Notes to lichen-forming and lichenicolous fungi in Ukraine I

VALERIY V. DARMOSTUK
ALEXANDER YE. KHODOSOVTSEV

DARMOSTUK V.V., KHODOSOVTSEV A.YE. (2020). **Notes to lichen-forming and lichenicolous fungi in Ukraine I.** *Chornomors'k. bot. z.,* **16** (3): 257–274. doi: 10.32999/ksu1990553X/2020-16-3-6

In this contribution, new data concerning lichen-forming and lichenicolous fungi in Ukraine are presented. It includes new records, exclusions, and confirmations to the Ukrainian administrative regions or taxa in the genera of *Arthonia*, *Aspicilia*, *Aspiciliella*, *Bacidia*, *Buellia*, *Cercidospora*, *Circinaria*, *Cladonia*, *Clypeococcum*, *Codonmyces*, *Didymellopsis*, *Didymocyrtis*, *Heterocephalacria*, *Laetisaria*, *Lambiella*, *Lecanora*, *Lepraria*, *Lichenochora*, *Lichenoconium*, *Lichenostigma*, *Lichenothelia*, *Marchandiomyces*, *Montanelia*, *Phaeospora*, *Placynthiella*, *Polycoccum*, *Protoparmeliopsis*, *Pyrenochaeta*, *Pyrenodesmia*, *Pyrenopsis*, *Refractohilum*, *Rinodina*, *Rosellinula*, *Scytinium*, *Sphaerellothecium*, *Sphinctrina*, *Staurothele*, *Stigmidium*, *Taeniolella*, *Thallinocarpon*, *Toninia*, *Trapelia*, *Weddellomyces*, *Xanthoparmelia* and *Xanthoriicola*. Among them 28 species of lichen-forming and lichenicolous fungi are new to Mykolaiv region, 21 species new to Dnipropetrovsk region, 17 species new to Cherkasy region, 7 species new to Kherson region, 5 species new to Zaporizhzhia region, 3 species new to Chernivtsi region, 3 species new to Odessa region, 3 species new to Luhansk region, 2 species new to Donetsk region, 2 species new to Kirovograd region, one species new to Ternopil region and one species new to Rivne region. *Caloplaca xerica* is a new host species for *Lichenochora caloplacae*. In Ukraine, *Aspicilia cinerea* is a dubious species and it needs to be removed from lichen list of Cherkasy, Donetsk, Dnipropetrovsk, Kirovograd, Mykolaiv and Zaporizhzhia regions. *Lepraria neglecta* was erroneously reported for Donetsk, Mykolaiv and Zaporizhzhia regions and should be removed from the species lists of these regions. *Miriquidica complanata* is erronoeusly reported for Zaporizhzhia regions and should be excluded from the list of this region.

Keywords: biodiversity, new records, Cherkasy, Chernivtsi, Dnipropetrovsk, Donetsk, Kirovograd, Kherson, Luhansk, Mykolaiv, Odessa, Rivne, Ternopil, Zaporizhzhia, regions

ДАРМОСТУК В.В., ХОДОСОВЦЕВ О.Є. (2020). **Нотатки щодо лишайників та ліхенофільних грибів України I.** *Чорноморськ. бот. ж.*, **16** (3): 257–274. doi: 10.32999/ksu1990553X/2020-16-3-6

У цьому повідомленні представлені нові дані щодо лишайників та грибів України. Вони включають в себе нові знахідки, корекції та підтвердження з різних українських адміністративних областей з родів *Arthonia*, *Aspicilia*, *Aspiciliella*, *Bacidia*, *Buellia*, *Cercidospora*, *Circinaria*, *Cladonia*, *Clypeococcum*, *Codonmyces*, *Didymellopsis*, *Didymocyrtis*, *Heterocephalacria*, *Laetisaria*, *Lambiella*, *Lecanora*, *Lepraria*, *Lichenochora*, *Lichenoconium*, *Lichenostigma*, *Lichenothelia*, *Marchandiomyces*, *Montanelia*, *Phaeospora*, *Placynthiella*, *Polycoccum*, *Protoparmeliopsis*, *Pyrenochaeta*, *Pyrenodesmia*, *Pyrenopsis*, *Refractohilum*, *Rinodina*, *Rosellinula*, *Scytinium*, *Sphaerellothecium*, *Sphinctrina*, *Staurothele*, *Stigmidium*, *Taeniolella*, *Thallinocarpon*, *Toninia*, *Trapelia*, *Weddellomyces*, *Xanthoparmelia* and *Xanthoriicola*. Серед них 28 видів лишайників та ліхенофільних грибів – нові для

Kherson State University, Universitetska Str., 27, Kherson, 73000, Ukraine
e-mail: valeriidarmostuk@gmail.com
Submitted 16 August 2020 *Recommended by S. Kondratyuk* *Published 30 November 2020*

Миколаївської області, 21 вид – новий для Дніпропетровської, 17 видів – нові для Черкаської області, 7 видів – нові для Херсонської області, 5 видів – нові для Запорізької області, 3 види – нові для Чернівецької області, 3 види – нові для Одеської області, 3 види нові для Луганської області, 2 види нові для Донецької області, два для Кіровоградської області, один для Рівненської та один вид новий для Тернопільської області. *Caloplaca xerica* новий вид господаря для *Lichenochora caloplacae*. Не підтверджено зростання *Aspicilia cinerea* в межах Дніпропетровської, Донецької, Запорізької, Кіровоградської, Миколаївської та Черкаської областей. *Lepraria neglecta* некоректно визначений лишайник для Донецької, Запорізької та Миколаївської областей. *Miriquidica complanata* є некоректно визначеним лишайником для Запорізької області. Ці види повинні бути виключені із списку ліхенобіоти цих областей.

Ключові слова: біорізноманіття, нові знахідки, Дніпропетровська, Донецька, Запорізька, Кіровоградська, Луганська. Миколаївська, Одеська, Рівненська, Тернопільська. Черкаська, Чернівецька, Херсонська, області

ДАРМОСТУК В.В., ХОДОСОВЦЕВ О.Є. (2020). **Нотатки о лишайниках и лихенофильных грибах Украины I.** *Черноморськ. бот. ж.*, **16** (3): 257–274. doi: 10.32999/ksu1990553X/2020-16-3-6

В этом сообщении представлены новые данные о лишайниках и грибах Украины. Они включают в себя новые находки, коррекции и подтверждения из разных украинских административных областей из родов *Arthonia*, *Aspicilia*, *Aspiciliella*, *Bacidia*, *Buellia*, *Cercidospora*, *Circinaria*, *Cladonia*, *Clypeococcum*, *Codonmyces*, *Didymellopsis*, *Didymocyrtis*, *Heterocephalacria*, *Laetisaria*, *Lambiella*, *Lecanora*, *Lepraria*, *Lichenochora*, *Lichenoconium*, *Lichenostigma*, *Lichenothelia*, *Marchandiomyces*, *Montanelia*, *Phaeospora*, *Placynthiella*, *Polycoccum*, *Protoparmeliopsis*, *Pyrenochaeta*, *Pyrenodesmia*, *Pyrenopsis*, *Refractohilum*, *Rinodina*, *Rosellinula*, *Scytinium*, *Sphaerellothecium*, *Sphinctrina*, *Staurothele*, *Stigmidium*, *Taeniolella*, *Thallinocarpon*, *Toninia*, *Trapelia*, *Weddellomyces*, *Xanthoparmelia* and *Xanthoriicola*. Среди них 28 видов лишайников и лихенофильных грибов – новые для Николаевской области, 21 вид – новые для Днепропетровской, 17 видов – новые для Черкасской области, 7 видов – новые для Херсонской области, 5 видов – новые для Запорожской области, 3 вида – новые для Черновицкой области, 3 вида – новые для Одесской области, 3 вида новые для Луганской области, 2 вида новые для Донецкой области, один вид для Ровненской и один вид новый для Тернопольской области. *Caloplaca xerica* новый вид хозяина для *Lichenochora caloplacae*. Не подтверждено произрастание *Aspicilia cinerea* в пределах Днепропетровской, Донецкой, Запорожской, Кировоградской, Николаевской и Черкаской областей. *Lepraria neglecta* некоректно определенній лишайник для Донецкой, Запорожской и Николаевской областей. *Miriquidica complanata* некоректно определенный лишайник для Запорожской области. Эти виды должны быть исключены из лихенобиот вышеуказанных областей.

Ключевые слова: биоразнообразие, новые находки, Днепропетровская, Донецкая, Запорожская, Кировоградская, Луганская, Николаевская, Одесская, Ровненская, Тернопольская, Черкасская, Черновицкая, Херсонская, области

The research of lichens and fungi in Ukraine has a long history. Results of such research are presented in several checklists and handbooks [e.g. ANDRIANOVA et al., 2006; KONDRATYUK et al., 2010; OXNER, 2010; DARMOSTUK, KHODOSOVTSEV, 2017]. However, there are still many gaps in case of distribution data of lichen-forming and lichenicolous fungi in Ukraine. To solve such problems and obtain complete data on the spread of these organisms, scientists are taking various types of data mobilization events. Choosing a data mobilization strategy should take into account national specifics of data management as well as features of scientific work in public institutions. One of the indicators of scientific work is a scientific article published in printed or electronic journal. Instead published a dataset or another data product not considered as an indicator of scientific work in Ukraine.

In this case, we are considering the possibility of data mobilization by publishing this article series in the format of regional checklist. We invite everyone to publish their regional finds of lichen-forming, lichenicolous and other groups of fungi in this format. In this first Notes we provide distribution data only about lichen-forming and lichenicolous fungi.

Material and methods

Specimens of lichen-forming and lichenicolous fungi were examined by lens (x 10) *in situ* and standard microscope techniques using microscopes Optica-1 and MICROMED-2 in laboratory. Non-collected materials were marked as "non coll." in the paper. Microscopical examination was performed in water, 10% KOH (K), and Lugol's iodine solution, directly (I) or after pretreatment with KOH (K/I), or Brilliant Cresyl Blue (BCr). The measurements were made in water with an accuracy of 0.5 μm for ascospores, asci, conidia, conidiogenous cells, conidiophores, and ascomatal and pycnidial wall cells, and 5 μm for ascomata and pycnidia. The measurements are given as (min–)x–SD – x+SD(–max), were x is the average and SD is the standard deviation. The photographs were taken with a Levenhuk C510 NG camera. We provide morphological features for some taxa, that distinguish them from similar species. All examined specimens are deposited in the lichenological herbarium of Kherson State University (KHER), M.G. Kholodny Institute of botany, NAS of Ukraine (KW-L) and in the private herbarium of the first author (herb. VD).

Species records

Lichens

ASPICILIA VIRIDESCENS (A. Massal.) Hue

The species morphologically similar to *Circinaria contorta* and *C. caesiocinerea*. The taxon characterized by more or less dispersed (especially when young) green-grey squamulose and subumbonate areoles, more or less elevated mature apothecia and growth on shaded moist granite and sandstone surfaces. *Miriquidica complanata* reported by KHODOSOVTSEV, ZAVYALOVA [2008] from Zaporizhzhia region should be removed from the regional lichen list, because the only known specimen (KHER 4213) belongs to *Aspicilia viridescens*. *A. viridescens* was known only from Crimea peninsula [KHODOSOVTSEV, 2002a, 2003b, 2004; KHODOSOVTSEV, REDCHENKO, 2002]. New for Dnipropetrovsk, Cherkasy, Mykolaiv, Rivne and Zaporizhzhia regions.

