

RESEARCH BULLETIN No. 7.

**ANTS OF THE NIGERIAN FOREST ZONE
(HYMENOPTERA: FORMICIDAE) PART IV
MYRMICINAE (Myrmecini to Tetramoriini)**

An illustrated guide to worker caste

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SYNOPSIS

This volume is the fourth in a short series of illustrated guides to the worker caste of ants of the Nigerian forest zone. This volume covers the tribes Myrmecini, Myrmicariini, Myrmicini, Ochetomyrmecini, Pheidolini, Solenopsidini and Tetramoriini being those members of the subfamily Myrmicinae not covered in the third volume.

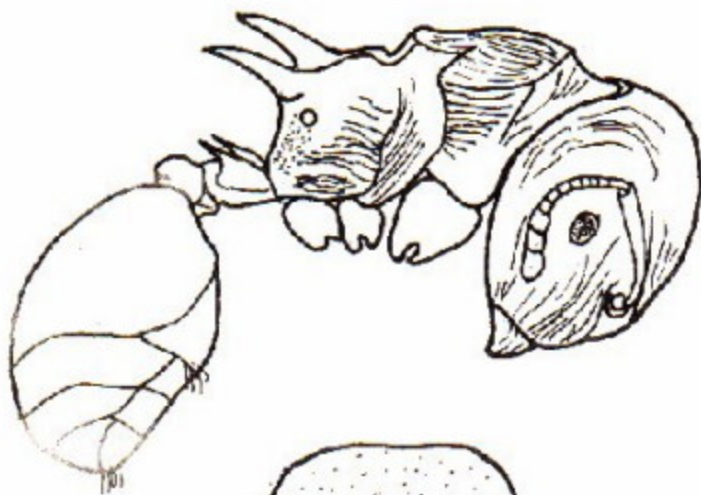
INTRODUCTION

This bulletin follows the same pattern as in the previous three parts of the series and Part I should be consulted for background information and references. For convenience of use of this guide in the field or laboratory the very large subfamily Myrmicinae has been split between two parts of the series and this part covers the tribes Myrmecini, Myrmecariini, Myrmecini, Ochetomyrmecini, Pheidolini, Solenopsisini and Tetramoriini.

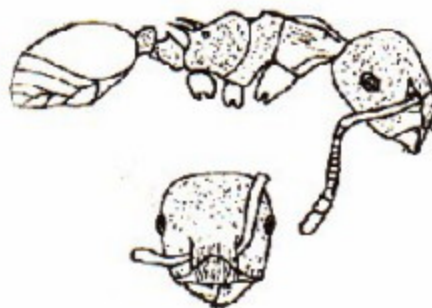
Subfamily MYRMICINAE

Diagnostic features

Pedicel of two segments, postpetiole usually distinctly separated from the gaster. Pygidium not impressed. Frontal carinae totally or partially covering the antennal insertions, eyes usually present. Clypeus projecting back between the frontal carinae. Tibial spurs of middle and hindlegs simple or absent. Antennae 4- to 12- segmented. Ocelli absent. Claws simple.



largest



smallest

Atopomyrmex mocquerysi x15

Tribe MYRMECININI

Genus Atopomyrmex E. André

Diagnostic features

Polymorphic. Antennae 12- segmented, club with 3 segments. Eyes well developed, flat, situated on the posterior half of the sides of the head. Pronotum marginate laterally, promesonotal suture absent. Mesonotum bituberculate behind. Metanotal groove impressed, propodeum armed with a pair of long spines. Petiole with pair of dorsal spines.

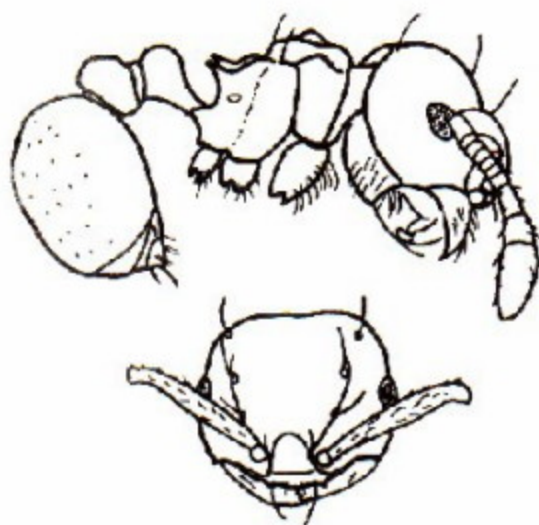
A. mocquerysi

TL 4.23 - 9.12 ; largest morph

HL 2.15 HW 2.27 SL 1.18 PW 1.43

Colour very dark brown-black overall on smallest morph but largest morph has head orange with darker alitrunk and remainder as smallest morph. Shiny, pilosity very short and sparse. Erect setae restricted to a few on clypeal margin and apex of gaster. Sculpturation of smallest morph mainly spiculate on head and alitrunk, rugose on alitrunk dorsum. Largest morph with coarse rugae on anterior of head and alitrunk, gaster very finely punctate. Propodeal spines of smallest flat and acute, of largest massive and upturned. Petiole spines short, acute on smallest; moderately long, acute on largest.

Arboreal, nesting in wood of large trees. Forages in columns onto adjacent trees, including cocoa.



Pristomyrmex species A x 31

Genus Pristomyrmex Mayr

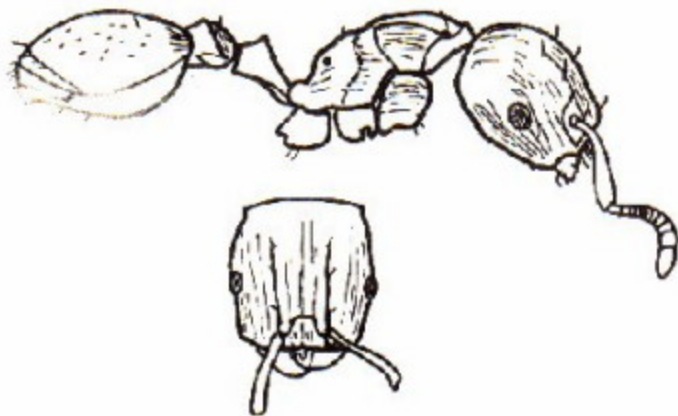
Diagnostic features

Median portion of clypeus with a number of blunt teeth on anterior margin; lateral portions reduced to a thin raised strip in front of antennal insertions. Antennae 11- segmented, 3- segmented club. Eyes medium or small, about midlength of head. Head broader in front than behind, sides convex. Dorsum of alitrunk without sutures. Pronotum usually with a pair of spines or blunt tubercles. Propodeum bispinose or bidentate. Sting simple.

Pristomyrmex species A

TL 2.89 HL 0.75 HW 0.78 SL 0.64 PW 0.47

Colour very dark brown, polished. Erect setae mainly on ventral surfaces, one pair on mesonotal dorsum. Very sparse, very short pilosity on gaster. Unsculptured. Pronotum with rounded acute tubercles. Propodeal spines acute, upturned, triangular. Petiole and postpetiole with smoothly rounded nodes. Collected from leaf litter and nest in what appeared to be an old mason wasp brood pot lying on the leaf litter.



Terataner species T¹ × 15

Genus Terataner Emery

Diagnostic features

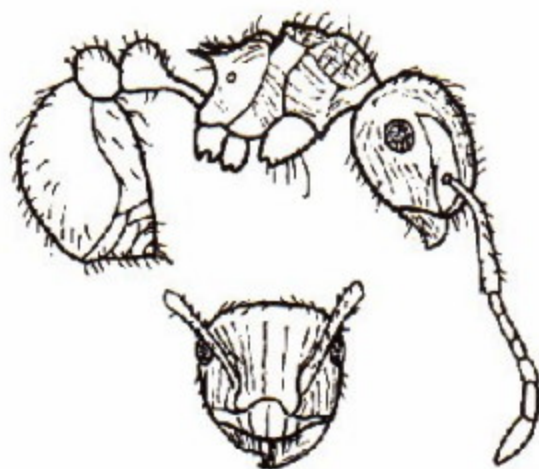
Antennae 12- segmented, 3- segmented club. Pronotum anteriorly and promesonotum laterally marginate. Promesonotal suture absent but lateral margination broken at pro- mesonotal junction. Metanotal groove weakly impressed. Propodeum unarmed, metapleural lobes present. Petiole with paired dorsal teeth.

Terataner species T¹

TL 6.21 HL 1.31 HW 1.24 SL 0.78 PW 0.93

Colour orange-brown, darker posteriorly (one specimen from CRIN generally lighter). Appearance dull due to all over fine reticulate sculpturation, overlaid by longitudinal rugae, most marked on head finer more posteriorly until disappears on posterior dorsum of first gastral tergite. Lateral posterior corners of head and anterior dorsal corners of pronotum with acute angles or minute denticles. Petiole teeth pyramidal with rounded apex in front view. Postpetiole in front view hemispherical, flat anterior face with pronounced vertical rugae. Erect setae short and sparse; extremely sparse and very short pilosity on dorsal surfaces.

Collected from shrub vegetation at CRIN and on cocoa at Cgbere and Ife. At last named found in a debris tent on cocoa flower.



Myrmicaria striata ×15

Tribe MYRMICARIINI

Genus Myrmicaria Saunders

Diagnostic features

Antennae 7- segmented, indistinctly clubbed. Frontal carinae widely separated. Eyes behind midlength of head. Anterolateral angles of pronotum drawn out into a tooth on each side. Promesonotal suture weakly impressed. Mesonotum bluntly bituberculate behind, sharply angled, posterior portion more or less vertical. Metanotal groove deeply impressed, propodeum bispinose. Petiole with long anterior peduncle. Sting coarse. All over numerous long, coarse, dark setae.

