

the labium. In *Lycosa* the excavation is relatively long, usually one-third the total length of the labium. In *Pirata*, in which the labium is longer than wide, as in *Lycosa*, the notch is shorter than in either of the two preceding genera, varying between one-fourth and one-fifth of the length of labium, with the average toward the lesser limit.

It is my opinion, however, that the clearest and most definite characters for limiting the more important genera of *Lycosidae* are presented in the structure of the copulatory organs, especially of the male, although slight use has been made of them in such connection heretofore. In a more extended paper, to appear later, I shall give a detailed treatment of the structure and homologies of the reproductive organs in this family, with application to the arrangement and classification of its American members. In the present place are presented only a few notes on the structure of copulatory organs in the commoner genera *Lycosa*, *Pardosa* and *Pirata*, although other genera might be used equally well so far as concerns the validity of the points it is desired to make.

Van Hasselt\*, who uses the term "epigynum" as applying strictly to the median piece or "process" of the female genital plate, attempts to establish with respect to its structure and functions in the *Aranee* several theses, the more essential of which are certainly not true for the *Lycosidae*. Thus in no degree whatever in this family can the median body, when such is present, have any mobility independent of the whole epigynum "*avec érection in longuer et flexibilité latérale*," and cannot be considered "*du moins fourtionnellement comme analogue a l'ovipositor de quelques Insectes*," such as could be used in arranging eggs in a cocoon. The median body here is simply a ridge-like elevation of the floor of the depressed area of the plate.

In most cases at or near its posterior end the median ridge is extended transversely on each side to the marginal walls, which they meet immediately behind the openings of the receptacula. The ridge thus divides the epigynal depression into two furrows or channels, each of which leads to the opening of the receptaculum of the corresponding side. Posteriorly the free ventral edges or the septal elevation and its transverse arms are produced out horizontally to a varying distance over the lateral channels, the median piece thus being in effect grooved along its sides. Sometimes these plate-like extensions are very wide, and may cover over most of the epigynum behind, as is the case in *Pardosa Californica*, Keys.

\*Vid. "L'Epigyne des Araignées Femelles," Tids. v., Ent., Vol. 35 (1891-'92). pp. 87-121. Pls. 7-9.