Specimens examined. UKRAINE. **Dnipropetrovsk region**, Apostolovo district, Tokivske village, Kamyanka river, 47.68514 N 33.94261 E, alt. 22 m a.s.l., on granite, leg. A. Khodosovtsev & V. Darmostuk, det. A. Khodosovtsev (KHER 12800); Krivy Rig city, waterfall Zahidy, 47.90572 N 33.28094 E, alt. 46 m a.s.l., on granite, 03.07.2018, leg. & det. A. Khodosovtsev (KHER 12847); **Cherkasy region**, Kamyanka district, Kamyanka town, Tyasminskyi Canyon, 49.04017 N, 32.0884 E, alt. 96 m a.s.l., on shaded granite surfaces, 12.10.2019, leg. & det. A. Khodosovtsev (KHER 12810, 12826); **Mykolaiv region,** Voznesensky district, "Buzky Gard" National Nature Park, Arbuzinsky Canyon, 47.7053 N 31.44236 E, alt. 44 m a.s.l., on granite in shaded situation, 08.05.2020, leg. & det. A. Khodosovtsev (KHER 13881); Pervomaysk district, "Buzky Gard" National Nature Park, Lviv village, right bank of Pivdenny Bug river, biodiversity plot SB20136, 47.90664 N 31.07887 E, alt. 44 m a.s.l., on small granite pebbles, 05.07.2020, leg. & det. A. Khodosovtsev (KHER 13983); **Rivne region**, Berznivka district, Sosnove village, "Nadsluchansky" Regional Landscape Park, 50.82623 N 27.03135 E, on sandstone, alt. 190 m a.s.l., 16.05.2019, leg. A. Khodosovtsev & V. Darmostuk (KHER 12856); **Zaporizhzhia region**, Melitopol district, geological reserve "Kamyana Mogyla", 46.95033 N, 35.46956 E, alt. 15 m a.s.l., on sandstone, vertical surfaces, 04.10.2007, leg. A. Khodosovtsev & T. Zavyalova, det. A. Khodosovtsev (KHER 4213 as *Miriquidica complanata* in KHODOSOVTSEV, ZAVYALOVA, 2008).

ASPICILIELLA INERMUTANS (Nyl.) M. Choisy in Werner

It is a common lichen-forming fungus on granite of Ukrainian Crystalline Schist, but in Ukrainian lichenological papers it has been reported as *Aspicilia cinerea* s. lat. [*e.g.*

OXNER, 2010, KHODOSOVTSEV, 1999; DARMOSTUK, KHODOSOVTSEV, 2014; KHODOSOVTSEV, DARMOSTUK, 2017, 2020; KHODOSOVTSEV, ZAVYALOVA, 2008a,b; KHODOSOVTSEV et al., 2013, 2019]. The taxonomic revision of *Aspiciella intermutans* s.lat. was provided recently [ZAKERI et al., 2019]. Among cited specimens, two specimens of this species (genotype D) were collected from Mykolaiv Region (Ukraine). *A. intermutans* is characterized by short conidia, 7–10 μm in length and medium grey to light brown areoles (old specimens) with white lines around areoles and K+ (reddish) thallus. *Aspiciliella intermutans* was known from AR Crimea [KHODOSOVTSEV, 2003, 2004], Donetsk [KHODOSOVTSEV et al., 2013] and Dnipropetrovsk [NAUMOVICH, 2009 a] regions. *Aspicilia cinerea* was not confirmed in plain part of Ukraine in this study. We summarize that *A. cinerea* is a dubious taxon and all specimens from Ukraine referred "*Aspicilia cinerea*" need critical revision. *A. intermutans* is new for Cherkasy, Kirovograd, Mykolaiv and Zaporizhzhia regions.

Specimens examined. UKRAINE. Cherkasy region, Kamyanka district, Kamyanka town, Tyasminskyi Canyon, 49.04670 N 32.06051 E, alt. 96 m a.s.l., on exposed granite surfaces, 12.10.2019, A. Khodosovtsev (non coll.); **Dniprpopetrovsk region,** Apostolovo district, near Tokivske village, Kamyanka river, 47.68511 N 33.94261 E, alt. 43 m a.s.l., on granite, 22.07.2008, leg. L. Gavrylenko, det. A. Khodosovtsev (KHER 7585 as *Aspicilia cinerea*; 7607, 7612, 7624); Krivy Rig region, Centralny district, right bank of the Ingulets river, 47.82842 N, 33.33516 E, alt. 37 m a.s.l., on quartzite, 11.10.2008, leg. A. Khodosovtsev, G. Naumovych, det. A. Khodosovtsev (KHER 3982 as *Aspicilia cinerea*); Krasna ravine, 48.10362 N 33.51197 E, alt. 84 m a.s.l., on iron quartzite, 10.07.2018, leg. et det. A. Khodosovtsev (KHER 11801 as *Aspicilia cinerea*); 17.10.2007, leg. A. Khodosovtsev, G. Naumovych, det. A. Khodosovtsev (KHER 4985, 7974, 7988 all as *Aspicilia cinerea*); Chkalivka village, left bank of the Ingulets river, 48.01580 N 33.28743 E, on siliceous rock, alt. 68 m a.s.l., 11.10.2008, leg. A. Khodosovtsev et al., det A. Khodosovtsev (KHER 4988, 12574 as *Aspicilia cinerea*); Solonyany district, "Dniprovi porogy" Regional Landscape Park, 48.25050 N 35.18381 E, alt. 65 m a.s.l., on granite, 01.07.2018, leg. & det. A. Khodosovtsev (KHER 12779 as *Aspicilia cinerea*); **Donetsk region,** Nikolsky district, near Nazarivka village, "Kamyani Mogyly" Reserve, Mt Zhaba, 47.30691 N 37.07380 E, alt. 186 m a.s.l., on granite, 12.05.2011, leg. Khodosovtsev, O. Nadyeina, A. Gromakova, det. A. Khodosovtsev (KHER 8256 as *Aspicilia cinerea* in KHODOSOVTSEV et al., 2013); same locality, on granites, 08.07.2018, leg. A. Khodosovtsev, V. Darmostuk, det. A. Khodosovtsev (KHER 12650 as *Aspicilia cinerea*); **Kirovograd region,** Bobrenets district, near Bobrenets town, 48.07809 N 32.18524 E, alt. 54 m a.s.l., on granite, 30.07.2016, V. Darmostuk (non coll. as *Aspicilia cinerea* in KHODOSOVTSEV, DARMOSTUK, 2017); **Mykolaiv region**, Yelanets district, Vodyano-Lorine village, 47.59880 N 32.10731 E, alt. 34 m a.s.l., on granite, 09.05.2008, leg. T. Boyko, det. A. Khodosovtev (KHER 4113, 4114, 4115, 4116, 4117 all as *Aspicilia cinerea*); Novyi Bug district, near Rosanivka village, 47.79662 N 32.37988 E, alt. 42 m a.s.l., on granite, 28.05.2017, leg. & det. A. Khodosovtsev (KHER 10988; 10986 as *Aspicilia cinerea*); Voznesensk district, "Buzky Gard" National Nature Park, Arbuzynsky Canyon, 47.70531 N 31.44236 E, alt. 42 m a.s.l., 08.05.2020, on granite, leg. A. Khodosovtsev (KHER 13880, 13891); Pervomaysk district, "Buzky Gard" National Nature Park, near Ivanivka village, on siliceous boulder, 47.87866 N 31.10866, alt. 58 m a.s.l., 05.07.2020, leg. et det. A. Khodosovtsev (KHER 13970); **Zaporizhzhia region**, Chernigiv district, Kalynivka village, Yushanly river, 47.03225 N, 35.98639 E, alt. 80 m a.s.l., on granite, 06.10.2008, leg. T. Zavyalova, det. A. Khodosovtsev (KHER 1470, 1471, 6283 all as *Aspicilia cinerea*); near Stulnevo village, 47.25857 N 36.05859 E, alt. 98 m a.s.l., on exposed granite surfaces, 28.06.2018, A. Khodosovtsev (non coll.); Kayinkulak river, waterpool, 47.26167 N 36.05894 E, alt. 103 m a.s.l., on granite, 02.10.2007, leg. T. Zavyalova & A. Khodosovtsev, det. A. Khodosovtsev (KHER 4289, 4296 as *Aspicilia cinerea* in KHODOSOVTSEV, ZAVYALOVA, 2008b); Novopoltavka village, Mt Synya, 47.26641 N 36.33092 E, alt. 284 m a.s.l., on granite, 02.10.2007, leg. A. Khodosovtsev & T. Zavyalova, det. A. Khodosovtsev (KHER 4395 as *Aspicilia cinerea*); Melitopol region, Terpinnia village, Kamiyana Mohyla, 46.95033 N 35.46956 E, alt. 15 m a.s.l., on sandstone, 04.10.2007, leg. A. Khodosovtsev & T. Zavyalova, det. A. Khodosovtsev (KHER 4184 as *Aspicilia cinerea* in KHODOSOVTSEV, ZAVYALOVA, 2008a); same location, 28.06.2018, A. Khodosovtsev (non cit.); Tokmak district, near Tokmak town, 47.24461 N 36.0073 E, alt. 85 m a.s.l., on granite, 16.07.1995, leg. & det. A. Khodosovtsev (KHER 401 as *Aspicilia cinerea*); Zaporizhia district, near Ivano-Hannivka village, Mokra Moskovka river, waterfall, 47.85166 N 35.39004 E, alt. 52 m a.s.l., on granite, 28.06.2018, A. Khodosovtsev (KHER 12429); Khortytsia Island, 47.86140 N 35.07324 E, alt. 21 a.s.l., on granite, A. Khodosovtsev (non coll. as *Aspicilia cinerea* in KHODOSOVTSEV, DARMOSTUK, 2020); **Autonomous Republic of Crimea,** Feodosia district, Karagag Nature Reserve, Karagach, 44.91166 E, 35.21282 E, alt. 5 m a.s.l., on volcanic rocks, 27.09.2000, leg. & det. A. Khodosovtsev (KHER 435, 436, 437, 438); Sudak district, Zelenogorye village, 44.88547 N 34.69028 E, alt. 700 m a.s.l., 05.05.2001, leg. & det. A. Khodosovtsev (KHER 273 as *Aspicilia cinerea*); Dachnoye village, 44.89401 N 34.99766 E, alt. 210 m a.s.l, on conglomerate, 07.05.2001, leg. & det. A. Khodosovtsev (KHER 441); cape Meganom, 44.80863 N, 35.05009 E, alt. 3 m a.s.l, on conglomerate, 21.05.2002, leg. & det.

A. Khodosovtsev (KHER 5341, 5340 as *Aspicilia cinerea*); Yalta city, cape Plaka, 44.59145 N 34.36882 E, alt. 30 m a.s.l., 13.11.1999, leg. & det. A. Khodosovtsev (KHER 439).

BACIDIA FUSCOVIRIDIS (Anzi) Lettau

The lichen-forming fungus was known from Ukrainian Carpathians [KHODOSOVTSEV, POSTOYALKIN, 2006]; Sumy [KHODOSOVTSEV et al., 2017], Kherson [DARMOSTUK, 2016b], Zaporizhzhia [KHODOSOVTSEV, DARMOSTUK, 2020] regions and AR Crimea [KHODOSOVTSEV, 1999, 2003c, KHODOSOVTSEV, BOGDAN, 2006]. New for Dnipropetrovsk and Mykolaiv regions.

Specimens examined: **UKRAINE. Dniprpopetrovsk region,** Solonyany district, Zvonetske village, "Dniprovi porogy" Regional Landscape Park, 48.20500 N 35.13810 E, alt. 56 m a.s.l., on shaded vertical granite surfaces in geolittoral zone, 01.07.2018, leg. & det. A. Khodosovtsev (KHER); **Mykolaiv region**, Pervomaysk district, "Buzky Gard" National Nature Park, Kuripchine village, left bank of Pivdenny Bug river, 47.99107 N 31.02184 E, alt. 68 m a.s.l., inclined granite surface, in ravine, water track, shaded by bayrak forest, 01.07.2020, leg. & det. A. Khodosovtsev (KHER 13966).

BUELLIA SEQUAX (Nyl.) Zahlbr.

In Ukraine, this lichen-forming fungus was known from AR Crimea [KHODOSOVTSEV, 2003]. New for lowland part of Ukraine.

