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Miscellaneous Studies on Neotropical Ants (Hym. Formicidae)

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(With 40 text-figures)

Summary

Introduction

This paper is a further contribution in a series presenting scattered odds and ends of taxonomic or faunistic information on Neotropical ants. The first part was published in *Studia Entomologica* (N.S.) 3: 417-466 (1960).

The following collections provided the material on which the present investigation is founded: Collection of Father Thomas Borgmeier, O.F.M. (CTB), now in the custody of the author;

Departamento de Zoologia da Secretaria de Agricultura do Estado de São Paulo (DZSP); Museo Civico di Storia Naturale, Genova, Italy, (Emery collection) courtesy of Dr. Delfa Guiglia; Naturhistorisches Museum Wien (NHMW), courtesy of Dr. Max Fischer; this author's personal collection (WWK).

I gratefully acknowledge the help received from many industrious collectors, especially from Mr. Fritz Plaumann, Nova Teutônia, S.C., Brazil, and Mr. Karol Lenko, Barueri, S.P., Brazil. Likewise I confess my indebtedness to the "Conselho Nacional de Pesquisas" of Brazil, for the continued stipend of a fellowship.

As regards the interpretation of the measurements used in the ensuing diagnoses, the reader is referred to the detailed explanations contained in my previous papers, especially Kempf, 1959, Stud. Ent. (N.S.) 2: 226.

Subfamily **Ponerinae** Lepeletier

Ectatomma Fr. Smith, 1858

Building upon the sound foundations laid down in Brown's (1958) revision of the tribe Ectatommini, I propose in the following a new synonym for *E. tuberculatum* (Olivier) and discuss the status of *E. regis* Kusnezov, a species described after the conclusion of Brown's studies on the genus.

Ectatomma tuberculatum (Olivier)

Formica tuberculata Olivier, 1791, Encycl. Méth. Ins. 6: 498 (Worker).
Ectatomma tuberculatum acrista Forel, 1909, Deutsche Ent. Zeitschr. p. 254 (Worker, female; Paraguay: San Bernardino). — Santschi, 1916, Physis 2: 366 (Paraguay: Santa Trinidad). — Nov. Syn.
Ectatomma acrista; Brown, 1958, Bull. Mus. Comp. Zool. Harvard 118: 208, 211, 298-299 (Discussion).

Forel described the "race" *acrista* upon specimens from Paraguay which, aside from other subtle characters, differ from the "typical" *tuberculatum* chiefly in the nearly rounded occipital corners of the head, lacking protruding carinae, and the brighter, yellowish-red color of the body. Having before him a syntype of *acrista*, Brown (1958) raised it to full specific rank, because he found not enough evidence to show that it is only a peripheral southern variant of *tuberculatum s. str.*

I have in my collection (WWK, CTB) several specimens which match closely the description of *acrista*. They were taken at the following localities in Brazil: São Paulo State, Agudos and Itu; Minas Gerais State: Pirapora; Goiás State: Santa Rita;

Federal District: Brasília; Pernambuco State: Bomjardim. The last locality is by far the most interesting, not only because it is farthest removed from Paraguay, but also because all the specimens but one of a single nest series show the regular *tuberculatum* features; only the lone aberrant individual looks like *acrista*.

On hand of this evidence *acrista* can hardly be taken as a separate species, nor may it be considered as a clearly definable geographical race of the southern periphery of the territory possessed by *tuberculatum*. There is, however, an indication that the *"acrista"* variant becomes more frequent toward the southern end of the range, but not clearly enough to prevent me from placing it into synonymy of *tuberculatum*.

The whole territory occupied by *tuberculatum* extends from southern Mexico to Paraguay; but heretofore, it has been scarcely collected south of the Amazon valley, and indeed, it becomes less frequent here than in the north. For a better picture of the distribution of the species in Brazil, I present the ensuing records, based on material in my collection (WWK, CTB) and in that of the Zoology Department of São Paulo State (DZSP):

Brazil, Amapá Territory: Serra do Navio (K. Lenko); Pará State: Belém (F. S. Pereira, C.M.F.), Alto Paru and Alto Cuminá (A. J. de Sampaio), Jacarèacanga (M. Alvarenga), Monte Alegre (Q. Mones, O.F.M.); Amazonas State: Rio Purus, Parintins (E. Garbe), Uaupés (Deisenhofer, J. F. Zikán), Tabatinga (F. M. Oliveira); Acre Territory: Feijó (W. Bokermann), Pôrto Valter (L. Herbst, C.S.Sp.); Rondônia Territory: Pôrto Velho (F. S. Pereira, C.M.F.); Mato Grosso State: Barra do Tapirapé (B. Malkin), Colônia Vicentina, Dourados (R. Mueller, O.F.M.), Nova Andradina (O. P. Forattini), Serra de Urucum (K. Lenko), Xingu (M. Alvarenga & W. Bokermann); Goiás State: Santa Rita (J. S. Schwarzmaier, C.Ss.R.); Federal District: Brasília (H. S. Lopes); Paraíba State: Areia (F. S. Pereira, C.M.F.); Pernambuco State: Bomjardim (B. Pickel, O.S.B.), Recife (L. Lima Castro), Tapera (B. Pickel, O.S.B.); Bahia State: Ilhéos (E. Garbe), Salvador (P. Becker, O.F.M.); Espírito Santo State: Pôrto Cachoeira (E. Garbe), Parque Soorotama (F. M. Oliveira); Minas Gerais State: Governador Valadares (K. Lenko), Itambacuri (K. Lenko), Pirapora (E. Garbe); Rio de Janeiro State: Pôrto das Caixas (O. Conde); São Paulo State: Agudos (W. W. Kempf, O.F.M., R. Mueller, O.F.M.); Franca (E. Garbe), G. Oeterer (W. Bokermann), Itu (F. S. Pereira, C.M.F.), Ituverava (E. Garbe).

Ectatomma regis Kusnezov

Ectatomma regis Kusnezov, 1957, Rev. Soc. Uruguaya Ent. 2 (1): 12-14 (Worker; Argentina, Salta: Reserva Nacional Estancia El Rey, Tucumán: Valle del Rio Sali, 40 km. n. of Tucumán).

This species was described when Brown's (1958) revision of the genus was in press. The original description consists of

only 6 differential characters, which separate the species from *E. quadridens*.

According to these diagnostic features, *E. regis* is indistinguishable from *E. permagnum* Forel and falls into synonymy of the latter unless it exhibits other characters not mentioned in the description.

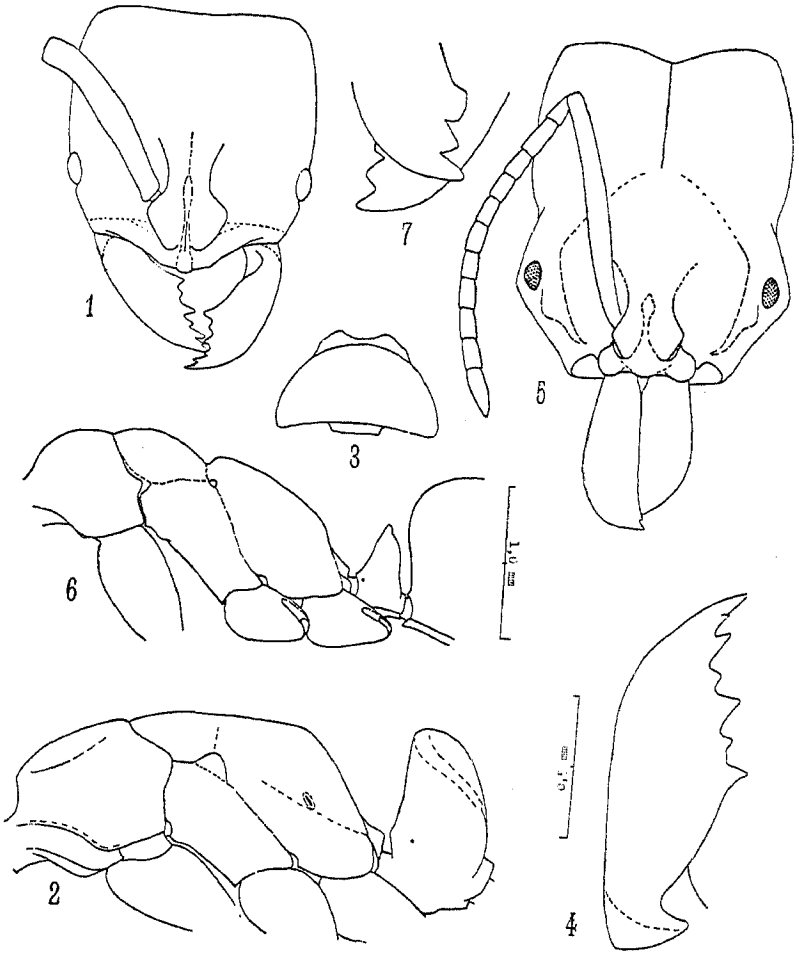
Pachycondyla lenkoi n. sp.

(Figs. 1-4)

Worker (holotype). — Total length 8.0 mm; head length 1.73 mm; head width 1.65 mm; scape length 1.23 mm; eye length 0.20 mm; maximum expansion of frontal carinae 0.59 mm; thorax length 2.45 mm; pronotum width 1.12 mm; hind femur length 1.38 mm; petiole length 0.75 mm; petiole width 1.07 mm; postpetiole length 1.12 mm; postpetiole width 1.55 mm. Black; mandibles, clypeus, frontal lobes, legs, sides of petiolar node, sides and apex of gaster ferruginous or fuscous-ferruginous.

Head (Fig. 1) subquadrate, sides gently convex, occiput very feebly excised. Mandibles (Fig. 4) elongate-triangular, smooth and shining with sparse piligerous punctures; oblique mandibular line on base; chewing border with 7 unequal teeth. Anterior half of clypeus perpendicular, separated from posterior horizontal half by a transverse mesially produced crest, forming in the middle a blunt tooth; an elongate tumulus behind the tooth turns into a keel which extends back between the frontal lobes. Dorsum of head densely and coarsely punctate, the intervals shining and smooth; only laterad of frontal carinae, and for a short distance behind them, the integument exhibits faint rugosities; coarse punctures becoming scarcer on sides of head and extremely rare on nearly smooth and highly polished gular face of head. Clypeus, and frontal lobes rather smooth and shining. Antennal scapes feebly sculptured but shining, attaining the occipital corner. Funicular segments I, II and XI noticeably longer than broad, III-VI about as broad as long, VII-X slightly transverse.

Thorax as shown in Fig. 2; rather feebly sculptured throughout and quite shining. "Neck" with a few irregular but rather longitudinal rugosities. Pronotum anteriorly and laterally marginate, sparsely and rather coarsely punctured above, more shallowly on sides.



Pachycondyla lenkoi n. sp. worker. Fig. 1. Head. — Fig. 2. Thorax. — Fig. 3. Petiole in dorsal view. — Fig. 4. Mandible. — *Odontomachus spissus* n. sp. worker. Fig. 5. Head. — Fig. 6. Thorax. — Fig. 7. Tip of mandibles, enlarged. — All figures to the same scale except Figs. 4 and 7, drawn to a larger scale. (Kempf del.)

Mesonotum and epinotum continuous in profile, not separated by a mesoepinotal suture; mesonotum sparsely but feebly punctured, basal and declivous face of epinotum practically smooth and shining, the declivous face laterally marginate. Sides of thorax with horizontal rugae above, smooth and shining below. Epinotal stigma elongate, slitlike. Legs weakly sculptured and quite shining.

