F. Schumm (2026):

Images of Lichens
Vezda Lichenes Selecti Exsiccati part 18

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With this volume, I continue the documentation of Vezda's works on exiccata, now with Lichenes Selecti as part 18. I have chosen the genus names that Vezda used, even though others are now more common. However, I also include the currently used names in the synonym list and the index. In addition, I have again made every effort to add species descriptions to the detailed information on the labels from the literature.

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

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

F. Schumm, 2026

Bacidia subtilis Vězda, Preslia 33: 367 (1961)
= *Fellhanera subtilis* (Vězda) Diederich & Sérus., in Sérusiaux, Mémoires de la Société Royale de Botanique de Belgique 12: 142 (1990) [1988]

[VZ1260}, Bohemoslovacia. Moraviae, Brno, supra lacum structilem prope pagum Rozdrojovice, 300 m. Supra muscos (*Polytrichum attenuatum*) ad terram in silva clara. Leg. A. Vězda, 28.6.1974. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1260.

Thallus crustose, episubstratic, 0.1-0.5 mm thick, grey-green, often shiny, smooth to granulose, esorediate. Apothecia biatorine, clustered towards thallus center, 0.1-0.5 mm across, with a flat to finally convex, whitish, pale grey-pink to pale brown disc, and a thin, paler, finally excluded proper margin. Proper exciple well-developed, thin, more or less colourless; epithecium, hymenium and hypothecium colourless; hymenium 40-60 µm high, I+ blue; paraphyses simple or sparingly branched, 0.5-1 µm thick at base, the apical cells to 2 µm wide. Asci 8-spored, clavate, with a K/I+ blue apical dome containing a darker blue, tubular ring-structure, and an amyloid coat, Byssoloma-type. Ascospores (1-)3-septate, narrowly fusiform to clavate-fusiform, sometimes slightly curved, 10-16 x (2.5-)3.5-4.5(-5) µm. Pycnidia pinkish white, 0.1-0.3 mm across, immersed to emergent and thorn-like with a long neck. Conidia pear- or drop-shaped to almost ellipsoid, 3.5-4.6 x c. 1.5 µm. Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: on twigs of small shrubs (e.g. *Vaccinium*, *Calluna*), more rarely on mosses (e.g. *Polytrichum*) and on twigs of *Picea* in cold sites, on north-facing slopes or in deep gorges, usually in upland areas; perhaps more widespread in the Alps.

Bacidia subtilis

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Bacidia subtilis Vězda, Preslia 33: 367 (1961)
= *Fellhanera subtilis* (Vězda) Diederich & Sérus., in Sérusiaux, Mémoires de la Société Royale de Botanique de Belgique 12: 142 (1990) [1988]

[VZ1938], Germania. Nordrhein-Westfalen, distr. Steinfurt: Laggenbeck prope Ibbenbüren, Hünhügel, 120 m. Ad corticem in ramulis *Callunae vulgaris*. Leg. E. Wölm (6182), 20.5.1983, det. A. Vězda. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1938.

Thallus crustose, episubstratic, 0.1-0.5 mm thick, grey-green, often shiny, smooth to granulose, esorediate. Apothecia biatorine, clustered towards thallus center, 0.1-0.5 mm across, with a flat to finally convex, whitish, pale grey-pink to pale brown disc, and a thin, paler, finally excluded proper margin. Proper exciple well-developed, thin, more or less colourless; epithecium, hymenium and hypothecium colourless; hymenium 40-60 µm high, I+ blue; paraphyses simple or sparingly branched, 0.5-1 µm thick at base, the apical cells to 2 µm wide. Asci 8-spored, clavate, with a K/I+ blue apical dome containing a darker blue, tubular ring-structure, and an amyloid coat, Byssoloma-type. Ascospores (1-)3-septate, narrowly fusiform to clavate-fusiform, sometimes slightly curved, 10-16 x (2.5-)3.5-4.5(-5) µm. Pycnidia pinkish white, 0.1-0.3 mm across, immersed to emergent and thorn-like with a long neck. Conidia pear- or drop-shaped to almost ellipsoid, 3.5-4.6 x c. 1.5 µm. Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: on twigs of small shrubs (e.g. *Vaccinium*, *Calluna*), more rarely on mosses (e.g. *Polytrichum*) and on twigs of *Picea* in cold sites, on north-facing slopes or in deep gorges, usually in upland areas; perhaps more widespread in the Alps.

Bacidia subtilis

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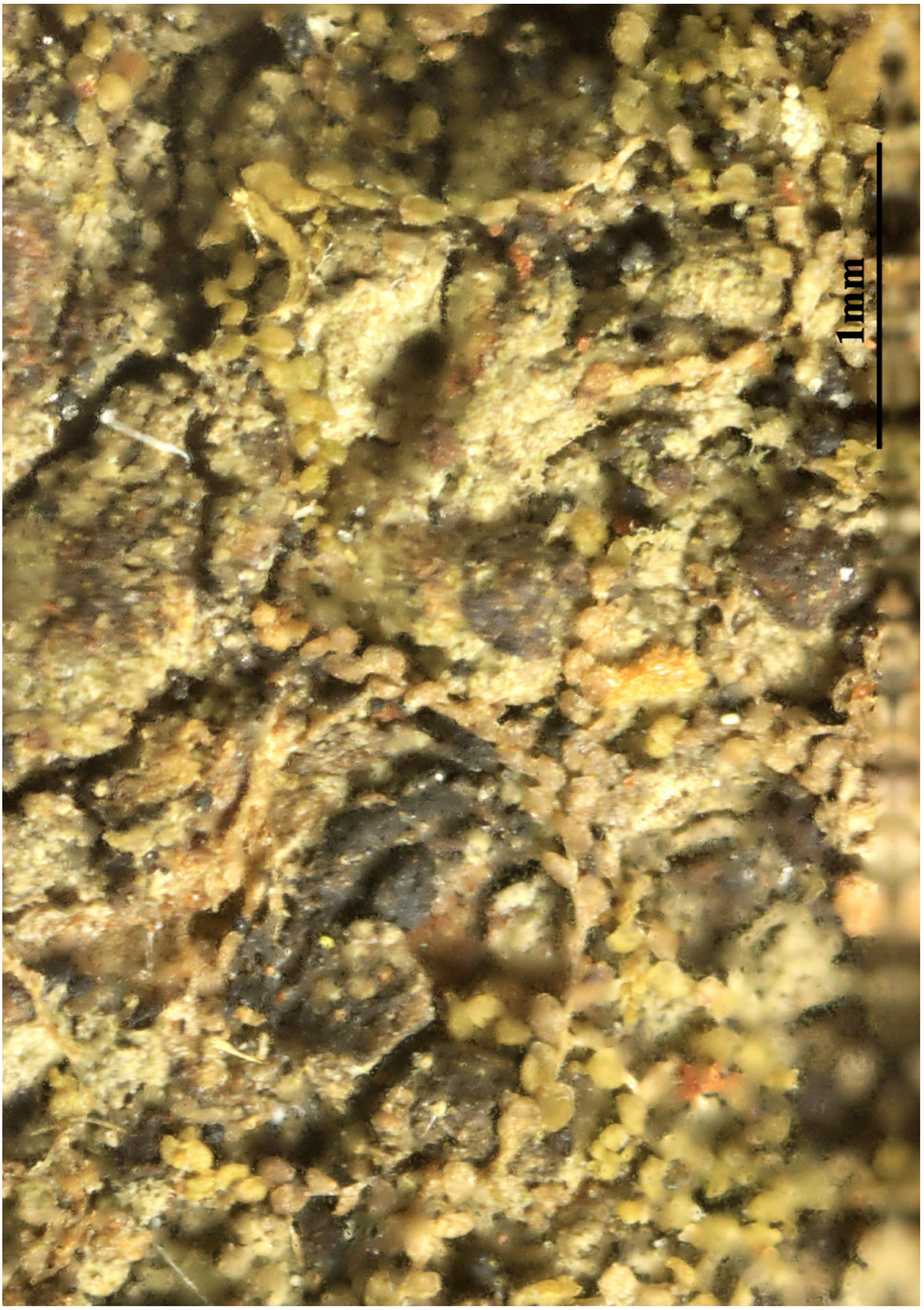
Bacidia vezdae Coppins & P. James, Lichenologist 10(2): 190 (1978)
= *Fellhaneropsis* vezdae (Coppins & P. James) Sérus. & Coppins, in Sérusiaux, Lichenologist 28(3): 208 (1996)

[VZ1629], Magna Britannia. Anglia. Sussex: 10 km ad septentriones versus a Chichester, West Dean, West Dean Wood, 150 m. Ad corticem *Quercum* vetustarum. Leg. B. Copiins et F. Rose, 8.12.1970, det. P. W. James. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1629.

Thallus crustose, ecorticate, thinly episubstratic, pale greenish grey. Apothecia biatorine, constricted at base, 0.2-0.4 mm across, pinkish brown to grey-brown, at first with a flat, sometimes tuberculate disc and an evident proper margin, but soon becoming convex and immarginate. Proper exciple of vertically arranged hyphae with elliptical to polyhedral cells, to 15 µm wide laterally, colourless throughout or very pale brown in innermost part; epithecium reddish brown; hymenium colourless or pale brown, 40-45 µm high, I+ blue; paraphyses branched and anastomosing, 0.5-1 µm thick, forming a densely interwoven network around the ascus tips; hypothecium thin, dark brown. Asci 8-spored, clavate, with a K/I+ blue apical dome containing a darker blue, tubular ring-structure, and an amyloid coat, Byssoloma-type. Ascospores 3-7-septate, hyaline, acicular-fusiform, slightly curved, 30-42 x 3-4.5 µm. Pycnidia frequent, sessile, globose to flask-shaped, pink-brown to finally brown-black, up to 0.2 mm across, with a relatively wide ostiole. Conidia thread-like, colourless, simple or indistinctly septate, curved, (20-)30-43 x 0.5-1 µm. Photobiont chlorococcoid, the cells 4-7 µm wide. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a mild-temperate lichen found on bark of broad-leaved (especially *Quercus*) and coniferous (e.g. *Abies*) trees in very humid, open forests, especially on basal parts of trunks, sometimes foliicolous.

Bacidia vezdae



Bacidia vezdae

Flavoparmelia rutidota (Hook. f. & Taylor) Hale, Mycotaxon 25(2): 605 (1986)
= *Parmelia rutidota* Hook. f. & Taylor 1844

[VZ2460],Australia. Tasmania. Hobart australis, The Cascades, lat. 42°54' austr., long. 147°17' orientr, 80 m. Ad ramulos *Salicis babylonicae* in pascua. Leg. G. Kantvilas (no. 183/90), 17.4.1990. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2460.

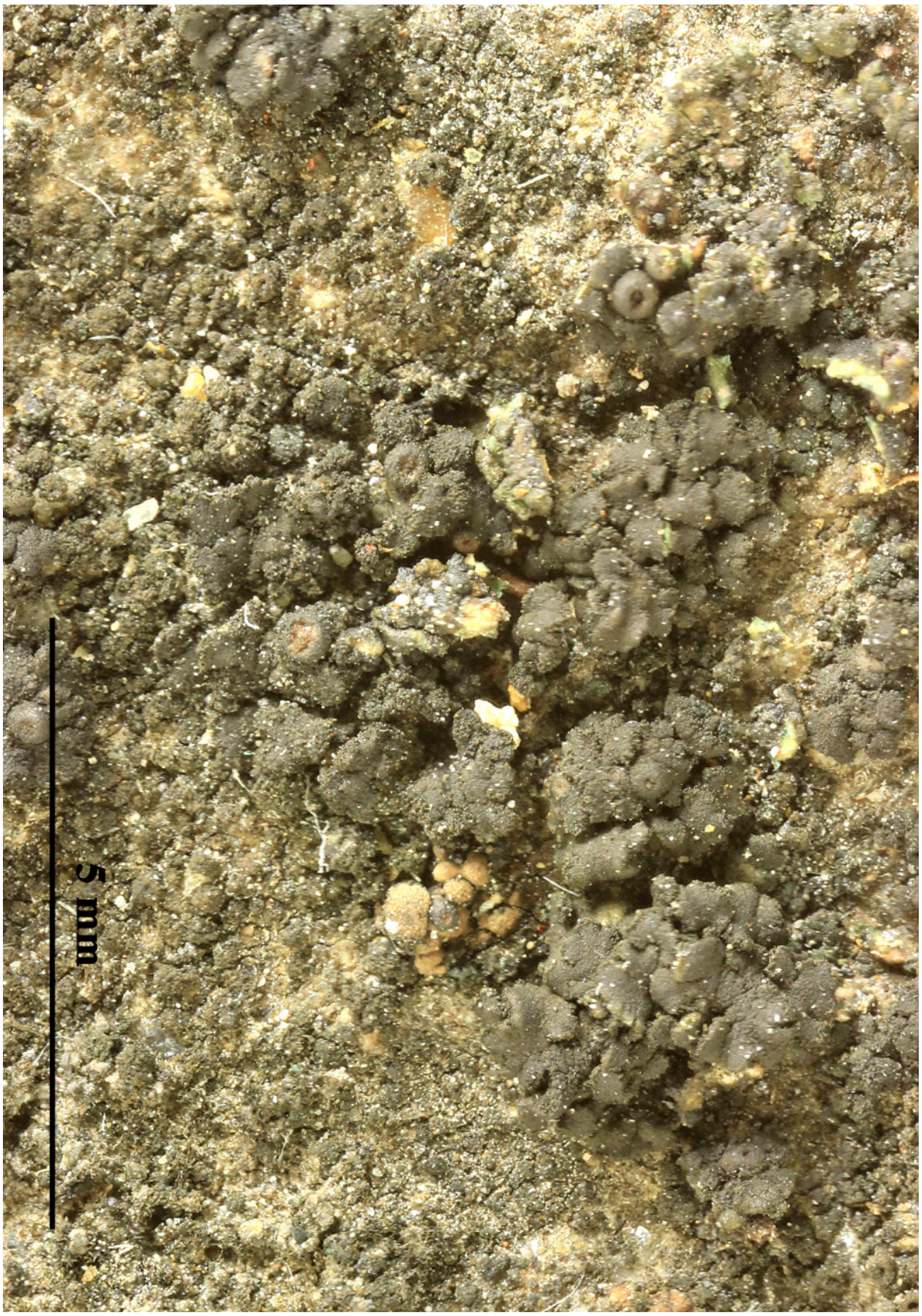
Thallus adnate, to 5–20 cm wide. Lobes imbricate, 2–8 mm wide; margins crenulate; lobulate or not; apices subrotund. Upper surface yellow-green to pale green, ±rugulose at margins becoming more densely rugose towards centre, dull, sometimes slightly shiny, lacking soredia, dactyls and isidia. Medulla mostly white, often with scattered cream to yellow patches, especially in lower medulla. Lower surface rugulose; rhizines sparse, simple. Apothecia sessile, 2–7 mm wide; disc concave, cinnamon-brown to dark brown; thalline exciple strongly involute, becoming rugulose. Ascospores 12–16 × 8–11 µm. Pycnidia common. Conidia bacilliform, 7–8 × 1 µm. CHEMISTRY: cortex K-, UV-; medulla K-, C-, KC-, P+ deep orange; yellow pigment (when present) in lower medulla K-; containing usnic acid, protocetraric acid (major), caperatic acid, ±atranorin, ±secalonic acid A (in pigmented medulla) and with or without unidentified compounds (trace). - Very common throughout temperate and subtropical Australia (all States and Territories); also occurs in southern U.S.A. Grows on bark of trees and dead wood, rarely on rock.

Flavoparmelia rutidota

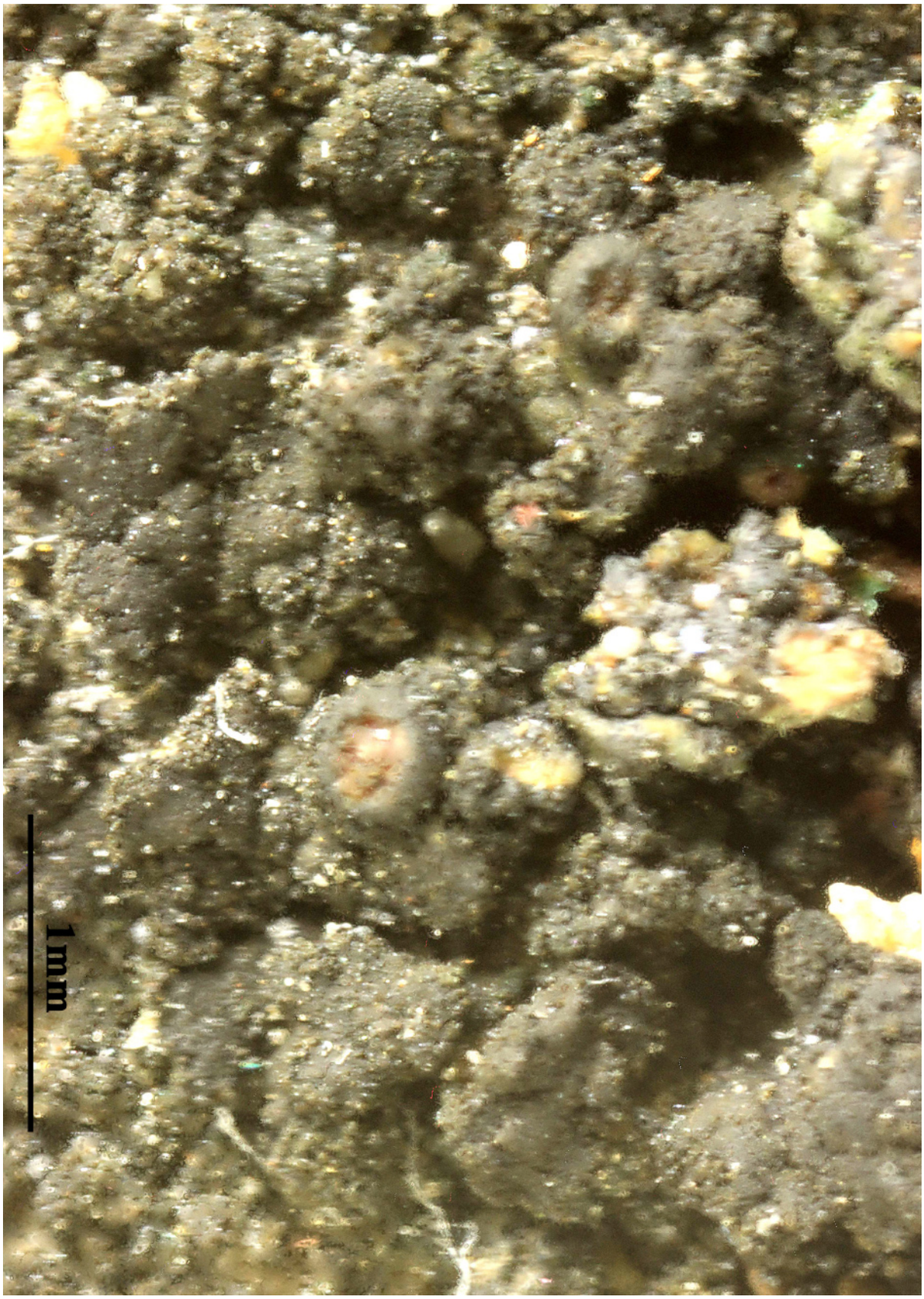
Flavoparmelia rutidota

Forssellia umbilicata Vězda, Folia geobot. phytotax. 13(4): 408 (1978)
= *Pterygiopsis umbilicata* (Vězda) Henssen, in Henssen & Jørgensen, Lichenologist 22(2): 143 (1990)

[VZ1480], Bohemoslovacia. Moravia, distr. Náměšt ad Oslavou, in valle fluminis Jihavka sub ruinam arcis Ketkovský hrad, 300 m. Ad saxa schistosa interdum inudata, Leg. A. Vězda et V. Wirth, 29.8.1969. - ISOTYPE-. EX A. VEZDA LICHENES SELECTI EXSICCATI NR. 1480.



Forssellia umbilicata



Forssellia umbilicata

Fulgensia australis (Arnold) Poelt, Mitt. bot. StSamml., Münch. 5: 594 (1965)

= *Variospora australis* (Arnold) Arup, Søchting & Frödén, in Arup, Søchting & Frödén, Nordic J. Bot. 31(1): 76 (2013)

= *Physcia australis* Arnold 1875

[VZ1594], Austria. Karnische Alpen, in alpe Spielboden, 1900 m. Ad saxa calcarea in prato. Leg. J. Poelt et O. Breuss. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1594.

Thallus crustose-placodioid, episubstratic, orange-yellow in shade-forms, bright orange-red in sun-forms, epruinose, areolate-verrucose in central parts, forming 1-4 cm wide, regular to irregular rosettes, the marginal lobes 1-3(-5) mm long, 0.25-0.5(-1) mm wide, slightly convex, more or less contiguous but not overlapping. Cortex 40-60 µm thick; medulla white. Apothecia zeorine, usually numerous in central parts of thalli, sessile, strongly constricted at base, 0.5-1(-2) mm across, with an orange-red to orange-brown, flat to weakly convex disc, a slightly paler, thin proper margin and a finally excluded thalline margin. Epithecium orange-brown, K+ purple-red; hymenium colourless, 70-80 µm high; hypothecium colourless. Asci 8-spored, clavate, functionally unitunicate, apically thickened with a broad internal beak, the inner part of apex and external cap I+ blue, Teloschistes-type. Ascospores 1-septate, not polarilocular, hyaline, narrowly spindle-shaped, often curved, 15-24 x (3-)4-6(-6.5) µm, with more or less pointed ends. Photobiont chlorococcoid. Spot tests: thallus and apothecia K+ purple-red, C-, KC-, P-. Chemistry: thallus and apothecia with parietin (major), fallacinal, emodin, teloschistin and parietinic acid (minor), corresponding with chemosyndrome A of Søchting (1997). - Note: on exposed calciferous rocks near or above treeline, e.g. on the top of large, isolated boulders and on steeply inclined to vertical surfaces.

Fulgensia australis

Fulgensia australis

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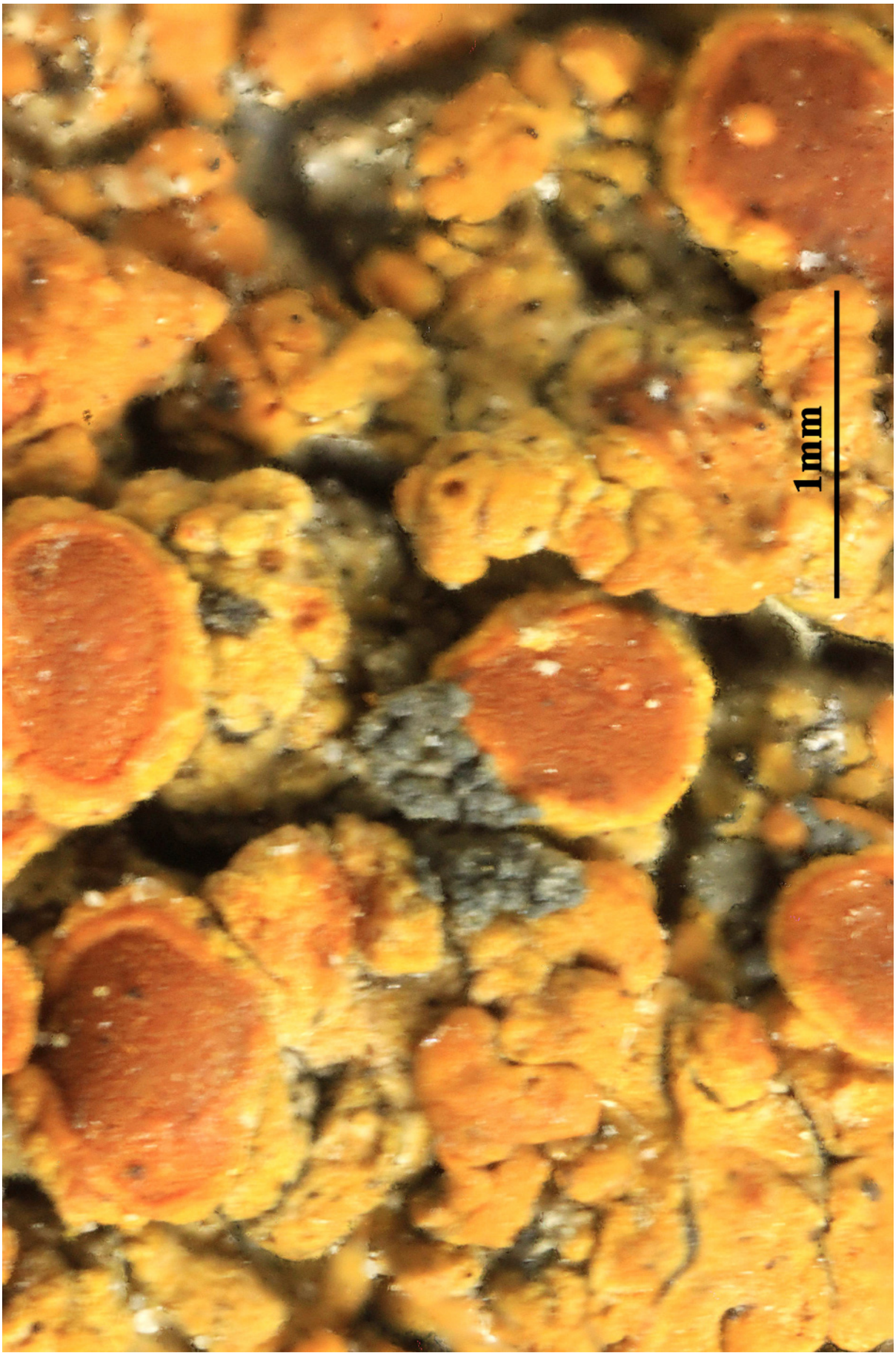
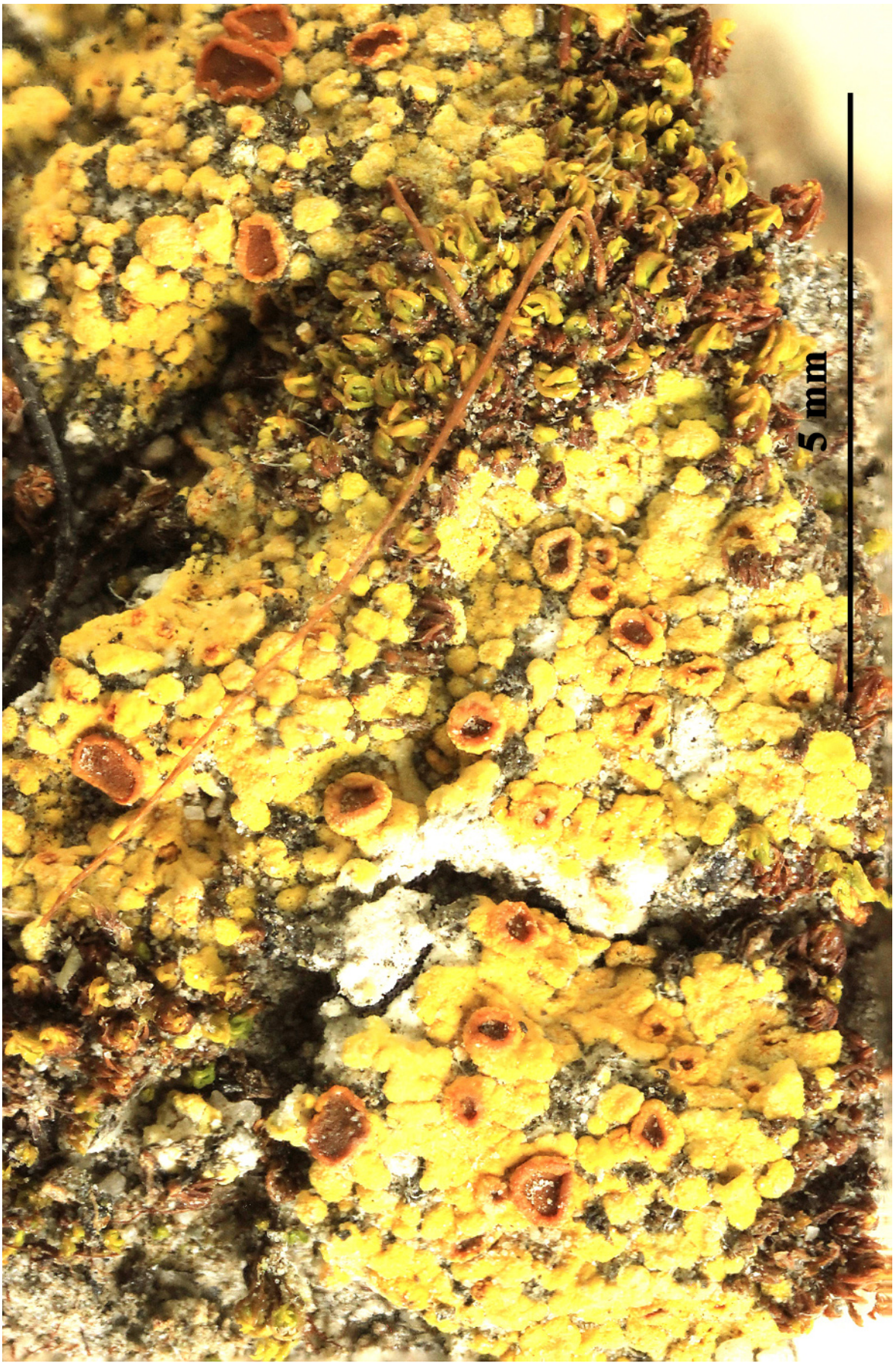


Fulgensia australis

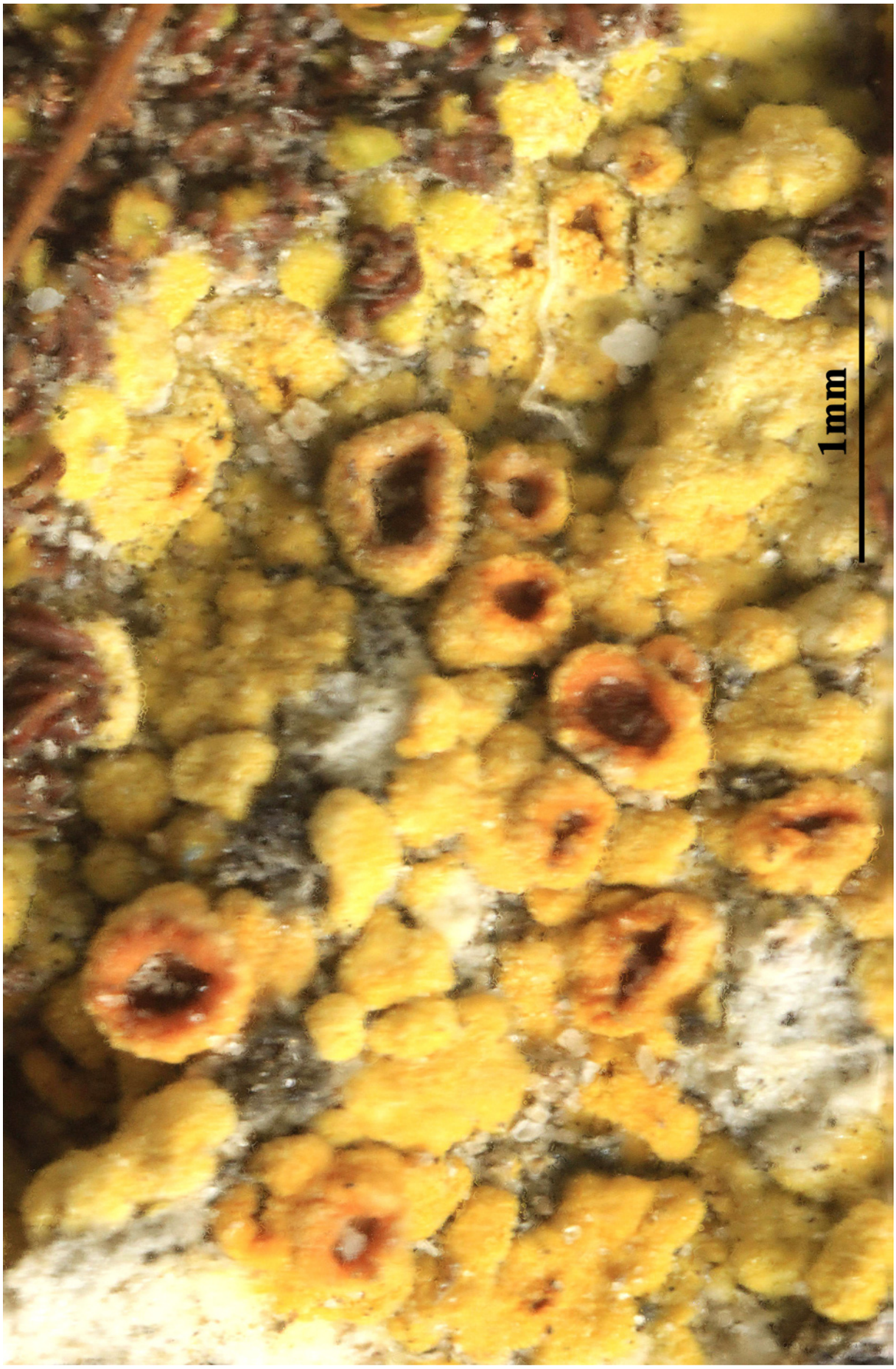
Fulgensia bracteata (Hoffm.) Räsänen, Acta Fauna Fl. Universali 1(5-6): 9 (1933)
= *Gyalolechia bracteata* (Hoffm.) A. Massal., Ric. auton. lich. crost. (Verona): 17 (1852)
= *Psora bracteata* Hoffm. 1796

[VZ1722], URSS. Uzbekistania. Montes Alaj, in valle prope pagum Šachimardan, ad meridiem Versus a urbe Fergana, 1600 m. Ad terra calcareo-gypsaceam. Leg. J. Soják, 18.4.1980, det. A. Vězda. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1722.

Thallus crustose, orange-yellow to golden yellow, consisting of more or less dispersed groups of areoles, sometimes with poorly developed marginal lobes, forming 1-2 cm wide patches. Areoles thick, rounded, flat to mostly convex, scattered to (mostly) contiguous on a rather thick whitish hypothallus, not or only slightly dissected at margin, more or less pruinose, the marginal ones sometimes slightly elongate, to 1-2 mm long. Apothecia frequent, zeorine, sessile, 1-2 mm across, with an orange-brown, weakly concave to flat, smooth to rugose disc, and a thick, orange-yellow margin, which at maturity separates into a darker and thinner proper margin and a paler thalline margin. Epithecium brownish orange, K+ purple-red; hymenium colourless, 60-70 µm high; hypothecium colourless. Asci 8-spored, clavate, functionally unitunicate, apically thickened with a broad internal beak, the inner part of apex and external cap I+ blue, Teloschistes-type. Ascospores 1-celled, hyaline, broadly ellipsoid, not restricted in the middle, thin-walled, 9-13(-15) x 4-7 µm. Pycnidia orange-yellow, immersed. Conidia narrowly ellipsoid. Photobiont chlorococcoid. Spot tests: thallus and apothecia K+ purple-red, C-, KC-, P-, UV+ pale orange. Chemistry: fragilin dominant, with smaller amounts of emodin and parietin; physcion present in the apothecia. - Note: on calciferous soil and terricolous mosses in open situations, sometimes in fissures of calcareous rocks, mostly near or above treeline; parasitic of *Thalloidima*-species when young.



Fulgensia bracteata

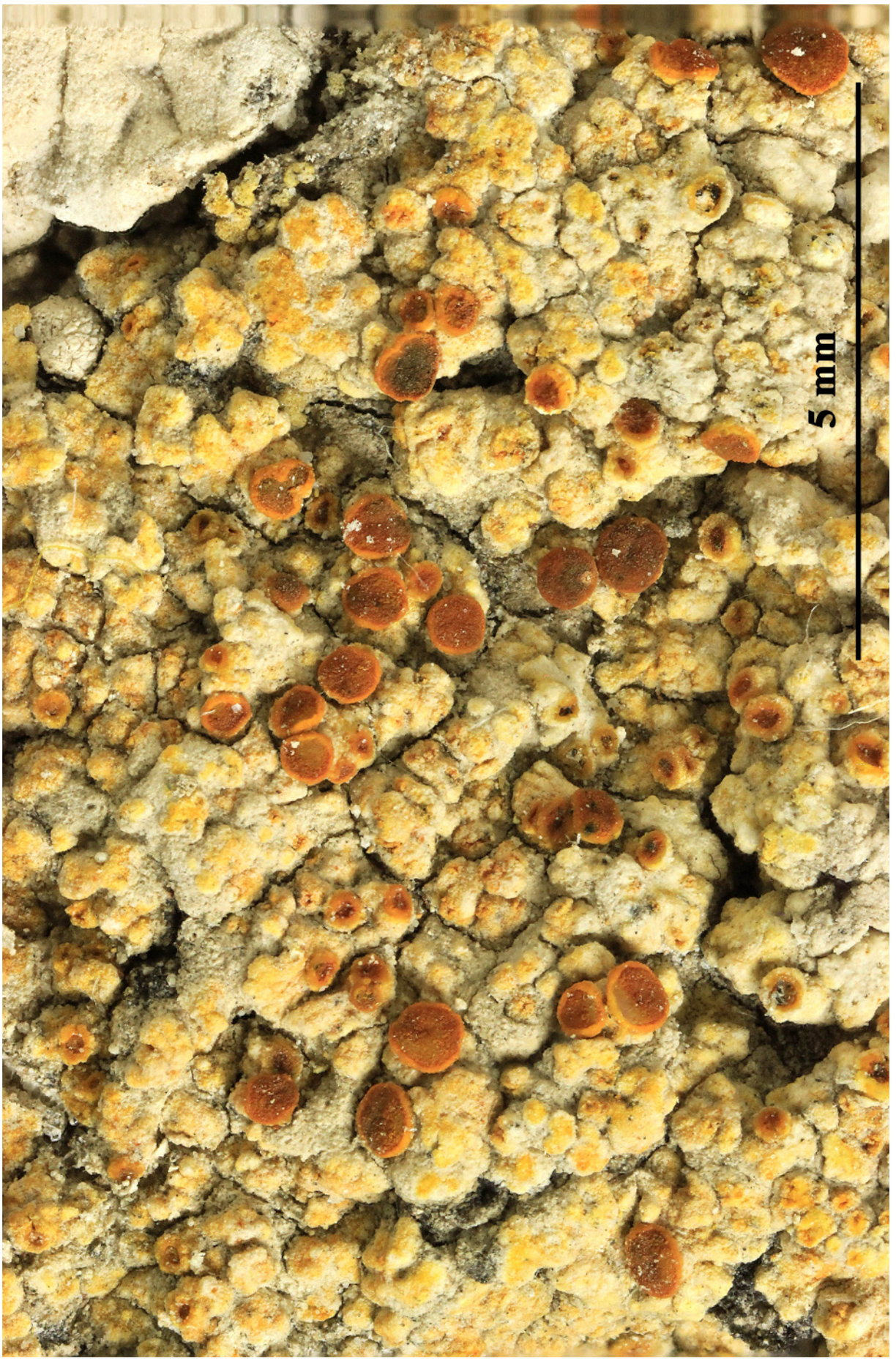


Fulgensia bracteata

Fulgensia desertorum (Tomin) Poelt, Mitt. bot. StSamml., Münch. 5: 600 (1965)
= *Placodium desertorum* Tomin 1926
= *Gyalolechia desertorum* (Tomin) Søchting, Frödén & Arup, in Arup, Søchting & Frödén, Nordic J. Bot. 31(1): 70 (2013)

[VZ1918], Hispania. Distr. Zaragoza: El Ciervo, Retuerda de Pina, 200 m. Ad terram gypsaceam. Leg. X. Llimona, J. Poelt et A. Vězda, 25.5.1983. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1918.

Thallus crustose, episubstratic, verrucose-areolate, sulphur- to orange-yellow, more or less pruinose, forming 1-2(-3) cm wide patches, the areoles flat to mostly convex, contiguous, often sitting on a rather thick hypothallus, the marginal ones sometimes elongate, to 1-2 mm long, the central ones strongly convex, almost verrucose, 0.3-0.5 mm thick. Upper cortex paraplectenchymatous, with an epinecral layer; medulla white, 40-160 µm thick; lower cortex absent. Apothecia lecanorine, sessile, 0.5-1.5 mm across, with an orange to brownish orange, flat to slightly convex, rugose disc, and a thin margin which at maturity separates into a darker and thinner proper margin and a paler thalline margin. Epithecium orange-brown, K+ purple-red; hymenium colourless, >70 µm high; hypothecium colourless. Asci 8-spored, clavate, functionally unitunicate, apically thickened with a broad internal beak, the inner part of apex and external cap I+ blue, Teloschistes-type. Ascospores 1-septate, often slightly constricted at septum, not polarilocular, hyaline, ovoid-ellipsoid, thin-walled, 10-17 x 4-8 µm. Pycnidia orange-yellow, immersed. Conidia oblong, 3-3.5 x 1-1.2 µm. Photobiont chlorococcoid. Spot tests: thallus and apothecia K+ purple-red, C-, KC-, P-, UV+ pale orange. Chemistry: fragilin dominant, with smaller amounts of emodin and parietin. - Note: in Italy only locally common, especially in areas with gypsum, in open grasslands; to be looked for also in dry-continental Alpine valleys.



Fulgensia desertorum

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Fulgensia desertorum (Tomin) Poelt, Mitt. bot. StSamml., Münch. 5: 600 (1965)
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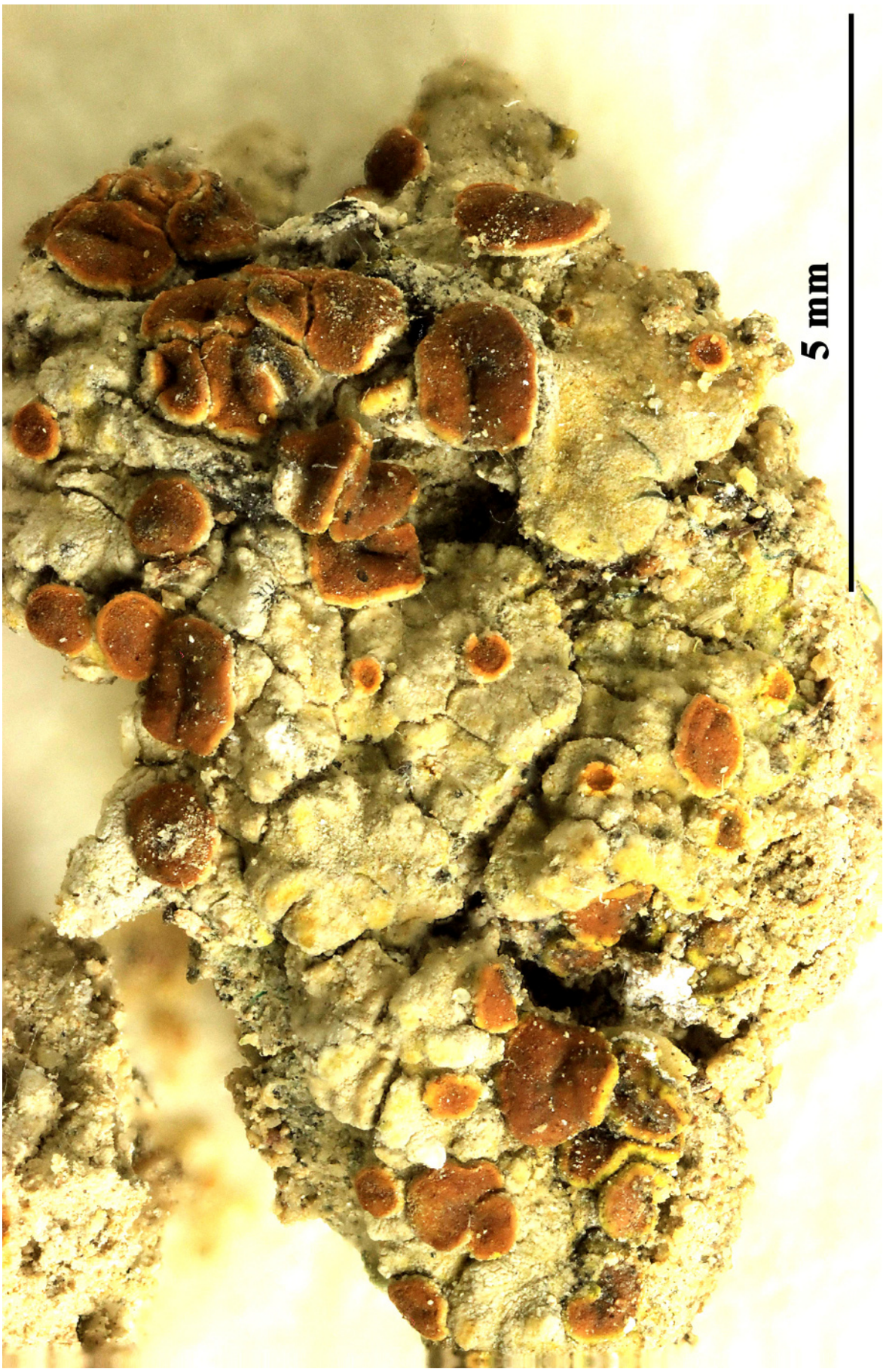
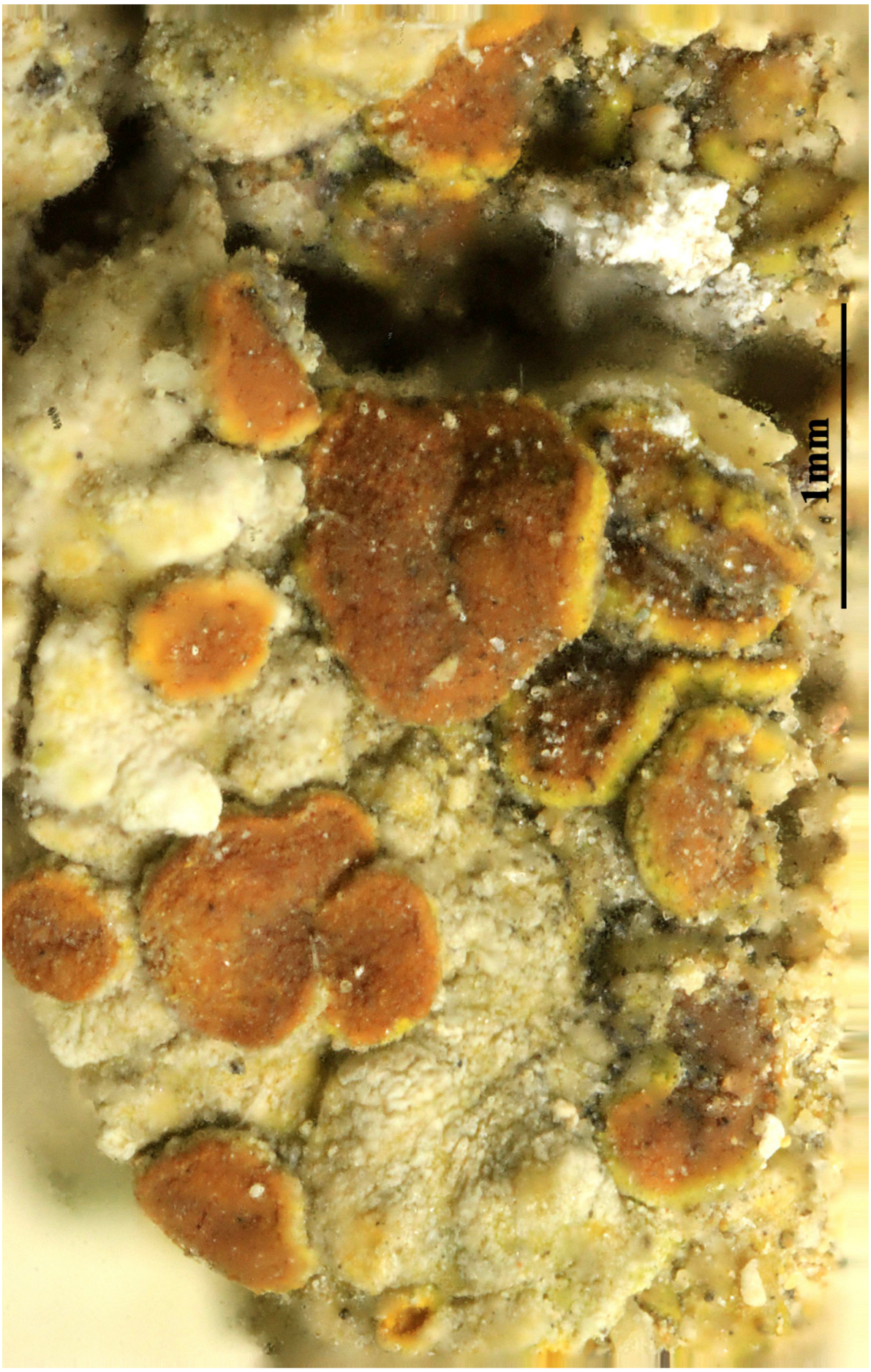
= *Gyalolechia desertorum* (Tomin) Søchting, Frödén & Arup, in Arup, Søchting & Frödén, Nordic J. Bot. 31(1): 70 (2013)

[VZ1422], URSS. Azerbajdzania. Distr. Baku, reservatum Kobistan (in litore maris Caspii 60 m in austro-occid. a Baku), 200 m. Ad terra locis desertis in saxonis arenaceis. Leg. E. Jelínková et A. Vězda, 17.5.1976. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1422.

Thallus crustose, episubstratic, verrucose-areolate, sulphur- to orange-yellow, more or less pruinose, forming 1-2(-3) cm wide patches, the areoles flat to mostly convex, contiguous, often sitting on a rather thick hypothallus, the marginal ones sometimes elongate, to 1-2 mm long, the central ones strongly convex, almost verrucose, 0.3-0.5 mm thick. Upper cortex paraplectenchymatous, with an epinecral layer; medulla white, 40-160 µm thick; lower cortex absent. Apothecia lecanorine, sessile, 0.5-1.5 mm across, with an orange to brownish orange, flat to slightly convex, rugose disc, and a thin margin which at maturity separates into a darker and thinner proper margin and a paler thalline margin. Epithecium orange-brown, K+ purple-red; hymenium colourless, >70 µm high; hypothecium colourless. Asci 8-spored, clavate, functionally unitunicate, apically thickened with a broad internal beak, the inner part of apex and external cap I+ blue, Teloschistes-type. Ascospores 1-septate, often slightly constricted at septum, not polarilocular, hyaline, ovoid-ellipsoid, thin-walled, 10-17 x 4-8 µm. Pycnidia orange-yellow, immersed. Conidia oblong, 3-3.5 x 1-1.2 µm. Photobiont chlorococcoid. Spot tests: thallus and apothecia K+ purple-red, C-, KC-, P-, UV+ pale orange. Chemistry: fragilin dominant, with smaller amounts of emodin and parietin. - Note: in Italy only locally common, especially in areas with gypsum, in open grasslands; to be looked for also in dry-continental Alpine valleys.



