

Weber, Neal G.W. C. BROWN
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New *Jomyline*, *Cerapachyine*, and
Ponerine Ants from the Imatong Mts.,
 Anglo-Egyptian Sudan

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All forms entered ✓

NEW DORYLINE, CERAPACHYINE AND PONERINE ANTS FROM
THE IMATONG MOUNTAINS, ANGLO-EGYPTIAN SUDAN.¹

BY NEAL A. WEBER,

University of North Dakota, Grand Forks, North Dakota.

The following species of the subfamilies Dorylinae, Cerapachyinae and Ponerinae were the new species of their genera in a collection of about 125 species of ants which I made in the Imatong Mountains, Anglo-Egyptian Sudan, in 1939. The southern foothills of these mountains cross Latitude 4° North into the Uganda frontier and extend east from Longitude 32° 30' East. The ants are described at the present time in order to use their names in an ecological study of plant zones and animals in these mountains.² The biology and relationships of the ants are treated in that study. The species described below have affinities mostly with the West African rain forest and the East African scrub plains faunas but there is a South African element (*Ophthalmopone*) and a species (*Anochetus sudanicus*) with Mediterranean affinities.

In the present paper a measurement introduced in 1938³ and generally used since then by the author is added as a complement to the total length measurement of common usage. This latter is often inaccurately made because of the variable extension of the gastric segments and the contorted position in which dead ants are found or measured. The present measurement may be called the thoracic length and is taken in a straight line from the anterior pronotal margin to the apex of the episternal angles. It is the longest measurement which can be made of a rigid structure in ants and hence minimizes the per cent of error.

AENICTUS.

Aenictus mentu, sp. nov.



(Fig. 2.)

Worker.—Extended length 1.7–2.5 mm. (of thorax, excluding collar or neck, 0.50–0.77 mm.).

Worker maxima.—Head strictly in front view, excluding mandibles, 1.05

¹ The identification of the ants of this collection was facilitated by grants from the American Academy of Arts and Sciences and the American Philosophical Society. I am also indebted to the authorities of the British Museum (Natural History), Museum of Comparative Zoology, American Museum of Natural History and United States National Museum for courtesies extended on my visits to these institutions.

² Weber, N. A. 1941. Plant zones and the ecology of animals, chiefly ants, on Central African mountains. Year Book, Amer. Phil. Soc., 1940, pp. 271–272 (Summary).

³ Weber, N. A., 1938. The biology of the fungus-growing ants. Part IV. Additional new forms. *Revista Ent.* 9:155 (footnote), fig. 17 (p. 171).

times longer than wide; occipital margin transversely truncate, sides feebly convex and reaching widest distance apart at a level opposite the clavate part of antennal scape; anterior clypeal margin transverse but interrupted by the convex anterior carinate portion of each antennal scrobe; eyeless; mandibles small, stout, convex, with a long, acutely pointed apical tooth and three denticles of variable development; antennal scapes clavate, bent near the middle and extending posteriorly slightly past mid-line of head. 2d funicular joint longer than broad, 3d-7th gradually increasing in comparative breadth to distinctly broader than long. Dorsal part of thorax from above about 2.84 times longer than broad when excluding collar or neck, broadest through pronotum whose sides are feebly convex; in side view flat on top except for gentle and feeble impression in mesoëpinotal region; epinotal declivity a rounded obtuse angle. Petiole from above rectangular, about 1.56 times longer than broad; in side view with evenly convex dorsum. Postpetiole from above ovate, as broad as long; in side view flat on top. Gaster ovate. Legs short, femora incrassate. Smooth and shining, epinotum and anterior part of petiole shallowly punctate. Pilosity of short, moderately abundant yellow hairs mostly reclinate and directed backwards. Pale ferruginous, minima workers yellow.

