

An analysis of species-groups of the genus *Plinthisus* Stephens (Hemiptera: Rhyparochromidae) in the Ethiopian Region with the description of eight new species

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ABSTRACT

An analysis of the known Ethiopian *Plinthisus* fauna shows that there are at least 12 species-groups. Two groups, the subgenera *Locutius* and *Isioscytus*, have Old World Palearctic and tropicopolitan distributions that extend into Australia. The other 10 species-groups are endemic to Africa, nine having a center of endemicity in the Cape Region of South Africa with apparent relationships to the Australian fauna. Eight new species of *Plinthisus* are described, each as a representative of a distinct species-group, seven from South Africa: *P. (Isioscytus) pulchellus* n. sp., *P. (Nanoplinthisus) ericae* n. sp., *P. (N.) fynbosi* n. sp., *P. (N.) peninsularis* n. sp., *P. (N.) lamprus* n. sp., *P. (N.) zuurb-ergi* n. sp., and *P. (N.) drakensbergensis* n. sp.; and one, *P. (Plinthisus) brachyococcus* n. sp., from the Democratic Republic of the Congo. *P. beniamaricus* Linnavuori, 1978 **stat. nov.** and *P. kilimensis* Horváth, 1906 **stat. nov.** are raised from subspecies of *P. himyaritus* Linnavuori, 1978 and *P.*

afer Horváth, 1906, respectively to specific rank. *Plinthisus hirsutus* Slater, 1964 is placed in a species-group distinct from the subgenus *Dasythisus*. The Nearctic species *Plinthisus americanus* Van Duzee, 1910, *P. compactus* Uhler, 1904 and *P. indentatus* Barber, 1918 are placed in the subgenus *Dasythisus*. Included are 123 figures illustrating dorsal views, heads, metathoracic scent gland areas, metathoracic wing stridulitra, abdominal structure, male genital capsules, claspers, phalli, spermathecae, and prothoracic legs.

Key words: Hemiptera-Heteroptera, Rhyparochromidae, Plinthisinae, *Plinthisus*, external morphology, Ethiopian Region, biogeography

INTRODUCTION

Slater & Sweet (1977) described 15 new species in five species-groups in a previously unrecorded Australian *Plinthisus* fauna. We briefly discussed the inadequate state of knowledge of the classification of the rhyparochromine subfamily Plinthisini (now subfamily of the Rhyparochromidae sensu Henry, 1997) that presently includes only the large diverse genus *Plinthisus*, although several subgenera are recognized in the Palearctic fauna (Wagner 1963, 1964). In Australia we distinguished two faunal components. One component, which included two species-groups (in the subgenera *Locutius* and *Isioscytus*) we interpreted as being a relatively recent element of the Australian fauna because it contained wide-ranging pterygopolymorphic species that were related to tropical Old World *Plinthisus* species-groups. The second component, which included three endemic species-groups, appeared to be much older because it consisted of species that were entirely brachypterous, and had restricted geographical distributions. Moreover, we noted that this older fauna appeared to be closely related to elements of the *Plinthisus* fauna of the Cape area of South Africa.

The Ethiopian *Plinthisus* fauna is extensive but also appears to consist basically of two biogeographic elements. One element, comprising three species-groups, is concentrated in tropical Africa, predominates in northeastern South Africa but is absent from the southwest Cape area. This element in part (subgenera *Locutius* and *Isioscytus*) extends through the Old World tropics into Australia, and is most closely related to the Palearctic *Plinthisus* fauna. The other element, consisting of nine species-groups, is centered in the temperate Cape area of South Africa with outliers to the north in the Karroo, the Namib Desert and along the mountains of the Drakensberg escarpment into the highlands of East Africa. This more temperate faunal element appears to be most closely related to the *Plinthisus* fauna of Australia. This biogeographic pattern parallels the floral patterns in which the Cape area is recognized as a separate Cape Floral Kingdom that is most closely related to the Australian flora, while the rest of the flora of South Africa is included in the African or Ethiopian Division of the Palaeotropical Floral Kingdom (Hutchinson, 1946). It is hoped that the systematic and biogeographic analysis of the World *Plinthisus* fauna presently under way will test these tantalizing relationships.