Fulgensia desertorum

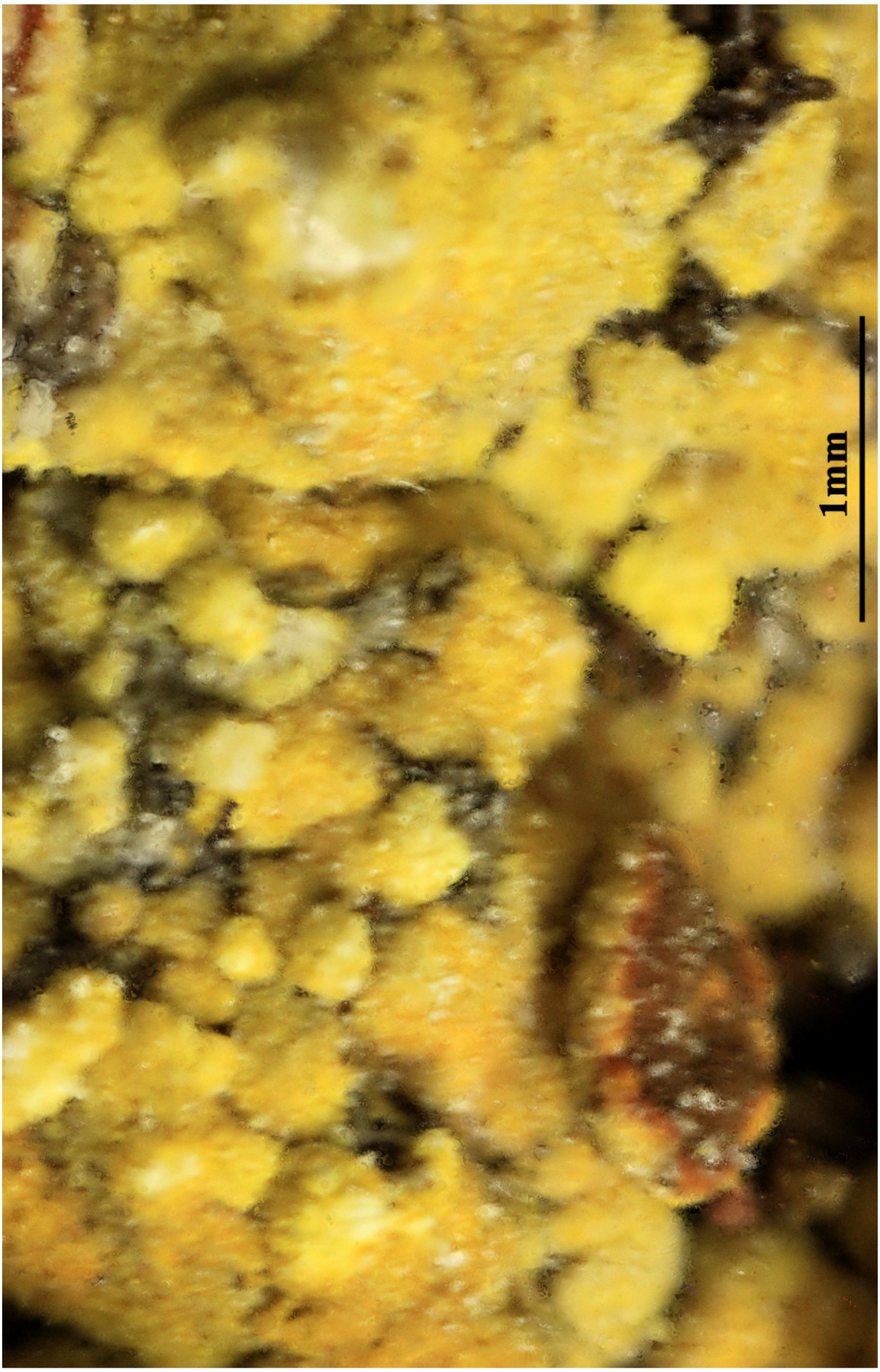


Fulgensia desertorum

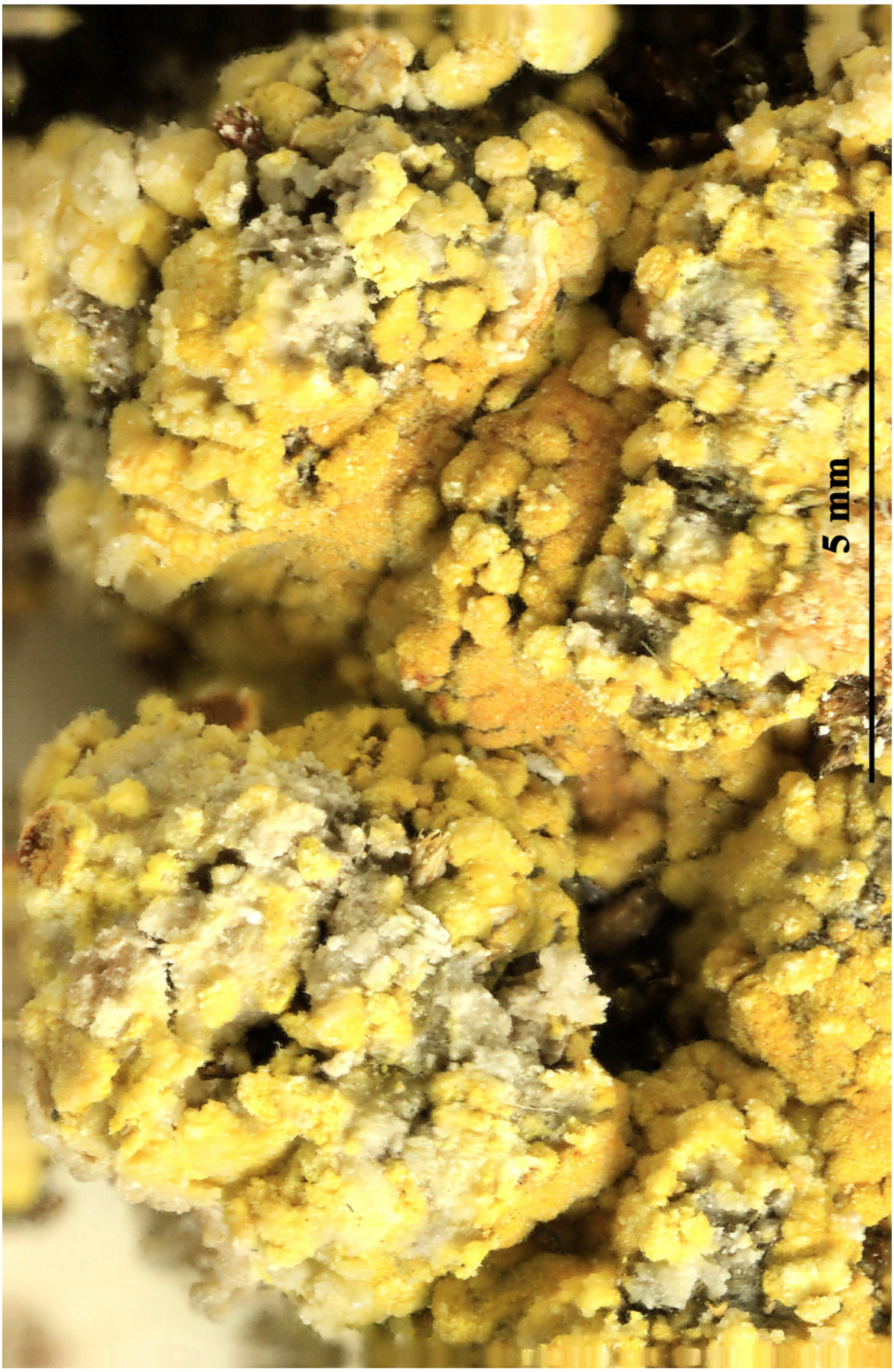
Fulgensia desertorum (Tomin) Poelt, Mitt. bot. StSamml., Münch. 5: 600 (1965)
= *Placodium desertorum* Tomin 1926
= *Gyalolechia desertorum* (Tomin) Søchting, Frödén & Arup, in Arup, Søchting & Frödén, Nordic J. Bot. 31(1): 70 (2013)

[VZ1562],Persia austro-occidentalis. Luristan, 8 km septentrionem versus a pago Malavi (Babazeyd). Ad terram. Leg. J. Soják, 8.4.1977, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI BR. 1562.

Thallus crustose, episubstratic, verrucose-areolate, sulphur- to orange-yellow, more or less pruinose, forming 1-2(-3) cm wide patches, the areoles flat to mostly convex, contiguous, often sitting on a rather thick hypothallus, the marginal ones sometimes elongate, to 1-2 mm long, the central ones strongly convex, almost verrucose, 0.3-0.5 mm thick. Upper cortex paraplectenchymatous, with an epinecral layer; medulla white, 40-160 µm thick; lower cortex absent. Apothecia lecanorine, sessile, 0.5-1.5 mm across, with an orange to brownish orange, flat to slightly convex, rugose disc, and a thin margin which at maturity separates into a darker and thinner proper margin and a paler thalline margin. Epithecium orange-brown, K+ purple-red; hymenium colourless, >70 µm high; hypothecium colourless. Asci 8-spored, clavate, functionally unitunicate, apically thickened with a broad internal beak, the inner part of apex and external cap I+ blue, Teloschistes-type. Ascospores 1-septate, often slightly constricted at septum, not polarilocular, hyaline, ovoid-ellipsoid, thin-walled, 10-17 x 4-8 µm. Pycnidia orange-yellow, immersed. Conidia oblong, 3-3.5 x 1-1.2 µm. Photobiont chlorococcoid. Spot tests: thallus and apothecia K+ purple-red, C-, KC-, P-, UV+ pale orange. Chemistry: fragilin dominant, with smaller amounts of emodin and parietin. - Note: in Italy only locally common, especially in areas with gypsum, in open grasslands; to be looked for also in dry-continental Alpine valleys.



Fulgensia desertorum



Fulgensia desertorum

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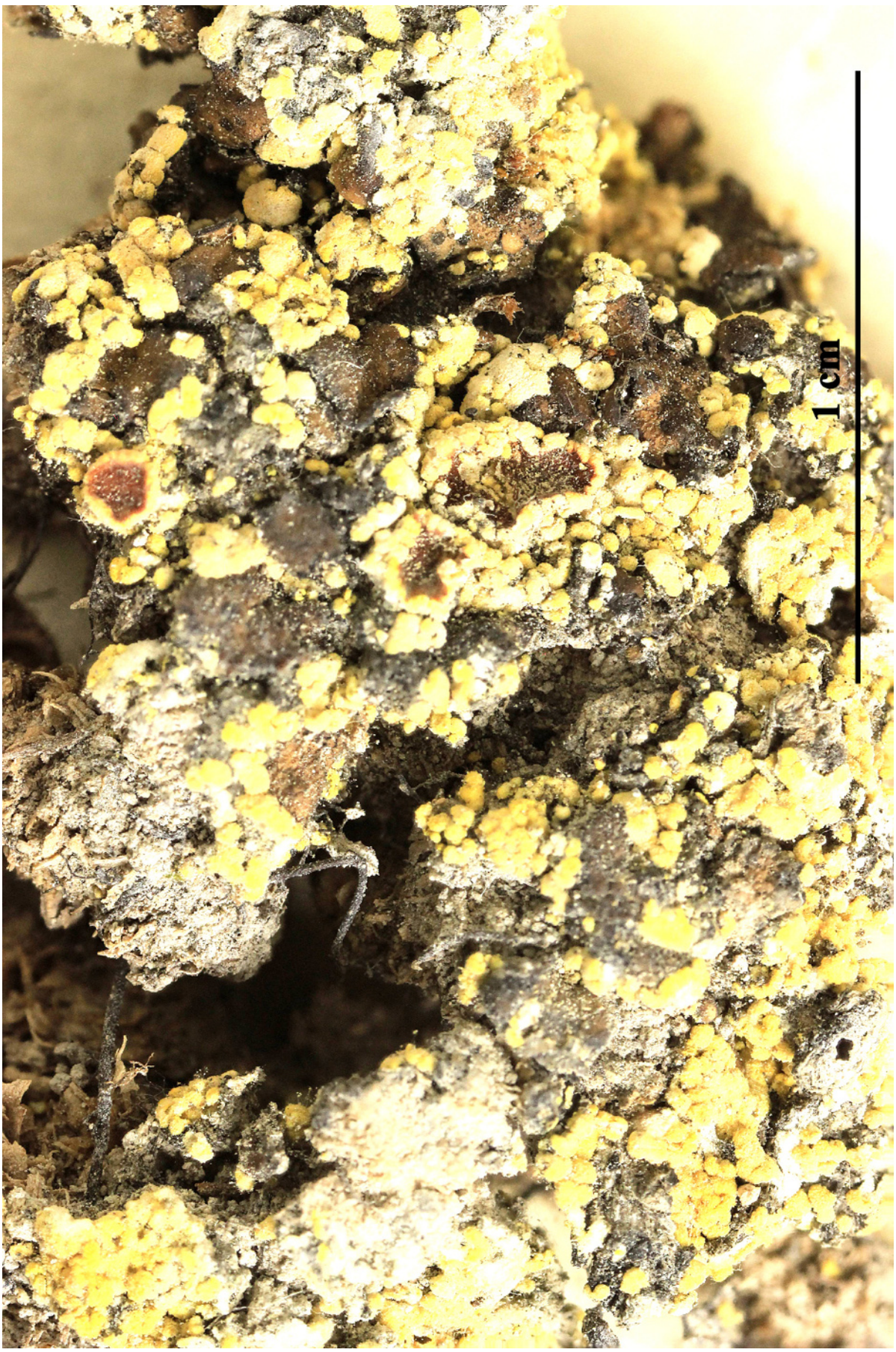
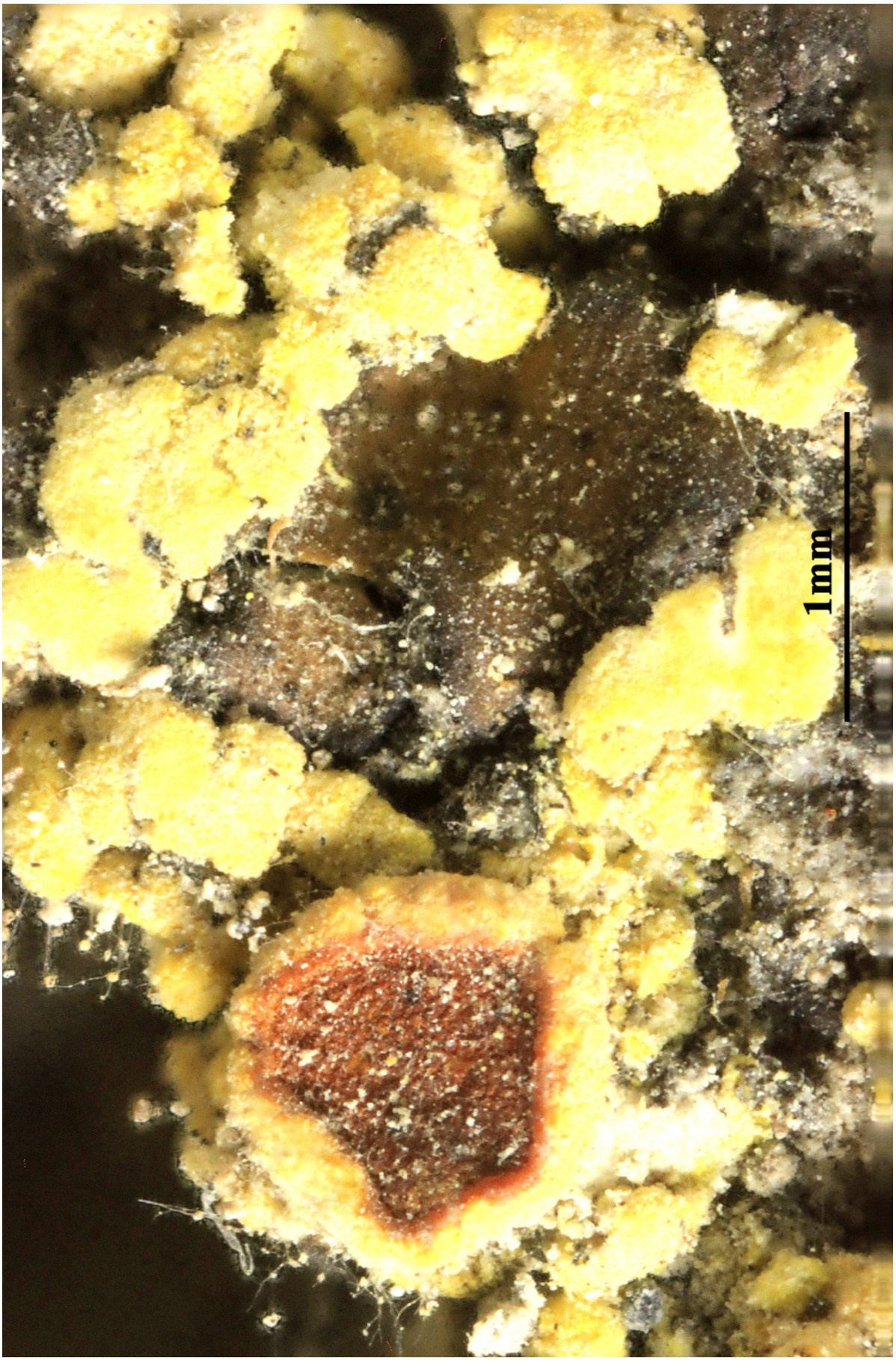
[VZ1723], URSS. Caucasus Magnus, Osetija Sept. distr. Ordžonikidze: in valle rivi FDlagdon, supra vicum Živgis, 1500-1600 m. Ad caespites plantarum in rupibus calcareis. Leg. A. Vězda, 31.5.1976. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1723.

Thallus crustose, episubstratic, verrucose-areolate, sulphur- to orange-yellow, more or less pruinose, forming 1-2(-3) cm wide patches, the areoles flat to mostly convex, contiguous, often sitting on a rather thick hypothallus, the marginal ones sometimes elongate, to 1-2 mm long, the central ones strongly convex, almost verrucose, 0.3-0.5 mm thick. Upper cortex paraplectenchymatous, with an epinecral layer; medulla white, 40-160 µm thick; lower cortex absent. Apothecia lecanorine, sessile, 0.5-1.5 mm across, with an orange to brownish orange, flat to slightly convex, rugose disc, and a thin margin which at maturity separates into a darker and thinner proper margin and a paler thalline margin. Epithecium orange-brown, K+ purple-red; hymenium colourless, >70 µm high; hypothecium colourless. Asci 8-spored, clavate, functionally unitunicate, apically thickened with a broad internal beak, the inner part of apex and external cap I+ blue, Teloschistes-type. Ascospores 1-septate, often slightly constricted at septum, not polarilocular, hyaline, ovoid-ellipsoid, thin-walled, 10-17 x 4-8 µm. Pycnidia orange-yellow, immersed. Conidia oblong, 3-3.5 x 1-1.2 µm. Photobiont chlorococcoid. Spot tests: thallus and apothecia K+ purple-red, C-, KC-, P-, UV+ pale orange. Chemistry: fragilin dominant, with smaller amounts of emodin and parietin. - Note: in Italy only locally common, especially in areas with gypsum, in open grasslands; to be looked for also in dry-continental Alpine valleys.



Fulgensia desertorum

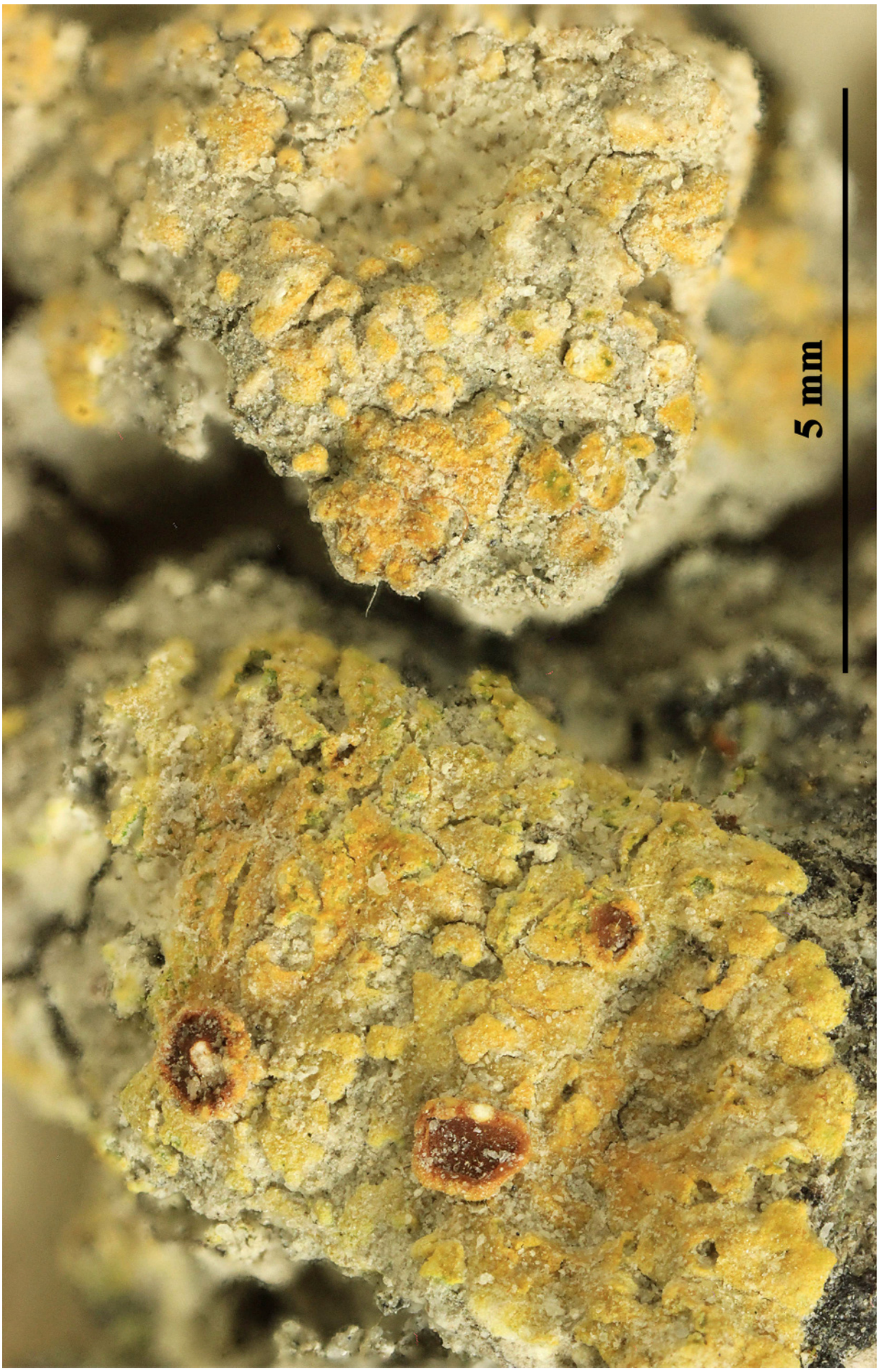


Fulgensia desertorum

Fulgensia desertorum (Tomin) Poelt, Mitt. bot. StSamml., Münch. 5: 600 (1965)
= *Placodium desertorum* Tomin 1926
= *Gyalolechia desertorum* (Tomin) Søchting, Frödén & Arup, in Arup, Søchting & Frödén, Nordic J. Bot. 31(1): 70 (2013)

[VZ1146], Hispania. Distr. Zaragosa, in vicinitate arcis Alfajarín, 200 m. Ad terram gypsaceum. Leg. X. Llimona, 4.1.1972. Ex A. VěZDA Lichenes Selecti Exsiccati Nr. 1140

Thallus crustose, episubstratic, verrucose-areolate, sulphur- to orange-yellow, more or less pruinose, forming 1-2(-3) cm wide patches, the areoles flat to mostly convex, contiguous, often sitting on a rather thick hypothallus, the marginal ones sometimes elongate, to 1-2 mm long, the central ones strongly convex, almost verrucose, 0.3-0.5 mm thick. Upper cortex paraplectenchymatous, with an epinecral layer; medulla white, 40-160 µm thick; lower cortex absent. Apothecia lecanorine, sessile, 0.5-1.5 mm across, with an orange to brownish orange, flat to slightly convex, rugose disc, and a thin margin which at maturity separates into a darker and thinner proper margin and a paler thalline margin. Epithecium orange-brown, K+ purple-red; hymenium colourless, >70 µm high; hypothecium colourless. Asci 8-spored, clavate, functionally unitunicate, apically thickened with a broad internal beak, the inner part of apex and external cap I+ blue, Teloschistes-type. Ascospores 1-septate, often slightly constricted at septum, not polarilocular, hyaline, ovoid-ellipsoid, thin-walled, 10-17 x 4-8 µm. Pycnidia orange-yellow, immersed. Conidia oblong, 3-3.5 x 1-1.2 µm. Photobiont chlorococcoid. Spot tests: thallus and apothecia K+ purple-red, C-, KC-, P-, UV+ pale orange. Chemistry: fragilin dominant, with smaller amounts of emodin and parietin. - Note: in Italy only locally common, especially in areas with gypsum, in open grasslands; to be looked for also in dry-continental Alpine valleys.



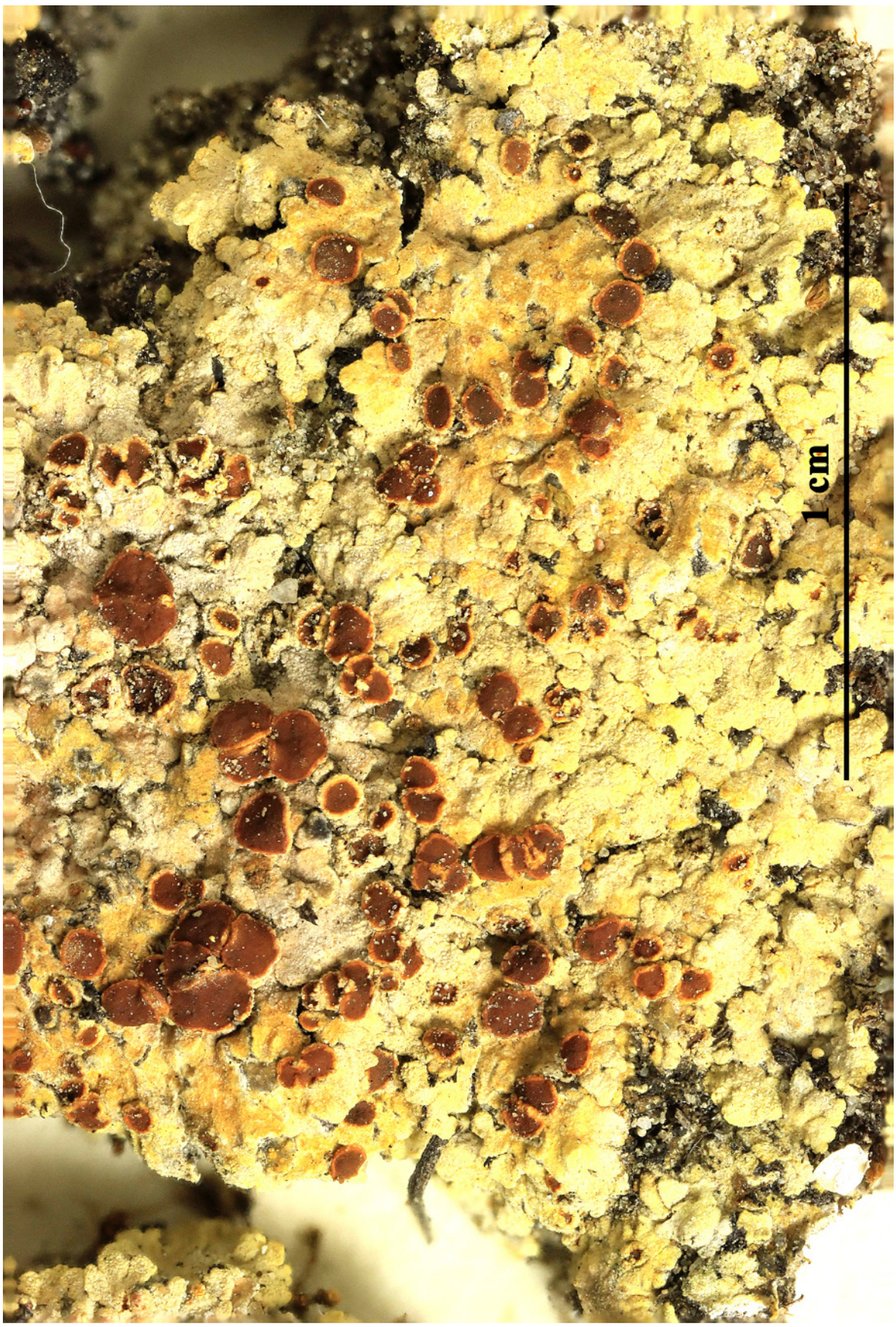
Fulgensia desertorum

Fulgensia desertorum

Fulgensia fulgens (Sw.) Elenkin, Lich. Fl. Ross. Med. 2: no. 246 (1907)
= *Gyalolechia fulgens* (Sw.) Søchting, Frödén & Arup, in Arup, Søchting & Frödén, Nordic J. Bot. 31(1): 70 (2013)
= *Lichen fulgens* Sw. 1784

[VZ1304],Hungaria. Kecskemét, prope Fülopháza, 80 m. Ad terram arenosam p, p, calcaream. Leg. T. Pócs, A. Kiszely et A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1304.

Thallus crustose-placodioid, almost monophyllous, episubstratic, pale yellow to orange-yellow, sometimes yellowish-white-pruinose, forming orbicular, up to 3-4 cm wide rosettes, with a verrucose-areolate central part and radiating marginal lobes. Lobes 1-2(-3) mm broad, concave to flat, contiguous to separate at margin, fused towards the centre. Apothecia frequent, rounded, sessile, 0.5-1.5(-2.5) mm across, with an orange to brownish orange, concave to flat, smooth disc, and a thin, orange-yellow margin. Epithecium orange-yellow, K+ purple-red; hymenium and hypothecium colourless. Asci 8-spored, clavate, functionally unitunicate, apically thickened with a broad internal beak, the inner part of apex and external cap I+ blue, Teloschistes-type. Ascospores 1-celled, rarely 1-septate, hyaline, thin-walled, of different forms within the same apothecium (from ovoid to slightly pyriform), 7-16 x 3.5-5(-6) µm. Pycnidia orange-yellow, immersed. Conidia narrowly ellipsoid. Photobiont chlorococcoid. Spot tests: thallus and apothecia K+ purple-red, C-, KC-, P-, UV+ pale orange. Chemistry: fragilin dominant, with smaller amounts of emodin and parietin and other anthraquinones (minor). - Note: a subtropical to temperate lichen found on calcareous rocks and thin layers of soil, often in rock fissures below the subalpine belt.



Fulgensia fulgens

Fulgensia fulgens

Fulgensia subbracteata (Nyl.) Poelt, Lich. Alp. 7: no. 137 (1961)
= *Gyalolechia subbracteata* (Nyl.) Søchting, Frödén & Arup, in Arup, Søchting & Frödén, Nordic J. Bot. 31(1): 72 (2013)
= *Lecanora subbracteata* Nyl. 1883

[VZ2191], Cyprus. Larnaca, in vicinitate pagi Oroklini, haud procul a litore, 5 m. Ad trram in saxis conglomeratis. Leg. A. Vězda, 25.6.1987. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2191.

Thallus crustose-placodioid, episubstratic, yellow to orange-yellow, sometimes yellowish-white-pruinose, the central parts verrucose-areolate, forming orbicular to irregular, to 3-4 cm wide, often confluent rosettes. Lobes 0.5-1 mm broad and to 3 mm long, flattened, contiguous, radiating from the central part of thallus, which is densely covered in flattened, scale-like, often elongate schizidia. Cortex paraplectenchymatous, 20-50 µm thick, including an up to 40 µm thick epinecral layer; medulla white, 40-135 µm thick. Apothecia rare, lecanorine, sessile, 0.5-1.2 mm across, with an orange to brownish-orange, flat, smooth disc, and a thin, orange-yellow margin which at maturity separates into an internal, darker and thinner proper margin, and an external, paler thalline margin. Epithecium orange-brown, K+ purple-red; hymenium colourless, 60-70 µm thick; hypothecium colourless. Asci 8-spored, clavate, functionally unitunicate, apically thickened with a broad internal beak, the inner part of apex and external cap I+ blue, Teloschistes-type. Ascospores 1-celled, hyaline, ovoid to slightly pyriform, thin-walled, 9-12 x 3.5-5 µm. Pycnidia orange-yellow, immersed. Conidia narrowly ellipsoid. Photobiont chlorococcoid. Spot tests: thallus and apothecia K+ purple-red, C-, KC-, P-, UV+ pale orange. Chemistry: fragilin dominant, with smaller amounts of emodin and parietin and other anthraquinones (minor). - Note: on calciferous ground, in clearings of grasslands and scrublands, with optimum in the Mediterranean belt. A critical taxon, characterized by schizidia, which, however, also occur in other related species. According to Roux & coll. (2014), it cannot be separated from G. fulgens, the schizidia being just a regeneration form from damages to the thallus, but according to Vondrák (in litt.), molecular data show that the two taxa are distinct.

Fulgensia subbracteata

Fulgensia subbracteata

Fulgensia subbracteata (Nyl.) Poelt, Lich. Alp. 7: no. 137 (1961)
= *Gyalolechia subbracteata* (Nyl.) Søchting, Frödén & Arup, in Arup, Søchting & Frödén, Nordic J. Bot. 31(1): 72 (2013)
= *Lecanora subbracteata* Nyl. 1883

[VZ2045}, Hispania. Prov. Zaragoza: El Ciervo, Retuerta de Pina, 200 m. Ad terram gypsaceam. Leg. J. Poelt et A. Vězda, 25.5.1983. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2045.

Thallus crustose-placodioid, episubstratic, yellow to orange-yellow, sometimes yellowish-white-pruinose, the central parts verrucose-areolate, forming orbicular to irregular, to 3-4 cm wide, often confluent rosettes. Lobes 0.5-1 mm broad and to 3 mm long, flattened, contiguous, radiating from the central part of thallus, which is densely covered in flattened, scale-like, often elongate schizidia. Cortex paraplectenchymatous, 20-50 µm thick, including an up to 40 µm thick epinecral layer; medulla white, 40-135 µm thick. Apothecia rare, lecanorine, sessile, 0.5-1.2 mm across, with an orange to brownish-orange, flat, smooth disc, and a thin, orange-yellow margin which at maturity separates into an internal, darker and thinner proper margin, and an external, paler thalline margin. Epithecium orange-brown, K+ purple-red; hymenium colourless, 60-70 µm thick; hypothecium colourless. Asci 8-spored, clavate, functionally unitunicate, apically thickened with a broad internal beak, the inner part of apex and external cap I+ blue, Teloschistes-type. Ascospores 1-celled, hyaline, ovoid to slightly pyriform, thin-walled, 9-12 x 3.5-5 µm. Pycnidia orange-yellow, immersed. Conidia narrowly ellipsoid. Photobiont chlorococcoid. Spot tests: thallus and apothecia K+ purple-red, C-, KC-, P-, UV+ pale orange. Chemistry: fragilin dominant, with smaller amounts of emodin and parietin and other anthraquinones (minor). - Note: on calciferous ground, in clearings of grasslands and scrublands, with optimum in the Mediterranean belt. A critical taxon, characterized by schizidia, which, however, also occur in other related species. According to Roux & coll. (2014), it cannot be separated from G. fulgens, the schizidia being just a regeneration form from damages to the thallus, but according to Vondrák (in litt.), molecular data show that the two taxa are distinct.

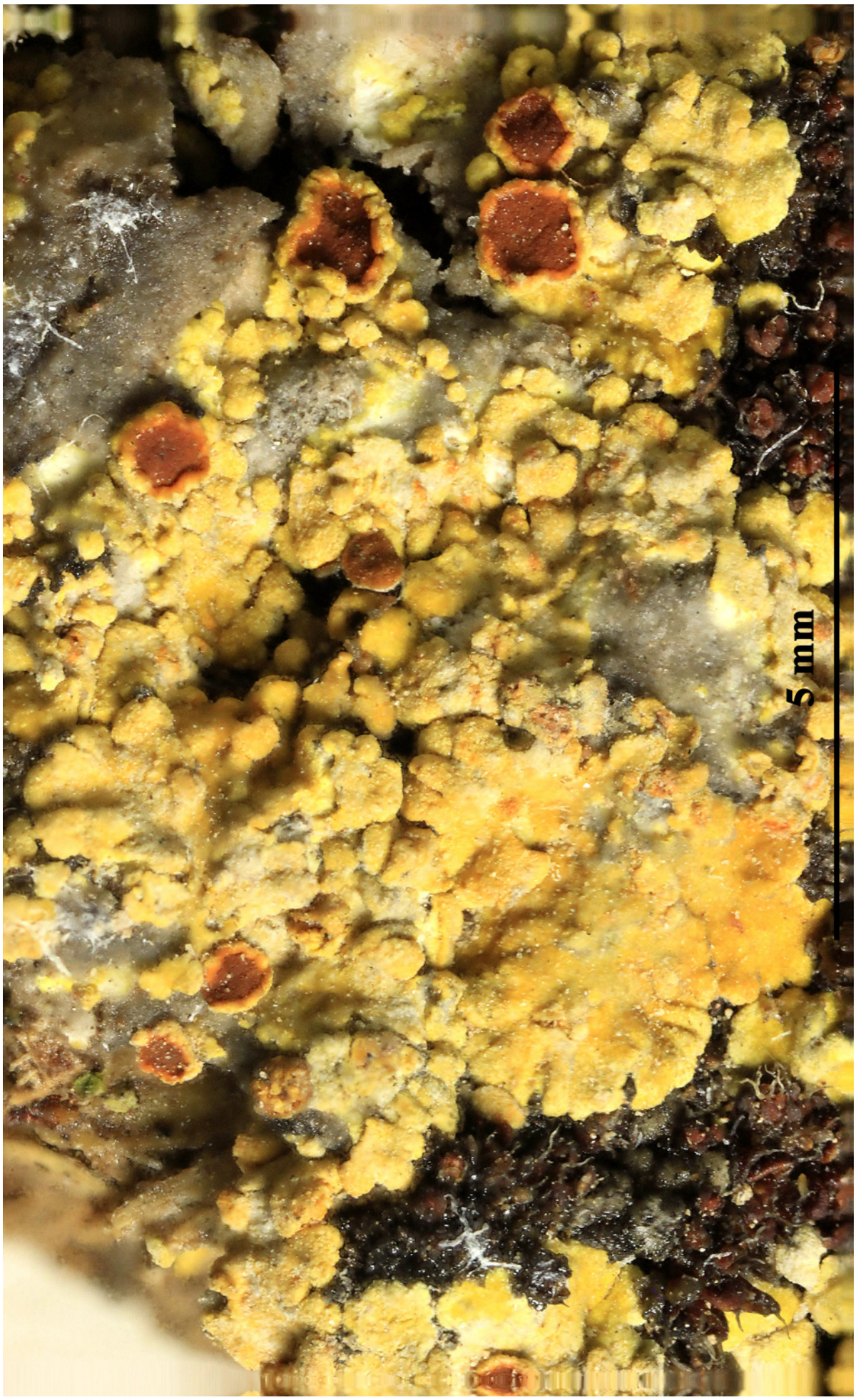
Fulgensia subbracteata

Fulgensia subbracteata

Fulgensia subbracteata (Nyl.) Poelt, Lich. Alp. 7: no. 137 (1961)
= *Gyalolechia subbracteata* (Nyl.) Søchting, Frödén & Arup, in Arup, Søchting & Frödén, Nordic J. Bot. 31(1): 72 (2013)
= *Lecanora subbracteata* Nyl. 1883

[VZ13059, URSS. Asia media, Turcomania. Aschabad, prope pagum Bagir loco dicto Kone Nusaj, 400 m. Ad terra, calcaream. Leg. I. Pišút, 21.4.1975. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1305.

Thallus crustose-placodioid, episubstratic, yellow to orange-yellow, sometimes yellowish-white-pruinose, the central parts verrucose-areolate, forming orbicular to irregular, to 3-4 cm wide, often confluent rosettes. Lobes 0.5-1 mm broad and to 3 mm long, flattened, contiguous, radiating from the central part of thallus, which is densely covered in flattened, scale-like, often elongate schizidia. Cortex paraplectenchymatous, 20-50 µm thick, including an up to 40 µm thick epinecral layer; medulla white, 40-135 µm thick. Apothecia rare, lecanorine, sessile, 0.5-1.2 mm across, with an orange to brownish-orange, flat, smooth disc, and a thin, orange-yellow margin which at maturity separates into an internal, darker and thinner proper margin, and an external, paler thalline margin. Epithecium orange-brown, K+ purple-red; hymenium colourless, 60-70 µm thick; hypothecium colourless. Asci 8-spored, clavate, functionally unitunicate, apically thickened with a broad internal beak, the inner part of apex and external cap I+ blue, Teloschistes-type. Ascospores 1-celled, hyaline, ovoid to slightly pyriform, thin-walled, 9-12 x 3.5-5 µm. Pycnidia orange-yellow, immersed. Conidia narrowly ellipsoid. Photobiont chlorococcoid. Spot tests: thallus and apothecia K+ purple-red, C-, KC-, P-, UV+ pale orange. Chemistry: fragilin dominant, with smaller amounts of emodin and parietin and other anthraquinones (minor). - Note: on calciferous ground, in clearings of grasslands and scrublands, with optimum in the Mediterranean belt. A critical taxon, characterized by schizidia, which, however, also occur in other related species. According to Roux & coll. (2014), it cannot be separated from G. fulgens, the schizidia being just a regeneration form from damages to the thallus, but according to Vondrák (in litt.), molecular data show that the two taxa are distinct.



Fulgensia subbracteata

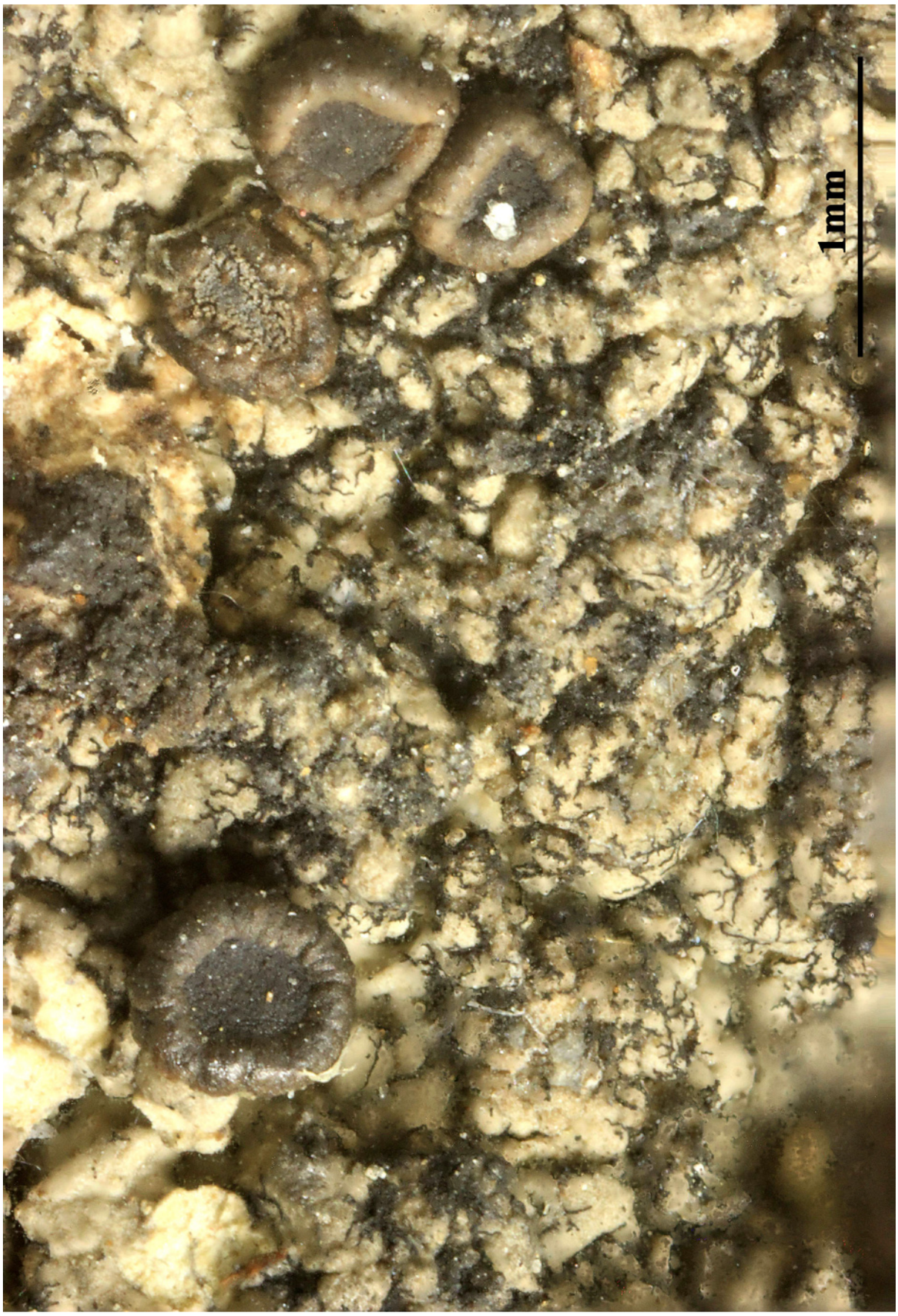
Fulgensia subbracteata

Fuscidea aggregatilis (Grummann) V. Wirth & Vězda, in Vězda, Lichenes Selecti Exsiccati, Fasc. (Průhonice) 56: 6 (no. 1397) (1976)
= *Fuscidea austera* (Nyl.) P. James, in Hawksworth, James & Coppins, Lichenologist 12(1): 106 (1980)
= *Lecidea aggregatilis* Grummann 1963

[VZ1397], Hungaria. Montes Matra, regio montis Kékes, loco Disnókô dicto, 700 m. Ad saxa trachytica loco ventoso. Leg. A. Kiszely et A. Vězda. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1397.

Thallus crustose, episubstratic, continuous to rimose, pale grey to grey-brown, often delimited by a black prothallus, the areoles 0.2-0.4(-0.5) mm wide, contiguous, thin, slightly to strongly convex. Medulla I-. Apothecia lecideine, 0.5-2 mm across, often gathered in up to 3 mm wide clusters, sessile, at first rounded but soon very irregular in outline, with a black-brown, flat, sometimes thinly pruinose disc, and a usually slightly paler, persistent, strongly wavy proper margin. Proper exciple brown in outer part, paler within; epithecium brown; hymenium colourless or pale brown in upper part, 55-75 µm high; paraphyses weakly coherent, simple or sparingly branched in upper part, 1.5-2 µm thick at mid-level, the apical cell clavate, to 4 µm wide; hypothecium colourless. Asci 8-spored, clavate, with a thin external and internal K/I+ dark blue cap surrounded by a thick K/I+ pale blue apical cap, and with a K/I- apical tube in tholus, Fuscidea-type. Ascospores 1-celled, hyaline broadly ellipsoid to subglobose, (6-)9-12(-13) x 6.5-9 µm. Pycnidia black-brown in upper part. Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC-, P-, UV-; apothecia UV+ bluish white. Chemistry: thallus without lichen substances; apothecia with divaricatic acid. - Note: on steeply inclined to rain-sheltered surfaces of hard siliceous rocks in upland areas; in Italy hitherto reported only from South Tyrol.

