXSICCATI NR. 1937.

Thallus crustose, episubstratic, areolate to areolate-verrucose, yellowish green, turning brownish in the herbarium, often glossy, of 0.5-4 mm wide, contiguous and convex areoles developing on a black hypothallus, forming up to 10 cm wide patches, often delimited by a black prothallus. Cortex pale grey in upper part, 40-60 µm thick, with a 15-40 µm thick epinecral later; medulla white, I-. Apothecia biatorine, black, (0.5-)2-3(-4.5) mm across, with an initially flat, then irregularly convex, epruinose disc, without a distinct proper margin. Proper exciple strongly reduced; epithecium bluish green-black, sometimes in part brown, N+ violet; hymenium colourless, 40-60 µm high; paraphyses coherent, strongly swollen in water, 4-5.5 µm thick at base, the apical cells 5-8 µm wide; hypothecium colourless in upper part, pale yellow-brown in lower part. Asci 8-spored, clavate, the K/I+ blue tholus penetrated by a faintly amyloid apical cushion with parallel or diverging flanks, the wall K/I-, surrounded by a K/I+ blue outer layer, Lecanora-type. Ascospores 1-celled, hyaline, ellipsoid, 7-12(-15) x 3-4.5(-5) µm, thick-walled. Pycnidia dark brown, immersed, the wall greenish around the ostiole. Conidia hyaline, bacilliform to thread-like, 6.5-10 x 1.5-1.8 µm. Photobiont chlorococcoid. Spot tests: cortex: K+ yellow or orange-red, C+ red, KC+ red, P- or P+ yellow; medulla K-,

KC+ red, P+ yellow. Chemistry: medulla with alectorialic acid (major), alectorialin, barbatolic, roccellic and protocetraric acids (all accessory).
- Note: an arctic-alpine, circumpolar species found on hard siliceous rocks in wind-exposed situations, most common in the Alps, much rarer in the mountains of Southern Italy; when young, it is a facultative parasite of *Sporastatia testudinea*.



Lecidea armeniaca



Lecidea armeniaca

Lecidea atrobrunnea (DC.) Schaer., Lich. helv. spicil. 3: 134 (1828)
= *Rhizocarpon atrobrunneum* DC. 1805
= *Lecidea funckii* Flot.
= *Lecidea protecta* H. Magn.
= *Lecidea pseudassimilis* Hertel
= *Lecidella atrobrunnea* (DC.) Körb.
= *Psora atrobrunnea* (DC.) A. Massal.
= *Sporastatia funckii* (Flot.) Dalla Torre & Sarnth.

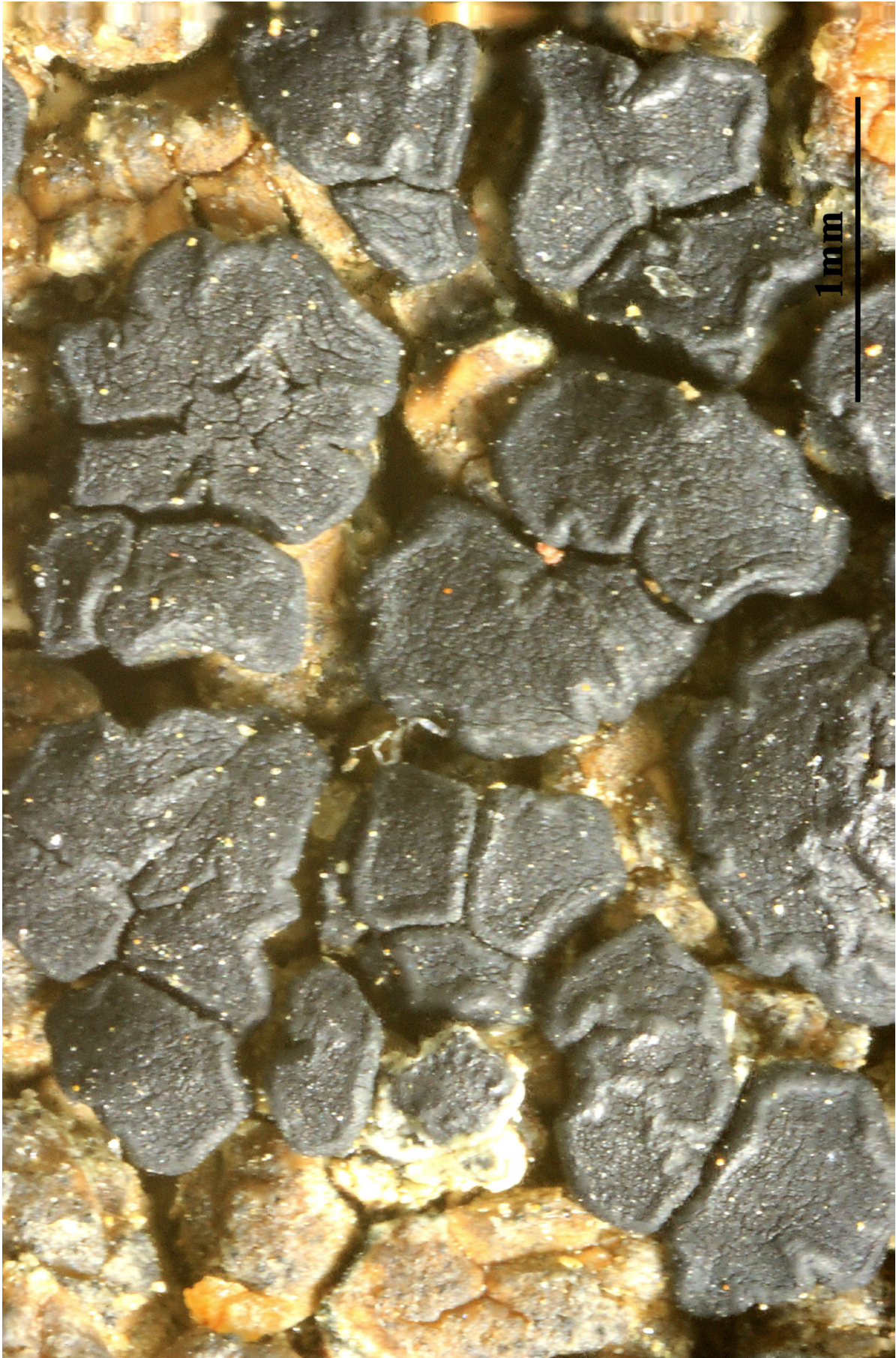
[VZ1734], URSS. Caucasus Magnus, regio monzis ignivomi Elbrus: ad latera austro-occid. montis Ceget, supra convexum torrentis Baksan dictis, 3000-3100 m. Ad saxa schistosa. Leg. A. Vězda, 22.6.1980. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1734.

Thallus crustose, episubstratic, 0.5-2.5 mm thick, areolate to almost squamulose, of flat to strongly convex, up to 3 mm wide, yellow-brown, copper-brown or dark reddish brown, often shiny areoles with or without a thin, whitish to blackish edge; prothallus absent to usually conspicuous, dark. Cortex brown in upper part, colourless in lower part, with a translucent epinecral layer; medulla white, I+ intensely blue-violet, Apothecia lecideine, black, 0.5-1.5(-2.5) mm across, often clustered, slightly constricted base, with a flat to convex, rarely bluish-pruinose disc, and a persistent, raised, often slightly wavy proper margin. Proper exciple of parallel-radiating, 3-7 μm thick hyphae, blue to green-black in outer part, colourless or very pale brown within, 25-150 μm wide laterally; epithecium bright green, bluish-green or olive-green, 8-15 μm high; hymenium colourless to very pale green in upper part, 34-62(-65) μm high, I+ blue; paraphyses coherent, usually simple or shortly branched in upper part, rarely anastomosing, 1.5-2.5 μm thick at mid-level, the apical cells clavate, 3-5 μm wide; hypothecium colourless to pale brown, I+ blue. Asci 8-spored, narrowly clavate, thick-walled, with a K/I+ pale blue tholus and a strongly amyloid, thin apical cushion, surrounded by a I+ blue outer layer, Lecidea-type. Ascospores 1-celled, hyaline, ellipsoid-oblong, with rounded ends, (5-)-7-11(-13) x 3-7 μm . Pycnidia immersed with a usually irregular to graphidioid ostiolar region. Conidia bacilliform, (5.5-)-7.2-11(-21) x 0.8-1.4 μm . Photobiont chlorococcoid. Spot tests: cortex and medulla K-, C-, KC-, P-; medulla K/UV+ mauve. Chemistry: confluent acid and sometimes 2'-O-methylperlatolic acid. - Note: a bipolar, arctic-alpine to boreal-montane species of acid siliceous rocks in exposed

situations, with optimum near and above treeline; common only in the Alps. The species is chemically variable, and several chemotypes were distinguished. For further details see Hertel & Leuckert (2008).



Lecidea atrobrunnea



Lecidea atrobrunnea

Lecidea atrobrunnea f. *leprosolimbata* (Arnold) Lettau, Hedwigia 55: 32 (1914)

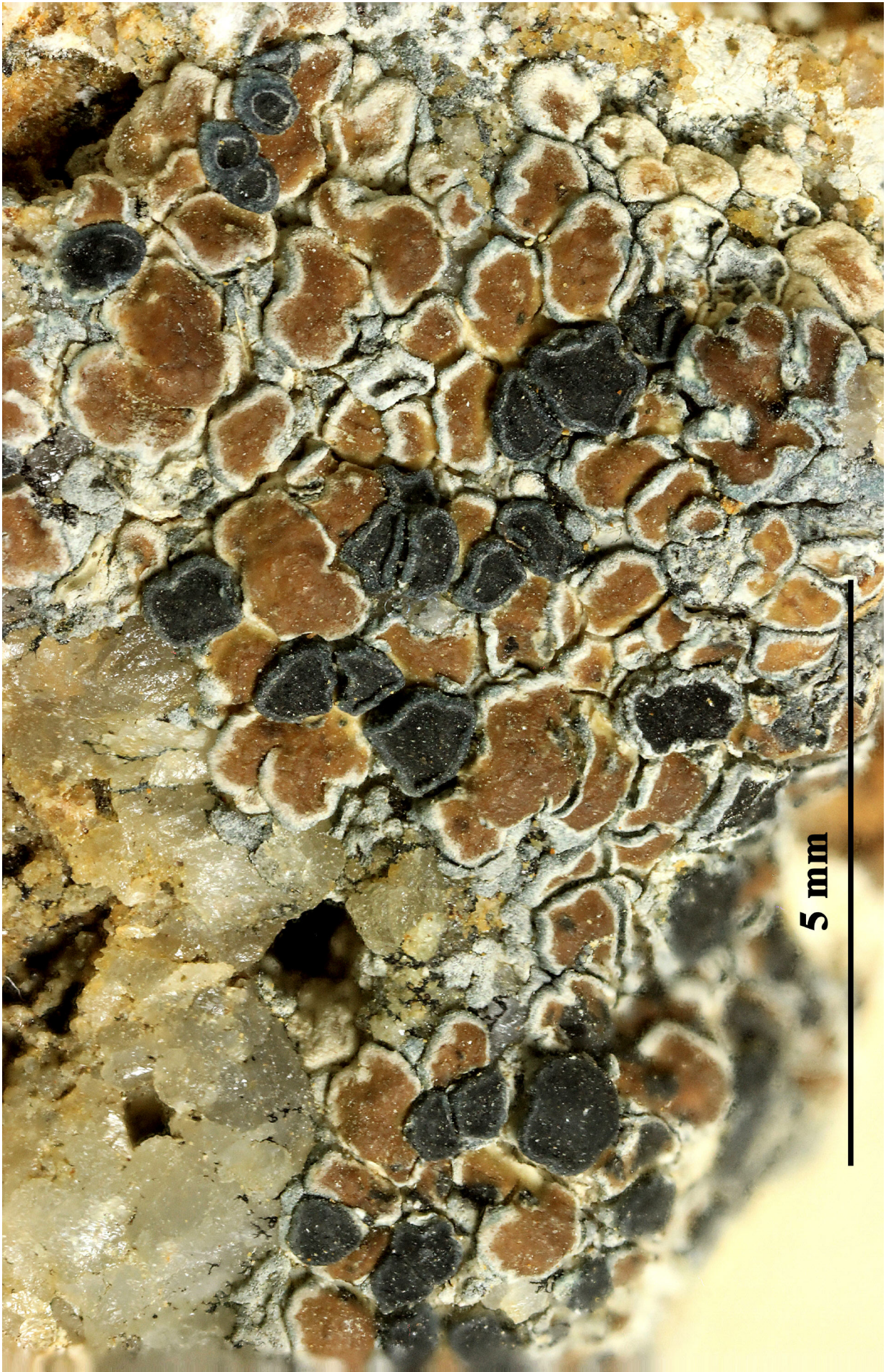
= *Psora atrobrunnea* var. *leprosolimbata* Arnold 1889

= *Lecidea leprosolimbata* (Arnold) Poelt, Lettau ex Poelt, Mitt. Bot. Staatss. München, 3: 587, 1960.

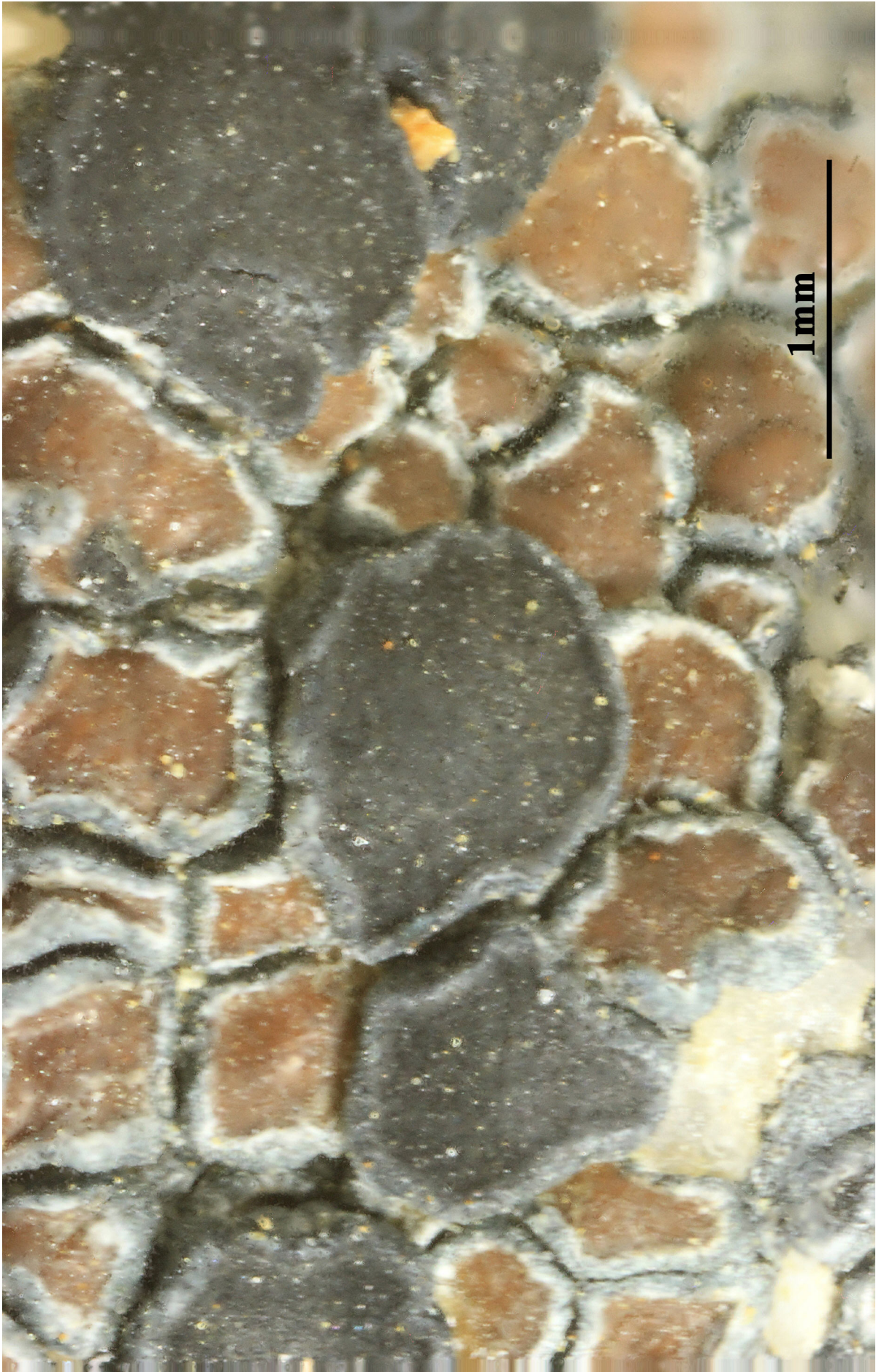
= *Psora atrobrunnea* var. *leprosolimbata* Arnold - Verh. zool.-bot. Ges. Wien, 39: 264, 1889.

[VZ1059], Gallia. Savoie. Reservatum nationale Vanoise, inter Super-Tignes et Col de la Leisse, 2700 m. Ad saxa dolomitica. Leg. J. Asta et Cl. Roux, 23.7.1971. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1059.

Thallus crustose, episubstratic, 0.5-2 mm thick, areolate to subsquamulose, of flat to strongly convex, up to 3 mm wide, yellow-brown, copper-brown or dark reddish brown areoles with a whitish to grey edge (due to the production of thallose spores), starting the life-cycle on the thalli of *Bellemeria subcandida*; prothallus usually conspicuous, dark, rarely absent. Algal layer strongly discontinuous; medulla white, I+ intensely blue-violet, Apothecia lecideine, black, 0.5-1.5(-2) mm across, often clustered, slightly constricted base, with a flat to convex, rarely bluish-pruinose disc, and a persistent, raised, often slightly wavy proper margin. Proper exciple of parallel-radiating, 3-7 μm thick hyphae, blue- to green-black in outer part, colourless or very pale brown within; epithecium bright green, bluish-green, or olive-green; hymenium colourless to very pale greenish in upper part, 40-65 μm high, I+ blue; paraphyses coherent, usually simple, rarely anastomosing, 1.5-2.5 μm thick at mid-level, the apical cells clavate, 3-5 μm wide; hypothecium colourless to pale brown, I+ blue. Asci 8-spored, narrowly clavate, thick-walled, with a K/I+ pale blue tholus and a strongly amyloid, thin apical cushion, surrounded by a I+ blue outer layer, *Lecidea*-type. Ascospores 1-celled, hyaline, ellipsoid-oblong, with rounded ends, 5-13 x 3-7 μm . Pycnidia black, immersed with a usually irregular to graphoid ostiolar region. Conidia bacilliform. Photobiont chlorococoid. Spot tests K+ yellow turning red (needle-like crystals), C-, KC-, P+ yellow-orange. Chemistry: norstictic acid syndrome. Note: on sunny, inclined surfaces of hard, weakly calciferous siliceous rocks in upland areas; certainly more widespread in the Alps, and locally even common. The world distribution was mapped by Hertel (2006).



Lecidea atrobrunnea f. *leprosolimbata*



Lecidea atrobrunnea f. *leprosolimbata*

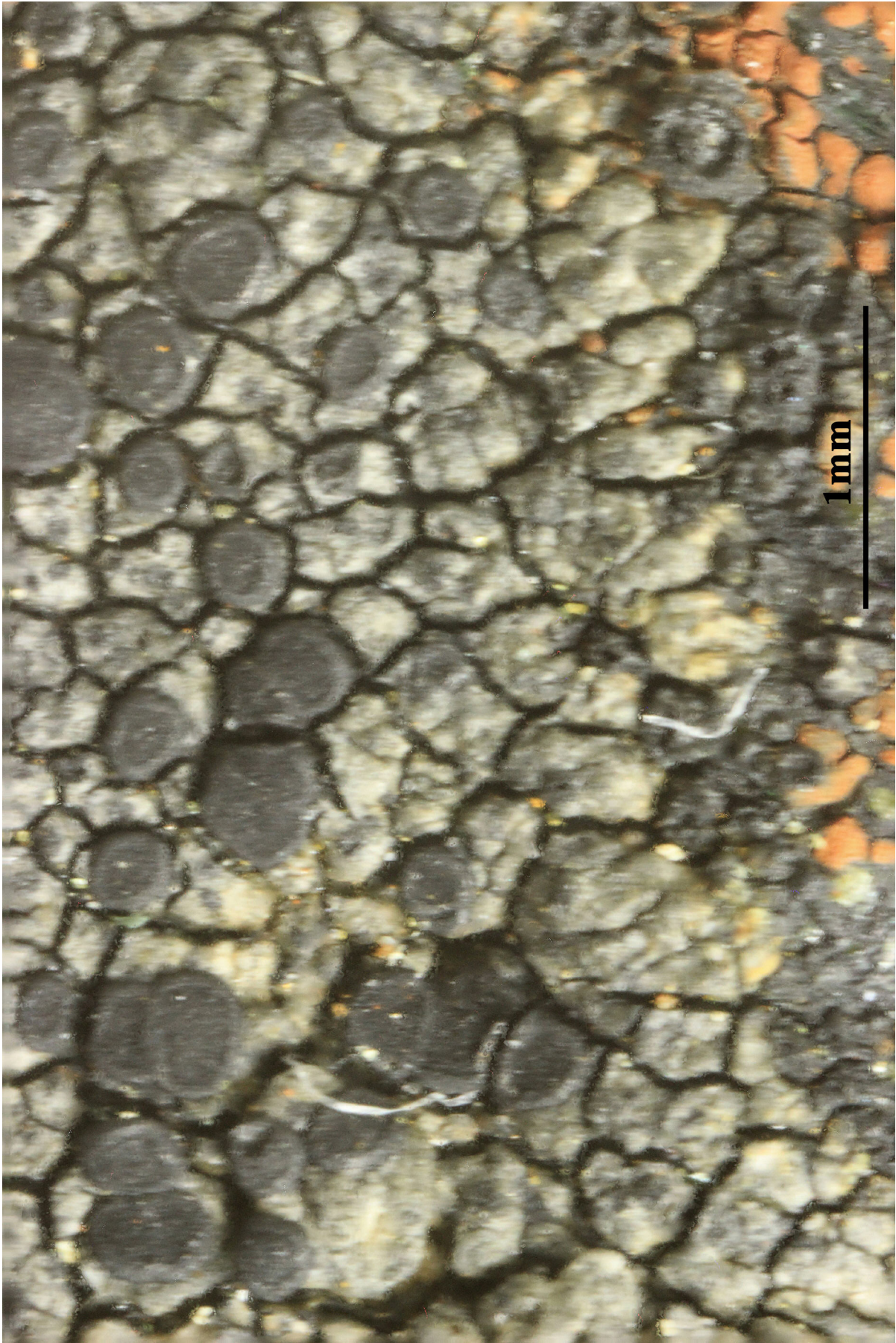
Lecidea circumnigrata H. Magn., in Degelius, Bot. Notiser: 403 (1945)
= *Miriquidica pulvinatula* (Arnold) Hertel & Rambold Mitt. bot. Staats.
München, 23: 389, 1987.
= *Lecidella pulvinatula* Arnold - Verh. zool.-bot. Ges. Wien, 29: 382, 1879.
= *Lecidea pulvinatula* (Arnold) Dalla Torre & Sarnth.

[VZ1534], Suecia. Härjedalen: Tännäs Paroecia, Gruvvålen prope
Mittåkläppen, 900 m. In rupibus metalla cupri vetusta. Leg. R. Santes-
son (no. 27921), 7.8.1977. EX A. VĚZDA LICHENES SELECTI EXSICCATI
NR. 1534.

Thallus crustose, episubstratic, dirty white, pale grey or beige, thin, rimose-areolate, forming small, up to 1 cm wide patches, the areoles small, up to 0.5 mm wide, flat, developing on a black hypothallus. Medulla white, I-. Apothecia lecideine, small, 0.3-0.5 mm across, broadly adnate to sessile, constricted at base, with a black disc and a slightly paler proper margin. Proper exciple blue-green in outer part, the hyphae somewhat cellular-radiate, colourless within; epithecium greenish black; hymenium colourless, 40-50(-55) μm high, I+ dark blue; paraphyses coherent, mostly simple, c. 2 μm thick at mid-level, the apical cells slightly swollen; hypothecium colourless, I+ blue. Asci 8-spored, clavate, approaching the Lecanora-type, but with a weakly amyloid tholus, lacking an amyloid zone above the axial body and with a thin outer amyloid wall layer. Ascospores 1-celled, hyaline, ellipsoid, 8-13 x (3-)4.5-5 μm . Photobiont chlorococcoid. Spot tests: cortex and medulla K-, C-, KC-, P-. Chemistry: miriquidic acid. - Note: on iron-rich crystalline rocks near and above treeline; closely related to *M. leucophaea*.



