

F. Schumm (2026):

Images of Lichens
Vežda Lichenes Selecti Exsiccati
part 24

With this volume, I continue the documentation of Vezda's works on exiccata, now with Lichenes Selecti as part 24. I have chosen the genus names that Vezda used, even though others are now more common. However, I also include the currently used names in the synonym list and the index. In addition, I have again made every effort to add species descriptions to the detailed information on the labels from the literature.

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

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

F. Schumm, 2026

Ochrolechia balcanica Verseghy, Beih. Nova Hedwigia 1: 85 (1962)

[1336], Jugoslavia. Macedonia, montes Galličica, secundum via inter Trpejca et Otesovo, 1550 m. Ad cortices *Quercuum* vetustarum. Leg. A. Vězda, EX A. VĚZDA: LICHENES SELECTI EXSICCATI NR. 1336

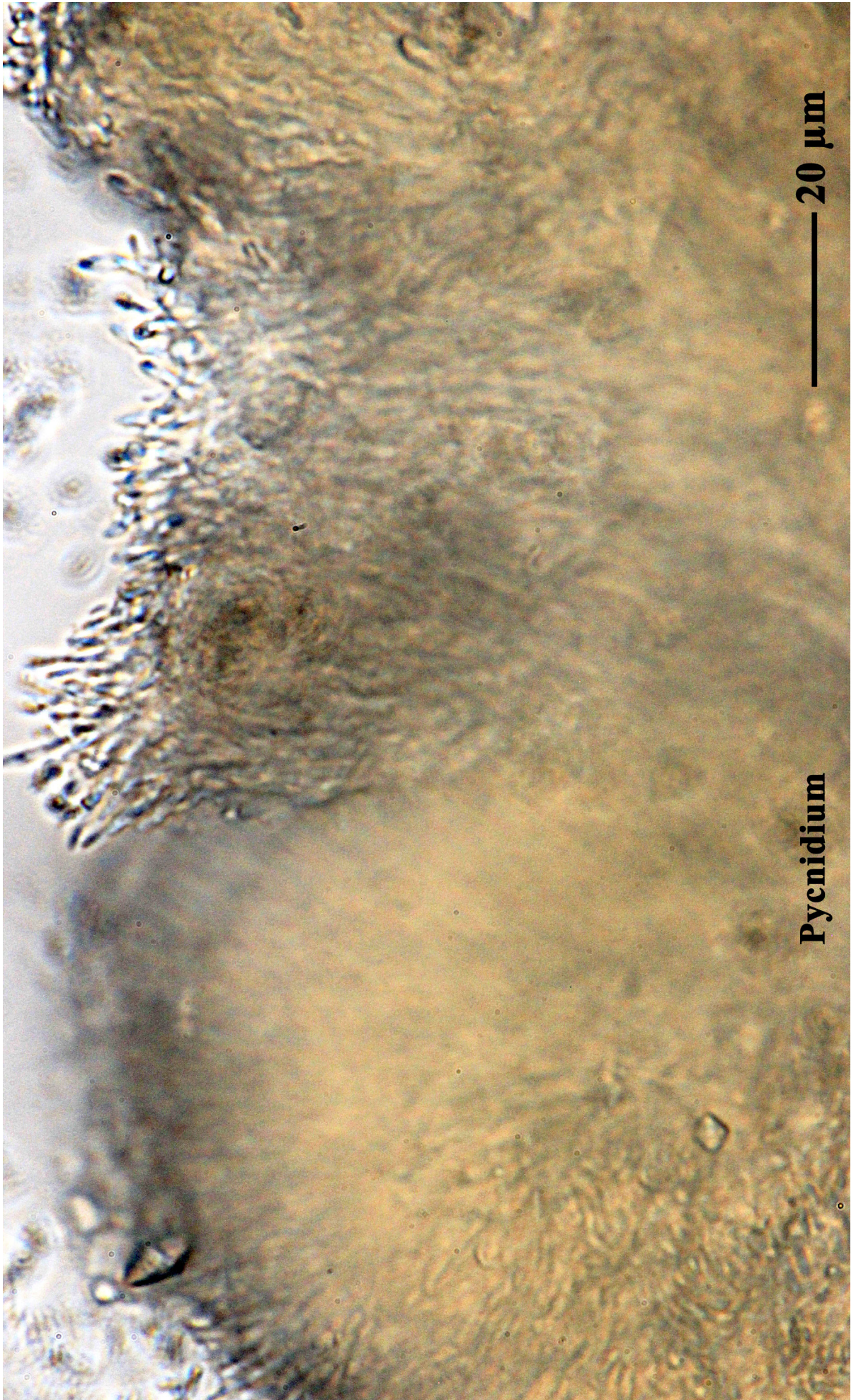
Thallus crustose, episubstratic, white to cream-coloured, smooth to verrucose-tuberculose and uneven, sometimes delimited by a white prothallus, the tubercles regular, small and then usually well separated from one another, or large, swollen, crowded or separated from one another. Apothecia lecanorine, (2-)3-6 mm across, with a pale brown to pale reddish brown, epruinose, slightly concave to flat disc and a thick, prominent, smooth thalline margin. Cortex of the thalline margin well-developed, with a well differentiated medulla; epithecium pale brown, granular, the granules dissolving in K, C+ red; hymenium colourless, 250–320 µm high; paraphyses thin, slender, densely branched and anastomosing; hypothecium colourless to yellowish, underlain by a continuous algal layer. Asci (6-)8-spored with thick, amyloid walls, without recognizable apical structures, Pertusaria-like. Ascospores 1-celled, hyaline, ellipsoid to broadly ellipsoid, (30-)45-63 x 19-32 µm. Pycnidia pale pinkish brown. Conidia cylindrical, straight. Photobiont chlorococcoid. Spot tests: thallus K- or K+ pale yellow, C+ red, KC+ red, P-; MEDulla C-, KC-; disc of apothecia C+ carmine red. Chemistry: gyrophoric acid (major) and lecanoric acid (minor). - Note: common and abundant in humid beech forests of the Apennines, rarer in oak forests of Tyrrhenian Italy. Apparently absent from the Alps, this conspicuous lichen probably belongs, together with species such as *Parmelia submontana* and *Physconia venusta*, to an ancient, pre-glacial, Mediterranean-montane element which is well worthy of further study. It may be confused with *O. tartarea*, which contains the androgyna B unknown 3 substance and 2 fatty acids and has a different ecology.



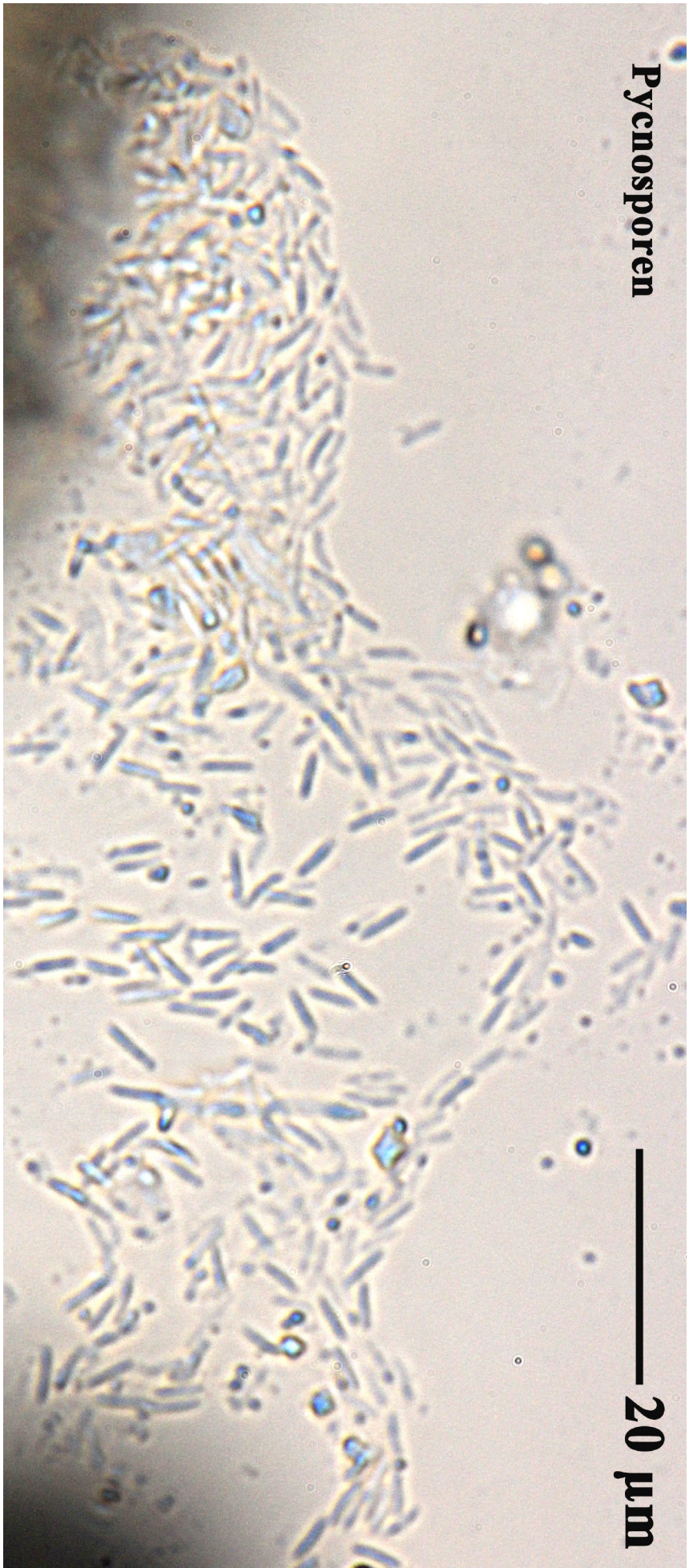
Ochrolechia balcanica



Ochrolechia balcanica



Ochrolechia balcanica



Pycnosporen

— 20 µm

Ochrolechia balcanica

Ochrolechia balcanica Verseghy, Beih. Nova Hedwigia 1: 85 (1962)

[VZ2415], Italia. Sardinia. Prov. Nuoro: Monti del Gennargentu, secus viam inter Fonni et Désulo, 6 km a Fonni, 1100 m. Ad cortocem *Castaneae sativae* vetustae. Leg. P. L. Nimis. C. Roux, M. Tretiach et A. Vězda. EX A. VĚZDA: LICHENES SELECTI EXSICCATI NR. 2415.

Thallus crustose, episubstratic, white to cream-coloured, smooth to verrucose-tuberculose and uneven, sometimes delimited by a white prothallus, the tubercles regular, small and then usually well separated from one another, or large, swollen, crowded or separated from one another. Apothecia lecanorine, (2-)3-6 mm across, with a pale brown to pale reddish brown, epruinose, slightly concave to flat disc and a thick, prominent, smooth thalline margin. Cortex of the thalline margin well-developed, with a well differentiated medulla; epithecium pale brown, granular, the granules dissolving in K, C+ red; hymenium colourless, 250–320 μm high; paraphyses thin, slender, densely branched and anastomosing; hypothecium colourless to yellowish, underlain by a continuous algal layer. Asci (6-)8-spored with thick, amyloid walls, without recognizable apical structures, Pertusaria-like. Ascospores 1-celled, hyaline, ellipsoid to broadly ellipsoid, (30-)45-63 x 19-32 μm . Pycnidia pale pinkish brown. Conidia cylindrical, straight. Photobiont chlorococcoid. Spot tests: thallus K- or K+ pale yellow, C+ red, KC+ red, P-; MEDulla C-, KC-; disc of apothecia C+ carmine red. Chemistry: gyrophoric acid (major) and lecanoric acid (minor). - Note: common and abundant in humid beech forests of the Apennines, rarer in oak forests of Tyrrhenian Italy. Apparently absent from the Alps, this conspicuous lichen probably belongs, together with species such as *Parmelia submontana* and *Physconia venusta*, to an ancient, pre-glacial, Mediterranean-montane element which is well worthy of further study. It may be confused with *O. tartarea*, which contains the androgyna B unknown 3 substance and 2 fatty acids and has a different ecology.



Ochrolechia balcanica



Ochrolechia balcanica

- Ochrolechia frigida*** (Sw.) Lynge, Rep. Sci. Res. Norweg. Exped. Novaya Zemlya, 1921 43: 182 (1928)
- = *Isidium frigidum* (Sw.) Ach., K. Vetensk-Acad. Nya Handl. 15(3): 182 (1794)
- = *Isidium gonatodes* (Ach.) Ach., Methodus, Sectio prior (Stockholmiæ): 137 (1803)
- = *Lecanora frigida* (Sw.) Johnson, in Smith & Sowerby, Engl. bot., Edn 2 10: 90 (1843)
- = *Lecanora pallescens* var. *frigida* (Sw.) Branth & Rostr., Bot. Tidsskr. 3: 202 (1869)
- = *Lecanora tartarea* f. *frigida* (Sw.) Nyl., Lich. Lapp. Orient.: 135 (1866)
- = *Lecanora tartarea* f. *gonatodes* (Ach.) Nyl., Lich. Lapp. Orient.: 135 (1866)
- = *Lecanora tartarea* var. *frigida* (Sw.) Ach., Lich. Univ.: 372 (1810)
- = *Lecanora tartarea* var. *gonatodes* (Ach.) Ach., Lich. Univ.: 372 (1810)
- = *Lichen frigidus* Sw., Method. Muscor. Illustr. (Upsaliae): 36 (1781)
- = *Lichen gonatodes* Ach., Lich. suec. prodr. (Linköping): 89 (1799) [1798]
- = *Lichen tartareus* var. *frigidus* (Sw.) Wahlenb., Fl. lapp.: 403 (1812)
- = *Lichen tartareus* var. *gonatodes* (Ach.) Wahlenb., Fl. lapp.: 403 (1812)
- = *Ochrolechia frigida* f. *gonatodes* (Ach.) Lynge, Rep. Sci. Res. Norweg. Exped. Novaya Zemlya, 1921 43: 183 (1928)
- = *Ochrolechia frigida* f. *lapuensis* (Vain.) Coppins [as 'lapuënsis'], in Corner, Trans. Bot. Soc. Edinb., 150th anniversary supplement 43: 312 (1981)
- = *Ochrolechia frigida* var. *lapuensis* (Vain.) Räsänen, Ann. Acad. Sci. fenn., Ser. A 34(no. 4): 93 (1931)
- = *Ochrolechia gonatodes* (Ach.) Räsänen, Die Flecht. Estl. 1: 93 (1931)
- = *Ochrolechia lapuensis* (Vain.) Räsänen [as 'lapuënsis'], Die Flecht. Estl. 1: 93 (1931)
- = *Ochrolechia tartarea* f. *frigida* (Sw.) Körb., Parerga lichenol. (Breslau) 1: 92 (1859) [1865]
- = *Ochrolechia tartarea* f. *gonatodes* (Ach.) Arnold, Verh. Kaiserl.-Königl. zool.-bot. Ges. Wien 30: 125 (1881) [1880]
- = *Ochrolechia tartarea* var. *frigida* (Sw.) Körb., Parerga lichenol. (Breslau) 1: 92 (1859) [1865]
- = *Ochrolechia tartarea* var. *gonatodes* (Ach.) Vain., Meddn Soc. Fauna Flora fenn. 6: 175 (1881)
- = *Ochrolechia tartarea* var. *lapuensis* Vain. [as 'lapuënsis'], in Räsänen, Meddn Soc. Fauna Flora fenn. 46: 163 (1921)
- = *Parmelia tartarea* var. *frigida* (Sw.) Ach., Methodus, Sectio post. (Stockholmiæ): 166 (1803)
- = *Parmelia tartarea* var. *gonatodes* (Ach.) Ach., Methodus, Sectio prior (Stockholmiæ): 35 (1803)

= *Psora frigida* (Sw.) Hoffm., *Deutschl. Fl., Zweiter Theil* (Erlangen): 168 (1796) [1795]

= *Rinodina frigida* (Sw.) Gray, *Nat. Arr. Brit. Pl.* (London) 1: 455 (1821)

[VZ1750], Norvegia. Hordaland. Granvin, loco Smøreggen. Leg. et det. J. J. Havaas, 04.09.1940. - Gyrophoric acid and lecanoric acid by TLC, anal. A. Johnson and C. F. Culberson (no. 2598). EX A. VěZDA: LICHE- NES SELECTI EXSICCATI NR. 1750.

THALLUS variable, thin, medium thick to very thick, with or without spines, membrane-like and almost invisible, but with small or large, dispersed or crowded papillate, subglobose to elongate areoles, or thallus more or less continuous with or without areoles, or thallus areolate, consisting of well developed, separated to crowded, subglobose, elongated or coralloid and branched areoles, sometimes with scabrid surface, or of elongated areoles, forming a subfruticose thallus, or thallus of ± swollen, soft and often fragile areoles, commonly dissolving into ± granular soredia or breaking into coarsely coralloid granules, with many intermediate forms; SWOLLEN AREOLES and whitish-grey or brownish-grey, usually ± matt; NOT SWOLLEN AREOLES, coralloid to elongated, grey, beige or grey-brown, sometimes only the top has a brown tinge, matt to shiny, or covered with a thick epinecral layer, distinctly shiny and brown; SPINES short or long, in extreme forms up to 2 cm in length, simple or branched, sometimes covered partly with thallus areoles or soralia; when spines long, sometimes surrounded by thallus tissues and resembling stems of *Usnea*; prothallus usually not evident, visible only in corticolous material as a white zone around thallus; SOREDIA farinose or granular, forming ± discrete soralia on the continuous thallus, or on the top of areoles, or rarely formed at the base of spines, or areoles completely dissolving into soredia, or coarsely coralloid granules forming at the top of areoles, or areoles completely dissolving into few such granules; in several specimens areoles dissolving into soredia, crowded and forming sorediate crust; APOTHECIA frequent, up to c. 4 mm in diam., with well developed or rarely almost excluded thalline margin; THALLINE MARGIN rather thin, usually concolorous with the thallus, smooth, entire, or crenulate, with thalline areoles, with or without spines, non-

Ochrolechia frigida

sorediate or \pm sorediate; EXCIPULUM PROPRIUM (SALMON DISCOID TISSUE) present in several specimens, prominent, visible as a well defined excipular ring around the disc or spreading over the thalline margin, brownish; DISC flat to concave, usually not pruinose, or sometimes with white farinose pruina, often with fissures radiating from the centre, commonly with secondary thalline areoles developing along the fissures, or disc \pm rosulate; MARGIN CORTEX well developed c. 50–75 μm wide; ALGAL LAYER present in excipulum and/or below hypothecium; HYPOTHECIUM yellowish; HYMENIUM c. 170–250(–300) μm high; asci (4–)6–8(–12)-spored; ASCOSPORES variable in size and shape, even in one ascus or section, ellipsoid, broadly ellipsoid, pyriform and sometimes constricted in 1/3rd of length (in Argentinean material), ovoid, rarely globose or subglobose, (10–)20–50(–67) \times (6–)12–30(–42) μm . Chemistry. SUBSTANCES (all present in thallus and apothecia): gyrophoric (+, major) and lecanoric (+, minor or trace) acids, very often with substances related to gyrophoric acid (minor or trace), pigments (\pm , minor), one fatty acid (in one instance, three fatty acids) of murolic acid complex (\pm , minor to submajor; detected in most sorediate specimens from Poland and Scotland, rarely from other regions, sometimes also in esorediate specimens), unknown fatty acids (\pm , minor to trace). SPOT TEST REACTIONS: epihymenium, soredia, margin and thalline cortex (often covered with C– layer), spines: C+ red; thalline and margin medulla: C–. Diagnostic characters and differentiation. *Ochrolechia frigida* is morphologically (shape and thickness of thallus, spines, areoles and apothecia) and anatomically (size and shape of ascospores) the most variable species of the genus.

Ochrolechia frigida



Ochrolechia frigida



Ochrolechia frigida

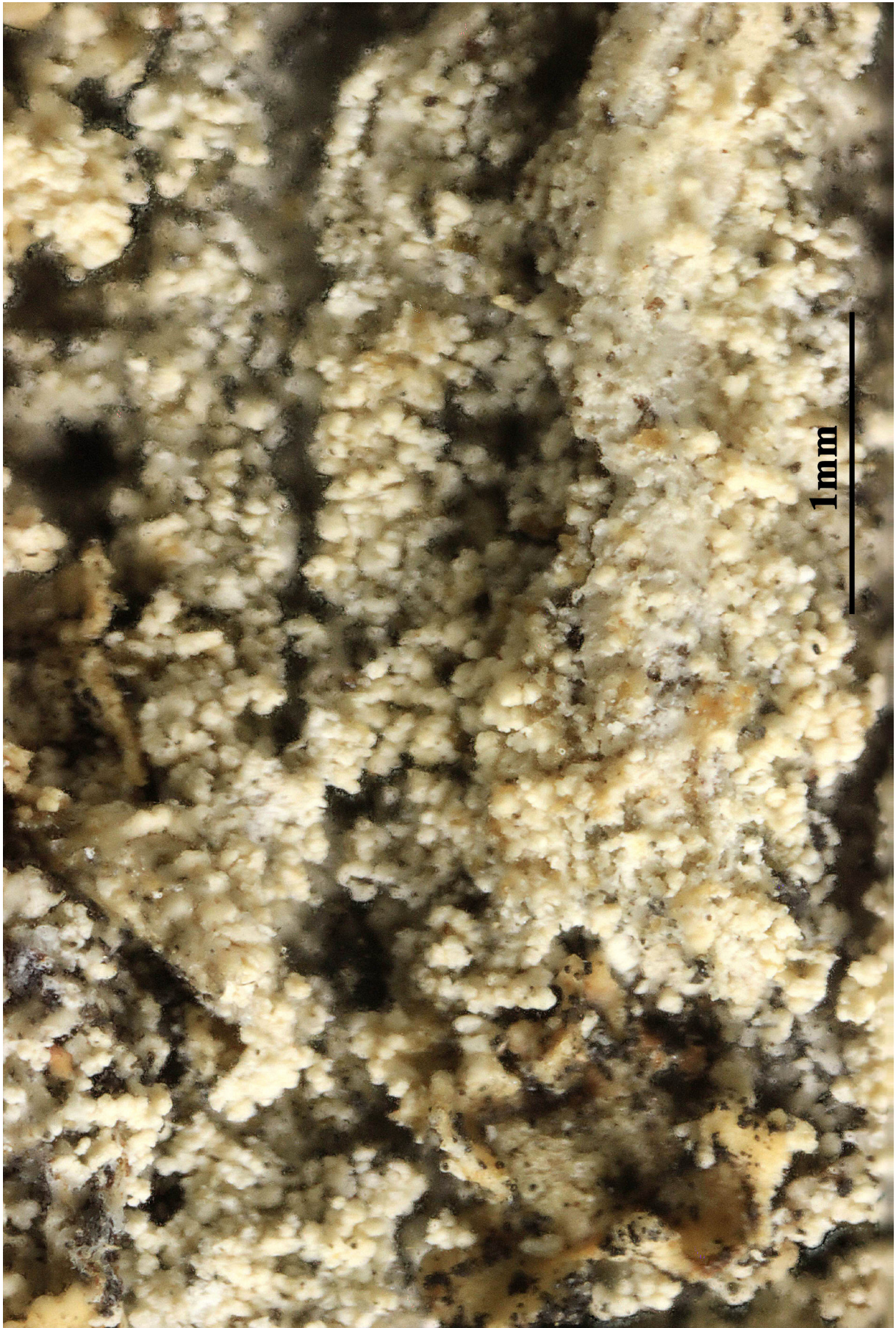
Ochrolechia microstictoides Räsänen, Lich. Fenn. Exs.: no. 226 (1936)

[VZ1113], Germania. Baden, Schwarzwald: St. Märgen, 1000 m. Ad corticem *Piceae excelsiae*. Leg. V. Wirth, 27.2.1972. EX A. VěZDA: LICHENES SELECTI EXSICCATI NR. 1113.

Thallus crustose, episubstratic, of very variable thickness, continuous, cracked or tuberculate, whitish-grey, rarely with a pale yellowish tinge, sorediate, delimited by a whitish prothallus. Soralia white-grey or grey, usually paler than thallus, originating from cracks in the cortex or bursting from the thallus, at first delimited and irregular, soon becoming confluent and forming a subleprose crust in the central part of thallus; soredia farinose, 20-40 µm across. Apothecia very rare, lecanorine, up to c. 2 mm across, with a flesh-coloured to brown, usually epruinose disc and an often sorediate thalline margin. Thalline exciple usually ecorticate (when sorediate) or with an uniformly thick cortex; epithecium pale brown, C+ red; hymenium colourless, c. 200 µm high; paraphyses thin, slender, densely branched and anastomosing; hypothecium colourless. Asci 6-8-spored with thick, amyloid walls, without recognizable apical structures, Pertusaria-like. Ascospores 1-celled, hyaline, ellipsoid, thin-walled, (30-)40-52 x 17-25(-33) µm. Photobiont chlorococcoid. Spot tests: thallus and soredia K- C+ yellow (reaction often faint), KC+ yellow, P-, UV+ white. Chemistry: variolaric acid (major) plus variable amounts of lichesterinic acid and 'microstictoides-unknowns'; epithecium with gyrophoric acid (major) and lecanoric acid (minor). - Note: a cool-temperate to boreal-montane lichen, mostly found on conifers in open, humid forests, very rarely also on siliceous rocks.



Ochrolechia microstictoides



Ochrolechia microstictoides

- Ochrolechia pallescens*** (L.) A. Massal., Nuovi Ann. Sci. nat. Bologna, Ser. 3 7: 212 (1853)
 = *Gasparrinia pallescens* (L.) Tornab., Atti Accad. Gioenia Sci. Nat. Catania, Ser. II 5(Suppl.): 36 (1848)
 = *Lecanora pallescens* (L.) Röhl., Deutschl. Fl. (Frankfurt) 3(2): 76 (1813)
 = *Lecanora pallida* var. *pallescens* (L.) Chevall., Fl. gén. env. Paris (Paris) 1: 559 (1826)
 = *Lecanora parella* f. *pallescens* (L.) Nyl., Annlis Sci. Nat., Bot., sér. 4 11: 219 (1859)
 = *Lecanora parella* var. *pallescens* (L.) Ach., Deutschl. Fl. (Frankfurt) 3(2): 76 (1813)
 = *Lecanora tartarea* * *pallescens* (L.) Nyl., Lich. Lapp. Orient.: 135 (1866)
 = *Lecanora tartarea* subsp. *pallescens* (L.) Lamy, Bull. Soc. bot. Fr. 25(5): 417 (1880) [1878]
 = *Lecanora tartarea* var. *pallescens* (L.) Branth, Bot. Tidsskr. 2: 81 (1868)
 = *Lichen pallescens* L., Sp. pl. 2: 1142 (1753)
 = *Ochrolechia parella* subsp. *pallescens* (L.) Clauzade & Cl. Roux, Bull. Soc. bot. Centre-Ouest, Nouv. sér., num. spec. 7: 827 (1985)
 = *Ochrolechia parella* var. *pallescens* (L.) Rabenh., Krypt.-Fl. Sachsen, Abth. 2 (Breslau): 213 (1870)
 = *Parmelia pallescens* (L.) Rebent., Prodr. fl. neomarch. (Berolini): 300 (1804)
 = *Parmelia parella* var. *pallescens* (L.) Ach., Methodus, Sectio post. (Stockholmia): 164 (1803)
 = *Patellaria pallescens* (L.) Trevis., Revta Period. Lav. Imp. Reale Acad., Padova 1(3): 258 (1852) [1851-52]
 = *Pertusaria pallescens* (L.) Müll. Arg., Flora, Regensburg 62: 483 (1879)
 = *Psora pallescens* (L.) Baumg., Fl. Lips.: 589 (1790)
 = *Verrucaria pallescens* (L.) F.H. Wigg., Prim. fl. holsat. (Kiliae): 87 (1780)

[VZ1791], URSS. Transcaucasia, Georgia. Distr. Chokhautari, montes Meskhedski khrebet, in declivibus septentionalibus montis Sacornia, 2000-2400 m. Ad corticem arborum. Leg. V. Vašak, 20.07.1980, det. A. Vězda. EX A. VĚZDA: LICHENES SELECTI EXSICCATI NR. 1791.

Thallus crustose, rather thick (0.5-2 mm), smooth to wrinkled or areolate, dull, whitish, ochre-grey or pale brown, forming up to 5 cm wide (usually less) patches. Apothecia lecanorine, round to (more rarely) irregular, 1-3 mm across, with a flat, pink-ochre, finely white-pruinose or rarely epruinose disc and a very thick, smooth, prominent thalline margin. Thalline exciple corticate, the cortex well-developed, in upper

part up to $\pm 70 \mu\text{m}$, \pm expanded at the base to 80–100 μm , the medulla well-developed; proper exciple well visible in section, superficially often forming a ring around disc; epithecium pale brown; hymenium colourless, 250–300 μm high; paraphyses thin, slender, densely branched and anastomosing; hypothecium colourless to yellowish. Asci (4-)6-8-spored, with thick, amyloid walls, without recognizable apical structures, Pertusaria-like. Ascospores 1-celled, hyaline, broadly ellipsoid, (35-)45-70(-75) x (12-)25-40 μm . Photobiont: chlorococcoid. Spot tests: cortex K-, C- or C+ yellow, KC+ yellow, P-; epithecium C+ red, the pruina C- or C+ yellow; medulla of the apothecial margin C- or very rarely C+ red in basal part, KC- or entirely or partly KC+ pink-red. Chemistry: epithecium with gyrophoric and lecanoric acid, thallus with variolaric acid, occasionally with substances of the murolic acid complex; alectoronic acid sometimes present in the medulla of the apothecial margin only. - Note: a mainly temperate species found on deciduous trees in humid areas. The relationships with *O. parella* remain to be clarified: the two species are similar, but have a different ecology and distribution, and they hardly can be treated as formae of one and the same species.

Ochrolechia pallescens



Ochrolechia pallescens



Ochrolechia pallescens

Ochrolechia szatalaensis Versegly, Annls hist.-nat. Mus. natn. hung. 50: 80 (1958)

= *Ochrolechia poriniza* (Nyl.) ined

= *Pertusaria poriniza* Nyl. - Flora, 57, 1:8-9, 1874

[VZ1337], Jugoslavia. Macedonia, montes Galličica, secus viam inter Trpejca et Otisovo, 1550 m. Ad cortices *Quercuum* vetustarum. Leg. A. Vězda, 11.07.1975, EX A. Vězda: LICHENES SELECTI EXSICCATI NR.1337.

Thallus crustose, endosubstratic or episubstratic, continuous to rimose-areolate, yellowish grey, whitish grey or pale brown, usually without a distinct prothallus. Apothecia lecanorine, 1-2.5 mm across, sessile, rounded or irregular, with a slightly concave to flat, flesh-coloured but densely yellowish- or brownish-grey pruinose disc (the pruina granular) and a thick, entire or rarely flexuose, smooth or rough thalline margin. Thalline exciple cortiate, the cortex of the margin well developed, laterally thinner, white in section, up to 70 μm thick, expanded at the base to c. 170(-200) μm , glassy, but opaque (best visible in sectioned apothecia under the stereomicroscope); medulla rich in algal cells; excipular ring or discoid like tissue absent; proper exciple well-developed; epithecium brownish, C- (the pruina C+ yellow); hymenium colourless, (160-)220-300 μm high; paraphyses thin, slender, densely branched and anastomosing; hypothecium yellowish. Asci (4-)6-8-spored, with thick, amyloid walls, without recognizable apical structures, *Pertusaria*-like. Ascospores 1-celled, hyaline, ellipsoid but often deformed, rather variable in size, 30-80 x (15-)20-43 μm . Photobiont chlorococcoid. Spot tests: outer part of cortex K-, C+ yellow, P-; medulla C-, KC-; apothecial margins C+ yellow and partially (inner part only) C-, KC+ pink; pruina of the apothecial disc usually C+ yellow. Chemistry: thallus and pruina of the apothecia with variolaric acid (major), accompanied by different unknown substances; thalline margin of apothecia often with alectoronic acid and fatty acids of the murolic acid complex. - Note: a cool-temperate to boreal-montane species with optimum on twigs in humid and cold sites; certainly widespread throughout the Alps. The identification of the sample from Sicily by Brackel (2008c) is not fully certain. It is included in the Italian red list of epiphytic lichens. - As the proposal to conserve the epithet *szatalaensis* against *Pertusaria poriniza* Nyl. was rejected, the correct name should be *Ochrolechia poriniza*.



Ochrolechia szatalaensis



Ochrolechia szatalaensis

Ochrolechia szatalaensis Versegly, Annl. hist.-nat. Mus. natn. hung. 50: 80 (1958)

= *Ochrolechia poriniza* (Nyl.) ined

= *Pertusaria poriniza* Nyl. - Flora, 57, 1:8-9, 1874

[VZ2264], Corea Borealis. Prov. Ryanggang, montes Peakdusan, prope urbem Samjiyon, 1500 m. Ad corticem arboris (*Betula platyphylla*) Leg. L. Lökös, 27.06.1988, det. A. Vězda. EX A. Vězda: LICHENES SELECTI EXSICCATI NR. 2264.

Thallus crustose, endosubstratic or episubstratic, continuous to rimose-areolate, yellowish grey, whitish grey or pale brown, usually without a distinct prothallus. Apothecia lecanorine, 1-2.5 mm across, sessile, rounded or irregular, with a slightly concave to flat, flesh-coloured but densely yellowish- or brownish-grey pruinose disc (the pruina granular) and a thick, entire or rarely flexuose, smooth or rough thalline margin. Thalline exciple corticate, the cortex of the margin well developed, laterally thinner, white in section, up to 70 μm thick, expanded at the base to c. 170(-200) μm , glassy, but opaque (best visible in sectioned apothecia under the stereomicroscope); medulla rich in algal cells; excipular ring or discoid like tissue absent; proper exciple well-developed; epithecium brownish, C- (the pruina C+ yellow); hymenium colourless, (160-)220-300 μm high; paraphyses thin, slender, densely branched and anastomosing; hypothecium yellowish. Asci (4-)6-8-spored, with thick, amyloid walls, without recognizable apical structures, *Pertusaria*-like. Ascospores 1-celled, hyaline, ellipsoid but often deformed, rather variable in size, 30-80 x (15-)20-43 μm . Photobiont chlorococcoid. Spot tests: outer part of cortex K-, C+ yellow, P-; medulla C-, KC-; apothecial margins C+ yellow and partially (inner part only) C-, KC+ pink; pruina of the apothecial disc usually C+ yellow. Chemistry: thallus and pruina of the apothecia with variolaric acid (major), accompanied by different unknown substances; thalline margin of apothecia often with alectoronic acid and fatty acids of the murolic acid complex. - Note: a cool-temperate to boreal-montane species with optimum on twigs in humid and cold sites; certainly widespread throughout the Alps. The identification of the sample from Sicily by Brackel (2008c) is not fully certain. It is included in the Italian red list of epiphytic lichens. - As the proposal to conserve the epithet *szatalaensis* against *Pertusaria poriniza* Nyl. was rejected, the correct name should be *Ochrolechia poriniza*.



