

A NEW SPECIES OF THE DOLICHODERINE ANT GENUS
MONACIS ROGER, FROM THE AMAZON, WITH
FURTHER REMARKS ON THE GENUS
(Hymenoptera, Formicidae)¹

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(With 3 text-figures)

Through the courtesy of Dra. Carminda da Cruz Landim and Mr. Vardeci Gama, of the "Faculdade de Filosofia de Rio Claro", I have received a sizeable collection of Amazonian ants, made by the "Instituto Nacional de Pesquisas da Amazônia" in the environs of Manaus. Among this material were specimens of a new and striking *Monacis*, the description of which is given below. I take the opportunity to add to my previous revision of the genus (KEMPF, 1959), by bringing up-to-date the key to the species and adding new and significant locality records for several other species of *Monacis*.

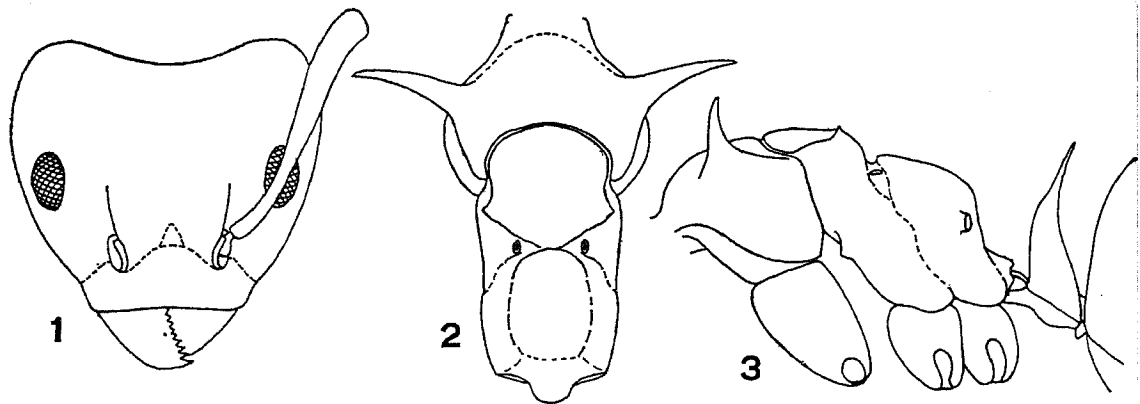
My thanks go to the above mentioned persons, and to Dr. W. L. Brown, Jr., of Cornell University, Ithaca, N.Y., to Prof. Domiciano Dias, of the "Universidade de Brasília", to Mr. Karol Lenko, of the "Instituto Biológico de São Paulo", to the "Museu de Zoologia da Universidade de São Paulo (MZUSP, formerly DZSP), for the gift or use of pertinent material. I likewise wish to thank the "Conselho Nacional de Pesquisas" of Brazil, for maintaining the fellowship under which this work was performed, and the "Fundação de Amparo à Pesquisa do Estado de São Paulo", or the renewal of my laboratory equipment.

Monacis omacantha sp. n.

Worker (holotype) — Total length 5.7 (5.2-6.2) mm; head length 1.43 (1.26-1.50) mm; head width 1.53 (1.40-1.60) mm; cephalic index 107 (107-112); antennal scape length 1.30 (1.20-1.33) mm thorax length 2.03 (1.70-2.07) mm; hind femur length 1.83 (1.63-1.90) mm; maximum width between tips of pronotal spines 2.03 (1.60-2.17) mm. Color reddish brown; antennal scape, fore coxae, and extensor face of tibiae fuscous-brown; gaster black. Integument finely granulate, i.e. densely and sharply reticulate-punctate, opaque; sculpture more superficial to obsolete and integument somewhat shining on mandibles (nearly smooth on tip and chewing border), scapes, tips of pronotal spines, legs and petiole. Golden yellow pubescence dense and conspicuous on body and appendages, extremely dense and heavy on gaster where it masks the integument. Erect or suberect hairs abundant on body and appendages, including the sides of head, scapes, pronotal and petiolar spines, and legs.

Head (Fig. 1) cordate, broader than long, the occipital lobes diverging laterad, the occipital border moderately excised.

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Monacis omacantha sp. n., worker holotype — Fig. 1: Head in full-face view; fig. 2: thorax in dorsal view; fig. 3: thorax and petiole in side-view. (Kempf del.).

