INTRODUCTION

Monomorium is one of the most diverse ant genera, with more than 300 described species (Bolton, 1995; Heterick, 2001), the majority of which are Old World, especially Afrotropical. For a long time there were various generic or subgeneric names associated with this genus and related groups (Etershank, 1966), without critical study of their limits or validity. Etershank (1966) made the first attempt to classify Monomorium in related groups; Bolton (1987) subsequently modified this arrangement in his study of the Afrotropical fauna of the genus. Since then, the only regional studies have been those of DuBois (1986) and Heterick (2001), and our understanding of the monophyly and relationships of the group remains far from adequate. The present work is intended as a modest contribution to this end; it consists of the description of two interesting species attributable to Monomorium, with taxonomic notes, synonyms, and an operational key for the Neotropical species.

The species described herein require extending the generic limits of Monomorium, or forming bridges among neighboring genera. Among the consequences is that Nothidris and Epeleidsidis cannot be sustained as distinct genera, that Megalomyrmex is left in a precarious state, and that Phacotes becomes, once again, a synonym of Monomorium.

Heterick (2003) observed that: "Monomorium sublancellatum ... pushes back the diagnostic boundaries of the genus Monomorium, and cannot be placed at present in existing Australian species-groups of Monomorium" (Heterick, 2003). The description of the two new species is fraught with analogous interpretational dilemmas with reference to the Neotropical Monomorium fauna, within which perhaps neither is rightly included. Both species may eventually prove to lie outside Monomorium. For further analysis of the issue, readers are referred to the discussion.

MATERIALS AND METHODS

Depositories of Material

CEPLAC Centro de Pesquisas do Cacau, Itabuna, Bahia, Brazil.
ICN Instituto de Ciencias Naturales, Universidad Nacional de Colombia, Bogotá D.C., Colombia.
LACM Los Angeles County Museum of Natural History, Los Angeles, USA.
MZSP Museu de Zoologia, Universidad de São Paulo, SP, Brazil.

Terminology

CI Cephalic index: HW/HL × 100.
EL Eye length: maximum diameter of the eye.
GL Gaster length: the maximum length, in lateral view, from the anterior most point of the gaster to gastral apex.
HL Head Length: maximum length, in full face view, from the midpoint apex of anterior clypeal margin to midpoint of preoccipital (posterior) margin of head.
HW Head width: maximum width in full face view.
PL Petiole length: in dorsal view, from anterior to posterior articulation.
PPPL Postpetiole length: in dorsal view, from anterior to posterior articulation.
SL Scape length: maximum length of scape, excluding basal condyle, in straight line distance.
TL Total length: total length of the ant from anterior clypeal margin to gastral apex.
WL Weber's length: the diagonal length of mesosoma from anterior pronotal margin to basal angle of metapleuron.
Illustrations

Scanning Electron Microscope (SEM) photographs were taken at the University of Alberta in Edmonton. Observations and measurements of pinned specimens were made using a Nikon SMZ21 stereomicroscope at 80X magnification and a fiber ring lamp. All measurements are in millimeters.

Monomorium Mayr


Monomorphic to polymorphic. Minute to moderately large in total length. Mandibles with 4 to 5 teeth. Maxillary palps with 2 to 4 segments. Median clypeal seta present, sometimes displaced or absent. Median portion of clypeus raised, longitudinally biconcave, the cuneus rarely effaced. Frontal cuneus absent past frontal lobes. Antennal scrobe absent. Antennae with 11-12 segments and with club of 3 (rarely 4) segments. Eyes present, sometimes reduced. Metapleural glands not bulging or hypertrophied. Metapleural lobes usually small, rounded. Propodeum normally unarmored, sometimes angulate to dentate, rarely with lamelliform process. Propodeal spur occasionally circular and at about midlength of the scutellum, rarely in a posteri position. Petiole pedunculated, the petiolar spines usually close to or at node. Sting functional.

