

4565

Studia Entomologica, vol. 4, fasc. 1-4, outubro 1961

W.L. Brown, Jr.
COLLECTION

**A Survey of the Ants of the Soil Fauna
in Surinam (Hymenoptera: Formicidae)**

By
Walter W. Kempf, O.F.M.

A Survey of the Ants of the Soil Fauna in Surinam (Hymenoptera: Formicidae)

By Walter W. Kempf, O.F.M., Convento São Francisco, São Paulo
(Fellow of the «Conselho Nacional de Pesquisas»)

(With 15 text-figures and 3 tables)

In 1959, from april to october, Dr. J. van der Drift, of the "Instituut voor Toegepast Biologisch Onderzoek in de Natuur" (ITBON) at Arnhem, Holland, made a semi-quantitative study of the soil fauna in Surinam, covering woodland, agricultural fields and pastures. The ants, taken in huge numbers during the survey, were sent to me for identification.

This ant collection consisted of over 13,000 specimens, preserved in alcohol and kept in 58 vials, separating the different catches according to localities and type of sample. After sorting out the unusually rich material, I was able to distinguish 171 different species of ants, belonging to 59 genera (Tab. I). New to science were the following 6 species: *Neivamyrmex megathrix*, n. sp., *Hylomyrma longiscapa*, n. sp., *Hylomyrma blandiens*, n. sp., *Megalomyrmex drifti*, n. sp., *Rogeria micromma*, n. sp., and *Wasmannia scrobifera*, n. sp. They are described below:

Not all of the 171 different kind of ants could be identified down to species; 49 species, i. e. approximately 29% of the total, had to be left unnamed. Specific identifications in certain genera such as *Ponera*, *Pheidole*, *Crematogaster*, *Solenopsis* (*Diplorhoptrum*), *Carebara* and several genera of the small Attini are almost hopeless due to the chaotic condition of their taxonomy. Still, in case of striking or common species, or when authentic material was at hand, a few forms of these difficult groups could be named. Whenever the identification is doubtful, the specific name is preceded by a question mark. As far as the so-called polytypical species are concerned, i. e. species split up into a number of subspecies and varieties according to the fashion of the previous generation of myrmecologists, no attempt has been made to run the specimens down to the lowest category. It is felt that the aforesaid system is highly unsatisfactory and long overdue for revision.

Tab. 1. Composition of the soil ant fauna in Surinam

Genus	N. of species	Genus	N. of species
DORYLINAE	10	Wasmannia	3
Nomamyrmex	1	Cephalotes	1
Labidus	2	Paracryptocerus ...	2
Eciton	3	Daceton	1
Neivamyrmex	4	Smithistruma	1
PONERINAE	43	Neostruma	1
Amblyopone	1	Strumigenys	6
Prionopelta	1	Quadristruma	1
Platythyrea	2	Octostruma	2
Ectatomma	4	Rhopalothrix	1
Gnamptogenys	8	Mycocarpus	1
Discothyrea	1	Myrmicocrypta	3
Typhlomyrmex	2	Sericomyrmex	2
Pachycondyla	3	Apterostigma	3
Neoponera	3	Cyphomyrmex	3
Termitopone	1	Trachymyrmex	7
Mesoponera	1	Atta	1
Trachymesopus	4	DOLICHODERINAE	6
Ponera	6	Dolichoderus	1
Leptogenys	3	Monacis	1
Anochetus	2	Hypoclinea	1
Odontomachus	1	Conomyrma	1
PSEUDOMYRMECINAE	2	Azteca	1
Pseudomyrmex	2	Tapinoma	1
MYRMICINAE	92	FORMICINAE	18
Hylomyrma	2	Acropyga	3
Pheidole	21	Brachymyrmex	3
Crematogaster	7	Myrmelachista	1
Megalomyrmex	2	Camponotus	7
Solenopsis	13	Dendromyrmex	1
Carebara	2	Paratrechina	3
Leptothorax	1	T O T A L:	
Rogeria	3	GENERA	59
Ochetomyrmex	2	SPECIES	171

Nearly all ants captured during the survey are members of the soil fauna, being either epigeaic foragers that nest in the soil or litter, or true geobionts or soil organisms that spend all their lives in the soil. However, a few strangers to this biotic stratum got also mixed up with the collection. This is the case of such notorious tree-dwellers as *Leptothorax echinatinodis*, *Cephalotes atratus*, *Paracryptocerus* spp., *Azteca* sp., to mention just a few examples.

The ecological and related aspects of the material taken during the survey will be evaluated by the collector. Here I

limit myself to a few general remarks which concern the relative frequency of certain species.

Table II

Frequency of species according to number of specimens captured

Name of species	Number of specimens	Number of samples
<i>Ectatomma quadridens</i> (F.)	2629	25
<i>Labidus praedator</i> (F. Sm.)	2154	8
<i>Solenopsis geminata</i> (F.)	950	32
<i>Brachymyrmex patagonicus</i> Mayr	760	28
<i>Wasmannia auropunctata</i> (Rog.)	434	23
<i>Labidus coecus</i> (Latr.)	412	19
<i>Brachymyrmex fiebrigi</i> For.	373	9
<i>Paratrechina</i> (Nyl.) sp. <i>a</i>	231	25
<i>Solenopsis saevissima</i> (F. Sm.)	220	12
<i>Solenopsis</i> (D.) <i>pygmaea</i> For.	210	15

As can be seen from the appended tabulations (Tab. II), nearly two thirds of the material consist of specimens of only 10 common and widespread species. The picture does not change noticeably if, instead of the number of specimens, the number of samples in which each species was found is considered (Tab. III). In this connection I like to point out that at least some of these species become dominant principally in cultivated areas, i. e. in places where the original balance of nature has been upset by human interference.

Table III

Frequency of species according to number of samples in which they occur

Name of species	Number of samples	Number of specimens
<i>Solenopsis geminata</i> (F.)	32	950
<i>Brachymyrmex patagonicus</i> Mayr	28	760
<i>Ectatomma quadridens</i> (F.)	25	2629
<i>Paratrechina</i> (Nyl.) sp. <i>a</i>	25	231
<i>Solenopsis</i> (D.) sp. <i>f</i>	24	30
<i>Wasmannia auropunctata</i> (Rog.)	23	434
<i>Ponera</i> sp. <i>a</i>	22	143
<i>Solenopsis</i> (D.) sp. <i>c</i>	20	81
<i>Labidus coecus</i> (Latr.)	19	412
<i>Cyphomyrmex rimosus</i> (Spin.)	19	84

The number of species found in each type of habitat suggests a few noteworthy conclusions. Primary forests and woodland have the richest fauna, varying from 34 to 56 species at 5 different stations. Cultural fields, varying from 13 to 24 species at 9 different stations, and pastures with 17 and 28 species at 2 different stations showed the lowest number. The shrub fauna

is extremely variable, ranging from 15 to 45 species at 4 different stations. The variation, in all probability, depends from the degree of recovery of a balanced fauna in second growth vegetation.

Collecting data. — The survey was conducted at the following localities: Paramaribo, capital of Surinam; Dirkshoop, experimental citrus gardens, about 40 km west of Paramaribo, in the coastal region; Tambahredjo and Sidoredjo, about 10 km west of Dirkshoop; Vank and La Poulle, a few km east of Dirkshoop; Maripaheuvél and Poeroe man kemisa, about 130 km south of Paramaribo, in the interior, on the eastern side of Sarakreek near Dam. The different collecting stations are given in Roman numerals and may be further characterized as follows:

- I — Paramaribo, culture garden, dense vegetation of weeds on shell ridge, april 1959.
- II — Paramaribo, culture garden, footland, grass vegetation on sandy shell ridge, april 1959.
- III — Dirkshoop, primary forest on sand, may 1959.
- IV — Dirkshoop, citrus orchard on sand, may 1959.
- V — Dirkshoop, peanut field on sand, may 1959.
- VI — Tambahredjo, woodland on shell ridge, june 1959.
- VII — Tambahredjo, tomato field, first year under cultivation, on shell ridge, june 1959.
- VIII — Tambahredjo, marshy wood on sandy loam, june 1959.
- IX — Tambahredjo, tomato field on shell ridge, june 1959.
- X — Sidoredjo, shrub on shell ridge, july 1959.
- XI — Sidoredjo, field with watermelons on shell ridge, july 1959.
- XII — Sidoredjo, shrub and dense grass vegetation on sand, july 1959.
- XIII — Sidoredjo, watermelon field on sand, july 1959.
- XIV — La Poulle, shrub on sand, august 1959.
- XV — La Poulle, pasture on sand, august 1959.
- XVI — La Poulle, dense vegetation of weeds in watermelon field on sand, august 1959.
- XVII — Vank, shrub vegetation on sand, august 1959.
- XVIII — Vank, pastureland on sand, august 1959.
- XX — Maripaheuvél, primary forest on sand, slope of the hill, september 1959.
- XXI — Poeroe man kemisa, primary forest on sand, september 1959.
- XXII — Poeroe man kemisa, cultural field in 1st year, september 1959.
- XXIII — Poeroe man kemisa, cultural field in 2nd year, september 1959.

A capital «D» in front of the Roman numeral means that the respective sample was gathered in the dry season, i. e. during october 1959.

The type of sample and the collecting method applied is indicated by a low case letter following the Roman numeral. Thus «a» means catches in alcohol pitfall traps, exposed during one week; «b» means litter (dry leaves, vegetable debris etc.) sample of about .3 lt. desiccated in Tullgren funnels; «c» means soil samples of 500 cm³ — depth to 5 cm — desiccated in Tullgren funnels separately; «d» means that five «c» samples were bulked and desiccated together. In most cases material from «c» and «d» samples was preserved together in one vial. Hence, for all practical purposes, there are only three types of samples, viz. 32 pitfall trap, 3 litter and 23 soil samples.

Acknowledgments. — I wish to thank Dr. J. van der Drift for giving me the opportunity to study this interesting collection of ants,

and for graciously consenting in depositing representatives of all species, including uniques, in my collection (WWK). I am also indebted to Dr. W. L. Brown, Jr., of Cornell University, for clearing up a few doubts concerning species of *Strumigenys*, to Mr. Robert Taylor, presently of the Biological Laboratories at Harvard, for checking the type of *Trachymesopus holmgreni*, and to Dr. N. A. Weber, scientific attaché at the American Embassy of Buenos Aires, who on a short visit to my laboratory gave valuable hints concerning several species of tribe Attini.

Subfamily **Dorylinae** Leach

Labidus coecus (Latreille, 1802)

412 workers from 19 samples taken at the following stations: Dirkshoop, primary forest (IIIa, IIIcd, DIIIa) and peanut field (Va, DVa); Tambahredjo, woodland (VIa, VIIIa) and tomato field (VIIa, DVIIa); Sidoredjo, watermelon field (XIa, XIIIa) and shrub (XIIa); La Poulle, pasture (XVa) and watermelon field (XVIa); Vank, shrub (XVIIa, DXVIIa) and pasture (XVIIIa); Poeroe man kemisa, primary forest (XXIa) and cultural field (XXIIa). Note that only once half a dozen workers were found in soil sample (IIIcd). All remaining specimens are from pitfall trap samples. This is a common and widespread army ant adapted to a great many divers environment, altitudes and climates.

Labidus praedator (Fr. Smith, 1858)

2154 workers collected in 8 pitfall trap samples from the following localities: Dirkshoop, citrus orchard (Va); Tambahredjo, woodland (VIa); Sidoredjo, shrub (XIIa) and watermelon field (XIIIa); Vank, shrub (XVIIa) and pasture (XVIIIa, DXVIIIa); Poeroe man kemisa, cultural field (XXIIIa). All catches but one (DXVIIIa) were made during the wet season.