Ochrolechia szatalaensis



Ochrolechia szatalaensis

- Omphalodina peltata*** Ramond ex Follmann & Redón, Willdenowia 6(3): 422 (1972)
 = *Rhizoplaca peltata* (Ramond) Leuckert & Poelt
 = *Protoparmeliopsis peltata* (Ramond) Arup, Zhao Xin & Lumbsch in Zhao Xin & al., Fungal Divers., 78: 301, 2016.
 = *Lichen peltatus* Ramond in Lamarck & de Candolle - Fl. Franç., éd. 3, 2: 377, 1805.
 = *Lecanora peltata* (Ramond) Steud.
 = *Lecanora rubina* var. *heteromorpha* Ach.
 = *Psoroma concinnum* Bagl. & Carestia
 = *Rhizoplaca peltata* (Ramond) Leuckert & Poelt

[VZ1217], Persia. Teheran. In declivibus praeruptis ad pedem montium Elburz supra Evine-Tehran, 35°47' bor., 51°24' orient., 2300 m. Ad saxa silicea. Leg. J. Soják, 14.3.1973, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1217.

Thallus foliose-umbilicate, usually monophyllous, up to 3 cm wide, entire to coarsely crenate or lobulate, often with down-rolled margins, the lobules to 1.5-3 mm long, 2-3 mm wide, flat to slightly concave, with entire to coarsely and shallowly crenate margins, the ultimate segments 0.5-1 mm wide. Upper surface greenish yellow to yellowish grey, turning orange-brown in the herbarium, continuous to cracked, sometimes partially pruinose; medulla thick, chalky white; lower surface yellowish brown, often bluish-black near edges, more or less strongly reticulately cracked in central parts, erhizinate, attached by a central holdfast. Apothecia lecanorine, usually abundant, 1-5 mm across, long remaining immersed to broadly adnate, finally sessile, with a concave to finally slightly convex, orange yellow to yellowish brown disc and a smooth to coarsely crenate, persistent thalline margin. Thalline exciple corticate, paraplectenchymatous; proper exciple colourless, prosoplectenchymatous; epithecium brown, densely interspersed with crystals penetrating into the upper part of the hymenium, N-; hymenium colourless; paraphyses coherent, clavate, the apical cells clearly swollen; hypothecium colourless. Asci 8-spored, elongate-clavate, very thin-walled, with a K/I+ blue, tall tholus penetrated by a faintly amyloid apical cushion, the wall K/I-, surrounded by a K/I+ blue outer layer, Lecanora-type. Ascospores 1-celled, hyaline, ellipsoid to subglobose, 8-13 x 5-8 µm. Pycnidia dark, immersed. Conidia thread-like, 20-40 µm long. Photobiont chlorococcoid. Spot tests: K- or K+

yellow turning red, C-, KC+ yellowish, P+ orange, UV-. Chemistry: upper cortex with usnic and sometimes norstictic acid; medulla with zeorin, pannarin and psoromic acid. - Note: a chemically variable species also known from Africa, Asia, and North America, found on exposed siliceous rocks above treeline.

Die peltat bis deutlich umbilicat gestalteten Thalli der Art sitzen auf gedüngten, kalkarmen Felsen trockener Gebirgsgebiete der ganzen Holarktis. Die Thallosporen werden an Rand und Unterseite der Thalli abgegliedert, am stärksten am Rand selbst. Die Thalli erscheinen daher häufig kräftig schwarz gesäumt. Die sporogenen Hyphen stehen vergleichsweise locker, sie sind deutlich dreidimensional verzweigt, an der schwach gefärbten Basis sehr englumig mit stark gequollenen Zellwänden; nach außen zu werden die Lumina breiter und die Zellwände dunkler gefärbt und dabei weniger gequollen. Die Thallosporen sind 2- bis wenigzellig, einreihig (2-zellig messen sie im Mittel um 13 x 7 µm), die mehrschichtigen, blauen Wände werden in KOH etwas aufgehellt, in HN03 scheidet sich eine purpurne Lösung ab. Das Plasma ist wiederum deutlich anfärbbar.



Omphalodina peltata



Omphalodina peltata

Omphalodium hottentottum (Ach.) Flot., Linnaea 17: 27 (1843)
= *Lichen hottentottus* Ach. 1799
= *Xanthoparmelia hottentotta* (Ach.) A. Thell, Feuerer, Elix & Kärnefelt, J. Hattori bot. Lab. 100: 806 (2006)
= *Xanthomaculina hottentotta* (Ach.) Hale

[1269], Africa Austro-occidentalis. Lüderitz, ad scopulus loco Grosse Bucht dicto prope Lüderitz. Ad saxa gneisiaca in litore maris vento salso exposita. Leg. O. Volk, 7.11.1974, det. V. Wirth, EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1269.

Thallus umbilicate, saxicolous, ranging from nearly monophyllous to deeply divided, stiff and leathery, dull greenish to brownish yellow, 6-10 cm broad; main lobes little branched, 10-20 mm wide, the margins ciliate, cilia black, simple to sparsely furcate, sometimes tinged dark reddish, 0-5-1-0 mm long; upper surface shiny, continuous, densely effigurate maculate, the individual maculae to 0-5 mm long, confluent; lower surface brown or reddish brown, smooth and bare at the centre but becoming dark brown to black and densely rhizinate toward the margins, the rhizines black, simple to sparsely branched, 0-5-1-0 mm long. Pycnidia abundant, laminal, more numerous toward the lobe margins, immersed, 150-180 μm diam, the conidia 6-9 x 0.8-1 μm , bifusiform to nearly cylindrical. Apothecia numerous, substipitate, the rim ciliate and the amphithecium sparsely hirsute, disc brown, 6-8 mm diam; spores 10-12 x 5-8 μm . Chemistry: Usnic acid in the cortex, stictic and norstictic acids, norstictic acid alone or norstictic and conorstictic acids in the medulla.



Omphalodium hottentottum



Omphalodium hottentottum

Opegrapha agelaeoides Nyl., J. Linn. Soc., Bot. 9: 257 (1867)

[VZ1828], Nova Zelandia. South Island, Otago, 3.5 km austro.-orient. versus ab Owaka, Pounaweia Scenic Reserve, 46°29' austr., 189°41' orient., 10 m. In ramulis *Weimanniae racemosae* in silva mixta litorali. Leg. et det. L. Tibell (no. 10302). EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1828.

Thallus green-grey to cream-white, sometimes dirty and dingy, continuous to minutely fissured or occasionally disappearing. Lirellae emergent to prominent, flexuous but generally unbranched, 0.5-2 × 0.3 mm, thalline margin lacking, proper exciple black, distinct, closing with a narrow slit, the base closed, black, quite heavily carbonised. Ascospores 8 per ascus, (6-7)-9-locular, 5-9 × 20-36 μm. Chemistry: Nil.



Opegrapha agelaeoides



Opegrapha agelaeoides

Opegrapha astraea Tuck., Lichens of California (Berkeley): 33 (1866)

[VZ1984], USA. Louisiana, East Baton Rouge paroecia, Essen Lane, Baton Rouge, Burden Research Plantation. Ad corticem *Quercum*. Leg. S. C. Tucker (no. 17254). EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1984.

Thallus crustose, thin, up to 150 μm thick, pale grayish green to dark green, continuous; prothallus pale to dark brown, ~0.1-0.5 mm wide. Vegetative diaspores absent. Photobiont trentepohlioid alga. Ascomata lirellate, abundant, scattered, sessile, simple to 1-3-branched, straight to flexuose, 0.2-2.5 x 0.15-0.35(-0.4) mm; disk narrowly exposed, whitish pruinose; labia black or partially to entirely white pruinose. Exciple dark brown to slightly olivaceous, often thin to widely discontinuous below, 25-65 μm laterally; hypothecium pale to dark brown, 10-35 μm thick; hymenium hyaline, clear; paraphysoids branched, anastomosing, 1 μm thick, tips not swollen; epihymenium hyaline to pale brown, covered by layer or crystals 1-6 μm diam., persistent in K. Asci 8-spored, clavate to ellipsoid, 50-85 x 12-19 μm ; ascospores hyaline, oblong, 3-7-septate, cells +/- equal in size, (13-)21.5-30.0 x (4-)5.0-5.5(-6.5) μm . Conidiomata not known. Chemistry. Spot tests negative; no substances detected by TLC.

Substrate and Habitat. Corticolous on trees in forests and woodlands. Distribution. Pantropical, eastern North America; in North Carolina found in the Coastal Plain ecoregion.

Literature: Ertz, D. (2009) Revision of the Corticolous *Opegrapha* Species from the Paletropics. Bibliotheca Lichenologica No. 102.



Opegrapha astraea



Opegrapha astraea

Opegrapha celtidicola (Jatta) Jatta, Nuovo G. bot. ital. 12: 231 (1880)

[VZ2277], Lusitania. Algarve. Villa Nova de Cacela, 3 m. Ad corticem *Ceratoniae siliquae*. Leg. J. M. Egea, 15.11.1987, det. P. Torrente et J. M. Egea. EX A. VĚZDA LICHENES SELCETI EXSICCATI NR. 2277.

Thallus crustose, thinly episubstratic, white to whitish grey, without a distinct prothallus. Apothecia lirelliform, black, polygonal, elliptical or elongated, usually simple, 0.5-2 x 0.4-0.8 mm, usually numerous, scattered or clustered, with a more or less expanded, often white-pruinose disc and a thick, epruinose, raised proper margin. Proper exciple black, carbonized, not extending below the hymenium; epithecium brownish, 20-35 μm high; hymenium colourless, 70-100 μm high, I+ blue; paraphysoids branched and anastomosing, 1-1.5 μm thick, the apical cells hardly swollen; hypothecium colourless or pale yellow. Asci 8-spored, broadly club-shaped, the inner layer of endoascus amyloid in upper part, with a reduced ring and ocular chamber (Varia-type). Ascospores (2-)3(-4)-septate, slightly constricted at septa, hyaline, often becoming brownish when overmature, ellipsoid, 13-20 x 3-6 μm , with a thin gelatinous perispore. Pycnidia black, immersed. Conidia simple, straight or slightly curved, 4-6 x c. 1 μm . Photobiont trentepohlioid. Spot tests: thallus K- or K+ pale yellow, C-, KC-, P-. Chemistry: without lichen substances. - Note: a Mediterranean-Atlantic lichen found on old trees, near the base of the trunks, but also on twigs of Mediterranean shrubs, at relatively low elevations; mainly Tyrrhenian in Italy. The species often overgrows the thalli of other lichens with Trentepohlia (*Schismatomma*, *Dirina ceratoniae*, etc.).



Opegrapha celtidicola

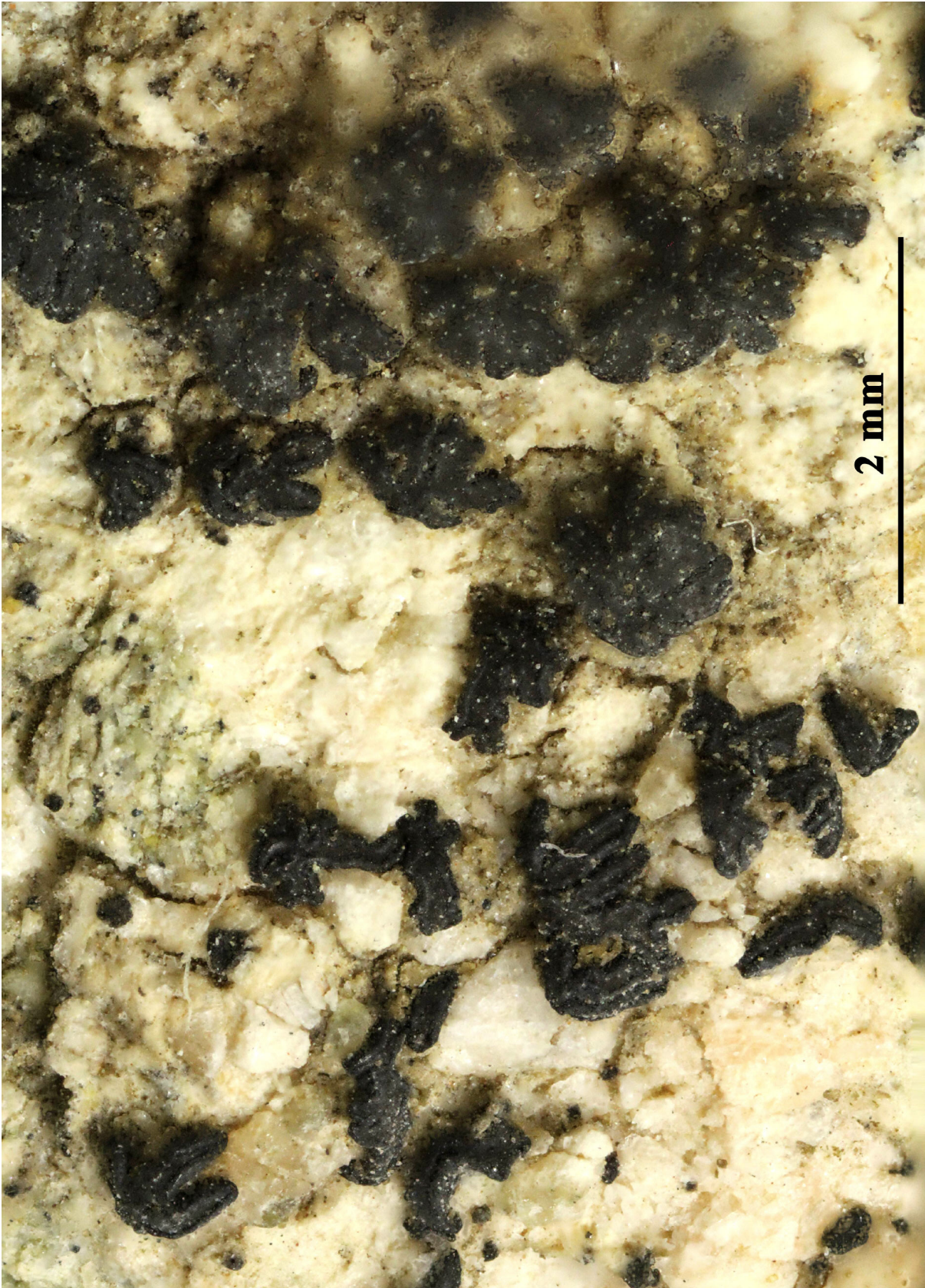


Opegrapha celtidicola

Opegrapha conferta Anzi, Comm. Soc. crittog. Ital. 1(fasc. 3): 160 (1862)
= *Gyrophysa saxigena* (Taylor) Ertz & Tehler, in Ertz, Tehler, Irestedt,
Frisch, Thor & van den Boom, Fungal Diversity 70: 43 (2014) [2015]

[VZ1505], Bulgaria. Pontus, distr. Burgas: in litore inter pagos Varvara et Mičurin, 10 m, in oariete alto scopuli maritimi andesitici. Leg. I. Pišút et A. Vězda, 22.8.1977. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1505.

Thallus crustose, endosubstratic or thinly episubstratic, whitish to pale grey, granulose, often poorly evident, esorediate. Apothecia lirelliform, black, epruinose, elongate, 0.5-1.5 x 0.2-0.3(-0.5) mm, at first isolated, but soon gathered into irregular to star-shaped, 2-3 mm wide, convex clusters, clearly raised, with a slit-like to slightly expanded disc, and a sometimes furrowed proper margin. Proper exciple black, carbonized, extending below the hymenium, K⁺ olive-green in inner part; epithecium brown, c. 10 μm high; hymenium colourless, (70-)80-100(-120) μm high, I⁺ red, rarely I⁺ blue in lower part; paraphyses branched and anastomosing, 1.5-2 μm thick, the apical cells slightly swollen; subhymenium brownish, 25-35 μm high; hypothecium brown-black, carbonized. Asci 8-spored, cylindrical-clavate, fissitunicate, laterally thin-walled, the apex rounded, with a tholus and a small ocular chamber, within a K/I⁺ medium blue ring (the only amyloid part of the ascus wall), the ascoplasma K/I⁺ orange-brown. Ascospores 3-septate, hyaline, more or less club-shaped, thick-walled and with rectangular loculi, 15-20(-24) x 4-6 μm, without a distinct perispore, the wall thick, thickened at septa. Pycnidia black, semi-immersed. Conidia bacilliform, (4-)5-7 x < 1 μm. Photobiont trentepohlioid. Spot tests: thallus K⁻, C⁻, KC⁻, P⁻, UV⁻. Chemistry: without lichen substances. - Note: a mild-temperate to Mediterranean-Macaronesian lichen of shaded siliceous rocks, mostly coastal; probably overlooked, or confused with other species in the past, but certainly not common.



Opegraha conferta

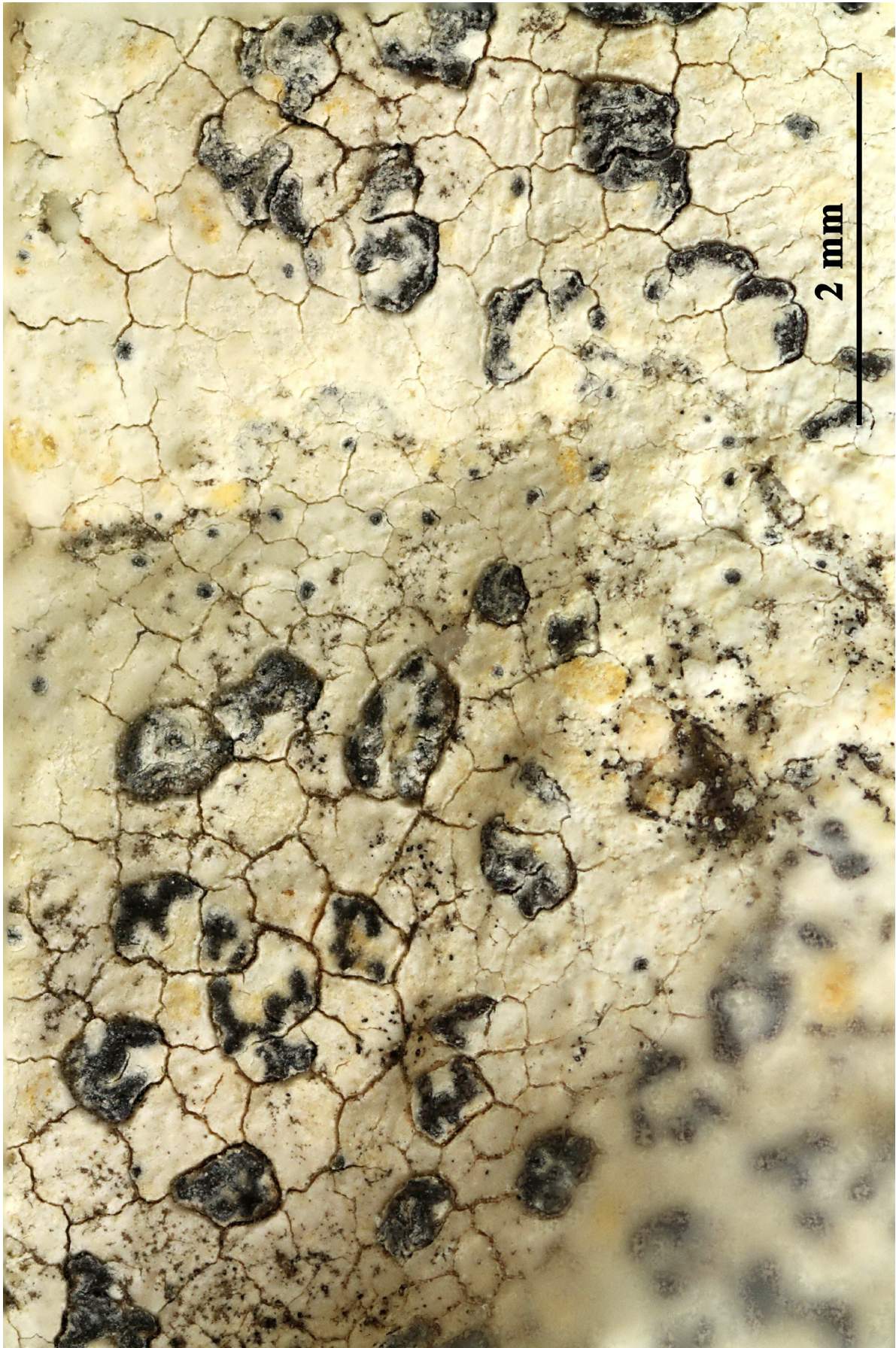


Opegrapha conferta

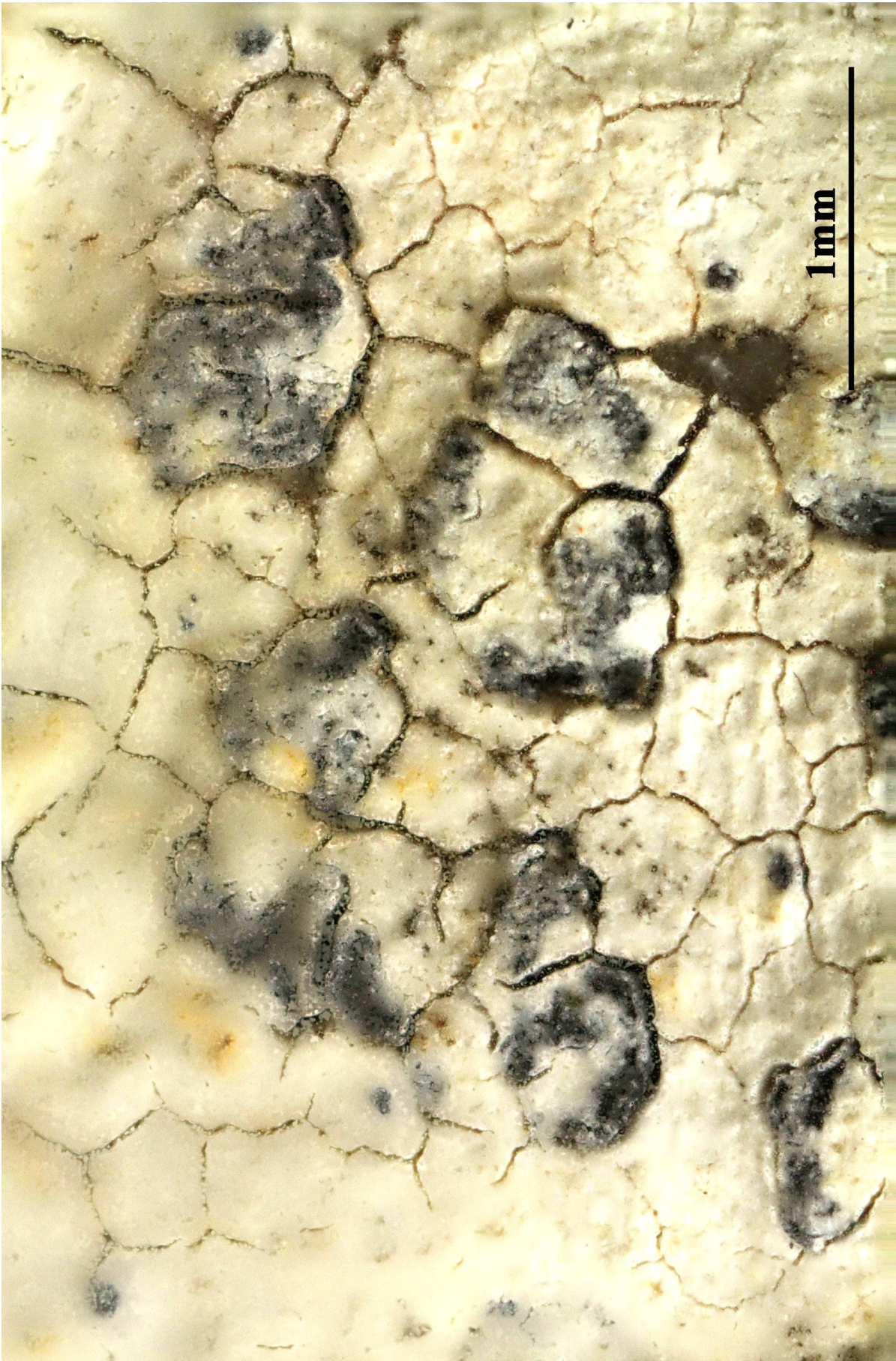
Opegrapha durieui Mont. [as 'duriaei'], in Durieu, Expl. Sci. Alg., Fl. Algér.
1(livr. 7): 279 (1848) [1846-49]
= *Enterographa durieui* (Mont.) Redinger
= *Opegrapha arthonioidea* (Nyl.) Nyl.
= *Opegrapha grumulosa* var. *arthonioidea* Nyl.
= *Opegrapha polymorpha* (Müll. Arg.) Müll. Arg.
= *Stigmatidium polymorphum* Müll. Arg.

[VZ2396], Italia. Sardinia. Prov. Nuoro: Peninsula Sinis, scopulum Tharros dictum, 15 m. Ad saxa calcarea. Leg. P. L. Nimis, C. Roux, M. Tretiach et A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2396.

Thallus crustose, episubstratic, continuous to rimose or rimose-areolate, smooth to granulose, white, sometimes with a pinkish hue, without a distinct prothallus, often forming orbicular patches. Apothecia ellipsoid to lirelliform, often curved, sometimes stellate, immersed, 0.5-3 x 0.2-0.4 mm, simple or branched, black, with an initially slit-like, later slightly expanded, sometimes whitish-pruinose disc, without a distinct proper margin, often surrounded by a pale, false thalline margin. Proper exciple thin, brown-black, extending below the hymenium; epithecium brown, 25-20 μm high; hymenium colourless, 80-125 μm high, I+ reddish; paraphysoids branched and anastomosing, 1.5-2 μm thick, the apical cells hardly swollen; subhymenium pale brown, 25-50 μm high, I+ blue; hypothecium brown-black, 25-75 μm high. Asci 8-spored, cylindrical-clavate, the entire endoascus faintly amyloid, the apical apparatus poorly differentiated. Ascospores 3-septate, ellipsoid to subfusiform, straight or slightly curved, 19-25 x 5-7 μm , with a 1.5-2 μm thick, gelatinous perispore. Pycnidia immersed, black, often confluent. Conidia hyaline, straight, 4-6 x 1-1.2 μm . Photobiont trentepohlioid. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a mainly Mediterranean species found on steeply inclined to rain-sheltered, generally north-facing surfaces of hard calcareous rocks near the coast. It probably does not belong to *Opegrapha* s.str.



Opegrapha durieui



Opegrapha durieui

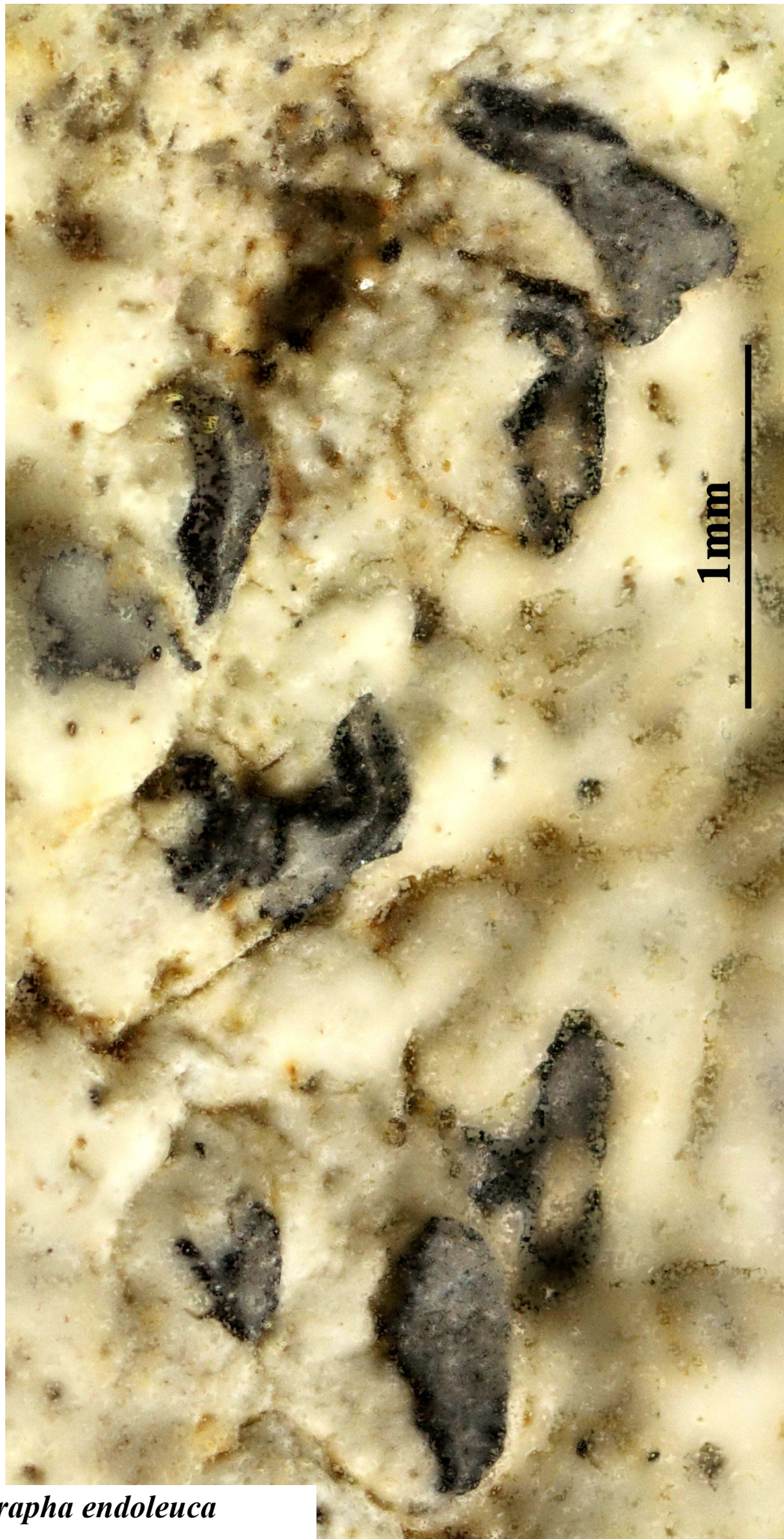
Opegrapha endoleuca Nyl., Annl. Sci. Nat., Bot., sér. 4 3: 168 (1855)

[VZ1852], Tunisia. Distr. Nabeúl, sinus Hammamet, 10 km ad septentriones et occidentem av urbe Hammamet, 180 m, Ad saxa aprica. Leg et det, J. Hafellner (9851), 17.4.1982. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1852.

Thallus crustose, episubstratic, rather thick, rimose or rimose-areolate, smooth or slightly granulose, white, without a distinct prothallus. Apothecia rounded to ellipsoid, 0.5-1 x 0.3-0.5 mm, simple or sparingly branched, with an expanded, bluish grey-pruinose disc, and a raised, often epruinose proper margin. Proper exciple black, carbonized, not extending below the hymenium; epithecium brownish, 20-35 μm high; hymenium colourless, 60-100 μm high, I+ blue; paraphysoids branched and anastomosing, c. 1.5 μm thick, the apical cells hardly swollen; subhymenium and hypothecium colourless to pale yellowish brown. Asci 8-spored, clavate, the inner layer of endoascus amyloid in upper part, with a I+ blue ring visible around a small ocular chamber, Variatype. Ascospores 3-septate, at first hyaline but turning brown at maturity, ellipsoid, often slightly pointed at one end, 13-16 x (4-)5-6.5 μm , surrounded by a 1-1.2 μm thick gelatinous perispore. Pycnidia black, immersed. Conidia bacilliform, straight, 5-6 x c. 1 μm . Photobiont trentepohlioid. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a calcicolous coastal species known from Macaronesia, Spain, North Africa and southern France.



Opegraha endoleuca



Opegrapha endoleuca

Opegrapha grumulosa Dufour, J. Phys. Chim. Hist. nat. Arts 87: 214 (1818)
= *Paralecanographa grumulosa* (Dufour) Ertz & Tehler, Fungal
Diversity 49(1): 57 (2011)

[VZ1506], Bulgaria. Pontus, distr. Burgas: in litore pagos Varvara et
Mičurin, 10 m. In pariete alto scopoli maritimi andesitici. Leg. I. Pišút
et A. Vězda, 22.8.1977. EX A. VĚZDA LICHENES SELECTI EXSICCATI
NR. 1506.

Thallus starting as a lichenicolous fungus on different hosts belonging to Arthoniales (e.g. *Dirina*, *Roccella*), eventually becoming lichenized, of two types: 1) crustose, episubstratic, usually thick, continuous to rimose-areolate, chalky-white to grey-white or pale brownish grey, farinose, often delimited by a dark prothallus, 2) fruticose, pendent to suberect, grey, often faintly white-pruinose, consisting of very fragile, flattened, usually sterile, 0.1-10 mm wide and up to several cm long, strap-shaped laciniae with a cortex of periclinally arranged hyphae and a very poorly developed medulla. Medulla usually thick in crustose forms, chalky-white, I-. Apothecia at first immersed, then sessile, of widely different shapes, round and 0.2-1.5 mm across, angular, or clearly lirelliform and then to 3 mm long, mostly irregularly substellate, with a flat to convex, often white- or bluish-pruinose, sometimes umbonate disc and a thin, often prominent, rarely finally excluded, black but often grey-pruinose, more or less wavy proper margin. Proper exciple dark brown, extending below the hymenium, K-; epithecium colourless to dark brown, thin, K+ greenish; hymenium colourless, 50-90 μm high, I+ pale reddish; paraphysoids branched and anastomosing, up to 2(-2.5) μm thick, the apical cells swollen and 3-4.5 μm thick, with a granular external brown pigmentation; hypothecium dark brown, K+ pale green. Asci 8-spored, cylindrical-clavate, thick-walled and fissitunicate, with a thin K/I+ pale blue tholus and a small ocular chamber with an inconspicuous amyloid ring. Ascospores 2-5-septate and slightly constricted at the central septa, hyaline (overmature spores turning pale brown), straight to slightly curved, ellipsoid to cylindrical-fusiform, the central cells larger, 12-23 x 3-4(-5) μm , surrounded by a thin gelatinous sheath. Photobiont trentepohlioid (but this might be the photobiont of the host, and the species could be not lichenized). Spot tests: thallus and apothecial pruina K-, C+ red, KC+

red, P-, UV-. Chemistry: gyrophoric and lecanoric acids, and erythrin.
- Note: on steeply inclined to rain-sheltered surfaces of more or less calcareous cliffs subject to humid maritime winds in rather shaded situations, starting as a lichenicolous fungus, later probably developing an own thallus. It sometimes forms long, fruticose outgrowths which look like a different lichen, previously called *Ingaderia troglodytica* (see Erzt & Tehler 2011).

Opegrapha grumulosa



Opegrapha grumulosa



Opegrapha grumulosa

Opegrapha grumulosa Dufour, J. Phys. Chim. Hist. nat. Arts 87: 214 (1818)
= *Paralecanographa grumulosa* (Dufour) Ertz & Tehler, Fungal Diversity 49(1): 57 (2011)

[VZ2054], Hispania, Murcia, Cabo de Palos, Cabezo de la Fuente. Ad saxa calcarea. Leg. J. M. Egea, 3.9.1983. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2054.

