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Serpula himantioides (Fr.) Bond. ex Parm. in Poland

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Serpula himantioides recognized as an extinct species iń Poland, has been recently found in the Wielkopolski National Park. Synonyms and iconogarphy are given and the present distribution and ecology is discussed.

INTRODUCTION

Serpula himantioides, a representative of *Coniophoraceae* family (Kreisel, 1961, 1987) quoted as an extinct species in the Red list of Macrofungi in Poland (Wojewoda, Ławrynowicz, 1992) is fairly abundant in the strict reserve "Pod Dziadem" in the Wielkopolski National Park located SW of Poznań (Fig. 1, 2). Fructification were collected by junior author (R. Fiebich) in October 1991 during the collective research on vegetation of the reserve and cryptogams growing on logs of *Pinus sylvestris*, (Balcerkiewicz et al., 1991). Collection of the material was repeated in September 1992 and the determination (Jülich, 1984), revised by Wojewoda. Pine (*Pinus sylvestris*) in the Wielkopolski National Park fell a victim to the gradation of gypsy moth (*Lymantria monacha*) in 1980-1982, and in some reserves, among others in the strict reserve "Pod Dziadem" fallen logs have not been removed. The importance of logs in the forests is significant. They nourish many rare species of plants, fungi and animals (insects).

Nomenclature

Serpula himantioides (Fr.) Bond. ex Parm. (Domański, 1975) – *Merulius hmantoides* Fr.: Fr., Syst. Mycol. 1: 329, 1821 (basion.) – *Serpula himantioides* (Fr.: Fr.) Karst., Meddeland. Soc. Fauna Fl. fenn. 11: 137. 1984 – *Merulius americanus* Burt., Miss. Bot. Gard. Ann. 4, 345. 1917. – *Gyrophana himantioides* (Fr.: Fr.) Bourd. et Galz, Bull. Soc. Mycol. Fr 39: 108. 1923 – *Serpula lacrimans* (Wulf.: Fr.) Bond. var. *himantioides* (Fr.: Fr.) W. B. Cooke in Kreisel 1961.

