## Additional Myxomycetes from West Pakistan

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#### With 2 Textfig.

In a previous paper Lohdi (1) reported 45 known species of Myxomycetes from West Pakistan; 20 additional recognized species are here listed and one new species is described. This brings to 66 the total number of species belonging to this group thus far recorded from West Pakistan.

The numbers given are those of the myxomycete collection of the University of the Panjab, Lahore. Duplicate specimens of most species are preserved in the collection of the State University of Iowa, Iowa City.

The classification followed and the order in which the species are listed is that of Martin (2).

Lycogala conicum Pers. No. 302

Murree, 22 Aug. 1955. Aethalia rather small, 1.5–2.3 mm tall, 1.1–1.7 mm broad; spores faintly reticulate under an oil immersion lens, 5–6  $\mu$  in diameter.

Cribraria macrocarpa Schrad. No. 310

Murree, 2 Aug. 1955. On coniferous wood.

Perichaena depressa Lib. No. 326

Murree, Sept. 1955. On dead wood.

Arcyria ferruginea Sauter. No. 322

Jhikagali, Murree, 20 Aug. 1955.

Trichia varia (Pers.) Pers. No. 350

Doongagali, 1 Sept. 1955. The spores in this collection are 12–16  $\mu$  in diameter.

Trichia pusilla (Hedw.) G. W. Martin. No. 353

Doongagali, 2 Sept. 1955. Includes both stalked and sessile sporangia.

Hemitrichia serpula (Scop.) Rost. No. 356

Charhan, Murree, 22 Aug. 1955. This collection is provisionally assigned to this species. Externally it is in exact agreement, but the capillitium is very broad, about 9  $\mu$ , without spines and with the spirals very close and irregular. The ridges of the reticulations on the spores are very thin and delicate. Pending further collections which will show whether these differences are constant, it may be regarded as a variant of *H. serpula*. ©Verlag Ferdinand Berger & Söhne Ges.m.b.H., Horn, Austria, download unter www.biologiezentrum.at

Stemonitis nigrescens Rex. No. 369 Jhikagali, Murree, 13 July 1955.
Comatricha nigra Pers. No. 379 Doongagali, 6 Aug. 1955.
Comatricha pulchella (C. Bab.) Rost. No. 389 Murree, 28 Aug. 1955.
Lamproderma columbinum (Pers.) Rost. No. 300. Doongagali, 1 Sept. 1955.



Fig. 1. Didymium labyrinthiforme. Habit, on leaf,  $\times$  3. This represents approximately half of the type collection.

Badhamia utricularis (Bull.) Berk. No. 400.

Between Doongagali and Nathiagali, 2 Sept. 1955. This would be referred to *B. magna* Peck by those who wish to recognize that species. The spores are very loosely clustered, mostly falling apart when mounted, either globose, 10–13  $\mu$ , or elliptical or ovate, 12–13  $\times$  9–10  $\mu$ .

Physarum Listeri Macbr. No. 414

Kashmir Point, Murree, 29 Aug. 1955. On wood and fallen leaves. Some of the stems are very short and thick so that the sporangia appear almost sessile. The spores are  $10-11 \mu$  in diameter, in the smaller range for the species, but otherwise typical, that is, coarsely and irregularly spiny. This is the species called. *P. luteo-album* by the Listers, but Schumacher had already used that combination for what is now called *Perichaena corticalis*.

Physarum melleum (Berk. & Br.) Massee. No. 415 Murree, 2 Aug. 1955. On dead leaves.

### Physarum viride (Bull.) Pers.

Murree, 26 Aug. 1955. No. 418. On dead wood. As is well known, the peridial color in this species varies from creamy white, usually with yellowish nodes, to deep reddish brown. The collection here referred to the species belongs near the dark end of the series. The peridium is bright orange brown, very close to Dragon's-blood Red of Ridgway. The spores, 8  $\mu$  in diameter, are somewhat more markedly spinulose than usual, with definite tendency for the spines to be clustered.



Fig. 2. Didymium labyrinthiforme. Spores, capillitium and lime crystals,  $\times$  1200.

Leocarpus fragilis (Dicks.) Rost. No. 439

Murree, 19 Aug. 1955.

Didymium fulvum Sturgis. No. 442

Murree, 19 Aug. 1955. On dead leaves and twigs. So far as available literature indicates, this species has hitherto been known only from the type collection by Sturgis, made in the mountains of Colorado in 1913. The present collection agrees entirely with the type except that some of the sporangia have a thick, stem-like base, obviously an extension of the hypothallus.

Didymium serpula Fries. No. 444

Charhan, Murree, 23 Aug. 1955. On dead leaves.

Didymium labyrinthiforme sp. nov. No. 464. Fig. 1, 2.

Plasmodiocarpis cinereis, effusis, dense reticulato-labyrinthiformibis, articulis plus minusque 0.2 mm latis; peridio delicatulo, membranaceo, iridescenti, crystalis calcareis dense tecto; columella nulla; capillitio fusco, reticulato; sporis globosis, pallide violaceis, minuto spinulosis,  $9-11 \mu$  diam.

Plasmodiocarp cinereous, about Gull Gray of Ridgway, closely reticulate, appearing labyrinthiform, the individual veins about 0.2 mm in width, the whole up to 2 cm or more in extent; peridium delicate, membranous, smoky-hyaline, iridescent, closely sprinkled with lime crystals; columella lacking; capillitium dark, netted, the threads  $1.5-2 \mu$  thick with occasional nodose swellings, the meshes mostly  $5-15 \mu$  wide; spores globose, pale violaceous, covered with large but rather sparsely and irregularly distributed spines,  $9-11 \mu$ in diameter. plasmodium unknown.

PAKISTAN: Kuldana, Murree, 7000 ft. 10 Sept. 1955. On ivy leaves. No. 464, TYPE (LAH, IA).

The densely netted plasmodiocarp suggests D. parietale, but there is no evidence of the characteristic columella and vesicular bodies of that species, the spores are smaller and the closely netted capillitium is quite distinct.

Didymium Iridis (Ditmar) Fries. No. 461

Charhan, Murree, 29 Aug. 1955. On dead leaves. Very commonly known as *D. xanthopus* Fries, or *D. nigripes* var. *xanthopus* Lister. There is genuine difficulty in deciding whether this should be recognized as a distinct species but certain as yet unpublished cultural data by Alexopoulos suggest very strongly that *D. Iridis* and *D. nigripes* are really distinct, although certainly closely related. The translucent stalks and white columellae of the present collection would place it in *D. Iridis*. The spores are 9–10  $\mu$  in diameter.

Didymium Listeri Massee. No. 462.

Murree, 29 Aug. 1955. On dead leaves.

#### Literature cited

- 1. Lohdi, S. A. Some Myxomycetes from West Pakistan. Sydowia 5: 375-383. 1951.
- 2. Martin, G. W. Myxomycetes. North American Flora 1 (1): 1-151. 1949.

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