

Morphological evidence for the systematic position of *Hybophthirus notophallus* (Neumann) as the sister species of the rest of the Anoplura (Insecta, Psocodea, Phthiraptera)

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Hybophthirus notophallus, the ectoparasite of the aardvark, is the only species of the Hybophthiridae (Phthiraptera, Anoplura). In recent systematic studies the Hybophthiridae appear as the sister group of the Haematopinidae within a larger group called the pediculid line (Kim KC 1988 The Systematic Association 37:91).

The mouthparts and head capsule of *H. notophallus* exhibit some plesiomorphic character states compared to the other Anoplura (Tröster G 1990 Stutt Beitr Naturk Serie A 442). Comparison of the character states of *Hybophthirus* and the rest of the Anoplura with that in the other taxa of the Phthiraptera justifies the assumption that the characters show the plesiomorphic state in *Hybophthirus* and the apomorphic state in all other Anoplura. The Anoplura are a well founded monophyletic taxon. The development of the piercing stylet from the hypopharynx and the prementum provides a conclusive argument for the monophyletic origin of this taxon. *Hybophthirus notophallus* differs from all other Anoplura in the following character states: 1) head capsule with a well developed anterior tentorium giving origin to muscles of the antenna (plesiomorphic) - anterior tentorial arms completely reduced, muscles of the antenna arise from the wall of the head capsule in all other Anoplura (apomorphic); 2) maxilla with a sclerotised lacinia, with a pro- and retractor muscle moving the lacinia which works as the valve in the duct of the Pawlowsky's gland (plesiomorphic) - the lacinia and the protractor muscle are completely reduced, the retractor muscle inserts at the membranous duct of the Pawlowsky's gland in all other Anoplura (apomorphic); 3) in *Hybophthirus* the mandibles show distinct ventral and dorsal parts, the dorsal parts form a tube that flanks the galeae, the galeae form a channel to transport the blood meal to the cibarium (plesiomorphic) - in all other Anoplura the ventral parts of the mandibles are completely fused with the head capsule, while the dorsal parts form a channel for the transport of blood, the galeae are completely fused to the ventral side of the dorsal parts of the mandibles (apomorphic).

The apomorphic characters listed above are good evidence that the Anoplura without *Hybophthirus* form a monophyletic unit, for which I propose the term Euanoplura. Euanoplura and *Hybophthirus* are sister taxa.