

A NOTE ON DRAGONFLY BEHAVIOUR DURING THE 1995 TOTAL SOLAR ECLIPSE NEAR CALCUTTA, INDIA

Dum Dum Park, a residential area of ca 35 ha in North 24 Parganas district of West Bengal, with ponds, canals and gardens, was selected for observations of dragonfly behaviour during the almost total solar eclipse (99.6°) of 24 October 1995. It started at 07.32 h and reached its peak at 08.48 h. The recorded temperatures (in °C) were as follows: at 06.00 h (23.6°), 06.30 h (25.5°),

07.00 h (26.00°), 07.30 h (27.00°), 08.20 h (25.00°), 08.40 h (24.00°), 08.48 h (23.00°) and at 09.00 h (29.00°).

The following species were at the site: *Agriocnemis pygmaea*, *Ceragrion coromandelianum*, *Ischnura senegalensis*, *Pseudagrion microcephalum*, *Brachythemis contaminata*, *Crocothemis servilia* and *Diplacodes trivialis*. For a complete list of species known from that locality, cf. T.R. MITRA (1994, *Rec. zool. Surv. India (Occ. Pap.)* 166: 1-40).

The activities of dragonflies gradually increased from 07.00 h onward and their behaviour remained normal up to 08.15 h. The anisopterans were flying at the usual height of ca 180-210 cm above the ground. The coolness in the breeze was felt from 08.15 h and gradually intensified. When, at 08.20 h, the mercury dropped to 25°C, the dragonflies commenced descending towards the ground, reduced their activities, but while at rest, they were still responding to the disturbances caused by the breeze or otherwise. Finally, the anisopterans settled in bushes, ca 60-90 cm above the ground, and all species ceased their movements at 08.48 h, when the eclipse was in peak and the mercury down to 23°C. They did not respond any more to any disturbance, most of them went under leaves. The insects resumed their activities at 08.55 h and became by 09.00 h (29°C) very active again.

After the eclipse, most dragonflies were resting at noon. After sunset (17.00 h) they became active again and remained so up to the onset of darkness (17.45 h; 30°C); *Tholymis tillarga* showed some reproductive behaviour.

The above observations were compared with the evidence recorded in October 1994 and on 23 October 1995. As it appears, the dragonfly behaviour during the solar eclipse of 24 October 1995, i.e. between 08.20 and 08.55 h, was essentially abnormal.

As to my knowledge, no evidence on dragonfly behaviour during a solar eclipse is so far available in the literature.

Dr B. KIAUTA (Bilthoven, The Netherlands) encouraged the "project" and the Director of the Zoological Survey of India rendered the facilities.

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