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Notes on the species of the genus *Hyadina* from China (Diptera: Ephydridae)

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Abstract

Two species of *Hyadina* Haliday, *H. pulchella* Miyagi and *H. guttata* (Fallén), are recorded from China for the first time and are redescribed. Their male genitalia are illustrated in detail. The first species, *H. pulchella* Miyagi occurs in both Oriental and Palaearctic China. The second species, *H. guttata* (Fallén) is found in Palaearctic China. A key is presented to separate the six known species from China.

Key words: Diptera, Ephydridae, *Hyadina*, new record species, China

Introduction

The shore-fly genus *Hyadina* Haliday, 1837, is currently placed in the tribe Hyadinini, subfamily Ilytheinae. The type species of the genus is *Notiphila guttata* Fellén, 1813.

Species of *Hyadina* are minute black flies, body length 1.20–2.00 mm. Fronto-orbital setae weak or absent; both vertical setae present, if lateral seta is absent then scutellum velvety black basolaterally. Chaetotaxy of mesonotum degenerate; anterior notopleural seta absent or very weak, posterior notopleural seta strong. Wing costa extended to vein M; second costal section nearly as long as third costal section; usually with white spots. Abdominal tergite 4 nearly as long as tergite 5, not conspicuously punctate (Clausen 1983, Mathis & Zatwarnicki 1998).

The common habitats of *Hyadina* are marsh reed, sedge meadow, sand shore and mud shore. Deonier (1965) was the first to record any detailed biological information about the habitats of the Nearctic species of *Hyadina*. He found *Hyadina albovenosa* Coquillett as an occasional inhabitant of the marsh reed habitat; *H. binotata* (Cresson) occasionally on the marsh reed, sedge meadow, and *Eragrostis* mat, but rare on the sand shore; and *H. furva* (Cresson) and *H. subnitida* Sturtevant & Wheeler as both rare on the sedge meadow. Later, in a very similar type study, Sheiring & Foote (1973) mentioned that *H. albovenosa* was taken on a marsh-woodland collecting trip but the exact habitat was not recorded. Furthermore, they found *H. binotata* to be a rare inhabitant of the mud shore, while *subnitida* was rare in the rain pool habitat. Finally, Zack (1979), in a study of the ephydrid habitats of Mt. Rainier National Park, found *H. binotata* to be rare in both the sedge meadow and the sand shore moraine habitats.

In a rearing and larval feeding study, *Hyadina* was found to feed on blue-green algae. Foote (1977) found *H. binotata, H. subnitida, H. flavipes*, and *H. furva* all to be monophagous in nature, feeding only on blue-green algae of the genus *Cylindrospermum*. Later, Foote (1979), in a similar feeding study, found that both *H. binotata* and *H. subnitida* could actually utilize, in the laboratory, blue-green algae of the genera *Anabaena*, *Cylindrospermum*, *Lyngbya*, and *Phormidium* but only *subnitida* could utilize that of the genus *Anacystis*.

The genus *Hyadina* is worldwide in distribution with 45 known species, of which 16 are from the Palearctic Region and 6 from the Oriental Region. Mathis & Zatwarnicki (1995) listed 40 *Hyadina* species in their world catalog. Mathis & Zatwarnicki (2004a, b) last revised the genus with the addition and description

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