Petiole as shown in Figs. 2, 3; node in dorsal view halfmoon-shaped, in side view with feebly excavate anterior face, dorsal

face continuous with posterior face, sloping downward right from the anterior border; sides of posterior face submarginate on lower half. Subpetiolar process rounded as in the other species. Integument smooth and shining except for minute piligerous punctures. Gaster with similar sculpture. First segment (postpetiole) twice as long above as below, anterior border submarginate, overhanging the petiolar insertion, as in *procidua, magnifica* and *metanotalis*. Acrotergite of gastric segment II lacking a stridulatory file. Pygidium postero-mesially with an ill-defined, highly polished and hairless area, surrounded by a fringe of long fine hairs.

Body and appendages with erect or suberect brownish-gold hairs. Pubescence rather long, dense and conspicuous on dorsum of head, thorax petiole and gaster, but never masking the integument. Tarsi, especially of mid and hind legs, with oblique, short, stout setae.

Type. — 1 lone worker (holotype) taken by Mr. Karol Lenko at Rio Sacre, NW Mato Grosso State, August 6, 1961 (n. 1623), deposited in the collection of DZSP. No other specimens are known.

Discussion. — On account of its small size, the present species resembles *harpax* and *lenis*, but is readily recognized by its much smoother and shinier integument and completely different petiolar node. In my key (Kempf, 1961, p. 192) for the Brazilian workers of *Pachycondyla*, on account of the peculiar shape of the petiole, the present species runs to couplet 3, keying out with *P. metanotalis*. *P. lenkoi* differs however from *metanotalis* in smaller size, smoother and shinier integument, less compressed petiolar node, shorter funicular segments III-V, weaker lateral margination of pronotum, and especially in the lack of a stridulatory file on acrotergite II of gaster. The elongate mandibles with the reduced number of 7 teeth distinguishes this species from all other species known in the genus and reminds of *Trachymesopus*.

Ponera Latreille, 1804

The cosmopolitan genus *Ponera* has in the New World (North, Central and South America) 36 recognized species, with 8 sub-species and 14 varieties. This number includes the Old World form *punctatissima* Rog., collected on a ship between Trinidad and Cuba (Weber, 1939), although it is not known whether it is really established in the Caribbean. Two of the remaining species, *coarctata pennsylvanica* Buckley and *oblongiceps* M. R. Smith, are strictly Nearctic; another, *inexorata* Wheeler, has a subspecies, *fallax* Forel, in Guatemala.

All species are more or less cryptobiotic, foraging in leaf mold. Their nests are frequently found in rotten wood. Siftings

of forest floor cover usually yield a large quantity of specimens of this genus.

The classification of this group is still primitive. Due to the monotonous morphology of most of the species, their characterization and identification is rather difficult. The extent of their infraspecific variability is scarcely understood.

In the following I give a redescription of *P. opaciceps* Mayr and *trigona* Mayr, based upon a direct examination of the types. A new species of the *foreli*-group, *P. vernacula* n. sp., is also described, with a brief diagnosis of the two related forms, *foreli* Mayr and *idelettae* Santschi.

Ponera opaciceps Mayr

(Figs. 8, 9)

Ponera opaciceps Mayr, 1887, Verh. Zool.-bot. Ges. Wien 37: 536 (Worker, female; Brazil: Santa Catarina). — Gallardo, 1918, An. Mus. Nac. Hist. Nat. B. Aires 30: 77-79, figs. 17, 18 (Worker, female; Argentina: Buenos Aires, Tucumán). — M. R. Smith, 1929, Ann. Ent. Soc. Amer. 22: 545-546 (Male, USA: Mississippi). — Smith & Haug, 1931, Ann. Ent. Soc. Amer. 24: 507-508, pl. 1 (Worker, ergatoid male; USA: Mississippi). — M. R. Smith, 1936, Ann. Ent. Soc. Amer. 29: 428-430 (Worker, female, ergatoid male; Distribution in USA).

The Natural History Museum of Vienna, Austria, has sent me on loan 4 type specimens, 2 workers and 2 females, of the present species. Thus I am enabled to determine the lectotype and to give a further characterization of *opaciceps*. Fortunately, this species seems to have been correctly interpreted by most authors that dealt with it in the past. The original description by Mayr and the diagnoses elaborated by R. M. Smith are reasonably accurate and complete. In the following I give figures of the worker based on the lectotype, exact measurements and a few additional characters.

W o r k e r (lectotype). — Total length 3.5 mm; head length 0.80 mm; head width 0.69 (0.67) mm; scape length 0.67 (0.64) mm; thorax length 1.09 mm; pronotum width 0.48 mm; petiole length 0.24 mm; petiole width 0.37 (0.35) mm; postpetiole (tergite I of gaster!) length 0.48 mm; postpetiole width 0.59 (0.56) mm; hind femur length 0.67 mm.

Mandibles with 3 distinct apical teeth, followed basad by numerous (over 8) small to indistinct denticles. Anterior face of clypeus vertical, subtruncate, truncation above obtusely marginate. Outer borders of frontal lobes conspicuously ciliate. Eyes with approximately 12 facets. Scape in repose attains the occipital border. Funicular segments I and XI distinctly longer than broad, III-VI conspicuously transverse, II, VII-X almost as long as

broad. Dorsum of thorax continuous, promesonotal and mesoepinotal sutures distinct but not deeply impressed. Anterobasal tooth of petiole rudimentary; spiracular opening minute. Cheeks, scapes and legs lacking standing or long oblique hairs.

The paratype worker agrees perfectly with the lectotype. The slight divergences in a few measurements have been given above in parenthesis.

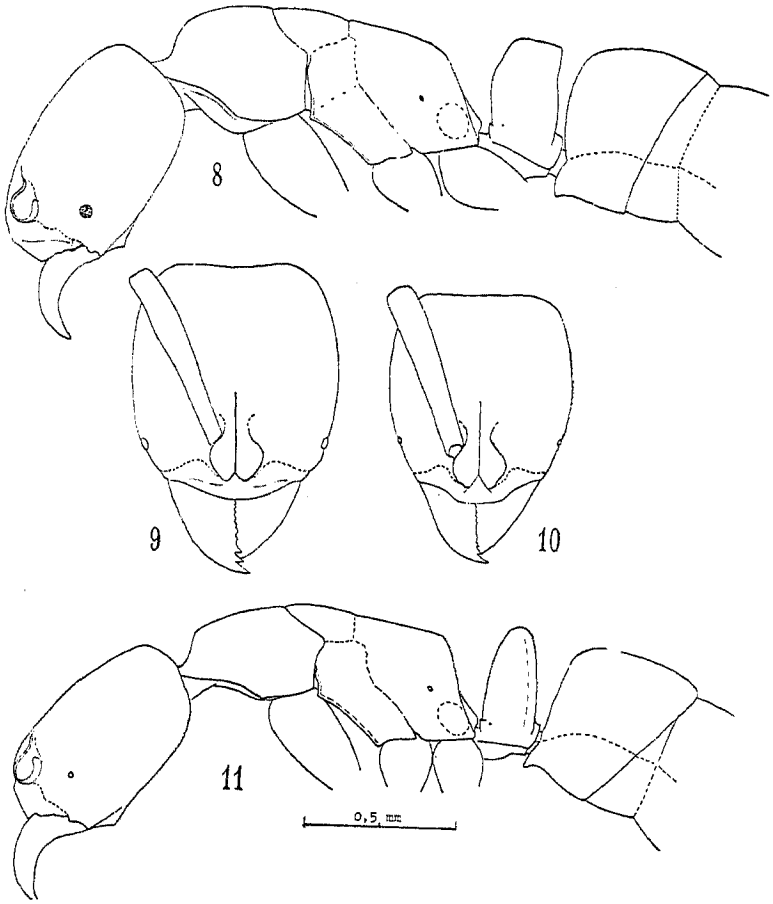
Female (paratypes). — Total length 3.9 mm; head length 0.85 mm; head width 0.75 mm; scape length 0.67-0.69 mm; thorax length 1.28 mm; petiole length 0.24 mm; petiole width 0.40-0.43 mm; postpetiole length 0.53 mm; postpetiole width 0.72-0.75 mm; hind femur length 0.72 mm; fore wing length 3.3 mm. — Similar to the worker with the modification peculiar to the caste. Cheeks with long oblique hairs. Clypeal truncation less distinct. Petiole narrower, attenuate toward apex, anteroposteriorly more compressed.

Distribution. — *P. opaciceps*, according to published records, is known to occur from the southern United States (cf. Smith, 1936) to Central Argentina in continental America and also in most of the Antillean islands.

Specimens examined. — U.S.A., Texas: Victoria, 1 worker (CTB from USNM); Mississippi: Andrew Fleming, Sibley, 1 worker (CTB from USNM). — Mexico, Distrito Federal, U.S. Plant Quarantine interception on *Lilium longiflorum* bulbs, 3 workers (WWK from USNM). — Brazil, São Paulo State: São Paulo, Brooklyn Paulista, W. W. Kempf leg. 1 worker (WWK), Osasco, K. Lenko leg. 2 workers (WWK), Barueri, K. Lenko leg. 4 workers (WWK); Santa Catarina State: Gaspar, Fontes leg. 12 workers (CTB 4420); Rio Grande do Sul State: Pareci Novo, Rambo and Hansen leg., 18 and 9 workers (CTB 1300, 1851).

Numerous workers from the Brazilian States Goiás, Minas Gerais, Rio de Janeiro, Santa Catarina and Rio Grande do Sul, all in my collection (WWK, CTB) resemble rather closely *opaciceps* but differ in several minor but perhaps significant details: scapes with a few short standing hairs, cheeks with prominent oblique hairs, head less constricted behind, dorsum of promesonotum shinier, petiolar scale narrower, slightly attenuate apicad. Since they might possibly represent still another species, I refrain from associating them definitely with *opaciceps*.

Discussion. — The relatively coarse, subopaque body sculpture, the shape of head and petiole are the main distinguishing features for this species. Several infraspecific variants have been named by previous authors, such as var. *cubana* Santschi, 1930, var. *gaigei* Forel, 1914, var. *pampana* Santschi, 1925, var. *post-angustata* Forel, 1908, and the subspecies *chilensis* Forel, 1914 and *jamaicensis* Aguayo, 1932 (described



Ponera opaciceps Mayr, worker, lectotype. Fig. 8. Body in profile. — Fig. 9. Head. — *Ponera trigona* Mayr, worker, lectotype. Fig. 10. Head. — Fig. 11. Body in profile. (Kempf del.)

as variety but raised to subspecies by Wheeler, 1937). I am not prepared to discuss their status, but should like to note that the syntypes of var. *pampana* in my collection appear to me specifically distinct from *opaciceps*.

Note. — In their keys, for the North American species, M. R. Smith (1936) and Creighton (1950) separate *coarctata pennsylvanica* and *opaciceps* from *ergatandria* by the greater number of facets (more than 3-4). This is true for *opaciceps*, but not necessarily for *pennsylvanica*. Specimens of the latter, collected by myself in New York State (Albany and Ithaca) have at most 3-4 facets, usually less. The aforesaid keys need revision in this respect.

Ponera trigona Mayr

(Figs. 10, 11)

Ponera punctatissima var. *trigona* Mayr, 1887, Verh. Zool.-bot. Ges. Wien 37: 537 (Worker, female; Brazil: Santa Catarina).