Nomamyrmex hartigi (Westwood, 1842)

Only 3 workers taken in a pitfall trap sample from shrub on sand at La Poulle (XIVa).

Eciton burchelli (Westwood, 1842)

Two samples — belonging to the race *cupiens* Santschi, 1923 — taken in pitfall trap. 10 workers in woodland (VIa),

and 36 workers in marshy wood on sandy loam (VIIIa), at Tambahredjo.

Eciton mexicanum Roger, 1863

4 workers in a single pitfall trap sample from woodland at Tambahredjo (VIa). Although widely distributed, this species is rather uncommon.

Eciton vagans (Olivier, 1791)

22 workers from 3 samples collected in pitfall traps at Dirkshoop, citrus orchard (DIVa), La Poulle, pasture (XVa), and Vank, pasture (DXVIIIa).

Neivamyrmex angustinodis (Emery, 1888)

Two samples, totalling 17 very small workers from pitfall trap catches made in a peanut field near Dirkshoop (DVa) in October 1959, during the dry season. These specimens are slender, having an elongated and rather parallel-sided head and a strongly compressed postpetiole, but do not otherwise differ from typical *angustinodis* specimens, hitherto known only from southern Brazil, Paraguay and the Argentine.

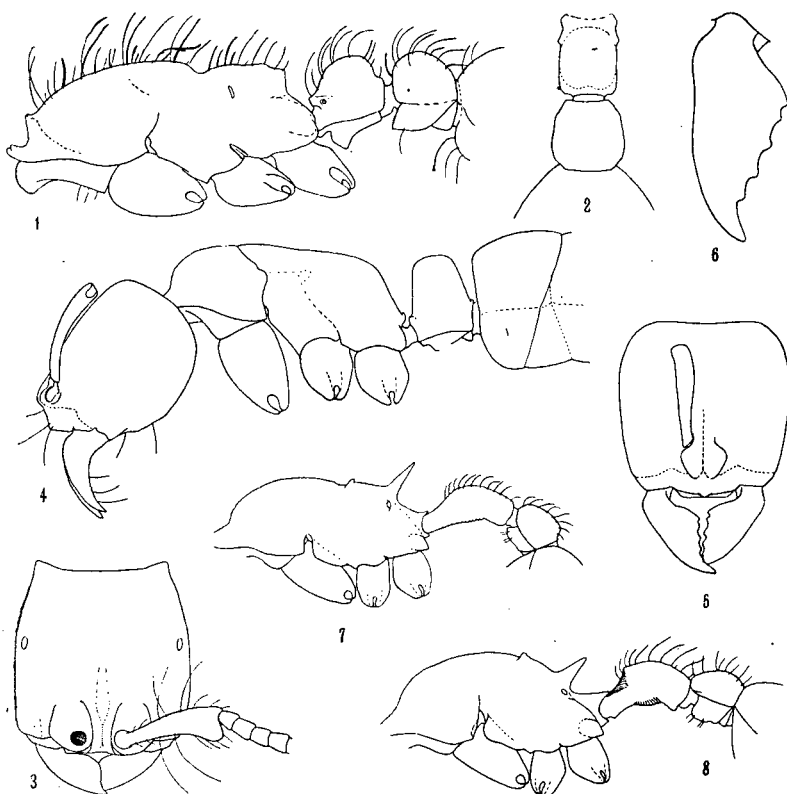
Neivamyrmex bohlsi (Emery, 1896)

192 workers from 5 samples collected in pitfall traps at the following stations: Paramaribo, culture garden (Ia & IIa); Dirkshoop, citrus orchard (DIVa); Tambahredjo, tomato field (IXa); Sidoredjo, shrub (XIIa). Heretofore the species was known only from the Argentine, Paraguay, southern Brazil (Minas Gerais) and Peru. This is the first record from the Guianas.

Neivamyrmex megathrix, n. sp.

(Figs. 1, 2, 3)

Worker major (holotype). — Total length 5 mm; maximum length of head capsule 1.09 (0.80-1.17) mm; width



Figs. 1-3. *Neivamyrmex megathrix*, n. sp., worker. — Fig. 1. Thorax and pedicel in profile. — Fig. 2. Pedicel in dorsal aspect. — Fig. 3. Head in full face view. — Figs. 4-6. *Trachymesopus holmgreni* Wühr., worker. — Fig. 4. Head, thorax and petiole in profile. — Fig. 5. Head in full face view. — Fig. 6. Mandible. — Fig. 7. *Hylomyrma longiscapa*, n. sp., worker, thorax and pedicel in profile. — Fig. 8. *Hylomyrma blandiens*, n. sp., worker, thorax and pedicel in profile. — (Kempf del.)

of head 0.99 (0.67-1.05) mm; length of scape 0.65 (0.48-0.72) mm; Weber's length of thorax 1.60 (1.17-1.76) mm; width of thorax 0.69 mm; length of hind femur 1.20 mm; length of hind tibia 1.09 mm. Dark reddish brown; shining portions of integument somewhat lighter. Standing hairs abundant, of unequal length; a few extremely long and conspicuous hairs on scapes, dorsum of thorax, femora and tibiae, shown in part in Figs. 1 and 3. Decumbent hairs short and sparse, denser on legs.

Mandibles striate, opaque, lacking a prominent basal tooth; corner between basal and apical border not obliquely truncate but rather rounded; outer (upper) face of blades without a shallow impression.

Head capsule (Fig. 3) slightly longer than broad, narrowed behind; occipital corners noticeably drawn out into a pointed

lobe; occipital border broadly excised. Dorsum of head more or less superficially reticulate and subopaque; sides and gular face smooth and shining. Frontal carinae in profile continuously rounded, not projecting in front nor forming a prominent and subangular lobe, not contiguous nor confluent behind but separated from each other by the deeply impressed frontal groove extending caudad to nearly the level of more or less defined ocular spot. Outer (genal) carinule of antennal groove prominent, with a raised tubercle at the anterior end where it touches the posterior clypeal border. Scape about two thirds the head length reaching backward a little beyond ocular spot. Funicular segments rather longer than broad.

Thorax (Fig. 1) robust, more or less heavily shagreened and opaque, except for portions of the laterotergite of pronotum which (especially in minor workers) has in part the sculpture more superficial to obsolete and is therefore somewhat shining. Pronotum anteriorly delimited by a transverse carinule. Mesonotum with shallower sculpture, especially caudad, and somewhat shining. Promesonotum in profile gently curved; sides inconspicuously marginate. Metanotal groove rather abrupt, broadly and deeply impressed. Basal face of epinotum at a lower level than promesonotum, very heavily shagreened and somewhat rugulose, indistinctly marginate laterally, not strikingly narrowed behind but sharply marginate and projecting above the distinctly excavate and laterally marginate declivous face. Epinotal spiracle elongate and slitlike. Metasternal angle continuously rounded, lacking a tooth. Coxae reticulate-punctate and opaque. Femora and tibiae rather shining and mostly smooth to superficially reticulate.

Petiole (Fig. 2), when seen from above, rectangular, longer than broad (15:12) with parallel sides; strongly shagreened and opaque; node in profile rounded; subpetiolar process prominent. Postpetiole between subglobose and subtrapezoidal, about as long as broad (14:15), densely but slightly more superficially shagreened, subopaque. Gaster smooth and shining.

Size variation between major and minor workers seems to be continuous and the extremes have been noted for the principal measurements in the foregoing description. No other noteworthy variations have been observed.

Types. — 93 workers from 3 samples taken at the following localities: La Poulle, from pitfall trap in pasture, august 1959 (XVa), J. v. d. Drift leg. 80 workers (holotype and paratypes); Dirkshoop, from pitfall trap in peanut field, may and

october 1959 (Va, DVa), J. v. d. Drift leg. 2 and 11 workers (paratypes). Holotype and half of the paratypes deposited in my collection (WWK); the rest was returned to the collector.

Discussion. — On account of the rather long basal face of epinotum, projecting over the excavate declivous face, the present new species belongs to Borgmeier's Group VII (Borgmeier, 1955, p.532 ss.). In Borgmeier's key (l. c., p.292) it runs to couplet 29 and coincides with *bohlsi* which, indeed, is the closest relative.

The lack of a shallow impression on the mandibular blades; the evenly rounded, not lobate, frontal carinae; the long, deeply impressed frontal groove; the prominent genal carinule; the partly reticulate cephalic dorsum; the strongly shagreened promesonotum; the sharp posterior margination of the basal face of epinotum, overhanging the excavate declivous face; the sculptured and subopaque postpetiole; the prominent subpetiolar process; all these characters distinguish at once *megatrix* from *bohlsi*.

***Neivamyrmex postangustatus* (Borgmeier, 1934)**

56 workers from a soil sample taken in shrub at Sidoredjo (Xc); 1 worker taken in pitfall trap sample from shrub at Vank (DXVIIa); 8 workers in pitfall trap sample from a tomato field at Tambahredjo (IXa). This interesting army ant was originally described from Paramaribo, Surinam, but also occurs in central Brazil.

Subfamily **Ponerinae** Lepeletier

***Amblyopone degenerata* Borgmeier, 1957**

A lone worker of this extremely rare and puzzling species, hitherto known only from southern Brazil, was taken in soil sample from primary forest near Maripaheuvél and Poeroe man kemisa (XXc & XXIc).

***Prionopelta antillana* Forel, 1909**

146 specimens, mostly workers but also a few dealate females, were found in 6 samples from the following stations: Tambahredjo, soil and pitfall trap sample from woodland (VIcd, DVIA), litter and soil samples from marshy wood on sandy loam (VIIIb, VIIIcd); La Poulle, soil sample from shrub on sand

(XIVcd); Poeroe man kemisa, pitfall trap sample from primary forest (XXIa).

Platythyrea angusta Forel, 1901

1 worker taken in pitfall trap in shrub on sand at La Poulle (XIVa). The identification is based upon the key to the neotropical species by Mann (1916), who had seen a type of this form in Forel's collection.

Platythyrea meinerti Forel, 1905

2 workers captured in pitfall trap sample from cultural field at Poeroe man kemisa (XXIIIa).

Ectatomma lugens Emery, 1894

This species is represented by 47 specimens — workers and a few dealate females — and was found in the following 5 pitfall trap samples: Dirkshoop, primary forest (IIIa); Tambahredjo, woodland (VIa, DVIa) and tomato field (DVIIa); Maripaheuvel, primary forest (XX).

Ectatomma morgani Forel, 1912

13 workers from 2 pitfall trap samples taken in primary forest at Maripaheuvel (XX) and Poeroe man kemisa (XXIa); 1 worker in soil sample from primary forest near Maripaheuvel and Poeroe man kemisa (XXc & XXIc). *E. morgani* is probably just a geographical variant of the southern *E. edentatum* Rog. The Surinam specimens at hand are somewhat intermediate, inasmuch as they combine the sculpture characters of *morgani* with the dark color of *edentatum*.

Ectatomma quadridens (Fabricius, 1793)

Commonest ant, present in huge numbers — 2629 workers and dealate females — in 25 pitfall trap samples from the ensuing localities: Paramaribo, culture garden (Ia & IIa); Dirkshoop, citrus orchard (IVa, DIVa) and peanut field (Va, DVa); Tambahredjo, woodland (VIa, DVIa), tomato field (VIIa, DVIIa, IXa), and marshy wood (VIIIa); Sidoredjo, shrub (Xa, XIIa) and watermelon field (XIa, XIIIa); La Poulle, shrub (XIVa),

pasture (XVa) and watermelon field (XVIa); Vank, shrub (XVIIa) and pasture (XVIIIa, DXVIIIa); Poeroe man kemisa, cultural field (XXIIa, XXIIIa). 2 stray workers, one collected in soil sample at Paramaribo (Icd & IIcd), the other in litter sample at Vank (XVIIIb) might have gotten into these samples by accident. *E. quadridens* is an epigaic forager. In Surinam it is dominant in fields, pastures and second growth vegetation, but strikingly absent in primary forests, where it is apparently replaced by the two preceding species.

