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NOTES ON SOME EAST AFRICAN APHIDS (HOMOPTERA, APHIDOIDEA)

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Twenty aphid species are recorded from Kenya and Tanzania. *Eonaphis crotonis* Quednau is new to East Africa; *Aphis fabae* subsp. *solanella* Theob. and *Macrosiphum rosae* L. are new to Tanzania. New host-plant records are added to some of the species. The male of *Neophyllaphis grobleri* Eastop is described for the first time and measurements of other morphs of this species and of the little known *Eonaphis crotonis*, previously found only once, are given.

INTRODUCTION

The aphid fauna of East Africa is treated in a monograph by Eastop (1958). Including some subsequent additions by Eastop (1959, 1961, 1966) the number of species previously known from Kenya and Tanzania amounts to 94, of which 81 species have been recorded from Kenya and 42 species from Tanzania.

The writer collected 20 aphid species in East Africa during an excursion with the Danish Natural History Society from December 26, 1971 to January 15, 1972. Eight species were found in southern Kenya and thirteen species in the north-eastern part of Tanzania.

The species are listed alphabetically below. Three of them are new to Tanzania and one of these is also new to East Africa. New host-plant records are added to some of the aphids previously known from Kenya and Tanzania.

Most of the plants on which the aphids were found were collected. They were subsequently delivered to the East African Herbarium, Nairobi, and identified by J. B. Gillett (indicated by an asterisk (*) in brackets behind the name of the plant). A few plants were identified in the field by the writer or by other members of the excursion. The aphids were identified by the writer.

LIST OF SPECIES

Aloephagus myersi Essig, 1950

Kariandusi Site, north of Naivasha, Kenya, Dec. 30; on *Aloë* sp. (Liliaceae).

Aphis craccivora Koch, 1854

Tsavo National Park East, Kenya, Jan. 1; on *Platycelyphium voense* (Engl.) Wild (*) (Papilionaceae), large colonies; also on *Alternanthera pungens* H. B. & K. (*) (Amaranthaceae) at the same locality, infested by large numbers though not a host; the aphids arrived from *Platycelyphium* a few metres away.

Aphis fabae Scopoli, 1763, subsp. *solanella* Theobald, 1913

West Kilimanjaro Forest Station (about 1500 m), Tanzania, Jan. 11; on *Solanum nigrum*

L. var. 'A' (*) (Solanaceae), large colonies crumpling the leaves; on *Malva verticillata* L. (*) (Malvaceae), only alatae; on *Capsella bursa-pastoris* (L.) Med. (Cruciferae), colonies on somewhat crumpled leaves.

Momella, Tanzania, Jan. 9-11; on *Bidens pilosa* L. (*) (Compositae), colonies; on *Nicotiana glauca* R. Grah. (*) (Solanaceae), alatae in the inflorescences; on *Chenopodium opulifolium* Koch & Ziz (*) (Chenopodiaceae), large colonies on upper parts of stems; on *Agapanthus* sp. (cultivated) (Alliaceae), colonies on flowers and fruits; on *Vernonia pauciflora* Less. (*) (Compositae), one dead alata.

Mt. Meru, Tanzania, Jan. 12; on *Clusia* sp. (Euphorbiaceae), colonies on undersides of young leaves.

These seem to be the first records from Tanzania. The subspecies occurs in Africa and Europe, originally described by Theobald from Kenya. Eastop (1958: 72) recorded it from Njoro and Muguga in Kenya.

Aphis frangulae Kaltentbach, 1855, subsp. *gossypii* Glover, 1877

Momella, Tanzania, Jan. 10; on *Ageratum conyzoides* L. (*) (Compositae), apterae and nymphs.

Aphis nerii B. de Fonscolombe, 1841

Near Buiko between Tanga and Same, Tanzania, Jan. 9; on *Calotropis* sp. (Asclepiadaceae), colonies in inflorescences and in concavities on undersides of leaves (like *Cryptomyzus ribis* (L.) on *Ribes rubrum*), visited by ants.

Eonaphis crotonis Quednau, 1962

Arusha National Park, Tanzania, Jan. 10; on *Croton macrostachyus* A. Rich. (*) (Euphorbiaceae), large colonies consisting of apterous and alate viviparous females and immature specimens on undersides of leaves together with some ants. *Croton macrostachyus* was examined at several places, but the aphids were found on only one plant, near Momella Lakes.

This interesting species, which belongs in Setaphidinae, has previously been found only once, viz. in Wonderboom Nature Reserve, South Africa, Dec. 1960—Jan. 1961 on *Croton subgratissimus*, by Quednau, who described it (1962).

Also in South Africa the aphids were found on only one tree, although *Croton subgratissimus* occurred abundantly in the area.