Mandibles with 10-11 triangular teeth, acute at apex, becoming gradually broader and blunter towards base. Frontal carinae gently diverging caudad. Frontal area impressed. Frontal suture absent. The single median ocellus vestigial (vestigial to absent in the paratypes). Antennal scape, when bent backwards over the occipital lobe, surpassing the occipital border by a distance greater than its own maximum thickness.

Thorax as shown in Figs. 2 and 3. Pronotum with a pair of long scapular spines, as long as width of mesonotum, projecting slightly forward and upward and principally laterad, the tips gently recurved. Mesonotum subquadrate, only slightly broader than long, the lateral borders marginate, with a slightly upraised dentate lobe at the posterior corner. Metanotal groove deeply impressed. Basal face of epinotum low, flat, submarginate at sides, unarmed and immarginate on at posterior corner, about as long as declivous face which is likewise flat and immarginate at the sides. Hind coxae without a basidorsal tooth or tubercle. Apex of petiolar scale drawn out in a long needle-like spine, the height of which surpasses that of the epinotum, the spine only gently curved backwards.

Types — 18 workers, all from the Reserva Ducke, near Manaus, Amazonas State, Brazil, from 4 different collections made by

the Instituto Nacional de Pesquisas da Amazônia (INPA), as follows. June 4, 1969, INPA n. 15, 7 workers (holotype and 6 paratypes); June 4, 1969, INPA n. 21, 4 workers (paratypes); May 20, 1971, INPA n. 9, 6 workers (paratypes); May 28, 1971, INPA n. 4, 1 worker (paratype); to be distributed among the following collections: Collection Kempf (WWK), collection of the Museu de Zoologia da Universidade de São Paulo (MZUSP) and the collection of Rio Claro.

Discussion — The present species belongs to the *bispinosus*-group of genus *Monacis* on account of the long needle-like spine on apex of the petiole. Within this group, on account of the shape of the thorax, it is closest to *spinicollis* Latreille and *mucronifera* Roger (cf. KEMPF, 1959: 225-270).

It differs from *spinicollis* as follows: size smaller; scapes, fore-coxae and extensor face of tibiae infuscated; pubescence longer and denser, very heavy on gaster where it conceals the integument; standing hairs present also on sides of head, scapes, pronotal and petiolar spines, and on legs; mandibular teeth 10-11 in number; frontal suture absent; median ocellus vestigial only or absent; pronotal spines much shorter, with the tips recurved; mesonotum slightly longer, subquadrate; epinotum

armed, much lower, the basal face being long as the declivous face.

The differences from *mucronifera* are following: size smaller; color different; pubescence denser and longer, very heavy; gaster; erect hairs present on sides and frons of head, spaces, and legs; occipital lobes more diverging laterad, occiput less deeply excised; frontal carinae more divergent; caudad; antennal scapes distinctly shorter than head length; pronotal spines much longer, as long as width of mesonotum; mesonotum more acutely dentate on posterior margin; basal face of epinotum as long as declivous face, more distinctly marginate at sides; hind femur distinctly shorter than coxal length.

The types of *omacantha*, except for the variation in measurements already given above in the description, are very much alike and variation is insignificant.

Since after my revision of the genus (KEMPF, 1959) two species have been added to the *bispinosus*-group, viz. *andina* Kempf (1962: 36-37) and the present *omacantha*, I offer here a new key for this very group which substitutes the first section of my previous key (KEMPF, 1959: 230-232, couplets 1-6).

Petiolar scale produced apically as a long, needle-like spine 2

Apex of petiole without a long, needle-like spine 7

Head capsule longer than broad, ovate; eyes in full-face view nearly touching or even surpassing the lateral border of head; antennal scapes longer than head width 3

Head capsule broader than long, cordate; eyes in full-face view with their lower (outer) orbit distinctly removed from the lateral border of head; antennal scapes shorter than head width 4

Body and appendages without long erect or suberect hairs (except on gastric sterna); mesonotum subquadrate, about as long as broad; basidorsal tooth on hind coxae ill-developed; color yellow *mucronifera* Roger

— Body and appendages with long erect or suberect hairs; mesonotum distinctly broader than long; basidorsal tooth on hind coxae well-developed; color black *andina* Kempf

4. Posterior corners of mesonotum and basal face of epinotum with a spine, the mesonotal spines shorter and suberect, the epinotal spines longer and obliquely raised upward; thoracic dorsum lacking erect hairs *septemspinosa* Emery

— Posterior corners of mesonotum and basal face of epinotum without such a spine, at most with a low tooth or else unarmed 5

5. Basal face of epinotum with the posterior border immarginate, not overhanging the flat, not excavate, declivous face; hind coxae without a well-developed basidorsal tooth or tubercle 6

— Basal face of epinotum with the posterior border sharply marginate or edged, overhanging the excavate declivous face; hind coxae with the basidorsal tooth well-developed 6b.

