

over, these are one of the few structures readily accessible to measurement, which are found to display a growth rate independent of overall size. In contrast, a statistical evaluation of our data shows that the head capsule bears a direct relationship to body length regardless of the stage of development. It is otherwise for the leg discs in relationship to body length (Text-figures 1, 2, and 3).

In very young or immature larvae the size of all three pairs of imaginal leg discs is approximately the same. The respective sizes of the leg discs, furthermore, are the same for larvae of similar body length and the same stage of development. In other words there is little, if any, individual difference in the size of the leg discs in very young larvae. In more mature larvae the three pairs of leg discs may vary slightly in size in any one specimen and may also vary to a small degree in the larvae of similar body length taken from the same stage of development. There is a greater degree of intra- and inter-individual differences in these thoracic structures in the more mature larvae. These size differences in the leg discs of the more mature larvae, however, do not mitigate the usefulness of these structures for separating the larvae into more definite stages.

Table I represents the smallest and largest body length size for each polymorphic group of larvae. The figures for the leg discs represent the average size of leg discs measured for five larvae in each of the three polymorphic groups, i.e., the polymorphic small, intermediate and large larvae. An examination of Table I indicates that larvae of the same body length but of different nomadic days have leg discs of consistently different size increasing with age (Plate III, fig. 9, and Plate IV, fig. 10). This is clearly evident if a 6.6 mm. larva of the tenth nomadic day is compared with a 6.6 mm. larva of the fourteenth nomadic day. Small larvae may be collected near the end of the nomadic phase which have larger leg discs than large larvae collected at an early stage of nomadism, clearly indicating the more advanced age of the former and their polymorphic specialization. This fact is made quite clear when the leg discs of 4.8 mm. larva of the seventeenth day is compared with those of a 9.6 mm. larva of the twelfth nomadic day. However, the most critical test comes when the size of the leg discs is compared at successive