Notothridis was created by Ettershank (1966) and further delimited by Snelling (1975), who created Antichthodon to accommodate some species. Bolton (1987: 284-285) discussed the traits proposed for the latter, demonstrating their weakness and dubious value as generic-level characters: a vestigial propodeal spur appears to be present in some Australian Monomorium species Monomorium, as proposed by Heterick (2001), leaves no justification for maintaining Notothridis as a separate genus.

Phacota has been a taxonomic problem in the myrmecines, due to its poor description, the disappearance of the type specimen, and the lack of collected material referable to P. sichelii (Bolton, 1887), all of which have impeded an evaluation of its taxonomic status. Ettershank (1966) considered this name a junior synonym of Monomorium. Bolton (1987) subsequently revived the name, but he made explicit his strong suspicion that the putative species is based on a wingless, ergatoid Monomorium female, perhaps from the M. salomonis group. Both the meager description rediscovered in Spain or any other nearby location, are consistent with this interpretation. Given that group's importance, samples assignable to Phacota would surely have been detected and described segmented club. Some Neotropical Solenopsis females possess this combination, but it is an outside the Neotropical fauna the following changes are proposed:

Monomorium sichelii (Roger, 1862) comb. rev.
Monomorium brocha (Bolton, 1987) comb. n.
SPECIES DESCRIPTIONS AND NOTES

Monomorium bidentatum Mayr comb. rev.

Monomorium bidentatum Mayr, 1887: 616 (w, q).
(as junior synonym of bidentatum).
Antichthoniids bidentata: Snelling, 1975: 5-6 (w, q, m), Wheeler & Wheeler, 1980: 533 (larvae).

Heterick (2001) synonymized Antichthoniids under Monomorium, but did not make the appropriate nomenclatural changes in the two species assigned to that genus.

Monomorium brasiliense Forel

Monomorium minuts subsp. brasilense Forel, 1908: 361 (w).

Bolton (1987) did not study the type of this species, nor the possibly corresponding native Monomorium material. The Monomorium native to South America are moderate to large in size, M. brunnea and M. delabieare are small but with HW greater than 0.60 mm. There is a possibility that M. brasiliense might in fact be a trapant species, erroneously described by Forel as a different (subspecific) taxon.

Monomorium cekalovici (Snelling) new combination

Nothidris cekalovici Snelling, 1975: 3 (w); Bolton, 1995: 292.

Monomorium chilenis, new name.


M. chilenis is the new name proposed for bicolor, a name preoccupied by Monomorium bicolor Emery, 1877: 368.

Monomorium cyanenum Wheeler

It is not easy to separate M. cyanenum from M. ebenum and M. depressum. In the syntheses of and keys indicate punctate mesopleura for the species. There are Mexican workers (LACM) with LACM lacks this attribute. Perhaps there is variability in the character, but the limited material is the other two species and supposedly there are 8 or fewer hairs on the mesosoma (DuBois, 1986: depressum share a petiole that is slightly curved in frontal view, as well as a petiole node that is thicker in lateral view. M. ebenum has a petiole that is flat or weakly concave in frontal view. Thus the problem is how to separate M. cyanenum and M. depressum. As pointed out above, the punctate sculpturing of the mesopleura does not seem to be universal in cyanenum (three syntheses examined, LACM, do not have appreciable sculpturing on the mesopleura). A characteristic of the syntheses and other specimens from Hatillo, Mexico, LACM is the presence of a light metallic blue sheen on the entire body (from which the species name derives). A specimen labeled as cyanenum (LACM) by DuBois has mesopleural sculpturing but does not have the blue sheen.

Monomorium delabiei, new species

Description

Worker measurements (mm): HW 0.65; HL 0.73; SL 0.53; EL 0.16; WL 1.03; PL 0.36; PPL 0.24; GL 1.00; TL 3.50. Indices: CI 89; SI 82.

Head slightly longer than wide. Sides of head slightly convex, evenly rounded into the posterior border, latter more or less straight with a small medial concavity. Mandibles with four teeth: the apical larger than the others, the subapical separated by a space from the basal teeth. Maxillary palps 2 segmented. Clypeus convex with no trace of carinae, extended posteriorly as smooth and shiny frontal area. Clypeus anteriorly convex. Antenna 12-segmented with club 3-segmented. Frontal carinae short.