Lecidea circumnigrata

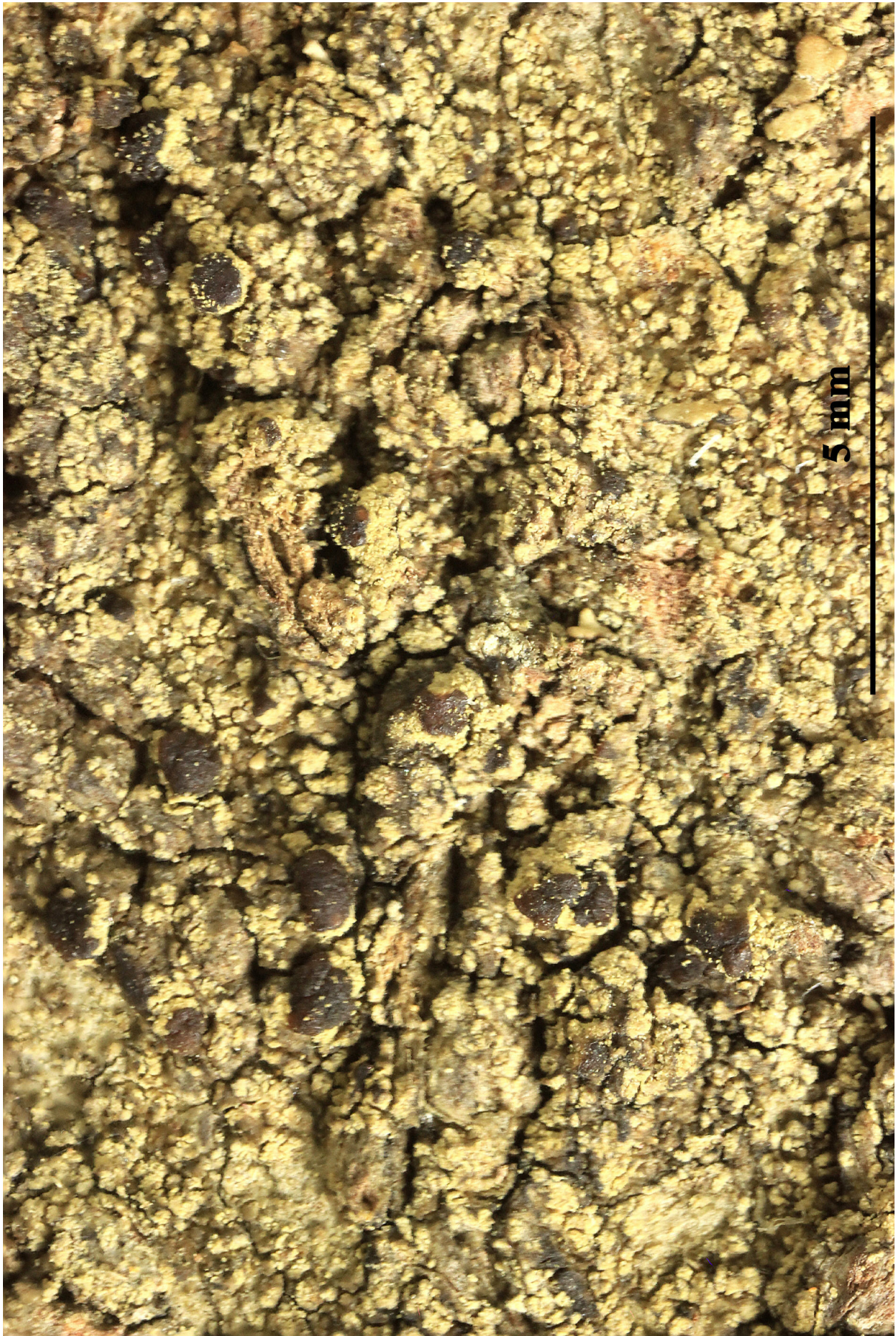


Lecidea circumnigrata

Lecidea efflorescens (Hedl.) Erichsen, Hedwigia 72: 83 (1932)
= *Lecidea helvola* f. *efflorescens* Hedl. 1892
= *Biatora efflorescens* (Hedl.) Räsänen, Lich. Fenn. Exs.: no. 133 (1935)

[VZ1132], Bohemoslovakia. Slovakia. Carpati, montes Tatra Minor: Predajná. in silva virginea montis Latiborská hola, 1200 m. Ad corticem *Aceris pseudoplatani*. Leg. A. Vězda, 10.8.1972. EX A. VĚZDA LICHE- NES SELECTI EXSICCATI NR. 1132.

Thallus crustose, episubstratic, usually forming rounded to irregular patches up to a few cm in diameter, rimose-areolate or (rarely) continuous, sorediate, without a clear prothallus, the areoles discrete or contiguous, greyish or greyish green, up to 0.2 mm wide, flat to slightly convex, rounded, entire to incised, adnate. Soralia pale yellow to bright yellowish green (paler than thallus), laminal or marginal on the areoles, or originating in non-areolate parts of thallus, discrete to diffuse, often efflorescent, 0.2-0.5 mm across, more or less circular when young to irregular and confluent, often forming a leprose-sorediate, sometimes cracked crust; soredia 15-30(-40) μm in diam. Apothecia rather rare, biatorine, 0.3-0.6(-1) mm across, with a pale yellowish or pinkish brown, sometimes reddish or sordid brown, glossy, flat to strongly convex disc, and a slightly paler, finally excluded proper margin. Proper exciple colourless, 35-80(-110) μm wide; hymenium colourless, 30-65 μm high; subhymenium distinct, 50-70 μm high; hypothecium colourless, 20-120 μm high. Asci 8-spored, clavate, with a K/I+ blue apical dome penetrated by a narrow, K/I- apical cushion surrounded by a narrow, deeply K/I+ blue zone, the wall K/I- but surrounded by an I+ red-brown, K/I+ blue outer layer, the ocular chamber relatively small, Biatora-type. Ascospores (0-)1-septate, hyaline, narrowly ellipsoid, 9-18(-22) x 3-5 μm . Photobiont chlorococcoid. Spot tests: thallus and soralia K-, C-, KC-, UV-; soralia P+ rapidly orange-red. Chemistry: argopsin (major), norargopsin. - Note: a probably holarctic lichen found on a wide variety of trees with smooth bark, sometimes overgrowing mosses, rarely on lignum, mostly in upland areas.



Lecidea efflorescens



Lecidea efflorescens

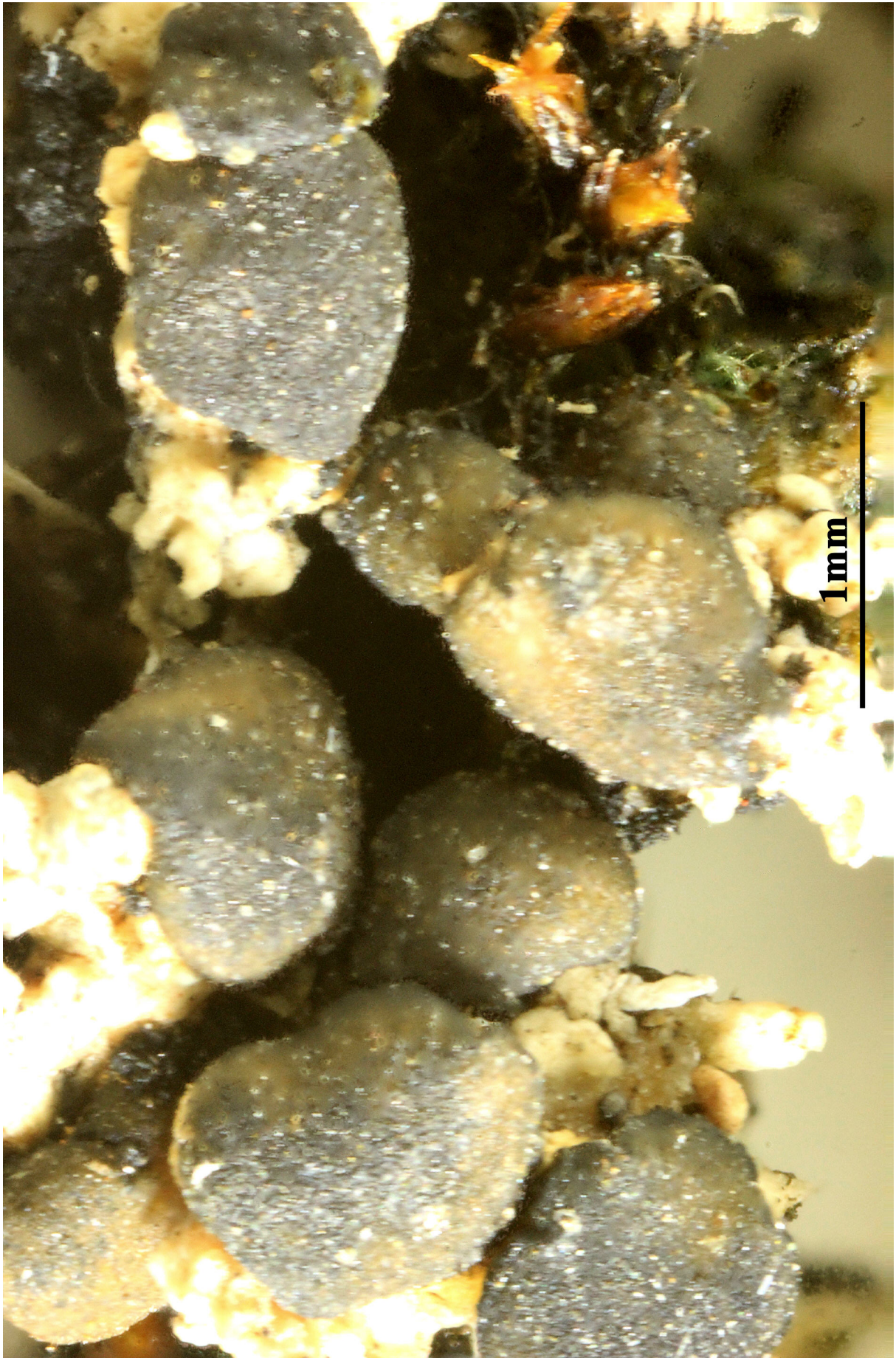
Lecidea ementiens Nyl., Flora, Regensburg 67(12): 222 (1884)
= *Biatora ementiens* (Nyl.) Printzen, Lichenologist 46(3): 451 (2014)
= *Protomicarea limosa* (Ach.) Hafellner in Hafellner & Türk, Stapfia, 76:
156, 2001.
= *Lecidea limosa* Ach. - Lichenogr. Univ.: 182, 1810.
= *Lecidea borealis* (Körb.) Anzi
= *Lecidella borealis* Körb.

[VZ1952], Groenlandia occidentalis. Disko: Godhavn, ad latera australia montis Lyngmarksfield, 150 m. Supra plantas emortuas ad terram interdum irrigatum, Leg. J. Poelt et H. Ulrich, 27.7.1983, det J. Poelt. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1952.

Thallus crustose, episubstratic, subgelatinous when wet, whitish grey to grey, granulose to small-areolate, the areoles mostly small, 0.2-0.6 mm wide, but sometimes becoming verrucose and up to 1 mm wide, contiguous, forming a more or less compact crust, sometimes with a white prothallus. Apothecia biatorine, black, round, sessile, (0.4-)0.5-0.8(-1) mm across, with a strongly convex disc, without a proper margin. Epithecium deep bluish green, the colour often extending down into the upper part of the hymenium, of radially arranged hyphae, K-; hymenium 45-65 μm high, at least partially green in upper part, I+ red; paraphyses coherent, mostly simple, 1.2-2 μm thick, scarcely thickened at apex; hypothecium patchily reddish brown, K+ brownish-orange. Asci 8-spored, cylindrical-clavate, the I+ blue tholus with a wide, I+ dark blue tube structure that expands towards the top, without a pale axial body, Psora-type. Ascospores 1-celled, hyaline, narrowly ellipsoid to fusiform, (8-)10-14(-15) x 3-4.5(-5) μm . Conidia bacilliform, 6-7 x c. 1.5 μm . Photobiont chlorococcoid, the cells 7-12 μm wide. Spot tests: thallus K-, C-, KC-, P+ orange-red. Chemistry: pannarin and triterpenoids. Note: an arctic-alpine to boreal-montane, circumpolar lichen found on naked soil in sites with a long snow-covering period, in clearings of Alpine grasslands, more rarely on moribund bryophytes and plant debris: in the Alps it can reach the nival belt.



Lecidea ementiens



Lecidea ementiens

Lecidea erratica Körb., Parerga lichenol. (Breslau) 3: 223 (1861) [1865]
 = *Helocarpon erraticum* (Körb.) M. Svenss., Myllys & Kantel., in Myllys, Svensson, Kantvilas, Sérusiaux, van den Boom, Aptroot, Cezanne, Eichler, Pino-Bodas, Printzen, Pykälä, Thor, Westberg, Weber & Kantelinen, Taxon 75(1, e70087): 23 (2026)
 = *Lecidea demarginata* Nyl.
 = *Lecidea dispansa* Nyl.
 = *Lecidea expansa* Nyl.
 = *Lecidea tephrizans* Leight.
 = *Leimonis erratica* (Körb.) R.C. Harris & Lendemer
 = *Micarea erratica* (Körb.) Hertel, Rambold & Pietschm.

[VZ1232], Bohemoslovacia. Moravia, Mor. Krumlov, in valle fluminis Rokytna prope pagum Tukešice, 280 m. Ad lapides in silva clara Leg. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1232.

Thallus crustose, pale to dark grey, thin to thick, usually episubstratic, rimose to rimose-areolate, rarely endosubstratic and poorly evident, often delimited by a black, dendritic prothallus. Apothecia biatorine, black, epruinose, sessile and constricted at base, 0.2-0.4(-0.7) mm across, with a usually flat disc and a slightly raised, thin, persistent or finally excluded proper margin. Proper exciple well developed, prosoplectenchymatous, 0.03-0.05 mm wide laterally, consisting of radially arranged, branched and interconnected hyphae, blue-black in outer part, pale brown within; epithecium dull green, K+ green, N+ purple-red; hymenium colourless, 35-55 µm high; paraphyses sparingly branched and anastomosing from the base, 1.5-2.5(-3) µm thick, the apical cells not swollen; hypothecium dark brown, 40-80 µm high. Asci 8-spored, cylindrical-clavate, the I+ blue tholus with a wide, intensely I+ dark blue tube structure that expands towards the top, without a pale axial body. Ascospores 1-celled, hyaline, narrowly ellipsoid, (6-)7-9(-10) x (2-)3-4(-5) µm. Pycnidia often abundant, c. 0.1 mm wide, grey to black, sessile to half-immersed, with a greenish wall. Conidia cylindrical, 3-6 x 1.2-1.8(-2) µm. Photobiont chlorococcoid, the cells (7-)10-16(-26) µm wide. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: on siliceous pebbles in open habitats, ecologically similar to *Porpidia crustulata*; widespread in the Holarctic region and also recorded from the Southern Hemisphere, with a few records from the Eastern Alps.



Lecidea erratica



Lecidea erratica

Lecidea erythrophaea Flörke ex Sommerf., Suppl. Fl. lapp. (Oslo): 163
(1826)

= *Biatora alnicola* Anzi

= *Biatora erythrophaea* (Sommerf.) Fr.

= *Lecidea alnicola* (Anzi) Jatta

= *Lecidea hyalinella* (Körb.) Jatta

= *Lecidea minuta* (Schaer.) A. Massal.

[VZ1133], Suecia. Värmlandia, Norra Ny, Sjögeräsen, 370 m. Ad corticem *Populi tremulae*. Leg. S.W. Sundell. EX A. VěZDA LICHES SELECTI EXSICCATI NR. 1133.

Thallus crustose, endosubstratic or thinly episubstratic, continuous to rimose, pale grey or greenish grey. Medullary hyphae I-. Apothecia biatorine, rounded to slightly irregular in outline, rarely tuberculate, adnate to sessile and constricted at base, 0.25-0.7(-1) mm across, with a ochre to reddish brown (in older apothecia sometimes almost black), flat to slightly convex disc and a concolorous or usually slightly darker, soon excluded proper margin. Proper exciple pale brown in outer part, colourless or with small pigmented droplets within, 25-60 µm wide laterally, 35-85 µm wide at base, of radiating hyphae with swollen end cells; epithecium reddish brown, 5-10 µm high, K-; hymenium colourless to pale yellowish brown, 35-55(-70) µm high, I+ blue; paraphyses simple or sparingly branched and anastomosing, 0.7-2 µm thick at mid-level, the apical cells 2.5-5 µm wide, with a brown cap; hypothecium colourless or very pale brown, 45-125(-170) µm high. Asci 8-spored, distinctly thickened at the apex, with a I+ blue tholus, the outer gelatinous coat I+ pale blue, approaching the *Bacidia*-type. Ascospores 1-celled, hyaline, fusiform, (7-)9-15(-18) x 3-4(-5) µm. Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a mainly boreal-montane, probably circumpolar species of acid bark, especially of conifers, in humid-cold situations, e.g. in *Sphagnum* bogs, which apparently reaches Sicily along the Apennines (Sicilian records, however, need re-confirmation). Closely related to *L. rhododendri* and certainly not a *Lecidea* s.str. It is easily confused with *Japewiella tavaresiana*, which has larger, thick-walled ascospores.



Lecidea erythrophaea



Lecidea erythrophaea

Lecidea furfurosa Tuck. ex Nyl., in Nylander, *Annls Sci. Nat., Bot.*, sér. 4
19: 341 (1863)
= *Malmidea furfurosa* (Tuck. ex Nyl.) Kalb & Lücking, in Kalb, Rivas
Plata, Lücking & Lumbsch, *Bibliotheca Lichenol.* 106: 165 (2011)

[VZ1558], USA., Florida. Sanford County, Black Hammock prope
Ovideo, in septentrione a Orlando. Ad corticem arborum. Leg. J. Poelt,
17.8.1977. Ex A. Vězda *Lichenes Selecti Exsiccati* Nr. 1558.

Thallus granulose-isidiate, green; apothecial disc beige, margin black.
Excipulum compact, lacking medullary layer. Hypothecium dark. Me-
dulla white, K–. Ascospores 11–15 x 5–8 µm.



Lecidea furfurosa

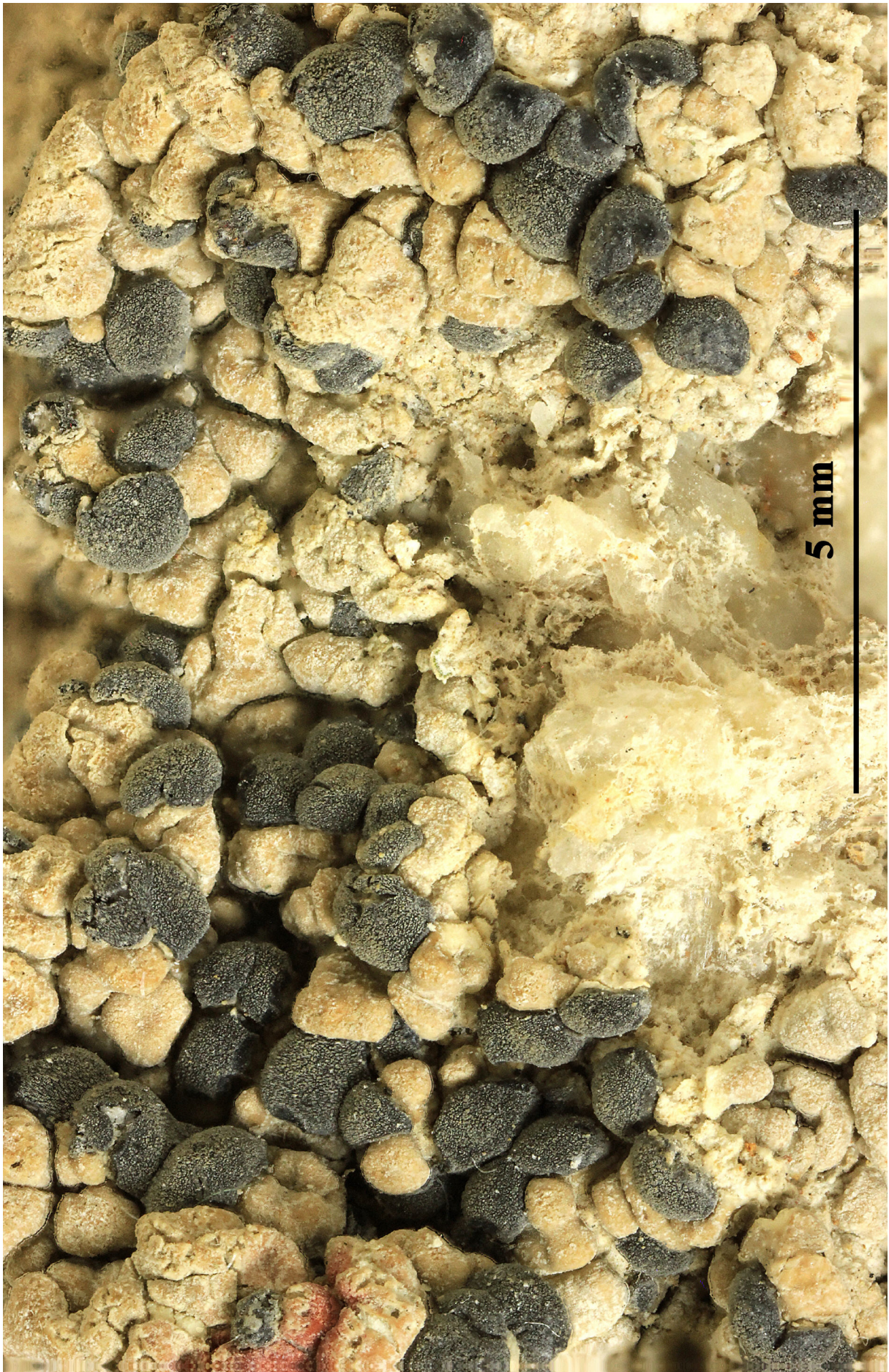


Lecidea furfurosa

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

[VZ1160], Hispania. Las Bardenas. Caparroso, 900 m. Ad gypsum compactum locis septentr. vel occident. spectantibus, 30°-60° inclinat. Legt. Llimona, 24.8.1972. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1160.

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



Lecidea gypsicola



Lecidea gypsicola

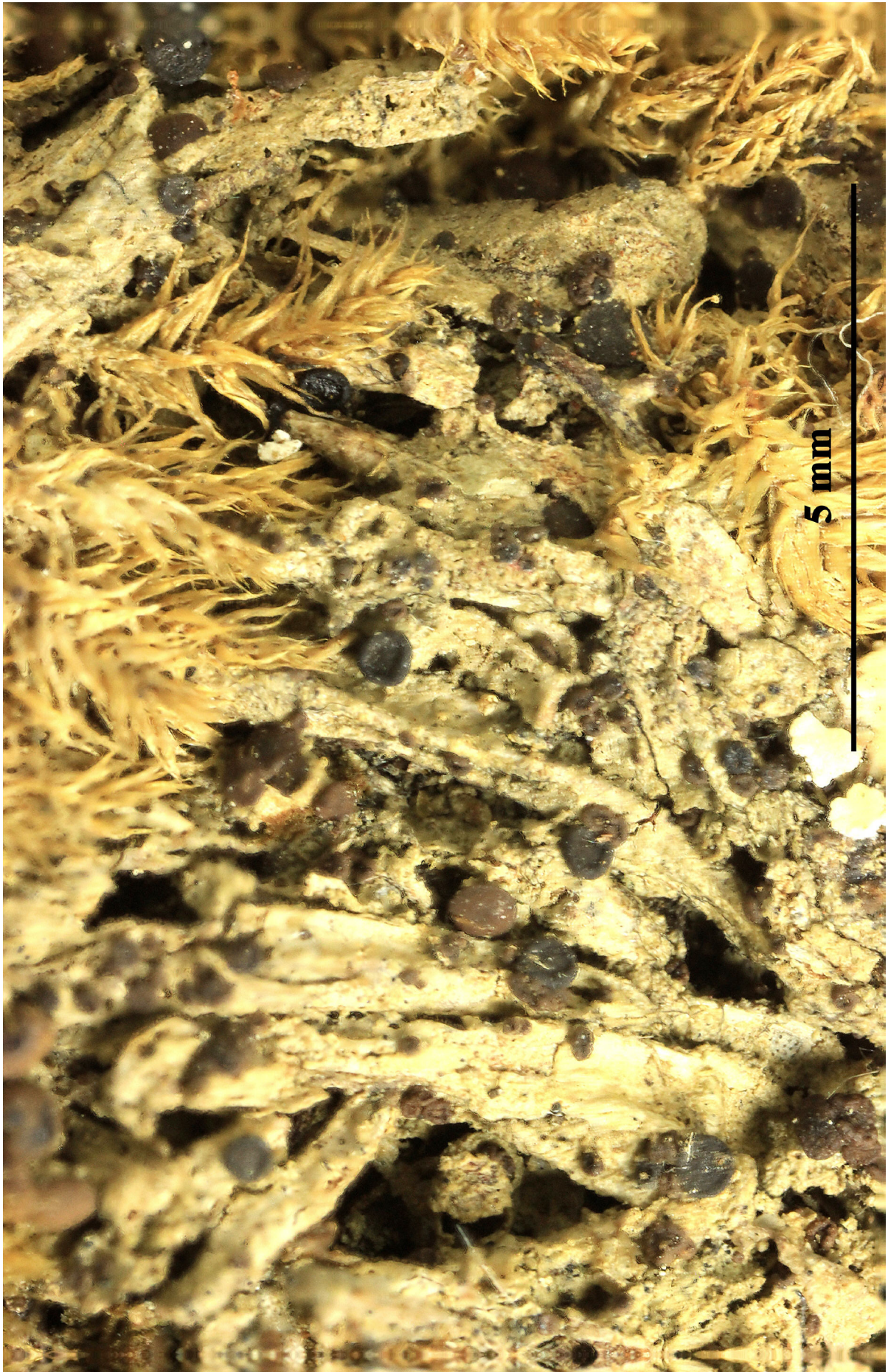
Lecidea hypnorum Lib., Pl. crypt. Arduenna, Fasc. (Liège) 1(nos 1-100): no. 12 (1830)

= *Bryobilimbia hypnorum* (Lib.) Fryday, Printzen & S. Ekman, Lichenologist 46(1): 31 (2014)

= *Mycobilimbia hypnorum* (Lib.) Kalb & Hafellner

{VZ1233}, Romania. Distr. Hunedoara, montes Retezat: in valle Lapușul Mare, supra Gura Apei, 1300 m. In fossis viae silvaticae, ad terram humosam. Leg. A. Vězda, 6.6.1972. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1233.

