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*F. A. MATHIASSEN
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CLARENCE J. GOODNIGHT and MARIE L. GOODNIGHT

Report on a
collection of Opilionids from East Africa



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By CLARENCE J. GOODNIGHT and MARIE L. GOODNIGHT

With 24 figures in the text

Introduction

During the Swedish expeditions to East Africa, 1937–1938 and 1948, Dr. Åke Holm made numerous collections of Opilionids, particularly on the high volcanic mountains of Aberdare, Kilimanjaro, and Kenya. While there have been other collections of Opilionids from East Africa, Dr. Holm was able to find many interesting forms, including a number of new species and one new genus.

This paper is concerned with those members of the suborder Laniatores which Dr. Holm collected. The members of this group are primarily tropical and subtropical in their distribution; hence are very abundant in this area. From this material which we have studied, there appears to be a great deal of endemism in these high tropical mountains.

Most of the material, and all holotypes are deposited in the collections of the Zoological Institute, Uppsala. Paratypes and duplicates are in the arachnid collection of the American Museum of Natural History, New York.

We wish to thank Dr. Holm for placing this material at our disposal. We also wish to thank Dr. Willis Gertsch of the American Museum of Natural History for helping us to obtain necessary literature. A grant from the Society of the Sigma Xi enabled us to consult types at the British Museum of Natural History in London.

Order *Opiliones* Sundevall

Suborder *Laniatores* Thorell

Family *Phalangodidae* Simon

Hinzuanus Karsch

Hinzuanus Karsch, 1880, Zeit. Naturwiss., vol. 53, p. 40. Pavesi, 1883, Ann. Mus. Genova, vol. 20, p. 88. Hirst, 1911, Trans. Linnæan Soc., London, ser. 2, vol. 14, p. 393. (Part) Roewer, 1912, Arch. Naturgesch., vol. 78, sect. A, no. 3, p. 170; 1915, Arch. Naturgesch., vol. 81, sect. A, no. 3, p. 27; 1923, Die Weberknechte der Erde, p. 129.

Biantes Simon, 1885, Bull. Soc. Zool. France, vol. 10, p. 25. Thorell, 1890 + 1891, Ann. Mus. Genova, vol. 30, pp. 357 and 727. Loman, 1898, Zool., Jahrbuch. Syst., vol. 11, p. 521. Soerensen, 1910, Ergeb. Schwed. Exp. Kilimanjaro, vol. 3, part 20, p. 71. (Part) Roewer, 1912, Arch.

Naturg., vol. 78, sect. A., no. 3, p. 174; (part), 1913, Alluaud and Jeannel, Voy. Afr. Or. Arach., vol. 1, p. 15. (New synonymy.)

Metabiantes Roewer, 1915, Arch. Naturg., vol. 81, sect. A, no. 3, pp. 27-28; 1923, Die Weberknechte der Erde, p. 133. (New synonymy.)

Members of the family Phalangodidae without a common eye tubercle and with five dorsal areas on the abdominal scute. The first of these areas is without a median line. The maxillary lobe of the second coxa without a ventral projection. Tarsi of third and fourth legs with scopulae, but with simple untoothed claws. Tarsus of first leg with three segments. Distitarsus of first tarsus with two segments; second with three. Metatarsi not divided into astraguli and calcanei.

GENOTYPE: *Hinzuanus insulanus* Karsch, 1880.

Hinzuanus convexus (Roewer)

Fig. 1.

Metabiantes convexus Roewer, 1949, Senckenbergiana, vol. 30, nos. 4-6, p. 248, plate 1, fig. 8.

RECORDS: 1948 expedition. Mt. Elgon, Kitale, 1890 meters, sifting dry leaves at a rivulet, March 8. Remaining records are from Bujuku Valley, Ruwenzori. 3500 meters, April 1; Bigo, March 25; Kyanasabu Camp, 2980 meters, sifting moss on the ground, March 19; Bigo, 3500 meters, from sphagnum mire, March 21; Bigo, 3450 meters, sifting dry leaves on Senecio, March 21; Bigo, 3450 meters, sifting moss (*Antitrichia*) on Senecio, March 31; Bigo, 3450 meters, sifting *Cladonia* on boulder stones, March 1; Bigo, 3450 meters, sifting star moss in *Erica* forest, March 2; and Bigo, 3450 meters, sifting thin moss covering and leaf debris on the ground in *Senecio-Loebelia-Erica* forest at camp site, March 5.

Description

MALE: total length of body, 2.7 mm; length of cephalothorax, 1 mm; width of body at widest portion, 1.9 mm.

Entire dorsum finely granulate especially on the abdomen. Cephalothorax without a common eye tubercle, with eyes widely separated and located on the posterior part of the cephalothorax. Median portion of the cephalothorax smooth, lacking the granulations of the remaining portion. Abdominal portion of the dorsal scute with five distinct areas, the boundaries of which are parallel. First area without a median line. A row of larger granulations along the lateral margin of the scute. Free tergites with granulations like those of the scute. Anal operculum finely granulate. Free sternites and coxae smooth, with fine granulations. Maxillary lobe of second coxa without ventral projection. Spiracle partially concealed by the fourth coxae. Third coxa with an anterior and posterior row of teeth.

LEGS: clothed throughout with hairs, otherwise unarmed. Second legs somewhat enlarged, with the femur conspicuously swollen. Metatarsus not divided into astragulus and calcaneus; tibia also somewhat swollen, but not so much as the femur. Third and fourth tarsi with heavy scopulae, with simple untoothed double claws. Tarsal segments: 3-5-5-5. Distitarsus of first tarsus with two segments; second, with three. The last segment of the tarsus of the third and fourth legs bifid at the distal portion.

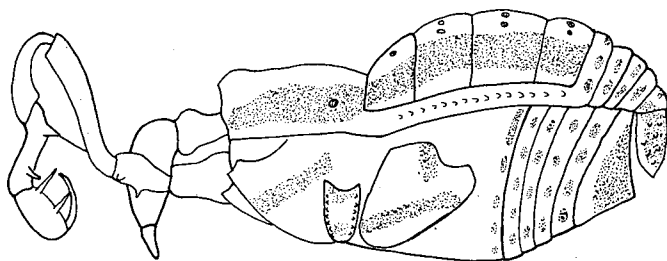


Fig. 1. *Hinzuanius convexus* (Roewer) lateral view of male.

Length of legs (mm)

| | I | II | III | IV |
|------------|-----|-----|-----|-----|
| Trochanter | 0.4 | 0.4 | 0.4 | 0.5 |
| Femur | 0.9 | 1.5 | 1.3 | 1.5 |
| Patella | 0.4 | 0.6 | 0.5 | 0.6 |
| Tibia | 1.1 | 1.2 | 1.1 | 1.5 |
| Metatarsus | 1.1 | 1.4 | 1.6 | 2.2 |
| Tarsus | 0.7 | 1.2 | 0.9 | 1.0 |
| Total | 4.6 | 6.3 | 5.8 | 7.3 |

PALPUS: trochanter, 0.4 mm long; femur, 0.9; patella, 0.6; tibia, 0.6; tarsus, 0.5. Total length, 3 mm. Palpus armed retrolaterally as in figure. Prolaterally the femur has a basal spine, but lacks an apical one; the patella is unspined. Tibia and tarsus armed as on retrolateral surface.

Chelicera normal in size, clothed with scattered hairs.

Entire body of animal yellowish with black markings as follows: median portion of abdominal scute outlined by an irregular wide stripe on either side; each abdominal area with two to four black dots in the median portion; free tergites, each with a cross row of black spots; ventrally, dark markings are irregularly scattered over the coxae, free sternites, and anal operculum. Appendages yellowish with darker mottlings, particularly at the distal portion of the legs; metatarsi with a banded appearance, and tarsi chiefly black. Palpus with only a few darker markings.

FEMALE: total length of body, 2.8 mm; cephalothorax, 0.9 mm; width of body at widest portion, 1.8 mm.

Similar in appearance to male, but lacking enlarged second leg.

Hinzuanius jeanneli (Roewer)

Figs. 2 and 3.

Metabiantes jeanneli Roewer, 1913, Alluand et Jeannel Voy. Afr. Or., Arach., vol. 1, p. 15, pl. 1, figs. 4, 4a-b; 1915, Arch. Naturg., vol. 81, sect. A, no. 3, p. 27; 1923, Die Weberknechte der Erde, p. 135.

RECORDS: 1948 expedition, all specimens collected from Mombasa, Bamburi Beach. Sifting debris in bamboo thicket, August 7; sifting leaf debris under bushes near the shore, August 12; and sifting under bushes near the shore, August 14.

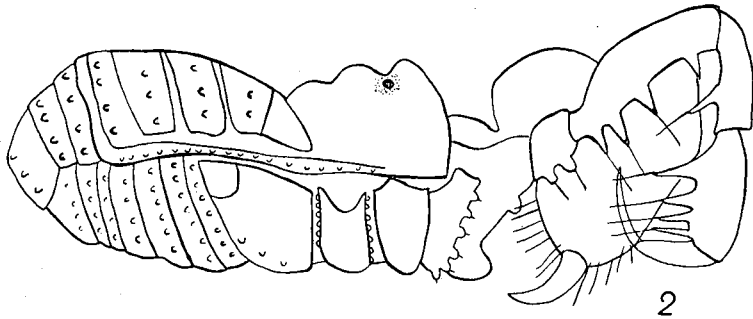


Fig. 2. *Hinzuanius jeanneli* (Roewer), lateral view of male.