Fuscidea aggregatilis

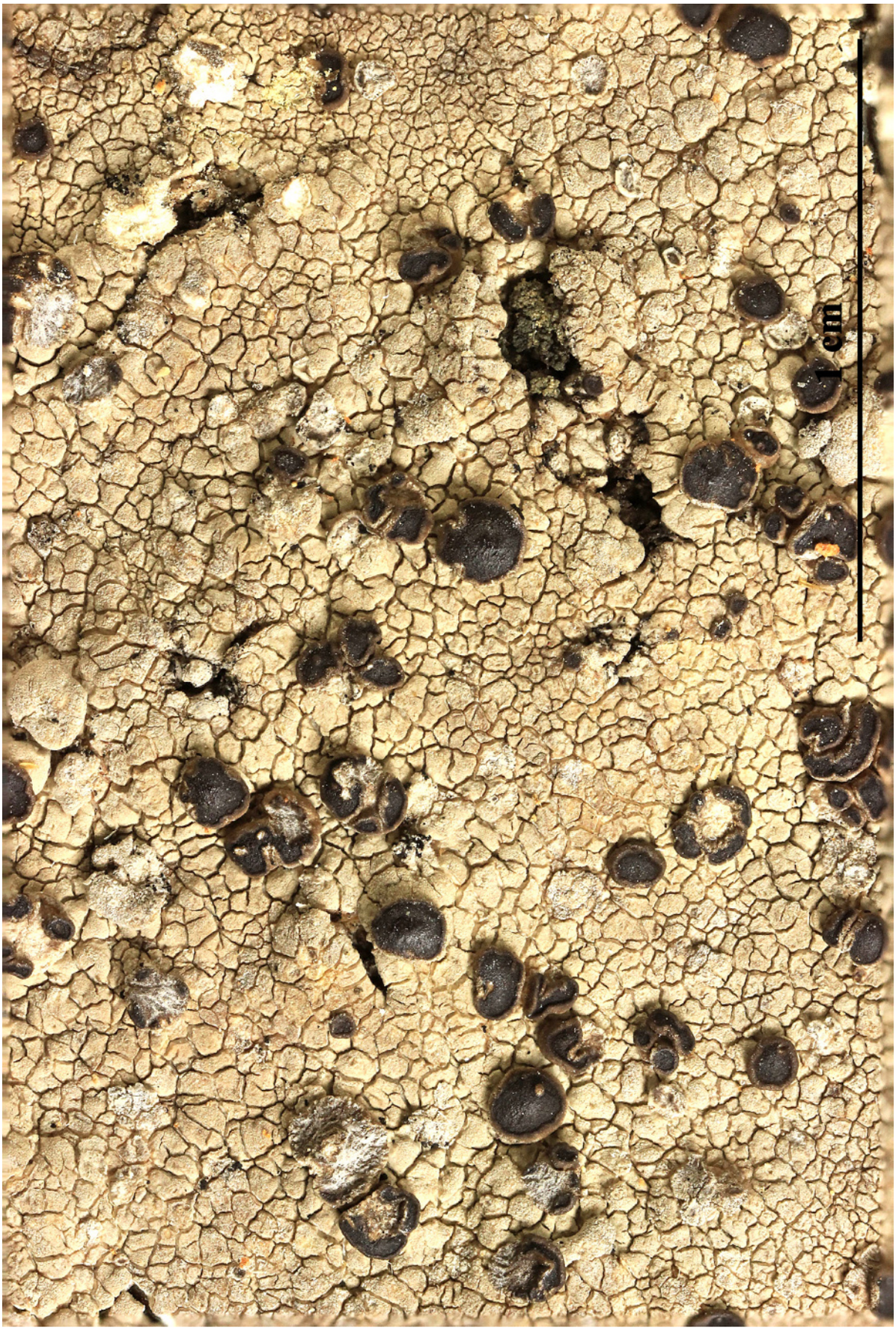


Fuscidea aggregatilis

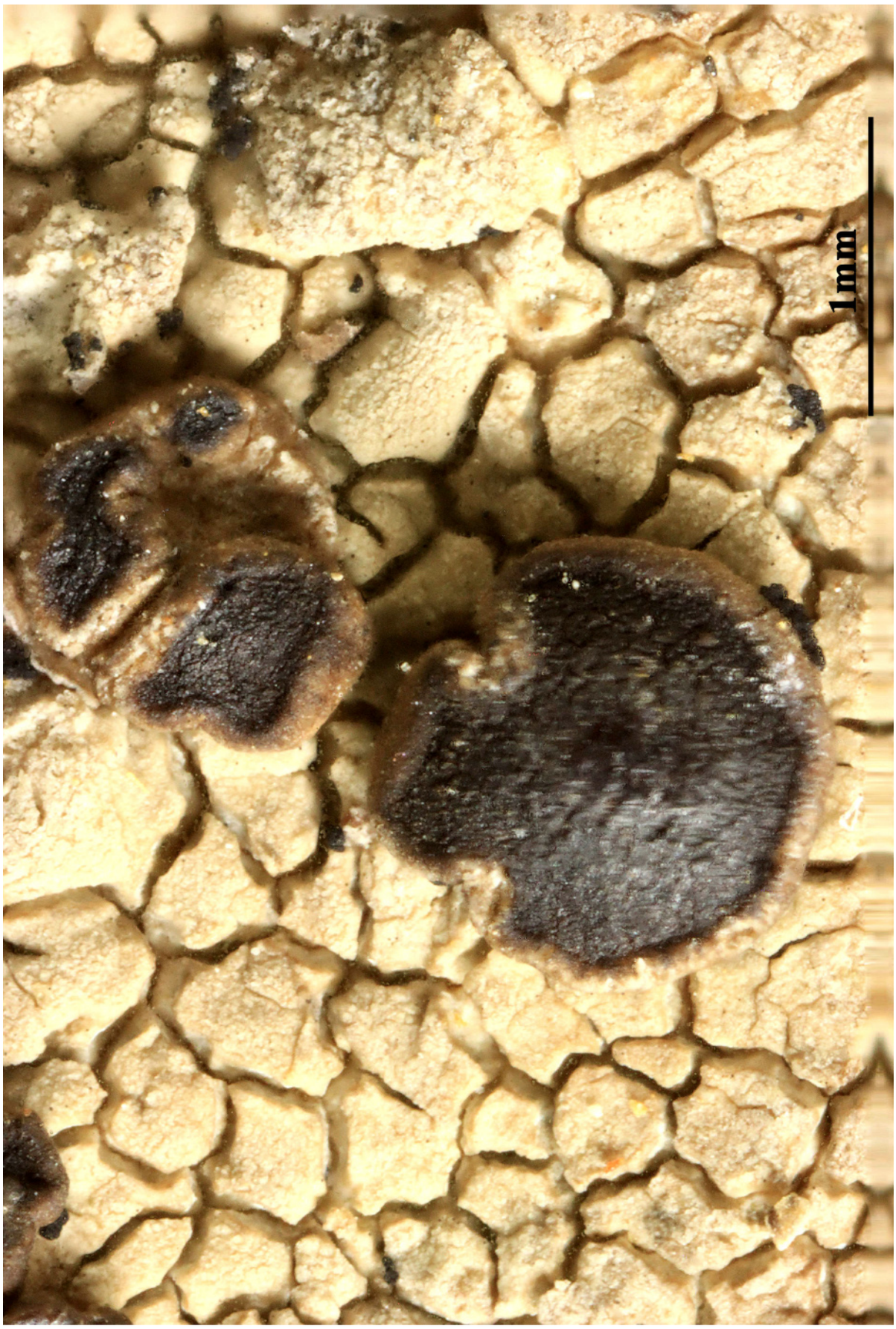
Fuscidea cyathoides* var. *corticola (Fr.) Kalb, Herzogia 4(1-2): 57 (1976)
= *Biatora rivulosa* f. *corticola* Fr. 1831
= *Fuscidea cyathoides* (Ach.) V. Wirth & Vězda, Beitr. Naturk. Forsch. Südwestdeutschl. 31: 92 (1972)
= *Fuscidea stiriaca* (A. Massal.) Hafellner *Fritschiana, 33: 42, 2002.*
= *Biatora stiriaca A. Massal.* - Ric. Auton. Lich. Crost., 125, 1852.
= *Biatorinella fagicola* (Zschacke) Deschâtres & Werner
= *Fuscidea fagicola* (Zschacke) Hafellner & Türk
= *Lecidea cyathoides* var. *corticola* (Fr.) H. Magn.
= *Lecidea fagicola* Zschacke
= *Lecidea rivulosa* var. *corticola* (Fr.) Jatta
= *Lecidea stiriaca* (A. Massal.) Jatta

[VZ1664], Jugoslavia. Bosna, montes Brenj, in valle augusta inter Boračko jezero et summum montem Prenj, 1500m. Ad corticem *Fagi orientalis*. Leg. A. Vězda, 25.7.1989. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1664.

Thallus crustose, continuous to rimose- cracked, grey, brownish green to olive-brown, often delimited by a dark brown to black prothallus and forming mosaics. Apothecia lecideine, constricted at base, round to irregular, to 1.8 mm across, with a brown to black, flat disc, and a prominent, smooth to strongly flexuose proper margin which is often slightly paler than disc. Epithecium brown; hymenium pale or faintly brownish; paraphyses 1.5-2 µm thick at mid-level, simple or sparingly branched, weakly coherent in water, becoming free in K, the apical cells to 4-5 µm wide; hypothecium colourless. Asci 8-spored, clavate, with a thin external and internal K/I+ dark blue cap surrounded by a thick K/I+ pale blue apical cap, and with a K/I- apical tube in tholus, Fuscidea-type. Ascospores 1-celled, hyaline to finally pale brown, broadly ellipsoid when young, bean-shaped when mature, (7-)10-11(-14) x 4-6 µm. Pycnidia abundant, brown, immersed to emergent, with a thin thalline rim. Conidia bacilliform 3-4.5 x 1-2 µm. Photobiont chlorococcoid. Spot tests: thallus K+ brownish yellow, C-, KC-, P+ rust red, UV-. Chemistry: fumarprotocetraric acid (major), protocetraric acid (trace). - Note: a cool-temperate to southern boreal-montane lichen found on bark (mainly of *Fagus*); perhaps declining, especially in Northern Italy.



Fuscidea cyathoides* var. *corticola

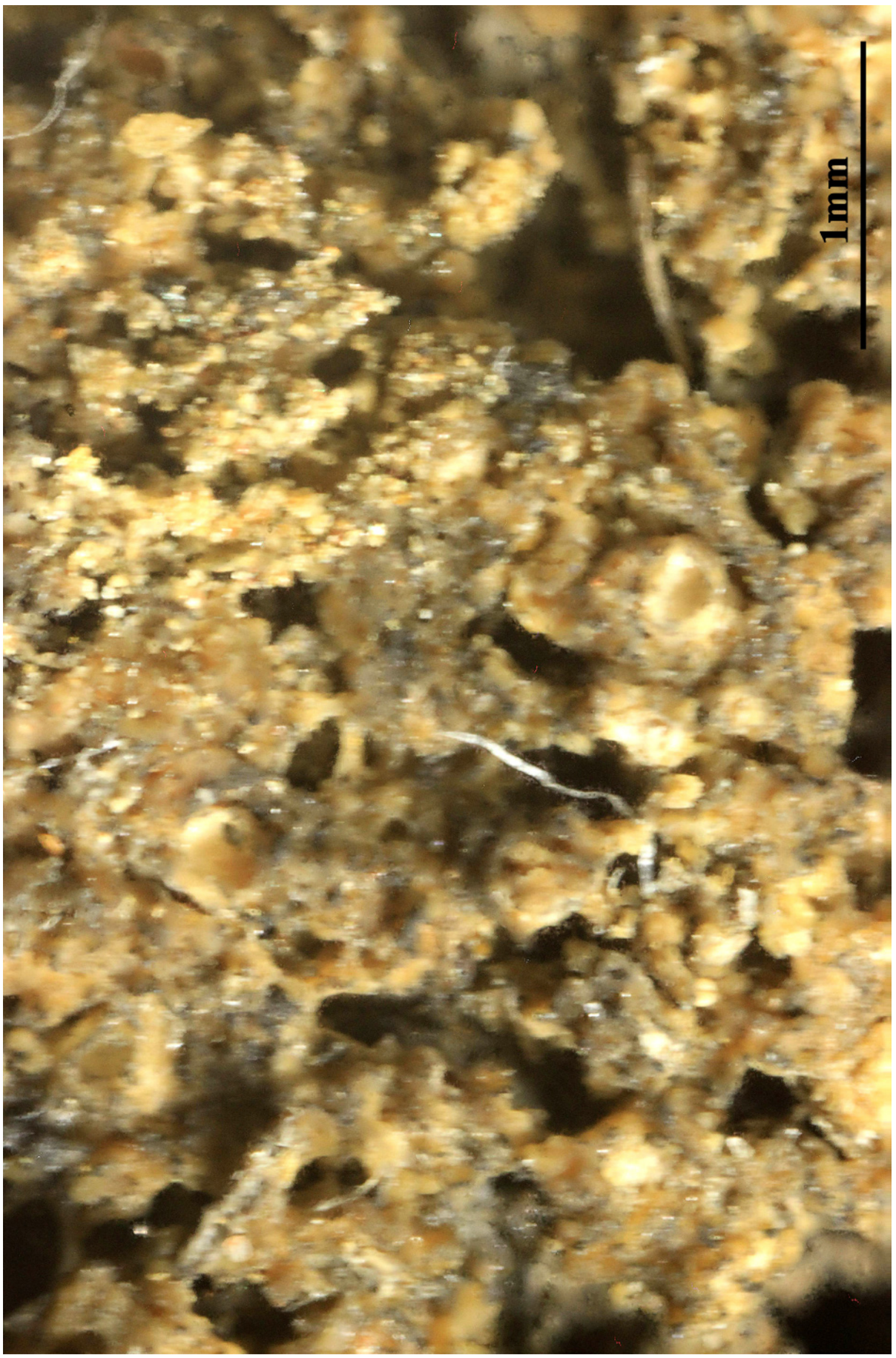


Fuscidea cyathoides* var. *corticola

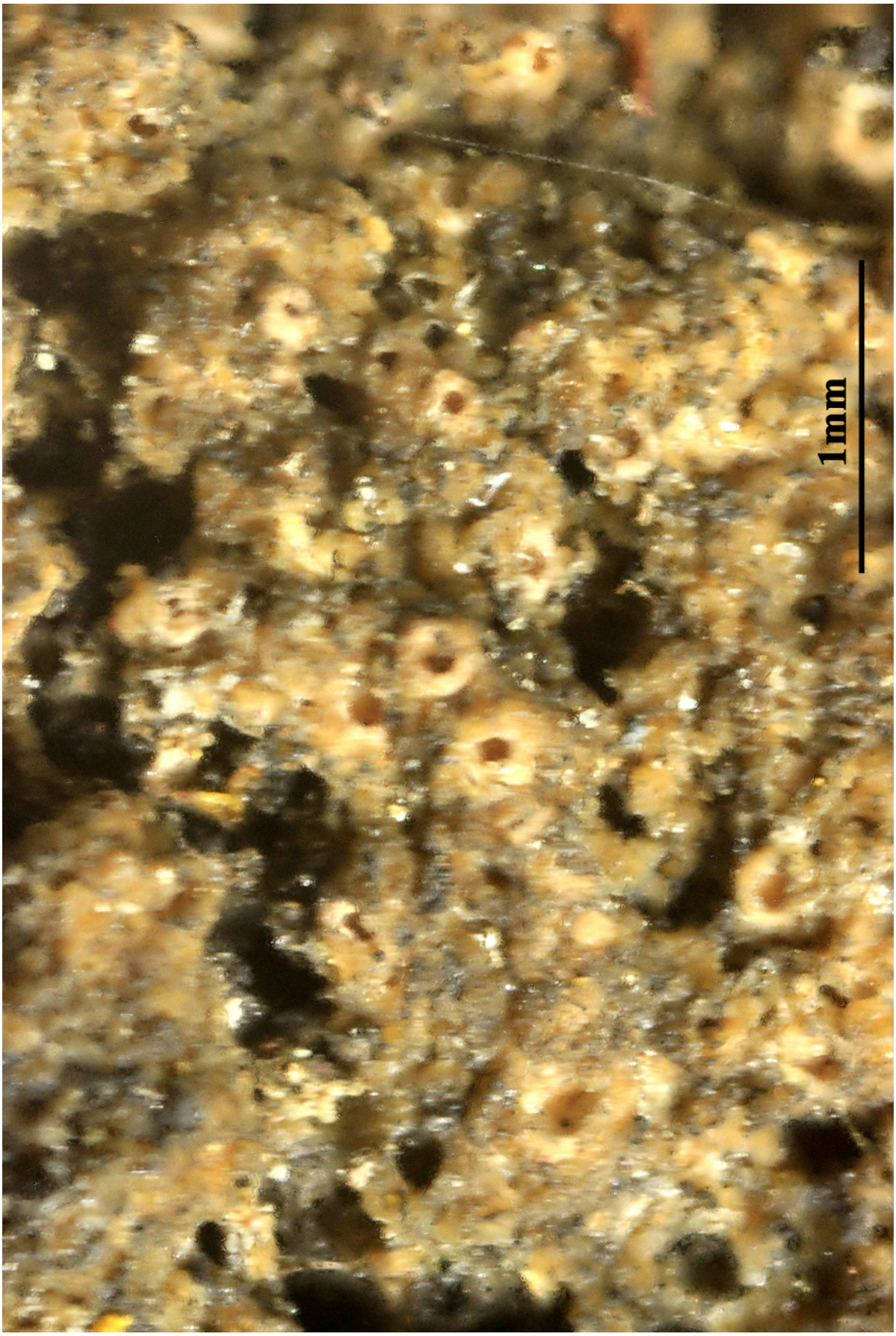
Gloeolecta bryophaga (Körb. ex Arnold) Vězda, Folia geobot. phytotax. bohemoslov. 1: 169 (1966)
= *Secoliga bryophaga* Körb. ex Arnold 1864
= *Cryptodiscus gloeocapsa* (Nitschke ex Arnold) Baloch, Gilenstam & Wedin, Fungal Diversity 38: 61 (2009)

[VZ1086], Bohemoslovacia. Moravia, montes Sudetes orientales, in monte Vysoká hole, 1450 m. Ad terram macram humosam. Leg. A. Vězda, 8.5.1872. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1088.

Thallus crustose, very thin when dry, thicker and gelatinous when wet, membranous or film-like, pale brown to pale green, more or less glossy, poorly delimited. Apothecia 0.2-0.5 mm across, scattered or in small clusters, at first immersed and almost perithecioid, later emergent, deeply concave, opening with a broad pore, with a pale yellow-brown to orange-red, rarely dark brown disc, and a paler or concolorous proper margin. Proper exciple 25-70 µm thick, of thin-walled, radially arranged hyphae, paraplectenchymatous in inner part, without crystals; epithecium poorly differentiated from the hymenium; hymenium colourless (brownish in uppermost part), 50-60 µm high, I+ yellow-brown, K/I+ faintly blue; paraphyses coherent, simple, thread-like, not swollen at apex, immersed in a gelatinous matrix; hypothecium colourless. Asci 8-spored, cylindrical, short-stalked, thin-walled, the apex thickened, rounded, K/I+ blue, without any clear apical structures. Ascospores 3-4-septate, not constricted at septa, hyaline, narrowly cylindrical to cylindrical-fusiform, 20-30 x 1.5-2 µm, often tapering at one end, arranged in a fascicle. Pycnidia pyriform, immersed in the thallus. Conidia short-cylindrical. Photobiont chlorococcoid, Gloeocystis-like, the cells globose or elongate, arranged in clusters. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: thallus without lichen substances. - Note: Widely distributed in the Northern Hemisphere, in the Alps, it was so far recorded also from Austria and Switzerland (Nimis et al. 2018). In the Alps the species mostly grows on acidic soil of a few years old embankments of secondary dirt forest roads in shaded situations, mostly in the montane to subalpine belt. In other parts of Europe it is also found in other habitats with pioneer character, such as consolidated acidic sand dunes or recently disturbed soil. Co-occurring bryophytes and leafy hepatics are partly or entirely overgrown by the filmy crustose lichen.



Gloeolecta bryophaga

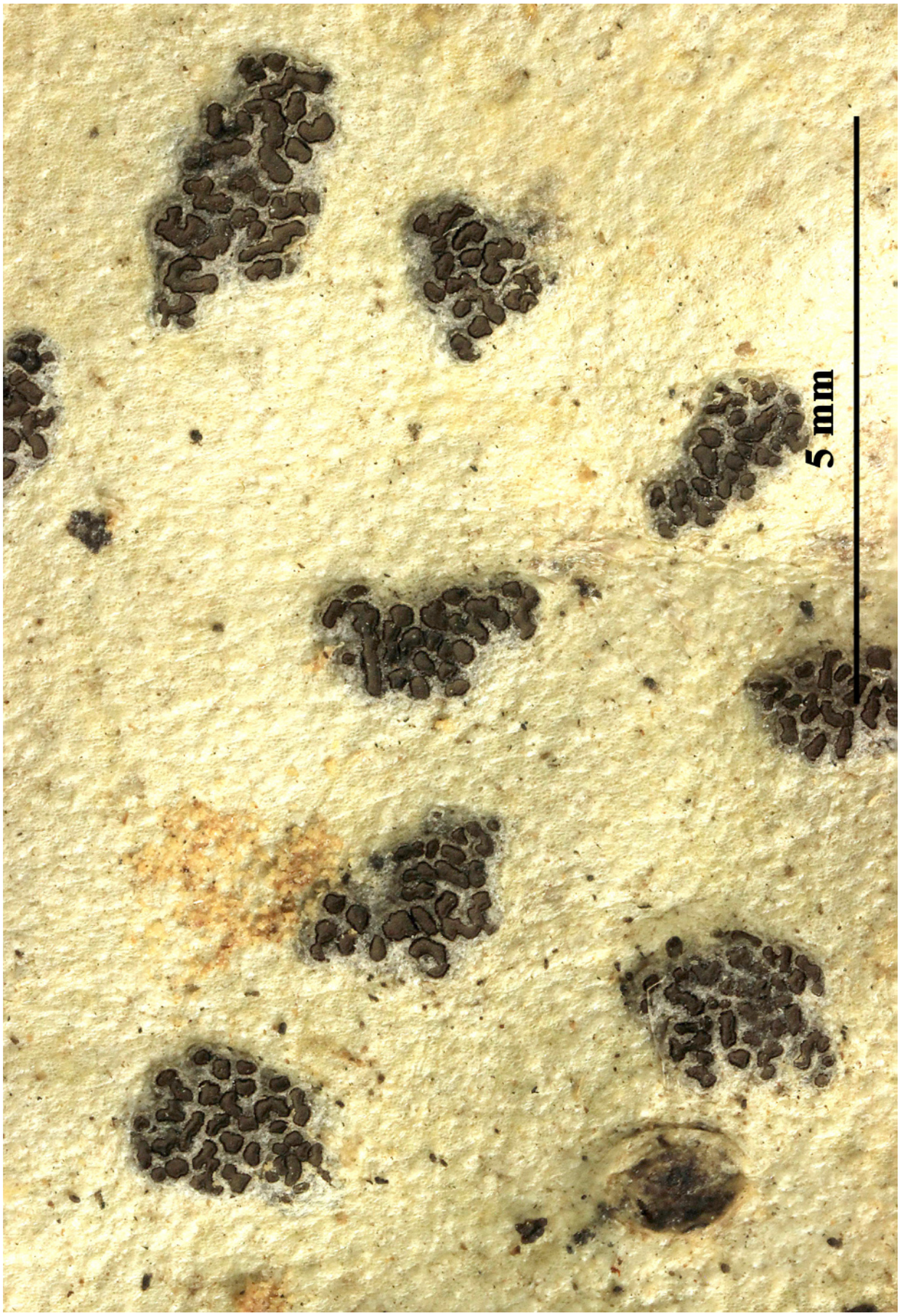


Gloeolecta bryophaga

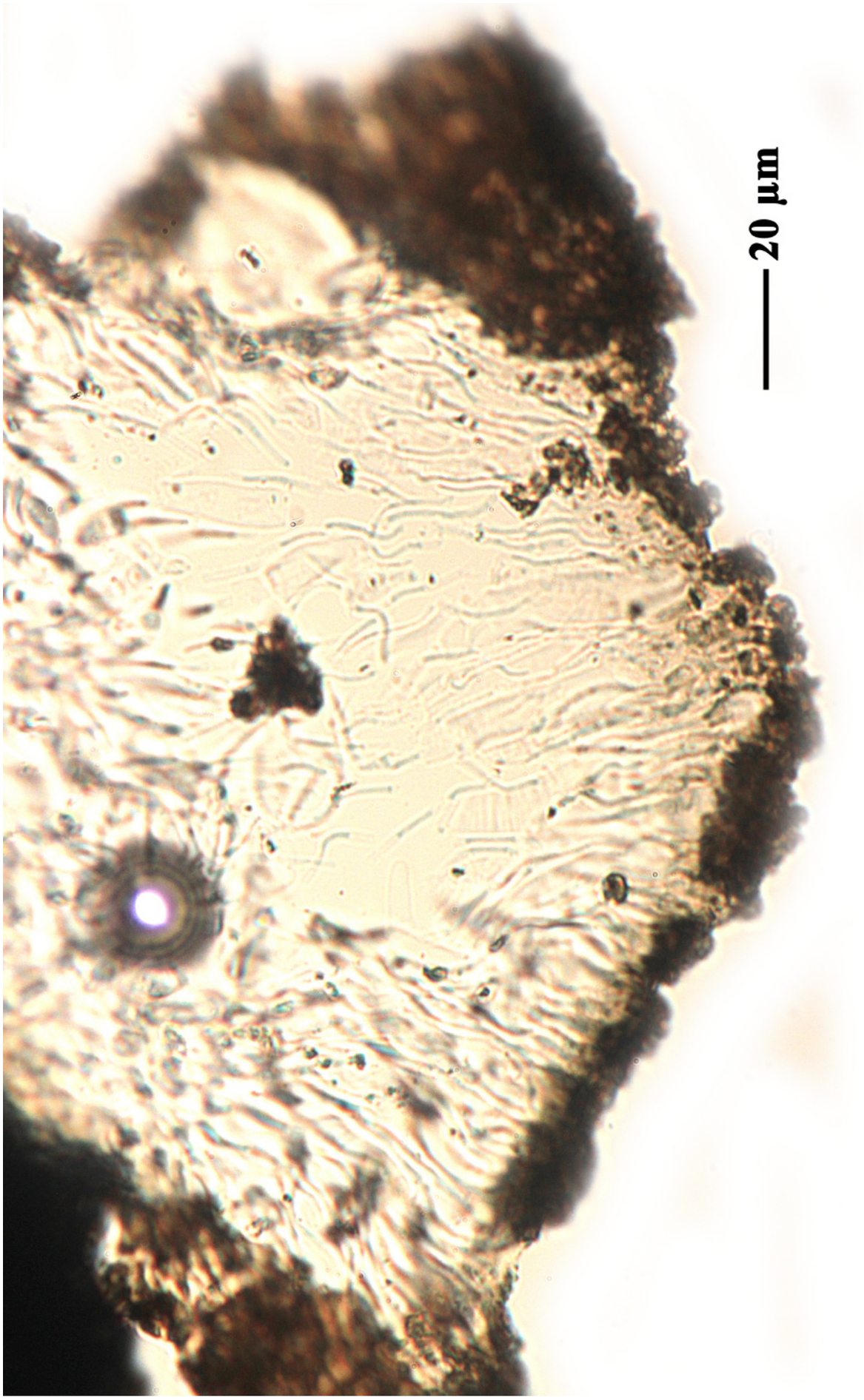
Glyphis cicatricosa Ach., Syn. meth. lich. (Lund): 107 (1814)

[VZ1801], Hawaii Insulae. Hawaii, Hilo. Corticicola in ramulis arborum. Leg. I. et O. Degener (no. 25274), 16.5.1981., det.A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1801.

(Largely translated and modified from Staiger (2002)) Thallus crustose, ochre, olive or brownish, mostly smooth or somewhat gristly with a waxy surface, but also creamy-whitish, dull, slightly unevenly warty or somewhat "flaky", ~50-150 µm thick in section; vegetative diaspores absent. Photobiont trentepohlioid alga. Ascomata lirellae, immersed, crowded-clustered in pseudostromata; individual lirellae ovoid to lobed to elongate, simple to branched, 1-10 x 1 mm; surface between lirellae whitish to brownish-gray, granular; disk brownish. Pseudostroma is composed largely of carbonized exciplular tissue, with embedded crystals in edges and upper surface. Hymenium hyaline, not inspersed, 70-100 µm high; epihymenium brown, about 5 µm high. Paraphyses 2-3 µm thick, with apical side branches, tips pigmented brown. Asci 8-spored; ascospores hyaline, transversely septate, 8-13-celled, 28-59 (-60) × 7-10 µm, perispore present, up to 5 µm thick. Chemistry: No substances detected by TLC; hymenium I+ faint violet or grey-blue; spores I+ blue-violet. Substrate and Habitat. Corticolous on hardwood trees. Distribution Pantropical, north to eastern North America.



Glyphis cicatricosa



Glyphis cicatricosa

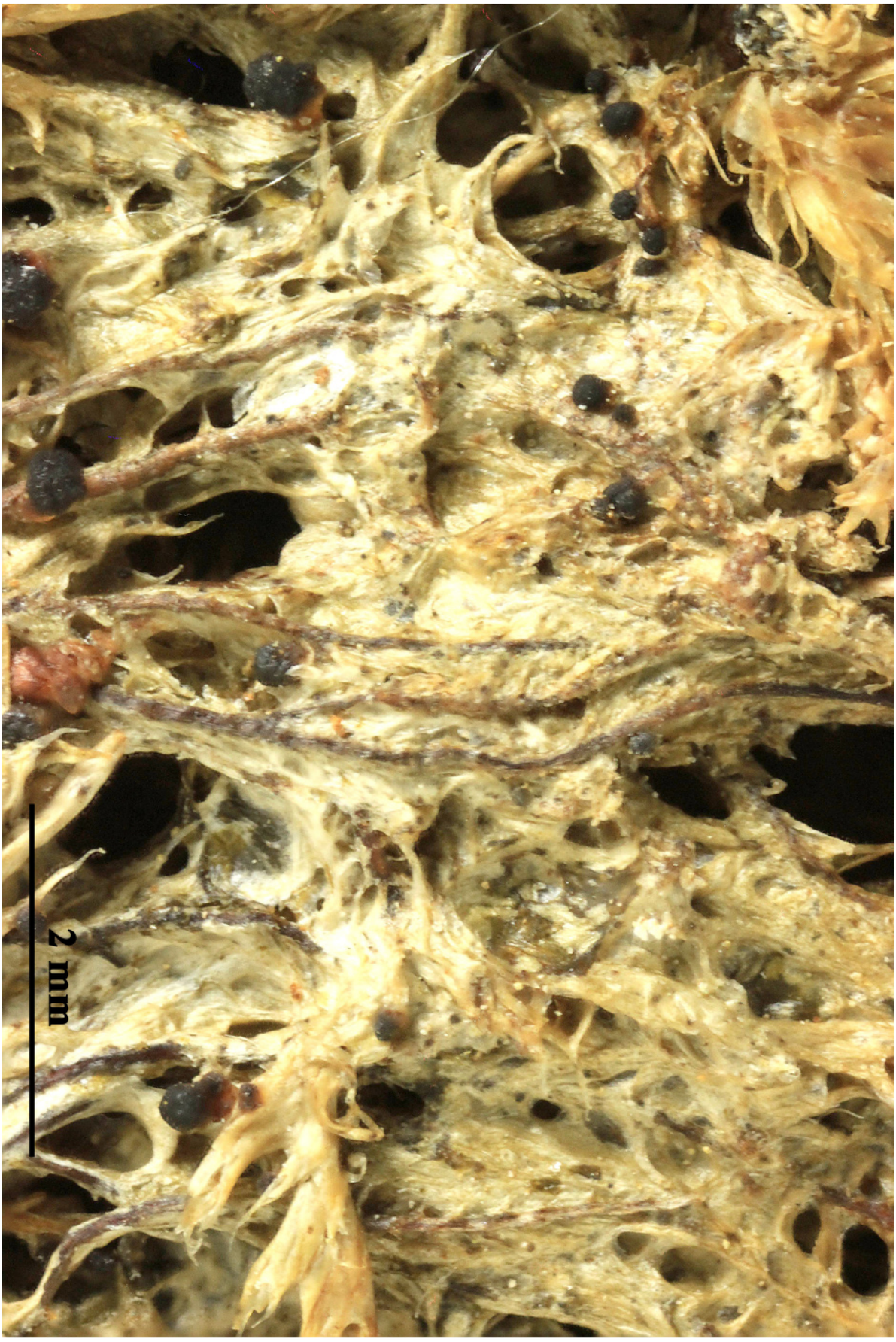
Glyphis cicatricosa

Glyphis cicatricosa

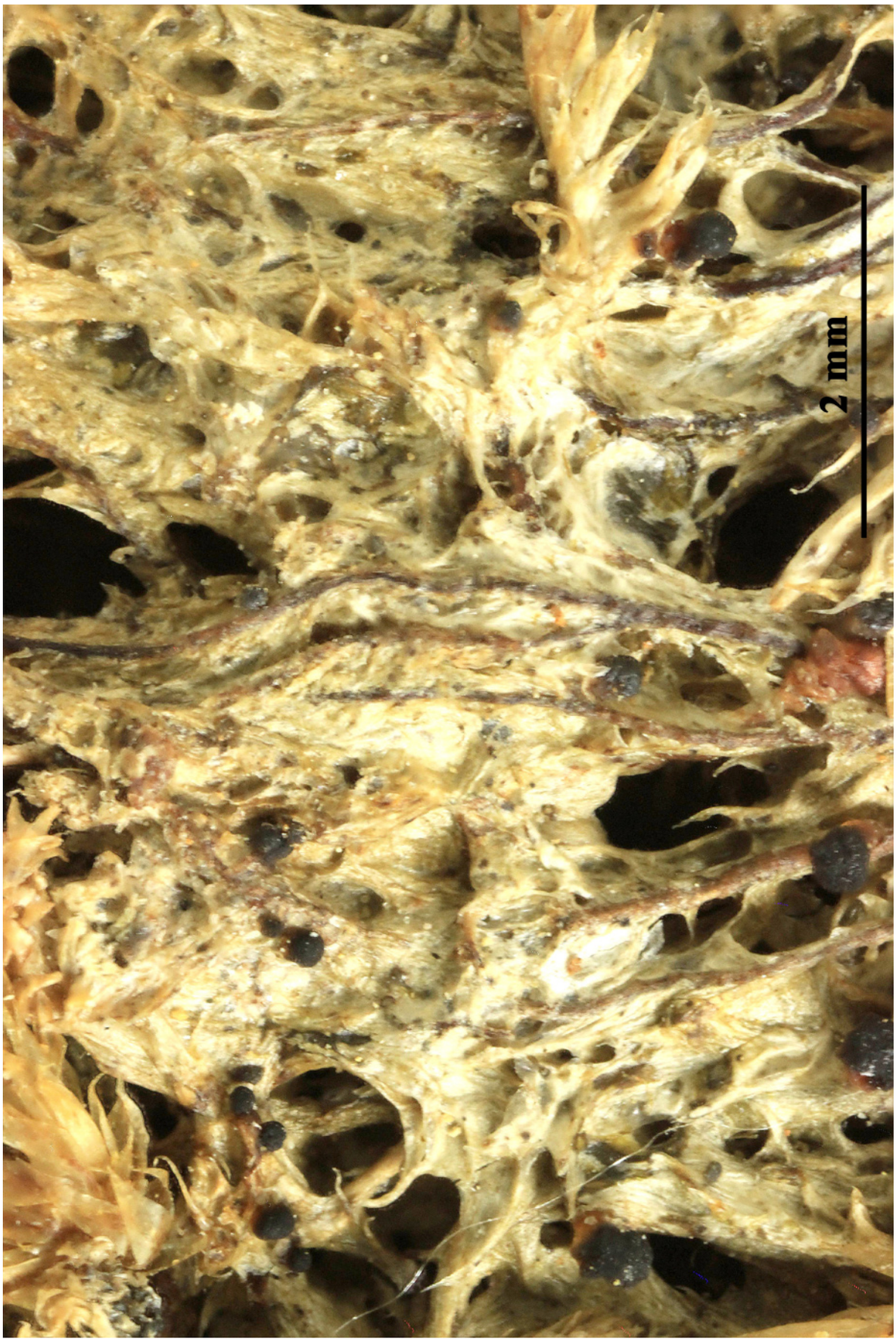
Gomphillus calycioides (Delise ex Duby) Nyl., Bot. Notiser(10-11): 65 (1853)
= Baeomyces calycioides Delise ex Duby 1830

[VZ1167], Gallia. Pyrenaei montes occident. Haute-Saule: Assurrucq, Arbailles, 600 m. Ad truncum muscorum *Fagi sivaticae*. Leg. J. Vivant, 28.12.1972. Ex A. VěZDA Lichenes Selecti Exsiccatiu Nr. 1167.

Thallus crustose, thin, membranous, translucent when moist, pale grey to greenish, often poorly evident, the hyphae penetrating the cells of moss and liverwort leaflets. Apothecia borne on short stalks which are black in upper part, paler in lower part, solitary or clustered, 0.2-0.7 mm across, with a convex, dark brown to black disc. Exciple well-developed, extending below into the stalk, pale brown in upper and outer part, almost colourless within; epithecium reddish brown; hymenium colourless, 280-360 µm high; paraphyses thin, anastomosing, the apices not swollen. Asci 8-spored, narrowly cylindrical, with a K/I- apical tholus, fissitunicate, Gomphillus-type. Ascospores many-septate (with up to 100 septa), with almost square cells, hyaline, thread-like, 160-210 x 1.5-2(-3) µm, with rounded apices. Pycnidial wall black in upper part, pale below. Conidia minutely ellipsoid, 2-4 x 0.5-0.7 µm. Photobiont chlorococcoid. Spot tests: thallus and apothecia K-, C-, KC-, P-. Chemistry: without lichen substances. - Note: a mild-temperate to tropical species found on bryophytes, mostly on basal parts of old trunks in mature warm-humid forests at low elevations. The regions from which it was reported, mostly in the Insubrian district of Italy.



Gomphillus calycioides

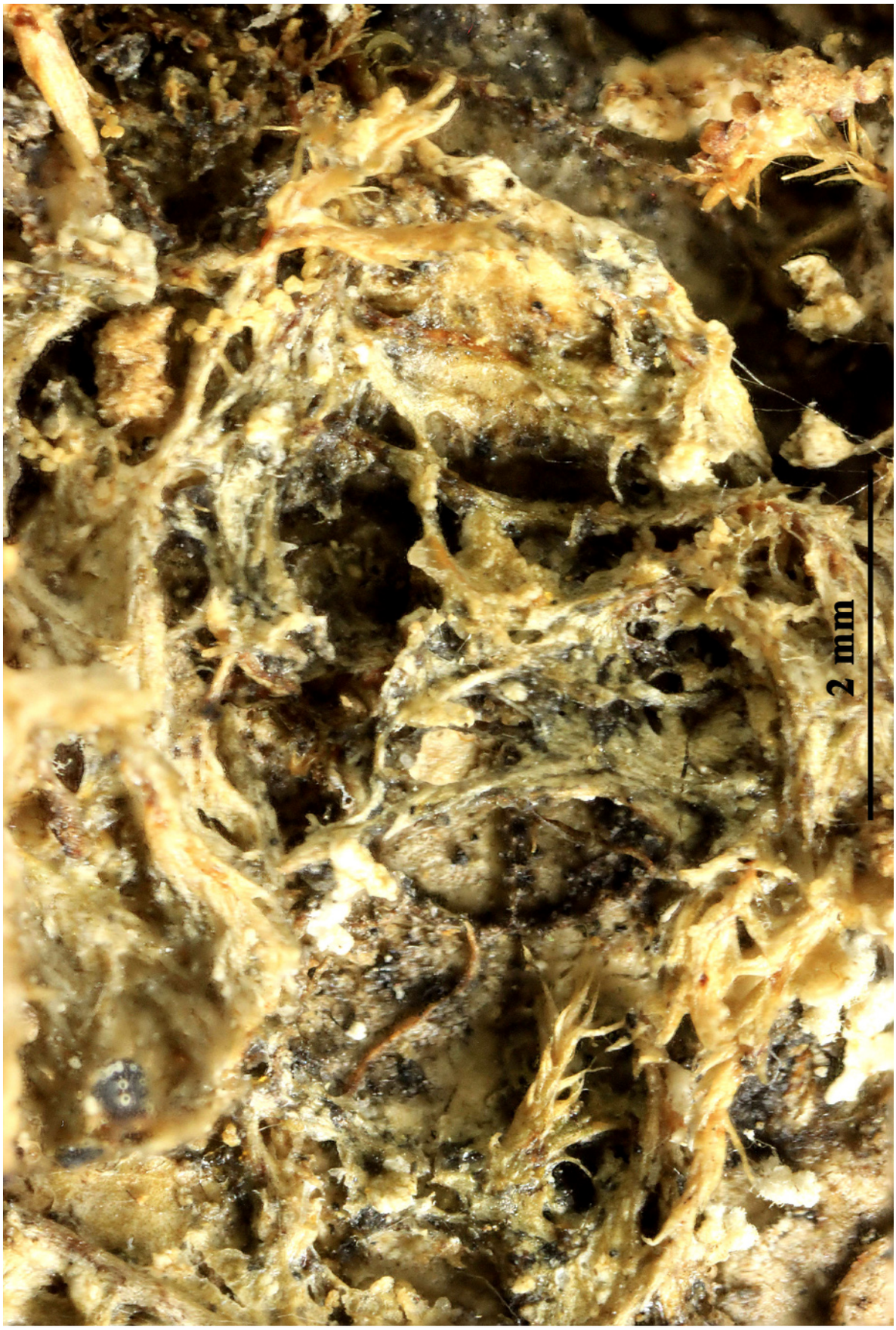


Gomphillus calycioides

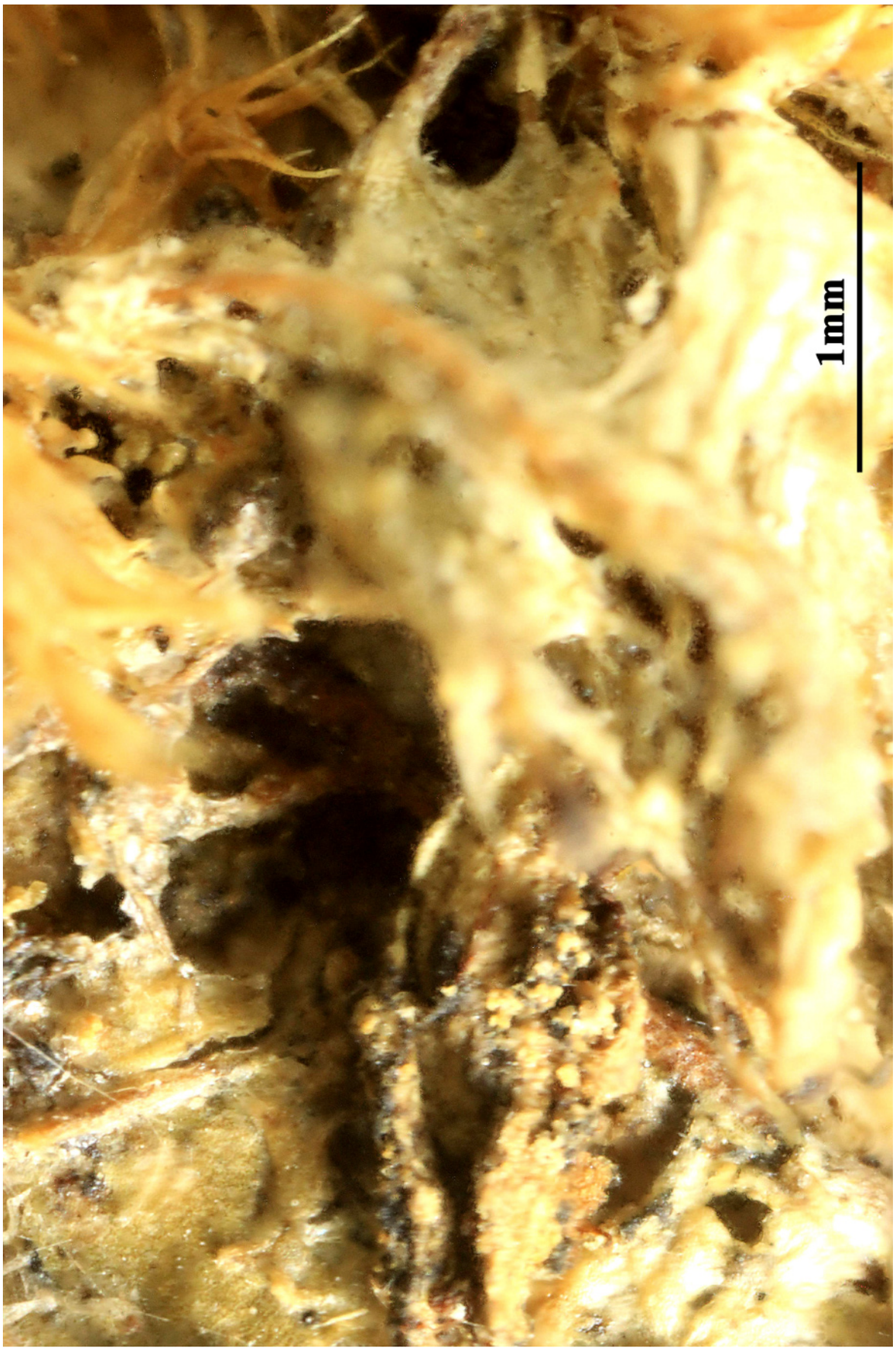
Gomphillus calycioides (Delise ex Duby) Nyl., Bot. Notiser(10-11): 65 (1853)
= Baeomyces calycioides Delise ex Duby 1830

[VZ1715], Magna Britannia. Caledonia, Argyll. Inver, Glasdrum, Loch Creran. Supra muscos ad truncum arboris. Leg. P. W. James. Ex A. Vezda Lichenes Selecti Exsiccati Nr. 1715.

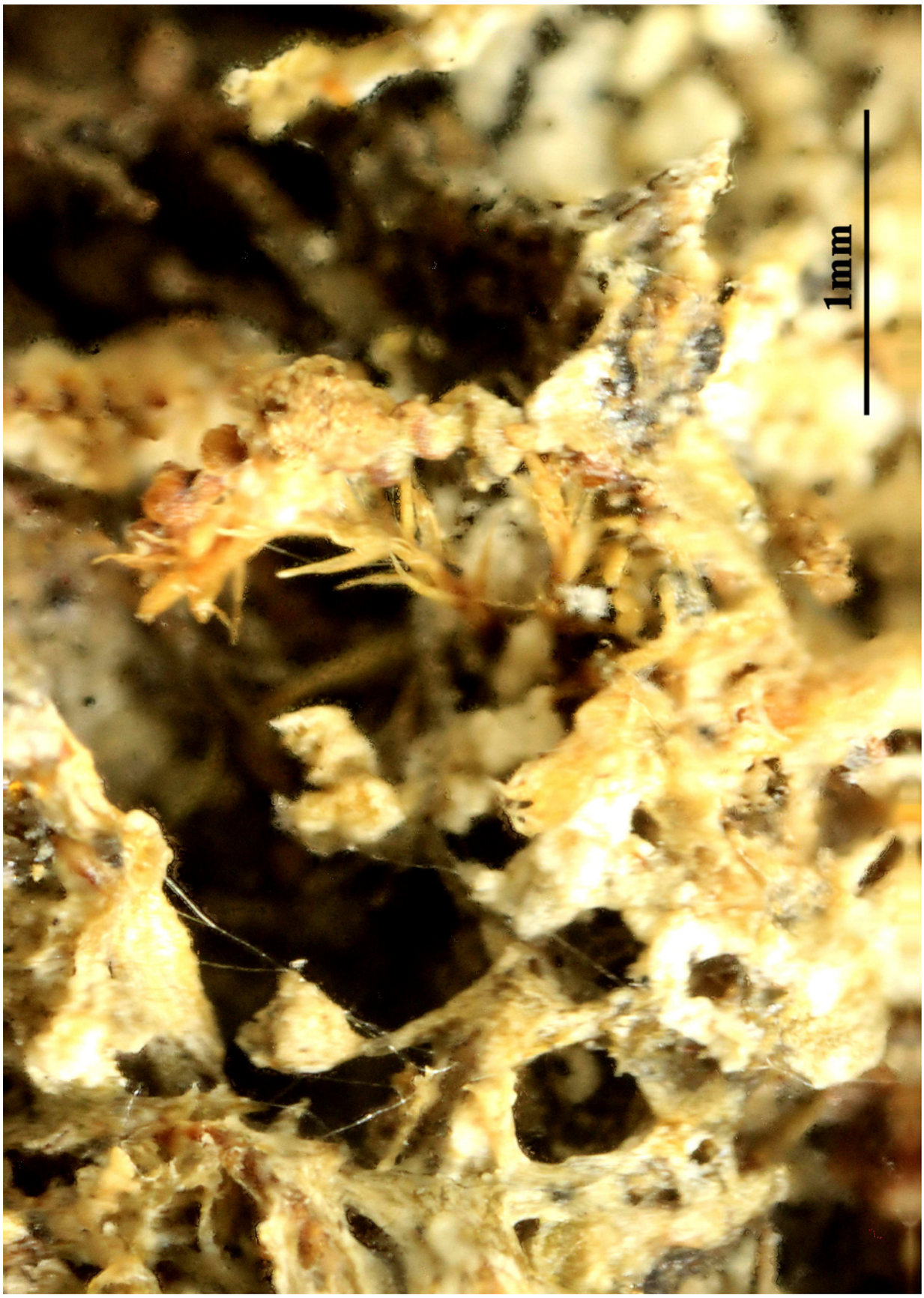
Thallus crustose, thin, membranous, translucent when moist, pale grey to greenish, often poorly evident, the hyphae penetrating the cells of moss and liverwort leaflets. Apothecia borne on short stalks which are black in upper part, paler in lower part, solitary or clustered, 0.2-0.7 mm across, with a convex, dark brown to black disc. Exciple well-developed, extending below into the stalk, pale brown in upper and outer part, almost colourless within; epithecium reddish brown; hymenium colourless, 280-360 µm high; paraphyses thin, anastomosing, the apices not swollen. Asci 8-spored, narrowly cylindrical, with a K/I- apical tholus, fissitunicate, Gomphillus-type. Ascospores many-septate (with up to 100 septa), with almost square cells, hyaline, thread-like, 160-210 x 1.5-2(-3) µm, with rounded apices. Pycnidial wall black in upper part, pale below. Conidia minutely ellipsoid, 2-4 x 0.5-0.7 µm. Photobiont chlorococcoid. Spot tests: thallus and apothecia K-, C-, KC-, P-. Chemistry: without lichen substances. - Note: a mild-temperate to tropical species found on bryophytes, mostly on basal parts of old trunks in mature warm-humid forests at low elevations. The regions from which it was reported, mostly in the Insubrian district of Italy.



Gomphillus calycioides



Gomphillus calycioides



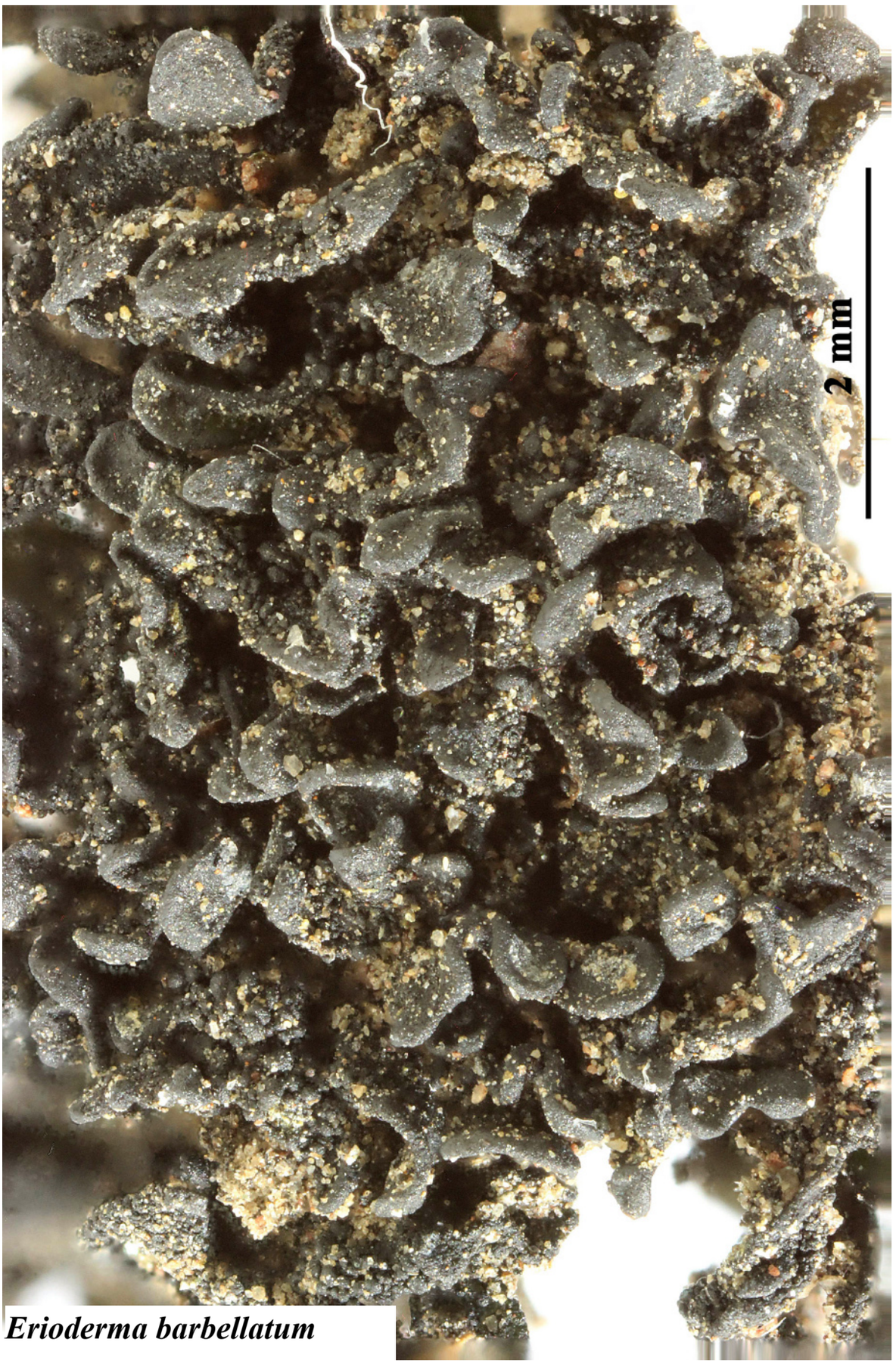
Gomphillus calycioides

Gonohymenia nigritella (Lettau) Henssen, Lichenologist 18(1): 52 (1986)
= *Thallinocarpon nigritellum* (Lettau) P.M. Jørg., in Jørgensen, Tønsberg & Vitikainen, Nordic Lichen Flora, 3, Cyanolichens 3: 145 (2007)
= *Lichinella nigritella* (Lettau) P.P. Moreno & Egea Cryptogamie, Bryol.-Lichénol., 13: 246, 1992.
= *Thyrea nigritella* Lettau - Beih. Repert. Spec. Nov. Regni Veg., 119: 276, 1942.

