

## Lichens and lichenicolous fungi from the Retezat Mts and overlooked records for the checklist of Romanian lichens

Jan VONDRÁK & Jiří LIŠKA

**Abstract:** VONDRÁK, J. & LIŠKA, J. 2013. Lichens and lichenicolous fungi from the Retezat Mts and overlooked records for the checklist of Romanian lichens. – *Herzogia* 26: 293–305.

Records of 223 taxa of lichens, lichenicolous fungi and non-lichenized but lichen-like fungi are reported from the Retezat Mts, south-western Romania. The list includes 44 taxa new to Romania: *Absconditella pauxilla*, *Acarospora heppii*, *Agonimia gelatinosa*, *Agonimia tristicula*, *Anaptychia bryorum*, *Arthrorhaphis grisea*, *Bacidia illudens*, *Biatoridium monasteriense*, *Buellia uberior*, *Caloplaca arenaria*, *C. cerinelloides*, *C. chrysodeta*, *C. magni-filii*, *C. saxifragarum*, *C. tirolensis*, *C. velana* var. *schaereri*, *C. xanthostigmoidea*, *Candelariella aggregata* s. l., *C. antennaria*, *Chaenotheca xyloxena*, *Dacampia hookeri*, *Dactylospora urceolata*, *Epilichen scabrosus*, *Fellhanera subtilis*, *Frutidella pullata*, *Gyalecta geoica*, *Illosporium carneum*, *Lecanora cavicola*, *Leptogium teretiusculum*, *Lichenocodium lecanorae*, *Lichenomphalia umbellifera*, *Macentina abscondita*, *Micarea botryoides*, *Mniacea nivea*, *Phaeorrhiza nimbosa*, *Porina arnoldii*, *Protoblastenia terricola*, *Protoparmelia atriseda*, *Protothelenella sphinctrinoidella*, *Psorinia conglomerata*, *Rhagadostoma lichenicola*, *Rhizoplaca melanophthalma*, *Sarea resinae*, and *Sphaerellothecium minutum*. *Stigmatidium* aff. *cerinae*, lichenicolous on *Lecanora epibryon*, is possibly an undescribed species. Taxonomic comments to identities of our samples are made for *Caloplaca xanthostigmoidea*, *Candelariella* cf. *aggregata*, *C. antennaria* and *C. plumbea*. In a second part of our paper, we provide additions to the checklist of Romanian lichens from the literature, listing species which lack in both the Catalogue of Lichens in Romania by Ciurchea and Feuerer's lichen checklist of Romania.

**Abstract:** VONDRÁK, J. & LIŠKA, J. 2013. Flechten und lichenicole Pilze aus dem Retezat-Gebirge und übersehene Angaben zur Checkliste der Flechten Rumäniens. – *Herzogia* 26: 293–305.

Funde von 223 Taxa von Flechten, flechtenbewohnenden Pilzen und nicht-lichenisierten, flechtenähnlichen Pilzen werden vom Retezat-Gebirge in Südwest-Rumänien vorgelegt. Darunter sind 44 Taxa, die neu für Rumänien sind: *Absconditella pauxilla*, *Acarospora heppii*, *Agonimia gelatinosa*, *Agonimia tristicula*, *Anaptychia bryorum*, *Arthrorhaphis grisea*, *Bacidia illudens*, *Biatoridium monasteriense*, *Buellia uberior*, *Caloplaca arenaria*, *C. cerinelloides*, *C. chrysodeta*, *C. magni-filii*, *C. saxifragarum*, *C. tirolensis*, *C. velana* var. *schaereri*, *C. xanthostigmoidea*, *Candelariella aggregata* s. l., *C. antennaria*, *Chaenotheca xyloxena*, *Dacampia hookeri*, *Dactylospora urceolata*, *Epilichen scabrosus*, *Fellhanera subtilis*, *Frutidella pullata*, *Gyalecta geoica*, *Illosporium carneum*, *Lecanora cavicola*, *Leptogium teretiusculum*, *Lichenocodium lecanorae*, *Lichenomphalia umbellifera*, *Macentina abscondita*, *Micarea botryoides*, *Mniacea nivea*, *Phaeorrhiza nimbosa*, *Porina arnoldii*, *Protoblastenia terricola*, *Protoparmelia atriseda*, *Protothelenella sphinctrinoidella*, *Psorinia conglomerata*, *Rhagadostoma lichenicola*, *Rhizoplaca melanophthalma*, *Sarea resinae* und *Sphaerellothecium minutum*. *Stigmatidium* aff. *cerinae*, ein lichenicoler Pilz auf *Lecanora epibryon*, ist möglicherweise eine bisher unbeschriebene Art. Taxonomische Anmerkungen zur Identität unserer Aufsammlungen werden für *Caloplaca xanthostigmoidea*, *Candelariella* cf. *aggregata*, *C. antennaria* und *C. plumbea* gemacht. In einem zweiten Teil unseres Artikels stellen wir als Ergänzung zur Checkliste der Flechten Rumäniens Arten aus der Literatur zusammen, die sowohl im Katalog von Ciurchea als auch in Feuerers Checkliste der Flechten Rumäniens fehlen.

**Key words:** Lichenized fungi, alpine biota, biodiversity, Carpathians.

## Introduction

The lichen flora of Romania has been studied during the last two centuries. In the 19<sup>th</sup> century, many lichenologists published papers with records from the territory of Romania, for instance I. Barth, M. Fuss, F. Hazslinszky and H. Lojka. In the 20<sup>th</sup> century, important contributions were published namely by L. Burlacu, M. Ciurchea, V. Codoreanu, P. Cretzoiu, C. Moruzi, G. Sava and Ö. Szatala (see CIURCHEA 1998). Several syntheses of the Romanian lichen flora have been compiled (CRETZOIU 1943 [pyrenocarpous lichens], MORUZI et al. 1967, CIURCHEA 1998, KONDRATYUK et al. 2003 [Eastern Carpathian part]). Unfortunately, a catalogue of the Southern Carpathians, covering large part of Romania is still lacking.

The territory of Romania includes large parts of the Carpathian mountain system. The Retezat Mts are one of the highest mountains in the Southern Carpathians, formed by hard siliceous rocks (in the higher and larger northern part) and limestone (in the southern part called Retezatul Mic). An alpine zone with numerous rocky outcrops is well developed in both parts. The Retezat Mts have one of the best known lichen biota among Romanian mountains; several publications regarding the Retezat Mts are compiled in CIURCHEA (1998), for instance the important lichen-floristic studies by MORUZI & MANTU (1962, 1963).