Description

MALE: total length of body, 3.6 mm; cephalothorax, 1.3 mm; width of body at widest portion, 2.4 mm.

Entire dorsum granulate; cephalothorax with a distinct elevation on the anterior margin. Eyes widely separated, located at the posterior portion of the cephalothorax. Median portion of the lateral margin with a prominent tubercle. Abdominal portion of the dorsal scute with five distinct areas, the boundaries of which are parallel; first area without a median line and without spines or large tubercles. Second, third, and fourth areas each with a transverse row of tubercles, the median pair of which is slightly enlarged. Fifth area and each free tergite with a transverse row of spines, these are larger on the free tergites and on each row the median spines are larger. Anal operculum with scattered spinose tubercles. Each free sternite with a transverse row of low tuberculations. Coxae with scattered tubercles. Fourth coxa widened laterally as in figure. Posterior margin of second and third coxa each with a row of teeth. Maxillary lobe of second coxa without downward pointing projection. Spiracles hidden by spines from the fourth coxa.

LEGS: with scattered tuberculations on all segments but the tarsus and metatarsus. Basal segments of the fourth legs somewhat enlarged. Metatarsi not divided into astraguli and calcanei. Third and fourth tarsi with heavy scopulae and simple double claws. Tarsal segments: 3-5-5-5. Distitarsus of first tarsus with two segments; second, with three.

Length of legs (mm)

| | I | II | III | IV |
|------------|------|------|------|------|
| Trochanter | 0.5 | 0.5 | 0.7 | 0.7 |
| Femur | 2.5 | 4.9 | 3.7 | 5.1 |
| Patella | 0.7 | 0.9 | 1.1 | 0.4 |
| Tibia | 2.1 | 3.4 | 2.3 | 2.9 |
| Metatarsus | 3.4 | 6.1 | 4.3 | 6.4 |
| Tarsus | 1.4 | 3.0 | 1.8 | 2.3 |
| Total | 10.6 | 18.8 | 13.9 | 17.8 |

PALPUS: trochanter, 0.7 mm long; femur, 1.4; patella, 1.1; tibia, 1; tarsus, 0.8. Total length, 5 mm. Palpus elongate, trochanter, femur, and patella unarmed on both retrolateral and prolateral surfaces. Tibia with three hair-tipped spines on the

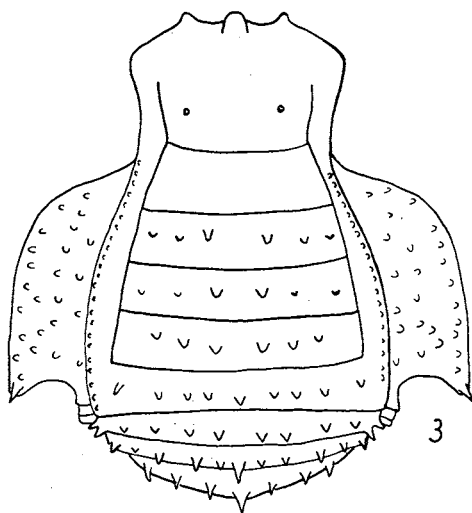


Fig. 3. *Hinzuanius jeanneli* (Roewer), dorsal view of male.

retrolateral side, two on the prolateral. Tarsus with two hair-tipped spines on either side.

Chelicera normal in size, clothed with scattered hairs on the distal segment.

Entire animal light reddish yellow, legs slightly darker.

FEMALE: total length of body, 3.7 mm; length of cephalothorax, 1.2 mm; width of body at widest portion, 2.5 mm.

Female similar in appearance to the male, but with the fourth coxa smaller, and with the dorsal spines reduced in size.

Hinzuanius punctatus (Soerensen)

Fig. 4.

Biantes punctatus Soerensen, 1910, *Ergeb. Schwed. Exp. Kilimanjaro*, vol. 3, no. 20, p. 71. Roewer, 1912, *Arch. Naturg.*, vol. 78, sect. A, no. 3, p. 177, fig. 38.

Metabiantes punctatus Roewer, 1915, *Arch. Naturg.*, vol. 81, sect. A, no. 3, p. 27; 1923, *Die Weberknechte der Erde*, p. 134.

RECORD: 1948 expedition. One female from Mt. Elgon, Kitale, 1890 meters, sifting dry leaves at rivulet, March 8. Kenya, Fort Hall District, Sagana, Mananja Estate, 1100 meters, June 7. Kilimanjaro, Marangu, 1400 meters, under stone in grassland near rivulet, June 11.

Description

MALE: total length of body, 1.8 mm; length of cephalothorax, 0.5 mm; width of body at widest portion, 1.3 mm.

Entire dorsum granulate, cephalothorax with a small elevation in the median portion of the anterior margin. Cephalothorax without a common eye tubercle and

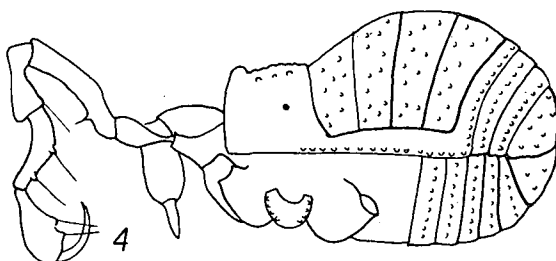


Fig. 4. *Hinzuanius punctatus* (Soerensen), lateral view of male.

with the eyes widely separated and located at the posterior portion of the cephalothorax. Anterior portion of the cephalothorax with the tuberculations much reduced. Abdominal portion of the scute with five distinct areas, the boundaries of which are parallel. First area without a median line. Lateral portion of the abdominal scute with a row of small tubercles. Fifth area and each free tergite with a transverse row of larger tubercles. Anal operculum tuberculate, each free sternite with a transverse row of small tubercles. Coxae finely granulate, third coxa with an anterior and posterior row of teeth. Spiracle hidden by the fourth coxa, maxillary lobe of second coxa without a ventral projection.

LEGS: smooth, metatarsi not divided into astraguli and calcanei. Third and fourth tarsi with heavy scopulae and with simple, untoothed claws. Last tarsal segment of third and fourth tarsi bifid. Tarsal segments: 3-5-5-5. Distitarsus of first tarsus with two segments, second with three.

Length of legs (mm)

| | I | II | III | IV |
|------------|-----|-----|-----|-----|
| Trochanter | 0.3 | 0.2 | 0.2 | 0.3 |
| Femur | 0.7 | 1.1 | 0.9 | 1.2 |
| Patella | 0.3 | 0.4 | 0.3 | 0.4 |
| Tibia | 0.5 | 1.0 | 0.8 | 1.0 |
| Metatarsus | 0.8 | 1.2 | 1.1 | 1.5 |
| Tarsus | 0.5 | 1.0 | 0.5 | 0.6 |
| Total | 3.1 | 4.9 | 3.8 | 5.0 |

PALPUS: trochanter, 0.2 mm long; femur, 0.8; patella, 0.5; tibia, 0.4; and tarsus, 0.3. Total length, 2.2 mm. Palpus armed retrolaterally as in figure. Prolaterally the femur is armed with a single hair-tipped tubercle which is visible from the retrolateral surface; patella unarmed; tibia and tarsus armed as on retrolateral surface.

Chelicera normal, smooth.

Entire animal including appendages yellowish. Tarsi of legs with some darker coloration. In some specimens, each of the dorsal abdominal areas has a pair of darker spots in the median portion. Appendages somewhat lighter than the body, usually mottled.

FEMALE: Total length of body, 2 mm; length of cephalothorax, 0.6 mm; width of body at widest portion, 1.4 mm.

Female similar to male in appearance, but with the granulation of the dorsum slightly reduced.

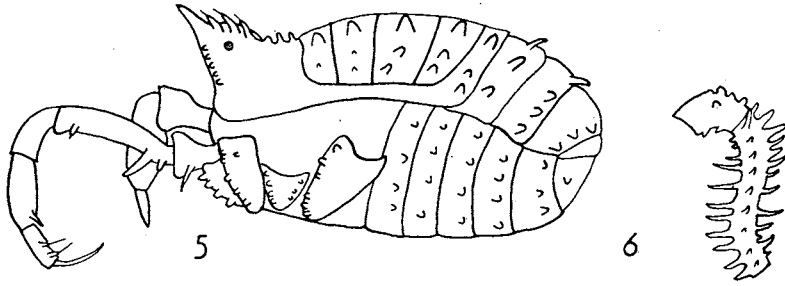


Fig. 5. *Erecanana defensa* n.sp., lateral view of female holotype. — Fig. 6. *Erecanana defensa*, n.sp., prolateral view of trochanter and femur of first leg of female holotype.

Erecanana Strand

Palpipes (non Roth, 1851) Soerensen, 1910, *Ergeb. Schwed. Exp. Kilimanjaro*, vol. 3, part 20, p. 68.

Erecanana Strand, 1911, *Soc. Entom.*, vol. 26, p. 14. Roewer, 1912, *Arch. Naturg.*, vol. 78, sect. A, no. 3, p. 212; 1923, *Die Weberknechte der Erde*, p. 184.