Mostly savannah species. The live ant holds the petiole downwards so that the gaster points to the ground.

M. striata

TL 5.57 HL 1.24 HW 1.24 SL 1.03 PW 0.90

Colour dark brown, shiny. Head and anttrunk, especially dorsum, longitudinally rugose. Mesonotum with lamellate lateral margin. Propodeal spines moderately long, acute, flat to down turned. Petiole and postpetiole with rounded nodes.

Ground nesting, constructs sunken runways in soils surface, prefers bare insolated soil. At CRIN fairly common and will tend aphids on cocoa flowers and pods, constructing tents of "mortared" soil. In other western Nigerian cocoa apparently much less common.

Tribe MYRMICINI

A single genus, Cratomyrmex Emery, confined to savannah regions. Not in CRIN collection.

10

Tribe OCHETOMYRMICINI

A single species of the neotropical genus Wasmannia Forel, W. auropunctata (Roger) has been introduced into cocoa growing areas of Cameroun. Not yet reported from Nigeria.

Tribe PHEIDOLINI

Genus Messor Forel

Restricted to savannah regions. Not represented in CRIN collection.

Genus Pheidole Westwood

Diagnostic features

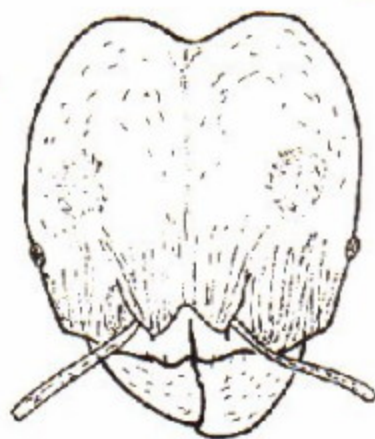
Dimorphic, intermediates rare. Major worker (soldier) with massive head, occipital margin deeply impressed in the middle. Mandibles large, heavy, strongly curved, each usually with three teeth, two apical and one basal with intervening diastema. Antennae 12-segmented, club 3-segmented. Eyes forward of midlength of head. Promesonotal suture rarely present. Metanotal groove deeply impressed. Propodeum with a pair of spines or teeth. Petiole usually emarginate dorsally.

Minor worker with occipital margin shallowly emarginate or more usually with sides of head converging behind eyes to give very short occipital margin. Mandibles usually with two or three large apical teeth subtended by a row of denticulae. Remainder as in soldier but eyes usually just forward of midlength of head.

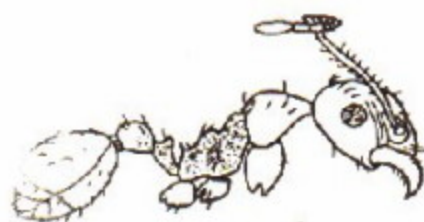
I have found the soldiers, in general, to be much more useful when distinguishing the various species. It is one of the largest and most taxonomically confused genera of ants.



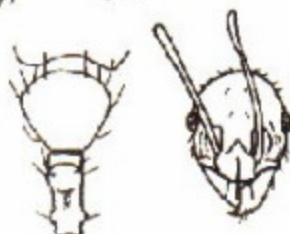
pedicel
× 31



soldier



pedicel
× 31



minor

Pheidole crassinoda × 15

P. crassinoda

Soldier TL 8.11 HL 2.91 HW 2.86 SL 1.37 PW 1.21

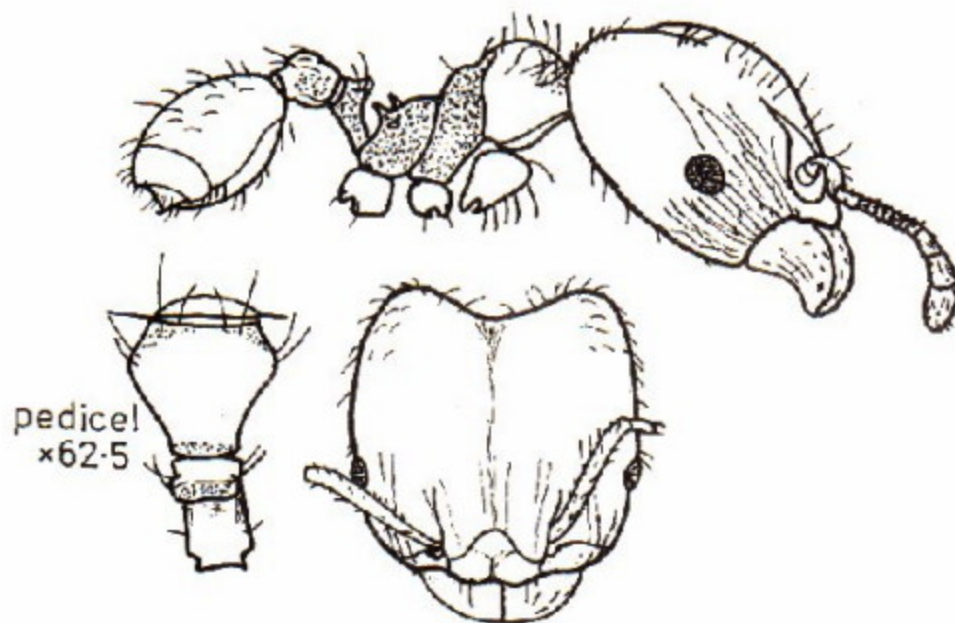
Minor TL 4.36 HL 1.01 HW 0.86 SL 1.24 PW 0.58

Colour, both morphs, head and alitrunk brown/dark red-brown, gaster darker to black, appendages lighter tarsi and antennal clubs orange-brown.

Sculpturation of minor, head, pronotum and gaster smooth, shiny; mesonotum, propodeum and pedicel spiculate. Clypeus medially carinate, shallowly emarginate anteriorly; longitudinal rugae on genae. Petiole produced laterally at anterior of peduncle. Erect setae sparse, relatively short.

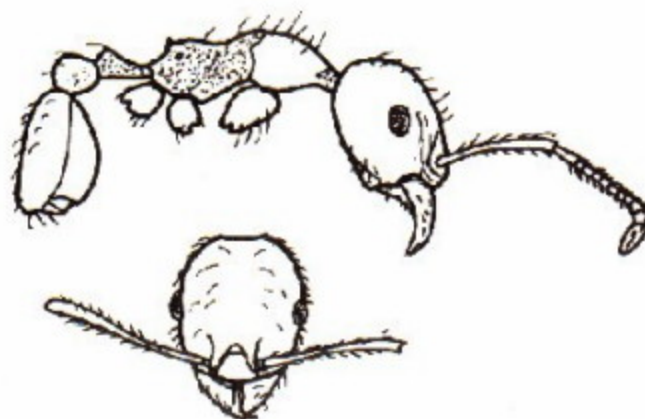
Soldier head principally smooth apart from anterior longitudinal rugae, dorsum shiny. Pronotum rugulose, mesonotum, propodeum and pedicel spiculate, post-petiole with lateral sharp apices and light transverse rugae. Gaster finely punctate. Propodeal spines relatively short narrow out-turned triangular. Erect setae few on head, moderately abundant elsewhere.

Collected from nest in cocoa crevice, opening closed with debris tent material. Will tend aphids on cocoa flowers. May be light and dark varieties. Latter defined as species T¹.



pedicel
×62.5

soldier



minor

Pheidole megacephala ×31

P. megacephala

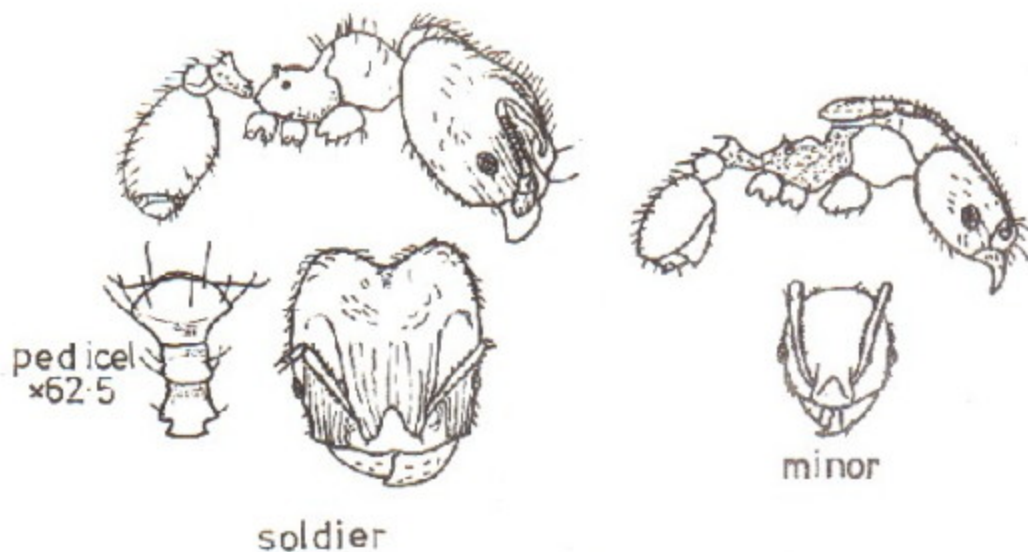
Soldier TL 3.58 HL 1.17 HW 1.24 SL 0.68 PW 0.61