[VZ2102], Bohemoslovacia. Moravia, Brno: in vicinitate pagi Chudčice prope Veverská Bitýška, 280 m. Ad saxa conglomerata. Leg. A. Henssen et A. Vězda, 7.11.1981. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2102.

Thallus small-foliose to squamulose-umbilicate, polyphyllous, gelatinous when wet, forming regular to irregular, up to 3 cm wide cushions, black, dull to glossy, very rarely with patches of grey pruina, soon covered in minute, globose 0.1-0.3 µm wide isidia, densely lobulate, the lobules at first adpressed, but soon ascending to erect in central parts of thallus, 1-2 mm wide at base and 3-4 mm wide at tips, broadly rounded at first but soon divided, with ascending, thicker margins; lower surface attached by a central holdfast. Thallus 0.2-0.4 µm thick, the outer part 50-70 µm thick, formed by short-celled, mainly anticlinally oriented hyphae enclosing the photobiont cells, the medullary part of loosely to densely arranged (forming a 50-100 µm thick compact strand), 1-2 µm thick hyphae with cylindrical cells, lacking photobionts. Apothecia thallinocarps, hemiangiocarpous, the ascogonia arising freely beneath the thallus surface, rare, marginal to apical, 0.3-0.6 mm across, immersed and difficult to recognize unless when wet, with a rough disc and an up to 50 µm wide, indistinct thalline margin. Proper exciple absent; hymenium 110-150 µm high, separated into partial hymenia by intrusions of wedge-shaped, sterile thalline tissue, covered by a continuous layer of sterile tissue separated by the pore-like discs of the partial hymenia, K/I+ blue turning wine-red; subhymenium hyaline, continuous, 50(-100) µm thick, K/I+ blue. Asci 16-24-spored, subcylindrical to obclavate, prototunicate, with a thin, one-layered, non-amyloid wall, an amyloid external apical cap, and passive spore discharge via apical rupturing, Lichina-type. Ascospores 1-celled, hyaline, broadly ellipsoid, 6-8 x 3-4 µm. Pycnidia rare, globose, immersed. Conidia ellipsoid, 4-5 x 1.5 µm. Photobiont cyanobacterial, chroococcoid, th cells single, measuring 6-12 x 6-10 µm, penetrated by haustoria and surrounded by a brownish gelatinous sheath. Spot tests:

all negative. Chemistry: without lichen substances. - Note: on steeply inclined surfaces of calcareous or base-rich siliceous rocks with water seepage after rain; certainly more widespread in the Alps and in the Apennines.



Erioderma barbellatum

Erioderma barbellatum

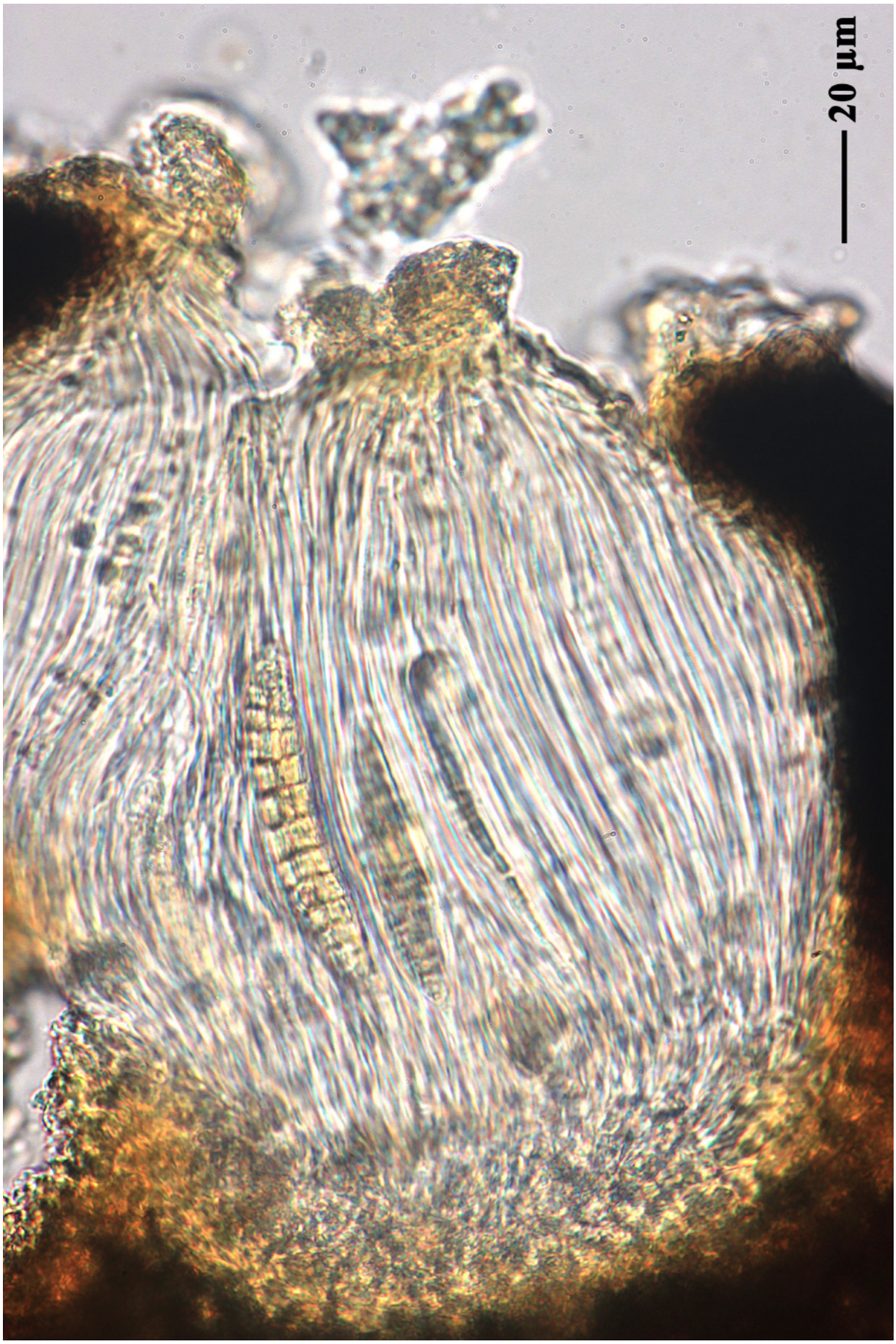
Graphina subserpentina (Nyl.) Müll. Arg., Bull. Soc. R. Bot. Belg. 32(2): 152 (1894) [1893]
= *Graphis subserpentina* Nyl., Acta Soc. Sci. fenn. 7(2): 465 (1863)

[VZ1579], India. Karnataka. Distr. Shimoga, prope Bhatkal, 100 m. Ad corticem arborum. Leg. et det. M. E. Hale, 21.11.1978. Ex A. VěZDA Lichenes Selecti Exsiccati Nr. 1579.

Thallus off-white, thin, smooth, dull. Ascomata numerous, black, semi-immersed, with a slightly raised thalline margin, straight, curved or sinuous, rarely branched, 1–3 (–5) mm long, (0.2–) 0.3–0.4 (–0.6) mm wide; lips closed. Proper exciple laterally carbonised, occasionally with the base almost closed. Hymenium (100–) 125–150 (–175) µm thick, not inspersed. Ascospores 1 per ascus, densely muriform, (80–) 100–130 (–145) × (18–) 28–38 µm, I+ blue. Chemistry: Norstictic acid. Corticolous in northern W.Australia, also in India, Sri Lanka, Thailand, Malaysia, the Philippines, Indonesia, the Solomon Islands, Fiji and the Hawaiian Islands.

Graphina subserpentina

Graphina subserpentina



Graphina subserpentina

Graphis duplicata Ach., Syn. meth. lich. (Lund): 81 (1814)

[VZ1802], Hawaii Insulae. Hawaii, Hilo. Corticicola in ramulis arborum. Leg. I. et O. Degener (no. 25274a), 16.5.1981. det. A. Vězda. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1802.

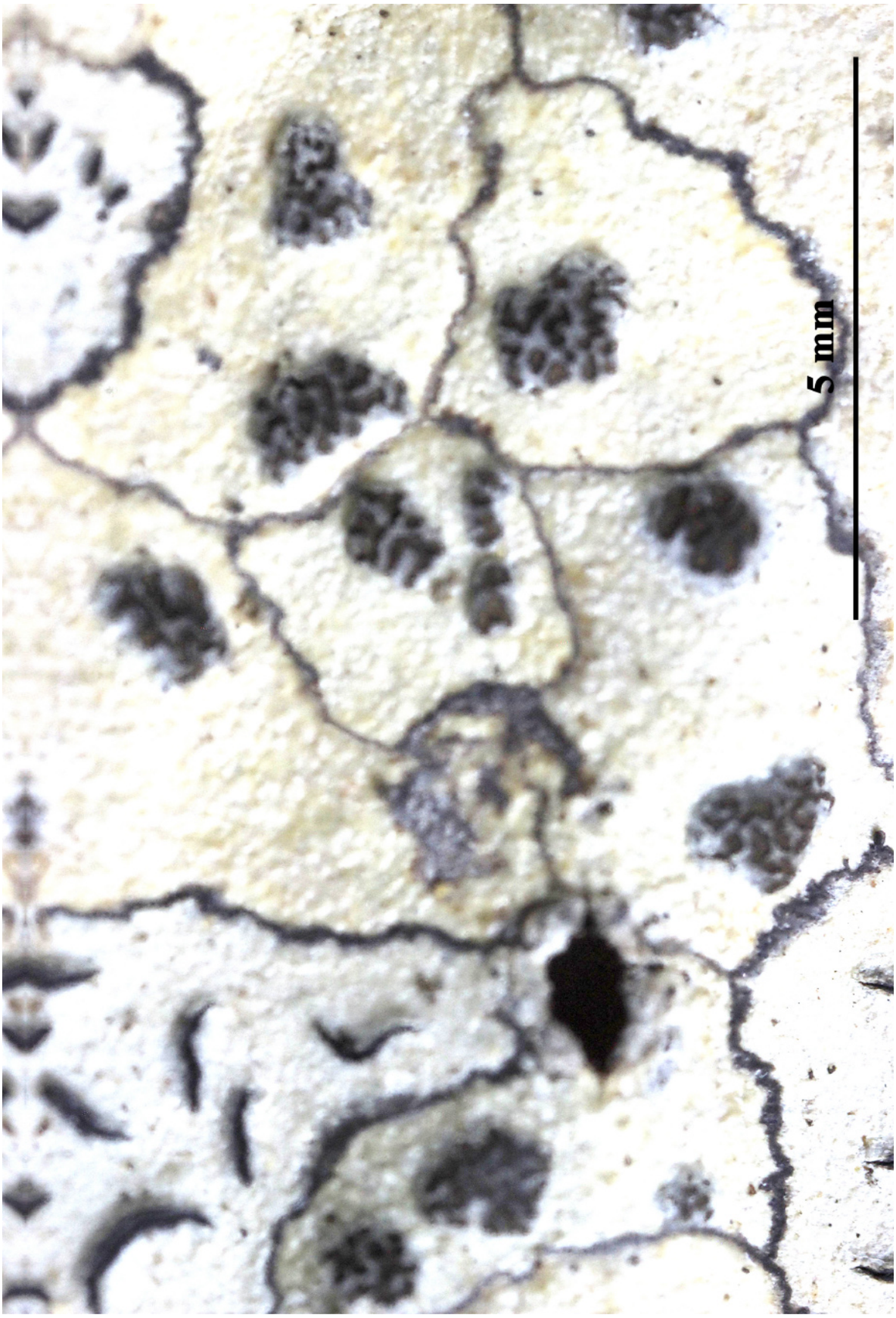
Thallus crustose, off-white to whitish gray, continuous, smooth, dull or rarely slightly glossy; vegetative diapsores absent. Photobiont trenteophlioid alga. Ascomata lirellae, erumpent to prominent lacking a thalline margin or with basal thalline margin, elongate, straight or curved, unbranched, rarely trifurcate; labia convergent, striate, black, not pruinose; disk concealed (striatula-morph). Exciple laterally carbonized; hymenium clear, 70-100 µm high; paraphyses ~1.5 µm thick, tips browned and somewhat thickened. Asci 8-spored; ascospores hyaline, transversely 7–15-septate, 25–45 × 6–8 µm. Chemistry. No lichen substances detected by TLC; spores I+ blue-violet. Substrate and Habitat. Corticolous on hardwood trees. Distribution. Pantropical, north into eastern North America; in North Carolina found in Coastal Plain ecoregion.

Literature

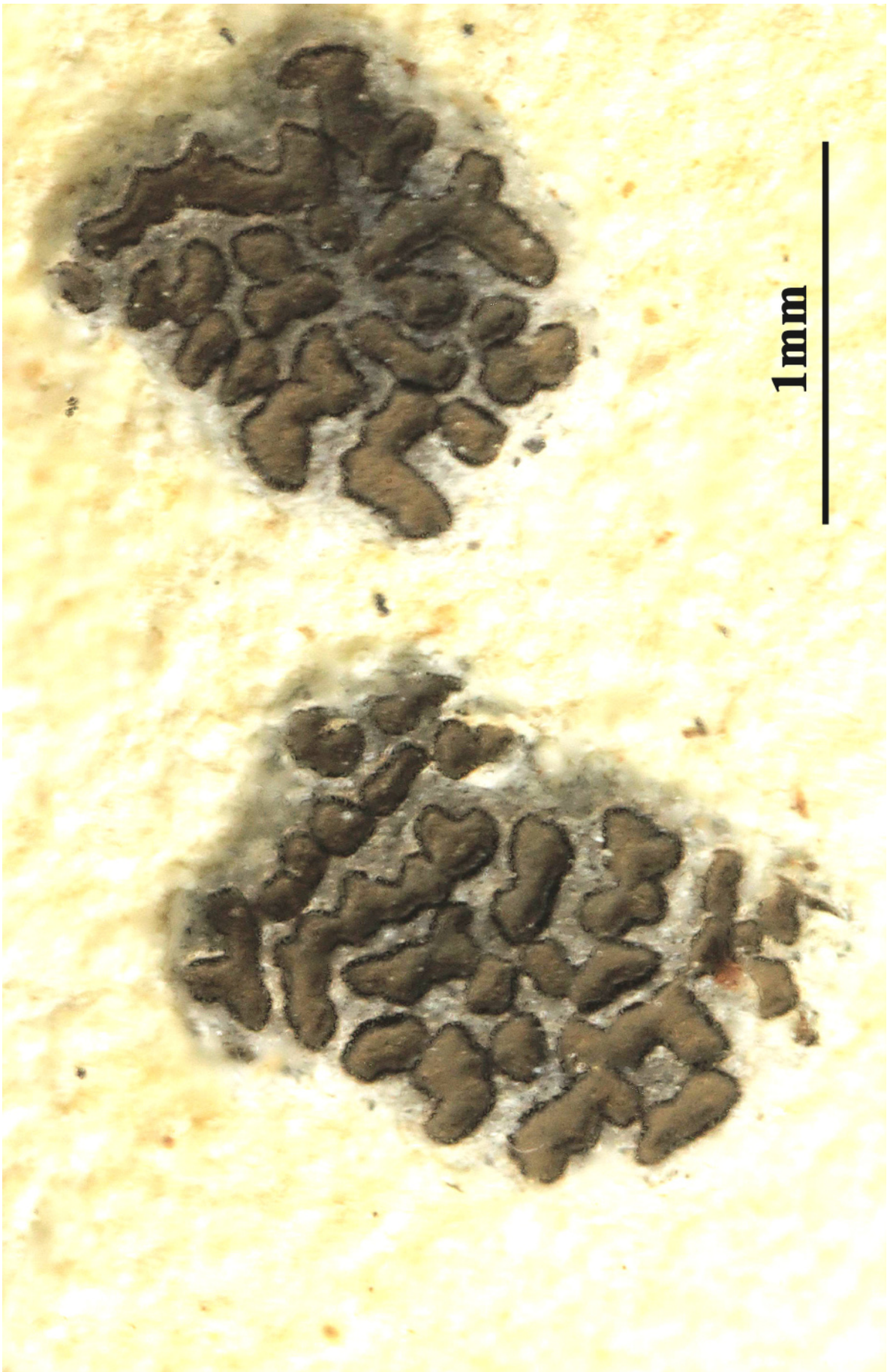
Acharius, E. (1814) Synopsis Methodica Lichenum. Lund. 392 pp (original description).

Kalb, J., R. Lücking & K. Kalb. (2018) The lichen genera Allographa and Graphis (Ascomycota: Ostropales, Graphidaceae) in Thailand – eleven new species, forty-seven new records and a key to all one hundred and fifteen species so far recorded for the country. Phytotaxa 377(1): 1-83.

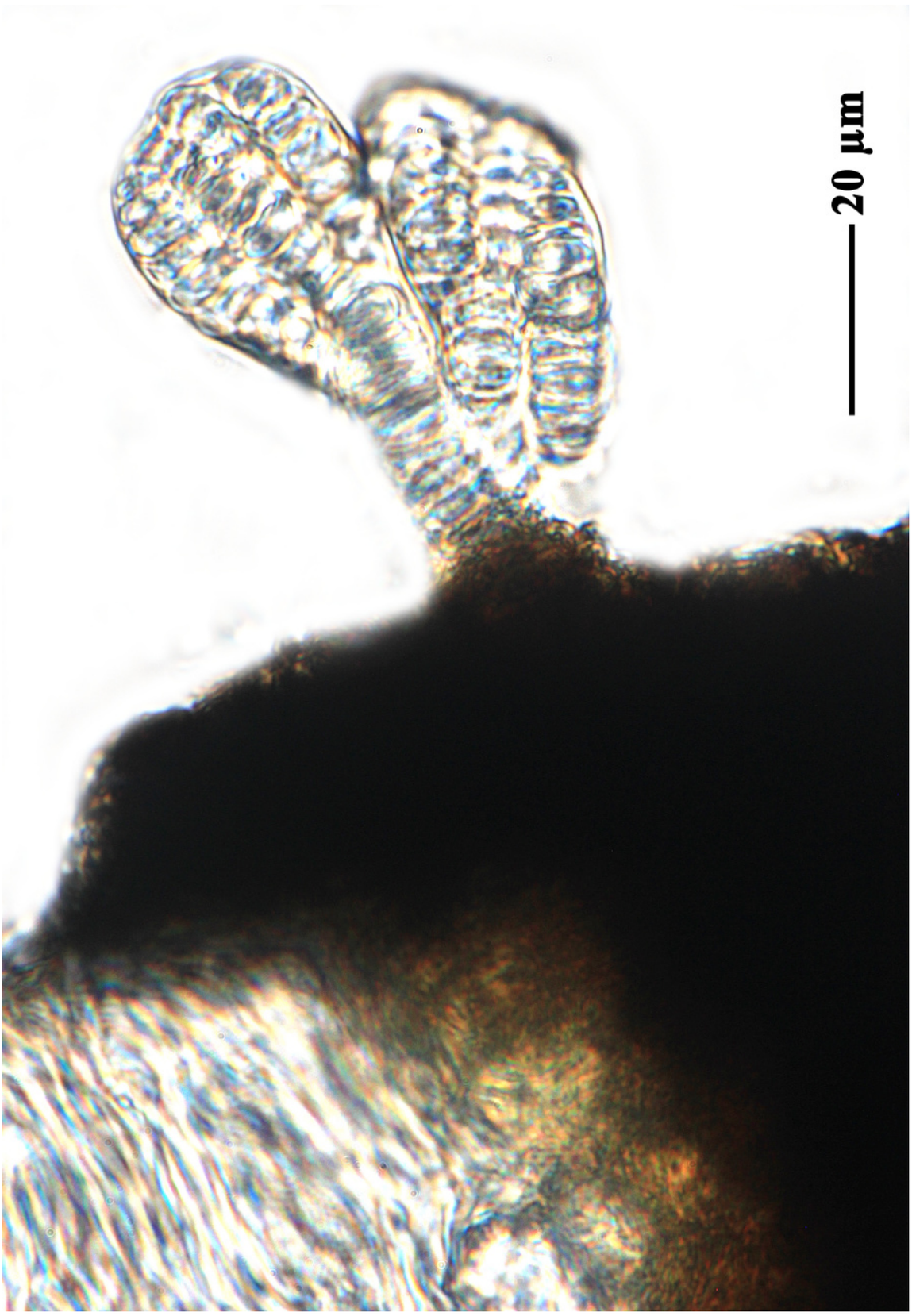
Staiger B. (2002) Die Flechtenfamilie Graphidaceae. Studien in Richtung einer natürlicheren Gliederung. Bibliotheca Lichenologica 85.



Graphis duplicata



Graphis duplicata



Graphis duplicata

Graphis lineola Ach., Lich. Univ.: 264 (1810)

[VZ1528], Hawaii Insulae. Pahala. Kau, corticola in ramulis *Mori* sp. in silva parva. Leg. O. et I. Degener, 23.7.1977, det. K. Kalb. - von B. Staiger zu *Graphis apertula* Staiger revidiert, 2.2001. - Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1528.

Thallus crustose, continuous, whitish to greenish gray; vegetative diaspores absent; photobiont Trentepohlia alga. Ascomata lirellae, erumpent, with lateral thalline margin, short to moderately, elongate, narrow, 0.5-2.0(-3.0) x 0.1-0.35 mm, straight or slightly curved, usually unbranched; labia black, entire; disk closed or narrowly open; exciple laterally carbonized; epithecium pale; hymenium hyaline, inspersed with oil droplets; hypothecium hyaline. Asci clavate, 8-spored. Ascospores colorless, ellipsoid, 7-9-septate, 28-38 x 7-8 μm. Chemistry. Spot tests all negative, secondary metabolites unknown. Substrate and Habitat. On smooth bark of hardwood trees, in forests. Distribution. Pantropical; in North Carolina throughout, mostly recorded from the Coastal Plain.

Literature

Acharius, E. (1810) Lichenographia Universalis. Gottingae, Apud Iust. Frid. Danckwerts, 1-696.

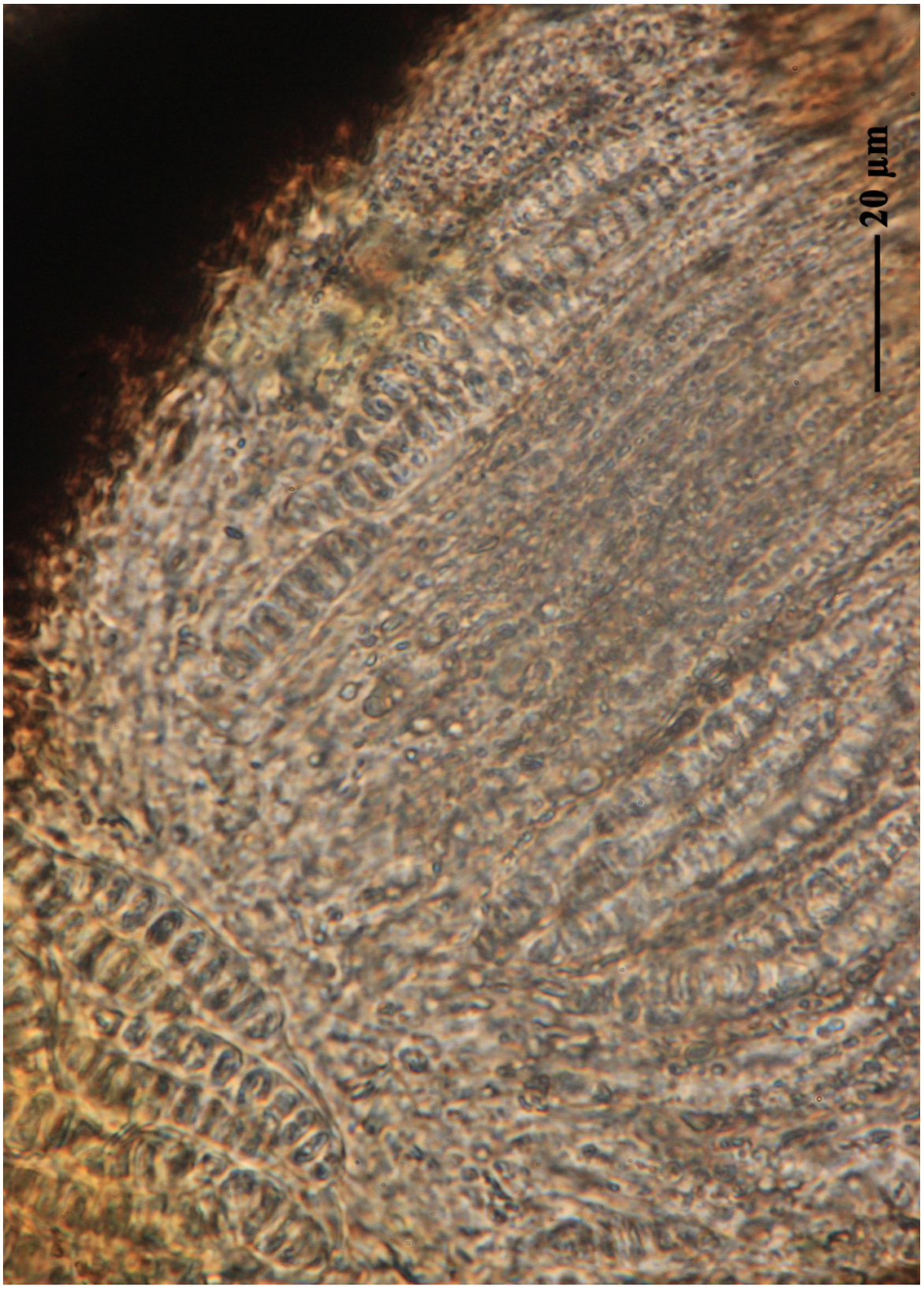
Fink, B. (1935) The Lichen Flora of the United States. University of Michigan Press, Ann Arbor.

Kalb, J., R. Lücking, R. & K. Kalb. (2018) The lichen genera Allographa and Graphis (Ascomycota: Ostropales, Graphidaceae) in Thailand—eleven new species, forty-seven new records and a key to all one hundred and fifteen species so far recorded for the country. Phytotaxa 377(1): 1-83.

Graphis lineola

Graphis lineola

Graphis lineola



Graphis lineola

Graphis lineola

Graphis striatula (Ach.) Spreng., Syst. veg., Edn 16 4(1): 250 (1827)
= *Allographa striatula* (Ach.) Lücking & Kalb, in Kalb, Lücking & Kalb, Phytotaxa 377(1): 26 (2018)
= *Opegrapha striatula* Ach. 1814

[VZ1477], Hawaii Insulae. Hawaii, Volcano, in horto cl. O. Degeneri, 1150 m. Ad ramulos arborum, Leg. O. et I. Degtener (no. 34119), 19.11.1976, det. K. Kalb.- von B. Staiger rev, zu *Graphis* **elegans** (Sm.) Ach., chemistry norstictic acid - . Ex A. VěZDA Lichenes Selecti Exsiccati Nr. 1477.

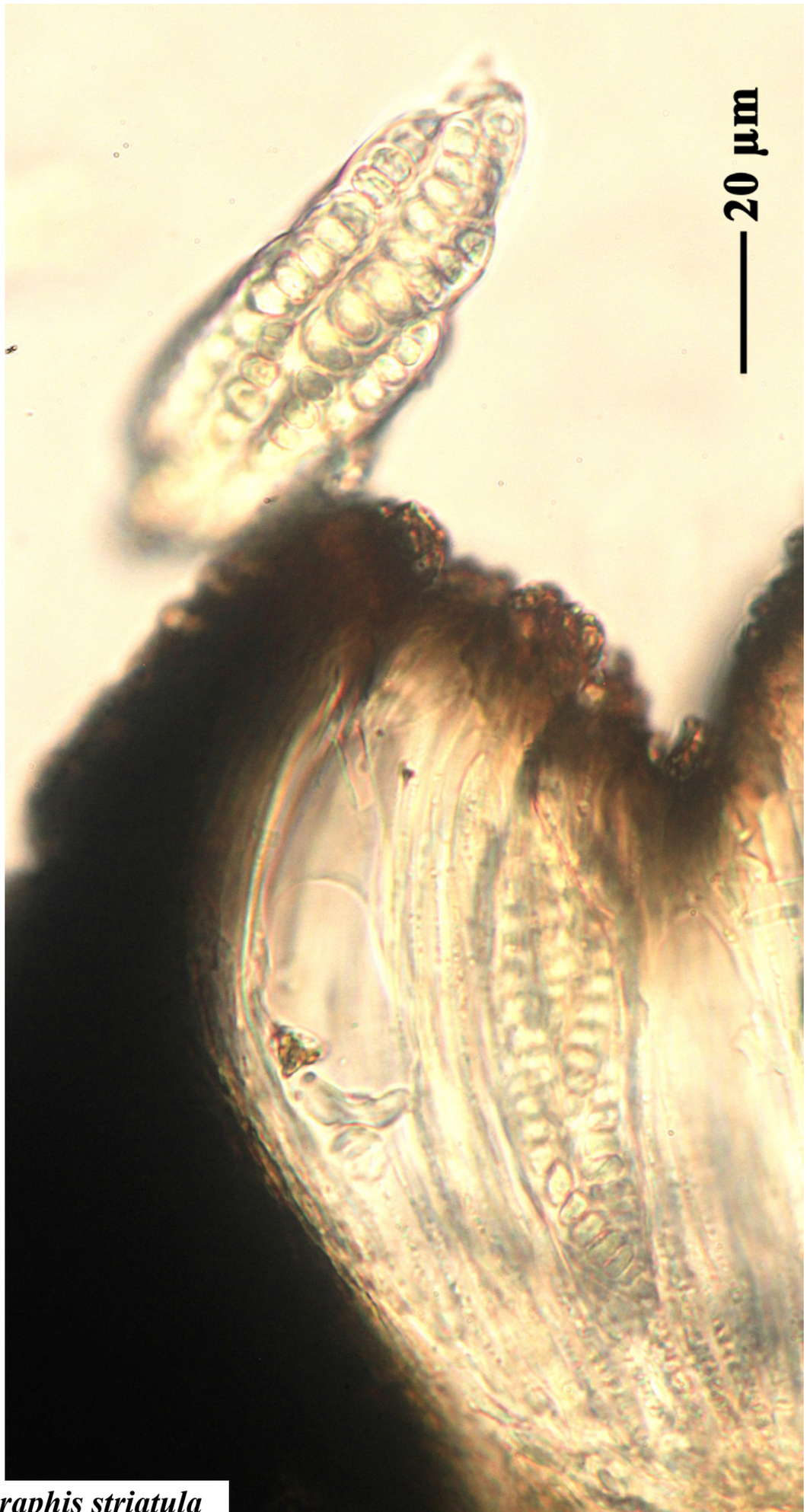
Thallus off-white to pale fawn, thin, smooth, dull. Ascomata numerous, conspicuous, black, sulcate, sessile, with a negligible thalline margin, straight, curved or sinuous, rarely branched, 1–2 (–3) mm long, 0.2–0.3 mm wide. Proper exciple laterally carbonised, occasionally weakly carbonised at the base. Hymenium 100–125 µm thick, not inspersed. Ascospores 8 per ascus, irregularly biseriate, transversely 10–14 (–16)-locular, 40–60 × 7–10 µm, I+ blue-violet. CHEMISTRY: No lichen compounds detected. - Corticolous in Australia,South America, East Africa, the Philippines and the Hawaiian Islands.

Graphis striatula

Graphis striatula

Graphis striatula

Graphis striatula



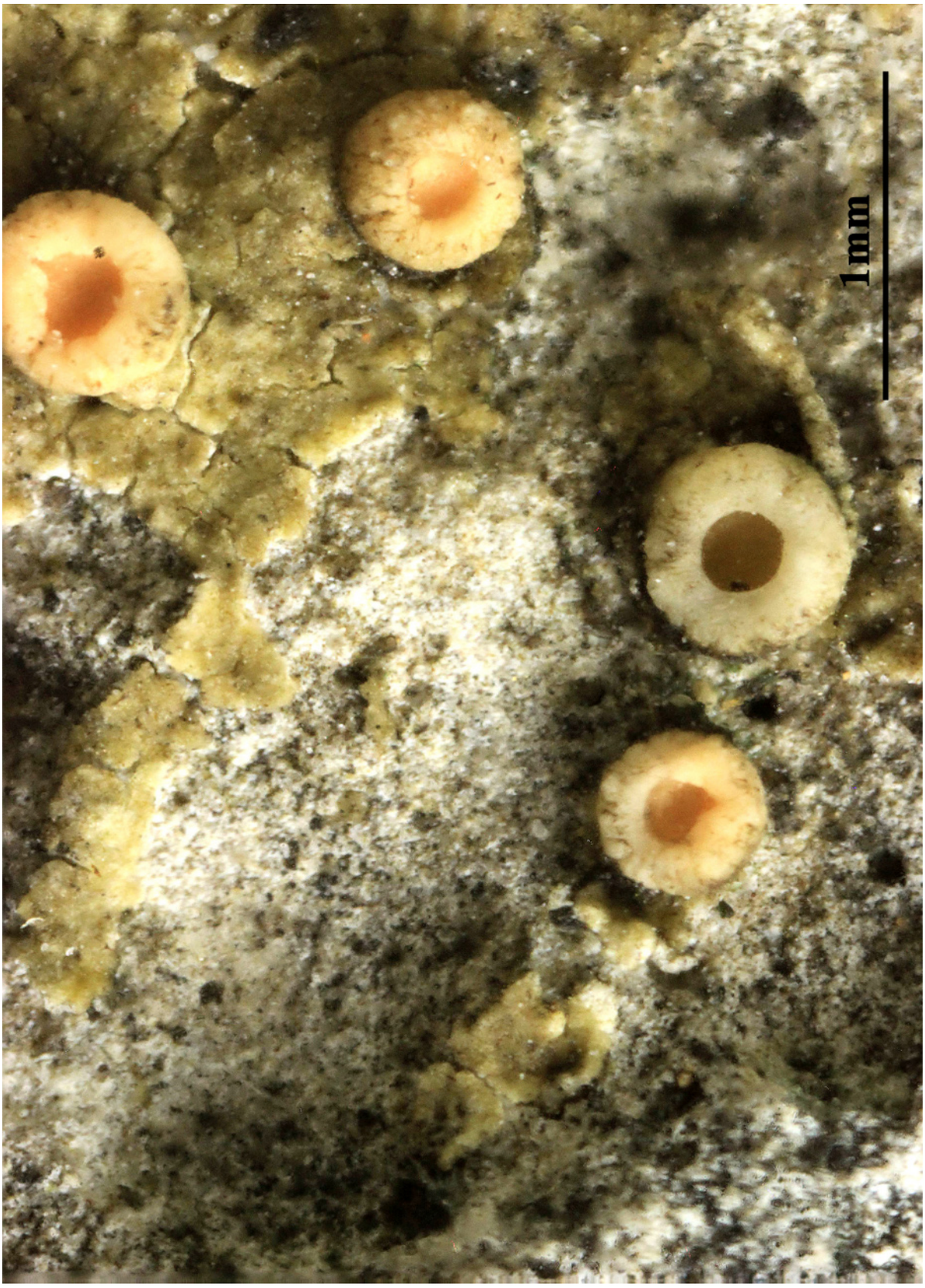
Graphis striatula

Gyalecta cupularis (Hedw.) Schaer., Lich. helv. spicil. 2: 79 (1826)
= *Secoliga jenensis* (Batsch) P.F. Cannon, in Cannon, Coppins, Aptroot, Sanderson & Simkin, Revisions of British and Irish Lichens 38: 52 (2024)
= *Lichen cupularis* Hedw. 1789

[VZ1280], Bohemoslovacia. Regio carstensis Meravský kras dicta, in valle rivi Punkva prope Skainí miýn, 400 m. Ad saxa calcarea. Leg. A. Vězda, 10.3.1975. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1280.

Thallus crustose, thinly episubstratic, continuous to cracked, orange-pink to pale grey-green, turning whitish in the herbarium. Apothecia usually numerous, sessile, round, 0.3-1.2 mm across, with a pale to deep orange, at first pore-like, then concave, often shiny and translucent (when wet) disc, and a whitish, entire to crenate or finally radially cracked proper margin. Proper exciple pale pink to brownish yellow in outer part, colourless within; hymenium colourless or yellowish in lower part, inspersed with oil droplets, 110-150 µm high; paraphyses coherent, clearly longer than the asci, 1.5-2 µm thick, the apical cells hardly swollen; hypothecium colourless, >100 µm high. Asci (4-)8-spored, thin-walled, lacking an apical apparatus or tholus, the wall K/I+ blue. containing uniseriately or partly biseriately arranged spores. Ascospores 3-septate to usually muriform at maturity, with 3-6 transverse septa and 1-2 longitudinal septa, hyaline, broadly to narrowly ellipsoid, (11-)15-25(-30) x (6-)7-10(-14) µm. Photobiont trentepohlioid. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a holarctic species found on limestone, dolomite, and other types of calciferous rocks, occasionally over bryophytes, in shaded situations, such as in deep rock fissures and under overhangs; widespread throughout the country, with a wide altitudinal range.

Gyalecta cupularis



Gyalecta cupularis

Gyalecta leucaspis (A. Massal.) Kremp., Denkschr. Kgl. Bayer. Bot. Ges., Abt. 2 4: 168 (1861)
= *Secoliga leucaspis* A. Massal. 1857

[VZ1375], Gallia. Var:Méounes, Aiguilles de Valbelle. Ad rupes calcarias. Leg. G. Clauzade et Cl. Roux, 18.9.1975. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1375.

Thallus crustose, thin, continuous to rimose, orange-pink to pale grey-green, turning whitish in the herbarium, forming up to 10 cm wide patches. Apothecia usually numerous, sessile, constricted at base, round, (0.3-)0.5-1(-1.2) mm across, with a pale pink-orange, at first pore-like, then concave, thickly white-pruinose disc, and a crenate or radially cracked, whitish proper margin. Proper exciple pale pink to brownish yellow in outer part, colourless within; hymenium colourless or yellowish in lower part, non- or very weakly amyloid, 70-90 µm high; paraphyses 1.5-2 µm thick, the apical cells not markedly swollen, up to 3 µm wide; hypothecium colourless. Asci 8-spored, thin-walled, lacking an apical apparatus or tholus, K/I+ blue, with uniseriately or partly biseriately arranged spores. Ascospores transversally (3-)4-9-septate, bacilliform to slightly clavate (often broader at one extremity), (25-)30-50 x 3-5(-7) µm. Photobiont trentepohlioid. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: on shaded, steeply inclined faces of dolomitic rocks below the Alpine belt; certainly less common than *G. jenensis*, but probably more widespread, and often overlooked.

Gyalecta leucaspis

Gyalecta leucaspis

Gyalecta leucaspis (A. Massal.) Kremp., Denkschr. Kgl. Bayer. Bot. Ges., Abt. 2 4: 168 (1861)
= *Secoliga leucaspis* A. Massal. 1857

[VZ1180], Gallia. Soule, Assurucq, in silva Des Arbailles dicta, 500m. Ad saxa calcarea. Leg. J. Vivant, 1.1973. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1180.

Thallus crustose, thin, continuous to rimose, orange-pink to pale grey-green, turning whitish in the herbarium, forming up to 10 cm wide patches. Apothecia usually numerous, sessile, constricted at base, round, (0.3-)0.5-1(-1.2) mm across, with a pale pink-orange, at first pore-like, then concave, thickly white-pruinose disc, and a crenate or radially cracked, whitish proper margin. Proper exciple pale pink to brownish yellow in outer part, colourless within; hymenium colourless or yellowish in lower part, non- or very weakly amyloid, 70-90 µm high; paraphyses 1.5-2 µm thick, the apical cells not markedly swollen, up to 3 µm wide; hypothecium colourless. Asci 8-spored, thin-walled, lacking an apical apparatus or tholus, K/I+ blue, with uniseriately or partly biseriately arranged spores. Ascospores transversally (3-)4-9-septate, bacilliform to slightly clavate (often broader at one extremity), (25-)30-50 x 3-5(-7) µm. Photobiont trentepohlioid. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: on shaded, steeply inclined faces of dolomitic rocks below the Alpine belt; certainly less common than *G. jenensis*, but probably more widespread, and often overlooked.

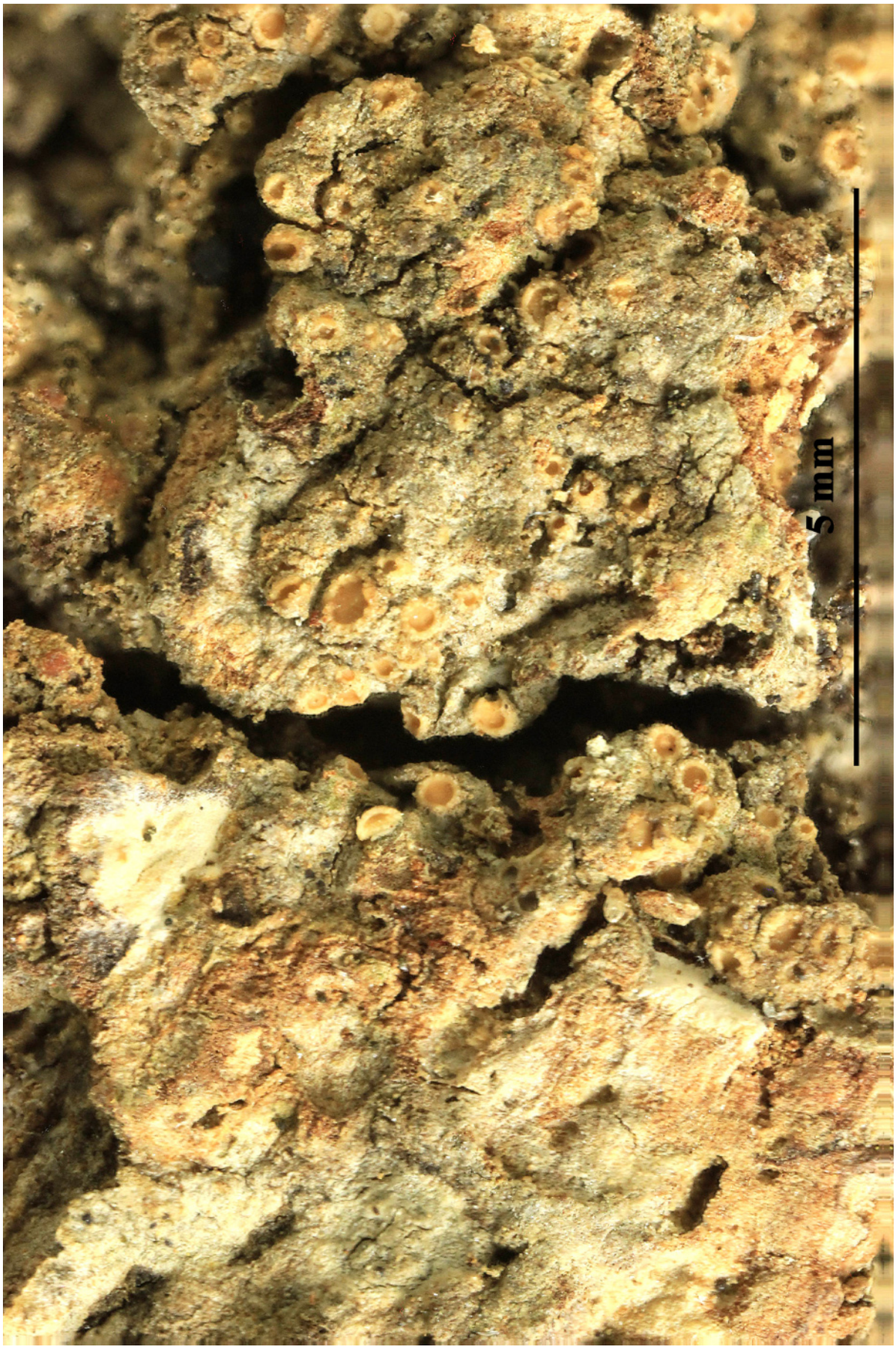
Gyalecta leucaspis

Gyalecta leucaspis

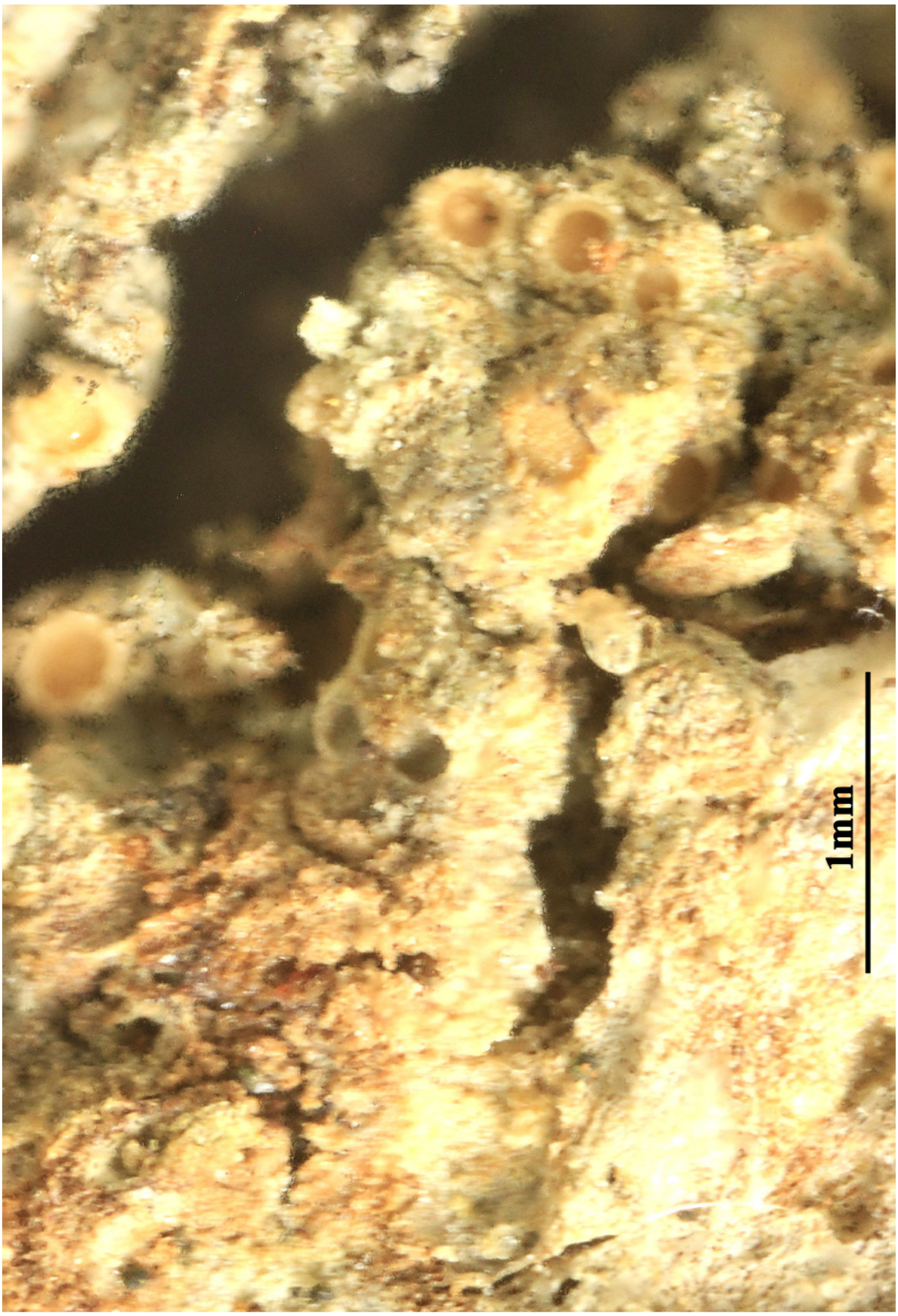
Gyalecta liguriensis (Vězda) Vězda, Annotationes Zoologicae et Botanicae, Bratislava 13: 5 (1965)
= *Gyalecta truncigena* var. *liguriensis* Vězda 1958

[VZ1056], Gallia. Montes Pyrenaei occident. Saint-Jean-pied-de-Port, 150 m. Supra corticem arborum vetustarum (*Quercus pedunculata*) in ambulacro. Leg. J. Vivant, 18.12.1871. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1056.

Thallus crustose, thinly episubstratic, grey to pale grey-brown, often inconspicuous and poorly evident. Apothecia scattered, urceolate, usually immersed, later sometimes becoming sessile, 0.1-0.3(-0.5) mm across, with a deeply concave, pale yellow-brown to ochraceous disc, and a prominent, smooth to (rarely) radially cracked, creamy to brownish or yellowish pink proper margin. Proper exciple colourless, c. 50 µm thick laterally, 10-20 µm wide at base; epithecium colourless, with orange-brown granules insoluble in K; hymenium colourless, inspersed with oil droplets, 100-120 µm high; paraphyses slightly longer than the mature asci, septate, capitate, the apical cells up to 3-4 µm wide; hypothecium colourless. Asci 8-spored, cylindrical to elongate-clavate, thin-walled, lacking an apical apparatus or tholus, K/I+ blue. Ascospores muriform, hyaline, citriform with pointed ends, 12-18 x 7-10(-12) µm. Photobiont trentepohlioid. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: on bark of ancient trees in humid, sheltered situations in lowland areas.