Specimens examined: **UKRAINE. Mykolaiv region,** Voznesensky district, "Buzky Gard" National Nature Park, Arbuzinsky Canyon, 47.70531 N 31.44236 E, alt. 44 m a.s.l., on granite surfaces in shaded situation, 08.05.2020, leg. & det. A. Khodosovtsev (KHER); Pervomaysk district, "Buzky Gard" National Nature Park, Lviv village, right bank of Pivdenny Bug river, biodiversity plot SB20136, 47.90664 N 31.07887 E, alt. 44 m a.s.l., on small granite pebbles, 05.07.2020, leg. & det. A. Khodosovtsev (KHER 13982); Lviv village, 47.89600 N 31.09690 E, alt. 51 m a.s.l., on small granite pebbles, 05.07.2020, leg. & det. A. Khodosovtsev (KHER 13977, 13984).

CIRCINARIA CAESIOCINEREA (Nyl. Ex Malbr.) A. Nordin, S. Savić & Tibell

This is widely distributed species on siliceous rocks in Ukraine [OXNER, 2010], but has not been collected previously in Cherkasy region.

Specimen examined. Ukraine. Cherkasy region, Kamyanka district, Kamyanka town, Tyasminskyi Canyon, 49.04671 N 32.06051 E, alt. 96 m a.s.l., on exposed granite surfaces, 12.10.2019, A. Khodosovtsev (non coll.).

CLADONIA CARIOSA (Ach.) Spreng.

This lichen-forming fungus was collected in Carpathians [KONDRATYUK et al., 2003], Kharkiv, Khmelnitzky Lviv, Kiev, Cherkasy, Potava [KONDRATYK et al., 1998], Donetsk [KHODOSOVTSEV et al., 2013], Kherson [KHODOSOVTSEV, 2015], Luhansk [RUSINA et al., 2010] regions. New for Mykolaiv region.

Specimen examined. UKRAINE. Mykolaiv region, Kryvoozers'kyi district, near Onislkovo village, 48.16048 N 30.39167 E, alt. 110 m a.s.l., on sand, 03.07.2020, V. Darmostuk (non coll.); Pervomaysk district, "Buzky Gard" National Nature Park, Lviv village, left bank of Pivdenny Bug river, biodiversity plot SB20136, 47.90664 N 31.07887 E, alt. 61 m a.s.l., on soil, 05.07.2020, leg. & det. A. Khodosovtsev (KHER 13980, 13987).

CLADONIA SYMPHICARPA (Ach.) Fr.

This lichen-forming fungus was collected from Ukrainian Carpathians [KONDRATYUK et al., 2003], Donetsk [NADYEINA, 2009], Khmelnytsky [BIELCZYK et al., 2005], Kyiv [PREKRASNA et al., 2012], Luhansk [NADYEINA, 2009], Ternopil [SMERECHINSKA, 2006] regions. New for Mykolaiv region.

Specimen examined. UKRAINE. Mykolaiv region, Pervomaysk district, "Buzky Gard" National Nature Park, Lviv village, left bank of Pivdenny Bug river, biodiversity plot SB20136, 47.90664 N 31.07887 E, alt. 61 m a.s.l., on soil, leg. & det. A. Khodosovtsev (KHER 13985).

LAMBIELLA INSULARIS (Nyl.) T. Sprib.

This lichenicolous lichen-forming fungus was known from Donetsk [KOVALENKO, 1976] and Zaporizhzhia regions [KHODOSOVTSEV, ZAYYALOVA, 2011]. New for Mykolaiv region.

Specimen examined: UKRAINE. Mykolaiv region, Pervomaysk district, "Buzky Gard" National Nature Park, Lviv village, left bank of Pivdenny Bug river, 47.90664 N 31.07887 E, alt. 61 m a.s.l., on *Lecanora rupicola*, on granite, 02.07.2020, A. Khodosovtsev (non coll.).

LECANORA OROSTHEA (Ach.) Ach.

In Ukraine, this species was known from Mykolaiv [MYKHAYLUK et al., 2011; KHODOSOVTSEV et al., 2019] and Zaporizhzhia [KHODOSOVTSEV, DARMOSTUK, 2020] regions. New for Cherkasy region.

Specimens examined. UKRAINE. Cherkasy region, Kamyanka district, Kamyanka town, Tyasminskyi Canyon, 49.04670 N 32.06051 E, alt. 96 m a.s.l., on overhanging surfaces of granite rock, 12.10.2019, A. Khodosovtsev (non coll.).

LEPRARIA MEMBRANACEA (Dicks.) Vainio

In lowland part of Ukraine, this lichen was collected from Zhytomyr [MYKHAYLUK et al., 2011], Kirovograd [KONDRATYUK, MARTYNENKO, 2006], Zaporizhzhia [KHODOSOVTSEV, 1999; KHODOSOVTSEV, ZAVYALOVA, 2008] regions. It is new for Cherkasy region.

Specimens examined. Ukraine. Cherkasy region, Kamyanka district, Kamyanka town, Tyasminskyi Canyon, 49.04670 N 32.06051 E, alt. 96 m a.s.l., on granite fissures, 12.10.2019, leg. & det. A. Khodosovtsev (KHER 12817).

LEPRARIA BOREALIS Lohtander & Tønsberg

In Ukraine, the species was reported from AR Crimea [OXNER, 2010]. The record was based on two specimens from Aju-Dag Mts (KHER 2209, 2236) which were identified by J. Malíček and O. Peksa. This species is characterized by K+ yellowish, C-, KC-, Pd- (rarely yellowish) reactions. Specimens of *Lepraria neglecta* from Ukrainian Carpathians (KHER 2242, 8955) have KC + pink reaction. Specimens of *Lepraria neglecta* reported in few papers [KHODOSOVTSEV et al., 2013, 2019; DARMOSTUK, KHODOSOVTSEV, 2014, KHODOSOVTSEV, ZAVYALOVA, 2008] on lowland part of Ukraine refer to *Lepraria borealis*. *L. neglecta* should be removed from plain part of Ukraine. *L. borealis* is new for Cherkasy, Donetsk, Mykolaiv and Zaporizhia regions.

Specimens examined. UKRAINE. Cherkasy region, Kamyanka district, Kamyanka town, Tyasminskyi Canyon, 49.04670 N 32.06051 E, alt. 96 m a.s.l., on overhanging surfaces of granite rock, 12.10.2019, leg. & det. A. Khodosovtsev (KHER 12812); **Donetsk region,** Nikolsky district, near Nazarivka village, "Kamyani Mogyly" Reserve, Mt Zhaba, 47.30691 N 37.07380 E, alt. 186 m a.s.l., on granite, 12.05.2011, leg. A. Khodosovtsev, O. Nadyeina, A. Gromakova, det. A. Khodosovtsev (KHER 4604 as *Lepraria neglecta*, 8258 as *Lepraria neglecta* in KHODOSOVTSEV et al., 2013); Telmanovo district, "Kalmiuskyi" Nature Reserve, on mosses, 28.04.2013, leg. et det. A. Khodosovtsev, det. A. Khodosovtsev (KHER 8369 as *Lepraria neglecta* in DARMOSTUK, KHODOSOVTSEV, 2014); **Mykolaiv region**, Pervomaysk district, "Buzky Gard" National Nature Park, Kuripchyne village, left bank of Pivdenny Bug river, 47.99213 N 31.02179 E, alt. 98 m a.s.l., on mosses, 01.07.2020, leg. & det. A. Khodosovtsev (KHER 13989); Romanova Balka village, left bank of Pivdenny Bug river, 47.93929 N 31.04276 E, alt. 55 m a.s.l., on horizontal granite surface, leg & det. A. Khodosovtsev (KHER 13988); Voznesensk district, "Buzky Gard" National Nature Park, Actove village, Aktovskiy Canyon, 47.71017 N 31.47804 E, alt. 55 m a.s.l., on exposed granite surfaces, 01.05.2016, leg. A. Khodosovtsev & V. Darmostuk, det. V. Darmostuk (KHER 9713 as *Lepraria neglecta* in KHODOSOVTSEV et al., 2019); Petropavlovskyi Canyon, 47.71997 N 31.48039 E, alt. 58 m a.s.l., on exposed soil crust, leg. A. Khodosovtsev & V. Darmostuk, det. A. Khodosovtsev (KHER 11507 as *Lepraria neglecta* in KHODOSOVTSEV & al., 2019); **Zaporizhia region,** Melitopol district, Terpinnia village, Kamiyana Mohyla, 46.95033 N 35.46956 E, alt. 15 m a.s.l., on sandstone, 04.10.2007, leg. A. Khodosovtsev & T. Zavyalova, det. A. Khodosovtsev (KHER 4194 as *Lepraria neglecta* in KHODOSOVTSEV, ZAVYALOVA, 2008).

LICHENOTHELIA CONVEXA Hensen

This species is widespread on granite surfaces [e.g. KHODOSOVTSEV, 2004, KHODOSOVTSEV, ZAVYALOVA, 2008; KHODOSOVTSEV et al., 2013, KHODOSOVTSEV, DARMOSTUK, 2017]. New for Dnipropetrovsk and Cherkasy regions.

Specimens examined. UKRAINE. Cherkasy region, Kamyanka district, Kamyanka town, Tyasminskyi Canyon, 49.04670 N 32.06051 E, alt. 96 m a.s.l., on naked granite surfaces and prothallus of different lichens (*Aspiciliella, Rhizocarpon*), 12.10.2019, A. Khodosovtsev (non coll.); **Dnipropetrovsk region**, Solone district, Zvonetske village, "Dniprovi Porogy" Regional Landscape Park, right bank of the Dnipro, 48.25717 N 35.17500 E, alt. 61 m a.s.l., xeric geollitoral, on overhanding granite surfaces, 01.07.2018, A. Khodosovtsev (non coll.).

MONTANELIA DISJUNCTA (Erichsen) Divakar, A. Crespo, Wedin & Essl.

It lichen-forming fungus was known from a few localities in Ukraine as Ivano-Frankivsk region [KONDRATYUK et al., 2003] and AR Crimea [KHODOSOVTSEV, 2013]. New for Donetsk and Mykolaiv regions.

Specimens examined: UKRAINE. Donetsk region, Nikolsky district, near Nazarivka village, "Kamyani Mogyly" Reserve, Mt Zhaba, 47.30691 N 37.07380 E, alt. 186 m a.s.l., on granite, 12.05.2011, leg. A. Khodosovtsev, O. Nadyeina, A. Gromakova, det. A. Khodosovtsev & V. Darmostuk (KHER 8255); **Mykolaiv region,** Voznesensk district, "Buzky Gard" National Nature Park, Aktovsky Canyon, 47.71240 N 31.46644 E, alt. 54 m a.s.l., on vertical granite surfaces, 05.06.2020, leg. & det. A. Khodosovtsev (KHER); Arbuzinskyi canyon, on steeply inclined granite surfaces, 27.05.2017, leg. & det. A. Khodosovtsev & V. Darmostuk (KHER 11534).

PLACYNTHIELLA ICMALEA (Ach.) Coppins & P. James

The lichen-forming fungus is widespread in Ukraine [e.g. KONDRATYUK et al., 1998; KONDRATYUK et al., 2003; KHODOSOVTSEV, BOGDAN, 2005, 2006], but has never been reported in Cherkasy region.

Specimens examined. UKRAINE. Cherkasy region, Kamyanka district, Kamyanka town, Tyasminskyi Canyon, 49.04670 N 32.06051 E, alt. 96 m a.s.l., on soil layer between granite boulders, 12.10.2019, A. Khodosovtsev (non coll.).

PROTOPARMELIOPSIS ACHARIANA (A. L. Sm.) Moberg & R. Sant.

This lichen-forming fungus was known from Nature Reserve Kamyani Mogyly (Donetsk region) [KOVALENKO, 1976]. It is second locality of *P. achariana* in Ukraine.

Specimens examined. UKRAINE. Mykolaiv region, Voznesensk district, Actovo village, "Buzky Gard" National Nature Park, Petropavlovsky Canyon, 47.72315 N 31.48085 E, alt. 54 m a.s.l., on exposed granite rocks, 04.05.2020, A. Khodosovtsev (non coll.).

PROTOPARMELIOPSIS BOLCANA (Pollini) Lumbsch

The species was collected in Donetsk [NADYEINA, 2009; KHODOSOVTSEV et al., 2013], Zaporizhzhia [OXNER, 2010] and Mykolaiv [OXNER, 2010; MYKHAYLUK et al., 2011] regions and AR Crimea [KHODOSOVTSEV, 2004]. New for Cherkasy and Kherson regions.