Eyes large, well developed, with about 11 ommatidia in the maximum diameter, situated in the middle of the head.


Entire body smooth and shining. Moderate erect pilosity on head, promesonotum, petiole, petiopode and gaster, very few on propodeum. Larger hairs about 0.15 mm, those of head shorter. Clypeus with two series of transverse setae, those of anterior margin increasing in size toward the somewhat larger median apical setae. Body brown, most of gaster dark brown.

Queen and male unknown.

Type data: Holotype worker, Brazil, Bahia, Fazenda Amarilina, Guaratinga, 28.vii.1993 (PulaMichelli No. 4675-D) (CEPLAC).

Distribution: Eastern Brazil.

Etymology: This species is named for my friend and colleague Dr. Jacques Delabie, for his continuous supply of interesting ants.

Comments

In M. delabiei there are two transverse rows of hairs on the clypeus. In the row on the anterior border, the hairs increase in length from the lateral ones towards the midpoint, where they are longest (although not very much longer than the rest); in other words, there is no single medial hair that stands out, a characteristic typical of the tribe. This is also typical of some Megalomyrmex, and
in at least some "Antichthonidris" workers, there is no apical medial seta. The clypeus forms a medial convexity with only a very weak trace of carinate. The tentorial pit is more than halfway between antennal receptacles and mandibular base (as in some "Antichthonidris"), rather than near the antennal alveolus (as in some Neotropical Monomorium). The form of the propodeal spiracle is somewhat similar to that of Nothidris (Bolton, 1994: 104), with a visible vestibule preceding anteriorly the spiracle proper. In typical Monomorium and Megalomyrnx the spiracle is round and without anterior vestibules. The postpetiole has a robust, pointed ventral tubercele, a characteristic apparently not shared with other members of the genus or with Megalomyrnx. The absence of the transverse propodeal carina excludes, by definition, the inclusion of this species in the typical Megalomyrnx, although the character is not universal within the genus, and can be present in some Monomorium.

**Monomorium denticulatum** Mayr revised combination

*Monomorium denticulatum* Mayr, 1887: 614 (w, q); Wheeler & Wheeler, 1980: 532 (larvae).
*Monomorium denticulatum navarriensis* Forel, 1904: 7 (q); Kusnezov, 1960: 347 (as junior synonym of denticulatum).
*Monomorium denticulatum picea* Emery, 1906: 120 (w); Kusnezov, 1960: 347 (as junior synonym of denticulatum).
*Monomorium (Notomyrnx) denticulatum inermis* Borgmeier, 1948: 469 (worker); Kusnezov, 1949: 432 (as junior synonym of denticulatum).

A widespread tramp species, *M. destructor* is readily recognized by the fine transverse striae on the vertex, as well as the dark metanotal groove.

**Monomorium ebeninus** Forel

This species is similar to *M. compressum* and, to a lesser extent, to *M. cyanum*. A characteristic that appears to separate it from similar species is the petiolar profile, which in frontal view is flat to weakly concave.

**Monomorium floricola** (Jerdon)

This is a small adventive Old World species, as is *M. monomorium*, with HW less than 0.35 mm. In *M. floricola* the pale mesosoma is in sharp contrast to the darker head and gaster.

**Monomorium inquitinum** DuBois

Known only from queen and male castes. DuBois (1986) suggests that this species is a social parasite of *M. cyanum*. Known only from the type locality, between Mexico City and Querétaro.

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**Monomorium inusuale** new species

*Figures 1-2*

**Description**

Worker, measurements (mm), holotype (paratypes, n=3): HW 0.48 (0.46-0.48); HL 0.57 (0.57-0.62); SL 0.37 (0.37-0.41); EL 0.03 (0.03); W/L 0.72 (0.70-0.72); PL 0.25 (0.25); PPL 0.18 (0.18); GL 0.73 (0.73-0.80); TL 2.58 (2.58-2.61). Indices: CI 84 (74-84); SI 77 (77-89).

