New record of genus *Peziza* (Pezizales, Ascomycetes) in Egypt and Africa

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The genus *Peziza* is new for Egypt and Africa where it is represented by *Peziza repanda* Wahlenb. Location, dates of collections in Egypt, general distribution, detailed macro- and micro-morphological descriptions and illustrations are given.

Key words – Ascomycetes – Egypt – *Peziza* – Pezizales

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Introduction

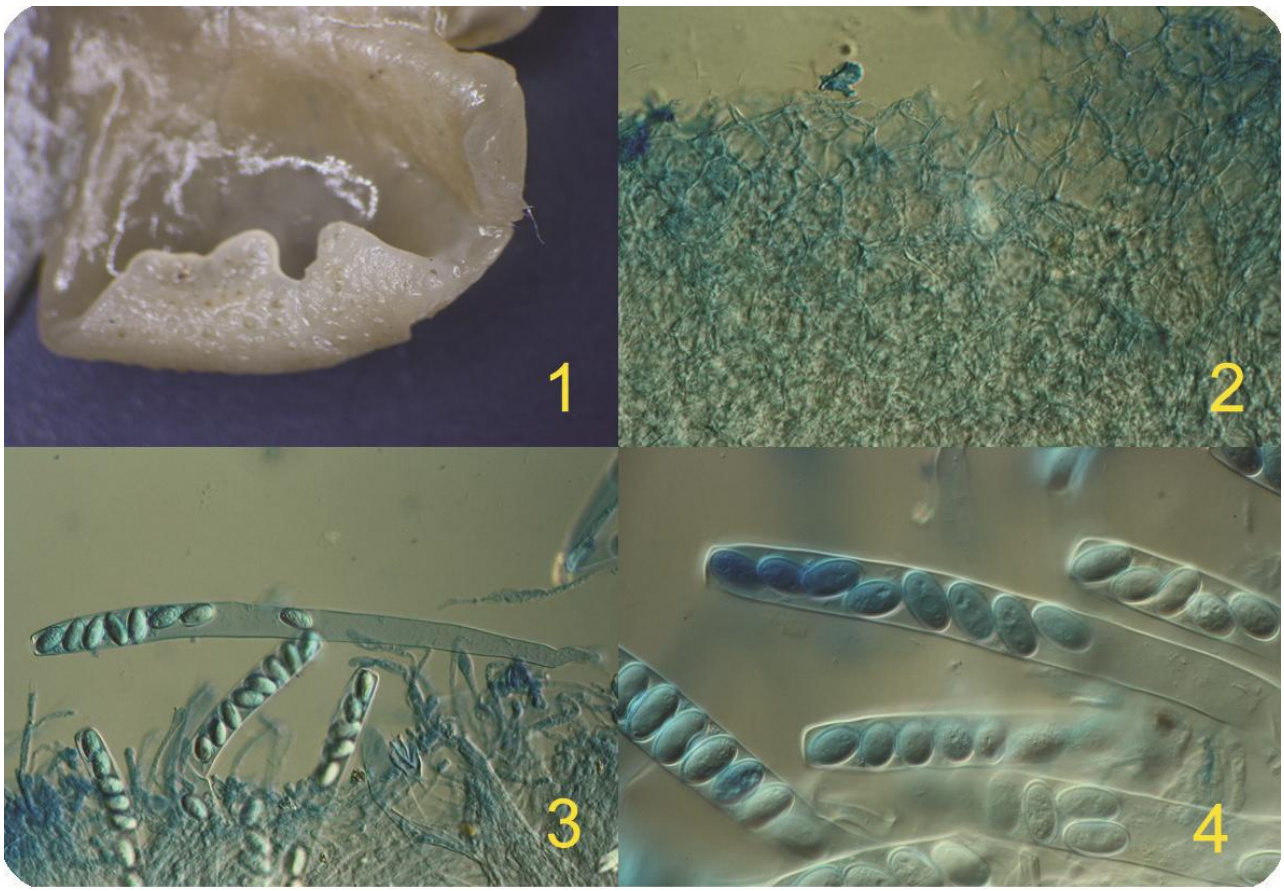
The study of Pezizales in Egypt is limited because members of the group were either overlooked during investigations or were never the sole target of any investigation until Abdel-Azeem (2003) conducted a survey focusing mainly on Ascomycetes. Many investigators have reported Pezizales during casual isolations from different sources e.g. Melchers (1931), Mouchacca (1977), Bagy et al. (1986), Moustafa & Ess El-Din (1989), Ibrahim (1995), El-Saadawi & Shabbara (1999) and Krug & Khan (1999). By scanning of available sources of information, it was possible to determine 23 taxa (2 introduced as novel taxa and 21 recorded during routine isolation) that could represent Pezizales from soil and other terricolous substrates in Egypt.