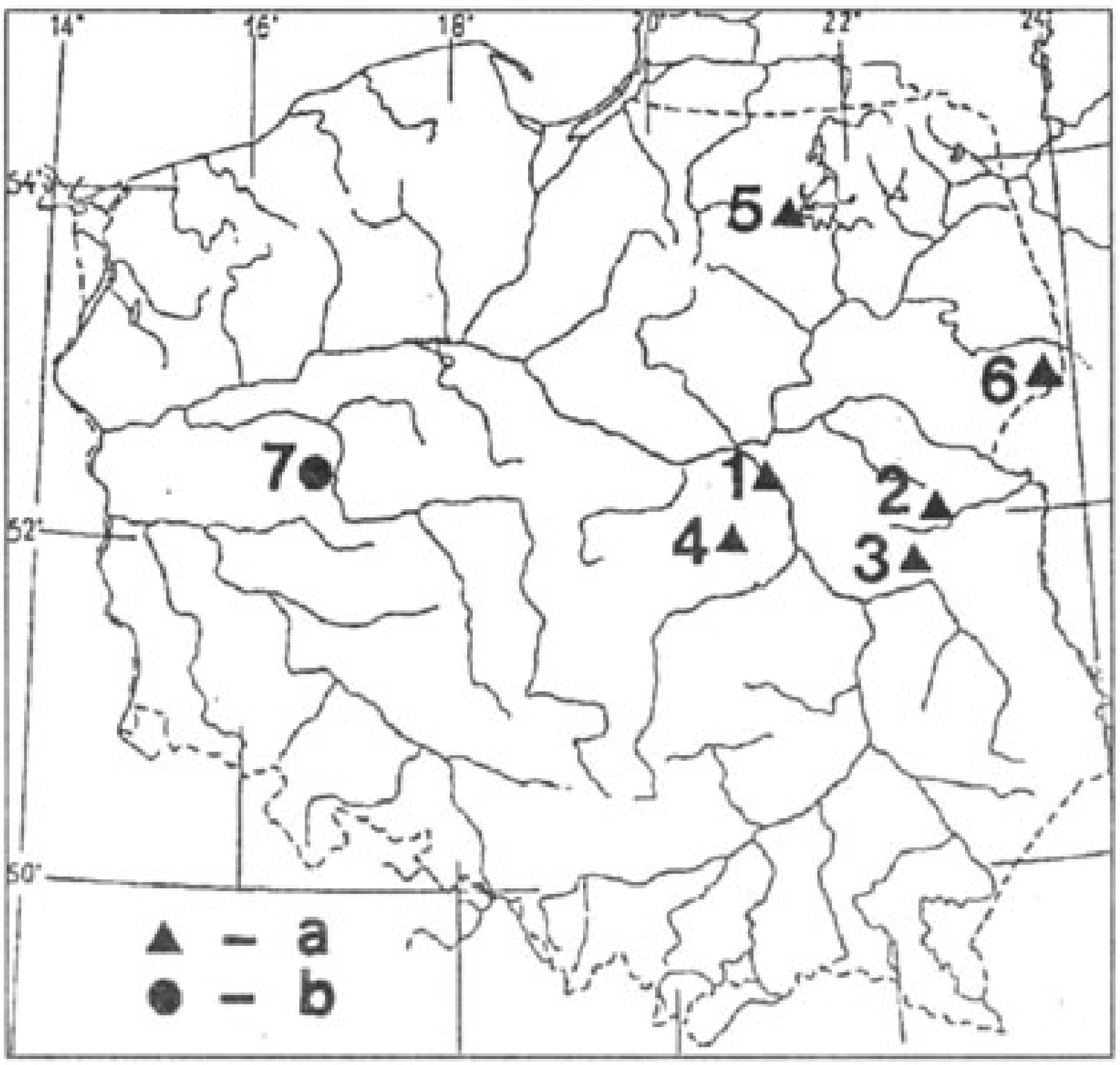


Fig. 1. Distribution of *Serpula himantioides* (Fr.) Bont. ex Parm. in Poland

1 – Warszawa (C h e ł c h o w s k i, 1888, 1889, 1899; B ł o ń s k i, 1896), 2 – Chorodyszcze (E i c h l e r, 1900), 3 – Stołpno (E i c h l e r, 1907);,4 – Mala Wieś (K i n e l s k a, R o ś l i k, 1959), 5 – Kamień (D o m a ń-s k i, 1963), Puszcza Piska (S k i r g i e ł ł o, 1966), 6 – Białowieski Park Narodowy (S k i r g i e ł ł o, 1968), 7 – Wielkopolski Park Narodowy; a – localities not confirmed with herbarium specimens, b – localities with herbarium specimens