Thallus starting as a lichenicolous fungus on different hosts belonging to Arthoniales (e.g. *Dirina*, *Roccella*), eventually becoming lichenized, of two types: 1) crustose, episubstratic, usually thick, continuous to rimose-areolate, chalky-white to grey-white or pale brownish grey, farinose, often delimited by a dark prothallus, 2) fruticose, pendent to suberect, grey, often faintly white-pruinose, consisting of very fragile, flattened, usually sterile, 0.1-10 mm wide and up to several cm long, strap-shaped laciniae with a cortex of periclinally arranged hyphae and a very poorly developed medulla. Medulla usually thick in crustose forms, chalky-white, I-. Apothecia at first immersed, then sessile, of widely different shapes, round and 0.2-1.5 mm across, angular, or clearly lirelliform and then to 3 mm long, mostly irregularly substellate, with a flat to convex, often white- or bluish-pruinose, sometimes umbonate disc and a thin, often prominent, rarely finally excluded, black but often grey-pruinose, more or less wavy proper margin. Proper exciple dark brown, extending below the hymenium, K-; epithecium colourless to dark brown, thin, K+ greenish; hymenium colourless, 50-90 μm high, I+ pale reddish; paraphysoids branched and anastomosing, up to 2(-2.5) μm thick, the apical cells swollen and 3-4.5 μm thick, with a granular external brown pigmentation; hypothecium dark brown, K+ pale green. Asci 8-spored, cylindrical-clavate, thick-walled and fissitunicate, with a thin K/I+ pale blue tholus and a small ocular chamber with an inconspicuous amyloid ring. Ascospores 2-5-septate and slightly constricted at the central septa, hyaline (overmature spores turning pale brown), straight to slightly curved, ellipsoid to cylindrical-fusiform, the central cells larger, 12-23 x 3-4(-5) μm , surrounded by a thin gelatinous sheath. Photobiont trentepohlioid (but this might be the photobiont of the host, and the species could be not lichenized). Spot tests: thallus and apothecial pruina K-, C+ red, KC+ red, P-, UV-. Chemistry: gyrophoric and lecanoric acids, and erythrin. - Note: on steeply inclined to rain-sheltered surfaces of more or less calcareous cliffs subject to humid maritime winds in rather shaded situations,

starting as a lichenicolous fungus, later probably developing an own thallus. It sometimes forms long, fruticose outgrowths which look like a different lichen, previously called *Ingaderia troglodytica* (see Erzt & Tehler 2011).

Opegrapha grumulosa



Opegrapha grumulosa

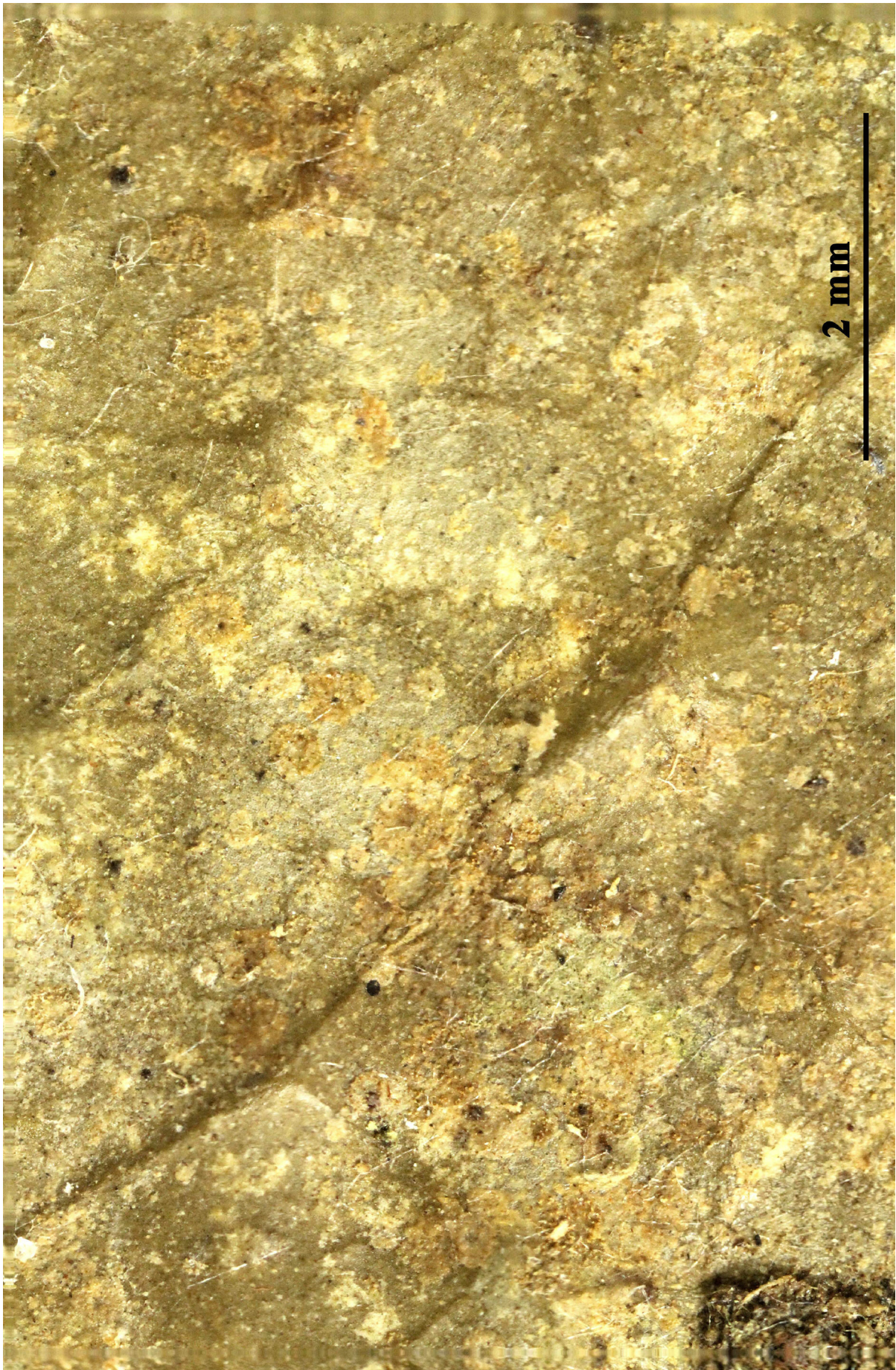


Opegrapha grumulosa

Opegrapha lambinonii Sérus., *Lejeunia*, n.s. 90: 2 (1978)

[VZ1479], Zaire. Prov. Haut-Zaire: Kisangani, 21 km ad septentrionem versus a Kisangani, prope vicum Bawi, 200-500 m. Epiphylla in silva virginea. Leg. S. Lisowski (no. 43069), 7.11.1976. - Annot: Thallus sterilis, goniocystangis (scyphulis) instructus. - EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1479.

Thallus continuous, forming rounded patches, 5–20 mm across, smooth, thin (5–12 μm), yellow to (dark) green, with minute (20–40 μm diam.) black dots, slightly shiny. Photobiont cells rectangular, 11–17 x 5–7 μm , in radiate plates. Ascomata adnate, elongate-lirellate, unbranched, 0.4–1.2(–1.8) mm long and 0.15–0.25 mm broad, 60–80 μm high; disc slit-like; margin thick, black. Excipuloid tissue 15–30 μm thick, basally up to 50 μm broad, absent below hypothecium. Hypothecium 5–15 μm high, sordid brown. Hymenium 50–60 μm high, colorless. Asci 30–40 x 12–16 μm . Ascospores narrowly fusiform, (3–)5(–7)-septate, slightly thick-walled (0.3–0.6 μm), (10–)12–17(–21) x (2–)3–4 μm , upper median cell slightly enlarged, colorless but becoming brown and ornamented (papillose) when mature. Pycnidia not observed. Goniocystangia abundant, rounded, 0.1–0.2 mm diam., with black margins, their contents (goniocysts) few, pale yellow or green. Chemistry: not tested.



Opegrapha lambinonii



Opegrapha lambinonii

Opegrapha longissima Müll. Arg., Bull. Herb. Boissier 3(1): 43 (1895)
= *Dimidiographa longissima* (Müll. Arg.) Ertz & Tehler, Fungal Diversity
49(1): 53 (2011)

[VZ1624], USA. Louisiana. East Baton Rouge Paroecia. Baton Rouge,
Essen Lane, Burden Research plantation, 30°24'30" sptentr., 91°06'46"
occid. Ad corticem Nyssae sylvaticae. Leg. S. C. Tucker (no. 13248),
28.8.1974. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1624.

Thallus: thin, smooth to warted, continuous to rimose surface: whitish,
pale grey, greenish-grey or pale brownish, matt Ascomata: lirelliform,
flexuous, immersed to slightly sessile, (0.4-)1-4(-6.5) x 0.15-0.25 mm,
often branched, scattered or contiguous, sometimes stellate; disc a slit,
soon widely exposed, reddish brown, epruinose or sometimes more or
less white pruinose exciple: widely open below the hymenium, dark
brown, K± olivaceous, 15-55 µm wide hymenium: 65-80 µm tall, I+
reddish; epihymenium, dark brown, K± olivaceous; hypothecium pale
brown, 15-30 µm, K± olivaceous; paraphysoids richly branched, anas-
tomosed, 1-1.5 µm wide asci: clavate, 8-spored, 50-70 x 12-15 µm
(between Variatype and Vulgata-type) ascospores: oblong to fusiform,
sometimes clavate, hyaline, becoming dark brown granulose when
over-mature, (16-)18-22(-24) x (3-)3.5-4.5(-5) µm, (3-)4-7-septate,
brown pigmentation probably due to a change in the perispore
(Parasitica-type) Pycnidia: not observed Spot tests: thallus P-, K-, KC-,
C-, UV- Secondary metabolites: none detected. Substrate and ecology:
epiphytic, on *Jatropha* in Baja California Sur World distribution: North
America (SE of U.S.A., Mexico) Sonoran distribution: Baja California
Sur (one locality S of Todos Santos). Notes: This species was known so
far only from SE of the U.S.A. and is reported here for the first time
from Mexico. It is characterized by the exciple that is widely open
under the hymenium, and long and flexuous lirellae with a widely
exposed, reddish brown hymenial disc. In the only specimen from the
Sonoran Desert Region (van den Boom 24798), the mature ascospores
are mainly 5-septate.



Opegrapha longissima

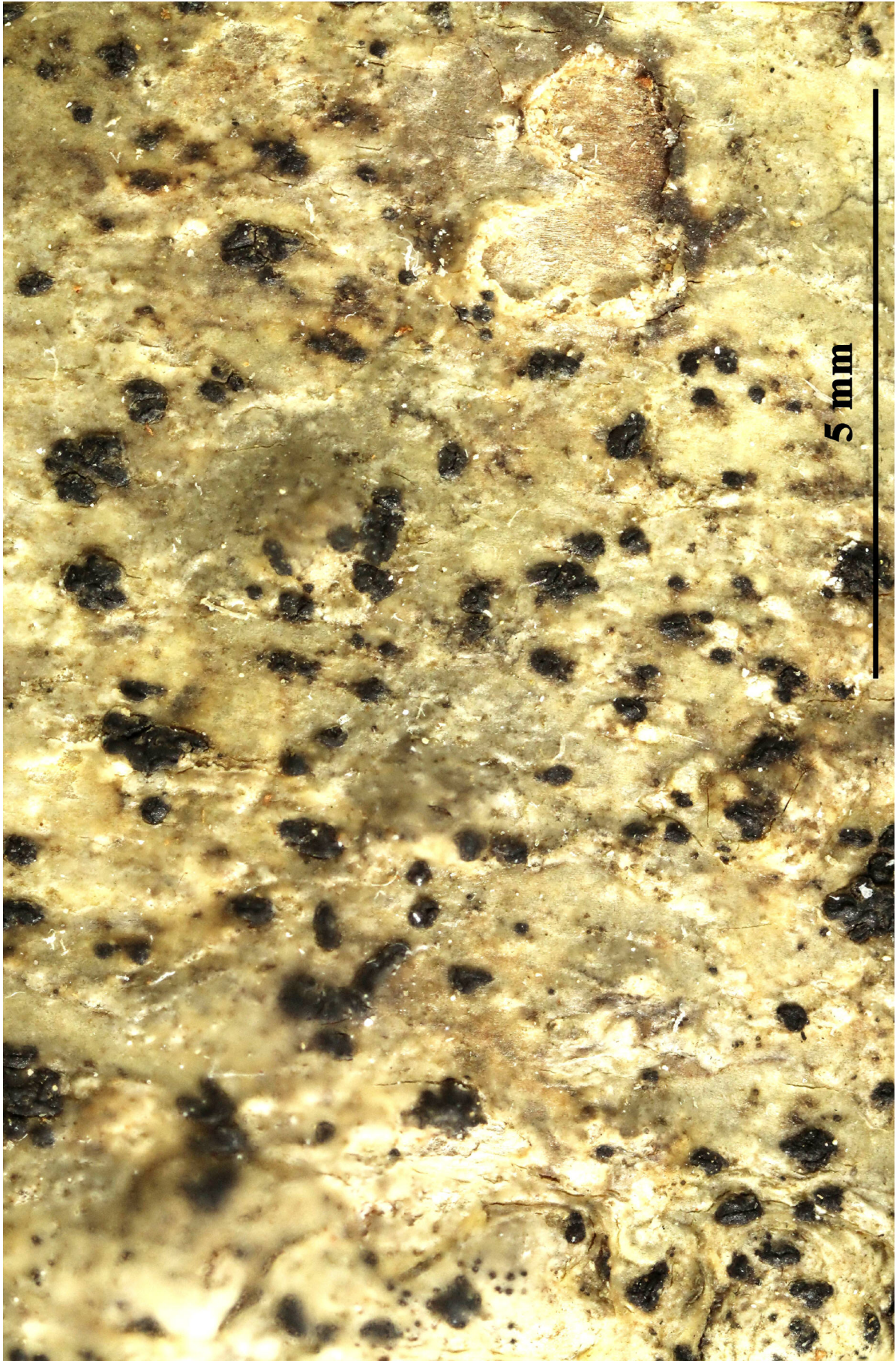


Opegrapha longissima

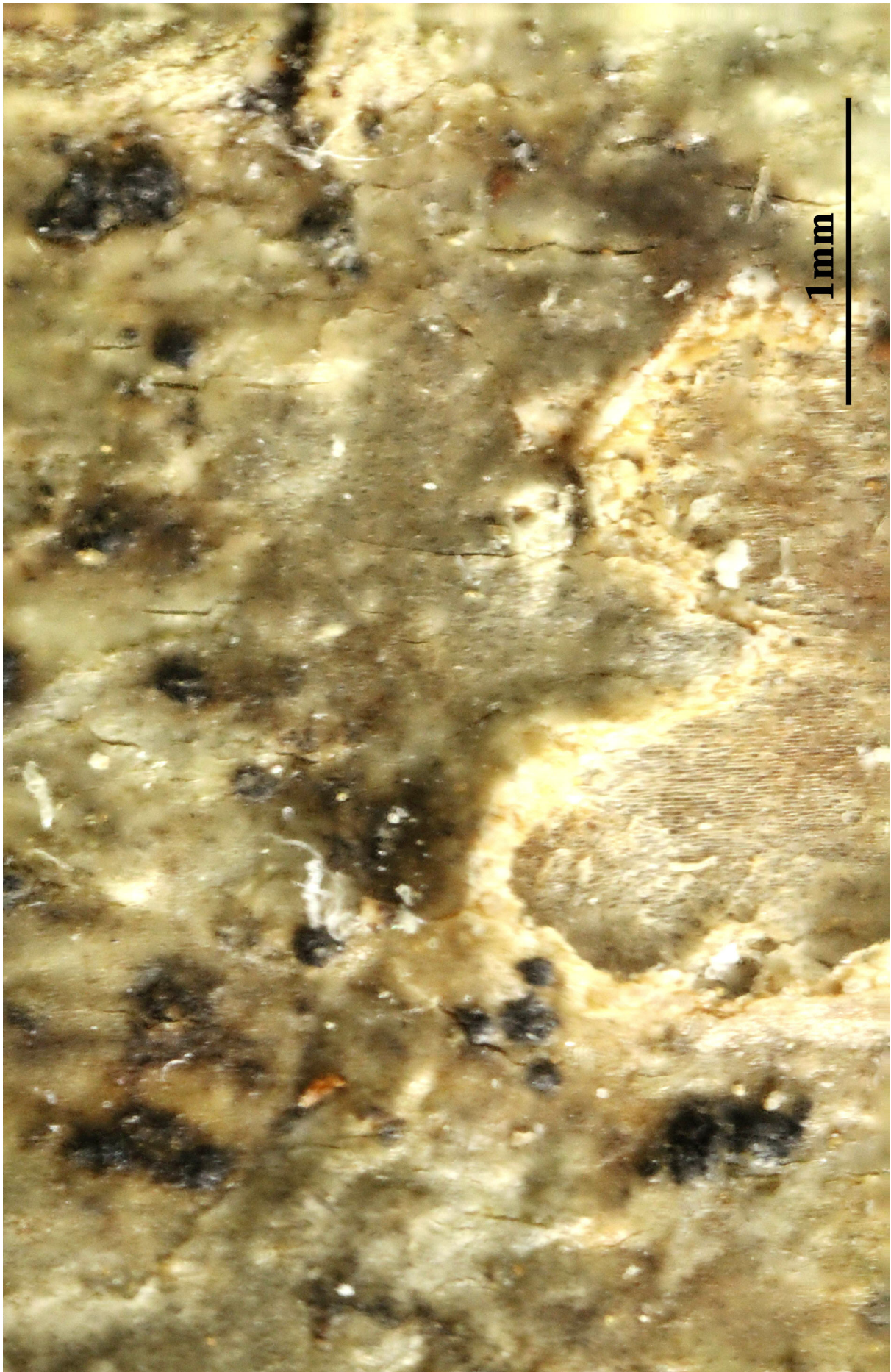
Opegrapha pertusariicola Coppins & P. James, Lichenologist 11(2): 164
(1979)

[VZ1699], Magna Britannia. Caledonia. Mid-Perthshire. Aberfeldy, Glen Lyon, prope Woodend. In thallo *Pertusariae leioplacae* vicens, ad corticem *Coryli*. Leg. P. James et B. J. Coppins (no. 3834), 11.8.1976. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1699.

Thallus inapparent, not lichenized, the hyphae developing inside the thalli of *Pertusaria*-species, especially *P. leioplaca*, sometimes forming necrotic patches on the host thallus. Apothecia lirelliform, black, epruinose, simple or furcate, straight or slightly curved, 0.2-1 x 0.1-0.2 mm, with a slit-like disc (which sometimes is visible in the central parts of old apothecia) and a finely rugose proper margin. Proper exciple dark brown, 25-60 μm thick laterally, up to 115 μm thick at base, thinner and irregular below the hymenium, K+ green-black; epithecium brownish, K-; hymenium colourless to pale brown, 55-70 μm high, I+ blue in upper and lower parts, I+ reddish in the middle part; paraphysoids branched and anastomosing, 1.5-2 μm thick; hypothecium brown. Asci 4-spored, clavate, fissitunicate, without a K/I+ blue ring-structure in tholus, 48-60 x 12-18 μm . Ascospores (5-)6-septate, with an enlarged median cell, hyaline but sometimes turning brown when overmature, cylindrical, straight or slightly curved, 21-28(-31) x 4.5-6(-7) μm , with a 0.7-1 μm thick gelatinous perispore. Pycnidia immersed, brown-black. Conidia simple, hyaline, oblong-ellipsoid, often tapering towards one end, 3.3-4 x 0.8-1 μm . Photobiont absent. Spot tests: all negative. Chemistry: without lichen substances. - Note: a lichenicolous fungus growing on the thalli of *Pertusaria*-species, especially *P. leioplaca*, probably much more widespread.



Opegrapha pertusariicola



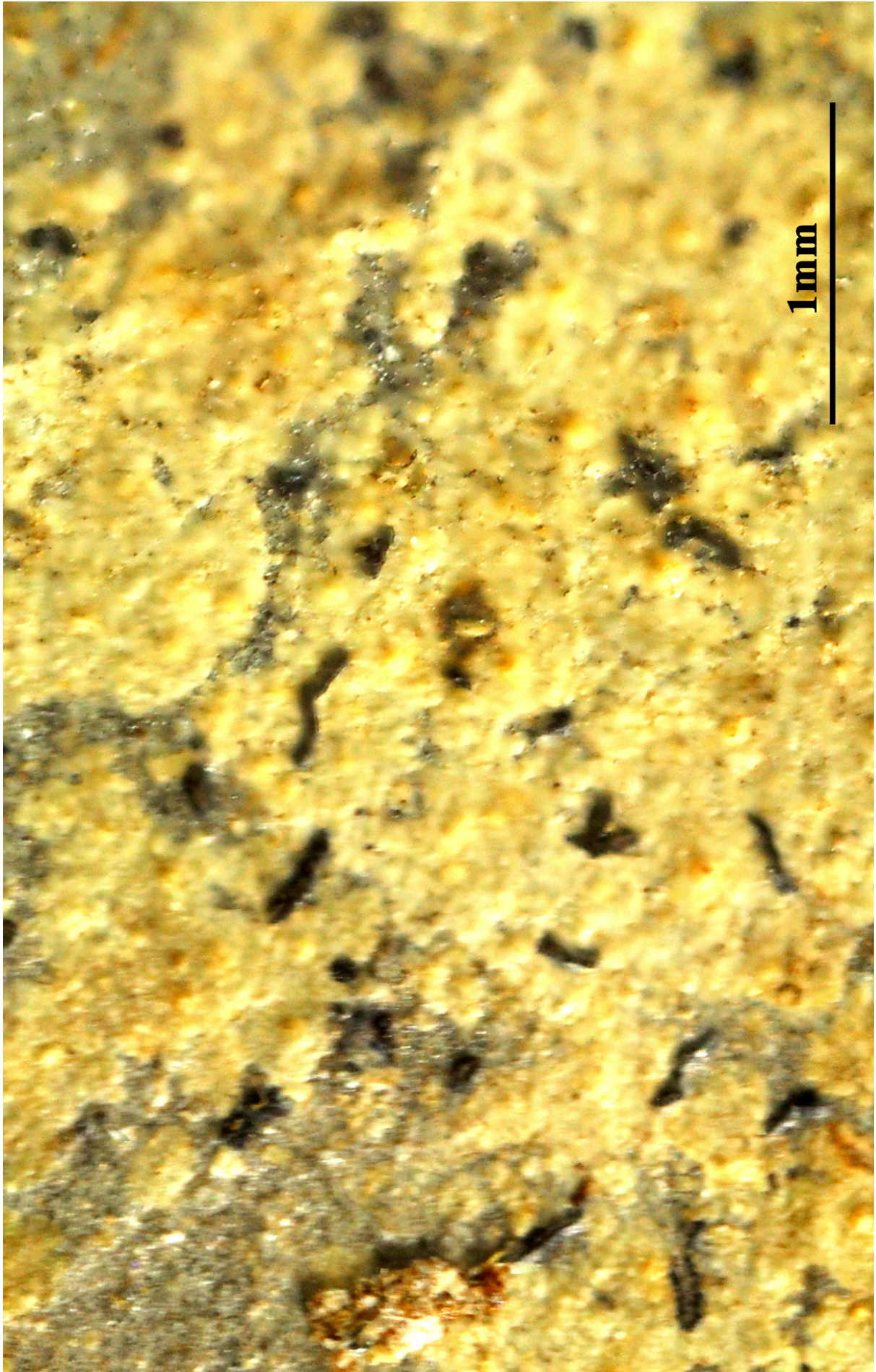
Opegrapha pertusariicola

Opegrapha phylloporinae Müll. Arg., Flora, Regensburg 73: 193 (1890)

[VZ2375], Tanzania. Morogora regio, Ngoro montes, in valle Chazi Mhonda Mission, 800-850 m. Foliicola, in thallo *Porinae epiphyllae* parasitans. Leg. E. Farkas (89102), 23.3.1989, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2375.



Opegrapha phylloporinae



Opeggrapha phylloporinae

Opegrapha vermicellifera (J. Kunze) J.R. Laundon, Lichenologist 2: 139 (1963)

= *Pyrenotea vermicellifera* Kunze in Reichenbach & Schubert - Lich. Exs.: nr. 60, 1823.

= *Opegrapha fuscella* (Fr.) Almb.

= *Opegrapha hapaleoides* Nyl.

= *Opegrapha leptospora* Werner & M. Choisy

= *Opegrapha mehdiensis* Werner

[VZ1653], URSS. Transcaucasia, Colchis. Distr. Chosta, ad latera austro-orientalia iugi nontium Achun, in valle fluminis Chosta, 400 m. Ad corticem *Aceris pseudoplatani*. Leg. C. Vašák et A. Vězda, 15.6.1979. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR.1653.

Thallus crustose, thin, smooth or finely rimose, grey to almost white, the fertile form grey-ochre, the sterile form more whitish, forming up to 12 cm wide patches. Apothecia lirelliform, confined to restricted areas on the thallus, (0.3-)0.6-1.5(-2.5) x 0.1-0.3 mm, most often simple and isolated, rarely furcate or stellate and arranged in small clusters, half immersed, with a slit-like to slightly expanded disc and a black to slightly grey-pruinose proper margin. Proper exciple black, carbonized, extending below the hymenium, 28–40 µm thick laterally, 40-50 µm thick at base, K-; epithecium brown; hymenium colourless, 50-60 µm high, I+ yellowish; paraphysoids branched and anastomosing, c. 1 µm thick, the apical cells hardly swollen; subhymenium brownish, 10-15 µm high. Asci 8-spored, cylindrical-clavate, the inner layer of the endoascus amyloid throughout, the apical ring hardly visible, Vulgata-type, 40-50 x 12-15 µm. Ascospores 4-7-septate, hyaline, markedly elongate with pointed ends, 15-25(-30) x 3-4(-5) µm, surrounded by a c. 1 µm thick gelatinous perispore. Pycnidia often abundant (in sterile forms), 0.15-0.25 mm in diam., regularly distributed, at first immersed and appearing as pale brown punctiform ostioles, later prominent, appearing as white-pruinose, subglobose, up to 0.4 mm tall warts, the wall K-, N-. Conidia bacilliform, straight or slightly curved, hyaline, 3-7 x 1-1.5 µm. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a mild-temperate lichen found on old trees in humid areas, especially near large rivers, on faces seldom wetted by rain.



Opegrapha vermicellifera



Opegrapha vermicellifera

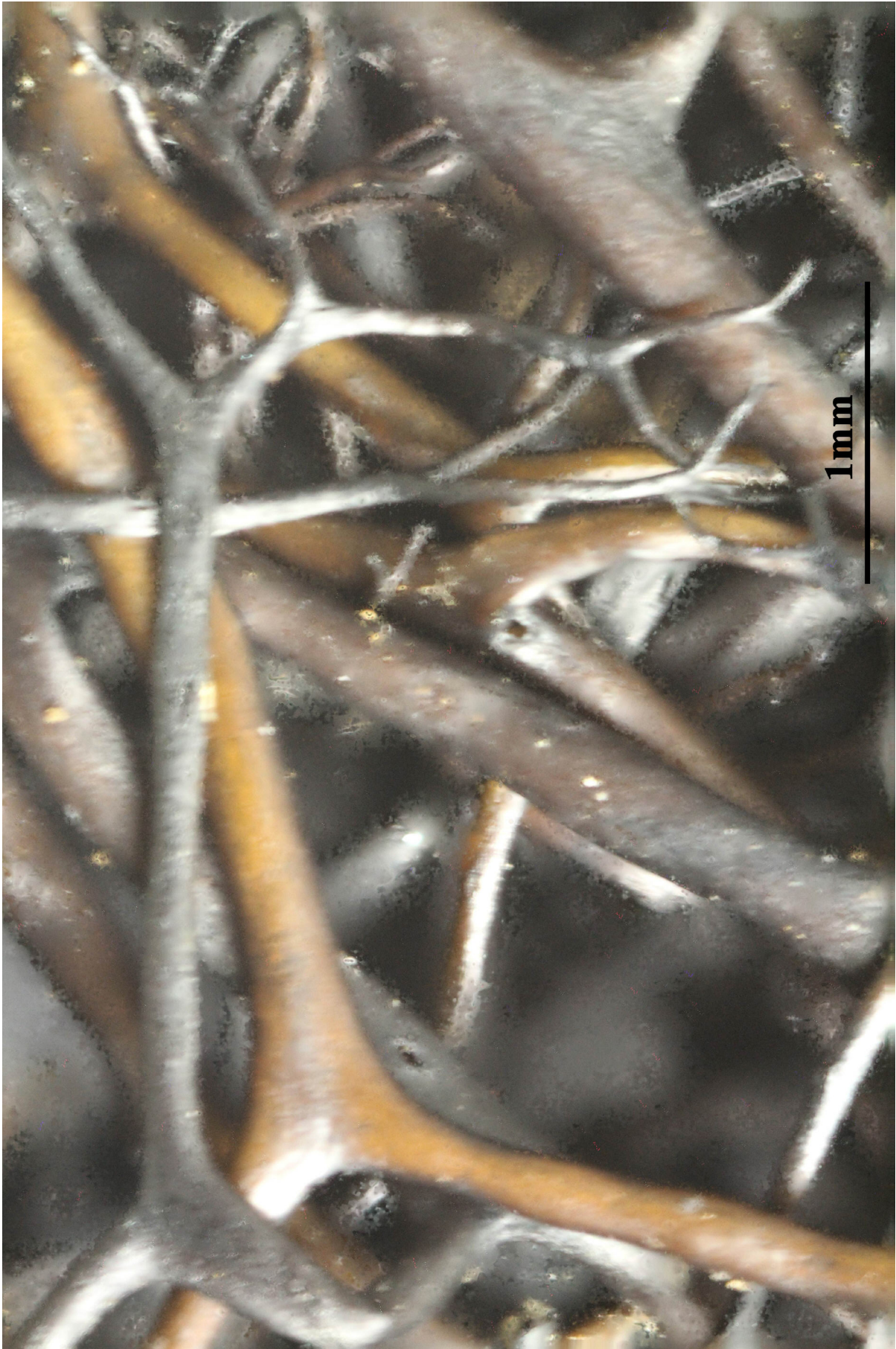
Oropogon barbaticus Essl., Systematic Botany Monographs 28: 47 (1989)

[VZ2436}, Venezuela. Mérida: Mucubají, prope lacum dictum Mucubají, inter Apartadero et Santo Domingo, 3230 m. In vegetazione alpina "páramo" dicta, ad terram. Leg, W. L. Culberson (no. 21049) et C. F. Culberson, 19.8.1989. - Annot.: Barbatic and Fumarprotocetraric acids by TLC; anal. A. Johnson and C.F. Culberson. - EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2436.

Thallus caespitosus, usque 9 (-12) cm longus, brunnescens vel fusco-brunneus vel subater, saepe atro-variegatus; pseudocyphellae ad centrum thalli cavi apertae; medulla tenuis et saepe maculescens, alba; acidum barbaticum continens. Thallus caespitose, up to 9 or rarely 12 cm long; branching isodichotomous, internodes 3-8 mm long, main branches up to 0.8 mm (rarely 1 mm) in diameter; tan-brown to dark brown or almost black, frequently distinctly mottled with black (bicolored); pseudocyphellae frequent, usually open to the hollow thallus center (in some younger parts of the thallus, the perforations are closed by a thin layer of medulla behind them). Thallus interior mostly hollow, with a thin medulla which often becomes patchy in more mature branches, some branches with occasional filled areas but those mostly in younger segments; medulla hyphal to somewhat scurfy, white to somewhat off-white. Apothecia common (present in ca. 39% of collections examined), to 4 mm in diameter, concave to flat when young, usually becoming convex, the margin entire to weakly crenate or sparsely spinulose; hymenium 175-220 μm thick, subhymenium 55-100 μm thick; spores 115-155 μm long, 37-48 μm wide, epispore absent in mature spores. Pycnidia not seen. Fig. 31. Thallus reactions: cortex all spot tests negative; medulla P- or P+ orange (or rarely P+ yellow), K- or K+ dingy orange, C-, KC+ orange or rarely KC-, CK+ orange or occasionally CK-. Constituents: barbatic acid (+ + +), sometimes with 4-O-demethylbarbatic acid (tr to +), fumarprotocetraric acid (tr to +), protocetraric acid (tr), or miscellaneous unknowns (tr to +), rarely with psoromic acid (tr to ++) or placodiolic acid (+ + +).