Gyalecta liguriensis



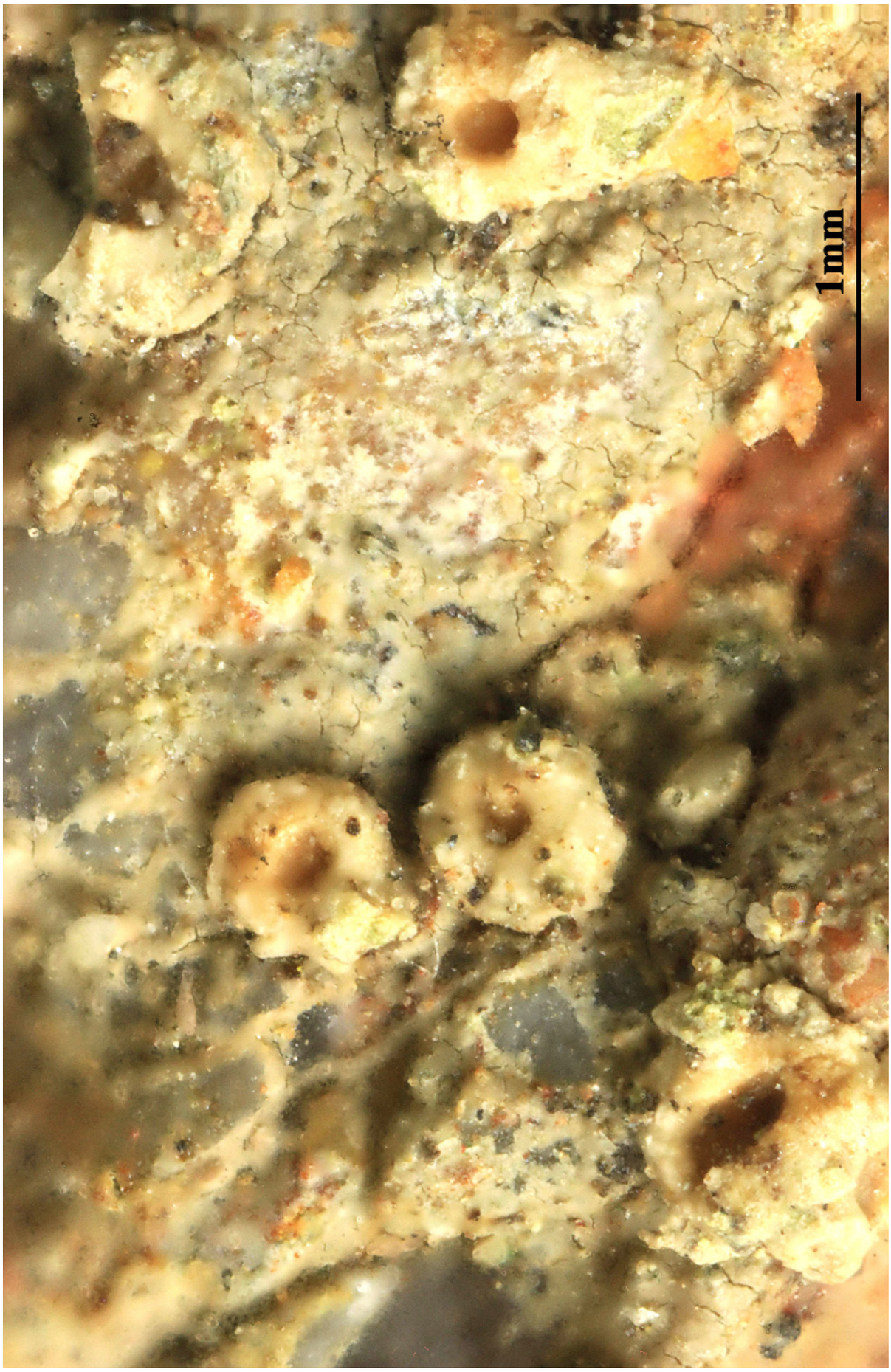
Gyalecta liguriensis

Gyalecta schisticola Werner, Bull. Soc. Sci. Nat. phys. Maroc 14(4-6): 148 (1934)

[VZ2389], Gallia. Corsica. Roccapina, 10 m. Ad sxa granitica. Leg. D. Puntillo, 28.7.1989, det. A. Vězda. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2389.

Thallus crustose, thinly episubstratic or poorly visible, formed by whitish granules dispersed among rock crystals. Apothecia sessile and constricted at base, 0.5-0.8(-1) mm across, with a concave, yellowish brown to brown disc, and a thick, prominent, smooth to crenulate proper margin. Proper exciple pale pink to brownish yellow in outer part, colourless within, the lower part 20-35(-50) µm thick, not paraplectenchymatous; epithecium colourless, barely distinguishable from the hymenium; hymenium colourless or yellowish in lower part, up to 165 µm high, inspersed with small yellow droplets; paraphyses coherent, clearly longer than the asci, c. 2 µm thick at mid-level, the apical cells hardly swollen; hypothecium colourless, 40-50 µm high. Asci 8-spored, thin-walled, lacking an apical apparatus or tholus, the wall K/I+ blue. with uniseriately or partly biseriately arranged spores. Ascospores muriform at maturity, with 3-6 transverse septa and 1-2 longitudinal septa, hyaline, ellipsoid, 18-25(-30) x (7-)9-12 µm. Photobiont trentepohlioid. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a Macaronesian-Mediterranean species related to *G. jenensis*, but differing in some anatomical details, and growing on schists, mainly in more or less coastal situations; apparently with a Tyrrhenian distribution in Italy.

Gyalecta schisticola



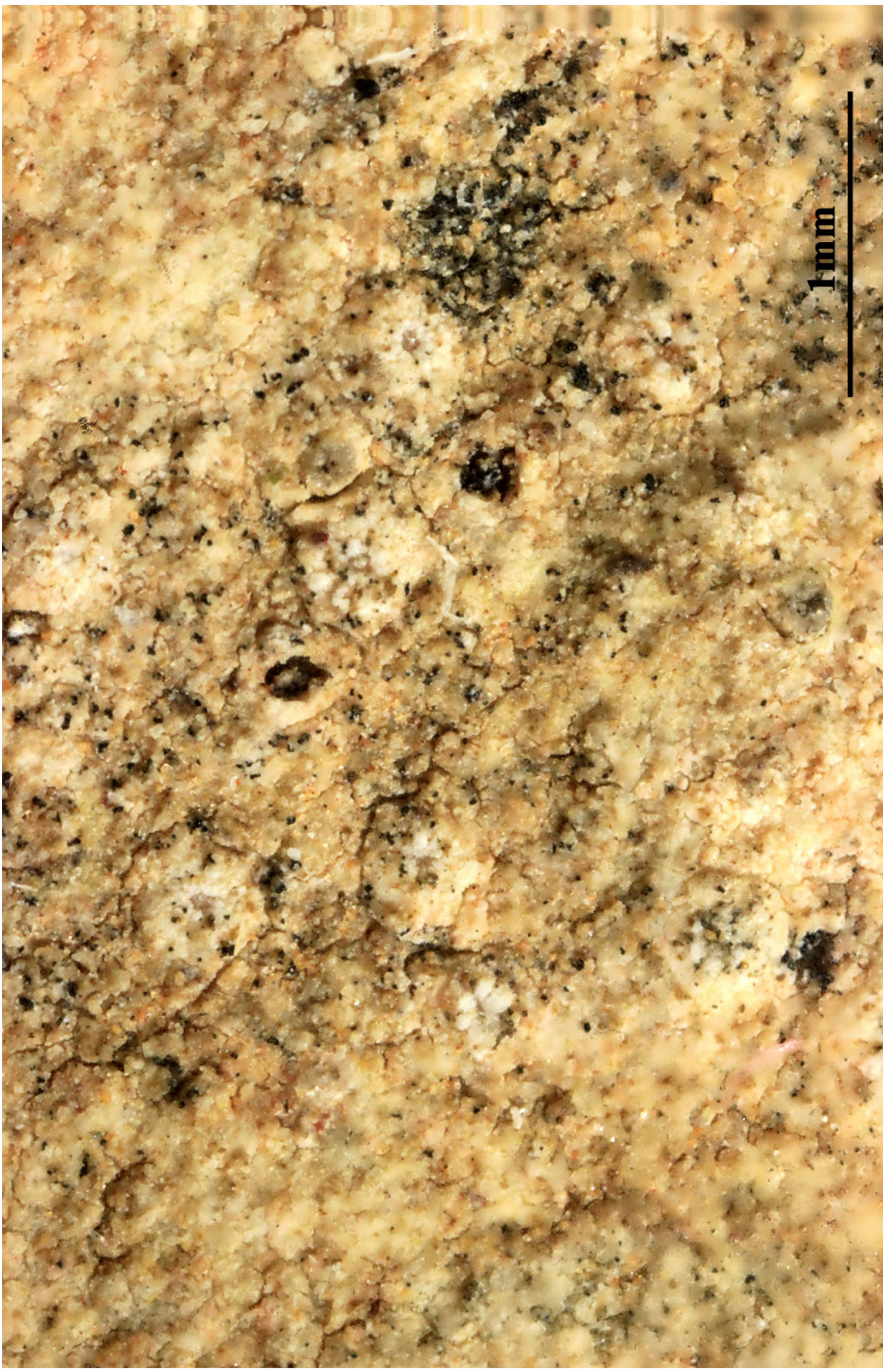
Gyalecta schisticola

Gyalecta thelotremella Bagl., Nuovo G. bot. ital. 11: 87 (1879)

[VZ2485], Italia.Sicilia insulae Egadi: Insula Marettimo, loco Semaforo dicto, 450 m. Ad saxa calcarea. Legt. D. Puntillo, 29.3.1991. Ex A. VěZDA Lichenes Selecti Exsiccati Nr. 2485.

Thallus crustose, thinly episubstratic or partly endosubstratic, 100-400 µm thick, continuous to finely rimose, pinkish white to yellowish white, turning white in the herbarium. Apothecia 0.2-0.3 mm across, immersed in the thallus and partly in the rock, at first covered with a thin thalline layer which soon disrupts leaving a kind of false thalline margin, appearing perithecioid when young, the disc later expanded, concave, pale yellow to flesh-coloured, smooth, surrounded by a thin, whitish proper margin. Proper exciple to 40 µm thick in upper part, colourless, often with crystals of calcium oxalates; epithecium colourless; hymenium colourless, 130-180 µm high; paraphyses 1.2-1.5 µm thick at mid-level, the apical cells hardly swollen; hypothecium colourless, c. 20 µm high. Asci 8-spored, thin-walled, lacking an apical apparatus or tholus, the wall K/I+ blue. Ascospores muriform with 3-5 transverse septa and 1-3 longitudinal septa, ellipsoid to broadly ovoid, 14-25 x 7-12 µm, not halonate. Pycnidia completely immersed in the thallus. Conidia bacilliform, straight, 6-7 x c. 1 µm. Photobiont trentepohlioid. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: on compact calcareous rocks in sheltered situations, often found together with *Neopetractis luetkemuelleri*, mostly Tyrrhenian, but also present in Puglia, where it is not rare along the rocky coasts.

Gyalecta thelotremella

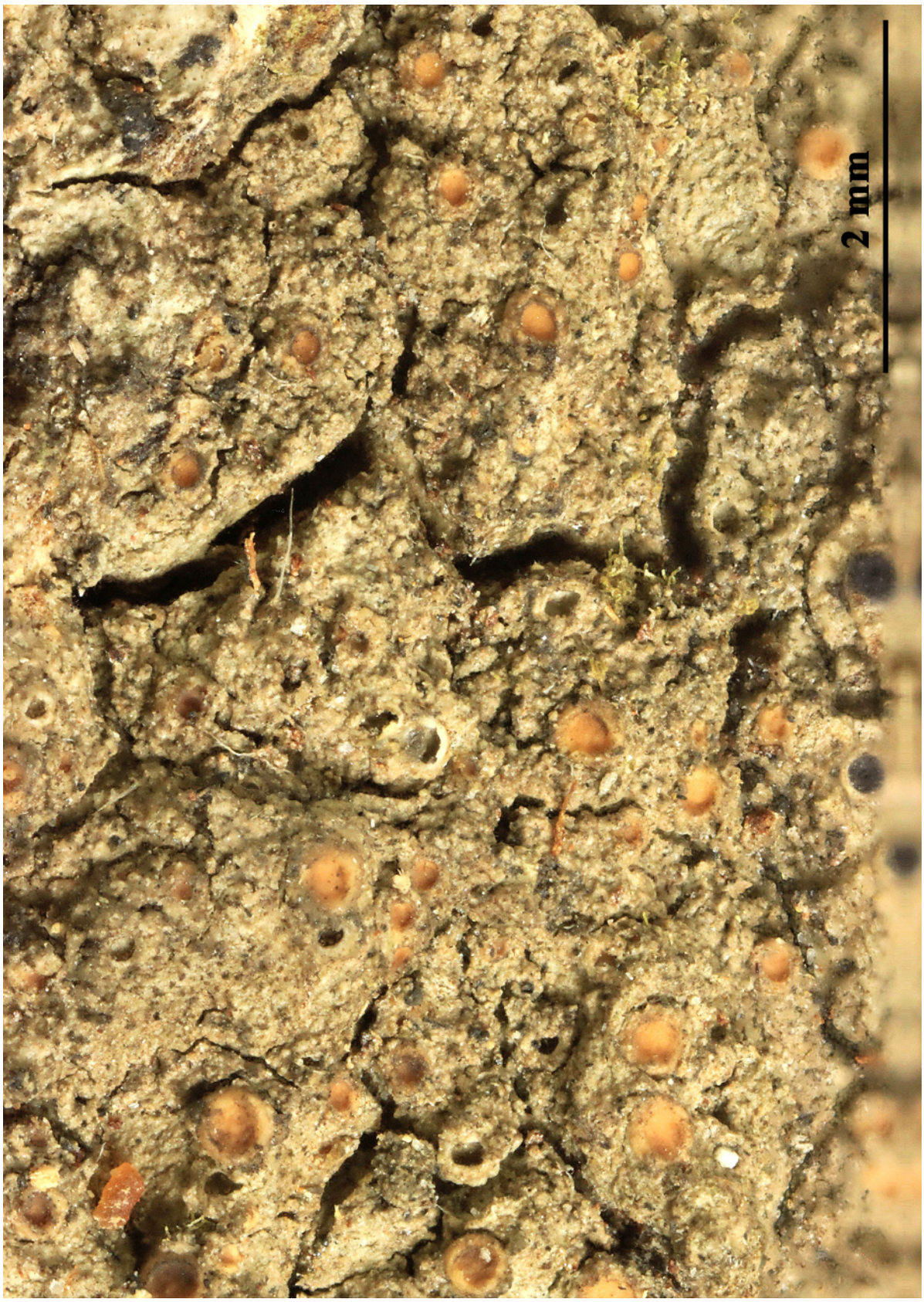


Gyalecta thelotremella

Gyalecta truncigena (Ach.) Hepp, Flecht. Europ.: no. 27 (1853)
= *Gyalecta wahlenbergiana var. truncigena* Ach. 1810

[VZ2314], Italia. Calabria. Prov. Catanzaro, prope ostium fluminis Neto in mare, 1 m. Ad corticem arboris (*Ulmus minor*). Leg. D. Puntillo, 8.11.1988. EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 2314.

Thallus crustose, inconspicuous, thin, pale green or grey, without a distinct prothallus. Apothecia scattered to aggregated, usually immersed, later sometimes becoming sessile, 0.2-0.5(-0.7) mm across, with a pale yellow-brown to pale orange or finally dark brown, deeply concave, waxy disc and a smooth to radially cracked, cream-coloured, brownish or yellowish pink proper margin which is sometimes covered by a thalline layer at the base. Proper exciple thick, colourless or pale brown in outer part; epithecium hardly differentiated from the hymenium; hymenium colourless, 90-115 µm high; paraphyses slightly longer than the asci, septate, capitate, the apical cells up to 3-4 µm wide; hypothecium colourless to pale yellow. Asci 8-spored, cylindrical to elongate-clavate, thin-walled, lacking an apical apparatus or tholus, the wall K/I+ blue. Ascospores muriform (with 6-12 cells visible in optical view) with (4-)5-7(-9) transverse septa and 1-2 longitudinal septa, most septa perpendicular to each other, hyaline, fusiform, without conical tips, 17-28(-31) x 7-9(-10) µm. Photobiont trentepohlioid. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a temperate lichen found on mature trees with base-rich bark, mostly *Acer* and *Fraxinus*, but also on the slightly nutrient-enriched bark of more acid-barked trees such as *oaks*, in mild-humid areas.



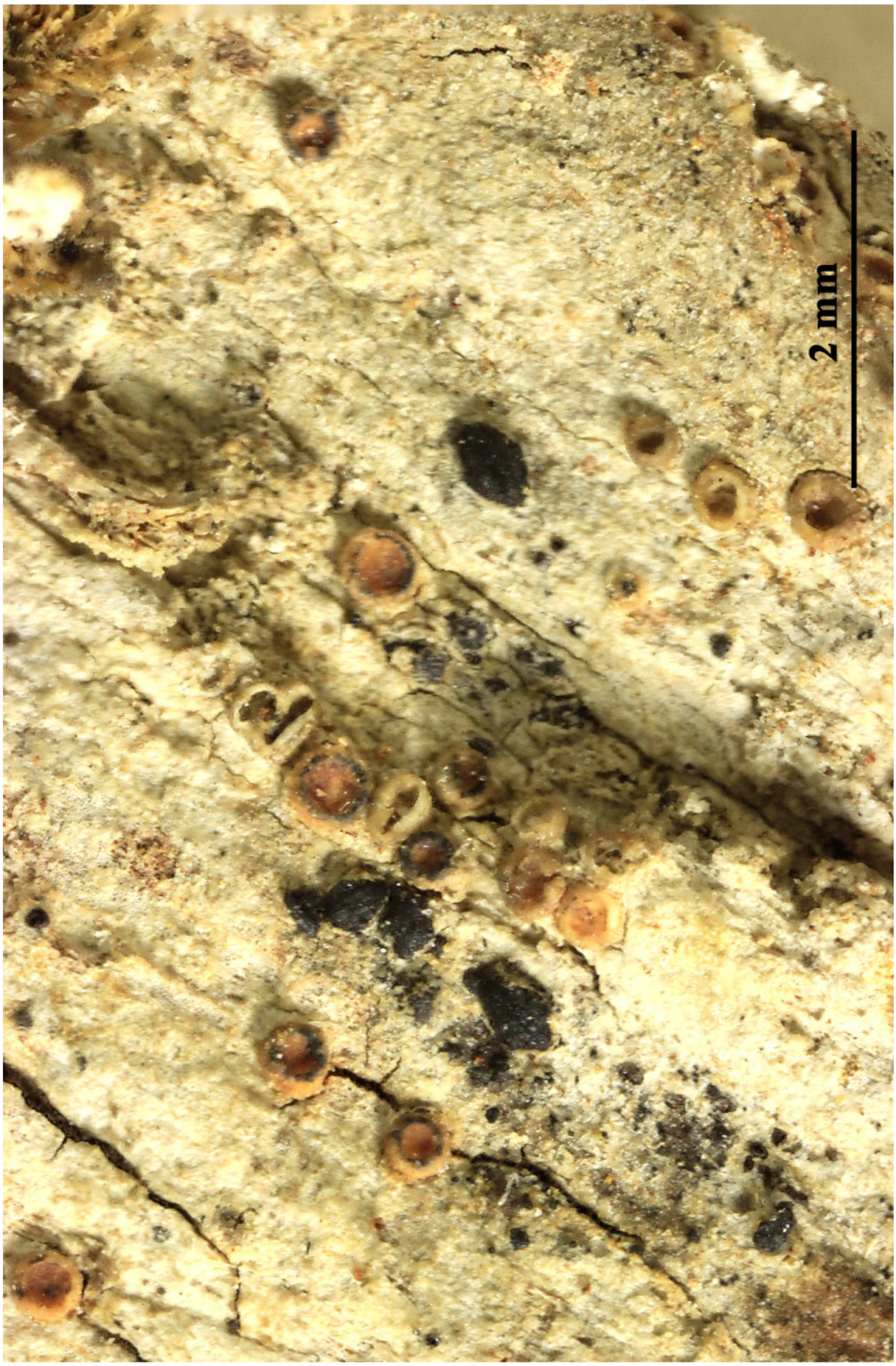
Gyalecta truncigena

Gyalecta truncigena

Gyalecta truncigena (Ach.) Hepp, Flecht. Europ.: no. 27 (1853)
= *Gyalecta wahlenbergiana var. truncigena* Ach. 1810

[VZ1510],URSS. Caucasus, Georgia: Colchis, distr. Sotchi, in declivibus supra pagum Novyi Afon,150 m. Ad corticem *Quercus tibericae* Stev. Leg. V. Vašák et A. Vězda, 10.6.1977. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1510.

Thallus crustose, inconspicuous, thin, pale green or grey, without a distinct prothallus. Apothecia scattered to aggregated, usually immersed, later sometimes becoming sessile, 0.2-0.5(-0.7) mm across, with a pale yellow-brown to pale orange or finally dark brown, deeply concave, waxy disc and a smooth to radially cracked, cream-coloured, brownish or yellowish pink proper margin which is sometimes covered by a thalline layer at the base. Proper exciple thick, colourless or pale brown in outer part; epithecium hardly differentiated from the hymenium; hymenium colourless, 90-115 µm high; paraphyses slightly longer than the asci, septate, capitate, the apical cells up to 3-4 µm wide; hypothecium colourless to pale yellow. Asci 8-spored, cylindrical to elongate-clavate, thin-walled, lacking an apical apparatus or tholus, the wall K/I+ blue. Ascospores muriform (with 6-12 cells visible in optical view) with (4-)5-7(-9) transverse septa and 1-2 longitudinal septa, most septa perpendicular to each other, hyaline, fusiform, without conical tips, 17-28(-31) x 7-9(-10) µm. Photobiont trentepohlioid. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a temperate lichen found on mature trees with base-rich bark, mostly *Acer* and *Fraxinus*, but also on the slightly nutrient-enriched bark of more acid-barked trees such as *oaks*, in mild-humid areas.



Gyalecta truncigena

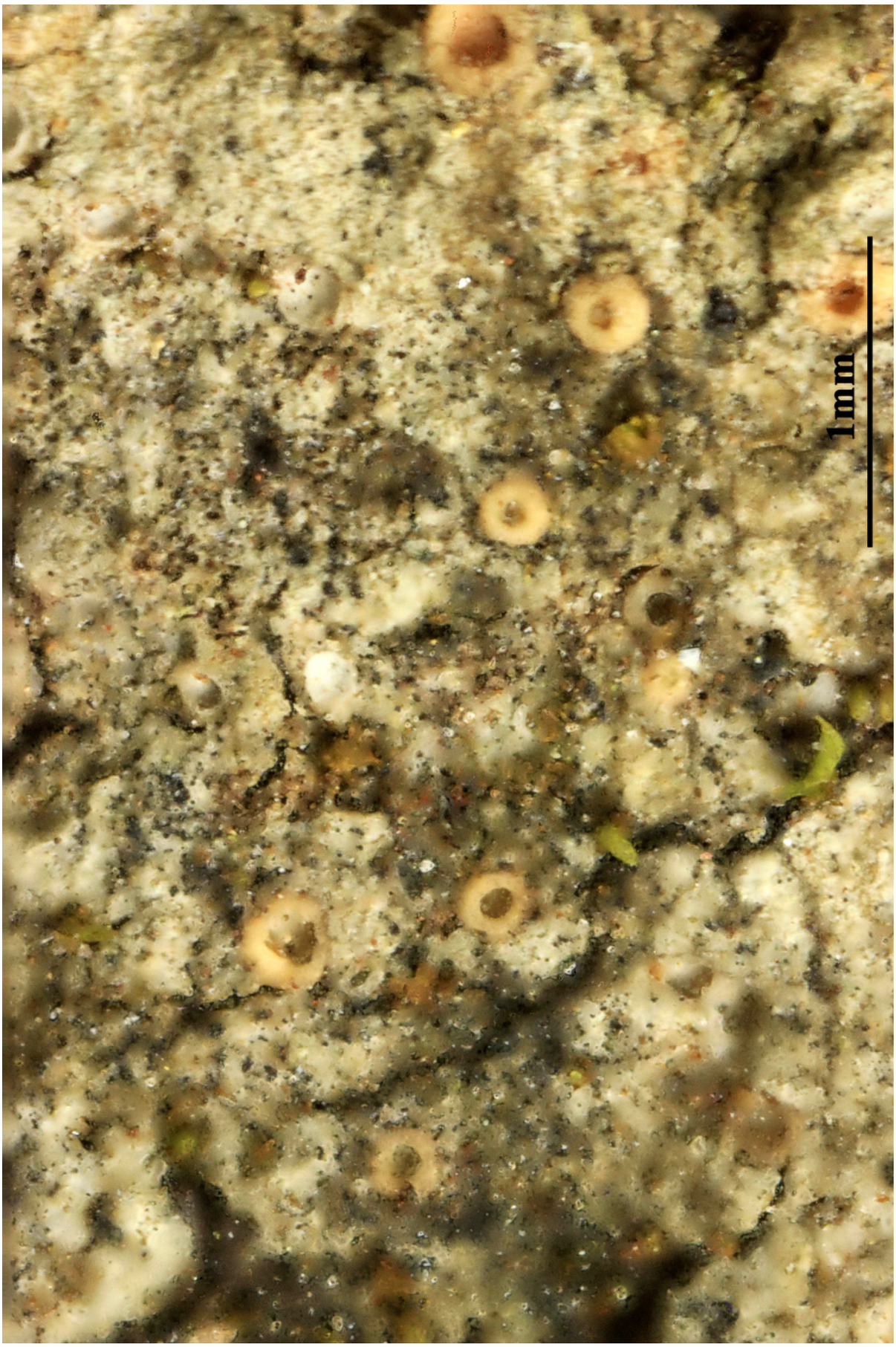
Gyalecta truncigena

Gyalecta truncigena (Ach.) Hepp, Flecht. Europ.: no. 27 (1853)
= *Gyalecta wahlenbergiana var. truncigena* Ach. 1810

[VZ1922], Graecia. Thessalia, in ripa fluminis Pinios prope Kalabaka, 220 m. Ad truncum *Platani orientalis*. Leg. A. Vězda, 26.7.1983. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1922.

[VZ2314], Italia. Calabria. Prov. Catanzaro, prope ostium fluminis Neto in mare, 1 m. Ad corticem arboris (*Ulmus minor*). Leg. D. Puntillo, 8.11.1988. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2314.

Thallus crustose, inconspicuous, thin, pale green or grey, without a distinct prothallus. Apothecia scattered to aggregated, usually immersed, later sometimes becoming sessile, 0.2-0.5(-0.7) mm across, with a pale yellow-brown to pale orange or finally dark brown, deeply concave, waxy disc and a smooth to radially cracked, cream-coloured, brownish or yellowish pink proper margin which is sometimes covered by a thalline layer at the base. Proper exciple thick, colourless or pale brown in outer part; epithecium hardly differentiated from the hymenium; hymenium colourless, 90-115 µm high; paraphyses slightly longer than the asci, septate, capitate, the apical cells up to 3-4 µm wide; hypothecium colourless to pale yellow. Asci 8-spored, cylindrical to elongate-clavate, thin-walled, lacking an apical apparatus or tholus, the wall K/I+ blue. Ascospores muriform (with 6-12 cells visible in optical view) with (4-)5-7(-9) transverse septa and 1-2 longitudinal septa, most septa perpendicular to each other, hyaline, fusiform, without conical tips, 17-28(-31) x 7-9(-10) µm. Photobiont trentepohlioid. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a temperate lichen found on mature trees with base-rich bark, mostly *Acer* and *Fraxinus*, but also on the slightly nutrient-enriched bark of more acid-barked trees such as *oaks*, in mild-humid areas.



Gyalecta truncigena

Gyalecta truncigena

Gyalecta ulmi (Sw.) Zahlbr., Annln K. K. naturh. Hofmus. Wien 5: 43 (1890)

[VZ2258], Germania. Bavaria, Berchtesgadener Land, Ramsau, 640 m. Ad corticem *Aceris pseudoplatani*. Leg. R. Türk et H. Wunder, 11.3.1987. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 2258.

Thallus crustose, thin, smooth, rarely cracked or finely verrucose-granular, white to white-grey. Apothecia (0.5-)1-1.8(-2) mm across, finally sessile, with a concave to flat, pink, reddish or finally reddish brown, initially thinly white-pruinose disc, and a densely white-pruinose, smooth to crenate proper margin. Proper exciple thick, of rounded cells; epithecium orange-brown to chestnut brown; hymenium and hypothecium colourless; paraphyses coherent, simple or sparingly branched in upper part; hypothecium colourless. Asci 8-spored, cylindrical to elongate-subclavate, thin-walled, without tholus, the wall K/I+ blue. Ascospores 3-septate (rarely with an additional oblique septum), hyaline, broadly ellipsoid, (12-)15-20(-25) x 5-7(-9) µm. Photobiont trentepohlioid. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a temperate lichen found on mature trees (especially near the base of *Ulmus*, but also on other trees with base-rich bark, such as *Acer* and *Fraxinus*), more rarely on mosses on steeply inclined faces of calciferous rocks.

Gyalecta ulmi

Gyalecta ulmi

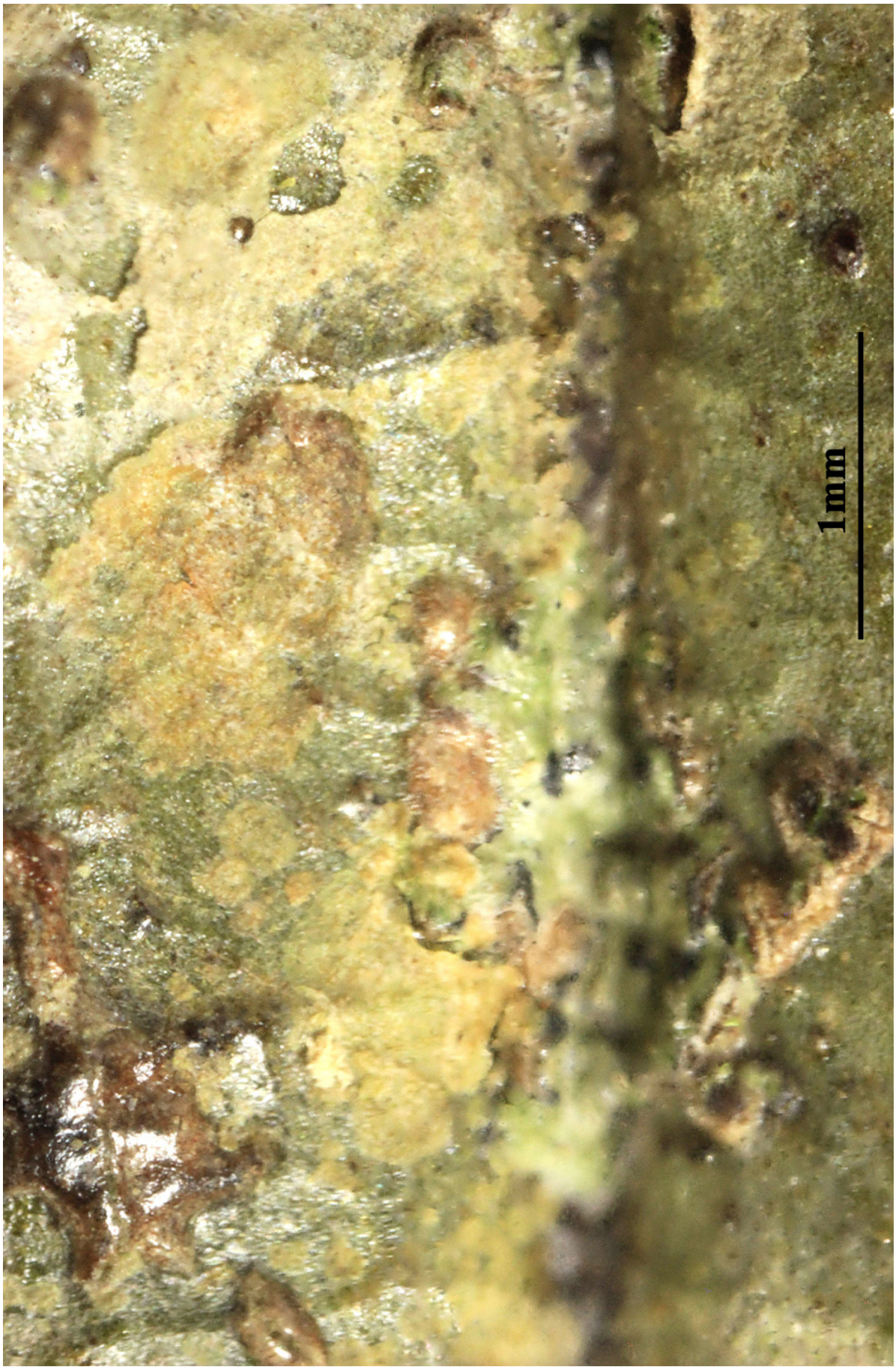
Gyalectidium caucasicum (Elenkin & Woron.) Vězda, Folia geobot. phytotax. 18(1): 56 (1983)
= *Sporopodium caucasicum* Elenkin & Woron. 1908

[VZ2431], Tanzania. Morogoro regio. Montes Nguru, ad latera montis Kanga, 900-1250 m. Foliicola, in vegetatione submontana. Leg. I. Pócs (no. 87227), 2.12.1987., det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2431.

Die aus der Umgebung von Gagra und Suchumi beschriebene foliicole Art *Sporopodium caucasicum* ELENK, et WORONICH. (1908) wurde von späteren Autoren lange mit *Gyalectidium filicinum* MULL. Arg. identifiziert. Die Art wurde bei Vizpa (1979: 54) erneut behandelt. Es wurde ihre Eigenstindigkeit erkannt und eine Überfiihrung in die Gattung *Calenia* vorgeschlagen. Als wichtigste Gründe für diese Kombination wurden die Öffnungsweise der Apothecien und die Bildung eines ringférmigen Spaltes zwischen dem Excipulum und der anliegenden Thallusberandung genannt. Zum ersten Mal wurden bei dieser Art eigenartige, schuppenférmige Hyphophoren gefunden und beschrieben. In umfangreichen Aufsammlungen von foliicolen Flechten aus Cuba und Brasilien, die dem Verfasser (Vezda) nun zur Untersuchung geschickt worden sind, wurden zahlreiche Belege vom verwandten *Gyalectidium filicinum* MULL. ARg. in verschiedenen Wuchsstadien gefunden. Bei offensichtlich alten Exemplaren kommt es auch bei dieser Art zu einer Spaltbildung zwischen den Apothecien und dem umliegenden Thallus. Ebenfalls wurden im Material Belege mit schuppigen, membranartigen Hyphophoren mehrfach gefunden, die früher bei dieser Art nicht beobachtet worden waren. Die schuppigen Hyphophoren bei *Gyalectidium filicinum* und *G. caucasicum* stellen ein wichtiges, gutes Merkmal fiir die Gattungscharakteristik von *Gyalectidium* dar; sie präzisieren die Abgrenzung der Gattung *Gyalectidium* Müll. Arg. vor allem gegen *Calenia* Müll. Arg. em. R. Sant., bei der Hyphophoren vom Borstentypus vorhanden sind. Die Hyphophoren-Typen bei *Gyalectidium* bestätigen auch die schon frither gedäusserte Meinung, dass die zwei restlichen *Gyalectidium*-Arten, *G. aspidotum* (Vain.) R. Sant. und *G. rotuliforme* Müll. Arg., mit der Typus-Art der Gattung, *G. filicinum* Müll. Arg., nicht verwandt sind; *G. aspidotum* mit Hyphophoren vom Borstentypus ist besser zu *Calenia* zu stellen, *G. rotuliforme* demgegeniiber zeigt im Bau der Apothecien nahe Anschlüsse zu *Asterothyrium* Müll. Arg. Bei dieser Species wurden, wie bei allen

Asterothyrium-Arten, keine Hyphophoren gefunden Zu ihrer Fortpflanzung ist *G. caucasicum* auf die Sporen angewwiesen die Hyphophoren werden bei dieser Art in der Kolchis sehr selten gebildet, die vegetative Fortpflanzung scheint also eine sehr geringe Rolle zu spielen. Die ersten Thallusanlagen bilden sich im Herbst auf den 1-jéhrigen Blättern, während der Wintermonate wachsen sie sehr rasch, sodass im Spatfrühling die Apothecien schon voll entwickelt sind. *Q. caucasicum* ist in der Kolchis die häufigste foliicole Art. Sie besiedelt vor allem die Blatter von *Buxus colchica*, *Laurocerasus officinalis* und *Hedera colchica*; auf den Blättern von *Taxus baccata, Rhododendron ponticum, Ilex colchica*, sowie auf Phyllokladien von *Ruscus hypophyllum* und *R. ponticus* ist sie schon seltener, nur einmal wurde sie auf iiberwinterten Blättern von *Phyliitis scolopendrium* gefunden. Beziiglich des Lichtgenusses kann man *G. caucasicum* als eine Halbschatten oder Halblichtpflanze bezeichnen. Auf den einzeln wachsenden *Buxus*-Sträuchern oder -Bidumen besiedelt die Flechte die Bäitter des Innenkronenbereiches, in den geschlossenen Beständen ist sie auf die randstindigen Sträucher oder Baume beschrankt. - Das Areal von *Gyalectidium caucasicum* in Ost-Transcaucasien deckt sich grundlegend mit dem von *Buzus colchica*. Von diesen Funden weit entfernt liegen die Lokalititen in Assam, Vietnam, Papua-New Guinea und Tanzania.

Gyalectidium caucasicum



Gyalectidium caucasicum

Gyalectidium caucasicum

Gyalectidium colchicum Vězda, Folia geobot. phytotax. 18(1): 58 (1983)

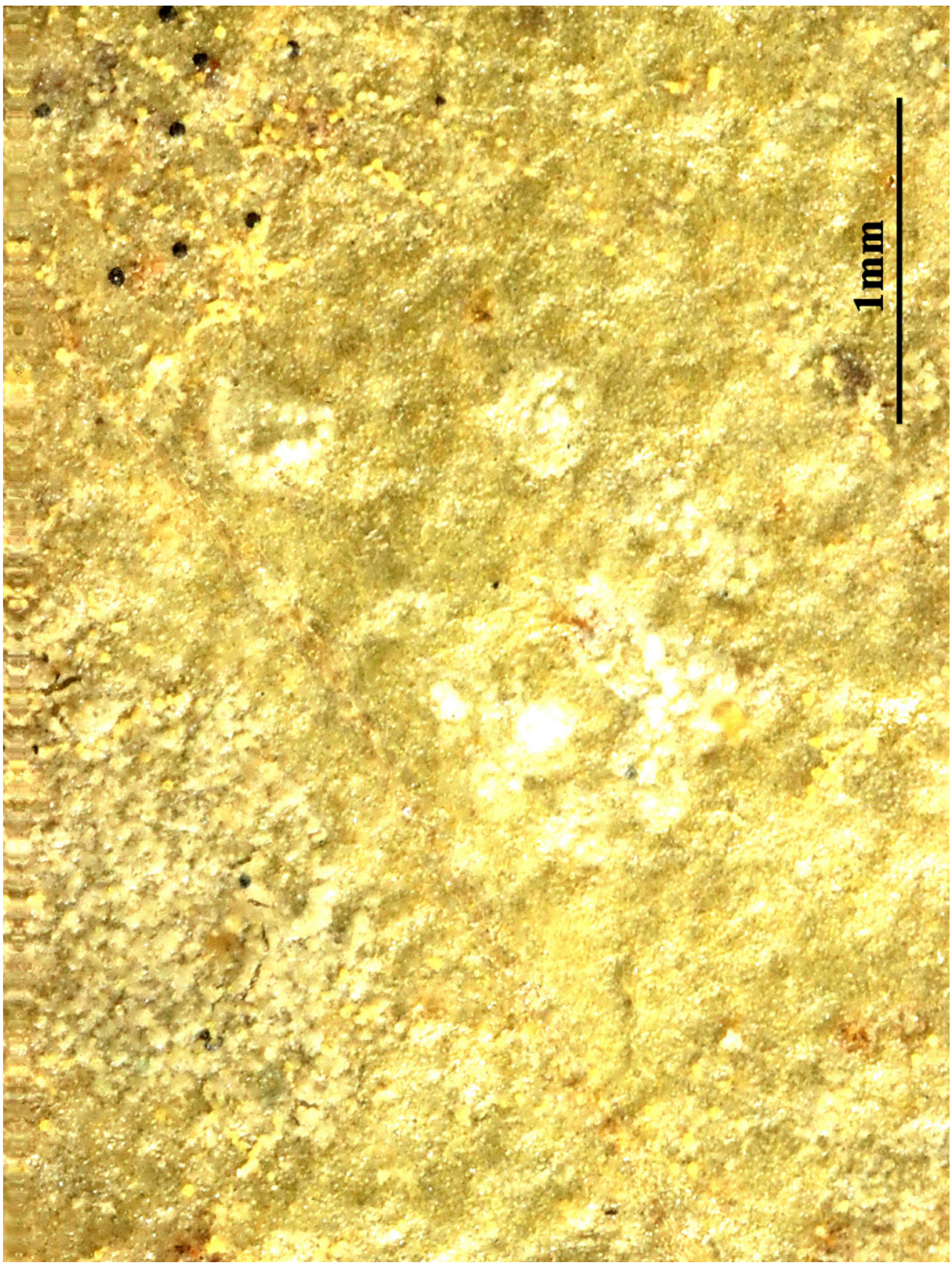
[VZ1867], URSS. Rossia merid., Colchis (Transcaucasia occid.), distr. Soči: in faucibus rivi Agua (dextra fluminis Soči) prope pagum Dzeparidze, 100-150 m. Ad folia *Laurocerasi officinalis*. Leg. A. Vězda, 21.6.1979. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1867.

Thalli epiphylli, suborbiculares, tenues, albido-cinerei usque subhyalini, verruculis ornati subalbidis subconcentricisque, crystallos hyalinos continentibus; thalli 0.5—1.5 mm lati, dispersi vel confluentes, hyphophoris instructi. Hyphophori squamiformes, membranacei, e zona marginali thallorum oblique radiatim adscendentes, hyalini, 0.15—0.2 mm longi, 0.1—0.15 mm crassi, canaliculati, in parte inferiore fasciculos hypharum diasporicarum foventes. Diahyphae hyalinae, septate, ad septa arcte constrictae (articulatae), 1.6—2 µm crassae, articulis 3—4 (5) µm longis; in partibus centralibus fasciculorum cellulae algarum globosae parvae (3—4 µm in diametro) inter diahyphas dispersae. Apothecia ignota. Alga ad Chlorococcaceae pertinens, cellulis in thallo globosis, 8—14 µm crassis.

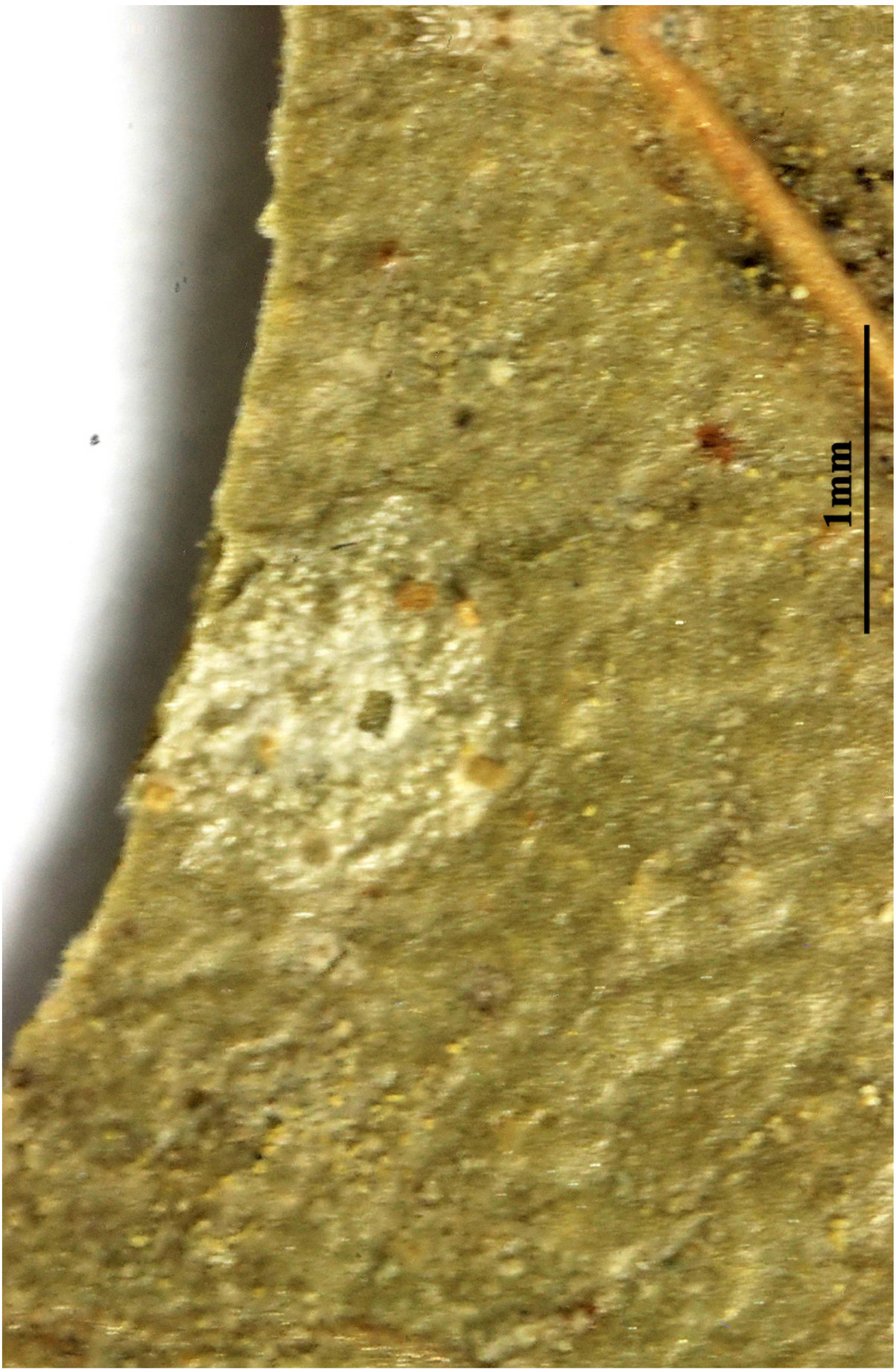
Lager der einzelnen Thalli rundlich, um 0,5—1.5 mm im Durchmesser, dünn, weisslich grau bis fast durchscheinend farblos, mit zerstreuten, fast konzentrisch angeeordneten, weisslichen, von farblosen Kristallen erfiillten Warzen. Selten fliessen mehrere Thalli zusammen und bilden bis 3 mm breite Verbindung. Aus der Randzone des voll entwickelten Thallus wachsen in geringer Zahl (2—5) Hyphophoren; sie sind schuppenférmig, membranartig dünn, farblos, schief-radiär abstehend, in Aufsicht 4kantig, um 0.15—0.2 mm Jang und 0.1—0.15 mm breit, mit nach unten etwas eingeroliten Seitenrindern, oberer Rand in spitzige Zähne zerfranzt; an der unteren konkaven Seite bilden sich mehrere Büschel von sehr dicht stehenden Hyphen (Diahyphen); die Büschel sind um 50 µm breit, kugelig, mit kurzen, dicken Hyphen an der Basis der Hyphophorenschuppe angwachsen; die Diaphyhen sind an den Septen stark eingeschnüirt, verzweigt, 1,5—2 µm dick, die Einzelzellen (Segmente) um 3—4 (5) µm lang. Angefeuchtet quellen ihre Aussenmembranen stark auf. In den zentralen Teilen des Hyphenbiischels befinden sich regelmissig verteilte, kleinzellige, kugelige oder breit ellipsoidische Algenzellen (3—4 µm im Durchmesser), die offensichtlich die Funktion haben, sich zusammen mit dem Hyphenbiischel als Flechtendiaspore zu verbreiten. Mit den feucht stark aufquellenden

Hyphenmembranen kleben sich die Biischel leicht an kleine Insekten. Ein Transport durch das Regenwasser könnte ebenfalls in Frage kommen. Selten bilden sich in der Mitte der Einzelthalli Pykniden. Sie sind um 0,2 mm breit, zuerst im Lager eingesenkt, dann hervorragend, schwarz, mit einem unregel‘missigen Riss sich öffnend; Gehäuse halbiert, schwarzbraun. Pyknosporen fadenférmig, 3 µm lang, um 0.02 µm breit, farblos. Die zu den Chlorococcaceae gehorenden Algen sind wie bei den übrigen *G alectidum*-Arten relativ durch gegenseitigen Druck eckig rundlich, rein grün, mit diinnen Membranen, 8—10 µm im Durchmesser. Die Artwurde in der Kolchis von vielen Fundorten belegt, niemals wurde sie aber mit Apothecien gefunden. Auf Grund der Vielzahl der gesammelten Proben darf man vermuten, dass hier eine Art vorliegt, die zumindest im Gebiet auf die vegetative Fortpflanzung praktisch vollig angewiesen ist.

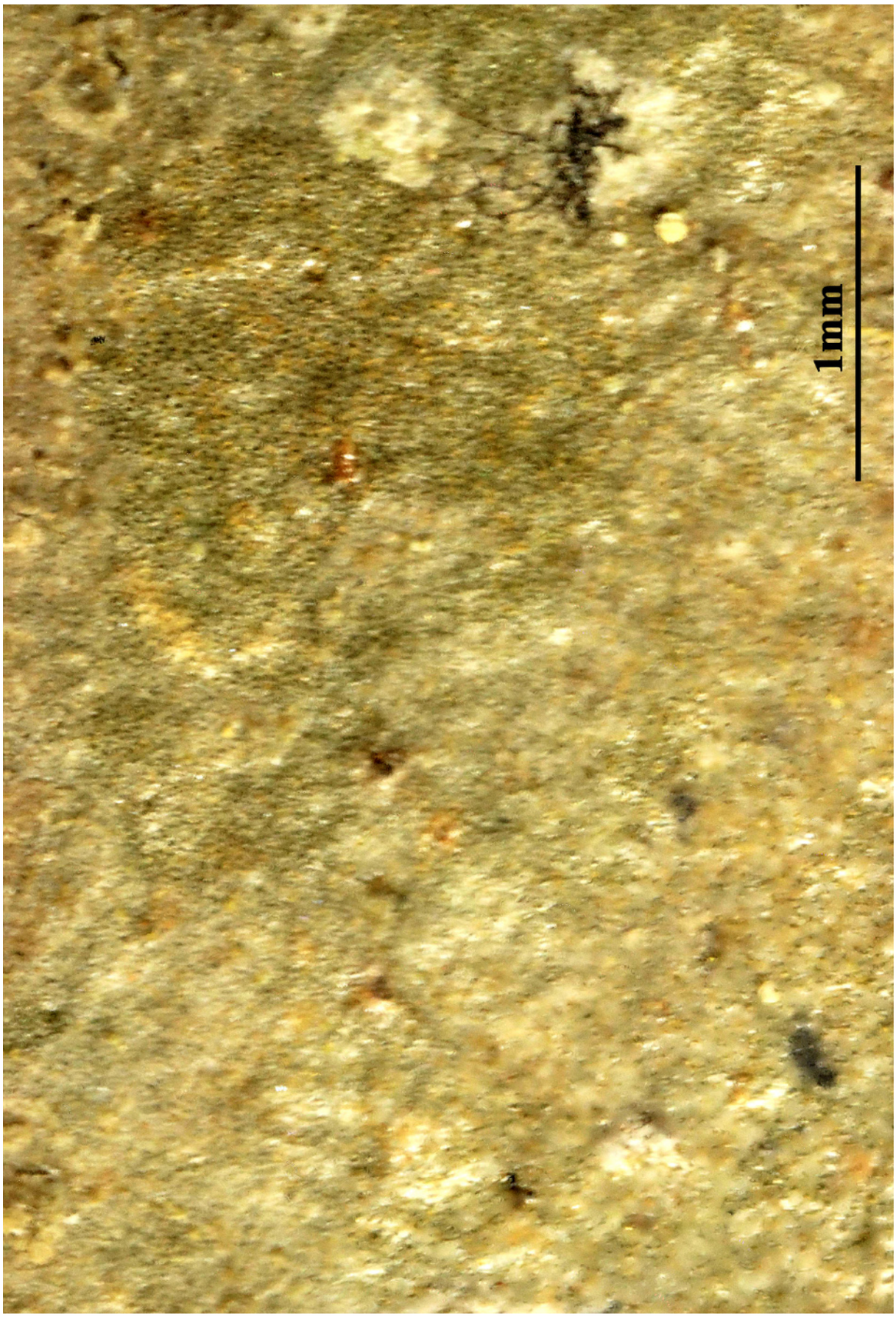
Gyalectidium colchicum



Gyalectidium colchicum



Gyalectidium colchicum



Gyalectidium colchicum

Gyalectidium colchicum Vězda, Folia geobot. phytotax. 18(1): 58 (1983)

[VZ1868], URSS. Rossia merid. Colchis (Transcaucasia occid.), distr. Adler: in valle angusta rivi Psacho sub pago Kamenka, 200 m. Ad folia *Laurocerasi officinalis*. Leg. A. Vězda, 21.5.1979. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1868.

