

## NEUROPTERA – CHRYSOPIDAE

### NEUROPTERA

Etymology : Neuro-nerve; ptera - wings.

Common names : Lace wings, Ant lions, Mantispidflies, Owlflies.

### Characters

- ✓ They are soft bodied insects.
- ✓ Antenna is filiform, with or without a terminal club.
- ✓ Mouthparts are chewing type in adults.
- ✓ Wings are equal, membranous with many cross veins.
- ✓ They are held in a roof-like manner over the abdomen.
- ✓ They are weak fliers
- ✓ Larva is campodeiform with mandibulosuctorial mouthparts.
- ✓ Pupa is exarate. Pupation takes place in a silken cocoon. Six out of eight Malpighian tubules are modified as silk glands. They spin the cocoons through anal spinnerets.

**Classification:** This order is subdivided into two suborders viz., Megaloptera and Planipennia.

### Sub order: PLANIPENNIA

#### 1. CHRYSOPIDAE (Green lacewings, Goldeneyes, Stinkflies, Aphid lions)

- ✓ Body is pale green in colour.
- ✓ Eyes are golden yellow in colour.
- ✓ Eggs are mounted on stalks to avoid predation and cannibalism.
- ✓ Larvae preys on soft bodied insects, especially on aphids. It often carries a layer of debris on its body which provides camouflage.
- ✓ They emit a stinking fluid when alarmed, from prothoracic stink gland.
- ✓ They are mass multiplied and released in fields for controlling aphids.



## 2. MANTISPIDAE (Mantispid flies).

- ✓ They resemble preying mantids.
- ✓ Prothorax is elongated.
- ✓ Forelegs are raptorial. Femur is armed with powerful spines.
- ✓ Larva preys on spiderlings in the nests of ground spiders.
- ✓ Development involves hypermetamorphosis.



## 3. MYRMELEONTIDAE (Ant lions)

- ✓ Adult resembles a damselfly.
- ✓ The antenna is long and clubbed.
- ✓ They are weak fliers.
- ✓ Grubs construct conical pits for capturing prey.
- ✓ Larval mandibles are sickle-like with one or more internal teeth.

- ✓ They have dolichasters (Lateral segmental processes fringed with setae).



#### 4. ASCALAPHIDAE (Owlfly)

- ✓ Adult resembles a dragonfly.
- ✓ Antenna is long, conspicuous and clubbed
- ✓ Hypostigmal cell is present in the wings
- ✓ Larvae do not construct pits to capture the prey
- ✓ Adults are aerial predators like dragonflies.

