racter of the legs of insects, and the usual structure of the antennæ in Crustacea, we may justly infer that this abnormal number arises in part, at least, from a subdivision of the terminal part of the legs. In a figure which Kröyer gives of a young of *Nymphon grossipes*,* the first pair of these legs has the full number *nine;* the first three of these short, the next three long, the seventh short, eighth long, the ninth a claw; the second pair has but seven joints, the first three short and the next three long, just like those of the first pair; the leg in this condition has seven joints, and looks like ordinary Crustacea legs, with the terminal claw. It hence follows that the additional joints are formed at or near the extremity, and probably by a subdivision of the penult.

The *third pair of legs* in the same figure are represented as partly developed, being only four-jointed; the first joint is here the longest, and evidently includes the first three of the perfect leg, and these result by natural fission. The second pair of legs is therefore normal in its joints, except that it has one too many; but this is probably the first, for in many Amphipoda and Isopoda the epimeral segment is properly a basal joint to the legs, and if counted, would make the number *seven*. The first joint in the legs may therefore correspond to the epimeral segment in other Crustacea.

This subject derives much interest and some elucidation from a comparison with the structure in the Arachnida, and also reflects light upon that and other departments of Articulata.

In the Arachnida, the mouth organs consist of—

1. A pair of mandibles.
2. A pair of maxillæ.
3. A lower lip corresponding to a second pair of maxillæ. There is also a simple upper lip which comes into the series.

Judging both from embryology and the simplest forms of articulate life, the Rotatoria, we may believe the mandibles to be the fixed determinate centre through the whole series. The simplest form of life above vegetation, has a mouth opening, and the first step above this, consists in the presence of a pair of mandibles; and from this pair as the centre, developments go on towards the more complex forms. This fact gives the highest importance to these organs as marking a

* Voy. Scand., pl. 39, f. 1 *d*.