

New data about Boletales in Bulgaria

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Abstract. This paper provides information about the distribution of 22 species of Boletales. New data are reported or confirmations of previous older records are made.

Key words: boletes, Bulgaria, conservation of fungi

Introduction

The knowledge about the species diversity and distribution of Boletales in Bulgaria is still scarce. Information is scattered in many papers and a checklist for this group is still in preparation. Even for species known to be common data about their distribution are deficient. Papers usually do not provide sufficient information to make possible any further judgment of the findings. The same holds also for the voucher specimens if there are any at all. Since boletes are among the most economically important fungal groups in Bulgaria, intensive research is needed on its species composition and distribution in the country. This paper aims to provide information about some recent findings. Special attention is paid to species, considered to be threatened in Bulgaria, but data about more widespread taxa are also included.

Material and Methods

Samples cited in this report were collected during the field seasons of 2002–2003 in different localities of the country. Studied specimens are kept in the Mycological collection at the Institute of Botany of the Bulgarian Academy of Sciences (SOMF); their accession numbers are given in brackets at the end of each record. Fungi were preserved by drying and documented with color photograph and/or concise description. Specimens were collected by the author, unless otherwise stated. Following monographs were used to determine the boletes: *Boletus* (incl. *Xerocomus*) – after Engel *et al.* (1983, 1996), *Suillus* – after Engel *et al.* (1996), *Strobilomyces* and *Tylopilus* (incl. *Porphyrellus*) – after Breitenbach & Kränzlin

(1991), *Chroogomphus* and *Gomphidius* – after Watling (1970). The works of Singer (1965, 1967), Pilát & Dermek (1974), Alessio (1985), and Galli (1998) were also used. Families and genera are given according to the arrangement of Kirk *et al.* (2001). Nomenclature of the mycorrhizal host trees follows Flora Europaea (Tutin *et al.* 1993). Phytogeographical division of Bulgaria is according to Jordanov (1966).

List of collected fungi

Boletaceae

Boletus aereus Bull. : Fr.

Eastern Forebalkan: Lovech distr., the locality of Koman near Troyan, under *Quercus frainetto* Ten. and *Q. cerris* L., 7 Jun 2002 (25 362).

B. aestivalis Paulet ex Fr.

Vitosha region: Plana Mt, in the vicinity of the village of Zheleznitsa nearly the hot springs, under *Fagus sylvatica* L., ca 1000 m, 28 Aug 2002 (25 363); Plana Mt, in the locality Krustatia Dub, under *Corylus avellana* L., ca 1100 m, 28 Aug 2002 (25 364); Vitosha Mt, above the village of Bistritsa, under *Fagus sylvatica*, ca 1200 m, 14 Aug 2002 (25 365); Lyulin Mt: above the village of Vladaya, under *Quercus frainetto*, ca 900 m, 25 May 2003 (25 366).

Sofia region: in the vicinity of the village of Voinegovtsi, under *Quercus rubra* L., ca 850 m, 4 Sep 2002 (25 372).

Sredna Gora Mts: Lozenska Planina Mt, under *Quercus* spp., 20 Jun 2003, leg. D. Dimitrov, det. B. Assyov (BA) (25 374).

Western Stara Planina Mts: above the town of Berkovitsa, in mixed forest of *Fagus sylvatica*, *Castanea sativa* Miller,

and *Carpinus betulus* L., under *Fagus sylvatica*, 16 Jun 2003 (25 367).

West Frontier Mts: Osogovo Mt, Kyustendil distr., above the village of Bournarska Mahala, under *Fagus sylvatica*, ca 1400 m, 7 Sep 2002 (25 370).

B. appendiculatus (Schaeff. ex Fr.) Secr.

Eastern Forebalkan: Lovech distr., the locality of Koman near Troyan, under *Quercus frainetto*, 7 Jun 2002 (25 371).

Note. Included in the Red list of Bulgarian macromycetes (Gyosheva *et al.* 2000) under category *Rare*.

B. badius Fr. : Fr.

Western Rhodopi Mts: the locality of Beglika, under *Picea abies*, 14 Jul 2002 (25 373).

