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Phytoseiid mites of the tribes Afroseiulini, Kampimodromini and Phytoseiulini, and complementary notes on mites of the tribes Euseiini and Neoseiulini (Acari: Phytoseiidae) from sub-Saharan Africa

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Abstract

This is the sixth publication in a series on the phytoseiid mites of sub-Saharan Africa. Seventeen phytoseiid species are reported in this paper, including all species of the Afroseiulini, Kampimodromini and Phytoseiulini known to occur in sub-Saharan Africa, in addition to one species of Euseiina and two species of Neoseiulini. Species of the latter two groups complement the respective lists of species presented in previous publications in this series. One species, *Paraphytoseius ghanaensis* **n. sp.**, is described for the first time and four species are redescribed. Keys are included to help in the separation of the species in each tribe or subtribe.

Key words: Biological control, phytoseiid, predator, cassava, taxonomy

Introduction

This paper is the sixth in a series dealing with the phytoseiid mites from sub-Saharan Africa. The first paper dealt with species of *Euseius* Wainstein (Moraes *et al.* 2001), the second with the species of the subtribes Typhlodromalina Chant & McMurtry and Euseiina Chant & McMurtry of Euseiini (Moraes *et al.* 2006), the third with the species of *Neoseiulus* Hughes (Zannou *et al.* 2006), the fourth with the species of Typhlodromipsini Chant & McMurtry and of the subtribes Arrenoseiina Chant & McMurtry and Proprioseiopsina Chant & McMurtry of Amblyseiini (Moraes *et al.* 2007) and the fifth with species of the subtribe Amblyseiina Chant & McMurtry of Amblyseiini (Zannou *et al.* 2007).

The whole series, including the present paper, refers to all species so far reported from that region, with information on morphological variation of the species that have been recollected in surveys conducted in South Africa by South African professionals and in other countries of the region by personnel of the International Institute of Tropical Agriculture (IITA). In the latter case, surveys were conducted within the scope of an extensive project for the biological control of the cassava green mite [*Mononychellus tanajoa* (Bondar)] in Africa (Yaninek & Herren 1988); the main objective of those surveys was to evaluate the composition of the phytoseiid fauna in cassava fields and on the surrounding vegetation, before and after the introduction of exotic phytoseiids from the Neotropics for control of the pest.

The objective of the present paper is to report the phytoseiids belonging to 3 tribes of the subfamily Amblyseiinae (Afroseiulini, Kampimodromini and Phytoseiulini) and to present complementary information on

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