Members of the family Phalangodidae without a common eye tubercle and with a forward pointing elevation between the eyes. Dorsal scute with five areas, the first of which is without a median line. Tarsi of third and fourth legs with simple untoothed claws, without scopulae. Metatarsi not divided into astraguli and calcanei. Femur, patella, tibia and metatarsus of first leg each with a ventral and dorsal row of spines. Tarsal segments: 2-2-4-4. Distitarsus of both first and second tarsi with but one segment.

GENOTYPE: *Erecanana horrida* (Soerensen), 1910.

Erecanana defensa n. sp.

Figs. 5 and 6.

RECORD: 1938 expedition. Kenya, 7 miles north of Mombasa, April 19. Two females collected.

Description

FEMALE HOLOTYPE: total length of body, 3 mm; cephalothorax, 0.9 mm; width of body at widest portion, 1.8 mm.

Cephalothorax with several spines at the anterior lateral margin. Eyes situated near the anterior margin. Between them is an elevation which bears a dorsal row of spines, the most anterior of these spines is larger and points forward. A row of small spines is along each side of the anterior margin of this elevation. Posterior to this elevation is a double row of spines which extend to the abdominal portion of the scute. A few other tubercles are scattered over the lateral surface of the cephalothorax. Abdominal scute with five distinct areas, the boundaries of which are not parallel. First area without a median line. A row of hair-tipped tubercles across each dorsal area. The median two are enlarged into paired tubercles in the first four areas. In the

fifth area there is a single larger median tubercle. Each free tergite with a transverse row of spinose tubercles, but without the median ones being larger. Anal operculum with some very small tuberculations. Each free sternite with a transverse row of small tuberculations. Each free sternite with a transverse row of small tubercles. Spiracle hidden by the fourth coxa. Coxae with a few scattered tubercles, with anterior and posterior rows of teeth on most coxae. Maxillary lobe of second coxa without ventral projection; distal portion of fourth coxa with spines.

LEGS: trochanters with irregularly arranged tubercles; femur, patella, tibia, and metatarsus of first leg with ventral and dorsal rows of large spines and with large tubercles on the retrolateral surfaces. These latter are more or less arranged in rows. Femora, patellae, tibiae, and metatarsi of second to fourth legs with similar rows of spines and tubercles, but these are much smaller than those of the first leg. Third and fourth tarsi without scopulae, and with simple double claws. Tarsal segments: 2-2-4-4. Distitarsi of both first and second tarsi with but one segment.

Length of legs (mm)

| | I | II | III | IV |
|------------|-----|-----|-----|-----|
| Trochanter | 0.3 | 0.3 | 0.4 | 0.5 |
| Femur | 1.0 | 1.6 | 1.1 | 1.3 |
| Patella | 0.4 | 0.5 | 0.4 | 0.5 |
| Tibia | 0.5 | 1.2 | 0.9 | 1.2 |
| Metatarsus | 0.7 | 1.1 | 1.1 | 1.0 |
| Tarsus | 0.2 | 0.5 | 0.4 | 0.4 |
| Total | 3.1 | 5.2 | 4.3 | 4.9 |

PALPUS: trochanter, 0.2 mm long; femur, 0.5; patella, 0.3; tibia, 0.4; tarsus, 0.4. Total length, 1.8 mm. Palpus armed retrolaterally as in figure, prolaterally the femur and patella each with an apical median spine, tibia and tarsus each with two spines.

Chelicera normal, clothed only with hairs.

Dorsum of animal yellowish brown, with much darker brown mottling, particularly in the median portion of the abdomen and on the cephalothorax. Ventral portion of the abdomen light yellowish brown. Legs with much darker brown markings, vaguely giving an annulate appearance to some segments.

RELATIONSHIPS: *E. defensa* n.sp. is related to *E. horrida* (Soerensen) 1910. This latter species was found in caves near the coastal town of Tonga. The present species has a much less spiny palpus.

DISCUSSION: From a close study of the material which we have, it appears that this species represents but one of a series of similar species within the genus *Ere-canana*. This opinion can only be confirmed by future study of numerous specimens from many localities. At present, the wisest course appears to be to recognize this as a distinct species. In the future, it could be delegated to the rank of subspecies.

Family *Assamiidae* Soerensen

Hypoxestus Loman

Hypoxestus Loman, 1902, Zool. Jahrb. Syst., vol. 16, pp. 187, 192. Roewer, 1912, Arch. Naturg., vol. 78, sect. A, no. 3, p. 88; 1923, Die Weberknechte der Erde, p. 268; 1935, Veröff. Deutsche Kol. und Uebersee Mus., Bremen, vol. 1, no. 1, p. 13.

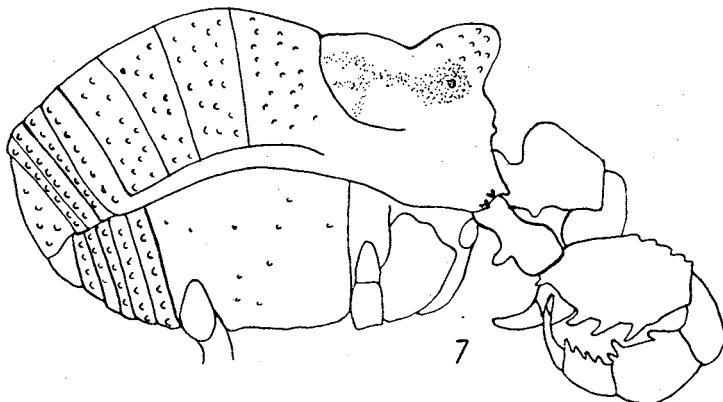


Fig. 7. *Hypoxestus holmi*, n. sp., lateral view of male holotype.

Amasis Soerensen, 1910, *Ergeb. Schwed. Exp. Kilimanjaro*, vol. 3, part 20, p. 76.

Amasilla Strand, 1911, *Soc. Ent.*, vol. 26, p. 14.

Randilea Roewer, 1935, *Veröff. Deutsche Kol. und Uebersee Mus., Bremen*, vol. 1, no. 1, p. 23 (new synonymy).

Members of the family Assamiidae having a normal eye tubercle which is low, round, and without conspicuous spines. The first area of the abdominal scute is with or without a median line. The median portion of the anterior margin of the cephalothorax is without a dorsal spine. The double claws of the third and fourth tarsi are simple and untoothed. The first tarsus has either five or six segments; the distitarsus of the first tarsus with two segments, the second with three. The spiracles are visible.

GENOTYPE: *Hypoxestus levis* Loman, 1902.

DISCUSSION: The genus *Randilea* Roewer is synonymized here. This genus was originally separated from the genus *Hypoxestus* by the fact that its members had a separation of the first area into two parts by a median line and possessed other minor differences. *H. planus*, n. sp., has the first area partially divided, demonstrating that this division of the first area cannot be considered a valid generic difference.

Hypoxestus holmi n. sp.

Figs. 7 and 8.

RECORDS: 1938 expedition. All collections from Mt. Elgon: Kitale, January 23; 2290 meters, February 9; East side of mountain, 2500 meters, February 3; East side, 2030 meters (Coll. R. Swam), February 21; E. side, February 21, 2970 meters; East side, 2400 meters, March 3; east side, 3300 meters, March 9; 1850 meters, March 23. 1948 expedition. Collections from Mt. Elgon: East side, 2970 meters, February 3; Kiparawa River, 2500 meters, February 21; East side, March 3; East side, 2970 meters, under branches in grass land in the Erica zone, March 3; east side, 1900 meters, Combretum savannah, net collecting in grass, April 30; East side, 4000 meters, sifting moss near rivulet in *Senecio gardneri* forest, May 10; east side, sifting "star moss", 4150 meters, May 11; East side, koitoboss, 4200 meters, sifting moss on the

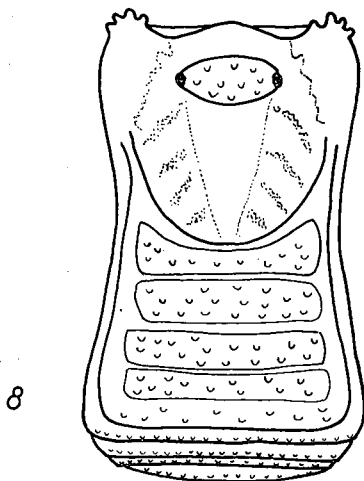


Fig. 8. *Hypozaestus holmi*, n.sp., dorsal view of male holotype.

ground, May 11; fault precipice southwest of Maji ya Moto, 3710 meters, sifting dry thistles, May 17. Aberdare, east side, 2900 meters, sifting of leaf debris in bamboo forest, July 11; Aberdare, 2nd camping place, 3100 meters, sifting debris among *Selaginella* in bamboo forest, July 15. Ruwenzori, Mijusi Valley, March.

Description

MALE HOLOTYPE: total length of body, 3.7 mm; cephalothorax, 1.5 mm; width of body at widest portion, 2.2 mm.

Cephalothoracic portion of dorsal scute finely granulate, anterior margin with four or five very small spines at the lateral portion and a single median spine, giving the formula of 4 or 5-1-4 or 5. The median spine arises from below the cephalothorax. It is very difficult to see in the males because of the manner in which the cephalothorax is curved downward. Eye tubercle large, bluntly rounded, on the anterior margin of the cephalothorax, covered with small spinules and tuberculations. Posterior portion of cephalothorax raised and rounded. Abdominal portion of dorsal scute with five distinct areas, first area without a median line. Entire portion covered with tiny granules and tuberculations, otherwise smooth. Fifth area and each free tergite with a transverse row of small spines. Some of these spines are larger on the third free tergite. Anal operculum with scattered granulations. Each free sternite with a transverse row of very tiny granulations. Coxae smooth except for small granulations. A transverse row of teeth on the anterior boundary of coxa I and on the posterior margin of coxa III. Spiracle visible. The dorsum of the male is strongly arched, giving the preserved specimens a characteristic appearance.