Mayr described this species upon several specimens which are specifically distinct. At any rate, three workers, labelled "*trigona*" "Typus", received from the Mayr collection (NHMW), represent three discrete species. In order to fix the identity of *trigona* and avoid further confusion, I presently select a lectotype specimen, which may be characterized as follows:

Worker (lectotype). — Total length 3.4 mm; head length 0.73 mm; head width 0.59 mm; maximum expansion of frontal lobes 0.17 mm; scape length 0.59 mm; thorax length 0.99 mm; pronotum width 0.45 mm; hind femur length 0.61 mm; petiole length 0.23 mm; petiole width 0.36 mm; petiole height 0.48 mm; postpetiole length 0.43 mm; postpetiole width 0.56 mm. Brownish-black to piceous; mandibles, funiculus and legs brown. Integument rather shining.

Head as shown in Fig. 10. Mandibles smooth and shining, with sparse piligerous punctures: chewing border with a prominent apical tooth, two lesser subapical teeth and basad with a series of 7-8 indistinct, irregular, small denticles. Clypeus oblique in side-view; anterior border strongly convex in the middle. Eyes very small, seemingly of one facet, but consisting of about half a dozen minute and ill-defined ommatidia, strikingly removed caudad from clypeal border. Occipital border very faintly excised, almost straight. Scape densely but superficially punctate, quite shining, surpassing the occipital border by a distance which is less than its maximum thickness, when laid back over the head as much as possible. Funicular segments I and XI much longer than broad, II, VII-X about as long as broad, III-VI distinctly transverse. Dorsum of head covered with dense and fine punctulae, the intervals shining and smooth; sculpture fading towards the sides of head, becoming obsolete on disc of gular face.

Thorax as shown in Fig. 11. Dorsum in profile continuous, gently curved. Pronotum smooth and shining with relatively sparse and fine punctulae. Mesonotum broader than long, transversely strongly convex, with the same sculpture as on pronotum; lateral borders marked by impressed sutures. Mesoepinotal suture weak, scarcely impressed. Epinotum gable-like, strongly compressed laterally, the basal face reduced to a narrow transversely convex ridge, which is as long as the declivous face. The latter forming

with the basal face an obtuse but distinct angle; with narrowly rounded apex, weakly convex and rather sharply marginate sides, smooth and shining on disc. Basal face of epinotum more strongly sculptured as rest of thorax, punctures denser, with vestiges of faint, short, transverse regulae. Mesopleura nearly smooth and highly shining, punctulae very sparse and superficial. Sides of epinotum with faint striae near bottom. Epinotal spiracle small, oval. Legs indistinctly punctulate, quite shining.

Petiole scalelike, broad, antero-posteriorly strongly compressed, visibly narrowed dorsad as seen in profile, anterior face transversely convex, posterior face flat. Antero-basal tooth small, spiracle minute. Subpetiolar process rounded. Integument finely punctulate, but quite shining. Gaster with the same superficial punctulae and shining integument.

Body and appendages rather densely covered with silky yellowish gray conspicuous pubescence. Aside from the usual long sensory hairs on clypeus and the conspicuous standing hairs on gaster, also the thoracic dorsum exhibits rather numerous short and evenly distributed standing hairs.

Lectotype. — 1 worker from Santa Catarina State, Brazil (NHMW).

Distribution. — In the new, restricted sense, *trigona* is widely dispersed over southeastern Brazil, occurring from Rio Grande do Sul to Guanabara and southern Goiás States.

Specimens examined. — Numerous workers collected from soil cover at the following Brazilian localities: Rio Grande do Sul State: Erechim (F. Plaumann); Santa Catarina State: Concórdia, Nova Teutônia, Passo Bormann, Seara, Xaxim (all from berlesate collections by F. Plaumann); Paraná State: Caiobá (F. Plaumann), Rio Negro (L. Schmidt); São Paulo State: Agudos (Kempf), Campos do Jordão (Kempf), Guararema (Kempf), Paranapiacaba (Kempf & V. dos Santos), Serra da Cantareira (Kempf & Santos); Guanabara State: Floresta da Tijuca (C. A. Campos Seabra); Goiás State: Goiânia, Campinas (J. S. Schwarzmaier) (WWK, CTB).

Discussion. — The piceous-black color, the well developed pubescence, the short standing hairs on thorax, the broad and compressed petiolar scale, the small eyes which are greatly removed from the clypeal border, the continuous thoracic dorsum, the vestigial mesoepinotal suture, the gable-like epinotum with a subtriangular declivous face, the rather shining and feebly sculptured integument, are the most outstanding characters for the worker of the present species.

The measurements vary considerably: head length 0.72-0.83 mm; head width 0.58-0.75 mm; thorax length 0.98-1.17 mm.

P. trigona actually possesses two described varieties, *cauta* Forel, 1912, and *opacior* Forel, 1893. At least the latter seems specifically distinct from *trigona* if the current idea about its nature is correct. The solution of the problem depends from an examination of the types, which were not accessible during the present study.

Group of Ponera foreli

The following three medium-sized species, *foreli* Mayr, *idelettae* Santschi, and *vernacula*, n. sp. constitute a distinctive group of rather easily recognizable species. They are characterized in the worker caste by the relatively slender habitus, the hump-backed thorax and the subcircular mesonotum. Moreover, *foreli* and *idelettae* lack a pronounced constriction of the gaster.

Ponera foreli Mayr

(Figs. 12, 17)

Ponera foreli Mayr, 1887, Verh. Zool.-bot. Ges. Wien 37: 534-536 (Worker, female; Brazil: Santa Catarina State). — Luederwaldt, 1296, Rev. Mus. Paulista 14: 235 (Brazil, Minas Gerais: Cristina; Bion.).

Mayr's descriptions are reasonably complete. The general habitus of the worker is shown in Figs. 12, 17. This caste is readily identified by the following features:

Body rather slender. Scape surpassing the occipital border by a distance equalling twice its maximum diameter when laid back over the head as much as possible. Funicular segment II elongate. Eyes medium-sized, with about 5 facets across the maximum diameter. Thorax hump-backed, promesonotum convex in both directions. Mesonotum subcircular. Epinotum strongly compressed transversely, gable-shaped; basal face reduced to a narrow longitudinal ridge, slightly elevated behind, forming nearly an angle with the declivous face. Petiolar scale strongly compressed antero-posteriorly, in side view strongly attenuate toward apex. Gastric constriction very feeble. Pilosity and pubescence well developed. Cheeks with oblique hairs.

The color and sculpture is quite variable. Specimens from Blumenau are brown and rather feebly sculptured, as stated for the type in the original description. Most of the remaining specimens are fuscous-brown to black, with variable but always better developed sculpture.

I have seen specimens from the following Brazilian localities:

Santa Catarina State: Blumenau (DZSP, CTB); Itajubá, Nova Teutônia, Seara, Xaxim, (F. Plaumann) (WWK); Paraná State: Rondon (F. Plaumann) (WWK); São Paulo State: Agudos (C. Gilbert, O.F.M., W. W. Kempf, O.F.M.) (WWK),

Mogi-Guaçu (K. Lenko) (WWK); Rio de Janeiro State: Itatiaia (J. F. Zikán) (CTB); Minas Gerais State: Cristina (H. Luederwaldt) (CTB, DZSP); Goiás State: Anápolis (W. W. Kempf) (WWK).

Luederwaldt found the Cristina specimens nesting in rotten wood. The colony numbered approximately 15-20 workers.

Ponera idelettae Santschi

(Figs. 14, 15)

Ponera idelettae Santschi, 1923, Rev. Mus. Paulista 13: 1258-1259 (Worker; Brazil, Santa Catarina: Blumenau).

The types were collected by Father Miguel Witte, O.F.M., for Prof. Reichensperger who sent them to Santschi. I have a single syntype worker (CTB), from Coll. Reichensperger.

W o r k e r (syntype). — Total length 4.6 mm; head length 1.03 mm; head width 0.83 mm; scape length 0.83 mm; thorax length 1.44 mm. Light reddish-brown; legs still lighter. Head, thorax and petiole as shown in Figs. 14, 15. This caste is fairly well diagnosed in the original description and it is now sufficient to point out the main distinguishing characters that separate it from *foreli:*

Integument much shinier, sculpture superficial to obsolescent, especially on dorsum of thorax which is nearly smooth. Sides of epinotum with very sparse punctures. Head and gaster more densely but finely punctulate. Eyes extremely small with two facets. Scapes as long as head width, not surpassing the occipital border by more than its maximum width, when laid back over the head as much as possible. Funicular segments II-V not longer than broad. Occiput feebly excised. Antero-inferior corner of pronotum subangulate. Epinotum gable-like, basal face not raised at junction with declivous face but narrowly rounded. Petiolar scale gently attenuate toward broadly rounded apex, as seen in profile. Gastric constriction feeble, as in *foreli.*

Besides the type, I have two additonal workers of this rare species. They were collected by F. Plaumann, at Nova Teutônia, Santa Catarina State, Brazil, in April 1954 (CTB).

Ponera vernacula n. sp.

(Figs. 13, 16)

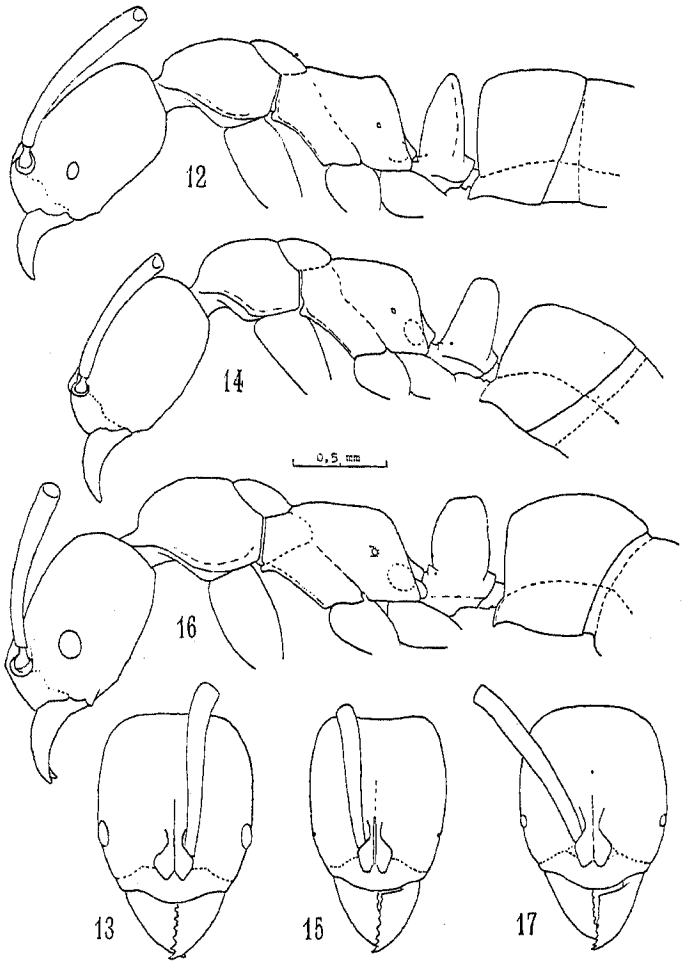
W o r k e r (holotype). — Total length 4.6 mm; head length 1.07 mm; head width 0.88 mm; eye length 0.13 mm; scape

length 0.91 mm; thorax length 1.49 mm; pronotum width 0.67 mm; hind femur length 0.99 mm; petiole length 0.40 mm; petiole width 0.43 mm; postpetiole length 0.64 mm; postpetiole width 0.77 mm. Dark ferruginous-red; head and appendages slightly lighter in color.