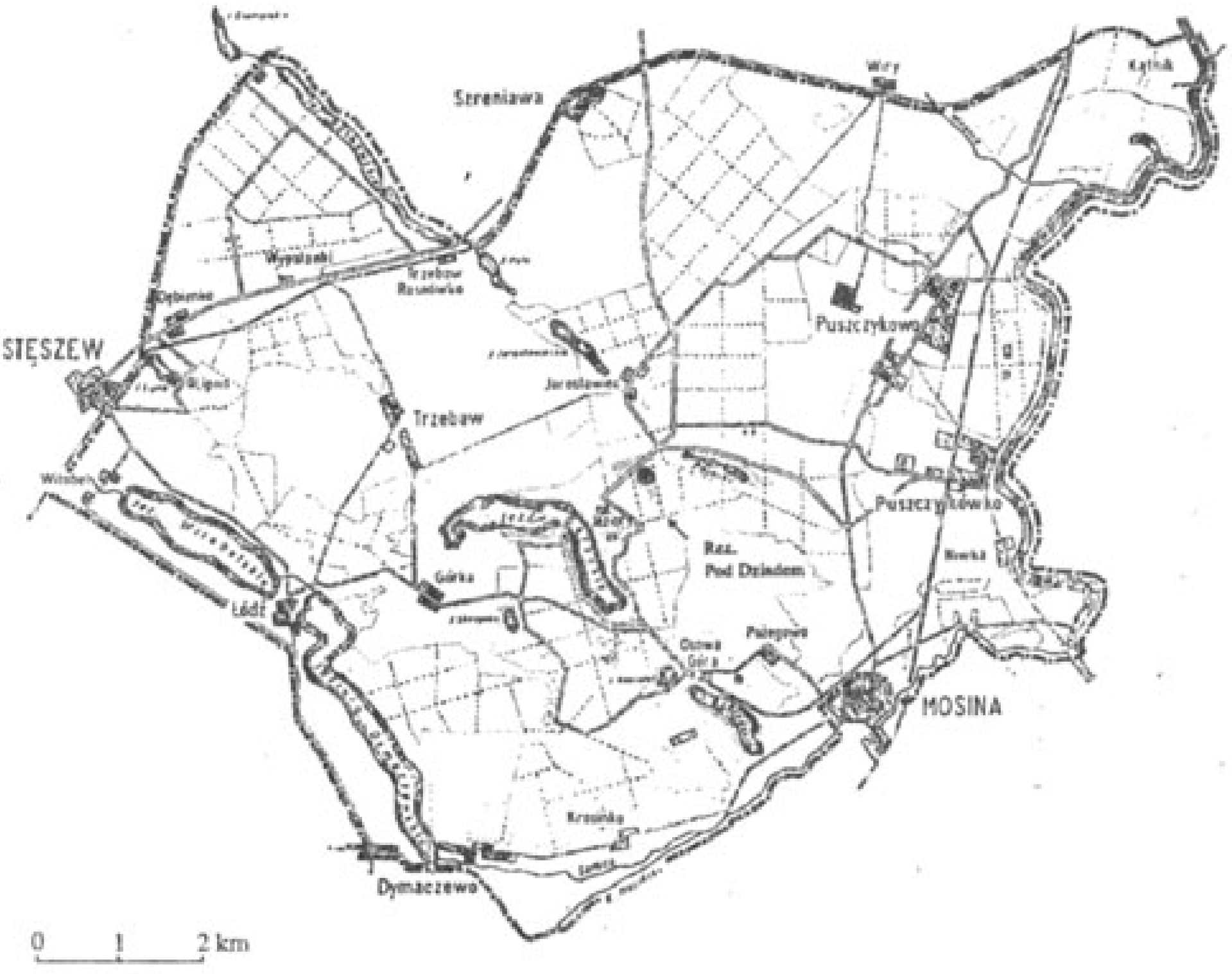


Fig. 2. Locality of *Serpula himantioides* in the Wielkopolski Park Narodowy (map after S z a f r a n, 1959)

Iconography and drawings

Christiansen (1960): 322, Fig. 320; Domański (1975) Tab. 57; Jahn (1979) 106, Fig. 76; Hallenberg, Eriksson (1985): Fig. 49-51; Bondarceva, Parmasto (1986), 172.

DESCRIPTION OF EXAMINED MATERIAL

Fructification (POZM) widely effused, membranous and brittle when dry. Hymenium merulioid or reticulate, honey brown, darker brown in the centre. Hymenium partly porose, pores angular (Fig. 3 a). Margins of resupinate fructifications white with distinct lilaceous tint, felty. Hyphal system dimitic. Generative hyphae 4.8-6.4 µm wide, branched, septate, clamped, thin-walled. Skeletal hyphae thick--walled, unbranched 1.6-3.2 µm wide.

Basidia clavate, 4 spored (Fig. 3 b, 4 b) 24-32 x 8.0 µm. Cystidia absent. Basidiospores broadly ellipsoid-ovoid, smooth, thick-walled, brown 9.6-11.6 (-15.6) x x (4.8-) 5.6-7.2 (-8.0) µm, with an apical germ pore (Fig. 4 a).