Of the habitus of *rotundatus* Mayr but differing especially in petiolar proportions. Described from one colony (No. 1436) which I took in the Imatong Mts., A.-E. Sudan, August 4 at an elevation of about 4,200 feet. The ants were in a termite nest (*Amitermes* (*A.*) *evuncifer* Silv.). This army ant is dedicated to the Egyptian war god, Mentu, whose influence is at the present time widespread.

CERAPACHYS.

√√ *Cerapachys* (*C.*) *pigra*, sp. nov.

(Fig. 11.)

Worker.—Extended length, including mandibles, 4.4-4.8 mm. (of thorax 1.4 mm.). Head strictly in front view excluding mandibles, slightly longer than broad, occipital margin feebly convex, sides more strongly convex and attaining greatest width apart back of eyes, anterior clypeal margin evenly convex; frontal carinae extended feebly backwards to a level with the eyes; antennal scrobes bordered laterally by a low rounded carina terminating anteriorly as a blunt tooth; eyes situated slightly in front of middle, feeble convex, 0.19 mm. in diameter; mandibles stout, trigonal, without distinct denticles on biting margins; antennal scapes clavate, extending back of eyes; funicular joints 2-10 strongly transverse, terminal joint 0.18 x 0.45 mm. Dorsal surface of thorax from above rectangular, 0.60 x 1.12 mm., thickest through epinotum; epinotal declivity bordered laterally and dorsally by a feeble, rounded carina between which the surface is smooth and flat. Petiole from above broader than long, sides convex, converging anteriorly, 0.51 x 0.62 mm. Postpetiole from above broader than long, sides convex, converging anteriorly, 0.58 x 0.79 mm. Gaster ovate, 1st segment slightly broader than long. Legs moderately short.

Shining, with coarse shallow, setigerous punctations which are largest on the pedicel, and very fine, shallow punctations visible under higher magnification. Hairs sparse but covering the body evenly, yellowish, appressed. Black, appendages dark brown.

Described from workers of one colony (No. 1374) which I took in the Imatong Mts., A.-E. Sudan, July 31 at an elevation of about 3,800 feet. The ants were traveling in an irregular file two or three abreast over stony ground.

∪∪ ***Cerapachys (C.) sudanensis***, sp. nov.
(Figs. 1 and 12.)

Worker.—Extended length with mandibles 2.8–3.8 mm. (of thorax 0.78–0.90 mm.) Head strictly in front view, excluding mandibles, 1 1/6 times longer than broad, occipital margin transverse, sides feebly convex, anterior clypeal margin transverse except where notched between projecting frontal carinae; antennal scrobes bordered laterally by a low, convex lateral carina which is rounded and terminates anteriorly as a blunt tooth; eyes feebly convex, situated slightly back of middle of head, about 0.14 mm. in diameter; mandible stout, trigonal, without distinct denticles; antennal scapes stout, clavate, extending to a level with the posterior margin of the eyes; joints 2–8 of funiculus strongly transverse, 9th joint much larger than preceding, terminal joint 0.17 x 0.36 mm. Thorax in side view feebly convex in front, from above broadest through epinotum where slightly convex laterally; epinotal declivity bordered laterally and dorsally by a low carina between which the surface is smooth and flat. Dorsal surface of petiole about 1.4 times broader than long, sides feebly convex, posterior margin produced medially as a slight convex lobe. Postpetiole from above about 1.4 times broader than petiole and about 1.4 times broader than long. 1st gastric segment slightly longer than broad. Legs moderately short. Shining, covered uniformly with setigerous punctations which are coarsest on pedicel. Uniformly covered with moderately abundant reclinate, fine, yellowish hairs. Black, appendages brown, becoming paler distally.

Described from workers of one colony (No. 1363) which I took in the Imatong Mts., A.-E. Sudan, at an elevation of about 6,000 feet. The ants were traveling in single file to a hole.

OPHTHALMOPONE.

∪∪ ***Ophthalmopone berthoudi*** Forel, ***pubescens***, ssp. nov.