Head shown in Figs. 16, 13. Mandibles dorsally smooth and shining, laterally superficially punctate; chewing border with approximately 8 larger triangular teeth, between the basal teeth there are minute intercalary denticles. Clypeus oblique in side view; anterior border convex in the middle. Frontal lobes 0.24 mm wide at their maximum expansion. Frontal sulcus reaching back to beyond posterior orbit of eyes. Scape finely punctate yet quite shining, its tip surpassing in repose the occipital border by 1 1/2 times its maximum thickness. Funicular segments I, VII-XI longer than broad, II-VI scarcely longer than broad to somewhat transverse. Sides os head gently convex, more constricted in front than behind; occipital border not excised. Dorsum of head subopaque, sharply and densely punctured; sculpture becoming superficial on sides, fading out completely on disc of gular face which is highly shining and smooth. Eyes relatively very large with about 8 facets across the greatest diameter.

Thorax as shown in Fig. 16. Promesonotum conspicuously convex in both direction. Antero-inferior corners of pronotum broadly ronded. Promesonotal suture impressed. Mesonotum almost as broad as long, distinctly bulging, with well delimited and impressed anterior, posterior and lateral borders. Mesoepinotal constriction pronounced both in profile and as seen from above. Basal face of epinotum transversely convex, not forming a narrow longitudinal ridge; lateral borders of declivous face bluntly marginate. Epinotal spiracle oval, facing obliquely caudad. Entire thorax, with the exception of the highly polished and smooth declivous face, densely rugulose-punctate and subopaque; mesopleura shinier due to vanishing sculpture on disc. Bottom of posterior portion of sides of thorax with fine horizontal striulae. Legs finely and superficially punctate, quite shining.

Petiole as shown in Fig. 16, rather stout, reticulate-rugose and punctate, sculpture vanishing on somewhat shining anterior and posterior face. Anterior face vertical below, oblique above, posterior face flat. Antero-basal tooth of node prominent. Subpetiolar process rounded. Gaster strongly constricted between first and second segment. Tergites I and II dorsally strongly,



Ponera foreli Mayr, worker. Fig. 12. Body in profile. — Fig. 17. Head. — *Ponera delettae* Santschi, worker. Fig. 14. Body in Profile. — Fig. 15. Head. — *Ponera vernacula* n. sp., worker, holotype. Fig. 16. Body in profile. — Fig. 13. Head. (Kempf del.)

laterally more superficially reticulate-rugulose and punctate; subopaque above, shinier on sides. Stridulatory file on acrotergite II well developed. Sternites superficially punctate and quite shining.

Standing hairs: A few long ones on clypeus, anterior border of gula, anterior face of fore coxae, base of flexor face of fore femora; scarce and shorter on vertex of head, basal half of dorsum of scape, none on cheeks; rather abundant but short on dorsum of thorax, top of petiole and on gaster. Pubescence: golden-brown, less conspicuous on head than on rest of body

and appendages, never concealing the integument. Border of frontal lobes conspicuously ciliate.

Types. — 8 workers (holotype and paratypes) from a single nest series found in decaying log at Serra da Cantareira mountains in the vicinity of São Paulo City, on January 31, 1960, W. W. Kempf & Vitor dos Santos leg. (WWK n. 3394).

Discussion. — Solely the type specimens of this species are known, which are all essentially alike. The holotype worker is smallest, the measurement of the largest individual are as follows: Total length 4.9 mm; head length 1.09 mm; head width 0.91 mm; scape length 0.96 mm; eye length 0.14 mm; thorax length 1.62 mm; pronotum width 0.71 mm; hind femur length 1.07 mm; petiole length 0.41 mm; petiole width 0.51 mm; postpetiole length 0.67 mm; postpetiole width 0.85 mm.

On account of the peculiar thoracic profile, *P. vernacula* belongs to the group of *foreli* and *idelettae*, differing from the former as follows: Eyes larger, funicular segments II-IV not conspicuously longer than broad, epinotum not gable-shaped, the basal face not reduced to a narrow longitudinal ridge, petiolar node thick, not conspicuously compressed in a scale-like fashion, gastric constriction pronounced, sides of head and gula without oblique hairs, pubescence less conspicuous.

The differences from *idelettae* are the following: Much larger eyes, longer scape, coarser sculpture of body, thicker petiolar node, pronounced gastric constriction, abundant short and erect hairs on dorsum of thorax, petiolar node and on gaster.

Odontomachus Latreille, 1805

In the Neotropical region six species, *viz. affinis* Guérin, *biolleyi* Forel, *chelifer* (Latreille), *cornutum* Stitz, *haematodus* (Linné) and *hastatus* (Fabricius), have heretofore been recognized and described, and a seventh species, *spissus*, n. sp. is proposed further below. The specific identity and limits of most forms are firmly established, only the group of *haematodus*, including *biolleyi*, is quite unsatisfactory, and is badly in need of revision.

O. haematodus, apparently of world-wide distribution, carries in the Neotropical region alone the heavy burden of 14 subspecies and 11 varieties. Among these infraspecific forms, besides insignificant variants which should never have been named, there are presumably several good species, the characters of which have not as yet been worked out.

For the sake of a cursory placement of the New World species, I offer the ensuing preliminary and avowedly incomplete key:

Preliminary key to Odontomachus species of the neotropical region

Workers and females

1. Striae on dorsum of head confined to front and vertex, occiput smooth and shining 2
— Dorsum of head completely covered with striae 5
2. Sides of head with a prominent spine at level of eyes.... *cornutus* Stitz
— Sides of head without a spine 3
3. Scape of antennae not reaching occipital corner; petiolar node with an antero-posteriorly compressed apical tooth ..... *spissus* n. sp.
— Scape of antennae reaching or surpassing occipital corner; petiolar node with a conical apical spine 4
4. Scape of antennae longer than head capsule; head conspicuously narrowed in back, scarcely broader than pronotum .... *hastatus* (F.)
— Scape of antennae not longer than head capsule; head scarcely narrowed in back, broader than pronotum ..... *affinis* Guérin
5. Pronotum and first gastric tergite transversely striate.. *chelifer* (Latr.)
— Pronotum with circular or longitudinal striae; first gastric tergite either smooth and shining or, if sculptured, never transversely striate.. *biolleyi* For., *haematodus* (L.) and allies.

Odontomachus spissus n. sp.

(Figs. 5-7)

Worker (holotype). — Total length 7.7 mm; head length 2.22 mm; head width 1.73 mm; exposed mandible length 1.07; scape length 1.54 mm; thorax length 2.22 mm; pronotum width 0.99 mm; hind femur length 1.73 mm. Brown; gula and legs yellowish-brown; mandibles ferruginous.

Head as shown in Fig. 5. Mandibles rather short and stout, smooth and shining; denticulation of inner border inconspicuous at best; apical dentition shown in Fig. 7. Frontal lobes horizontal, not obliquely upturned laterad. Sagittal suture on posterior half of cephalic dorsum simple, not lying in impressed longitudinal groove. Posterior half of head nearly as broad as width at level of eyes. The latter relatively small, with about 10 facets across the greatest diameter. Integument smooth and shining, except for the finely and longitudinally striated front; striae somewhat diverging and spreading in a fanlike fashion caudad, fading out within the shallow and converging posterior portion of antennal groove. Scape finely and superficially punctate, somewhat shining, failing to reach the occipital corner by a distance subequal to the combined length of first two funicular segments. All funicular segments relatively short, segments I, III-X about twice as long as broad, II and XI strikingly more elongate.

Thorax (Fig. 6) short and compact. Disc of pronotum with longitudinal striae, surrounded by circular ones; sides of pronotum horizontally striate. Mesonotum transversely striate. Epinotum transversely striate, striae continuing on sides downward and obliquely foreward. Mesopleura smooth and shining. Legs rather shining, coxae smooth, femora and tibiae with fine and superficial piligerous punctures.

Petiole scale-like, apex antero-posteriorly compressed, mesially acuminate, mesial tooth flanked on each side by transverse margination, separating the flat posterior face; integument rather smooth and shining with obsolete superficial striae on sides. Gaster anteriorly vertical, all segments smooth and shining.

Pronotum, fore coxae and gaster with sparse and long erect hairs. Dorsum of head width very short and more numerous fine erect hairs. Similar hairs, but subappressed on thorax, completely appressed but sparse on petiole and gaster. Pubescence of antennae and legs dense, silky and conspicuous. Upper and lateral marginate border of petiolar scale with a fringe of short erect hairs.

Types. — 3 workers (holotype and paratypes) from Brazil, Mato Grosso State, Utiariti, Rio Papagaio, 325 m alt., VII-1961, K. Lenko leg. n. 1583 (holotype and one paratype in DZSP, the other paratype in WWK).

Discussion. — The paratype workers are not fully colored, and with the exception of the dark brown gaster, are mostly yellowish-brown. Their measurements are the following: Total length 7.4-7.5 mm; head length 2.16-2.19 mm; head width 1.63-1.65 mm; mandible length 1.04 mm; scape length 1.49-1.52 mm; thorax length 2.13-2.16 mm; pronotum width 0.96-0.99 mm; hind femur length 1.70-1.73 mm.

The present species is quite distinct from all other neotropical forms by its short and compact body, small size, short antennal scape, scalelike petiolar node. In addition, the cephalic striation, confined to the front, separates it from *haematodus, chelifer, biolleyi* and allies.

Subfamily **Myrmicinae** Lepeletier

Pheidole megacephala (Fabricius, 1793)

In the New World, this cosmopolitan tramp species has hitherto been recorded solely from the West Indies: Bermuda, Bahamas, Greater Antilles (Cuba, Jamaica, Hispaniola, Puerto Rico), and the Virgin Islands (St. Thomas, Culebrita). There is also a somewhat doubtful record (Weber, 1948: 81 cites the

species with question mark!) from the continental island Curaçao, off the shore of Venezuela. Strictly South American records, so far as I was able to glean from the existing literature, are still unknown. However, I have in my collection (WWK, CTB) specimens of the present species, taken on two oceanic islands in the Southern Atlantic, belonging to Brazil, and at several localities on the coast of Southeastern Brazil. The records are the following:

Oceanic Islands, Southern Atlantic. — Fernando de Noronha Island, May 1954 (M. Alvarenga leg.). — Ilha da Trindade: Praia das Tartarugas, May 22, 1950, nest in fern (Expedition João Alberto leg.).

Brazilian Mainland. — Rio de Janeiro State: S. João da Barra (CTB); Guanabara State: City of Rio de Janeiro, Jardim Botânico, October 1936, (H. de Souza Lopes leg.), Realengo, June 1917, Bonsucesso, November 6, 1926 (Mathurino leg.) (CTB); São Paulo State: Santos, January 1958 (Z. Machado, O.F.M.), (WWK), Itanhaem, July 1961 (A. Guedes & F. Grossmann leg.) (DZSP); Santa Catarina State: Florianópolis, December 1953, (R. Mueller, O.F.M. leg.) (WWK), Itajaí, December 1927 (Fontes leg.) (CTB).

There is no doubt that this is an introduced species, still confined, as it seems, to the shore line, whereas other introduced species to the Brazilian mainland, such as *Paratrechina longicornis* (F.) and *Monomorium pharaonis* (L.) were more successful and are presently dispersed all over the country.

According to Emery (1922, p. 86), the cosmopolitan form of *megacephala* is known as the "subspecies" *pusilla* (Heer, 1852). Here I am following the simpler nomenclature adopted by New World myrmecologists who shun this all too refined taxonomy.

