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New species and records of scale mites (Acari: Pterygosomatidae) from Arabian agamid lizards (Squamata: Agamidae)

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Abstract

Two new species of pterygosomatid mites parasitizing lizards of the family Agamidae are described: *Pterygosoma aqabensis* **sp. nov.** from *Pseudotrapelus aqabensis* Melnikov *et al.* and *Pterygosoma dhofarensis* **sp. nov.** from *Pseudotrapelus dhofarensis* Melnikov and Pierson both from Arabian Peninsula. *Pterygosoma aqabensis* **sp. nov.** is most closely related to *P. dhofarensis* **sp. nov.** but differs by the presence of subcapitular setae *n*, setae *vFI* and *vGIV*, 14–21 pairs of the antero-dorsal setae, 4 pairs of dorso-median setae *dm*, 5–6 pairs of the postero-lateral setae and 7 pairs of pseudoanal setae *ps*, palp setae *dG* and *dF* are subequal in the length and setae *vm3* are slightly serrated. *P. dhofarensis* **sp. nov.** is similar to *P. sinaita* Jack, 1961 but in the new species setae *dm1* are serrated and setae *dm2* are filiform, 3 or 4 pairs of the medio-lateral setae and 2 pairs of peripheral setae are present, setae *dGI* are absent. A redescription of *Pterygosoma adramitana* Jack, 1961 from the type host *Acanthocercus adramitanus* (Anderson) (Agamidae) is given.

Key words: Acari, Agamidae, ectoparasites, lizards, Pterygosomatidae, Arabia, *Pseudotrapelus*

Introduction

The family Pterygosomatidae (Acariformes) is represented by permanent 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 62 species and subspecies. Among them 37 species are known from the African agamid (Squamata: Agamidae) and gerrhosaurid lizards (3 species) (Squamata: Gerrhosauridae), 15 species were recorded on the agamid lizards from Asia and seven species on liolaemid lizards (Liolaemidae) from South America (Fajfer 2012; Fajfer and González Acuña 2013).

Below, we describe two new species, *Pterygosoma aqabensis* **sp. nov.** from *Pseudotrapelus aqabensis* and *P. dhofarensis* **sp. nov.** from *Pseudotrapelus dhofarensis* (Agamidae) both originating from Arabian Peninsula. According to the pattern of the body setation, these two newly described species along with *P. inermis* Trägårdh, 1905, *P. inermis stoliczкана* Jack, 1962, *P. adramitana* Jack, 1961, and *P. sinaita* Jack, 1961 belong to the *inermis* species group established by Jack (1962b). Redescription of *Pterygosoma adramitana* Jack, 1961 from *Acanthocercus adramitanus* (type host) (Agamidae) from Saudi Arabia is given.

Material and methods

Mites used in the present study were preserved in formaldehyde and then transferred in 70% ethanol. Before mounting in Hoyer's medium, they were cleared and softened in Nesbitt's solution at +45°C for 12–24 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

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References

- Bochkov, A.V. & O'Connor, B.M. (2006) A review of the external morphology of the family Pterygosomatidae and its systematic position within the Prostigmata (Acari: Acariformes). *Parazitologiya*, 40, 201–214.
- Fajfer, M. (2012) Acari (Chelicerata) - Parasites of Reptiles. *Acarina*, 20, 108–129.
- Fajfer, M. & González Acuña, D. (2013) Pterygosomatid mites of a new species group *ligare* (Acariformes: Pterygosomatidae: *Pterygosoma*) parasitizing tree iguanas (Squamata: Liolaemidae: *Liolaemus*). *Zootaxa*, 3693, 301–319.
<http://dx.doi.org/10.11646/zootaxa.3693.3.1>
- Grandjean, F. (1939) Les segments postlarvaires de l'hysterosoma chez les oribates (Acariens). *Bulletin Societe Zoology France*, 64, 273–284.
- Grandjean, F. (1944) Observations sur les Acariens de la famille des Stigmaeidae. *Archives des Sciences physiques et naturelles*, 26, 103–1131.
- Grandjean, F. (1946) Au sujet de l'organe de Claparede, des eupathides multiples et des taenidies mandiubulaires chez les Acariens actinochitineux. *Archives des Sciences physiques et naturelles*, 28, 63–87.
- Jack, K.M. (1961) New species of Near Eastern agamid scale-mites (*Acarina*, *Pterygosomatidae*) with notes on the developmental stages of *Geckobia hemidactyli* Law., 1936. *Parasitology*, 51, 241–256.
<http://dx.doi.org/10.1017/s0031182000068633>
- Jack, K.M. (1962a) New species of *Pterygosoma* (Acari, Pterygosomatidae). *Proceedings of the Zoological Society of London*, 138, 579–603.
- Jack, K.M. (1962b) Observations on the genus *Pterygosoma* (Acari: Pterygosomatidae). *Parasitology*, 52, 261–295.
- Jack, K.M. (1964) Leg-chaetotaxy with special reference to the Pterygosomatidae (Acarina) *Annals of the Natal Museum*, 16, 152–171.
- Paredes-León, R., Klompen, H. & Pérez, T.M. (2012) Systematic revision of the genera *Geckobiella* Hirst, 1917 and *Hirstiella* Berlese, 1920 (Acari: Prostigmata: Pterygosomatidae) with description of a new genus for American species parasites on geckos formerly placed in *Hirstiella*. *Zootaxa*, 3510, 1–40.
- Trägårdh, I. (1905) Acari. In: Jägerskiöld, L.A. (Ed.), *Results of the Swedish Zoological Expedition to Egypt and the White Nile, Part II*. Upsala. pp. 59–63.
- Uetz, P. (2013) The Reptile Database. Available from: <http://www.reptile-database.org> (accessed 1 February 2013)