Specimens examined. UKRAINE. Cherkasy region, Kamyanka district, Kamyanka town, Tyasminskyi Canyon, 49.04670 N 32.06051 E, alt. 96 m a.s.l., on overhanging surfaces of granite rock, 12.10.2019, leg. & det. A. Khodosovtsev (KHER 12819); **Kherson region**, Gola Prystan district, Black Sea Biosphere Reserve, Tendrivska Split Island, 46.24320 N 31.63582 E, alt. 1 m a.s.l., on wood irrigated by sea water, 04.10.2017, leg. A. Khodosovtsev & V. Darmostuk, det. A. Khodosovtsev (KHER 12226).

PROTOPARMELIOPSIS GAROVAGLII (Körb.) Arup, Zhao Xin & Lumbsch

The species grow on granite rocks in Cherkasy, Donetsk [OXNER, 2010], Dnipropetrovsk [GOLOVENKO, 2016], Kyiv, Kirovograd, Lugansk, Vinnytsa [OXNER, 2010], Zaporizhzhia [BLUM, 1962] regions and AR Crimea [KONDRATYUK et al., 1998]. New for Kherson and Mykolaiv regions.

Specimens examined: UKRAINE. Kherson region, Velyka Olexandrivka district, near Zaporozhzhia village, 47.29408 N 33.22771 E, alt. 23 m a.s.l., on limestone, 21.07.2014, V. Darmostuk (non coll.); **Mykolaiv region**, Voznesensk region, "Buzky Gard" National Nature Park, Actove village, Arbuzynsky Canyon, 47.70529 N 31.43888 E, alt. 43 m a.s.l., on exposed granite surfaces, water track, 07.05.2020, leg. et det. A. Khodosovtsev (KHER 13879, 13883); Snigurivka district, Kalinindorf station, right bank of the Visun river, 47.17736 N, 32.93009 E, alt. 23 m a.s.l., on exposed limestone, 01.05.1995, leg. et det. Khodosovtsev (KHER 6616).

PYRENODESMIA ARACTINA (Fr.) S.Y. Kondr.

This lichen-forming fungus was found in Cherkasy, Kyiv, Kirovograd, Vinnytsa [KONDRATYUK et al., 1998], Mykolaiv [MYKHAYLYUK et al., 2011], Zaporizzha [KHODOSOVTSEV, 1999] and AR Crimea [KONDRATYUK et al., 1998], but not collected in Dnipropetrovsk region. The specimen under the name *Caloplaca cupreobrunnea* Poelt & Hinter. [NAUMOVICH, 2009d] belongs to *Pyrenodesmia aractina*. *Caloplaca cupreobrunnea* should be removed from the lichen list of Ukraine.

Specimen examined. Ukraine. Dnipropetrovsk region, Kryviy Rig, Reserve Track "MODR rocks", 47.88708 N 33.30838 E, alt. 48 m a.s.l., on iron quartz schists inclined surfaces, 02.07.2018, leg. & det. A. Khodosovtsev (KHER).

PYRENODESMIA ATROFLAVA (Turner) S.Y. Kondr.

In Ukraine, this species was known from Ukrainian Carpathians [KONDRATYUK et al., 2003], Zhytomyr [KAPETS et al., 2018], Zaporizhzhia [KHODOSOVTSEV, 1999] regions and AR Crimea [KONDRATYUK et al., 1998; KHODOSOVTSEV, 2002c, 2003]. New for Dnipropetrtovsk and Mykolaiv region.

Specimens examined: **UKRAINE. Dnipropetrovsk region,** Apostolovo district, near Tokivske village, Kamyanka river, 47.68511 N 33.94261 E, alt. 43 m a.s.l., on granite, leg. & det. A. Khodosovtsev & V. Darmostuk (KHER 12797): **Mykolaiv region**, Pervomaysk district, "Buzky Gard" National Nature Park, Kuripchyne village, left bank of Pivdenny Bug river, 47.99213 N 31.02179 E, alt. 98 m a.s.l., on exposed granite surface, water track, 01.07.2020, A. Khodosovtsev (KHER 13967, 13971); 48.00399 N 31.02421 E, alt. 118 m a.s.l., on granite, water track, leg. & det. A. Khodosovtsev (KHER 13973); "Buzky Gard" National Nature Park, Sophievka village, "Litniy Chutir Skarzhinskogo", 48.04974 N 31.02289 E, alt. 103 m a.s.l., on exposed granite surfaces, water track, 01.07.2020, det. A. Khodosovtsev (non coll.).

PYRENODESMIA MOLARIFORMIS (Frolov, Vondrák, Nadyeina & Khodos.) S.Y. Kondr.

In Ukraine, this recently described species was known from Luhansk region [VONDRÁK et al., 2013]. New for Dnipropetrovsk, Kirovograd and Mykolaiv regions.

Specimens examined: **UKRAINE. Dnipropetrovsk region**, Solone district, Zvonetske village, "Dniprovi Porogy" Regional Landscape Park, right bank of the Dnipro, 35.18476 N 48.24574 E, alt. 51 m a.s.l., xeric geollitoral, on granite, 01.07.2018, leg. A. Khodosovtsev & V. Darmostuk, det. A. Khodosovtsev (KHER 11817 as *Caloplaca xerica*); **Kirovograd region**, Bobrynets district, Bobrynets, Bobrynets ravine, 48.07311 N 32.18710 E, alt. 102 m a.s.l., on granite surfaces, water tracks, 29.07.2016, leg. A. Khodosovtsev & V. Darmostuk, det. A. Khodosovtsev (KHER 9976); **Mykolaiv region**, Pervomaysk district, "Buzky Gard" National Nature Park, Kuripchyne village, left bank of Pivdenny Bug river, 47.99213 N 31.02179 E, alt. 98 m a.s.l., on exposed granite surface, water track, 01.07.2020, leg. & det. A. Khodosovtsev (KHER 13975, 13979); 48.00399 N 31.02421 E, alt. 118 m a.s.l., on exposed granite surfaces, water track, leg. et det. A. Khodosovtsev (KHER 13968); Sophievka village, "Litniy Chutir Skarzhinskogo", 48.04974 N 31.02289 E, alt. 103 m a.s.l., on exposed granite surfaces, water track, 01.07.2020, leg. & det. A. Khodosovtsev (KHER 13969); Voznesensk region, "Buzky Gard" National Nature Park, Actove village, Arbuzynsky Canyon, 47.70529 N 31.44120 E, alt. 52 m a.s.l., on exposed granite surfaces, water track, 27.05.2017, leg. & det. A. Khodosovtsev (KHER 10769); same locality, 47.70529 N 31.43888 E, alt. 43 m a.s.l., on granite, 07.05.2020, A. Khodosovtsev (non coll.).

PYRENOPSIS SUBAREOLATA Nyl.

The lichen-forming fungus was known from Kirovograd region [KHODOSOVTSEV, DARMOSTUK, 2017] and AR Crimea [KHODOSOVTSEV, 2006]. New for Dnipropetrovsk and Mykolaiv regions.

Specimens examined: UKRAINE. Dnipropetrovsk region, Krivy Rig city, waterfall Zahidy, 47.90572 N 33.28094 E, alt. 46 m a.s.l., on granite, 03.07.2018, leg. & det. A. Khodosovtsev (KHER 12844, 12843); **Mykolaiv region,** Voznesensk district, "Buzky Gard" National Nature Park, Actovo village, Vasyleva Pasika,

47.73066 N 31.43168 E, alt. 34 m a.s.l., water track, 03.05.2020, leg. et det. A. Khodosovtsev (KHER); Arbuzinsky canyon, 47.70531 N 31.44236 E, alt. 43 m a.s.l., on granite, 03.05.2020, A. Khodosovtsev (KHER 13898); Pervomaysk district, Pervomaysk district, "Buzky Gard" National Nature Park, Kuripchyne village, left bank of Pivdenny Bug river, 47.99213 N 31.02179 E, alt. 98 m a.s.l., on granite, 01.07.2020, A. Khodosovtsev (non coll.); same locality, 48.00399 N 31.02421 E, alt. 118 m a.s.l., on granite, leg. & det. A. Khodosovtsev (KHER 13972, 13978); "Buzky Gard" National Nature Park, Sophievka village, "Litniy Chutir Skarzhinskogo", 48.04974 N 31.02282 E, alt. 103 m a.s.l., on exposed granite surfaces, water track, 01.07.2020, leg. et det. A. Khodosovtsev (KHER 13974).

RINODINA CONFRAGOSA (Ach.) Körb.

In the lowland part of Ukraine, the species was collected in Mykolaiv [BOYKO, 2009b, 2010a, KHODOSOVTSEV et al., 2019], Zaporizhzhia [KHODOSOVTSEV, ZAVYALOVA, 2008] and Donetsk [KOVALENKO, 1976b; KHODOSOVTSEV et al., 2013] regions. New for Dnipropetrovsk and Cherkasy regions.

Specimens examined. UKRAINE. Cherkasy region, Kamyanka district, Kamyanka town, Tyasminskyi Canyon, 49.04670 N 32.06051 E, alt. 96 m a.s.l., on overhanging surfaces of granite rock, 12.10.2019, A. Khodosovtsev (non coll.); **Dnipropetrovsk region**, Solone district, Zvonetske village, "Dniprovi Porogy" Regional Landscape Park, right bank of the Dnipro, 48.25717 N 35.17501 E, alt. 61 m a.s.l., on overhanding granite surfaces 01.07.2018, A. Khodosovtsev (non coll.).

RINODINA OXYDATA (A. Massal.) A. Massal.

The lichen was known from Ukrainian Carpathians, Cherkasy, Kyiv and Vinnitsa regions [OXNER, 2010]. New for Dnipropetrovsk region.

Specimen examined. UKRAINE. Dnipropetrovsk region, Kryviy Rig, Reserve Track "MODR rocks", 47.88708 N 33.30831 E, alt. 48 m a.s.l., on iron quartz schists inclined surfaces, 02.07.2018, leg. & det. A. Khodosovtsev (KHER 12836).

SCYTINIUM TENUISSIMUM (Hoffm.) Otálora, P. M. Jørg. & Wedin

This lichen was known from Ukrainian Carpathians [KONDRATYUK et al., 2003], Donetsk [KHODOSOVTSEV et al., 2013], Kharkiv [GROMAKOVA, 2018], Zaporizhzhia [KHODOSOVTSEV, ZAVYALOVA, 2011]. New for Mykolaiv region.

Specimen examined. UKRAINE. Mykolaiv region, Pervomaysk district, "Buzky Gard" National Nature Park, Lviv village, left bank of Pivdenny Bug river, biodiversity plot SB20136, 47.90664 N 31.07887 E, alt. 61 m a.s.l., on soil, 05.07.2020, leg. et det. A. Khodosovtsev (KHER 13986).

STAUROTHELE FRUSTULENTA Vainio

This lichen was reported from Ukrainian Carpathians [KONDRATYUK et al., 2003], Chernivtsi [BIELCZYK, KISZKA, 2000], Donetsk [DARMOSTUK, KHODOSOVTSEV, 2014], Dnipropetrovsk [NAUMOVYCH, 2009d], Kherson [KHODOSOVTSEV, 2008], Khmelnitsky [BIELCZYK et al., 2005], Kirovograd [KHODOSOVTSEV, DARMOSTUK, 2017], Mykolaiv [BOYKO, 2009a, KHODOSOVTSEV et al., 2019] and Zhytomyr [KONDRATYUK et al., 2020] regions. Probably, *Staurothele ambrosiana* (A. Massal.) Lettau is a priority name for *Staurothele frustulenta*. New for Cherkasy region.

Specimen examined. UKRAINE. Cherkasy region, Kamyanka district, Kamyanka town, Tyasminskyi Canyon, 49.04670 N 32.06051 E, alt. 96 m a.s.l., on granite surfaces near water, 12.10.2019, A. Khodosovtsev (non coll.).

THALLINOCARPON NIGRITELLUM (Lettau) P. M. Jørg.