LEGS: trochanters, femora, patellae, and tibiae of legs with scattered hairs and small tuberculations. Fourth femur curved. These tuberculations are larger on the fourth femur. Metatarsi with many false articulations. Third and fourth tarsi with simple, double claws, no scopulae, though with heavy hairs. Tarsal segments: 6-10 or 11-6-7. Distitarsus of first tarsus with two segments, second with three.

Length of legs (mm)

| | I | II | III | IV |
|------------|-----|-----|-----|-----|
| Trochanter | 0.4 | 0.4 | 0.5 | 0.4 |
| Femur | 1.5 | 2.2 | 1.5 | 2.2 |
| Patella | 0.5 | 0.8 | 0.7 | 0.7 |
| Tibia | 1.0 | 1.8 | 1.2 | 1.5 |
| Metatarsus | 1.7 | 2.4 | 2.0 | 2.6 |
| Tarsus | 0.9 | 1.5 | 1.0 | 1.1 |
| Total | 6.0 | 9.1 | 6.9 | 8.5 |

PALPUS: trochanter, 0.4 mm long; femur, 1.2; patella, 0.7; tibia, 0.7; and tarsus, 0.6. Total length, 3.6 mm. Palpus flattened, retrolaterally armed as in figure; prolaterally the femur has a median-apical spine, the patella has two spines, the tibia and tarsus each with four.

Chelicera enlarged, with scattered hairs, proximal segment with a distinct dorsal elevation.

Entire animal yellowish brown, with much darker brown mottling, particularly on the dorsal scute.

FEMALE: total length of body, 3.5 mm; cephalothorax, 1.3 mm; width of body at widest portion, 2.1 mm.

Female similar in appearance to male, but with the chelicera and palpus reduced in size. In most specimens the first tarsus had only five segments.

RELATIONSHIPS: This new species differs from the other members of the genus by possessing a set of characteristics which are found in no other species.

Hypoxestus patellaris (Soerensen)

Fig. 9.

Amasis patellaris Soerensen, 1910, *Ergeb. Schwed. Exp. Kilimanjaro*, vol. 3, part 20, p. 78.

Hypoxestus patellaris Roewer, 1912, *Arch. Naturg.*, vol. 78, sect. A, no. 3, p. 89; 1913, *Alluaud u.*

Jeannel. Voy. Afr. Or. Arach., vol. 1, p. 6; 1923, *Die Weberknechte der Erde*, p. 269.

TYPE LOCALITY: Kilimanjaro.

RECORDS: 1948 expedition. Both collections from Aberdare. South of second camping place, 3000 meters, sifting moss in *Cliffortia* thickets, July 18; second camping place, 3100 meters, sifting of grassy hillocks, July 20.

Description

MALE: total length of body, 4.8 mm; cephalothorax, 1.7 mm; width of body at widest portion, 2.6 mm.

Cephalothorax finely granulate, anterior margin with three small spines on either side of the lateral border. Of these three spines, the inner one is the largest. Central spine of the anterior margin arises from below the border of the cephalothorax. Eye tubercle oval, normal, without spines or tubercles. Dorsal scute of the abdomen finely granulate, first area without a median line, with a transverse row of small tubercles along the lateral margin and a transverse row across the fifth area and each free tergite. Anal operculum with scattered hairs. Venter and coxae clothed throughout with hairs, a few small tubercles on the coxae, spiracle clearly visible.

LEGS: clothed throughout with hairs; femora, patellae, and tibiae of all legs with rows of tiny tubercles. Tarsal segments: 6-10-7-8. Distitarsus of first tarsus with two segments, second with three.

Length of legs (mm)

| | I | II | III | IV |
|------------|-----|------|-----|------|
| Trochanter | 0.4 | 0.5 | 0.6 | 0.7 |
| Femur | 1.8 | 3.2 | 2.2 | 3.5 |
| Patella | 0.8 | 1.0 | 1.0 | 1.2 |
| Tibia | 1.5 | 2.6 | 1.7 | 2.3 |
| Metatarsus | 2.3 | 3.8 | 2.5 | 3.8 |
| Tarsus | 1.6 | 2.4 | 1.8 | 2.7 |
| Total | 8.4 | 13.5 | 9.8 | 14.2 |

PALPUS: trochanter, 0.5 mm long; femur, 1.1; patella, 0.9; tibia, 0.8; tarsus, 0.9. Total, 4.2 mm. Trochanter with ventral spine, femur with a ventral row of hair-tipped tubercles and an anterior median spine on the prolateral margin. Tibia with two large and two small hair-tipped spines on the prolateral margin and two on the retrolateral margin. Tarsus with four hair-tipped spines on each margin.

Chelicera smooth, clothed throughout with hairs.

Color of dorsum light brown, with darker brown mottlings. On the dorsal scute this darker brown mottling shows up as a pattern of two darker brown stripes on either side of a central area. Free tergites dark brown. Venter brownish, mottled. Appendages light yellowish brown, with darker brown mottlings which are particularly prominent at the distal portion of the legs.

FEMALE: total length of body, 5.2 mm; cephalothorax, 1.5; width of body at widest portion, 2.9 mm.

Similar in appearance to male.

Hypoxestus planus n. sp.

Fig. 10.

RECORDS: 1948 expedition. Ruwenzori, Bujuku Valley, Kyanasabu camp, 2980 meters, sifting moss on the ground. March 19; Ruwenzori, Bugoye, 1400 meters, April 13.

Description

FEMALE HOLOTYPE: total length of body, 6.2 mm. Cephalothorax, 2.1 mm; width of body at widest portion, 3.6 mm.

Cephalothoracic portion of dorsal scute smooth, with two or three projections on either side of the anterior margin. With but a single median projection which originates from the lower surface of the cephalothorax. Eye tubercle rounded, unarmed, and clearly removed from the anterior margin. Abdominal portion of the dorsal scute with five areas. First area almost divided by a median line; posterior boundary of the first area not distinct. Median paired low tubercles on the third and fourth areas, fifth area with a transverse row of small tubercles along the posterior margin, otherwise dorsal scute only finely granulate. Each free tergite with a transverse row of small tubercles. Anal operculum with scattered tubercles. Each free sternite with

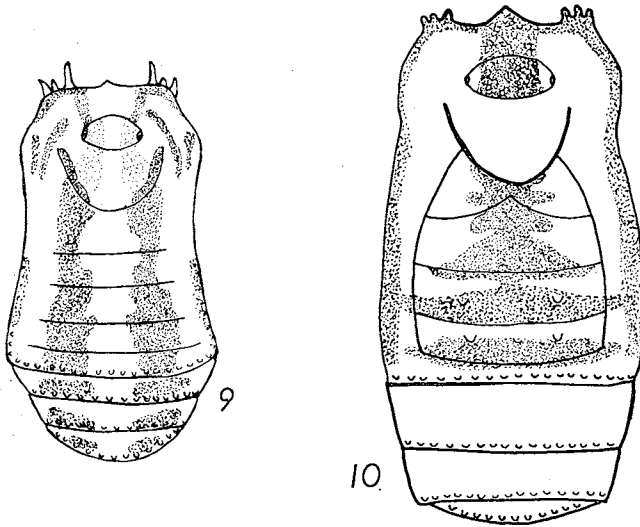


Fig. 9. *Hypoexestus patellaris* (Soerensen), dorsal view of male. — Fig. 10. *Hypoexestus planus*, n.sp., dorsal view of female holotype.

a transverse row of small tubercles; coxae with a few scattered tubercles, first coxa with a transverse row of larger tubercles. First and third coxae each with an anterior row of tubercles. Spiracles visible.

LEGS: clothed with scattered hairs and with small tubercles. Fourth femur curved, tarsi of third and fourth legs with double, simple claws, and without scopulae or pseudonychium. Tarsal segments: 5-12-6-7. Distitarsus of first tarsus with two segments, second with three.

Length of legs (mm)

| | I | II | III | IV |
|------------|-----|------|------|------|
| Trochanter | 0.6 | 0.7 | 0.7 | 0.9 |
| Femur | 2.3 | 3.8 | 2.7 | 3.6 |
| Patella | 0.9 | 1.2 | 1.2 | 0.7 |
| Tibia | 1.7 | 3.0 | 1.9 | 2.7 |
| Metatarsus | 2.6 | 3.8 | 3.0 | 4.5 |
| Tarsus | 1.8 | 3.0 | 1.9 | 2.4 |
| Total | 9.9 | 15.5 | 11.4 | 14.8 |

PALPUS: trochanter, 0.7 mm long; femur, 1.5; patella, 1; tibia, 1.1; and tarsus, 1.2. Total length, 5.5 mm. Palpus characteristically flattened. Retrolateral surface of trochanter with a single ventral spine, femur with a ventral row of small spines, patella unarmed, tibia with several small tubercles and two larger spines, tarsus with two large spines and some smaller ones. Prolaterally the femur and patella unarmed, tibia and tarsus each with two prominent spines.

Chelicera with scattered hairs, proximal segment with a slight dorsal elevation.