6. Sides of head, antennal scapes, femora and tibiae with erect hairs; pronotal spines as long as width of mesonotum ... *omacantha* Kempf

— Sides of head, antennal scapes, femora and tibiae without erect hairs; pronotal spines either much longer or much shorter than width of mesonotum 6a.

6a. Posterior corners of basal face of epinotum dentate; pronotal spines huge, exceeding by much the width of the mesonotum *spiniicollis* Latreille

— Posterior corners of basal face of epinotum edentate; pronotal spines much shorter than width of mesonotum *mucronifera* Roger

6b. Antennal scape, excluding articular condyle, about as long as maximum length of head; petiolar summit gradually tapering off as a needle-like spine; promesonotum densely and coarsely punctate only *valida* Kempf

— Antennal scape, excluding articular condyle, distinctly shorter than maximum length of head; petiolar summit more or less transversely truncate and slightly crenulate, at base of constricted-off needle-like spine; promesonotum reticulate-rugose *bispinosa* Olivier

(Here they key continues at couplet 7 in KEMPF, 1959: 231).

NEW LOCALITIES FOR OTHER SPECIES
OF THE GENUS

Monacis debilis Emery

Brasil, Mato Grosso State: Utiariti, Rio Papagaio, July 1961 and Oct.-Nov. 1966, K. Lenko & F. S. Pereira leg., several series of workers (MZUSP 1629, 3958, 4762, 4849, WWK; 15 km N of Xavantina, May 5, 1968, A. G. A. Mathews leg., several workers (WWK 5924).

Peru, Anashirone River, Chanchamayo, Aug. 21, 1963, C. A. Portocarrero leg., several workers (WWK 4034).

Monacis rufescens Mann

Brasil, Amazonas State: Benjamin Constant, Sept. 19-21, 1962, W. L. Brown, Jr. & K. Lenko leg., several long series (MCZ-BC 37, 82; MZUSP 226, 4503; WWK). Hitherto known only from the type series taken along the Madeira-Mamoré RR., in the Rondônia Territory.

Monacis laminata Mayr

Brasil, Mato Grosso State: Utiariti, Rio Papagaio, July 1961, K. Lenko leg., a long series of workers (MZUSP 1710; WWK); Pará State: Belém, Reserva Guamá, 1968, equipe de D. Dias leg., several long series of workers (APEG 928, 967, 1058, 1381; WWK).

Monacis varians Mann

Brasil, Amazonas State; Rio Tarumã nr. Manaus, Aug. 28, 1962, W. L. Brown, Jr. & K. Lenko leg., a long series of workers (MCZ-M-114; MZUSP 2206; WWK); Pará State: Belém, Reserva Guamá, 1968, equipe de D. Dias leg., several long series of workers and males (APEG 1592, 1600, 1637, 1656, 1746, 1779; WWK). Hitherto known only from the lone holotype collected in the Rondônia territory.

Monacis lamellosa Mayr

Brasil, São Paulo State: São Paulo City, Instituto Butantan, July 31, 1969, L. Travassos F. leg., 1 female (WWK 5750); Anhembi, Fazenda Barreiro Rico, Febr. 14, 1969, W. W. Kempf leg., 1 worker (WWK 5578); Nova Europa, Fazenda Itaquerê, A. 163, June 1965, K. Lenko leg., several series of workers (MZUSP 2425, 4478; WWK); Maranhão State: Bacabal, Nov. 3, 1968, W. Kempf leg., a series of workers (W 5392); Amazonas State: Manaus, Sept. 1962, K. Lenko leg., several workers (MZUSP 2247; WWK).

REFERENCES

- KEMPF, W. W., 1959, A revision of the Neotropical ant genus *Monacis* Roger. *Studia Ent.* (n.s.), 2: 225-270, 64 figs.
- KEMPF, W. W., 1962, Miscellaneous studies on Neotropical ants. II. *Studia Ent.* (n.s.), 5: 1-38, 40 figs.