represent the curved lower sweep of the secondaries and tertials in the wings of birds, *halteres* or balancers are supplied. In the Strepsiptera the lower-wings are largely developed, and the fore-wings degenerate into balancers.

There is a departure from this third form, in which all the four wings are nearly of equal length, and diverge considerably, as in the Dragon flies, of which fig. 35 is an example, and Lace-winged flies.

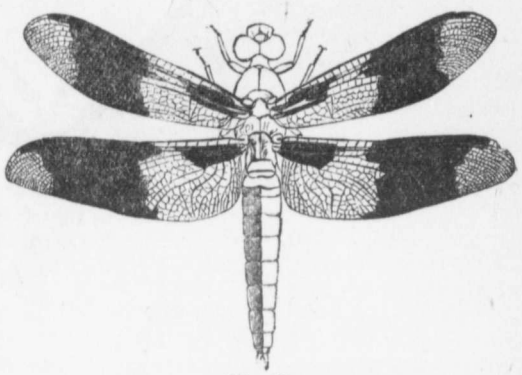

Fig. 35.

Where unusual projections are met with in the fore-part of the body, they are counter-balanced by a proportionate extension or development of the abdomen. The large head and scythe-like mandibles of the Horned corydalis are balanced by its dank and elongated body. In a dried specimen of this insect the want of symmetry, occasioned by the contraction of the abdomen, at once strikes the eye. The antennæ of the longicorn beetles are thrown over the back in flight, and the ovipositor of *Pimpla lunator* streams behind. There are instances among the Hymenoptera in which the abdomen is provided with a foot-stalk, and, in this arrangement, the equilibrium of the insect is maintained without an inconvenient increase of weight.

Many beetles have what may be called the Tortoise-shape; and it will be found that, as a rule, these are sluggish in disposition, falling, when disturbed, inertly to the ground. They are, consequently, oftentimes in danger of being trodden under foot. But their form is admirably adapted to resist pressure; and an ox might tread one of them into the yielding sod without doing it an injury. The potato-beetle is a familiar instance of insects of this form, and so is the beautiful pie-bald beetle that frequents the silk-weed.

The water-beetles and bugs are admirably adapted to their environment. *Belostoma grandis* (fig. 36) is a wherry of the most approved form, having powerful sweeps with which it can urge its way through the water. It is also provided in its fore-legs with grapnels, with which it can hold itself against the force of the current. Insects of this form—and there are many of them—may well be described as the Boat-shaped.

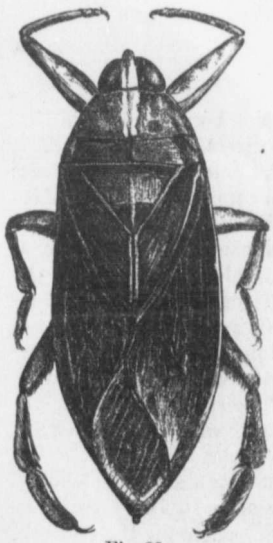

Fig. 36.

We have already alluded to the fact that variations of structure in winged insects are associated with diversities of modes of flight. The ample-winged Attici have a flitting, uncertain flight; but the clean-cut, powerful wings of the Sphinges (see fig. 37) are admirably suited both for hovering over flowers and for making a sudden dash out of the way of harm. Insects that have wings of an intermediate size are those that have the most stately flight. *Danais Archippus*, for instance (fig. 38), sails through the air with a grace and dignity that are perfectly charming. And this creature, too, is capable of long-sustained effort. It is known to be migratory, and to pass in flocks from one district to another.

In the calm summer and autumn evenings how amusing it is to witness the sportive dances, in the beams of the falling sun, of Ephemera and Tipulæ. The long limbs of these insects retard a forward movement, but yield readily to an upward flight. The mere weight, however, of the appendages soon brings the creatures down when the force of the wing-stroke is abated. Renewed efforts, again and again, give an upward movement, and so the mazes of the airy dance are threaded.