It lichen was known from Kirovograd [KHODOSOVTSEV, DARMOSTUK, 2017], Khmelnytsky [ZELENKO, 2004], Mykolaiv [KHODOSOVTSEV et al., 2019] regions and AR Crimea [KHODOSOVTSEV, 2002]. New for Dnipropetrovsk region.

Specimen examined. UKRAINE. Dnipropetrovsk region, Kryviy Rig, Reserve Track "MODR rocks", 47.88708 N 33.30831 E, alt. 48 m a.s.l., on iron quartz schists inclined surfaces, 02.07.2018, A. Khodosovtsev (non coll.).

TRAPELIA GLEBULOSA (Sm.) J. R. Laundon

In plain part of Ukraine, the species was collected from Dnipropetrovsk [NAUMOVICH, 2009 a,b], Donetsk [KHODOSOVTSEV et al., 2013], Kharkiv [Gromakova, 2014], Mykolaiv [BOYKO, 2010, KHODOSOVTSEV et al., 2019], Zaporizhzhia [KHODOSOVTSEV, 1999]. New for Cherkasy region.

Specimen examined. UKRAINE. Cherkasy region, Kamyanka district, Kamyanka town, Tyasminskyi Canyon, 49.04670 N 32.06051 E, alt. 96 m a.s.l., on granite surfaces near soil, 12.10.2019, leg. & det. A. Khodosovtsev (KHER 12815).

XANTHOPARMELIA POKORNYI (Körb.) O. Blanko, A. Crespo, Elix, D. Hawksw. & Lumbsch

The species wide distributed in steppe zone [KHODOSOVTSEV et al., 2018], but not reported in Cherkasy region.

Specimen examined. UKRAINE. Cherkasy region, Kamyanka district, Kamyanka town, Tyasminskyi Canyon, 49.04670 N 32.06051 E, alt. 96 m a.s.l., on small granite boulders, 12.10.2019, A. Khodosovtsev (non coll..).

Lichenicolous fungi

ARTHONIA MOLENDOI (Heufl. ex Frauenf.) R. Sant.

Previously, it was reported from Crimea Peninsula and Zaporizhzhia region [KONDRATYUK et al., 1999; DARMOSTUK et al., 2018]. New species for the Kherson region.

Specimen examined. UKRAINE. Kherson region, Velykooleksandrivka district, near Zapovit village, 47.09901 N 32.97331 E, alt. 15 m a.s.l., on *Variospora aurantia*, on limestone, 02.05.2018, leg. & det. V. Darmostuk & A. Khodosovtsev (KHER 12478).

ARTHONIA VARIANS (Davies) Nyl.

The species was known from a few localities in the steppe zone of Ukraine [DARMOSTUK, KHODOSOVTSEV, 2017]. New species for the Cherkasy, Dnipropetrovsk and Zaporizhzhia regions.

Specimens examined (all on *Lecanora rupicola*). **UKRAINE. Cherkasy region,** Kamyanka district, Kamyanka town, Tiasmynskyi canyon, 49.03992 N 32.08815 E, alt. 132 m a.s.l., on granite stone, 12.10.2019, leg. & det. V. Darmostuk (non coll.); **Dnipropetrovsk region**, Kryvyi Rig council, Krasna ravine, 48.10362 N 33.51197 E, alt. 55 m a.s.l., on iron quartzite stone, 10.07.2018, leg. & det. V. Darmostuk (KHER 11720); **Zaporizhia region**, Chernihiv district, near Stulneve village, 47.25857 N 36.05859 E, alt. 98 m a.s.l., on granite stone, 28.06.2018, leg. & det. V. Darmostuk (KHER 12424); Tokmak district, near Udarnyk village, 47.04691 N 35.84378 E, alt. 90 m a.s.l., 07.06.2009, leg. & det. A. Khodosovtsev, T. Zavyalova (KHER 1473).

CERCIDOSPORA SOLEARISPORA Calat., Nav.-Ros. & Hafellner

This species was reported only from Zaporizhzhia region [DARMOSTUK, 2016a] previously. New for the Mykolaiv region.

Specimen examined. UKRAINE. Mykolaiv region, Novyi Bug district, near Rozanivka village, "Pryinhylskyi" Regional Landscape Park, 47.79475 N 32.37981 E, alt. 62 m a.s.l., on *Aspiciliella intermutans* (thallus), on granite stone, 28.05.2017, leg. & det.V. Darmostuk (KHER 11614).

CLYPEOCOCCUM CLADONEMA (Wedd.) D. Hawksw.

Previously, it was known from Kherson and Kyiv regions [DARMOSTUK, KHODOSOVTSEV, 2017]. It is new species for the Mykolaiv region.

Specimen examined. UKRAINE. Mykolaiv region, Ochakiv district, near Pokrovka village, 46.48116 N 31.65867 E, alt. 2 m a.s.l., on *Xanthoparmelia pokornyi* (thallus), on sand, 06.05.2017, leg. & det. V. Darmostuk, A. Khodosovtsev (KHER 11697).

CLYPEOCOCCUM HYPOCENOMYCIS D. Hawksw.

This species is not rare in habitats where its host, *H. scalaris* is common [DARMOSTUK, KHODOSOVTSEV, 2017; DARMOSTUK, SIRA, 2020]. New for the Dnipropetrovsk region.

Specimen examined. UKRAINE. Dnipropetrovsk region, Novomoskovsk district, near Andriivka village, Samarskiy forest, 48.76381 N 35.48565 E, alt. 73 m a.s.l., on *Hypocenomyce scalaris* (thallus), on *Pinus* bark, 09.07.2018, V. Darmostuk (KHER 11716).

CODONMYCES LECANORAE Calat. & Etayo

This is a common species in the steppe zone of Ukraine [DARMOSTUK, 2015; NAUMOVICH, DARMOSTUK, 2015]. New for the Luhansk region.

Specimen examined. UKRAINE. Luhansk region, Lutuhynsk district, near Verkhnia Orichivka village, 48.35975 N 39.33591 E, alt. 96 m a.s.l., on *Protoparmeliopsis muralis* (apothecia), on siliceous stone, 04.05.2005, leg. O. Nadyeina, det. V. Darmostuk (KW).

DIDYMELLOPSIS PULPOSI (Zopf) Grube & Hafellner

This species can be found mostly on a few *Collemataceae* species. Another species growing on *Collemataceae* is *D. collematum* [GRUBE, HAFELLNER, 1990]. They can be distinguished by the size of the ascospores (20–26 × 5–10 mkm in *D. collematum* vs. 14–21 × 5–7 mkm in *D. pulposi*). *Didymellopsis pulposi* was known from a few localities in the steppe zone [KHODOSOVTSEV 2011, 2015; GROMAKOVA, 2018]. It is a new species for the Dnipropetrovsk, Mykolaiv and Odessa regions.

Specimens examined. UKRAINE. Dnipropetrovsk region, Kryvyi Rig city council, "Skeli MODRu" Landscape reserve, 47.887358 N 33.307817 E, alt. 103 m a.s.l., on *Collema tenax* (thallus), on soil, 03.07.2018, leg. & det. V. Darmostuk, A. Khodosovtsev (KHER 11994); **Mykolaiv region,** Snihurivka district, near Galaganivka village, 46.91619 N 32.84853 E, alt. 18 m a.s.l., on *Scytinium schraderi* (thallus), on soil, 06.05.2018, leg. & det. V. Darmostuk (KHER 11641); on *Collema tenax* (thallus), on soil, 07.05.2019, leg. & det. V. Darmostuk (herb. VD 451); **Odessa region**, Tatarbunary district, near Lymany village, 45.89243 N 29.97032 E, alt. 12 m a.s.l., 02.05.2014, leg. & det. V. Darmostuk, A. Khodosovtsev (KHER 9503).

DIDYMOCYRTIS CLADONIICOLA (Diederich, Kocourk. & Etayo) Ertz & Diederich

This species is common in Southern Ukraine [DARMOSTUK, KHODOSOVTSEV, 2017]. It is new for the Chernivtsi and Zaporizhzhia regions.

Specimens examined. UKRAINE. Chernivtsi region, Zastavna district, near Kadubivtsi village, 48.56909 N 25.76439 E, alt. 275 m a.s.l., on *Rusavskia papilifera*, on gypsum, 11.05.2018, leg. & det. V. Darmostuk (KHER 11693); **Zaporizhzhia region**, Polohiv district, near Konski Rozdory village, 47.367145 N 36.439251 E, alt. 46 m a.s.l., on *Cladonia foliacea*, on soil, 08.07.2018, leg. & det. V. Darmostuk (KHER 11722).

DIDYMOCYRTIS RAMALINAE (Roberge ex Desm.) Ertz, Diederich & Hafellner

The species is known from Kirovograd, Mykolaiv and Zaporizhzhia regions [DARMOSTUK, KHODOSOVTSEV, 2017; KHODOSOVTSEV, DARMOSTUK 2017]. New for the Dnipropetrovsk region.

Specimens examined (all on *Ramalina polymorpha*). **UKRAINE. Dnipropetrovsk region,** Kryvyi Rig district, near Chkalivka village, 48.01580 N 33.28743 E, alt. 68 m a.s.l., on siliceous stone, 11.10.2008, leg. A. Khodosovtsev, G. Naumovych, O. Smetana, det. V.V. Darmostuk (KHER 9465); Kryvyi Rig city council, Krasna ravine, 48.10362 N 33.51197 E, alt. 55 m, on siliceous stone, 10.07.2018, leg. & det. V. Darmostuk (KHER 11720); Solone district**,** near Zvonetske village, 48.25050 N 35.18381 E, alt. 65 m a.s.l., on granite stone, 01.07.2018, leg. & det. V. Darmostuk (herb. VD 391; KHER 12784).

HETEROCEPHALACRIA BACHMANNII (Diederich & M. S. Christ.) Millanes & Wedin

This lichenicolous basidiomycete was known only from Autonomous Republic of Crimea and Kherson region [KHODOSOVTSEV, 2013; KHODOSOVTSEV, DARMOSTUK 2017c]. New for the Mykolaiv region.

Specimen examined. UKRAINE. Mykolaiv region, Pervomaisk district, near Kuripchene village, "Buzkyi Gard", National Nature Park 47.99527 N 31.00167 E, alt. 48 m a.s.l., on *Cladonia rangiformis* (podecia), on mosses, 21.09.2019, leg. & det. V. Darmostuk (herb. VD 279).

LAETISARIA LICHENICOLA Diederich, Lawrey & Van den Broeck

Previously, *L. lichenicola* was reported from a few localities in Kherson region [KHODOSOVTSEV, DARMOSTUK, 2017; KHODOSOVTSEV et al., 2017, 2019]. New for the Mykolaiv region.

Specimen examined. UKRAINE. Mykolaiv region, Pervomaisk district, near Kuripchene village, "Buzkyi Gard" National Nature Park, 47.99527 N 31.00167 E, alt. 48 m a.s.l., on *Physcia adscendens* (thallus), on *Prunus* twig, 21.09.2019, leg. & det. V. Darmostuk (herb. VD 277).

LICHENOCHORA CALOPLACAE Zhurb.

Lichenochora caloplacae was known from Norway, Russia and Mongolia on *Athallia* spp. [ZHURBENKO, BRACKEL, 2013; ZHURBENKO, 2017; ZHURBENKO et al., 2020]. In Ukraine, it was reported from Mykolaiv and Kherson regions [KHODOSOVTSEV, DARMOSTUK, 2017; KHODOSOVTSEV et al., 2018]. *Caloplaca xerica* is a new host species for the fungus. New for the Dnipropetrovsk region.

Specimen examined. UKRAINE. Dnipropetrovsk region, Solone district, near Zvonetske village, 48.25050 N 35.18381 E, alt. 65 m a.s.l., on *Caloplaca xerica* (thallus), on granite stone, 01.07.2018, leg. & det. V. Darmostuk, A. Khodosovtsev (KHER 12138).

LICHENOCHORA OBSCUROIDES (Linds.) Triebel & Rambold

This species is common in Forest-Steppe and Forest zones of Ukraine [DARMOSTUK, KHODOSOVTSEV, 2017; GROMAKOVA, 2018; DARMOSTUK, SIRA, 2020]. New for the Dnipropetrovsk and Mykolaiv regions.