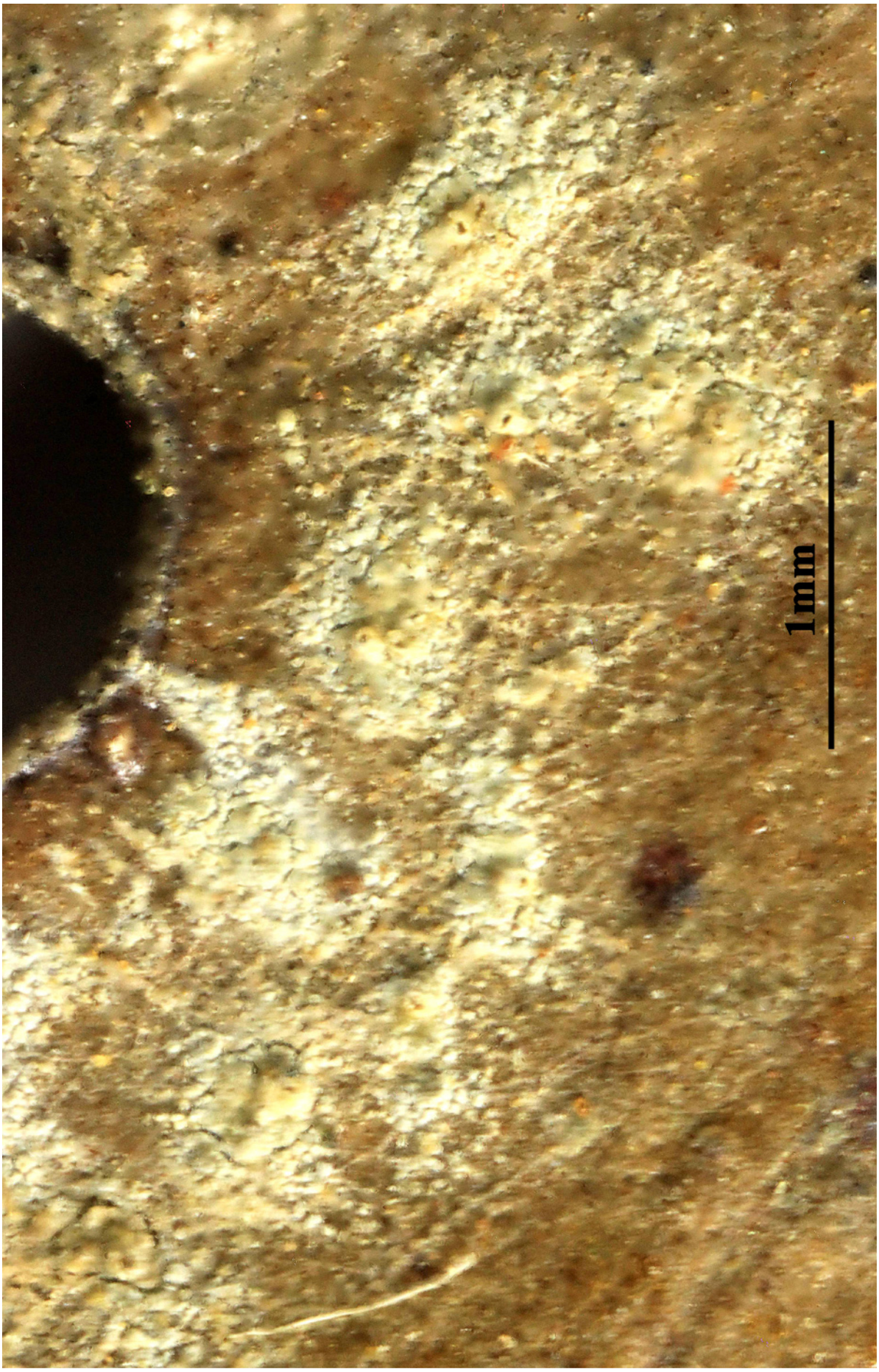
Thalli epiphylli, suborbiculares, tenues, albido-cinerei usque subhyalini, verruculis ornati subalbidis subconcentricisque, crystallos hyalinos continentibus; thalli 0.5—1.5 mm lati, dispersi vel confluentes, hyphophoris instructi. Hyphophori squamiformes, membranacei, e zona marginali thallorum oblique radiatim adscendentes, hyalini, 0.15—0.2 mm longi, 0.1—0.15 mm crassi, canaliculati, in parte inferiore fasciculos hypharum diasporicarum foventes. Diahyphae hyalinae, septate, ad septa arcte constrictae (articulatae), 1.6—2 µm crassae, articulis 3—4 (5) µm longis; in partibus centralibus fasciculorum cellulae algarum globosae parvae (3—4 µm in diametro) inter diahyphas dispersae. Apothecia ignota. Alga ad Chlorococcaceae pertinens, cellulis in thallo globosis, 8—14 µm crassis.

Lager der einzelnen Thalli rundlich, um 0,5—1.5 mm im Durchmesser, dünn, weisslich grau bis fast durchscheinend farblos, mit zerstreuten, fast konzentrisch angeeordneten, weisslichen, von farblosen Kristallen erfiillten Warzen. Selten fliessen mehrere Thalli zusammen und bilden bis 3 mm breite Verbindung. Aus der Randzone des voll entwickelten Thallus wachsen in geringer Zahl (2—5) Hyphophoren; sie sind schuppenférmig, membranartig dünn, farblos, schief-radiär abstehend, in Aufsicht 4kantig, um 0.15—0.2 mm Jang und 0.1—0.15 mm breit, mit nach unten etwas eingeroliten Seitenrindern, oberer Rand in spitzige Zähne zerfranzt; an der unteren konkaven Seite bilden sich mehrere Büschel von sehr dicht stehenden Hyphen (Diahyphen); die Büschel sind um 50 µm breit, kugelig, mit kurzen, dicken Hyphen an der Basis der Hyphophorenschuppe angwachsen; die Diaphyhen sind an den Septen stark eingeschnüirt, verzweigt, 1,5—2 µm dick, die Einzelzellen (Segmente) um 3—4 (5) µm lang. Angefeuchtet quellen ihre Aussenmembranen stark auf. In den zentralen Teilen des Hyphenbiischels befinden sich regelmissig verteilte, kleinzellige, kugelige oder breit ellipsoidische Algenzellen (3—4 µm im Durchmesser), die offensichtlich die Funktion haben, sich zusammen mit dem Hyphenbiischel als Flechtendiaspore zu verbreiten. Mit den feucht stark aufquellenden

Hyphenmembranen kleben sich die Biischel leicht an kleine Insekten. Ein Transport durch das Regenwasser könnte ebenfalls in Frage kommen. Selten bilden sich in der Mitte der Einzelthalli Pykniden. Sie sind um 0,2 mm breit, zuerst im Lager eingesenkt, dann hervorragend, schwarz, mit einem unregel‘missigen Riss sich öffnend; Gehäuse halbiert, schwarzbraun. Pyknosporen fadenférmig, 3 µm lang, um 0.02 µm breit, farblos. Die zu den Chlorococcaceae gehorenden Algen sind wie bei den übrigen *G alectidum*-Arten relativ durch gegenseitigen Druck eckig rundlich, rein grün, mit diinnen Membranen, 8—10 µm im Durchmesser. Die Artwurde in der Kolchis von vielen Fundorten belegt, niemals wurde sie aber mit Apothecien gefunden. Auf Grund der Vielzahl der gesammelten Proben darf man vermuten, dass hier eine Art vorliegt, die zumindest im Gebiet auf die vegetative Fortpflanzung praktisch vollig angewiesen ist.

Gyalectidium colchicum

Gyalectidium colchicum



Gyalectidium colchicum

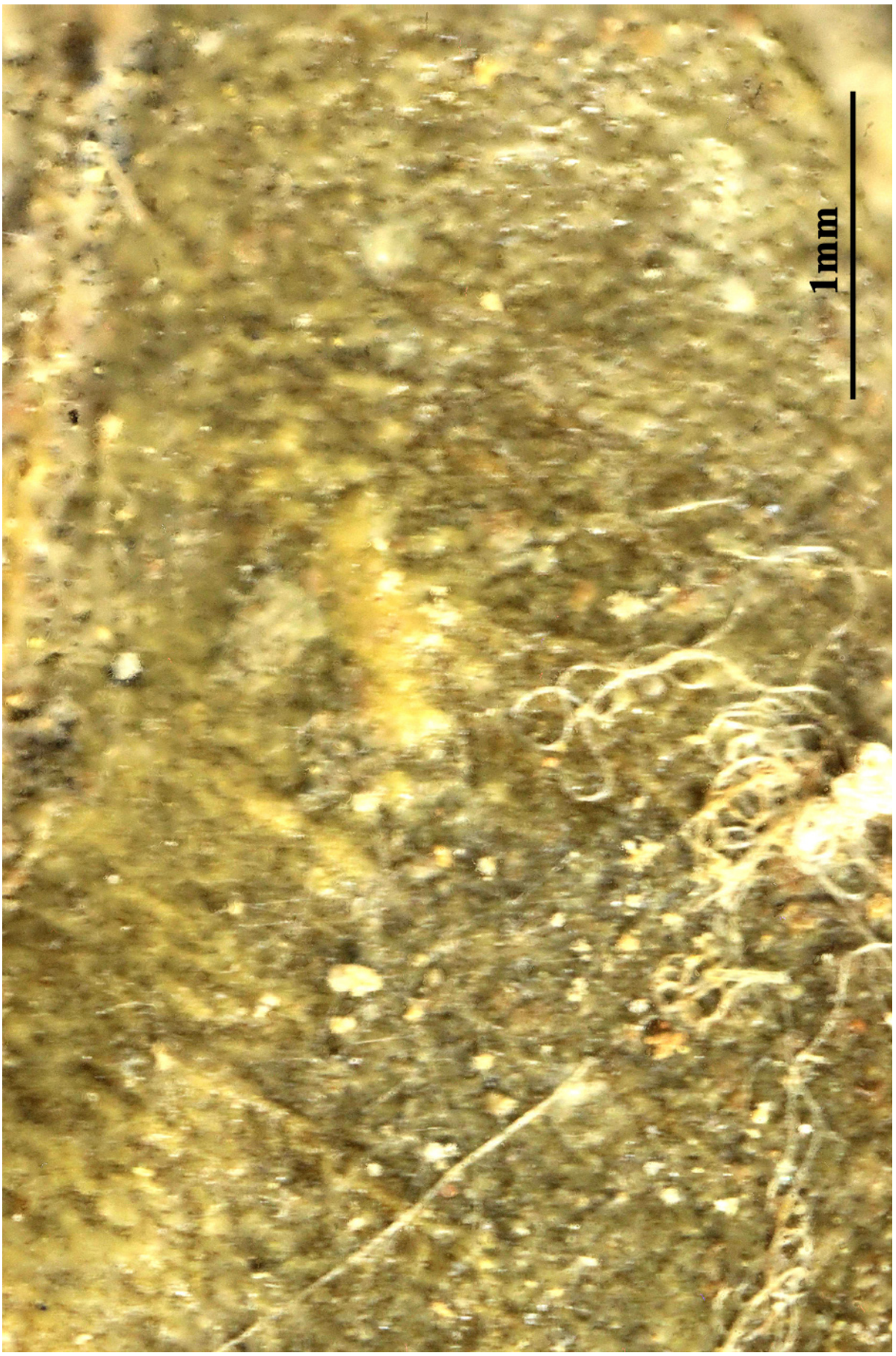
Gyalectidium colchicum Vězda, Folia geobot. phytotax. 18(1): 58 (1983)

[VZ1866], URSS. Rossia merid., Colchis (Transcaucasia occid.), distr. Lazarevskoja: in faucibus rivi Dagomys Zapadnyi, supra vicum Tretja Rota, 250 m. Ad folia *Buxi colchicae*. Leg. A. Vězda, 25.6.1979. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1866.

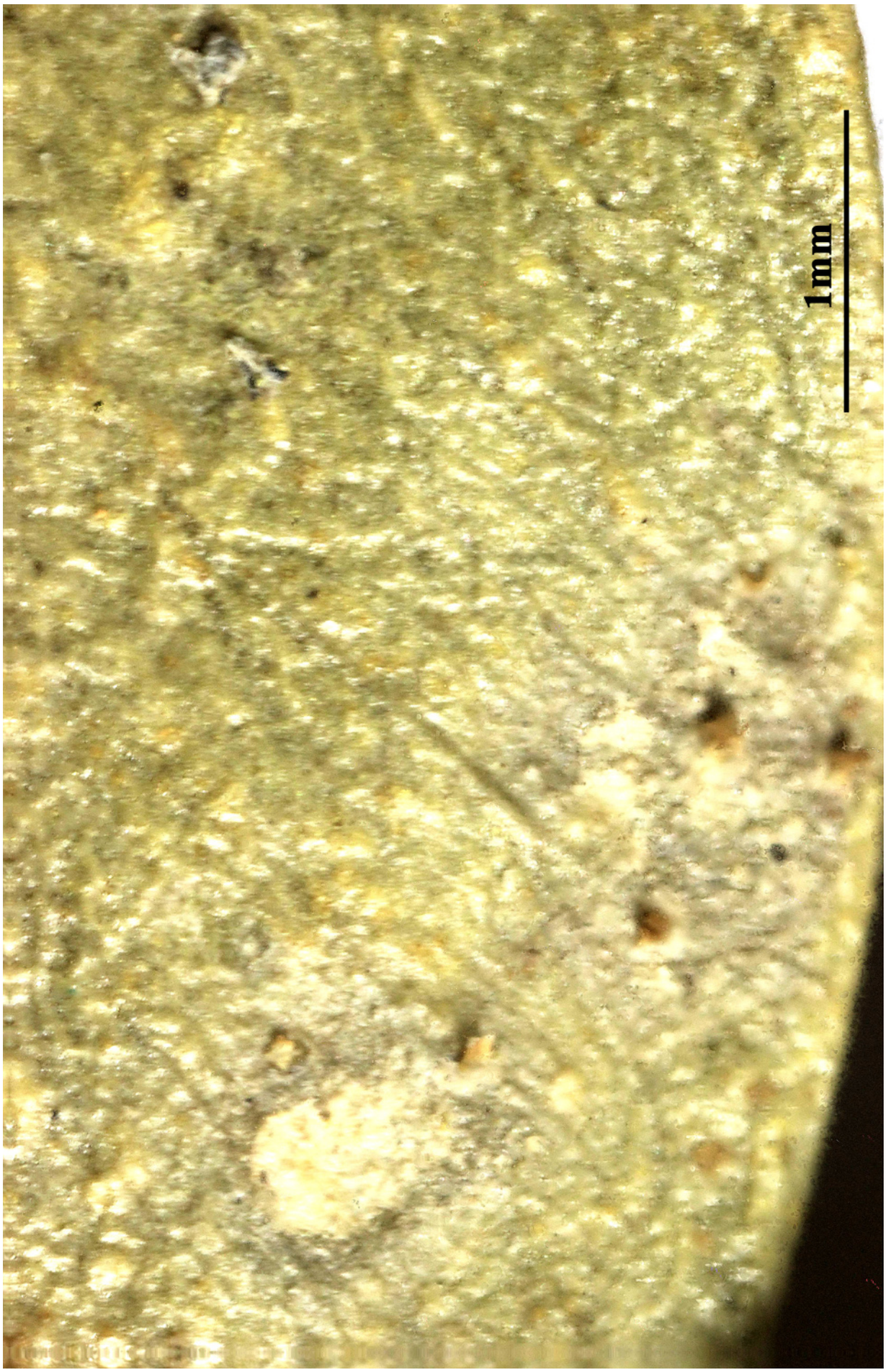
Thalli epiphylli, suborbiculares, tenues, albido-cinerei usque subhyalini, verruculis ornati subalbidis subconcentricisque, crystallos hyalinos continentibus; thalli 0.5—1.5 mm lati, dispersi vel confluentes, hyphophoris instructi. Hyphophori squamiformes, membranacei, e zona marginali thallorum oblique radiatim adscendentes, hyalini, 0.15—0.2 mm longi, 0.1—0.15 mm crassi, canaliculati, in parte inferiore fasciculos hypharum diasporicarum foventes. Diahyphae hyalinae, septate, ad septa arcte constrictae (articulatae), 1.6—2 µm crassae, articulis 3—4 (5) µm longis; in partibus centralibus fasciculorum cellulae algarum globosae parvae (3—4 µm in diametro) inter diahyphas dispersae. Apothecia ignota. Alga ad Chlorococcaceae pertinens, cellulis in thallo globosis, 8—14 µm crassis.

Lager der einzelnen Thalli rundlich, um 0,5—1.5 mm im Durchmesser, dünn, weisslich grau bis fast durchscheinend farblos, mit zerstreuten, fast konzentrisch angeeordneten, weisslichen, von farblosen Kristallen erfiillten Warzen. Selten fliessen mehrere Thalli zusammen und bilden bis 3 mm breite Verbindung. Aus der Randzone des voll entwickelten Thallus wachsen in geringer Zahl (2—5) Hyphophoren; sie sind schuppenférmig, membranartig dünn, farblos, schief-radiär abstehend, in Aufsicht 4kantig, um 0.15—0.2 mm Jang und 0.1—0.15 mm breit, mit nach unten etwas eingeroliten Seitenrindern, oberer Rand in spitzige Zähne zerfranzt; an der unteren konkaven Seite bilden sich mehrere Büschel von sehr dicht stehenden Hyphen (Diahyphen); die Büschel sind um 50 µm breit, kugelig, mit kurzen, dicken Hyphen an der Basis der Hyphophorenschuppe angwachsen; die Diaphyhen sind an den Septen stark eingeschnüirt, verzweigt, 1,5—2 µm dick, die Einzelzellen (Segmente) um 3—4 (5) µm lang. Angefeuchtet quellen ihre Aussenmembranen stark auf. In den zentralen Teilen des Hyphenbiischels befinden sich regelmissig verteilte, kleinzellige, kugelige oder breit ellipsoidische Algenzellen (3—4 µm im Durchmesser), die offensichtlich die Funktion haben, sich zusammen mit dem Hyphenbiischel als Flechtendiaspore zu verbreiten. Mit den feucht stark aufquellenden

Hyphenmembranen kleben sich die Biischel leicht an kleine Insekten. Ein Transport durch das Regenwasser könnte ebenfalls in Frage kommen. Selten bilden sich in der Mitte der Einzelthalli Pykniden. Sie sind um 0,2 mm breit, zuerst im Lager eingesenkt, dann hervorragend, schwarz, mit einem unregel‘missigen Riss sich öffnend; Gehäuse halbiert, schwarzbraun. Pyknosporen fadenférmig, 3 µm lang, um 0.02 µm breit, farblos. Die zu den Chlorococcaceae gehorenden Algen sind wie bei den übrigen *G alectidum*-Arten relativ durch gegenseitigen Druck eckig rundlich, rein grün, mit diinnen Membranen, 8—10 µm im Durchmesser. Die Artwurde in der Kolchis von vielen Fundorten belegt, niemals wurde sie aber mit Apothecien gefunden. Auf Grund der Vielzahl der gesammelten Proben darf man vermuten, dass hier eine Art vorliegt, die zumindest im Gebiet auf die vegetative Fortpflanzung praktisch vollig angewiesen ist.



Gyalectidium colchicum



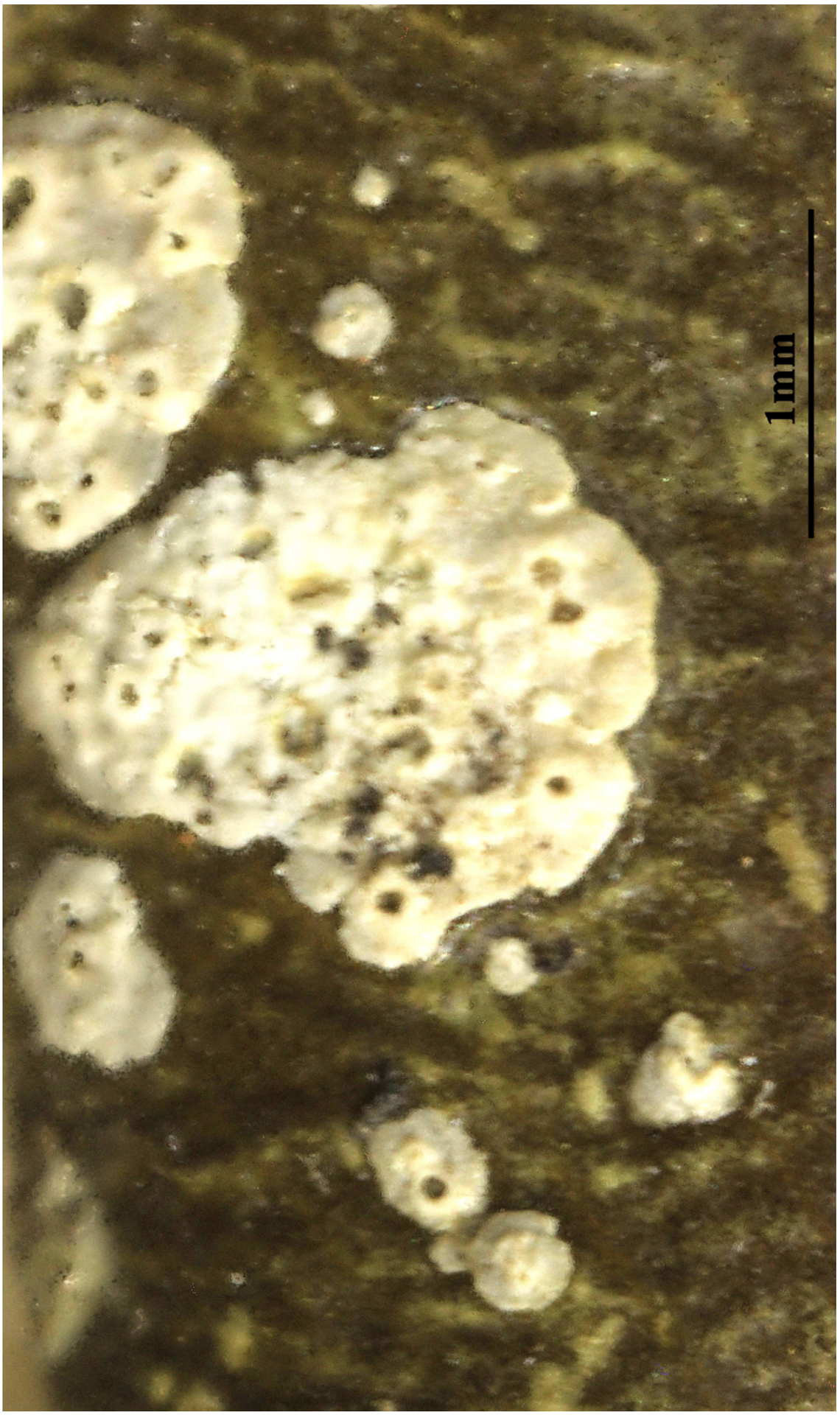
Gyalectidium colchicum

Gyalectidium filicinum Müll. Arg., Flora, Regensburg 64(7): 101 (1881)
= *Ectolechia filicina* (Müll. Arg.) Vain., J. Bot., Lond. 34: 206 (1896)
= *Lopadiopsidomyces coffeae* Cif. & Tomas., Atti Ist. bot. Univ. Lab. crittog. Pavia, sér. 5 10(2): 265 (1954)
= *Lopadiopsis coffeae* (Müll. Arg.) Zahlbr., Cat. Lich. Univers. 2: 676 (1924)
= *Myxodictyon coffeae* Müll. Arg., Lich. Epiph. Novi: 4 (1890)
= *Sporopodium filicinum* (Müll. Arg.) Zahlbr., Cat. Lich. Univers. 2: 679 (1924)

[VZ1179], URSS. Distr. Krasnodar, in valle fluminis Chosta prope balneas Soči, 150 m. Infoliis Buxi sempervirentis vigens, Leg. I. Pšsút, 8.8.1973. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1179.

Thallus in small, rounded patches 1–5(–10) mm across and 20–30 µm thick, with a cellular, corticiform layer, finely verrucose due to incrustation with calcium oxalate crystals, pale greenish grey; verrucae 0.03–0.07 mm diam., white. Apothecia rounded, 0.2–0.4 mm diam. and 70–100 µm high; disc plane to slightly concave, yellowish green; margin rather thick, slightly prominent, smooth, white to pale green. Excipulum 5–10 µm broad. Hypothecium 5–10 µm high. Epithecium 5–10 µm high, with numerous, epithecial algae, cells 3–5 µm diam. Hymenium 60–70 µm high. Asci 50–60 x 15–20 µm. Ascospores 30–40 x 13–18 µm, 2.5–3 times as long as broad. Hyphophores frequent, formed on thallus surface or near margin, projecting obliquely, squamiform with 2acute, lateral projections, 0.3–0.6mm long and 0.3–0.3 mm wide, white. Chemistry: no substances detected by TLC. Distribution and Ecology: Pantropical, extending into subtropical regions. By far the most common species of the genus, being found in all microclimatic situations but most common in sheltered to semi-exposed places with an oceanic climate.

Gyalectidium filicinum



Gyalectidium filicinum

Gyalectidium filicinum Müll. Arg., Flora, Regensburg 64(7): 101 (1881)
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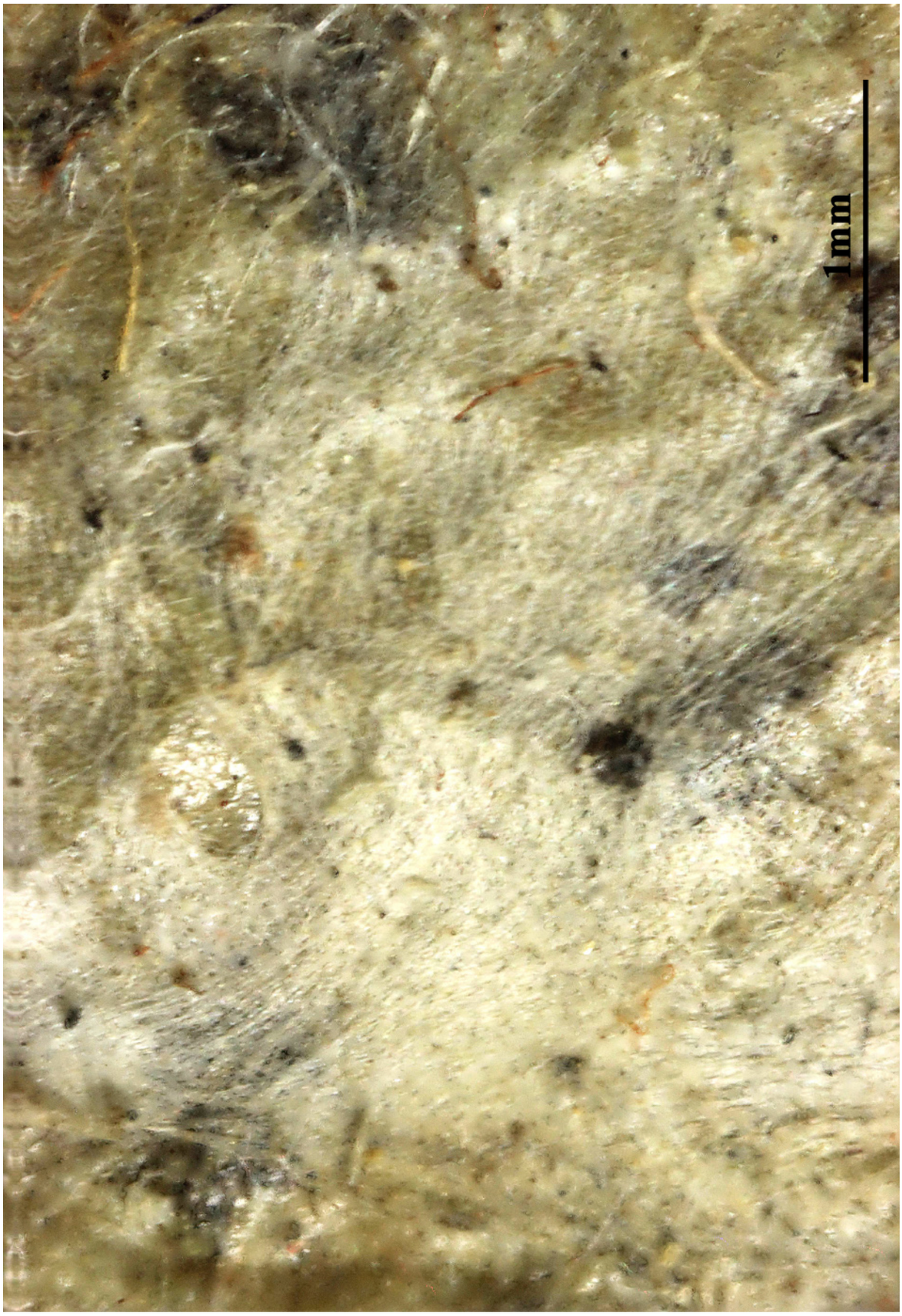
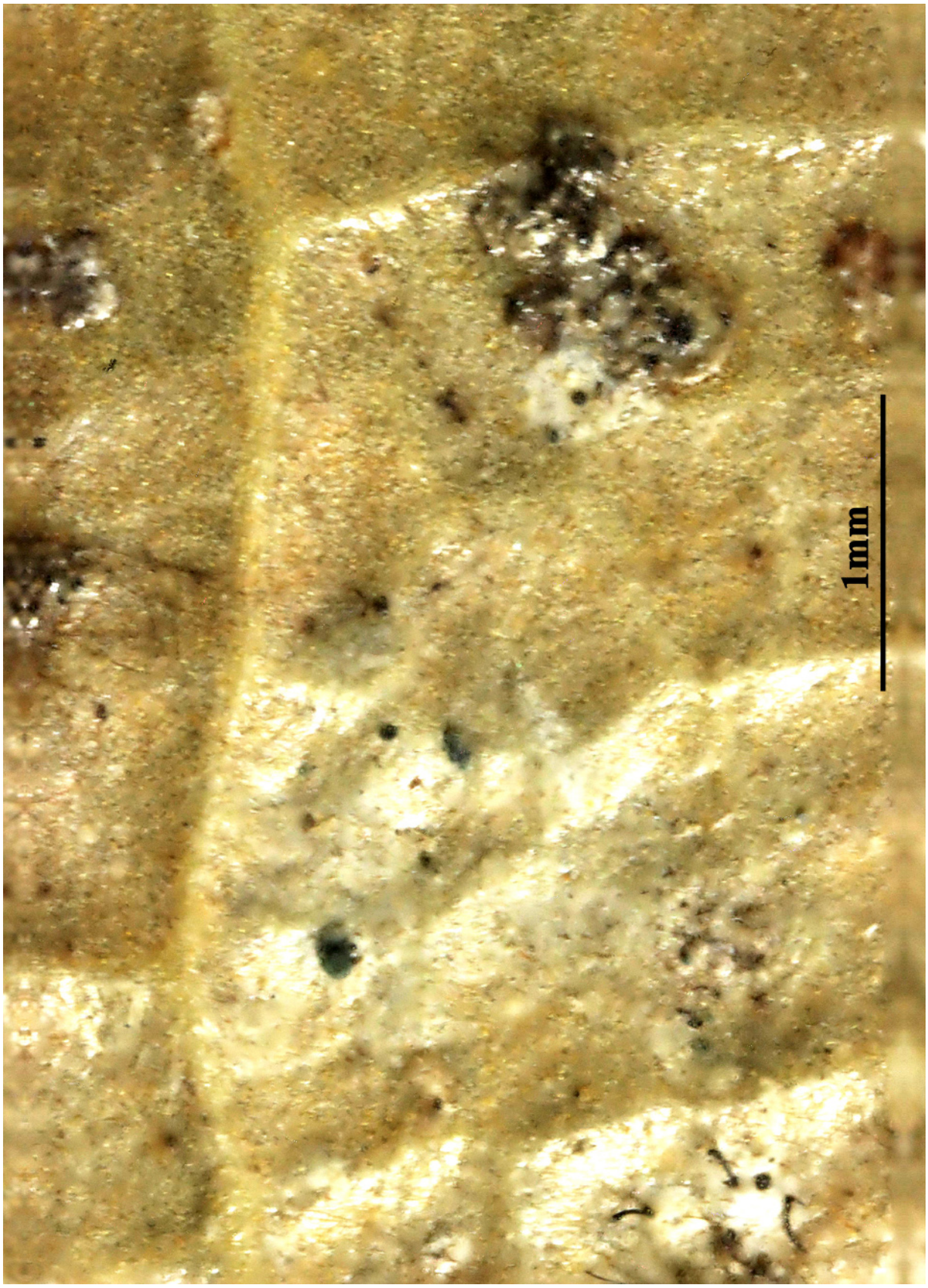
= *Lopadiopsis coffeae* (Müll. Arg.) Zahlbr., Cat. Lich. Univers. 2: 676 (1924)
= *Myxodictyon coffeae* Müll. Arg., Lich. Epiph. Novi: 4 (1890)
= *Sporopodium filicinum* (Müll. Arg.) Zahlbr., Cat. Lich. Univers. 2: 679 (1924)

[VZ1556],USA. Florida, Apalachiola National Forest, secus flumine Sopchopy. Ad folia arborum. Leg. E. Serusiaux (no. 1794). Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1556.

Thallus in small, rounded patches 1–5(–10) mm across and 20–30 µm thick, with a cellular, corticiform layer, finely verrucose due to incrustation with calcium oxalate crystals, pale greenish grey; verrucae 0.03–0.07 mm diam., white. Apothecia rounded, 0.2–0.4 mm diam. and 70–100 µm high; disc plane to slightly concave, yellowish green; margin rather thick, slightly prominent, smooth, white to pale green. Excipulum 5–10 µm broad. Hypothecium 5–10 µm high. Epithecium 5–10 µm high, with numerous, epithecial algae, cells 3–5 µm diam. Hymenium 60–70 µm high. Asci 50–60 x 15–20 µm. Ascospores 30–40 x 13–18 µm, 2.5–3 times as long as broad. Hyphophores frequent, formed on thallus surface or near margin, projecting obliquely, squamiform with 2acute, lateral projections, 0.3–0.6mm long and 0.3–0.3 mm wide, white. Chemistry: no substances detected by TLC. Distribution and Ecology: Pantropical, extending into subtropical regions. By far the most common species of the genus, being found in all microclimatic situations but most common in sheltered to semi-exposed places with an oceanic climate.



Gyalectidium filicinum



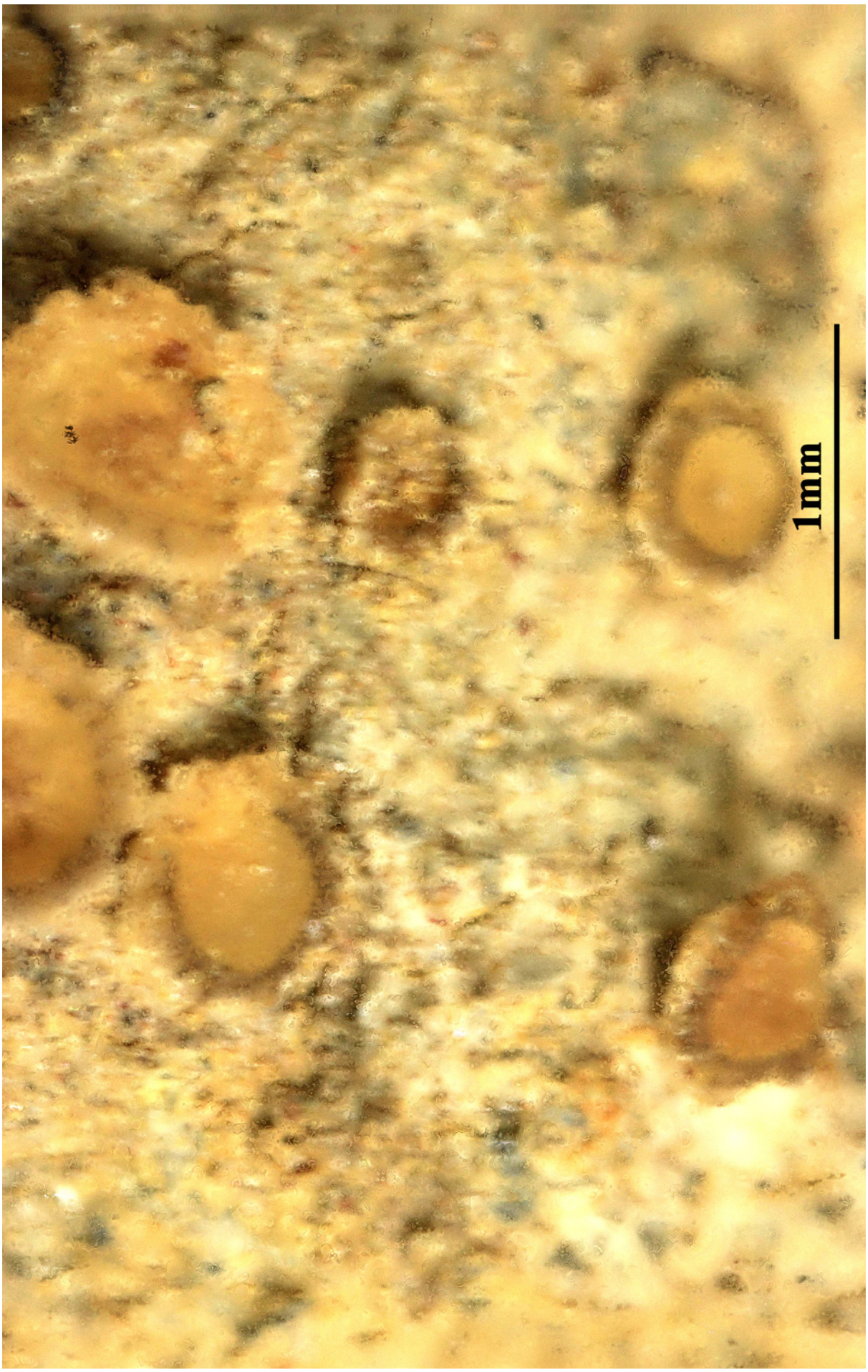
Gyalectidium filicinum

Gyalidea dodgei Vězda, Folia geobot. phytotax. 1: 322 (1966)

[VZ2233], Aequatoria. Napo: 24 km ad occidentem versus a Baeza, in vegetatione montana "cloud foret" dicta, 2950 m. Ad terram humidam secus viam. Leg. W. Culberson (no. 20555) et C. F. Culberson,25.8.1987, det. A. Veěda . - Annot.: trace of an unidentified triterpene by TLC; anal. A. Johnson et C. F. Culberson. - EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2233.

Thallus epilithicus, tenuis, continuus vel ob substratum rugosum interruptus, sordide ochraceus. Algae globosae, cellulis 8-13 µm crassis. Apothecia dispersa, orbicularia, maturitate usque 2 mm lata, 0.3-0.4 mm alta, basic onstricta. Margo crassus, primum elevatus, demum deplanatus alta, basi constricta. Margo crassus, primum elevatus , demum deplanatus discum haud superans, olivaceo-hyalinus, juventute integer, maturitate fissis radiantibus crenulatus, crenulis albido-hyalinis. Pars lateralis marginis strato thallino tenuissimo subalbido tecta, demum nuda, Discus primum concavus, demum subplanus, olivaceo-fuscus vel pallide fuscus, Excipulum subhymeniale 300-360 µm, laterale 200-300 µm crassum, hyalinum. Hymenium 70-80 µm altum, decoloratum. Paraphyses simplices, rarissimae ramosae, tubulis 1.5 µm crassis. Asci 55-65 x 12-14 µm, 6-8-spori. Sporae fusiformi-oblongae, utroque obtusae, transverse 3 septatae, 13-22 x 5-6 µm.

Gyalidea dodgei

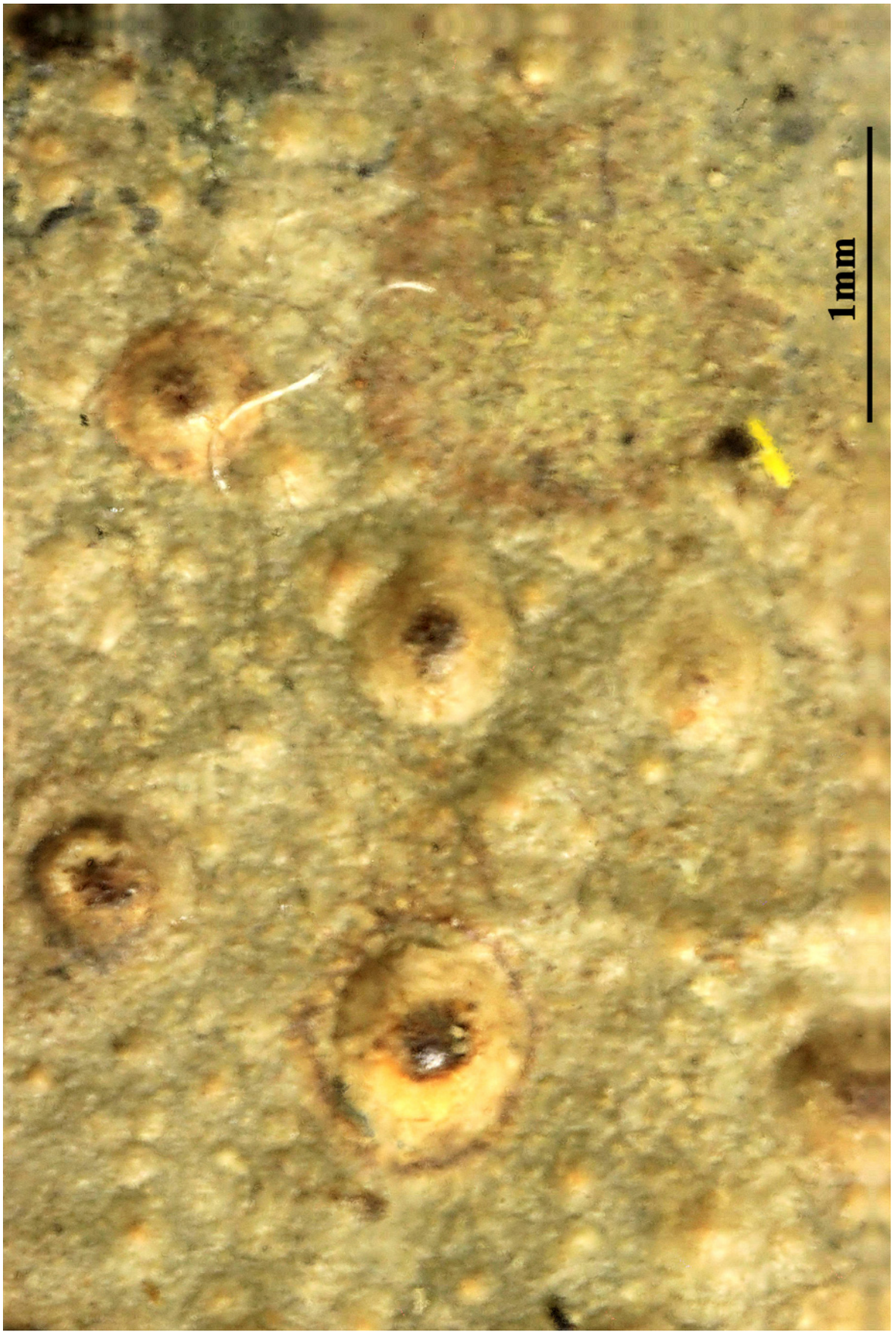


Gyalidea dodgei

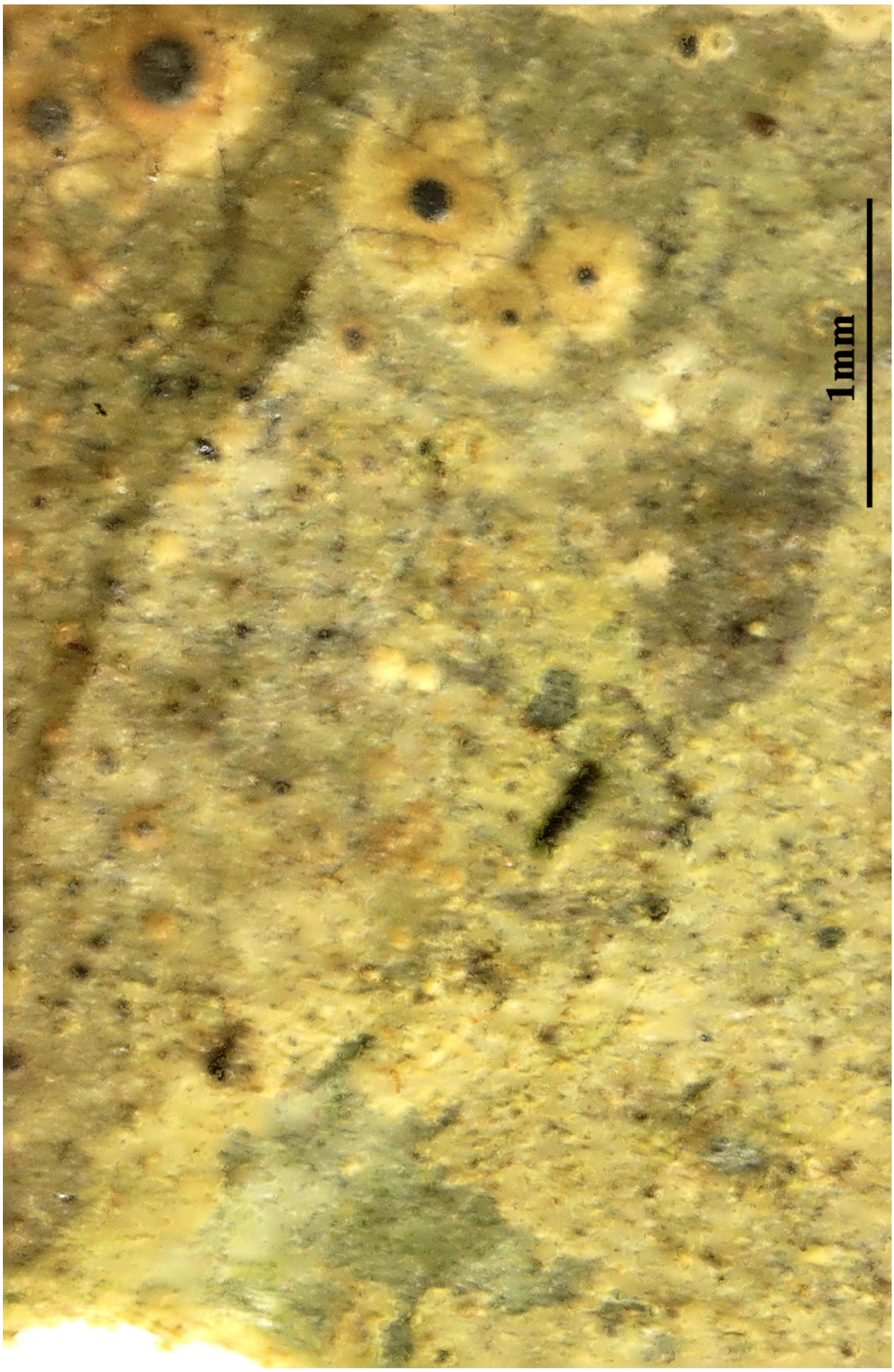
Gyalidea epiphylla Vězda, Folia geobot. phytotax. bohemoslov. 1: 311 (1966)

[VZ2184], Australia. New South Wales. MbPherson Range, ad marginem reservati naturae Border Ranges National Park dicti, loco Gradys Greek dicto, 800 m. Foliicola in pluviisilva subtropicali. Leg. J. Hafellner, P. Merrotsy et R. Rogers, 29.8.1986, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2184.

Thallus continuous, 10–30 mm across and 15–20 µm thick, smooth to minutely farinose arachnoid, pale green. Apothecia sessile, biatorine, rounded, 0.15–0.35 mm diam. and 70–100 µm high; disc plane, pale yellowish brown, slightly translucent; margin thin, smooth, of same color as disc. Excipulum paraplectenchymatous, 20–30 µm broad. Hypothecium 10–15 µm high, colorless to pale yellow. Epithecium indistinct. Hymenium 40–50 µm high, colorless. Asci clavate, 35–45 x 10–14 µm. Ascospores ellipsoid, 3(–5)-septate, with slight constrictions at septa, 13–25 x 3.5–5 µm, 3.5–5.5 times as long as broad, colorless. Pycnidia not observed. Chemistry: no substances detected by TLC. - Distribution and Ecology**.** Pantropical but uncommon; a very typical collection was also found in Papua New Guinea. An element of the shady understory



Gyalidea epiphylla

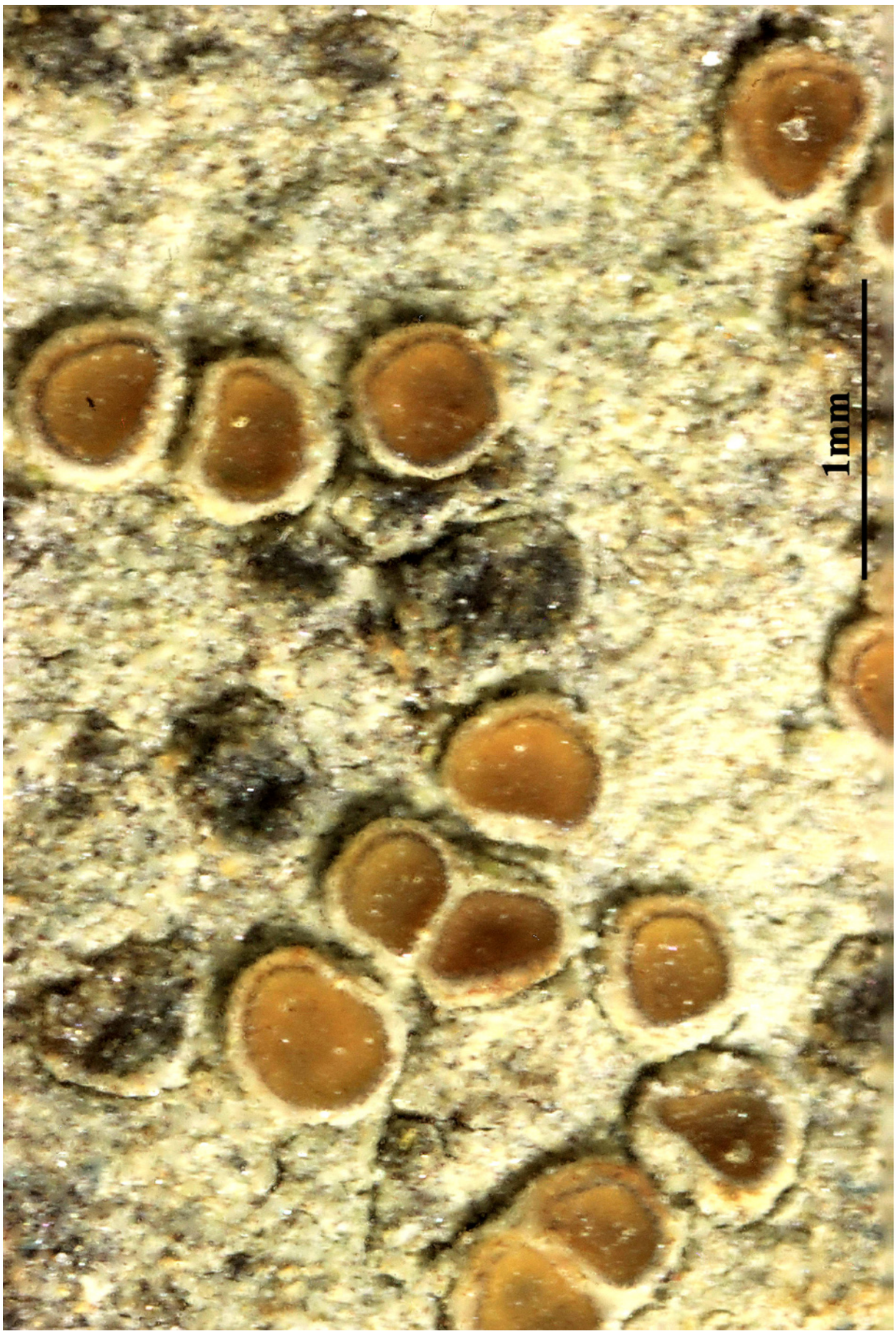


Gyalidea epiphylla

Gyalidea hyalinescens (Nyl.) Vězda, Folia geobot. phytotax. bohemoslov. 1: 321 (1966)
= *Lecidea hyalinescens* Nyl. 1857

[VZ1427], Canada. Columbia britannica, Vancouver insula, Shawnigan Lake Road, San Juan River Bridge in occidente a Port Renfrew, 30 m. Ad rupes schistosas locis umbrosis secus viam, Leg. A. M. Crone et W. J. Noble (no. 5818), 4.6.1976. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1427.