Entire animal reddish brown, with much darker brown on the dorsum and free sternites. Boundaries of dorsal areas are indicated by darker brown.

RELATIONSHIPS: this species is most closely related to *Hypoxestus scabricula* (Roewer), but the arrangement of the tubercles on the dorsum is entirely different.

Hypoxestus scabricula (Roewer)

Fig. 11.

Randilea scabricula Roewer, 1935, Veröff. Deutsche Kol. und Uebersee Mus., Bremen, vol. 1, no. 1, p. 23.

RECORD: 1948 expedition. Mt. Elgon, Maji ya Moto, 3630 meters, in a cleft of rock, May 21.

Description

FEMALE: total length of body, 4.8 mm; cephalothorax, 1.6 mm; width of body at widest point, 2.2 mm.

Entire dorsal scute thickly covered with heavy tubercles. Anterior margin of cephalothorax with four to six small projections on the lateral margin and a single tiny median projection which arises from the under portion of the cephalothorax. Eye tubercle clearly removed from the anterior margin, rounded, and thickly covered with tubercles. Abdominal portion of the scute with five distinct areas, first area with a median line. Second and third areas, each with a pair of median elevations surmounted by larger tubercles. These appear to be distinct tubercles on the third area. A row of prominent tubercles along the lateral margins of the scute. Each free tergite with a transverse row of large tubercles. Anal operculum tuberculate, each free sternite with a transverse row of small tuberculations. Coxae tuberculate, an anterior row of a few teeth on the first coxa. Spiracles partially covered by the fourth coxae, but clearly visible.

LEGS: clothed throughout with hairs, in addition the trochanters, femora, patellae, and tibiae thickly set with tubercles. Tarsi of third and fourth legs without scopulae and with untoothed double claws. Tarsal segments: 5-9-6-7. Distitarsus of first tarsus with two segments, second with three.

Length of legs (mm)

| | I | II | III | IV |
|------------|-----|------|-----|------|
| Trochanter | 0.5 | 0.6 | 0.5 | 0.7 |
| Femur | 1.8 | 2.9 | 2.1 | 3.2 |
| Patella | 0.7 | 1.0 | 0.9 | 1.0 |
| Tibia | 1.3 | 2.6 | 1.7 | 2.0 |
| Metatarsus | 1.7 | 3.3 | 2.4 | 3.6 |
| Tarsus | 1.4 | 2.6 | 1.7 | 2.1 |
| Total | 7.4 | 13.0 | 9.3 | 12.6 |

PALPUS: trochanter, 0.5 mm long; femur, 1.2; patella, 0.6; tibia, 0.8; and tarsus, 0.8. Total length, 3.9 mm. Palpus characteristically flattened, with a ventral row of small spines on the femur; patella unarmed. Tibia and tarsus each with three spines on the prolateral and retrolateral margins.

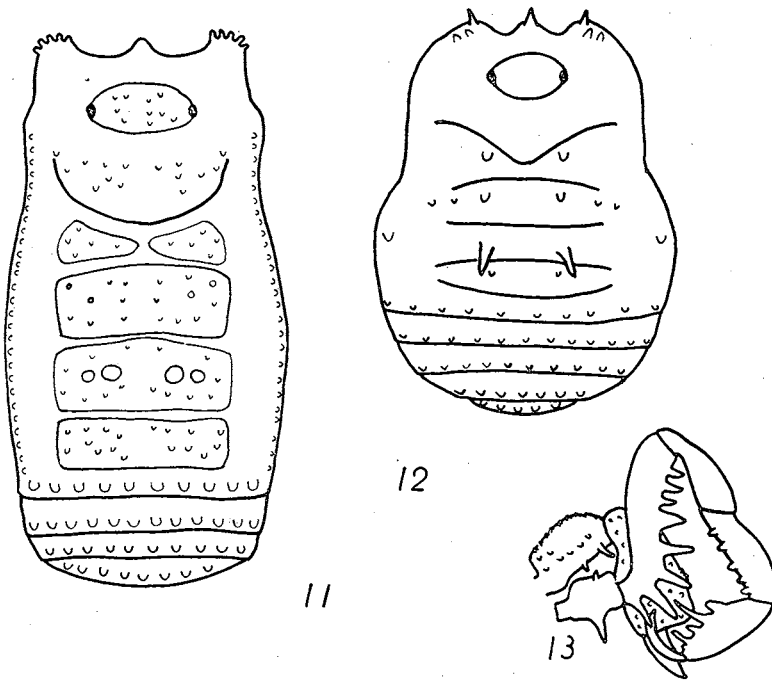


Fig. 11. *Hypozeustus scabricula* (Roewer), dorsal view of female. — Fig 12. *Sesostris gracilis* Soerensen, dorsal view of male. — Fig. 13. *Sesostris gracilis* Soerensen, retrolateral view of palpus and chelicera of male.

Chelicera clothed with hairs, with a slight dorsal elevation on the first segment. Entire animal yellowish brown, with darker brown mottling especially on the dorsum.

***Sesostris* Soerensen**

Sesostris Soerensen, 1910, *Ergeb. Schwed. Exp. Kilimanjaro*, vol. 3, part 20, pp. 79–80. Roewer, 1912, *Arch. Naturg.*, vol. 78, sect. A, no. 3, p. 91; 1923, *Die Weberknechte der Erde*, p. 264; 1935, *Veröff. Deutsche Kol. und Uebersee Mus., Bremen*, vol. 1, no. 1, p. 28.

Members of the family Assamiidae having a normal oval eye tubercle which is rounded and without heavy spines. The first area of the dorsal scute with a median line. The median portion of the anterior border of the cephalothorax without a dorsal spine. Spiracle visible. The double claws of the third and fourth tarsi simple, without a pseudonychium. First tarsus with five to seven segments, distitarsus of first tarsus with two segments, second with three.

GENOTYPE: *Sesostris gracilis* Soerensen.

***Sesostris gracilis* Soerensen**

Figs. 12 and 13.

Sesostris gracilis Soerensen, 1910, *Ergeb. Schwed. Exp. Kilimanjaro*, vol. 3, part 20, p. 80. Roewer, 1912, *Arch. Naturg.*, vol. 78, sect. A, no. 3, p. 92; 1913, *Alluaud u. Jeannel Voy. Afr. Or., Arach.*, vol. 1, p. 10; 1923, *Die Weberknechte der Erde*, p. 264.

TYPE LOCALITY: Kilimanjaro.

RECORD: 1948 expedition. Tanga, Amboni Cave, September 4.

Description

MALE: total length of body, 4.9 mm; cephalothorax, 1.8 mm; width of body at widest portion, 2.4 mm.

The cephalothoracic portion of abdominal scute smooth, with four small spines at the anterior lateral margin, two of which are below. The single median spine of the anterior margin arises from underneath; thus the under portion of the anterior margin of the cephalothorax has the spines arranged as 2:1:2. The eye tubercle is in the median portion of the cephalothorax, rounded, unarmed except for small granulations. Abdominal portion of the dorsal scute with five areas, the first with a median line and median paired spines. The second area with a median pair of spines, and with two additional spines to either side of the median pair; thus there is a row of six spines with the central ones being the largest. The third area with a pair of very large prominent spines. Fourth area with only a median pair of very low tubercles. Fifth area with a transverse row of small spines. Each free tergite with a transverse row of spines, these are largest on the third free tergite. Anal operculum tuberculate, each free sternite with a transverse row of small tubercles. Coxae granulate, ventral surface of coxa I with scattered tubercles and an anterior row of teeth. Third coxa with an anterior and posterior row of teeth. Spiracles visible.

LEGS: smooth except for investing hairs. Fourth femur long and straight. Tarsal claws of third and fourth legs double, simple, and without scopulae. The tarsal segments are: 8-16-8-9. Distitarsus of first tarsus with two segments, second with three.

Length of legs (mm)

| | I | II | III | IV |
|------------|------|------|------|------|
| Trochanter | 0.6 | 0.6 | 0.7 | 0.7 |
| Femur | 3.9 | 7.0 | 4.3 | 6.4 |
| Patella | 0.9 | 1.1 | 1.1 | 1.1 |
| Tibia | 2.7 | 6.3 | 2.7 | 3.8 |
| Metatarsus | 4.2 | 8.1 | 4.5 | 6.7 |
| Tarsus | 1.8 | 4.2 | 2.0 | 2.7 |
| Total | 14.1 | 27.3 | 15.3 | 21.4 |

PALPUS: trochanter, 0.6 mm long; femur, 1.9; patella, 1; tibia, 1.2; and tarsus, 1. Total length, 5.7 mm. Palpus armed retrolaterally as in figure. Prolaterally the femur has a median apical spine, the patella has two spines, the tibia has two large and two small spines, the tarsus also has two large and two small spines.

Chelicera enlarged, proximal segment very tuberculate dorsally and with several large ventral spines and two retrolateral spines. Distal segment thickly covered with large tubercles, with a row of curved spines on either side.

Entire animal light yellowish brown.

FEMALE: total length of body, 4.3 mm; cephalothorax, 1.3 mm; width of body at widest portion, 2.7 mm.

Female similar in appearance to male, but the chelicerae much reduced in size.