Specimens examined. UKRAINE. Dnipropetrovsk region, Novomoskovsk district, near Andriivka village, Samarskiy forest, 48.7638 N 35.48565 E, alt. 73 m a.s.l., on *Phaeophyscia sp.*, on *Populus* bark, 09.07.2018, leg. & det. V. Darmostuk (KHER 11718); **Mykolaiv region,** Pervomaisk district, near Kuripchyne village, "Buzkyi Gard" National Nature Park, 48.00309 N 30.97984 E, alt. 54 m a.s.l., on *Phaeophyscia orbicularis* (thallus), on *Fraxinus* bark, 21.09.2019, leg. & det. V. Darmostuk (herb. VD 263).

LICHENOCHORA WEILLII (Werner) Hafellner & R. Sant.

This lichenicolous fungus inhabits *Physconia* spp. and is characterized by typical dark brown gall-like structures. In Southern Ukraine, it was reported from Mykolaiv and Kherson regions [DARMOSTUK, KHODOSOVTSEV, 2017; KHODOSOVTSEV et al., 2019]. New for the Chernivtsi and Dnipropetrovsk regions.

Specimens examined (all on *Physconia distorta*). **UKRAINE. Chernivtsi region,** Kel'mentsi district, near Dnistrovka village, 48.55579 N 26.92516 E, alt. 217 m a.s.l., on *Quercus* bark, 13.05.2018, leg. & det. V. Darmostuk, A. Khodosovtsev (KHER 12412); **Dnipropetrovsk region,** Solone district, near Orikhove village, Bashmachka ravine, 48.19834 N 35.00957 E, alt. 130 m a.s.l., on *Quercus* bark, 01.07.2018, leg. & det. V. Darmostuk (herb. VD 380).

LICHENOCONIUM LICHENICOLA (P. Karst.) Petr. & Syd.

This coelomycetes fungus most likely common, but not frequently collected. Confirmed records are known only from Kherson region [DARMOSTUK, 2019]. New for the Mykolaiv region.

Specimen examined. UKRAINE. Mykolaiv region, Pervomaisk district, near Kuripchyne village, "Buzkyi Gard", National Nature Park 47.99527 N 31.00167 E, alt. 48 m a.s.l., on *Physcia adscendens* (thallus), on *Prunus* twig, 21.09.2019, leg. & det. V. Darmostuk (herb. VD 278).

LICHENOSTIGMA ELONGATUM Nav.-Ros. & Hafellner

This species is common in Ukraine [DARMOSTUK, KHODOSOVTSEV, 2017]. New for the Luhansk region.

Specimens examined. UKRAINE. Luhansk region, Antratsyt district, near Malomykolaivka village, 48.32059 N 39.00378 E, alt. 172 m a.s.l., on *Protoparmeliopsis muralis* (thallus), on siliceous stone, 06.05.2005, leg. O. Nadyeina, det. V. Darmostuk (KW); Lutuhyn district, near Verkhnya Orichivka village, 48.35975 N 39.33591 E, alt. 96 m a.s.l., on *Circinaria caesiocinerea* (thallus), on siliceous stone, 04.05.2005, leg. O. Nadyeina, det. V. Darmostuk (KW).

LICHENOSTIGMA ROUXII Nav.-Ros., Calat. & Hafellner

This is rarely collected species in Ukraine and previously was reported only from Crimea Peninsula [KONDRATYUK, 2005]. New for the Kherson region.

Specimen examined. UKRAINE. Kherson region, Beryslav district, near Tiahynka village, "Nyzhniodniprovskyi" National Nature Park, 46.76862 N 33.03424 E, alt. 29 m a.s.l., on *Squamarina cartilaginea* (thallus), on limestone, 01.06.2017, leg. A. Khodosovtsev, det. V. Darmostuk (KHER 11659).

LICHENOSTIGMA SVANDAE Vondrák & Šoun

This is rare species, found on *Acarospora cervina* [DARMOSTUK, KHODOSOVTSEV, 2017]. New for the Odessa and Ternopil regions.

Specimens examined (all on *Acarospora cervina***). UKRAINE. Odessa region,** Lymanskyi district, near Kalynivka village, 46.89619 N 31.00831 E, alt. 05 m a.s.l., on limestone, 02.05.1995, leg. A. Khodosovtsev, det. V. Darmostuk (KHER 12592); **Ternopil region,** Husyatyns'kyi district, near Sataniv village, Nature Reserve 'Medobory', 49.22218 N 26.17583 E, alt. 370 m a.s.l., on limestone, 11.08.2018, leg. Yu. Vasheniak, det. Darmostuk (KHER 12114).

LICHENOTHELIA RENOBALESIANA D. Hawksw. & V. Atienza

Previously, it was reported from Crimea Peninsula [KHODOSOVTSEV, DARMOSTUK, 2016]. New for the Chernivtsi and Mykolaiv regions.

Specimens examined. UKRAINE. Chernivtsi region, Kel'menetsi district, near Nahoriany village, 48.54462 N 26.66842 E, alt. 157 m a.s.l., on *Verrucaria nigrescens*, on argillites, 12.05.2018, leg. & det. V. Darmostuk, A. Khodosovtsev (KHER 12456, 12458); **Mykolaiv region**, Ochakiv district, near Katalyno village, 46.75793 N 31.87410 E, alt. 29 m a.s.l., on *Bagliettoa calciseda*, on limestone, 02.08.2018, leg. & det. V. Darmostuk (KHER 11669).

MARCHANDIOMYCES CORALLINUS (Roberge) Diederich & D. Hawksw.

This species is rather common in Ukraine [DARMOSTUK, KHODOSOVTSEV, 2017]. New for the Odessa region.

Specimens examined. UKRAINE. Odessa region, Lymanskyi district, near Port village, 46.71592 N 31.04314 E, alt. 53 m a.s.l., on *Xanthoria parietina* (thallus), on *Juglans* bark, 30.08.2018, leg. & det. V. Darmostuk (herb. VD 163).

PHAEOSPORA LECANORAE Eitner

This species was known from Autonomous Republic of Crimea [KHODOSOVTSEV et al., 2007]. New for the Kherson region.

Specimen examined. UKRAINE. Kherson region, Kalanchak district, Khorly village, 46.07915 N 33.29731 E, alt. 3 m a.s.l., on *Lecanora albescens*, on concrete, 08.08.2017, leg. & det. V. Darmostuk (KHER 10934).

POLYSPORINA SUBFUSCESCENS (Nyl.) K. Knudsen & Kocourk.

The lichen was previously known from Zaporizhzhia, Zhytomyr [DARMOSTUK, KHODOSOVTSEV, 2017] and Mykolaiv [KHODOSOVTSEV et al., 2019] regions. New for Cherkasy region.

Specimen examined. UKRAINE. Cherkasy region, Kamyanka district, Kamyanka town, Tyasminskyi Canyon, 49.04670 N 32.06051 E, alt. 96 m a.s.l., on *Acarospora* sp., on granite surfaces, 12.10.2019, A. Khodosovtsev (non coll.).

POLYCOCCUM PULVINATUM (Eitner) R. Sant.

This species is common in Forest-Steppe zone of Ukraine [DARMOSTUK, KHODOSOVTSEV, 2017; KHODOSOVTSEV, DARMOSTUK, 2020]. New for the Cherkasy and Dnipropetrovsk regions.

Specimens examined. UKRAINE. Cherkasy region, Kamyanka district, Kamyanka town, Tyasminskyi Canyon, 49.04670 N 32.06051 E, alt. 132 m a.s.l., on *Physcia dimidiata* (thallus), on granite stone, 12.10.2019, leg. & det. V. Darmostuk (herb. VD 226); **Dnipropetrovsk region**, Apostolovo district, near Tokivske village, 47.68511 N 33.94261 E, alt. 22 m a.s.l., on *Physcia caesia* (thallus), on granite stone, 03.07.2018, leg. & det.

V. Darmostuk, A. Khodosovtsev (herb. VD 387); Solone district, near Zvonetske village, 48.25050 N 35.18381 E, alt. 65 m a.s.l., on *P. caesia* (thallus), on granite stone, 01.07.2018, leg. & det. V. Darmostuk (herb. VD 391).

PYRENOCHAETA XANTHORIAE Diederich

This species was known from a few localities in Southern Ukraine [DARMOSTUK, KHODOSOVTSEV, 2017]. New for the Dnipropetrovsk region.

Specimen examined. UKRAINE. Dnipropetrovsk region, Novomoskovs'kyi district, near Andriivka vill., Samarskiy forest, 48.76381 N 35.48565 E, alt. 73 m a.s.l., on *Xanthoria parietina.*, on *Populus* bark, 09.07.2018, leg. & det. V. Darmostuk (KHER 11719).

REFRACTOHILUM INTERMEDIUM Cl. Roux & Etayo

This species was known from Autonomous Republic of Crimea, Sumy and Kherson region [DARMOSTUK, KHODOSOVTSEV, 2017]. New for the Mykolaiv region.

Specimen examined. UKRAINE. Mykolaiv region, Pervomaisk district, near Kuripchene village, "Buzkyi Gard" National Nature Park, 48.00309 N 30.97984 E, alt. 54 m a.s.l., on *Pachyphiale carneola* (thallus and apothecia), 21.09.2019, leg. & det. V. Darmostuk (herb. VD 239).

ROSELLINULA FRUSTULOSAE (Vouaux) R. Sant.

It was reported only from Crimea peninsula and Mykolaiv region [DARMOSTUK, KHODOSOVTSEV, 2017; DARMOSTUK et al., 2018]. New for the Kherson region.

Specimen examined. Ukraine. Kherson region, Velyka Oleksandrivka district, near Zelenyi Gai village, 47.15381 N 32.95936 E, alt. 31 m a.s.l., on *Lecanora argopholis* (thallus), on limestone, 06.05.2018, leg. & det. V. Darmostuk (KHER 11674).

SPHAERELLOTHECIUM PUMILUM (Lettau) Nav.-Ros., Cl. Roux & Hafellner (syn. *Stigmidium pumilum* (Lettau) Matzer & Hafellner)

Previously, it was reported only from Zhytomyr region [FEDORENKO et al., 2006, 2007]. New for the Dnipropetrovsk and Mykolaiv regions.

Specimens examined. UKRAINE. Dnipropetrovsk region, Solonyans'kyi district**,** near Zvonetske vill., 48.25050 N 35.18381 E, alt. 65 m, on *P. caesia* (thallus), on granite stone, 01.07.2018, leg. & det. V. Darmostuk (herb. VD 399); **Mykolaiv region,** Pervomais'kyi district, near Ivanivka vill., National Nature Park "Buzkyi Gard", 47.96895 N 31.03937 E, alt. 61 m, on *Physcia caesia* (thallus), on granite stone, 21.09.2019, leg. & det. V. Darmostuk (herb. VD 219).

STIGMIDIUM CLAUZADEI Cl. Roux & Nav.-Ros.

It was reported only from Mykolaiv and Kherson regions [DARMOSTUK, KHODOSOVTSEV, 2017]. New for the Zaporizhzhia region.

Specimen examined. UKRAINE. Zaporizhzhia region, Melitopol district, near Troitske village, Troitska ravine, 47.06103 N 35.43336 E, on *Verrucaria viridula*, on limestone, 07.07.2018, leg. & det. V. Darmostuk (KHER 11964).

STIGMIDIUM SQUAMARIAE (B. de Lesd.) Cl. Roux & Triebel

This species was reported within steppe zone only from Mykolaiv region [KHODOSOVTSEV, DARMOSTUK, 2017; KHODOSOVTSEV et al., 2019]. New for the Luhansk region.

Specimen examined. UKRAINE. Luhansk region, Lutuhyne district, near Uspenka village, 48.38163 N 39.14012 E, alt. 96 m a.s.l., on *Protoparmeliopsis muralis* (apothecia), on siliceous stone, 03.05.2005, leg. O. Nadyeina, det. V. Darmostuk (KW).

STIGMIDIUM XANTHOPARMELIARUM Hafellner

This species is common in Ukraine [DARMOSTUK, KHODOSOVTSEV, 2017]. New for the Cherkasy, Donetsk and Zaporizhia regions.