Head longer than wide. Sides of head parallel, very slightly wider anteriorly, broadly rounded into the posterior border, which is more or less straight. Mandibles with four teeth: the three apical separated from isolated basal by a large diastema. Maxillary palps 2 segmented. Median lobe of clypeus strong, bicarinate, narrowing posteriorly to narrow strip between frontal lobes. Clypeus with apical median seta and several paracranial setae. Antenna 12 segmented with strong 3 segmented club; scape fails to reach the vertexal border. Antennal insertions close together. Frontal carinae and antennal scrobes absent. Eyes reduced to indistinct ommatidia, placed in front of head midline.

In lateral view promesonotum slightly convex. Metanotal groove very deep, well marked. Propodeum unarméd, with a faint cuticular crest, from the meeting point of dorsal and declivity faces, extended and slightly higher, continuous with the small metapleural lobes. Propodeal spiracle circular, opened posteriorly. Bullae of metapleural glands large. Petiole with peduncle and node well differentiated; the node more or less with the sides parallel, dorsum convex. Petiolar spiracle at beginning of node. Petiolar ventral process tooth-like. Postpetiole subcubaniform, with a strong transverse carina. Apical portion of penultimate tergite with four small pegs or hairs, hairs arising from outermost.

Mandibles, most of promesonotum, dorsum of petiole and postpetiole and gaster smooth and shining. Head with longitudinal rugulae mixed with dense foveae. Posterior promesonotum with feeble short rugulae. Most of mesopleura with irregular short longitudinal striae, mixed with fine reticulation. Most of propodeum and sides of petiole and postpetiole densely reticulated. Declivity of propodeum with several fine transverse carinae, the most posterior more marked. Moderate erect pilosity on head, promesonotum, petiole, postpetiole and gaster, very few on propodeum. Scapes with several erect hairs. Larger hairs about 0.15 mm, those of head shorter. Body brown, appendages lighter.

**Queen and male** unknown.

**Type data**: Holotype worker, Brazil, Bahia, Barrolândia, 16-23.07.1994 (S. Lacerda) (CEPLAC).

Paratypes, 1 worker, same data as holotype, deposited in ICN; 3 workers, Brazil, Amazonas, Benjamin Constant, 21.ix.1962 (W. L. Brown Jr.) (MZSP); 2 workers, Ecuador, Napo, Limoncocha, 1973 (M. Reitnmeyer) (MZSP, BMNH).

**Distribution**: Ecuador and Brazil.

**Etymology**: The name refers to the unusual traits of the ant, and the taxonomical difficulties for their generic placement.
Comments

This species presents a series of unusual characters that are interesting in the context of the Solenopsidini, and especially Monomorium and its allied genera. The long distempa between the apical teeth and the basal tooth does not appear to be common in the genus or any other close genera.

The same can be said for the much reduced eyes, since large, multifaceted eyes are common in the genus, although some Afrotropical species have reduced eyes (Snelling, personal communication). The narrow carina or propodeal crest that extends down to join the metapleural lobes is reminiscent of Epeplus. The anterior and posterior sides of the petiolar node are more or less straight, in other species in this and neighboring genera, they tend to be rounded. The postpetiole has a strong transverse keel in the ventral part, which is reminiscent of Axidomyrmex. The head sculpturing is also unusual, with longitudinal rugules mixed with obvious foveae, a trait which is absent in other Neotropical Monomorium. The most outstanding feature is the series of minute teeth or pegs in the last abdominal tergum, from at least the outermost of which arise hairs. This appears to be an autapomorphic structure, absent in other Solenopsidini and probably in Myrmicinae; it is somewhat like the pygidial pegs of Cerapachyini and Pachycondyla crassodora workers.