Rogeria Emery, 1894

The ants of the genus *Rogeria* are rare and little-known both taxonomically and biologically. After shifting to *Lordomyrma* the Oriental-Pacific species described by Mann and Santschi, as correctly suggested by Brown (1953 p. 4), and separating *Irogera* as a full genus, according to my own recent proposal related species:

belti Mann, 1922, worker. — Honduras.
blanda Fr. Smith, 1858, worker. — Brazil: Amazonas.
bruchi Santschi, 1922, worker. — Argentina: Buenos Aires.
brunnea Santschi, 1930, worker. — Cuba.
caraiba Santschi, 1936, worker. — Cuba.
cubensis Santschi, 1936, worker. — Cuba.
var. *habanica* Santschi, 1936. — Cuba.
curvipubens Emery, 1894, worker, female. — West Indies, Surinam.
foreli Emery, 1894, worker, female. — West Indies.
f. gaigei Forel, 1914, worker. — Colombia.
germaini Emery, 1894, worker. — Brazil: Mato Grosso, ? Rio.
g. minensis Santschi, 1922, worker. — Brazil: Minas Gerais.
micromma Kempf, 1961, worker. — Surinam.
minima Kusnezov, 1958, female. — Argentina: Tucumán.
scabra Weber, 1934, worker, female. — Cuba.
sicaria n. sp., worker. — Brazil: São Paulo.

Identifications in this group are extremely difficult on account of probable synonymy and the lack of a synthesis and comparative treatment of the known species. It should also be noted the Cuban species, *brunnea, caraiba, cubensis* and var. *habanica,* were described by Santschi as belonging to subgenus *Irogera,* whereas to all appearances they are *Rogeria* in the strict sense. (cf. Kempf, 1961 p. 435). While I am not prepared to start a full-scale revision of the group, I herewith give a redescription of *germaini* Em., based on the lectotype, and a description of a new species from São Paulo State, Brazil.

Rogeria germaini Emery

(Figs. 18, 19)

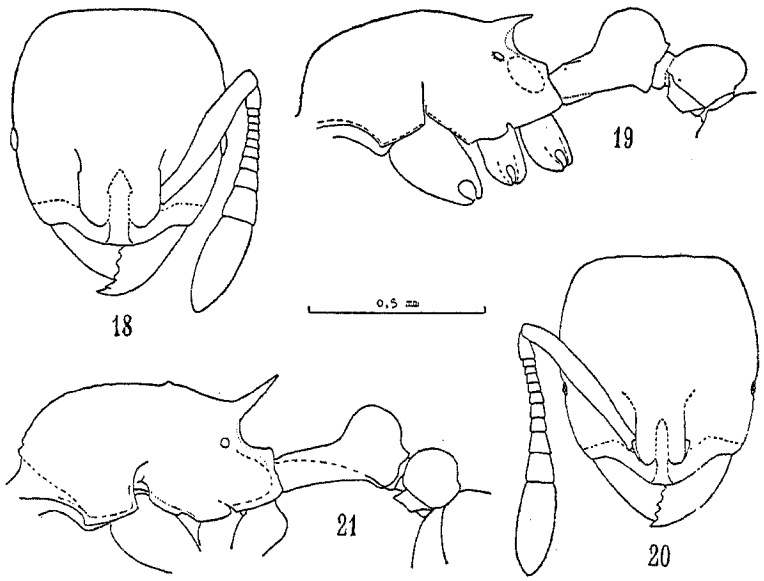
Rogeria germaini Emery, 1894, Bull. Soc. Ent. Ital. 26: 189-190 (Worker; Brazil, Mato Grosso State).

Types. — Two workers, collected by Germain in Mato Grosso State, in the Emery collection (Museo Civico di Storia Naturale, Genova, Italy). I have seen one specimen (lectotype).

Worker (lectotype). — Total length 2.7 mm; head length 0.67 mm; head width 0.60 mm; maximum width between outer edges of frontal carinae 0.23 mm; scape length 0.45 mm; eye length 0.06 mm; thorax length 0.69 mm; thorax width across pronotum 0.43 mm; petiole length 0.32 mm; width of petiolar node 0.18 mm; postpetiole length 0.16 mm; postpetiole width 0.20 mm. Yellowish-ferruginous.

Head as shown in Fig. 18. Mandibles smooth and shining, sparsely covered with fine piligerous punctures; chewing border with 6 acute teeth, diminishing in size toward base. Median lobe

(Kempf, 1961 p. 435), *Rogeria* becomes an exclusively Neotropical and sufficiently consistent group of the following closely of clypeus elevated, smooth and shining, anteriorly strongly truncate, perpendicular; lateral borders carinulate; posterior portion confluent with frontal area, deeply wedged in between frontal carinae. Lateral portions of clypeus with sparse longitudinal costae. Frontal carinae broadly expanded, completely roofing



Rogeria germaini Emery, worker. Fig. 18. Head. — Fig. 19. Thorax and pedicel in profile. — *Rogeria sicaria* n. sp., worker. Fig. 20. Head. — Fig. 21. Thorax and pedicel in profile. (Kempf del.)

antennal socket, their maximum expansion greater than 1/3 of maximum of head width. Antennal scape superficially reticulate-rugose. somewhat shining, failing to reach the occipital border by a distance conspicuously exceeding its maximum width when laid back over the head. Funiculus 11-segmented with distinct 3-segmented and inflated apical club; for details see Fig. 18. Eyes small, with approximately 15 pigmented facets: their maximum diameter subequal to thickness of scape at apex. Dorsum and sides of head very finely but superficially reticulate-punctate and quite shining. Front with longitudinal, widely separated and slightly diverging rugae, cross connections becoming more frequent toward the rear; sides coarsely reticulate-rugose. Occiput predominantly with transverse arched rugae. Disc of gular face smooth and shining.

Thorax as shown in Fig. 19. Dorsum of promesonotum without a marked scapular corner, immarginate laterally, gently convex in both directions, covered with longitudinal and strongly vermiculate rugosities, exhibiting occasional cross-connections; sculpture becoming reticulate- rugose in front and on sides of pronotum. Basal face of epinotum as broad as long, with 5 transverse raised carinules, the anteriormost separating the epinotum from the promesonotum, the posteriormost connecting the bases of the acute, rather thin, straigh, subparallel, scarcely raised epinotal spines. Sides of thorax more loosely reticulate rugose, with longitudinal (horizontal) rugae predominating toward the rear. Finely reticulate-punctate microsculpture superficial, nearly obsolete on basal face of epinotum and on sides of thorax. Declivous face of epinotum smooth and shining, deeply impressed between the prominent infradental lamellae and metasternal lobes. The latter dorsally nearly rounded, ventrally subrectangular. Legs smooth and shining. Tibiae II and III without apical spurs.

Petiole strikingly pedunculate in front of highly vaulted node. Peduncle above finely reticulate, marginate laterally; sides and ventral face smooth and shining; the latter anteriorly with a short longitudinal sharp ridge. Node smooth and shining on disc, dorso-laterally vestigially rugulose; little longer than broad. Postpetiole transversely oval, smooth and shining above. Gaster smooth and shining.

Head, dorsum of thorax, pedicelar nodes and gaster with dense, fine, erect or slightly inclined or curved hairs. Scape with dense, short, oblique to subappressed hairs. Legs, especially tibiae, with longer, sparser, oblique hairs.

Note. — Emery's description contains a mistake. The middle portion of the clypeus is smooth and shining, the lateral portions costate-rugose, and not vice-versa, as stated in the original diagnosis.

Discussion. — The species is still known from the types only. Five stray workers from Rio de Janeiro, Guanabara State, Brazil (T. Borgmeier, C. A. Campos Seabra leg.) resemble it rather closely, but are of slightly smaller size, have the frontal carinae a bit less expanded; the petiolar node, in side-view, is shorter, less globose, and both the petiolar and postpetiolar node are sculptured, not smooth and shining, as in *germaini* type. In as much as this difficult group is still little known, I rather associate these specimens with the present species than risking the proposition of a new species.

Rogeria sicaria n. sp.

(Figs. 20, 21)

Worker (holotype). — Total length 2.8 mm; head length 0.67 mm; head width 0.56 mm; maximum width between outer

edges of frontal carinae 0.16 mm; scape length 0.45 mm; eye length 0.03 mm; thorax length 0.75 mm; pronotum width 0.37 mm; petiole length 0.35 mm; petiolar node width 0.16 mm; postpetiole length 0.17 mm; postpetiole width 0.18 mm. Yellowish-ferruginous.

Head and thorax and pedicel as shown in Figs. 20, 21. Differs from the preceding *germaini* in the following characters:

1. Head somewhat narrower; frontal carinae less expanded laterally, their width less than 1/3 of head width: eyes minute, with about half a dozen pigmented facets; petiole with longer peduncle and narrower node (cf. measurements and figures).

2. Front with 7 longitudinal rugae, ramifying and spreading out obliquely laterad in a fan-like fashion on vertex. Occiput and sides of head reticulate-rugose. Thorax, with the exception of only the smooth declivous face of epinotum, coarsely reticulate-rugose; two transverse carinules on anterior pronotal margin; another raised transverse carina on mesoepinotal junction, prominent in profile. Petiolar and postpetiolar nodes coarsely reticulate-rugose. Areas within the meshes finely reticulate-punctate. Legs finely and superficially punctate, quite shining.

3. Promesonotum rather strongly and continuously convex transversely, immarginate laterally. Epinotal spines obliquely raised apicad and somewhat diverging, as long as the distance between their apices. Metasternal lobes with rectangular corners above and below. Infradental lamellae between these lobes and epinotal spines very low.

4. Hairs on scapes and legs appressed or subappressed.

Type. — 1 worker (holotype) from Agudos, São Paulo State, Brazil, W. W. Kempf leg. in berlesate of dry leaves from second growth forest floor cover, Nov. 19, 1955. (WWK).

The very small eyes, the relatively slender and laterally somewhat compressed thorax with the long and obliquely raised epinotal spines, and the strongly pedunculate petiole with narrow node are the principal distinguishing features for this species, of which only the holotype is known.

Tetramorium caespitum (Linné, 1759)

When visiting Buenos Aires, Argentina, in September 1952, Father Borgmeier collected at the local Franciscan Monastery four workers of a Myrmicine ant, which he tentatively determined as *Tetramorium caespitum*. I could confirm his opinion by comparing them with North American and European specimens of the same species.

This appears to be the first authentic record from continental South America for the well-known and widespread pavement ant. It would be interesting to know whether or not the species, which doubtless has been introduced in recent times, is already firmly established in the Argentine.

Gymnomyrmex Borgmeier, 1954

All specimens of the hitherto known five species of *Gymnomyrmex* have been collected by Mr. Fritz Plaumann. who recently, among other material of a berlesate collection, sent me a single individual which at closer examination proved to be a new and rather aberrant species of the same genus. The striking features of this new form consist principally in the three-segmented antennal funiculus and the peculiar head shape, the sides of which are produced in an angle at the eye level. It bears to *Gymnomyrmex* the same relation as *Codioxenus simulans* (Santschi) bears to *Glamyromyrmex*.

At first, I intended to create a new genus for this species. But heeding the advice received from my friend Dr. W. L. Brown, Jr., the foremost authority on this group of ants, I changed my mind, since it now appears that generic splitting in subtribe Strumigenyti has been carried too far, and that the difference in number of antennal segments is not necessarily a generic character.