***Ectatomma ruidum* Roger, 1860**

40 workers and 2 females taken in pitfall trap sample from culture garden at Paramaribo (Ia & IIa).

***Gnamptogenys aculeaticoxae* (Santschi, 1921)**

2 workers and 2 females from 4 different samples: Dirkshoop, primary forest, in pitfall trap (IIIa, DIIIa) and soil sample (IIIC); Tambahredjo, marshy wood on sandy loam, pitfall trap sample (VIIIa).

***Gnamptogenys acuminata* Emery, 1896**

7 workers and 2 females taken in pitfall trap sample from woodland at Tambahredjo (VIa, DVIa), and from primary forest at Dirkshoop (IIIa, DIIIa).

***Gnamptogenys annulata* Mayr, 1887**

A lone worker taken in pitfall trap in primary forest at Dirkshoop (IIIa).

***Gnamptogenys horni* Santschi, 1929**

61 specimens, workers and dealate females, of this apparently common species were taken in 15 pitfall trap, littler and soil samples at the following stations: Dirkshoop, primary forest (IIIa, IIICd, DIIIa) and citrus orchard (DIVa); Tambahredjo, woodland (VIa, DVIa); Sidoredjo, shrub (Xa, Xc, XIIa); La Poulle, shrub (XIVa, XIVb, XIVc); Vank, shrub (XVIIa); Maripahoeuvel, primary forest (XX). Presumably *G. horni* shuns open fields, since it was not found in any of the 9 samples taken in this type of environment.

Gnamptogenys minuta (Emery, 1896)

A single worker of this rare yet widespread species was found in soil sample from primary forest at Dirkshoop (DIIIcd). Originally, this species was described in the genus *Alfaria* Emery, recently placed into synonymy of *Gnamptogenys* by Brown.

Gnamptogenys regularis Mayr, 1870

A damaged worker in pitfall trap sample from a tomato field at Tambahredjo (VIIa).

Gnamptogenys sulcata (Fr. Smith, 1858)

2 workers, collected in pitfall traps in shrub and dense weed vegetation of a watermelon field at La Poulle (XIVa, XVIa).

Gnamptogenys tortuolosa (Fr. Smith, 1858)

21 workers from 11 samples — mostly pitfall trap catches, but also from soil and leaf litter — at the following stations: Paramaribo, dense grass and weed vegetation (Ia & IIa); Dirkshoop, primary forest (IIIa, DIIIa); Tambahredjo, woodland (VIa, DVIa) and marshy wood (VIIIa); Sidoredjo, shrub (Xa); La Poulle, shrub (XIVb, XIVcd); Vank, shrub (XVIIa); Poeroe man kemisa, cultural field (XXIIa).

Discothyrea denticulata Weber, 1939

6 workers and 2 females from the following stations: Dirkshoop, in soil sample from primary forest (IIIcd); Tambahredjo, in pitfall trap sample from woodland on shell ridge (DVIa); Sidoredjo, in soil sample from shrub (Xc); vicinity of Maripahuvel and Poeroe man kemisa, in pitfall trap sample from primary forest (XXc & XXIc).

The types and hitherto only known specimens of this species are from British Guiana. Its closest relative is *neotropica* Bruch, now known in both the female and worker caste. *D. denticulata* is quite distinct from *neotropica* by smaller size, the anteriorly dentate vertical clypeal lamina between the antennal base, the shape of the petiole, the node of which is more strongly compressed and dorsally more acuminate when seen in profile.

Typhlomyrmex ? pusillus Emery, 1894

56 specimens, mostly workers but also a few females, principally from soil samples taken at the ensuing localities: Dirkshoop, primary forest (IIIcd, DIIIa) and peanut field (Vcd); Tambahredjo, woodland (VIcd) and tomato field (IXcd); Sidoredjo, shrub (Xc, XIIcd); La Poulle, shrub (XIVcd); vicinity of Maripaheuvel and Poeroe man kemisa, primary forest (XXc & XXIc).

The present specimens are distinctly less than 2 mm long. They are heavily punctured and opaque throughout, and for this very reason I am not sure about the identification. They might represent a still undescribed species.

Typhlomyrmex rogenhoferi Mayr, 1862

A lone worker from soil sample taken in shrub on sand at La Poulle (XIVcd).

Pachycondyla crassinoda (Latreille, 1802)

23 workers collected in pitfall traps in primary forest at Dirkshoop (IIIa, DIIIa), at Maripaheuvel (XX), and at Poeroe man kemisa (XXIa); in shrub at La Poulle (XIVa).

Pachycondyla harpax (Fabricius, 1804)

11 samples contained 55 specimens of this common species which is not ecologically specialized. Collecting data are as follows: Dirkshoop, primary forest (IIIa), citrus orchard (DIVa); Tambahredjo, woodland (VIa, VIcd); La Poulle, shrub (XIVa, XIVb, XIVcd), pasture (XVa), watermelon field with dense weeds (XVIa); Vank, shrub (XVIIa); Maripaheuvel, primary forest (XX).

Pachycondyla impressa (Roger, 1861)

2 workers taken in pitfall trap sample from shrub on sand at La Poulle (XIVa).

Neoponera apicalis (Latreille, 1802)

One female from pitfall trap in shrub at La Poulle (XIVa).

Neoponera obscuricornis (Emery, 1890)

1 worker from pitfall trap in shrub at La Poulle (XIVa).

Neoponera unidentata (Mayr, 1862)

A headless worker from pitfall trap sample taken in primary forest at Dirkshoop (DIIIa).

Termitopone commutata (Roger, 1860)

A lone worker taken in primary forest at Maripaheuvcl (XX).

Mesoponera constricta (Mayr, 1884)

56 workers, mostly from pitfall trap samples, taken at the following stations: Paramaribo, cultural garden (Ia & IIa); Dirkshoop, primary forest (IIIa, DIIIa, DIIIcd) and citrus orchard (DIVa); Tambahredjo, woodland (DVIa) and marshy wood on sandy loam (VIIIa); Sidoredjo, shrub (Xa); La Poulle, shrub (XIVa, XIVb); Vank, shrub (XVIIa); Maripaheuvcl, primary forest (XX); Poeroe man kemisa, primary forest (XXIa).

Trachymesopus gilberti Kempf, 1960

12 workers, all from soil samples, taken in primary forest at Dirkshooper (IIIcd, DIIIcd) and in shrub at Vank (XVIIcd). The discovery of this species in the Guianas is rather surprising, since it was just recently described upon very few stray specimens from southern Brazil. The Surinam specimens agree with the holotype worker from Agudos, S. P., Brazil, in all essential features except for the decidedly smaller compound eyes.

Trachymesopus holmgreni (Wheeler, 1925)

(Figs. 4, 5, 6)

2 workers from pitfall trap samples taken in primary forest at Maripaheuvcl (XX) and Poeroe man kemisa (XXIa). Inasmuch as this is not only a rare but also a crucial species from a taxonomic standpoint, I decided to redescribe and picture the worker.

Worker. — Total length 4.3-4.7 mm; maximum length of head capsule 0.93-0.99 mm; maximum width of head 0.88-0.95 mm; maximum depth of head 0.69-0.72 mm; length of scape 0.56-0.59 mm; Weber's length of thorax 1.28-1.39 mm. Yellowish-brown; head capsule reddish-brown; mandibles dark ferruginous.

Head capsule as shown in Figs. 4, 5; subquadrate, slightly longer than broad; densely and finely reticulate-punctate and

opaque above; superficially reticulate-striolate and shining below. Anterior half of clypeus truncate and perpendicular to dorsum of head, separated from posterior half by a blunt margination bearing in the middle a small tubercular tooth; posteriorly the median portion of clypeus has a small and well delimited triangular extension wedged in between the frontal carinae. Eyes absent. Mandibles (Fig. 6) distinctly geniculate at base, smooth and shining, rather triangular than elongate; chewing border with 5 small subtriangular teeth and a very strong elongate apical tooth. Scape subclavate, failing to attain the occipital margin by a distance slightly exceeding its maximum width when laid backwards. Funicular segments: I twice as long as broad, II-V slightly longer than broad, VI-VIII about as broad as long, IX-X slightly longer than broad, XI more than twice as long as broad.

Thorax (Fig. 4) shinier than head, superficially punctate to reticulate-punctate; bottom of sides of epinotum with fine horizontal striae; basal and declivous face of epinotum nearly smooth and very shining. Mesonotum not bulging, forming in profile a straight line with pronotum and epinotum. Thorax not strongly constricted from side to side between meso and epinotum. Mesoepinotal suture absent. Dorsum of thorax immarginate laterally. Legs superficially punctate but quite shining. Pectinate mesial spurs on all three pairs of tibiae, smallest on second pair. Lateral spurs of mid and hind tibiae simple, small, scarcely recognizable on the mid tibiae, on account of the strong, spur-like, thick scattered bristles on the apex and extensor face of mid tibiae and on mid tarsi.

Petiole in profile as shown in Fig. 4; broader than long (15:14), much higher than long (20:14), not strongly attenuate toward apex, anterior and posterior face equally slanted. Anterior and posterior face and dorsum smooth and shining, sides feebly sculptured, reticulate-punctate. Subpetiolar process in the form of a blunt, elongate, low lobe. Gaster still shinier than thorax, the punctures fine and scattered, with loose and extremely fine reticulation. Constriction between first and second segment rather feeble but distinct.

Erect and suberect hairs unequal in length, scattered, lacking on extensor and posterior faces of femora. A few long, probably sensory hairs on clypeus, mandibles, and gular face next to the mouth opening (shown in Fig. 4). Pubescence short, golden-yellow, all over the insect, densest on head, on dorsum of thorax and on appendages.

Discussion. — Wheeler described this species upon two well preserved specimens from an unknown locality in Peru. Mr. Taylor, presently of the Biological Laboratories at Harvard University, kindly checked my identification by comparing copies of the drawings with the syntype worker deposited in the collections of the Museum of Comparative Zoology. The species is quite distinct from the other South American species of *Trachymesopus*, and on account of the general habitus, the deep, eyeless head, the strong bristles on extensor face of mid tibiae (of burrowing function, present in *Wadeura* and *Centromyrmex*, absent to feebly developed in other *Trachymesopus*), it comes pretty close to *Wadeura*. Only the rather triangular than elongate mandibles, the lack of a mesonotal bulge and mesoepinotal constriction, and the thick and blunt petiolar node distinguish *T. holmgreni* from the two known *Wadeura* species. In short, *holmgreni* is quite an ideal intermediate between the more orthodox *Wadeura* and *Trachymesopus* species. This, in turn, casts serious doubts on the validity of *Wadeura* as an independent genus.

Mr. Robert W. Taylor has started a comprehensive study on the *Ponera*-like genera of the world with the purpose of evaluating and reassessing the generic limits. I believe that the solution of a taxonomic problem similar to the present one should be left to such a study. For this reason I am not taking any action on this probable case of generic synonymy, hoping that Mr. Taylor will be able to give us a better classification of this extremely difficult and intricate species group.

***Trachymesopus lunaris* (Emery, 1896)**

4 workers from soil samples taken in primary forest (IIIc, IIIcd) and in citrus orchard (DIVcd) at Dirkschoop and in woodland (VIcd) at Tambahredjo. This species was hitherto known only from southern Brazil and Paraguay.