Methods

The present study was based on specimens collected between 2005 and 2009. Our specimens were deposited at the fungarium of Suez Canal University (SCUF), Egypt. The microscopic characteristics were observed with a Carl Zeiss-amplival microscope and microscopic photos were taken with a Canon Power Shot G10 digital camera. Fungal material was mounted on a microscope slide and examined in water using phase contrast at ×20 and ×40 magnification. For statistical calculations, 100 ascospores, asci, and paraphyses were measured for every preparation. Micromorphological characteristics of the specimens were observed using Melzer's reagent, and lactophenol blue solution. All synonyms were adopted from Index Fungorum online database (http://www.indexfungorum.org). The identification of the specimens was carried out using relevant references (Dennis 1978, Ellis & Ellis 1998, Barseghyan & Wasser 2011).

Results

Peziza repanda Wahlenb., Fl. Upsal.: 466 (1820). Figs. 1–4.
= *Aleuria repanda* (Wahlenb.) Gillet, Champignons de France, Discom. (1879); *Discina repanda* (Wahlenb.) Sacc., Syll. fung. (Abellini) 8: 100 (1889); *Galactinia repanda* (Wahlenb.) Le Gal, Bull. trimest. Soc. mycol.



Figs 1–4 *Peziza repanda*. **1** Margin of apothecium. **2** Excipulum of textura angularis. **3–4** Eight – spored asci, paraphyses and mature ascospores.

Fr. 78: 208 (1962); *Plicaria repanda* (Wahlenb.) Rehm, in Winter, Rabenh. Krypt.-Fl., Edn 2 (Leipzig) 1.3(lief. 43): 1007 (1894) [1896]. **Icon**. Cooke (1875–1879: 240); Bresadola (1898: pl. 189); Le Gal (1941: 64, fig. 3); Seaver (1942: 230); Smitskaja (1980: 99); Dennis (1981: pl. V); Donadini (1981: 17, pl. 5–6, fig. 2); Phillips (1981: 269); Binyamini (1984: fig. 10); Pantidou (1991: 187).

Specimens Examined – Egypt, El-Sanania, Damietta, on the ground, 13 December 2005, 27 January 2007, 30 November 2008, 28 December 2009, leg. A.A. El-Fallal, det. A.M. Abdel-Azeem (SCUF-31, 57, 89, 133).

Habitat and general distribution – This species is primarily a humus saprotroph. The fruiting bodies can appear after fires and are found on soil. AFRICA: Egypt. ASIA: China, Israel, Japan, Kazakhstan, Korea, South Caucasus. AUSTRALASIA: Australia, New Zealand. EUROPE: Austria, Bulgaria, Denmark, Finland, France, Germany, The Netherlands, Norway, Poland, Spain, Sweden, Switzerland, Russia, Ukraine, United Kingdom. NORTH AMERICA: USA. According to Moser (1963) and Dennis (1978), *Peziza repanda* is sessile and grows on the ground or in sawdust.

Description and discussion of species

Apothecia sessile or very short-stipitate, shallow cup-shaped, the margin even or crenate, externally whitish to creamy fawn, expanding and becoming curved, the margin remaining entire or splitting, regular in outline or irregularly revolute, reaching a diameter of 5–10 cm; hymenium concave, becoming plane or convex, pale brown, becoming darker with age, even or convolute (Fig. 1).