Oropogon barbaticus

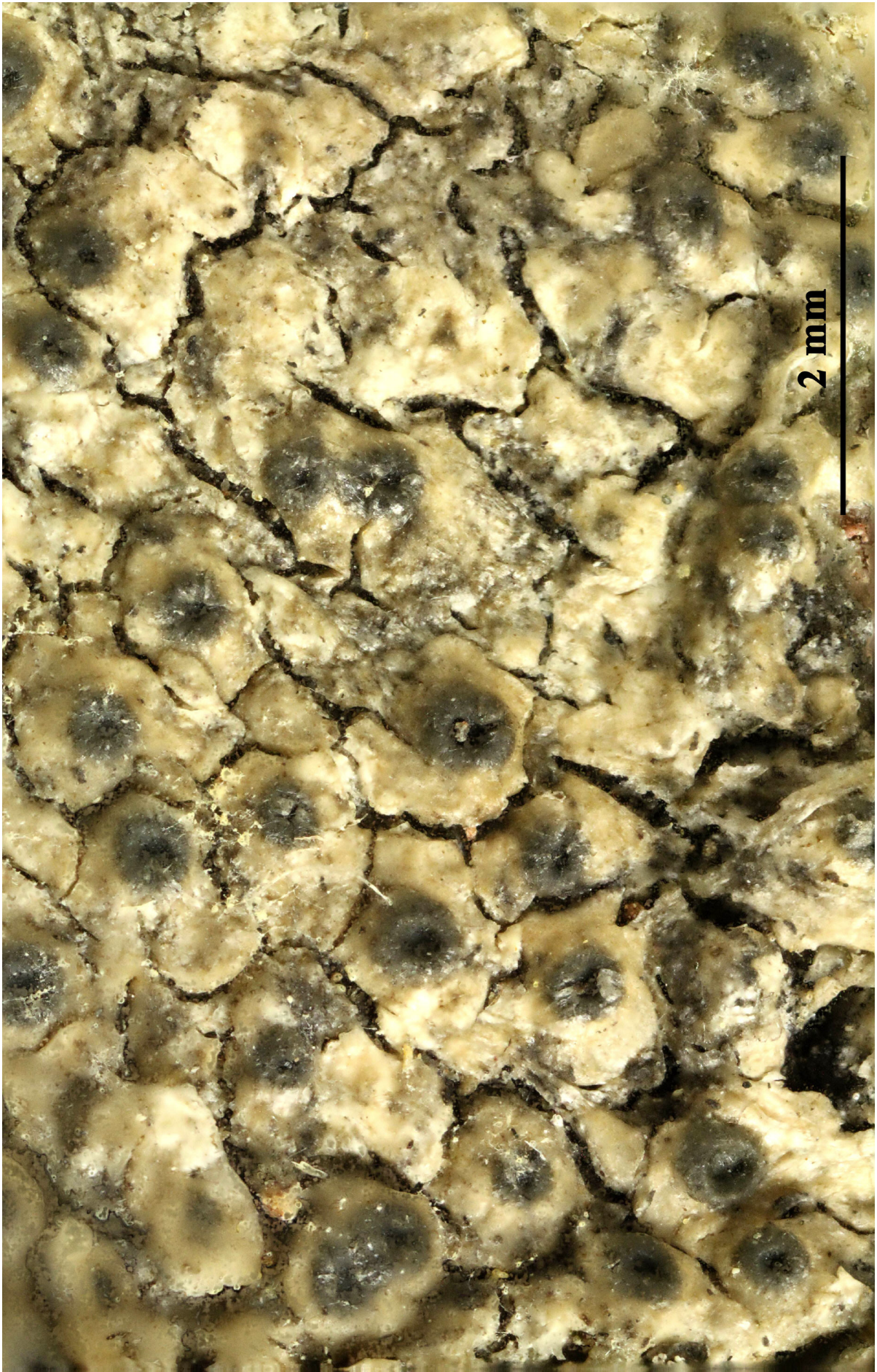


Oropogon barbaticus

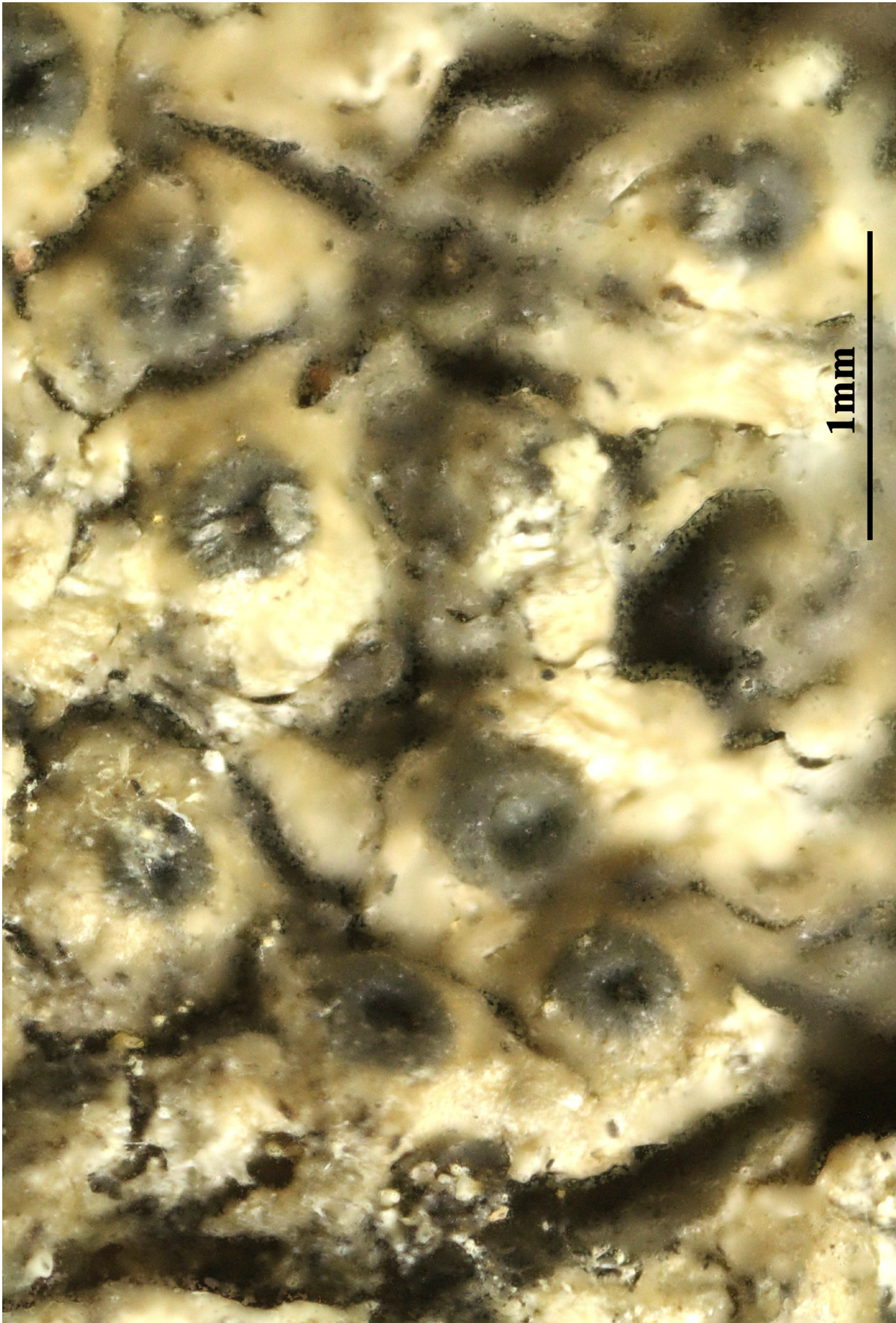
Pachyospora mutabilis (Ach.) A. Massal., Ric. auton. lich. crost. (Verona):
44 (1852)
= *Megaspora verrucosa* (Ach.) L. Arcadia & A. Nordin, Taxon 61(2): 465
(2012)
= *Megaspora verrucosa* var. *mutabilis* (Ach.) Nimis & Cl. Roux in
Nimis, The Lichens of Italy: 430, 1993
= *Urceolaria mutabilis* Ach. - Lichenogr. Univ.: 335, 1810.

[VZ1761], Suecia. Värmland: Vitsand, Kullberget, 360 m. Ad corticem
Populi tremulae. Leg. S. W. Sundell, 27.8.1976. EX A. VĚZDA LICHE-
NES SELECTI EXSICCATI NR. 1761.

Thallus crustose, whitish to brownish grey, usually warted, more or less
densely white-pruinose, usually rather well-delimited. Apothecia fre-
quent, aspicilioid, immersed in thalline warts, up to 1.5 mm across
(usually less), with a black, initially pore-like then expanded, concave
to finally flat, rough but epruinose disc, the black colour expanding to
the margin, forming a dark halo; thalline margin thick, smooth, whitish
to grey, darker in inner part, pruinose. Thalline exciple with numerous
small crystals; proper exciple thin, of strongly coherent, vertically
aligned hyphae; epithecium olivaceous green to partly grey-black, N+
bright green, the darkest parts K+ brownish, without crystals; hymeni-
um colourless, 80-120 μm high, I+ blue; paraphysoids coherent, bran-
ched and anastomosing, slender, c. 1.5 μm thick, the apical cells not
markedly thickened; hypothecium colourless to yellowish. Asci (4-)8-
spored, clavate or cylindrical-clavate, thin walled except towards the
apex, with a K/I+ pale blue tholus, Biatora-type. Ascospores 1-celled,
hyaline, broadly ellipsoid to subglobose, 34-60 x 22-42 μm , the wall
1.5-2.5 μm thick. Photobiont chlorococcoid. Spot tests: thallus K-, C-,
KC-, P-, UV-. Chemistry: thallus without lichen substances; apothecia
with the Caesiocinerea-green pigment. - Note: on basal parts of old
deciduous trees; most frequent in Central Italy.



Pachyospora mutabilis

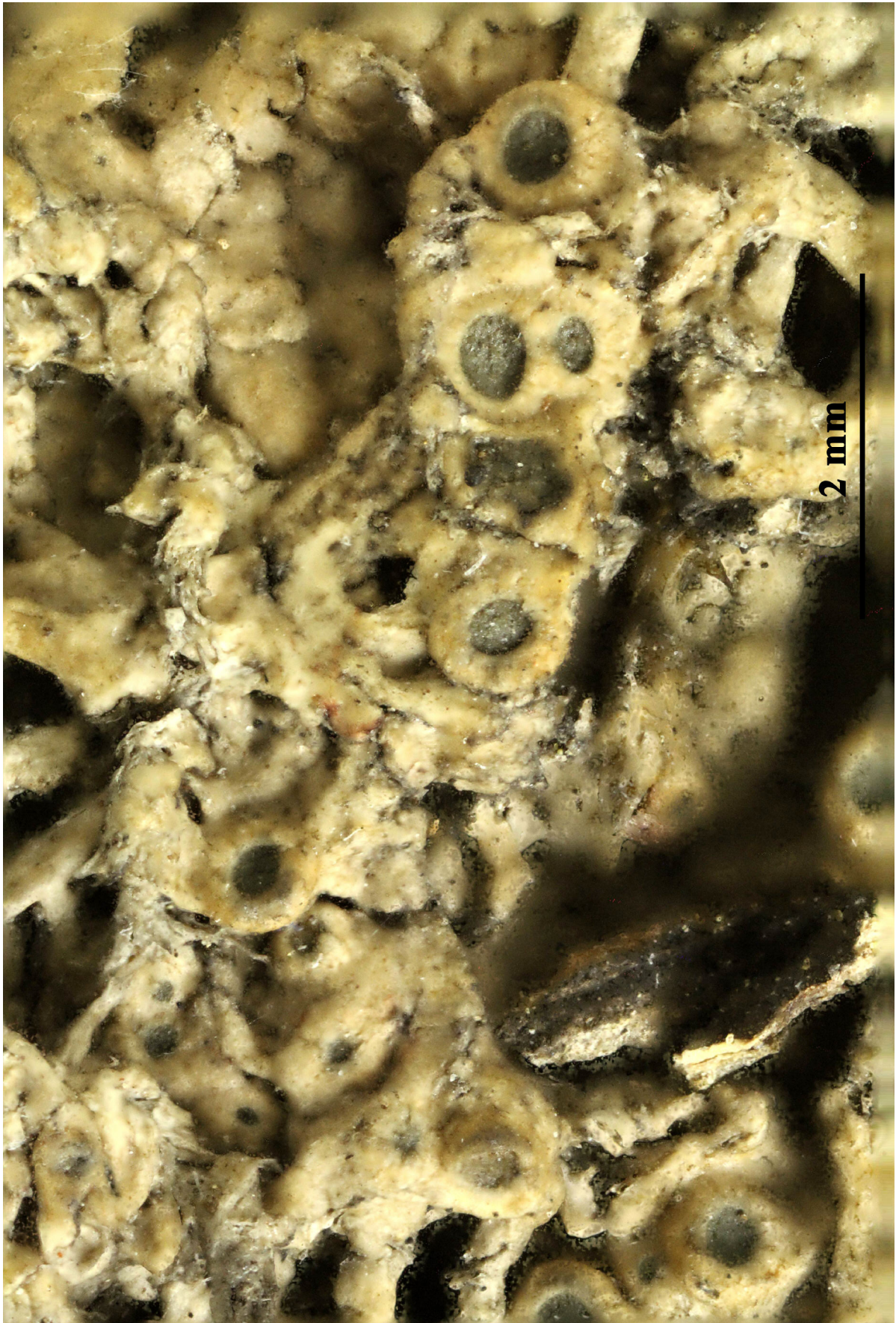


Pachyospora mutabilis

Pachyospora mutabilis (Ach.) A. Massal., Ric. auton. lich. crost. (Verona): 44 (1852)
= *Megaspora verrucosa* (Ach.) L. Arcadia & A. Nordin, Taxon 61(2): 465 (2012)
= *Megaspora verrucosa* var. *mutabilis* (Ach.) Nimis & Cl. Roux in Nimis, The Lichens of Italy: 430, 1993
= *Urceolaria mutabilis* Ach. - Lichenogr. Univ.: 335, 1810.

[VZ1278], USSR. Distr. Krasnodar: In jugo collis Orlinnyje skaly prope balneas Sotschi, 320 m. Ad corticem *Quercus petraeae*. Leg. I. Pišút, 12.8.1973. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1278.

Thallus crustose, whitish to brownish grey, usually warted, more or less densely white-pruinose, usually rather well-delimited. Apothecia frequent, aspicilioid, immersed in thalline warts, up to 1.5 mm across (usually less), with a black, initially pore-like then expanded, concave to finally flat, rough but epruinose disc, the black colour expanding to the margin, forming a dark halo; thalline margin thick, smooth, whitish to grey, darker in inner part, pruinose. Thalline exciple with numerous small crystals; proper exciple thin, of strongly coherent, vertically aligned hyphae; epithecium olivaceous green to partly grey-black, N+ bright green, the darkest parts K+ brownish, without crystals; hymenium colourless, 80-120 μm high, I+ blue; paraphysoids coherent, branched and anastomosing, slender, c. 1.5 μm thick, the apical cells not markedly thickened; hypothecium colourless to yellowish. Asci (4-)8-spored, clavate or cylindrical-clavate, thin walled except towards the apex, with a K/I+ pale blue tholus, Biatora-type. Ascospores 1-celled, hyaline, broadly ellipsoid to subglobose, 34-60 x 22-42 μm , the wall 1.5-2.5 μm thick. Photobiont chlorococcoid. Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: thallus without lichen substances; apothecia with the Caesiocinerea-green pigment. - Note: on basal parts of old deciduous trees; most frequent in Central Italy.



Pachyospora mutabilis



Pachyospora mutabilis

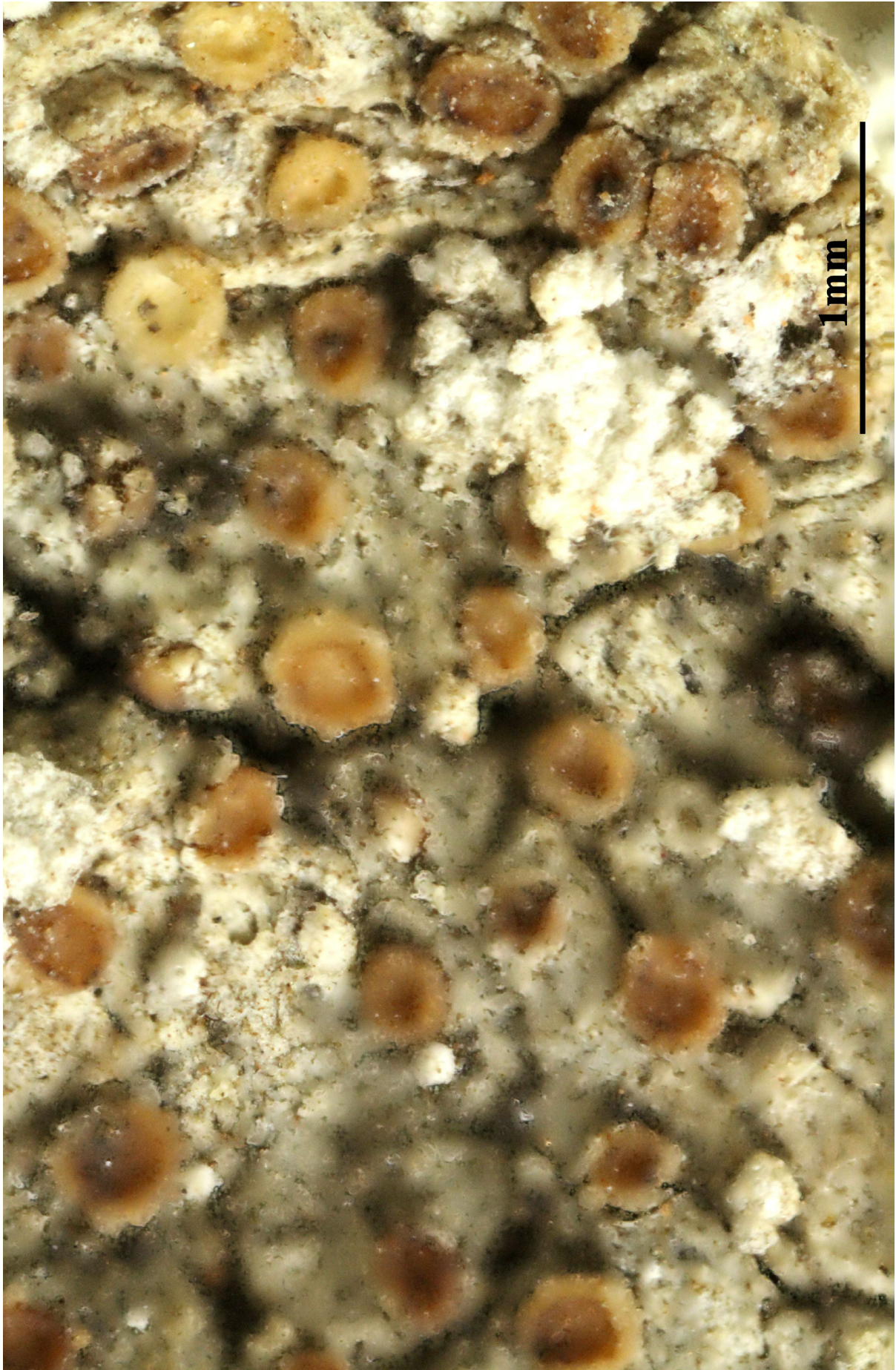
Pachyphiale arbuti (Bagl.) Arnold, Flora, Regensburg 54(4): 50 (1871)
= *Bacidiopsis arbuti* Bagl. 1861
= *Gyalecta arbuti* (Bagl.) Baloch & Lücking, in Baloch, Lumbsch,
Lücking & Wedin, Lichenologist 45(6): 726 (2013)

[VZ2363], Italia. Sardinia. Distr. Oristano: montes Ferru, in monte Urtigu, 800-900 m. Ad corticem arborum (*Quercus ilex*). Leg. P. L. Nimis, C. Roux. M. Tretiach et A. Vězda, 5.9.1989. EX A. VěZDA LICHENES SELECTI RXSICCATI NR. 2363.

Thallus crustose, thinly episubstratic, whitish, somehow glossy, sometimes poorly evident. Apothecia 0.3-0.6 mm across, usually numerous, urceolate, gelatinous and translucent when wet, with a concave, orange or reddish brown to finally dark brown disc and a darker, thick, raised, smooth proper margin. Proper exciple well-developed, of narrow, thin, compacted hyphae, reddish brown in outer part, pale within; epithecium reddish brown; hymenium colourless; paraphyses simple, septate, more or less hooked at tips; hypothecium colourless. Asci 16-48-spored, thin-walled, lacking an apical apparatus or tholus, the wall K/I+ blue. Ascospores transversely 6-12(-13)-septate, hyaline, acicular, straight to slightly curved, (26-)35-50(-60) x 3-5 µm, with apiculate ends. Photobiont trentepohlioid. Spot tests: K-, C-, KC-, P-. Chemistry: not known, probably without lichen substances. - Note: a species of Mediterranean, rather humid forests, frequently confused with *G. carneola*.



Pachyphiale arbuti

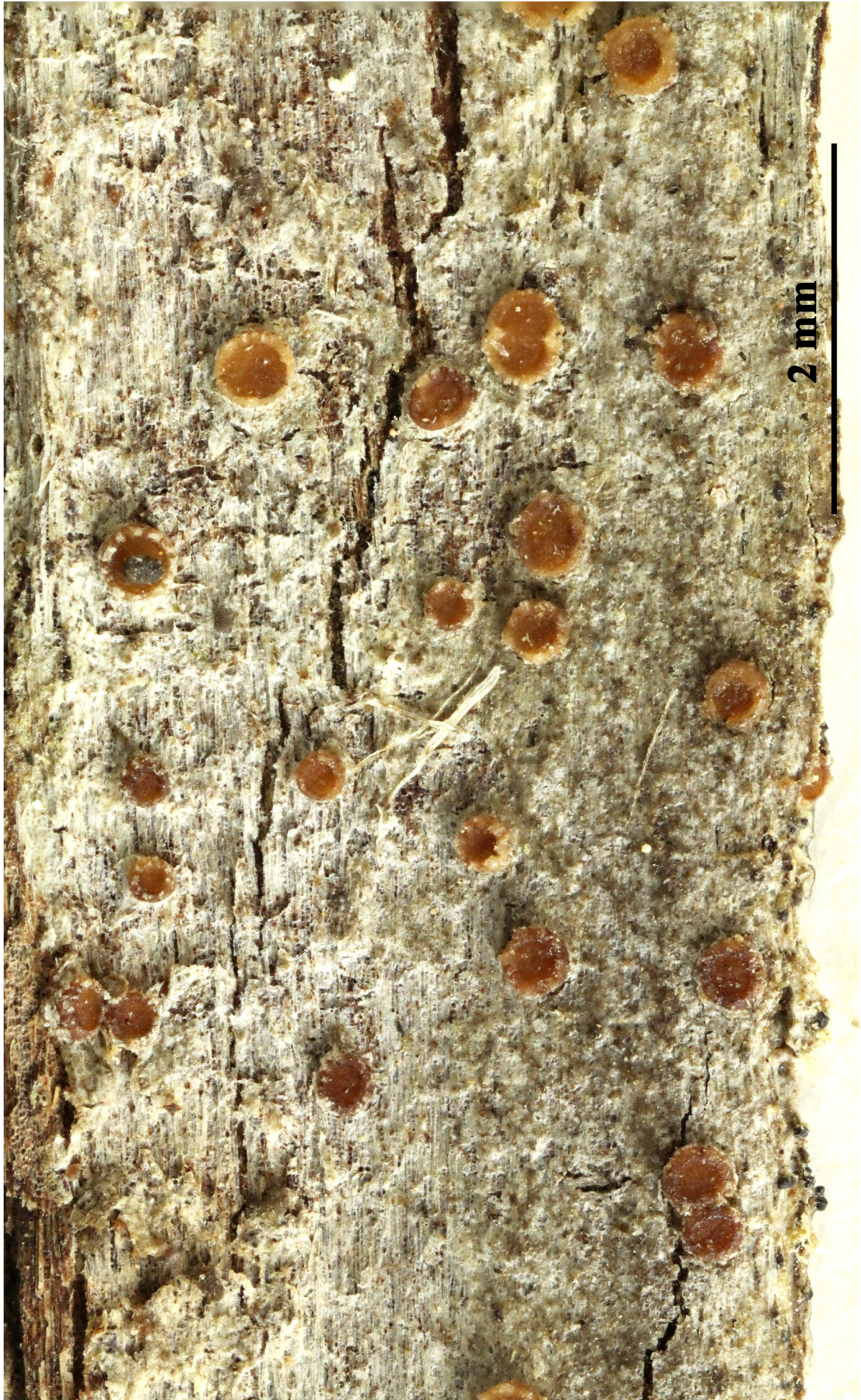


Pachyphiale arbuti

Pachyphiale cornea (Ach.) Poetsch, in Poetsch & Schiedermayr, System.
Aufzähl. samenlos. Pflanzen (Krypt.): 222 (1872)
= *Lecidea cornea* Ach. 1803
= *Bacidia cornea* (Ach.) A. Massal., Ric. auton. lich. crost. (Verona): 118
(1852)

[VZ24217], Gallia. Corsica: Roccapina, 15 m. Ad corticem *Juniperi phoeniceae* in litore. Leg. D. Puntillo, 28.5.1989. EX A. V&ZDA LICHE-
NES SELECTI EXSICCATI NR. 2416.

Thallus crustose, inconspicuous, thin, pale grey to whitish, sometimes orange-spotted. Apothecia 0.4-0.6 mm across, usually numerous, urceolate, gelatinous and translucent when wet, with a concave, orange or reddish brown to finally dark brown disc, and a thick, raised, smooth proper margin which is sometimes surrounded by a spurious, crenulate, pale pseudothalline margin. Proper exciple well-developed, of narrow, thin, compacted hyphae, reddish brown in outer part, pale within; epithecium reddish brown; hymenium colourless, I+ pale blue; paraphyses mostly simple, septate, more or less hooked at tips; hypothecium colourless. Asci (8-)16-48-spored, thin-walled, lacking an apical apparatus or tholus, the wall K/I+ blue. Ascospores transversely 9-15-septate, hyaline, acicular, straight to slightly curved, 38-85 x 3-6 μm , with pointed ends. Photobiont trentepohlioid. Spot tests: K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a mild-temperate species found in old, humid forests; very much declining, especially in Northern Italy.



Pachyphiale cornea

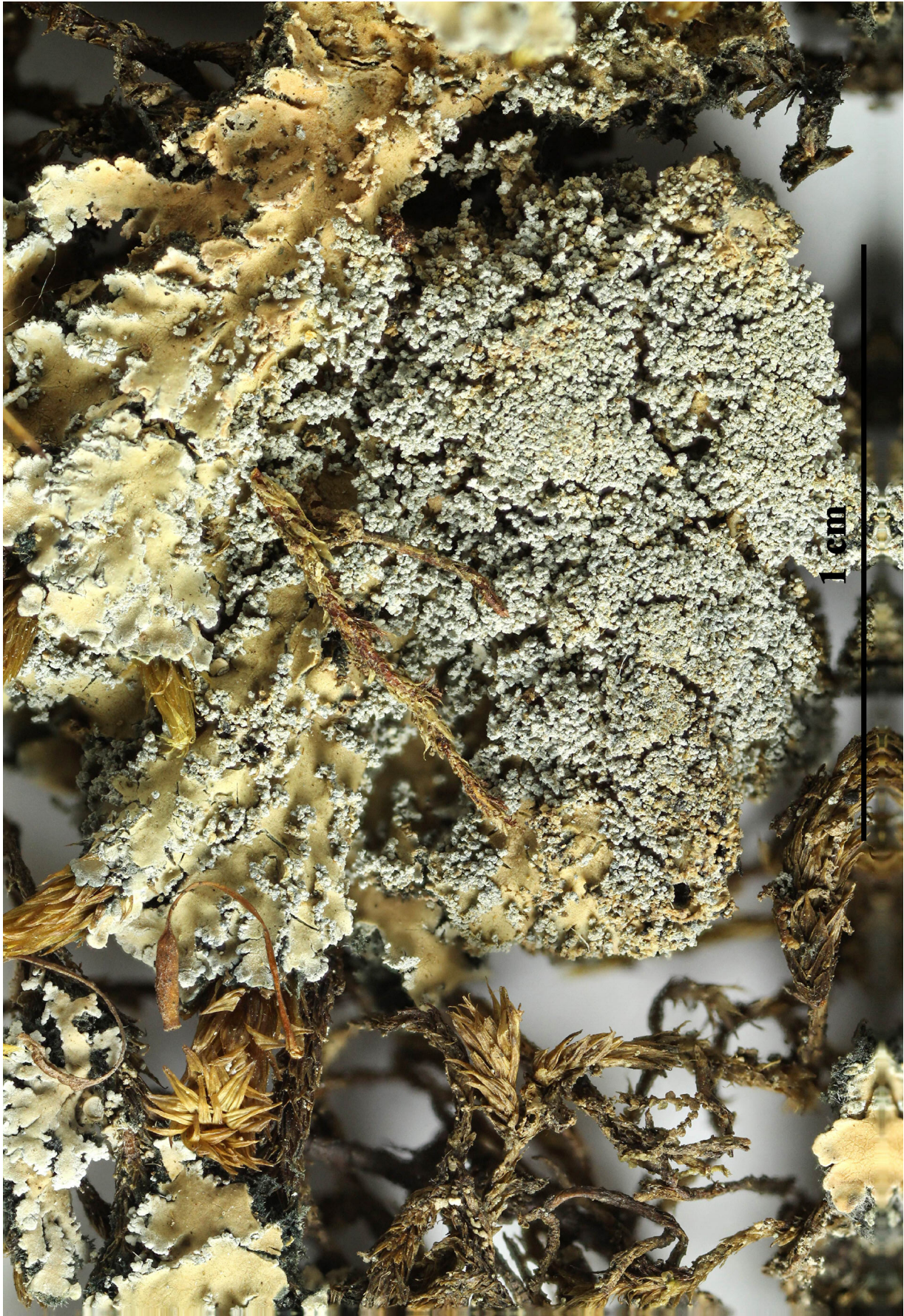


Pachyphiale cornea

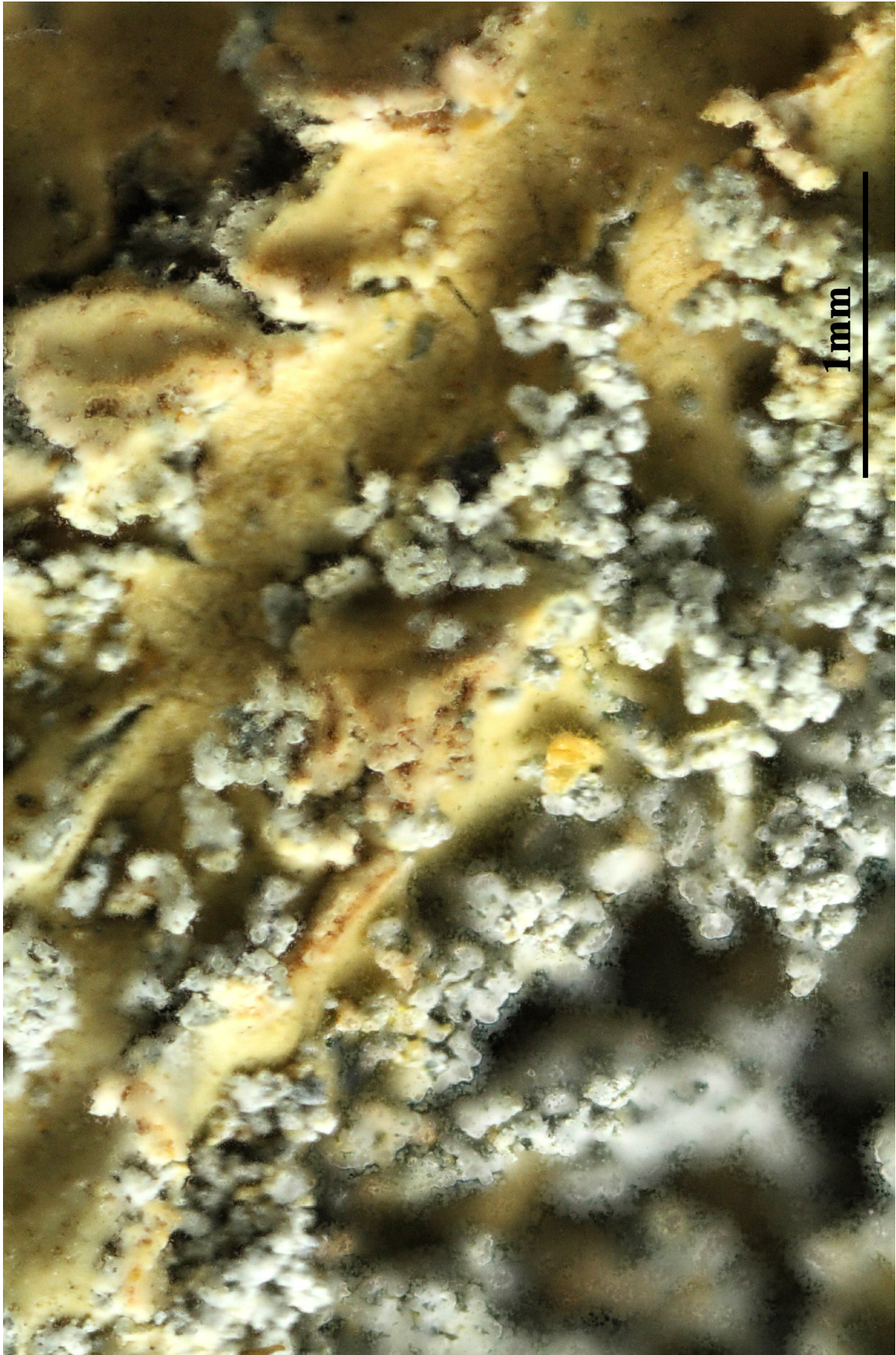
Pannaria conoplea (Ach.) Bory, Dict. Class. Hist. Nat. 13: 20 (1828)
= *Parmelia conoplea* Ach. 1810

[VZ1666], Jugoslavia. Bosna. Montes Prenj, supra lacum Boračko, jezero, 400 m. Ad corticem Fraxini. Leg. A. Vězda. Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1666.

Thallus small-foliose to rarely subcrustose, heteromerous, dorsiventral, 150-200 μm thick, forming irregular to regular, 2-3(-4) cm wide rosettes developing on a dark hypothallus. Lobes contiguous to partially overlapping, fan-shaped, 2-7(-9) mm long and (1-)3-4(-5) mm wide, deeply incised, adnate to more or less ascending, sometimes poorly developed. Upper surface glaucous grey to pale brown in sun-forms, shiny centrally, scabrid-pruinose towards margins, with soledia-like, decorticated marginal lobules (gymnidia) that sometimes totally cover the central parts of thallus; lower surface whitish, with blue-black rhizohyphae sometimes extending beyond lobe margins to form a kind of prothallus. Upper cortex paraplectenchymatous, 40-50 μm thick; medulla white; lower surface ecorticate. Apothecia very rare, lecanorine, 0.5-1.5 mm across, with a reddish brown disc and a gymnidiate thalline margin. Proper exciple subparaplectenchymatous; epithecium brown; hymenium colourless to pale brown, (100-)110-150 μm high, partially I+ persistently blue near the asci; paraphyses mostly simple, the apical cells hardly swollen; hypothecium colourless. Asci 8-spored, clavate to subcylindrical, with a well developed, non-amyloid or very weakly amyloid tholus lacking any internal structures, and an intensely amyloid, thin outer sheath. Ascospores 1-celled, hyaline, ellipsoid, pointed at both ends, with a ridged episporium, measuring 15-19 x 9-10 μm without episporium, 20-24 x 10-12 μm including the episporium. Photobiont cyanobacterial, (*Nostoc*, the cells not in chains). Spot tests: thallus K-, C-, KC-, P+ orange. Chemistry: pannarin. - Note: a *Lobarion*-species, most common on mossy bark in open, humid forests, sometimes on mossy siliceous rocks; declining, especially in Northern Italy.