The specimens from Tanzania are somewhat bigger than those described from South Africa, with longer antennal segment III and total antennal length, so some measurements (in mm) are given below:

Apterous viviparous females: body length 1.46-1.88, ant. 1.56-1.68, ant. segm. III 0.57-0.66. One specimen: body 1.73, ant. 1.60, ant. segm. III 0.64, IV 0.31, Va 0.21, Vb 0.30, siph. 0.13, ultimate rostral segm. 0.15, 2nd segm. of hind tarsus 0.11.

Alate viviparous females: body 1.63-1.66, ant. 1.60-1.83, ant. segm. III 0.64-0.72 with 18-24 secondary rhinaria. One specimen: body 1.66, ant. 1.70, ant. segm. III 0.72, IV 0.32, Va 0.21, Vb 0.31, siph. 0.13, ultimate rostral segm. 0.16, 2nd segm. of hind tarsus 0.11.

In Quednau's material the antennae are about 0.8 × body length in alatae, in the present material of the same length as the body or a little longer.

Hyperomyzus lactucae (L., 1758)

Thomson's Falls (2361 m), Kenya, Dec. 28; on *Sonchus oleraceus* L. (*) (Compositae).

Lake Naivasha (1893 m), Kenya, Dec. 29; on *Sonchus oleraceus* L. (*).

The species is almost cosmopolitan, according to Eastop (1966) occurring in Kenya highlands at altitudes of 1800-2700 m, whereas the related *H. carduellinus* (Theobald) in Kenya is found only up to about 2100 m.

The present material is identified with *H. lactucae* by means of the key in Eastop (1966). The altitudes of both above mentioned localities are more than 1800 m.

Macrosiphum rosae (L., 1758)

Arusha, Tanzania, Jan. 13; on *Rosa* sp., cultivated in gardens, pink apterae and nymphs.

This almost cosmopolitan species, the common pest to roses in Europe, has been recorded from several localities in Africa, in Eritrea, Kenya, Rhodesia, Uganda, South Africa (Eastop 1958: 47), Mozambique (Ilharco 1970), and Angola (van Harten & Ilharco 1971). This is the first record from Tanzania.

Macrosiphum (Sitobion) africanum Hille Ris Lambers, 1954

Western slope of Kilimanjaro (about 1800 m), Tanzania, Jan. 11; one alata swept from low vegetation on roadside in rain forest.

Macrosiphum (Sitobion) sp.

Mt. Meru, Tanzania, Jan. 12; on a woody member of the Hypericaceae, apterae killed by fungus disease.

It is perhaps *M. (S.) nigrinectaria* Theobald, 1915, but identification is not possible because the hind tarsi are missing.

Myzus ornatus Laing, 1932

Lake Naivasha, Kenya, Dec. 29; on cultivated variety of *Achillea millefolium* L. (Compositae) in gardens, large numbers of apterae and nymphs together with ants.

Ngurdoto Crater, Arusha National Park, Tanzania, Jan. 10; on *Sphaeranthus suaveolens* (Forssk.) D.C. (*) (Compositae), only two alatae.

Myzus (Nectarosiphon) persicae (Sulzer, 1776)

Near Ngobit north of Nyeri, Kenya, Dec. 28; one aptera swept from vegetation with *Bidens pilosa* L. (*) (Compositae).

Neophyllaphis grobleri Eastop, 1955

Near Amani, Usambara Mountains, Tanzania, Jan. 8; on *Podocarpus usambarensis* (according to label on the tree in the forest of the Malaria Station) (Podocarpaceae), large colonies on fullgrown tree, apterous and alate viviparous females and sexuales.

The host record is new. Previously this aphid has been found on *Podocarpus gracilior* (Eastop 1955), *P. milanjanus* (Eastop 1958), *P. henkelii* (Quednau 1962), and *P. engelmannii* (according to label on sample from West Africa collected by Eastop). It is known only from Africa south of Sahara (Kenya, Tanzania, South Africa, Cameroons) and is the only *Neophyllaphis* species occurring in Africa. The sample was identified by means of the key in Hille Ris Lambers (1967), and the oviparous females were compared with material from British Museum.

As the specimens from *P. usambarensis* are a little bigger than the specimens described by Eastop (1955) some measurements (in mm) are given below:

Apterous viviparous female: body 2.27, ant. 1.22, ant. segm. III 0.50, IV 0.21, V 0.20, VIa 0.13, V1b 0.04, ultimate rostral segm. 0.07, 2nd segm. of hind tarsus 0.16.

Alate viviparous females: body 2.11-2.84; number of rhinaria on ant. segm. III 92-104. Most specimens are ovipariform with hind tibiae bearing up to five pseudosensoria. One specimen: body 2.43, ant. 2.04, ant. segm. III 0.93, IV 0.39, V 0.32, VIa 0.16, V1b 0.04, ultimate rostral segm. 0.09, 2nd segm. of hind tarsus 0.17, hind tibia with one pseudosensorium.