Thallus epilithisch, zusammenhängend, durch dicht stehende, sehr feine Risse zerteilt, schmutzig dunkelgrau oder olivbräunlich. Thallusdicke bis 200 µm. Algenzellen 10-12 µm breit.Apothecien zahlreich, unregelmäßig verteilt, oft zu 3-4 zusammen-stoßend, 0.8-1.2 mm breit, 0.2-0.3 mm hoch; Rand zuerst stark gewölbt, dann abgeflacht zurücktretend, wachsgelblich-fleischfarbig bis gelbbrau, ungeteilt, die Oberfläche dauernd oder wnigstens bei den jungen Apothecien weißlich-feinmehlig, fast wie bereift, die seitlichen Teile mit weißlicher Thallushülle bedeckt; Discus konkav bis später flach, blassfleischfarbig oder hell-bräunlich. Excipulum imbasalen Teil 50-80 µm, an den Seiten 60 bis 120 µm breit, farblos oder schwach gelblich, die Oberflächenschicht schmutzig gelblich bis olivgelblich; an der Außenseite, die Oberfläche bedeckend, eine dünne, farblose Thallusschicht; Hymenium 80-120 µm hoch, farblos, oben etwas gelblich verfärbt und mit adspersenKörnchen; Paraphysen meistens einfach , c. 1 µm dick; Asci 70-80 x 10-12 µm. 8-sporig; Sporen zylindrisch, an den Enden wenig verschmälert, 3 x quer geteilt, 16-24 x3-6 µm. Irland, Frankreich, Deutschland.



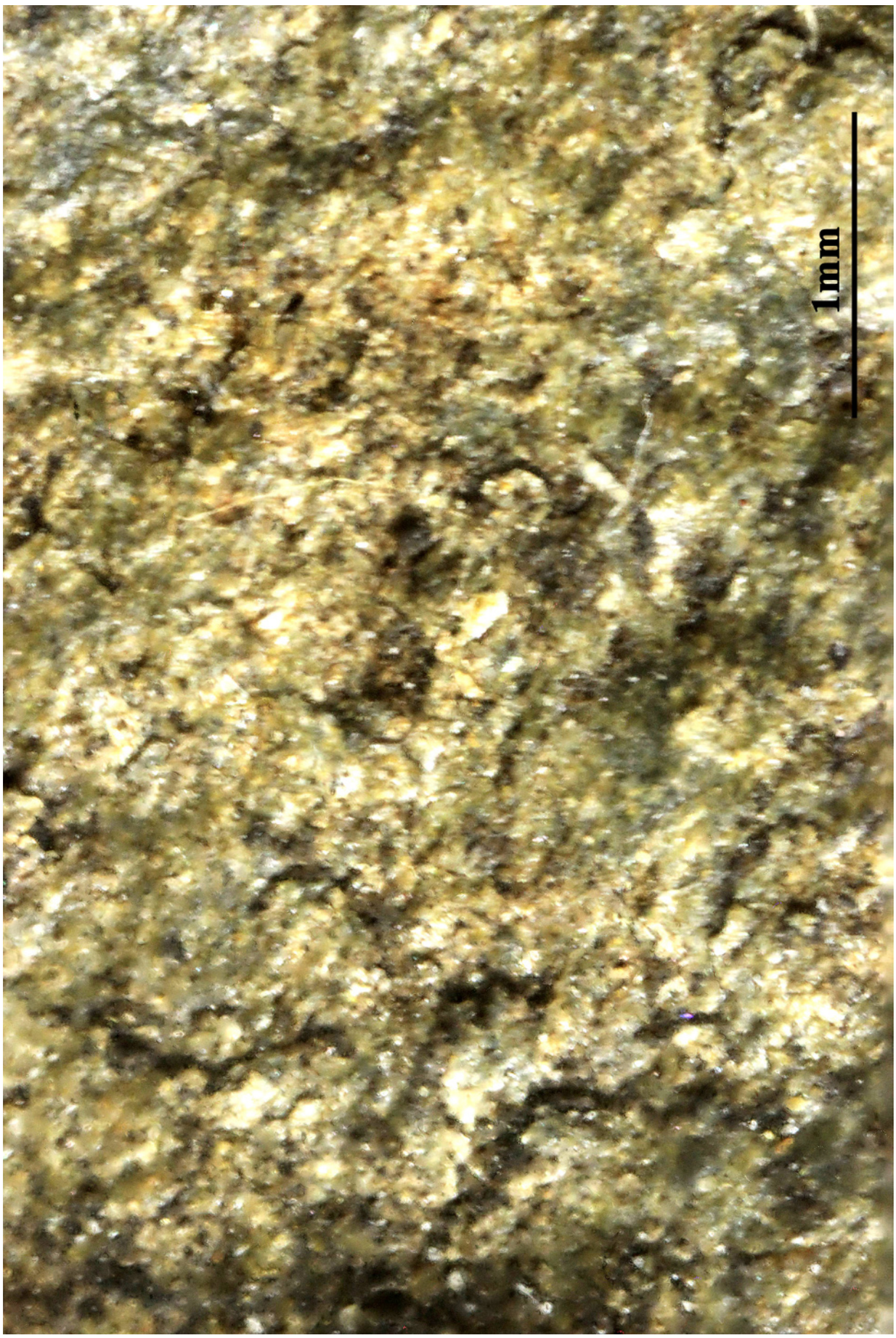
Gyalidea hyalinescens

Gyalidea hyalinescens

Gyalidea lecideopsis (A. Massal.) Lettau ex Vězda, Folia geobot. phytotax. bohemoslov. 1: 312 (1966)
= *Gyalecta lecideopsis* A. Massal. 1856

[VZ2407], Austria. Styria: Grazer Bergland, secus viam inter Rechbergsattel et Semriach prope Dreihofen, 950 m, In fossis viae, ad lapides humidos calcem continentes. Leg. H. Pittoni, J. Poelt et A. Vězda, 18.3.1990. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2407.

Thallus crustose, endosubstratic or thinly episubstratic, often inconspicuous and poorly evident, smooth or finely granulose, grey-white to yellowish grey. Apothecia 0.2-0,6 mm across, with a concave, dark reddish brown, dark brown to black disc and a smooth, crenulate or radially split, mostly black to brown proper margin (often turning pure white in dry sites). Proper exciple 50-60 µm wide laterally, dark olive-brown in outer part, colourless or paler within; epithecium brown-green; hymenium brown-green in upper part, colourless in lower part, 100-130 µm high; paraphyses mostly simple, to 1 µm thick, not swollen at apex; hypothecium colourless or pale yellowish brown. Asci 6-8-spored, thin-walled, apically thickened, with a small ocular chamber. Ascospores muriform, hyaline, ovoid to broadly ellipsoid, (17-)22-30(-35) x (10-)12-15 µm, without a distinct perispore. Photobiont chlorococcoid, Cystococcus/Leptosira-like. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a northern-montane species found on limestone, dolomite, calciferous schists, on porous, damp faces; easily overlooked, but certainly rare.



Gyalidea lecideopsis

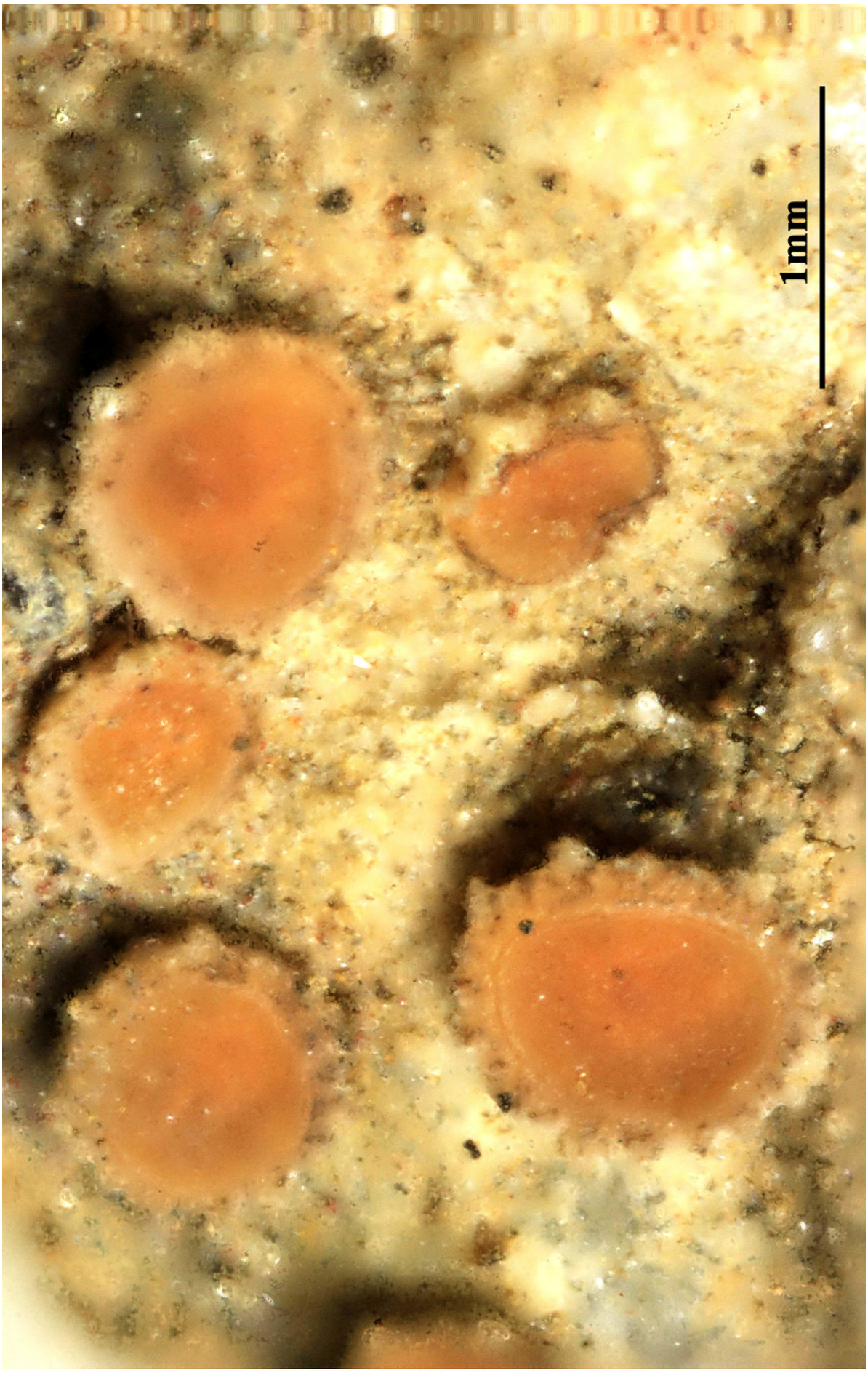
Gyalidea lecideopsis

Gyalidea mexicana (B. de Lesd.) Vězda, Folia geobot. phytotax. bohemoslov. 1: 325 (1966)
= *Gyalecta mexicana* B. de Lesd. 1929

[VZ3506], Aequatoria. Napo: 24 km ad occidentem versus a Baeza, 2950 m. Ad lapillos in terra humida in silva montana nube crebo inducta. Leg. W, L, Culberson (20555) et C, F, Culberson, 25.8.1987, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 3506.

Thallus epilithisch oder humosen Sandbodn überziehend, in Form dünner ungeteilter oder unregelmäßig rissig- geteilter Überzüge zu erkennen, schmutzig oliv oder lehm-bräunlich. Thallusdicke 100-300 µm; Algenzellen 8-12 µm breit. Apothecien häufig, dicht gehäuft, hier und da zusammenstossend, 0.6 bis 1 mm breit, 0.2-0.4 mm hoch. Rand zuerst hochgewölbt, später abgeflacht zurücktretend, an der oberen Fläche radiär-gestreift, durchscheinend blassbraun, an der Seitenfläche mit einer dünnen, weisslichen Thallusdecke; Discus konkav, bei älteren Apothecien fast flach, olivbraun oder blassbraun. Excipulum im basalen Teil 40-50 µm. an den Seiten 60-75 µm breit, hyalin, in dem äußeren Viertel gelbbraun verfärbt; Hymenium 120-130 µm hoch, hyalin, nur oben gebräunt und hier mit inspersen gelbbraunen Körnchen; Paraphysen meist einfach, 1 µm breit Asci 80-90 x 14-18 µm. mit 8 Sporen, von welchen gewöhnlich nur 6 oder 4 gut entwickelt;Sporen lang elliptisch bis lang eiförmig, mauerförmig geteilt, 30-35 x 9-15 µm

Gyalidea mexicana



Gyalidea mexicana

Gyalidea phyllophila Vězda, Acta Mus. Silesiae, Ser. A 22: 89 (1973)
= *Phyllogyalidea phyllophila* (Vězda) Lücking & Aptroot, in Lücking, Fl. Neotrop., Monogr. 103: 382 (2008)

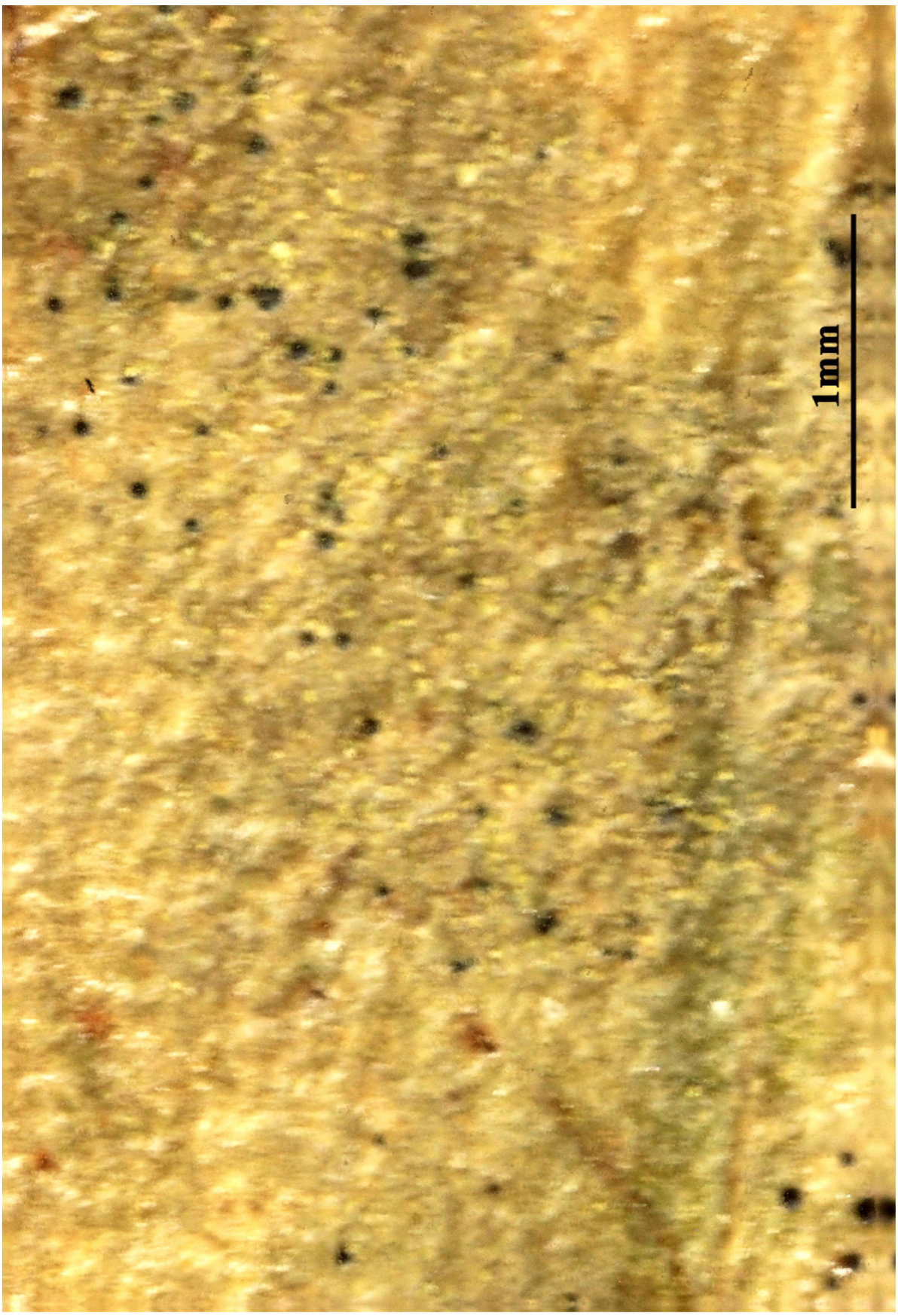
[VZ1569], URSS. Transcaucasus, Colcchis. Distr. Sochi, in valle angusta rivi Agva (dextra fluminis Sochi), ad cataractas dictas "Orechovye vodopady), 250 m. Ad folia *Laurocerasus offzcinalis* Roem., Leg. V. Vašák et. A. Vězda, 11.6.1978. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1569.

Die aus der Republik Guinea (W-Afrika) beschriebene und später auch in einer Aufsammlung aus Zaire aufgefundene Art ist auch bei stärkerer Lupenvergrésserung leicht zu iibersehen. Die blassbraunen, urceolaten, durchscheinenden Apothecien sind héchstens 0.3 mm breit; sie sitzen einzeln in der Mitte der runden, dünnen, durchscheinenden Einzelthalli; selten fliessen einige Einzelthalli zusammen. Bei den afrikanischen Pflanzen sind die Sporen 4-zellig, an den Septen eingeschnürt, 15—24 µm lang und 5—7 µm breit, mit im Wasser schleimig aufquellenden Aussenschichten der Membranen, daher unter dem Mikroskop ohne sichtbare Aussenkonturen. Die in der Kolchis gesammelten Pflanzen unterscheiden sich habituell kaum wesentlich von den Typen-Exemplaren; die Apothecien der vorwiegend auf einjahrigen Blättern gesammelten Exemplare sind in der Regel nicht völlig reif und daher durchschnittlich etwas kleiner als beim Typus. Auch die anatomischen Verhältnisse der kolchischen Populationen stimmen mit dem Typus-Material überein; nur bei den Sporen zeigt sich eine Differenz in der Grösse und Septation. In den jungen Asci bilden sich die Anlagen von 8 Sporen; aber oft entwickeln sich nicht alle weiter. Die reifen Asci enthalten dann nur 6, oft auch weniger Sporen, die dementsprechend grösser und reichlich septiert sind. Die meisten Sporen sind typisch nur querseptiert bei den extrem grossen, in geringerer Zahl sich im Ascus bildenden, kann eine von den mittleren Zellen auch einmal längstgeteilt sein. Anhliche Unregelmissigkeiten in der Sporenbildung kommen nicht nur bei den anderen *Gyalidea*-Arten vor, sondern sind bei den meisten Gattungen der Familie *Asterothyriaceae* bekannt. Sie stellen ein charakteristisches Merkmal der Familie da. Die sich von den typischen Pflanzen durch die iiberwiegend stärker abweichenden Sporen unterscheidenden Populationen kann man taxonomisch als Varietidten auswerten, wie es z.B. bei *Gyalidea lecideopsis* (Massar.) Lerr. der Fall ist. Die Abweichungen einer geringeren Zahl der Sporen, z.B. bei der

oben behandelten *Gyalidea phyllophila*, liegen aber in der Varlablltat der Art. In der Kolchis bevorzugt die Art halbbeschattete Blätter von *Laurocerasus officinalis*. Sie ist an sehr hohe Luftfeuchtigkeit gebunden. An allen Fundorten wächst sie auf über den Wasserspiegel hingenden Blättern in sehr engen, felsigen Bachschluchten mit geschlossener Kronendecke. Sehr selten wurde sie auf den Bättern von *Buxus colchica*, *Ilex colchica* und *Rhododendron ponticum* gesammelt. Als Begleiflechte wurde nur *Gyalectidium colchicum* Vezda gefunden; an den meisten Fundorten kommt sie jedoch als einzige Art vor.

Gyalidea phyllophila

Gyalidea phyllophila



Gyalidea phyllophila

Gyalidea phyllophila Vězda, Acta Mus. Silesiae, Ser. A 22: 89 (1973)
= *Phyllogyalidea phyllophila* (Vězda) Lücking & Aptroot, in Lücking, Fl. Neotrop., Monogr. 103: 382 (2008)

[VZ1679], URSS. Transcaucasia, Colchis. Distr. Adler,in faucibus rivi Psacho sub vicum Kamenka, 200 m. Ad folia *Laurocerasi officinalis*. Leg. V. Vašák et A. Vězda, 21.6.1979. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1679.

Die aus der Republik Guinea (W-Afrika) beschriebene und später auch in einer Aufsammlung aus Zaire aufgefundene Art ist auch bei stärkerer Lupenvergrésserung leicht zu iibersehen. Die blassbraunen, urceolaten, durchscheinenden Apothecien sind héchstens 0.3 mm breit; sie sitzen einzeln in der Mitte der runden, dünnen, durchscheinenden Einzelthalli; selten fliessen einige Einzelthalli zusammen. Bei den afrikanischen Pflanzen sind die Sporen 4-zellig, an den Septen eingeschnürt, 15—24 µm lang und 5—7 µm breit, mit im Wasser schleimig aufquellenden Aussenschichten der Membranen, daher unter dem Mikroskop ohne sichtbare Aussenkonturen. Die in der Kolchis gesammelten Pflanzen unterscheiden sich habituell kaum wesentlich von den Typen-Exemplaren; die Apothecien der vorwiegend auf einjahrigen Blättern gesammelten Exemplare sind in der Regel nicht völlig reif und daher durchschnittlich etwas kleiner als beim Typus. Auch die anatomischen Verhältnisse der kolchischen Populationen stimmen mit dem Typus-Material überein; nur bei den Sporen zeigt sich eine Differenz in der Grösse und Septation. In den jungen Asci bilden sich die Anlagen von 8 Sporen; aber oft entwickeln sich nicht alle weiter. Die reifen Asci enthalten dann nur 6, oft auch weniger Sporen, die dementsprechend grösser und reichlich septiert sind. Die meisten Sporen sind typisch nur querseptiert bei den extrem grossen, in geringerer Zahl sich im Ascus bildenden, kann eine von den mittleren Zellen auch einmal längstgeteilt sein. Anhliche Unregelmissigkeiten in der Sporenbildung kommen nicht nur bei den anderen *Gyalidea*-Arten vor, sondern sind bei den meisten Gattungen der Familie *Asterothyriaceae* bekannt. Sie stellen ein charakteristisches Merkmal der Familie da. Die sich von den typischen Pflanzen durch die iiberwiegend stärker abweichenden Sporen unterscheidenden Populationen kann man taxonomisch als Varietidten auswerten, wie es z.B. bei *Gyalidea lecideopsis* (Massar.) Lerr. der Fall ist. Die Abweichungen einer geringeren Zahl der Sporen, z.B. bei der oben behandelten *Gyalidea phyllophila*, liegen aber in der Varlablllat

der Art. In der Kolchis bevorzugt die Art halbbeschattete Blätter von *Laurocerasus officinalis*. Sie ist an sehr hohe Luftfeuchtigkeit gebunden. An allen Fundorten wächst sie auf über den Wasserspiegel hingenden Blättern in sehr engen, felsigen Bachschluchten mit geschlossener Kronendecke. Sehr selten wurde sie auf den Bättern von *Buxus colchica*, *Ilex colchica* und *Rhododendron ponticum* gesammelt. Als Begleiflechte wurde nur *Gyalectidium colchicum* Vezda gefunden; an den meisten Fundorten kommt sie jedoch als einzige Art vor.

Gyalidea phyllophila

Gyalidea phyllophila

Gyalidea phyllophila

Gyalidea phyllophila

Gyalideopsis alnicola W.J. Noble & Vězda, Folia geobot. phytotax. 14(1): 62 (1979)

[VZ2432], Norvegia. Sör-Tröndelag, Klaebu, Skjöla, 220 m. In ramulis tenuibus *Piceae exccelsae*. Leg. T. Tönsberg (10763), 30.4.1988. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1432.

Thallus crustose, thinly episubstratic, smooth, whitish grey to greenish grey, ecorticate, not sharply delimited, without a distinct prothallus. Hyphophores rare, scale-like or shortly stalked, erect, fan-shaped, whitish to dark brown, 0.3-0.35 mm high and up to 0.15-0.25 mm wide in upper part. Apothecia usually frequent, scattered, round or irregularly wavy in outline, 0.1-0.3(-0.5) mm across, 0.2-0.3 mm high, sessile and strongly constricted at base, with an initially urceolate, then slightly concave, dark red-brown disc and a raised, entire or radially split, black, finally often thin and almost excluded proper margin. Proper exciple 70-80 µm wide laterally, red-brown in outer part, colourless within, of loosely anastomosing hyphae embedded in a gelatinous matrix; epithecium olive-brown, c. 20 µm high; hymenium colourless, (50-)60-75(-80) µm high; paraphyses c. 1 µm thick, simple or richly branched and anastomosing in upper part; hypothecium colourless, c. 10 µm high. Asci (2-)4-6(-8)-spored, cylindrical-clavate, thin-walled, apically thickened, the wall I-, the contents K/I+ reddish. Ascospores with up to 5 transverse septa and (0-)1 longitudinal septum, hyaline, ellipsoid to fusiform, straight or slightly curved, (12-)15-20 x 4.5-6(-7) µm. Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: this species has been previously reported from Calabria as G. alnicola, collected on twigs of *Abies* in a damp forest. However, according to Tønsberg, this species is a juvenile *G. piceicola* with whitish hyphophores, based on his observations in the Pacific Northwest of North America (from where *G. alnicola* was described): well-developed specimens often occur together with a mixture of young and white and mature and brown hyphophores.

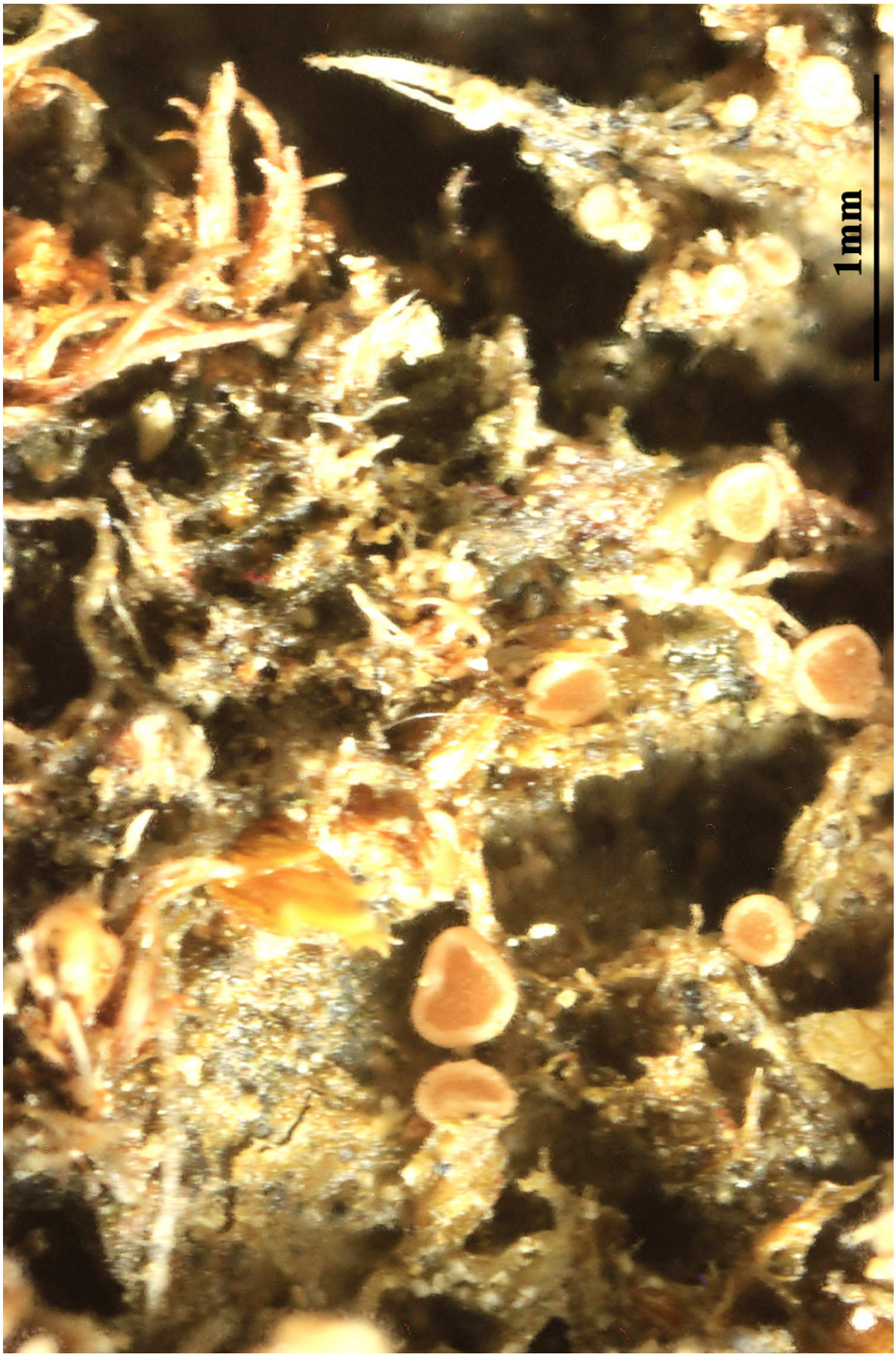
Gyalideopsis alnicola

Gyalideopsis alnicola

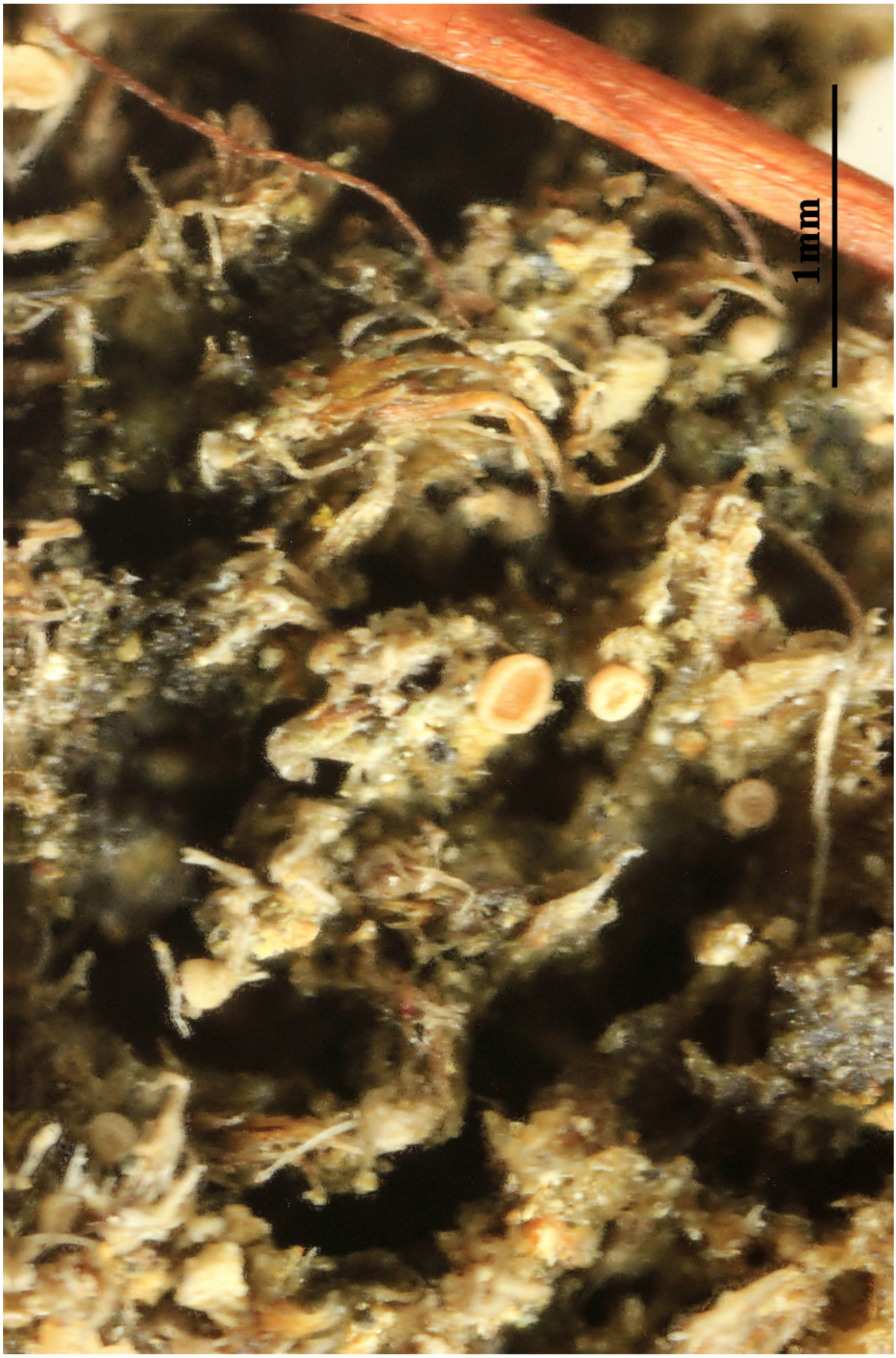
Gyalideopsis kalbii Vězda, Mitt. bot. StSamml., Münch. 19: 153 (1983)

[VZ1965], Brasilia, São Paulo, Ilha de São Sebastiãno, 130 km ad orientem versus São Pãulo, ad latera orientalia montis Morro das Tacas, 500 m. Ad terram et plantas destructas in fossis viae in silva montana. Leg. K. Kalb et J. Poelt, 7.7.1979. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1965.

Tha1lus crustaceus, tenuis, muscos parvos partim emortuos obtegens vel supra terram nudam cresens, cinereus, vulgo autem haud visibilis, hyphophoris albidis vel subfuscis instructus; hyphophori setiformes, 0.5-0.8 mm alti, 0.01-0.05 mm crassi, apicibus capitatis, capitibus usque 0.15 mm crassis. Alga ad Chlorococcaceas pertinen, cellulis globosis vel late ellipsoideis, viridibus, membranis tenuibus. Apothecia crebra, (0.2)-0.4-0.5 mm lata, 0.2-0.3 mm alta, dispersa vel conferta vel dense aggregata, orbicularia vel mutua pressione difformia, basi arcte constricta substppitataque. Discus convavus vel planus , albidus vel pallide rsaceus, nudus vel dilute lbo-pruinosus. Margo persistenter elevatus, tenuis, albidus integer. Excipulu, hyalinum in apozheciis bene evolutis c. 60-70 µm crassum. Hymenium totum hyalinum, 80-90 µm altum. Hypothecium indistibcte limitatum, hyalinum. Paraphyses densae, tubulis 1 µm crassis, flexuosae, crebre ramosae anastomosantesque, Asci cylindrico clavati, basi attenuati substipitatique, 4-6-8-spori. Sporae ellipsoideaevel ovoideae, mrali-divisae, septae transversalibus 3. longitudinalibus 1-2, ad septa constrictae. 15-20 µm longae, 8-10 µm crassae.



Gyalideopsis kalbii



Gyalideopsis kalbii

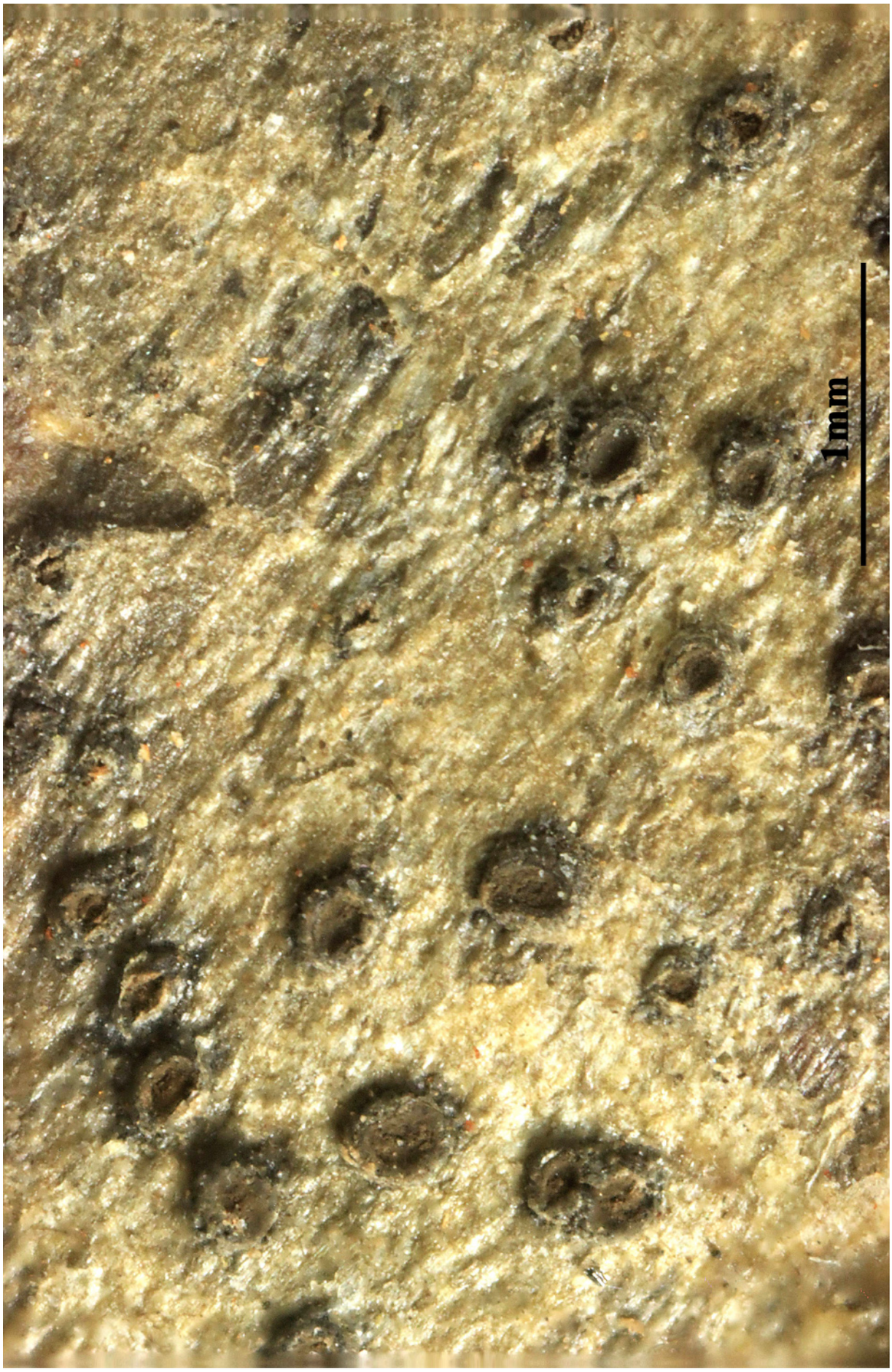
Gyrostomum scyphuliferum (Ach.) Nyl., Annls Sci. Nat., Bot., sér. 4 16: 96 (1862)
= *Glyphis scyphulifera* (Ach.) Staiger, Biblthca Lichenol. 85: 175 (2002)
= *Lecidea scyphulifera* Ach. 1814

[VZ1991], USA. Lousiana, East Baton Rouge paroecia, Essen Lane, Baton Rouge, Burden Research Plantation. Ad corticem arborum. Leg. S. C. Tucker (no. 14159), 31.5.1975. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1991.

Thallus crustose, whitish, yellowish or brownish; vegetative diaspores absent. Photobiont trentepohlioid alga. Ascomata apothecoid, round, sessile, constricted at base; exipular rim black, covered by thallus; disk brownish, sunken. Exciple entirely carbonized, with crystals on lateral edges. Hymenium hyaline, not inspersed, 90-130 µm high, I+ faint violet or grey-blue; epihymenium dark brown. Paraphyses ~1-1.5 µm thick, with gelatinous layer, anastomosing and branching in the lateral part of the hymenium; tips with many short side branches, slightly thickened and pigmented. Asci 6-8-spored; ascospores hyaline to somewhat brownish, muriform, 30-45 × 12-16 µm, young spores often with gelatinous envelope (perispore). Chemistry: No substances detected by TLC; spores I+ blue-violet. Substrate and Habitat. Corticolous on hardwood trees. Distribution. Pantropical, north to eastern North America; in North Carolina found in Coastal Plain ecoregion.

Literature:
Acharius, E. (1814) Synopsis Methodica Lichenum. Lund. 392 pp (original description as Lecidea scyphulifera).
Staiger B. (2002) Die Flechtenfamilie Graphidaceae. Studien in Richtung einer natürlicheren Gliederung. Bibliotheca Lichenologica 85: 1–526.

Gyrostomum scyphuliferum

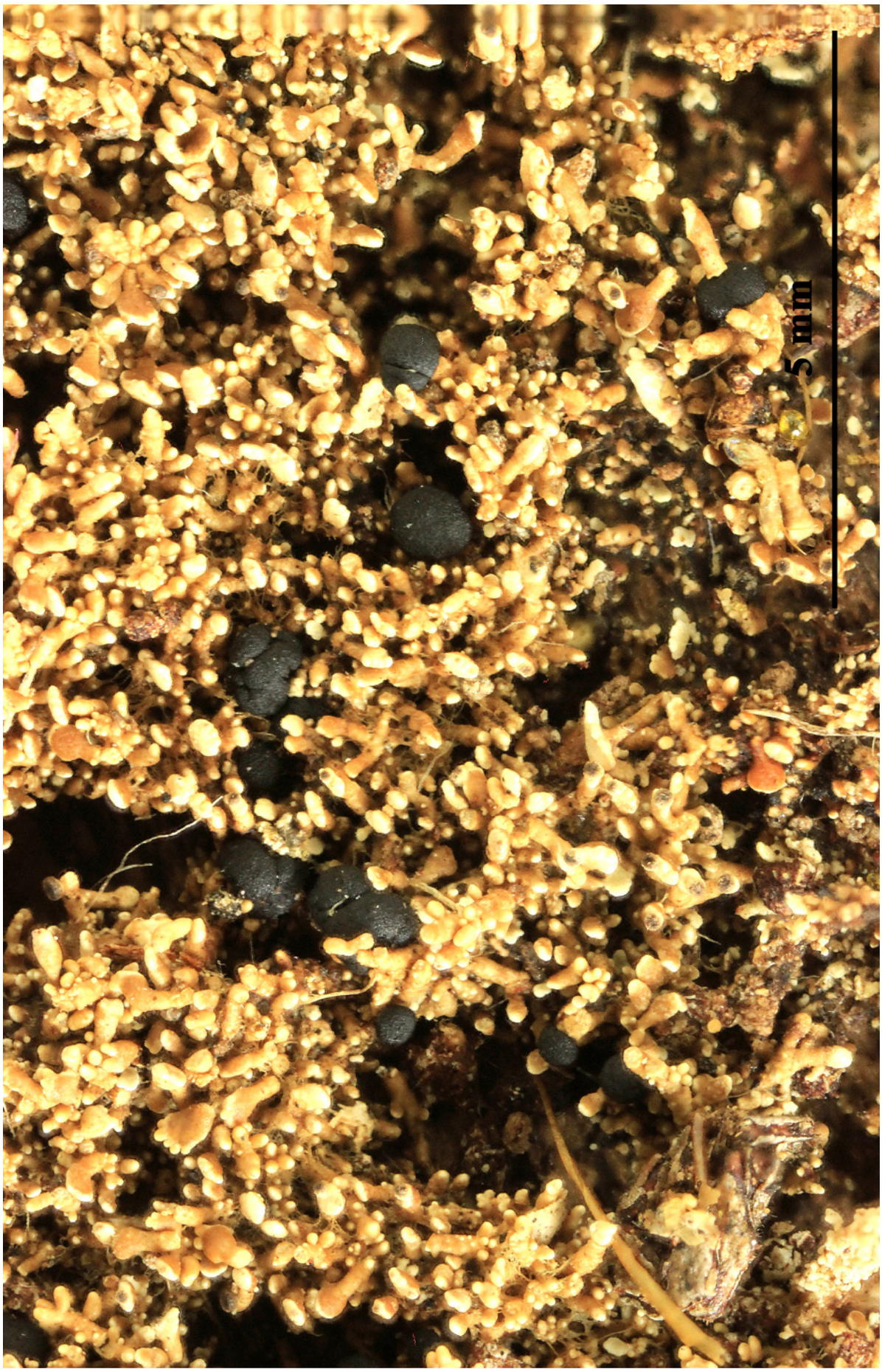


Gyrostomum scyphuliferum

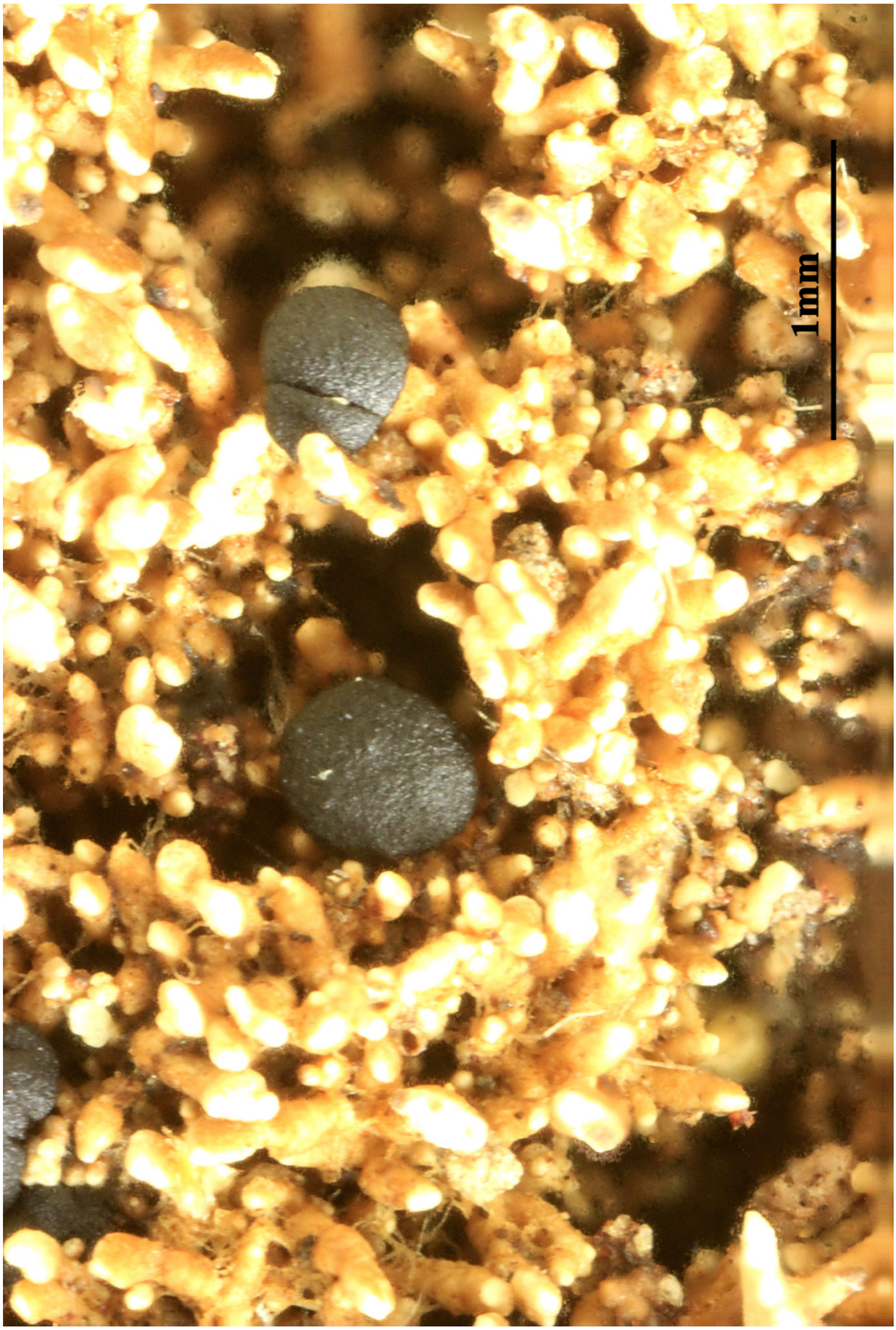
Gymnoderma melacarpum (F. Wilson) Yoshim., J. Jap. Bot. 48(9): 287 (1973)
= *Phyllis melacarpa* F. Wilson 1889
= *Neophyllis melacarpa* (F. Wilson) F. Wilson, J. Linn. Soc., Bot. 28: 372 (1891)

[VZ2020], Australia, Tasmania. Strathgordon Rd. , prope Boyd River, 400 m. Ad lignum putridum arboris (*Eucalyptus obliqua*) in pluviisilva. Leg. G. Kantvilas (no. 493/84), 28.2.1984. Ex A. VěZDA Lichenes Selecti Exsiccati Nr. 2020.

Primary thallus to 1.5 mm tall and c. 0.5 mm wide, small, squamulose, sublinear, irregularly to pinnately lobed, pale greenish brown to olive-green above, cream or yellowish brown below. Lobes rounded at apex, sinuous at margins. Lobules often developing from upper surface or margins. Podetia on primary squamules, to 3 mm tall, simple, slender, usually very dense, cylindrical, sometimes distinctly flattened. Apothecia to 1 mm wide, on podetial tips, sometimes sunk below level of clustered primary thalli; disc convex to hemispheric, shining, blackish brown to black; exciple thin, becoming obscured. Ascospores ellipsoidal, 5–13 × 4–7 µm. CHEMISTRY: K-, KC-, P± red. Fumarprotocetraric melacarpic and grayanic acids (major), congrayanic and 4-0-demethylgrayanic acids (minor). Occurs in south-eastern Australia and Tasmania. - A common and characteristic species of rotting logs and tree bases in wet sclerophyll forests up to 1300 m.



