

condition of the adult form, while the fifth and sixth pairs are in an early stage of gemmation.

The pleopoda are represented by Suhm as being single-branched, whereas in my specimen they are all, excepting the first pair, more or less perfectly biramose.

The sixth pair differs only in being more slender, with the margins parallel, and in having the tooth on the outer margin nearer the basal articulation. The appendage is long and narrow when compared with that which I have given. The telson is short, as is relatively shown in the figure (at *t*). Suhm remarks that it much resembles the typical features of a young *Leucifer*.

*Observations.*—By tracing the several stages, we may safely conclude from the direct structural affinities, that *Mastigopus* is a young *Sergestes*, and that it is preceded by the Acanthosoma stage. But the interval between Acanthosoma and Elaphocaris is so great that a comparison of all the various forms which we believe to belong to distinct species requires us to insist upon a clearer demonstration of the developmental connection between the two. If we could bridge over this chasm we might safely trace the sequence, if not in a single direct line, certainly through closely allied genera, to the Elaphocaris, shown by v. Willemoes Suhm to have left the ovum so recently that the yolk-mass had not been all absorbed when he observed it.

*Sergestes intermedius*, n. sp.

Rostrum one-third the length of the carapace, armed with a tooth on the dorsal crest, just above the orbital margin, and with a small denticle just within the posterior margin in the dorso-median line; the rest of the carapace is smooth, excepting a small tooth on the hepatic region above the point of the mandibular attachment.

Pleon having the five anterior somites subequal in length; the sixth about twice that of the fifth somite. The anterior three are dorsally smooth, the posterior three are armed with a small tooth at the posterior dorsal margin, the last of which is horizontally produced; all the somites are furnished with a small tooth projecting from the lateral walls, and the ventral surface is armed in the median line with a large longitudinally compressed spine-like tooth between each of the anterior five pairs of pleopoda.

The telson is about half the length of the sixth somite and terminates in two small points.

The ophthalmopoda are nearly twice as long as the rostrum, and the ophthalmus is obliquely mounted on, and broader than the stalk, and fungiform in appearance.

The peduncle of the first pair of antennæ is enlarged at the base for the reception of the otocyst, reaches beyond the ophthalmus, and terminates in two flagella, of which the longer is broken off, and the smaller is unarticulate and rudimentary.

The second pair of antennæ is broken off at the extremity of the peduncle; a long and