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CONTRIBUTION TO THE LICHEN FLORA OF JUGOSLAVIA

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110 taxa are reported from NW Jugoslavia of which 39 are commented upon. 9 of these are new to Jugoslavia, viz.: *Caloplaca inconnexa*, *C. saxifragarum*, *C. subochracea* var. *subochracea* forma *pallida*, *C. tenuata*, *Candelariella plumbea*, *Cladonia merochlorophaea*, *Lecanora hageni* f. *saxifragae*, *Lecidella achristotera*, and *Polyblastia clandestina*. 16 are new to Slovenia, viz.: *Bacidia bagliettoana*, *Caloplaca aurea*, *C. nubigena*, *C. velana* var. *schaereri*, *Fulgensia australis*, *Lecanora atra*, *Ochrolechia androgyna*, *Peltigera leucophlebia*, *P. praetextata*, *P. rufescens*, *Phlyctis argena*, *Protoblastenia incrustans*, *Psora lurida*, *Ramalina baltica*, *Rinodina dubyana*, and *Solorina bispora*. 5 are new to Croatia, viz.: *Cladonia symphyocarpa*, *Lecanora argentata*, *Lepraria incana*, *Parmelia subrudecta*, and *Phaeophyscia hirsuta*.

Introduction

In the early fifties Kušan (1953) made a status of the Jugoslavian lichen flora, including all earlier work with the exception of Bornmüller (1928) and Szatala (1940). Later Gallé (1975) summarized the knowledge of the lichen flora and sociology of the Province of Vojvodina.

Since the work of Kušan (1953) many contributions to the Jugoslavian lichen flora has been made, viz.: Barbalčić (1953, 1955a, 1955b, 1978, 1979), Batič (1976), Batič et al. (1979), Batič & Martinčić (1981, 1982), Hofman et al. (1974), Krause & Klement (1959), Murati (1975, 1984), Pavletić & Murati (1977), Pišút (1967), Ritter-Studnička & Klement (1968), and the works cited in Gallé (1975).

During an excursion with the object of studying vascular plants some scanty collecting of lichens was undertaken. A little over 200 specimens were collected covering some 110 taxa.

A list of the collected taxa are brought in connection with the description of the localities. The more interesting of the specimens are presented in the paragraph: »Interesting taxa and new or rare records«.

Materials and Methods

The specimens were collected in the period 24. june — 4. july 1982. Some of the specimens has been analysed by thin layer chromatography (TLC) in accordance with Culberson & Kristinsson (1970) and Culberson (1972, 1974).

Part of the material have been seen by specialists: M. Skytte Christiansen (*Agonimia*, *Polyblastia*), G. Degelius (*Collema*), H. Mayrhofer (*Rinodina dubyana*), C. Roux (*Caloplaca*), U. Søchting (*Caloplaca*, *Fulgensia*, *Ramalina*, *Xanthoria*), and O. Vitikainen (*Peltigera*).

The specimens are deposited in the Botanical Museum, Copenhagen (C) and in the authors private herbarium.

Kušan (1953) subdivide the Republic of Croatia into several entities: Slavonia (the northeastern of the Republic), Istria, Dalmatia. Croatian littoral (»Hrvatsko Primorje«), and the central, interior part (»Hrvatska«). The Republic of Slovenia is not subdivided (Kušan 1953). In the following »Slovenia« and »Croatia« means the whole area of the two respective republics.

The localities

The geographic position of the localities appear from Fig. 1.

Croatia

Otočac, 26. VI. Main street at the town border. On *Populus tremula* road side tree: *Parmelia exasperatula*.

Loc. 1, 26. VI. Ca. 20 km WSW of Otočac, Velebit Mts., N of the summit Vučjak (1645 m). *Fagus* forest on limestone. 1300—1400 m.

On the *Fagus* trunks grew among others *Caloplaca herbiddella* (sterile, unpigmented, with pycnidia), *Candelariella aurella*, *C. xanthostigma*, *Fuscidea cyathoides* var. *corticola*, *Lecanora argentata*, *L. coilocarpa*, *Lecidella euphorea*, *Parmelia acetabulum*, *P. glabratula*, *P. pastillifera*, *P. saxatilis*, *Pertusaria albescens* var. *corallina*, *P. hymenea*, *Phlyctis argena*, and *Platismatia glauca*.

