

THE CHOROLOGY OF *CRESPORHAPHIS* M. B. AGUIRRE 1991 GENUS IN ROMANIA

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The main concern of this theme is represented by chorology of *Cresporhaphis wienkampii* (J. Lahm ex Hazsl.) M.B. Aguirre 1991 in Romania. Chorological data of this species on Romania territory are slightly and no recent data are provided. The field researches were performed in forests habitats and trees integrated in diverse anthropogenic structures, especially from rural areas. Within each investigated site *C. wienkampii* was not identified. In Romania, from zoological point of view there is no any information as regard the statute of the studied lichen species.

Key words: *Cresporhaphis wienkampii*, chorology, Romania.

INTRODUCTION

Of all lichen species belonging to *Cresporhaphis* genus, only *Cresporhaphis wienkampii* (J. Lahm ex Hazsl.) M.B. Aguirre 1991 has been cited for Romania (Ciurchea, 2004). *C. wienkampii* is widespread on European continent in Bulgaria (Ljulín Mountain, identified on *Pyrus communis* L.), Czech Republic, Germany, Italy, Great Britain, Norway, Poland, Netherlands, Slovakia (Prešov, near Jareza locality), identified on *Salix* sp. and in Borkul where it has been found on *Salix alba* Thunb., Sweden, Ukraine, on North America (Calatayud and Aguirre-Hudson, 2001; Aguirre-Hudson *et al.*, 2005) and on Asia in the Kislichnaya Mountain, near Ob Inferior River, in Elizarovskogo and Bogdashinskogo reserves from Siberia (Russia) on *Populus* sp. (Седельникова and Таран, 2000). As regards the studied species zoology, in the Czech Republic this is extinct (Liška and Palice, 2010). In the Netherlands it is susceptible, very rare with a presence under 1% established based on collected data from 1 to 17 samples of 5 km by 5 km (Aptroot *et al.*, 1999). In Hessa Region from Germany, this species is presented with uncertain identification data (Schöller *et al.*, 1996). In Harz National Park (Germany), *C. wienkampii* presents a moderate frequency (Ungethüm *et al.*, 2011). Within a few papers, this species is included in the Red List of Lichens from Germany (Wirth, 2008; Ungethüm *et al.*, 2011). In Nordrhein-Westfalen land, Kölner-Bucht, Bonn, Enderich (Germany), *C. wienkampii* has been retrieved on lignicolous substrata represented

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by *Fagus sylvatica* L. after about 130 years from the last published data (Mies, 2014). Within alluvial forests from the western part of Siberia, Kamensky region (Altai, Russia), along Ob River has been identified *C. wienkampii* on corticolous substrata represented to trees and shrubs (Таран and Романова, 2014). Opposed to the other studies, in Kemerovo (south-western Siberia, Russia), *C. wienkampii* is resistant to atmospheric pollution, the main reason for which it has been included in class VIII of pollution bioindicators (Романова, 2012).

MATERIALS AND METHODS

The field researches were performed during 2010–2015 both in the mountain, hilly and plain areas. The studied habitats were represented by primary and secondary forested areas, tree alignments from rural areas, isolated trees, grouped trees on small areas and private gardens from rural zones. The lichen and cormophytes nomenclature is according to www.mycobank.org and www.uk.ipni.org, respectively. The abbreviation used in text H.U.C. refers to Babeş-Bolyai University Herbarium from Cluj-Napoca.

RESULTS AND DISCUSSION

Cresporhaphis genus is characterised by ampliform perithecia, usually lacked of the pedicel and lateral collapsed in the mature stage. The hamathecium is constituted by unitunicate asci, paraphyses, occasional periphyses and septate ascospores that are falcate to fusiform. Within this genus association between algal and fungal components is facultative (Calatayud and Aguirre-Hudson, 2001).

Worldwide this genus is represented by the following species: *C. muelleri* (Duby) M.B. Aguirre, *C. rhoina* (Ellis & Everh.) Barr 1993, *C. acerina* (Rehm) B. Aguirre, *C. wienkampii* (J. Lahm. ex Hazsl.) M.B. Aguirre, *C. pinicola* (G. Samp.) M.B. Aguirre, *C. macrospora* (Eitner) B. Aguirre și *C. ulmi* Calatayud et M.B. Aguirre sp. nov. (Calatayud and Aguirre-Hudson, 2001).

In Romania, *Cresporhaphis* genus is not found in the Red List of lichens which indicates that this is a common genus. The last information on this genus chorology in Romania dates from 1972 (Ciurchea, 1972). Since then until now, the researches of both Romanian lichenologists and foreigner ones were not finished to identification of this genus in other regions of Romania.