Specimens examined. UKRAINE. Cherkasy region, Kamyanka district, Kamyanka town, Tyasmynskyi canyon, 49.03992 N 32.08815 E, alt. 132 m a.s.l., on *Xanthoparmelia conspersa* (thallus), on granite stone, 12.10.2019, leg. & det. V. Darmostuk (non coll.); **Donetsk region**, Nikolske district, near Nazarivka village,

47.30934 N 37.07906 E, alt. 174 m a.s.l., on *Xanthoparmelia conspersa* (thallus), on granite stone, 13.05.2011, leg. & det. A. Khodosovtsev (KHER 12187).

SPHINCTRINA LEUCOPODA Nyl.

This calicioid fungus usually inhabits *Pertusaria* spp., but sometimes can be found on epilithic *Diploschistes* and *Lecanora*. Recently, *S. leucopoda* was reported from Zakarpattia region on *Pertusaria pertusa* [MALÍČEK et al., 2018]. New for the lowland part of Ukraine.

Specimen examined. UKRAINE. Mykolaiv region, Pervomaisk district, near Ivanivka village, "Buzkyi Gard", National Nature Park 47.96895 N 31.03937 E, alt. 61 m a.s.l., on *Lecanora rupicola* (thallus), on granite stone, 21.09.2019, leg. & det. V. Darmostuk (herb. VD 311); near Lviv village, on *Lecanora orosthea*, 47.88967 N 31.09873 E, alt. 50 m a.s.l., 02.07.2020, leg. & det. A. Khodosovtsev & V. Darmostuk (KHER 13976).

TAENIOLELLA PHAEOPHYSCIAE D. Hawksw.

This is most likely common species inhabiting *Phaeophyscia* species [DARMOSTUK, KHODOSOVTSEV, 2017]. New for the Mykolaiv region.

Specimens examined (all on *Phaeophyscia orbicularis*). **UKRAINE. Mykolaiv region,** Berezanka district, near Tashyne village, 46.88322 N 31.18924 E, alt. 64 m a.s.l., on *Acer* bark, 03.07.2019, leg. & det. V. Darmostuk (herb. VD 161).

TONINIA TALPARUM Timdal

This species was known from Khmelnytskyi region [ZELENKO, 2005]. New for the Kherson and Mykolaiv regions.

Specimens examined (all on *Lecania turicensis*). **UKRAINE. Kherson region,** Beryslav district, near Mylove village, 47.06414 N 33.58893 E, alt. 42 m a.s.l., on limestone, 02.06.2017, leg. & det. V. Darmostuk, A. Khodosovtsev (KHER 11051); **Mykolaiv region,** Snihurivka district, near Galaganivka village, 46.90909 N 32.84826 E, on limestone, alt. 29 m a.s.l., 06.05.2018, leg. & det. V. Darmostuk, A. Khodosovtsev (KHER 11679).

WEDDELLOMYCES HETEROCHROUS Nav.-Ros. & Cl. Roux

Previously, it was reported only from Luhansk region [NADYEINA, HALICI, 2012]. New for the Mykolaiv region.

Specimen examined. UKRAINE. Mykolaiv region, Snihurivka district, near Novovasylivka village, 47.01166 N 32.79936 E, alt. 11 m a.s.l., on *Circinaria calcarea*, on limestone, 12.05.2018, leg. & det. V. Darmostuk & A. Khodosovtsev (KHER 12471).

XANTHORIICOLA PHYSCIAE (Kalchbr.) D. Hawksw.

This species is common in Ukraine [DARMOSTUK, KHODOSOVTSEV, 2017]. New for the Dnipropetrovsk region.

Specimen examined. Ukraine. Dnipropetrovsk region, Solone district, near Orikhove village, Bashmachka ravine, on *Xanthoria parietina*, on *Quercus* bark, 48.19834 N 35.00957 E, alt. 130 m a.s.l., 01.07.2018, leg. & det. V. Darmostuk (herb. VD 381).

Acknowledgements

The authors are grateful to Vladyslav Artamonov, Borys Baranovskyi, Yakiv Didukh, Vadym Maniuk, Ivan Moysiyenko, Olexander Rylskiy, Daria Shyriaeva, Denys Vynokurov for help during field expedition, Jurga Motiejūnaitė for correct remarks to the paper. Those studes were financially supported by several project of Ministry of Science and Education of Ukraine (0116U004735 and 0119U000105) and by The Next Challenge Grant (2017).

References

ANDRIANOVA T.V., DUDKA I.O., HAYOVA V.P., HELUTA V.P., ISIKOV V.P., KONDRATYUK S.YA., KRIVOMAZ T.I., KUZUB V.V., MINTER D.W., MINTER T.J., PRYDIUK M.P., TYKHONENKO YU.YA. (2006). Fungi of Ukraine. www.cybertruffle.org.uk/ukrafung/eng

BIELCZYK U., KISZKA J. (2000). Contribution to the lichen flora of Western Ukraine. *Fragm. Flor. Geobot.*, **45**(1-2): 493–500.

BIELCZYK U., BYLIŃSKA E., CZARNOTA P., CZYZEWSKA K., GUZOW-KRZEMIŃSKA B., HACHUŁKA M., KISZKA J., KOWALEWSKA A., KRZEWICKA B., KUKWA M., LEŚNIAŃSKI G., ŚLIWA L., ZALEWSKA A. (2005).

Contribution to the knowledge of lichens and lichenicolous fungi of Western Ukraine. *Pol. Bot. J.*, **50**(1): 39–64.

BOYKO T.O. (2009a). New and rare for Ukraine lichens from Nature Reserve "Yelanetsky Step". *Chornomors`k. bot. z.* **5**(2): 241–246. (in Ukrainian)

BOYKO T.O. (2009b). An Annotated List of the Lichens and Lichenicolous Fungi of the "Elanetsky step" Nature Reserve. *Chornomors`k. bot. z.* **5**(3): 448–457. (in Ukrainian)

BOIKO T.O. (2010). First data on lichens and lichenicolous fungi of «Pryinhulskiy» Regional Landscape Park (Mycolaiv region). *Visnyk of the Lviv University, Series Biology*, **54**: 165–171. (in Ukrainian)

DARMOSTUK V.V. (2015). *Codonmyces lecanorae* Calat. & Etayo is a new species of lichenicolous fungi for Ukraine. *Chornomors'k. bot. z.*, **11**(3): 327–329. (in Ukrainian) doi: 10.14255/2308-9628/15.113/5

DARMOSTUK V.V. (2016a). The genus *Cercidospora* (Dothideales) in Ukraine. *Ukr. Bot. J.*, **73**(3): 262–267. (in Ukrainian) doi: 10.15407/ukrbotj73.03.262

DARMOSTUK V.V. (2016b) Lichens and lichenicolous fungi of the Rusova beam (Velykooleksandrivka district, Kherson region). *Studia Biologica*, **10**(2): 133–140. (in Ukrainian)

DARMOSTUK V.V. (2019). The genus *Lichenoconium* (Lichenoconiaceae, Ascomycota) in Ukraine. *Ukr. Bot. J.*, **76**(2): 101–113. (in Ukrainian) doi: 10.15407/ukrbotj76.02.101

DARMOSTUK V.V., KHODOSOVTSEV A.YE. (2014). Lichens and lichenicolous fungi Kalmius department of Ukrainian Steppe Reserve. *Chornomors'k. bot. z.*, **10**(3), 322–327. (in Ukrainian)

DARMOSTUK V.V., KHODOSOVTSEV A.YE. (2017). Lichenicolous fungi of Ukraine: An annotated checklist. *Studies in Fungi*, **2**(1): 138–156. doi: 10.5943/sif/2/1/16

DARMOSTUK V.V., SIRA O.YE. (2020). New and remarkable records of lichenicolous fungi from Ternopil Oblast (Ukraine). *Czech Mycol*., **72**(1): 33–41. doi: 10.33585/cmy.72103

DARMOSTUK V.V., KHODOSOVTSEV A.YE., NAUMOVICH G.O., KHARECHKO N.V. (2018). *Roselliniella lecideae* sp. nov. and other interesting lichenicolous fungi from the Northern Black Sea region (Ukraine). *Turkish Journal of Botany*, **42**(3): 354–361. doi: 10.3906/bot-1709-5

FEDORENKO N.M., KONDRATYUK S.YA., ORLOV O.O. (2006). *Lichen-forming and lichenicolous fungi of Zhytomyr region*. Zhytomyr: P.P. Ruta, Volyn Publichers, 148 p. (in Ukrainian)

FEDORENKO N.M., NADYEINA O.V., KONDRATYUK S.Y. (2007). New and rare lichenicolous fungi from Ukraine. *Ukr. Bot. J.*, **64**(1): 47–56. (in Ukrainian)

GOLOVENKO Ye.O. (2016). The lichenflora of Kryvyi Rig iron ore dumps. *Chornomors'k. bot. z.*, **12**(1): 78–84. (in Ukrainian) doi:10.14255/2308-9628/16.121/8

GROMAKOVA A.B. (2014). New and rare lichens and lichenicolous fungi for the Left-Bank part of Ukraine from the Seversky Donets River basin. *Chornomors'k. bot. z*., **10**(4): 506–514. (in Ukrainian) doi:10.14255/2308-9628/14.104/5

GROMAKOVA A.B. (2018). New records of lichens and lichenicolous fungi from Eastern Ukraine. *Chornomors'k. bot. z.*, **14**(3): 269–278. (in Ukrainian) doi: 10.14255/2308-9628/18.143/5

GRUBE M., HAFELLNER J. (1990). Studien an flechtenbewohnenden Pilzen der Sammelgattung Didymella (Ascomycetes, Dothideales). *Nova Hedwigia*, 51(3–4): 283–360.

KHODOSOVTSEV A.YE. (1999). *The lichens of the Black Sea steppes*. Kiev: Phytosociocentre, 236 p. (in Ukrainian)

KHODOSOVTSEV A.YE. (2002a). Lichens of karst outcrops of Chatyrdag (Crimea). *Botan zhurn*., **87**(1): 46–56. (in Russian)

KHODOSOVTSEV A.YE. (2002b). A new for Ukraine and rare species of the genus *Caloplaca* Th. Fr. (Teloschistaceae) from Southern Ukraine. *Ukr. Bot. J.*, **59**(2): 171–178. (in Ukrainian)

KHODOSOVTSEV A.YE. (2003). An annotated list of the lichen forming fungi of the Karadag natural reserve. *News of Biosphere Reserve «Askania-Nova»*, **5**: 31–43. (in Ukrainian)

KHODOSOVTSEV A.YE. (2004). *The lichens on rock outcrops of Crimea Peninsula*. DSc thesis. Kyiv: M.H. Kholodny Institute of Botany (n Ukrainian).

KHODOSOVTSEV A.Ye. (2006). New for Ukraine species of lichens from Crimea. *Ukr. Bot. J.* 63(2): 196-202. (in Ukrainian)

KHODOSOVTSEV A.Ye. (2008). Newand rare for Ukraine species of lichens from the southern part of the steppe zone. *Ukr. Bot. J.* 63(2): 234-242. (in Ukrainian)

KHODOSOVTSEV A.YE. (2011). A new for Ukraine species of the lichenicolous fungi. *Chornomors'k. bot. z.*, **7**(2): 194–198. (in Ukrainian)

KHODOSOVTSEV A.YE. (2013). Lichen–forming and lichenicolous fungi from Aju-Dag Mt new to Ukraine and Crimea. *Chornomors'k. bot. z.*, **9**(1): 84–88. (in Ukrainian)

KHODOSOVTSEV A.YE. (2015). *Endocarpo-Xanthocarpion tominii* all. nov. and *Caloplacetum albolutescentis* ass. nov., a new syntaxa of lichen communities from loess outcrops in southern Ukraine. *Chornomors'k. bot. z.*, **11**(3): 317–326. (in Ukrainian) doi: 10.14255/2308-9628/15.113/4

KHODOSOVTEV A.YE., BOGDAN O.V. (2005). An annotated catalogue of the lichen forming fungi of the Yalta Mountain-Forest Nature Reserve. *Chornomors'k. bot. z.*, **1**(1): 117–132. (in Ukrainian)

KHODOSOVTSEV A.YE., BOGDAN O.V. (2006). An annotated list of the lichen forming fungi of the Crimean Nature Reserve. *Chornomors'k. bot. z.*, **2**(1): 95–117. (in Ukrainian)

KHODOSOVTSEV A.YE., DARMOSTUK V.V. (2016). New species of lichenicolous fungi for Ukraine. *Folia Cryptogamica Estonica*, **53**: 93–99. doi: 10.12697/fce.2016.53.11

KHODOSOVTSEV A.YE., DARMOSTUK V.V. (2017b). Lichens and lichenicolous fungi of granite outcrops of the Bobrynets raivne. *Chornomors'k. bot. z.*, **13**(2): 195–203. (in Ukrainian) doi: 10.14255/2308-9628/17.132/6

KHODOSOVTSEV A.YE., DARMOSTUK V.V. (2017c). *Zwackhiomyces polischukii* sp. nov., and other noteworthy lichenicolous fungi from Ukraine. *Polish Botanical Journal*, **62**(1): 27–35.