## Materials and Methods

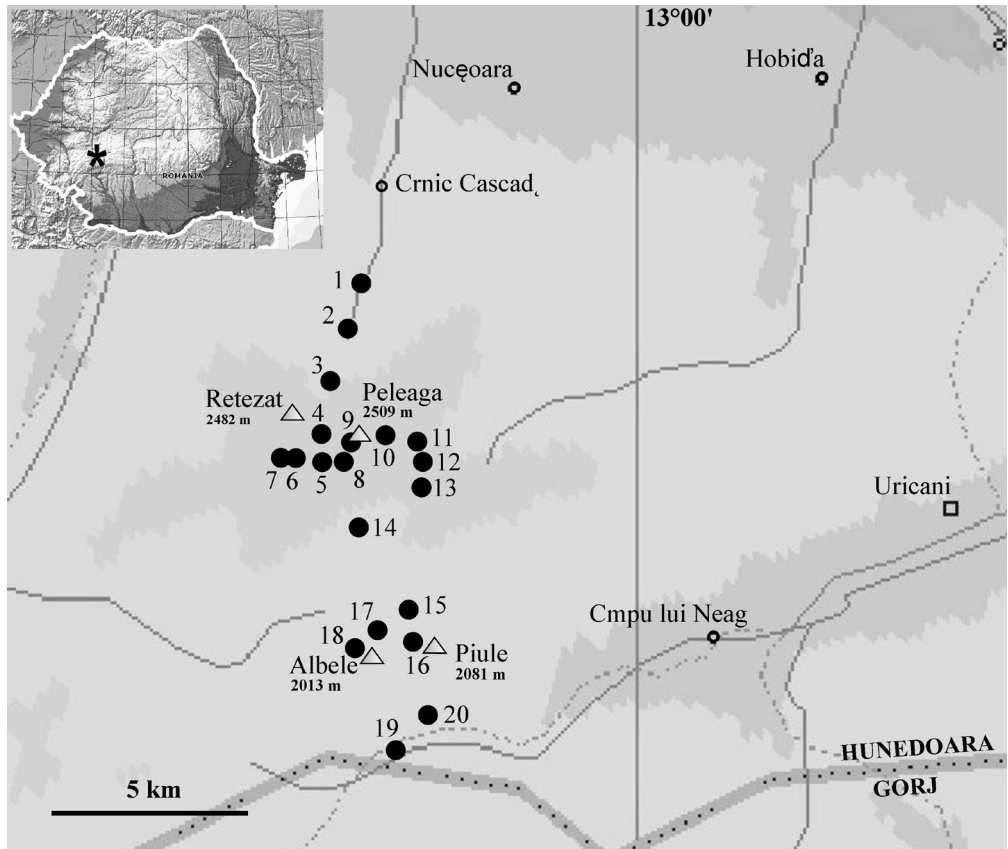
We collected lichens in the Retezat Mts during a field excursion to Romania in June 2005. Sampling sites are shown in Fig. 1. Our sampling was neither systematical nor intensive, but the identification of our samples revealed some little known species and many new records to Romania.

Samples were investigated externally with a stereomicroscope. The anatomical details were observed in tap water mounts with a microscope. Spot tests with KOH and P were frequently applied, TLC was used for identifications of some taxa (eg. *Biatora* spp., *Lecanora cavicola*, *Lepraria* spp.); TLC results are given in the species list.

Herbarium specimens were deposited in the herbarium of the Faculty of Biological Sciences, University of South Bohemia, Czech Republic (CBFS, ‚JVxxxx‘ are accession numbers) and in the herbarium of Jiří Liška (herb. JL).

## Study sites

1. Hațeg, Nucșoara, camping site Pietrele, spruce forest above the camping, 1500–1650 m a.s.l., 22 June 2005.
2. Hațeg, Nucșoara, camping site Pietrele, timber-line of a spruce forest around the hut Gentiana, 1670 m a.s.l., 22 June 2005.
3. Hațeg, Nucșoara, camping site Pietrele, scrubland of *Pinus cembra* and *P. mugo* between the hut Gentiana and the lake Pietrele, 1700–1990 m a.s.l., 22 June 2005.
4. Hațeg, Nucșoara, camping site Pietrele, alpine vegetation around saddle Curmătura Bucurei, c. 2200 m a.s.l., 22 June 2005.
5. Central part of the Retezat Mts, c. 2 km SW of Mt. Peleaga, in alpine zone around the lake Bucura, c. 2050 m a.s.l., 23 June 2005.
6. Central part of Retezat Mts, c. 1 km W of the lake Bucura, in alpine zone around the lake Bucurellu, c. 2150 m a.s.l., 23 June 2005.
7. Central part of the Retezat Mts, c. 1.5 km W of the lake Bucura, in alpine zone around the lake Tău Portii, c. 2230 m a.s.l., 23 June 2005.
8. Central part of the Retezat Mts, c. 2 km SW of Mt. Peleaga, in alpine zone, on steep western slope above the lake Bucura, 2150–2200 m a.s.l., 23 June 2005.
9. Central part of the Retezat Mts, SW ridge of Mt. Peleaga, stony debris in alpine zone, 2300–2450 m a.s.l., 24 June 2005.



**Fig. 1:** Position of the Retezat Mts in Romania and location of study sites (numbers correspond with the list of visited sites; see Materials and Methods). Grey triangles represent selected mountain summits.

10. Central part of the Retezat Mts, c. 0.5 km NE of Mt. Peleaga, in alpine zone around the saddle Șaua Pelegii, 2300–2450 m a.s.l., 24 June 2005.
11. Central part of the Retezat Mts, c. 2 km E of Mt. Peleaga, in alpine zone around the top of Mt. Păpușa, 2500 m a.s.l., 24 June 2005.
12. Central part of the Retezat Mts, c. 2.5 km E of Mt. Peleaga, in alpine zone in the saddle between Mt. Păpușa and Mt. Păpușa Mică, 2300–2350 m a.s.l., 24 June 2005.
13. Central part of the Retezat Mts, c. 3 km ESE of Mt. Peleaga, in alpine zone around the saddle Șaua Custurii, c. 2200 m a.s.l., 24 June 2005.
14. Lupeni, Câmpu lui Neag, Cheile Butii, spruce forest around a camping site on upper stream of the brook Lăpușnicu Mare, below the lake Bucura, 1600–1750 m a.s.l., 25 June 2005.
15. Lupeni, Câmpu lui Neag, Cheile Butii, scrubland of *Pinus mugo* between hills Mt. Buta and Mt. Drăgșanu, 1950–2080 m a.s.l., 25 June 2005.
16. Lupeni, Câmpu lui Neag, Retezatul Mic Mts, limestone outcrops around Mt. Piule, 1900–2080 m a.s.l., 25 June 2005.
17. Lupeni, Câmpu lui Neag, Retezatul Mic Mts, limestone outcrops around Mt. Albele, 1800–2020 m a.s.l., 26 June 2005.
18. Lupeni, Câmpu lui Neag, Retezatul Mic Mts, limestone outcrops around Mt. Piatra Iorgovanului, 1800–2010 m a.s.l., 26 June 2005.
19. Lupeni, Câmpu lui Neag, Cheile Butii, mixed beech-spruce forest near the camping site Canton silvic Câmpușel, 1100–1200 m a.s.l., 27 June 2005.
20. Lupeni, Câmpu lui Neag, Cheile Butii, in the gorge Cheile Scorota, 1100–1200 m a.s.l., 27 June 2005.