Minor TL 2.49 HL 0.67 HW 0.58 SL 0.68 PW 0.39

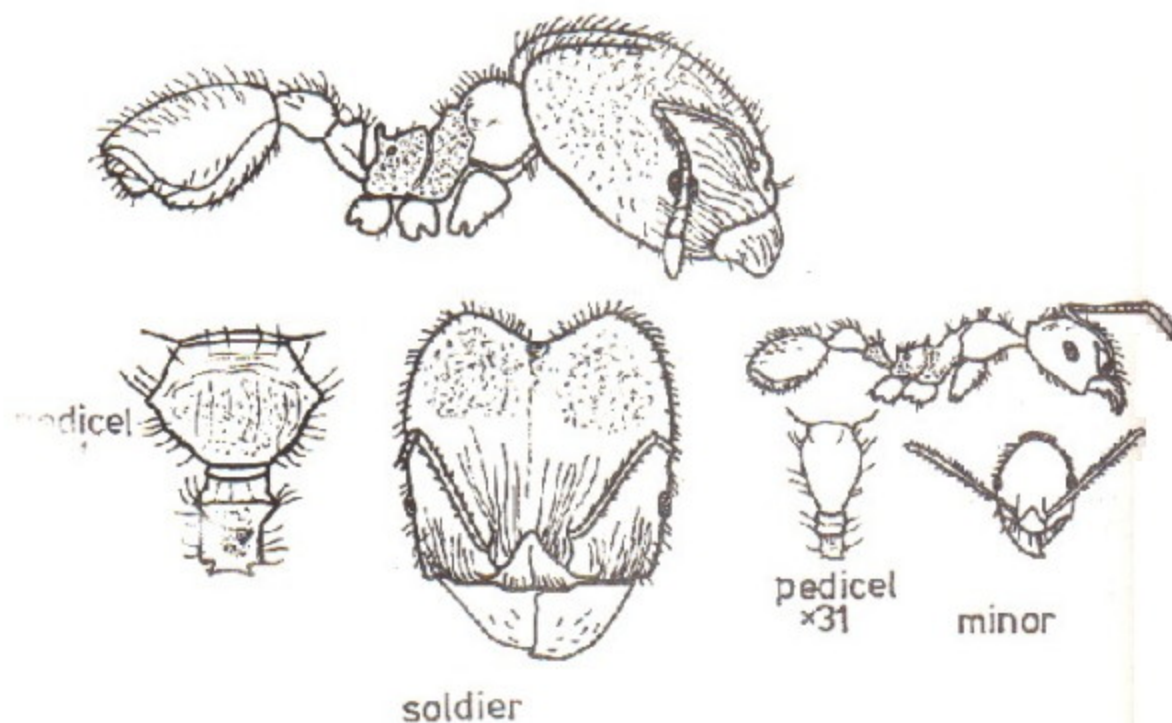
Colour both morphs red-brown, gaster darker, appendages lighter. Alitrunk spiculate except posterior dorsal and lateral areas of pronotum. Erect setae relatively long, moderately abundant. Clypeal margin shallowly convex in minor, medially concave in soldier. Propodeal spines of soldier short and acute.

A common and widespread species on cocoa. Nests in ground or soil in crevices on trees. Avidly tends Homoptera and constructs tents of soil, debris or both.

In the CRIN collection I have separated out what appears to be a melanistic variety of P. megacephala. This variety, Pheidole species T³ is morphologically almost identical, the head of the soldier is slightly more rugose, but the minor is very dark with yellow antennae and tarsi. It seems to be the more common of the two varieties on unshaded vegetation.



Pheidole minima x 31



Pheidole speculifera x15

P. minima/species B

Soldier TL 2.43 HL 0.89 HW 0.81 SL 0.42 PW 0.37

Minor TL 1.56 HL 0.44 HW 0.39 SL 0.40 PW 0.22

Colour dark red-brown, shiny. Sculpturation slight, faint spiculation on lateral mesonotum and propodeum. In profile the petiole node of the soldier is relatively high and emarginate, the post petiole node is relative short with a rounded profile and produced laterally to rounded triangular prominences. The propodeal teeth are small, acute triangular. Erect setae are moderately abundant, relatively long and fine. The minor petiole is short with a raised node but not produced laterally.

Fairly common on cocoon nesting in soil and debris in crevices and building debris tents over Homoptera.

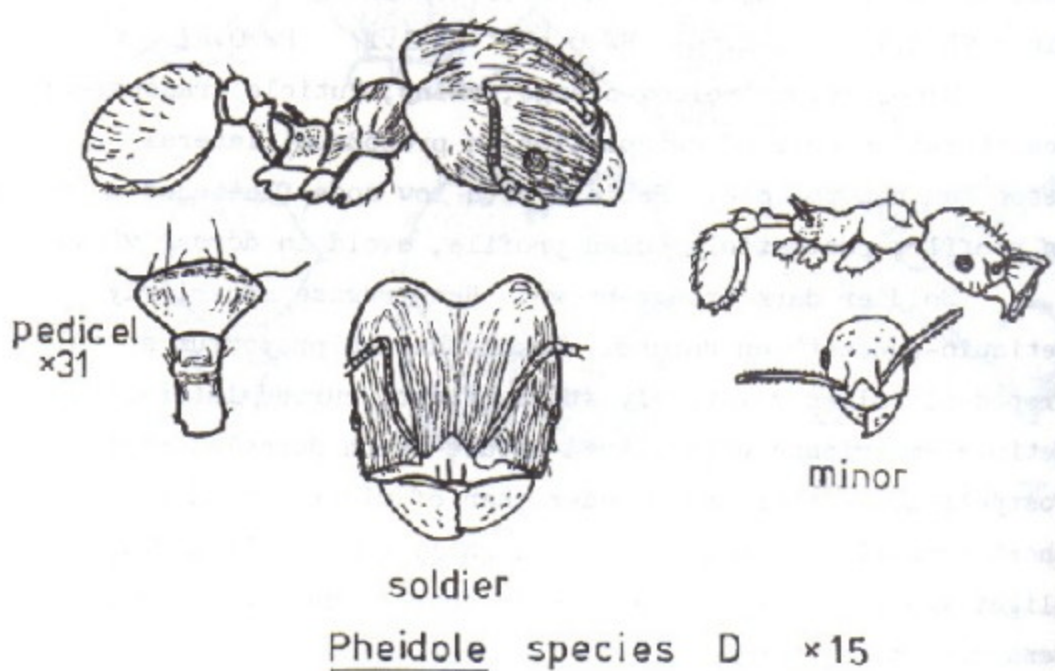
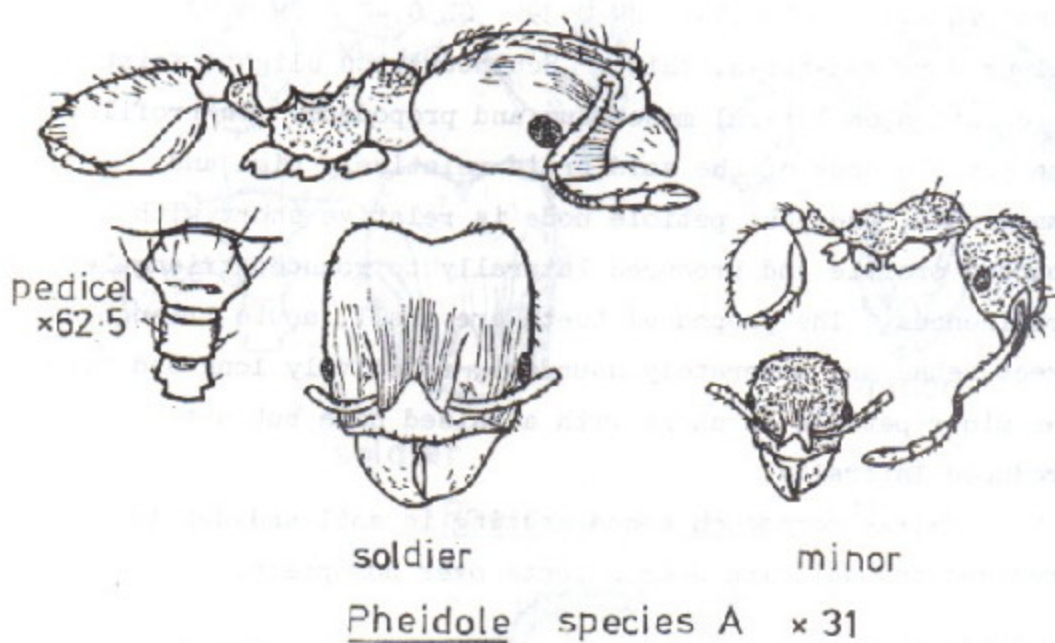
P. speculifera

Soldier TL 6.97 HL 2.27 HW 2.33 SL 1.18 PW 1.00

Minor TL 3.42 HL 0.86 HW 0.65 SL 1.17 PW 0.47

Minor colour yellow-orange, shiny, cuticle transparent. Sculpturation only of spiculation on propodeum, lateral mesonotum and petiole. Petiole with low node flattened dorsally in profile, postpetiole domed profile, ovoid in dorsal view.

Soldier dark orange-brown. Head rugose anteriorly reticulo-punctate on dorsum. Mesonotum and propodeum spiculate. Propodeal spines relatively stout, blunt, curved laterally. Petiole emarginate with paired obtuse teeth dorsolaterally. Postpetiole shorter and broader than of minor. Head with short frontal carinae, clypeus slightly emarginate and with slight medial carina. Erect setae coarse, abundant. Will tend aphids on cocoa.