***Trachymesopus stigma* (Fabricius, 1804)**

A lone worker in pitfall trap sample from shrub at Vank (XVIIa).

***Ponera* spp.**

About 500 workers, a few females and an ergatoid male, belonging to at least 6 different species. Due to the chaotic state of the taxonomy of the cosmopolitan genus *Ponera*, I hesitate to name them at this stage of the investigation.

***Leptogenys unistimulosa* Roger, 1863**

1 worker from pitfall trap sample taken in shrub vegetation on sand at Vank (XVIIa).

Leptogenys (Lobopelta) dasygyna Wheeler, 1923

1 worker from pitfall trap sample taken in shrub vegetation on sand at Vank (XVIIa). The specimen agrees well with the description and figures of the type which hails from neighboring British Guiana.

Leptogenys (Lobopelta) langi Wheeler, 1923

5 workers from pitfall trap samples taken in primary forest at Dirkshoop (IIIa) and Poeroe man kemisa (XXIa).

Anochetus mayri Emery, 1884

14 workers and dealate females, both from pitfall trap catches and litter and soil samples collected in citrus orchard (IVa, IVcd, DIVa) at Dirkshoop, in tomato field (DVIIa) at Tambahredjo, in shrub (XIVb, XIVcd) at La Poulle.

Anochetus ? targionii Emery, 1894

16 workers and 1 female from pitfall trap, soil and litter samples taken in citrus orchard at Dirkshoop (IVa, IVcd, DIVa, DIVcd), in tomato field at Tambahredjo (DVIIa), in shrub at La Poulle (XIVb, XIVcd). It is interesting to note that, with one exception, all specimens were always found in samples that contained individuals of the preceding species. However, the present species seems certainly distinct from *mayri*, although the specific identification of it is made with doubt. The classification of the genus *Anochetus* is presently quite unsatisfactory and needs urgent revision.

Odontomachus haematodus (Linné, 1758)

44 workers and dealate females found in 10 pitfall trap and 1 litter samples taken in primary forest (IIIa), citrus orchard (DIVa), peanut field (DVa) at Dirkshoop; in tomato field (IXa) at Tambahredjo; in shrub (XIVa), pasture (XVa) and watermelon field (XIVa) at La Poulle; in shrub (XVIIa) and pasture (XVIIIa, XVIIIb, DXVIIIa) at Vank. *O. haematodus* is taken here in the broad sense, although the present specimens may well represent the typical species in the restricted sense which was originally taken by Rolander in Surinam.

Subfamily **Pseudomyrmecinae** M. R. Smith

Pseudomyrmex gracilis (Fabricius, 1804)

A lone female found in a pitfall trap sample taken in a peanut field at Dirkshoop (Va).

Pseudomyrmex termitarius (Fr. Smith, 1855)

24 workers from pitfall trap samples taken in citrus orchard (DIVa) at Dirkshoop; in pastureland (DXVIIIa) at Vank; in cultural field (XXIIa, XXIIIa) at Poeroe man kemisa. This is one of the very few soil inhabiting species of the otherwise typically arboreal genus.

Subfamily **Myrmicinae** Lepeletier

Hylomyrma longiscapa, n. sp.

(Fig. 7)

Worker (holotype). — Total length 4.0 mm; maximum length of head capsule 0.85 mm; maximum width of head behind eyes 0.75 mm; maximum depth of head 0.61 mm; length of scape 0.75 mm; Weber's length of thorax 1.12 mm. Reddish-brown; mandibles, antennae, legs, brown; four apical funicular segments (apical club) lighter than rest; gaster fuscous reddish-brown.

Mandibles elongate, subtriangular, dorsal face densely and longitudinally costate; shape of blades and dentition much as in *reitteri* (cf. Kempf, 1960, p. 431) but basal angle less conspicuous, basal and apical borders subcontinuous, the latter with 6 small teeth.

Head capsule in full face view somewhat longer than broad, not restricted in front; occipital half subsemicircular, i. e. the occipital angles broadly rounded and not marked, grading imperceptibly into the sides and the convex occipital border. Clypeus with the bidentate anterior apron peculiar to the genus; posterior portion of median lobe with about 9 longitudinal costae. Frontal area distinct and impressed, traversed by a median longitudinal carinule. Frontal carinae gently convex above antennal socket, slightly constricted behind, fading out at level of anterior border of eyes. Head sculpture as in *reitteri*, but costae on front and vertex are subparallel, not diverging caudad. Compound eyes lentiform, not as strongly compressed dorso-ventrally as in *reitteri*

and *balzani*, but anterior corner likewise drawn out into a blunt angle. Antennal scapes obliquely bent at base, rest straight; surpassing occipital border when laid back over the head as much as possible; finely longitudinally costate-rugulose. Funicular segments II-VII only a little broader than long.

Thorax (Fig. 7) subopaque, coarsely and irregularly reticulate-rugose, with fine punctures between the rugae. Thoracic dorsum in profile convex in front, mesonotum and basal face of epinotum rather flat and continuous; a distinct but shallow impression at the mesoepinotal juncture, followed by a raised transverse carinule. Epinotal spines long, terete, acute, obliquely raised, slightly diverging, as long as their distance at apex; base somewhat costulate, apical half smooth and shining. Declivous face between spines and metasternal flanges finely transversely costulate. Uppermost tooth of bidentate metasternal flange acute. Coxae finely transversely costulate-striate. Femora and tibiae of all legs practically smooth and shining. Finely barbulate spurs present on apex of middle and hind tibiae.

Petiole (Fig. 7) elongate, pedunculate. As seen in profile, the strongly compressed peduncle grades imperceptly into the node proper, not forming a peak at the juncture. In dorsal view, the node is much longer than the peduncle, more than twice as long as broad, with parallel sides. Peduncle smooth and shining except for the posterior ascending half of dorsum which is finely transversely costulate. Dorsum of node proper irregularly but predominantly transversely rugose. Ventral face of node with short and feeble transverse costulae. Postpetiole as long as deep and about as broad as long, trapezoidal in dorsal view, broadening toward the rear, with nearly straight sides. Dorsum with marked fine longitudinal striae. Ventral half with nearly obliterated predominantly transverse striolae. Gaster smooth and shining, except for the basidorsal costulae on first tergite, which occupy nearly a third of its length.

Standing hairs copious, rather short and curved and of uniform length; uniformly oblique on legs and scapes (hairs projecting in profile on petiole and postpetiole are shown in Fig. 7).

Paratype workers agree perfectly with the preceding description. The Vank specimen is slightly larger: Total length 4.2 mm; maximum length of head capsule 0.91 mm; maximum width of head behind eyes 0.80 mm; maximum depth of head

0.64 mm; length of scape 0.80 mm; Weber's length of thorax 1.20 mm.

Types. — Surinam, Dirkshoop, pitfall trap catch in primary forest, may 1959, J. v. d. Drift leg.: 2 workers (holotype and paratype; Vank, pitfall trap catch in shrub on sand, august 1959, J. v. d. Drift leg.: 1 worker (paratype). Holotype and 1 paratype in my collection (WVK), the other paratype returned to the collector.

Discussion. — This new species seems closest to *H. columbica* (Forel, 1912), but in this latter species, according to the original description, the head is constricted in front, the scapes barely reach the occipital border when laid backward over the head, the funicular segments II-VII are prominently transverse, the thoracic dorsum is strongly arched, the mesonotum and basal face of epinotum transversely costate-rugose, the extensor face of mid and hind tibiae longitudinally striolate. The long scapes, the shape of head, thorax and petiole, the long basidorsal costulae on first gastric tergite, distinguish *longiscapa* from the better known *reitteri* and *balzani*. Note that in the latter two species the pilosity of the scapes and legs is of two kinds, i. e. standing longer hairs are mixed with shorter decumbent hairs, a feature which does not obtain in *longiscapa*.

***Hylomyrma blandiens*, n. sp.**

(Fig. 8)

Worker (holotype). — Total length 4.0 mm; maximum length of head capsule 0.85 mm; maximum width of head behind eyes 0.80 mm; length of scape 0.61 mm; Weber's length of thorax 1.20 mm. In color, shape and body structure this species resembles very closely *reitteri* and *balzani* (cf. Kempf, 1960); hence I confine the diagnosis to the essential features.

Longitudinal striae on dorsal face of mandibular blades finer and more numerous; striae count at level of basal angle 18 (12 in *reitteri*). Median lobe of clypeus finely and densely longitudinally striate, lacking coarse costulae. Antennal scape laid back over the head failing to reach the occipital border by a distance equalling its maximum width. Funicular segments II-VII strikingly transverse. Microsculpture of head, thorax and petiolar node consisting of fine dense and beaded striation, which is longitudinal except between eye and front and on basal face of epinotum, where it is transverse. Macrosculpture of the same parts of the insect reticulate-rugose, the edges of the raised rugae blunt, not interrupting the finely striate microsculpture. Front and vertex of head also with 12 spaced longitudinal rugae. Thorax

and pedicel as shown in Fig. 8. A raised transverse carinule at the mesoepinotal junction. Coxae, especially of fore legs, with very fine, numerous and regular transverse striae. Extensor face of femora and tibiae longitudinally costate-rugose. Petiole, in profile, with a sharp peak at the junction of ascending face of peduncle and node proper, the latter less than twice as broad as long. Posterior portion of dorsum of peduncle and ventral face of petiolar node with transverse striae, fine on the former, coarser on the latter. Basidorsal costulae on first gastric segment very long extending over nearly the anterior third. Pilosity as in *reitteri* and *balzani*, sparser, longer and more unequal than in *longiscapa*.

F e m a l e (paratype). — Total length 4.2 mm; maximum length of head capsule 0.85 mm; maximum width of head behind eyes 0.80 mm; length of scape 0.59 mm; Weber's length of thorax 1.25 mm. With the same distinguishing features as the worker, except for the following:

Mesothoracic dorsum and sides regularly and more coarsely longitudinally striate, without superimposed reticulate-rugose macrosculpture; striae on scutum of varying gauge, more prominent striae are separated by more numerous finer ones. Basal face of epinotum with regular transversely arched fine striation.

T y p e s. — Surinam: Dirkshoop, soil sample from primary forest, May 1959 (J. v. d. Drift leg.): 1 worker (holotype). — La Poulle, soil sample from shrub on sand, August 1959 (J. v. d. Drift leg.): 1 female (paratype) (WWK).

This species is at once recognized by its peculiar sculpture pattern already described above, which differs completely from that of the other known species of the genus.

Although the scanty material precludes definite conclusions, it is interesting to point out that this species has been taken from soil samples, whereas the specimens of *longiscapa* were collected in pitfall traps. This could be an indication of an ecological difference between both species.

Pheidole spp.

The protean genus *Pheidole* has long gone out of taxonomic control and identifications are next to impossible except in cases of well known and strikingly different species. The Surinam material at hand contains about 1000 specimens, representing at least 21 different species. I am able to identify and name only the ensuing forms.

Pheidole (Macropheidole) fimbriata Roger, 1863

29 workers and 1 soldier from 1 litter and 3 pitfall trap samples taken in primary forest at Dirkshoope (IIIa, DIIIa) and in marshy wood on sandy loam at Tambahredjo (VIIIa, VIIIb).

Pheidole biconstricta Mayr, 1870

6 workers collected in pitfall traps in primary forest at Poeroe man kemisa (XXIa).

Pheidole cramptoni Wheeler, 1916

2 isolated soldiers, both sifted from soil samples in culture garden at Paramaribo (Icd & IIcd), seem to belong to this species.

