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Species-group concepts and biogeography of the genus *Crotonia* (Acari: Oribatida: Crotoniidae), with new species from South and Central America

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Abstract

Five new species of oribatid mite belonging to the Gondwanan genus *Crotonia* are described from South and Central America: *C. macfadyeni* **sp. nov.** from the Falkland Islands, *C. carioca* **sp. nov.** from Brazil, *C. valdivia* **sp. nov.** and *C. wallworki* **sp. nov.** both from Chile, and *C. aculeata* **sp. nov.** from Guatemala. The nymphal stages of *C. macfadyeni* are also described. The species-groups of *Crotonia* delineated by Luxton (1982) are redefined in relation to these new species and a re-evaluation of characters. Previously, the primary character for defining species-groups was the arrangement of the caudal apophyses. Greater emphasis is placed herein on the fusion of the dorsal shield with the rest of the notogaster and the presence or absence of a lateral hyaline region. The Nukuhivae group is merged into the Unguifera group (containing *C. carioca* **sp. nov.**, *C. cervicornia*, *C. melanesiae*, *C. nukuhivae* and *C. unguifera*) and the Caudalis group into the Obtecta group (containing *C. blaszaki*, *C. obtecta*, *C. pulchra*, *C. caudalis*, *C. cupulata*, *C. longibulba* and *C. tuberculata*). The biogeography of *Crotonia* is re-assessed based on 43 recognised species. The redefined Obtecta group has a disjunct trans-Pacific distribution. The Unguifera group, present in the Neotropics, is also found in an arc from New Zealand to the Philippines and has also dispersed to the mid-Pacific Marquesas Islands. Three new species-groups are established. The Flagellata group, containing *C. flagellata* and *C. reticulata*, also has a disjunct trans-Pacific distribution. The Lanceolata group is dominated by species from oceanic islands and contains *C. brassicae*, *C. lanceolata* and *C. perforata* from St. Helena, *C. brevicornuta* from Campbell Island, and *C. ovata* from Tasmania. The Capistrata group contains those species which possess the full complement of setae in the *c* series (*C. alluaudi*, *C. americana*, *C. ardala*, *C. borbora*, *C. capistrata*, *C. dicella*, *C. ecphyla*, *C. pauropelor*, *C. tasmaniana* and *C. tryjanowskii*). It has a disjunct continental distribution represented in the Neotropical, Afrotropical and Australasian regions. The Cophinaria group (*C. aculeata* **sp. nov.**, *C. brachyrostrum*, *C. chiloensis*, *C. cophinaria*, *C. jethurmerae*, *C. lyrata*, C. *macfadyeni* **sp. nov.**, *C. marlenae*, *C. pyemaireneri*, *C. ramus*, *C. rothschildi*, *C. valdivia* **sp. nov.** and *C. wallworki* **sp. nov.**) has a similar distribution to the Capistrata group. The Afrotropical region has lowest diversity (two species-groups, six

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