Pheidole species A

Soldier TL 2.89 HL 1.18 HW 0.93 SL 0.50 PW 0.44

Minor TL 1.87 HL 0.47 HW 0.42 SL 0.47 PW 0.26

Colour orange, gaster very dark brown. Dorsum of head and entire alitrunk densely spiculate in minor, head only faintly spiculate in soldier. Propodeal spines of soldier short, acute. Erect setae moderately abundant.

Collected from under bark of tree and in cocoa crevices.

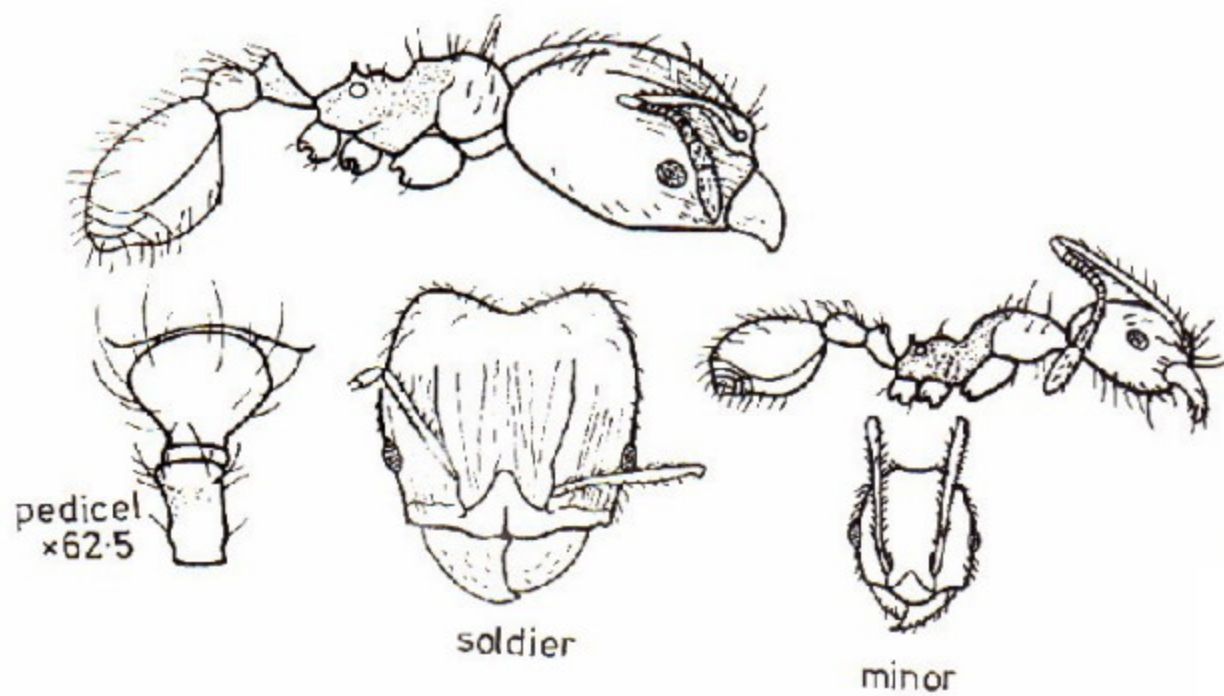
Pheidole species D

Soldier TL 5.60 HL 1.80 HW 1.80 SL 1.18 PW 0.84

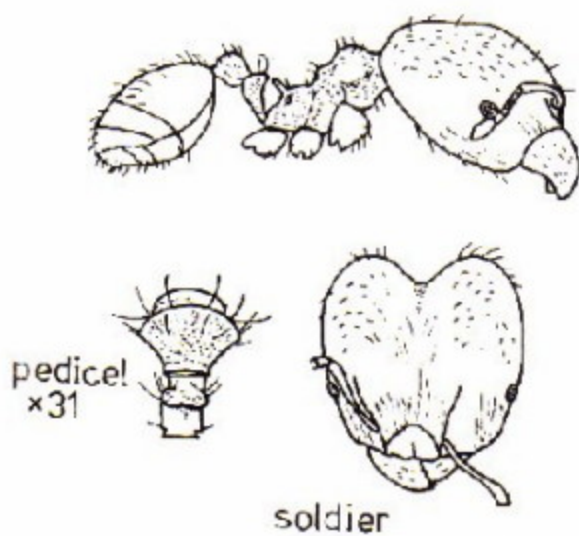
Minor TL 3.39 HL 0.86 HW 0.73 SL 0.98 PW 0.50.

Colour very dark red-brown to black. Minor almost unsculptured, shiny, faint reticulation on propodeum and pedicel. Propodeal spines long, slender, acute. Erect setae coarse, relatively sparse. Soldier markedly rugose all over dorsum of head. Alitrunk faintly reticulorugose, pedicel and gaster finely punctate. Propodeal spines long, slender, acute, slightly curved.

Collected from dead log on ground and at base of cocoa tree.



Pheidole species E ×31



Pheidole species F ×15

Pheidole species E

Soldier TL 3.42 HL 1.18 HW 1.12 SL 0.70 PW 0.50

Minor TL 2.24 HL 0.59 HW 0.50 SL 0.72 PW 0.34

Colour yellow-brown, gaster darker. Sculpturation restricted to spiculation of lateral mesonotum and propodeum on minor, even less on soldier. Rugae faint on anterior dorsum of soldier head, frontal carinae long. Propodeal spines of both morphs narrow, acute, upturned, triangular; propodeal spiracle relatively large and prominent. Erect setae relatively long, fine, moderately abundant.

A fairly common species nesting in dead wood and crevices on trees including cocoa. Tends Homoptera and constructs tents of vegetable and arthropod debris.

Pheidole species F

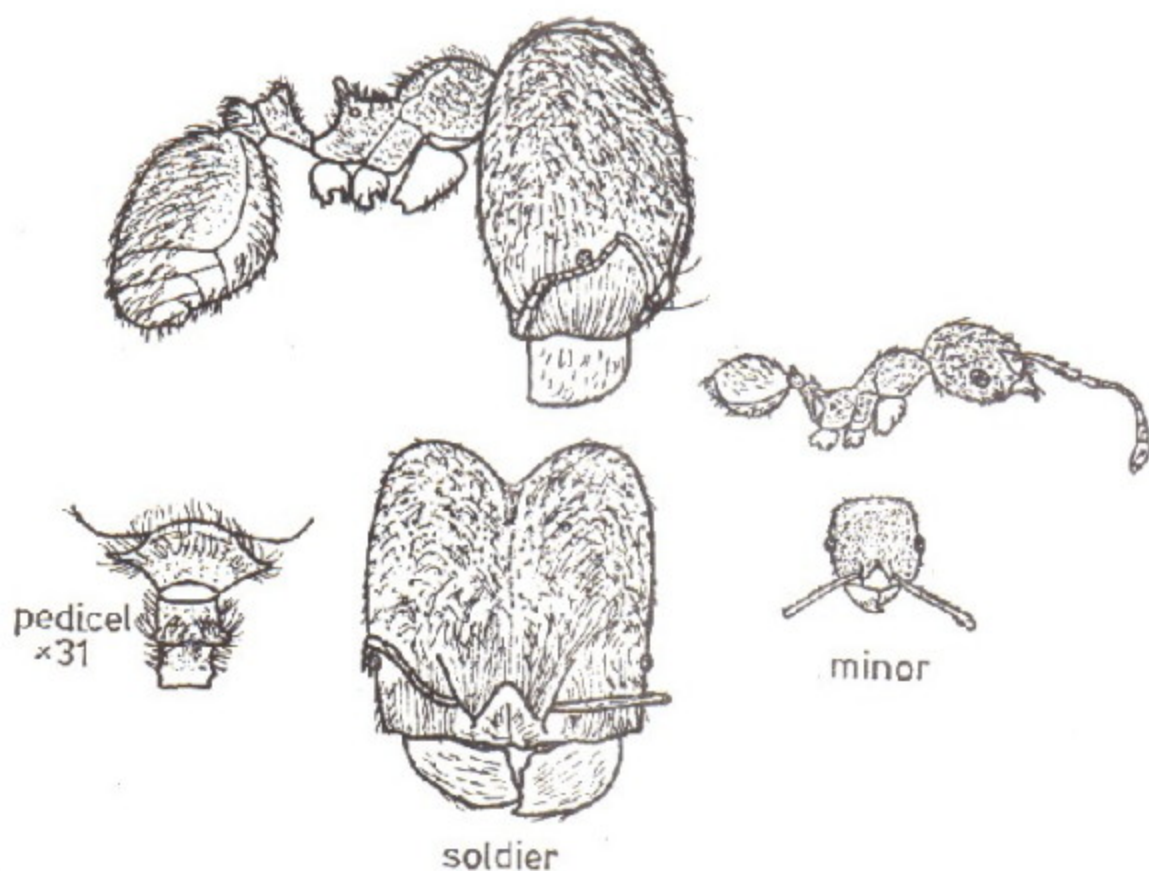
Soldier TL 4.88 HL 1.71 HW 1.80 SL 0.78 PW 0.81

Minor TL 2.43 HL 0.68 HW 0.62 SL 0.72 PW 0.39

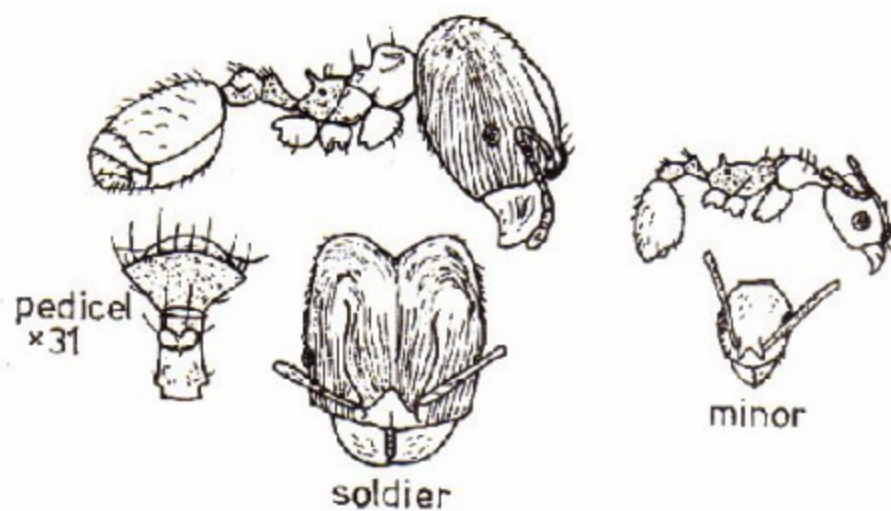
Colour red-brown, gaster darker, appendages lighter.