Thallus crustose, thinly episubstratic, effuse, membranous or granulose, pale grey to ash grey, sometimes with a brownish tinge. Apothecia lecideine, sessile, 0.5-1.5 mm across, dark brown to black, sometimes confluent and forming larger tuberculate clusters, with a flat to finally convex disc and a raised, smooth, often flexuose, finally sometimes excluded proper margin. Proper exciple dark reddish brown, K-; epithecium pale brown, reddish brown or almost colourless; hymenium colourless, amyloid, 60-70 μm high, with scattered blue-violet (K+ green) granules which are often present also in the upper part of hypothecium; paraphyses mostly simple, coherent, 1.5-1.7 μm thick at base, the apical cells up to 2.5 μm ; hypothecium dark reddish brown. Asci 8-spored, clavate, with a I+ blue tholus and an internal, darker I+ tubular structure, the external gel I+ faintly blue, Porpidia-type. Ascospores 0-1(-3)-septate, hyaline, ellipsoid, 9-17(-19) x (3-)4-6(-7) μm , with a finely warted episporium. Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC-, P-, UV+ white. Chemistry: without lichen substances. - Note: a cool-temperate to arctic-alpine, probably circumpolar lichen found on mosses, plant debris, soil, bark and lignum, especially in upland areas with calcareous substrata.



Lecidea hypnorum

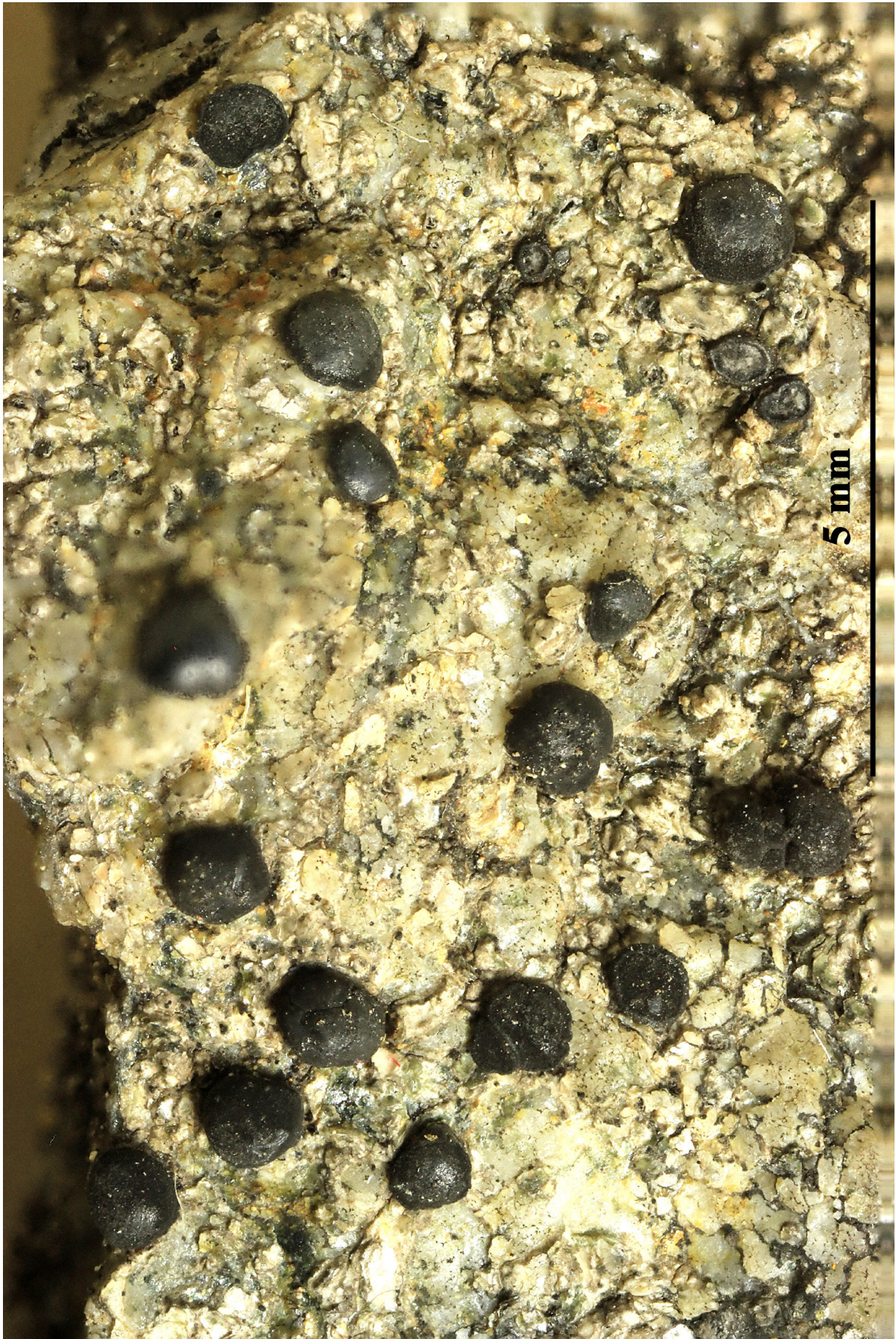


Lecidea hypnorum

Lecidea inops Th. Fr., Lich. Scand. (Upsaliae)(2): 501 (1874)

[VZ1432], Bohemoslovakia. Slovakia, Tatra Mior, distr. Banská Bystrica: Staré Hory, prope vicum Richtárová, 600 m. Ad lapillos prope cuprifodinas vetustas. Leg. A. Kiszely et A. Vězda, 25.8.1876, det. H. Hertel. Ex A. Vězda Lichens Selecti Exsiccati Nr. 1432.

Thallus crustose, white to sordid or dull drab grey, forming a thin, almost evanescent to moderately thick, uneven, rimose-cracked, continuous crust, occasionally occurring as dispersed, roughened, convex granules. Prothallus indistinct. A pale aeruginose-blue coloration (copper oxalate) is frequently visible in cracks and abraded areas. Anamorph: conidiomata pycnidia, ca 500 µm diam., conspicuous especially where the thallus is poorly developed, usually numerous, crateriform with a ± elevated, conspicuous thalline margin. Conidia 10-15 x 0.8 µm, narrowly bacillar, straight, hyaline. Apothecia, 1-3 mm diam., sessile, matt black, occasionally ± pruinose, usually at first flattened with a narrow even margin, becoming irregularly convex or sublobate and emarginate, occasionally remaining flattened, with a thin, persistent, markedly flexuose margin. Exciple often poorly developed and soon excluded, the edge olive brown, gradually becoming colourless within and towards the hypothecium. Hypothecium with an upper pale brown part ca 15 µm thick, the hyphae vertically orientated, the lower part becoming dark brown-black and 110-230 µm thick, with unorientated hyphae. Hymenium 45-55 µm high, hyaline. Epithecium well defined, drab brown-olive, K+ dull greenish, N+ purple-red. Interascal tissue of unbranched paraphyses ca 2 µm diam. with slightly swollen brownish apices (to 2.5-3 µm diam.), conglomerate, not separating in K. Asci clavate, 22-45 x 6-9 µm, 8-spored. Spores 8-11 (-13) x (2-5)-3 (-4.0) µm, cylindric-ellipsoidal, hyaline, aseptate. Chemistry: Thallus C-, K-, KC-, P-, UV+ white (perlatolic acid in the thallus; an unidentified substance, probably anziaic acid or a derivative, in the exciple). Medulla usually markedly I+ blue or violet.



Lecidea inops



Lecidea inops

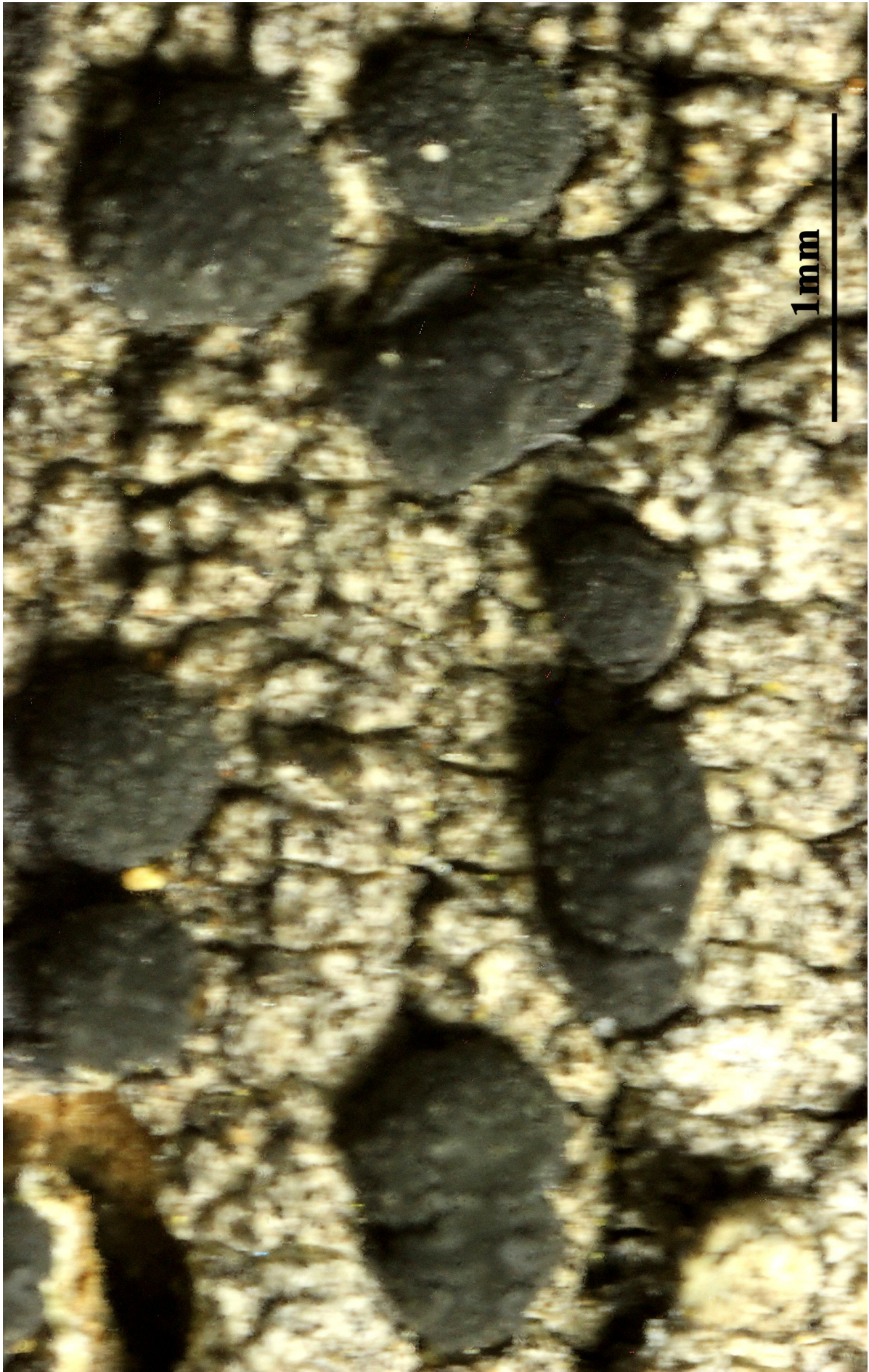
Lecidea inops Th. Fr., Lich. Scand. (Upsaliae)(2): 501 (1874)

[VZ1731], Bohemoslovakia. Slovacia orient., montes Spišské Rudohorie: Mnišek, in ripa rivi Smolník loco Smolnická pila dicto, 450 m. Ad truncum decorticatam *Pini* vetustum in acervo scoriae cuprum continentis subimmersum. Leg. E. Lisická, J. Liška, I. Pisút et. A. Vězda, 27.5.1980. - Annot.: Thallus pycnidiis crateriformibus instructus. Pycnoconidia bacillaria, simplicia, recta, 10-12 x 0.8 μm . - Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1731.

Thallus crustose, white to sordid or dull drab grey, forming a thin, almost evanescent to moderately thick, uneven, rimose-cracked, continuous crust, occasionally occurring as dispersed, roughened, convex granules. Prothallus indistinct. A pale aeruginose-blue coloration (copper oxalate) is frequently visible in cracks and abraded areas. Anamorph: conidiomata pycnidia, ca 500 μm diam., conspicuous especially where the thallus is poorly developed, usually numerous, crateriform with a \pm elevated, conspicuous thalline margin. Conidia 10-15 x 0.8 μm , narrowly bacillar, straight, hyaline. Apothecia, 1-3 mm diam., sessile, matt black, occasionally \pm pruinose, usually at first flattened with a narrow even margin, becoming irregularly convex or sublobate and emarginate, occasionally remaining flattened, with a thin, persistent, markedly flexuose margin. Exciple often poorly developed and soon excluded, the edge olive brown, gradually becoming colourless within and towards the hypothecium. Hypothecium with an upper pale brown part ca 15 μm thick, the hyphae vertically orientated, the lower part becoming dark brown-black and 110-230 μm thick, with unorientated hyphae. Hymenium 45-55 μm high, hyaline. Epithecium well defined, drab brown-olive, K+ dull greenish, N+ purple-red. Interascal tissue of unbranched paraphyses ca 2 μm diam. with slightly swollen brownish apices (to 2.5-3 μm diam.), conglutinate, not separating in K. Asci clavate, 22-45 x 6-9 μm , 8-spored. Spores 8-11 (-13) x (2-5)-3 (-4.0) μm , cylindric-ellipsoidal, hyaline, aseptate. Chemistry: Thallus C-, K-, KC-, P-, UV+ white (perlatolic acid in the thallus; an unidentified substance, probably anziaic acid or a derivative, in the exciple). Medulla usually markedly I+ blue or violet.



Lecidea inops



Lecidea inops

Lecidea insidiosa Th. Fr., Bot. Notiser: 153 (1867)

= *Ramboldia insidiosa* (Th. Fr.) Hafellner, in Hafellner & Türk, Carinthia II 185/105: 624 (1995)

[VZ2310], Austria. Carinthia, Nockberge, Nockalmstrasse, 1.5 km ad australem et occidentem versus ab Eisentalhöhe, 1860 m. Ad lignum *Pini cembrae*. Leg. R. Türk et N. Türk, 15.10.1988. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 2310.

Thallus crustose, growing on *Lecanora varia*, at first apparently not lichenized and appearing as a blackening of the host, later forming a granulose to rimose, greenish brown, independent thallus with I+ violet hyphae. Apothecia lecideine/biatorine, black (often with a blue-greenish tinge when wet), at first punctiform, then expanded and more or less sessile, 0.2-0.6(-0.7) mm across, with a convex disc and a somewhat paler, thin, soon excluded proper margin. Proper exciple prosoplectenchymatous, of radiating, branched and anastomosing hyphae, greenish brown in outer part, paler within; epithecium dark green, with an epipsamma of brownish crystals dissolving in K, N+ purple-red; hymenium colourless, 40-60 μm high; paraphyses strongly coherent, mostly simple, 1-2 μm thick at mid-level, the apical cells clavate and to 3.5 μm wide, often with a dark cap; hypothecium colourless, pale green or pale brown. Asci 8-spored, clavate, the tholus with a strongly amyloid lateral part, a non-amyloid broadly diverging axial mass with a thick, non-amyloid cap above, and a weakly amyloid outer layer *Lecanora*-type. Ascospores 1-celled, hyaline, ellipsoid, 8-12 x 4.5-5.5(-8) μm . Photobiont chlorococcoid. Spot tests: all negative (but usually difficult to distinguish from those of the host). Chemistry: thallus without lichen substances. - Note: obligately lichenicolous on *Lecanora varia*, on hard lignum, more rarely on smooth, hard bark, most frequent in the Alps.

Thallus greenish brown, granular, transformed from that of the host, K+ yellow; apothecia black, strongly convex, 0.2-0.5(-0.7) mm diam; ascospores (8. 5-)9. 5-11.5 x 4- 5.5 5(-6) μm ; on *Lecanora varia*.



Lecidea insidiosa



Lecidea insidiosa

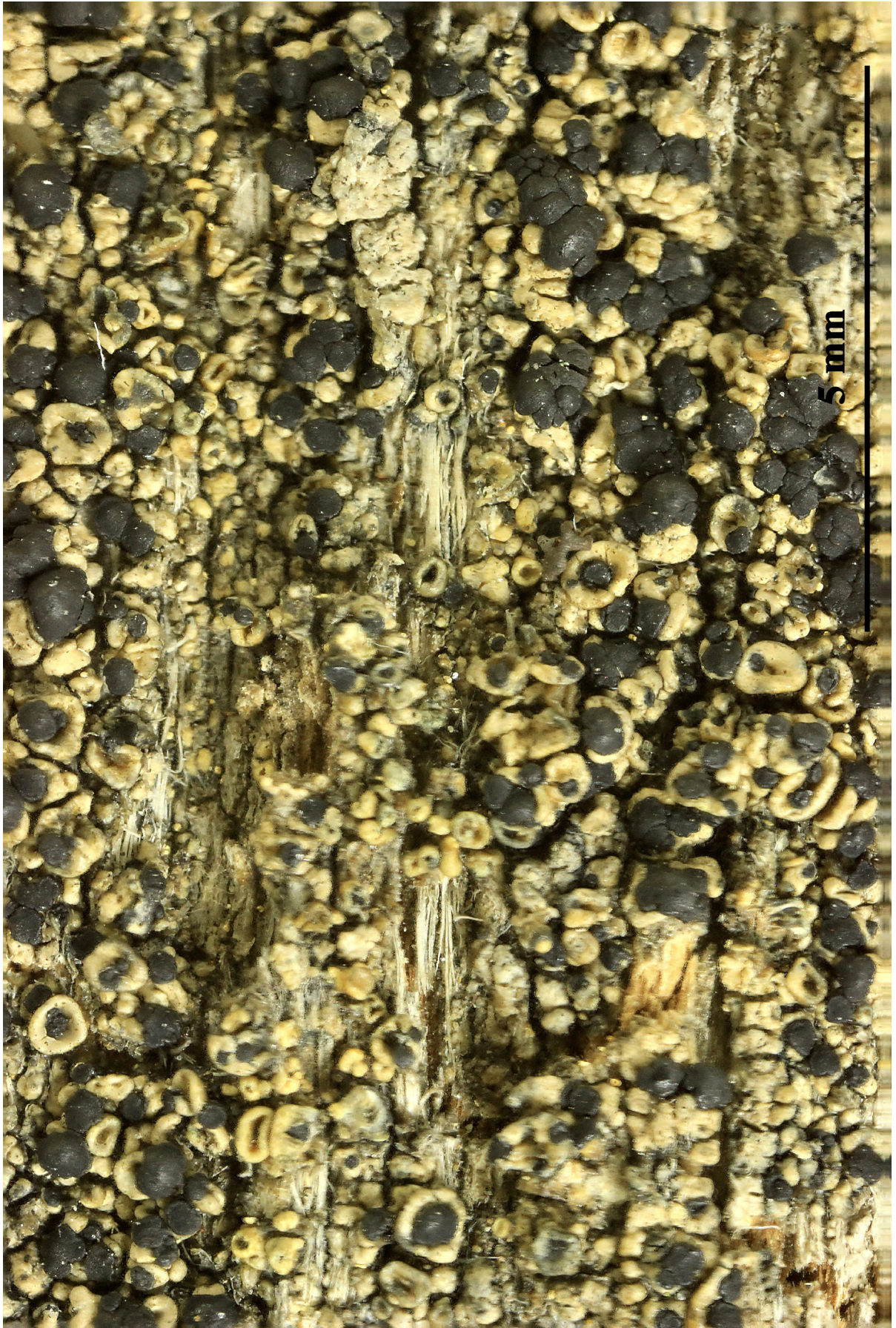
Lecidea insidiosa Th. Fr., Bot. Notiser: 153 (1867)

= *Ramboldia insidiosa* (Th. Fr.) Hafellner, in Hafellner & Türk, Carinthia II 185/105: 624 (1995)

[VZ1809], Austria. Tirolia, in alpebus "Ötztaler Alpen" dictis, Hochsölden, 2120 m. Ad lignum faeniliorum. Leg. K. Kalb et S. Moosburger, 17.6.1981. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1809.

Thallus crustose, growing on *Lecanora varia*, at first apparently not lichenized and appearing as a blackening of the host, later forming a granulose to rimose, greenish brown, independent thallus with I+ violet hyphae. Apothecia lecideine/biatorine, black (often with a blue-greenish tinge when wet), at first punctiform, then expanded and more or less sessile, 0.2-0.6(-0.7) mm across, with a convex disc and a somewhat paler, thin, soon excluded proper margin. Proper exciple prosoplectenchymatous, of radiating, branched and anastomosing hyphae, greenish brown in outer part, paler within; epithecium dark green, with an epipsamma of brownish crystals dissolving in K, N+ purple-red; hymenium colourless, 40-60 μm high; paraphyses strongly coherent, mostly simple, 1-2 μm thick at mid-level, the apical cells clavate and to 3.5 μm wide, often with a dark cap; hypothecium colourless, pale green or pale brown. Asci 8-spored, clavate, the tholus with a strongly amyloid lateral part, a non-amyloid broadly diverging axial mass with a thick, non-amyloid cap above, and a weakly amyloid outer layer Lecanora-type. Ascospores 1-celled, hyaline, ellipsoid, 8-12 x 4.5-5.5(-8) μm . Photobiont chlorococcoid. Spot tests: all negative (but usually difficult to distinguish from those of the host). Chemistry: thallus without lichen substances. - Note: obligately lichenicolous on *Lecanora varia*, on hard lignum, more rarely on smooth, hard bark, most frequent in the Alps.

Thallus greenish brown, granular, transformed from that of the host, K+ yellow; apothecia black, strongly convex, 0.2-0.5(-0.7) mm diam; ascospores (8. 5-)9. 5-11.5 x 4- 5.5 5(-6) μm ; on *Lecanora varia*.