Pheidole fallax Mayr, 1870

143 workers and 31 soldiers, taken at the following collecting stations: Dirkshoop, peanut field (Vcd, DVa); Tambahredjo, tomato field (VIIa, DVIIa); Sidoredjo, watermelon field (XIIIa); La Poulle, pasture (XVa) and watermelon field (XVIa); Vank, shrub (XVIIa) and pasture (XVIIIa, DXVIIIa); Poeroe man kemisa, cultural field, first and second year under cultivation (XXIIa, XXIIIa). This is the commonest *Pheidole* of the area and was present in 11 pitfall trap samples. Only a lone worker was found in soil sample (Vcd). Collecting data seem to indicate that this species lives in open areas, covered with low vegetation. At any rate, it was not found in forest or woodland samples.

Pheidole fallax is taken here in the broad sense, although the present material comprises at least two different «morphs». Most specimens seemingly coincide with the subspecies *jelskii* Mayr, 1884, originally described from the Guianas.

Pheidole opaca Mayr, 1862

3 soldiers and 4 workers from pitfall trap samples obtained in primary forest at Dirkshoop (IIIa), in marshy wood on sandy loam at Tambahredjo (VIIIa) and in cultural field at Poeroe man kemisa (XXIIa).

***Pheidole radoszkowskii* Mayr, 1883**

15 workers caught in pitfall traps in peanut field at Dirkshoop (DVa) and in pasture on sand at La Poulle (XVa).

***Pheidole subarmata* Mayr, 1883**

6 workers and 6 soldiers taken in pitfall trap in shrub and dense grass vegetation at Sidoredjo (Xa, XIIa) and desiccated soil sample from woodland on shell ridge at Tambahredjo (VIcd).

***Pheidole transversostriata* Mayr, 1887**

38 workers and 19 soldiers in soil sample from primary forest at Dirkshoop (IIIcd), in soil and pitfall trap sample from tomato field at Tambahredjo (VIIcd, DVIIa), in pitfall trap sample from watermelon field at Sidoredjo (XIa).

***Crematogaster* spp.**

There are 180 specimens, 179 workers and 1 female, in the present collection, representing 7 different species. On account of the confusion reigning in the taxonomy of neotropical *Crematogaster* I am able to name specifically only 2 species.

The relatively great number of *Crematogaster* specimens collected during the survey of the soil fauna in Surinam is surprising, inasmuch as these ants are usually tree dwellers. In fact, very few terricolous forms have been registered heretofore. 87% of the specimens were caught in pitfall traps, 13% (belonging to 4 species) were obtained from desiccated soil and litter samples.

***Crematogaster brasiliensis* Mayr, 1877**

99 workers from 12 samples, as follows: Dirkshoop, pitfall trap and soil samples from primary forest (IIIa, DIIIa, DIIIcd); Tambahredjo, pitfall trap sample from woodland on shell ridge (VIa); Sidoredjo, pitfall trap and soil sample from shrub (Xa, Xc); Vank, pitfall trap sample from shrub (XVIIa) and litter sample from pasture on sand (XVIIIb); Maripaheuvél, primary forest (XX); Poeroe man kemisa, pitfall trap collections in primary forest and cultural field (XXIa, XXIIa, XXIIIa).

Crematogaster limata Fr. Smith, 1858

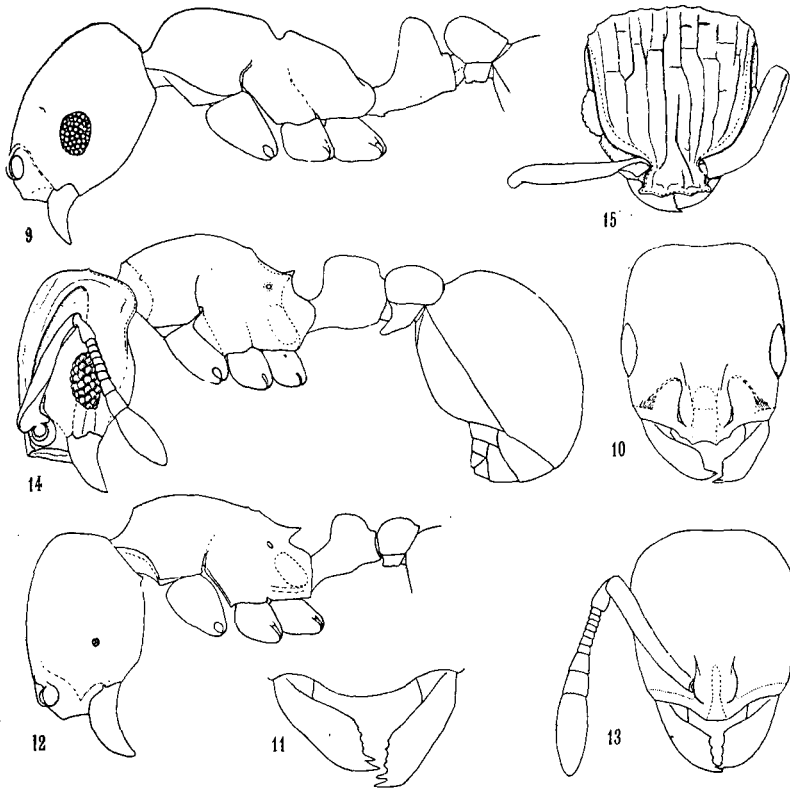
25 workers from 7 samples, as follows: Dirkshoop, pitfall trap collection in primary forest (IIIa); Tambahredjo, pitfall trap collection in tomato field (IXa); La Poulle, pitfall trap, litter and soil samples from shrub and pasture (XIVa, XIVb, XIVcd, XVa); Poeroe man kemisa, pitfall trap sample from primary forest (XXIa).

Megalomyrmex drifti, n. sp.

(Figs. 9, 10, 11)

Worker (holotype). — Total length 2.2 mm; maximum length of head capsule 0.51 mm; maximum width of head behind eyes 0.41 mm; length of scape 0.37 mm; maximum diameter of eyes 0.11 mm; Weber's length of thorax 0.61 mm. — Black-brown; mandibles anterior half of clypeus, antennae, legs, light brown. Smooth and shining throughout.

Head (Figs. 9, 10) somewhat elongate; lateral borders feebly convex; occipital border with a very slight impression in the middle. Mandibles as shown in Fig. 11; note the prominent pair of apical teeth and the feeble basal dentition, consisting of ill-developed denticles; basal angle not well marked. Clypeus strongly truncate; lower subperpendicular face with rounded anterior border, separated from subhorizontal upper face by a transversely marginate to subcarinate border, prominent in the middle and bearing four denticles, covering the anterior border in full-face view (Fig. 10); an ill-defined longitudinal carina extends from each of the innermost denticle back between the frontal carinae imitating the condition obtained in most *Solenopsis* and *Monomorium* species. Frontal area impressed. Frontal carinae gently convex, constricted behind antennal socket. A few longitudinal costulae laterally on genae, the mesal ones curving mesad and joining up with the posterior end of frontal carinae, clearly delimiting the impressed area around antennal socket. Eyes relatively large, with about 8 facets across the greatest diameter, strongly flattened. Scapes, laid back over the head, barely attaining the occipital border. Funicular segment I twice as long as broad, segments II-VIII distinctly broader than long, segments IX-XI forming a clearly defined apical club, segments IX and X longer than broad, and subequal in length, segment XI nearly as long as IX and X combined.



Figs. 9-11 *Megalomyrmex drifti*, n. sp., worker. — Fig. 9. Head, thorax and pedicel in profile. — Fig. 10. Head in full face view. — Fig. 11. Mandibles and clypeal border. — Figs. 12-13. *Rogeria micromma*, n. sp., worker. — Fig. 12. Head, thorax and pedicel in profile. — Fig. 13. Head in full face view. — Figs. 14-15. *Wasmannia scrobifera*, n. sp., worker. — Fig. 14. Head, thorax, pedicel and gaster in profile. — Fig. 15. Head in full face view. — (Kempf *del.*)

Thorax as shown in Fig. 9. Promesonotum continuously vaulted dorsally, slightly flattened discally, immarginate laterally, lacking a promesonotal suture. Metanotal groove broad and deeply impressed. Basal face of epinotum, in profile, at the same level as mesonotum, longer than broad, anterior and posterior corners subtuberculate, the posterior corners more feebly so; flat to very slightly transversely excavate, capable of receiving the anterior face of petiolar node when gaster is curved over forward: sides marginate. Declivous face of epinotum strongly oblique, laterally marginate, forming with basal face a strongly obtuse and smoothed angle. Metasternal lobes rounded above. Mid and hind tibiae with a rudimentary apical spur.

Petiole with a short peduncle and a highly elevated, antero-posteriorly compressed node. Node broader than basal face of epinotum; subpetiolar tooth minute. Postpetiole in profile inclined forward, seen from above broader than long (17:12), suboval, distinctly broader than petiolar node (17:14). Gaster subtruncate anteriorly.

Standing or oblique hairs sparse on body; shorter, denser and subdecumbent hairs on antennae and legs. Sparse decumbent hairs on dorsum of head inclined toward the middle.

Female (paratype). — Total length 2.7 mm; maximum length of head capsule 0.56 mm; maximum width of head behind eyes 0.48 mm; length of scape 0.43 mm; Weber's length of thorax 0.77 mm. Wings unknown. Closely resembling the worker, with the differences of the caste, i. e. presence of small, not protruding ocelli and a pterothorax. Clypeal truncation and armature a bit weaker than in worker. Basal face of epinotum not dentate at the posterior corners but basal and declivous face in profile sub-continuous.

Types. — 13 workers and 1 female from Dirkschoop, Surinam, sifted from soil sample taken in primary forest (DIIIcd) in October 1959 (J. v. d. Drift leg.). Holotype worker and half of the paratypes in my collection (WWK), the other half returned to the collector, to whom this striking new species is dedicated.

Discussion. — The paratype workers completely agree with the holotype, even the variation in measurements is negligible. Total length 2.1-2.3 mm; maximum length of head 0.48-0.52 mm; maximum width of head 0.39-0.41 mm; Weber's length of thorax 0.59-0.64 mm.

Using Emery's (1922) and Wheeler's (1922) keys to the Myrmicine genera, one will find difficulty in running down this species to *Megalomyrmex*. As likely as not one will end up with the subgenera *Parholcomyrmex* and *Xeromyrmex* of *Monomorium*, none of them native to the Neotropical region. The reason for this lies in the shape of the clypeus, as already described above and shown in the figures. It should be noted, however, that in other small *Megalomyrmex* species from southern Brazil a similar transformation of the clypeus is outlined, yet never as strong as in the present species. I have a still undescribed species from southern Brazil which is very close to the present *drifti*, and forms at the same time an ideal connecting link with the remaining more orthodox *Megalomyrmex* species. For this reason, and on account of overall similarity, I associate *drifti* with *Megalomyrmex*. But I do not pretend that the distinction of genera in tribe Monomoriini is final and does not need further study.

The present species differs from all hitherto described species in the genus by its extremely small size, the black color, the truncate, dentate and carinate clypeus, and the shape of the mandibles. Although I am not much in favor of hitherto recognized subgenera in this genus, I wish to state that *drifti* should be placed in *Megalomyrmex* s. str.

Megalomyrmex (Wheelerimyrmex) sjoestedti Wheeler, 1925

A single worker, taken in pitfall trap in a citrus orchard at Dirkshoop (IVa), seems to belong to the present species, originally described from Bolivia. The specimen agrees well with the description of the type, except for slightly longer funicular segments II-VIII. Incidentally, Wheeler had the same species from British Guiana, which he described under the name of *sjoestedti* var. *langi*.

