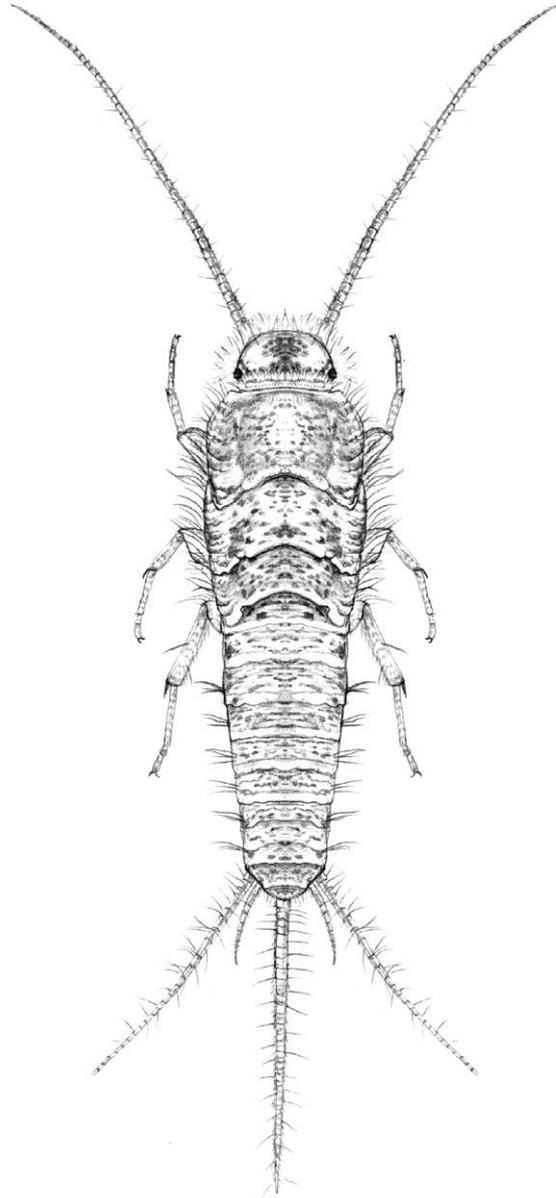


Order Zygentoma
(= Thysanura)



Common names: silverfish, firebrats

Simple diagnosis. Silverfish are wingless insects of moderate size (5 to 30 mm). They have an elongate and flattened body, multi-segmented antennae, reduced or absent eyes, five-segmented maxillary palps, enlarged distal segment on the labial palps, and three long caudal filaments (= tail-like cerci) at the tip of the abdomen, which are more or less equal in length.

Technical diagnosis. Adults and nymphs are diagnosed by the absence of wings or wing pads, presence of scales on the body, flattened body, presence of three long segmented filaments on the tip of the abdomen; dicondylar (= two places of articulation to head) mandibles, five-segmented maxillary palps, enlarged last segment of the labial palp, dorsoventrally flattened and enlarged coxae, and abdominal segments with styli and eversible vesicles ventrally. The immature stages are similar to adults, except early stages lack scales.



Photograph: © Graham Smith

What can they be confused with? Zygentoma are similar to Archaeognatha (= bristeltails) externally as both are wingless, elongate, covered with scales, and have three caudal “tails” on their abdomen. Zygentoma differ, however, in that the body is relatively flattened, the medial “tail” is slightly longer than the lateral cerci, the compound eyes are small and distant, and the maxillary palps are five-segmented.

Biology. Silverfish are mainly diurnal and omnivorous, living under bark or leaf litter, but some are subterranean and vegetarian. There are species that can survive in arid climates, like deserts, or inhabit ant nests, termite nests and mammal burrows. Some species are anthropophilic (= associated with humans). Silverfish can run fast, but are not able to jump. Like the Archaeognatha, they have indeterminate growth and have ametabolous development (= do not undergo distinct metamorphosis, nymphs and adults similar in body form). Silverfish are not capable of jumping, but can run very swiftly.



Photograph: © Graham Smith

Diversity in Papua New Guinea. Silverfish have a worldwide distribution, but predominantly inhabit the Southern Hemisphere. There are over 300 species worldwide, within five families. The New Guinea fauna is poorly known (Miller 2007).



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Key references for Papua New Guinea.

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