Worker.—Extended length with mandibles 11.8 mm. (of thorax including collar or neck 4.33 mm.). Differing from Victoria Falls, S. Rhodesia workers of the typical form chiefly as follows: eyes slightly smaller (0.75 mm. diameter), longitudinal medial impression of epinotal basal surface less distinct, posterior margin of petiolar node distinctly less carinate, more rounded; appressed pubescence of body distinctly more abundant, the pubescence extending to the head and pronotum.

Holotype: One worker (No. 1297) which I took July 23 at an elevation of 2,800 ft. on the plains at the east base of the Imatong Mts., A.-E. Sudan.

EUPONERA.

✓✓ *Euponera* (*Mesoponera*) *dentis*, sp. nov. = *Tribunoi*
(Fig. 9.)

Dealate Female.—Extended length including mandibles 5.2 mm. (of thorax 1.7 mm.). Head, excluding mandibles, $1\frac{1}{7}$ times longer than broad, occipital margin transverse, sides slightly convex, widest apart back of eyes, anterior clypeal margin feebly convex, clypeus with a rounded medial carina which terminates anteriorly above the anterior clypeal margin as a distinct tooth or rounded angle, continuing posteriorly from the clypeal carina is a distinct line between the frontal carinae which ends in front of the median ocellus as a groove; frontal carina short, ending at a level just posterior to the eyes; eyes feebly convex, situated less than their diameters from the mandibular insertions, 0.21 mm. in greatest diameter; mandibles trigonal, with 8 irregular teeth and a suggestion of a 9th, the apical tooth being long and acute, the others much smaller; antennal scapes not quite reaching occipital angles; funicular joints 2-4 about as broad as long, 5-8 broader than long. Epinotal declivity not angulate, rounded and marginate on sides. Petiolar node cuneate, antero-posteriorly compressed above, anterior face convex from above, posterior face flat. Gaster short, dorsum of 1st segment shorter than 2d. Legs moderately short and slender. Finely and densely punctate, gaster sub-lucid, mandibles smooth and shining. Covered uniformly with a thick, short, appressed yellowish pubescence and sparse, longer upright yellowish hairs most numerous on gaster. Dark brown; appendages paler.

Holotype: One dealate female (No. 1452) which I took in the Lotti Forest of the Imatong Mts., A.-E. Sudan August 5.

This species has a petiolar node like *ingesta* Wheeler but thinner at apex. The apical mandibular tooth is much longer.

∪∪ *Euponera* (*Mesoponera*) *flavopilosa*, sp. nov. = *Acolopax*
(Fig. 10.)

Dealate Female.—Extended length including mandibles 6-7 mm. (of thorax 2.3 mm.). Head, excluding mandibles, rectangular in front view, $1\frac{1}{6}$ times longer than broad; occipital margin transverse, feebly impressed medially; sides subparallel, feebly convex back of eyes; anterior clypeal margin sinuate in front with a median tooth; frontal carinae feeble, extending to a level with the middle of the eyes; median frontal groove continued posteriorly to the median ocellus pit; eyes feebly convex, 0.29 mm. in greatest diameter; mandibles long, narrow and trigonal with a long acute apical tooth and about 11 denticles; antennal scapes slender, exceeding occipital corners by their distal diameters; all funicular joints distinctly longer than broad. Epinotal declivity plane, not marginate, feebly impressed dorsally. Petiolar node cuneate, high and narrow, twice as high as thick at base in side view, anterior surface feebly convex,

posterior surface plane, dorsal surface convex. Gaster small, 1st segment wider than long and distinctly longer than 2d segment. Legs moderately short and slender. Shining, finely punctate, mandibles feebly striate. Pubescence reclinate, abundant on head, thinner elsewhere. Pilosity of yellow hairs comparatively numerous on petiole and gaster, more scanty on head and thorax. Dark brown, appendages paler.

Holotype: One female (No. 1439) which I took in the Lotti Forest of the Imatong Mts., A.-E. Sudan August 5.

PONERA.

√√ *Ponera coarctata* (Latr.), *imatongica*, ssp. nov.