## Species list

Our list contains 223 taxa, including 213 lichens, nine lichenicolous fungi and three not lichenicolous but lichen-like fungi; 44 taxa are new to Romania. New country records are mostly less conspicuous microlichens. Some of them are definitely rare alpine species with a peculiar ecology, e.g. *Caloplaca xanthostigmaidea*, *C. magni-filii*, *Epilichen scabrosus*, and *Phaeorrhiza nimbosa*, but number of the taxa are rather common species; e.g. *Caloplaca arenaria*, *Fellhanera subtilis* and *Frutidella pullata*.

\* new to Romania; ! lichenicolous fungus; # non-lichenized but lichen-like fungus.

\**Absconditella pauxilla* Vězda & Vivant: **2**, on wood (herb. JL, det. Z. Palice)

\**Acarospora heppii* (Nägeli) Körb.: **19**, on limestone outcrop (CBFS JV3982)

*Acarospora moenium* (Vain.) Räsänen: **19**, on limestone outcrop with *Acarospora heppii* and *Lecidella stigmatea* (CBFS JV3981)

\**Agonimia gelatinosa* (Ach.) Brand & Diederich: **18**, on calcareous soil (CBFS JV3722)

\**Agonimia tristicula* (Nyl.) Zahlbr.: **16**, on plant debris (CBFS JV3659)

*Alectoria nigricans* (Ach.) Nyl.: **10**, on acid soil, **11**, on acid soil with *A. ochroleuca* (CBFS JV3954, 3974)

*Alectoria ochroleuca* (Hoffm.) A.Massal.: **3**, **11**, on acid soil (CBFS JV3569, 3955)

*Alloctraria madreporiformis* (Ach.) Kärnefelt & Thell: **18**, on calcareous soil (CBFS JV3613, herb. JL)

\**Anaptychia bryorum* Poelt: **16**, on dead mosses (CBFS JV3664)

*Anzina carneonivea* (Anzi) Scheid.: **15**, on bark of *Pinus mugo* (CBFS JV4163)

*Arthrorhaphis citrinella* (Ach.) Poelt: **5**, on acid soil with *Micarea lignaria*, **9**, on acid soil (herb. JL), **11**, on acid soil (CBFS JV3559, 3895)

\*!*Arthrorhaphis grisea* Th.Fr.: **8**, on shallow acid soil, parasitic on *Baeomyces rufus* (CBFS JV3529)

*Aspicilia caesiocinerea* (Malbr.) Arnold: **6**, on granite rock (CBFS JV3682)

*Aspicilia cinerea* (L.) Körb.: **5**, **6**, **9**, on granite rock (CBFS JV3516, 3591, 3702, 3745, 3757)

*Bacidia bagliettoana* (A.Massal & De Not.) Jatta: **19**, over mosses and on *Peltigera* growing on lime-rich soil (CBFS JV3907)

\**Bacidia illudens* (Nyl.) Lyngé: **16**, on mosses (herb. JL, det. Z. Palice)

*Bacidia subincompta* (Nyl.) Arnold: **20**, on bark of *Fagus sylvatica* (CBFS JV3717)

*Bacidina inundata* (Fr.) Vězda: **14**, on wood partially immersed in brook (CBFS JV3632)

*Baeomyces placophyllus* Ach.: **8**, on shallow acid soil, parasited by *Epilichen scabrosus*, **11**, on acid soil with *Arthrorhaphis citrinella* (CBFS JV3519, 3894, herb. JL)

*Baeomyces rufus* (Huds.) Rabenh.: **8**, on shallow acid soil, parasited by *Arthrorhaphis grisea* (CBFS JV3530)

*Biatora efflorescens* (Hedl.) Räsänen: **2**, on bark of *Picea*, **20**, on bark of *Fagus* (herb. JL, det. Z.Palice)

Note: TLC confirmed argopsin

*Biatora* cf. *fallax* Hepp: **2**, on bark of *Picea*, **20**, on bark of *Fagus* (herb. JL, det. Z.Palice)

Note: TLC confirmed gyrophoric acid

\**Biatoridium monasteriense* Körb.: **20**, on bark of *Ulmus glabra* (CBFS JV3727, herb. JL)

*Bilimbia lobulata* (Sommerf.) Hafellner & Coppins: **16**, **18**, among mosses on calcareous soil and plant debris (CBFS JV3526, 3677)

*Brodoa intestiniformis* (Vill.) Goward: **5**, on granite rock (CBFS JV3703)

*Bryoria fuscescens* (Gyeln.) Brodo & D.Hawksw.: **17**, on calcareous soil with *Alectoria ochroleuca*, *Flavocetraria cuculata*, and *F. nivalis* (CBFS JV3670)

\**Buellia uberior* Anzi: **7**, on granite rock (CBFS JV3540)

*Calicium trabinellum* (Ach.) Ach.: **14**, on decorticated snag of large spruce with *Chaenotheca trichialis*, *Ch. xyloxena* and *Placynthiella dasaea* (CBFS JV3718)

