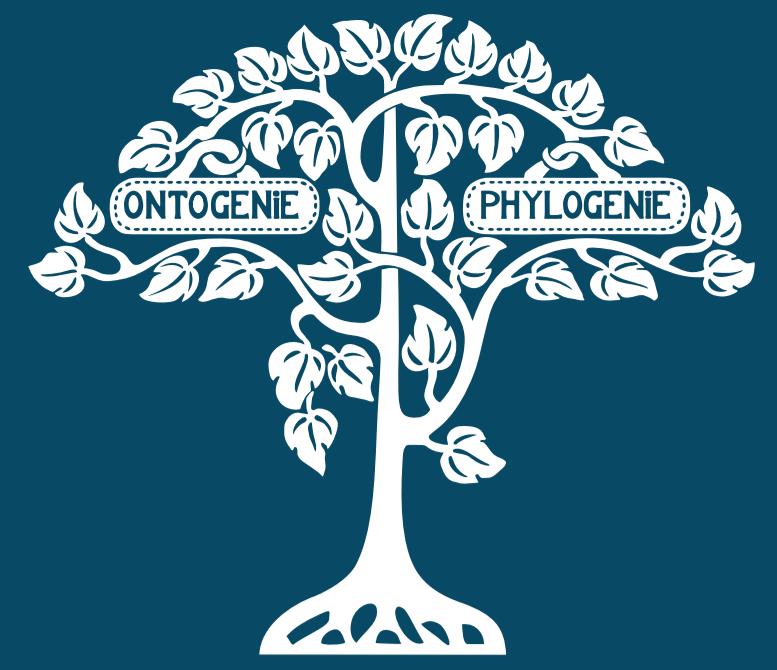


The “other” earwig: *Hemimerus* sp. and its cephalic adaptions towards commensalism



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Fig. 1: *Hemimerus* sp. on fur, photography, copyright Piotr Naskrecki

Introduction

Earwigs (Dermaptera) are generally very similar in their habitus. They are characterized by a flat and elongate body with conspicuous pincers at the abdominal apex. The only distinct exceptions are the commensal Hemimeridae. They live in the fur of giant murid rats, where they feed on skin scales, secretions and fungi [Nakata & Maa 1974]. The family differs morphologically so strongly from other earwigs, that they were

even considered a separate order [Hennig 1953]. However, recent molecular and morphological studies suggest that the highly specialized Hemimeridae are deeply nested within Dermaptera [Jarvis et al. 2005]. To investigate features related to the commensal [Jarvis et al. 2005] lifestyle of *Hemimerus* sp. we compared its morphology with that of *Diplatys* sp. and the generalist *Forficula auricularia*.