B. calopus Pers. : Fr.

Vitosha region: Vitosha Mt, Bistrishko Branishte Reserve, under *Picea abies*, 10 Aug 2002 (25 376).

B. erythropus (Fr. : Fr.) Krombh.

Western Rhodopi Mts: the locality of Beglika, under *Fagus sylvatica*, 14 Jul 2002 (25 382).

B. fechtneri Velen.

Eastern Forebalkan: Lovech distr., the locality of Koman near Troyan, under *Quercus frainetto*, 7 Jun 2002 (25 384).

B. luridus Schaeff. : Fr.

Eastern Stara Planina Mts: above the village of Grozdyovo, in the vicinity of Eleshnitsa dam lake, under *Quercus frainetto*, 28 Aug 2003 (25 387).

Note. This new record confirms the previous finding of the species in Eastern Stara Planina Mts (Boeva 2002), which was not supported by a specimen in SOMF.

B. pinophilus Pilát & Dermek

Western Rhodopi Mts: the locality of Beglika, under *Picea abies*, 30 Jun 2002 (25 392).

B. pulverulentus Opat.

Vitosha region: Vitosha Mt, Bistrishko Branishte Reserve, under *Fagus sylvatica*, ca 1200 m, 14 Aug 2002 (25 393); Plana Mt, in the vicinity of the village of Zheleznitsa near the hot springs, under *Fagus sylvatica*, ca 1000 m, 28 Aug 2002 (25 394).

A *Rare* species (Gyosheva *et al.* 2000). This is its first record from Vitosha region.

B. queletii Schulzer var. *queletii*

Vitosha region: Vitosha Mt, Bistrishko Branishte Reserve, under *Corylus avellana*, ca 1150 m, 10 Aug 2002 (25 395); Plana Mt, in the vicinity of the village of Zheleznitsa near the hot springs, under *Fagus sylvatica*, ca 1000 m, 28 Aug 2002 (25 396).

Eastern Forebalkan: Lovech distr., the locality of Koman near Troyan, under *Quercus frainetto* and *Q. cerris*, 7 Jun 2002 (25 397).

B. regius Krombh.

Western Stara Planina Mts: in the vicinity of the village of Burzia, Jun 2002, leg. Ts. Borisova, det. BA (25 398).

Note. The species is reported for the first time from Western Stara Planina Mts. It is included in the Red list of Bulgarian macromycetes (Gyosheva *et al.* 2000) under category *Vulnerable*.

B. rhodoxanthus (Krombh.) Kallenb.

Rila Mts: above the village of Yakorouda, in the locality of Boukevitsa, mixed forest of *Pinus sylvestris* L. and *Fagus sylvatica*, under *Fagus sylvatica*, ca 1400 m, 25 Aug 2002, BA.

Note. This find consisted of two very old sporocarps whose preservation for further studies was fairly impossible. Description of the find is given below.

Cap up to 20 cm in diam, pale ochraceous with pinkish tint, not bluing when bruised. Stipe bright yellow with well developed carmine red network, almost not bluing when bruised. Tubes yellowish green when old, pores bright red; both the tubes and the pores bluing when bruised. Flesh bright yellow in the stipe, paler in the cap, slightly bluing predominantly in the cap.

West Frontier Mts: Osogovo Mt, Kyustendil distr., above the village of Bournarska Mahala, under *Fagus sylvatica*, ca 1350 m, 7 Sep 2002 (25 399).

Note. The species is reported for the first time from both localities in Rila and West Frontier Mts. A *Rare* species, included in the Red list of Bulgarian macromycetes (Gyosheva *et al.* 2000).

B. satanas Lenz

Eastern Stara Planina Mts: above the village of Grozdyovo, in the vicinity of Eleshnitsa dam lake, under *Quercus frainetto*, 28 Aug 2003 (25 400).

Note. This find confirms the occurrence in Eastern Stara Planina Mts (Kuthan & Kotlaba 1989; Boeva 2002) of this *Vulnerable* species (Gyosheva *et al.* 2000).

Strobilomyces strobilaceus (Scop. : Fr.) Berk.

West Frontier Mts: Osogovo Mt, Kyustendil distr., above the village of Bournarska Mahala, under *Fagus sylvatica*, ca 1400-1450 m, 7 Aug 2002 (25 401).