KHODOSOVTSEV A.YE., DARMOSTUK V.V. (2020). Lichens and lichenicolous fungi of Khortytsia Island (Ukraine). *Chornomors'k. bot. z*., **16** (1): 74–80. doi: 10.32999/ksu1990-553X/2020-16-1-5

KHODOSOVTSEV A.YE., POSTOYALKIN S.V. (2006). Species of lichens new for Ukraine and for the Ukrainian Carpathians from Carpathian Biosphere Reserve. *Ukr. Bot. J.*, **63**(3): 351–357. (in Ukrainian)

KHODOSOVTSEV A.YE., REDCHENKO O.O. (2002). An annotated list of the lichen forming fungi of the natural reserve «Mys Martyan» (Ukraine). *Ukr. Bot. J.*, **59** (1): 64–71. (in Ukrainian)

KHODOSOVTSEV A.YE., ZAVYALOVA T.V. (2008a). The lichen–forming and lichenicolous fungi of the geological nature monument «Kamyana Mogyla» (Zaporizka oblast, Melitopolskiy district). *Chornomorsk. bot. z.*, **4**(2): 264–272. (in Ukrainian)

KHODOSOVTSEV A.YE., ZAVYALOVA T.V. (2008b). The lichenological zoning of the rocks outcrops of the Kayinkulak river shores (Zaporozhskaya oblast, Chernigovsky district). *Visnyk of Odessa National University. Biology*, **13**(16): 56–60. (in Ukrainian)

KHODOSOVTSEV A.YE., ZAVYALOVA T.V. (2011). The lichens of the key botanical territories of the Northern-West Azov sea coastal. In: *Network of key botanical territories in the Azov region. Proceedings of the international meeting (October 6-7, 2011, Melitopol)*: 55 – 56. (in Ukrainian)

KHODOSOVTSEV A.YE., NADYEINA O.V., GROMAKOVA A.B. (2013). An annotated list of lichen–forming and lichenicolous fungi of Kamyani Mogily Reserve (Ukraine). *Chornomors'k. bot. z*., **9**(4): 542–552. (in Ukrainian)

KHODOSOVTSEV A.Ye., DARMOSTUK V.V., KHODOSOVTSEVA YU.A. (2018). *Xanthoparmelia* incognita in Red Data Book of Ukraine. In: *Plant kingdom the Red Book of Ukraine: implementation of the Global Strategy for Plant Conservation (Proceedings of the V International Conference (June 25-28, 2018, Kherson, Ukraine*): 135–135. (in Ukrainian)

KHODOSOVTSEV A.YE., VONDRÁK J., ŠOUN J. (2007). New lichenized and lichenicolous fungi for the Crimean Peninsula (Ukraine). *Chornomors'k. bot. z.*, **3**(2): 109–118.

KHODOSOVTSEV A.YE., DARMOSTUK V.V., MOYSIYENKO I.I., DAVYDOV O.V. (2018). The lichens and lichenicolous fungi of the Berezan Island with notes on its floristic and landscape diversity. *Chornomors'k. bot. z.*, **14**(3): 279–290. (in Ukrainian) doi: 10.14255/2308-9628/18.143/6

KHODOSOVTSEV A.YE., DARMOSTUK V.V., KHODOSOVTSEVA YA.A., GAYCHENYA YU.V. (2019). The lichens and lichenicolous fungi of Trykraty granite massive (Ukraine). *Chornomors'k. bot. z.*, **15**(1): 54–68. doi: 10.32999/ksu1990-553X/2019-15-1-6

KHODOSOVTSEV A.YE., MALIUGA N.G., DARMOSTUK V.V., KHODOSOVTSEVA YA.A., KLYMENKO V.M. (2017). The corticolous *Physcietea* lichen communities in the old parks of Kherson region (Ukraine). *Chornomors'k. bot. z.*, **13**(3): 481–515. (in Ukrainian) doi: 10.14255/2308-9628/17.134/6

KHODOSOVTSEV A.YE., MOYSIYENKO I.I., BOIKO M.F., KUNTZ B., MELNYK R.P., ZAGORODNYUK N.V., DARMOSTUK V.V., ZAKHAROVA M.YA., KLYMENKO V.M., DAYNEKO P.M., MALYUGA N.G. (2019). *Ancient forgotten parks of Kherson region*. Kherson: Publishing House: Helvetica, 300 p. (in Ukrainian)

KONDRATYUK S.YA. (2005). New for mycobiota of Ukraine and rare species of *Lichenostigma* Haf. (Arthoniales, Ascomycotina). *Ukr. Bot. J.*, **62**(4): 509–516. (in Ukrainian)

KONDRATYUK S.Y., MARTYNENKO V.G. (2006). *Lichen indication (manual)*. K.-Kirovograd: TOV "Kod", 260 p. (in Ukrainian)

KONDRATYUK S.YA., ANDRIANOVA T.V., TYKHONENKO YU.YU. (1999). *Study of mycobiota diversity of Ukraine (Lichenicolous, Septoria and Puccinia fungi)*. Kyiv: Phytosociocentre, 110 p. (in Ukrainian)

KONDRATYUK S.YA., DYMYTROVA L.V., NADYEINA O.V. (2010). *The third checklist of lichenforming and allied fungi of Ukraine*. In: Oxner A.M. Flora of the lichens of Ukraine, in two volumes. Volume 2, issue 3. Kiev: Naukova Dumka, pp. 446–486.

KONDRATYUK S.YA., KHODOSOVTSEV A.YE., ZELENKO S.D. (1998). *The second checklist of lichen forming, lichenicolous and allied fungi of Ukraine*. Kiev: Phytosociocentre, 180 p.

KONDRATYUK S.YA., POPOVA L.P., LACKOVIČOVÁ A., PIŠÚT I. (2003). *A catalogue of the Eastern Carpathian Lichens*. Kiev-Bratislava: M.H. Kholodny Institute of Botany, 264 p.

KONDRATYUK S.Y., UPRETI D.K., MISHRA G.K., NAYAKA S., INGLE K.K., ORLOV O.O., KONDRATIUK A.S., LŐKÖS L., FARKAS E., WOO J.J., HUR, J.S. (2020). New and noteworthy lichen-forming and lichenicolous fungi 10. *Acta Botanica Hungarica*, **62**(1-2): 69–108.

KOVALENKO L.I. (1976). New and interesting litophylous lichens from Donetsk and Zaporizha regions. *Ukr. Bot. J.*, **33**(5): 502–506. (in Ukrainian)

MALÍČEK J., PALICE Z., ACTON A., BERGER F., BOUDA F., SANDERSON N., VONDRÁK J. (2018). Uholka primeval forest in the Ukrainian Carpathians – a keynote area for diversity of forest lichens in Europe. *Herzogia*, **31**(1), 140–171. doi: 10.13158/099.031.0110

MIKHAILYUK T.I., KONDRATYUK S.Y., NYPORKO S.O., DARIENKO T.M., DEMCHENKO E.M., VOYTSEKHOVICH A.O. (2011). *Lichen-forming fungi, bryophytes and terrestrial algae of granitic canyons of Ukraine*. K.: Alterpres, 398 p. (in Ukrainian)

NADYEINA O.V. (2009). The lichen–forming and lichenicolous fungi of the Donetsk Upland. *Mycologia Balcanica*, **6**: 37–53.

NADYEINA O.V., HALICI M.G. (2012). New lichenicolous fungi records for Kyrgyzstan, Uzbekistan, and Ukraine. *Mycotaxon*, **118**(1): 131–136.

NAUMOVICH A.O. (2009a). A new and rare for the plain part of Ukraine species of the lichens and lichenicolous fungus from the Ingilets valley. *Chornomors'k. bot. z.*, **5**(2): 265–272. (in Ukrainian)

NAUMOVICH A.O. (2009b). Lichens of the geological nature monument «Skeli MODRU» (Kryvyi Rig city). *Chornomors'k. bot. z.*, **5**(3): 442–447. (in Ukrainian)

NAUMOVICH G.O., DARMOSTUK V.V. (2015). Lichenicolous fungi of the valley of Ingulets river (Ukraine). *Chornomors'k. bot. z.*, **11**(4): 512–520. (in Ukrainian) doi: 10.14255/2308-9628/15.114/7

OXNER A.M. (2010). *Flora of the lichens of Ukraine, in two volumes. Volume 2, issue 3*. Kyiv: Naukova Dumka, 662 p. (in Ukrainian)

PREKRASNA YE., VASYLYUK O., DOMASHEVSKYY S., PARNIKOZA I. et al. (2012). *The projected of National Nature Park «Divychky» in the Kyiv region*. Kyiv: National Ecological Center of Ukraine, 44 p. (in Ukrainian)

RUSINA N.V., NADYEINA O.V., KHODOSOVTSEV A.YE. (2010). An annotated list of lichen–forming and lichenicolous fungi of Lugans'ky natural reserve. *Chornomors'k. bot. z.*, **4**(1): 247–258. (in Ukrainian)

SMERECHYNSKA T.O. (2006). *Lichens of the Medobory Nature Reserve*. PhD thesis. Kyiv: M.H. Kholodny Institute of Botany. (in Ukrainian)

VONDRÁK J., FROLOV I., ŘIHA P., HROUZEK P., PALICE Z., NADYEINA O., HALICI G., KHODOSOVTSEV A., ROUX C. (2013). New crustose Teloschistaceae in Central Europe. *The Lichenologist*, **45**(6): 701–722.

ZAKERI Z., OTTE V., SIPMAN H., MALÍČEK J., CUBAS P., RICO V.J, LENZOVA V., SVOBODA D., DIVAKAR P.K. (2019). Discovering cryptic species in the *Aspiciliella intermutans* complex (Megasporaceae, Ascomycota) – First results using gene concatenation and coalescent-based species tree approaches. *PLoS One*, **14**(5): e0216675.

ZELENKO S.D. (2004). *Lichenized fungi.* In: Biodiversity of Kamyanets-Podilskyi. A preliminary checklist of the plants, fungi and animals. Lviv: Liga-Press: pp. 86–89. (in Ukrainian)

ZELENKO S.D. (2005). *Toninia talparum* (Lecideaceae, Ascomycetes) – new species for lichenobiota Eurasia from Podoliya Heights. *Ukr. Bot. J.*, **62**(4): 517–521. (in Ukrainian)

ZHURBENKO M.P. (2017). Lichenicolous fungi of the Caucasus: new species, new records and a second synopsis. *Opuscula Philolichenum*, **16**: 267–311.

ZHURBENKO M.P., BRACKEL W. VON (2013). Checklist of lichenicolous fungi and lichenicolous lichens of Svalbard, including new species, new records and revisions. *Herzogia*, **26**: 323–359. doi: 10.13158/heia.26.2.2013.323

ZHURBENKO M., ENKHTUYA O., JAVKHLAN S. (2020). Additions to the checklist of lichenicolous fungi of Mongolia. *Folia Cryptogamica Estonica*, **57**: 9–20. doi: 10.12697/fce.2020.57.03