The Brazilian specimens are uniform in size and general aspect. Nevertheless, the two Ecuadorian specimens differ somewhat in size and some measurements (slightly shorter dorsal side of the propodeum, for instance) and the visible microgrees of the last tergum are less conspicuous than those of Benjamin Constant, Brazil. These structures are well-developed in the type specimen, from Bahia, but the propodeum is intermediate between the other Brazilian specimens and those from Ecuador. Given that in the other essential characteristics all samples are similar, I prefer to consider these differences as within-species variability, instead of creating a new taxon that might result in a paraphyletic species.

Is M. insulare truly a Monomorium? I recently was loaned two interesting myrmecines from CEPLAC. The first of these, a worker from Guaramiranga (Brazil, Ceará) is reminiscent in general form of the Australian M. sublamiata, although without a single apical clypeal seta and clypeus so conspicuously bicornuate. The Brazilian specimen could pass as an unusual Monomorium. However, the discovery of a preooccipital carina—supposedly apomorphic in Rogeria—could require the inclusion of the species in the latter genus, in spite of the fact that other characteristics do not coincide (Kugler, 1994). Or, alternatively, the Australian species possibly does not belong in Solenopsidini: Heterick (2003) places sublamiata in Monomorium by default, since it does not fit in any other genus of the tribe. The paraphyletic nature of Monomorium renders it a “basket” or “catch-all” genus. Maybe sublamiata, like this Ceará worker, belongs to Stenammini (Bolton, personal communication).

The second CEPLAC specimen from Bahia (Brazil, S. Jose Victoria, No. 2139, provisionally determined as Monomorium sp.) has a general aspect typical of Monomorium, the genus to which the Bolton (1994) key leads, if one ignores the absence of the apical clypeal seta (which is variable in some Stenammini, possibly Rogeria), although it is impossible to confirm the preooccipital carina in place in Rogeria (as defined by Kugler, 1994). Bolton (personal communication) suggests that M. insulare might be a member of Stenammini, frontal lobes and toruli, as well as clypeal posterior border, places insulare in the Stenammini as on ventral surface, and the single medial clypeal seta puts the taxon in the Solenopsidini, again sensu monophyletic group, the tribes proposed by Bolton (2003) as Stenammini and Solenopsidini currently lack synapomorphies. Perhaps the mixed traits of insulare, the Australian species, and the Brazilian specimens referred to above may justify merging the two tribes. On the other hand, moving these taxa from Monomorium to Stenammini simply transfers the problem of generic allocation from one tribe to the other.

Bolton (2003) has clarified some of the uncertainties in the systematics of the myrmicines allied to Solenopsidini and Stenammini. However, there are many problems to be resolved only when the limits of the Myrmicine tribes are clearly defined. For these reasons, I think that the only option at the moment is to leave insulare as a member of Monomorium.

Monomorium latasei Emery revised combination


Monomorium marjorlue DuBois

The worker caste of this species is indistinguishable from those of M. minimum and M. wheelorum. However, M. marjorlue is the only species (of these three) recorded for Mexico (DuBois, 1986).

Monomorium minimum (Buckley)

Kempf (1972) recorded this species from Paraguay, following Forel (1917). However, I know of no confirmed records of this species from Paraguay or any other Neotropical country and it is not included in the key below.

*Monomorium mononorum Bolton

Wilson and Taylor (1967) mention the presence of this Old World species (as M. minutum Mayr) from Brazil. However, I know of no confirmed records in the literature. It has also been recorded from Barbados (Kempf, 1972).

*Monomorium pharaonis (Linnaeus)

Monomorium pharaonis, M. salomonis and M. subopacum are the only species in the Neotropics with head and mesosoma with fine reticulate-punctate sculpture and mandibular dorsum with coarse longitudinal rugae. M. pharaonis has two rows of hairs on the head between the vertex and carinae, which distinguishes this species from the other two. M. pharaonis is one of the best-known Old World tramp species.