Dimensions of microscopic elements of *Serpula himantioides* according to different authors

Author	Basidia	Spores
Burt, 1917	–	9-10 x 6
Domański, 1975	40-75 x 6-10	9-13 x 5-7
Mazelaitis, 1976	4.5-5.5* x 6-10	8-13 x 5-7
Rattan, 1977	35-40 x 6-9	9-10.5 x 5-6
Jülich, Stalpers, 1980	25-45 x 6-9	(7-) 8 x 4.5-7 (-8)
Hallenberg, Eriksson, 1985	40-80 x 6-9	9-12 x 5-6.5
Bondarceva, Parmasto, 1986	30-70 x 6-10	8-12 (-13) x 5-7

Serpula himantioides was collected on October 1, 1991 and on September 23, 1992 in forest section 83 a on thick fallen logs of *Pinus sylvestris*, on decorticated wood mainly in the root neck, covered with pollsters of liverworts, *Nowellia curviflora*, a boreal – montane species, rare in the lowland, *Lophocolea heterophylla* and many species of mosses eg. *Aulacomnium androgynum, Hypnum cupressiforme* v. *cupressiforme*, *Pholia nutans* and *Tetraphis pellucia*. The forest is classified as *Pinus sylvestris-Quercus petraea-Milium effusum* syntaxon (Balcerkiewicz et al., 1991), but the habitat is typical of an oak-hornbeam forest with pine planted 160 years ago. *Pinus sylvestris* drops out from the treestand because of the age, tendency of the forest to develop towards the natural habitat and because of tradition of gradation of *Lymantria monacha*.

In the literature *Serpula himantioides* is recorded mainly on gymnosperms (*Pinus, Picea, Abies, Larix, Cedrus*) both in natural habitats: Eriksson (1958), Hellenberg, Eriksson (1985) and in gardens: Błoński (1896), Velenovsky (1920). It rarely grows on angiosperms: *Alnus* (Eichler, 1900), *Juglans regia* (Rattan, 1977).

* Probably mistake with comma; should be 45-55 x.