Alitrunk of both morphs almost all over spiculate, fainter on dorsal and lateral pronotum. Minor appears morphologically identical to minor of P. megacephala. Soldier head with more rounded occipital lobes; clypeus emarginate, medial carina short; more pronounced anterior fine rugae; moderate pilosity on dorsum and mandibles. Pronotum with pronounced dorsolateral tubercles. Propodeal spines moderately long, stout, blunt. Postpetiole with fairly acute dorsolateral prominences.

May be as common as P. megacephala as impossible to distinguish in the field. Nesting habits probably similar also Homoptera tending on cocoa etc.



Pheidole species F995 x15



Pheidole species T² x15

Pheidole species F 995

Soldier TL 7.92 HL 2.72 HW 2.55 SL 1.03 PW 1.15

Minor TL 3.80 HL 0.82 HW 0.78 SL 0.93 PW 0.59

Colour red-brown, gaster darker; appearance dull because dense puncturation all over, coarsest on head, fine posteriorly. Dense covering of moderately long, semi-prone, fine setae. Propodeal spines of soldier relatively long, stout, upturned; postpetiole strongly produced laterally to form a blunt triangular process; petiole with markedly emarginate narrow dorsal face.

Nests directly into soil, workers also collected in a mummified cocoa pod on ground.

Pheidole species T²

Soldier TL 5.76 HL 1.71 HW 1.59 SL 0.90 PW 0.75

Minor TL 3.08 HL 0.75 HW 0.56 SL 0.89 PW 0.42

Colour dark red-brown, gaster near black as is head of minor. Soldier spiculate on lateral mesonotum, propodeum and pedicel; head markedly rugose all over more reticulate on occiput; frontal carinae long equal to scapes.

Alitrunk dorsum transversely faintly rugose, pronounced dorsolateral pronotum tubercles; propodeum concave dorsomedially, spines moderately long, narrow, parallel sided, blunt apex. Postpetiole produced laterally to triangular prominences in dorsal view. Minor with unusually large eyes; head, pronotum and gaster unsculptured propodeal spines thick, blunt.

Nests in hard packed soil.

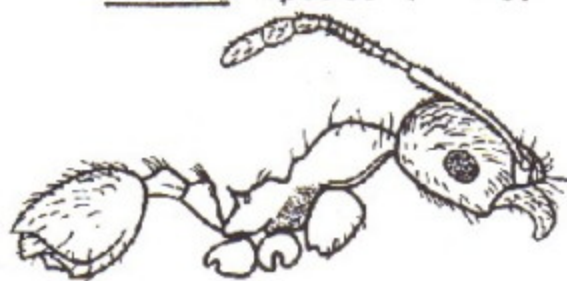


pedicel
x62.5



soldier

Pheidole species T⁴ x 31



minor

Pheidole species T⁵ x 31

Pheidole species T⁴

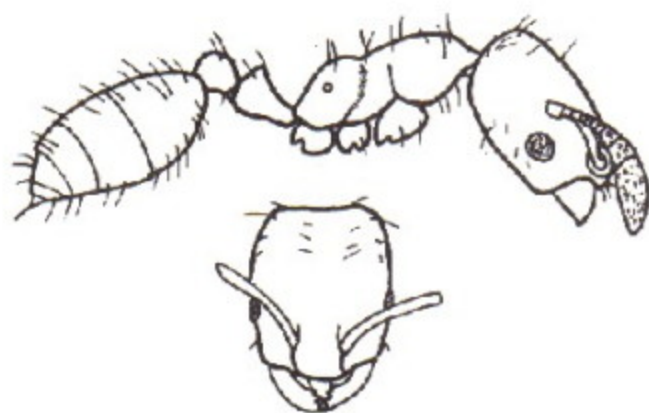
Soldier TL 4.51 HL 1.49 HW 1.24 SL 0.54 PW 0.65
 Soldier known from single specimen. Colour head brown, body darker posteriorly to gaster near black, tarsi yellow. Erect setae long, fine, abundant. Head elongated, frontal carinae short. Sculpturation reticulorugose on occiput and alitrunk; pedicel and gaster finely punctate. Promesonotum domed in profile; propodeal spines acute triangular. Postpetiole produced laterally to give blunt prominences.

Found foraging on ground.

Pheidole species T⁵

Minor TL 3.11 HL 0.72 HW 0.65 SL 0.73 PW 0.47
 Colour orange-brown, head and gaster darker. Only sculpturation, spiculation on lateral mesonotum. Clypeus with medial carina and almost straight anterior margin. Alitrunk without visible sutures. Eyes relatively large. Erect setae light, coarse, moderately abundant especially on head.

Nest found in insulated bare earth, no soldiers collected.



Diplomorium lujae x62.5

Tribe SOLENOPTERINI

Genus Carebara Westwood

All species hypogaeic and nearly always found with termites. Not represented in CRIN collection

Genus Diplomorium Mayr

Diagnostic features

Antennae 11- segmented with 3- segmented club. Median portion of clypeus swollen but not bicarinate. Promesonotal suture absent; metanotal groove impressed. Propodeum unarmed- petiole pedunculate, node high and rounded.

Diplomorium lujae

EL 1.45 HL 0.39 HW 0.31 SL 0.25 FW 0.19

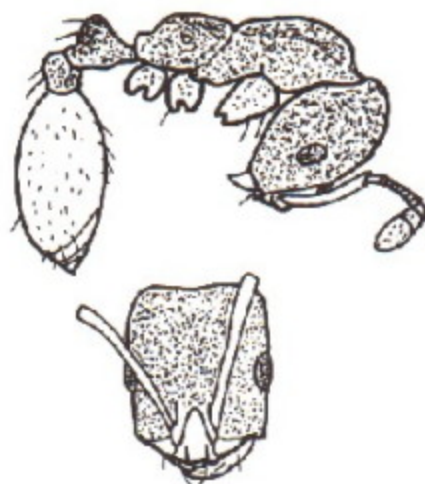
Colour yellow-brown, darker on gastral apex, smooth unsculptured, shiny. Erect setae sparse, relatively long.

Nests in dead wood on trees, including cocoa.

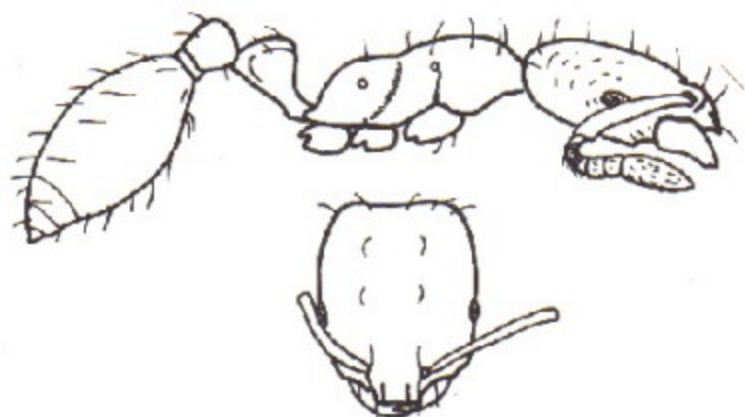
Genus Monomorium Mayr

Diagnostic features

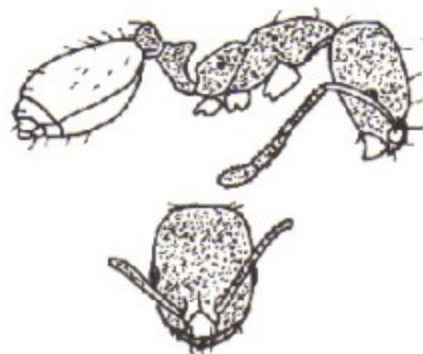
Antennae 11- or 12- segmented with 3- segmented club. Median portion of clypeus with two distinct longitudinal carinae; clypeus may be concave between carinae on anterior margin, carinae then project as a pair of blunt teeth. Eyes present. Promesonotal suture absent, metanotal groove impressed. Propodeum unarmed, petiole pedunculate, node high and rounded.