*Monomorium salomonis (Linnaeus)

The body is sculpture as in M. pharaonis and M. subopacum. It differs from these by the lack of hairs on the dorsum, and presence of a medial notch in the anterior clypeal margin. It is a widespread species, introduced in the Neotropics.
Monomorium subpoeicum Emery

This is a minute, pale ant, with propodeum angles well marked. Mesopleuron sculptured. Body with abundant pilosity. It was described from St. Thomas in the Lesser Antilles, but is found also in Puerto Rico (R. R. Snelling, pers. comm.).

Monomorium subpocacum (Fr. Smith)

Similar in general form as M. pharaonis and the body is without erect hairs; clypeus without the medial notch as in M. salomonis. Originally described from the Azores, M. subpocacum has been recorded from Antigua in the Lesser Antilles (Kempf, 1972).

THE LIMITS OF MONOMORIUM AND RELATED GENERA

Bolton (1987) characterized the genus and listed its extensive associated synonymy, including new synonyms. This author proposed species groups for the Afrotropical fauna, some of which might be applicable to the fauna outside of Africa. Since then, DuBois (1986) has studied the M. minimum species group native in America and Heterick (2001) has revised the Australian fauna, placing Antichthoonidris Snelling as junior synonym of Monomorium.

Monomorium was included within the tribe Solenopidini by Bolton (1987), citing several traits and giving emphasis to the possession of a single medial apical seta or hair on the anterior margin of the clypeus. This characteristic at times is variable (the seta may be displaced to one side or a pair of setae more or less arising from the apical part of the medial clypeus), a feature that is also present in Adeomyrmex, Cardiocondyla, Tyrammomyrmex and some Stenamnini (Bolton, 2003; Fernández, 2003).

Later, Bolton (2003) redefined Solenopidini and proposed two groups in the tribe: Solenopsis genus group (Solenopidini s.str., as in Bolton, 1987) and Carebara genus group, containing most of the former tribe Pheidologetonini. Although it is possible to recognize several monophyletic groupings within the Solenopidini s.str. (e.g., Allomerus, Solenopsis), the monophyly of Monomorium and allied groups (Antichthoonidris, Megalomomyrmex, Nothidris, Phacota) is not clear. In fact, Heterick (2001) in his revision of the Australia Monomorium formally synonymized Antichthoonidris with Monomorium. Bolton (1987) had already warned of the precariousness of this genus and of Nothidris Ettershank, names whose validity become feeble upon examination of the group in a worldwide context. Phacota Roger was revalidated by Bolton (1987) as a synonym of Monomorium (Ettershank, 1966). Unfortunately the type of this group has disappeared and Bolton (1987) suspected that the description might have been based on a wingless ergatoid female.

What are the limits of Monomorium?

There has been no phylogenetic study of the Solenopidini. Kusnezov (1957) discussed some problems in the taxonomy of Solenopsis and neighboring groups and Bolton (1987) ventured some possible relationships within the tribe (now Solenopsis genus group: see Bolton, 2003). Some Oxypeoccus, possess distinctive shared morphological traits. Nonetheless, it is not clear whether these groups are monophyletic, the arrangement would leave Monomorium and other genera as paraphyletic. No morphological trait exists, either in workers or males, which characters or sets of characteristics that were seen from a local rather than a global perspective. Hence the creation of many weakly-delimited genera, whose fate has been synonymy. In fact, strict application of cladistic norms would result in synonymy of all the genera in the tribe, leaving a giant inclusive genus, Solenopsis, which would be rejected by the majority of myrmecologists. Even so, the monophyly of this grouping would not be clear, since Solenopidini still lacks a strong synapomorphy: the apical central clypeal seta is not universal.

Perhaps a moderate solution might be to maintain as valid those groups that can be clearly distinguished from Monomorium (Allomerus, Antilomyrma, Bondroilota, Diplomorium, Oxypeoccus and Solenopsis), leaving the rest in a single genus, Monomorium. This group is paraphyletic, but can be justified on practical grounds as a provisional arrangement, pending molecular systematics and chemotaxonomy that will probably illuminate relationships not apparent solely on the basis of external morphology. Some studies, for instance, suggest that the defensive chemicals in Solenopsis and neighboring groups will be phylogenetically useful traits (Van der Meer, 1986). Although molecular phylogenetic studies are not nearly as compelling as the discipline’s followers contend, the joint examination of molecular, chemical and morphological characters will probably be enlightening. This problem is not exclusive to Monomorium and its neighbors; it is highly likely that the same situation exists in genera such as Camponotus and its neighbors in the tribe Camponotini (Brady et al., 1999) and in the taxa created around Lepiophorus (Bolton, 2003).

