

## Botanical notes

### *INONOTUS TAMARICIS* (FUNGI, HYMENOGYASMALES) ON MELOS IN GREECE

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*Inonotus tamaricis* (Pat.) Maire is widespread in some parts of the Northern Hemisphere, especially in the countries bordering the Mediterranean and Black Sea. In Europe it is widely distributed from the Iberian Peninsula in the west to Ukraine and Russia in the east (Ryvarden & Gilbertson 1993). The Mediterranean distribution also includes the Middle Eastern countries Syria (Klán 1978) and Israel (Ryvarden & Gilbertson 1993), as well as Algeria, Morocco (Klán 1978) and Egypt (Hejny & Kotlaba 1984) in North Africa.

Outside the Mediterranean the distribution of *Inonotus tamaricis* is supplemented by further localities in Asia and Africa. In Asia it is known in the central part of the continent (Ryvarden & Gilbertson 1993), in China (Dai *et al.* 1997), and in Africa in Senegal (Ryvarden & Gilbertson 1993) and the Canary Islands (Beltrán Tejera & Rodríguez-Armas 1999). Throughout its geographical range it is strictly linked with species of *Tamarix* L., among others *Tamarix canariensis* Willd. and *T. gallica* L.

While preparing a distribution map of *Inonotus hispidus* (Bull.: Fr.) P. Karst. for the *Atlas of the Geographical Distribution of Fungi in Poland* (Piątek 2000), the author found in KRAM a collection of *Inonotus tamaricis* from the island of Melos (= Milos) in Greece. The fungus was collected there by Professor Kazimierz Browicz during his studies on the trees and shrubs of Melos (Browicz 1997). *Inonotus tamaricis* was not pre-

viously known from the island, and the finding deserves to be published.

In Greece the species is uncommon and has been reported from Attiki and Thessaloniki, and from the Mediterranean islands of Corfu, Crete, Rhodes and Spetses. For details of the Greek localities see Zervakis *et al.* (1998 and literature cited therein) and Dai *et al.* (1997). So far nine localities have been recorded in the country (Fig. 1).

The material contains two well-developed basidiomes, macroscopically similar to those de-

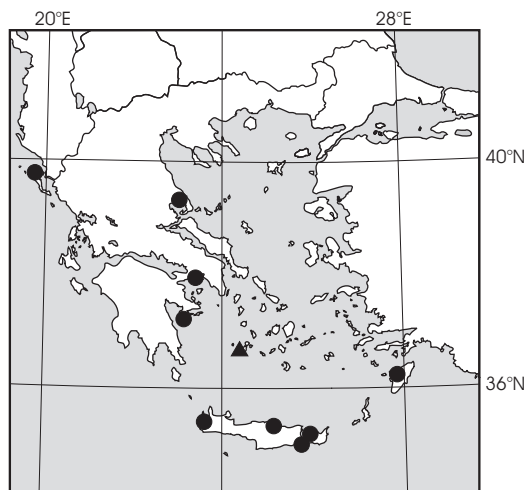


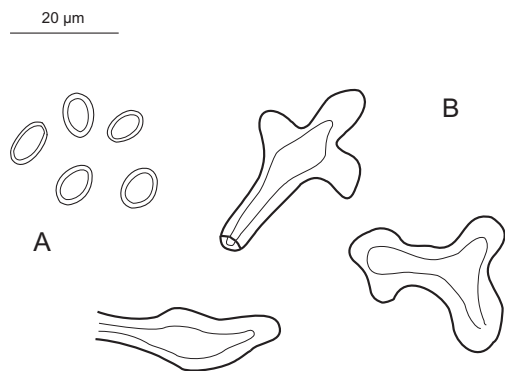
Fig. 1. Distribution of *Inonotus tamaricis* (Pat.) Maire in Greece. ● – previously known localities, ▲ – new locality.

picted by Gerhardt (1997, photograph on page 543). Basidiomes pileate, semicircular, one of them 14 × 7 cm wide, the second 10 × 6 cm wide. Upper surface hispid, cinnamon brown, zonate; pore surface brown, pores irregular, 1–2(–3) per mm. Context rusty brown with granular core at base. Contextual hyphae simple-septate; in granular core are very branched, dark brown binding hyphae and angular sclerids. No cystidia or setae present in hymenium. Basidia clavate, 10–20 × 7–9 μm, unclamped at base; basidiospores ellipsoid, rusty brown, thick-walled, (5.2–)7.3–9.4 × 4.2–6.2 μm (Fig. 2).