Pannaria conoplea



Pannaria conoplea

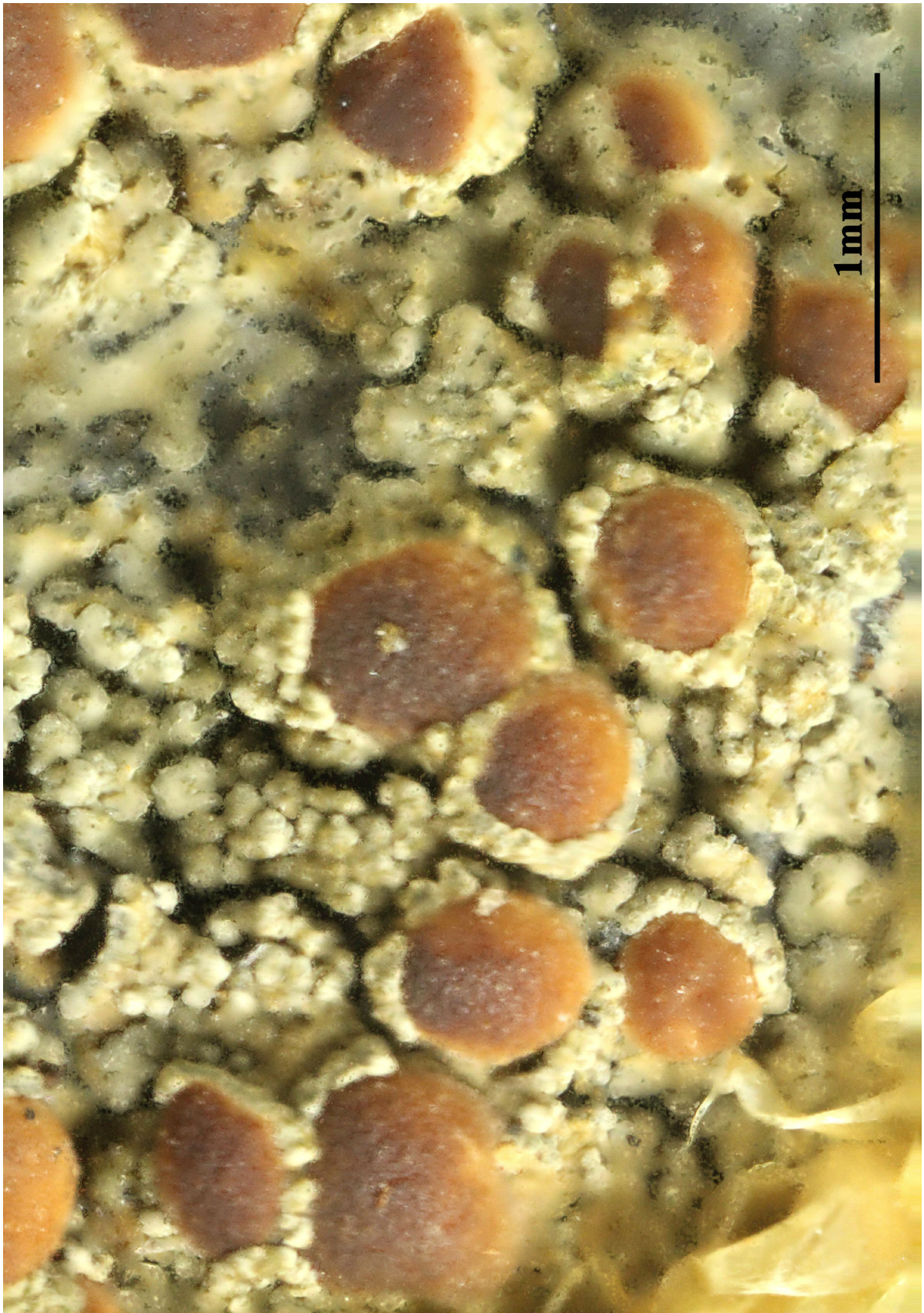
Pannaria ignobilis Anzi, Comm. Soc. crittog. Ital. 1(fasc. 3): 138 (1862)
= *Fuscopannaria ignobilis* (Anzi) P.M. Jørg., J. Hattori bot. Lab. 76: 205
(1994)

[VZ1753], Italia. Basilicata- Prov. Potenza: Coppola di Paola prope Rotonda, 900-1000 m. Ad corticem *Quercus cerris* in silva clara- Leg. J. Hafellner et H. Maythofer, 31.5.1979. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1753.

Thallus crustose-subsquamulose, heteromerous, episubstratic, pale grey, blue-grey or brownish grey, of (0.3-)0.5-1(-1.5) mm wide, incised, dispersed to usually contiguous or imbricate areoles/squamules with a whitish margin, developing on a blue-black hypothallus and often forming a cracked crust. Upper cortex sclerenchymatous, 20-30 μm thick, of thick-walled cells; lower cortex absent. Apothecia lecanorine, 0.3-1 mm across, with a soon convex, orange-brown to red-brown disc, a finally excluded, pale brown proper margin, and an often incompletely developed, granular-verrucose thalline margin. Proper exciple paraplectenchymatous, 20-40 μm wide; epithecium pale brown; hymenium colourless, 100-140(-180) μm high, hemiamyloid, I+ blue-green turning reddish; paraphyses simple, coherent, the apical cells slightly swollen; hypothecium colourless to yellowish, 200-300 μm high. Asci 8-spored, subcylindrical to clavate, with a I+ blue tholus and an internal, more intensely I+ blue apical plug. Ascospores 1-celled, hyaline, ellipsoid, usually with a single large guttule, apiculate at one or both ends, with a variably thick epispore, 10-14(-16) x (6-)7-9(-11) μm , including the epispore 18-28(40) x (7-)9-12 μm . Pycnidia wart-like. Conidia bacilliform. Photobiont cyanobacterial (Nostoc, the cells in clusters). Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. Note: a Mediterranean-Atlantic species, usually found in cracks of the bark of ancient trees, near the base of the boles.



Pannaria ignobilis



Pannaria ignobilis

Pannaria lurida (Mont.) Nyl., Mém. Soc. Imp. Sci. Nat. Cherbourg 5: 109
(1858) [1857]
= *Collema luridum* Mont. 1842

[VZ1780], USA. Arkansas. Polk County: 12 km ad occidentem versus a Mena, secus viam dictam Talimena Skyline Drive. Ad corticem *Quercus stellatae* in silva aridissima. Leg. W. L. Culberson (no. 14764) et C. F. Culberson, 9.9.1970. - Annot.: A trace of the unknown pigment SV-1 by TLC; anal. A Johnson and C. F. Culberso.- EX A. VěZDA LICHENES SELECTI EXSICCATI NR. 1780.

Thallus foliose, flat, orbicular, up to 5-7 cm diam., with poorly developed hypothallus; lobes confluent, apically enlarged, wrinkled; upper surface olive-gray; photobiont a *Nostoc* in chains; lower surface whitish, naked, loosely attached by blue-black rhizohyphae. Apothecia mainly central, up to 2 mm wide; disc brown, with squamulose thalline margin; exciple paraplectenchymatous, 80-100 µm thick; hymenium primarily hyaline but brown above, partially I+ blue (in vicinity of the asci); asci clavate without inner amyloid apical structures, 8-spored; ascospores simple, colorless, ellipsoid 10-18 x 7-9 µm with a distinct, rugulose, apiculate epispore; Spot test thallus K-, C-, KC-, P+ orange; Secondary metabolites pannarin. Substrate and ecology: on hardwood trees, usually on oak, in warm-temperate, moist forests at middle altitudes. World distribution main species widespread in tropical regions, but subspecies *quercicola* appears to be endemic to the hardwood forests of eastern North America, extending southwards to Mexico. - Notes: It is easily recognized on the heavily wrinkled thallus and is often found on oaks



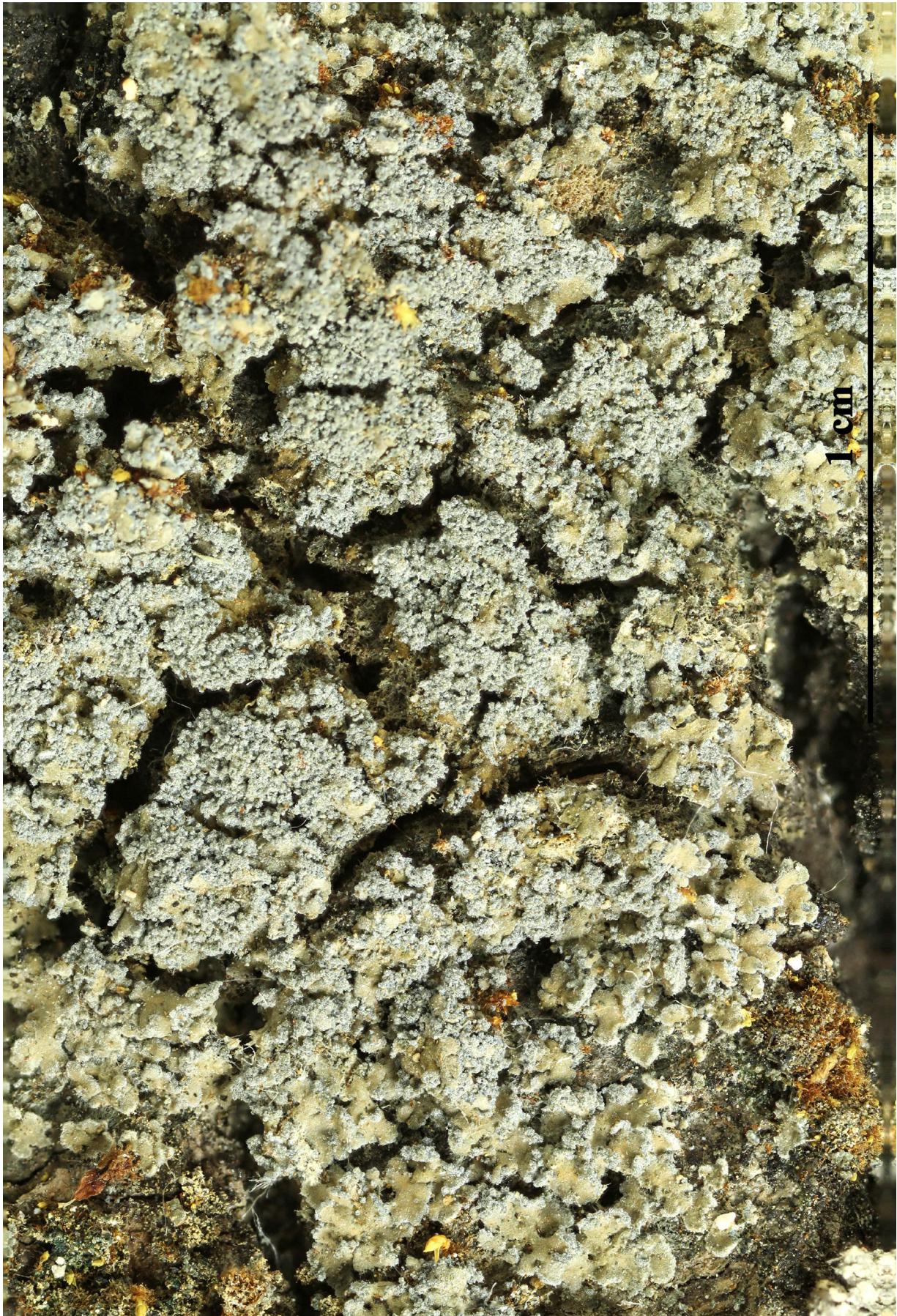
Pannaria lurida



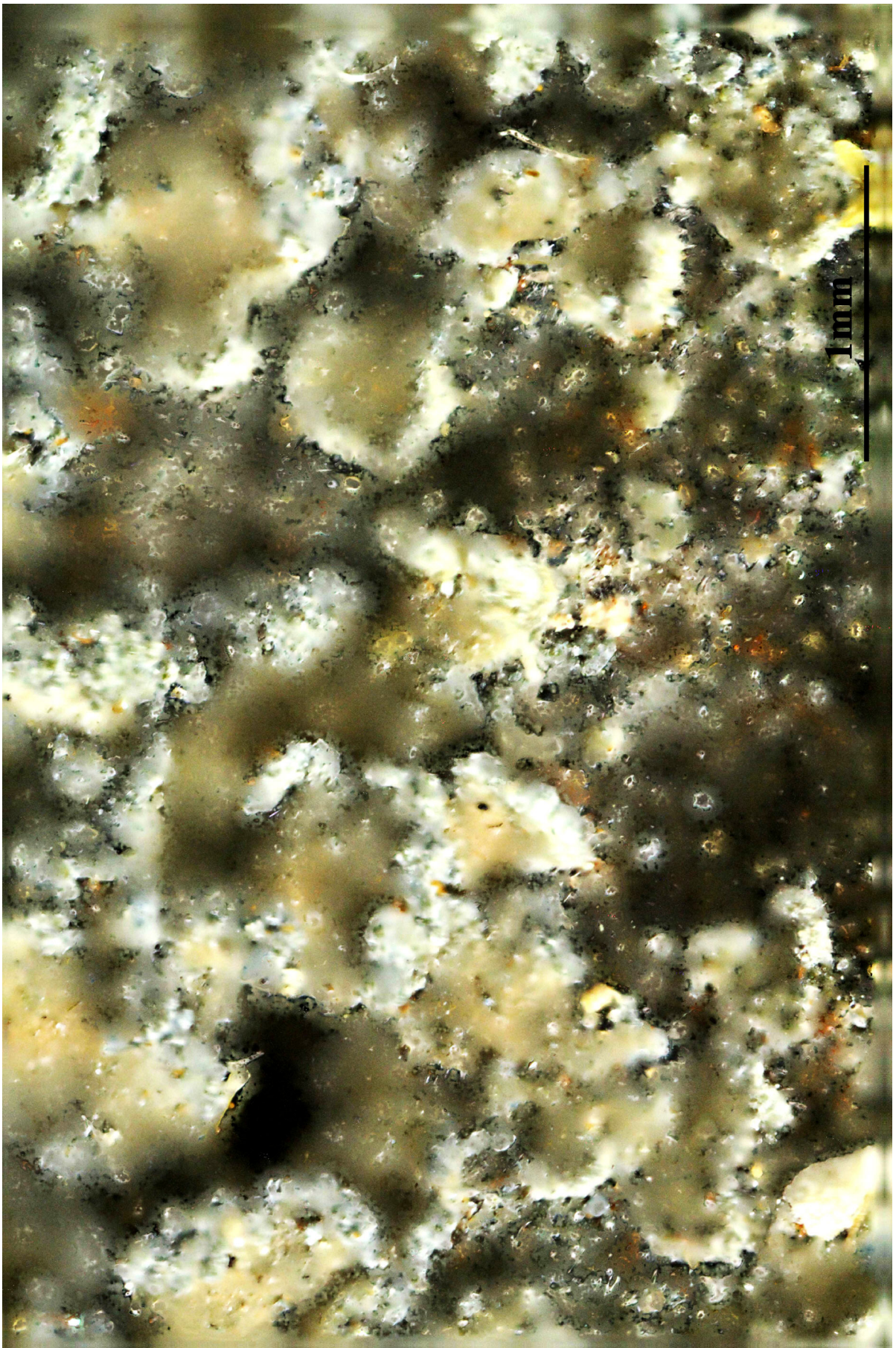
Pannaria mediterranea Tav., Portug. acta biol., Sér. B 8: 5 (1965)
= *Fuscopannaria mediterranea* (Tav.) P. M. Jørg., J. Hattori bot. Lab. 76:
205 (1994)

[VZ1453], Suecia. Västergötland, Östad, in silva mixta prope Vålås. Ad corticem *Populi tremulae*. Leg. T. E. Hasselrot, 9.1945, det. P. M. Jørgensen. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1453.

Thallus crustose-subsquamulose, heteromerous, episubstratic, bluish grey to olive-brown, of 2-3 mm wide, 160-230 μm thick, contiguous or imbricate, sorediate areoles/squamules with a white-felted, upturned margin, developing on a thin, often inconspicuous, blue-black hypothallus, usually forming a thick, cracked crust. Soredia granular, lead-grey or violet-grey, arranged in marginal, sometimes finally confluent soralia often covering the central parts of thallus, which often appear woolly in herbarium material (accumulation of fine crystals). Upper cortex sclerenchymatous, 30-40 μm thick, of thick-walled cells; lower cortex absent. Apothecia very rare, lecanorine, 0.5-1.5(-2) mm across, with a brown disc and a granular, sometimes sorediate, often poorly developed thalline margin. Proper exciple subparaplectenchymatous, 40-70 μm wide; epithecium pale brown; hymenium colourless, c. 100 μm high, hemihamyloid, I+ blue-green turning reddish; paraphyses simple, coherent, the apical cells slightly swollen; hypothecium colourless. Asci 8-spored, subcylindrical to clavate, with a I+ blue tholus and an internal, more intensely I+ blue apical plug. Ascospores 1-celled, hyaline, ellipsoid, with a thick episporium 4rd broadly attenuated apices, measuring (10-)13-16 x 7-8(-9) μm without episporium, 17-23 x 8-10 μm with episporium. Photobiont cyanobacterial (*Nostoc*, the cells in clusters). Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: fatty acids and steroids. - Note: a mild-temperate to Mediterranean species found on bark of ancient broad-leaved trees in semi-natural, rather undisturbed, humid woodlands, more rarely on siliceous, mossy rocks.



Pannaria mediterranea



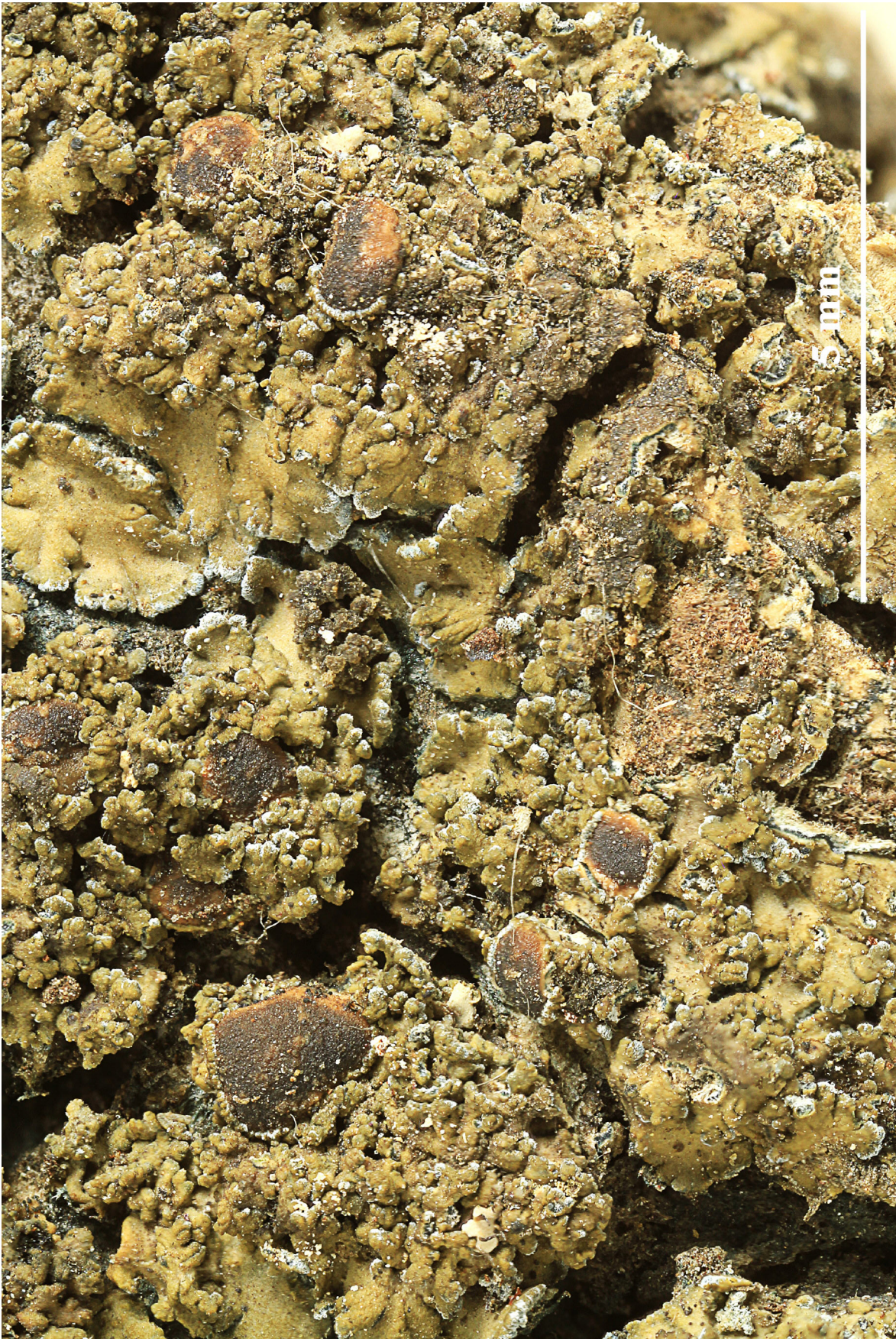
Pannaria mediterranea

Pannaria olivacea P.M. Jørg., Op. bot. 45: 49 (1978)

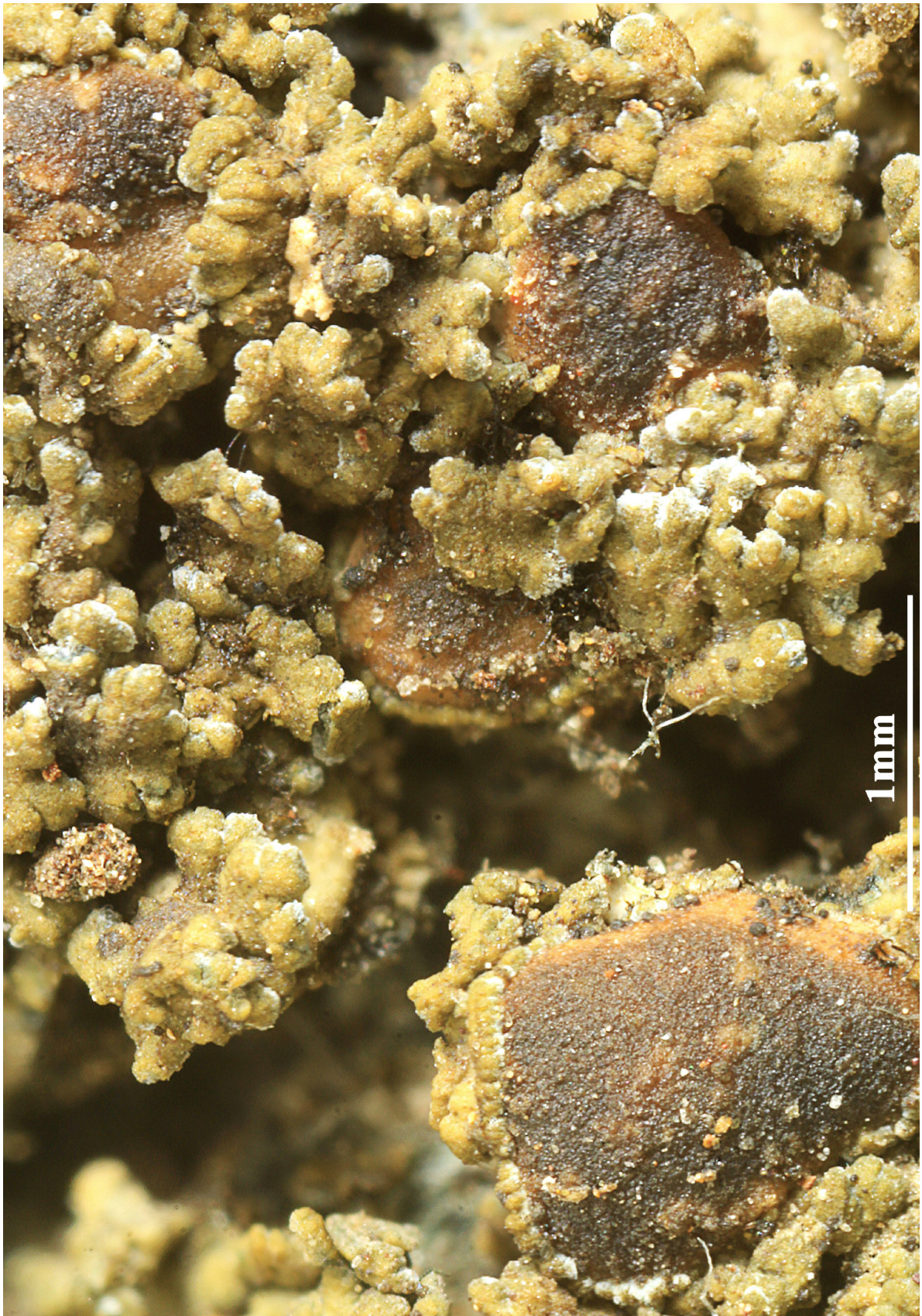
= *Fuscopannaria olivacea* (P.M. Jørg.) P.M. Jørg., J. Hattori bot. Lab. 76:205 (1994)

[VZ2103], Jugoslavia, Dalmatia, peninsula Pelješac: montes Zagorje, prope pagum Duračiči, 400 m. Ad corticem *Quercus pubescentis*. Leg. A. Vezda, 29.08.1984. EX A. VěZDA: LICHENES SELECCTI EX-SICCATI NR. 2103.

Thallus crustose-subsquamulose, heteromerous, of 1-1.5 mm wide, with a white-felted, undulating margin and lower surface, developing on a blue-black hypothallus. Upper cortex paraplectenchymatous 30-40 absent. Apothecia lecanorine, 0.5-1.2 mm across, with a flat to finally convex, reddish brown disc, and a more or less crenulate, persistent, sometimes white-felted thalline margin. Proper exciple paraplectenchyphyses coherent, simple, the apical cells slightly swollen; hypothecium 8-spored, subcylindrical to clavate, with a I+ blue tholus and an internal, more intensely I+ blue apical plug. Ascospores 1-celled, hyaline, ellipsoid, usually with a large guttule, the apices rounded, with a *Nostoc*, the cells in short clusters). Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a mild-temperate to Mediterranean species found on bark and mossy trunks in humid broad-leaved woodlands.



Pannaria olivacea



Pannaria olivacea

Pannaria olivacea P.M. Jørg., Op. bot. 45: 49 (1978)

= *Fuscopannaria olivacea* (P.M. Jørg.) P.M. Jørg., J. Hattori bot. Lab. 76:205 (1994)

[VZ2004], Graecia, Creta, Kaloniktis prope Rethimnon, m300 m. Ad corticem arborum (*Quercus macrolepidis*). Leg, E, Sérusiaux (6240), 4 1984. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2004.

Thallus crustose-subsquamulose, heteromerous, of 1-1.5 mm wide, with a white-felted, undulating margin and lower surface, developing on a blue-black hypothallus. Upper cortex paraplectenchymatous 30-40 absent. Apothecia lecanorine, 0.5-1.2 mm across, with a flat to finally convex, reddish brown disc, and a more or less crenulate, persistent, sometimes white-felted thalline margin. Proper exciple paraplectenchyphyses coherent, simple, the apical cells slightly swollen; hypothecium 8-spored, subcylindrical to clavate, with a I+ blue tholus and an internal, more intensely I+ blue apical plug. Ascospores 1-celled, hyaline, ellipsoid, usually with a large guttule, the apices rounded, with a *Nostoc*, the cells in short clusters). Spot tests: thallus K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a mild-temperate to Mediterranean species found on bark and mossy trunks in humid broad-leaved woodlands.



Pannaria olivacea

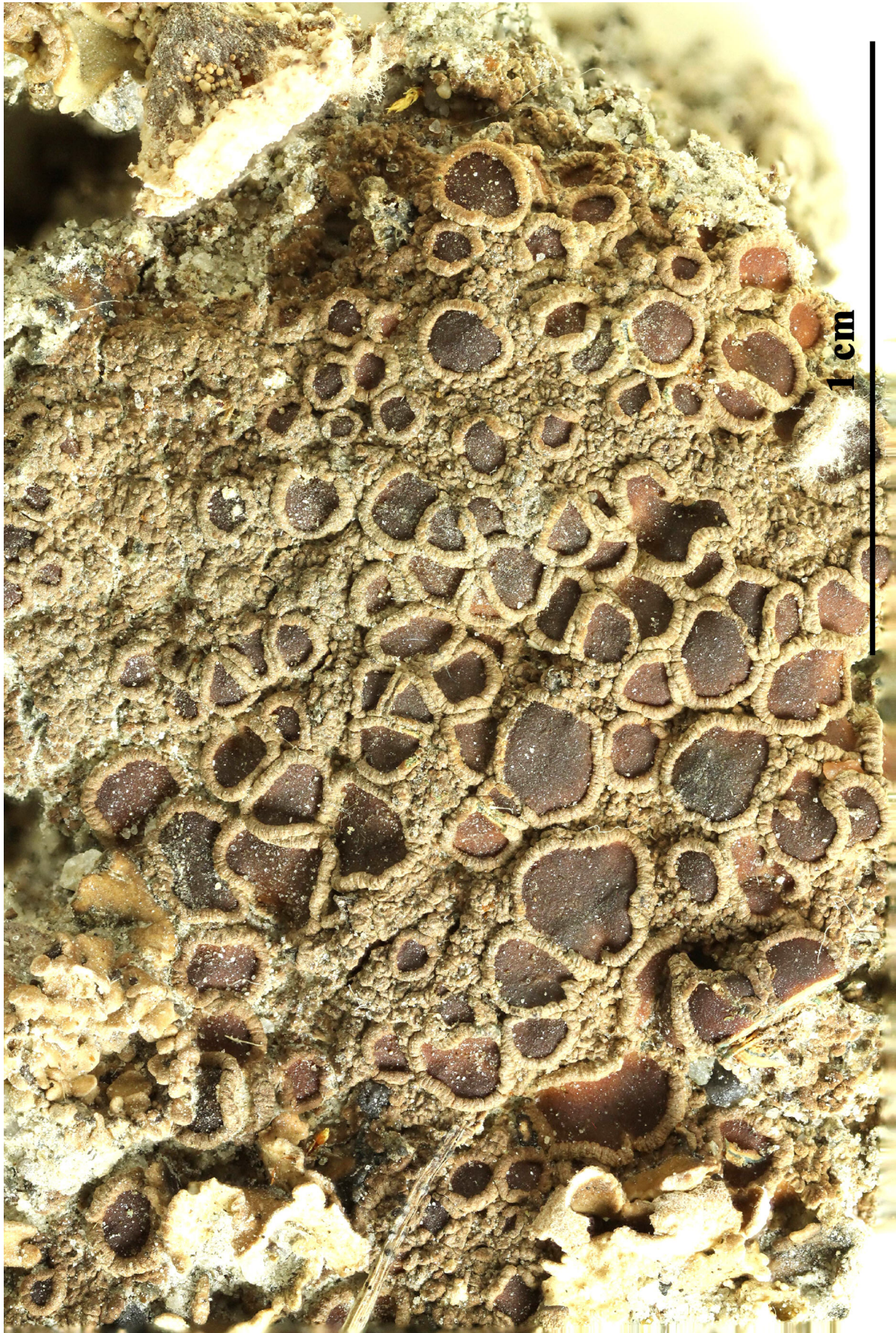


Pannaria olivacea

Pannaria pezizoides (Weber) Trevis., Lichenoth. Veneta 3-4: no. 98 (1869)
= *Lichen pezizoides* Weber 1778
= *Protopannaria pezizoides* (Weber) P.M. Jørg. & S. Ekman, in Jørgensen, Bryologist 103(4): 699 (2000)

[VZ1767], Suecia. Härjedalen: Tännäs Paroecia, haud procul deversorii Ramundberget, 700 m. Ad terram humosam, in silva subalpina. Leg. R. Santesson (no. 19609), 4.7.1979. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1767.

Thallus small-squamulose to crustose, up to 200 µm thick, pale bluish grey, ochraceous, or reddish brown in sun-forms, bluish-green to blackish when moist, thick, forming dense, up to 8 cm wide, often cushion-like patches. Squamules 0.2(-1) mm wide, crenate to lobulate, flattened, contiguous to usually imbricate, when young developing on a poorly visible, blue-black hypothallus, closely adpressed to the substratum to form a compact crust; lower surface pale. Upper cortex paraplectenchymatous, 40-50 µm thick; medulla white, intricately plectenchymatous, 20-40 µm thick, merging into the hypothallus in lower part; lower cortex absent. Apothecia frequent and usually very abundant, lecanorine, sessile, up to 2.5 mm across, with an orange-brown to dark brown, flat to slightly convex disc, and a thick, granular to verruculose thalline margin. Thalline exciple pseudoparenchymatous in outer part, the inner part with densely packed photobiont cells; proper exciple thin, pale, more or less pseudoparenchymatous; epithecium brownish; hymenium colourless, 95-150 µm high, I+ dark blue; paraphyses simple, septate, slightly swollen at apices; hypothecium colourless. Asci 8-spored, cylindrical-clavate, without internal amyloid structures, but with a I+ deep blue external cap. Ascospores 1-celled, hyaline, ellipsoid, somewhat pointed at both ends, thick-walled, with a ridged and warted epispore, measuring 19-25 x 8-10 µm without epispore, 25-30 x 9-12 µm with epispore. Photobiont cyanobacterial (*Nostoc* the cells in clusters). Spot tests: cortex and medulla K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. Note: an arctic-alpine to boreal-montane, circumpolar lichen found on mosses, plant debris, and organic soil in open habitats, with optimum near and above treeline; most common in the Alps.



Pannaria pezizoides

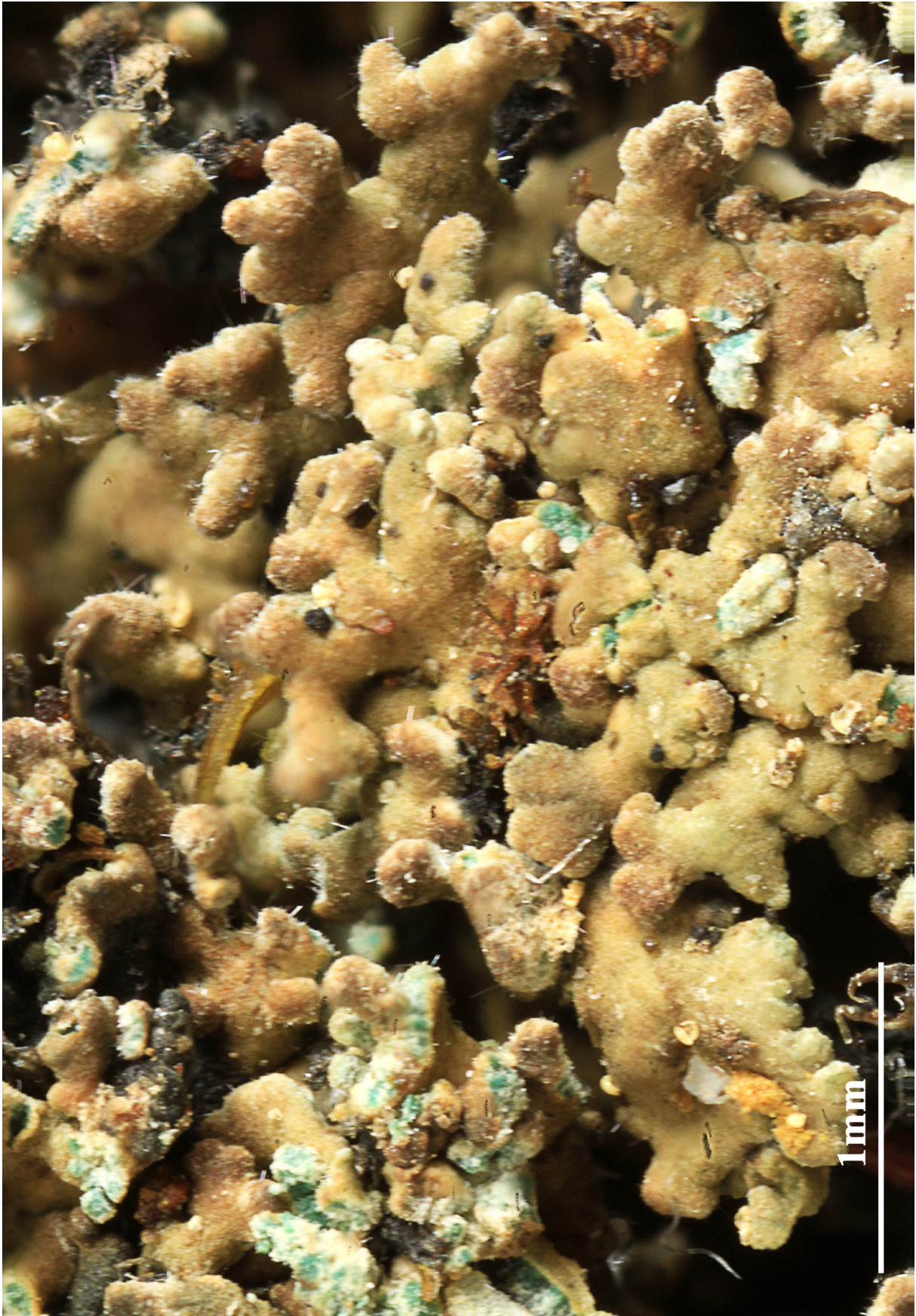


Pannaria pezizoides

Pannaria praetermissa Nyl., Not. Sällsk. Fauna et Fl. Fenn. Förh., Ny Ser.
4(no. 1): 97 (1858) [1858-59]
= *Fuscopannaria praetermissa* (Nyl.) P. M. Jørg., J. Hattori bot. Lab. 76:
205 (1994)

[VZ2252], Bohemoslovacia. Slovacia. Carpates. Tatra Magna, in valle Tichá dolina, 1200 m. Ad muscos in saxo in ripa torrentis. Leg. J. Horáková, Z. Kyselová et A. Vězda, 8.6.1988. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2252.

