

Subfamily LUCIFERINÆ.

This subfamily is formed to receive those Sergestidæ that have no branchiæ attached to the pereion; in which the two anterior pairs of pereiopoda are not chelate, and the third pair has the chelæ reduced to a more or less imperfect condition; in which the ova are carried beneath the pereion, but appear not to have any special means of attachment, and in which the brephalos is hatched in the Nauplius form. Of this subfamily there is known to exist only a single genus.

Lucifer, Vaughan Thompson.

Lucifer, Vaughan Thompson, Zool. Researches, p. 58, pl. vii. fig. 2, 1829.

Leucifer, Milne-Edwards, Hist. Nat. Crust., tom. ii. p. 469.

Lucifer, Dana U.S. Explor. Exped., Crust., p. 668.

Animal long, slender, and laterally compressed. Cephalon cylindrical, and produced to a great length anteriorly to the mandibles, so that the antennæ and ophthalmopoda are removed considerably from the oral and other appendages. The pereion is short and dorsally covered with a small receding carapace. The pleon is very long, being about two-thirds the length of the animal, and has the five anterior somites subequal, whereas the sixth is about twice or thrice the length of either of the preceding.

The telson is narrow, compressed and tapering, differing more in sexual than in specific form.

The ophthalmopoda are long, narrow, and terminate in round, bulbous ophthalmi.

The first pair of antennæ (Pl. LXXIX., *b*) has a three-jointed peduncle and a single slender flagellum, and carries within the basal portion of the first joint a well-defined acoustic organ (or otolith).

The second pair (*c*) has the joints of the peduncle closely united; the first supports a long, slender phymacerite, and the second a long, slender, somewhat styliform scaphocerite; and the terminal joint is long, robust, and supports a long, slender flagellum.

The distance from the second pair of antennæ to the epistoma is greater than from that to the posterior extremity of the pereion, and these together form about one-third the length of the animal.

The mandibles do not carry any synaphipod, and have the margin of the psalisiform blades serrate.

The first pair of siagnopoda (*e*) is three-lobed, two lobes being on the inner side, one of which is broad and fringed with several strong spines, the other narrow and furnished with a few slender spines or hairs; and one on the distal surface that is narrow, cylindrical, and free from ornamentation.

The second pair (*f*) consists of four foliaceous lobes; the two basal are produced inwards,