Monomorium bicolor × 31



Monomorium floricola × 62.5



Monomorium prossae × 31

Monomorium bicolor

TL 2.89 HL 0.78 HW 0.62 SL 0.67 PW 0.37

Colour orange-brown, gaster black. Head, alitrunk and pedicel densely spiculate. Sparse, short pilosity all over; few erect setae on gaster, pedicel and anterior of head.

Nest in open ground, will tend aphids on cocoa flowers near ground level.

Monomorium floricola

TL 1.65 HL 0.39 HW 0.33 SL 0.23 PW 0.20

Colour orange-brown, head darker, gaster very dark near black, unsculptured, shiny. Erect setae relatively long, moderately abundant.

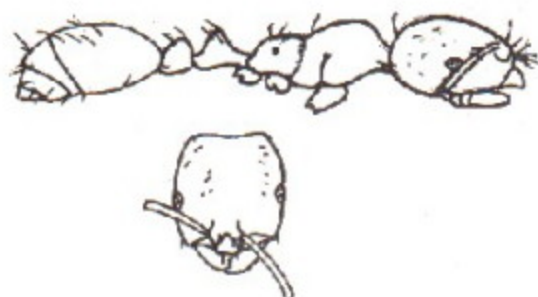
Found in rotten log by Bolton and also collected inside laboratories at CRIN.

Monomorium prcssae/? pharonis

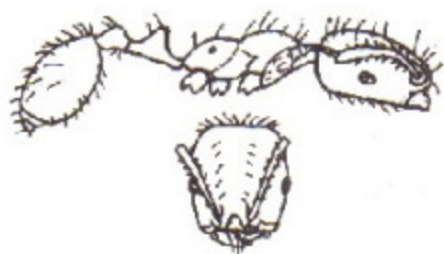
TL 2.52 HL 0.57 HW 0.44 SL 0.49 PW 0.28

Colour yellow-orange, apex of gaster dark. Head, alitrunk and pedicel finely and densely reticulopunctate. Erect setae relatively long and moderately abundant on head and gaster. Antennae 12-segmented. Sides of head convex in front view with smooth curve to slightly convex occipital margin.

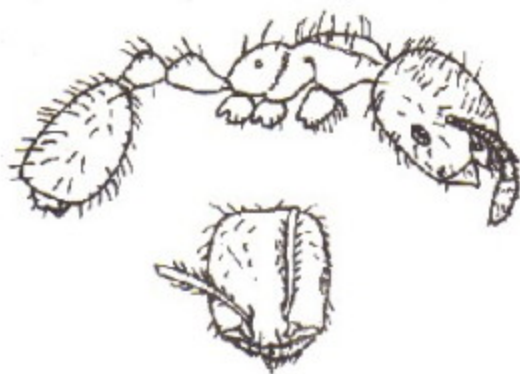
Collected in buildings and "sweeping grass" by Bolton at CRIN.



Monomorium species A ×31



Monomorium species G ×31



Monomorium species T¹ ×31

Monomorium species A (F998)

TL 2.18 HL 0.53 HW 0.47 SL 0.39 PW 0.26

Colour brown, gaster darker, unsculptured, shiny. Appendages yellow. Erect setae relatively sparse, moderately long. Minute blunt triangular subpetiolar tooth.

Collected from cocoa at CRIN by Bolton.

Monomorium species G

TL 1.90 HL 0.50 HW 0.47 SL 0.34 PW 0.25

Colour dark yellow-brown, gaster near black, antennae tibiae and tarsi yellow, unsculptured, shiny. Erect setae long, moderately abundant. Clypeal carinae well developed running into anterior margin of clypeus.

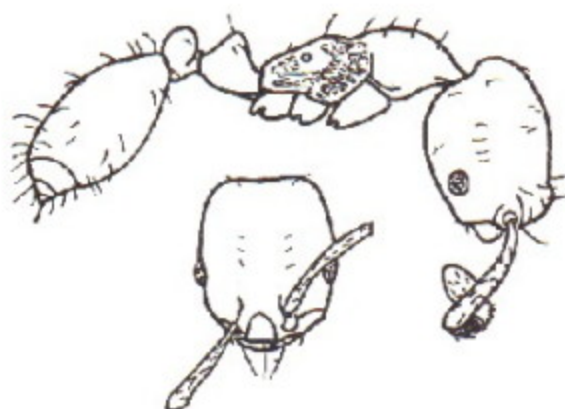
Commonest species of the genus on cocoa, nests in dead wood on trees.

Monomorium species T¹

TL 2.45 HL 0.61 HW 0.53 SL 0.54 PW 0.31

Colour dark brown except funiculi, tibiae and tarsi yellow; unsculptured, shiny polished. Erect setae long, abundant. Dorsum of pronotum distinctly flattened. Clypeal carinae faint.

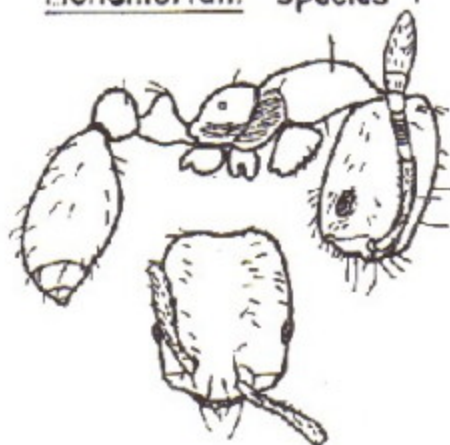
Collected from herbaceous vegetation round cocoa plot.



Monomorium species T² ×62.5



Monomorium species T³ ×62.5



Monomorium species T⁴ ×62.5

Monomorium species T²

TL 1.63 HL 0.40 HW 0.34 SL 0.31 FW 0.23

Colour yellow, head and gaster more brown. Cuticle of head translucent. Lateral mesonotum and propodeum very finely rugoreticulate. Erect setae moderately long, relatively sparse.

Collected from leaf of low shrub under forest shade.

Monomorium species T³

TL 1.87 HL 0.47 HW 0.39 SL 0.31 FW 0.26

Colour very dark brown, appendages lighter, shiny, polished. Lateral mesonotum punctate ventrally; propodeum with distinct dorsal and posterior faces, dorsal face margined, faint rugae ventro-laterally. Petiole flattened in side view to a thick scale, apex broadened in front view, flat subpetiolar process. Clypeal carinae well developed extending forwards as sharp processes. Abundant semi-prone setae on head, moderately abundant erect setae on rest of body.

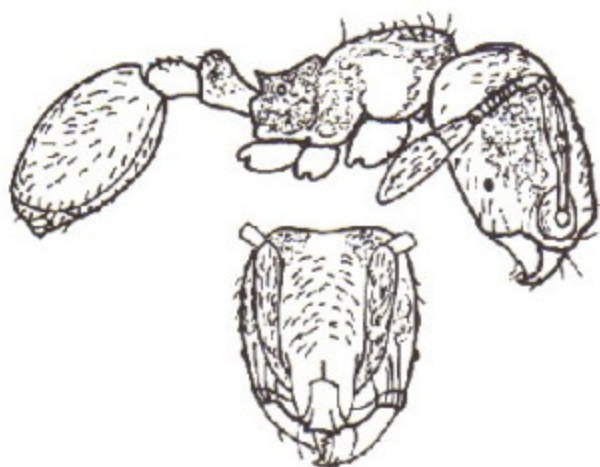
Collected at base of cocoa tree at CRIN.

Monomorium species T⁴

TL 1.62 HL 0.45 HW 0.34 SL 0.31 FW 0.19

Colour very dark brown-black, shiny, polished, funiculi and tarsi yellow. 11-segmented antennae. Faint rugae on lateral mesonotum and propodeum otherwise unsculptured. Clypeal carinae faint. Erect setae moderately long, relatively sparse, few on alitrunk.

Found on dead tree.



minor

Oligomyrmex silvestrii × 62.5

Genus Oligomyrmex Mayr

Diagnostic features

Dimorphic, major workers with massive heads. Median portion of clypeus longitudinally bicarinate. Antennae 9-, 10- or 11- segmented with 2- segmented club. Eyes present, small. Promesonotal suture absent, metanotal groove impressed. Propodeum armed with a pair of teeth or at least sharply angulate.

O. silvestrii

Minor TL 1.59 HL 0.45 HW 0.36 SL 0.31 PW 0.23

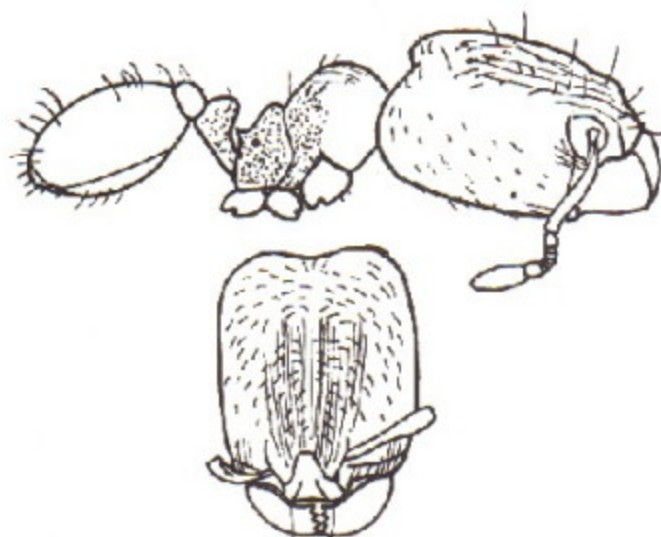
Major morph not represented. Colour orange-brown.

