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Dedicated to Professor Alina Skirgiełło on the occasion of her ninety-fifth birthday

Gloiodon strigosus (Swartz: Fr.) P. Karst. (*Bondarzewiaceae*) in Poland

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Gloiodon strigosus (Swartz: Fr.) P. Karst. recognized as an extinct species in Poland, has been recently found in the Białowieża National Park. Iconography and synonyms are given and the distribution and ecology is discussed.

Key words: *Gloiodon strigosus*, *Bondarzewiaceae*, Russulales, extinct species

INTRODUCTION

Gloiodon strigosus (Swartz: Fr.) P. Karst., a representative of *Bondarzewiaceae* family (Kirk et al. 2001), recognized as an extinct species in the Red List of Macrofungi in Poland (Wojewoda, Ławrynowicz 2006) has been recently found in the Area of Strict Protection of the Białowieża National Park. Fructifications were collected by the author in September 2004 during the mycological excursion devoted to the observation of fruit bodies of a rare and interesting fungus, *Rhodotus palmatus* which occurs in that area regularly in early autumn, since 2001 (Bujakiewicz 2002b, 2003; Bujakiewicz, Nita 2004).

The locality site is characteristic of dense thickets covering piles of fallen logs of elm (*Ulmus scabra*) which fell a victim of the Dutch elm disease. The logs are not removed and nourish many rare representatives of plants, animals (insects) and fungi (Bujakiewicz 2002a, b, 2003).

NOMENCLATURE, ICONOGRAPHY AND DRAWINGS

Hydnum strigosum Swartz, Kongl. Vetensk. Acad. Nva Handl. 31(3): 250, 1810: Fr., Syst. Mycol. 1: 414, 1821; *Gloiodon strigosus* (Swartz: Fr.) P. Karst., Medd. Soc. F. Fl. Fenn. 5: 42. 1879; *Sclerodon strigosus* (Swartz: Fr.) Karst., Finl. Basids. 361. 1889.

Nikolajeva (1961) 205-207, Fig. 153-155, Jahn (1979) 75, Fig. 40; Jahn and Sturm (1983), Fig. 1-10; Ryman and Holmåsen (1984): 108; Koski-Kotiranta and Niemelä 1988 (1987): 61-64, Fig. 13-15.

DESCRIPTION OF COLLECTED MATERIAL

Fructifications of *Gloiodon strigosus* were collected on September 18, 2004 in forest section 398 of the Area of Strict Protection of the Białowieża National Park (Fig. 1) along the "didactic trial", on underneath of the log of *Ulmus scabra*, on