Vitosha region: Vitosha Mt, above the village of Bistritsa, under broadleaved trees, 24 Jul 2002, leg. D. Stoykov, det. BA (25 402).

Note. A *Rare* species (Gyosheva *et al.* 2000), which is reported for the first time from the West Frontier Mts. From Vitosha Mt it has been previously known only by the works of Hinkova (1954, 1955).

Tylophilus pseudoscaber Sect. ex A.H. Smith & Thiers

Rila Mts: above the village of Yakorouda, the locality of Boukevitsa, in plantation of *Pinus sylvestris*, ca 1400 m, 25 Jul 2002 (25 403).

North Pirin Mts: above the road from the town of Bansko to the chalet of Bunderitsa, under *Picea abies*, ca 1600 m, 21 Aug 2002 (25 404).

Note. The species has been previously found in Rila and Pirin Mts, but because of its threat status (Gyosheva *et al.* 2000) it seems appropriate to provide information about these new findings.

G o m p h i d i a c e a e

Chroogomphus rutilus (Schaeff. : Fr.) O.K. Miller

Danube Plain: Pleven distr., the locality of Kailuka, under *Pinus* sp., leg. R. Tsonev, det. BA (25 405).

West Frontier Mts: Osogovo Mt, Kyustendil distr., in the locality of Hisarluka, under *Pinus nigra* Arnold, 6 Sep 2002 (25 406).

Gomphidius roseus (Fr. : Fr.) Gillet

Rila Mts: above the village of Yakorouda, at the road between the locality of Treshtenik and Nehtenitsa, under *Pinus sylvestris*, ca 1800 m, 25 Aug 2002 (25 407).

Note. *Gomphidius roseus* is included in the Red list of Bulgarian macromycetes under category *Rare* (Gyosheva *et al.* 2000). It has been previously reported from Rila Mts only by Gyosheva & Denchev (2000).

S u i l l a c e a e

Suillus collinitus (Fr.) Kuntze

Sofia region: in the vicinity of the village of Voinegovtsi, under *Pinus nigra*, ca 850 m, 4 Sep 2002 (25 415).

Note. This second find confirms the occurrence of *Suillus collinitus* in Bulgaria. Previously the species was reported only by Stoichev & Dimcheva (1987).

S. grevillei (Klotzsch) Singer

Rila Mts: above the village of Yakorouda, at the road between the locality of Boukevitsa and Treshtenik, under *Larix* sp., alt. 1400-1500 m, 25 Jul 2002 (25 418); idem, 24 Aug 2002.

Note. An alien species, whose distribution in the country is connected with the cultivation of its mycorrhizal partners – *Larix* spp. *Suillus grevillei* has been previously reported from Sofia region (Barsakov 1926), Vitosha region (Hinkova 1954), Pirin Mts (Dimcheva & Stoichev 1987), and Rila Mts (Stoichev & Dimcheva 1984).

S. sibiricus (Singer) Singer subsp. *helveticus* Singer

North Pirin Mts: above the road from the town of Bansko to the chalet of Bunderitsa, in mixed coniferous forest under *Pinus peuce* Griseb., ca 1700 m, 21 Aug 2002 (25 420).

Note. It seems fairly possible that all previous records of *Suillus sibiricus* (Dörfelt & Müsch 1987; Stoichev & Dimcheva 1987; Dimcheva & Stoichev 1987; Gyosheva 2003)

might belong to subsp. *helveticus*. Unfortunately, neither the literature sources, nor the only sample kept in SOMF provide enough information to clarify that. *Suillus sibiricus* subsp. *helveticus* is one of the candidates for entry in Appendix I of the Bern Convention (Dahlberg & Croneborg 2003), which further research and monitoring of its populations in Bulgaria is desirable.

S. variegatus (Schwartz : Fr.) Richon & Roze

North Pirin Mts: above the road from the town of Bansko to the chalet of Bunderitsa, in mixed coniferous forest under *Pinus sylvestris*, ca 1700 m, 21 Aug 2002 (25 421).

Note. *Suillus variegatus* has been previously found in Pirin Mts by Dörfelt & Müsch (1987) but there are no specimens available to support this record.

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