- Caloplaca ammiospila* (Wahlenb.) H.Olivier: **9**, very rare on plant debris, **16**, common on plant debris and dead twigs (CBFS JV3566, 3575, 3602)
- \**Caloplaca arenaria* (Pers.) Müll.Arg.: **6**, on granite rock with *Aspicilia caesiocinerea* (CBFS JV3681)
- Caloplaca aurea* (Schaer.) Zahlbr.: **18**, on mosses and plant debris with *C. xanthostigmoidea* (CBFS JV3661, herb. JL)
- Caloplaca cerina* s. l.: **18**, on wood (herb. JL)
- \**Caloplaca cerinelloides* (Erichsen) Poelt: **19**, on twigs of *Picea abies* (CBFS JV3585, 3612, 3725, herb. JL)
- Caloplaca citrina* (Hoffm.) Th.Fr.: **19**, on small limestone rock (CBFS JV3598)
- Caloplaca herbidella* (Hue) H.Magn.: **20**: on bark of *Fagus sylvatica* with *Ramalina farinacea* (CBFS JV3968)
- \**Caloplaca chrysodeta* (Vain. ex Räsänen) Dombr.: **19**, on shaded overhanged limestone rock (CBFS JV3574)
- \**Caloplaca magni-filii* Poelt: **9**, parasitic on thallus of cf. *Miriquidica nigroleprosa* on granite rock (CBFS JV3971)
- \**Caloplaca saxifragarum* Poelt: **16, 18**, on plant debris with *C. stillicidiorum*, *Lecanora hagenii* var. *fallax*, and *Lecania* sp. (CBFS JV3679, 3942, 3948, herb. JL)
- Caloplaca sinapisperma* (Lam. & DC.) Maheu & A.Gillet: **16**, on soil and mosses (CBFS JV3696)
- Caloplaca stillicidiorum* (Vahl) Lyngé: **16, 18**, on plant debris (CBFS JV3617, 3680, 3943, 3949, herb. JL)
- \**Caloplaca tiroliensis* Zahlbr.: **16**, on plant debris (CBFS JV3938)
- \**Caloplaca velana* var. *schaereri* (Arnold) Clauzade & Cl.Roux: **18**, on limestone rock (CBFS JV3533)
- Caloplaca xantholyta* (Nyl.) Jatta: **19**, on shaded overhanged limestone rock (CBFS JV4001)
- \**Caloplaca xanthostigmoidea* (Räsänen) Zahlbr.: **16, 18**, on calciphilous mosses *Schistidium* sp. and *Grimmia ovalis* (CBFS JV3643, 3662, 4002)
- Notes: In the Retezat Mts, this taxon forms distinct yellow crusts overgrowing cushions of alpine mosses *Grimmia* and *Schistidium*. However, the type of *C. xanthostigmoidea* was collected in Canada from birch bark (WESTMORE 2004) and our specimen perhaps represents a different, but morphologically similar taxon. The names *C. epiphyta* (described from the Arctic) and *C. bryochryson* (described from the Alps) possibly better accommodate the specimens from the Retezat Mts, but both are now considered to be synonyms of *C. xanthostigmoidea* (HANSEN et al. 1987, SØCHTING et al. 2008).
- Another yellow sorediate *Caloplaca* was found on mosses and plant debris in the Retezat Mts (CBFS JV3619); it forms tiny rounded soralia on an inconspicuous whitish thallus. This unnamed taxon is somewhat similar to *C. chrysophthalma*.
- \**Candelariella aggregata* M. Westberg s. l.: **16, 18**, on plant debris (CBFS JV3754)
- Note: The lichens from the Retezat Mts fit well the concept of *Candelariella unilocularis* sensu Hakulinen (1954), but this name is a synonym to *C. aurella* (e.g. WESTBERG & CLERC 2012). The sample CBFS JV3754 was seen by Westberg in 2006, who considered this specimen to be conspecific with the North American specimens of *C. aggregata*. This taxon has been recently reported from Switzerland (WESTBERG & CLERC 2012). However, WESTBERG & CLERC (2012) also stated that the terricolous specimens with long spores from the Swiss Alps will be described as a new species in a forthcoming paper. We suppose that our samples perhaps belong to this undescribed taxon.
- \**Candelariella antennaria* Räsänen: **19**, on twigs of *Picea abies* with *Caloplaca* aff. *holocarpa* (CBFS JV3584, 3723)
- Note: Although this species was described from South America (RÄSÄNEN 1939), it was later recorded also in North America (WESTBERG 2007) and recently it was recorded several times in Eurasia (references are summarized in YAKOVCHENKO et al. 2012).
- Candelariella coralliza* (Nyl.) H.Magn.: **12**, on siliceous rock with *Cornicularia normoerica* and *Miriquidica leucophaea* (CBFS JV3604)

*Candelariella plumbea* sensu Nimis: **16**, on limestone rock (CBFS JV3571)

Note: *Candelariella plumbea* was described from a low altitude in Romanian Dobruja (POELT & VĚZDA 1976) as a species with grey, well developed granulose to squamulose thallus. Such morphotypes are rather common on xerothermic limestone outcrops in dry continental parts of Europe (our data). In the Retezat Mts, however, the lichens have their grey thallus rather reduced to small spots reflecting small depressions or cracks in the substrate. This morphotype fits well the concept of *C. plumbea* in NIMIS & MARTELOS (2008).

*Candelariella rhodax* Poelt & Vězda: **18**, on limestone rock (CBFS JV3663)

*Candelariella vitellina* (Hoffm.) Müll.Arg.: **11**, on siliceous rock (CBFS JV3678, 3693)

! *Carbonea vitellinaria* (Nyl.) Hertel: **11**, parasitic on *Candelariella vitellina* (CBFS JV3692)

*Catapyrenium cinereum* (Pers.) Kőr̀b.: **18**, among mosses on calcareous soil (CBFS JV4152)

*Catinarina atropurpurea* (Schaer.) Vězda & Poelt: **1**, on bark of *Sambucus racemosa* (CBFS JV3553)

*Cetraria aculeata* (Schreb.) Fr.: **17**, on calcareous soil (CBFS JV3673)

*Cetraria ericetorum* Opiz: **8**, on acid soil (CBFS JV3650)

*Cetraria islandica* (L.) Ach.: **4**, on shallow acid soil, **17**, on calcareous soil (CBFS JV3675, 3708)

*Cetraria sepincola* (Ehrh.) Ach.: **3, 8**, on twigs of *Rhododendron myrtifolium* (CBFS JV3550, 3621, 3706)

*Chaenotheca ferruginea* (Turner & Borrer) Mig.: **1**, on bark of *Picea abies* (CBFS JV3947)

*Chaenotheca chrysocephala* (Turner ex Ach.) Th.Fr.: **1**, on bark of *Picea abies*; **14**, on wood (CBFS JV3978, herb. JL)

*Chaenotheca stemonea* (Ach.) Müll.Arg.: **1**, on bark of *Picea abies* (CBFS JV3531)

*Chaenotheca trichialis* (Ach.) Th.Fr.: **1**, on bark of *Picea abies*, **14**, on decorticated snag of large spruce (CBFS JV3623, 3648, 3720)

\* *Chaenotheca xyloxena* Nád̄v.: **14**, on decorticated snag of large spruce (CBFS JV3721)

*Cladonia bellidiflora* (Ach.) Schaer.: **5**, on acid soil (CBFS JV3700)

*Cladonia coniocraea* (Flörke) Spreng.: **1**, on rotten stump, **20**, on base of *Fagus sylvatica* (CBFS JV3902, 3908)

*Cladonia deformis* (L.) Hoffm.: **14**, on acid soil (CBFS JV3631)

*Cladonia digitata* (L.) Hoffm.: **14**, on acid humus (CBFS JV3649)

*Cladonia gracilis* (L.) Willd. s. l.: **4, 8**, on shallow acid soil (CBFS JV3527, 3690, 3709)

*Cladonia macrophyllodes* Nyl.: **4**, on shallow acid soil (CBFS JV3532, det. Z. Palice)

Note: common chemotype with fumarprotocetraric acid confirmed by spot test (C+ orange-red).

