



ЗАМЕТКА

Mass occurrence of flies of the genus *Ephydra* (Diptera: Ephydriidae) at the coastline zone of hypersaline coastal lagoons in the Eastern Crimea [Массовая встречаемость мух рода *Ephydra* (Diptera: Ephydriidae) в прибрежной зоне гиперсолёных лагун в Восточном Крыму. Масова зустрічальність мух роду *Ephydra* (Diptera: Ephydriidae) у зоні берегової лінії гіперсолоних лагун у Східному Криму.] Shore flies of the genus *Ephydra* Fallén, 1810 (Diptera: Ephydriidae) are known to occur abundantly at the shores of salt water bodies (saline lakes, salt marshes, sea coasts) in various regions of the World (e.g., reviewed by Foote, 1995). In particular, they are abundant as both adults and immatures in shore habitats along the western coast of the Black Sea, i.e. in Bulgaria (Beshovski, 2009; Caspers, 1951) and Romania (Galdean, 1976). At the same time, the cases of mass occurrence of *Ephydra* in other parts of the Black Sea as well as in the adjoining areas of the Ukraine and Russia are unknown. In spring – autumn 2004 – 2008, large aggregations of adult *Ephydra* were observed by one from us (N.Sh.) at the water margins of Lake Tobechikskoe, a closed lagoon in the eastern Crimea situated at the Black Sea coast about 20 km S of Kerch (45°10'35"N 36°22'10"E). The flies were especially abundant on the mats of purple bacteria (anoxygenic phototrophs) on flat muddy shores near the waterline (Fig. 1). According to our observations, the flies fed on bacterial mats and were most active in the morning. Previously, adults of several *Ephydra* species were known to feed on bacteria and green-blue algae (reviewed by Simpson, 1976). *Ephydra* were numerous also in many places of the shoreline at Lake Koyashskoe, a neighbouring closed hypersaline coastal lagoon (45°02'50"N 36°11'10"E), both as adults and immature, but their abundance was markedly lower. Two species, *Ephydra murina* Wirth, 1975 and *E. riparia* Fallén, 1813, were reared by A. Przhiboro from the larvae and puparia collected in the water margin zone of Lake Koyashskoe. Both species were common in 2005 – 2008. It is probable that the same species occurred at Lake Tobechikskoe. We calculated the approximate abundance of *Ephydra* adult flies at Lake Tobechikskoe, based on the photographs taken at the shores and the body size (ca. 4 mm) and weight of flies (ca. 5 mg) collected and reared from Lake Koyashskoe. The largest aggregations of flies at Lake Tobechikskoe in summer reached 300 – 350 m in length (along the shoreline) and 2 – 25 m in width. The abundance of flies varied within the aggregation, reaching up to 90000 ind. · m<sup>-2</sup> in its central part and only 350 – 600 ind. · m<sup>-2</sup> at the periphery. Most typically, the abundance was between 10000 and 30000 ind. · m<sup>-2</sup>. Hence, the biomass estimate is 50 – 150 g. · m<sup>-2</sup>; the maximum biomass was ca. 450 g. · m<sup>-2</sup>. *Ephydra* flies belong to the most abundant macroinvertebrates in the water margin zone of these lagoons (together with Ceratopogonidae; see Przhiboro & Brodskaya, 2006) and should have a high

significance in the lake ecosystems. They are also important as a food of insectivorous birds, as recorded in other regions (e.g., see Wirth, 1975). **A. Przhiboro** (Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia), **N. Shadrin** (Institute of Biology of the southern Seas, Sevastopol, Ukraine)



Fig. 1 *Ephydra* sp., Lake Tobechikskoe  
Рис. 1 *Ephydra* sp., озеро Тобечикское