Thallus squamulose, heteromerous, 0.2-0.4 mm thick, brown to dark brown with a bluish tinge, forming continuous, several cm wide, thick crusts, usually without hypothallus. Squamules 2(-3) mm long, up to c. 1.5 mm broad, round to weakly elongate, incised, flattened, contiguous or mostly imbricate, the margins white-felted due to accumulation of terpenoid crystals, with erect, finger-like lobules looking like isidia, the apex of the lobes and also the lobules often breaking off, revealing the photobiont layer. Upper cortex sclerenchymatous, (20-)30-50 μm thick; lower surface ecorticate, felted. Apothecia rare, cryptolecanorine, to 1.5 mm across, with a brown, usually convex disc, a dark proper margin, and an often excluded, granulose thalline margin. Proper exciple subparaplectenchymatous, 60-80 μm wide; epithecium pale brown; hymenium colourless, 100-120 μm high, hemiamyloid, I+ blue-green rapidly turning red-brown; paraphyses simple, the apical cells slightly swollen; hypothecium colourless. Asci 8-spored, subcylindrical to clavate, with a I+ blue tholus and an internal, more intensely I+ blue apical plug. Ascospores 1-celled, hyaline, ovoid to broadly ellipsoid, often with a single, large oil droplet, 18-22 x 9-11 μm , with a thick, smooth episporium. Photobiont cyanobacterial (*Nostoc*, the cells in clusters). Pycnidia wart-like. Conidia bacilliform. Spot tests: Thallus K-, C-, KC-, P-, UV-. Chemistry: unidentified aliphatic acids and triterpenoids. - Note: an arctic-alpine to boreal-montane, circumpolar lichen found on calciferous soil, mosses and plant debris, with optimum near and above treeline.



Pannaria praetermissa



Pannaria praetermissa

Parmelia andina Müll. Arg., Rev. Mycol., Toulouse 1(4): 169 (1879)
= *Parmotrema andinum* (Müll. Arg.) Hale (Hale 1965: 236)

[VZ1383], Rwanda (Africa centralis), in silva Rugege dicta inter montibus Muzimu et Bigugu, 2450 m. Ad ramosos arborum (*Olinia usambarensis*). Leg. J. Lambinon (1024), 5.03.1972. EX A. VěZDA: LICHENES SELECTI EXSICCATI NR. 1383.

Thallus often very large, to 30 cm. broad, loosely attached to bark, light mineral gray; lobes large and rotund, 10-20 mm. wide, margins smooth to broadly crenate, cilia lacking; upper surface plane to broadly undulous, continuous or reticulately cracked with age, faintly to distinctly white-maculate, isidia and soredia lacking; lower side black and sparsely rhizinate, brown and naked in a broad zone at the margins. Apothecia numerous, large, to 20 mm. in diameter, stalked, amphithecium rugose, white-maculate, disc perforate; hymenium 50-70 μm high; spores 7-10 x 13-18 μm , the episporium 1.0-1.5 μm thick; pycnidia present, conidia not seen. Reactions: Thallus K⁺ yellow; medulla K⁻, C⁺ blood red, KC⁺ blood red, P⁻, atranorine and lecanoric acid present.

Parmotrema andinum is a foliose lichen characterized by a loosely attached thallus that forms rosettes up to 15 cm in diameter. The thallus is coriaceous, Medulla white (sometimes with patches of orange-red skyrin or other anthraquinones near lower cortex; in decayed plants salazinic acid may cause red staining). Medulla C⁺ blood red (lecanoric acid); apothecia if present perforate. *Parmotrema andinum* is a species of lichen in the family Parmeliaceae. It was first described as new to science in 1879 by Johannes Müller Argoviensis as a species of *Parmelia*. Mason Hale transferred it to *Parmotrema* in 1975.



Parmelia andina



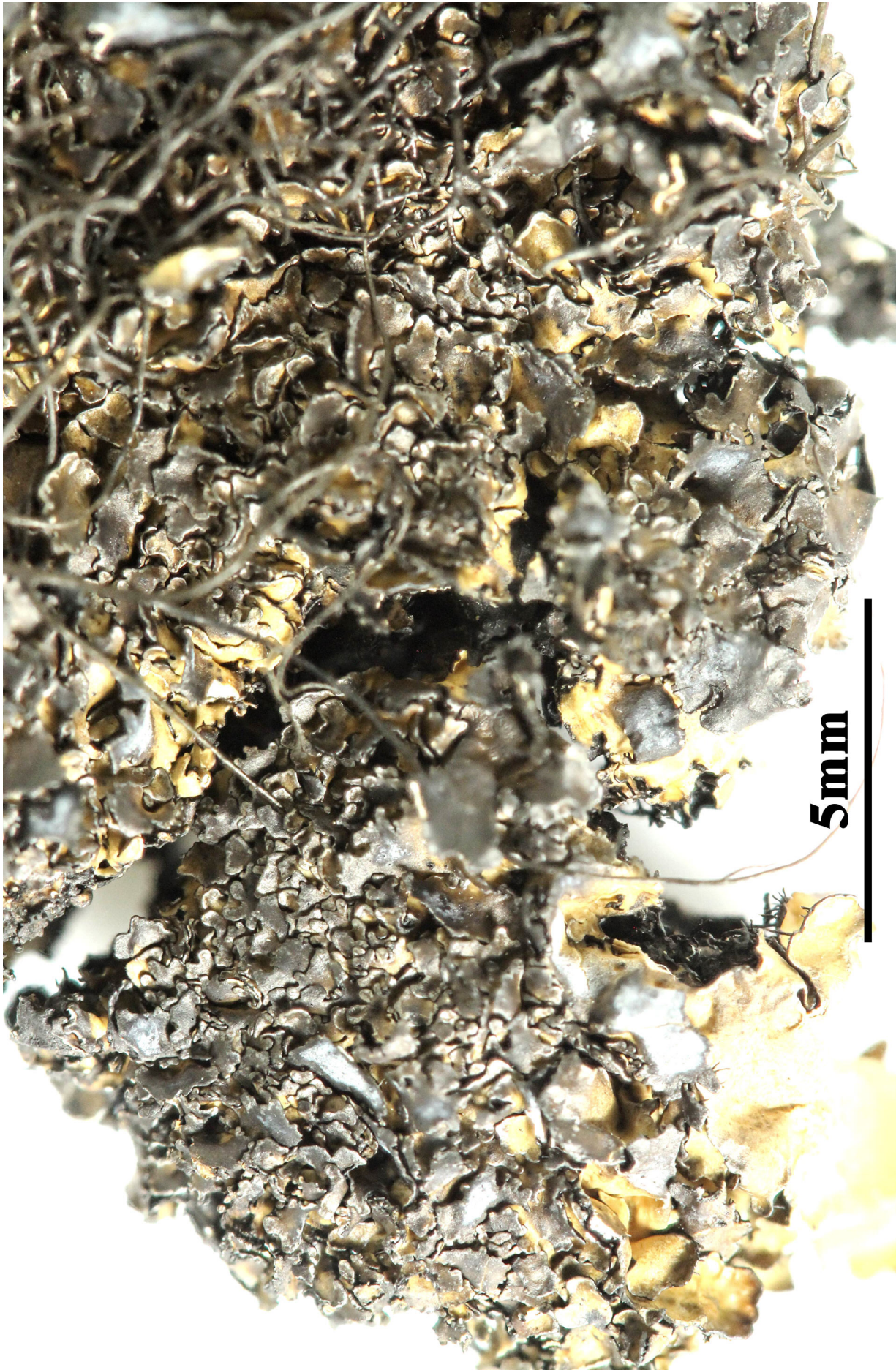
Parmelia andina

Parmelia omphalodes (L.) Ach., Methodus qua omnes detectos Lichenes
Secundum Organa Carpomorpha ad Genera, Species et Varietates Redigere
atque Observationibus Illustrare Tentavit Erik Acharius: 204 (1803)
= *Lichen omphalodes* L. 1753

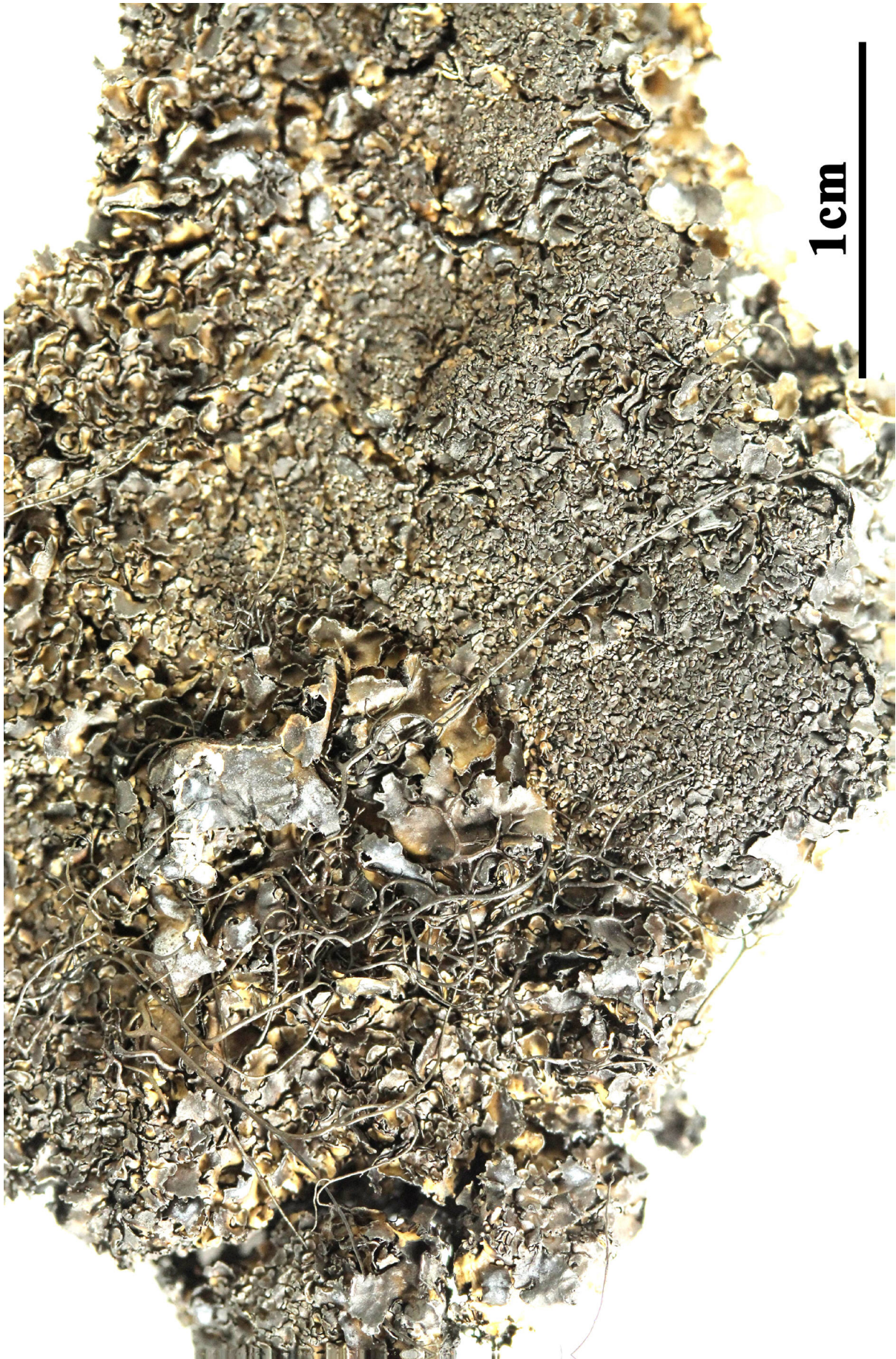
[VZ2139], Austria, Vorarlberg, Rätikon, Schruns, in monte Golmer
Joches, 2100 m, ad lapides siliceos in prato alpino. Leg. A. Vězda,
17.07.1986. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR.2139.

- Chemistry TLC anal F. Schumm p408/9: salazinic, consalazinic,
atranorin. Bestimmung fragwürdig weil lobaric acid und Pseudocyphel-
len vom sulcata-Typ fehlen.

Thallus foliose, heteromerous, dorsiventral, rather loosely attached,
forming more or less regular, up to 15 cm wide rosettes which often
merge into extensive swards. Lobes 2-4(-5) mm wide, with angular
apices, often imbricate. Upper surface of variable colour, from pale
grey in shade-forms to brown, dark brown or almost black in sun-forms,
slightly shiny, epruinose, with a conspicuous network of laminal and
marginal, whitish, at first punctiform but soon linear pseudocyphellae;
lower surface black, with simple or forked, black rhizines most abun-
dant towards the margin. Upper cortex paraplectenchymatous, of 2-6
layers of densely packed cells, with a usually non-pored epicortex, the
cell walls with isolichenan; medulla white; algal layer continuous;
lower cortex paraplectenchymatous, thinner than upper cortex. Apothe-
cia rare, lecanorine, cup-shaped, to 12 mm across, with a dark brown,
often splitting disc and a prominent thalline margin. Epithecium brow-
nish; hymenium and hypothecium colourless. Asci 8-spored, clavate,
Lecanora-type. Ascospores 1-celled, hyaline, ellipsoid, 10-15 x 7-9 μm .
Pycnidia common, black, laminal. Conidia more or less thickened at
both ends, 5.5-6.5 x c. 1 μm . Photobiont chlorococcoid. Spot tests:
upper cortex K⁺ yellow (but often slowly turning dirty red due to
medullary substances), C⁻, KC⁻, P⁻ or P⁺ faintly yellow; medulla K⁺
yellow turning dirty red, C⁻, KC⁻, P⁺ orange-red. Chemistry: upper
cortex with atranorin; medulla with consalazinic and salazinic acids
(major), and variable amounts of lobaric, galbinic, protolichesterinic
and fumarprotocetraric acids. - Note: an arctic-alpine, circumpolar
lichen found on rocks, epilithic bryophytes, more rarely on soil, mostly
near or above treeline; common in the Alps, where it can reach the nival
belt.



Parmelia omphalodes



Parmelia omphalodes



Parmelia omphalodes

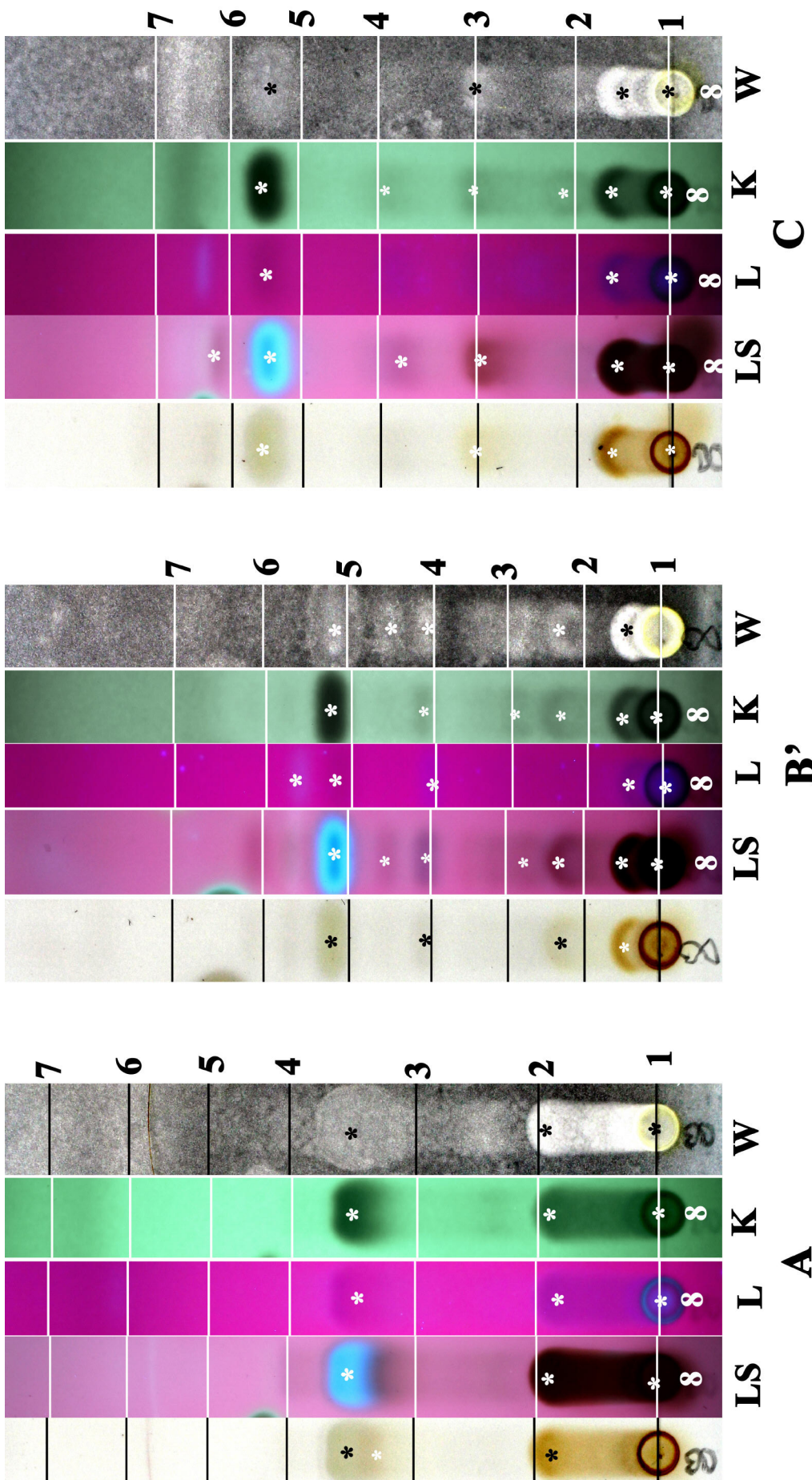


Parmelia omphalodes



Parmelia omphalodes

Parmelia omphalodes



[20329], p408/8

Parmelia omphalodes (L.) Ach., Methodus qua omnes detectos Lichenes
Secundum Organa Carpomorpha ad Genera, Species et Varietates Redigere
atque Observationibus Illustrare Tentavit Erik Acharius: 204 (1803)
= *Lichen omphalodes* L. 1753

[VZ1740], Gallia, Finistère, Pointe de Pen-Hir. Ad scopulos prope
litum. Leg. W. L. Culberso (no. 10483) et C. F. Culberson, 6.1962. -
Annot.: Lobaric acid, salazinic acid, consalazinic acid and trace of
galbinic acid by TLC: anal by A. Johnson and C. F. Culberson. - Ex A.
Vězda Lichenes Selecti Exsiccati Nr. 1740.

Chemistry anal. F. Schumm with TLC p408/8: lobaric, salazinic, consa-
lazinic acid.

Thallus foliose, heteromerous, dorsiventral, rather loosely attached,
forming more or less regular, up to 15 cm wide rosettes which often
merge into extensive swards. Lobes 2-4(-5) mm wide, with angular
apices, often imbricate. Upper surface of variable colour, from pale
grey in shade-forms to brown, dark brown or almost black in sun-forms,
slightly shiny, epruinose, with a conspicuous network of laminal and
marginal, whitish, at first punctiform but soon linear pseudocyphellae;
lower surface black, with simple or forked, black rhizines most abun-
dant towards the margin. Upper cortex paraplectenchymatous, of 2-6
layers of densely packed cells, with a usually non-pored epicortex, the
cell walls with isolichenan; medulla white; algal layer continuous;
lower cortex paraplectenchymatous, thinner than upper cortex. Apothe-
cia rare, lecanorine, cup-shaped, to 12 mm across, with a dark brown,
often splitting disc and a prominent thalline margin. Epithecium brow-
nish; hymenium and hypothecium colourless. Asci 8-spored, clavate,
Lecanora-type. Ascospores 1-celled, hyaline, ellipsoid, 10-15 x 7-9 μ m.
Pycnidia common, black, laminal. Conidia more or less thickened at
both ends, 5.5-6.5 x c. 1 μ m. Photobiont chlorococcoid. Spot tests:
upper cortex K⁺ yellow (but often slowly turning dirty red due to
medullary substances), C⁻, KC⁻, P⁻ or P⁺ faintly yellow; medulla K⁺
yellow turning dirty red, C⁻, KC⁻, P⁺ orange-red. Chemistry: upper
cortex with atranorin; medulla with consalazinic and salazinic acids
(major), and variable amounts of lobaric, galbinic, protolichesterinic
and fumarprotocetraric acids. Note: an arctic-alpine, circumpolar lichen
found on rocks, epilithic bryophytes, more rarely on soil, mostly near
or above treeline; common in the Alps, where it can reach the nival belt.



Parmelia omphalodes



Parmelia omphalodes



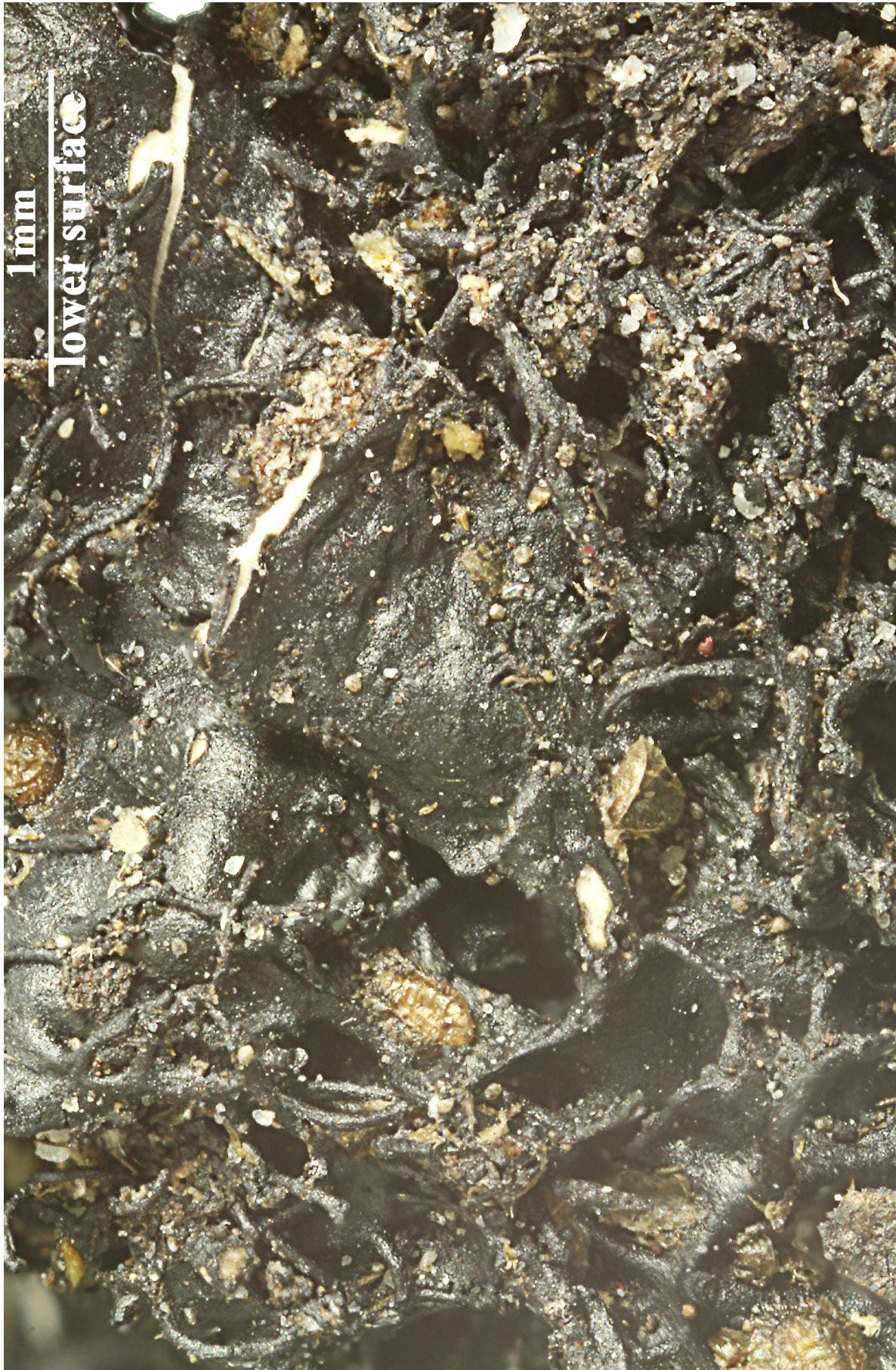
Parmelia omphalodes



Parmelia omphalodes

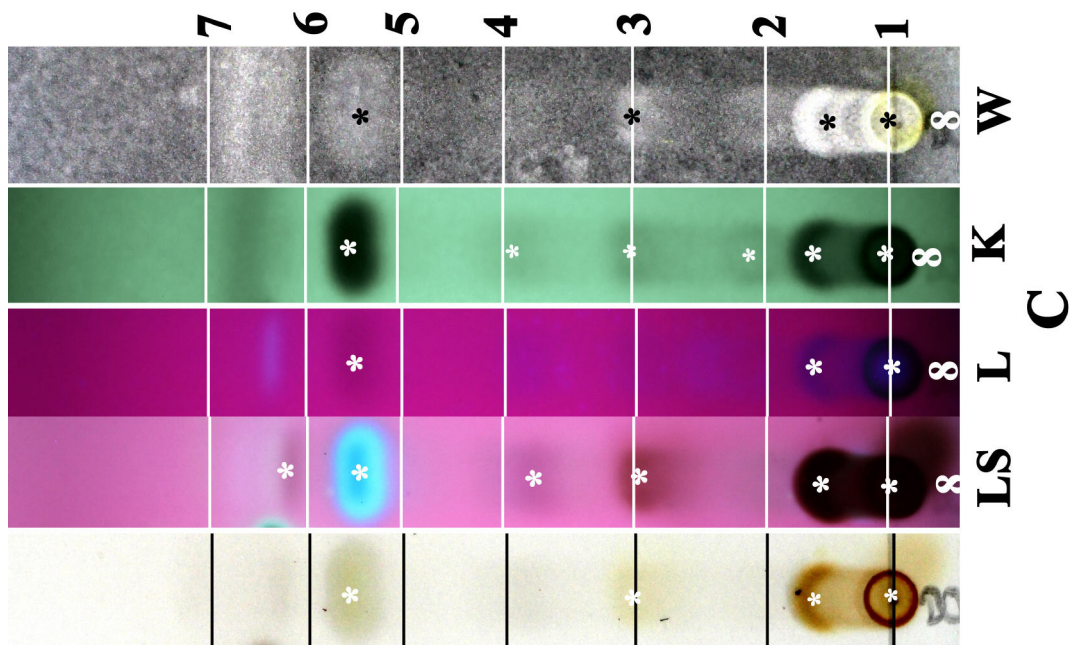
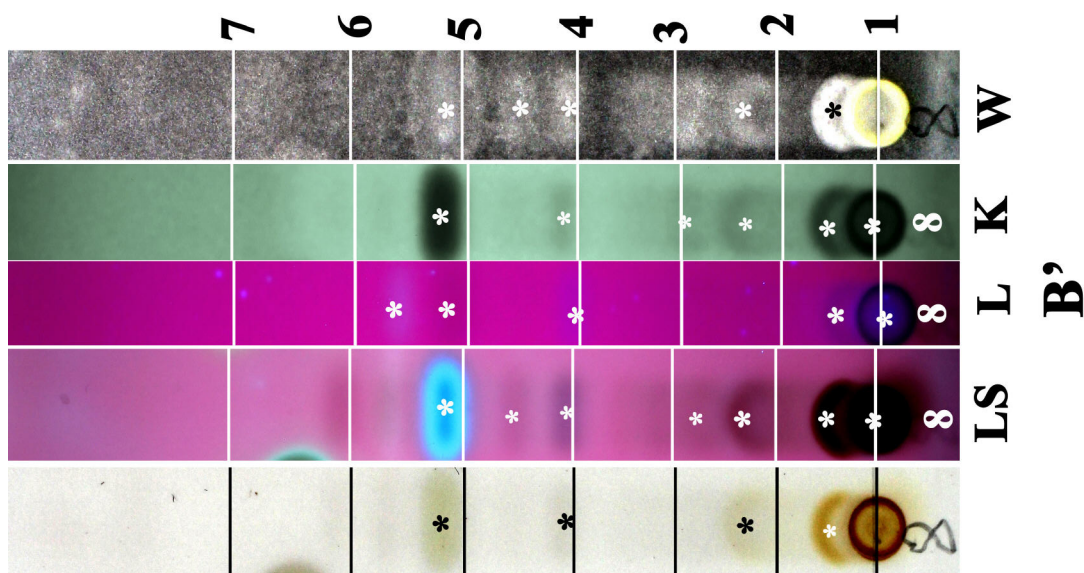
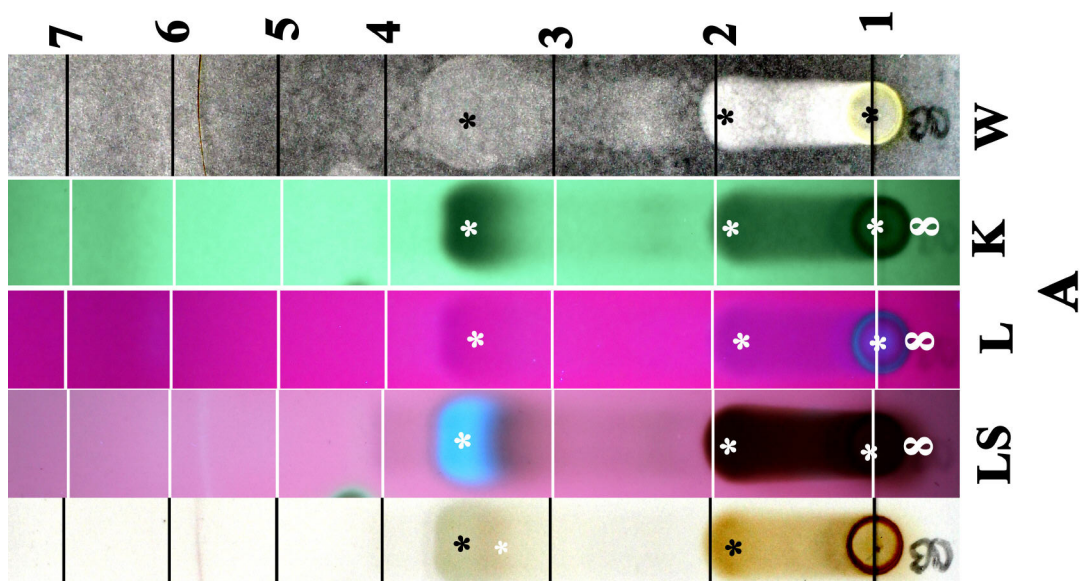


Parmelia omphalodes



Parmelia omphalodes

Parmelia omphalodes

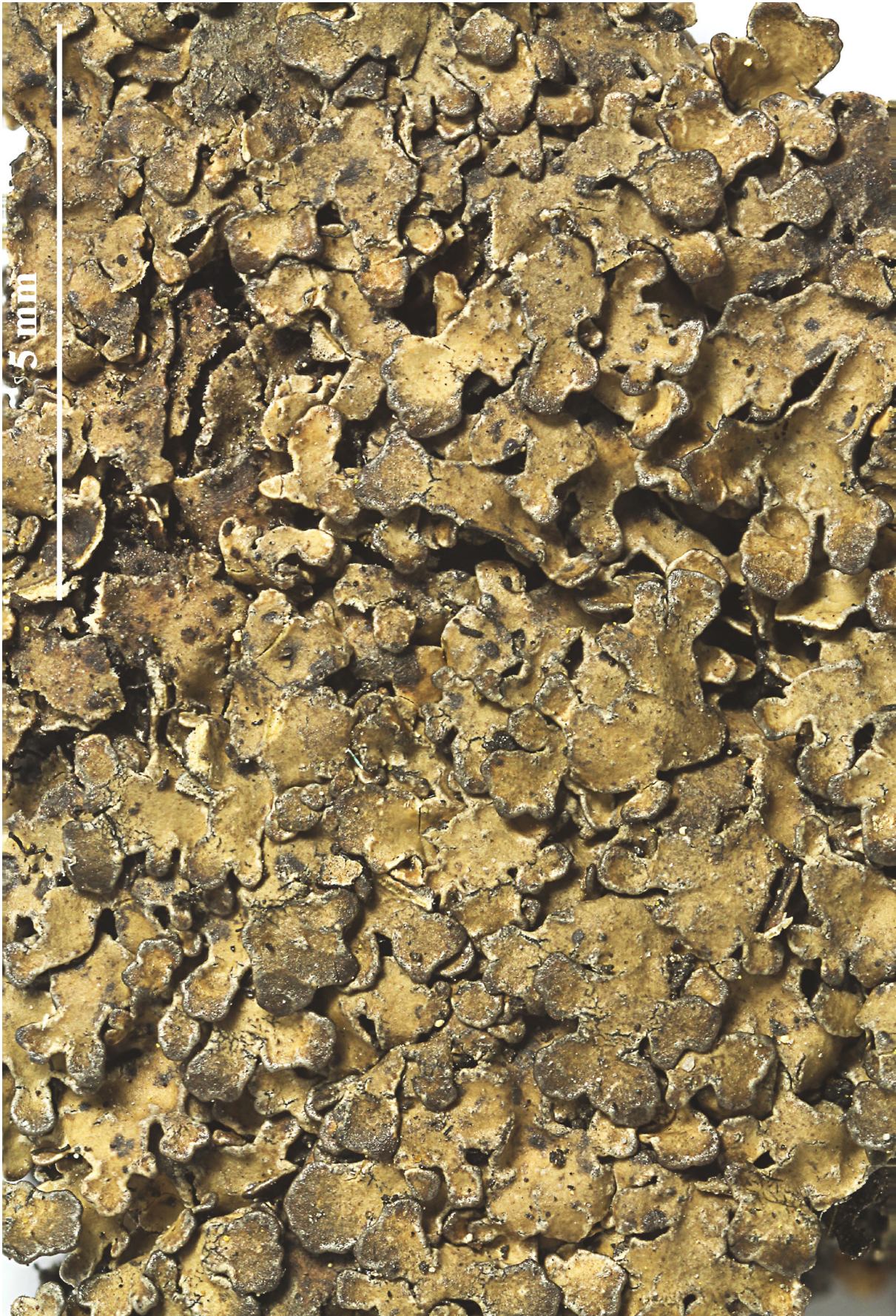


[20329], p408/8

Parmelia pinnatifida Kurok., J. Jap. Bot. 51(12): 378 (1976)
= *Parmelia omphalodes* subsp. *pinnatifida* (Kurok.) Skult,

[VZ1735], Bohemoslovacia. Slovacia. Carpathes, iugum Branisko dictum: Krompachy, in colle Bradlo prope Hrišová, 500 m. Ad saxa silicea. Leg. E. Lisická, I. Pišút et. A. Vězda., 29.5.1980. EX A. VĚZDA LICHE-
NES SELECTI EXSICCATI NR. 1735.