(Fig. 3.)

Worker.—Length extended 2.7–2.8 mm. (of thorax 0.8 mm.). Head in front view, excluding mandibles, 1.2 times longer than broad, occipital margin feebly impressed, sides and anterior clypeal margin moderately convex, frontal lobes small, convex, frontal carinae shorter than the lobes and divided by a short, deep groove; eyes minute, hardly to be distinguished from a punctation; mandibles elongate, trigonal, with about 8 denticles of irregular development and a longer, acute apical tooth; antennal scapes failing to reach occipital corners by a distance about equal to their distal diameters. Thorax from above thickest through pronotum, the latter being evenly convex laterally and anteriorly, epinotal sides subparallel, epinotal declivity with sides marginate. Petiolar node from above evenly convex anteriorly, sides convex, posterior margin feebly concave. 1st gastric segment from above broader than long. 2d segment longer than 1st. Legs moderately long and slender.

Shining, finely and densely punctate. Pilosity of abundant, fine, reclinate short hairs which do not obscure sculpturing. Yellowish brown, head darker.

Described from workers (No. 1313, 1387, 1390) taken by myself July 25 and August 1 at elevations of 6,100–6,800 feet in the Imatong Mts., A.-E. Sudan.

√√ *Ponera mesoëpinotalis*, sp. nov.

(Fig. 4.)

Worker.—Length extended 3 mm. (of thorax 0.9 mm.). Head in front view, excluding mandibles, 1.2 times longer than broad, occipital margin distinctly impressed, sides feebly convex, anterior clypeal margin projecting in a distinct angle; frontal lobes small, convex, frontal carinae shorter than lobes, frontal groove extends between these to gradually disappear near the occipital margin; eyes distinct, situated close to the mandibular insertions, 0.03 mm. in diameter; mandibles comparatively short and with several denticles on the cutting surface; antennal scapes failing to reach occipital corners by a distance about equal to their distal diameters. Thorax from above broadest through pronotum, the latter convex laterally and anteriorly, concave behind, suture being distinct dorsally. Petiolar node from above with evenly convex sides and anteriorly, plane posteriorly, the corners rounded. 1st gastric segment from above

1¼ times broader than long, 1st and 2d segments co-equal in length. Legs of moderate proportions.

Shining, finely punctate. Pilosity of moderately abundant appressed to reclinate fine short hairs and scattered longer and upright hairs most numerous on gaster posteriorly. Bright brown, appendages yellow brown.

Holotype: One worker (No. 1395) taken by myself August 2 at an elevation of about 6,400 feet in the Imatong Mts., A.-E. Sudan. The distinct mesoëpinotal impression separates the species easily from the other Imatong *Ponera*.

✓✓ ***Ponera muscicola***, sp. nov.

(Fig. 13.)

Female (Dealate).—Length extended about 3.2 mm. (of thorax 0.9 mm.). Head in front view 1¼ times longer than broad, occipital margin faintly impressed, corners rounded, sides subparallel, anterior clypeal margin angulate in middle; frontal lobes short, frontal carinae shorter, frontal groove extending to the anterior ocellus and posterior to the carinae deepened as an infuscated pit; eyes situated in front of middle of head, laterally placed and feebly convex, 0.14 mm. in diameter; mandibles trigonal with 9 or 10 irregular denticles and a longer, acute apical tooth; antennal scapes nearly reaching occipital corners. Thorax from above with sides convex, pronotum anteriorly convex, epinotal declivity plane. Petiolar node from above antero-posteriorly compressed, anterior surface convex, posterior margin but faintly convex. 1st gastric segment from above slightly broader than long, slightly shorter than 2d segment. Legs of moderate proportions.

Shining, finely punctate. Pilosity of abundant fine, short reclinate hairs becoming longer and coarser on posterior gastric segments. Bright yellowish brown, head darker.

Holotype: One female (No. 1313) taken by myself July 25 at an elevation of about 7,200 feet in the Imatong Mts., A.-E. Sudan. The ant was in wet moss in the cavity of a tree.