Lecidea insidiosa



Lecidea insidiosa

Lecidea insidiosa Th. Fr., Bot. Notiser: 153 (1867)

= *Ramboldia insidiosa* (Th. Fr.) Hafellner, in Hafellner & Türk, Carinthia II 185/105: 624 (1995)

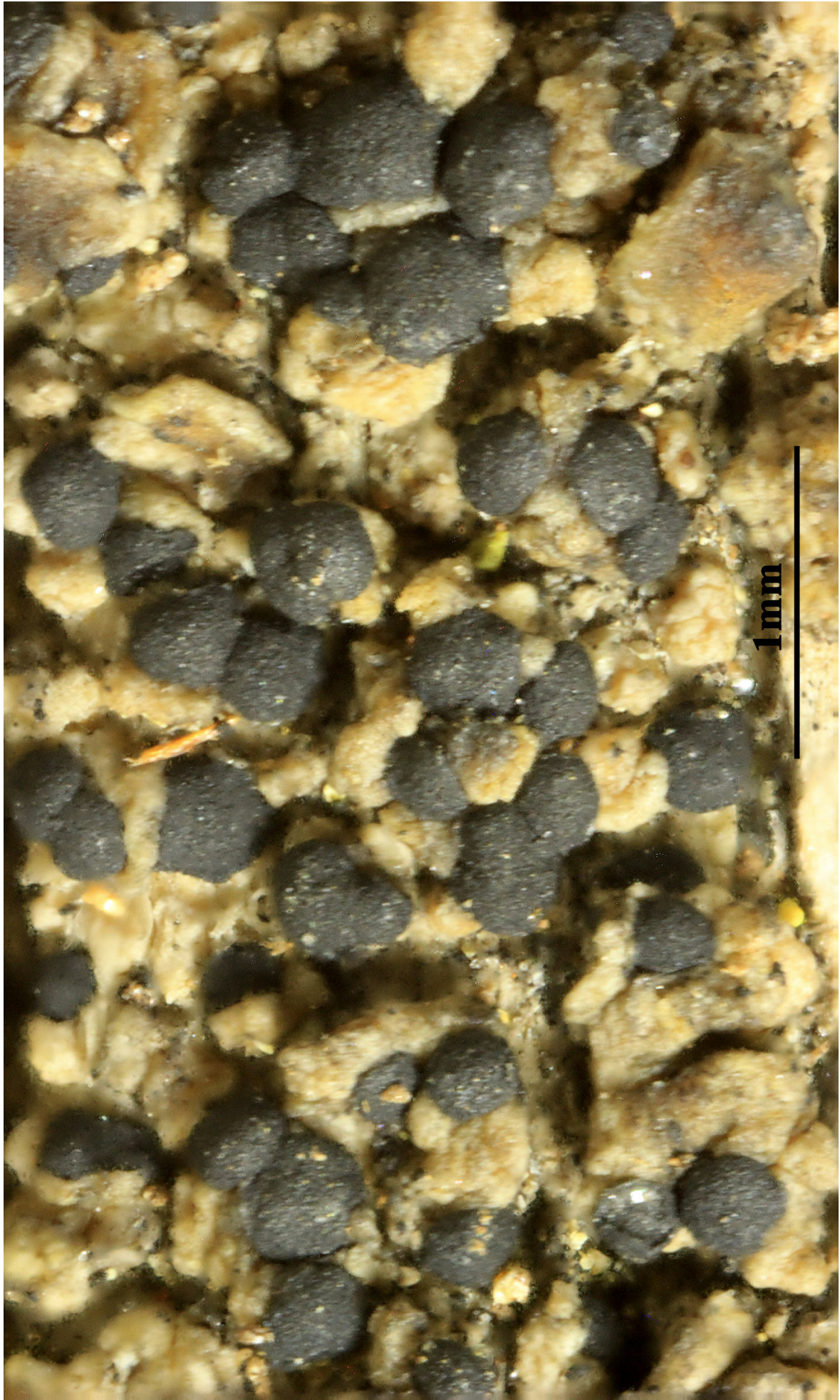
[VZ1590}, Austria. Carinthia, distr. Greifenburg, regio montis Kreuzeck: Emberger Alm, 1700 m. Ad lignum putridum faeniliorum. Leg. H. Hertel, J. Poelt et A. Vězda, 16.7.1978. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1590.

Thallus crustose, growing on *Lecanora varia*, at first apparently not lichenized and appearing as a blackening of the host, later forming a granulose to rimose, greenish brown, independent thallus with I+ violet hyphae. Apothecia lecideine/biatorine, black (often with a blue-greenish tinge when wet), at first punctiform, then expanded and more or less sessile, 0.2-0.6(-0.7) mm across, with a convex disc and a somewhat paler, thin, soon excluded proper margin. Proper exciple prosoplectenchymatous, of radiating, branched and anastomosing hyphae, greenish brown in outer part, paler within; epithecium dark green, with an epipsamma of brownish crystals dissolving in K, N+ purple-red; hymenium colourless, 40-60 µm high; paraphyses strongly coherent, mostly simple, 1-2 µm thick at mid-level, the apical cells clavate and to 3.5 µm wide, often with a dark cap; hypothecium colourless, pale green or pale brown. Asci 8-spored, clavate, the tholus with a strongly amyloid lateral part, a non-amyloid broadly diverging axial mass with a thick, non-amyloid cap above, and a weakly amyloid outer layer *Lecanora*-type. Ascospores 1-celled, hyaline, ellipsoid, 8-12 x 4.5-5.5(-8) µm. Photobiont chlorococcoid. Spot tests: all negative (but usually difficult to distinguish from those of the host). Chemistry: thallus without lichen substances. - Note: obligately lichenicolous on *Lecanora varia*, on hard lignum, more rarely on smooth, hard bark, most frequent in the Alps.

Thallus greenish brown, granular, transformed from that of the host, K+ yellow; apothecia black, strongly convex, 0.2-0.5(-0.7) mm diam; ascospores (8. 5-)9. 5-11.5 x 4- 5.5 5(-6) µm; on *Lecanora varia*.



Lecidea insidiosa



Lecidea insidiosa

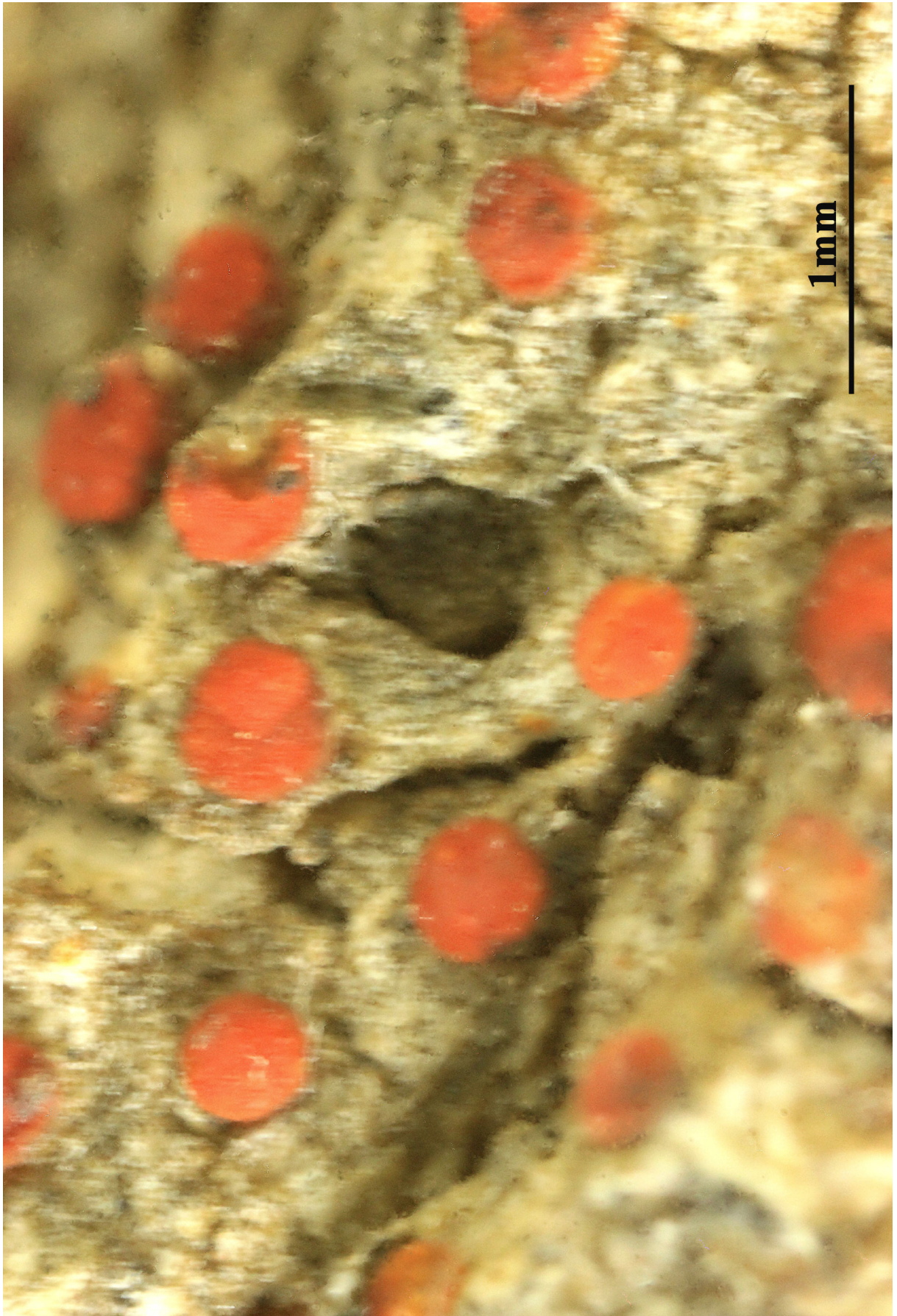
Lecidea laeta Stirt., Trans. & Proc. New Zealand Inst. 30: 384 (1898)
= *Ramboldia laeta* (Stirt.) Kalb, Lumbsch & Elix, Nova Hedwigia 86(1-2):
34 (2008)
= *Ramboldia laeta* (Stirt.) Kalb, Lumbsch & Elix in K.Kalb, B.Staiger,
J.A.Elix, U.Lange & H.T.Lumbsch, Nova Hedwigia 86: 34 (2008).
= *Pyrrhospora laeta* (Stirt.) Hafellner, Herzogia 9: 86 (1992).

[VZ2157], Australia, Tasmania. Vale of Bellevoir, 840 m. Ad ramulos
emortuos *Melaleucaae squameae*. Leg. G. Kantvilas (54/87),
16.5.1987. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 2157.

Thallus whitish to pale grey, greenish grey or dark brownish grey, dull
or slightly glossy, to 10 cm wide, 20–300 μm thick, \pm smooth or irregu-
larly areolate and rimose, scabrid, minutely papillose to verruculose,
often eroding with age but lacking soredia and isidia, ecorticate or with
a poorly differentiated cortical layer 20–30 μm thick. Prothallus absent.
Photobiont cells 8–15 μm wide. Apothecia sessile or basally cons-
tricted, round to \pm irregular, scattered or crowded, 0.1–1.2 mm diam.;
disc bright orange-red to red-brown, glossy, \pm plane to strongly convex,
epruinose; margin thin, often flexuose, soon becoming excluded. Ex-
ciple densely interspersed with orange-red K⁺ reddish purple pigment.
Epihymenium 12–15 μm thick, orange-red, K⁺ purple-red. Hymenium
35–60 μm thick, interspersed with orange K⁺ reddish purple pigment,
densely so in the upper part, faintly pigmented to colourless below.
Hypothecium colourless or interspersed with orange K⁺ reddish purple
pigment, 40–100 μm thick; subhypothecium colourless to pale brown,
to 15 μm thick, K⁻. Paraphyses simple or occasionally branched, rather
robust, 2–3 μm thick; apices tapered or rounded, not noticeably swol-
len. Asci 25–38 \times 9–12 μm . Ascospores ellipsoidal to fusiform-ellipso-
idal, 7.0–14.5 \times 2.5–4.0 μm . Conidia filiform, curved or hook-shaped,
10–20 \times c. 0.5 μm . - CHEMISTRY: Thallus K⁻, C⁻, KC⁻, P⁻, UV⁻;
containing protolichesterinic and lichesterinic acids or lacking lichen
substances. Apothecia K⁺ reddish purple; containing russulone (major),
norrussulone (trace). - Common on twigs and branches in Australia; in
Tasmania. it occurs on twigs and rocks. Also in New Zealand.



Lecidea laeta

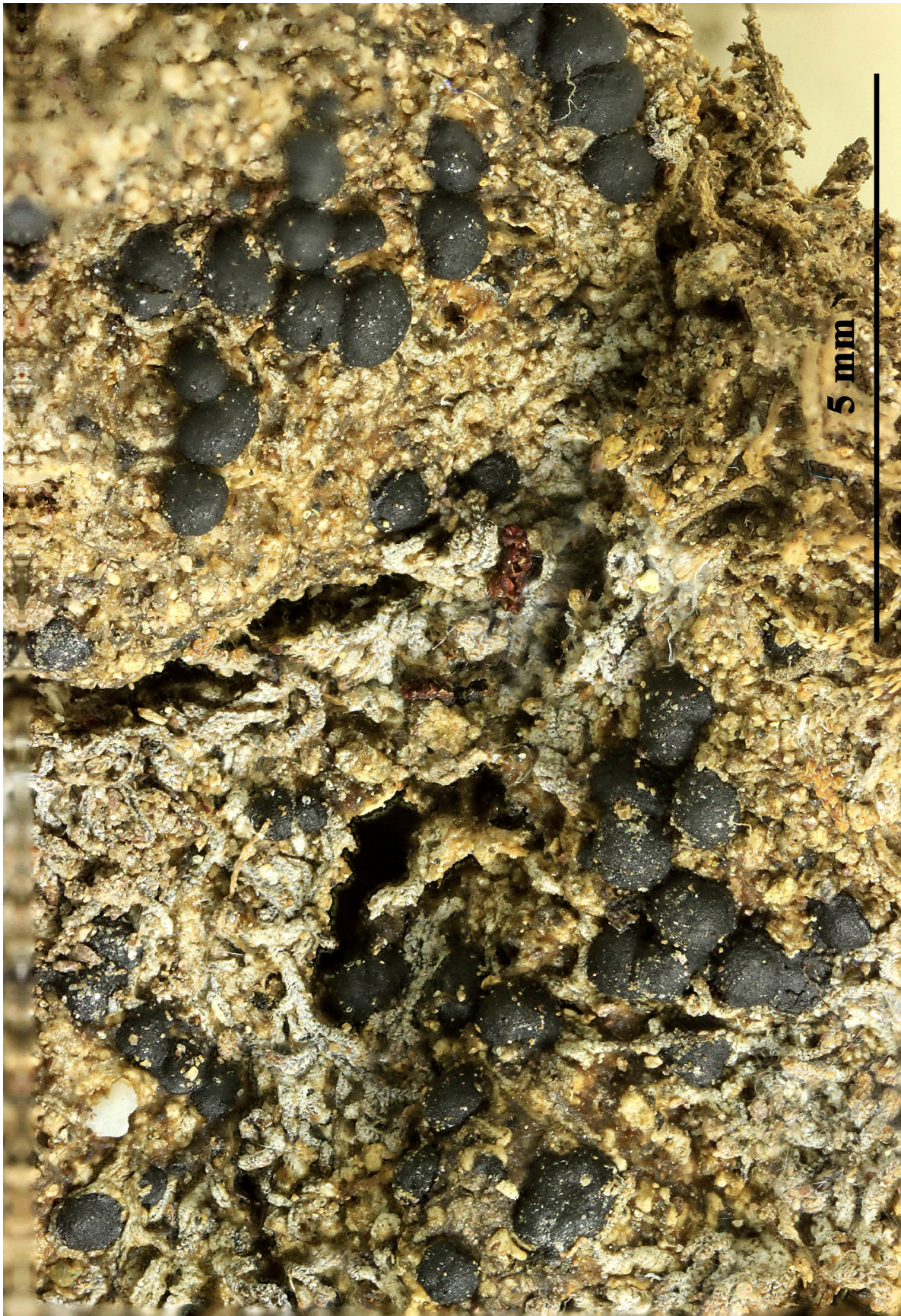


Lecidea laeta

Lecidea limosa Ach., Lich. Univ.: 182 (1810)
= *Protomicarea limosa* (Ach.) Hafellner, Stapfia 76: 156 (2001)
= *Lecidea borealis* (Körb.) Anzi
= *Lecidea ementiens* Nyl.
= *Lecidella borealis* Körb.

[VZ2158], Austria. Voralbergia, Rätikon, Schruns, in monte Golmer joches, 2000-2124 m. Ad terram humosam. Leg. A. Vezda, 17.7.1986. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2158.

Thallus crustose, episubstratic, subgelatinous when wet, whitish grey to grey, granulose to small-areolate, the areoles mostly small, 0.2-0.6 mm wide, but sometimes becoming verrucose and up to 1 mm wide, contiguous, forming a more or less compact crust, sometimes with a white prothallus. Apothecia biatorine, black, round, sessile, (0.4-)0.5-0.8(-1) mm across, with a strongly convex disc, without a proper margin. Epithecium deep bluish green, the colour often extending down into the upper part of the hymenium, of radially arranged hyphae, K-; hymenium 45-65 μm high, at least partially green in upper part, I+ red; paraphyses coherent, mostly simple, 1.2-2 μm thick, scarcely thickened at apex; hypothecium patchily reddish brown, K+ brownish-orange. Asci 8-spored, cylindrical-clavate, the I+ blue tholus with a wide, I+ dark blue tube structure that expands towards the top, without a pale axial body, Psora-type. Ascospores 1-celled, hyaline, narrowly ellipsoid to fusiform, (8-)10-14(-15) x 3-4.5(-5) μm . Conidia bacilliform, 6-7 x c. 1.5 μm . Photobiont chlorococcoid, the cells 7-12 μm wide. Spot tests: thallus K-, C-, KC-, P+ orange-red. Chemistry: pannarin and triterpenoids. - Note: an arctic-alpine to boreal-montane, circumpolar lichen found on naked soil in sites with a long snow-covering period, in clearings of Alpine grasslands, more rarely on moribund bryophytes and plant debris: in the Alps it can reach the nival belt.



Lecidea limosa



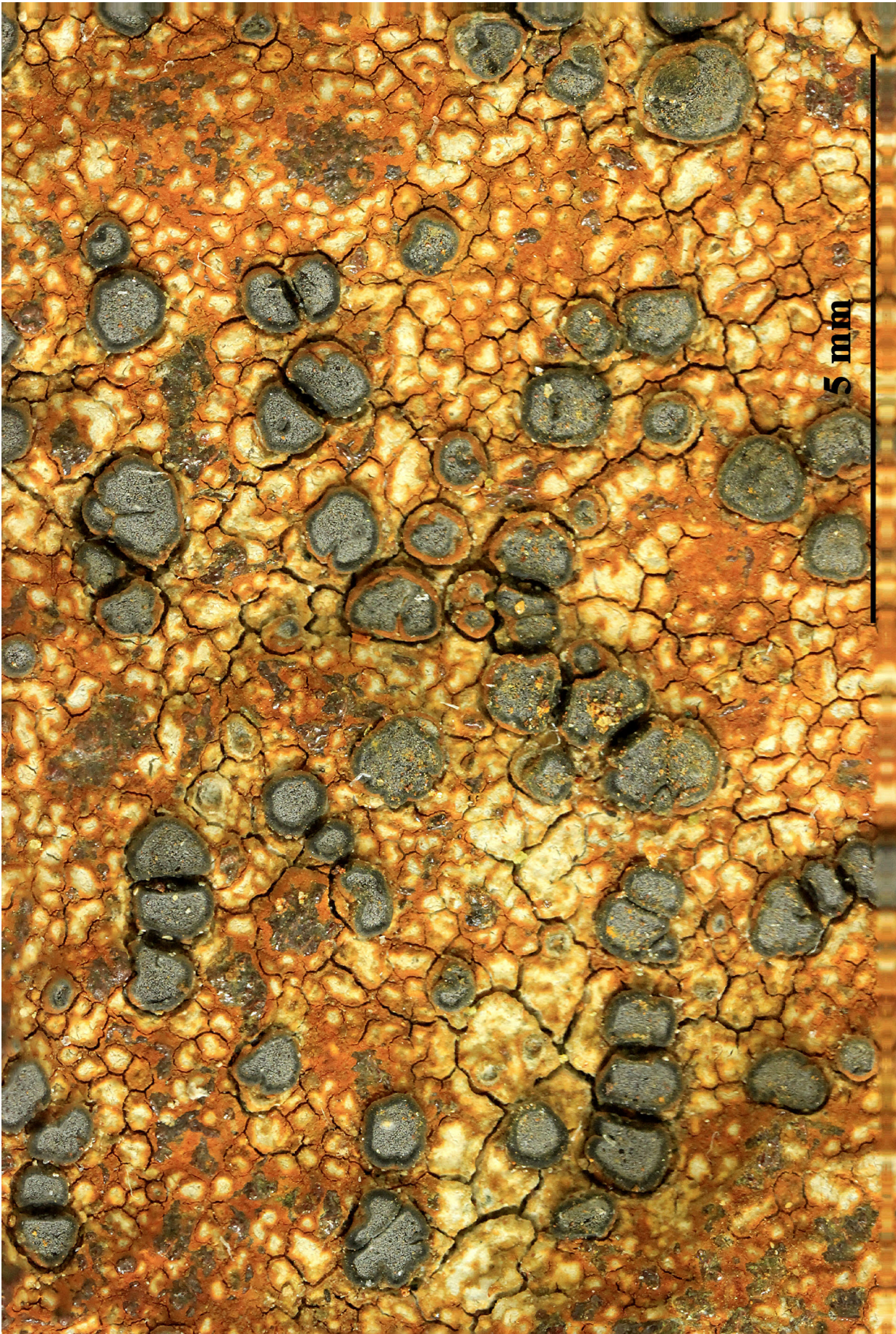
Lecidea limosa

Lecidea lithophila (Ach.) Ach., Syn. meth. lich. (Lund): 14 (1814)
 = *Lecidea lapicida* var. *lithophila* Ach. 1810
 = *Lecidea lapicida* var. *lithophila* Ach. - K. Vetensk.-Akad. Nya Handl., 29:
 233, 1808.
 = *Lecidea farinosa* H. Magn.
 = *Lecidea heteromorpha* H. Magn.
 = *Lecidea lithophiliza* Nyl.
 = *Lecidea ochracea* Fée
 = *Lecidea pruinosa* auct.;
 = *Lecidea silacea* var. *lecanactis* A. Massal.
 = *Lecidella lithophila* (Ach.) Arnold
 = *Lecidella pruinosa* Körb.

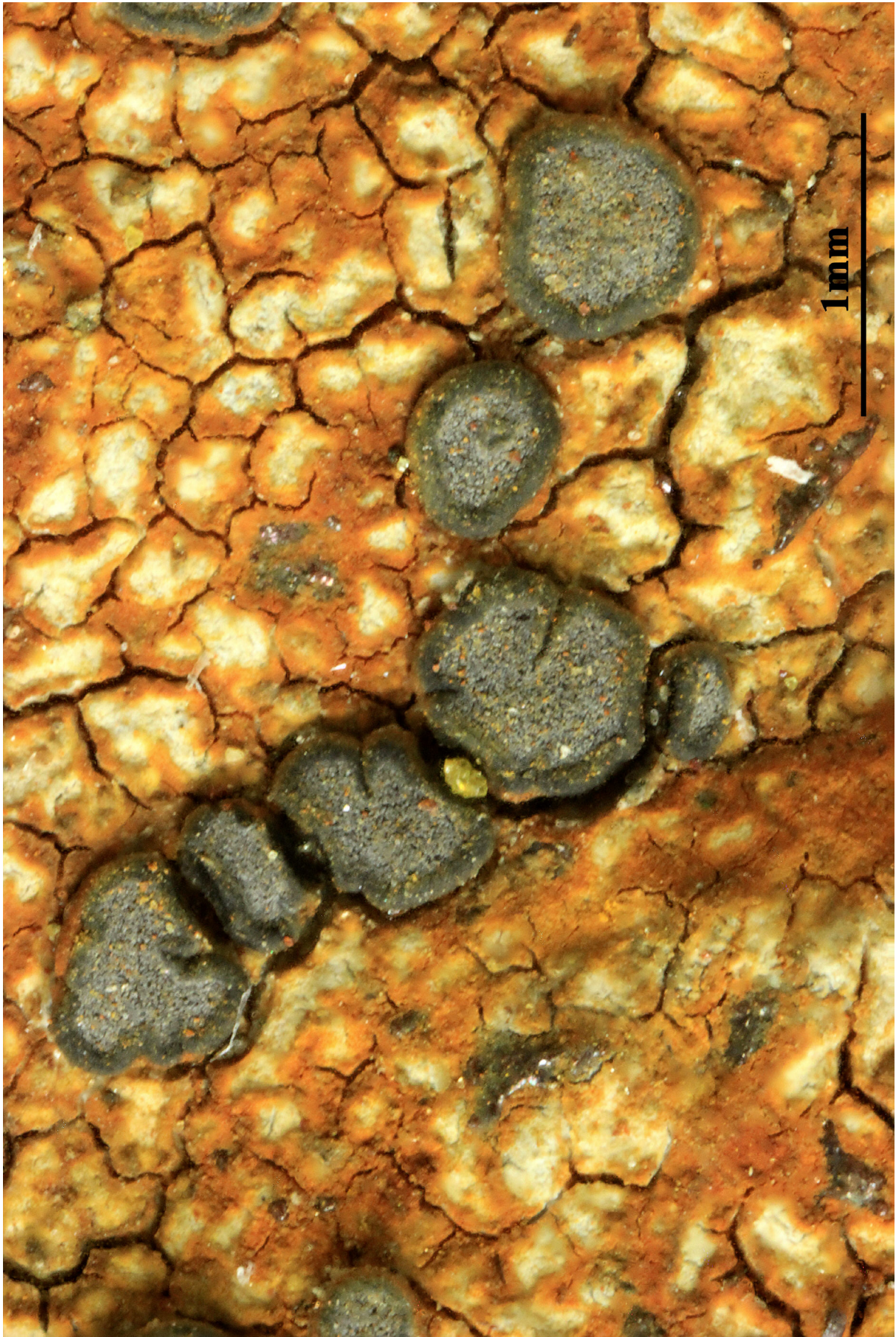
[VZ1205], Surcia. Härjedalen. Tännäs Paroecia. Gruvvålen prope
 Mittåkläppen, 100 m. Ad saxa prope metalla vetusta cupri. Leg. R.
 Santesson (no. 24426), 18.7.1973. EX A. VĚZDA LICHENES SELECTI
 EXSICCATI NR. 1205.