Ereca Soerensen

Ereca Soerensen, 1910, *Ergeb. Schwed. Exp. Kilimanjaro*, vol. 3, part 20, p. 72 (part). Roewer, 1912, *Arch. Naturg.*, vol. 78, sect. A, no. 3, p. 69; 1913, *Alluaud u. Jeannel Voy. Fr. Or. Arach.*, vol. 1, p. 4; 1923, *Die Weberknechte der Erde*, p. 259; 1935, *Veröff. Deutsche. Kol. und Uebersee Mus.*, Bremen, vol. 1, no. 1, p. 49.

Members of the family Assamiidae with a normal rounded eye tubercle which is without conspicuous spines. First area without a median line, upper surface of cephalothorax without a spine before the eye. Spiracle hidden. Double claws of the third and fourth legs simple, untoothed, without a pseudonychium. First tarsus with four segments; distitarsi of both first and second tarsi with but two segments.

GENOTYPE: *Ereca undulata* Soerensen.

Ereca undulata Soerensen

Figs. 14–18.

Ereca undulata Soerensen, 1910, *Ergeb. Schwed. Exp. Kilimanjaro*, vol. 3, part 20, p. 72. Roewer, 1912, *Arch. Naturg.*, vol. 78, sect. A, no. 3, p. 70; 1923, *Die Weberknechte der Erde*, p. 260. *Ereca maculata* Roewer, 1913, *Alluaud u. Jeannel Voy. Afr. Or. Arach.*, vol. 1, p. 4; 1923, *Die Weberknechte der Erde*, p. 262.

Description

MALE: Anterior margin of the cephalothorax with two lateral spines on either side and one median central spine originating from the under portion of the cephalothorax, making the formula 2:1:2. Eye tubercle low, unarmed, clearly removed from the anterior margin. Cephalothoracic portion of dorsal scute smooth, abdominal portion with five distinct areas. First area without a median line. Surface finely granulate, otherwise unarmed. A transverse row of tiny hair-tipped tubercles across the posterior margin of the fifth area and each free tergite. Anal operculum covered with tiny tubercles. Each free sternite with a transverse row of granulations. Coxa smooth except for hairs and small granulations, a row of teeth on the anterior margin of the first and third coxae. Spiracle hidden by the fourth coxa.

LEGS: with many small granulations and scattered hairs, fourth femur slightly curved. Tarsal segments: 4–6 or 7–5–6. Distitarsus of both first and second tarsi with but two segments.

PALPUS: characteristically flattened, armed retrolaterally as in the figure. Prolaterally the femur has an apical median spine, the patella has three spines, the tibia has four, and the tarsus has two.

Chelicera armed only with scattered hairs, with only a very slight elevation on the proximal segment.

Entire animal yellowish brown, with much darker brown mottling, particularly on the dorsal scute and free tergites.

FEMALE: similar in appearance to male, but with a slight reduction in the size of the chelicera.

DISCUSSION: the members of this species fall into three well defined subspecies which are separated from one another by the relative size of the spines on the anterior lateral margin of the cephalothorax.

Ereca undulata undulata Soerensen

Figs. 14, 15 and 16.

Ereca undulata Soerensen, 1910, *Ergeb. Schwed. Exp. Kilimanjaro*, vol. 3, part 20, p. 72. Roewer, 1912, *Arch. Naturg.*, vol. 78, Sect. A, no. 3, p. 70; 1923, *Die Weberknechte der Erde*, p. 260.

TYPE LOCALITY: Meru in rain forest, 3000 to 3500 meters.

RECORDS: 1948 expedition. All collections from Ruwenzori, Bujuku Valley. Bigo, 3500 meters, sphagnum-mire, March 21. 2100 meters, March 19. 3500 meters, March 22. 3000 meters, April 1. Bigo, 3450 meters, sifting sphagnum in tussocks of *Carex runssoroensis*, April 1. Bigo, 3450 meters, sifting sphagnum and other mosses in *Erica* forest at the camp, April 5. Valley west of Mt. Baker, Kittandarai, 4025 meters, sifting dry leaves on *Senecio*, April 10.

Description

MALE: total length of body, 3.4 mm; cephalothorax 1 mm; width of body at widest portion, 2 mm.

The outermost spine of the lateral pair of spines of the anterior margin of the cephalothorax is much shorter than the inner one.

LEGS: tarsal segments: 4-6 or 7-5-6. Distitarsus of both first and second tarsi with two segments.

Length of legs (mm)

| | I | II | III | IV |
|------------|-----|-----|-----|-----|
| Trochanter | 0.4 | 0.4 | 0.4 | 0.4 |
| Femur | 1.1 | 1.6 | 1.3 | 1.6 |
| Patella | 0.5 | 0.6 | 0.5 | 0.7 |
| Tibia | 0.9 | 1.2 | 1.0 | 1.2 |
| Metatarsus | 1.1 | 1.4 | 1.3 | 2.1 |
| Tarsus | 0.7 | 1.0 | 0.8 | 0.9 |
| Total | 4.7 | 6.2 | 5.3 | 6.9 |

PALPUS: trochanter, 0.4 mm long; femur, 1.1; patella, 0.7; tibia, 0.7; and tarsus, 0.6. Total length, 3.5 mm.

FEMALE: total length of body, 3 mm; cephalothorax 1 mm. Width of body at widest portion, 2.2 mm.

Similar in appearance to male.

Ereca undulata maculata Roewer

Fig. 17.

Ereca maculata Roewer, 1913, *Alluaud u. Jeannel Voy. Afr. Or., Arach.*, vol. 1, p. 4; 1923, *Die Weberknechte der Erde*, p. 262. Type locality: Kilimanjaro.

RECORDS: 1948 expedition. All collections from near Peters' Hut, Kilimanjaro. *Carex runssoroensis*-mire, 3900 meters, June 17. 3975 meters, June 23. Sifting moss and debris in *Carex* mire near rivulet, 3815 meters, June 17. Rivulet, 3 kilometers

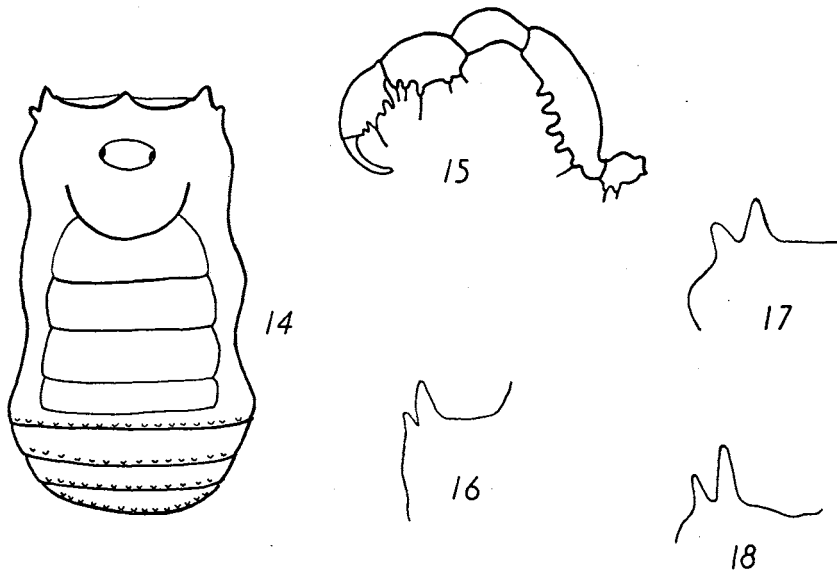


Fig. 14. *Ereca undulata undulata* Soerensen, dorsal view of male. — Fig. 15. *Ereca u. undulata* Soerensen, retrolateral view of palpus of male. — Fig. 16. *Ereca u. undulata* Soerensen, dorsal view of anterior-lateral margin of cephalothorax of male. — Fig. 17. *Ereca undulata maculata* Roewer, dorsal view of anterior-lateral margin of cephalothorax of male. — Fig. 18. *Ereca undulata aberdarensis*, n. subsp., dorsal view of anterior-lateral margin of cephalothorax of male holotype.

east, sifting dry leaves on Senecio, 3670 meters, June 20. Sifting dry Alchemilla in mire, 3975 meters, June 23. Sifting moss on Senecio, 3280 meters, June 26. Sifting moss near rivulet, 3920 meters, June 27.

Description

MALE: total length of body, 3.7 mm; cephalothorax 1 mm. Width of body at widest portion, 2.4 mm.

The paired spines of the anterior lateral margin of the cephalothorax are approximately equal in size.

LEGS: tarsal segments: 4-6-5-6. Distitarsus of both first and second tarsi with two segments.

Length of legs (mm)

| | I | II | III | IV |
|------------|-----|-----|-----|-----|
| Trochanter | 0.4 | 0.4 | 0.5 | 0.4 |
| Femur | 1.1 | 1.6 | 1.2 | 1.7 |
| Patella | 0.5 | 0.5 | 0.5 | 0.7 |
| Tibia | 0.8 | 1.2 | 1.0 | 1.3 |
| Metatarsus | 1.1 | 1.6 | 1.4 | 1.7 |
| Tarsus | 0.8 | 1.2 | 0.8 | 1.0 |
| Total | 4.7 | 6.5 | 5.4 | 6.8 |

C. J. AND MARIE L. GOODNIGHT, *Opilionids from East Africa*

PALPUS: trochanter, 0.5 mm long; femur, 1.2; patella, 0.5; tibia, 0.6; and tarsus, 0.6. Total length, 3.4 mm.

FEMALE: total length of body, 3.5 mm; cephalothorax, 1 mm; width of body at widest portion, 2.1 mm.

