

form tolerably accurate ideas of the kind of food on which the insect naturally subsists.*

Above, or rather in front of the mandibles, is situated the *labrum*, or upper lip (u.) It is usually of a hard or horny texture, and admits of some degree of motion; but its form and direction are exceedingly various in different tribes of insects. The lower pair of jaws (j.) or *maxillæ*, as they have been termed, are behind the mandibles, and between them is situated the *labium*, or lower lip (l.) which closes the mouth below, as the *labrum* does above. In the grasshopper, each maxilla consists of an outer and an inner plate (o and i.) The jaws of insects are confined, by their articulations with the head, to motions in a horizontal plane only, so that they open and close by lateral movements, and not upwards and downwards, as is the case with the jaws of vertebrated animals. The maxillæ are, in most cases, employed principally for holding the substances on which the dividing or grinding apparatus of the mandibles is exerted. A similar use may be assigned also to the organs denominated *Palpi*, or *Antennulæ* (p, q,) which are jointed filaments, or processes, attached to different parts of the mouth, and most usually to the maxillæ and the labium; the former (p) being termed the *maxillary*, and the latter (q) the *labial palpi*. In addition to these parts, another, which, from its supposed use, has been denominated *Glossa*, or tongue (g,) is also generally found.

For an account of the various modifications which these parts receive in different tribes and species, I must refer to works which treat professedly of this branch of comparative anatomy. I shall content myself with giving a single example of the conversion of structure here alluded to, in that of the *rostrum*, or proboscis of the *Cimex nigricornis*. This insect belongs to the order Hemiptera, which has been usually characterized as being destitute of both mandibles

* See a memoir by Marcel des Serres, in the *Annales du Muséum d'Hist. Nat.* xiv. 56.