On limestone outcrops in the wood grew *Agonimia tristicula*, *Cladonia furcata*, *C. merochlorophaea*, *C. pocillum*, *Leptogium lichenoides*, and *Peltigera praetextata*.

Loc. 3, 26. VI. Ca. 1 km N of loc. 1. Road side in *Fagus* forest on limestone. 1165 m.

On limestone outcrop: *Peltigera praetextata*.

Loc. 8, 27. VI. Ca 70 km NE of Zadar. between the villages Pečani and Jošane. Limestone boulders along road in arable land. Ca. 800 m.

On the boulders grew among others *Aspicilia hoffmannii*, *Caloplaca lactea*, *C. ochracea*, *C. cfr. subochracea* var. *subochracea* forma *pallida*, *C. velana*, *Candelariella aurella*, *Catillaria lenticularis*, *Collema tuniforme*, *Dermatocarpon minutum*, *Lecanora crenulata*, *L. dispersa*, *L. hageni*, *Physcia adscendens*, *Rinodina bischoffii*, *Verrucaria hochstetteri* and *V. nigrescens*.



Fig. 1. Mapsketch of NW Yugoslavia. Large dots: Villages and towns. Small dots: The localities. The arab numbers of the localities correspond to those in the text.

Udbina. 27. VI. Just outside the village.

On *Sorbus aucuparia* in meadow: *Caloplaca flavorubescens*, *Rinodina exigua*, and *Xanthoria parietina*.

Loc. 9, 27. VI. Ca. 50 km ENE of Zadar, 2.5 km W of Mt. Crnopac, Limestone outcrop in grazed mountain side. Ca. 800 m.

On the rocks grew a. o. *Aspicilia subcircinata*, *Caloplaca ochracea*, *C. velana*, *Cladonia pocillum*, *C. pyxidata*, *C. symphycharpa*, *Lecidea immersa*, *Protoblastenia calva*, *P. incrustans*, *P. rupestris*, *Psora albilabra*, *P. decipiens*, *P. lurida*, *Squamarina cartilaginea*, *Toninia caeruleonigricans*, *Verrucaria hochstetteri*, and *V. nigrescens*.

Loc. 10, 27. VI. Ca. 6 km W of Muscovci, ca 2 km N of Obrovac. Dry limestone slope with *Juniperus* thicket. Ca. 300 m.

Cladonia convoluta, *Collema cristatum*, *Lecidea chondrodes*, and *Psora albilabra*.

Loc. 11a, 28. VI. 15 km WSW of Otočac, Velebit Mts., outskirts of Krasno Polje. Dry, stony, grazed mountain slope with scattered *Crataegus monogyna* and *Juniperus* sp. Ca. 830 m.

O. *C. monogyna* grew a. o. *Anaptychia ciliaris*, *Caloplaca flavorubescens*, *Candelariella xanthostigma*, *Lecanora carpinea*, *L. argentata*, *Lecidella achristotera*, *Parmelia acetabulum*, *P. exasperata*, *P. glabra*, *P. glabratula*, *Physcia adscendens*, *P. aipolia*, *P. semipinnata*, *P. stellaris*, *Ramalina fastigiata*, *Rinodina exigua*, *Tomasellia gelatinosa*, and *Xanthoria parietina*.

Loc. 11c, 28. VI. Ca. 10 km SEE of Senj, ca. 3 km SE of Jurjevo, Velebit Mts., near Rača. Ca. 100 m. Submediterranean bush with *Quercus pubescens*, *Acer monspessulanum*, *Fraxinus ornus*, and *Cotinus coggygria* in the bottom.

The epiphytes were a. o. *Candelariella xanthostigma*, *Lecanora argentata*, *Parmelia glabra*, *P. pastillifera*, *P. quercina*, *Physcia aipolia*, *Physconia pulverulacea*, *Tomasellia* sp., and *Xanthoria parietina*.

Loc. 13, 29. VI. Velika Kapela Mts., NW of Ogulin, near Gomirje, at river Dobra. Ca. 350 m. Thicket with a. o. *Carpinus betulus*.

Epiphytes were a. o. *Graphis scripta* var. *serpentina*, *Lecanora pulicaris*, *L. argentata*, *Lecidella euphorea*, *Lepraria incana*, *Opegrapha atra*, *Parmelia glabratula*, and *Phlyctis argena*.