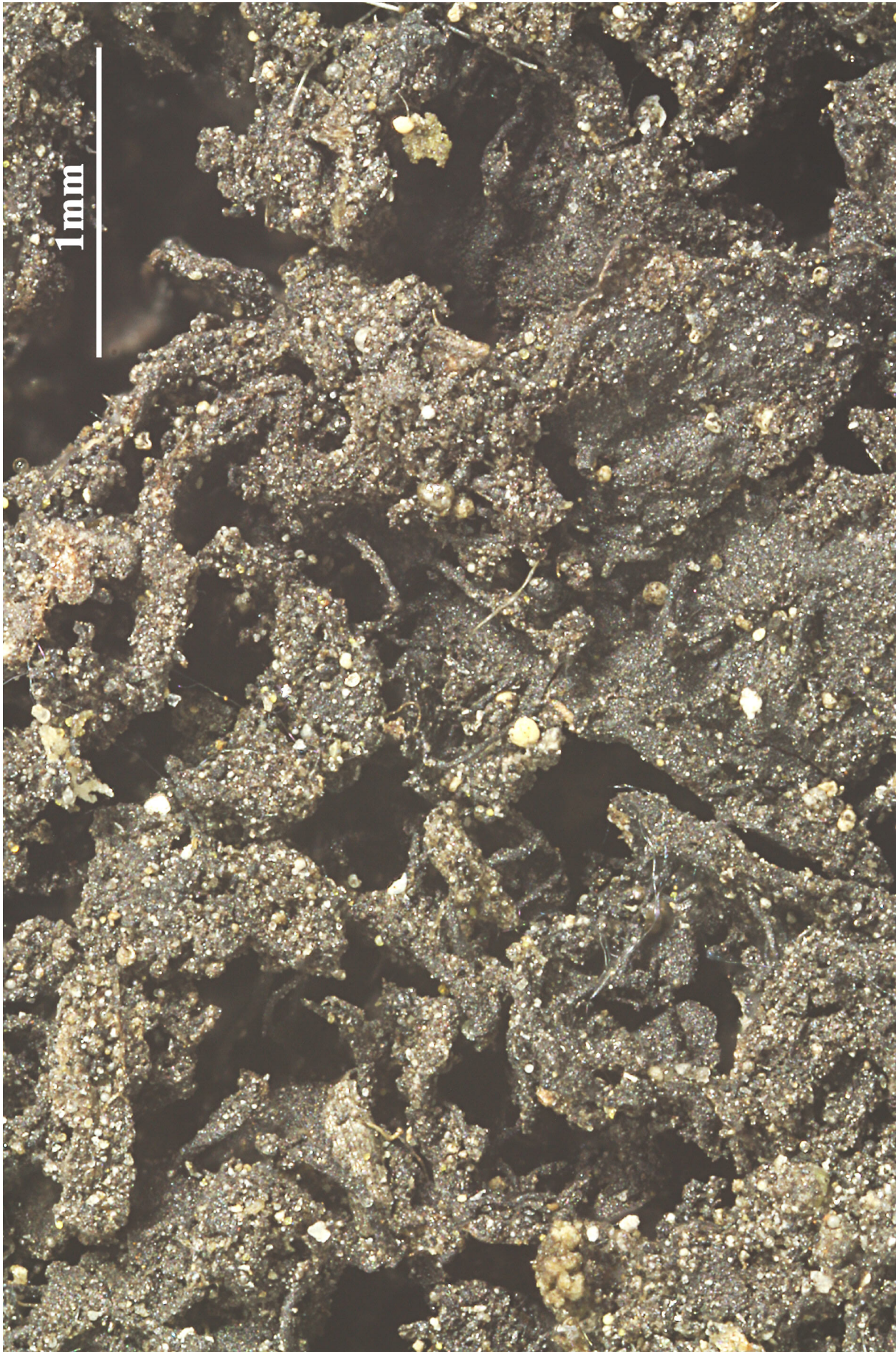
Thallus foliose, heteromerous, dorsiventral, rather loosely attached, forming more or less regular, up to 10 cm wide rosettes, which often merge into extensive swards. Lobes 1(-2) mm wide, but mostly <1.5 mm wide, short and branched, with angular apices, often imbricate, the margins often with up to 0.3 mm wide, ascending to erect lobules. Upper surface usually blackish, rarely grey to brown in shade-forms, slightly shiny, epruinose, with mainly marginal, whitish, at first punctiform but soon linear and furcate pseudocyphellae which sometimes merge forming a white marginal rim; lower surface black, with simple or forked, black rhizines that are most abundant towards the margin. Upper cortex paraplectenchymatous, of 2-6 layers of densely packed cells, with a usually non-pored epicortex, the cell walls with isolichenan; medulla white; algal layer continuous; lower cortex paraplectenchymatous, thinner than upper cortex. Apothecia rare, lecanorine, cup-shaped, to 4 mm across, with a dark brown, often splitting disc and a prominent thalline margin. Epithecium brownish; hymenium and hypothecium colourless. Asci 8-spored, clavate, Lecanora-type. Ascospores 1-celled, hyaline, ellipsoid, 10-15 x 7-9 μm . Pycnidia black, common, laminal. Conidia more or less thickened at both ends, 5.5-6.5 x c. 1 μm . Photobiont chlorococcoid. Spot tests: upper cortex K+ yellow (but often slowly turning dirty red due to medullary substances), C-, KC-, P- or P+ faintly yellow; medulla K+ yellow turning dirty red, C-, KC-, P+ orange-red. Chemistry: upper cortex with atranorin; medulla with consalazinic and salazinic acids (major), and variable amounts of galbinic, fumarprotocetraric and lobaric acids (accessory or in traces). - Note: This species has been only recently reported from the Italian Alps; other records may be hidden among those of the morphologically and ecologically similar *P. omphalodes*.



Parmelia pinnatifida



Parmelia pinnatifida



Parmelia pinnatifida

Parmelia saxatilis (L.) Ach., Methodus qua omnes detectos Lichenes Secundum Organa Carpomorpha ad Genera, Species et Varietates Redigere atque Observationibus Illustrare Tentavit Erik Acharius: 204 (1803)
= *Lichen saxatilis* L. 1753

[VZ1741], Gallia, Hautes-Pyrénées; Inter Cauterets et Pont d'Espagne. Ad saxa muscosa. Leg. W. L. Culberson (no. 11931-B) et C. F. Culberson. -Annot.: Atranorin (trace), lobaric acid, salazinic acid, consalazinic acid, and galbinic acid (trace) by TLC; anal. A. Johnson and C. F. Culberson. - EX A. VĚZDA LICHENES SELECTI EXSICCATI NR, 1741.

Thallus foliose, heteromerous, dorsiventral, rather loosely attached, forming 4-20 cm wide, mostly regular rosettes. Lobes sublinear, contiguous, elongate, separate, flat, 1.5-2.5(-3.5) mm wide, with truncate apices, rarely lobulate. Upper surface grey (to brown in exposed situations and at lobe tips), smooth to foveolate, somehow shiny, rarely slightly white-pruinose in marginal parts, with numerous, mostly apical or marginal, elongate-linear, rarely weakly anastomosing, white pseudocyphellae. Isidia cylindrical, simple to coralloid, often darkened at tips, scattered to clustered but not developing in lines along the pseudocyphellae, mainly laminal and most abundant in central parts of thallus. Lower surface black, with simple to furcate, black rhizines present also along the margins. Upper cortex paraplectenchymatous, of 2-6 layers of densely packed cells, with a usually non-pored epicortex, the cell walls with isolichenan; medulla white; algal layer continuous; lower cortex paraplectenchymatous, thinner than upper cortex. Apothecia rare, lecanorine, 2-8 mm across, with a brown disc and a usually isidiate thalline margin. Epithecium brownish; hymenium and hypothecium colourless. Asci 8-spored, clavate, Lecanora-type. Ascospores 1-celled, ellipsoid, hyaline, (11-)13-15(-18) x 6-8(-11) μm . Pycnidia black. Conidia cylindrical to bacilliform, 5-8 x c. 1 μm . Spot tests: upper cortex K+ yellow (but often slowly turning orange-red due to medullary substances), C-, KC-, P- or P+ faintly yellow; medulla K+ yellow turning orange-red, C-, KC-, P+ orange-red, UV-. Chemistry: upper cortex with atranorin and chloroatranorin; medulla with salazinic acid (major) and consalazinic acid (minor), and often traces of lobaric and protocetraric acids; fatty acids (lichesterinic and protolichesterinic acids) absent. - Note: a mainly saxicolous species whose real distribution and ecology in Italy are very poorly known.



Parmelia saxatilis



Parmelia saxatilis

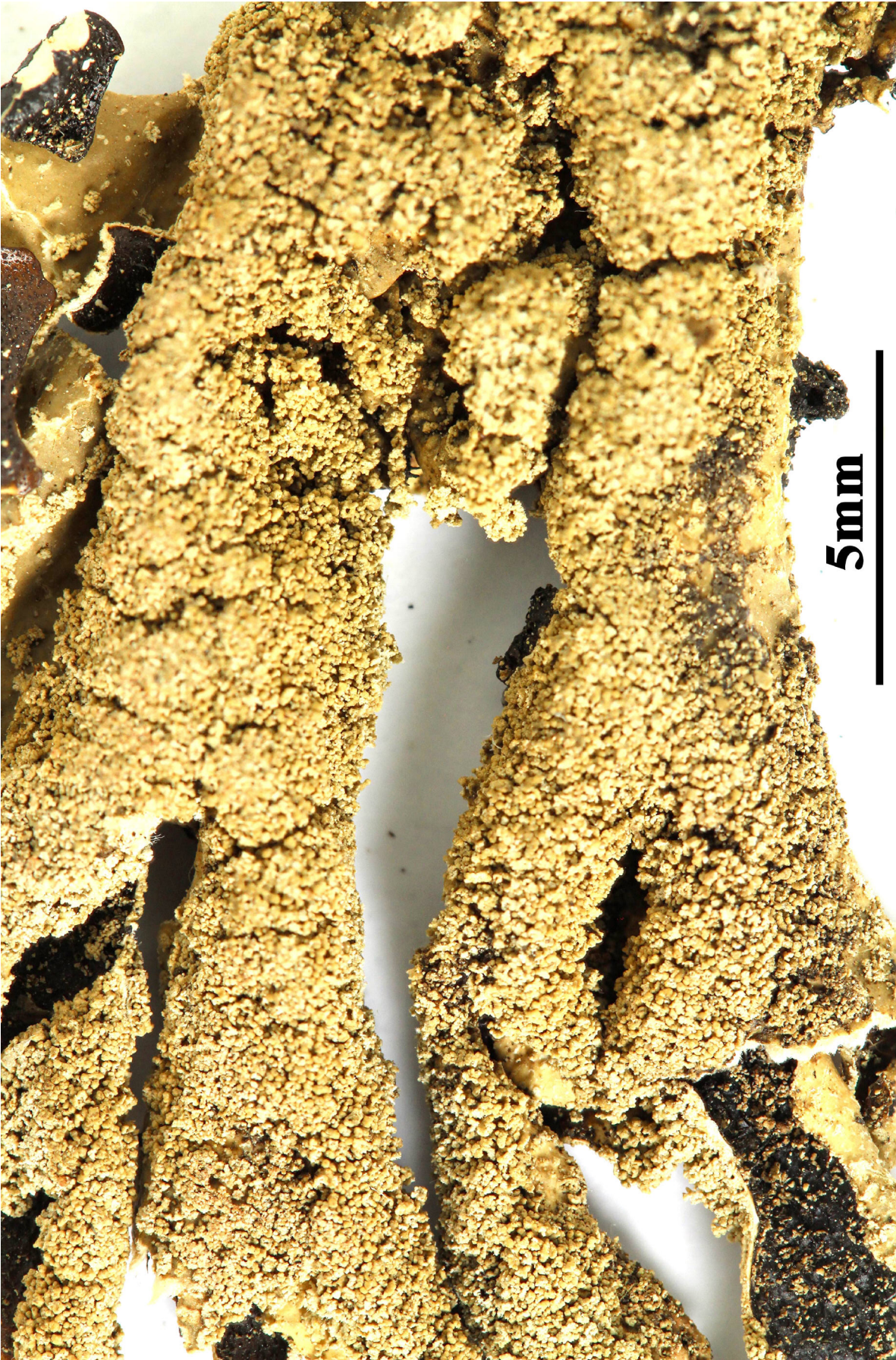
Parmelia submontana Nádv., Sborník Prác o Tatranskom Národnom Parku
1: 72 (1957)
= *Parmelia submontana* Hale Smithsonian Contr. Bot., 66: 44, 1987.

[VZ2212], Italia. Sardinia. Prov. Sassari: Gallura, montes Limbara, prope Vallicciola, 1000-1200 m. Ad truncum arboris. Leg. A. Vězda, 20.7.1987. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2212.

Thallus foliose, heteromerous, dorsiventral, very loosely attached, not forming rosettes. Lobes strap-shaped, geotropically oriented, with upwards incurved apices, sublinear, elongate, separate, to 7 cm long, 2-4(-6) mm wide, often with down-rolled margins. Upper surface grey (to pale brown in exposed situations), with a network of white, elongated pseudocyphellae which erode to form punctiform, up to 0.3 mm wide soralia soon developing dense clusters of subglobose to ovoid, rarely coralloid, c. 0.2 mm wide, soft isidioid outgrowths. Lower surface black, except at the brown apices, with simple to rarely furcate, black rhizines, most abundant in the older parts of thallus. Upper cortex paraplectenchymatous, of 2-6 layers of densely packed cells, with a usually non-pored epicortex, the cell walls with isolichenan; medulla white; algal layer continuous; lower cortex paraplectenchymatous, thinner than upper cortex. Apothecia extremely rare, lecanorine. Asci 8-sporeed, Lecanora-type. Ascospores 1-celled, hyaline, ellipsoid. Photobiont chlorococcoid. Spot tests: upper cortex K⁺ yellow (but often slowly turning dirty orange-red due to medullary substances), C⁻, KC⁻, P⁻ or P⁺ orange-yellow; medulla K⁺ yellow turning orange-red, C⁻, KC⁻, P⁺ orange-red, UV⁻. Chemistry: upper cortex with atranorin; medulla with salazinic acid (major) and consalazinic acid (minor). - Note: on the trunks of old trees (mainly *Fagus* and *Abies*) in humid montane forests; locally very abundant in beech forests of the Apennines, much rarer in the Alps.



Parmelia submontana



Parmelia submontana

Parmelia sulcata Taylor, in Mackay, Fl. Hibern. (Dublin) 2: 145 (1836)

[VZ1817], Bulgaria. Pontus, distr. Burgas: Sozopol, in silvis prope pagum Veselie, 150 m. Ad *cortivem Quercum*. Leg. A. Vězda, 20.9.1978. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1817.

Thallus foliose, heteromerous, dorsiventral, rather loosely attached, usually forming 4-10(-20) cm wide, distinct rosettes. Lobes sublinear, contiguous to imbricate, elongate, flat, separate, 2-5 mm wide, with truncate apices. Upper surface grey, usually epruinose, rarely faintly white-pruinose in marginal parts, becoming cracked along prominent, elongated pseudocyphellae which give rise to granular soredia arranged in laminal, linear, non-excavated soralia. Lower surface black, with black, simple to furcate rhizines mixed with squarrose rhizines, the latter present also along the margins. Upper cortex paraplectenchymatous, of 2-6 layers of densely packed cells, with a usually non-pored epicortex, the cell walls with isolichenan; medulla white; algal layer continuous; lower cortex paraplectenchymatous, thinner than upper cortex. Apothecia rare, lecanorine, 2-8 mm across, with a brown disc and a usually sorediate thalline margin. Epithecium brownish; hymenium and hypothecium colourless. Asci 8-spored, clavate, Lecanora-type. Ascospores 1-celled, hyaline, ellipsoid, 11-15 x 6-8 μm . Pycnidia immersed, black. Conidia bacilliform, 5-8 x 1 μm . Photobiont chlorococcoid. Spot tests: upper cortex K⁺ yellow (but often slowly turning orange-red due to medullary substances), C⁻, KC⁻, P⁻ or P⁺ faintly yellow; medulla K⁺ yellow turning orange-red, C⁻, KC⁻, P⁺ orange, UV⁻. Chemistry: upper cortex with atranorin and chloroatranorin; medulla with salazinic acid (major) and consalazinic acid (minor). - Note: on acid or subacid bark, exceptionally also on wood; this is certainly the most common and wide-ranging *Parmelia*.



Parmelia sulcata



Parmelia sulcata

Parmelia vagans (Nyl.) Nyl., Flora, Regensburg 52(19): 293 (1869)

= *Endocarpon vagans* Nyl. 1858

= *Xanthoparmelia vagans* (Nyl.) Hale

[VZ1412], URSS. Armenia, Caucasus Minor, distr. Krasnoselsk; iugum montium Sevanskij chrebet dictum, supra lacum Sevan, 2100 m. Terricola. Leg. A. Vězda, 21.5.1976. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1412.

Thallus vagrant, free growing on soil, firm but often breaking apart, 2-3 cm broad, light yellowish green: lobes sublinear, 1-3 mm wide, separate to subimbricate; upper surface continuous, emaculate, shiny, isidia and soredia lacking; medulla white; lower surface strongly convoluted but only partially inrolled, brown or darkening, especially at the tips, moderately to densely rhizinate, the rhizines brown, simple, 0.2-0.6 mm long. Pycnidia and apothecia lacking. CHEMISTRY, constictic, norstictic, and usnic acids. Distribution Canada, western USA, Mexico, Ecuador, Chile. - COMMENTS: -This species is closely related to the salazinic acid-containing *X. chlorochroa*, both species occurring only in the New World, *X. vagans* having a more southerly range into South America.



Parmelia vagans

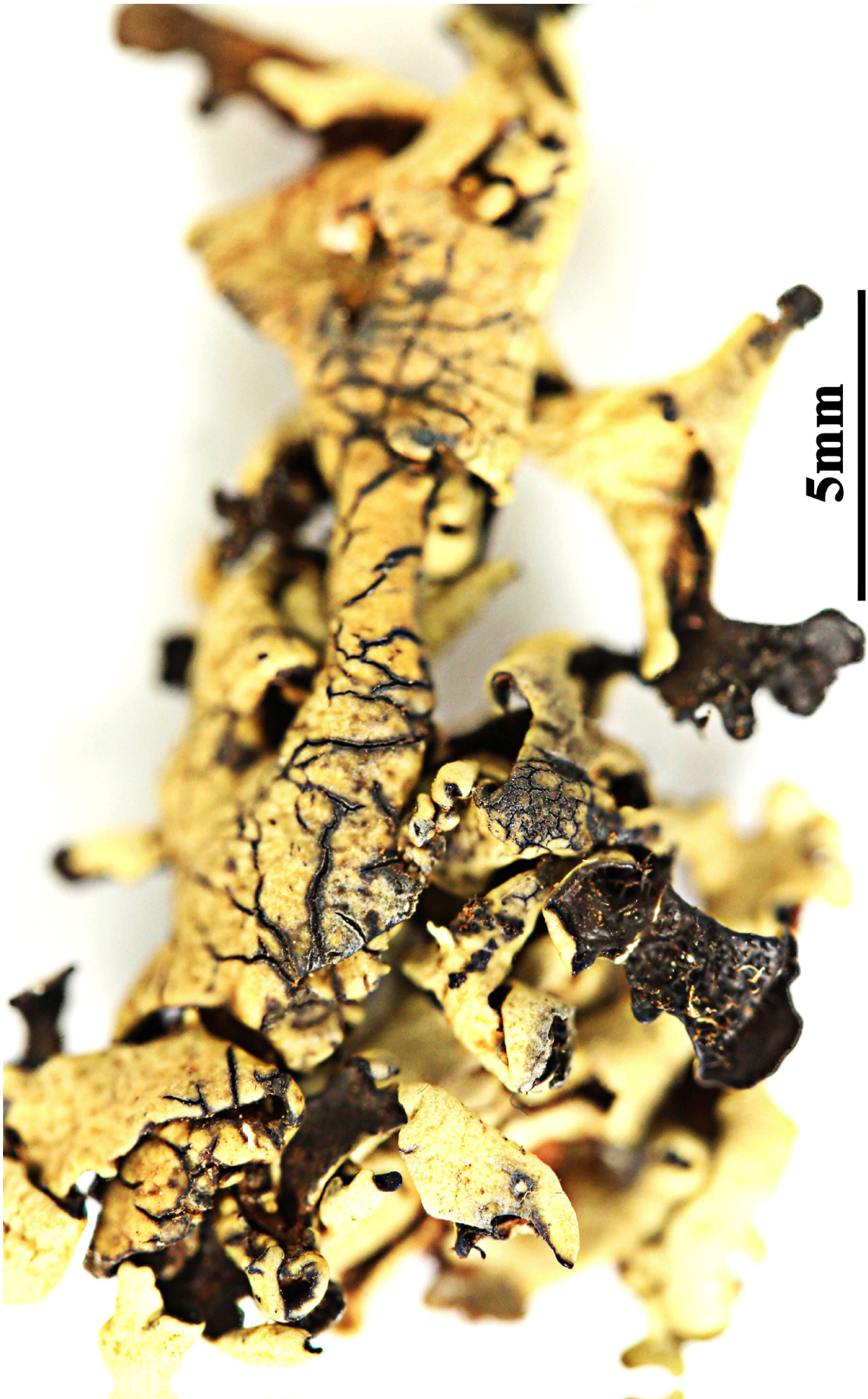


Parmelia vagans

Parmelia vagans (Nyl.) Nyl., Flora, Regensburg 52(19): 293 (1869)
= *Endocarpon vagans* Nyl. 1858
= *Xanthoparmelia vagans* (Nyl.) Hale

[VZ1906], Hispania. Prov. Sorta: Prope vicum Judes, Paramera, 1250 m. Supra terram calcaream in *Juniperito thuriferae* soluto. Leg. A. Crespo, J. Poelt et A. Vězda, 24.5.1983. - Annot.: Ad formam desertorum Elenkin (Axta Horti Oetropolzani 18.21.19021) pertinet. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1906.

Thallus vagrant, free growing on soil, firm but often breaking apart, 2-3 cm broad, light yellowish green: lobes sublinear, 1-3 mm wide, separate to subimbricate; upper surface continuous, emaculate, shiny, isidia and soredia lacking; medulla white; lower surface strongly convoluted but only partially inrolled, brown or darkening, especially at the tips, moderately to densely rhizinate, the rhizines brown, simple, 0.2-0.6 mm long. Pycnidia and apothecia lacking. CHEMISTRY, constictic, norstictic, and usnic acids. Distribution Canada, western USA, Mexico, Ecuador, Chile. - COMMENTS: -This species is closely related to the salazinic acid-containing *X. chlorochroa*, both species occurring only in the New World, *X. vagans* having a more southerly range into South America.



Parmelia vagans

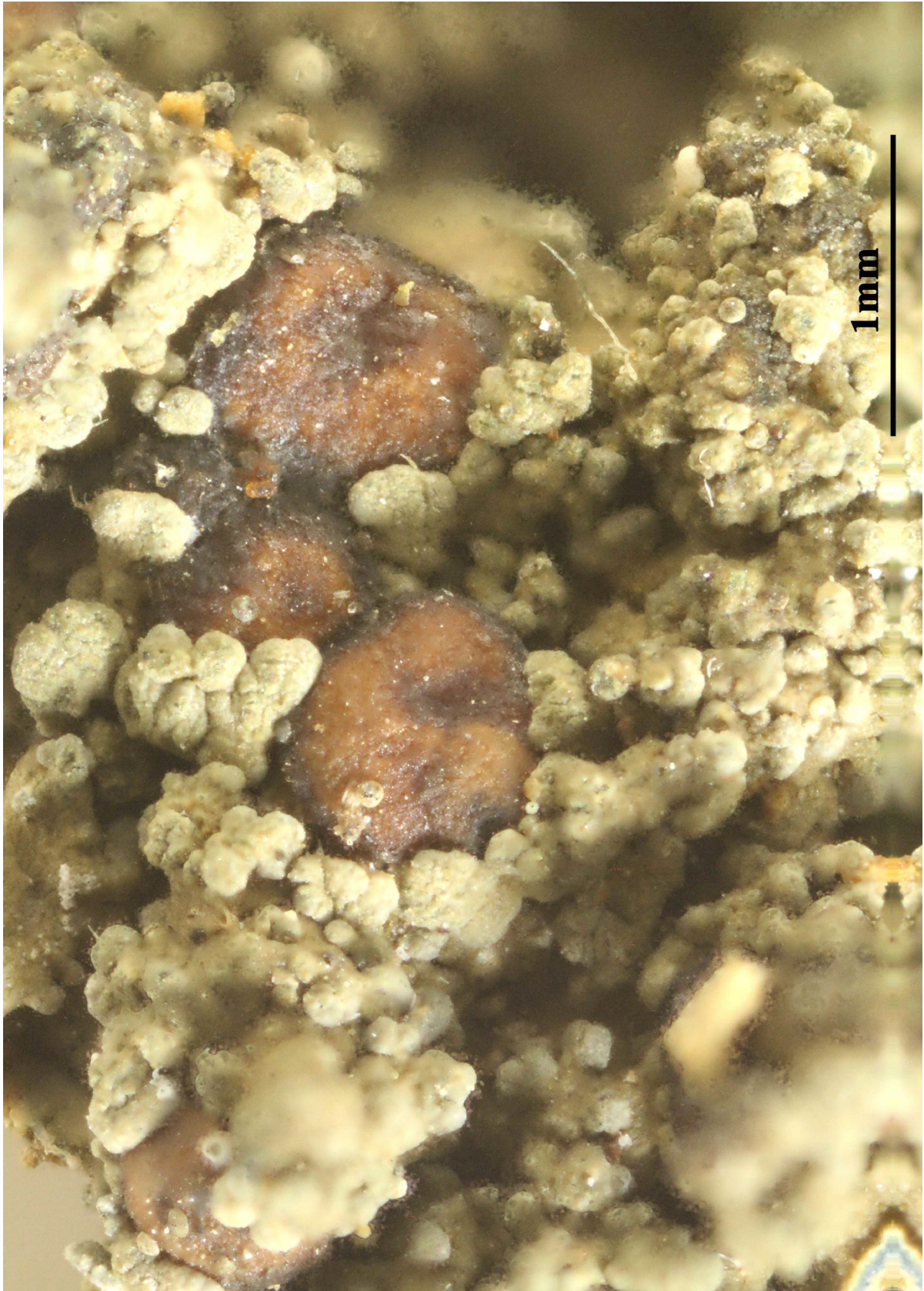


Parmelia vagans

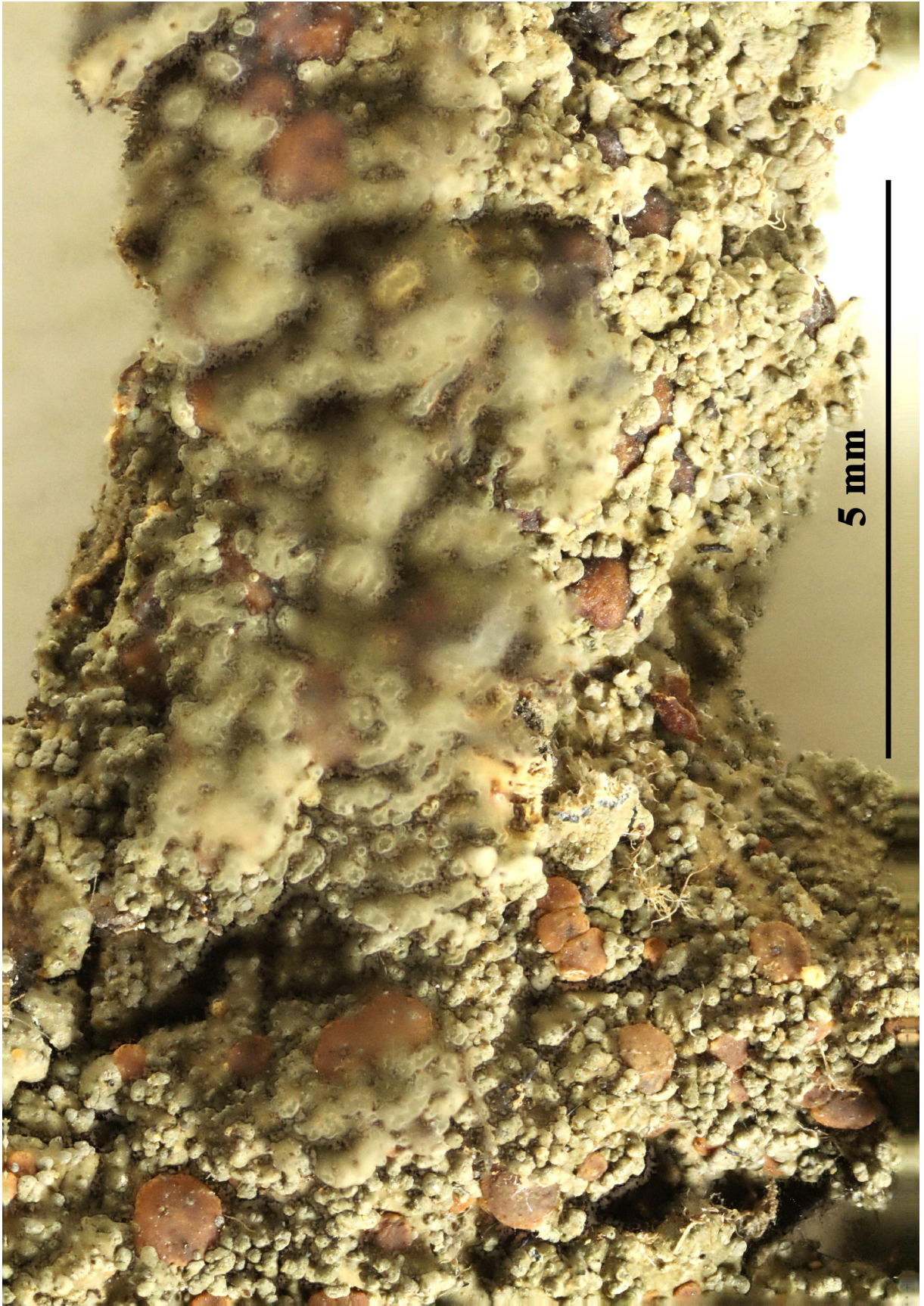
Parmeliella atlantica Degel., Acta Phytogeogr. Suec. 7: 131 (1935)
= *Degelia atlantica* (Degel.) P.M. Jørg. & P. James, in Jahns, Bibliotheca Lichenol. 38: 264 (1990)
= *Pectenaria atlantica* (Degel.) P.M. Jørg., L. Lindblom, Wedin & S. Ekman, in Ekman, Wedin, Lindblom & Jørgensen, Lichenologist 46(5): 652 (2014)

[VZ1778], URSS. Transcaucasia, Colchis. Distr. Sochi, supra balneas Macesta, secus viam a Macesta ad rupes "Orinyje skaly", 100-300 m. Ad truncum *Carpini caucasicae*. Leg V. Vašák, 24.7.1980, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1778.

Thallus foliose, rather firmly attached, monophyllous in central parts, distinctly lobed at margins, forming up to 6 cm wide, orbicular rosettes delimited by a fibrous, pale to blue-black prothallus, the surface with knob-like to subcoralloid, up to 0.2 mm thick isidia that often cover the whole thallus. Lobes contiguous, fan-shaped, rounded at apices, (1.5-)2-4(-5) mm wide, concave, with successive rough-shaped segments, each ending in a transverse, crescent-shaped structure, the surface finely to strongly longitudinally striate, lead-grey to bluish grey, sometimes with a brownish hue, paler at margins and apex. Lower surface with a prominent, blue-black hypothallus of rhizohyphae, sometimes extending beyond the margins. Upper cortex paraplectenchymatous, not sharply delimited from photobiont layer; medulla dense, white to pale brown, of parallel, horizontally oriented hyphae; lower cortex poorly developed or absent. Apothecia very rare, biatorine, adnate, 0.5-1 mm across, with a flat, reddish brown to finally blackish disc and a distinct, concolorous or paler proper margin. Proper exciple of radiating, isodiametrical cells; epithecium pale yellowish brown; hymenium colourless, K/I+ blue; paraphyses mostly simple, not swollen at apices; hypothecium yellowish. Asci 8-spored, slightly clavate, the upper half K/I+ blue in two parallel layers, with a K/I- layer inbetween. Ascospores 1-celled, hyaline, ellipsoid, without perispore, (14)17-20(-23) x 7-9(-12) µm. Photobiont cyanobacterial, (*Nostoc*, the cells in clusters). Spot tests: cortex and medulla K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. Note: a mild-temperate lichen, mainly western in Europe, found on trunks, more rarely on mossy rocks, in moist-warm stands.