Solenopsis geminata (Fabricius, 1804)

950 major and minor workers in 32 samples and from the following stations: Paramaribo, culture garden in pitfall trap (Ia & IIa) and soil sample (Icd & IIcd); Dirkshoop, in soil sample from primary forest (IIIc), in pitfall trap sample from citrus orchard (IVa, DIVa), and in both soil and trap samples from peanut field (Va, Vcd, DVa); Tambahredjo, both in pitfall trap and soil samples from woodland (VIa, VIcd, DVIIa) and tomato field (VIIa, VIIcd, DVIIa, IXa) on shell ridge; Sidoredjo, in pitfall trap samples from shrub (Xa) and watermelon field (XIa); La Poulle, in pitfall trap, litter and soil samples from shrub (XIVa, XIVb, XIVcd), pasture (XVa, XVcd) and watermelon field (XVIa); Vank, in pitfall trap samples from shrub (XVIIa) and pasture (XVIIIa, DXVIIIa); Poeroe man kemisa, in pitfall trap sample from cultural field (XXIIIa). This is one of the commonest species, especially abundant in cultivated areas.

Solenopsis saevissima (Fr. Smith, 1855)

220 workers in 12 samples from the following stations: Dirkshoop, in pitfall trap and soil samples from primary forest (IIIa, IIIcd) and peanut field (Va, DVa); Tambahredjo, in pitfall trap sample from woodland (VIa) and tomato field (DVIIa); Sidoredjo, in pitfall trap sample from watermelon field (XIa); La Poulle, in pitfall trap sample from pasture (XVa, XVcd) and watermelon field (XVIa); Poeroe man kemisa, pitfall trap sample in cultural field (XXIIa, XXIIIa). Decidedly less common than the preceding species, yet it is not rare. It should be noted that Surinam is close to the northern limit of the natural range of *S. saevissima*.

Solenopsis (Euopthalma) globularia (Fr. Smith, 1858)

43 workers in 2 samples taken in pitfall traps in cultural field at Poeroe man kemisa (XXIIa, XXIIIa).

Solenopsis (Diplorhoptrum) altinodis Forel, 1912

A lone worker found in pitfall trap sample from woodland at Tambahredjo (DVIa). Originally described from Venezuela and Trinidad, this species was already recorded from British Guiana by Wheeler, in 1921.

Solenopsis (Diplorhoptrum) sulfurea Roger, 1862

Two workers from two pitfall trap samples taken in primary forest at Maripaheuvel (XX) and Poeroe man kemisa (XXIa).

Solenopsis (Diplorhoptrum) ? pygmaea Forel, 1901

Approximately 200 workers found in 14 soil and 1 pitfall trap samples at the following localities: Paramaribo, cultural garden (Icd & IIcd); Dirkshoop, primary forest (IIIcd), citrus orchard (IVcd); Tambahredjo, woodland (VIcd, DVIa), tomato field (VIIcd, IXcd), marshy wood on sandy loam (VIIIcd); Sido-redjo, in shrub (Xc, XIIcd), watermelon field (XIIIc); La Poulle, in shrub (XIVcd).

Solenopsis (Diplorhoptrum) spp.

200 workers belonging to at least six different species could not be identified during this investigation. The group is badly in need of revision, and no recent synthesis is at hand.

***Carebara* spp.**

About 50 workers of very small size seem to belong to 2 different species of this difficult genus. Since there is no synthesis or key for the few neotropical species already described, and my attempts at identification were of no success, I leave them rather unnamed. One or the other might be a still undescribed species.

Leptothorax echinatinodis Forel, 1886

Two workers, one from a pitfall trap sample, the other from a soil sample, both taken in a citrus orchard at Dirkshoop (IVa,

IVcd). The finding of this species in the soil fauna is merely accidental, since it is known as a twig dweller and tree ant.

Rogeria curvipubens Emery, 1894

72 specimens, mostly workers but also a few females, found in 10 different samples at the following stations: Dirkshoop, from pitfall trap and soil sample in citrus orchard (DIVa, DIVcd); Tambahredjo, trap and soil sample in woodland (VIcd, DVia) from trap sample in tomato field (VIIa), from litter and soil sample in marshy wood on sandy loam (VIIIb, VIIIcd); Sido-redjo, from soil in shrub (Xc); La Poulle, from litter and soil sample in shrub (XIVb, XIVcd). The species is already known from Bolivia, Venezuela, Trinidad and Cuba. I have seen the female syntype of the original series.

Rogeria sp.

4 workers and 1 female, from 3 litter samples taken in marshy wood on sandy loam at Tambahredjo (VIIIb); in shrub at La Poulle (XIVb); in pastureland at Vank (XVIIIb). They differ from *curvipubens* by the decidedly coarser sculpture but might be related to one of several species described by Santschi and Weber from Cuba. The lack of authentic or type material prevents me from naming them specifically.

Rogeria micromma, n. sp.

(Figs. 12, 13)

Worker (holotype). — Total length 1.9 mm; maximum length of head 0.51 mm; maximum width of head 0.45 mm; length of scape 0.35 mm; Weber's length of thorax 0.52 mm. Yellowish brown.

Head as shown in Figs. 12, 13. Mandibles smooth and shining sparsely covered with fine piligerous punctures; chewing border with 5 small teeth, diminishing in size toward base. Clypeus with prominent, convex to subtruncate median lobe, the anterior face is vertical, forming in profile an obtuse angle with posterior oblique dorsal face, the latter narrowed and laterally subcarinate, posteriorly wedged in between the short, subparallel, gently convex frontal carinae. Antennal scape smooth and shining, failing to reach the occipital border by a distance which exceeds its

maximum width when laid back over the head. Funiculus 11-segmented with distinct 3-segmented and inflated apical club; for details see Fig. 13. Eyes minute, consisting of 3 facets, their maximum diameter much shorter than maximum thickness of scape. Integument of head proper finely and superficially reticulate-punctate and somewhat shining; macro-sculpture consisting of sparse longitudinal and somewhat diverging rugae on front and vertex, of coarsely reticulate rugosities elsewhere, transverse rugosities predominating on occiput.

Thorax as shown in Fig. 12; subopaque. Fine reticulate-punctate microsculpture sharper; macrosulpture weaker; dorsum of promesonotum longitudinally but irregularly rugose, with a few occasional transverse trabeculae connecting the rugae; vestigial on sides of thorax, except for portion below the large and prominent bulla of metasternal gland, where several longitudinal costae are present. Promesonotum continuous, anteriorly separated from reticulate rugose "neck" by one or two undulate transverse rugae, laterally immarginate, little longer than broad, posteriorly converging to strongly narrowed epinotum. Mesoepinotal junction not marked by a suture or transverse groove, but having instead one or two transverse and raised carinules. Basal face of epinotum laterally sharply marginate, flattened, posteriorly with a pair of rather short, scarcely raised and somewhat diverging spines, which are acutely triangular as seen in profile. Epinotal spines shorter than their distance at base, connected at their base by a transverse blunt margination, limiting above the laterally carinate and strongly excavate declivous face. Metasternal lobes dorsally rounded, ventrally rectangular. Legs smooth and shining.

Pedicelar segments subopaque, finely reticulate-punctate, their dorsal faces more weakly sculptured and somewhat shining. Petiole with a stout peduncle, followed by an elevated, rounded node, which seen from above is transversely oval. Postpetiole broader than petiolar node, broader than long, the sides convex. Gaster smooth and shining, piligerous punctures minute and indistinct.

Head and gaster with sparse both erect and decumbent short hairs. Thorax and pedicel with erect or oblique hairs only. Pile on scape and legs denser but decumbent.

Types. — 3 workers as follows: Surinam, Dirkshoop, soil sample from primary forest, May 1959 (J. van der Drift leg.) 2 workers (holotype and paratype); La Poulle, soil sample

from shrub, august 1959, (J. v. d. Drift leg) 1 worker (paratype). In my collection (WWK) and that of the collector.

Discussion. — The few specimens examined indicate the following varying features: Total length 1.7-1.9 mm; maximum length of head capsule 0.48-0.51 mm; maximum width of head 0.43-0.45 mm; length of scape 0.32-0.35 mm; Weber's length of thorax 0.49-0.52 mm. In addition, the chewing border of the mandibles may have a 6th tooth, the transverse carinules on anterior border of pronotum vary from 1-2, on mesoepinotal junction from 0-2; the eyes have 1-4 facets, the basal face of the epinotum may present vestigial rugosities.

The ensemble of the following characters distinguish this present species from all other known species of the group: Small size, minute eyes, heavy reticulate-punctate microsculpture, especially on thorax, type of pilosity.

***Ochetomyrmex semipolitus* Mayr, 1877**

16 workers from 3 pitfall-trap catches made in primary forest at Maripaheuvel (XX), in primary forest (XXIa) and cultural field (XXIIa) at Poeroe man kemisa.

***Ochetomyrmex subpolitus* (Wheeler, 1916), n. comb.**

Wasmannia subpolita Wheeler, 1916, Bull. Amer. Mus. Nat. Hist. 35: 8-9 (Worker; British Guiana: Tukeit, Kaieteur, Kauwa Creek, Roraima).

A single worker collected in primary forest at Maripaheuvel (XX). The types (syntype workers in WWK) were taken in British Guiana. Recently (Kempf 1959, p.215) I recorded the species from the adjoining Amapá territory in Brazil.

The main distinctive character of *Ochetomyrmex* has hitherto been supposed to consist in the longitudinally flattened and anteriorly protracted clypeus, as present in *O. semipolitus* Mayr and *O. mayri* Forel (the latter possibly a mere synonym of the former!). To my mind, the generic division of the Ochetomyrmicini becomes more satisfactory when this character is put aside and other characters are taken into consideration, such as sculpture patterns (cephalic dorsum nearly smooth and shining in *Ochetomyrmex*), lack of an infero-posterior-margination or ridge on head, thoracic structure (deep and broad metanotal impression) and prominent bullae of the metasternal glands. Thus *Wasmannia subpolita* falls nicely into *Ochetomyrmex* and the genus *Wasmannia* itself becomes more homogeneous and consistent. I intend to deal with this matter more thoroughly in another study.

***Wasmannia auropunctata* (Roger, 1863)**

430 workers and a few females collected in 23 pitfall trap, soil and litter samples at the following stations: Dirkshoop, primary forest (IIIa, IIIcd, DIIIa, DIIIcd), citrus orchard (IVa, IVcd, DIVa, DIVcd), and peanut field (Va, DVa); Tambahredjo, in woodland (VIa); Sidoredjo, in watermelon field (XIIIa); La Poulle, in shrub (XIVa, XIVcd); Vank, in shrub (XVIIa, XVIIcd) and pasture land (XVIIIa, XVIIIb, DXVIIIa); Maripaheuvcl, in primary forest (XX-XXIa); Poeroe man kemisa, in cultural field (XXIIIa). This is a common, widespread and rather unspecialized ant. It is significant that in Surinam it was found in forest, cultivated field, shrubs and pastures, both during the wet and dry season.

***Wasmannia scrobifera*, n. sp.**

(Figs. 14, 15)

Worker (holotype). — Total length 2.1 mm; maximum length of head capsule 0.53 mm; maximum width of head behind eyes 0.48 mm; length of scape 0.37 mm; Weber's length of thorax 0.53 mm. Testaceous-brown.

