



Fig. 3 - Generalised butterfly body (from Eaton 1988, redrawn).

**Antennae.** Dorsally, between the compound eyes, the head carries the two antennae, which in the case of butterflies may be either hooked at apex, as in most HesperIIDae (or ‘skippers’), sometimes called ‘grypocera’, because of this characteristic, or more or less distinctly clubbed, in other families (‘rhopalocera’). The antennae carry a large number of sensilla, whose main function is to capture and identify the volatile molecules (smells).

**Mouthparts.** The mouth parts of some basal Lepidoptera, i.e. the Micropterigidae (all continents), the Heterobathmidae (S. America) and the Agathiphagidi (2 species: S.W. Pacific), include more or less functional maxillae and mandibles, whose presence, at least in the former family, is connected with pollen manipulation (see Scoble 2002, Krenn 2010).

In contrast, the mouth parts of all other Lepidoptera (Fig. 3) are only represented by I) the labrum (upper lip), which dorsally closes the oral cavity; II) the very elongate maxillae, transformed into the proboscis; III) the transversally set labium (lower lip), which carries, on the two sides, the 3-segmented (labial) palpi used, sometimes, to clean the proboscis. At the distal extremity of each palp is present a cavity containing sensory setae (see Reuter 1896 for a very detailed study of the structure of the latter organs). All the sensilli occurring on the oral parts probably have both olfactory- and gustatory-like functions.

**THE THORAX.** The head is attached to the thorax by the “neck”, a short joint bearing no appendages and on which the head turns only to the two sides (not up and down). Like in all other insects (the Latin word “Insecta” means cut into pieces), the thorax is made of three segments (pro-, meso- and metathorax). Each of these segments bears a pair of legs. The prothorax is the smallest and carries no other appendages. The meso- and metathorax also bear a pair of wings each (Fig. 3).