Introduction. — There are 29 species of Sphaeroma currently known (Harri-son & Holdich, 1984). Most species inhabit shallow-waters and some penetrate into waters of low salinity, particularly those which are wood-borers (Holdich & Harrison, 1983). Sphaeroma serratum (Fabricius) has a wide geographical range, i.e. Atlantic coasts of Europe, N.W. Africa, the Canaries, Madeira, the Azores, the Mediterranean, Black Sea, Suez Canal, South Africa, Western Australia (Monod, 1931; Omer-Cooper & Rawson, 1934; Harvey, 1969; Kensley, 1978; Holdich & Harrison, 1983). Its occurrence in South Africa and Western Australia is probably a result of man’s activities through shipping. (Sphaeroma walkeri Stebbing has the widest geographical range of any Sphaeroma species and has been dispersed synanthropically to many of the world’s ports (see Carlton & Iverson, 1981)). Sphaeroma serratum occurs in a wide variety of habitats but is most commonly found under intertidal and shallow-water stones, in empty mollusc shells and, on rocky intertidal coasts, in upper shore crevices (Lejuez, 1966; Naylor, 1972; Harvey et al., 1973). It is very tolerant of desiccating conditions (Charmantier, 1973; Harvey et al., 1973), and can also tolerate brackish water to some extent, but not as well as Sphaeroma hookeri Leach and S. rugicauda Leach (see Harvey et al., 1973). All the records known to the authors cite Sphaeroma serratum as occurring in fully marine or estuarine situations.

Observations. — In the Faiyum depression 100 km south west of Cairo in Egypt is a large, closed, inland body of saline water – Lake Qarun (200 km², 40
km in length, 5 km in width at widest point, average depth 4 m). It is the remnant of a once larger lake and has become increasingly saline during its history due to evaporation and to the input of salts via drainage channels from the surrounding land (Naguib, 1961). Water entering the drainage channels largely comes from the River Nile. The maximum salinity and temperature values recorded during 1983 were 36.5°/0 and 33°C and the minimum values were 19.3°/0 and 16°C respectively. (Maximum and minimum salinity values quoted for 1934 by Naguib (1958) were 25.5°/0 and 18°/0. Smith (1908) mentions the lake as being only slightly salty). This salt lake is very productive – more so in the past than at present (Naguib, 1958, 1961). Large numbers of marine molluscs and algae thrive in the lake (Naguib, 1958). A Gammarus sp. was recorded as being abundant in the red and blue-green algae along the shores as well as in the plankton by Naguib (1961). This was presumably G. aequicauda (see below).

There is no pollution due to sewage. In the past various Tilapia spp. and eels were the dominant fish in the lake but with the increasing salinity only T. zillii (Gervais) and Anguilla anguilla (L.) were able to survive (Naguib, 1958, 1961). To maintain the fishery in the lake, mullet, eels and sole have been periodically introduced from the Mediterranean since 1928. As stated by Naguib (1958, 1961) this has coincidently involved the transport of smaller marine organisms, in particular algae, molluscs and crustaceans (including barnacles). A marine copepod, Acartia sp. is abundant in the lake and appears to have been a recent introduction as it was not recorded by Wimpenny in 1930 (quoted in Naguib, 1961). Some of the benthic crustacean species are also now common in the lake and include Balanus amphitrite Darwin, Gammarus aequicauda (Martynov), Orchestia platensis Kroyer (a semi-terrestrial amphipod), and Sphaeroma serratum. S. serratum is found under partially submerged stones and rocks resting on sand in the shallow margins of the lake and probably feeds on algae and micro-organisms associated with the substrate.

The Sphaeroma serratum from Lake Qarun are identical in key morphological characters to specimens from various British localities, and also to other Egyptian specimens collected from Lake Timsah, through which the Suez Canal flows. One morphological feature of S. serratum which has received little attention is the sexual dimorphism present in the form of the pleotelson. Monod (1931) showed that in females the posterior pleotelsonic margin is straight, whilst that of the males is rounded. This makes separation of the sexes very easy from the dorsal aspects, but was not mentioned by Lejuez (1966) in his review of Sphaeroma. Male S. serratum tend to be much larger than females and during precopulatory behaviour the female is held beneath the male. However, both sexes of S. serratum from Lake Timsah are on average smaller in body size and less fecund (as are Gammarus aequicauda, cf. Dawod, unpubl.) than those from Lake Qarun. In terms of abundance, however, S. serratum is more dense in Lake Timsah.