Loc. 17, 25. & 29. VI. Ca. 18. km NW of Rijeka, ca. 2 km SE of Rupa. Submediterranean dry grassland with scattered *Prunus* and other bushes, limestone outcrops and *Robinia* road trees.

On the limestone were a. o. *Aspicilia calcarea*, *Caloplaca ochracea*, *C. tenuata*, *C. velana*, *Lecanora muralis*, *Protoblastenia calva*, and *Verrucaria nigrescens*.

On *Robinia* a. o. *Caloplaca herbidella*, *Candelaria concolor*, *Candelariella xanthostigma*, *Lecanora argentata*, *Normandina pulchella*, *Parmelia acetabulum*, *P. caperata*, *P. subrudecta*, *P. sulcata*, *Pertusaria albescens*, var. *corallina*, *Phaeophyscia hirsuta*, *P. orbicularis*, *Physcia adscendens*, *P. aipolia*, *Physconia pulverulacea*, *Ramalina farinacea*, *R. fastigiata* and *Xanthoria parietina*.

On *Prunus* in the dry meadow grew besides *Lecidella achristotera*, *Parmelia borrieri*, *P. pastillifera*, *P. saxatilis*, and *Physcia semipinnata*.

Slovenia

Loc. 18, 30. VI. Ca. 9 km S of Wurzen Pass (Prelaz Vršič) Mt. Nad glava. E-faced mountain side, limestone. *Pinus mugo* thicket and group of *Larix* ca. 1650 m. On basis of *Larix*: *Caloplaca cerina*, *C. herbidella*, *Candelariella vitellina*, *C. xanthostigma*, and *Rinodina exigua*. On dead *P. mugo*: *Cladonia pyxidata*. On limestone boulders ca 1900 m: *Caloplaca aurea*, *Fulgensia australis*, *Candelariella* cfr. *plumbea*, *Dermatocarpon miniatum* var. *complicatum*, and *Protoblastenia incurstans*. On E faced limestone wall ca. 1900 m: *Dermatocarpon miniatum*, *Polyblastia clandestina*, *Psora lurida*, *Solorina bispora*, and *Toninia caeruleonigricans*.

Loc. 20, 1. VII. Ca. 10 km SW of Bovec, Mt. Stol (Koča na Stolu). S-faced montane meadow with outcrops of limestone. 1425—1550 m.

Cladonia furcata, *C. pyxidata*, and *Peltigera rufescens*.

Loc. 21, As loc. 20, but 1650 m.

Caloplaca nubigena, *C. velana* var. *schaererii*, *Candelariella aurella* var. *aurella*, and *Rinodina dubyana*.

Loc. 22, 1. VII, Ca. 10 km SW of Bovec, Mt Stol. *Fagus* forest and limestone rocks on N-slope. 1200—1300 m.

Peltigera leucophlebia, *P. praetextata*, *P. sp.*, and *Solorina saccata*.

Loc. 23, 2. VII. Ca. 6 km WNW of Bovec, Mt. Prestreljenik. Rock crevices and overhangs of alpine meadows on limestone. 2200—2400 m.

Bacidia bagliettoana, *Caloplaca aurea*, *C. inconnexa*, *C. saxifragarum*, *Cladonia pyxidata*, *Dactylina madreporiformis*, *Dermatocarpon miniatum*, *Lecanora epibryon* var. *epybryon*, *L. hageni* forma *saxifragae*, *Pachyspora verrucosa*, and *Thamnomia vermicularis* var. *vermicularis*.

Loc. 24, VII. Ca. 4 km W of Bovec. E-side of Mt. Skripa, near the summit Turen Skednju. NE-facing *Fagus-Picea* mixed forest. 1200 m.

On soil grew *Cladonia pyxidata* and *Peltigera praetextata*, and on *P. abies* grew *Caloplaca herbidella*, *Evernia illyrica*, *E. prunastri*, *Lecanora atra*, *L. symmetrica*, *Lobaria pulmonaria*, *Ochrolechia androgyna*, *Parmelia glabrata*, *P. saxatilis*, *Pertusaria albescens*, *Phlyctis argena*, *Ramalina baltica*, and *R. farinacea*.

Interesting taxa and new or rare records

The nomenclature is in accordance with Santesson (1984) and Hawksworth et al. (1980) in the mentioned order. The synonyms used by Kušan (1953) are given in parenthesis.