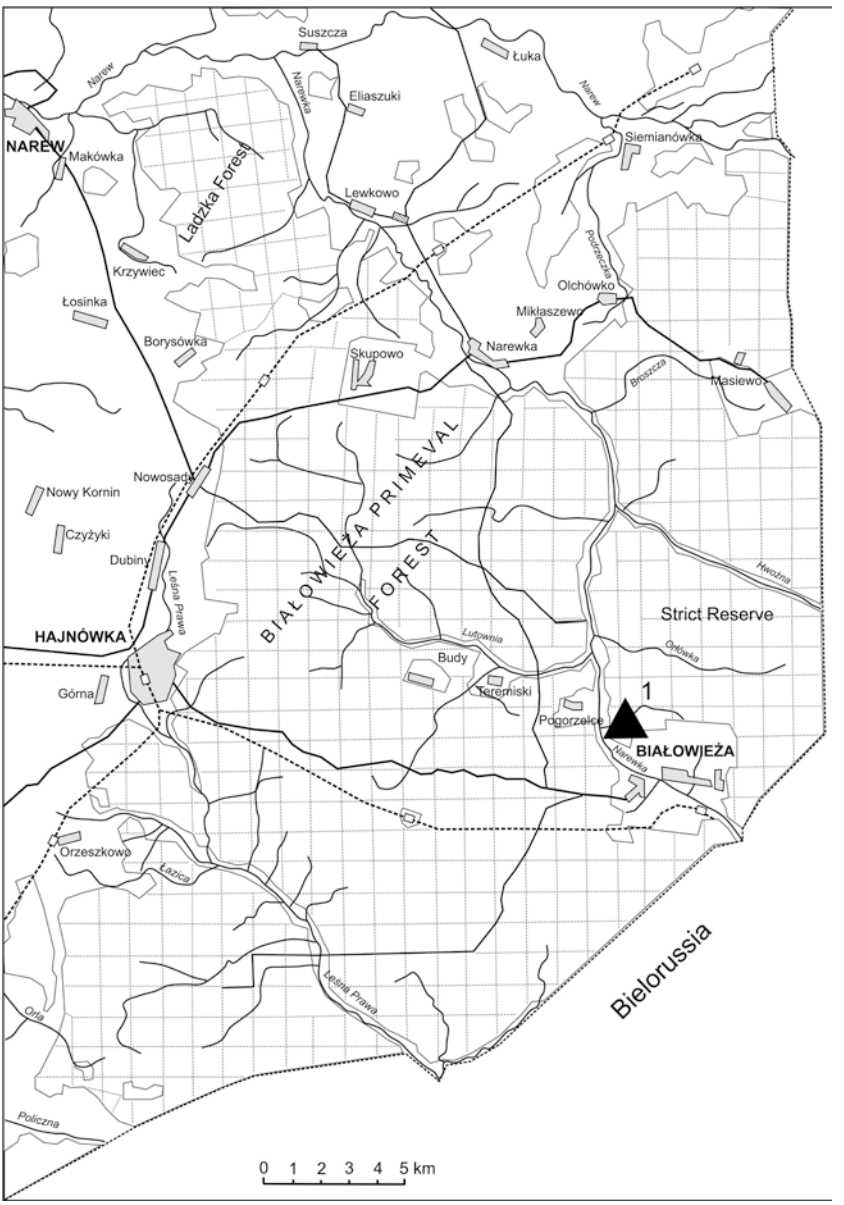

Fig. 1. The Białowieża Forest (acc. to Faliński 1986, modified) – distribution of *Gloiodon strigosus* in the Białowieża Forest.
1-locality in the Area of Strict Protection of the Białowieża National Park (2004).

decorticated wood in association with *Auricularia mesenterica*. The fruit body was emerging from remnants of an older one and was mostly fan shaped (Fig. 2). The forest is classified as the phytocoenosis of the *Fraxino-Alnetum* association with the elements of the *Tilio-Carpinetum* association.

With regards to morphology and sporulation elements of the fruit bodies specimens collected correspond entirely with Jahn's (1979) photo (Fig. 2) and Jahn and Sturm's (1983) description. Minutely verrucose spores of *Gloiodon strigosus* seen under the electron microscope are presented on figure 3.

There are three species up to now recognized in the genus *Gloiodon*: *G. occidentale* Ginns growing on gymnosperms in North America and having glabrous spores, *G. nigrescens* (Petch) Maas occurring in Sri Lanka, having pileal surface with scattered hairs or even glabrous and *G. strigosus* distinguished by the occurrence on angiosperm wood, having pileal surface densly haired and smaller verrucose spores. (Ginns 1988).

Gloiodon strigosus resembles *Auriscalpium vulgare* in many characters, both macro--and microscopical and formerly belonged to the *Auriscalpiaceae* family (Maas Geesteranus 1963). Now it belongs to *Bondarzewiaceae* family and represents the order *Russulales* (Kirk et al. 2001; Wojewoda 2003).

In the literature *Gloiodon strigosus* is recorded on angiosperms, mostly on *Populus*, *Alnus*, *Salix* and *Prunus*, seldom is found on *Ulmus* and *Betula* (Koski-Kotiranta, Niemelä 1988). Nikolajeva (1961) noted some Siberian fructifications collected in Sajan Mts on fir (*Abies*) which may belonged to *G. occidentale*.

Gloiodon strigosus is saprotrophic, causes white rot (Jahn 1979) and prefers humid microclimate. It is a rare and endangered species with vulnerable ecology, connected with old, well preserved forests. It's distribution covers the Northern Hemisphere mainly throughout the Boreal zone, both in the interior of the continents and in oceanic areas. The first find of *Gloiodon strigosus* in Central Europe was announced by Jahn and Sturm (1983) in the Bavarial Alps in an Oroboreal montane zone (Koski-Kotiranta, Niemelä 1988).