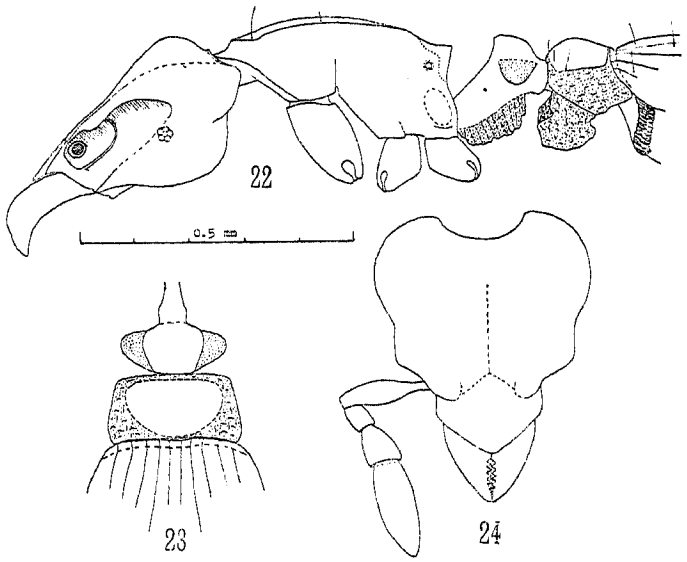
Gymnomyrmex minusculus n. sp.

(Figs. 22-24)

Worker (holotype). — Total length 1.6 mm; head length 0.43 mm; head width 0.39 mm; Weber's length of thorax 0.43 mm; pronotum width 0.24 mm. Cephalic index 91; mandibular index 22. Fuscous-brown; clypeus, pedicel and gaster brown; antennae and legs yellowish-brown; spongiform appendages of pedicel and gaster dirty yellowish-white.

Head (Figs. 22, 24) depressed, broadly pyriform; occiput and gular face conspicuously convex in profile. Mandibular blades smooth and shining above, the lateral face densely yet superficially reticulate-punctate: chewing border serially denticulate, all teeth small and acute except for the blunt and stout basal tooth. (Details of dentition have not been worked out since a dissection of the only available specimen did not seem feasible).

Clypeus flat, smooth and shining, covered with minute, sparse, setigerous punctures; anterior apron triangular, tapering to a bluntly rounded apex; posterior border well-defined. Frontal carinae broadly expanded laterad, roofing completely the cheeks and the antennal scrobe. Lateral borders of cephalic dorsum bluntly marginate, diverging obliquely laterad in front, then forming a blunt and projecting angle and running subparallel



Gymnomyrmex minusculus n. sp., worker. Fig. 22. Body in profile. — Fig. 23. Pedicel in dorsal view. — Fig. 24. Head.

for a short distance, then diverging again caudad and merging with the prominent and broadly rounded occipital lobes. Occiput deeply excised in the middle. Frontal suture vestigial, reaching back to the level of the greatest lateral expansion of head. Front and vertex flat, rather smooth and shining, curving conspicuously downward at posterior third of head length toward occiput and occipital lobes which are at a much lower level. Lateral portions of cephalic dorsum and occipital lobes feebly and superficially reticulate-punctate. Sides and gular face of head likewise finely and superficially reticulate-punctate, not quite shining. Eyes small, with about 6 facets, its maximum diameter less than 0.03 mm; situated at about the middle of the sides of head. Inferior border of cheeks immarginate. Antennal scape clavate, attenuate at base and incrassate at apex, subopaque, rather densely reticulate-punctate. Funiculus three-segmented, segment III longer than I and II combined.

Thorax (Fig. 22) smooth and shining troughout, its dorsum sharply marginate in front and along sides, lacking even traces of transverse sutures; very gently and continuously convex in both directions. Anterior pronotal border evenly and conspicuously convex. Shoulder marked by a conspicuous angle. Epinotal spines in dorsal view rather long and slender, scarcely diverging caudad, longer than half the distance between their apices, in profile completely fused with the infradental lamellae, forming a rectangular tooth. Bulla of metasternal gland relatively large and protuberant. Legs, with the exception of the smooth and shiny lateral face of fore coxae and dorsal apices of femora, finely reticulate-punctate yet quite shining.

Petiole (Figs. 22, 23) with a neatly differentiated node forming a prominent peak in profile; peduncle finely reticulate-punctate and subopaque, rather narrow in dorsal view. Node broader than long, smooth and shining. Postpetiole much broader than long, disc of node proper smooth and shining. Shape of spongiform appendages of pedicelar segments as shown in Figs. 22, 23. Gaster smooth and shining, broadly oval, with a thin, sinuate transverse lamella in front, with 10 rather long basidorsal costulae on first .tergite, as shown in Fig. 23. Ventral pad of spongiform hairs on anterior subtruncated face of first sternite well-developed.

Minute appressed setulae rather dense on clypeus, front and vertex of head, sparser on gular face, dorsum of thorax, extremely sparse on gaster. Standing hairs extremely scarce, a long seta on each scapular corner, followed by a much shorter pair at promesonotal junction laterally on thoracic dorsum. Postpetiole with few, gaster with more abundant and evenly distributed standing hairs. The latter also with a few curved and subdecumbent hairs on apex. Appressed setae of antennae and legs more conspicuous.

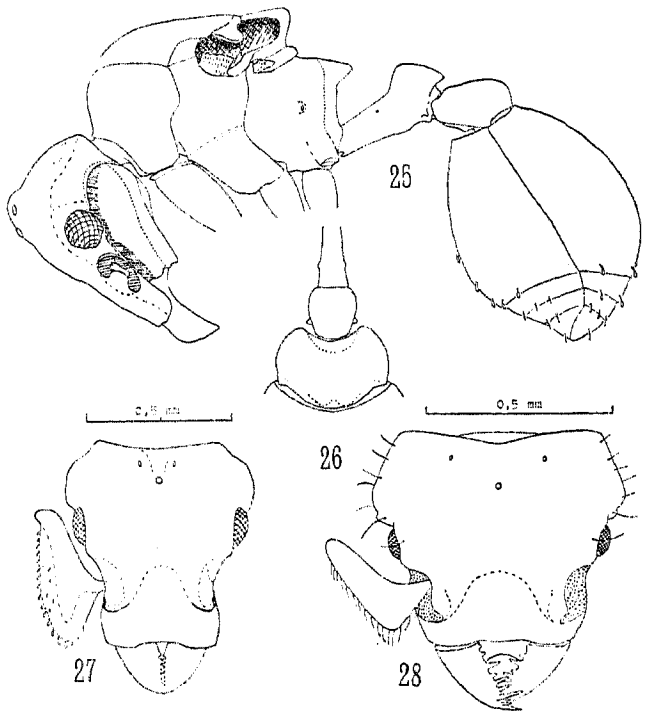
Type. — A lone worker from Chapecó, western Santa Catarina State, Brazil, collected in July 1960 by F. Plaumann in berlesate of leaf mold; deposited in the author's collection.

The small size, the peculiar head shape and the 4-segmented antennae separate *minusculus* at once from the 5 other known species of *Gymnomyrmex* (cf. Kempf, 1959, 1960).

Tribe **Basicerotini** Brown

After our joint revision of the tribe (Brown & Kempf, 1960) I received from Mr. Plaumann two isolated females, one represent-

ing a new species of *Eurhopalothrix* Brown & Kempf, the other a new species of *Rhopalothrix* Mayr. The former specimen is particularly interesting inasmuch as it shows several striking features, which are quite different from those of the previously known species in that genus.



Eurhopalothrix spectabilis n. sp. female. Fig. 25. Body in profile. — Fig. 26. Pedicel in dorsal view. — Fig. 27. Head. — *Rhopalothrix acutipilis* n. sp. female. Fig. 28. Head. — Fig. 28 drawn to a larger scale (Kempf del.)

Eurhopalothrix spectabilis n. sp.

(Figs. 25-27)

F e m a l e (holotype). — Total length 3.0 mm; head length 0.73 mm; head width 0.67 mm; scape length 0.48 mm; thorax length 0.85 mm; cephalic index 91. Medium ferruginous; pedicel and gaster darker: a blackish spot on ocellar area. Form of head and body as shown in the figures 25, 26 and 27.

Mandibles very sparsely and finely punctate, almost smooth and quite shining; basal tooth represented by a broadly truncate lamella, followed apicad by approximately 9 small triangular

teeth. Clypeus sparsely, rest of head more densely foveolate, intervals smooth and shining. Antennal scrobe with a prominent foliaceous and lamellate inferior border. Gular face of head bordered on each side by another lamellate carina, running parallel to and mesad of the scrobe. Scapes densely punctate-foveolate and subopaque. Each occipital lobe bears apico-laterally an elongate, elliptical, more finely densely punctate, impressed area.

Thorax densely foveolate except for catepisternum of mesothorax and bottom half of declivous face of epinotum which are smooth and shining. Epinotal teeth compressed, lamelliform. Infradental lamella very broad and foliaceous. Bulla of metasternal gland greatly projecting. Legs densely punctate and subopaque. Tibiae and metatarsi on hind legs somewhat broadened and distinctly compressed.

Petiole and postpetiole densely foveolate, subopaque. Postpetiole postero-dorsally with a pair of weak tumuli separated by a short, shallow median furrow. Gaster somewhat more coarsely foveolate and shinier than pedicel. First tergite with a transverse carina on anterior border. Sting well developed.

Ground pilosity of body consisting of minute, decumbent and inconspicuous setulae rising from the foveolae. Edge of inferior border of antennal scrobe, dorsal face of scape, legs and apical half of gastric sternum with small and decumbent spatulate hairs. Larger, spatulate, erect hairs present only on apical half of gaster and leading edge of scape.

Wings unknown.

Type. — A lone dealate female (holotype) collected in May 1960, in berlesate of leaf mold at Nova Teutônia, Santa Catarina State, by Mr. Fritz Plaumann (WWK).

Discussion. — The present species differs conspicuously from all other known forms of the genus. It stands out by the broadly truncate basal tooth of the mandibles, the broadly expanded frontal carinae, concealing the preocular carinae in full-face view, the shining integument, the conspicuously carinate lateral border of gular face, the inconspicuous ground pilosity, the extremely reduced number of erect spatulate hairs, practically confined to the apex of gaster.

In Brown & Kempf's key (1960, p. 245) to the neotropical species, *E. spectabilis* runs to the first couplet only, disagreeing with either lug by the ensemble of the characters pointed out above.

Rhopalothrix acutipilis n. sp.

(Fig. 28)

Female (holotype). — Total length 3.3 mm; head length 0.58 mm; head width 0.67 mm; mandibular length 0.16 mm;

thorax length 0.88 mm; fore wing length 2.9 mm; cephalic index 116.

Resembling rather closely *R. kusnezovi* by its abundant and bristly pilosity, but differs as follows:

1. Mandibles practically smooth and shining: very superficially and vestigially reticulate-punctate on inner border at base. Subapical tooth not longer than basal width of mandible; apical tooth subequal to subapical tooth. Dentition of masticatory border from base to apex: 2-3 small denticles, 1 longer acute tooth, 1 intercalary denticle, 2 longer acute teeth, 1 intercalary denticle, 1 subapical tooth, 2 intercalary but rather strong teeth, 1 apical tooth.

2. Head capsule (Fig. 28) significantly broader, with laterally prominent occipital lobes. Occiput more distinctly truncate. Anterio-median portion of clypeus smooth and shining.

3. Scutum entirely flat without an impression. Epinotal spines well-developed, in dorsal view nearly as long as half the interval between their apices. Infradental lamella low, not translucid.

4. Petiole distinctly longer than broad, subtriangular in profile, subpedunculate; anterior face slightly concave; summit rounded; posterior face vertical. Gaster more elongate; first tergite lacking an antero-median shallow impression.