Thallus crustose, usually thinly epibiotic, continuous to rimose-
 areolate, grey-white to ochraceous, sometimes patchily rust-red on
 iron-rich substrata, the areoles flat to slightly convex, forming large
 patches and sometimes mosaics, the individual thalli separated by black
 lines; sometimes however the thallus is poorly developed and hardly
 evident. Medulla white, I-. Apothecia lecideine, black to brown-black
 but turning dark red-brown when wet (wait for a few minutes), ap-
 pressed-adnate to finally sessile, not constricted at base, 0.3-1.5(-2) mm
 across, round to irregular in outline by mutual compression, with an
 often cracked to deeply split, flat to slightly convex, blue-pruinose (in
 young apothecia) to epruinose disc, and a flexuose, raised, persistent
 proper margin. Proper exciple dark brown to greenish brown in outer
 part, colourless or pale brown within, of intricate-radiating hyphae, the
 marginal cells thin-walled, 1-3 μm thick, the medullary part filled with
 minute crystals; epithecium brown to rarely olive-brown, K-, N+ pur-
 ple-red; hymenium colourless, 40-75(-80) μm high, I+ blue; paraphyses
 coherent, simple or rarely branched, 1.5-2 μm thick at mid-level, the
 apical cells 3-4 μm wide; hypothecium colourless, I+ intensively blue.
 Asci 8-spored, narrowly clavate, thick-walled, with a K/I+ pale blue
 tholus and a strongly amyloid, thin apical cushion, surrounded by a I+
 blue outer layer, Lecidea-type. Ascospores 1-celled, hyaline, narrowly
 ellipsoid, sometimes pseudodiblastic (containing 2 large oil droplets),

9-15 x (3.5-)4-7 μm . Pycnidia dark, immersed. Conidia bacilliform, 12-18 μm long. Photobiont chlorococcoid. Spot tests: cortex and medulla K-, C-, KC-, P-, UV-. Chemistry: planaic acid (major), 4-0-demethylplanaic acid (usually traces). - Note: an ecologically wide-ranging, pioneer species found on vertical to slightly inclined surfaces of acid siliceous rocks close to the ground, also on iron-rich substrata, with optimum above the montane belt. The world distribution was mapped by Hertel (2006).



Lecidea lithophila



Lecidea lithophila

Lecidea lithophila (Ach.) Ach., Syn. meth. lich. (Lund): 14 (1814)
 = *Lecidea lapicida* var. *lithophila* Ach. 1810
 = *Lecidea lapicida* var. *lithophila* Ach. - K. Vetensk.-Akad. Nya Handl., 29:
 233, 1808.
 = *Lecidea farinosa* H. Magn.
 = *Lecidea heteromorpha* H. Magn.
 = *Lecidea lithophiliza* Nyl.
 = *Lecidea ochracea* Fée
 = *Lecidea pruinosa* auct.;
 = *Lecidea silacea* var. *lecanactis* A. Massal.
 = *Lecidella lithophila* (Ach.) Arnold
 = *Lecidella pruinosa* Körb.

[VZ1960], Norvegia. Hordaland: Gravin, prope summum montis dicti Smøreggen, 725 m. In saxis. Leg, et det. J. J. Havaas, 3.9.1940. - Annot.: Planaic acid and 4-O-demethylplanaic acid by TLC; anal. A. Johnson and C. F. Culberson. Collected for Lichenes Norvegiae Occidentalis Exsiccati but not issued in that series. - EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1960.

[VZ1205], Surcia. Härjedalen. Tännäs Paroecia. Gruvvålen prope Mittåkläppen, 100 m. Ad saxa prope metalla vetusta cupri. Leg. R. Santesson (no. 24426), 18.7.1973. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1205.

Thallus crustose, usually thinly epibiotic, continuous to rimose-areolate, grey-white to ochraceous, sometimes patchily rust-red on iron-rich substrata, the areoles flat to slightly convex, forming large patches and sometimes mosaics, the individual thalli separated by black lines; sometimes however the thallus is poorly developed and hardly evident. Medulla white, I-. Apothecia lecideine, black to brown-black but turning dark red-brown when wet (wait for a few minutes), appressed-adnate to finally sessile, not constricted at base, 0.3-1.5(-2) mm across, round to irregular in outline by mutual compression, with an often cracked to deeply split, flat to slightly convex, blue-pruinose (in young apothecia) to epruinose disc, and a flexuose, raised, persistent proper margin. Proper exciple dark brown to greenish brown in outer part, colourless or pale brown within, of intricate-radiating hyphae, the marginal cells thin-walled, 1-3 µm thick, the medullary part filled with minute crystals; epithecium brown to rarely olive-brown, K-, N+ pur-

ple-red; hymenium colourless, 40-75(-80) μm high, I+ blue; paraphyses coherent, simple or rarely branched, 1.5-2 μm thick at mid-level, the apical cells 3-4 μm wide; hypothecium colourless, I+ intensively blue. Asci 8-spored, narrowly clavate, thick-walled, with a K/I+ pale blue tholus and a strongly amyloid, thin apical cushion, surrounded by a I+ blue outer layer, Lecidea-type. Ascospores 1-celled, hyaline, narrowly ellipsoid, sometimes pseudodiblastic (containing 2 large oil droplets), 9-15 x (3.5-)4-7 μm . Pycnidia dark, immersed. Conidia bacilliform, 12-18 μm long. Photobiont chlorococcoid. Spot tests: cortex and medulla K-, C-, KC-, P-, UV-. Chemistry: planaic acid (major), 4-O-demethylplanaic acid (usually traces). - Note: an ecologically wide-ranging, pioneer species found on vertical to slightly inclined surfaces of acid siliceous rocks close to the ground, also on iron-rich substrata, with optimum above the montane belt. The world distribution was mapped by Hertel (2006).



Lecidea lithophila



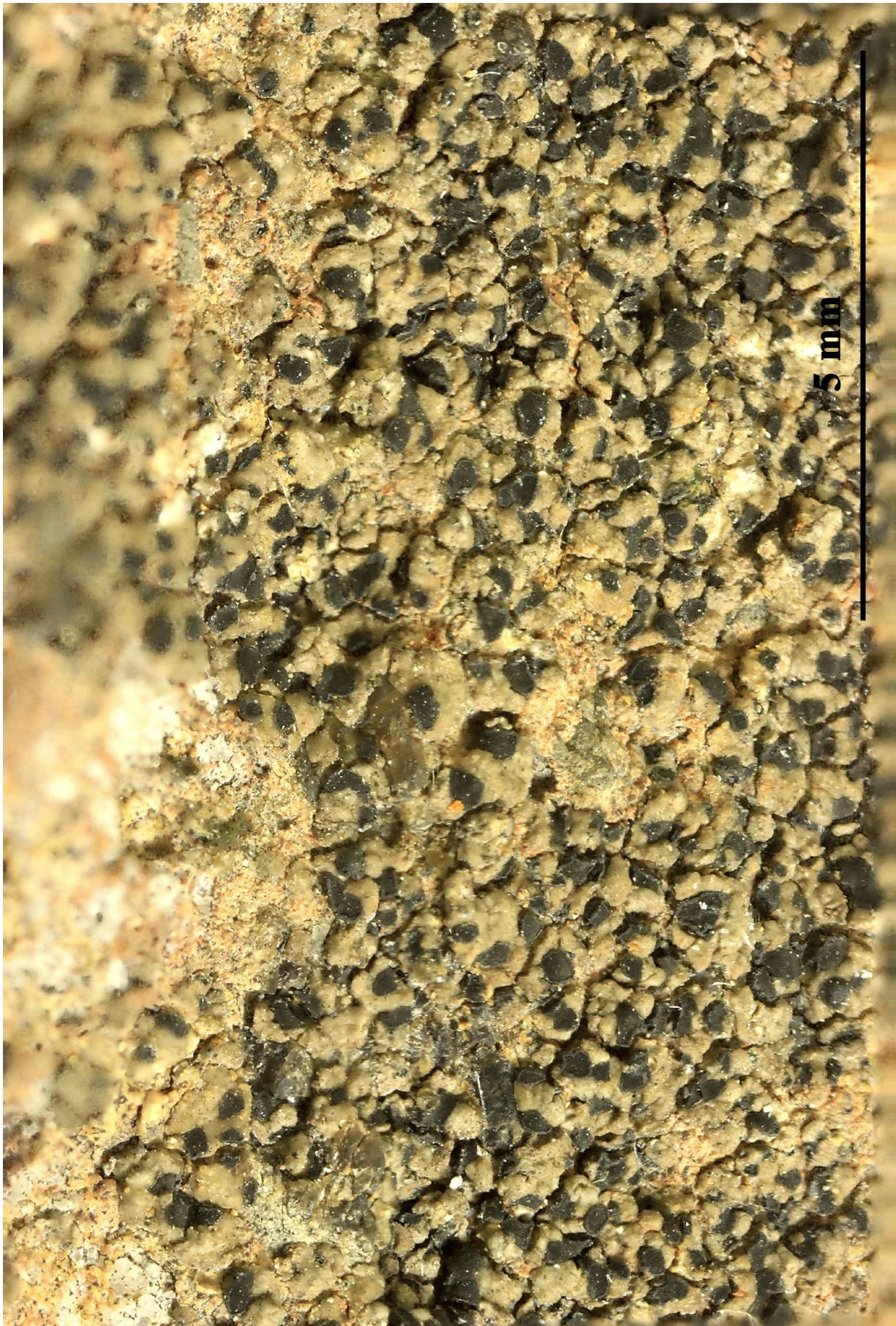
Lecidea lithophila

Lecidea microsporella Lettau, Hedwigia 61: 128 (1912)

= *Lecidea variegatula* Nyl. Flora, 48: 6, 1865

{VZ1367}, Hungaria, Montes Matra: regio montis Kékes, loco Dicnókösicte, 700 m. Ad saxa andesitica. Leg. A. Kiszely et A. Vězda, 4.10.1975. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1367.

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



Lecidea microsporella



Lecidea microsporella

Lecidea pullata (Norman) Th. Fr., Lich. Scand. (Upsaliae)(2): 471 (1874)
 = *Biatora pullata* Norman 1870
 = *Frutidella pullata* (Norman) Schmull, in Schmull et al., Mycologia
 103(5): 990 (2011)
 = *Frutidella furfuracea* (Anzi) M. Westb. & M. Svensson, Mycokeys, 25:
 64, 2017.
 = *Biatora furfuracea* Anzi - Comm. Soc. Crittog. Ital. 2: 13, 1864.
 = *Biatora amaurospoda* Anzi
 = *Biatora pullata* Norman
 = *Lecidea anziana* Zahlbr.
 = *Lecidea furfuracea* (Anzi) Jatta non Pers.
 = *Lecidea ostrogothensis* Nyl.
 = *Lecidea perobscurans* Nyl.

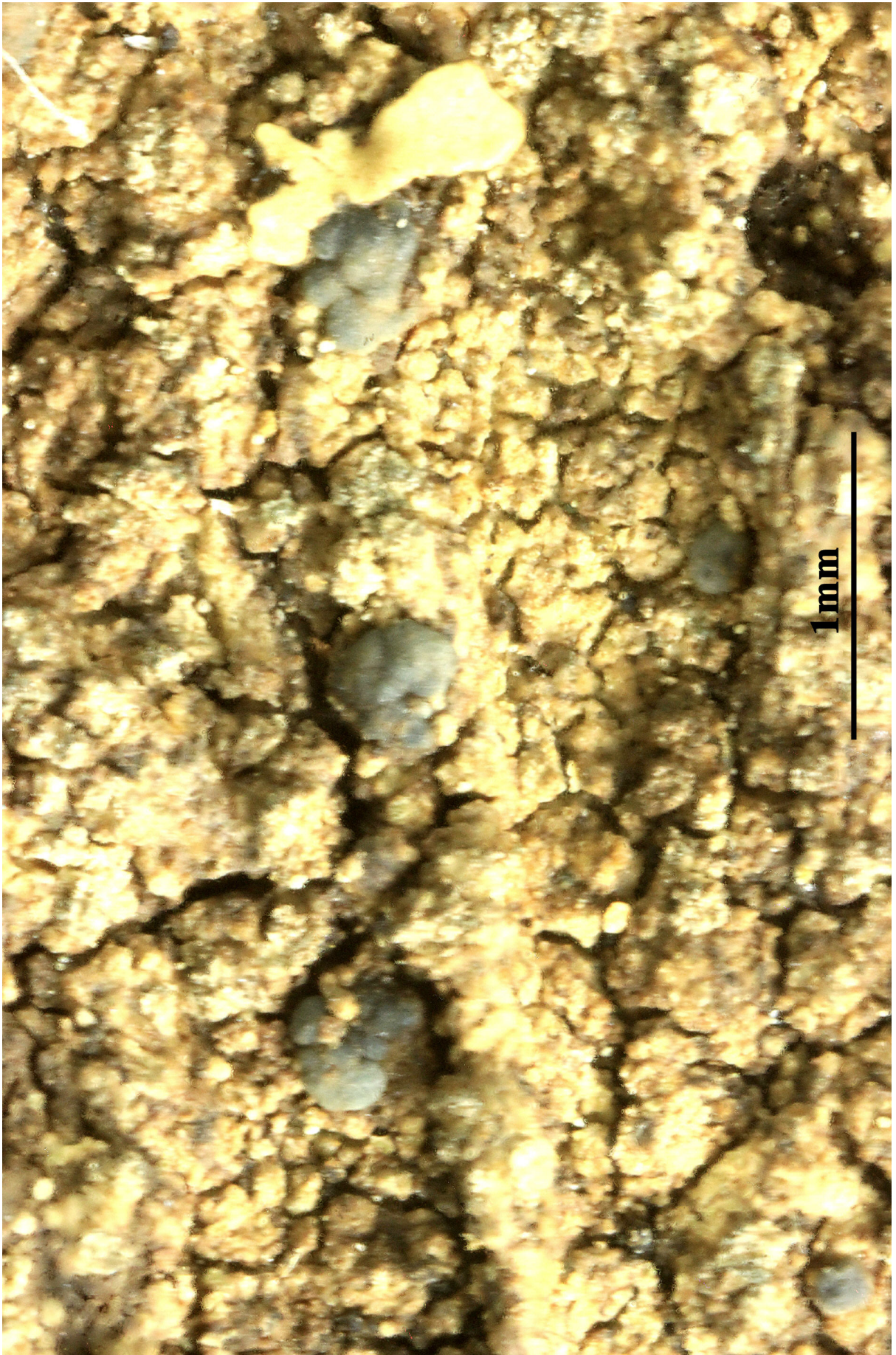
[VZ2057], Bohemoslovakia. Slovakia, Carpati, montes Tatra Minor, in
 pede merid. montis Ďumbier, in valle prope Trangoska, 1300 m. Ad
 corticem *Aceris pseudoplatani*. Leg. E. Farkas et A. Vězda, 28.5.1985.
 Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2057.

Thallus crustose, endo- to episubstratic in non-sorediate parts, conti-
 nuous to more or less distinctly areolate, forming regular or irregular,
 up to 10 cm wide patches, usually delimited by a dark, bluish to brown
 prothallus, the blue pigment N+ red. Areoles 0.1-0.3 mm wide, convex,
 green to pale brown, soon bursting apically into minute, irregularly
 punctiform, 0.1(-0.3) mm wide, mostly flat soralia which rarely coale-
 sce into a subleprose crust; soredia farinose, up to 20-30 µm in diam,
 the external ones brownish, the internal ones pale greenish. Apothecia
 not always present, biatorine, up to 0.6 mm across, the disc flat to
 strongly convex, blackish but often faintly pruinose and appearing
 bluish grey, lead-grey or grey-black, rarely with a brownish hue, the
 proper margin soon excluded. Proper exciple more or less colourless,
 of radiating hyphae; epithecium pale olive-green to greenish brown;
 hymenium colourless to bluish green in upper part; paraphyses strongly
 coherent, sparingly branched and anastomosing; hypothecium pale
 olive-brown. 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. Asco-
 spores 1-celled, hyaline, ellipsoid, 9-17 x 4-7.5 µm. Photobiont chloro-
 coccoid. Spot tests: thallus and soralia K- (or soralia K+ very pale
 yellow), C-, KC-, P-, UV+ white. Chemistry: sphaerophorin (major),

isosphaeric acid (traces). Note: on bark, on basal parts of (mainly) coniferous trees, more rarely on lignum, often associated with *Parmeliopsis ambigua*, with optimum in the subalpine belt; most frequent in the Alps.



Lecidea pullata



Lecidea pullata

- Lecidea ramulicola* H. Magn., Ark. Bot., Ser. 2 2(no. 2): 133 (1952)
 = *Lecidea ramulicola* (H. Magn.) Hillmann 1944
 = *Palicella filamentosa* (Stirt.) Rodr. Flakus & Printzen Lichenologist, 46: 540, 2014.
 = *Lecidea filamentosa* Stirt. - Scott. Natural., 5: 218, 1879
 = *Lecanora filamentosa* (Stirt.) Elix & Palice
 = *Lecanora ramulicola* (H. Magn.) Printzen & P.F. May
 = *Lecidea dalecarlica* Hedl.
 = *Lecidea hercynica* M. Hauck & Schmull
 = *Lecidea ramulicola* (H. Magn.) Hillm. non H. Magn. (1952)
 = *Lecidea saepincola* Ach. var. *ramulicola* H. Magn.

[VZ1206], Bohemoslovakia. Slovakia, Carpati, montes Liotovské hole, in efscensu montis Baranec supra pagum Ždiar, 1200 m. Ad corticem Laricis deciduae. Leg. A. Vězda, 22.8.1973. EX A. VEZDA LICHENES SELECTI EXSICCATI NR. 1206.

Thallus crustose, whitish, episubstratic and 0.1-0.4(-0.7) mm thick, rimose-areolate to strongly warted, the warts 0.1-0.2(-0.4) mm wide, rarely endosubstratic and poorly evident, sometimes delimited by a white prothallus. Pseudocortex of gelatinized, 2.5-3 µm thick, branched and anastomosing, semi-anticlinally arranged hyphae; medulla compact, of highly branched, entangled, 2.5-3 µm thick hyphae, I-. Apothecia sometimes cryptolecanorine when young, but usually appearing biatorine, rounded to irregular in outline, frequently crowded and coalescing, adnate to sessile, 0.3-0.6(-0.9) mm across, with a cream-coloured, red-brown to brown-black, flat to convex, sometimes faintly pruinose disc, a concolorous to slightly paler, thin, hardly raised, finally often excluded proper margin, and (in young apothecia only) an ephemeral thalline margin. Proper exciple yellow-brown to orange brown in outer part, colourless within, 30-55 µm wide laterally, 30-90 µm wide at base, of strongly gelatinized, branched and anastomosing, radiating hyphae with strongly elongate lumina; epithecium yellow brown to orange-brown, with a layer of coarse granules which sometimes streak into the hymenium, dissolving in K but not in N, the Cinereorufa-green pigment and a brown pigment reacting K⁺ greenish brown or greyish brown; hymenium colourless, (35-)40-70 µm high, I⁺ blue; paraphyses lax in K, moderately branched and anastomosing, 1.2-2 µm thick, the apical cells not markedly wider; hypothecium colourless to pale yellow, 15-90(-150) µm high, I⁺ weakly blue. Asci 8-spored, the tholus I⁺ blue, with a wide axial body that is mostly surrounded by a distinct darker

staining layer (Lecanora/Lecidella-type). Ascospores 1-celled (rarely a few 1-septate), hyaline, narrowly ellipsoid, (10-)12.5-13.5(-16) x (3.5-)4-4.5(-5) μm . Pycnidia rare, black, immersed, the conidiogenous cells flask-shaped with long to very long necks, apparently terminal. Conidia thread-like, (9-)11-15(-17) x c. 1 μm . Photobiont chlorococcoid. Spot tests: thallus K⁺ yellow, C-, KC-, P+ yellow. Chemistry: thallus with atranorin and traces of usnic acid; apothecia with paraensic acids C, D, G and the Cinereorufa-green pigment. Note: a mainly boreal-montane, very variable species found on wood, but also on acid bark in humid, montane coniferous forests. Widespread in northern and central Europe, and known from a few stations in the Eastern Alps (Austria, Switzerland), where it is probably more widespread, the distribution being poorly known due to frequent misidentifications, especially with *Lecanora symmicta* and similar species. To be looked for in the Italian Alps. For further details see Printzen & May (2002), Pérez-Ortega & Printzen (2007), Palice & al. (2011), Dietrich & al. (2020).



Lecidea ramulicola



Lecidea ramulicola

Lecidea silacea (Hoffm.) Ach., Methodus qua omnes detectos Lichenes Secundum Organa Carpomorpha ad Genera, Species et Varietates Redigere atque Observationibus Illustrare Tentavit Erik Acharius: 48 (1803)

= *Patellaria silacea* Hoffm. 1790

= *Lecidea subsilacea* Nyl.

= *Lecidella silacea* (Hoffm.) Stein

[VZ1535], Suecia. Härjedalen: Tännäs Paroecia, Gruvvålen prope Mittåkläppen, 900 m. In rupibus metallis cupri vetusta. Leg. R. Santesson (no. 27392), 26.6.1977. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1535.

Thallus crustose, episubstratic, rather thick, areolate-verrucose, ochre to rust-red, without a distinct prothallus, the areoles convex to bullate, 0.3-1(-1.5) mm wide, matt. Medulla white, I+ blue. Apothecia lecidine, black, 0.5-1.5(-2) mm across, arising between the areoles, sessile and constricted at base, with a flat to convex disc and a usually persistent, sometimes finally excluded, raised, often sinuous proper margin. Proper exciple with a thick, brown-black to green-black cortex reacting N+ purple, more or less colourless within; epithecium bright blue-green or green-black, N+ purple; hymenium colourless or pale green in upper part, 40-70 μm high; paraphyses sparingly branched and anastomosing, 1.5-2 μm thick at mid-level, the apical cell to 5 μm wide; subhymenium pale blue-green, well-differentiated from the pale to dark brown, sometimes substipitate hypothecium. Ascii 8-spored, clavate, Lecidea-type. Ascospores 1-celled, hyaline, ellipsoid to broadly ellipsoid, (7-)8-15(-17) x 4.5-6(-7) μm , 1.6-2 times as long as wide. Pycnidia dark. Conidia bacilliform 8-12 x c. 1 μm . Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances, or sometimes with porphyritic acid, rarely with low amounts of stictic or norstictic acids. - Note: a probably circumpolar, arctic-alpine to boreal-montane lichen (Hertel 2006) found on iron-containing rocks in humid, sheltered situations, mostly in upland areas. The sample from Valle d'Aosta was collected by B. Feige near Plan Masson near Breuil, at 2500 m.