✓✓ ***Ponera lotti***, sp. nov.

(Fig. 5.)

Worker.—Length extended 2.6 mm. (of thorax 0.8 mm.). Head in front view ovate except for truncate occipital margin; excluding mandibles nearly 1 2/5 times longer than broad, occipital margin distinctly impressed, sides markedly convex, anterior clypeal margin projecting in a blunt tooth; frontal lobes short, convex, carinae shorter, frontal groove distinct, ending near middle of head; eyes minute, apparently of a single facet, about 0.03 mm. in diameter, situated near mandibular insertions; mandibles stout, trigonal with a cutting surface with about 6-11 rudimentary denticles, the two or three most distal being most distinct, and a distinct, acute apical tooth; antennal scapes exceeding the occipital margin slightly. Thorax from above with convex pronotal sides, the pronotum being over 1½ times thicker than the epinotum, the latter with

rounded but marginate sides. Petiolar node from above strongly compressed antero-posteriorly. 1st gastric segment from above about 1.4 times broader than long. Legs moderately long and slender.

Shining, microscopically, and finely punctate. Pilosity a short, fine, appressed pubescence not obscuring sculpture. Dark brown, appendages a yellowish brown.

Described from several workers (Nos. 1442, 1448) taken by myself August 5 in the Lotti Forest on the west slopes of the Imatong Mts., A.-E. Sudan.

✓✓ ***Ponera ambigua***, sp. nov.

(Fig. 6.)

Worker.—Length extended about 2.5 mm. (of thorax 0.75 mm.). Head in front view, excluding mandibles, 1.1 times longer than broad and rectangular with rounded corners, occipital margin impressed, sides subparallel, feebly convex, anterior clypeal margin feebly convex; frontal lobes short, convex, carinae vestigial, frontal groove deep and distinct to middle of head from which it continues faintly to occiput; eyes vestigial, in front of middle of head; mandibles elongate, trigonal, with 8 denticles of irregular development of which two are distinct, and a long, acute apical tooth; antennal scape extends approximately to a level with the occipital corners; terminal funicular joint compressed and apically blunt, 0.08 x 0.24 mm., joints 8–10 squarish. Thorax with epinotum lowered and laterally compressed as in *Euponera*; from above the pro- and mesonotum appear ovate in outline, the pronotum being broader than long and with all sides strongly convex except for concave surface joining mesonotum; mesoepinotal impression distinct on sides. Petiolar node from above with convex anterior surface and plane posteriorly. 1st gastric segment from above broader than long, narrowed anteriorly, 2d segment larger. Legs of moderate proportions.

Shining, finely punctate. Pilosity of abundant short, fine, reclinate hairs and sparse, upright, longer hairs chiefly on terminal gastric segments. Pale brownish yellow.

Holotype: One worker (No. 1452) taken by myself in the Lotti Forest on the west slopes of the Imatong Mts., A.-E. Sudan August 5. The thorax of this ant is like that of many *Euponera* species yet it has but one well-developed tibial spur on the middle and hind legs.

LEPTOGENYS.

“ ***Leptogenys*** (L.) ***maxillosa*** (F. Smith), ***sericeus***, ssp. nov. = ***pavesii***

Worker.—Length extended 7.3–7.6 mm. (of thorax 2.4–2.5 mm.). Differing from the typical form found in Africa, Mauritius, Guam, etc., from the variety *vinsonnella* (Dufour) of the Seychelles and from the variety *falcata* Roger of

Cuba in somewhat larger size but especially in its distinctively longer and denser appressed pubescence which gives it a silky sheen.

Cotypes: Workers from one colony (No. 1377) taken by myself at an elevation of about 4,100 feet on the east slope of the Imatong Mts., A.-E. Sudan July 31.

✓✓ *Leptogenys (Leptogenys) africanus*, sp. nov.

(Fig. 8.)