Parmeliella atlantica

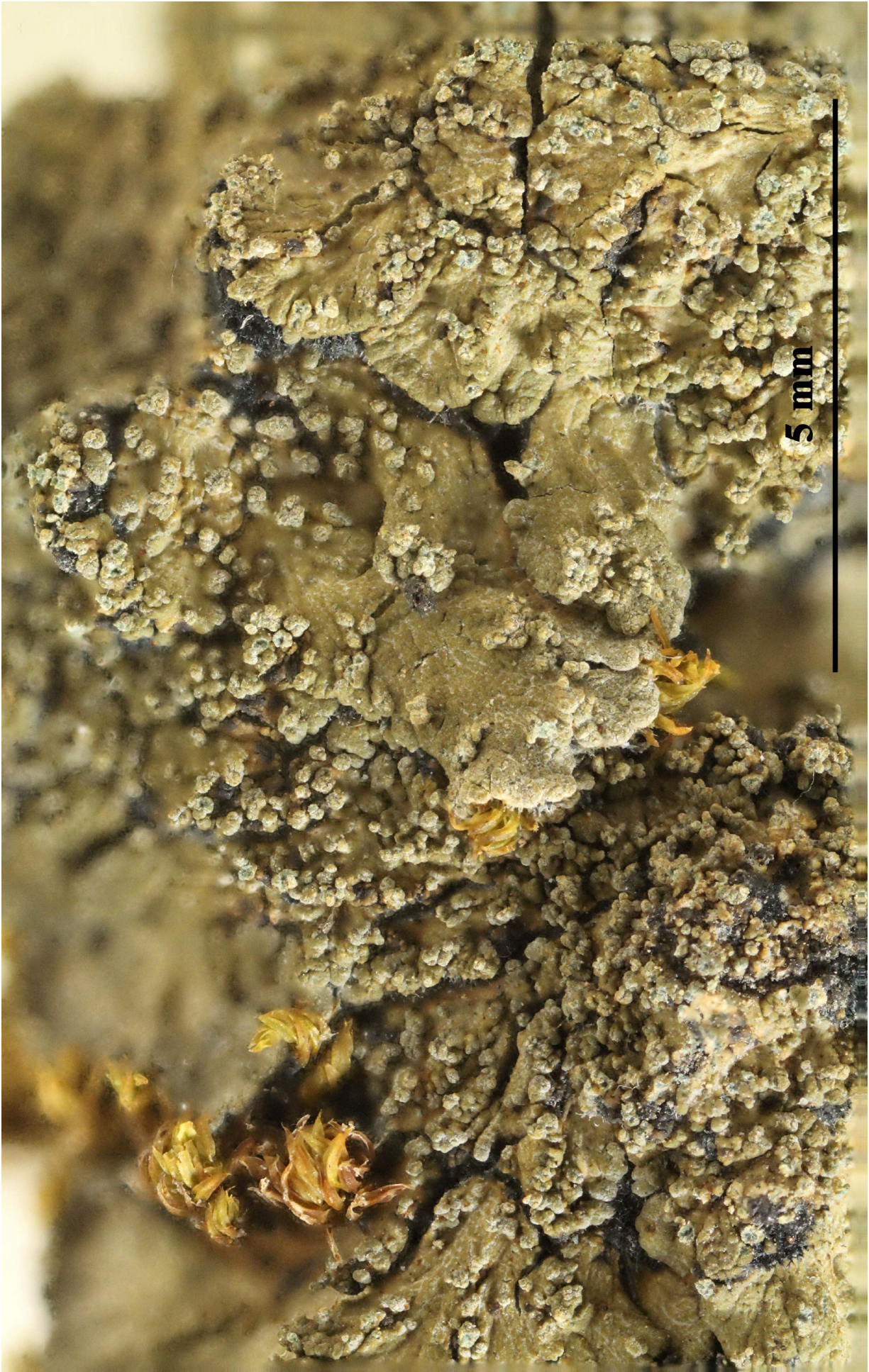


Parmeliella atlantica

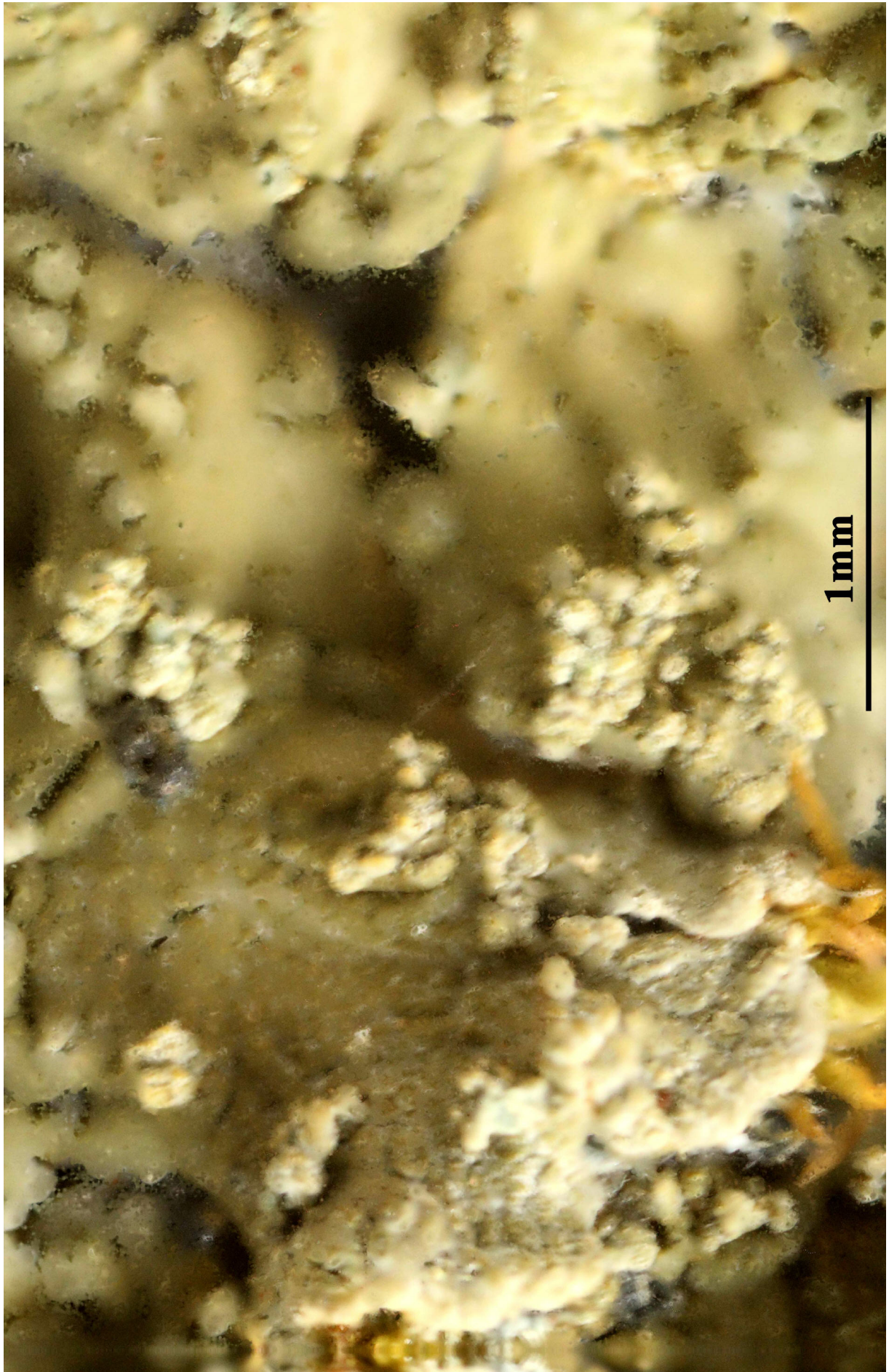
Parmeliella atlantica Degel., Acta Phytogeogr. Suec. 7: 131 (1935)
= *Degelia atlantica* (Degel.) P.M. Jørg. & P. James, in Jahns, Bibliotheca Lichenol. 38: 264 (1990)
= *Pectenaria atlantica* (Degel.) P.M. Jørg., L. Lindblom, Wedin & S. Ekman, in Ekman, Wedin, Lindblom & Jørgensen, Lichenologist 46(5): 652 (2014)

[VZ2003], Jugoslavia. Dalmatia, peninsula Pelješac: montes Zagorje, in vicinitate pagi Duračići, 400 m. Ad corticem arborum (*Quercus pubescens*). Leg. A. Vězda, 29.8.1984. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 2003.

Thallus foliose, rather firmly attached, monophyllous in central parts, distinctly lobed at margins, forming up to 6 cm wide, orbicular rosettes delimited by a fibrous, pale to blue-black prothallus, the surface with knob-like to subcoralloid, up to 0.2 mm thick isidia that often cover the whole thallus. Lobes contiguous, fan-shaped, rounded at apices, (1.5-)2-4(-5) mm wide, concave, with successive rough-shaped segments, each ending in a transverse, crescent-shaped structure, the surface finely to strongly longitudinally striate, lead-grey to bluish grey, sometimes with a brownish hue, paler at margins and apex. Lower surface with a prominent, blue-black hypothallus of rhizohyphae, sometimes extending beyond the margins. Upper cortex paraplectenchymatous, not sharply delimited from photobiont layer; medulla dense, white to pale brown, of parallel, horizontally oriented hyphae; lower cortex poorly developed or absent. Apothecia very rare, biatorine, adnate, 0.5-1 mm across, with a flat, reddish brown to finally blackish disc and a distinct, concolorous or paler proper margin. Proper exciple of radiating, isodiametrical cells; epithecium pale yellowish brown; hymenium colourless, K/I+ blue; paraphyses mostly simple, not swollen at apices; hypothecium yellowish. Asci 8-spored, slightly clavate, the upper half K/I+ blue in two parallel layers, with a K/I- layer inbetween. Ascospores 1-celled, hyaline, ellipsoid, without perispore, (14)17-20(-23) x 7-9(-12) µm. Photobiont cyanobacterial, (*Nostoc*, the cells in clusters). Spot tests: cortex and medulla K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. Note: a mild-temperate lichen, mainly western in Europe, found on trunks, more rarely on mossy rocks, in moist-warm stands.



Parmeliella atlantica



Parmeliella atlantica

Parmeliella pannosa (Sw.) Müll. Arg., Flora, Regensburg 64(6): 86 (1881)
= *Lichen pannosus* Sw. 1788
= *Pannaria pannosa* (Sw.) Nyl., Mém. Soc. Imp. Sci. Nat. Cherbourg 3: 176
(1855)

[VZ1327], Mexico. Veracruz: 10 km in septentrione pagi Huatusco. Ad corticem *Liquidambaris styracifluae*. Leg. W. L. Culberson (no. 16455) et C. F. Culberson, 27.12., 1974. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1327.

Thallus subfoliose and squamulose centrally, forming orbicular patches, up to 5 cm diam, resting on a conspicuous brownish hypothallus; lobes radiating at the periphery, up to 2 mm wide, with ascending, incised margins; upper surface brownish, smooth or shiny, lobulate, lacking isidia or soredia; lobules covering thallus, sometimes sinuose; Apothecia rare, up to 1.5 mm wide; disc brown, sometimes obscured by secondary lobules; proper exciple paler; hymenium I+ blue; asci clavate with apical amyloid tubes, 8-spored; ascospores simple, colorless, ellipsoid, 15-20 x 7-10 μm ; Spot tests all negative; Secondary metabolites none detected. Substrate and ecology on bark; World distribution widespread in subtropical regions, particularly of South and Central America. Notes: This species is previously often confused with *Parmeliella mariana* (Fr.) P. M. Jørg. and D. J. Gallow., a species which as yet is not known from the North American continent, but is present in Hawaii and the West Indies. That species has apothecia with distinct thalline margin and lacks secondary squamules on the lobe margins.



Parmeliella pannosa



Parmeliella pannosa

- Parmeliella plumbea* (Lightf.) Müll. Arg., Bull. Herb. Boissier 2(app. 1): 44 (1894)
 = *Lichen plumbeus* Lightf. 1777
 = *Pectenaria plumbea* (Lightf.) P.M. Jørg., L. Lindblom, Wedin & S. Ekman, in Ekman, Wedin, Lindblom & Jørgensen, Lichenologist 46(5): 652 (2014)
 = *Coccocarpia plumbea* var. *cinereofumosa* Caruso
 = *Degelia plumbea* (Lightf.) P. M. Jørg. & P. James
 = *Pannaria delisei* Bory
 = *Pannaria lojaconii* (Müll. Arg.) Jatta
 = *Pannaria plumbea* (Lightf.) Bory
 = *Parmelia plumbea* var. *vetustior* Del Amo
 = *Parmeliella lojaconii* Müll. Arg.
 = *Parmeliella plumbea* (Lightf.) Vain.
 = *Trachyderma plumbeum* (Lightf.) Norman

[VZ1779], Magna Britannia. Caledonia. Argyllshire: 6 km ad orientem versus a Salen. Ad corticem *Quercus petraea*. Leg. W. L. Culberson (no. 11748) et C. F. Culberson, 30.7.1964. - Annot.: No substances found by TLC, anal. C. F. Culberson. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1779.

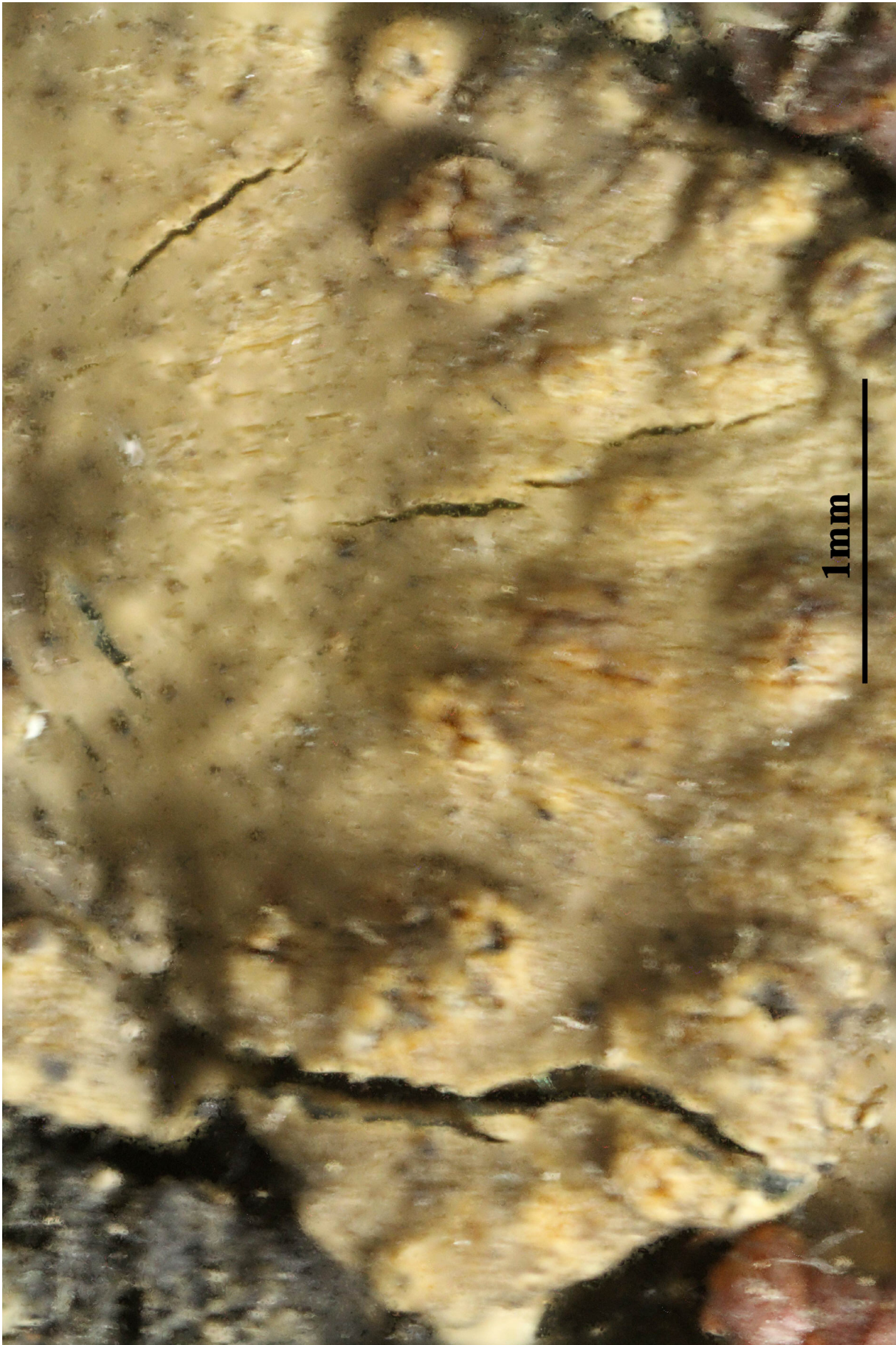
Thallus foliose, blue-grey to grey-brown, matt, monophyllous in central part, distinctly lobed at margins, forming up to 8(-10) cm wide, orbicular rosettes. Lobes closely adpressed, contiguous, (1.5-)2-4(-5) mm wide, lacking a concave transversal segmentation, the surface with an irregular network of reticulate, narrow whitish lines; central part of thallus sometimes with globose or knob-like outgrowths resembling isidia. Lower surface with a prominent, blue-black hypothallus of rhizohyphae, sometimes extending beyond the margins. Upper cortex 25-40 µm thick, paraplectenchymatous, not sharply delimited from photobiont layer; medulla dense, white to pale brown, of parallel, horizontally oriented hyphae, the lower ones gradually merging into blue-black rhizohyphae; lower cortex poorly developed or absent. Apothecia abundant in central part, biatorine, sessile, flat to convex, up to 1.5 mm across, with a brown disc and a thin, paler, finally often excluded proper margin. Proper exciple of radiating, isodiametrical cells; epithecium pale yellowish brown; hymenium colourless, K/I+ blue; paraphyses mostly simple, not swollen at apices; hypothecium yellowish. Asci 8-spored, slightly clavate, the upper half K/I+ blue in two parallel layers, with a K/I- layer inbetween. Ascospores 1-celled,

hyaline, ellipsoid, without perispore, 16-25 x 6-10 μm . Pycnidia 0.1-0.2 mm diam., often in prominent warts. Conidia bacilliform. Photobiont cyanobacterial, (Nostoc, the cells in clusters). Spot tests: cortex and medulla K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a mild-temperate lichen with oceanic affinities, found on base-rich, often mossy bark of old trees, more rarely on mossy rocks in rainy-humid areas, mostly in Lobarion-communities.

Parmeliella plumbea



Parmeliella plumbea

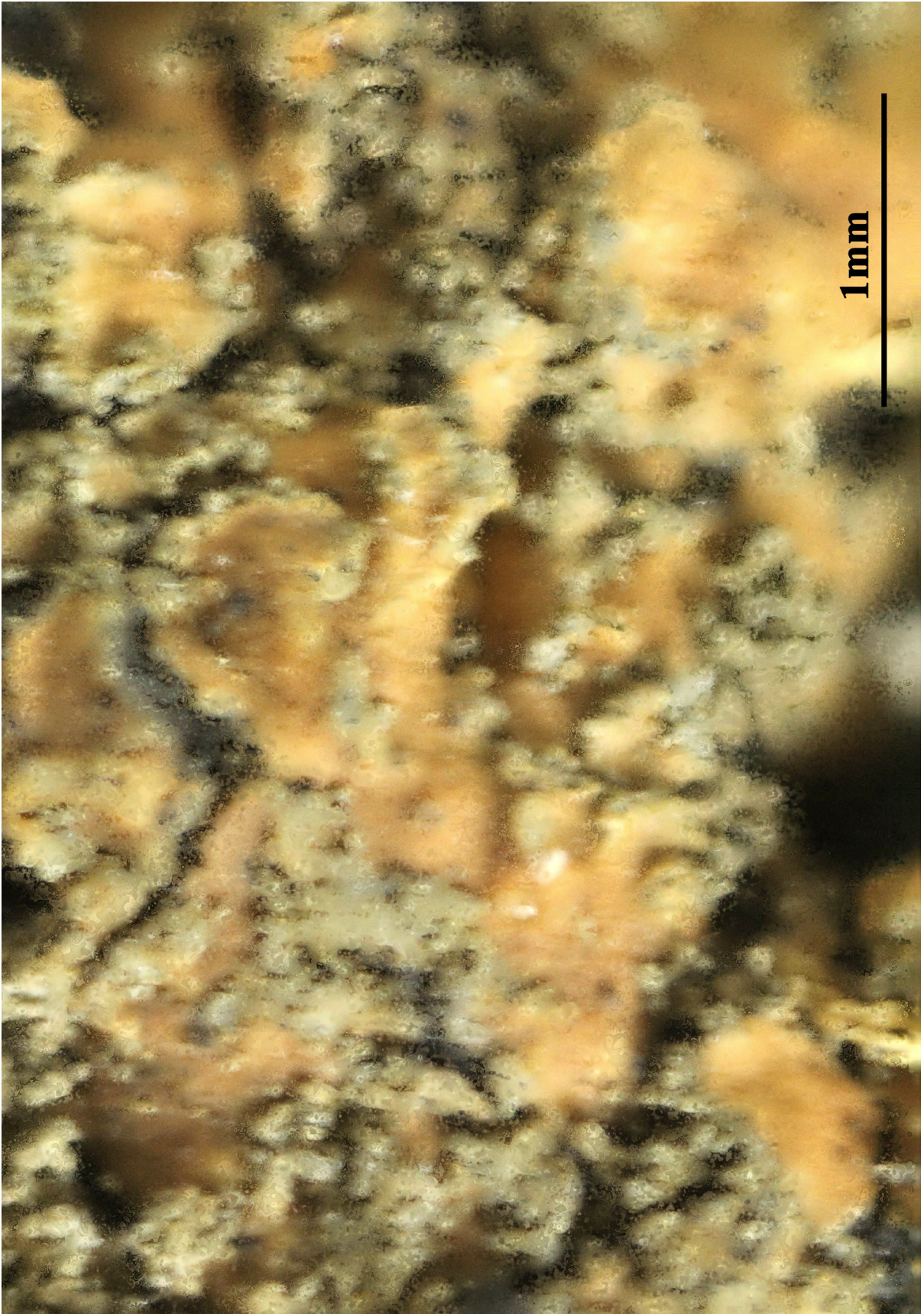


Parmeliella plumbea

Parmeliella testacea P. M. Jørg., Op. bot. 45: 70 (1978)

[VZ1876], Hibernia. Kerry. Rossacroonaloo Wood, prope Loo Bridge. Ad corticem *Coryli avellanae*, in silva umbrosa humida. Leg. et det. P. M. Jørgensen (no. 9180). Ex A. Vězda Lichenes Selecti Exsiccati Nr. 1876.

Thallus squamulose to subfoliose, heteromerous, 150-200 μm thick, chestnut brown to grey-brown, sorediate, forming 5-10 cm wide rosettes, rather loosely attached, rarely delimited by a blue-black prothallus. Squamules c. 2 x 2-3 mm, developing on a dark hypothallus, the marginal ones elongate, enlarged and somehow radiating, to 5 mm long, the soralia mainly marginal, convex, knob-like and resembling isidia, breaking down into blue-grey, granular soredia. Upper cortex fragile, paraplectenchymatous, 150-200 μm thick; medulla white; lower cortex absent, the lower hyphae developing in dark rhizohyphae anchoring the thallus to the substrate. Apothecia rare, biatorine, 1-1.5 mm across, with a flat, red-brown disc and a rather thick, paler, persistent proper margin. Proper exciple pseudoparenchymatous; epithecium brownish; hymenium colourless, I+ persistently deep blue; paraphyses simple, not or only slightly thickened at apices; hypothecium colourless. Asci 8-spored, subcylindrical to clavate, with a I+ blue tholus and an internal, more intensely I+ blue tubular structure. Ascospores 1-celled, hyaline, broadly ellipsoid, 16-20 x 9-10 μm , without a distinct episporium. Photobiont cyanobacterial (*Nostoc* the cells in clusters). Spot tests: cortex and medulla K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. Note: a mild-temperate lichen found on bark of ancient deciduous trees in mature forests, mostly in old plantations of *Castanea*; mainly Tyrrhenian in Italy, but also known from the Insubrian district.



Parmeliella testacea



Parmeliella testacea



Parmeliella testacea



Parmeliella testacea

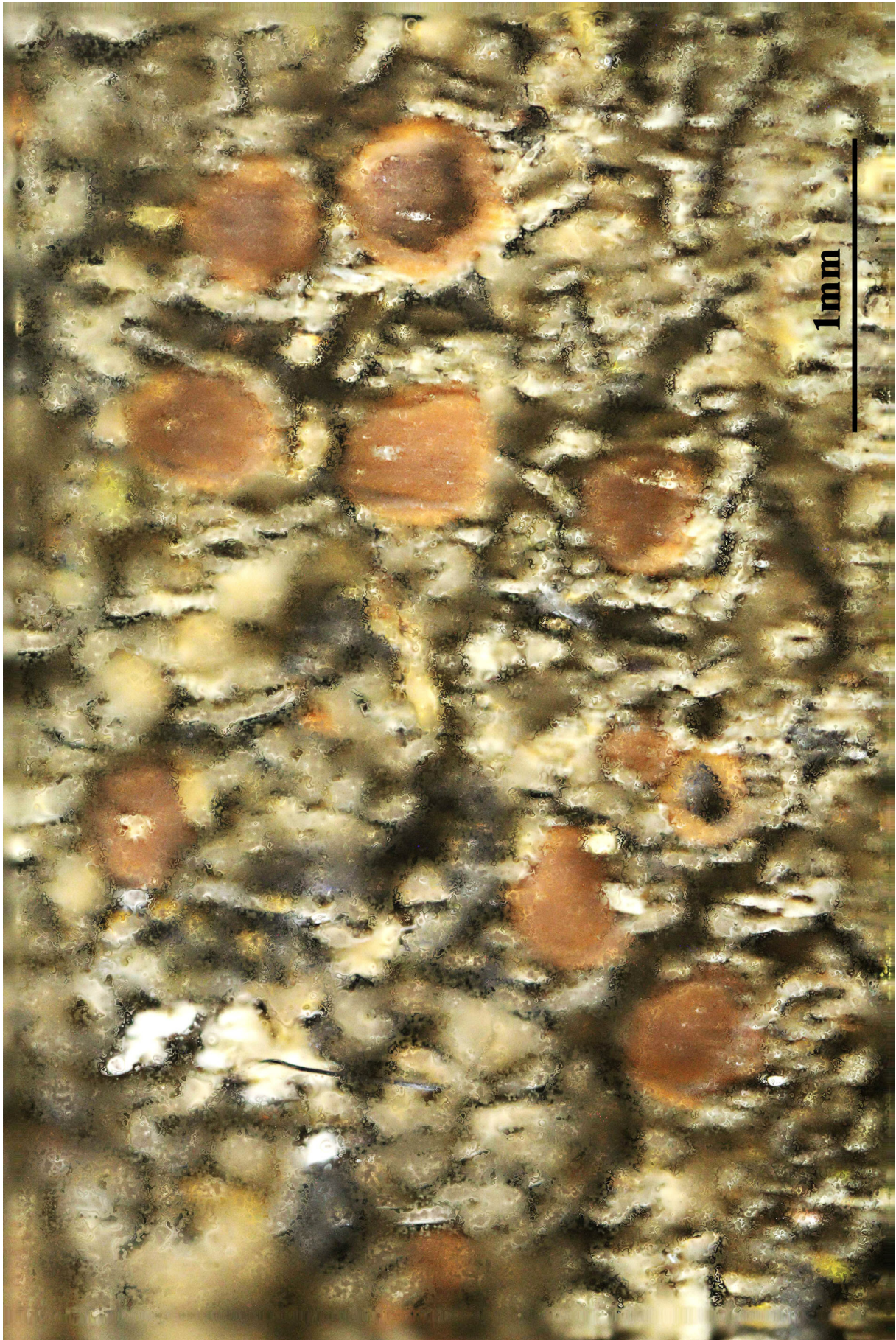
Parmeliella triptophylla (Ach.) Müll. Arg., Mém. Soc. Phys. Hist. nat.
Genève 16(2): 376 (1862)
= *Lecidea triptophylla* Ach. 1808

[VZ1927], URSS. Georgia (Caucasus occidentalis). Distr. Sukhumi: in declivibus montis Bashta prope pagum Pskhu, 900-1000 m. Ad corticem *Alni barbatae*. Leg. V. Vašák, 9.8.1983, det. A. Vězda. EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1927.

Thallus small-squamulose, heteromerous, 75-100 µm thick, developing on an extended, thin but prominent, blackish hypothallus, the squamules scattered to contiguous, 0.5-1(-1.5) mm wide, incised, blue-grey to brown, more or less shiny, with coralloid marginal isidia (often interspersed with flattened lobules) which may later cover the entire surface. Upper cortex paraplectenchymatous, 25-35 µm thick; medulla white; lower cortex absent. Apothecia rather rare, biatorine, 0.5-1.2 mm across, with a red-brown to blackish, finally convex disc, and a thin, finally often excluded proper margin. Proper exciple paraplectenchymatous, up to 90 µm wide laterally; epithecium brown-black; hymenium colourless, up to 100 µm high, I+ persistently deep blue; paraphyses simple, not or slightly thickened at apices; hypothecium brownish. Asci 8-spored, subcylindrical to clavate, with a I+ blue tholus and an internal, more intensely I+ blue tubular structure. Ascospores 1-celled, hyaline, ellipsoid, 10-17 x 5-8 µm, without an epispore, the inner wall smooth, the outer one uneven. Photobiont cyanobacterial (*Nostoc*, the cells in clusters). Spot tests: cortex and medulla K-, C-, KC-, P-, UV-. Chemistry: without lichen substances. - Note: a widespread, cool-temperate to boreal-montane lichen found on old trees and upon epiphytic bryophytes in humid forests, sometimes also on mossy siliceous rocks, with a wide altitudinal range.



Parmeliella triptophylla

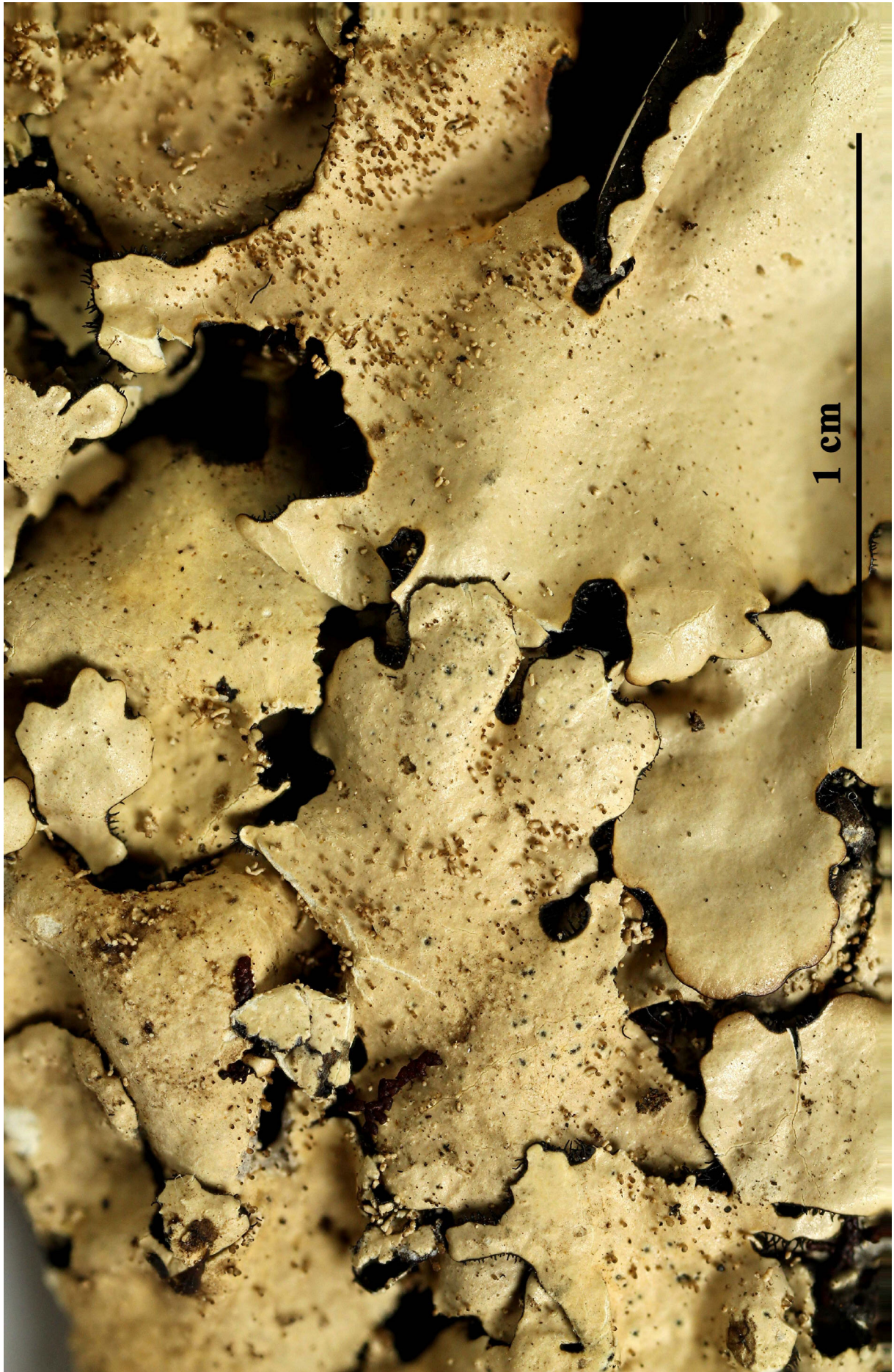


Parmeliella triptophylla

Parmelina wallichiana (Taylor) Hale, Phytologia 28(5): 483 (1974)
= *Parmelia wallichiana* Taylor 1847
= *Parmelinella wallichiana* (Taylor) Elix & Hale, Mycotaxon 29: 242 (1987)

[VZ1384], India, Tamil Nadu, Montes Palni, Kodaikanal, prope Silver Cascade, 1800 m, ad saxum.. Leg. M. E. Hale (No. 43870), 24.01.1975.
EX A. VĚZDA LICHENES SELECTI EXSICCATI NR. 1394.

Thallus loosely adnate to adnate, to 5–20 cm wide. Lobes irregularly branched, 3–10 mm wide; margins \pm crenate, lobulate with age, ciliate especially in axils; cilia c. 0.5 mm long. Upper surface yellowish grey to pale grey-green, shiny, irregularly cracked on older lobes, sparsely isidiate; isidia cylindrical, mostly simple, 0.2–0.8 mm high. Lower surface with naked or papillate, dark brown, rather wide zone near lobe apices; rhizines sparse to moderately dense, simple, black. Apothecia rare, 2–7 mm wide. Ascospores 14–18 \times 8–10 μ m. Pycnidia rare. Conidia 5–6 \times 1 μ m. CHEMISTRY: cortex K⁺ yellow; medulla K⁺ yellow then red, C⁻, KC⁻, P⁺ orange; containing atranorin, chloroatranorin, salazinic acid (major), consalazinic acid and secalononic acid A. - Scattered on rocks and trees in Qld; also occurs in Africa, India, SE Asia and Japan.



Parmelina wallichiana



Parmelina wallichiana

Images of Lichens (Vezda Exsiccat Lichenes Selecti Part 24)

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