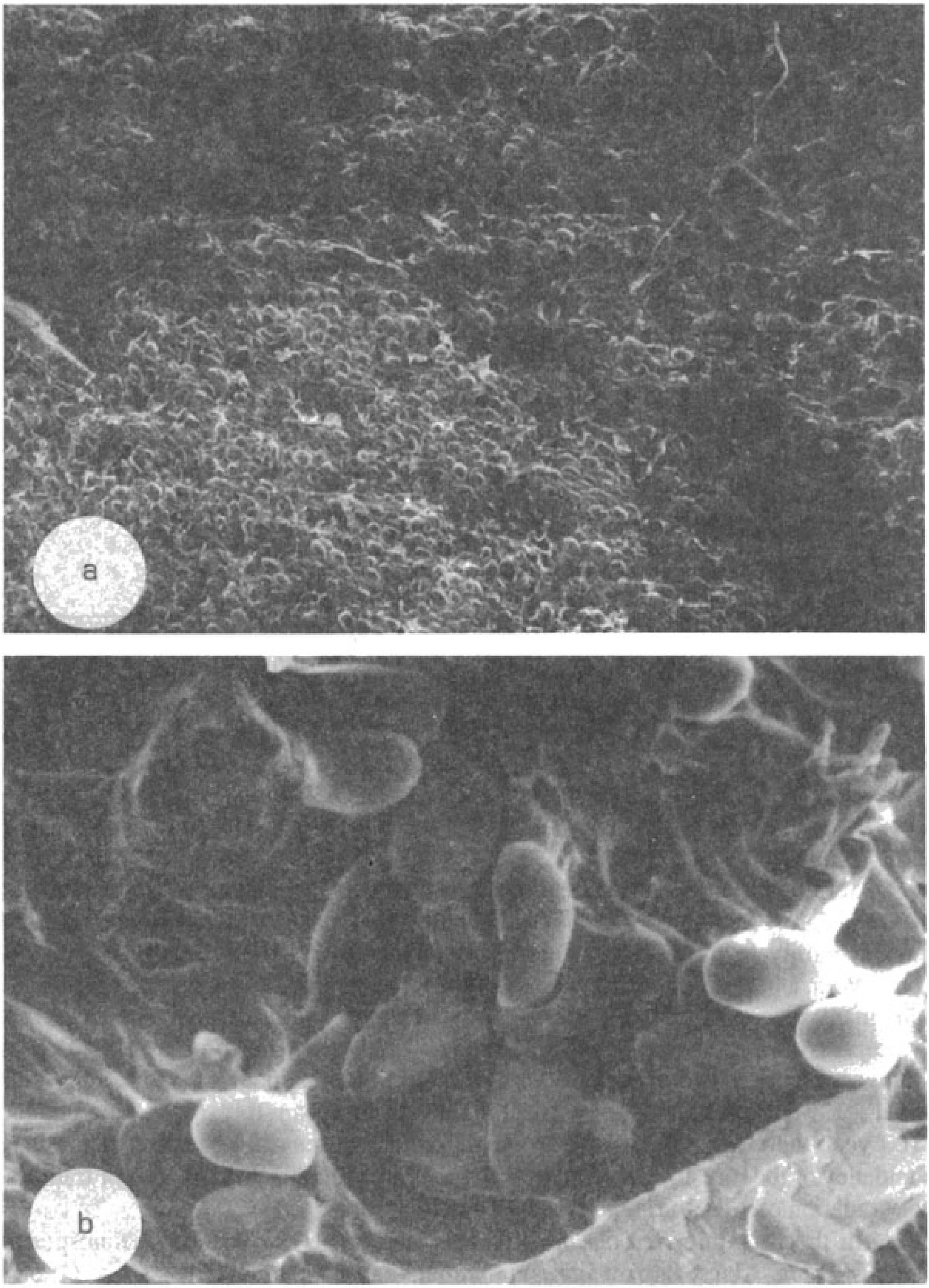
