

* Kösel von Rosenthal says " If they have been fortunate enough to capture something, they carry it back to their resting place, and I have often seen them devour an insect, hair and hide. They catch them, of course, with their mouths but they use also their fore feet and there are stiff hairs on them which aid in capturing the prey.

The student of Zoology or Entomology regards the Pre-Linnean period much as the historian or antiquarian thinks of ante-diluvian times. No doubt the animals and insects existed but the record is so imperfect and so confused on account of tales of strange and mythical forms that the student is cast away in a sea of confusion and conjecture. Bees spontaneously created in the carcass of a ox, as Virgil tells in his *Georgics*, and ^{or} from that of a lion, as we read in the famous riddle of Samson; tales of the rockatrice, the Phoenix, and the Unicorn; geese hatched from barnacles as Marco Polo related and even pictured, no doubt with much fidelity to nature; all these were related and believed not only by the poor and ignorant, but even by those who claimed for themselves the name of scholar. Even as late as 1749, Röser of Rösenthal, whose "*Insekten Belustigen*" is a most amazingly accurate record of the life histories of most of our common insects, thought it worth while to devote several pages to a refutation of the common belief that dragonflies were born

spontaneously from the mud and ooze of lakes or ponds.

From this class, the classifications of Linnaeus, ^{in his Systema Naturae} rise like a very rock of salvation for the harassed systematist. Faulty tho' many of his groupings appear in the light of recent knowledge, his works offer the foundation on which modern scientists have reared a superstructure of careful and accurate classification.

Little spid about Willcott. - Marsh. Say. - Haqar. -
Linnaeus father assumed the name from a large linden tree near Steinhilbert, he was a pastor. Carl Linnaeus born May 13th 1707. O.S. At age of ten was sent to school at Mexico. Lund University. Lodged and boarded with Lectur Nilsius Stobæus - lecturer on natural history, geology and botany. - Helped Linnaeus.
Later went to the University of Upsala.
Bonnier's "Pinax Theatri botanici" - 1623
Rudbeck's "Campi Elysi" - eleven volumes.
Olof Celsius vider Linnaeus to remain at Upsala despite his extreme poverty.
"Sponsalia Plantarum" - discoverer of sexual reproduction in plants.
Systema Naturae - 1753 - last edition in 1766 -

water he was the scourge of all living things smaller than himself, so in the air he is no less the dread and terror of the small ^{flies} Diptera and other ^{tiny} winged creatures.

The spectacle of the ^{transformation} metamorphosis of a dragonfly nymph is a very wonderful one, but in spite of the great abundance of dragonflies transforming daily during the summer, it is a comparatively rare sight. The cause for this is that most species are accustomed to transform at night or very early in the morning, and for this somewhat disobliging habit there is a most excellent reason. Fleet and strong altho. the adult dragonfly is, just at the moment of his emergence from the nymphal skin, he is at the mercy of his enemies. His body, just with drawn from the tough case of the nymph, is extremely soft and tender, his wings which have been folded into the wing cases of the nymphal skin, are tender and easily torn, and are, moreover, too clump and crumpled to sustain the body of their weaver in flight. It is, consequently, an act of the greatest prudence for a dragonfly to choose for his inauguration, that period of the day when he has least to dread from enemies, from birds and from

mature dragonflies; these last exhibit not the slightest hesitancy in attacking and devouring such ^{newly emerged} larval specimens of their own kind as they are able to overcome.

Careful account of transformations -

enemies of dragon flies - salamanders
trout

sub-families in which the legs have become specialized for a quite different purpose. Altho' these two forms are far apart from the systematic standpoint, the legs have become specialized in a strikingly similar manner.

erected
erected covered

In the Diptera and Hymenoptera the laying down of the venation has preceded the tracheation - where veins assume position of cross veins and even run backward, trachea could scarcely be expected to follow course of veins - the trachea are laid down later and take most direct routes to regions. Impossible to work out venation of more specialized wings, without a study of more generalized forms.

In Hymenoptera C_{u2} disappears - thus S_c , then anal veins - then base of radial sector.

First six belong to

Rest to Pterostigma

Reason for modifications in the wing - dynamic reasons - result of natural forces of growth - certain modifications adapted to certain kinds of flight. Primitive type of Hymenopterous wing adapted only to slow clumsy flight. Lengthening of wing and reduction of anal area an adaptation for swift flight - swinging up of free part of M. has formed a brace which strengthens the wing and distributes the stress. Radial-submarginal triangle, characteristic of specialized Hymenopterous wings.

Accessory veins in various wings analogous not homologous.