49

www.biodiversityjournal.com

ISSN 2039-0394 (Print Edition) ISSN 2039-0408 (Online Edition)

with the support of



Biodiversity Journal

DECEMBER 2022, 13 (4): 753-982

FOR WILDLIFE RESEARCH AND ENVIRONMENTAL STUDIES



BIODIVERSITY JOURNAL 2022, 13 (4): 753-982

Quarterly scientific journal edited by Edizioni Danaus, via V. Di Marco 43, 90143 Palermo, Italy www.biodiversityjournal.com biodiversityjournal@gmail.com

Official authorization no. 40 (28.12.2010)

ISSN 2039-0394 (Print Edition) ISSN 2039-0408 (Online Edition)

https://doi.org/10.31396/Biodiv.Jour.2022.13.4.I.II

The genus *Halobates* **Eschscholtz, 1822 (Heteroptera Gerridae).** Though insects are the most successful group of organisms living on earth, they are not equally distributed in all natural environments. The greatest majority of them are restricted to the terrestrial or aquatic habitats of the emerged lands. Only few representatives of three different orders (Coleoptera, Diptera and Heteroptera) have colonized coastal marine environment in various forms, adapting themselves to live in brackish waters of lagoons, in mangrove swamps, in tide-dominated beaches, etc... Out of a total of more than 1.000.000 known species of insects, however, only 5 species of Heteroptera, all belonging to the genus *Halobates* (family Gerridae), can be defined as pelagic in the strict sense, living on open oceans thousands of kilometers away from the nearest land. They are small gerrids, or water striders, 3.4-4.5 mm long, with a strongly shortened abdomen, very long middle and front legs and a body entirely covered with water-repellent setae and microtrichia. The setae on the body surface reach a density of 4-12.000 for square mm² and the microtrichia of 6-700.000 for square mm². *Halobates* live in the three oceans, in the belt delimited by the parallels of latitude 40°N and 40°S, without ever approaching land; they prefer areas where temperatures range between 24 °C and 28 °C. They skate at great speed on the surface, about 1m/sec, and are attracted by the lights of the ships. They feed on the zooplankton present in the interface between sea and air and lay their eggs on any floating object (seeds, the ships.

empty shells, plastic objects) or on algae of the genus *Sargassum*. The grey colouration makes them almost undistinguishable on the surface of water, protecting them from the predation of small sea birds such as petrels. The only way to collect them is using a Neuston net for marine invertebrates towed by a ship. None of the known species was ever found in the Mediterranean Sea, but a fossil species dating back to the middle Eocene, *Halobates ruffoi* Andersen, 1994, was discovered in the marine deposit of Pesciara di Bolca (Verona, Italy) (see figure on the right).

Attilio Carapezza, via S. Botticelli 15, 90144 Palermo, Italy; e-mail: attilio.carapezza@unipa.it