Lecidea silacea



Lecidea silacea

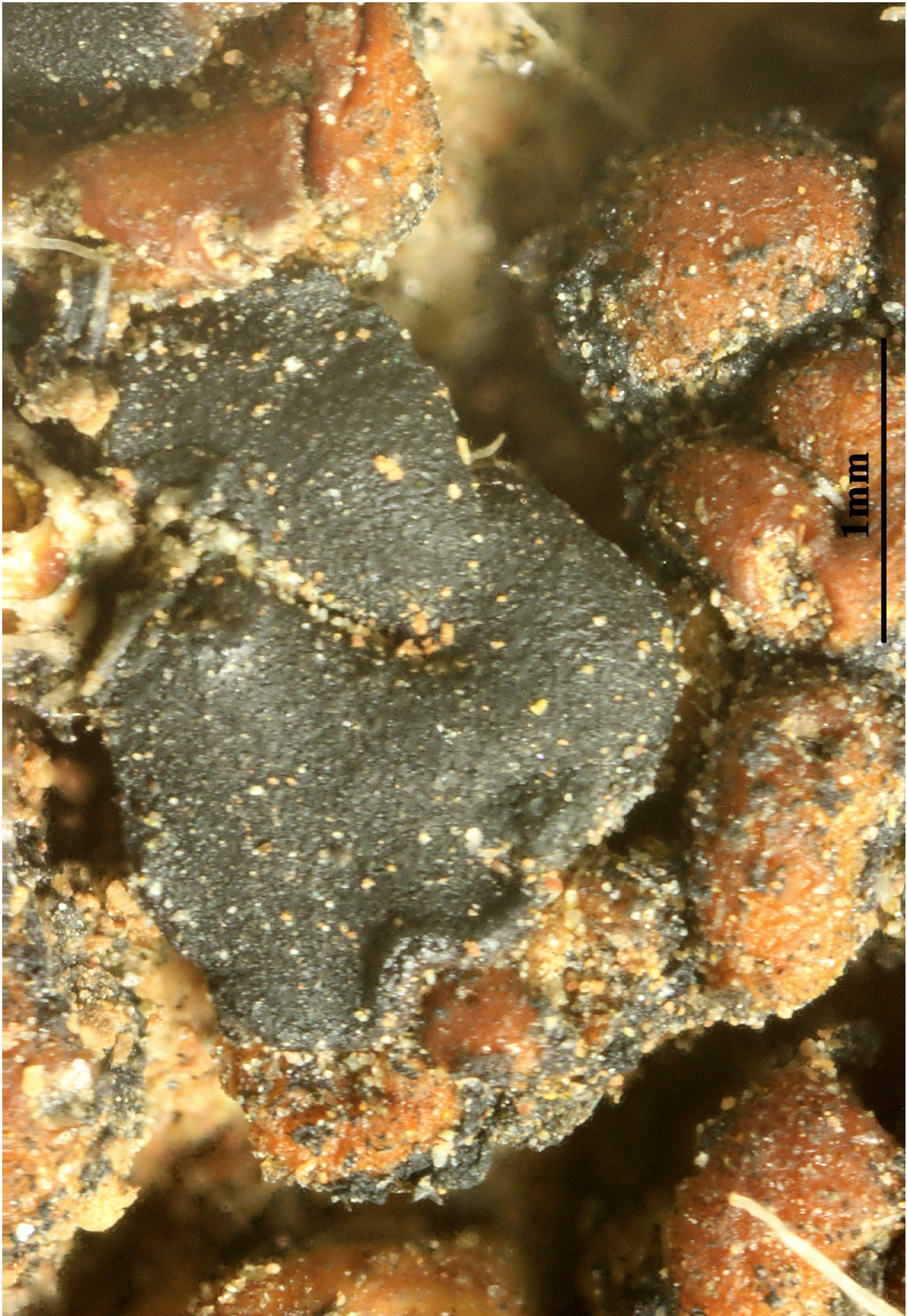
Lecidea tabacina (DC.) Schaer., Lich. helv. spicil. 11(App.): 631 (1842)
= *Psora tabacina* DC. 1805
= *Lecidea silacea* (Hoffm.) Ach. Meth. Lich.: 48, 1803.
= *Patellaria silacea* Hoffm. - Descr. Adumb. Plant. Lich., 1, 4: 89, 1790.
= *Lecidea subsilacea* Nyl.
= *Lecidella silacea* (Hoffm.) Stein
= *Psora tabacina* Ramond ex DC. non auct.

[VZ1997], Hispania. Prov. Lerida, in valle fluminis Segre prope Organa, 550 m. In fissuris rupium secus viam. Leg. J. Poelt et A. Vězda., 26.5.1983. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1997.

Thallus crustose, episubstratic, rather thick, areolate-verrucose, ochre to rust-red, without a distinct prothallus, the areoles convex to bullate, 0.3-1(-1.5) mm wide, matt. Medulla white, I+ blue. Apothecia lecidine, black, 0.5-1.5(-2) mm across, arising between the areoles, sessile and constricted at base, with a flat to convex disc and a usually persistent, sometimes finally excluded, raised, often sinuous proper margin. Proper exciple with a thick, brown-black to green-black cortex reacting N+ purple, more or less colourless within; epithecium bright blue-green or green-black, N+ purple; hymenium colourless or pale green in upper part, 40-70 μm high; paraphyses sparingly branched and anastomosing, 1.5-2 μm thick at mid-level, the apical cell to 5 μm wide; subhymenium pale blue-green, well-differentiated from the pale to dark brown, sometimes substipitate hypothecium. A ζ sci 8-spored, clavate, Lecidea-type. Ascospores 1-celled, hyaline, ellipsoid to broadly ellipsoid, (7-)8-15(-17) x 4.5-6(-7) μm , 1.6-2 times as long as wide. Pycnidia dark. Conidia bacilliform 8-12 x c. 1 μm . Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances, or sometimes with porphyritic acid, rarely with low amounts of stictic or norstictic acids. - Note: a probably circumpolar, arctic-alpine to boreal-montane lichen (Hertel 2006) found on iron-containing rocks in humid, sheltered situations, mostly in upland areas. The sample from Valle d'Aosta was collected by B. Feige near Plan Masson near Breuil, at 2500 m.



Lecidea tabacina

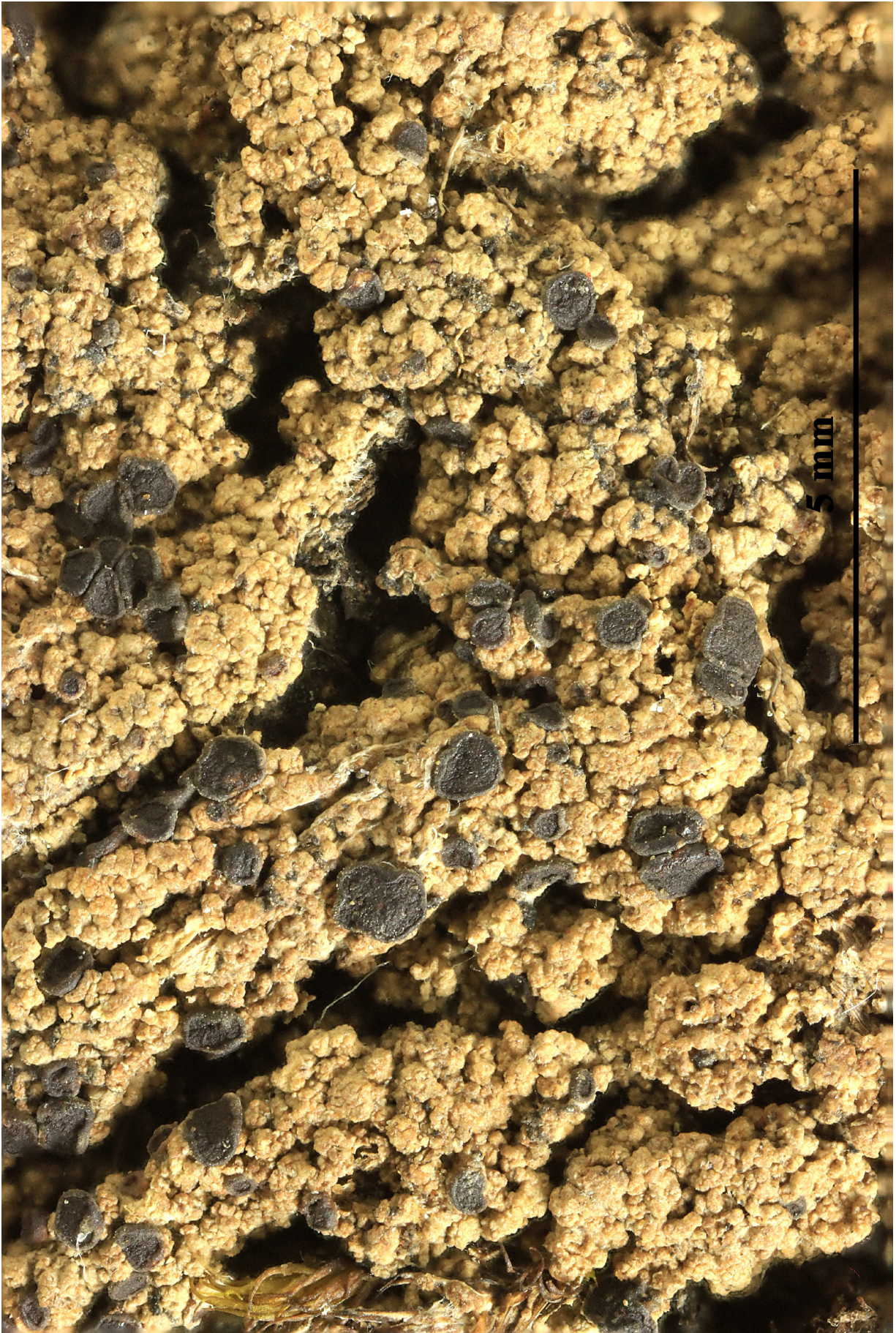


Lecidea tabacina

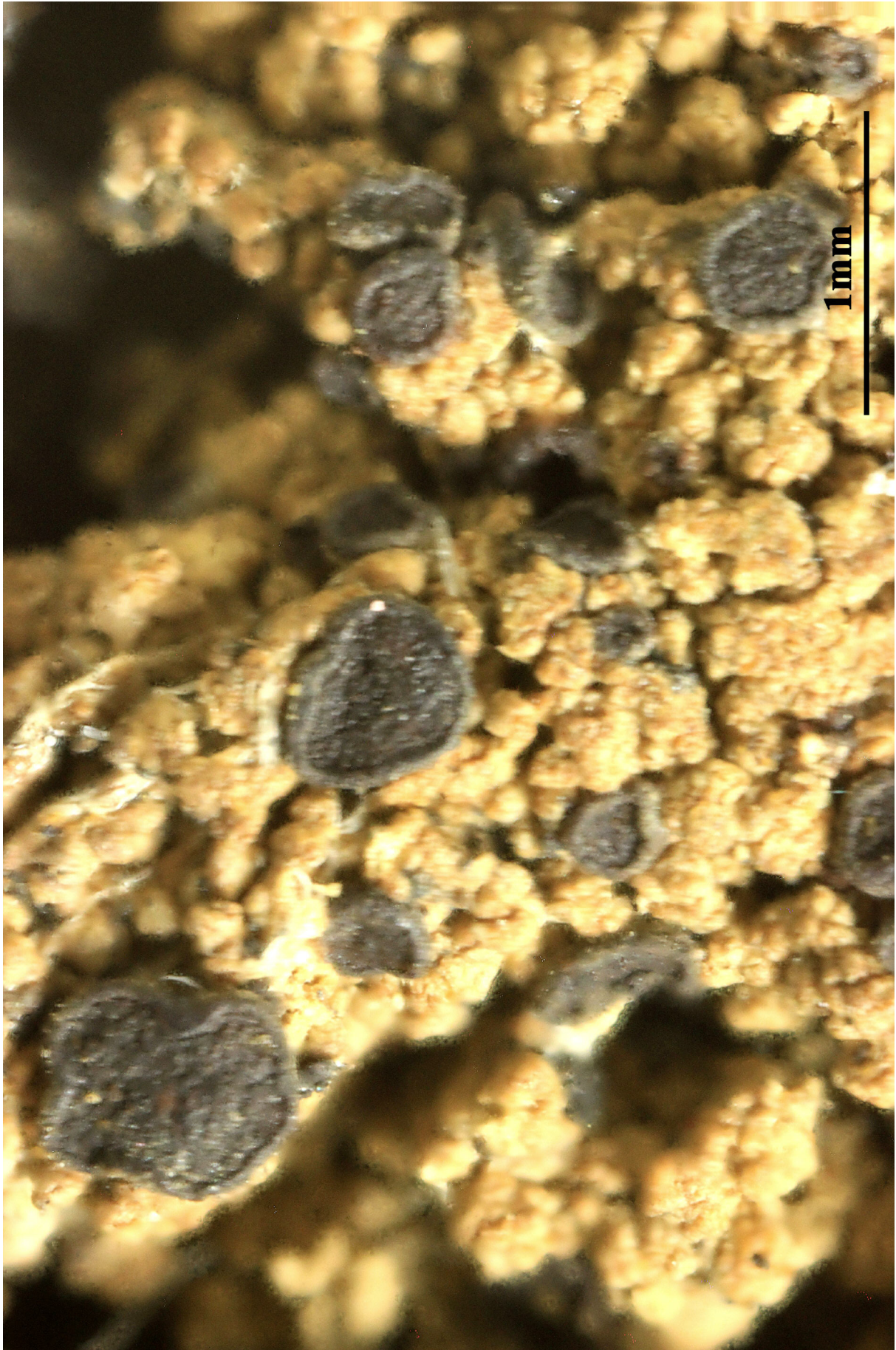
Lecidea turficola (Hellb.) Th. Fr., Lich. Scand. (Upsaliae)(2): 475 (1874)
= *Biatora turficola* Hellb. 1865

[VZ2122], Bohemoslovacia. Slovacia septentrionalia, Carpates, Tatra Magna: in parte superiore vallis Hlinská dolina, 2080 m. Ad terram humosam in *Saliceto herbaceae*. Leg. E. Farkas, Z. Kyselová et A. Vězda, 25.6.1988. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2122.

Ex A. H. Magnusson (1952): Non saxicolous *Lecidea* species in Finland: Hypothecium pale to ± brown; Sp. 9—16 x 4—6 μm. Thallus brown-grey, ±red-brown to pale, squam.-verrucose to granular. Apothecia 0.5—0.8 mm, red to black-brown, plane; margo thin. Hypothecium + exccipulum pale. Thecium 50 μm. Paraphyses. clavate. Exccipulum hyphae thin-walled.



Lecidea turficola

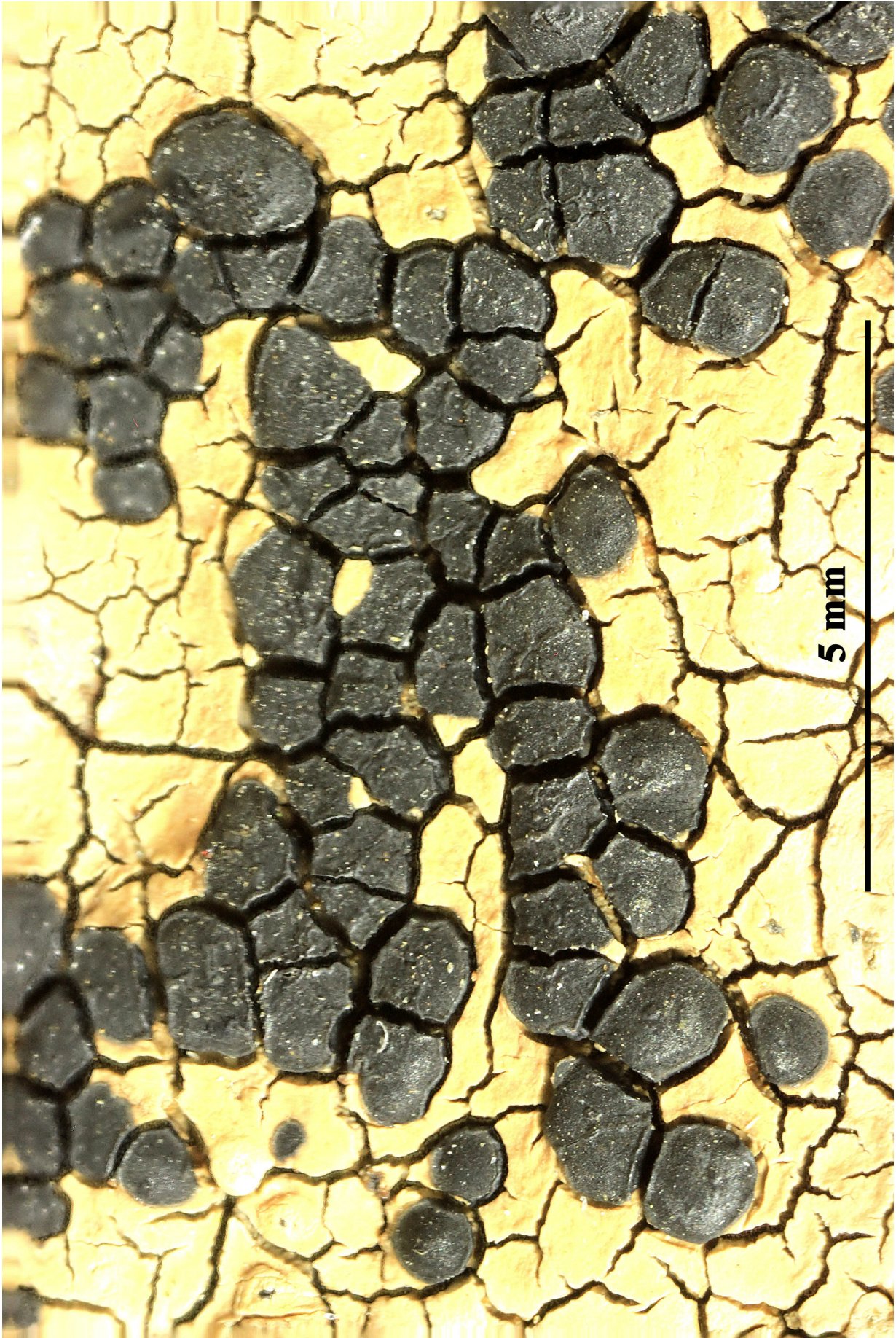


Lecidea turficola

Lecidea umbonella Nyl., Flora, Regensburg 49: 372 (1866)
 = *Cecidonia umbonella* (Nyl.) Triebel & Rambold, Nova Hedwigia 47(3-4): 284 (1988)
 = *Lecidea alumnula* Nyl.
 = *Lecidea dealbatula* Nyl.
 = *Lecidea deparcula* Nyl.
 = *Lecidea hymeneliicola* Alstrup & D. Hawksw.
 = *Lecidea subumbonata* Nyl.
 = *Lecidea subumbonella* Lamy
 = *Lecidea umbonella* var. *alumnula* (Nyl.) Hertel
 = *Nesolechia xenophana* (Körb.) Vouaux

[VZ1591], Austria. Carinthia. distr. Greifenburg, regio montis Kreuzeck: Emberger Alm, in monte Knoten, 2200 m. Ad rupes siliceas, supra thallum *Lecidea* sp. parasiticans. Leg. H. Hertel, A. Vězda et V. Wirth. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1591.

Thallus apparently crustose, often forming white to cream-coloured, gall-like, flattened to convex, up to 4 mm wide and up to 0.4 mm thick warts on silicicolous *Porpidia*-species. Medulla of the galls I-. Apothecia black, round to elliptical in outline, 0.2-0.3(-0.5) mm across, sessile, with a sometimes umbonate disc and a persistent, usually glossy black proper margin. Proper exciple up to 75 µm wide laterally, of irregular chains of swollen cells, carbonaceous black in outer part, paler brown within; epithecium pale olive-brown, up to 20 µm high; hymenium colourless, amyloid, 50-80 µm high; paraphyses coherent, branched and anastomosing, c. 2 µm thick at mid-level, the apical cells hardly swollen, up to 3 µm wide; hypothecium dark brown, 70-120(-300) µm high. Asci 8-spored, subcylindrical-clavate, the apex thickened, with a K/I+ pale blue apical dome usually with a distinct I+ blue, shallow subapical ring, *Lecidea*-type. Ascospores 1-celled, hyaline, ellipsoid, (9-)10-12(-13) x 5-6.5(-7.5) µm, without a perispore. Pycnidia black, c. 90 µm wide, the wall dark brown and conidia simple, hyaline, bacilli-form, 5.5.-8 x c. 1 µm (these however may be the pycnidia of the host). Photobiont apparently chlorococcoid, but the galls are most probably a reaction of the host thalli, the species being non-lichenized. Spot tests: those of the host lichens. Chemistry: probably without lichen substances. - Note: an obligately lichenicolous fungus growing on the thalli of *Porpidia*-species; probably more widespread in the Alps, also known from the high Mediterranean mountains.



Lecidea umbonella



Lecidea umbonella

Lecidea varians Ach., Syn. meth. lich. (Lund): 38 (1814)

= *Xanthosyne varians* (Ach.) R.C. Harris, Lendemer, Brodo & McMullin, in Brodo, Lendemer, Harris, McMullin, López de Silanes, van Miltenburg, Bull, Paradis & Ginter, Bryologist 127(2): 199 (2024)

= *Xanthosyne varians* subsp. *exigua* (Chaub.) Brodo, López de Silanes, Lendemer, R.C. Harris & McMullin in Brodo & al., Bryologist, 127, 2: 202, 2024).

= *Lecidea exigua* Chaub. - in Saint-Amans, Fl. Agen.: 478, 1821.

= *Biatora decandollei* Hepp

= *Biatora exigua* (Chaub.) Fr.

= *Biatora geographica* A. Massal.

= *Lecidea decandollei* (Hepp) Jatta

= *Traponora varians* (Ach.) J. Kalb & Kalb

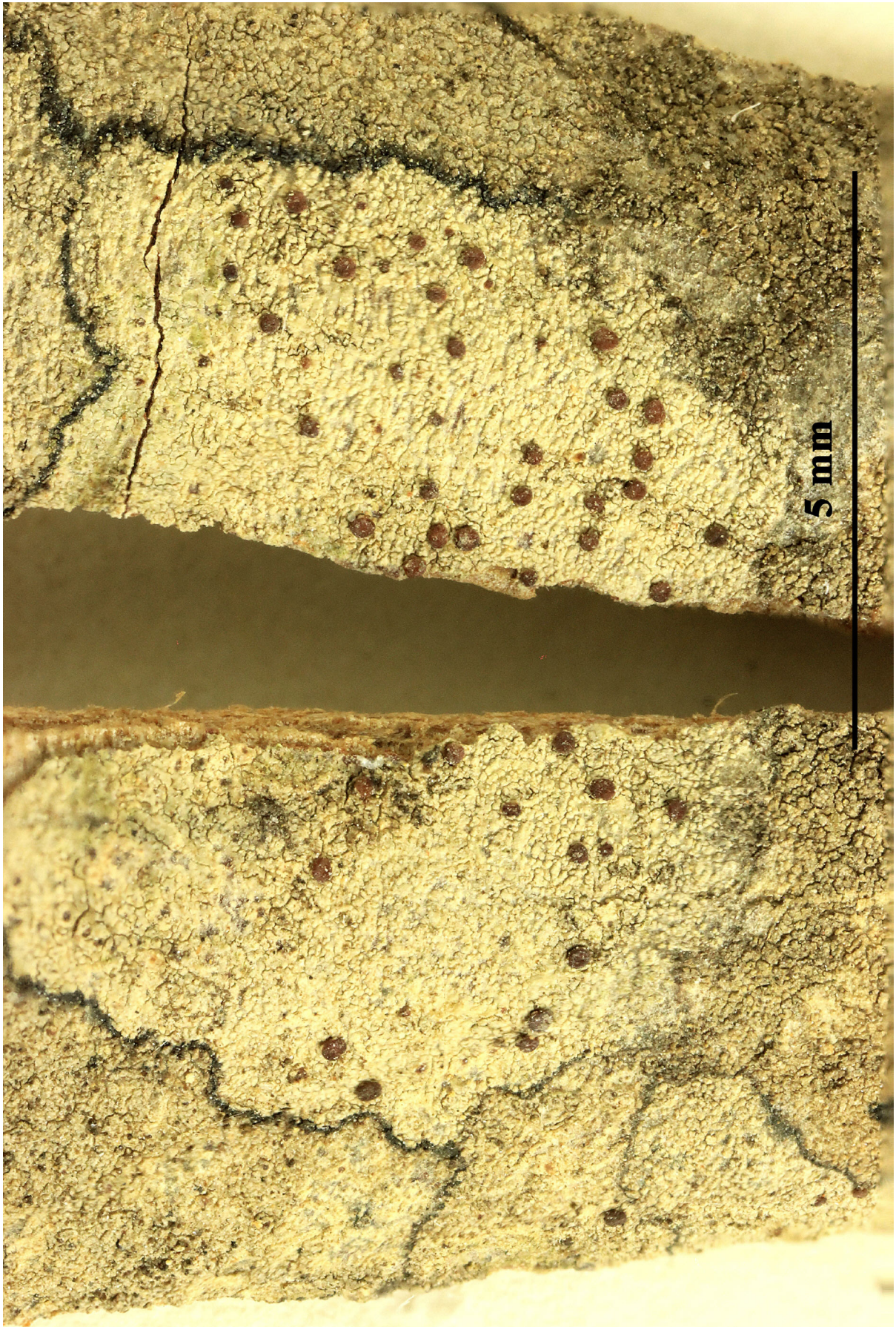
[VZ1608], USA. Louisiana. East Baton Rouge Paroecia: Baton Rouge, Baird Drive, 30°22'45" sept., 91°07'30" occid. Ad corticem *Carpini caroliniana*e. Leg. S. C. Tucker (no. 15932). EX A. V&ZDA LICHE- NES SELECTI EXSICCATI NR. 1608.