Worker.—Length extended 9.5 mm. (of thorax 2.9–3.0 mm.). Head in front view, excluding mandibles, 1.1 times longer than broad, occipital margin slightly concave, sides feebly convex and diverging to the mandibles, clypeus with a median carina, anterior clypeal margin sinuate and produced medially as a rounded tooth, the latter margined with a few thin spine-like hairs; frontal lobes short, convex, frontal carinae subparallel and extending to a level with the eyes, separated by a groove; eyes large, convex, situated closer to the mandibular insertions than their diameters; mandibles long, falcate, narrow, terminating apically as a single tooth; antennal scapes narrow, long, surpassing occipital corners by over a third their length; all funicular joints longer than broad, joints 2–4 more than twice as long as broad. Mesonotum from above bordered anteriorly and posteriorly by distinct sutures; epinotal declivity plane, not marginate. Petiole from above trapezoidal, wider behind than in front and terminating posteriorly in a long tooth. 1st gastric segment from above over 1½ times broader than long, shorter than 2d segment. Legs moderately long and slender.

Head, thorax and petiole coarsely vermiculate-rugose, becoming reticulate on the petiole, entire body finely punctate in addition. Covered fairly uniformly with upright yellowish hairs. Black, appendages becoming dark brown distally.

Described from workers of a colony (No. 1452) and strays nearby collected by myself in the Lotti Forest on the west slopes of the Imatong Mts., A.-E. Sudan August 5. This species is noteworthy because of its toothed petiole and coarse sculpture. It may for this be better placed in the Australian subgenus *Odontopelta*. The mandibles and clypeus, however, are those of the typical subgenus.

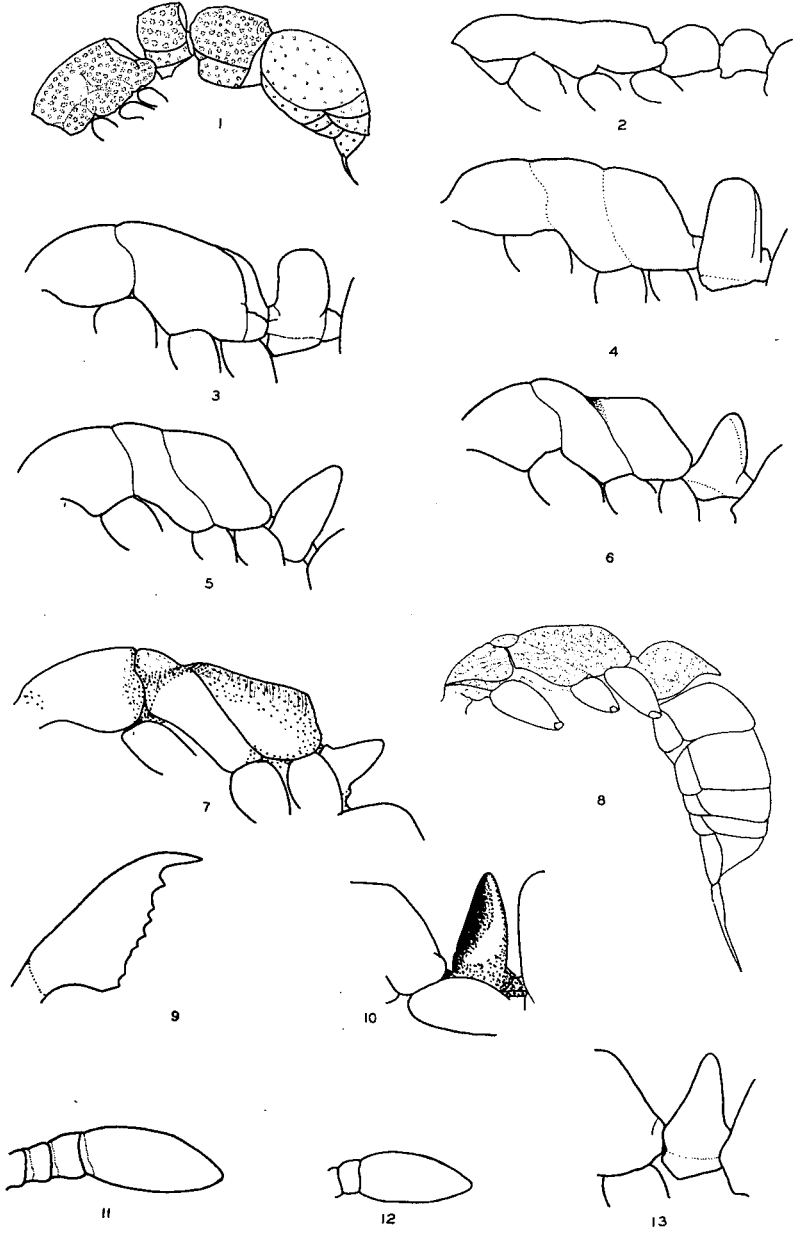
ANOCHETUS.