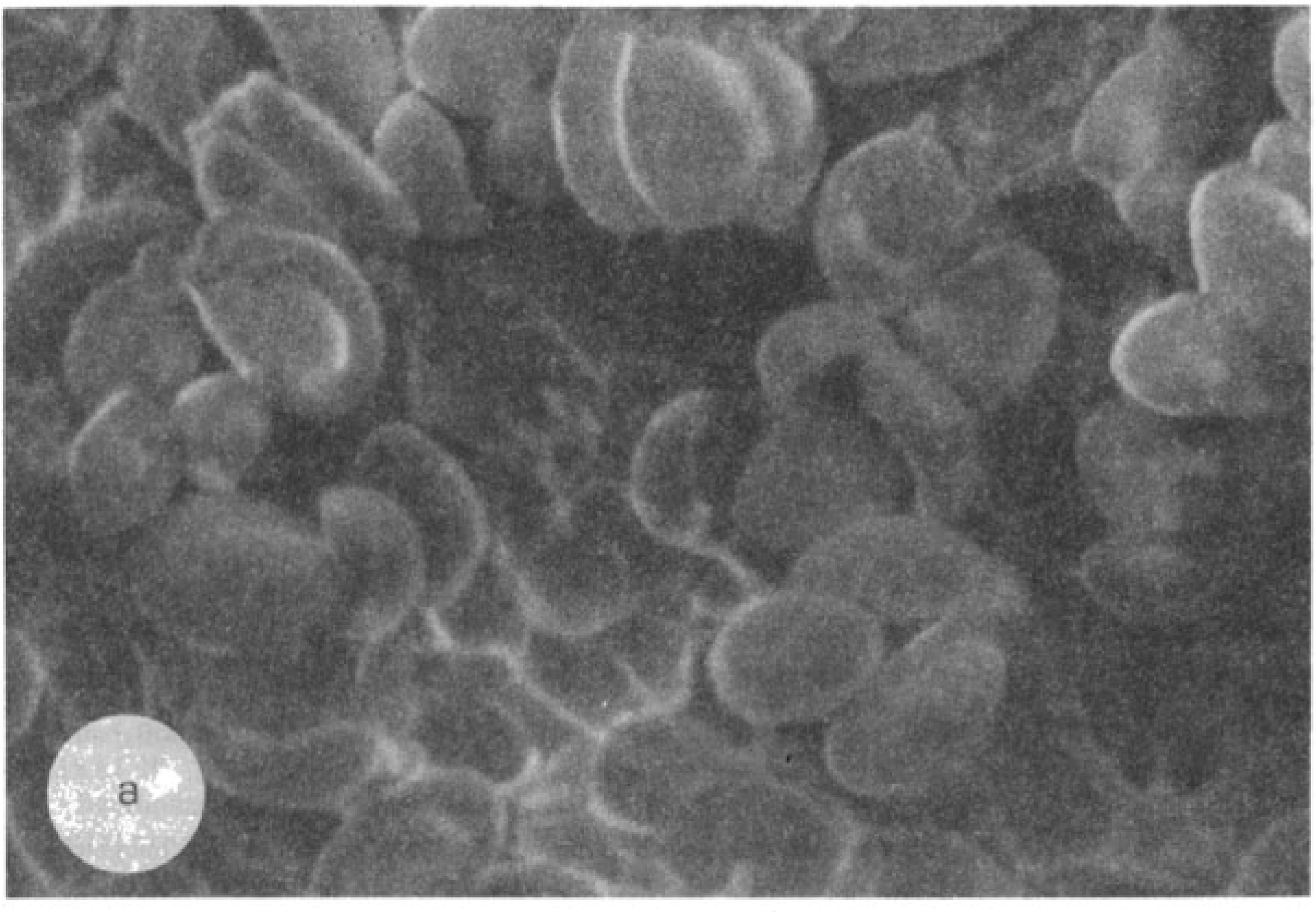