Asci cylindrical, 325–345 × 15–20 µm. Ascospores ellipsoid, hyaline, smooth, 13.5-18.75 × 10–11.25 µm, wall 1.25 µm thick; paraphyses slender, slightly enlarged above, yellowish or brownish, textura angularis (Figs. 2–4).

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References

Abdel-Azeem AM. 2003 – Ecological and taxonomical studies on ascospore-producing fungi in Egypt. PhD thesis, Faculty of Science, Suez Canal University, Ismailia, Egypt.

Bagy MMK, Moharram AM, Abdel-Mallek A. 1986 – Coprophilous fungi of the camel. Bulletin of the Faculty of Science, Assiut University 15, 1–10.

Barseghyan GS, Wasser SP. 2011– The genus *Peziza* Dill. ex Fr. (Pezizales, Ascomycota) in Israel. Ascomycete.org 2, 39–50.

Binyamini N. 1984 – Larger fungi of Israel. Ascomycotina, Basidiomycotina. (Aphyllophorales, Auriculariales, Tremellales and Gasteromycetes). Tel Aviv, Publishing Co., 175 p.

Bresadola G. 1898 – Fungi tridentini novi, vel nondum delineati, descripti, et iconibus illustrati 2, 8-10.

Cooke MC. 1875–1879 – Mycographia, seu icones fungorum. Vol. I. Discomycetes. Londres, Williams and Norgate. 6 fasc.

Dennis RWG. 1978 – British Ascomycetes. Vaduz, A.R. Gantner Verlag.

Dennis RWG. 1981– British Ascomycetes. 4th edn. J. Cramer, Vaduz.

Donadini JC. 1981 – Le genre Peziza dans le Sud-Est de la France avec clé du genre pour laFrance. Marseille

Ellis MB, Ellis JP. 1998 – Microfungi on miscellaneous substrates: an identification handbook. 246 pp. Slough, The Richmond Publishing Co., UK.

El-Saadawi WE, Shabbara HM. 1999 – The first report on a moss fungus association in Egypt. Arab Gulf Journal of Scientific Research 17, 221–229.

Ibrahim, RA. 1995 – Studies on desert truffles. MSc thesis, Faculty of Science, Cairo University, Cairo.

Krug JC, Khan RS. 1999 – Soil fungi from eastern Dakhleh Oasis. In: C.S. Churcher & A.J. Mills [eds]. Reports from the Survey of Dakhleh Oasis, Western Desert of Egypt, 1977–1987. Dakhleh Oasis Project Monograph 2: Oxbow Monograph 99. Pp. 69–71. Oxbow Books, Oxford, U.K.

Le Gal, M. (1941) Les *Aleuria* et les *Galactinia*. Revue de Mycologiė, Supplement 6: 56±82.

Melchers LE. 1931 – A check list of plant diseases and fungi occurring in Egypt. Transactions of the Kansas Academy of Science 34, 41–106.

Moser MM. 1963 – Ascomyceten (Schlauchpilze). Kleine Kryptogamenflora IIa. Stuttgart, Gustav Fischer.

Mouchacca J. 1977 – Sur un nouveau Discomycetes *Ascobolus egyptiacus*. Travaux dédiès à G. Viennot-Bourgin, pp. 236-267. Société Francaise de Phytopathologie, Paris.

Moustafa AF, Ess El-Din EK. 1989 – *Lasiobolidium aegyptiacum*, a new ascomycete from Egyptian soils. Mycological Research 92, 376–378.

Pantidou ME. 1991- Mushrooms in the forests of Greece. Goulandris Natural History Museum, Athens.

Phillips R. 1981– Les champignons. Solar.

Seaver FJ. 1942 – The North American Cup-Fungi (Operculates) (Supplemented ed.). Lancaster.

Smitskaja MF. 1980 – Flora Fungorum RSS Ucrainicae. Discomycetes (Operculate). Naukova Dumka, Kiev.