Head as shown in Figs. 14, 15; finely punctate and opaque. Mandibles finely reticulate-rugose, somewhat shining; chewing border showing at full mandibular closure 4 distinct triangular teeth (total number of teeth not verified, this being the only available specimen). Anterior border of clypeus convex; the median lobe perpendicularly raised, with a few longitudinal rugae, terminating above in a transverse marginate and crenate border; posterior half of same lobe horizontal, completely fused to frontal carinae, frontal area and front; trapezoidal in dorsal view, the anterior border slightly scalloped, the antero-lateral corners with a prominent blunt tooth, the sides sinuous and converging toward strangulation of frontal carinae above the antennal socket. Frontal carinae strongly sinuous and projecting, transverse in front, then broadly rounded, then subparallel and continuing caudad to nearly the occipital corner, forming the dorsal limit of the neatly circumscribed and excavate antennal scrobe. Dorsum of head, between scrobes, with longitudinal and widely spaced rugae, slightly more irregular on posterior half, where occasional transverse connecting trabeculae are also seen. Occipital border moderately convex, occipital corners not marked

in dorsal view. Eyes relatively large, dorso-ventrally compressed, with slightly drawn-out antero-inferior corner, having about 7 facets across the greatest diameter. Antennal scrobe more sharply punctate, lacking macrosulpture. Cheeks longitudinally rugose, sides and gular face of head rather coarsely reticulate-rugose. Inferior occipital angles prominent, rounded, crested, continued forward to below the eye separating side of head from gular face. Scapes conspicuously flattened and broadened, curved and slightly twisted near base; shapes in different positions shown in Figs. 14, 15. Funicular segments rather shining, segments II-VII distinctly transverse; apical club indistinctly 3-segmented, VIII much shorter than IX, X longer than VIII and IX combined.

Thorax finely reticulate-punctate and opaque; in profile as shown in Fig. 14. Scapular angles marked. Promesonotum continuous, about as long as broad; anterior border marginate, lateral borders submarginate; sides of pronotum subparallel, of mesonotum converging caudad; disc gently convex in both directions, traversed on pronotum by 8, on mesonotum by 6 longitudinal and vermiculate rugae, not counting the rugae coinciding with the lateral borders. Mesoepinotal junction marked by a raised transverse carinule. Basal face of epinotum lacking macrosulpture on disc. Epinotal spines short, somewhat raised and diverging. Infradental lamellae very prominent. Rugosities on sides or thorax more irregular and less pronounced. Bulla of metasternal gland not greatly projecting. Legs more superficially reticulate-punctate and somewhat shining.

Pedicelar segments (Fig. 14) opaque, reticulate-punctate, dorsum and sides of both nodes coarsely longitudinally rugose. Petiole with a short peduncle followed by an elevated subrectangular and compressed node, which is longer than broad and not attenuate toward apex. Postpetiole distinctly broader than long, sides parallel, in profile gently convex above, its sternite anteriorly bilobate. First gastric tergite nearly covering the whole gaster in dorsal view; anterior half opaque with 12-14 longitudinal coarse rugae, fading out at about the middle of the segment; posterior half superficially and loosely reticulate and somewhat shining. First gastric sternite opaque and sharply reticulate-punctate.

Standing hairs fairly abundant on body, as in all *Wasmannia*-species. Legs and scapes with appressed hairs only.

Type. — 1 worker (holotype) from Surinam, Poeroe man kemisa, collected in pitfall trap sample from primary forest in september 1959 by J. van der Drift (WWK).

Discussion. — The present species is so aberrant that, at first, I was tempted to establish a new genus upon it. Indeed, the peculiar head shape (clypeus, antennal scrobe and frontal carinae), the compressed scapes, the antero-ventrally bilobate sternum of postpetiole and the sculpture of gaster are unique features. Nevertheless, the specimen possesses all the essential features of the genus *Wasmannia*.

***Wasmannia* ? *sigmoidea* (Mayr, 1884)**

7 workers and 1 dealate female from the following localities: Dirkshoop, pitfall trap catch in citrus orchard (DIVa); La Poulle, in soil sample from watermelon field (XVIcd); Vank, in pitfall trap and litter sample from pasture land (XVIIIb, DXVIIIa).

The specific identity of these specimens is doubtful. They disagree in minor details of sculpture characters with the original description of the types, which Mayr had received from Cayenne, in neighboring French Guiana. Later (1887) he also records the same species from southern Brazil, but it is possible that the latter specimens represent a different species.

***Cephalotes atratus* (Linné, 1758)**

TERREBIS

2 stray workers, one from woodland on shell ridge at Tambahredjo (DVIa), the other from primary forest at Marpaheuveel (XX), both taken accidentally in pitfall traps. The species is a tree dweller and only occasionally forages on the for-

***Paracryptocerus minutus* (Fabricius, 1804)**

2 workers taken in pitfall trap samples from shrub ridge at Sidoredjo (Xa) and from shrub on sand at I. (XIVa). Like the preceding and the following species, *tus* is a tree inhabiting species.

***Paracryptocerus pusillus* (Klug, 1824)**

1 soldier in pitfall trap sample from shrub at La Poulle (XIVa).

***Daceton armigerum* (Latreille, 1802)**

1 worker in pitfall trap sample from tomato field at Tambahredjo (DVIIa). This species is an epigeaic and arboreal forager.

Smithistruma margaritae (Forel, 1893)

2 workers in pitfall trap sample from citrus orchard at Dirkshoop (DIVa), taken during the dry season. Like most small Dacetine ants, this is an inhabitant of leaf litter and the upper layer of soil.

Neostruma crassicornis (Mayr, 1887)

1 worker from litter sample taken in shrub on sand at La Poulle (XIVb). This is a very interesting catch, because heretofore the species was known exclusively from southeastern Brazil and northern Argentina.

Strumigenys carinithorax Borgmeier, 1934

1 worker and 1 female from three pitfall trap and soil samples taken in woodland at Tambahredjo (DV1a), in shrub at Sidoredjo (Xc), and in shrub at Vank (XVIIcd). The types were described upon specimens taken in coffee plantation at Poeroe man kemisa.

Strumigenys denticulata Mayr, 1887

55 workers and 6 females, mostly from litter and soil samples taken at the following stations: Dirkshoop, in pitfall trap and soil samples from primary forest (IIIcd, DIIIa, DIIIcd); Tambahredjo, in marshy wood on sandy loam (VIIIcd); Sidoredjo, in shrub (Xc); La Poulle, in shrub (XIVb, XIVcd); Vank, in shrub (XVIIcd) and in pastureland (XVIIIb); Maripaheuveel, in primary forest (XX, XX & XXIc).

Strumigenys eggersi Emery, 1890

8 workers and 1 female in 4 soil samples taken in marshy wood on sandy loam at Tambahredjo (VIIIcd), in shrub at Sidoredjo (Xc, XIIcd), in shrub at La Poulle (XIVcd).

Strumigenys elongata Roger, 1863

1 worker in soil sample from primary forest near Maripaheuveel and Poeroe man kemisa (XXc & XXIc).

Strumigenys louisianae Roger, 1863

1 worker in pitfall trap sample taken in citrus orchard at Dirkshoop (IVa).

Strumigenys perparva Brown, 1957

98 workers and 5 females from 8 samples taken at the following stations: Dirkshoop, primary forest (IIIcd, DIIIcd); Tambahredjo, marshy wood on sandy loam (VIIIb, VIIIcd); Sidoredjo, a lone female in pitfall trap sample from watermelon field (XIa); La Poulle, in shrub (XIVb, XIVcd); Maripaheuvcl, primary forest (XXc & XXIc).

Quadristruma emmae (Emery, 1890)

62 workers and 4 females from two soil samples taken in citrus orchard at Dirkshoop (IVcd, DIVcd).

Octostruma balzani (Emery, 1894)

55 workers and 4 females from the following 12 pitfall trap, soil and litter samples: Dirkshoop, primary forest (DIIIa) and citrus orchard (DIVa, DIVcd); Tambahredjo, woodland (VIa, VIcd, DVla), marshy wood on sandy loam (VIIIa, VIIIb, VIIIcd); Sidoredjo, shrub (xc); La Poulle shrub (XIVb); Vank, pasture (XVIIIb).

Octostruma ? batesi (Emery, 1894)

2 workers, from primary forest at Maripaheuvcl (XX) and near Maripaheuvcl and Poeroe man kemisa (XXc & XXIc).

This species is known only from the single holotype specimen taken at an unknown locality on the Amazon river. The present specimens are much smaller in size and differ also in head pilosity which resembles that of *balzani*. Perhaps the larger size and the extranumerary cephalic hairs of the *batesi* type (cf. Brown & Kempf, 1960, p.201) mark it as an ergatoid female, an intercaste which occurs also in other species of the *balzani*-group of *Octostruma*. At any rate the present specimens are specifically distinct from *balzani* as regards the peculiar head shape (as in *batesi*) and the presence of a pair of long fine setae on the first gastric sternite.

Rhopalothrix weberi Brown and Kempf, 1960

12 workers and 2 females from 4 samples taken at Dirkshoop, primary forest (IIIcd), at Tambahredjo, woodland (VIcd, DVIa); at La Poulle, shrub (XIVcd). Heretofore the species was known only from the holotype taken at Casa Harvard near Central Soledad, Las Villas Province, Cuba.

Mycocepurus reconditus Borgmeier, 1937

A lone worker from pitfall trap sample taken in tomato field at Tambahredjo (VIIa).

Myrmicocrypta buenzlii Borgmeier, 1934, reinstated

3 workers from soil samples taken in primary forest at Dirkshoop (IIIcd) agree closely with the paratype worker of *buenzlii* in my collection (CTB).

Recently (1958, p.262), Weber synonymized *buenzlii* with *squamosa* Fr. Smith, after having examined 3 workers in the Forel collection, identified as *squamosa* by the latter. Forel's specimens (cf. 1911, p.295), however, were taken by Luederwaldt in the borough of Ipiranga in São Paulo city, southern Brazil. Specimens of the same serie are in the collection of the Departamento de Zoologia de São Paulo and that of Father Borgmeier (CTB). Their identity with the original *squamosa* rests exclusively upon the assumption that São Paulo city is the type locality. This is not correct. All species mentioned or described by Fr. Smith in his 1860 paper (Jour. Ent. 1) as having been taken at «St. Paul, Brazil», were collected by H. W. Bates at São Paulo de Olivença, a small town on the upper Amazon river. Inasmuch as the original description of *squamosa*, a female, is worthless for all practical recognition, it follows that Forel's identification of the specimens from southern Brazil as belonging to the same species is merely a guess. Dr. Weber is correct in pointing out the extreme similarity between *buenzlii* and aforesaid «*squamosa*» workers. But as long as the true identity of *squamosa* Sm. (not of authors) is not established, *buenzlii* is the first available name for the present specimens, unless they be also identical with *uncinata* (Mayr, 1887) (now questionably listed as a mere «variety» under *squamosa* Fr. Smith).

Myrmicocrypta spp.

3 workers from soil and pitfall trap samples taken in primary forest at Maripaheuvél and Poeroe man kemisa (XXc & XXic, XXIa), represent two additional species which I am unable to identify with certainty.

Sericomyrmex spp.

Each of two pitfall trap samples taken in primary forest at Maripaheuvcl and Poeroe man kemisa (XX, XXIa) contained workers of two different species. On of the species is also represented by a dealate female. The lack of an up-to-date synthesis of the species in this difficult genus and of authentically determined specimens in my collection prevents me from naming them at the present time.

Apterostigma urichi Forel, 1893

1 worker from pitfall trap sample taken in cultural garden at Paramaribo (Ia & IIa); 1 female from pitfall trap sample taken in primary forest at Dirkshoop (DIIIa).

Apterostigma spp.

3 workers, representing two species, taken in pitfall trap samples from primary forest at Maripaheuvcl (XX) and Poeroe man kemisa (XXIa).

Cyphomyrmex kirbyi Mayr, 1887

1 worker taken in littler sample from shrub at La Poulle (XIVb) and 1 dealate female taken in soil sample from shrub at Vank (XVIIcd) seem to belong to this species.

Cyphomyrmex ? laevigatus Weber, 1938

7 workers collected in pitfall trap and soil samples from primary forest at Dirkshoop (IIIa, IIIcd, DIIIa). This strikingly aberrant species was known only from the types taken in Bolivia. Their presence in Surinam is one of the many surprises provided by the survey conducted by Dr. J. van der Drift.