*Cladonia metacorallifera* Asahina: **3**, on acid soil (CBFS JV3731)

*Cladonia mitis* Sandst.: **17**, on calcareous soil (CBFS JV3676)

*Cladonia pyxidata* (L.) Hoffm.: **5**, on acid soil (CBFS JV3951)

*Cladonia sulphurina* (Michx.) Fr.: **15**, on acid humus (CBFS JV3535)

*Collema auriforme* (With.) Coppins & J.R.Laundon: **20**, on mosses (herb. JL)

*Collema polycarpon* Hoffm.: **16**, on limestone rock (herb. JL)

*Cornicularia normoerica* (Gunnerus) Du Rietz: **12**, on siliceous rock (CBFS JV3605)

\*! *Dacampia hookeri* (Borrer) A.Massal.: **18**, on calcareous soil, parasitic on *Solorina saccata* (CBFS JV3726, 3962, herb. JL)

\*! *Dactylospora urceolata* (Th.Fr.) Arnold: **16**, parasitic on *Caloplaca ammiospila* and *Pannaria pezizoides* (CBFS JV3572, 3686)

*Dermatocarpon minutum* (L.) W.Mann: **18**, on limestone rock (herb. JL)

*Dimelaena oreina* (Ach.) Norman: **7**, on granite rock (CBFS JV3539)

*Dimerella pineti* (Ach.) Vězda: **1**, on bark of *Picea abies* (CBFS JV3561)

*Diploschistes gypsaceus* (Ach.) Zahlbr.: **20**, limestone (herb. JL)

\* *Epilichen scabrosus* (Ach.) Clem.: **8**, on shallow acid soil, parasitic on *Baeomyces placophyllus* (CBFS JV3518, herb. JL)

- Evernia divaricata* (L.) Ach.: **17**, on calcareous soil with *Cetraria nivalis* and *Alectoria ochroleuca* (CBFS JV3657)
- \**Fellhanera subtilis* (Vězda) Diederich & Sérusiaux: **2, 19**, on leaves and twigs of *Picea abies* (CBFS JV3610, 3712)
- Flavocetraria cucullata* (Bellardi) Kärnefelt & Thell: **4**, on shallow acid soil, **17**, on calcareous soil (CBFS JV3522, 3672)
- Flavocetraria nivalis* (L.) Kärnefelt & Thell: **4**, on shallow acid soil, **17**, on calcareous soil (CBFS JV3521, 3671)
- \**Fruetidella pullata* (Norman) Schmull: **8**, on dead twigs of *Rhododendron myrtifolium* (CBFS JV3554)
- Fulgensia bracteata* (Hoffm.) Räsänen: **16**, on calcareous soil among mosses (CBFS JV3557); **18**, on mosses and calcareous soil (herb. JL)
- Fulgensia schistidii* (Anzi) Poelt: **18**, among mosses on calcareous soil (CBFS JV3600)
- Fuscidea mollis* (Wahlenb.) V. Wirth & Vězda: **15**, on granite rock (CBFS JV3524)
- \**Gyalecta geoica* (Wahlenb. ex Ach.) Ach.: **16**, on calcareous soil (CBFS JV3607, 3984)
- Gyalecta jenensis* (Batsch) Zahlbr.: **16, 19**, on limestone rock, **18**, on calcareous soil (CBFS JV3738, 3963, 3967)
- Hypogymnia farinacea* Zopf: **2**, on bark of *Picea abies* (herb. JL)
- \**Illosporium carneum* Fr.: **19**, parasitic on *Peltigera rufescens* and *P. didactyla* (CBFS JV3758, 3905)
- Imshaugia aleurites* (Ach.) S.L.F. Meyer: **2**, on wood (CBFS JV3669, herb. JL)
- Lecania cyrtella* (Ach.) Th. Fr.: **19**, on twigs of *Picea abies* (CBFS JV3586, 3735)
- \**Lecanora cavicola* Creveld: **4**, on overhanged side of large granite boulder (CBFS JV3747, det. Z. Palice)  
Note: TLC confirmed alectorialic acid.
- Lecanora chlarotera* Nyl. s. l.: **8**, on dead twigs of *Rhododendron myrtifolium* (CBFS JV3579)
- Lecanora epibryon* (Ach.) Ach.: **16, 18**, on plant debris and over mosses (CBFS JV3558, 3580, 3958, herb. JL)
- Lecanora hagenii* var. *fallax* Hepp: **16, 18**, on plant debris (CBFS JV3618, 3755, 3944, 3950)
- Lecanora polytropa* (Hoffm.) Rabenh.: **5**, on granite rock, **10**, on siliceous rock (CBFS JV3704, 3987, 3996)
- Lecanora saligna* (Schrad.) Zahlbr.: **2**, on wood with *Imshaugia aleurites* and *Micarea lignaria* (CBFS JV3667)
- Lecanora symmicta* (Ach.) Ach., s. l.: **2**, on leaves and twigs of *Picea abies* (CBFS JV3759), **8, 16**, on twigs of *Rhododendron myrtifolium* (CBFS JV3548, 3576, 3707)
- Lecidea atrobrunnea* (Lam. & DC.) Schaer.: **10, 12**, on siliceous rock (CBFS JV4038, 4039)
- Lecidea lapicida* (Ach.) Ach.: **5**, on granite rock (CBFS JV3730)
- Lecidea nylanderii* (Anzi) Th. Fr.: **1**, on bark of *Picea* (CBFS JV3885, herb. JL)
- Lecidella elaeochroma* (Ach.) M. Choisy: **18**, on wood of dead twigs (herb. JL)
- Lecidella stigmatea* (Ach.) Hert. & Leuck.: **18, 19**, on limestone rock (CBFS JV3753, 3983)
- Lecidoma demissum* (Rutstr.) Gotth. Schneid. & Hertel: **9**, on soil (herb. JL)
- Lepraria caesioalba* (de Lesd.) J.R. Laundon: **5**, on acid soil (herb. JL, det. Z. Palice)  
Note: TLC confirmed atranorin and fumarprotocetraric acid
- Lepraria jackii* Tønsberg s. lat.: **2**, on mosses (herb. JL, det. Z. Palice)  
Note: TLC confirmed atranorin and tonsbergianic acid
- Lepraria rigidula* (de Lesd.) Tønsberg: **5**, on acid soil (CBFS JV3953)
- Lepraria vouauxii* (Hue) R.C. Harris: **20**, on calcareous soil (CBFS JV3941, det. J. Malíček)
- Leptogium lichenoides* (L.) Zahlbr.: **18, 19**, among mosses on calcareous soil (CBFS JV3666, 3906, herb. JL)
- Leptogium saturninum* (Dicks.) Nyl.: **1**, on bark of *Sambucus racemosa* (CBFS JV3633); **20**, on moss on trunk (herb. JL)