5. Posterior dorsum and occipital lobes of head, dorsum of thorax with the exception of epinotum, summit of petiole and postpetiole, first gastric tergite with scattered, long, apically pointed standing hairs, besides denser, subdecumbent to appressed, shorter, apically subtruncate hairs.

Type. — 1 female (holotype), from Nova Teutônia, Santa Catarina State, Brazil, F. Plaumann leg. V-1960 (WWK).

In the key to the species (Brown & Kempf, 1960, p. 247) *R. acutipilis* coincides with *kusnezovi* Brown & Kempf, (couplet 1, lug 1), from which it may be separated at once by the characters given above in the differential diagnosis.

Cyphomyrmex Mayr

Cyphomyrmex Mayr, 1862, Verh. Zool.-bot. Ges. Wien 12: 690 (type: *Cyphomyrmex minutus* Mayr, 1862 = *C. rimosus minutus* Mayr, worker, monobasic).
Cyphomannia Weber, 1938, Rev. de Ent. 9: 183 (Type: *Cyphomyrmex (Cyphomannia) laevigatus* Weber, 1938, worker, by original designation and monobasic). — Nov. Syn.

The subgenus *Cyphomannia,* erected upon the somewhat aberrant *C. laevigatus* Weber, from Bolivia, is "distinguished by the large frontal lobes, lamellate occipital spines, smoothly curved thorax and epinotum without tubercles or spines, and by the compressed petiole and postpetiole" (Weber, 1938, p. 184).

Since all the head characters are exactly the same as in *Cyphomyrmex bicornis* Forel, the worker of which has a tuberculate thorax, there remain only the thorax characters with distinguishing value. The thoracic differences by themselves, however, are scarcely sufficient to separate *laevigatus* from the rest of the *rimosus*-group, with which it agrees rather closely in many other characters, as will be shown below.

Kusnezov, (1949) described still another species, *C. lilloanus* and associated it with *Cyphomannia*. It also has a practically toothless thorax, but of a different shape, and the head characters are completely different, being those of the *strigatus*-group.

A careful study of several representative species of the genus has convinced me, that it is separable into two distinct groups, which may be distinguished as follows in the worker and efmale caste:

1. Group of C. rimosus

Preocular carina curving mesad above eyes, not joining up with the postocular carina. which extends from the occipital corner to posterior or inferior border of eye; mandibles with 5 teeth; two or no median pronotal tubercles present.

Component species: *bicornis* Forel, *?championi* Forel, *cochunae* Kusnezov, *colombianus* Weber, *costatus* Mann, *flavidus* Pergande, *foxi* André, *kirbyi* Mayr, *laevigatus* Weber, *longiscapus* Weber, *rimosus* (Spinola) and ssp., *salvini* Forel, *transversus* Emery, *vorticis* Weber, *wheeleri* Forel.

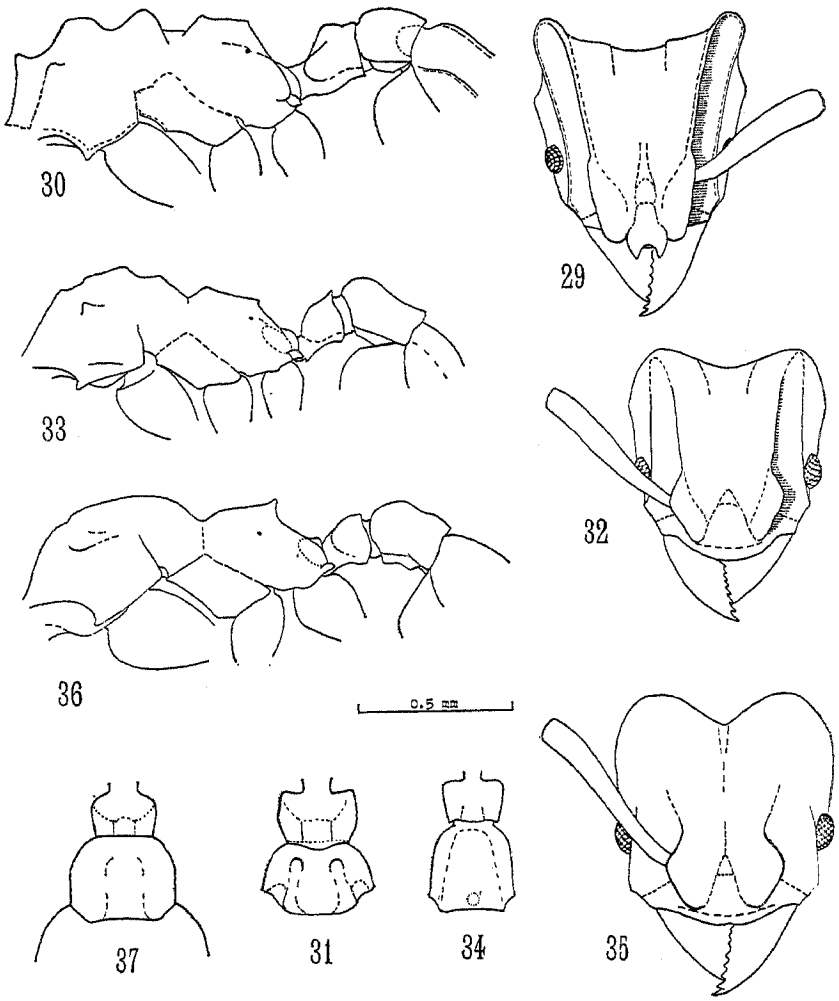
2. Group of C. strigatus

Preocular carina extending all the way back to the occipital corner, forming the inferior limit of the antennal scrobe; mandibles with 7 or more teeth, gradually diminishing in size base; a single median pronotal tubercle usually well-developed.

Component species: *auritus* Mayr, *bigibbosus* Emery, *bruchi* Santschi, *daguerrei* Santschi, *lilloanus* Kusnezov, *morschi* Emery, *nemei* Kusnezov, *olitor* Forel, *paniscus* Wheeler, *personatus* Santschi, *plaumanni* n. sp., *quebradae* Kusnezov, *strigatus* Mayr, *vallensis* Kusnezov.

Cyphomyrmex conformis Mayr, although superficially resembling *C. morschi* Emery, must be shifted to *Mycetophylax* and is a senior synonym of *M. brittoni* Wheeler, as will be shown further below.

I have already started a full-scale revision of the genus *Cyphomyrmex*, the conclusion of which will take time on account of the difficulty of securing certain crucial types. Meanwhile I present a description of *C. plaumanni* n. sp., a close relative of *strigatus* and figures of *morschi*, based on a syntype, in order to show the differences from *Mycetophylax conformis* (Mayr).



Cyphomyrmex plaumanni n. sp., worker. Fig. 29. Head. — Fig. 30. Thorax and pedicel in profile. — Fig. 31. Pedicel in dorsal view. — *Cyphomyrmex morschi* Emery, worker (syntype). Fig. 32. Head. — Fig. 33. Thorax and pedicel in profile. — Fig. 34. Pedicel in dorsal view. — *Myrcetophylax conformis* (Mayr), worker (holotype). Fig. 35. Head. — Fig. 36. Thorax and pedicel in profile. — Fig. 37. Pedicel in dorsal view. (Kempf del.)

Cyphomyrmex plaumanni n. sp.

(Figs. 29-31)

?*Cyphomyrmex auritus:* Emery, 1922 (*nec* Mayr), Gen. Ins. Subf. Myrmicinae, fasc. 174, pl. 7, figs. 13, 13b (Female: head and fore wing).

W o r k e r (holotype). — Total length 3.2 (-3.4) mm; head length 0.82 (-0.91) mm; head width 0.69 (-0.79) mm; thorax length 0.98 (-1.07) mm; hind femur length 0.72 (-0.83) mm. Fuscous brown; opaque.

Head in full face view shown in Fig. 29. Mandibles subopaque, finely reticulate-punctate and vestigially striolate; chewing border with 8-9 teeth, the basal ones small to indistinct. Clypeus with strongly convex anterior border, not distinctly excised in the middle; narrow antero-median portion vertical to head length, overhung by strongly prominent and bidentate posteromedian portion; teeth strongly approximated, separated from each other by a narrow, deep, semicircular marginate excision. Frontal lobes not strongly expanded laterad, scarcely rounded and scarcely constricted behind, subcontinuous with the posteriorly diverging prolongation of the frontal carinae. Postocular carina continuous with preocular carina, distinct in the form of a low, raised carinule. Frontal area and paired midfrontal carinules distinct. Occiput shallowly excised between distinct carinules of vertex. Occipital lobes moderately prominent, auriculate, shorter than their maximum diameter. Supraocular tooth tubercular, blunt, without a raised carinule between its base and the infero-occipital corner of head. Eyes small. Scape in repose not surpassing apex of scrobe. Funicular segments 2-8 not longer than broad. Dorsum of head between frontal carinae with minute tubercles on frontal lobes and postero-laterally, with inconspicuous, often interrupted, longitudinal rugulae on disc. Scrobes and sides of head without coarse sculpture.

Thorax as shown in Fig. 30; finely and densely reticulate-punctate and opaque. Pronotum anteriorly and laterally marginate: with 3 tubercles, mesial one rather pointed, lateral ones blunter; antero-inferior corner acutely dentate. Mesonotum with 2 pairs of stout and low tubercles, anterior pair elongate. Meso-epinotal constriction deep in profile. Basal face of epinotum with pair of blunt longitudinal ridges, anterior end of which is tuberculate (feebly) posterior end subdentate. Femora and tibiae subprismatic. Femora with anterior border of extensor face and both borders of flexor face sharply marginate and with a low raised crest. Hind femora broadened below at basal third, with a prominent laminula projecting from posterior border, which, in side view, forms a distinct angle. Apical half of tibial borders distinctly marginate.

Petiolar node broader than long, its anterior corners in dorsal view narrowly rounded: dorsum with a pair of feeble carinules; posterior border consisting of convex, slightly prominent laminula. Postpetiole not longer than petiole, distinctly transverse, without conspicuous anterior face, anterior and posterior tuber-

cles feeble, a pair of longitudinal, posteriorly divergent ridges, between ridges shallowly excavate (Fig. 31). First gastric tergite with 3 pairs of longitudinal carinae, terminating at the posterior third of tergite, where it becomes densely tuberculate.

Appressed hairs minute, not scale-like, little prominent even on scapes and legs.

Types. — Brazil, Santa Catarina State: Nova Teutônia, X-1955, F. Plaumann leg. 1 worker (holotype) (CTB); Rio Grande do Sul State: Barros-Cassal, IX-1960, F. Plaumann leg. 1 worker (paratype) Erechim, VII-1960, F. Plaumann leg. 1 worker (paratype); Paraná State: Rio Azul, 1000 m, X-1959, F. Plaumann leg. 1 worker (paratype) (WWK).

Discussion. — In the many berlesate samples collected in southeastern Brazil by F. Plaumann during the past couple of years. I have found the above mentioned 4 stray workers which, at the first look, appeared like somewhat aberrant *strigatus* workers. The Barros-Cassal and Rio Azul specimens even came from samples that also contained a few typical *strigatus* workers. Inasmuch as Plaumann's samples originated from several, often many different takings of humus, soil cover, leaf mold, etc., condensated to a single sample by his original and high-yield collecting method, the occurrence of *plaumanni* and *strigatus* in the same samples (which also contained *rimosus, olitor, kirbyi, paniscus*) is not necessarily an indication of conspecificity, nor provenience from the same colony. At a closer look, the four specimens are better separated as an independent new species, which differs from *strigatus* as follows:

1. Peculiar shape of postero-median clypeal lobe, which has the teeth close together, and prominently overhanging the vertical to slightly excavate anterior portion beneath it.