Bacidia bagliettoana (Massal. & DNot. in Massal.) Jatta
(*B. muscorum* (Sw.) Mudd)

Loc. 23, no. 1010. On moss and plant debris on overhang on limestone.

New to Slovenia.

Caloplaca aurea (Schaerer) Zahlbr.

Loc. 18, no. 954.

Loc. 23, no. 1003 & 1009a. All in rock crevices in limestone.
New to Slovenia.*Caloplaca inconnexa* (Nyl.) Zahlbr.

Loc. 23, no. 1009b. On limestone rock.

New to Jugoslavia.

Caloplaca nubigena (Krempel.) Dalla Torre & Sarnth.

Loc. 21, no. 978. On limestone boulder.

New to Slovenia.

Caloplaca saxifragarum PoeltLoc. 23, no. 1006. On dead *Saxifraga* on overhang on limestone.
»...in den Alpen weit verbreitet aber zerstreut...« (Poelt 1969).

New to Jugoslavia.

Caloplaca cfr. *subochracea* Werner emend. Clauz. & Roux var. *subochracea* forma *pallida* Clauz. & Roux.

Loc. 8, no. 806. On limestone boulder. Det. C. Roux.

The spores are a little too broad, but the specimen is otherwise in accordance with the taxon. The spores of this species can vary within a section of an apothecium (Roux in litt.)

C. subochracea is new to Jugoslavia.*Caloplaca tenuata* (Nyl.) Zahlbr.

Loc. 17, no. 929. On limestone outcrop in dry meadow. Central part of thallus is typically developed, but the marginal lobes are weakly developed to missing. »Auf Horizontalflächen auf Kalk im Mittelmeergebiet« (Poelt 1969).

New to Jugoslavia.

Caloplaca velana (Massal.) Du Rietz var. *schaereri* (Flörke) Clauz. & Roux (*C. schaeereri* (Flörke) Zahlbr.)

Loc. 21, no. 980. On limestone boulder.

C. velana is new to Slovenia.*Candelariella aurella* (Hoffm.) Zahlbr. var. *aurella*

Loc. 21, no. 979. On limestone outcrop.

C. aurella is not reported from Slovenia by Kušan (1953), but is reported from the Republic by Batič & Martinčič (1982).*Candelariella* cfr. *plumbea* Poelt et Vězda

Loc. 18, no. 957. On limestone boulder on E slope, 1900 m.

Thallus grey, areolate to squamate-areolate, areolae 2-3 mm wide, narrowing at base, often subdivided, glibulose, not changing colour with addition of water, K-. Apothecia up to 1 mm in diam., mostly narrowly appressed to immersed, a few more or less sitting, not changing colour with addition of water, disc brownish-yellow, thallus margin yellow, at first smooth, later becoming crenulated. Spores 8 pr. ascus, 15-18 × 4½-6 μm. The species is known from one locality in Rumania, one in central Austria and two S of Villach in S Austria (Poelt & Vězda 1976), ca 20 km N of Nad glava.

New to Jugoslavia.

Cladonia merochlorophaea Asah. var. *merochlorophaea*

Loc. 1, no. 782. On detritus on *Fagus* stump. TLC: 4-o-Methyl-cryptochlorophaeic acid, Merochlorophaeic acid, and Fumarprotocetraric acid.

C. merochlorophaea is new to Yugoslavia.

Cladonia symphycarpa (Ach.) Fr.

(*C. symphycarpia* (Flörke) Sandst.)

Loc. 9, no. 829 & 837. On soil on limestone rocks. Both contain Atranorin and Norstictic acid (TLC).

New to Croatia.

Collema subflaccidum Degel.

(*C. subfurvum* (Müll. Arg.) Degel.)

Bovec, leg. H. F. Götzsche s. n. On road tree in the town. Not mentioned in Kušan (1953), but reported from Slovenia, Croatia and Dalmatia by Degelius (1954).

Collema tuniforme (Ach.) Ach.

Loc. 8, no. 805 & 811. On limestone boulder.

Not included in Kušan (1953), but reported from Istra and Dalmatia by Degelius (1954).

Fulgensia australis (Arn.) Poelt

(*Candelariella australis* (Arn.) Zahlbr.)

Loc. 18, no. 953 & 956. On limestone boulder No. 956 sterile. New to Slovenia.