Thallus: thin, warted-areolate, rimose or rarely endosubstratal areoles: scattered or contiguous, strongly convex or with irregular surface, 0.05-0.25 mm in diam., often confluent or forming a rimose crust with areoles 0.3-0.6 mm in diam. surface: grayish beige to pale yellow; dull, esorediate; cortex poorly developed, 5-10 µm high; medulla mostly lacking; algal layer 30-60 µm high; Apothecia rounded to somewhat deformed, often in groups of 3-5, sessile, with a weakly constricted base or appressed, 0.15-0.45 mm wide; disc ochre to reddish brown, sometimes with a pink hue due to a fine, white pruina, plane or weakly convex; margin weakly prominent and soon excluded or lacking from the beginning; exciple ochre to reddish brown at the outer edge or near the hymenium, hyaline or pale yellow within, laterally 15-30 µm wide, basally 15-50(-65) µm wide, composed of branched and anastomosing, radiating hyphae with 0.7-1 µm wide lumina and apical cells with lumina 3-6 µm wide; epihymenium yellowish to reddish brown, composed of paraphysal tips and ±sparse granules, 5-10 µm high; hymenium hyaline, 50-60(-70) µm high; paraphyses basally hyaline, with lumina 0.7-1.2 µm wide, apically mostly with pale brown walls and lumina 2-4.5 µm wide, weakly to moderately branched (mainly below apical cells) and anastomosing; subhymenium hyaline, 15-55 µm thick; hypothecium hyaline or pale yellow, 0-100 µm thick; asci clavate, Lecidella-type with an I+ blue tholus containing a lighter blue, broadly rounded axial body, 8-spored; ascospores hyaline, simple, broadly

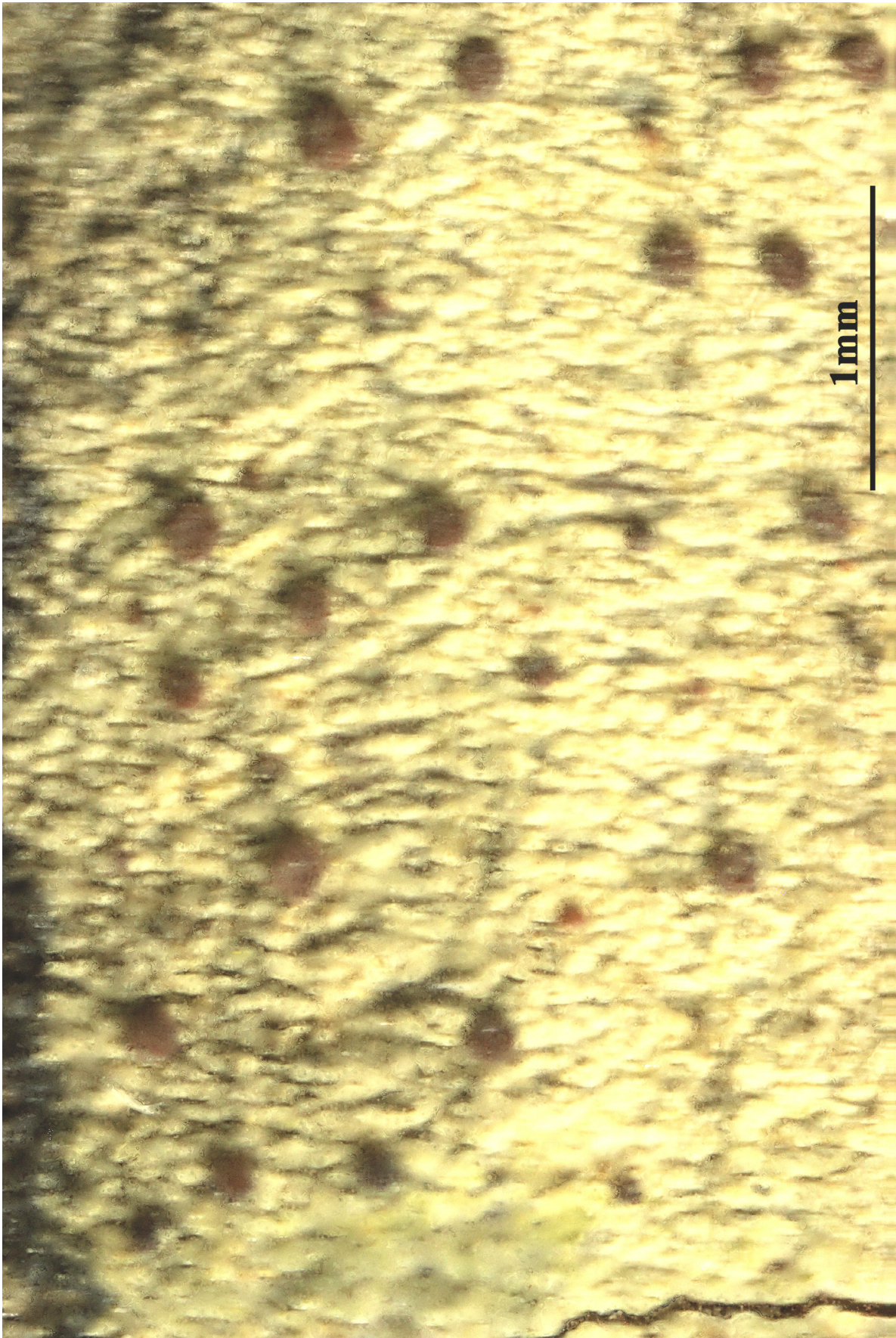
ellipsoid, (7-)8.6-11.1(-13.5) x (4-)4.9-6.1(-7) μm ; Pycnidia not seen; Spot tests: thallus K-, C \pm orange, P-, UV \pm dark orange; Secondary metabolites: atranorin and xanthones. Substrate and ecology: on bark, often on twigs of deciduous trees and shrubs, rarely on wood, between 50 and 500 m (one collection from 2550 m) World distribution: North America and Europe. - Note: The minute, pale apothecia of *Lecidea varians* distinguish it from all other species.

Thallus crustose, thinly episubstratic, whitish, pale yellow or greenish grey, smooth to areolate or finely verrucose, delimited by a dark prothallus. Apothecia lecideine, rounded to deformed by mutual compression, 0.15-0.5 mm across, isolated or aggregated into small clusters, orange-brown, pale yellowish brown or reddish brown, sometimes pruinose when young and blackening when old, with a flat to slightly convex disc and a thin, finally excluded proper margin. Proper exciple two-parted, the inner part and the outer rim consisting of non-gelatinized, prosoplectenchymous hyphae, the lower outer portion consisting of gelatinized, anticlinally arranged, branched hyphae, usually pale brown, lacking green pigments, ochre to reddish brown at the outer edge, colourless to pale yellow within, 15-30 μm wide laterally, expanding to 50(-65) μm towards the base; epithecium pale yellow-red-brown, with many crystals dissolving in K, 5-10 μm high; hymenium colourless, 40-70 μm high, I+ blue; paraphyses coherent in water, easily made free in K, simple or sparingly branched and anastomosing in upper part, 0.7-1.2 μm thick at mid-level, at least some of them with capitate, up to 4(-5) μm wide apical cells; hypothecium colourless, 20-30 μm high. Asci 8-spored, narrowly clavate, thick-walled, with an I+ blue tholus containing a lighter blue, broadly rounded axial body, Lecidella-type. Ascospores 1-celled, hyaline, ellipsoid, (7-)8-11(-15) x (3-)4-6(-7) μm . Photobiont chlorococcoid. Spot tests: thallus K+ yellow, C- or C+ weakly orange-yellow, KC+ pale orange, P-, UV-. Chemistry: atranorin, thiophanic acid, confusa-unknown, arthothelin. - Note: a mild-temperate to Mediterranean lichen found in very open woodlands, on smooth bark, especially on branches of deciduous trees; records from Southern Italy are the first from Italy in the XX century. For further details see Brodo & al. (2024).

Lecidea varians



Lecidea varians



Lecidea varians

Lecidea varians Ach., Syn. meth. lich. (Lund): 38 (1814)

= *Xanthosyne varians* (Ach.) R.C. Harris, Lendemer, Brodo & McMullin, in Brodo, Lendemer, Harris, McMullin, López de Silanes, van Miltenburg, Bull, Paradis & Ginter, Bryologist 127(2): 199 (2024)

= *Xanthosyne varians* subsp. *exigua* (Chaub.) Brodo, López de Silanes, Lendemer, R.C. Harris & McMullin in Brodo & al., Bryologist, 127, 2: 202, 2024).

= *Lecidea exigua* Chaub. - in Saint-Amans, Fl. Agen.: 478, 1821.

= *Biatora decandollei* Hepp

= *Biatora exigua* (Chaub.) Fr.

= *Biatora geographica* A. Massal.

= *Lecidea decandollei* (Hepp) Jatta

= *Traponora varians* (Ach.) J. Kalb & Kalb

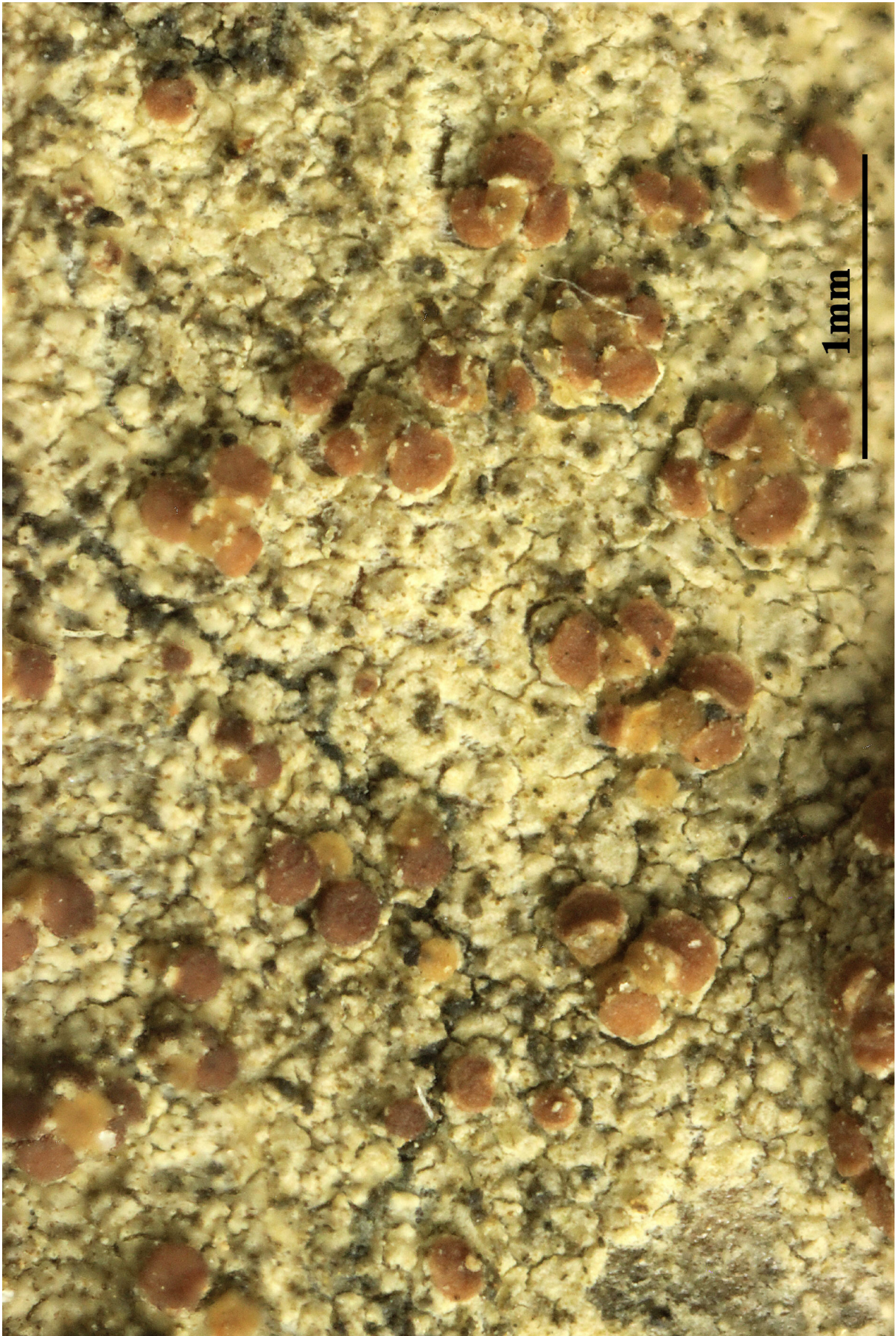
[VZ1636], URSS. Transcaucasus, Colchis. Distr. Suchum, in valle angusta rivi supra pagum Mercheuli, 50 m. Ad corticem *Alni barbatae*. Leg. A. Vězda, 14.7.1977. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1636.

Thallus: thin, warted-areolate, rimose or rarely endosubstratal areoles: scattered or contiguous, strongly convex or with irregular surface, 0.05-0.25 mm in diam., often confluent or forming a rimose crust with areoles 0.3-0.6 mm in diam. surface: grayish beige to pale yellow; dull, esorediate; cortex poorly developed, 5-10 μm high; medulla mostly lacking; algal layer 30-60 μm high; Apothecia rounded to somewhat deformed, often in groups of 3-5, sessile, with a weakly constricted base or appressed, 0.15-0.45 mm wide; disc ochre to reddish brown, sometimes with a pink hue due to a fine, white pruina, plane or weakly convex; margin weakly prominent and soon excluded or lacking from the beginning; exciple ochre to reddish brown at the outer edge or near the hymenium, hyaline or pale yellow within, laterally 15-30 μm wide, basally 15-50(-65) μm wide, composed of branched and anastomosing, radiating hyphae with 0.7-1 μm wide lumina and apical cells with lumina 3-6 μm wide; epihymenium yellowish to reddish brown, composed of paraphysal tips and \pm sparse granules, 5-10 μm high; hymenium hyaline, 50-60(-70) μm high; paraphyses basally hyaline, with lumina 0.7-1.2 μm wide, apically mostly with pale brown walls and lumina 2-4.5 μm wide, weakly to moderately branched (mainly below apical cells) and anastomosing; subhymenium hyaline, 15-55 μm thick; hypothecium hyaline or pale yellow, 0-100 μm thick; asci clavate, Lecidella-type with an I+ blue tholus containing a lighter blue, broadly rounded axial body, 8-spored; ascospores hyaline, simple, broadly

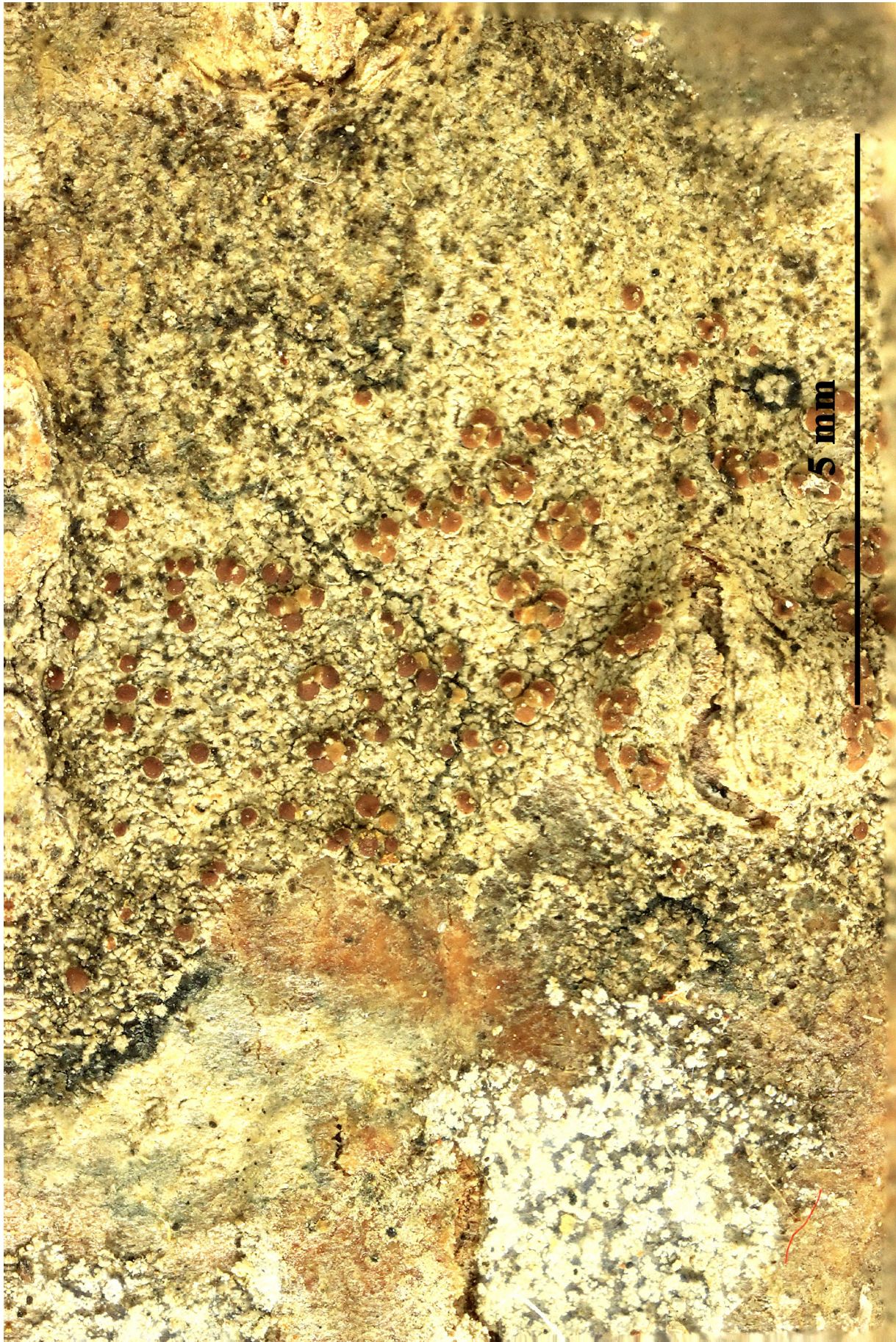
ellipsoid, (7-)8.6-11.1(-13.5) x (4-)4.9-6.1(-7) μm ; Pycnidia not seen; Spot tests: thallus K-, C \pm orange, P-, UV \pm dark orange; Secondary metabolites: atranorin and xanthonones. Substrate and ecology: on bark, often on twigs of deciduous trees and shrubs, rarely on wood, between 50 and 500 m (one collection from 2550 m) World distribution: North America and Europe. - Note: The minute, pale apothecia of *Lecidea varians* distinguish it from all other species.

Thallus crustose, thinly episubstratic, whitish, pale yellow or greenish grey, smooth to areolate or finely verrucose, delimited by a dark prothallus. Apothecia lecideine, rounded to deformed by mutual compression, 0.15-0.5 mm across, isolated or aggregated into small clusters, orange-brown, pale yellowish brown or reddish brown, sometimes pruinose when young and blackening when old, with a flat to slightly convex disc and a thin, finally excluded proper margin. Proper exciple two-parted, the inner part and the outer rim consisting of non-gelatinized, prosoplectenchymous hyphae, the lower outer portion of consisting of gelatinized, anticlinally arranged, branched hyphae, usually pale brown, lacking green pigments, ochre to reddish brown at the outer edge, colourless to pale yellow within, 15-30 μm wide laterally, expanding to 50(-65) μm towards the base; epithecium pale yellow-red-brown, with many crystals dissolving in K, 5-10 μm high; hymenium colourless, 40-70 μm high, I+ blue; paraphyses coherent in water, easily made free in K, simple or sparingly branched and anastomosing in upper part, 0.7-1.2 μm thick at mid-level, at least some of them with capitate, up to 4(-5) μm wide apical cells; hypothecium colourless, 20-30 μm high. Asci 8-spored, narrowly clavate, thick-walled, with an I+ blue tholus containing a lighter blue, broadly rounded axial body, Lecidella-type. Ascospores 1-celled, hyaline, ellipsoid, (7-)8-11(-15) x (3-)4-6(-7) μm . Photobiont chlorococcoid. Spot tests: thallus K+ yellow, C- or C+ weakly orange-yellow, KC+ pale orange, P-, UV-. Chemistry: atranorin, thiophanic acid, confusa-unknown, arthothelin. - Note: a mild-temperate to Mediterranean lichen found in very open woodlands, on smooth bark, especially on branches of deciduous trees; records from Southern Italy are the first from Italy in the XX century. For further details see Brodo & al. (2024).

Lecidea varians



Lecidea varians



Lecidea varians

Lecidea vernalis (L.) Ach., Methodus qua omnes detectos Lichenes Secundum Organa Carpomorpha ad Genera, Species et Varietates Redigere atque Observationibus Illustrare Tentavit Erik Acharius: 68 (1803)

= *Lichen vernalis* L. 1768

= *Biatora vernalis* (L.) Fr., K. svenska Vetensk-Akad. Handl., ser. 3: 271 (1822)

= *Biatora sphaeroides* var. *vernalis* (L.) Rabenh.

= *Bilimbia vernalis* (L.) Trevis.

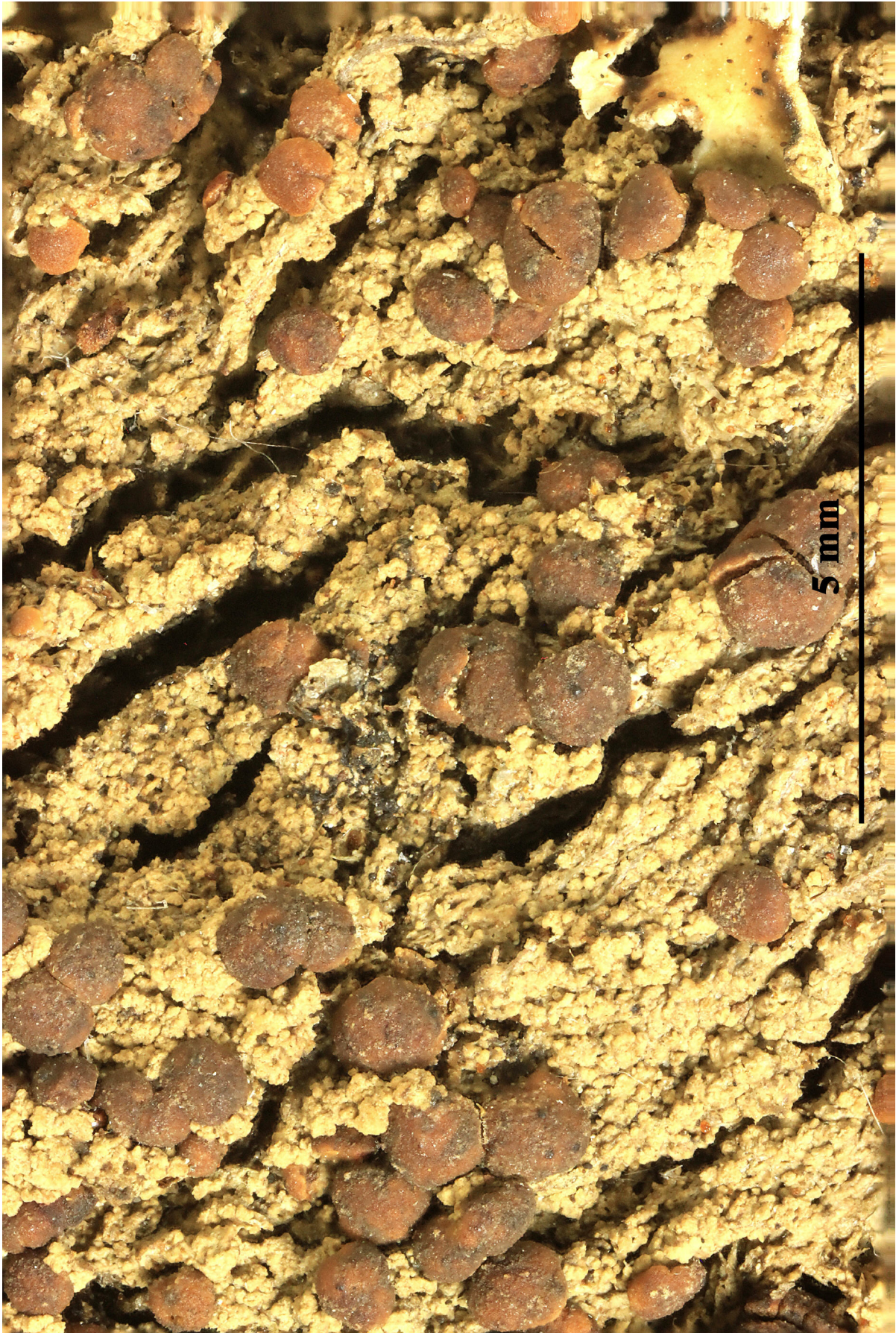
= *Patellaria vernalis* (L.) Spreng.