- \**Leptogium teretiusculum* (Wallr.) Arnold: **19**, on soil with *Peltigera* sp. div. (CBFS JV3596; conf. A. Guttová 2006)
- \**Lichenoconium lecanorae* (Jaap) D.Hawksw.: **10**, parasitic on apothecia of *Lecanora polytropa* and *Protoparmelia atriseda* (CBFS JV3914, 3997)
- Lichenomphalia hudsoniana* (H.S.Jenn.) Redhead et al.: **3**, on peat and *Sphagnum* cushions CBFS JV3536, herb. JL), **5**, on acid soil (CBFS JV3965)
- \**Lichenomphalia umbellifera* (L.: Fr.) Redhead et al.: **1**, on rotten wood, **8**, on acid soil (CBFS JV3615, 3977)
- Lobaria linita* (Ach.) Rabenh.: **13**, on acid soil (CBFS JV3629)
- \**Macentina abscondita* Coppins & Vězda: **1**, on bark of *Sambucus racemosa* (CBFS JV3937)
- Megaspora verrucosa* (Ach.) Hafellner & V.Wirth: **16**, **18**, on plant debris (CBFS JV3515, 3658, herb. JL)
- Melanelia commixta* (Nyl.) Thell.: **13**, over the moss *Grimmia elongata* on soil (CBFS JV3985)
- Melanelixia glabra* (Schaer.) O.Blanco, A.Crespo, Divakar, Essl., D.Hawksw. & Lumbsch: **20**, on bark (herb. JL)
- Melanohalea exasperatula* (Nyl.) O.Blanco, A.Crespo, Divakar, Essl., D.Hawksw. & Lumbsch: **19**, on twigs of *Picea abies* (CBFS JV3611, 3654)
- #*Melaspilea proximella* (Nyl.) Nyl.: **3**, on dead twigs of alpine shrubs, **19**, on twigs of *Picea abies* (CBFS JV3622, 3724)
- Menegazzia terebrata* (Hoffm.) A.Massal.: **1**, on bark of *Picea abies* (CBFS JV3627)
- \**Micarea botryoides* (Nyl.) Coppins: **2**, on mosses (herb. JL)
- Micarea lignaria* (Ach.) Hedl.: **1**, on wood, **5**, on acid soil (CBFS JV3560, 3616, 3668)
- Micarea melaena* (Nyl.) Hedl.: **1**, on bark of *Picea abies* (CBFS JV3694)
- Micarea prasina* Fr.: **1**, on bark of *Picea abies* (CBFS JV3973)
- Miriquidica leucophaea* (Flörke ex Rabenh.) Hertel & Rambold: **12**, on siliceous rock (CBFS JV3606)
- Miriquidica nigroleprosa* (Vain.) Hertel & Rambold: **9**, on granite rock (CBFS JV3971)
- \*#*Mniacea nivea* (Crouan) Boud.: **1**, on rotten spruce wood (CBFS JV4159)
- Mycobilimbia sabuletorum* (Schreb.) Hafellner: **18**, on plant debris (CBFS JV3732)
- Mycoblastus affinis* (Schaer.) T.Schauer: **1**, on bark of *Picea abies* (CBFS JV3636, 10662)
- Mycoblastus fucatus* (Stirt.) Zahlbr.: **1**, on branch of *Picea abies* (CBFS JV3684, 10661)
- Nephroma parile* (Ach.) Ach.: **20**, on base of *Fagus sylvatica* among mosses (CBFS JV3896)
- Nephroma resupinatum* (L.) Ach.: **20**, on base of *Fagus sylvatica* among mosses (CBFS JV3896, herb. JL)
- Ochrolechia alboflavescens* (Wulfen) Zahlbr.: **2**, on bark of *Picea* (herb. JL, det. Z. Palice)
- Ochrolechia frigida* (Sw.) Lynge: **16**, on plant debris (CBFS JV3564)
- Ochrolechia upsaliensis* (L.) A.Massal.: **16**, on plant debris (CBFS JV3568, 3956)
- Opegrapha gyrocarpa* Flotow: **4**, on overhanged side of large granite boulder (CBFS JV3751)
- Ophioparma ventosa* (L.) Norman: **4**, **8**, **10**, on granite boulders and rocks (CBFS JV3538, 3543, 3990)
- Orphniospora moriopsis* (A.Massal.) D.Hawksw.: **6**, on granite rock (CBFS JV3639)
- Parmelia saxatilis* (L.) Ach.: **1**, on bark of *Pinus cembra* (CBFS JV3980)
- Parmelia submontana* Hale: **20**, on bark of *Fagus sylvatica* (CBFS JV3939)
- Parmeliopsis ambigua* (Wulfen) Nyl.: **15**, on bark of *Pinus mugo* (herb. JL)
- Parmeliopsis hyperopta* (Ach.) Arnold: **15**, on bark of *Pinus mugo* (herb. JL)
- Peltigera aphthosa* (L.) Willd.: **5**, on acid soil in damp situation (CBFS JV4000, herb. JL); **20**, on soil (herb. JL)
- Peltigera canina* (L.) Willd.: **14**, on soil (CBFS JV3976)
- Peltigera degenii* Gyeln.: **20**, on bark of *Fagus sylvatica* (CBFS JV3964)
- Peltigera didactyla* (With.) J.R.Laundon: **14**, on soil, **19**, on drying calcareous soil at forest road edge (CBFS JV3749, 3993)



