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Establishment of *Oulenziella* gen. nov. for *Oulenzia bakeri* (Hughes, 1962) (Acari: Winterschmidtiidae)

QING-HAI FAN[1], SHERLY GEORGE[1], DONG-MEI LI[1] & ZHI-QIANG ZHANG[2]

[1] *Plant Health & Environment Laboratory, Ministry for Primary Industries, Auckland, New Zealand. E-mail: qinghai.fan@mpi.govt.nz*
[2] *Landcare Research, Private Bag 92170, Auckland, New Zealand and School of Biological Sciences, Centre for Biodiversity & Biosecurity, University of Auckland, Auckland, New Zealand. Corresponding author: ZhangZ@landcareresearch.co.nz*

Abstract

A new genus, *Oulenziella*, is proposed for *Oulenzia bakeri* (Hughes, 1962), a species originally collected on jute (*Corchorus* sp., Malvaceae) from India. *Oulenziella bakeri* (Hughes, 1962) comb. nov. is re-described. *Oulenzia gossypii* Meyer & Rodrigues, 1965 collected from *Gossypium* sp. in Mozambique is considered a junior synonym of *Oulenziella bakeri*. The new genus differs from *Oulenzia* in having *hT* present on tibiae I and II, *kT* on tibia IV, *la* and *ra* on tarsus II, *w* and *r* on tarsus III, *e* and *f* on tarsi I–III; and by seta *d* on tarsi III and IV positioned at level of apical 1/8 to 1/6 of the segments.

Key words: Sarcoptiformes, Astigmata, *Acalvolia*, *Procalvolia*, *Psylloglyphus*, India, Mozambique

Introduction

The genus *Oulenzia* was erected by Oudemans (1928) and currently includes three named species, *O. arboricola* Oudemans, 1928, *O. bakeri* (Hughes, 1962) (=*Calvolia bakeri* Hughes, 1962) and *O. gossypii* Meyer & Rodrigues, 1965, and an undescribed species (Fan *et al*. 2012). The type species, *Oulenzia arboricola* (Oudemans, 1928) (originally as *Lenzia arboricola* Oudemans, 1928), was collected from *Hevea* leaves, in Medan, Deli, Sumatra, Indonesia. The second species, *Calvolia bakeri* Hughes, 1962, was described based on the specimen misidentified as *Oulenzia arboricola* by Baker & Wharton (1952) collected from jute in Dacca, India and recently transferred to the genus *Oulenzia* by Fan *et al*. (2012). The third species *Oulenzia gossypii* Meyer & Rodrigues, 1965 was collected from cotton (*Gossypium* sp.) in Mozambique. It is unsatisfactory to keep *O. bakeri* and *O. gossypii* in *Oulenzia*, as indicated by Fan *et al*. (2012) in their redefinition of *Oulenzia*. In addition we have found that these two species could not be classified into any known genus in the subfamily Oulenziinae. There is thus a need to propose a new genus to accommodate them. The purpose of this paper is to erect a new genus *Oulenziella* based on *Oulenzia bakeri* (Hughes, 1962), designate a lectotype for *Oulenzia bakeri*, redescribe this species in detail to allow accurate identification, and synonymize *Oulenzia gossypii* Meyer & Rodrigues, 1965 with *O. bakeri*.

Methods

Specimens loaned from the United States National Mite Collection via Barry OConnor (University of Michigan, USA) and the Arachnida Collection of Plant Protection Research Institute, Pretoria, South Africa were examined and measured with an interference-phase contrast microscope (Fan *et al*. 2010). Illustrations were made using a drawing tube attached to a Nikon interference-phase contrast microscope. Images were taken using a Zeiss AxioCam HRc camera attached to a Zeiss interference-phase contrast microscope and edited with Auto-montage and Adobe Photoshop CS4 software. All measurements are given in micrometers (μm). Terminology used for idiosomal chaetotaxy follows Griffiths *et al*. (1990), that for palp and leg chaetotaxy follows Grandjean (1939) and Griffiths (1970).