Lecanora argentata (Ach.) Malme

(*L. subfuscata* H. Magn.), cfr. Brodo & Vitikainen (1984).

Loc. 1, no. 762. On *Fagus*.

Loc. 11a, no. 867. On *Crataegus monogyna*.

Loc. 11c, s. n. On *Acer monspessulanum*.

Loc. 13, no. 906. On *Carpinus betulus*.

Loc. 17, no. 742. On *Robinia* road side tree.

New to Croatia.

Lecanora atra (Huds.) Ach.

Loc. 24, no. 1033. On *Picea abies*.

New to Slovenia.

Lecanora hageni (Ach.) Ach. forma *saxifragae* Anzi

Loc. 23, no. 1006a. On dead *Saxifraga*.

L. hageni is not reported from Slovenia by Kušan (1953), but is so by Batič & Martinčič (1982) and Batič (1986). Forma *saxifragae* is new to Yugoslavia.

Lecidella achristotera (Nyl.) Hertel & Leuckert

Loc. 11a, no. 885. On *Crataegus*.

Loc. 17, no. 749. On *Prunus*.

No. 885: Thallus rather thick, uneven, C+ yellowish, K+ yellowish, lower third of hymenium inspers, hypothecium redbrown, apothecia plane without pruina.

No. 749: Thallus thinner, C-, K-, lower third of hymenium and hypothecium inspers, hypothecium yellowish brown, apothecia plane, without pruina. There are some differences in li-

terature with regard to these characters. See Kalb (1976) for a discussion. In addition can be mentioned that Poelt & Vězda (1981) states: »Th: K ± gelb, C⁺ orange«, and Wirth (1980) key the species out under both alternatives in:

»Th: C⁺ (rose) rot oder orange...

C- (bisi leicht gelblich)...«

According to Poelt & Vězda (1981) *L. achristotera* has a thin thallus and apothecia without pruina, while *L. laureri* (Hepp) Körber, which in some cases has inspers hymenium, has comparatively thick, often granulose to squamulose, C—, K— or + yellow thallus and whitish pruinose, convex apothecia. Perhaps the two taxa are not well defined.

L. laureri is not known from Croatia.

L. achristotera is new to Jugoslavia.

Lepraria incana (L.) Ach.

Loc. 13, no. 903. On *Carpinus betulus*.

Not included in Kušan (1953). Reported from Vojvodina by Gallé (1975) and from Macedonia by Pavletić & Murati (1977) — both as *L. aeruginosa* (Wigg.) Sm.

New to Croatia.

Ochrolechia androgyna (Hoffm.) Arn.

Loc. 24, no. 1029. On *Picea abies*.

New to Slovenia.

Parmelia glabratula (Lamy) Nyl. var. *glabratula*

Loc. 24, no. 1025. On *Picea abies*.

Not reported from Slovenia by Kušan (1953), but reported from the republic by Batič (1976, 1986), Batič et al. (1979) and Batič & Martinčić (1982).

Parmelia subrudecta Nyl.

Loc. 17, no. 730. On *Robinia* road tree.

Not included in Kušan (1953). Reported from Slovenia (Batič 1976, 1986, Batič et al. (1979), Batič & Martinčić 1982, Hale 1965: fig. 3), Crna Gora (Hale 1965: fig. 3), Banatet (Broz 1951, as *P. dubia* Wolf. var. *deliblatensis* Gyeln.), and Vojvodina (Gallé 1975).

New to Croatia.

Peltigera leucophlebia (Nyl.) Gyeln.

(*P. variolosa* (Massal.) Gyeln.)

Loc. 22, no. 983. On moss covered limestone rockwall along track in *Fagus* forest.

New to Slovenia.

Peltigera praetextata (Sommerf.) Zopf

Loc. 22, no. 985. On limestone wall along track in *Fagus* forest.

Loc. 24, no. 1021 & 1022. On moss and detritus on the forest floor. No. 985 is non-isidiate.

New to Slovenia.

Peltigera rufescens (Weis) Humb.

Loc. 20, no. 976. On overhang on limestone.

New to Slovenia.

Peltigera sp.

Loc. 22, no. 989. On moss on limestone wall along track in *Fagus* forest.

Lobules without tomentum, up to 1 cm broad, with upturned, crenulated margin, with isidia along the margin and in ruptures. Upper side grey, with pruina near apex. Underside white, with white, in central parts dark, more or less well defined, anastomosing veins. Rhizina simple or weakly brushlike, white or towards the centre dark.

