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Three new species of scale mites (Acari: Pterygosomatidae) parasitizing *Agama sankaranica* (Sauria: Agamidae)

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Abstract

Three new species of pterygosomatid mites *Pterygosoma engai* **sp. nov.**, *P. indare* **sp. nov.** and *P. olape* **sp. nov.** (Acari: Pterygosomatidae) are described from the agamid lizard *Agama sankaranica* (Sauria: Agamidae) from Kenya. *P. engai* **sp. nov.** is similar to *P. annectans circularis* Jack, 1962 but in the new species, the anterior paddle-shaped setae with spicules on the apical margin of the idiosomal dorsum and three pairs of the postero-lateral setae are present, setae *dm1* are paddle-shaped, peripheral setae and setae *dGIV* are absent, the pseudoanal setal series is represented by three pairs of setae *ps*. *P. indare* **sp. nov.** is most closely related to *P. agamae agamae* Peters, 1849 but differs by the absence of eyes and setae *dGI*, the presence of the flattened hypostomal apex and 12–14 pairs of the peripheral setae and some of them are tapered. *P. olape* **sp. nov.** is similar to *P. engai* **sp. nov.** but differs by the presence of the hypostome with a smooth rounded apex and 16 pairs of the peripheral setae inserted ventrally, the genital series is represented by one pair of setae *g* situated ventrally and four pairs of setae *ps* situated ventrally and terminally.

Key words: Acari, Agamidae, ectoparasites, lizards, Pterygosomatidae

Introduction

The family Pterygosomatidae (Acariformes) is represented by permanent and highly specified, mono- or oligoxenous ectoparasites of reptiles. Only species of the genus *Pimeliaphilus* Trägårdh are probably secondarily associated with terrestrial arthropods (Peredes-Leon *et al.* 2012).

The genus *Pterygosoma* Peters includes currently 57 species and subspecies; most of them (32 species) are known from African agamid (Squamata: Agamidae) and gerrhosaurid lizards (3 species) (Squamata: Gerrhosauridae) and only 15 species were recorded on agamid lizards from Asia and 7 species on liolaemid lizards from South America (Fajfer 2012, Fajfer & González Acuña 2013).

In this paper, I describe three new *Pterygosoma* species from *Agama sankaranica* originating from Kenya.

Material and methods

Mites used in the present study were preserved in 70% ethanol. Before mounting in Hoyer's medium, they were cleared and softened in Nessbitt's solution at +60°C for 1–5 hours. Specimens were studied using the light microscope Olympus BH-2 with differential interference contrast (DIC) illumination and drawings were made using a camera lucida. Specimens destined for scanning electron micrographs (SEM) were dehydrated in ethanol, dried by using the critical point technique, covered with gold, and examined with a Carl Zeiss AG – EVO@40 electron microscope in the Laboratory of Scanning and Transmission Microscopy (AMU). All measurements including scale bars are given in micrometers (µm). In the species descriptions, names of the leg and idiosomal setae follow Grandjean (1939, 1944), names of the palpal setae follow Grandjean (1946). Grandjean's nomenclatures were adapted to the family Pterygosomatidae by Bochkov and OConnor (2006). The scientific names of lizards follow Uetz (2013). Specimen depositories and reference numbers are cited using the following