= *Pyrrhospora vernalis* (L.) M. Choisy

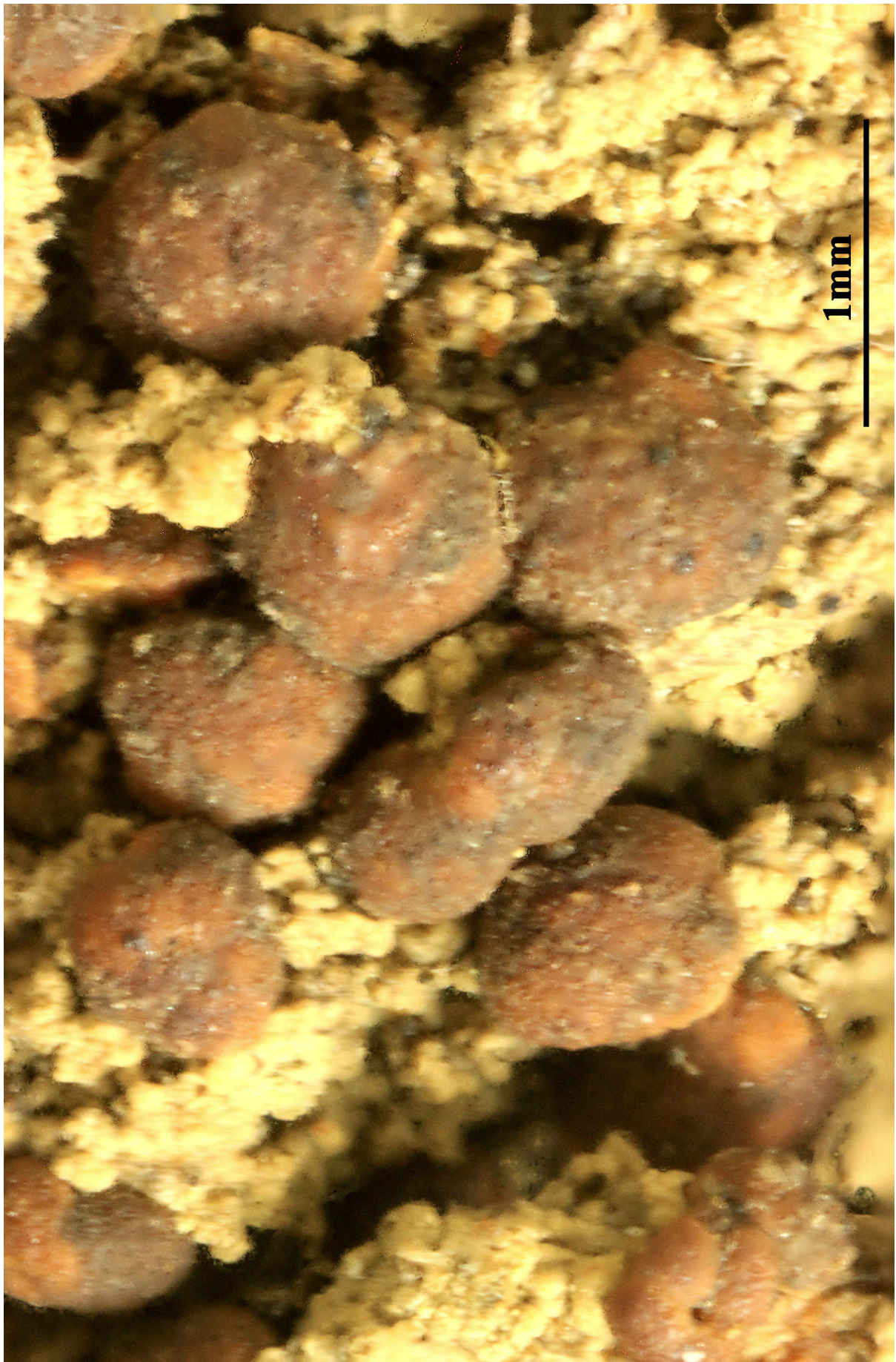
= *Secoliga vernalis* (L.) Norman

[VZ1159], Gallia. Pyrenaei montes occident. In silva "Iraty" dicta, 1300-1400 m. Ad truncum *Fagi silvaticae*. Leg. J. Vivant, 12.1972. EX A. V&ZDA LICHENES SELECTI EXSICCATI NR. 1159.

Thallus crustose, episubstratic, greenish to grey-green (turning brownish in the herbarium), consisting of 0.1-0.3 mm wide, crowded, granular warts forming an up to 10 cm wide crust. Apothecia biatorine, sessile with constricted base, orange-brown to reddish brown, rarely pale ochre, single or often confluent, 0.3-0.6(-1.5) mm across, with a convex, sometimes tuberculate, epruinose disc, and a paler, very thin and soon excluded proper margin. Proper exciple 50-100 µm wide laterally, of radiating hyphae with more or less cylindrical lumina, colourless or more or less uniformly pale brown; epithecium scarcely differentiated from the hymenium; hymenium colourless or pale brown in upper part, 45-70(-95) µm high; paraphyses coherent, simple or sparingly branched, 0.7-2 µm thick at mid-level, the apical cells up to 4 µm wide; subhymenium 40-70 (-120) µm high; hypothecium 95-300 µm high, colourless or pale orange-brown. Asci 8-spored, clavate, with a K/I+ blue apical dome penetrated by a narrow, K/I- apical cushion surrounded by a narrow, deeply K/I+ blue zone, the wall K/I- but surrounded by an I+ red-brown, K/I+ blue outer layer, the ocular chamber relatively small, Biatora-type. Ascospores 1-celled (rarely 1-2-septate), hyaline, ellipsoid, (10-)12-20(-25.5) x 4-6(-7) µm. Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a mostly boreal-montane, circumpolar species ranging from northern Scandinavia to the Alps, Pyrenees and the Balkan mountains, becoming progressively rarer southwards. It is found on epiphytic bryophytes and bark in humid montane forests.



Lecidea vernalis



Lecidea vernalis

Lecidea vernalis (L.) Ach., Methodus qua omnes detectos Lichenes Secundum Organa Carpomorpha ad Genera, Species et Varietates Redigere atque Observationibus Illustrare Tentavit Erik Acharius: 68 (1803)

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= *Biatora vernalis* (L.) Fr., K. svenska Vetensk-Akad. Handl., ser. 3: 271 (1822)

= *Biatora sphaeroides* var. *vernal* (L.) Rabenh.

= *Bilimbia vernalis* (L.) Trevis.

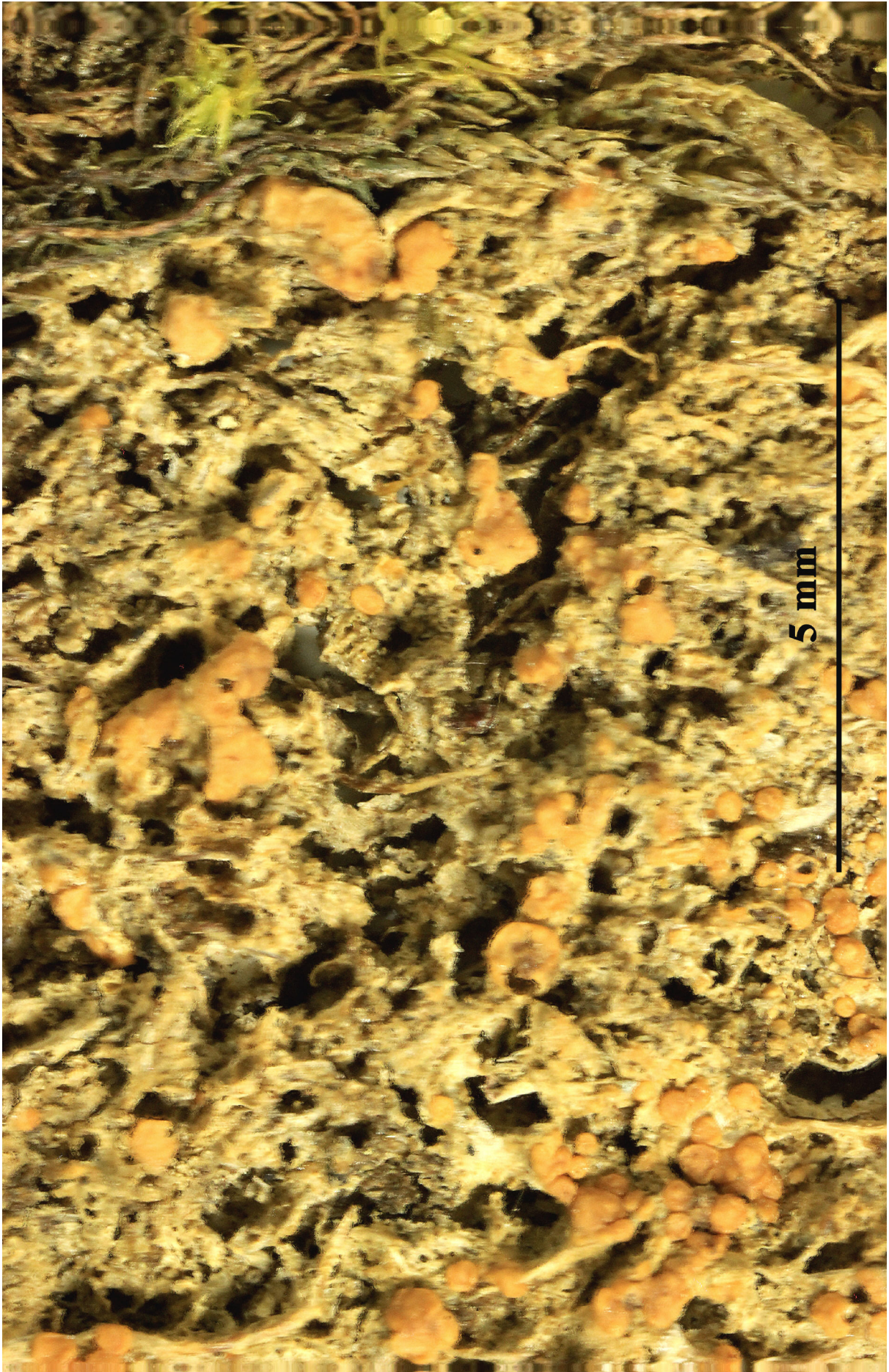
= *Patellaria vernalis* (L.) Spreng.

= *Pyrrhospora vernalis* (L.) M. Choisy

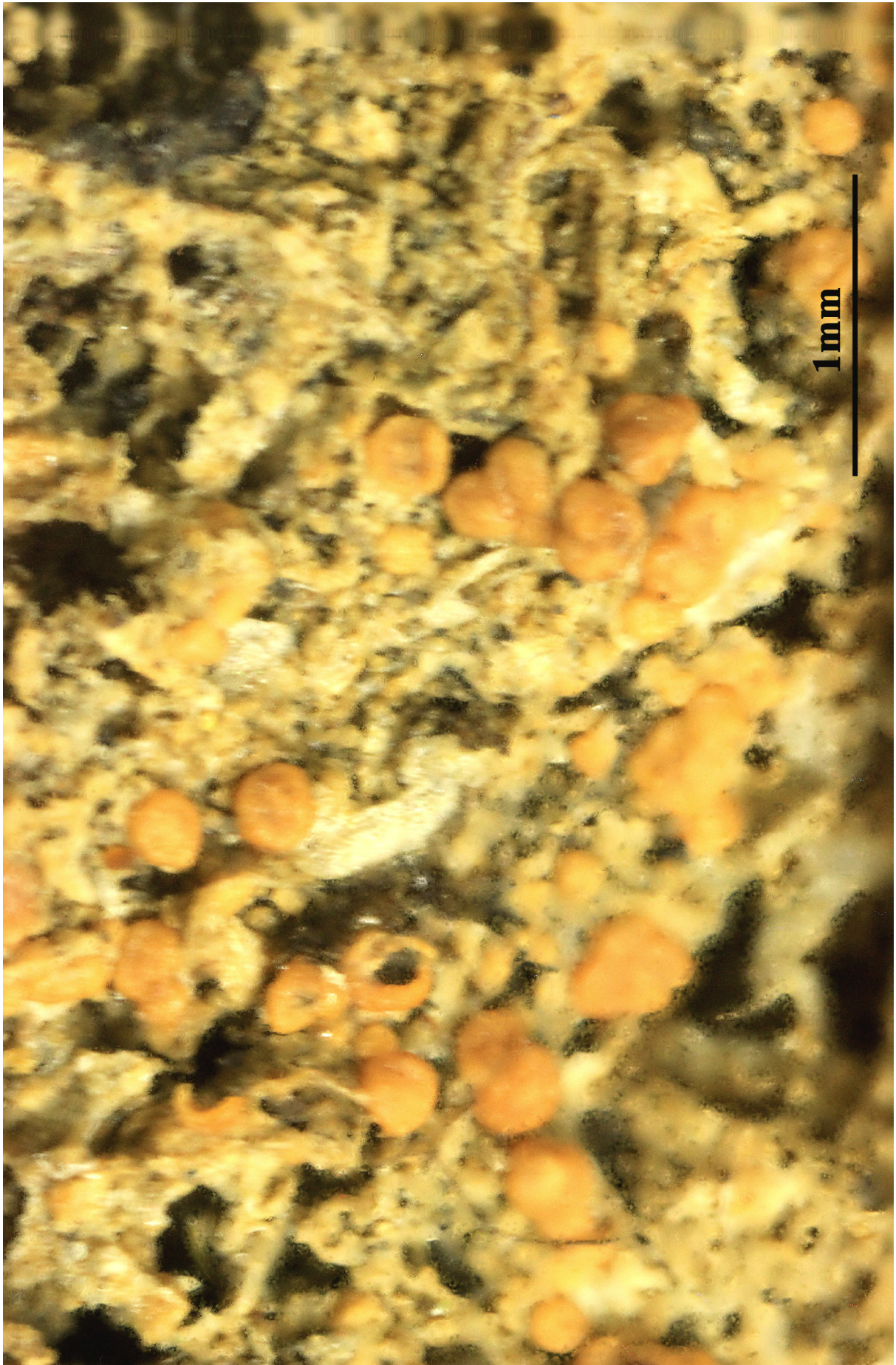
= *Secoliga vernalis* (L.) Norman

[VZ1928], URSS. Georgia (Caucasus occidentalis). Distr. Sukhumi: in vicinitate pagi Pskhu, in declivibus montis Bashta, 800-1000 m . Ad corticem *Fagi orientalis*. Leg. V. Vašák, 8.8.1983, det A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1928.

Thallus crustose, episubstratic, greenish to grey-green (turning brownish in the herbarium), consisting of 0.1-0.3 mm wide, crowded, granular warts forming an up to 10 cm wide crust. Apothecia biatorine, sessile with constricted base, orange-brown to reddish brown, rarely pale ochre, single or often confluent, 0.3-0.6(-1.5) mm across, with a convex, sometimes tuberculate, epruinose disc, and a paler, very thin and soon excluded proper margin. Proper exciple 50-100 μm wide laterally, of radiating hyphae with more or less cylindrical lumina, colourless or more or less uniformly pale brown; epithecium scarcely differentiated from the hymenium; hymenium colourless or pale brown in upper part, 45-70(-95) μm high; paraphyses coherent, simple or sparingly branched, 0.7-2 μm thick at mid-level, the apical cells up to 4 μm wide; subhymenium 40-70 (-120) μm high; hypothecium 95-300 μm high, colourless or pale orange-brown. Asci 8-spored, clavate, with a K/I+ blue apical dome penetrated by a narrow, K/I- apical cushion surrounded by a narrow, deeply K/I+ blue zone, the wall K/I- but surrounded by an I+ red-brown, K/I+ blue outer layer, the ocular chamber relatively small, *Biatora*-type. Ascospores 1-celled (rarely 1-2-septate), hyaline, ellipsoid, (10-)12-20(-25.5) x 4-6(-7) μm . Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a mostly boreal-montane, circumpolar species ranging from northern Scandinavia to the Alps, Pyrenees and the Balkan mountains, becoming progressively rarer southwards. It is found on epiphytic bryophytes and bark in humid montane forests.



Lecidea vernalis

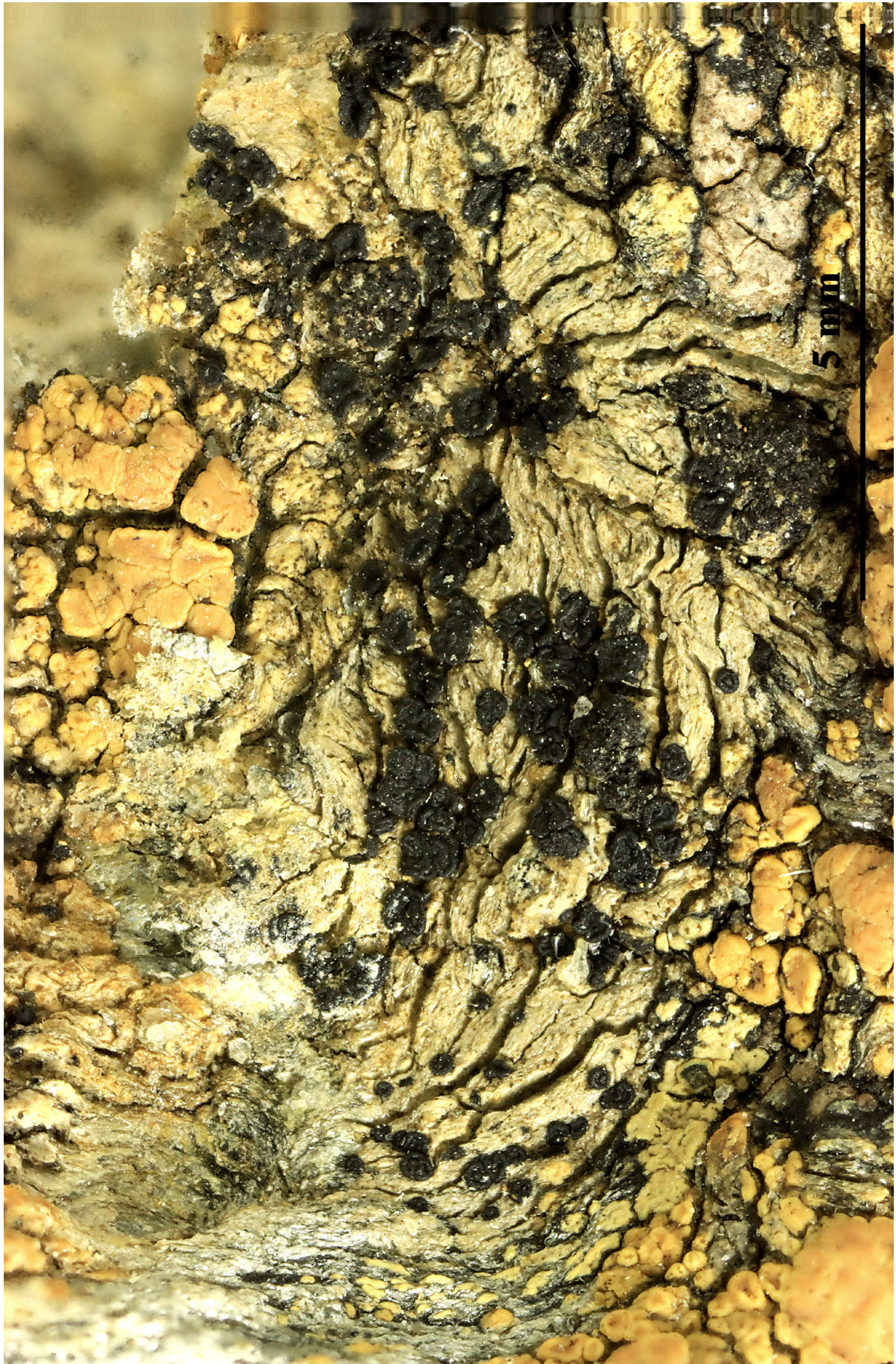


Lecidea vernalis

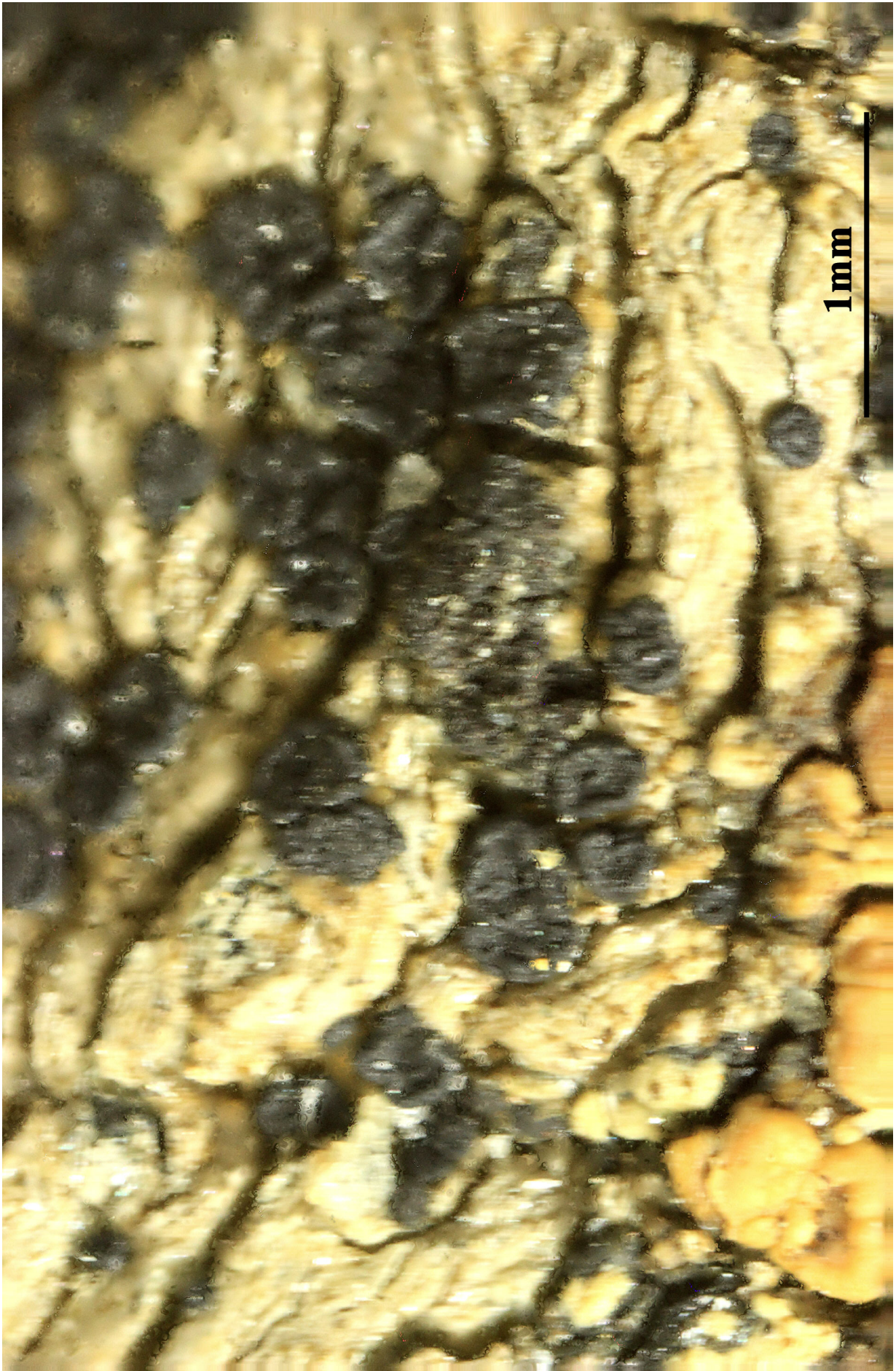
Lecidea verruca Poelt, Mitt. bot. StSamml., Münch. 4: 187 (1961)

[VZ1589], Austria. Carinthia, distr. Greifenburg, regio montis Kreuteck. Emberger Alm: Ad Latera Orientalia Montis Nassfeld: Ad Saxa silicea; supra thallum *Aspicilia* sp. vicens. Leg. J. Poelt, A. Vězda et. V. Wirth, 17.12.1978. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1589.

Thallus crustose, episubstratic, whitish, forming 1-6(-10) mm wide, rounded to irregular, flat to slightly convex islands on the thalli of other crustose lichens (*Aspicilia*-species). Cortex with an epinecral layer; medulla, white, I+ deep blue at least in lower part. Apothecia lecideine/biatorine, black, semi-immersed to appressed, rounded to angular in outline, 0.3-0.8(-1.2) mm across, with a black, flat to slightly convex, epruinose or weakly pruinose, not umbonate disc and a thin, often soon excluded proper margin. Proper exciple poorly developed, with a brownish rim, colourless within, 25-40 µm wide in upper part; epithecium olive-brown to green-black; hymenium colourless, 40-60(-75) µm high, I+ blue; paraphyses coherent, simple or rarely branched in upper part, usually not anastomosing, the apical cells 4-5 µm wide; hypothecium colourless to very pale brown, I+ blue. Asci 8-spored, narrowly clavate, thick-walled, with a K/I+ pale blue tholus and a strongly amyloid, thin apical cushion, surrounded by a I+ blue outer layer, Lecidea-type. Ascospores 1-celled, hyaline, ellipsoid to broadly ellipsoid, 8.5-12(-14) x 5-6(-7) µm, not halonate, rather thick-walled. Pycnidia developed on sterile, smaller (1-3 mm wide) thalli, semi-immersed, black, the ostiolar region at first punctiform, then expanded. Conidia bacilliform, straight to slightly curved, (7-)10-12(-14) x 1-1.5(-2) µm. Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC-, P-. Chemistry: confluent acid syndrome. - Note: an arctic-alpine, bipolar silicicolous species with a peculiar ecology (Hertel 2006), always growing on species of *Aspicilia* near or above treeline; related to *L. tessellata*.



Lecidea verruca



Lecidea verruca

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