

It is then sufficient to say, that none of the Lycidæ or Telephoridæ possess any light-giving organs, and that they are diurnal in their habits. In some of the Lycidæ the front part of the head is prolonged into a beak, and in many of them the elytra are very large, expanded and coarsely reticulated. The peculiar structures of some Telephoridæ will be noticed farther on.

The Lampyridæ proper comprise all the luminous species, though this faculty is possessed by them in a very unequal degree, and in some genera and species of diurnal habits is quite wanting. For our present purposes their division may be indicated into tribes and groups as follows :

A. Side pieces of metathorax narrow ;

a. ♂ and ♀ similar or nearly so ; antennæ long, last joint simple.

b. ♂ and ♀ conspicuously different ; antennæ short, last joint with acicular appendage.

B. Side pieces of metathorax wide (♀ unknown) ; palpi very unequal, mouth organs more developed.

The series A a contains the largest number of genera and species, and exhibits a gradation from *Matheteus*, with widely separated pectinate antennæ, and general Lyciform appearance, through *Photinus*, with approximate filiform antennæ, and head retracted under the prothorax, to *Photuris*, with the antennæ filiform, and the head partly exposed. There is thus a continuous line of affinities in this series from the diurnal Lycidæ to the diurnal Telephoridæ.

Now besides the gradations in structure just mentioned there are great differences in the sizes of the eyes, and in the development of the light organs. In the species usually seen flying by day (*Lucidota*, *Ellychnia*, &c) the light organs are indicated by feeble yellowish spots on the last ventral segments, but do not seem to possess any light-giving power ; in these the eyes are lateral, rather small in ♀, but larger and more convex in ♂ ; they are widely separated above and beneath as in Lycidæ.

The series A b contains a much smaller number of genera, and in them the antennæ are approximate, usually filiform, rarely (*Pleotomus*) bipectinate. The number of joints varies from 9 to 14, and the last joint has at the end a small acicular appendage simulating an additional joint. The eyes of the ♂ are excessively large, almost contiguous above and beneath, leaving very little room for the mouth and antennæ ; in the ♀ the eyes are moderate, or even small, lateral and widely separated. The