The specimen belongs to an underscribed, calciphilous taxon, which have affinity to *P. praetextata*. The taxon is hitherto known from Crna Gora (Vitikainen in litt.).

Phaeophyscia hirsuta (Mereschk.) Moberg
(*Physcia labrata* Mereschk.)

Loc. 17, no. 730a. On *Robinia* road tree. Not included in Kušan (1953), but reported for Yugoslavia in Nádvořník (1948, as *Physcia černohorskýi* Nádvořník).

New to Croatia.

Phlyctis argena (Ach.) Flotow

Loc. 24, no. 1030. On *Picea abies*.

New to Slovenia.

Polyblastia clandestina (Arn.) Jatta

Loc. 18, no. 963. On E-faced limestone wall.

New to Yugoslavia.

Protoblastenia incrustans (DC.) Steiner

Loc. 18, no. 958. On limestone boulder.

New to Slovenia.

Psora lurida (Dill.) DC.

(*Lecidea lurida* (Dill.) Ach.)

Loc. 18, no 959. On soil on E-faced limestone wall.

New to Slovenia.

Ramalina baltica Lettau

Loc. 24, no. 1028b. On *Picea abies*.

TLC: Divaricatic acid.

New to Slovenia.

Rinodina dubyana (Hepp) Steiner

(*Buellia dubyana* (Hepp) Rabenh.)

Loc. 21, no. 978a. On limestone. The apothecia are partly immersed in the limestone, which is »...rather seldom for this species...« (Mayrhofer in litt.)

Not reported from Slovenia by Kušan (1953), nor by Mayrhofer & Poelt (1979) or Mayrhofer (1984). The species seems to be new to Slovenia.

Rinodina exigua (Ach.) S. F. Gray

Loc. 18, no. 943d. On basis of *Larix* in *Pinus mugo* thicket.

Not reported from Slovenia by Kušan (1953), but reported from the republic by Batič & Martinčič (1982).

Solorina bispora Nyl. var. *bispora*

Loc. 18, no. 962. On soil in crevice in E-faced limestone wall. *S. bispora* is new to Slovenia.

Tomasselia gelatinosa (Chevall) Zahlbr.Loc. 11a, no. 882. On *Crataegus*.

New to northern Croatia.

Tomasselia sp.Loc. 11c, no. 889. *Fraxinus ornus*.

Thallus with conspicuous black hypothallus. Stroma with up to 7 perithecia. Hymenia: I-. Spores hyaline, 5 (—6) celled, thick walled, 25—29 × 6 μm.

Seems to have affinity to *T. arthonioides* (Massal.) Massal., but the spores are far too large.*Xanthoria fallax* (Hepp) Arn.

Bovec, leg. H. F. Göttsche s. n. On road tree in the town. Not included in Kušan (1953), but reported from Slovenia by Batič et al. (1979) and Batič & Martinčič (1982) and from Vojvodina by Gallé (1975), »... in Südeuropa und südlichen Mitteleuropa weit verbreitet, aber zerstreut.« (Poelt 1966).

*

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SAŽETAK

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Autor izvještava o nalazima 110 svojih lišaja u Hrvatskoj i Sloveniji. Devet od tih novih su taksoni za Jugoslaviju: *Caloplaca inconnexa*, *C. saxifragarum*, *C. subochracea* var. *subochracea* forma *pallida*, *C. tenuata*, *Candelariella plumbea*, *Cladonia merochlorophaea*, *Lecanora hageni* f. *saxifragae*, *Lecidella achristotera* i *Polyblastia clandestina*;

16 taksona novih su za Sloveniju: *Bacidia bagliettoana*, *Caloplaca aurea*, *C. nubigena*, *C. velana* var. *schaereri*, *Fulgensia australis*, *Lecanora atra*, *Ochrolechia androgyna*, *Peltigera leucophlebia*, *P. praetextata*, *P. rufescens*, *Phlyctis argenta*, *Protoblastenia incrustans*, *Psora lurida*, *Ramalina baltica*, *Rinodina dubyana* i *Solorina bispora*;

5 taksona novih su za Hrvatsku: *Cladonia symphyocarpa*, *Lecanora argentata*, *Lepraria incana*, *Parmelia subrudecta* i *Phaeophyscia hirsuta*.

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