On an enclosed herbarium label the host was reported to be *Tamarix* sp., but according to Browicz (1997) the only species of *Tamarix* found on the island is *Tamarix arborea* Ehrenb. ex Bunge. This is a new host for this fungus in Greece. Previously it was reported only from *Tamarix gallica* and unidentified *Tamarix* (Kotlaba & Klán 1994; Zervakis *et al.* 1998).

**SPECIMEN EXAMINED.** GREECE. MELOS: coasts near Plathiena, on trunk of *Tamarix* [*Tamarix arborea*], 26 May 1996, leg. K. Browicz (KRAM F-36971); dupl. in herb. Zervakis (Kalamata, Greece).

*Inonotus tamaricis* is rather easy to identify because of the presence of a granular core at the base of the context and its connection with *Tamarix*. *Inonotus rheades* (Pers.) P. Karst. also has a granular core, but it occurs on various deciduous trees, mainly on *Fagus* L., *Populus* L. and *Quercus* L.,



**Fig. 2.** *Inonotus tamaricis* (Pat.) Maire. A – basidiospores, B – sclerids from granular core.

and it has smaller basidiospores (6.2–7.3 × 4.2–5.2 μm from Polish collection: Tarnów at Ochronek Street, on living trunk of *Fagus sylvatica* L., 6 Aug. 1997, leg. M. Piątek, KRAM F-39367). Moreover, *I. rheades* is known from Northern and Central Europe rather than Southern Europe (according to Ryvarden and Gilbertson 1993 it has a boreal distribution). In fact it was also reported from the Mediterranean – Portugal (Farinha 1956), Italy (Bernicchia 1990) and Israel (Avizohar-Hershenzon & Jaquenoud 1980; Binyamini & Halperin 1983) – but it is unknown in Greece (Zervakis *et al.* 1998). A similar granular core may also be found in the basidiomes of *Inonotus dryophilus* (Berk.) Murrill, but that species grows on *Quercus* and has not been found in Greece (Zervakis *et al.* 1998). *Inonotus tamaricis* is very similar to *Inonotus levis* P. Karst. (Dai *et al.* 1997). Both species occur in Central Asia, but the latter species differs in having slightly larger spores and a different host spectrum.

These four species form a natural group within the genus *Inonotus* P. Karst. Donk (1974) placed these fungi in *Inonotus* sect. *Phymatopilus* Donk, and Fiasson and Niemelä (1984) transferred them to a genus of its own, *Inocutis* Fiasson & Niemelä.

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## NEW DISCOVERY OF *DAEDALEOPSIS TRICOLOR* (FUNGI, PORIALES) AND A REVIEW OF ITS DISTRIBUTION IN POLAND

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*Daedaleopsis tricolor* (Pers.) Bondartsev & Singer is a rare polypore with a submediterranean type of distribution in Europe, where it is present in western and central parts of the continent. The fungus is completely unknown in Northern Europe, where it is replaced by a vicariant species, *Daedaleopsis septentrionalis* (P. Karst.) Niemelä (Ryvarden & Gilbertson 1993). *D. tricolor* is somewhat similar in appearance to *Daedaleopsis confragosa* (Bolton: Fr.) J. Schroet. and for a long time it was considered to be variety of it (e.g., Bondartsev 1953; Domański *et al.* 1967; Tellería 1980; Breitenbach & Kränzlin 1986). Unlike *D. confragosa* it forms smaller basidiomes with a

reddish upper surface of pileus and lamellate hymenophore.