Fig. 3. *Serpula himantioides*

a – hymenial surface of fructification covered with spores. Visible angular pores (SEM x 326), b – tetrads of broadly ellipsoid-ovoid smooth spores (SEM x 2620)



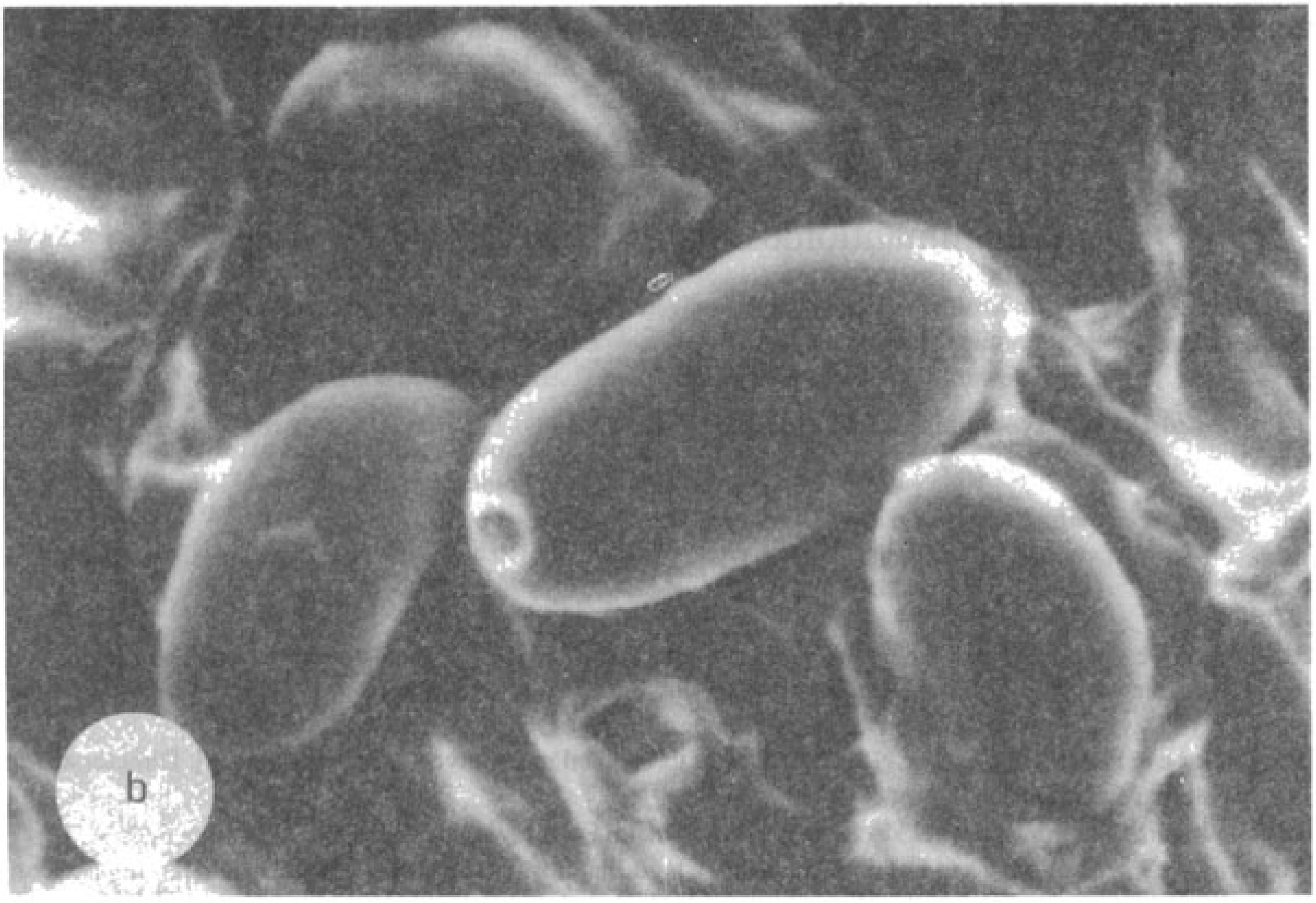


Fig. 4. *Sperula himantioides*

a – spores on sterigmata (SEM x 2300), b – spore with an apical germ pore (SEM x 2620)

Distribution

In Poland: Warszawa, Botanical Garden (Chełchowski, 1888, 1898); Warszawa, Botanical Garden, Królikarnia (Błoński, 1896); Chorodyszcze forest near Łomazy on Zielawa river (Eichler, 1900); Stołpno near Międzyrzecz Podlaski (Eichler, 1907); Mała Wieś near Grójec, Modrzewina reserve (Kinelska, Rośl ik, 1959); Kamień in Mazury region (Domański, 1963); Piska Forest (Skirgiełło, 1966); Białowieski National Park (Skirgiełło, 1968); Wielkopolski National Park.

In the world: Spain (Telleria, 1990), Great Britain (Rea, 1922), Denmark (Christiansen, 1960), Germany (Krieglsteiner, 1991; Kreisel, 1987, Gerhardt, 1990), Sweden (Erikkson, 1958), Czechia (Velenovsky, 1920-1922), Lithuania (Trzebiński, 1934; Mazelaitis, 1976), Russia (Bondarceva, Parmasto, 1986; Neuhoff, 1933), Asia (Bondarceva, Parmasto, 1986), North Western Himalayas (Rattan, 1977). It is present on the red list of macromycetes as conservation demanding species in Norway (Bendiksen, Høiland, 1992).

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Serpula himantioides (Fr.) Bond. ex Parm. w Polsce

Streszczenie

Przedstawiono synonimikę z ikonografią grzyba uważanego za wymarły w Polsce.

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