Antennae 11- segmented. Sculpturation of head loose reticulation, dorsomedial area smooth; pronotum nearly all smooth; lateral mesonotum and propodeum punctate. Anterior margin of pronotum well defined; promesonotum in profile near flat; propodeum on distinctly lower plane, spines well developed upturned triangular. Postpetiole with flattened profile. Erect setae short, fine, sparse most on dorsal alitrunk.

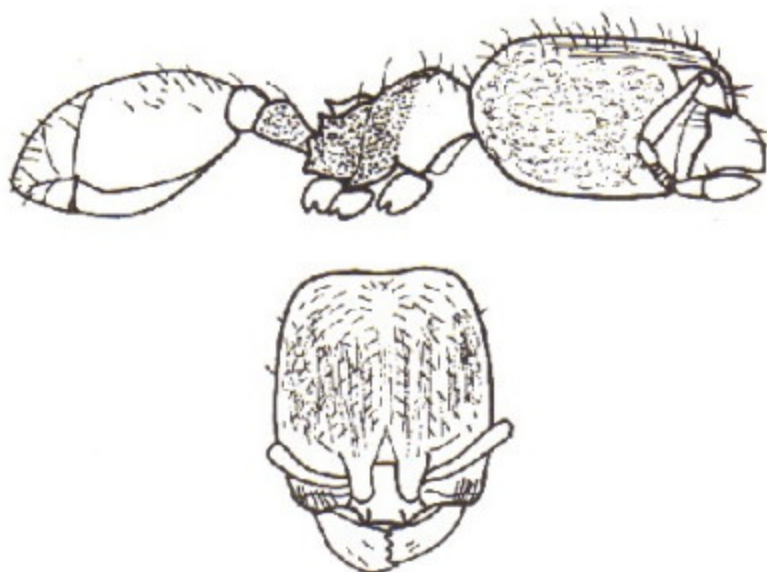
Collected by Bolton from leaf litter and under a chip of dead wood at CRIN.

Oligomyrmex species A

Specimens from Ghana, minors only, TL 1.01. Not drawn, colour yellow; sculpturation of head and alitrunk coarsely reticulopunctate, on lateral propodeum punctations distinctly separate from each other. Erect setae moderately abundant all over, on head long pilosity. Propodeal spines minute triangular, half-way down declivity which is a smooth curve after a steep rise from the metanotal groove.



major
Oligomyrmex species B $\times 62.5$



major
Oligomyrmex species E $\times 62.5$

Oligomyrmex species B

Major TL 1.43 HL 0.51 HW 0.44 SL 0.23 PW 0.23

Minor (not drawn) TL 0.86

Colour darkish yellow-brown. Major head unsculptured except for fine rugae on dorsum; lateral pronotum smooth, lateral mesonotum and propodeum finely punctate. Eye minute. Antennae 9-segmented. Propodeal spines minute triangular forming upper end of flanges on lower half of lateral propodeum. Erect setae relatively sparse; head with very sparse pilosity. Minor sculpturation similar but head reticulopunctate. From dead log at CRIN, collected by Bolton.

Oligomyrmex species D

Minor only (not drawn) TL 1.03

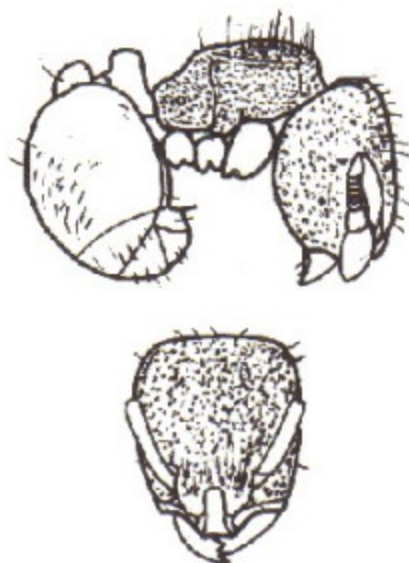
Colour dark yellow-brown. Unsculptured except lower lateral mesonotum punctate. Metanotal groove shallowly impressed. Propodeal spine more acute than species B. Small subpetiolar tooth. Eye small but not minute. Antennae 9-segmented. In earth termitarium at CRIN, collected by Bolton.

Oligomyrmex species E

Major TL 1.56 HL 0.57 HW 0.47 SL 0.28 PW 0.23

Minor (not drawn) TL 0.98

Colour yellow-brown. Major head and alitrunk finely rugoreticulate, rugae discontinuous. Metanotal groove deep; propodeum rising vertically to flat slightly down sloping dorsal surface, triangular spines at top of flanged posterior margin. Antennae 9-segmented; eye minute and far forward. Erect setae fine, fairly long, moderately abundant. Minor similarly sculptured but loosely reticulate on head. Found in old cocoa pod at CRIN by Bolton.



Paedalgus termitolestes × 62.5

Genus Faedalgus Forel

Diagnostic features

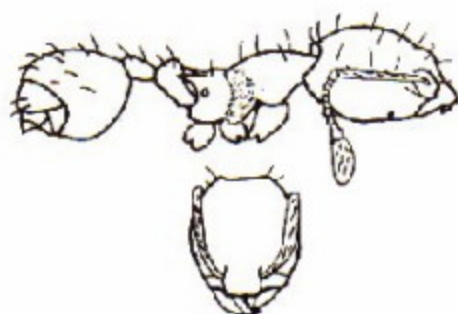
Mandibles with four teeth. Clypeus longitudinally bicarinate. Eyes present, minute, of two ommatidia only. Antennae 9-segmented with club of two segments. Promesonotal suture absent; metanotal groove not impressed. Dorsum of alitrunk with sharp lateral margins; propodeum unarmed. All associated with termites.

P. termitolestes Wheeler

TL 1.24 HL 0.40 HW 0.34 SL 0.20 PW 0.26

Colour yellow-brown. Head and alitrunk densely reticulopunctate, pedicel and gaster shiny. Petiole node near rectangular in profile. Erect setae sparse relatively long on alitrunk, sparse pilosity all over, most obvious on gaster.

Workers and males collected with termites in a log by Bolton (see Bolton, B. 1969, Niger. Ent. Mag. 2, 14 - 16).



minor

Pheidologeton species $\times 31$

Genus Pheidologeton Mayr

Diagnostic features

Polymorphic. Mandibles of major workers edentate or with reduced rounded teeth, minor workers with five or six teeth. Eyes present. Antennae 11- segmented with 2- segmented club. Promesonotal suture absent in minor workers increasingly developed with increased worker size. Metanotal groove impressed; propodeum bispinose.

Pheidologeton species

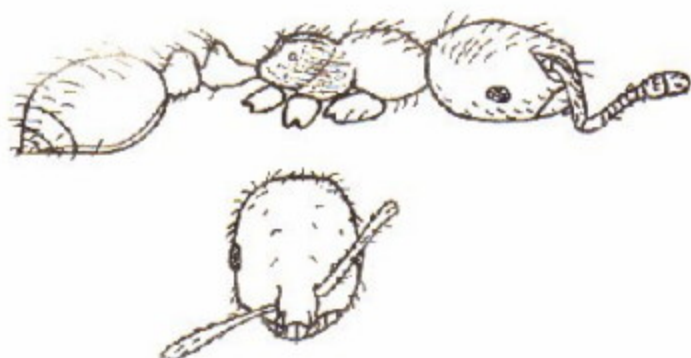
Minor only TL 1.87 HL 0.53 HW 0.47 SL 0.39 FW 0.26

A single morph only is represented in the CRIN collection. Colour golden-yellow; unsculptured except slight reticulation on lateral mesonotum. Propodeal spines long, narrow, acute; promesonotal suture absent; petiole and postpetiole with laterally compressed nodes. Erect setae relatively long and sparse. Found in leaf litter at CRIN by Bolton.

Genus Solenopsis Westwood

Diagnostic features

Monomorphic or polymorphic. Mandibles with three or four teeth. Maxillary palp geniculate. Clypeus strongly longitudinally bicarinate, the median area sharply elevated and deeply inserted between the frontal carinae. Antennae 10- segmented with a 2- segmented club. Promesonotal suture absent, metanotal groove impressed; propodeum unarmed.



Solenopsis geminata x31



Solenopsis species1 x62.5

S. geminata (Fabricius)

TL 2.43 HL 0.65 HW 0.51 SL 0.50 PW 0.36

Colour yellow-brown, gaster slightly darker, shiny, polished.

Unsculptured except faint rugoreticulation on lateral mesonotum and propodeum. Eyes moderately large. Very small obtuse denticles at lateral junction of dorsal and posterior faces of propodeum.

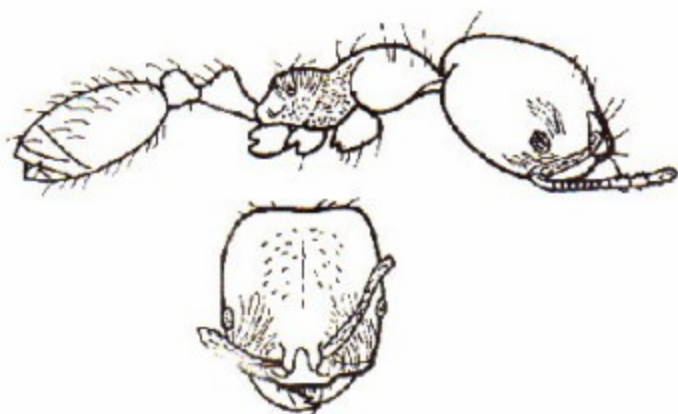
An introduced neotropical species common in the Warri Delta where it is known as "okubrass" (Bolton, 1973a). Specimens collected by A. Youdeowei.