In Poland the first record of the fungus was made at the end of the 1950s by Domański *et al.* (1960), who found it on Dział Mt. in the Bieszczady Mts. A few years later the same group of mycologists found two more localities in this mountain range, on the western slope of Kiczera Mt. and on the southeastern slope of Połonina Caryńska Mt. (Domański *et al.* 1963). Now these localities are within the Bieszczady National Park. In the late 1990s three additional localities were discovered in the Beskid Niski Mts: near Polany in the Głębokie forest, between Polany and Mys-

cowa, and in the valley of Baranie stream (Wojewoda 1999). These are within the borders of the Magura National Park, and until recently represented the northwesternmost occurrence of this species in the Carpathians.

In 2000 a beautiful collection of *Daedaleopsis tricolor* was made in the Pogórze Ciężkowickie foothills in a well-preserved deciduous forest with *Fagus sylvatica* L., *Abies alba* Mill. and *Carpinus betulus* L. The locality is situated in a valley by a small stream, and such a habitat is rather typical for this species (Ryvarden & Gilbertson 1993). The basidiomes occurred on a dead standing trunk of *Corylus avellana* L. The trunk was 1.5 m high and broken at the top. Dead basidiomes of *Daedaleopsis tricolor* occurred where the trunk was broken, while live basidiomes emerged below, 1 m above the ground. On and around the dead basidiomes were live specimens of *Antrodiella semisupina* (Berk. & M. A. Curtis) Ryvarden, which is treated as a 'successor' species and appears on wood previously decayed by other polypores (see Niemelä *et al.* 1995; Piątek 2001). All the aforementioned observations suggest that the trunk of hazel was infected by *D. tricolor* at the top and that the mycelia had grown from the top to the bottom of the trunk. The mycelia were dying from the top toward the bottom, and the dead basidiomes were subsequently replaced by *A. semisupina*.

SPECIMEN EXAMINED. POLAND. WESTERN CARPATHIANS. Pogórze Ciężkowickie foothills: Ryglice, near Pod Lasem farmstead in valley of unnamed stream on NW slopes of Góra Liwecka Mt., ca 20 km SE of center of Tarnów, alt. ca 360 m, 8 Aug. 2000, leg. M. Piątek (KRAM F-51284).

In Poland the species currently is known from seven scattered localities in the Eastern Carpathians and in eastern parts of the Western Carpathians (Fig. 1). The site in the Pogórze Ciężkowickie foothills is actually the northwesternmost in the Carpathians and in Poland as a whole. It is significant that the species was not found further west, for instance in the mycologically well-investigated Beskid Sądecki (Wojewoda 2000) or Pieniny Mts. (Gumińska 1999 and lit.). In the Carpa-

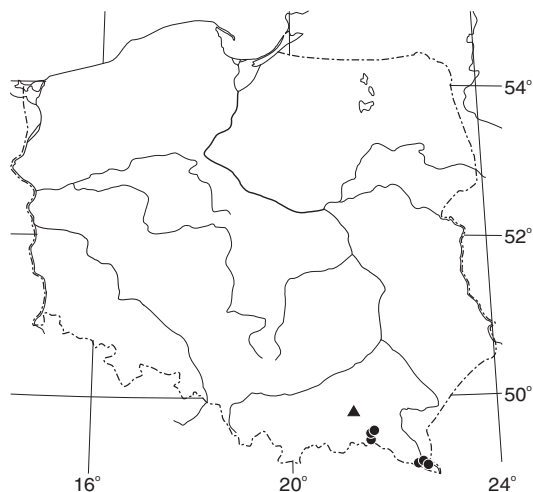


Fig. 1. Distribution map of *Daedaleopsis tricolor* (Pers.) Bondartsev & Singer in Poland. ● – previously known localities; ▲ – new locality.

thians (at least the Polish parts of these mountains), *Daedaleopsis tricolor* seems to be an eastern species with a type of distribution similar to that of some Eastern Carpathian vascular plants, for example *Aposeris foetida* (L.) Less., *Symphytum cordatum* Waldst. & Kit. ex Willd. or *Scopolia carniolica* Jacq. In the territory of the former Czechoslovakia it is somewhat more common in the eastern part of Slovakia, while in other parts of this area only a few records of the species are known (Vampola 1994).

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