2. Frontal carinae scarcely expanded in front, scarcely rounded, little constricted after frontal lobes.

3. Preocular carina reaching occipital corner as a well-developed, slightly raised, carinule, never just vestigial behind eyes.

4. Femora and tibiae prismatic, hind femora with ventral lobe and angle at basal third, as explained in the description.

5. Postpetiole scarcely elevated in front, without an anterior vertical face, conspicuously transverse, never longer than petiolar node.

6. Appressed pilosity fine, minute and inconspicuous, never scale-like.

I associate provisionally with this species the female specimen from an unknown locality, pictured by Emery in Genebra Insectorum (1922). Clypeus and general outline of the head are like the present species, although Emery forgot to draw in the outer border of the antennal scrobe (preocular and postorbital carina).

This species is dedicated to Mr. Fritz Plaumann, as a token of gratitude for the many fine specimens which he has discovered during the past years.

Variation. — Measurement ranges are given in the description. Some specimens have the frontal carinae a little more constricted, never conspicuously, behind frontal lobes. The full-face view of the head (Fig. 29) is based upon the holotype; thorax and petiole (Figs. 30, 31) were drawn from the Barros-Cassal paratype worker.

Cyphomyrmex morschi Emery, 1887

(Figs. 32-34)

The present species was described upon workers taken by Prof. Hermann von Jhering at São Lourenço do Sul, Rio Grande do Sul State, Brazil, at sea-level. Aside from a syntype worker (DZSP), I have also seen specimens from the São Paulo State shore line *viz.* Praia Grande (sw. of the city of Santos) and São Sebastião, and from Cabo Frio, State of Rio de Janeiro, Brazil.

The distinct, although posteriorly ill-delimited antennal scrobe, the less expanded and posteriorly less constricted frontal lobes, and the distinctly tuberculate promesonotum separate at once this species from the following *Mycetophylax conformis* (Mayr).

Mycetophylax conformis (Mayr) n. comb.

(Figs. 35-37)

Cyphomyrmex conformis Mayr, 1884, Hor. Soc. Ent. Ross. 18: 38-39 (Worker; French Guiana: Cayenne).
Myrmicocrypta brittoni Wheeler, 1907, Bull. Amer. Mus. Nat. Hist. 23: 728-729, Pl. 50, figs. 18-19 (Worker; Puerto Rico: Santurce). — Wheeler, 1911, Bull. Mus. Comp. Zool. Harvard 54: 170 (Male; Grenada, B.W.I.: Point Saline. — Nov. syn.
Cyphomyrmex (Mycetophylax) brittoni; Emery, 1913, Ann. Soc. Ent. Belg. 57: 251.
Mycetophylax brittoni var. *littoralis* Weber, 1937, Rev. de Ent. 7: 401 (Worker, male; Trinidad, B.W.I.: Mayaro Bay). — Nov. syn.

The examination of the holotype (unique) of *Cyphomyrmex conformis* (NHMW) revealed that this is not a *Cyphomyrmex* in the restricted modern sense, but a true *Mycetophylax,* being practically identical with *M. brittoni,* the type species of the latter genus.

Worker (holotype). — Total length 3.3 mm; head length 0.79 mm; head width 0.75 mm; scape length 0.62 mm; thorax length 1.07 mm; pronotum width 0.51 mm; hind femur length 0.85 mm; length width proportion of petiole 6 : 8, of postpetiole 11 : 13. Fuscous-brown; appendages somewhat lighter. For a full characterization see the accompanying figures (Figs. 35-37) and Wheeler's (1907: 728) description of *M. brittoni,* which needs but a few corrections and minor additions:

Mandibular teeth 8 (-9). Clypeus with a vestigial excision in the middle of anterior border. Frontal carinae slightly broader than half the width of head at level of maximum expansion of

the former. Promesonotal furrow laterally rather distinct between lateral pronotal teeth and antero-lateral corners of mesonotum. Oblique anterior face of petiole ending above in a pair of nearly obsolete and minute tumuli, each sending out caudad a vestigial longitudinal carinule. Postpetiole postero-dorsally shallowly impressed.

Specimens examined. — Brazil, Pará State: Salinópolis, 13-XI-1953, C. R. Gonçalves leg. 4 workers (CTB). — French Guiana: Cayenne, 1868, Jelski leg. 1 worker, holotype of *conformis* (NHMW), — Trinidad: Mayaro Bay, 11-III-1935, N. A. Weber leg. 1 worker, syntype of *brittoni* var. *littoralis* (CTB). Puerto Rico: Tortuguera Camp, 27-X-1950, W. F. Buren leg. 6 workers (WWK).

Distribution. — The hitherto recorded specimens suggest a continuous territory ranging from NE South America over the lesser Antilles to Puerto Rico.

Discussion. — The shallower occipital excision, the less pronounced lateral tubercles of the pronotum, the flattened mesonotum, and the very short, tubercular epinotal teeth distinguish the typical *brittoni* of Puerto Rico from the South American *conformis*. These differences, however, are seemingly infra-specific, and *brittoni* is best considered a synonym of *conformis*.

The type specimen of *brittoni* var. *littoralis* from Trinidad is even closer to the *conformis* holotype, differing mainly in the somewhat narrower postpetiole, and confirming the above proposed synonymy. The specimens from northern Brazil, in turn, have the epinotal teeth weaker and the mesonotum more flattened. At least in some of them, there is a vestigial mid-pronotal tooth.

Here I forego a discussion of the validity of *Mycetophylax* as a separate genus. It certainly is an ill-defined assembly of heterogeneous forms, a residue of classification. Whereas some of its members, such as *emeryi, cristulatus* and *bruchi*, are quite distinct from *Cyphomyrmex* s. str., the type species *brittoni* (= *conformis*) is dangerously close to *Cyphomyrmex morschi*, as Emery already pointed out in 1922 (p. 343). The only good generic difference for workers consists in the absence of a clearly defined and circumscribed antennal scrobe in *Mycetophylax*.

Note. — After finishing the manuscript of the present paper, K. Lenko and A. Rocha discovered three small colonies, one with alate females, of this same species in the vicinity of Caraguatatuba, on the northern São Paulo State shore line, Brazil, about 40 meters away from the beach. The ants (DZSP, WWK) were nesting in the soil. This discovery extends enormously the range of the present species.

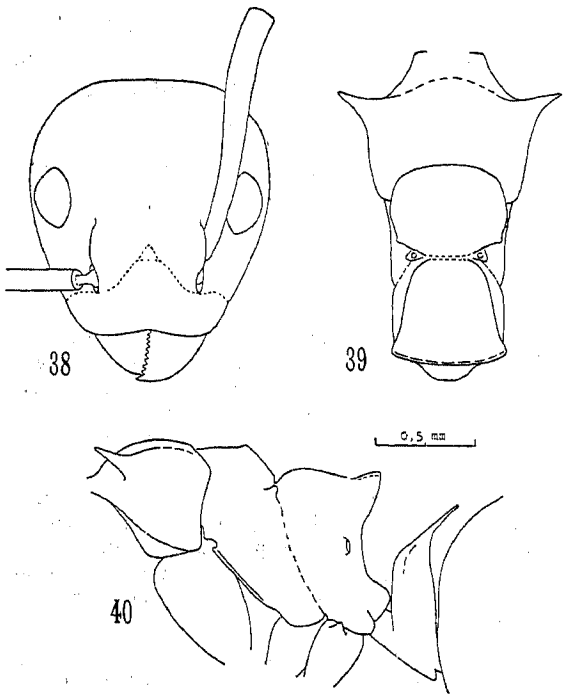
The female, rather similar to the worker, has blunt lateral tubercles on pronotum, lacks notauli, and has the scutellum posteriorly feebly bidentate. Measurements of a single specimen: Total length 4.5 mm; head length 0.98 mm; head width 0.93 mm; thorax length 1.41 mm.

Subfamily **Dolichoderinae** Forel

Monacis andina n. sp.

(Figs. 38-40)

Worker (holotype). — Total length 5.4 mm; head length 1.28 mm; head width 1.23 mm; scape length 1.25 mm; Weber's length of thorax 1.73 mm; width of pronotum between tips of spines 1.15 mm; mesonotum width 0.59 mm; epinotum width



Monacis andina n. sp., worker, holotype. — Fig. 38. Head. — Fig. 39. Thorax in dorsal view. — Fig. 40. Thorax and pedicel in profile. (Kempf del.)

0.61 mm. Black; chewing border of mandibles fuscous brown. Mandibles very finely and superficially reticulate, somewhat shining. Dorsum and sides of head subopaque, coarsely reticulate-rugose, the meshes enclosing deeply impressed, often elongate pits, the bottom of which is finely reticulate-punctate. Scapes coriaceous, subopaque. Dorsum of thorax, excluding neck, coarsely reticulate-rugose and foveolate. Sides of thorax with similar sculpture, except for nearly smooth, superficially reticulate areas dorso-posteriorly on latero-tergite of pronotum and inferior half of mesothoracic catepisternum: sides of epinotum

predominantly horizontally rugose. Declivous face of epinotum quite shining with superficial, fine and transverse costulae. Legs coriaceous and somewhat shining. Petiolar scale finely and superficially reticulate-rugose and quite shining. Gaster very superficially aciculate and shining, microsculpture extremely feeble. Erect and suberect hairs rather abundant on head, scapes, dorsum of thorax, legs, petiole and gaster. Pubescence inconspicuous and almost absent except on gaster where, however, it is much more diluted and sparser than in *bispinosa* and *valida*.

Head (Fig. 38) subovate, a little longer than broad, occipital lobes not expanded laterad, broadly rounded; occiput not excised in full-face view. Frontal carinae gently convex, the lateral edges somewhat raised above the antennal socket. Eyes rather strongly convex. Scapes slightly longer than maximum width of head. Pronotal spines (Fig. 39) prominent, obliquely directed forward, the distance between their tips approaching the maximum width of head. Lateral border of pronotum behind spines marginate. Mesonotum somewhat broader than long, lateral borders sharply marginate, posterior corners slightly raised. Basal face of epinotum bell-shaped, a little longer than broad; posterior lobes less projecting than in *bispinosa;* lateral borders marginate; posterior border gently and evenly convex, not impressed in the middle, forming a cutting edge above the excavate declivous face. Hind coxae with a blunt basidorsal tooth. Petiolar scale strongly compressed, with neatly separated needle-like apical process (Fig. 40), much as in *bispinosa*.

The paratype workers agree with the holotype in all essential characters. The critical measurements vary as follows: Head length 1.25-1.36 mm; head width 1.20-1.31 mm; scape length 1.23-1.33 mm; Weber's length of thorax 1.68-1.86 mm.

Types. — 12 workers (holotype and paratypes) from Central Peru, Pichita Caluga, altitude 2150 m, W. Weyrauch leg., September 18, 1960, in my collection (WWK).

Discussion. — *Monacis andina* runs to couplet 4 in my key to the species (Kempf, 1959, p. 230), but disagrees with either lug. The black color, the presence of erect and suberect hairs on body and appendages, the slightly less elongate head and the shape of the thorax in dorsal view (Fig. 39) separate it at once from *dolonigera*. It is even closer to *bispinosa* and *valida*, on account of body color, pilosity, development of basidorsal tooth of hind coxae, and thoracic outline in dorsal view, but differs rather strikingly in head shape (ovate not cordate), coarser sculpture of head, much finer sculpture on gaster where the pubescence is quite dilute.

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