✓✓ *Anochetus sudanicus*, sp. nov.

(Fig. 7.)

= *gracilicornis*
Viehmayer

Worker.—Length extended 6.9 mm. (of thorax 2.14 mm.). Head, excluding mandibles, 1 1/6 longer from anterior clypeal margin to occipital angles than broad at eye level; antennal scapes slender, outwardly curved, slightly exceeding occipital angles; mandibles with two large apical teeth and a short third which springs from the base of the lowest tooth. Thorax from above with convex



pronotal and subparallel epinotal sides, the former about 1 2/3 times broader than latter; epinotal declivity faintly impressed medially. Petiolar node from above convex anteriorly, plane posteriorly. 1st gastric segment from above slightly longer than broad and longer than 2d. Legs of moderate proportions.

Shining, striae of front part of head extending to middle; basal and declivous surfaces of epinotum transversely and densely carinate, mesonotum with shallow, transverse striae. Pilosity of sparse, fine, yellowish appressed to reclinate hairs and a few long, upright hairs. Brownish yellow, front of head and gaster infuscated.

Holotype: One worker (No. 1366) taken by myself at the Lango village of Longoforok at the east base of the Imatong Mts., A.-E. Sudan July 29.

This species is close to *A. ghilianii* Spinola of the Mediterranean but differs in having shorter mandibular apical teeth, more slender funicular joints, more angulate epinotum, less circular petiolar node of petiole when viewed from above, more regular and distinct mesonotal striae, coarser epinotal carinae and fewer hairs. It has probably migrated up the Nile valley from the Mediterranean.

EXPLANATION OF PLATE.

- Fig. 1. *Cerapachys (C.) sudanensis*, sp. nov. Worker thorax and abdomen in side view.
- Fig. 2. *Aenictus mentu*, sp. nov. Worker thorax and petiole in side view.
- Fig. 3. *Ponera coarctata imatongica*, ssp. nov. Worker thorax and petiole in side view.
- Fig. 4. *Ponera mesoëpinotalis*, sp. nov. Worker thorax and petiole in side view.
- Fig. 5. *Ponera lotti*, sp. nov. Worker thorax and petiole in side view.
- Fig. 6. *Ponera ambigua*, sp. nov. Worker thorax and petiole in side view.
- Fig. 7. *Anochetus sudanica*, sp. nov. Worker thorax and petiole in side view.
- Fig. 8. *Leptogenys (L.) africana*, sp. nov. Worker thorax and abdomen in side view.
- Fig. 9. *Euponera (Mesoponera) dentis*, sp. nov. Female mandible.
- Fig. 10. *Euponera (Mesoponera) flavopilosa*, sp. nov. Female petiole in side view.
- Fig. 11. *Cerapachys (C.) pigra*, sp. nov. Worker antenna, terminal segments.
- Fig. 12. *Cerapachys (C.) sudanensis*, sp. nov. Worker antenna, terminal segments.
- Fig. 13. *Ponera muscicola*, sp. nov. Female petiole in side view.
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