Ereca maculata aberdarensis n. subsp.

Fig. 18.

RECORDS: 1948 expedition. All collections from Aberdare. Second camping place, 3100 meters, sifting grassy hillocks, grassland, July 20. 3100 meters, July 15. 3050 meters, July 24.

Description

MALE: holotype: total length of body, 2.9 mm; cephalothorax, 0.9 mm; width of body at widest portion 2 mm.

The outermost spine of the lateral pair of spines of the anterior margin of the cephalothorax is only slightly shorter than the inner one.

LEGS: tarsal segments: 4-7-5-6. Distitarsus of both first and second tarsi with two segments.

Length of legs (mm)

| | I | II | III | IV |
|------------|-----|-----|-----|-----|
| Trochanter | 0.3 | 0.4 | 0.4 | 0.3 |
| Femur | 1.0 | 1.4 | 1.1 | 1.5 |
| Patella | 0.4 | 0.5 | 0.4 | 0.6 |
| Tibia | 0.7 | 1.1 | 0.8 | 1.2 |
| Metatarsus | 1.0 | 1.4 | 1.2 | 2.0 |
| Tarsus | 0.7 | 0.9 | 0.8 | 1.0 |
| Total | 4.1 | 5.7 | 4.7 | 6.6 |

PALPUS: trochanter, 0.4 mm long; femur, 0.7; patella, 0.5; tibia, 0.5; and tarsus, 0.5. Total length, 2.6 mm.

The color of the entire body of the members of this subspecies tends to be darker than that of the other members of the species.

FEMALE: total length of body, 3.1 mm; cephalothorax, 1 mm; width of body at widest portion, 1.9 mm.

Ereca modesta Soerensen

Fig. 19.

Ereca modesta Soerensen, 1910, *Ergeb. Schwed. Exped. Kilimanjaro*, vol. 3, part 20, p. 74.

Roewer, 1912, *Arch. Naturg.*, vol. 78, sect. A, no. 3, p. 70; 1913, *Alluaud u. Jeannel Voy.*

Afr. Or., Arach., vol. 1, p. 4; 1923, *Die Weberknechte der Erde*, p. 261.

TYPE LOCALITY: Meru.

RECORDS: 1948 Expedition. Tang. Meru., 3250 meters, November 11, collected by O. Hedberg. Mombasa, Bamburi Beach, sifting under bushes near the shore, August 14.

Description

MALE: total length of body, 2.4 mm; cephalothorax, 0.7 mm; width of body at widest portion, 1.8 mm.

Anterior margin of the cephalothorax with two prominent spines on either side at the lateral border. The outer one of these two spines is somewhat smaller. The median spine of the anterior margin arises from below. Between the lateral spines and the median one there is a row of very small spines. The surface of the cephalothorax is smooth, the eye tubercle is oval in shape and has three small spines on either side above the eye. Dorsal surface of the abdominal scute quite smooth. A lateral row of small tubercles on either side. Areas one to four, each with a few small tubercles in the median portion. Fifth area with a row of small tubercles on the posterior margin. Each free tergite with a transverse row of heavier spines. Anal operculum tuberculate, each free sternite with a transverse row of small tubercles. Coxae finely tuberculate, tubercles somewhat larger on the anterior portion of the fourth coxae. Spiracle hidden.

LEGS: clothed throughout with small hairs. Femora with many small tuberculations. Tarsal segments: 4-6 to 7-5-6. Distitarsus of both first and second tarsus with two segments.

Length of legs (mm)

| | I | II | III | IV |
|------------|-----|-----|-----|-----|
| Trochanter | 0.3 | 0.3 | 0.3 | 0.3 |
| Femur | 1.9 | 1.6 | 1.1 | 1.8 |
| Patella | 0.4 | 0.5 | 0.3 | 0.6 |
| Tibia | 0.6 | 1.0 | 1.0 | 1.0 |
| Metatarsus | 1.0 | 1.7 | 1.2 | 2.0 |
| Tarsus | 0.6 | 1.0 | 0.6 | 0.9 |
| Total | 4.8 | 6.1 | 4.5 | 6.6 |

PALPUS: trochanter, 0.2 mm long; femur, 0.7; patella, 0.4; tibia, 0.4; and tarsus, 0.2. Total length, 1.9 mm. Femur of the palpus with a row of teeth on the basal two-thirds and with a median apical spine. Patella with a prolateral ventral row of spines; tibia and tarsus each with a ventral row of small spines on either side.

Chelicera smooth, with a small dorsal elevation on the first segment.

Dorsum light yellowish brown, with many darker brown markings which form a pattern. There is some variation in this pattern among the specimens. Venter with much darker brown mottling, appendages dark brown.

FEMALE: body, 3.2 mm long; cephalothorax, 0.8 mm; width of body at widest portion, 1.9 mm.

Similar in appearance to the male.

Metereca Roewer

Ereca (part) Roewer, 1912, Arch. Naturg., vol. 78, sect. A, no. 3, pp. 71, 73.

Metereca Roewer, 1923, Die Weberknechte der Erde, p. 262; 1935, Veröff. Deutsche Kol. und Uebersee Mus., Bremen, vol. 1, no. 1, p. 51.

Members of the family Assamiidae with a normal rounded eye tubercle which is without conspicuous spines or tubercles. First area without a median line; upper

surface of cephalothorax without a spine before the eye. Spiracle hidden. Double claws of the third and fourth legs simple, untoothed, without a pseudonychium. First tarsus with five segments; distitarsi of both first and second tarsi with but two segments.

GENOTYPE: *Metereca abnormis* Roewer.

Metereca abnormis Roewer

Figs. 20, 21.

Ereca abnormis Roewer, 1912, Arch. Naturg., vol. 78, sect. A, no. 3, p. 71.

Metereca abnormis Roewer, 1923, Die Weberknechte der Erde, p. 262.

TYPE LOCALITY: east shore of Lake Tanganyika.

RECORDS: 1948 expedition. All collections from Ruwenzori. Mijusi Lake, 4000 meters, sifting moss in Senecio forest, March 28. Bigo, 3450 meters, sifting thin moss covering and leaf debris on the ground, April 5. Hakitengia, 850 meters, sifting leaf debris in forest near rivulet, April 17.

Description

MALE: total length of body, 3.1 mm; cephalothorax, 0.8 mm; width of body at widest portion, 1.8 mm.

Cephalothoracic portion of the abdominal scute smooth, anterior margin with three spines at the lateral portion and a single median spine arising from the under portion. Eye tubercle rounded, low, unarmed, clearly removed from the anterior margin. Dorsal scute with five distinct areas, first without a median line. Abdominal portion of dorsal scute unarmed except for a row of very low granulations across the fifth area. Each free tergite with a row of small granulations, these are somewhat larger on the second and third tergites. Anal operculum granulate. Each free sternite with a transverse row of granulations. Coxae granulate, a row of teeth on the anterior margin of coxa I and the posterior margin of coxa III. Spiracles hidden by the fourth coxa.

LEGS: clothed throughout with hairs and covered with small granules. Fourth femur curved. Apical portion of the fourth femur, patella, and tibia enlarged. Third and fourth tarsi with simple double claws, without scopulae or pseudonychium. Tarsal segments: 5-8-6-7. Distitarsi of both first and second tarsi, two.

Length of legs (mm)

| | I | II | III | IV |
|------------|-----|-----|-----|-----|
| Trochanter | 0.3 | 0.3 | 0.4 | 0.4 |
| Femur | 1.1 | 1.5 | 1.1 | 1.6 |
| Patella | 0.4 | 0.6 | 0.5 | 0.6 |
| Tibia | 0.8 | 1.2 | 0.8 | 1.0 |
| Metatarsus | 1.1 | 1.6 | 1.1 | 1.6 |
| Tarsus | 0.6 | 1.2 | 0.8 | 1.1 |
| Total | 4.3 | 6.4 | 4.7 | 6.3 |

PALPUS: trochanter, 0.2 mm long; femur, 0.9; patella, 0.5; tibia, 0.4; and tarsus, 0.4. Total length, 2.4 mm. Palpus flattened, retrolateral surface with the trochanter

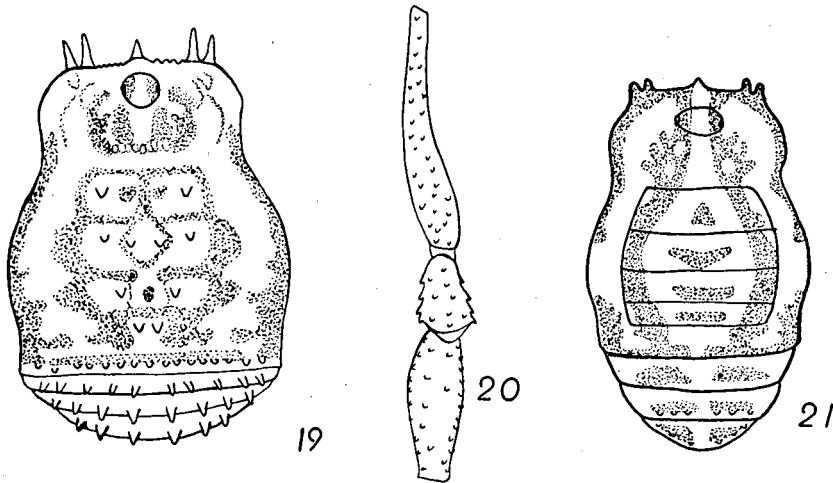


Fig. 19. *Ereca modesta* Soerensen, dorsal view of male. — Fig. 20. *Metereca abnormis* Roewer, dorsal view of femur, patella, and tibia of fourth leg of male. — Fig. 21. *Metereca abnormis* Roewer, dorsal view of male.

possessing a single ventral spine, the femur with a ventral row of spines, the patella unarmed, the tibia and tarsus each with a row of four tubercles. Prolaterally, the femur with an apical median spine, the patella with a row of three spines, including one apical median one, the tibia with three spines, and the tarsus with four.