The species M. insuile described here creates an interesting dichotomy. On one hand, it possesses unique features (mandibles with diastema, greatly reduced eyes, propodeal crest, pegs on the penultimate abdominal segment) whose nature might justify the creation of a new genus, as was the case with Notidris, Antichthoonidris and Epeydisris. Nevertheless, given the morphological and behavioral richness of Monomorium (Bolton, 1987; Heterick, 2001), it is difficult to justify such strict generic limits. If Notidris or Epeydisris are accepted as valid genera, it requires that M. insuile also be considered a separate genus. Nevertheless, by so doing, it would favor the indiscriminate creation of many monotypic genera (or with just a few species) around Monomorium. Although such genera might be monophyletic, characterizing them as separate genera might confound the taxonomy of the group. It seems thus more advisable to regard these as monophyletic lineages that have evolved separately, each with unique traits, within Monomorium. This is the decision taken recently by Heterick (2003) in placing the highly distinctive M. substilatulatum in Monomorium, instead of erecting a new monotypic genus to accommodate this species.

To summarize, this work proposes the following: To accept as valid genera within the tribe Solenopidini those that can be unambiguously distinguished from Monomorium: Antilomyrma, Solenopsis and others. To consider as congenerics those genera that cannot be clearly separated from Monomorium: Notidris, Phacota, Epeydisris and perhaps Megalomomyrmex. This is a practical position, but there are other considerations as well: the phylogeny of the Myrmicinae is barely in its first stages. This means that some genera placed in Solenopidini (Antilomyrma, for instance) might eventually belong to a different lineage, which may restrict the size of the tribe. New morphological, molecular, and chemical characters, as well as the description of the males and females of many of these lineages will perhaps in the future create a firm foundation for understanding the limits and relationships of the components of this interesting tribe.

KEY TO NEOTROPICAL MONOMORIUM WORKERS

This key should be considered a working draft, since it has been constructed based more on the literature than on specimens: Snelling & Hunt, 1976; DuBois, 1986; Bolton, 1994. I have not been able to examine various specimens assignable to some of the species reported for the Neotropical region. It will be of special interest in this context to study the type of M. brasiliense and establish its actual status. Observations by users will surely be useful for improving future versions.
14. Scapae surpassing posterior margin of head by slightly less than length of following segment. ................................................. M. marajorae .......................... 15

- Scapae never surpassing posterior margin of head .......................................................... M. subopacum ............. 16

15. Propodeum with small spines; clypeus without teeth; eyes reduced to one or two ommatidia; yellowish species; Puerto Rico, Virgin Islands ................................................... M. subopacum

- Propodeum unarmed, rounded in profile; clypeus with two submedian teeth; eyes multifaceted; body brown to black ............................................................ M. compressum (part) .... 17

16. Scape with reclinate hairs; body brown ................................................................. M. compressum (part)

- Scape with suberect hairs; body blackish brown to black ............................................. M. compressum (part)

17. HW equal to or more than 0.38 mm; Mexico .............................................. 18

- HW less than 0.36 mm; introduced in Brazil (?) ....................................................... M. monomorium

18. Body with metallic bluish reflections; clypeal teeth as long as wide at base .......... M. cyanescens

- Body without bluish reflections; clypeal teeth stout, wider at base than long ............ M. compressum (part)

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LITERATURE CITED


Figure 1. Monomorium inusuale. A, head in full face view; B, clypeus in oblique view; C, lateral view of worker; D & E, two lateral views of mesosoma.

Figure 2. Lateral (A) and dorsal (B-D) views of the last abdominal tergum in M. inusuale (Brazil).