- Peltigera lepidophora* (Nyl. ex Vain.) Bitter: **19**, on drying calcareous soil at forest road edge (CBFS JV3595, herb. JL)
- Peltigera leucophlebia* (Nyl.) Gyeln.: **16, 19**, on calcareous soil (CBFS JV3695, 3734)
- Peltigera malacea* (Ach.) Funck: **5**, on acid soil, conf. O. Vitikainen 2006 (CBFS JV3903)
- Peltigera neckeri* Müll.Arg.: **19**, on drying calcareous soil at forest road edge (CBFS JV3656)
- Peltigera polydactylon* (Neck.) Hoffm.: **19**, on drying calcareous soil at forest road edge (CBFS JV3737)
- Peltigera praetextata* (Sommerf.) Zopf: **19**, on drying calcareous soil at forest road edge (CBFS JV3688, 3711, rev. O. Vitikainen)
- Peltigera rufescens* (Weiss) Humb.: **16**, on calcareous soil (CBFS JV3555)
- Peltigera venosa* (L.) Hoffm.: on calcareous soil (CBFS JV3644, 3687)
- Pertusaria albescens* (Huds.) M.Choisy & Werner: **1**, on bark of *Pinus cembra*, **20**, on bark of *Fagus sylvatica* (CBFS JV3910, 3979)
- Pertusaria amara* (Ach.) Nyl.: **1**, on branch of *Picea abies* (CBFS JV3683)
- Pertusaria coccodes* (Ach.) Nyl.: **20**, on bark of *Fagus sylvatica* (CBFS JV3899)
- Pertusaria oculata* (Dicks.) Th.Fr.: **8**, on plant debris (CBFS JV3603)
- \**Phaeorrhiza nimbose* (Fr.) H.Mayrhofer & Poelt: **18**, on calcareous soil and plant debris (CBFS JV3547)
- Physcia adscendens* (Fr.) H.Olivier: **20**, on twigs of *Picea abies* (CBFS JV3655)
- Placynthiella dasaea* (Stirton) Tønsberg: **14**, on decorticated snag of large *Picea abies* (CBFS JV3719)
- Platismatia glauca* (L.) W.L.Culb. & C.F.Culb.: **1**, on bark of *Picea abies* (CBFS JV3635)
- \**Porina arnoldii* Poelt & Vězda: **8**, on dead twigs of *Rhododendron myrtifolium* (CBFS JV4040)
- Protoblastenia calva* (Dicks.) Zahlbr.: **19**, on limestone rock (CBFS JV3689)
- \**Protoblastenia terricola* (Anzi) Lyngbe: **16**, on calcareous soil and on plant debris (CBFS JV3660)
- Protomicarea limosa* (Ach.) Hafellner: **3**, on acid soil (CBFS JV3589)
- Protopannaria pezizoides* (Weber) P.M.Jørg. & S.Ekman: **16**, on calcareous soil (CBFS JV3614, 3685, herb. JL)
- \**Protoparmelia atriseda* (Fr.) R.Sant. & V.Wirth: **10**, on schist rock parasited by *Lichenocodium lecanorae*, with *Rhizocarpon lecanorinum* (CBFS JV3913)
- Protoparmelia badia* (Hoffm.) Hafellner: **5**, on granite rock (CBFS JV3705)
- \**Protothelenella sphinctrinoidella* (Nyl.) H.Mayrh. & Poelt: **13**, on acid soil among mosses (CBFS JV3891)
- Pseudephebe pubescens* (L.) M.Choisy: **3**, on granite rock (CBFS JV3587)
- Pseudevernia furfuracea* (L.) Zopf: **1**, on bark of *Picea abies*, **8**, on dead twigs of *Rhododendron myrtifolium* (CBFS JV3523, 3549)
- \**Psorinia conglomerata* (Ach.) Gotth.Schneid.: **9**, on granite rock (herb. JL)
- Ramalina carpatica* var. *carpatica* Körb.: **8**, on overhanged granite rock (CBFS JV4003)
- Ramalina farinacea* (L.) Ach.: **20**, on bark of *Fagus sylvatica* (CBFS JV3969)
- \**Rhagadostoma lichenicola* (De Not.) Keissl.: **19**, on thallus of *Peltigera lepidophora* (CBFS JV3886)
- Rhizocarpon alpicola* (Anzi) Rabenh.: **5**, on granite rock (CBFS JV3701)
- Rhizocarpon badioatrum* (Flörke ex Spreng.) Th.Fr.: **3**, on partially submersed granite rock with *Staurothele fissa* and *Verrucaria latebrosa* (CBFS JV3739)
- Rhizocarpon geographicum* (L.) DC.: **4, 5, 10**, on granite and schist rocks and boulders (CBFS JV3744, 3989, 3991)
- Rhizocarpon lecanorinum* Anders: **6, 7, 10**, on granite and schist rocks and boulders (CBFS JV3541, 3577, 3915)
- Rhizocarpon polycarpum* (Hepp) Th.Fr.: **6, 10**, on siliceous rocks (CBFS JV3590, 3988)
- \**Rhizoplaca melanophthalma* (DC.) Leuckert & Poelt: **6**, on granite rock (CBFS JV3601)
- Romularia lurida* (Ach.) Timdal: **18**, on soil (herb. JL)
- Ropalospora viridis* Tønsberg: **20**, on bark of *Fagus sylvatica* (CBFS JV3909)

- \*#*Sarea resiniae* (Fr.) Kuntze: **1, 2**, on resin of *Picea abies* (CBFS JV3972, herb JL)
- Scoliciosporum chlorococcum* (Graewe ex Stenh.) Vězda: **1**, on bark of *Sambucus racemosa*, **2, 19**, on leaves and twigs of *Picea abies* (CBFS JV3630, 3736, 3760)
- Schaereria fuscocinerea* (Nyl.) Clauzade & Cl.Roux: **5**, on granite rock (CBFS JV3593)
- Solorina crocea* (L.) Ach.: **4**, on shallow acid soil (CBFS JV3620)
- Solorina saccata* (L.) Ach.: **16, 20**, on calcareous soil (CBFS JV3710)
- Solorina spongiosa* (Sm.) Anzi: **16, 18**, on plant debris on calcareous soil (CBFS JV3583, 3946, herb. JL)
- \*!*Sphaerellothecium minutum* Hafellner: **13**, parasitic on *Sphaerophorus fragilis* (CBFS JV3893)
- Sphaerophorus fragilis* (L.) Pers.: **5, 13**, on acid soil (CBFS JV3892, 3952)
- Sporastatia polyspora* (Nyl.) Grumann: **5, 8**, on granite rocks (CBFS JV3544, 3594)
- Sporastatia testudinea* (Ach.) A.Massal.: **5, 6**, on granite rocks (CBFS JV3578, 3746)
- Squamarina gypsacea* (Sm.) Poelt: **18**, on mosses and calcareous soil (herb JL)
- Staurothele fissa* (Taylor) Zwackh: **3**, on partially submersed granite rock (CBFS JV3741)
- \*!*Stigmidium* aff. *cerinae* Cl.Roux & Triebel: **16**, parasited in apothecia of *Lecanora epibryon* (CBFS JV3581)
- Note: the specimen is possibly a new taxon.
- Strigula stigmatella* (Ach.) R.C.Harris: **19**, on mosses on bark of *Fagus* (herb. JL)
- Tephromela armeniaca* (DC.) Hertel & Rambold: **8, 10**, on siliceous rocks (CBFS JV3537, 3542)
- Thamnolia vermicularis* (Sw.) Schaer.: **3**, on acid soil, **16, 17**, on calcareous soil (CBFS JV3570, 3582, 3674, herb. JL)
- Thelidium pyrenophorum* (Ach.) Mudd: **17**, on limestone rock (CBFS JV3742)
- Thelocarpon epibolum* (Nyl.) Zahlbr.: **19**, on wood (CBFS JV3904)
- Thelopsis melathelia* Nyl.: **18**, on plant debris (CBFS JV3992)
- Trapelia coarctata* (Sm.) M.Choisy: **4**, on granite stone (CBFS JV3752)
- Trapeliopsis flexuosa* (Fr.) Coppins & P.James: **16**, on plant debris (CBFS JV3565)
- Trapeliopsis viridescens* (Schrad.) Coppins & P.James: **1**, on bark of *Picea abies* (CBFS JV3520)
- Tremolecia atrata* (Ach.) Hertel: **8**, on granite rock (CBFS JV3743)
- Tuckneraria laureri* (Kremp.) Randlane & Thell: **1**, on bark of *Picea abies* with *Platismatia glauca* (CBFS JV3634)
- Umbilicaria cylindrica* (L.) Delise ex Duby: **9**, on granite rock (herb. JL)
- Verrucaria latebrosa* Körb.: **3**, on partially submersed granite rock (CBFS JV3740)
- Vulpicida juniperinus* (L.) J.-E.Mattsson & M.J.Lai: **16**, on calcareous soil (CBFS JV3691 sub *V. tubulosus*, herb. JL)
- Vulpicida pinastri* (Scop.) J.-E.Mattsson & M.J.Lai: **15**, on bark of *Pinus mugo* (herb. JL)
- Xanthoparmelia tinctina* (Maheu & A.Gillet) Hale: **7**, on granite rock (herb JL)
- Xanthoria elegans* (Link) Th.Fr.: **18**, on limestone rock (CBFS JV3599)
- Xylographa parallela* (Ach.) Behlen & Desberg: **14**, on wood (CBFS JV3966, herb. JL)