Chelicera with scattered hairs, proximal segment with a slight dorsal elevation.

Animal yellowish brown with much darker brown marking on the dorsum. Free tergites and sternites entirely dark brown. Legs yellowish brown with darker brown at the apical portion of the femur, the patella, and most of the tibia. This gives a banded appearance which is particularly prominent on the enlarged portion of the fourth leg.

FEMALE: total length of body, 3.4 mm; cephalothorax, 1.2 mm; width of body at widest portion, 2.1 mm.

Similar in appearance to the male, but without the enlarged portion of the fourth leg and the reduced chelicera. Some of the females examined had the tarsal number: 5-8-5-6.

Aberdereca n. gen.

Members of the family Assamiidae with a normal rounded eye tubercle which is without conspicuous spines or tubercles. First area with a median line, upper surface of the cephalothorax without a spine before the eye. Spiracle hidden. Double claws of the third and fourth legs simple, untoothed, without a pseudonychium. First tarsus with four segments; distitarsus of first tarsus with two segments, second with three.

GENOTYPE: *Aberdereca parva*, n.sp.

DISCUSSION: This new genus is related to *Ereca*, but its members differ by having three segments in the distitarsus of the second tarsus and by having the first area divided by a median line.

Aberdereca parva n. sp.

Fig. 22.

RECORD: 1948 expedition. Aberdare, 18 kilometers north of Kinangop, sifting moss, 3100 meters, July 18.

Description

FEMALE HOLOTYPE: total length of body, 2.5 mm; cephalothorax, 1.1 mm; width of body at widest portion, 1.5 mm.

Cephalothorax finely granulate, with a few small tubercles on the lateral margin. Anterior margin with three to four small spines on either side. Median spine of the anterior margin arises from below. Eye tubercle oval, normal in size and appearance, with a few tubercles above. First area of the abdominal scute divided by a median line. Each dorsal area of the abdominal scute thickly tuberculate. Fifth area and each free tergite with a transverse row of tubercles. Lateral margin of the scute with a row of tubercles. Anal operculum and each free sternite with small tubercles. Opening of the spiracle hidden by several spinose tubercles from the fourth coxa. Ventral surface of coxae finely granulate.

LEGS: clothed throughout with hairs, with rows of small tubercles on the femora, patellae, and tibiae. Tarsal segments: 4-8-5-6. Distitarsus of first tarsus with two segments, second with three. Third and fourth tarsi without scopulae.

Length of legs (mm)

| | I | II | III | IV |
|------------|-----|-----|-----|-----|
| Trochanter | 0.3 | 0.3 | 0.4 | 0.3 |
| Femur | 0.9 | 1.7 | 1.3 | 1.6 |
| Patella | 0.4 | 0.5 | 0.5 | 0.5 |
| Tibia | 0.8 | 1.5 | 1.0 | 1.2 |
| Metatarsus | 1.0 | 2.0 | 1.3 | 2.0 |
| Tarsus | 0.7 | 1.2 | 1.0 | 1.0 |
| Total | 4.1 | 7.2 | 5.5 | 6.6 |

PALPUS: trochanter, 0.2 mm long; femur, 0.6; patella, 0.4; tibia, 0.4; tarsus, 0.4. Total length, 2 mm. Trochanter with a ventral spine, femur with a ventral row of four spines and a median apical spine; patella with two spines on the prolateral surface; tibia and tarsus each with four spines on each side.

Chelicera with a slight dorsal elevation on the first segment, smooth throughout.

Entire animal including appendages light brown, mottled with large areas of darker brown. Dorsum and legs quite dark.

Tundabia Roewer

Tundabia Roewer, 1935, Veröff. Deutsche Kol. und Uebersee Mus., Bremen, vol. 1, no. 1, p. 51.

Members of the family Assamiidae having a blunt eye tubercle which is lobed on the dorsal surface; it is located directly on the anterior margin and the eyes are poorly developed. Dorsum with five areas, the first without a median line. Spiracle

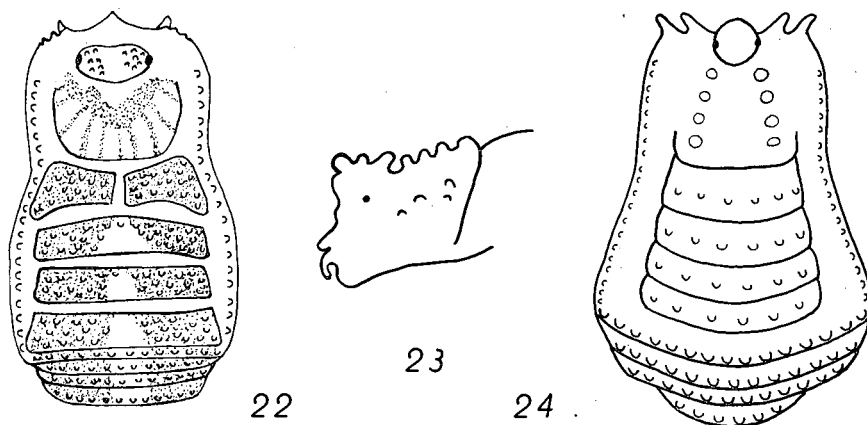


Fig. 22. *Aberdereca parva*, n.sp., dorsal view of female holotype. — Fig. 23. *Tundabia ugandensis*, n.sp., lateral view of cephalothorax of male holotype. — Fig. 24. *Tundabia ugandensis*, n.sp., dorsal view of male holotype.

hidden. The claws of the third and fourth tarsi are simple and untoothed; without scopula or pseudonychium. First tarsus with four segments; distitarsus of first tarsus with two segments, second with three.

GENOTYPE: *Tundabia semicaeca* Roewer.

Tundabia ugandensis n. sp.

Figs. 23 and 24.

RECORD: 1948 expedition. Uganda, Kadam, Moreta, 1430 meters, under stone, May 4.

Description

MALE: total length of body, 2.5 mm; cephalothorax, 1.2 mm; width of body at widest portion, 1.7 mm.

Cephalothorax with anterior spines arranged: 2:1:2; without a median spine arising from the dorsal part of the anterior margin of the cephalothorax. Two lateral spines on either side are very large. Eye tubercle on the anterior margin, above with two large, dorsal, lobe-like tubercles and numerous smaller ones. Eyes small at the base, animal is nearly blind. Surface of the cephalothoracic portion of the dorsal scute very tuberculate particularly in the median portion. From the dorsal view there are two rows of pronounced tubercles which lead from the eye to the abdomen. Abdominal portion of the dorsal scute also tuberculate, with a transverse row of larger tubercles across each area. Boundaries of areas parallel, first area without a median line. A longitudinal row of tubercles along each lateral margin of the dorsal scute. Each free tergite with a transverse row of prominent tubercles. Anal operculum tuberculate. Free sternites with rows of very tiny tubercles. Coxae only granulate; all coxae with anterior rows of teeth. Spiracle hidden by spines from the fourth coxa. Maxillary lobe of the second coxa without a downward pointing spine. Distal por-

tion of each coxa with some irregularly shaped large tubercles. These are particularly prominent on the second and fourth coxa and are visible from above.

LEGS: granulate, clothed throughout with hairs. Tarsal segments: 4-6-5-6. Distitarsus of first tarsus with two segments, second with three.

Length of legs (mm)

| | I | II | III | IV |
|------------|-----|-----|-----|-----|
| Trochanter | 0.2 | 0.2 | 0.2 | 0.2 |
| Femur | 0.9 | 1.2 | 0.9 | 1.2 |
| Patella | 0.4 | 0.5 | 0.4 | 0.5 |
| Tibia | 0.6 | 1.0 | 0.7 | 0.9 |
| Metatarsus | 0.9 | 1.1 | 0.9 | 1.4 |
| Tarsus | 0.4 | 0.8 | 0.4 | 0.5 |
| Total | 3.4 | 4.8 | 3.5 | 4.7 |

PALPUS: trochanter 0.2 mm long; femur, 0.4; patella, 0.5; tibia, 0.3; and tarsus, 0.3. Total length, 1.7 mm. Palpus characteristically flattened, clothed only with hairs.

Chelicerae clothed with hairs, proximal segment with a small dorsal elevation.

Entire animal and appendages reddish brown, appendages slightly lighter than the dorsum.

FEMALE: total length of body, 2.8 mm; cephalothorax, 0.9 mm; width of body at widest portion, 1.7 mm.

Similar in appearance to the male, but with a slight reduction in the dorsal tuberculation and with a slightly smaller first cheliceral segment.

DISCUSSION: *T. ugandensis* is related to *T. semicaeca* Roewer, but the eye tubercle is different in form and not quite so granulate.

Department of Biological Sciences, Purdue University, West Lafayette, Indiana, U.S.A.

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