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For THOMAS DOBSON, AT THE STONE-HOUSE,
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1802.

No. VIII.

On the Ephoron Leukon, usually called the White Fly of Passaick River. By Dr. WILLIAMSON.

Read Feb.
1, 1799.

THESE insects are of the order called neuroptera. Lin. Syf. Nat.

The eyes are large and prominent.

The stemmata are wanting.

The wings are plain, patent, membranaceous, reticulated. The under wings shorter and narrower than the upper wings by more than one half. They are attached to the body a little behind and below the upper wings and are nearly covered by them.

The antennæ are cetaceous, half an inch long, having six articulations besides the base.

From the tail there are two cetaceous appendices about one inch and a half long. They diverge making an angle of 12 or 14 degrees. Each of them contains 15 or 20 small knots resembling articulations.

The tail, perhaps of the males, is furnished with two small crooked filaments hardly one-tenth of an inch in length, that are inserted below the cetaceous appendices, their points turn inward so as to form pincers.

The length of the insect is half an inch.

The trunk is not thicker than a grain of rye. The abdomen is much smaller.

The wings, abdomen and legs are perfectly white.

The eyes black; the trunk of a brownish colour.

Their flight in speed is nearly equal to that of the dragon flies.

Neither mouth nor feet could be described from the want of a microscope.

They

They begin to rise out of the river 35 or 40 minutes after the sun sets and continue rising about fifteen minutes.

We have no information concerning the larvæ of those insects.

The crysalis, in which form they rise to the surface of the water, is not distinguishable from the perfect insect in shape or colour.

The crysalis deposits a thin white pellicle or skin on the surface of the water and rises a perfect insect. It continues on the wing about an hour and perishes.

Some of them, not one in a hundred, rise from the water in the form of a crysalis. They fly immediately to the shore and in less than a minute they creep through the white pellicle that covered the trunk, abdomen and appendices, and rejoin their companions on the wing.

In their flight they seldom rise more than six or eight feet above the water, but they usually skim or play near the surface.

The female drops two clusters of eggs upon the water and perishes immediately.

The eggs are yellow. Each cluster is nearly one quarter of an inch in length and the thickness of a common pin, resembling the roe of a fish and containing about 100 eggs. They sink in the water.

As those insects are not seen to couple on the wing it is presumed that the male fecundates the eggs when they drop on the water.

These flies are so numerous that they appear some evenings like thick driven snow in a cloud that is hardly transparent.

These insects, who differ in many particulars from the ephemera, are not easily reduced to any genus described by Linnæus, Geoffroy or Scheffer. They must

be

be of the order called neuroptera, but an eighth genus is to be added to that order.

They are natives of the river Passaick, but their utmost range on that river is not above two miles and a half. They rise about three quarters of a mile below the bridge at Belville and one mile and a half above that bridge. Within those limits they rise without number, but no where else in the river, though there is a regular tide nine miles above the bridge and there is not any falt water within three miles of it. They are not found, as we are told, in any of the neighbouring rivers.

Their first appearance every year is about the 20th of July, and they continue rising every evening more or less about three weeks.

They seek the light, for they fly in crouds to a lamp or candle, but they are supposed to be the only genus of winged insects that never see the sun.

The insect of an hour, that is never at rest, might serve for a strong figure in the hands of a peevish philosopher.