

fingers of the chela, but they are only subservient to the larger organ, while in this case the chela is rudimentary. The presence of long calcified tendons within the propodos is strong evidence that the dactylos is a movable joint, and the movable power that it possesses must have its usefulness increased by the presence of these long hairs. It appears to offer an example of how a simple and apparently useless organ may by adaptation become converted into one of importance.

The third pair of pereopoda is longer than the second and more robust, and terminates in a short, single, sharp pointed unguis; the carpos and the meros at their distal articulation on the upper surface overlap the next succeeding joint. The fourth pair of pereopoda resembles the third in proportion and form. The fifth is shorter and terminates in a stunted dactylos.

The pleopoda are biramose and subequal.

The lateral plates of the rhipidura are longer than the telson and possess a small diæresis.

The telson is long, slender, and tapering.

*Observations.*—This, our only specimen, is small and semi-transparent. It was dredged in the same locality as *Synalpheus*, *Paralpheus*, *Alpheus avarus*, and that which I have thought resembles *Alpheus acuto-femoratus*. The form of the chela in this species so greatly corresponds in appearance with that of the right or smaller one in *Synalpheus falcatus* that I at first thought it must be a younger form of that species, or at least of some species of the same genus, but an examination of certain parts renders this most improbable. In *Synalpheus falcatus* the dorsal surface of the carapace is elevated into a carina, which decreases in intensity on the pleon, but still remains conspicuous, although more as a dorso-lateral compression than as a distinct keel. In *Cheirothrix parvimanus* the carapace is not elevated and the dorsal surface is smooth and even. In *Synalpheus* the first pair of antennæ has a tendency to divide into two at the extremity of the stouter flagellum, which does not appear to be the case in *Cheirothrix*. The second pair of antennæ in *Synalpheus* has the scaphocerite sharp pointed, and the outer styliform process separated from the inner foliaceous plate by nearly half its length. In *Cheirothrix* it is broad and ovate, rigid on the outer margin, and connected with the foliaceous plate to near its distal extremity, where it terminates in a short tooth. The first pair of gnathopoda differs in form, and also apparently in structure, since in *Synalpheus* the position of the dactylos varies from that in *Cheirothrix*, and in the latter genus the second pair at its distal extremity is tipped with short spinules, while in *Synalpheus* it terminates in two points and a few fine hairs.

The generic distinction between this species and those of *Alpheus* or its allies must rest upon the importance of the change in the form of the second pair of pereopoda.

In all species of *Alpheus* and its related genera the second pair of pereopoda is as long as, or longer than the third pair, it is slender and has the carpos more or less