Alate oviparous female: body 2.37, ant. 2.05, ant. segm. III 0.94, with 96-97 secondary rhinaria, IV 0.39, V 0.33, VIa 0.16, V1b 0.04, ultimate rostral segm. 0.08, 2nd segm. of hind tarsus 0.17, hind tibia with 35-36 pseudosensoria.

Alate male: has not been described previously. It is similar to the alate viviparous female, except that the third antennal segment bears about 140-150 secondary rhinaria, which in the basal half of the segment are of a shape similar to that in the alate female, viz. narrow, transversal, and linear and not ciliated, but not extending around the segment for more than a half of its circumference; in the middle part of about the same shape, but ciliated; and in the distal one third to two fifths transverse-oval or subcircular, ciliated and situated not only on one side of the segment, and the fourth segment with about 35 transverse-oval, ciliated rhinaria on all sides of the segment (the rest of the antenna is missing). Measurements of one specimen: body 2.13, ant. segm. III 0.84, IV 0.39, ultimate rostral segm. 0.07, 2nd segm. of hind tarsus 0.16.

In the viviparous females ant. segm. III is longer than in the material described by Eastop, and there are more secondary rhinaria in the alate viviparous females (92-104 against 54-76). Material from West Africa bridges the gap, however. In one sample collected by Eastop in Cameroons an alate viviparous female similar to Eastop's type material, with body length 2.60 mm and ant. segm. III 0.77 mm with 64 rhinaria, occurs together with an alate oviparous female similar to my material from the Usambara Mts., with body length 2.90 mm and ant. segm. III 0.97 mm with 81-82 rhinaria, so the differences should probably be ascribed to intraspecific variation only.

Rhopalosiphum rufiabdominalis (Sasaki, 1899)

Western slope of Kilimanjaro (about 1800 m), Tanzania, Jan. 11; one alata swept from low vegetation on roadside in rain forest.

Saltusaphis scirpus Theobald, 1915

Lake Naivasha, Kenya, Dec. 29; on *Pennisetum clandestinum* Chiov. (*) (Gramineae), apterous and alate viviparous females and immature specimens caught by shaking high grass in one place and low short-leaved grass of the same species in another place several metres away.

Though the aphids belong in two samples from the same plant species it is doubtful that *Pennisetum* is a true host because, elsewhere, this well-known aphid has been found feeding on Cyperaceae only. It is recorded from Egypt, Sudan, Kenya, South Africa, Mozambique, and Angola.

Schoutedenia bougainvilleae (Theobald, 1920)

Diani Beach south of Mombasa, Kenya, Jan. 3; on *Phyllanthus* sp. (*) (Euphorbiaceae), small colonies visited by ants, apterae and nymphs, from some of which alatae were reared.

Tetraneura nigriabdominalis (Sasaki, 1899)

Lake Naivasha, Kenya, Dec. 29; on *Pennisetum clandestinum* Chiov. (*) (Gramineae), alatae taken by shaking the plants over a board.

Toxoptera aurantii (B. de Fonscolombe, 1841)

Mt. Meru, Tanzania, Jan. 12; on *Rhamnus prinoides* L'Hér. (*) (Rhamnaceae), apterae and nymphs on undersides of leaves.

It is previously known from *Rhamnus*, though not *Rh. prinoides*.

Toxoptera citricidus (Kirkaldy, 1907)

Mt. Meru, Tanzania, Jan. 12; on *Clusia* sp. (Buphorbiaceae), one alata visited by ant.

Uroleucon (*Uromelan*) *Compositae* (Theobald, 1915)

Momella, Arusha National Park, Tanzania, Jan. 9-11; on several *Compositae*, large colonies on *Vernonia lasiopus* O. Hoffm. (*), *V. pauciflora* Less. (*), and *Conyza floribunda* H. B. & K. (*): a few specimens (alatae, apterae, nymphs) on *Gnaphalium undulatum* L. (*), some of them dead or dying, in one little colony together with a coccid-like ladybird larva: and finally single specimens on *Ageratum conyzoides* L. (*) (aptera), *Bidens pilosa* L. (*) (aptera), and *Galinsoga parviflora* Cav. (*) (alata).

Roadside between Momella and Arusha, Tanzania, Jan. 13; on *Vernonia glabra* (Steetz) Vatke (*) (alatae, apterae, nymphs).

The material all belongs to *U. compositae* subsp. *compositae*, also the sample from *Vernonia glabra*, the only host of *U. compositae* subsp. *evansi* Eastop, which lives in southern Tanzania and Rhodesia.

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