Gymnoderma melacarpum



Gymnoderma melacarpum

Gymnoderma lineare (A. Evans) Yoshim. & Sharp, Am. J. Bot. 55: 639 (1968)
= *Cladonia linearis* A. Evans Bryologist 59:1947
= *Cetradonia linearis* (A. Evans) J.C. Wei & Ahti, Lichenologist 34(1): 25 (2002)

[VZ1694], USA. Tennesee. Sevier County: In monte dicto Clingmans Dome. Ad terram super petras in silva (*Picea Abies*). Leg. W. B. Schofield (no. 10514), 21.7.1959, det. W. L. Culbersin, - Annot.: Atranorin, probably prtolichesteinic acid as the major fatty acid, lichesterinic acid (trace), and protolichesterinic acid by TLC; anal. A. Johnson et C. F. Culberson. - Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1694.

Cetradonia linearis is a fruticose species that grows on rock outcrops and boulders and is narrowly endemic to the southern Appalachians. This species is threatened by habitat degradation due to invasive tree pests, climate change and resource extraction. The Rock Gnome Lichen looks like patches of small green fingers (squamules) growing out from rock outcrops and boulders. It is often fertile and bears black apothecia at the ends of the podetia. The podetia are solid, and occasionally branched.

Gymnoderma lineare

Gymnoderma lineare

Haematomma nemetzii J. Steiner, in Fritsch, Denkschr. Kaiserl. Akad. Wiss. Wien, Math.-Naturwiss. Kl. 68: 230, tab. I, fig. 4, a-c (1899)

[VZ1355], Bulgaria. Pontus distr, Burgas: in ripa sinistra fluminis Ropotamo in vicinitate maris, 30 m. Ad saxa granitica. Leg. A. Kiszely et A. Vězda, 18.8.1975. annot. from B. Staiger: Atranorin, Roccellsäure, Russulon, Psoromsäure, 2'-O-Demethylpsoromsäure. - . Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1355.

Thallus crustose, episubstratic, rimose-areolate, 0.3-1 mm thick, whitish, yellowish white or pale grey-brown, usually delimited by a whitish prothallus, the areoles flat or irregularly convex, often forming large patches. Apothecia lecanorine, up to 2.5 mm across, round to irregular in outline, at first slightly immersed in the thallus, later subsessile, rarely constricted at base, with an orange-red to blood-red, epruinose, flat to finally convex disc, and a smooth to verruculose, finally rarely excluded thalline margin. Proper exciple thin, usually not visible externally; epithecium red-brown, K+ violet-red; hymenium pale yellowish, rarely colourless, 150-180 µm high, the pigmented parts K/I+ blue; paraphyses branched and anastomosing, c. 1 µm thick at base, the apical cells slightly wider; hypothecium thick, more or less colourless. Asci 8-spored, clavate, with an amyloid apical dome, approaching the Lecanora-type. Ascospores 3-4(-7)-septate, hyaline, fusiform, pointed at both ends but often thicker at one end, straight or curved, 27-42(-50) x 5-8 µm. Pycnidia bright orange-red, immersed or slightly projecting in small thalline warts, up to 0.3 mm wide. Conidia strongly curved, 13-22 x 0.8-1(-1.5) µm. Photobiont chlorococcoid. Spot tests: cortex K+ pale yellow, C-, KC-, P+ pale yellow. Chemistry: thallus with atranorin, sometimes with additional psoromic acid. Apothecia with anthraquinones (nemetzone). - Note: a mainly eastern Mediterranean species known from Croatia, Greece, Cyprus, Turkey, Bulgaria and the Ukraine, found on more or less basic siliceous rocks, usually below the montane belt.

Haematomma nemetzii

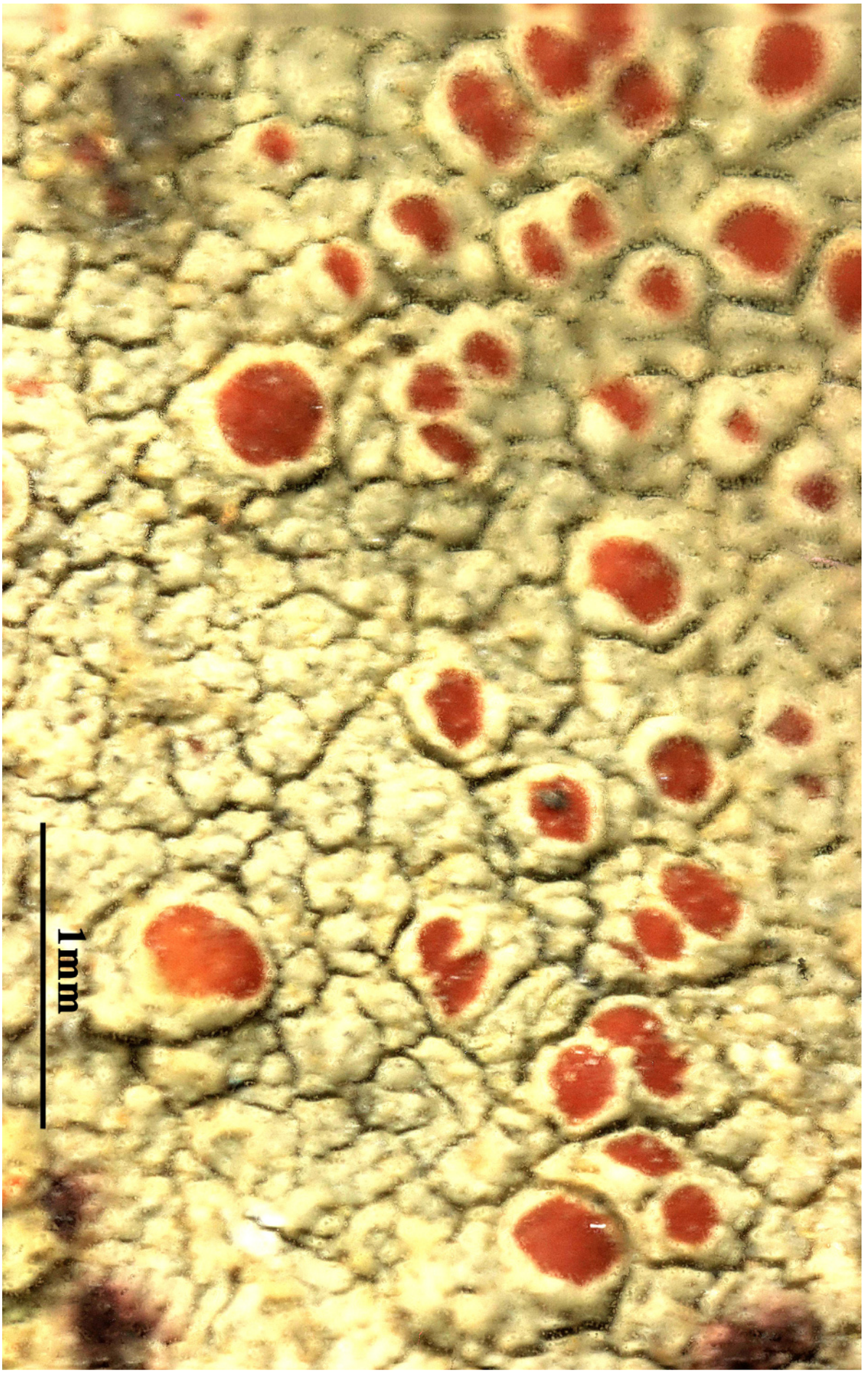
Haematomma nemetzii

Haematomma puniceum (Ach.) A. Massal., Atti Inst. Veneto Sci. lett., ed Arti, Sér. 3 5: 253 (1860) [1859-1860]
= *Parmelia punicea* Ach. 1803

[VZ1628], USA. Louisiana. East Baton Rouge Paroecia. Baton Rouge: Baird Drive, 30°22'45" septentr., 91°07'30" occid. Ad corticem *Carpini carolinianae*. Leg. Shirley C. Tucker (no. 15829), 15.4.1976. - Annot. from B. Staiger: rev as *Haematomma personii*; Atranorin, Sphaerophorin, Isosphaersäure, Russulon, 23.1.1994. - EX A. VěZDA LICHENES SELECTI EXSICCATI NR.1628.

Thallus crustose, thin or thick, smooth and shining or granular-warted or nodular to minutely subsquamulose, ashy white to pale greenish-grey, to 6 cm diam., corticolous. Apothecia common, lecanorine, scattered or crowded, rounded to irregular-indented, sessile or constricted at base, to 3 mm wide, disc concave at first, becoming plane or strongly convex with age, scarlet, to pale flesh-pink, matt, often ± finely white-pruinose, margins thick, persistent, concolorous with thallus, entire or crenulate with rather blunt apices, 1-5(-8)-septate, (19-)25-40(-45) × 3-8 µm. Chemistry: Atranorin and unidentified compounds.

Haematomma puniceum

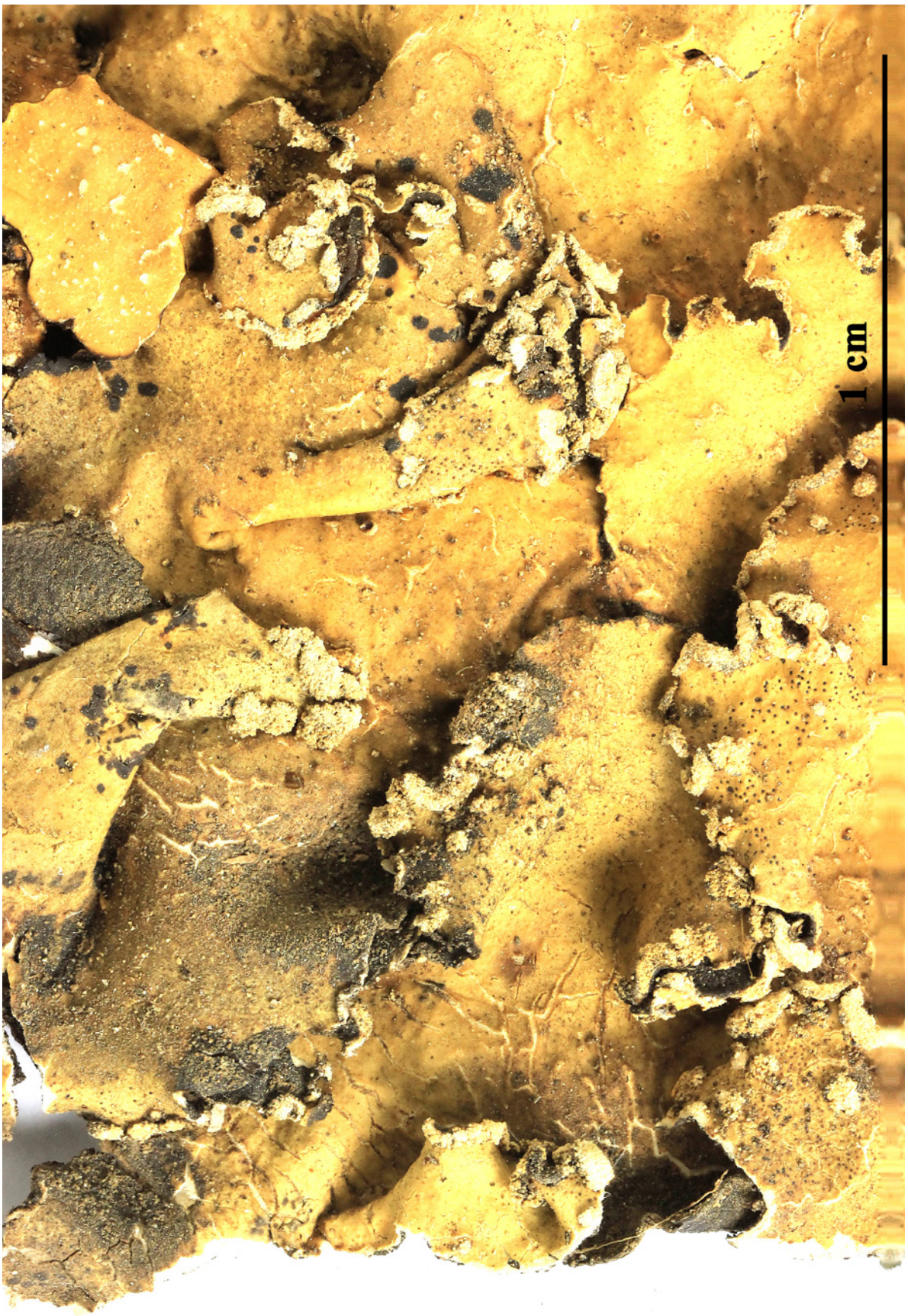


Haematomma puniceum

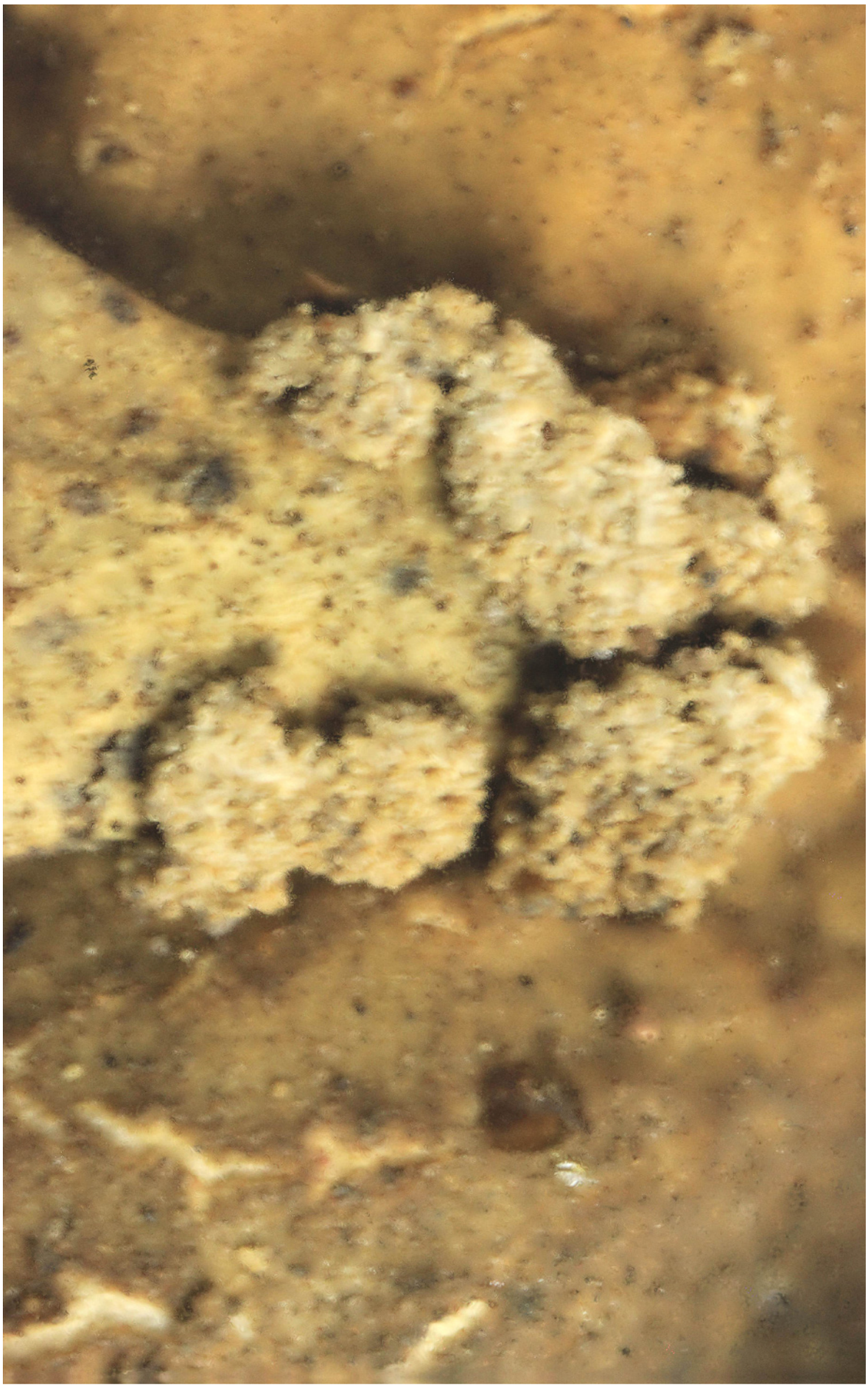
Parmelia flaventior Stirt., Scott. Natural. 4: 254 (1878) [1877-78]
= *Flavopunctelia flaventior* (Stirt.) Hale, Mycotaxon 20(2): 682 (1984)

[VZ1632], Costa Rica. Cartago: 13 km ad septentriones et orientem a Cartago. Ad corticem *Erythrinae crista-galli* secus viam. Leg. W. L. Culberson (no. 16843) et C. F. Culberson, 13.12.1976. - Annot.: Usnic acid, lecanoric acid, and an unidentified aliphatic compound by TLC, anal.: C. F. Culberson and A. Johnson. - . Ex A. VěZDA Lichenes Selecti Exsiccati Nr. 1632.

Thallus foliose, heteromerous, dorsiventral, tightly adnate to weakly appressed, forming 4-13(-20) cm wide rosettes. Lobes 2-6(-9) mm wide, flat, contiguous, greenish yellow, smooth to usually wrinkled to weakly ridged-reticulate, with white, large (to 1 mm), round to slightly elongated pseudocyphellae which give rise to round, laminal or rarely marginal, 0.5-2 mm wide soralia. Lower surface black to dark chestnut brown, paler at margin, with mostly simple, short, dark rhizines, except in the usually paler marginal zone. Upper cortex paraplectenchymatous, with a non-pored epicortex, the cell walls with an intermediate type of lichenan; medulla white; algal layer continuous; lower cortex paraplectenchymatous. Apothecia rare, lecanorine, 2-6 mm across, the disc brown, the margin pseudocyphellate and becoming sorediate. Epithecium brownish; hymenium and hypothecium colourless. Asci 8-spored. Lecanora-type. Ascospores 1-celled, hyaline, ovoid to ellipsoid, 8-13 x 5-7 µm. Pycnidia rare, black, immersed. Conidia bifusiform, 6-10 µm long. Photobiont chlorococcoid. Spot tests: cortex K+ yellowish, KC- or KC+ pale yellow, C-, P-; medulla K- C+ red, KC+ red, P-. Chemistry: cortex with usnic acid (minor) and rarely traces of atranorin; medulla with lecanoric acid (major). - Note: a species of rather continental areas, found on more or less isolated deciduous trees, most frequent in dry Alpine valleys.



Parmelia flaventior

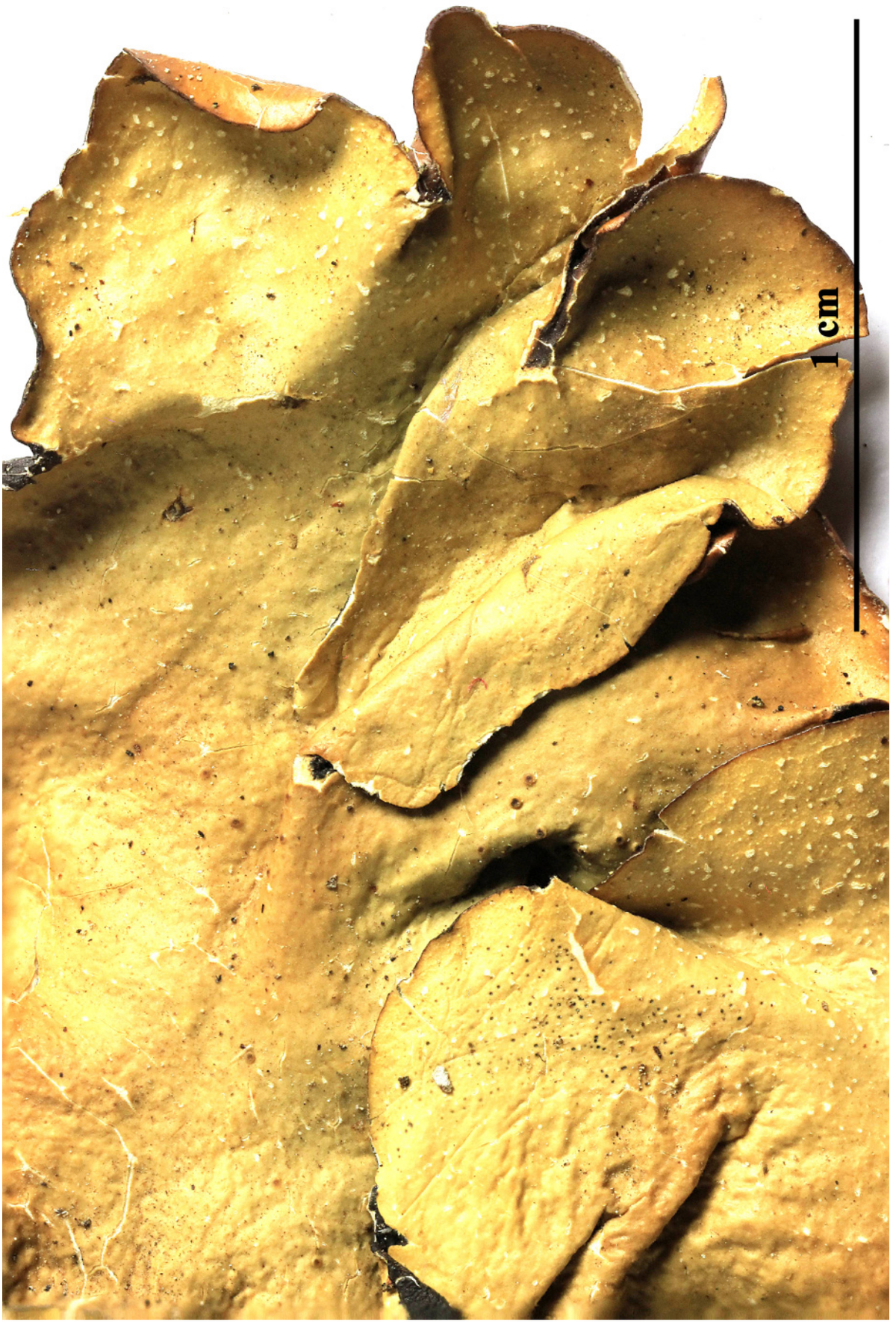


Parmelia flaventior

Parmelia flaventior Stirt., Scott. Natural. 4: 254 (1878) [1877-78]
= *Flavopunctelia flaventior* (Stirt.) Hale, Mycotaxon 20(2): 682 (1984)

[VZ1539], Mexico. Mexico: 23 km ad meridiem et occidentem versus a Toluca, 3200m. Ad corticem *Alni* sp.. Leg. W. L. Culberson (no. 17095) et C. F. Culberson, 22.12.1976. - Annot.: Usnic acid, lecanoric acid, and an unidentified aliphatic compound by TLC; anal.: C. F. Culberson and A. Johnson. -. Ex A. VěZDA Lichenes Selecti Exsiccati Nr. 1539.

Thallus foliose, heteromerous, dorsiventral, tightly adnate to weakly appressed, forming 4-13(-20) cm wide rosettes. Lobes 2-6(-9) mm wide, flat, contiguous, greenish yellow, smooth to usually wrinkled to weakly ridged-reticulate, with white, large (to 1 mm), round to slightly elongated pseudocyphellae which give rise to round, laminal or rarely marginal, 0.5-2 mm wide soralia. Lower surface black to dark chestnut brown, paler at margin, with mostly simple, short, dark rhizines, except in the usually paler marginal zone. Upper cortex paraplectenchymatous, with a non-pored epicortex, the cell walls with an intermediate type of lichenan; medulla white; algal layer continuous; lower cortex paraplectenchymatous. Apothecia rare, lecanorine, 2-6 mm across, the disc brown, the margin pseudocyphellate and becoming sorediate. Epithecium brownish; hymenium and hypothecium colourless. Asci 8-spored. Lecanora-type. Ascospores 1-celled, hyaline, ovoid to ellipsoid, 8-13 x 5-7 µm. Pycnidia rare, black, immersed. Conidia bifusiform, 6-10 µm long. Photobiont chlorococcoid. Spot tests: cortex K+ yellowish, KC- or KC+ pale yellow, C-, P-; medulla K- C+ red, KC+ red, P-. Chemistry: cortex with usnic acid (minor) and rarely traces of atranorin; medulla with lecanoric acid (major). - Note: a species of rather continental areas, found on more or less isolated deciduous trees, most frequent in dry Alpine valleys.



Parmelia flaventior

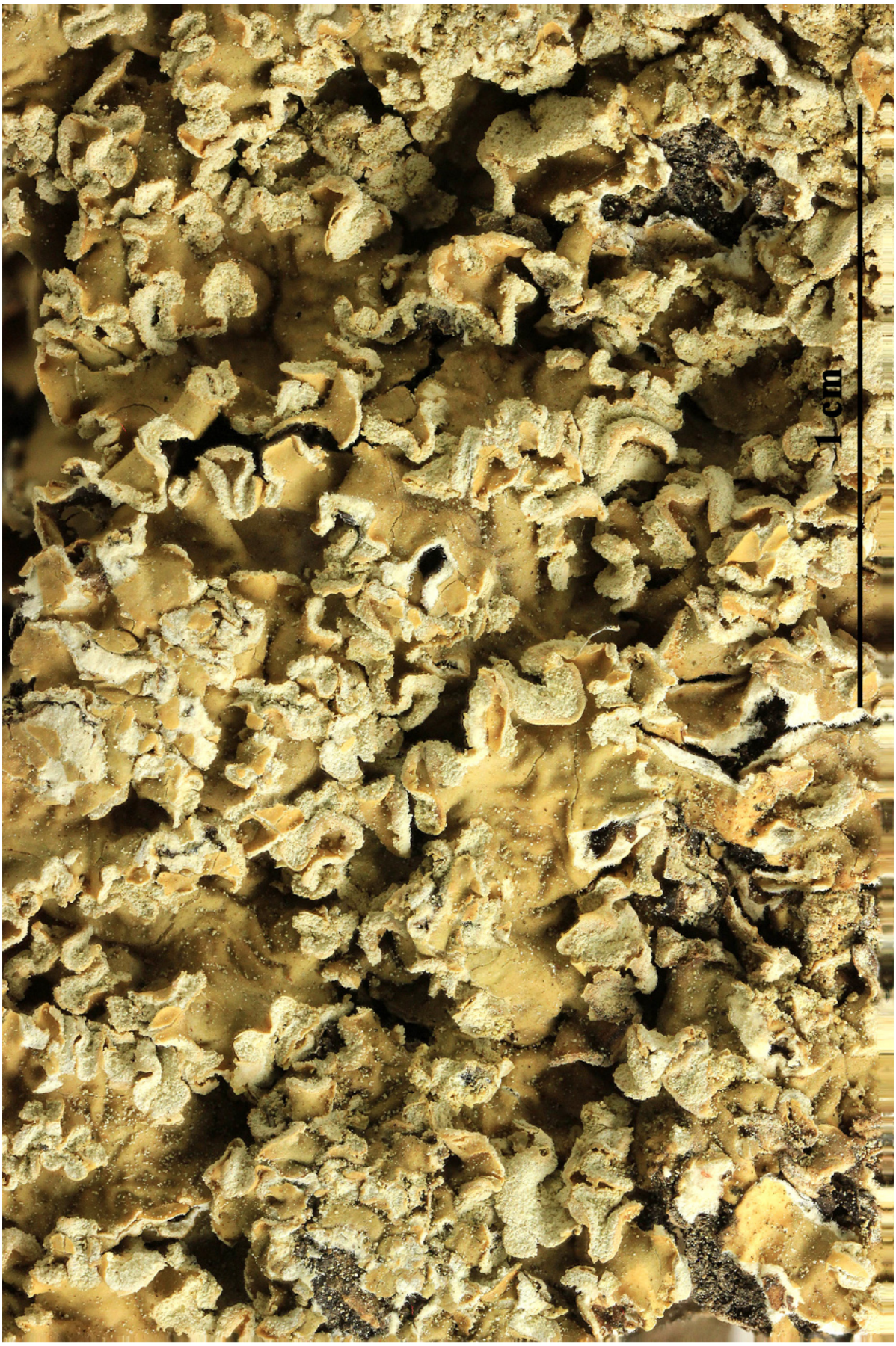
Parmelia flaventior

Parmelia flaventior

Parmelia ulophyllodes (Vain.) Savicz, in Ahlquist, Bull. Jard. Imp. Bot. Pierre le Grand 15: 316 (1915)
= *Parmelia dubia var. ulophyllodes* Vain. 1896

[VZ1688], Mexico. Zacatecas: 23 km ad meridiem et occidentem ab oppido Sombre. Ad corticem *Pini* sp..Leg. W. L. Culberson (no. 17809) et C. F. Culberson. - . Annot.: Usnic acid, lecanoric acid, probable trace of atranorin, and a trace of an unidentified compound by TLC; anal. A. Johnson et C. F. Culberson. - Ex A. VěZDA Lichenes Selecti Exsiccati Nr. 1688.

Thallus foliose, appressed to tightly adnate, to 12 cm wide, lobate; lobes linear, sublinear or subirregular, contiguous or very rarely separate, plane, 3-8 mm (-12 mm in specimens from California Channel Islands) with apices rounded; upper surface pale green, yellowish green to greenish yellow, turning dull yellow to brownish with age in the herbarium, smooth to weakly wrinkled and rugose, rarely weakly ridged-reticulate, frequently with white maculae, rarely with a few marginal laciniae or pruina; pseudocyphellae absent or rare and very small punctiform; soredia white, farinose to granular, covering reflexed, "crescent-shaped" lobe margins or irregularly along the lobe margins, infrequently with laminal soralia; medulla white with a continuous algal layer; lower surface smooth to finely wrinkled, dark chestnut brown to black, sometimes paler toward the margin; rhizines simple, rarely branching, short, concolorous with the lower surface, sometimes with white tips, usually absent in a zone along the margins Apothecia rare (often immature); disc pale to dark rusty-brown; exciple becoming sorediate; asci Lecanora-type, 8-spored; ascospores simple, hyaline, ellipsoid, 9-12 x 57 µm; Pycnidia black, rare or absent; conidia appearing straight filiform or bifusiform, 7-11 µm long; Spot tests: upper cortex K+ yellowish, KC-, C-, P-; medulla C+ red, KC+ red, K-, P-; Secondary metabolites: upper cortex with usnic acid (minor); medulla with lecanoric acid (major), +5-chlorolecanoric acid (minor or trace). Substrate and ecology: on bark and wood of angiosperms (*Acacia*, *Acer*, *Canotia, Ceanothus, Cowania, Fraxinus, Fouquieria, Heteromeles, Juglans, Nolina, Prosopis, Prunus, Quercus, Rhus, Robinia, Salix, Yucca*), conifers (*Abies, Cupressus, Juniperus, Picea, Pinus, Pseudotsuga*) and very rarely on rock from 270-3200 m; World distribution: temperate and boreal areas of North America and southern South America, South Africa, India, Russia.



Parmelia ulophyllodes

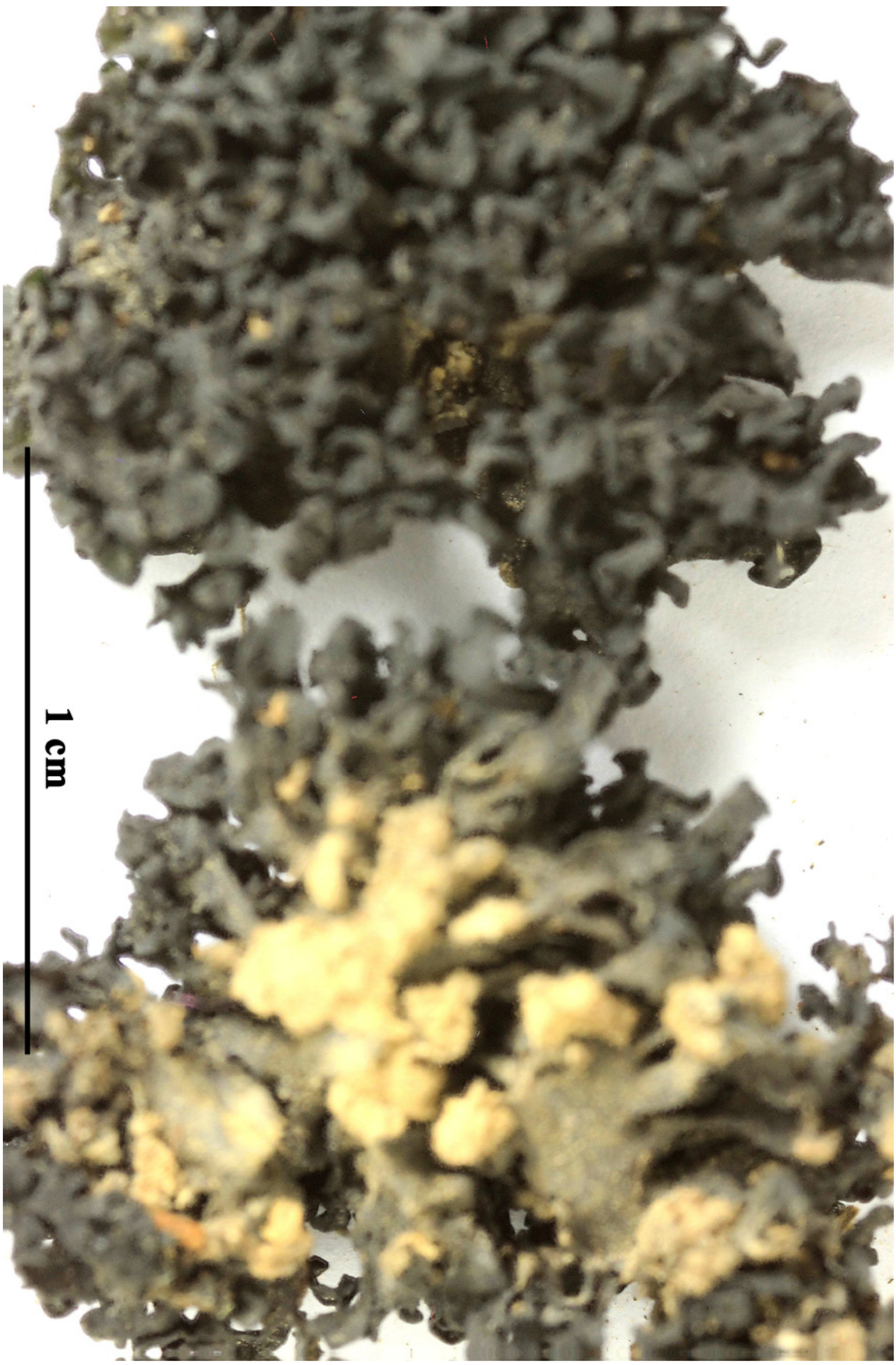
Parmelia ulophyllodes

Thyrea nigritella Lettau, Feddes Repert., Beih. 119(no. 5): 276 (1942)
= *Thallinocarpon nigritellum* (Lettau) P.M. Jørg., in Jørgensen, Tønsberg & Vitikainen, Nordic Lichen Flora, 3, Cyanolichens 3: 145 (2007)
= *Lichinella nigritella* (Lettau) P.P. Moreno & Egea,Cryptogamie, Bryol.-Lichénol., 13: 246, 1992.
= *Gonohymenia nigritella* (Lettau) Henssen.

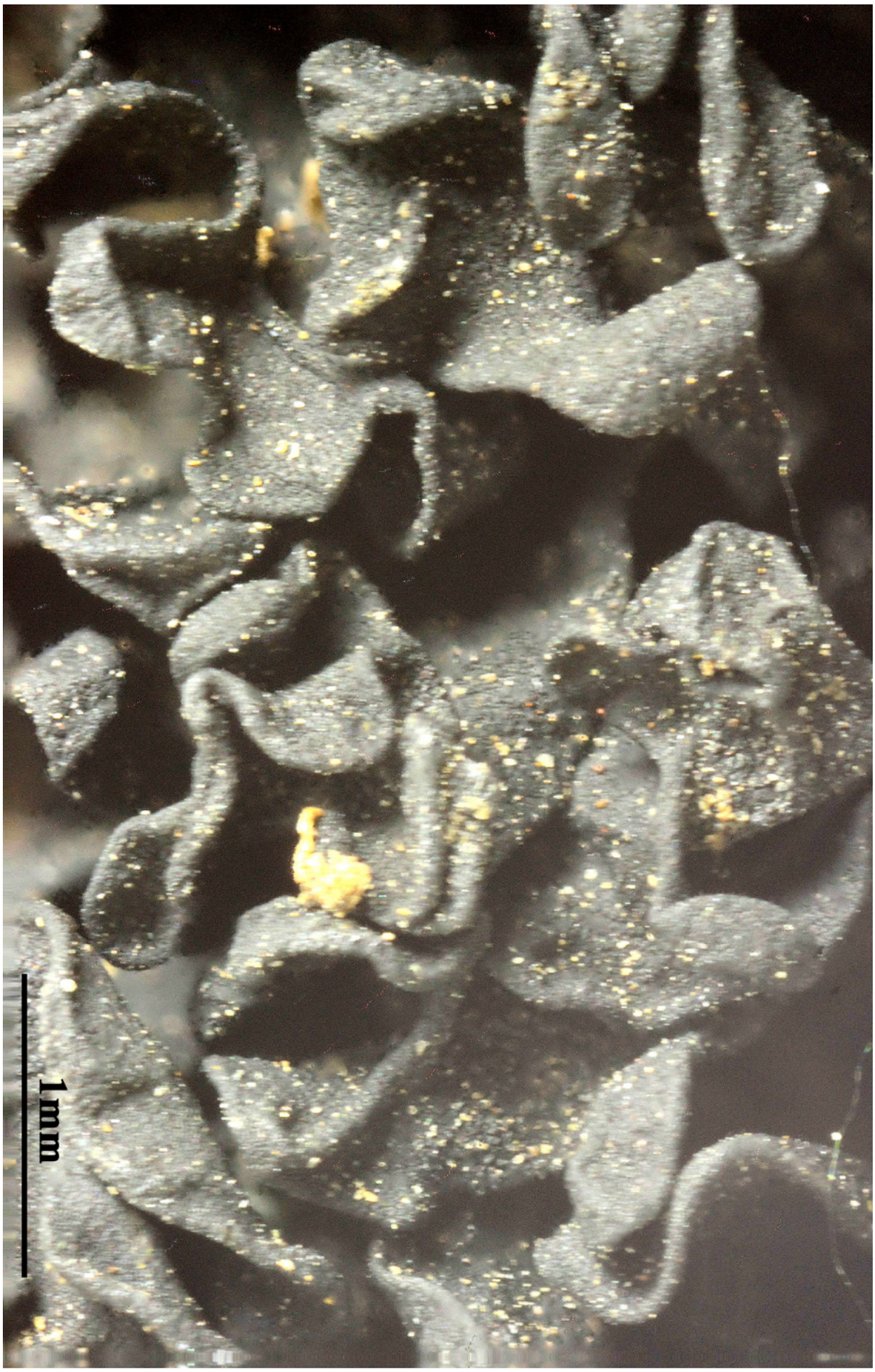
[VZ1105], Romania, Distr. Hunedoara. Secus viam e Deva ad Brad ducentem, prope pagum Formádia, 300 m. Ad saxa andesitica aprica. Leg. I. Pišút et A. Vězda, 8.6.1972. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1105.

Thallus small-foliose to squamulose-umbilicate, polyphyllous, gelatinous when wet, forming regular to irregular, up to 3 cm wide cushions, black, dull to glossy, very rarely with patches of grey pruina, soon covered in minute, globose 0.1-0.3 µm wide isidia, densely lobulate, the lobules at first adpressed, but soon ascending to erect in central parts of thallus, 1-2 mm wide at base and 3-4 mm wide at tips, broadly rounded at first but soon divided, with ascending, thicker margins; lower surface attached by a central holdfast. Thallus 0.2-0.4 µm thick, the outer part 50-70 µm thick, formed by short-celled, mainly anticlinally oriented hyphae enclosing the photobiont cells, the medullary part of loosely to densely arranged (forming a 50-100 µm thick compact strand), 1-2 µm thick hyphae with cylindrical cells, lacking photobionts. Apothecia thallinocarps, hemiangiocarpous, the ascogonia arising freely beneath the thallus surface, rare, marginal to apical, 0.3-0.6 mm across, immersed and difficult to recognize unless when wet, with a rough disc and an up to 50 µm wide, indistinct thalline margin. Proper exciple absent; hymenium 110-150 µm high, separated into partial hymenia by intrusions of wedge-shaped, sterile thalline tissue, covered by a continuous layer of sterile tissue separated by the pore-like discs of the partial hymenia, K/I+ blue turning wine-red; subhymenium hyaline, continuous, 50(-100) µm thick, K/I+ blue. Asci 16-24-spored, subcylindrical to obclavate, prototunicate, with a thin, one-layered, non-amyloid wall, an amyloid external apical cap, and passive spore discharge via apical rupturing, Lichina-type. Ascospores 1-celled, hyaline, broadly ellipsoid, 6-8 x 3-4 µm. Pycnidia rare, globose, immersed. Conidia ellipsoid, 4-5 x 1.5 µm. Photobiont cyanobacterial, chroococcoid, th cells single, measuring 6-12 x 6-10 µm, penetrated by haustoria and surrounded by a brownish gelatinous sheath. Spot tests:

all negative. Chemistry: without lichen substances. - Note: on steeply inclined surfaces of calcareous or base-rich siliceous rocks with water seepage after rain; certainly more widespread in the Alps and in the Apennines.



Thyrea nigritella

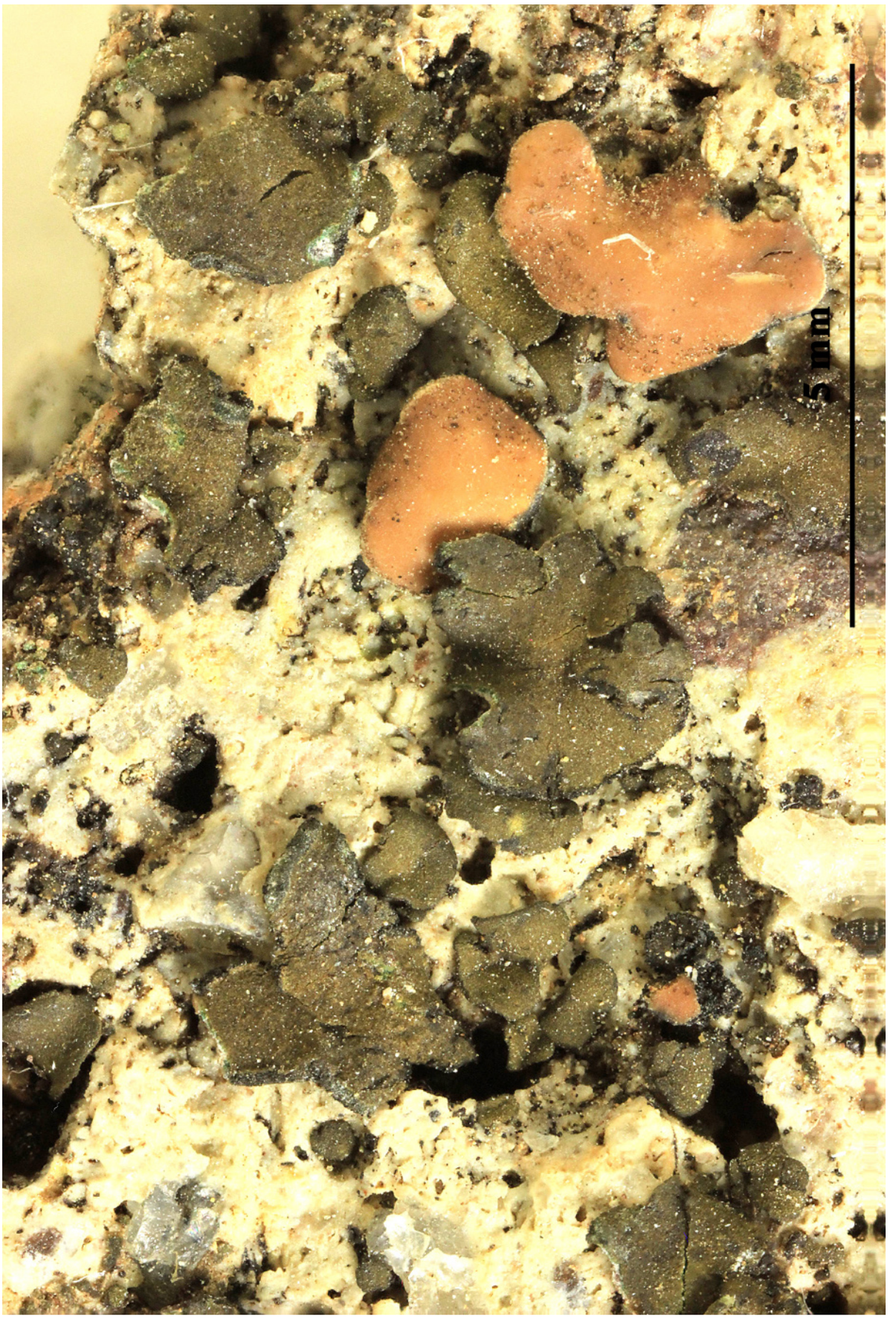


Thyrea nigritella

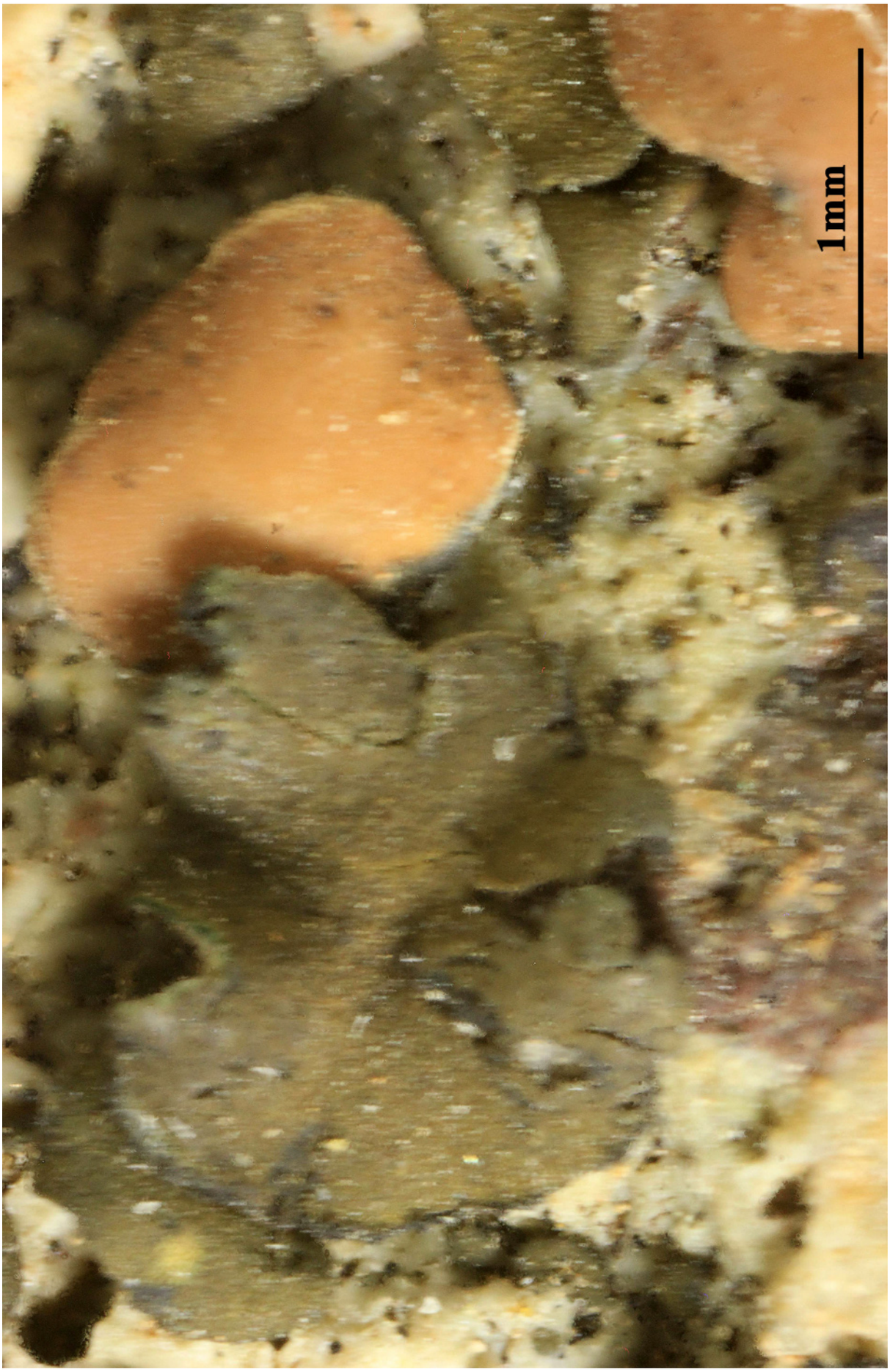
Xanthopsorella llimonae Hertel, Egea & Poelt
= *Glyphopeltis ligustica* (B. de Lesd.) Timdal Mycotaxon, 31: 102, 1988.
= *Psora ligustica* B. de Lesd. - Bull. Soc. Bot. France, 28: 82, 1936.
= *Glyphopeltis eburina* Brusse

[VZ2203], Italia. Sardinia. Prov. Nuoro: scopulum Torre Argentina dictum, prope oppidum Bosa, 5-20 m. Ad saxa eruptiva. Leg. J. Poelt, M. Tretiach et A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2203.

Thallus of peltate, orbicular to irregular, scattered to crowded, cream-coloured to olivaceous brown squamules, starting the life-cycle on the thalli of Peltula-species. Squamules up to 17 mm in diam. and up to 1 mm thick, the upper surface smooth or often cracked, with an undulate margin. Lower surface reddish brown to brown-black, rugose, attached by a central holdfast or by centrally located, thick rhizohyphae. Upper cortex paraplectenchymatous, (45-)100-180 µm thick, often overlain by a thick epinecral layer; medulla white, prosoplectenchymatous, I-; lower cortex poorly developed, of periclinally arranged, dark hyphae. Apothecia lecideine, black, epruinose, rounded or irregular in outline, up to 1.2(-1.8) mm across, marginal or laminal, sessile and slightly constricted at base, with a strongly convex disc and a thin, soon excluded proper margin. Proper exciple of radially arranged hyphae; epithecium blue-green to green, without crystals, N+ purple; hymenium colourless, 40-65 µm high, I+ blue turning reddish; paraphyses simple or sparingly branched and anastomosing, 2-3.5 µm thick at base, the apical cells to 6 µm wide; hypothecium pale brown. Asci 8-spored, clavate, surrounded by a thin gelatinous sheath reacting I+ blue, with an amyloid tholus of finely superimposed layers and a darker tubular structure, approaching the Psora-type. Ascospores 1-celled, hyaline, broadly ellipsoid to subglobose, (6-)8-12(-15) x (4-)5-7.5 µm. Pycnidia globose, hyaline, immersed in the squamules. Conidia straight, bacilliform, 5-8 x c. 1 µm. Photobiont chlorococcoid. Spot tests: cortex and medulla K-, C-, KC-, P-. Chemistry: low amounts of atranorin and an unidentified substance. - Note: on steeply inclined surfaces of siliceous rocks, growing on the thalli of *Peltula*-species in areas with frequent humid maritime winds; much less frequent than its hosts and mostly coastal in Italy.



Xanthopsorella llimonae



Xanthopsorella llimonae

Images of Lichens (Vezda Exsiccat Lichenes Selecti Part 18)