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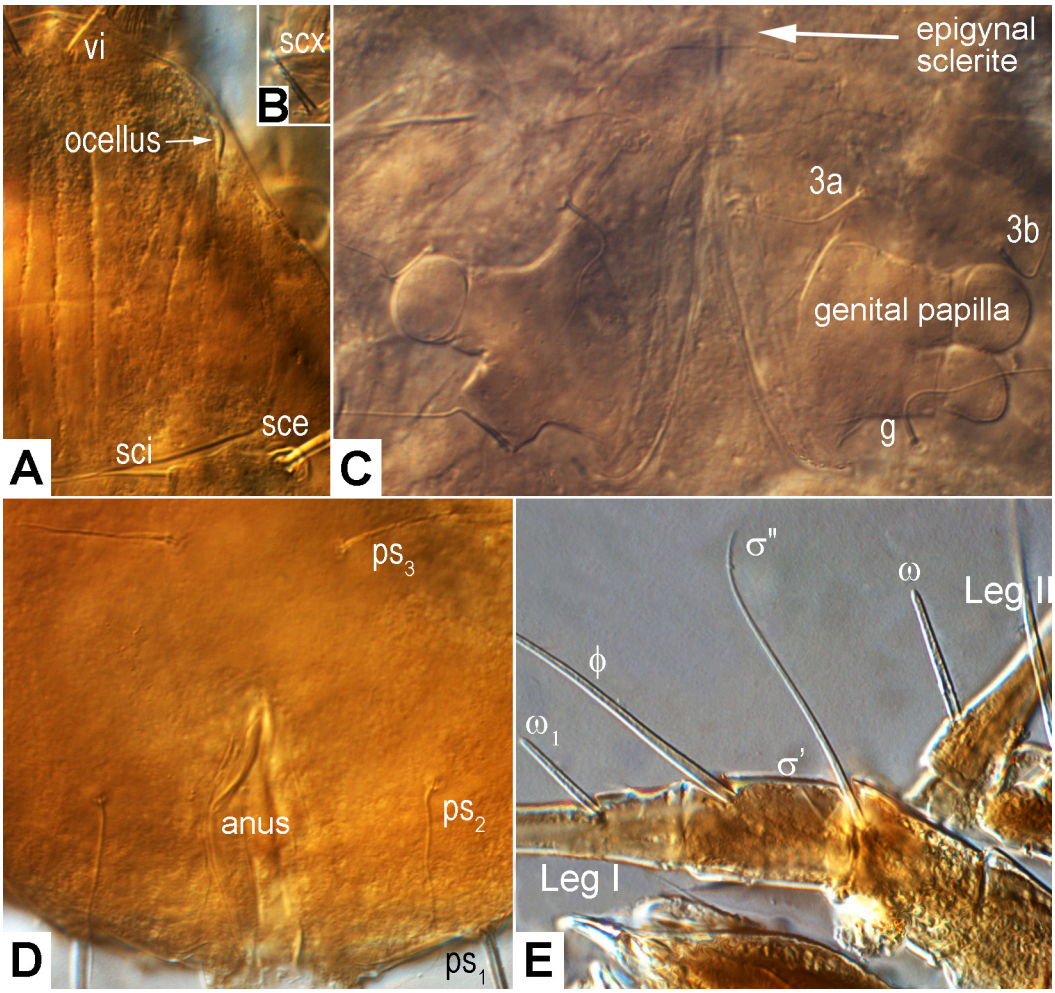

PLATE 1. *Oulenziella bakeri* (Hughes, 1962) (female). **A,** prodorsum; **B,** supracoxal seta; **C,** genital area; **D,** anal area; **E,** solenidia on tarsi I and II.

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References

Baker, E.W. & Wharton, G.W. (1952) *An Introduction to Acarology*. Macmillan, New York, 465 pp.

Fan, Q.-H., George, S. & Kumarasinghe, L. (2010) Genus *Acalvolia* (Acari: Winterschmidtiidae), with the description of a new species from the US. *Zootaxa*, 2719, 41–61.

Fan, Q.-H., George, S. & Kumarasinghe, L. (2012) Redescription of *Oulenzia arboricola* (Oudemans, 1928), type species of *Oulenzia* Radford, 1950 (Acari: Astigmata: Winterschmidtiidae). *Systematic & Applied Acarology*, 17, 333–338.

http://dx.doi.org/10.11158/saa.17.3.11
Grandjean, F. (1939) La chaetotaxie des pattes chez les Acaridae. *Bulletin de la Société Zoologique de France*, 64, 50–60.
Griffiths, D.A. (1970) A further systematic study of the genus *Acarus* L., 1758 (Acaridae, Acarina), with a key to species. *Bulletin of the British Museum (Natural History) Zoology,* 19 (2), 85–118.
Griffiths, D.A., Atyeo, W.T., Norton, R.A. & Lynch, C.A. (1990) The idiosomal chaetotaxy of astigmatid mites. *Journal of Zoology*, 220, 1–32.
http://dx.doi.org/10.1111/j.1469-7998.1990.tb04291.x
Hughes, A.M. (1962) The genus *Calvolia* Oudemans, 1911 (Acari: Sarcoptiformes). *Acarologia*, 4 (1), 48–63.
Meyer, M.K. & Rodrigues, M. da C. (1965) Acari associated with cotton in southern Africa (with reference to other plants). *Garcia de Orta*, 13 (2), 195–226.
OConnor, B.M. (2009) Cohort Astigmatina. *In*: Krantz, G.W. & Walter, D.E., (Eds.), *A Manual of Acarology. 3rd Edition.* Texas Technical University, Lubbock, Texas, pp. 565–657.
Oudemans, A.C. (1928) Acarologische Aanteekeningen XCI. *Entomologische Berichten*, VII, 317–328.