After finishing this manuscript I had a chance of showing these specimens to Dr. N. A. Weber, the foremost authority on small Attini ants, and author of *laevigatus*. Dr. Weber is of the opinion that on account of their hugely enlarged occipital lobes the present specimens are not identical with *laevigatus*, representing in all probability a new species. The confirmation of this surmise by closely comparing them with the types is not possible at the moment.

Cyphomyrmex rimosus (Spinola, 1851)

84 specimens, mostly workers but also a few dealate females, were found in 19 samples from the following stations: Paramaribo, from pitfall trap in culture garden (Ia & IIa); Dirkshoop, in soil sample from primary forest (IIIcd), from pitfall trap and soil samples in citrus orchard (IVa, IVcd, DIVa, DIVcd); Tambahredjo, in pitfall trap and soil sample from woodland (VIa, VIcd) and tomato field (VIIa, IXa); Sidoredjo, in pitfall trap sample from watermelon field (XIa), in soil sample from shrub on shell ridge (Xc); La Poulle, in pitfall trap sample from shrub on sand (XIVa); Vank, in pitfall trap sample from pasture (XVIIIa, DXVIIIa); Poeroe man kemisa, in pitfall trap samples from primary forest (XXIa) and cultural field (XXIIa).

The great variability of the species, which found its taxonomic expression in a number of subspecies and varieties, is likewise reflected by the present lot. Since this system is not satisfactory I do not take it into consideration, accepting *C. rimosus* here in the broad sense.

Trachymyrmex cornetzi Forel, 1912

12 workers from 6 pitfall trap samples taken in primary forest (IIIa) and citrus orchard (IVa) at Dirkshoop; in woodland (VIa, DVIIa), tomato field (DVIIa) and in marshy wood (VIIIa) at Tambahredjo.

Trachymyrmex relictus Borgmeier, 1934

32 workers and 2 females taken in pitfall trap and soil samples from primary forest (IIIa, IIIcd) and citrus orchard (IVa, DIVa) at Dirkshoop.

Trachymyrmex verrucosus Borgmeier, 1948

2 workers from pitfall trap sample in primary forest at Dirkshoop (IIIa).

Trachymyrmex spp.

62 specimens belonging to 4 different, still unidentified species.

Atta cephalotes (Linné, 1758)

65 workers from pitfall trap samples collected in woodland (VIa, DVIIa) and tomato field (VIIa, DVIIa) at Tambahredjo and in primary forest (XX) at Maripaheuvél.

Subfamily **Dolichoderinae** Forel**Dolichoderus attelaboides** (Fabricius, 1775)

1 worker in litter sample from shrub at La Poulle (XIVb).

Monacis bispinosa (Olivier, 1791)

4 workers from 3 pitfall trap samples taken in marshy wood on sandy loam at Tambahredjo (VIIIa) and in cultural fields at Poeroe man kemisa (XXIIa, XXIIIa).

Hypoclinea bidens (Linné, 1758)

1 worker from pitfall trap sample in cultural field at Poeroe man kemisa (XXIIIa).

Azteca sp.

1 minor worker from pitfall trap sample in primary forest at Dirkshoop (DIIIa).

Conomyrma brunnea (Forel, 1908)

37 workers from pitfall trap collections made in tomato field (VIIa, DVIIa) at Tambahredjo; in watermelon field (XIa) at Sidoredjo; in pastureland (DXVIIIa) at Vank; in culture garden at Paramaribo (Ia & IIa). 7 males taken in soil samples at Dirkshoop (IIIcd), Tambahredjo (VIcd), Sidoredjo (XIIIc), La Poulle (XVcd, XVIcd) possibly belong to the same species which I accept in the sense defined by Kusnezov (1952).

Tapinoma melanocephalum (Fabricius, 1793)

18 workers from 7 pitfall trap and soil samples taken at the following stations: Dirkshoop, peanut field (Vcd); Tambah-

redjo, woodland (DV1a) and marshy wood (VIIIcd); Sidoredjo, shrub and dense grass vegetation (XIIcd); La Poulle, shrub (XIVcd) and pasture (XVcd).

Subfamily **Formicinae** Lepeletier

Acropyga paramaribensis Borgmeier, 1933

127 workers and 3 females in 4 samples taken at the following stations: Dirkshoop, primary forest in pitfall trap and soil samples (IIIa, IIIcd); Tambahredjo, in soil sample from woodland (DV1a); Maripaheuvel and Poeroe man kemisa, in pitfall trap sample from primary forest (XXa & XXIa).

Acropyga rutgersi Buenzli, 1935

1 worker in pitfall trap sample from primary forest at Dirkshoop (IIIa).

Acropyga sp.

1 female in pitfall trap sample from shrub at Sidoredjo (XIIa).

Brachymyrmex patagonicus Mayr, 1868

760 specimens, mostly workers but also several females and males in 28 samples taken at the following stations: Paramaribo, soil sample from culture garden (Icd & IIcd); Dirkshoop, pitfall trap and soil samples from primary forest (IIIcd), citrus orchard (IVa, IVcd, DIVa) and watermelon field (Va, Vcd, Dva); Tambahredjo, pitfall trap and soil samples from woodland (DV1a) and tomato field (VIIa, IXa, IXcd); Sidoredjo, pitfall trap and soil samples from shrub (Xc), watermelon field (XIa, XIIIa) and dense shrub and grass vegetation (XIIcd); La Poulle, in pitfall trap and soil samples from pasture (XVa, XVcd) and watermelon field (XVIa, XVIcd); Vank, pitfall trap sample from pasture (DXVIIIa); Poeroe man kemisa, pitfall trap samples from cultural fields in first and second year of cultivation (XXIIa, XXIIIa).

Brachymyrmex heeri Forel, 1874

15 workers and 1 female from 4 soil samples taken at the following stations: Dirkshoop, primary forest (IIIcd); Tambahredjo, woodland (VIcd) and tomato field (VIIcd); Sidoredjo, shrub on shell ridge (Xc).

Brachymyrmex fiebrigi Forel, 1908

373 specimens, mostly workers and a few females, from 9 soil samples collected at the following stations: Paramaribo, culture garden (Icd & IIcd); Dirkshoop, citrus orchard (IVcd, DIVcd); Tambahredjo, tomato field in pitfall trap (IXa); Sidoredjo, shrub (XIcd) and watermelon field (XIIIc); La Poulle, pasture (XVcd) and watermelon field (XVIcd); Vank, shrub (XVIIcd).

B. fiebrigi was hitherto known only from Paraguay and adjoining countries. The identification of the present lot is based on Santschi's 1923 revision of the genus.

Myrmelachista (Hincksidris) sp.

1 badly damaged worker from pitfall trap sample, taken in woodland at Tambahredjo (VIa), was lost during mounting.

Camponotus (Myrmothrix) abdominalis (Fabricius, 1804)

11 workers from 1 litter and 2 pitfall trap samples taken in shrub on sand at La Poulle (XIVa, XIVb) and in marshy wood on sandy loam at Tambahredjo (VIIIa).

Camponotus (Tanaemyrmex) agra (Fr. Smith, 1858)

1 minor worker from pitfall trap sample taken in primary forest at Dirkshoop (IIIa).

Camponotus (Tanaemyrmex) rapax (Fabricius, 1804)

1 minor worker taken in primary forest at Maripaheuvel (XX).

Camponotus (Myrmaphaenus) leydigi Forel, 1886

30 minor workers from 8 pitfall trap samples taken at the following localities: Dirkshoop, citrus orchard (IVa, DIVa);

Tambahredjo, marshy wood on sandy loam (VIIIa); Sidoredjo, field with water melons on shell ridge and on sand (XIa, XIIIa); Vank, pasture land on sand (XVIIIa, DXVIIIa).

Camponotus (Myrmaphaenus) blandus (Fr. Smith, 1858)

3 minor workers taken in pitfall trap sample from cultural field at Poeroe man kemisa (XXIIIa).

Camponotus (Myrmaphaenus) novogranadensis Mayr, 1870

1 minor worker found in pitfall trap sample from woodland on shell ridge at Tambahredjo (VIa).

Camponotus (Myrmobrachys) crassus Mayr, 1862

9 major and minor workers, found in pitfall trap catches made in citrus orchard at Dirkshoop (IVa), in pasture at Vank (DXVIIIa), and in cultural field at Poeroe man kemisa (XXIIIa).

Dendromyrmex chartifex (Fr. Smith, 1860)

1 worker in pitfall trap sample from primary forest at Dirkshoop (IIIa).

Paratrechina (Nylanderia) fulva Mayr, 1862

159 specimens, mostly workers, a few females and males, from 8 samples taken at the following stations: Tambahredjo, soil sample from marshy wood (VIIIcd) and soil and pitfall trap sample from tomato field (IXa, IXcd); Sidoredjo, soil and pitfall trap sample from shrub (Xa, Xc) and soil sample from watermelon field (XIIIc); La Poulle, soil sample from pasture (XVcd).

Although these specimens do not seemingly differ from typical *fulva* samples from southern Brazil, I am not sure of the identification in such unmanageable a group as the subgenus *Nylanderia* of *Paratrechina*.

Paratrechina (Nylanderia) spp.

231 specimens belonging to an apparently common yet unidentified species (sp. *a*). Another species is represented by only a single worker specimens (sp. *b*).

References

- Borgmeier, T., 1955, Die Wanderameisen der neotropischen Region. — *Studia Entomologica*, Nr. 3, 717 pp., 87 pls.
- Brown, W. L., Jr. & W. W. Kempf, 1960, A World Revision of the Ant Tribe *Basicerotini*. — *Studia Ent. (N. S.)*, vol. 3, pp.161-250, 63 figs.
- Emery, C., 1922, Subfam. Myrmicinae *in*: *Gen. Insect. fasc.* 174, 397 pp., 7 pls.
- Forel, A., 1911, Ameisen des Herrn Prof. von Jhering aus Brasilien (São Paulo usw.) nebst einigen anderen aus Suedamerika und Afrika. — *Deutsche Ent. Zeitschr.*, pp.285-312.
- Kemp f, W. W., 1959, *Insecta Amapaensia*. — Hymenoptera: Formicidae. — *Stud. Ent. (N. S.)*, vol. 2, pp.209-218.
- 1960, *Miscellaneous Studies on Neotropical Ants*. — *Stud. Ent. (N. S.)*, vol. 3, pp.417-466, 47 figs.
- Kusnezov, N., 1952, El estado real del grupo *Dorymyrmex* Mayr. — *Acta Zool. Lill.*, vol. 10, pp.427-448, 20 figs.
- Mann, W. M., 1916, The Ants of Brazil. — *Bull. Mus. Comp. Zool. Harvard*, vol. 60, pp.399-490, 7 pls.
- Mayr, G. L., 1887, Suedamerikanische Formiciden. — *Verh. Zool.-bot. Ges. Wien*, vol. 37, pp.511-632.
- Santschi, F., 1923, Revue des fourmis du genre «*Brachymyrmex*» Mayr. — *An. Mus. Nac. Hist. Nat. B. Aires*, vol. 31, pp.650-678, 4 pls.
- Smith, Fr., 1860, Descriptions of new Genera and Species of exotic Hymenoptera. — *Journ. Ent.*, London, vol. 1, pp.65-84.
- Weber, N. A., 1958, Some Attine Synonyms and Types. — *Proc. Ent. Soc. Wash.*, vol. 60, pp.259-264.
- Wheeler, W. M., 1922, Keys to the Genera and Subgenera of Ants. — *Bull. Amer. Mus. Nat. Hist.*, vol. 45, pp.631-710.