

3. Hirota, Y., Fujii, T., Sano, Y. and Iyama, S., *Nature (London)*, 1978, 276, 416.
4. Mohapatra, R. N. and Rao, V. R., *Plant Soil*, 1981, 59, 473.
5. Nayak, D. N., Pasalu, I. C. and Rao, V. R., *Curr. Sci.*, 1980, 49, 118.
6. Rao, J. L. N., Pasalu, I. C. and Rao, V. R., *J. Agric. Sci.*, 1983, 100, 637.
7. Weinhard, P., Balandreau, J. and Rinaudo, G., *Rev. Ecol. Biol. Sol.*, 1971, 8, 367.
8. Lee, K. K., Castro, T. and Yoshida, T., *Plant Soil*, 1977, 48, 613.

Table 1 Morphometric differences between female and male fish.

	Female	Male
Standard length (mm) (length)*	19.7 ± 0.6	19.2 ± 0.7
Longest dorsal ray	15.2	20.3
Longest ventral ray (number)	11.7	11.7
Anal fin base	30.1	31.9
Anal fin rays branched	0.92	0.17
Rays with papilla processes	0	0
Nodes in an anal fin ray	8.9	13.1
Nodes in a dorsal fin ray	8.6	12.5
Urinogenital papillae	Large	Small

* Expressed as percentage of the standard length.

SEXUAL DIMORPHISM IN *ORYZIAS MELASTIGMA* (McCLELLAND).

TAKASHI IWAMATSU, HIROSHI UWA* and O. P. SAXENA**

Department of Biology, Aichi University of Education, Kariyashi, Aichi 448, Japan.

* Department of Biology, Shinshu University, Matsumoto, 390, Japan.

** Zoology Research Laboratories, Multanumal Modi College, Modinagar 201 204, India.

ORYZIAS MELASTIGMA belongs to the order Atherinoformes, family Oryziatidae. The members of the genus *Oryzias* are small, hardy and prolific breeders which inhabit fresh and brackish water. They are worldwide in distribution (tropical and temperate regions). Yamamoto¹ and Labhart² reported 10 species of *Oryzias*, of which *O. melastigma* is the only representative from India not noticed by the past investigators due to its restricted distribution. The information available on *Oryzias melastigma* is only the work of Sriramulu³ and Uwa *et al*⁴.

Morphometric differences in male and female *O. melastigma* are given in table 1. Sexual dimorphism is exhibited in figures 1 and 2.

From table 1 it is evident that sexual dimorphism is quite conspicuous in this fish. Although the females and males are almost of the same size, yet the anal and dorsal fins are enlarged in the males while the urinogenital papilla in front of the urinogenital pore is comparatively small. On the contrary, the females have less developed anal and dorsal fins but well developed urinogenital papilla. Males very active in mating behaviour reveal the black ventral fins (figure 1). The most prominent feature of the male



Figure 1. *Oryzias melastigma* (approximately × 2)
A. Female B. Male

sexual character is the shape of the anal fin which is almost triangular while in female it is almost like a parallelogram. The branched anal fin rays are less in males than in females. The nodes on anal fin ray and dorsal fin ray are more in males than females. The eggs remain hanging under the bellies of females for several hours (figure 2) after spawning. The eggs are kept in



Figure 2. Female *Oryzias melastigma* with eggs attached to its belly.

this position out of the urinogenital pore by long attaching filaments on the chorion.

The male and female do not appear different from each other in other taxonomic features.

31 December 1984; Revised 8 April 1985

1. Yamamoto, T., In: *Medaka (Killifish) Biology and Strains*, Keigaku Publishing Company, Tokyo, Japan, 1975.
2. Labhart, P., *DKG Journal*, 1978, 9, 152.
3. Sriramulu, V., *La Cellule*, 1963, 63, 369.
4. Uwa Hiroshi, Iwamatsu, T. and Saxena, O. P., *Proc. Jpn Acad.*, 1983, 59, 43.

DUPORTELLA TRISTICULA (B & BR) REINKING—A NEW RECORD FROM INDIA

A. B. DE

*Department of Botany, Burdwan Raj College,
Burdwan 713 104, India.*

A FUNGUS was collected from a dead branch of *Gossypium herbaceum* L. in Bankura, West Bengal, India in September, 1979. It was identified as *Duportella tristicula* (B & Br) Reinking. Perusal of literature^{1,2} revealed that this report constitutes its first record from India. A brief description of this fungus is given below:

Morphology: Hymenophore (figure 1) resupinate, annual, membranous, adnate, at first developing as



Figure 1. Carpophore of *D. tristicula* (B & Br) Reinking growing on dead branch of *G. herbaceum* L.

numerous scattered orbicular or irregular colonies which later merge to form irregular areas; hymenial surface reddish brown, smooth but appears delicately velvety under hand lens; margin thin, adnate, pale brown to white.

Anatomy: Basidiome 140–400 μ thick. Hyphal system dimitic; generative hyphae hyaline to brown with clamp connections and rare simple septa, thin to slightly thick-walled, moderately branched, occasionally inflated, sometimes with granular incrustations, 2.5–6.4 μ in diameter; skeletal hyphae yellowish to brown, unbranched, aseptate, thick-walled, walls upto 1.5 μ thick, vermiculiform or aciculiform, 3.5–6 μ in diameter; pseudoparenchymatous cells thin to slightly thick-walled, hyaline to dark brown, isodiametric; basidia hyaline, thin-walled, clavate, 25–27 \times 6.5–8.2 μ , tetrasterigmatic, sterigma 4–4.5 μ long; basidiospores hyaline to pale brown, thin to very slightly thick-walled, smooth, cylindrical, cyanophilous, non-amyloid, 9.8–13.5 \times 3.7–5.2 μ ; pseudosetae brown, thick-walled, with acute apex, often the apex is coated with fine crystals, upto 6 μ in diameter; gloecystidia clavate or subcylindrical, hyaline to pale brown, slightly thick-walled, walls upto 1 μ thick, often with a clamp at the base, occasionally with crystals at the apical portion, 48–90 \times 13.5–15.4 μ

21 December 1984; Revised 15 April 1985