DISTRIBUTION

In Poland: Ladzka Forest in the complex of the Białowieża Primeval Forest, on logs of deciduous trees (Błoński 1889); Area of Strict Protection of the Białowieża National Park, forest section 398.

In the world: Scandinavia: Finland, Norway, Sweden (Ryvarden 1971; Strid 1975; Ingelög et al. 1984), Estonia (Järva, Parmasto 1980), Czech Republic, France, Hungary (Jülich 1984), Ukraina (Zerova et al. 1872), Siberia (Nikolajeva 1961), Russia Far East (Lyubarskij, Vasilieva 1975), India (Jahn, Sturm 1983) and North America in both Canada (Pomerleau 1980) and the USA (Banker 1913; Harrison 1973) (Koski-Kotiranta, Niemelä 1988).

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Gloiodon strigosus (Swartz: Fr.) P. Karst. (*Bondarzewiaceae*) w Polsce

Streszczenie

Przedstawiono opis stanowiska, synonimikę i ikonografię *Gloiodon strigosus*, gatunku uważanego za wymarły w Polsce. Podano też uwagi dotyczące ekologii i chorologii gatunku. *Gloiodon strigosus* jest gatunkiem wskaźnikowym dobrze zachowanych borealnych lasów łęgowych.

Fig. 2. Fructifications of *Gloiodon strigosus*: a) hymenophore with spines; b) upper surface covered with soft hairs. Phot. M. Snowarski.

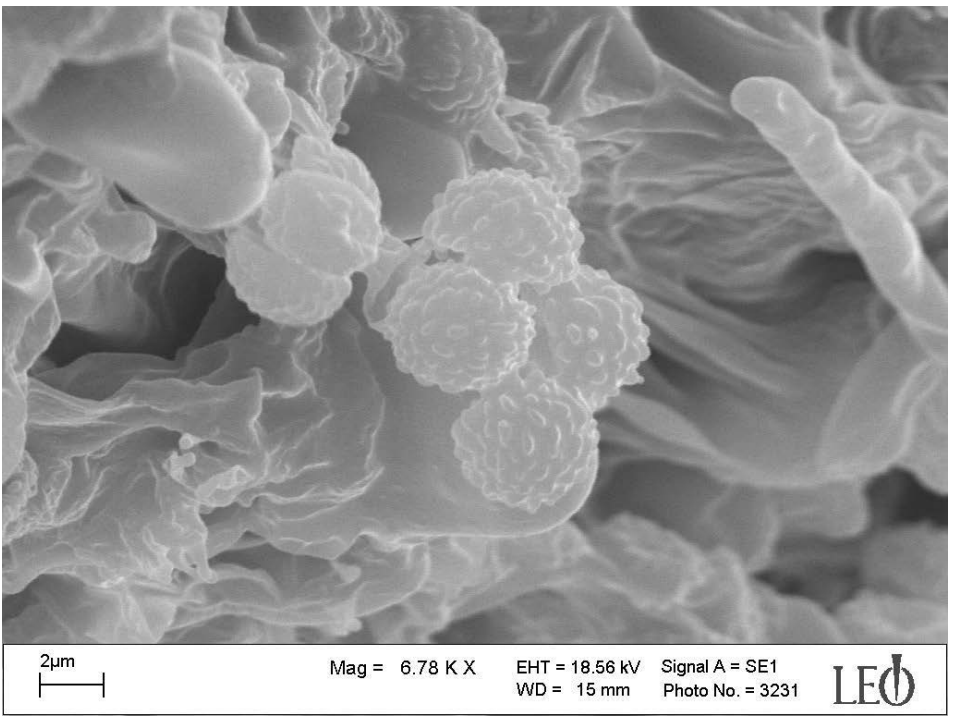

Fig. 3. Minutely verrucose spores of *Gloiodon strigosus* (SEM x 6,78 KX) (Courtesy of Lab. Electron & Confocal Microscopy, Adam Mickiewicz University, Poznań).