### Additions to the lichen checklist of Romania from published literature

The most recent version of the lichen checklist of Romania (FEUERER 2011) fully excerpted the Catalog of lichens in Romania (CIURCHEA 1998) and added some recent studies. During our identification work we came across some papers with information on lichen species from Romania, which are listed neither in CIURCHEA (1998) nor FEUERER (2011): ARUP & ÅKELIUS (2009), *Caloplaca herbidella*; BARTÓK et al. (2005), *Lecanora thysanophora*; CALATAYUD & RAMBOLD (1998), *Immersaria mehadiana*; CZARNOTA & KUKWA (2009),

*Vezeadaea aestivalis*; ÇOBANOĞLU et al. (2009), *Opegrapha prosodea*, *Parmelia submontana*, *Parmelina pastillifera*, *Phaeophyscia rubropulchra*, *Ramalina canariensis*, *Rimularia furvella*, *Usnea subscabrosa*; ÇOBANOĞLU et al. (2010), *Buellia griseovirens*, *Candelariella coralliza*, *Cladonia stellaris*, *Lecanora cinereofusca*, *Leproloma cacuminum*, *Ochrolechia inaequatula*, *Trapelia involuta*, *Usnea silesiaca*; DENGLER et al. (2012), *Caloplaca raesae-nenii*, *Cladonia magyrica*, *Xanthoparmelia perrugata*; FAŁTYNOWICZ & SULMA (1994, incorrectly reported to Ukraine), *Lecanora leptyroides* (sub *L. nemoralis*), *Rinodina capensis* (sub *R. corticola*); GAYA (2009), *Caloplaca arnoldii* subsp. *obliterata*, *C. pusilla*; KUKWA (2011), *Ochrolechia trochophora*; LLOP (2010), *Bacidia punica*; PALICE (1999), *Chaenotheca sphaerocephala*, *Pycnora leucococca*, *Scoliciosporum curvatum*, *Trapelia corticola*; PIŠŮT (1971), *Caloplaca murorum* var. *laceratula*, *Dermatocarpon arnoldianum*, *Lecanora admontensis*, *Phaeophyscia endophoenicea* (sub *Physcia labrata* var. *endophoenicea*), *P. pusilloides* (sub *Physcia p.*), *Physconia venusta*, *Ramalina obtusata* var. *ventricosa*, *Rhizocarpon saanaense* (sub *R. sublucidum*), *Teloschistes contortuplicatus*; PIŠŮT (1995), *Ochrolechia microstictoides*; *Pycnora sorophora* (sub *Hypocenyomyce s.*); PIŠŮT (1999), *Collema subflaccidum*; PIŠŮT (2002), *Caloplaca scrobiculata*, *Collema polycarpon* subsp. *corcyrense*, *Lecanora xanthostoma*, *Parmotrema stuppeum*, *Polyblastia theleodes*, *Ramalina sinensis*, *Xanthoria isidioidea*; POELT & VĚZDA (1976), *Candelariella plumbea*, *C. rhodax*; PRINTZEN & PALICE (1999), *Biatora chrysantha*, *B. efflorescens*, *B. ocelliformis*, *B. sphaeroidiza*; PRINTZEN et al. (2002), *Cheiromycina flabelliformis*; ŚLIWA (2009), *Lecanora semipallida*; TIBELL (1973), *Chaenotheca stemonea*; TOMA & COVALIUC (2006), *Arthopyrenia sphaeroides*, *Bacidia scopulicola*, *Lecania turicensis*, *Lecanora cinereofusca*, *Ramalina ligulata*, *Sphaerophorus melanocarpus*; VĚZDA (1960–1991, 1975), *Anaptychia setifera*, *Anzina carneonivea* (sub *Varicellaria c.*), *Aspicilia calcarea* var. *dobrogenensis*, *Bellemeria cupreoatra* (sub *Lecanora c.*), *Cetraria steppae* (sub *Cornicularia s.*), *Dimelaena griseoviridis*, *Diploschistes actinostomus*, *D. farinosus*, *Hypotrachyna britannica* (sub *Parmelia b.*), *Lecanora casimceana*, *Lichinella nigrifella* (sub *Thyrea n.*), *Miriquidica nigroleprosa* (sub *Lecidea n.*), *Physcia leptalea*, *Protoparmelia psarophana* (sub *Lecanora p.*), *Ramalina pontica*, *R. roesleri*, *Solenopsisora liparina*, *Xanthoparmelia ryssolea* (sub *Parmelia r.*), *X. tinctina* (sub *Parmelia t.*), *X. vagans* f. *desertorum* (sub *Parmelia*), *Xanthoria domogledensis*, *X. papillifera*; VONDRÁK (2004), *Caloplaca crenulatella*, *Rinodina pityrea*, *Verrucaria macrostoma* f. *furfuracea*; VONDRÁK (2010), *Caloplaca albopruinosa*; VONDRÁK et al. (2008), *Caloplaca concreticola*; VONDRÁK et al. (2009a), *Caloplaca austrocitrina*, *C. dichroa*, *C. limonia*, *C. phlogina*; VONDRÁK et al. (2009b), *Caloplaca ulceroza*; VONDRÁK et al. (2012), *Caloplaca skii*; VONDRÁK & KOCOURKOVÁ (2008), *Opegrapha vulpina*; YAVUZ & ÇOBANOĞLU (2008), *Catapyrenium squamulosum*, *Phaeophyscia perisidiosa*; ZAMFIR et al. (1998), *Aspicilia* (= *Acarospora*) *moenium*, *Phaeophyscia endophoenicea*. ARDELEAN et al. (2013) added about sixty lichen taxa new to Romania; mostly epiphytic species from the Rodney Mts in Eastern Carpathians. We used the sources listed in this paragraph to recognize the taxa new to Romania.

## Acknowledgements

Zdeněk Palice and Jiří Malíček kindly identified some difficult lichen samples. Zdeněk Palice turned our attention to several papers with records from Romania. Markus Hauck kindly translated the abstract into German and improved the text. Our research was supported by the Academy of Sciences of the Czech Republic (long-term research program RVO 67985939) and the Grant Agency of Faculty of Environmental Sciences (CULS, 42900/1312/3114). All support is gratefully acknowledged.

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Manuscript accepted: 1 November 2013.

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