The species of the *Cresporhaphis* genus are very rare therefore their identification and their introduction within lichen collections present a significant importance, for instance: the specimen identified in the Great Britain, Scotland, eastern part of Lothian and Linton regions, along Tyne River, on *Salix* (Calatayud and Aguirre-Hudson, 2001).

The chorology of *Cresporhaphis* genus in Romania is the following:

Bistrița-Năsăud County: Arcalia Scientific Stationary Park and forests around Arcalia Scientific Stationary (Ciurchea and Szabó, 1966; Ciurchea, 1972; Ciurchea, 2004, H.U.C. Nr. 558061).

Brașov County: Făgăraș Mountains, Podragu Peak (Moruzi *et al.*, 1967; Ciurchea, 2004).

Caraș-Severin County: Banat Mountains, at Mehadia (Moruzi *et al.*, 1967; Ciurchea, 2004).

Cluj County: the Apuseni Mountains, Crișului Repede Valley, Ciucea village (Hazslinszky, 1884; Cretzoiu, 1941; Moruzi *et al.*, 1967; Ciurchea, 2004).

Maramureș County: the locality is not indicated (Moruzi *et al.*, 1967; Ciurchea, 2004).

As regards the substrata of species tabulated within *Cresporhaphis* genus these are corticolous-saprobiont (Calatayud and Aguirre-Hudson, 2001).

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REFERENCES

1. Aguirre-Hudson B., Farkas E., Lőkös L., 2005, New records of *Leptorhaphis* and other ascomycete genera from the Carpathian basin (Europe), *Herzogia*, **18**, pp. 47–50.
2. Aptroot A., van Herk K., Sparrius L., van den Boom P., 1999, Checklist van de Nederlandse lichenen en lichenicole fungi, *Buxbaumiella*, **50**, pp. 4-64.
3. Calatayud V., Aguirre-Hudson B., 2001, Observations on the genus *Cresporhaphis* (Trichosphaeriaceae) with a key to the known species, and *C. ulmi* sp. nov., *Mycol Res*, **105**, pp. 122–126.
4. Ciurchea M., 1972, Cercetări asupra florei și vegetației lichenologice arboricole din regiunea Arcalia, *Contr Bot*, pp. 133–139.
5. Ciurchea M., 2004, *Determinatorul lichenilor din România*, Editura Bit, Iași.
6. Ciurchea M., Szabó A., 1966, Licheni corticoli din Parcul Arcalia (r. Bistrița), *Stud Univ Victor Babeș Bolyai, Ser Biol*, **1**, pp. 13–23.
7. Cretzoiu P., 1941, Conspectul lichenilor pyrenocarpi din România, *Analele Institutului de Cercetări și Experimentație Forestieră, Seria I, Partea I*, **7**, pp. 50–159.
8. Hazslinszky F., 1884, *A Magyar Birodalom zuzmó-flórája*, Kiadja A.K.M. Természettudományi Társulat. Budapest, p. 293.
9. Liška J., Palice Z., 2010, Červený seznam lišejníků České republiky (verze 1.1), *Příroda*, **29**, pp. 3–66.
10. Mies B.A., 2014, Neue und interessante Flechten (lichenisierte Ascomyceten) aus Eifel, Ardennen und Hunsrück, *Abhandlungen der Delattinia*, **40**, pp. 161-175.
11. Moruzi C., Petria E., Mantu E., 1967, Catalogul Lichenilor din România, *Acta Bot Horti Bucharest*, pp. 1–389.
12. Романова Е.В., 2012, Лишайники биоиндикаторы атмосферного загрязнения г. Кемерово, *Вестник Томского государственного университета, Биология*, **4**, pp. 203–214
13. Schöller H., Cezanne R., Eichler M., 1996, *Rote liste der Flechten (Lichenes) Hessens*, Herausgeber Hessisches Ministerium des Inneren und für Landwirtschaft, Forsten und Naturschutz, Wiesbaden, 76 pp.

14. Седельникова Н.В., Таран Г.С., 2000, Основные черты лишенофлоры Елзаровского заказника (нижняя Обь), *Krylovia*, **2**, pp. 46–53.
15. Таран Г.С., Романова Е.В., 2014, К лишенофлоре пойменных лесов верхней Оби, *Растительный мир Азиатской России*, **2**, pp. 19–23.
16. Ungethüm K., Kison H.U., Stordeur R., 2011, Die epiphytischen Flechten in drei verschiedenen Laubwaldgesellschaften im Nationalpark Harz, *Hercynia*, **44**, pp. 191–210.
17. Wirth V., 2008, Rote liste und Artenverzeichnis der Flechten Baden-Württembergs, Herausgeber Landesanstalt für Umwelt, Messungen und Naturschutz Baden-Württemberg, 64 pp.