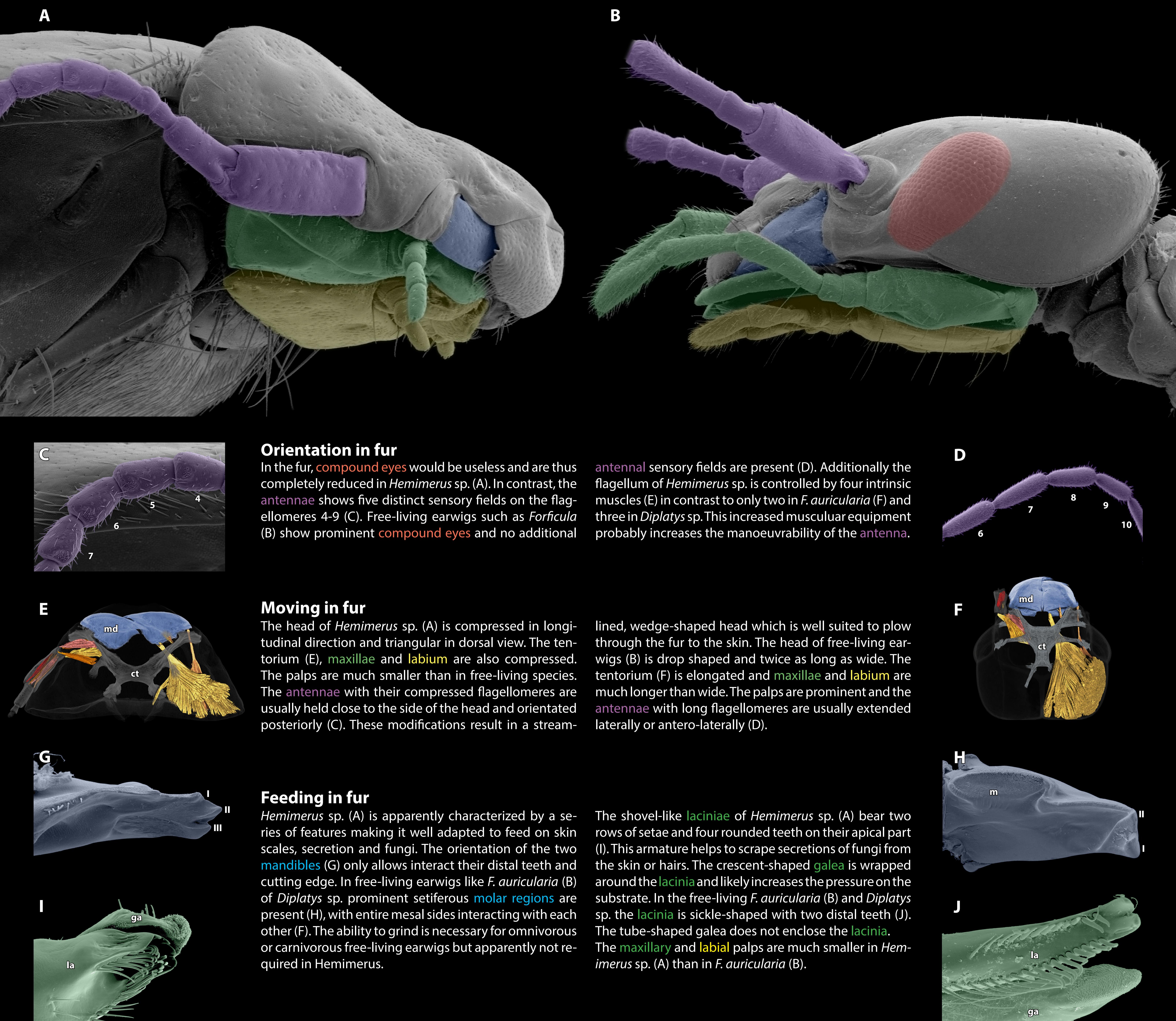


Fig. 2: Left side *Hemimerus* sp.; right side *Forficula auricularia*. **A, B.** Lateral view of the head, SEM. **C, D.** Side of the antennae, last flagellomeres, SEM. **E, F.** Dorsal overview of the head, mandibular and antennal muscles, 3D-reconstruction. **G, H.** Mesal side of the left mandible, SEM. **I, J.** Mesal side of the left maxilla, SEM. Abbreviation: ct, corpotentorium; ga, galea; la, lacinia; md, mandible; m, mandibular mola.

References

- Hennig W (1953) Kritische Bemerkungen zum phylogenetischen System der Insekten. Beiträge zur Entomologie 3: 1-85
- Jarvis KJ, Haas F, Whiting MF (2005) Phylogeny of earwigs (Insecta: Dermaptera) based on molecular and morphological evidence: reconsidering the classification of Dermaptera. Systematic Entomology 30: 442-453
- Nakata S, Maa TC (1974) A review of the parasitic earwigs (Dermaptera, Arixeniida: Hemimerina). Pacific Insects 16: 307-374

Acknowledgements

We are grateful to Akinola Akintola for specimens of *Hemimerus* sp. and Piotr Nasrecki for providing his picture of *Hemimerus* sp. in the fur (Fig. 1).