Solenopsis species 1

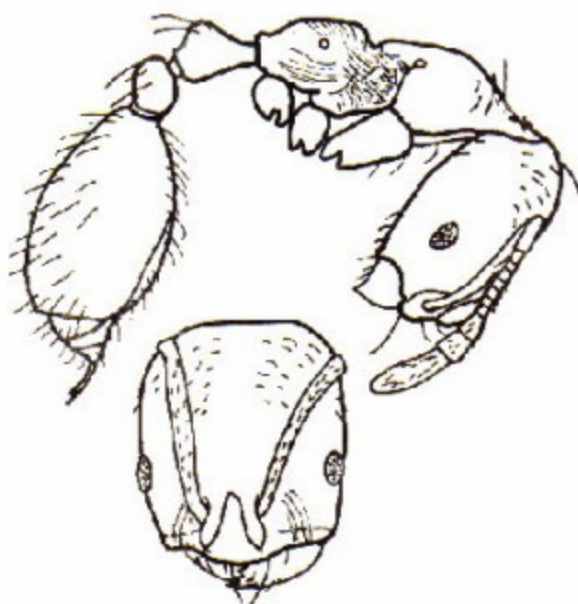
TL 1.40 HL 0.34 HW 0.34 SL 0.25 PW 0.22

Colour golden yellow. Sculpturation restricted to reticulation of propodeum, lower lateral mesonotum and petiole. Eye small. Propodeum an uninterrupted curve from metanotal groove to base. Erect setae fine moderately long and abundant, semiprone on head; a few long erect setae on dorsal pronotum.

Collected from soil at CRIN by Bolton.



Syllophopsis species 1 $\times 31$



Syllophopsis species 2 $\times 62.5$

Genus Syllophopsis Santschi

Diagnostic features

Median portion of clypeus somewhat swollen but without longitudinal carinae. Eyes present. Antennae 12-segmented with 3-segmented club. Promesonotal suture absent; metanotal groove impressed. Propodeum unarmed; petiole pedunculate, node high and rounded.

Syllophopsis species 1

TL 2.71 HL 0.78 HW 0.68 SL 0.50 PW 0.39

Colour golden yellow. Sculpturation on head of very fine faint striations; spiculation on lateral mesonotum and propodeum; fine transverse striations on dorsal and upper lateral propodeum. In profile propodeum with flat dorsum rounded into near vertical posterior face. Erect setae long, moderately abundant; sparse short pilosity.

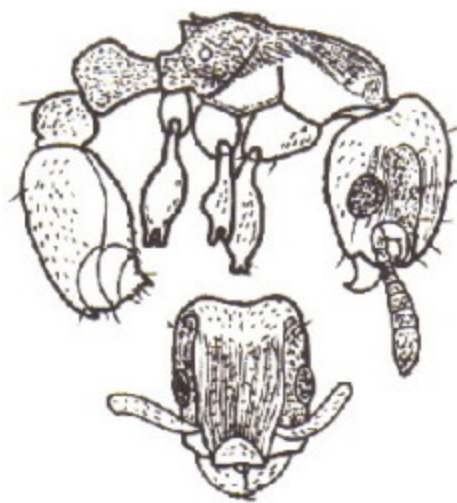
Found nesting in an old cocoa pod and on open ground by Bolton at CRIN.

Syllophopsis species 2

TL 1.68 HL 0.47 HW 0.37 SL 0.31 PW 0.26

Colour golden yellow. Sculpturation of fine reticulate striation on lateral mesonotum; very faint transverse striations on dorsal propodeum, similar but longitudinal on posterior of lateral propodeum. Erect setae sparse, fairly coarse.

Ground nesting and foraging.



Decamorium decem × 31

Tribe TETRAMORIINI

Genus Decamorium Forel

Diagnostic features

A monotypic genus, the single species is D. decem (Forel)

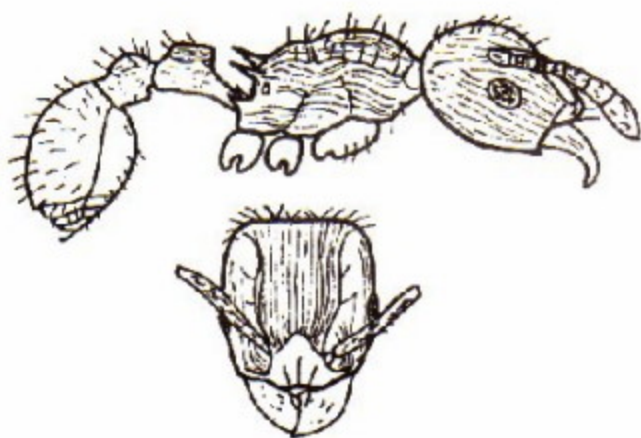
TL 3.17 HL 0.68 HW 0.56 SL 0.42 PW 0.44

Colour red-brown, gaster darker. Mandibles with five to six teeth. Sides of median portion of clypeus and posterior margins of the lateral portions raised, bordering the antennal insertions. Antennae 10- segmented with 3- segmented club. Antennal scrobes present above the eyes, ventral margins of scrobes poorly defined. Anterodorsal pronotal angles acute; promesonotal suture absent. Metanotal groove impressed, metanotal lobes present; propodeum bidentate. Sting with apicodorsal triangular lamelliform appendage. Femora of legs swollen.

Nests in rotten logs or twigs in leaf-litter. Forage in leaf-litter, often in single file. Will prey on termites.

Genus Rhoptryrmex Mayr

Not represented in CRIN collection. Uncommon in West Africa, occasionally found in leaf-litter and usually from the forest zone.



Tetramorium lucayanum × 31

Genus Tetramorium Mayr

Diagnostic features

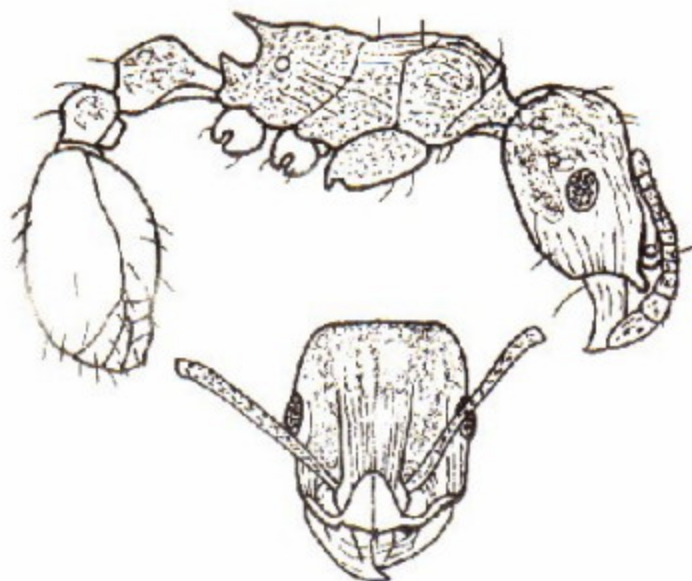
Mandibles with three or four large teeth apically, followed by a variable number of denticulae. Posterior lateral margins of clypeus raised into a ridge bordering the antennal insertions. Antennae 12-segmented, 3-segmented club. Antennal scrobes absent to feebly present; frontal carinae often extended as a pair of diverging longitudinal rugae. Pronotum characteristically square - shouldered in dorsal view due to sharp anterolateral angles. Promesonotal suture absent, metanotal groove usually impressed. Propodeum with pair of spines or teeth; metapleural lobes present, acute, may project as a lower pair of spines. Sting with an apicodorsal triangular lamelliform appendage. Femora usually distinctly swollen. Setae simple.

T. lucayanum

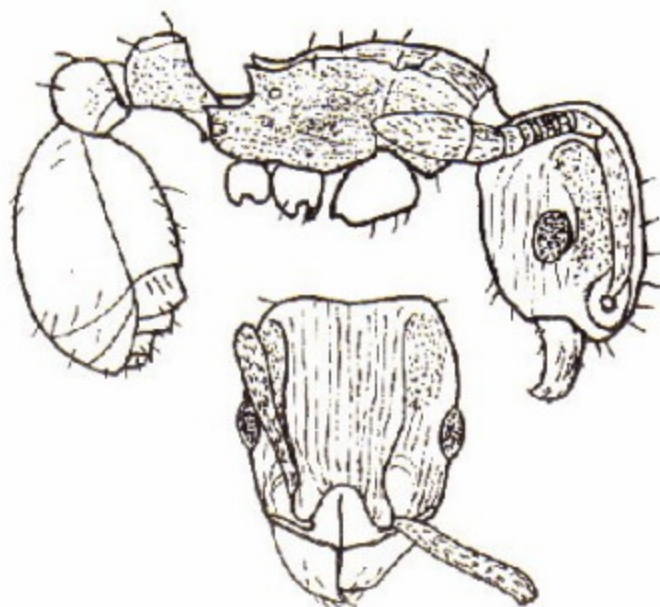
TL 2.96 HL 0.72 HW 0.65 SL 0.54 PW 0.45

Colour very dark red-brown near black, extremities lighter, shiny. Sculpturation of longitudinal rugae on all except gaster. Erect setae moderately abundant, long, fine, yellow. Propodeal spines relatively long narrow, sharp, straight, pointing upwards. Petiole with vertical anterior face, right angled junction with dorsal face, posterior face slightly sloping from rounded junction with dorsal face. Clypeus with moderate median carina and slightly emarginate.

Moderately common, probably subarboreal, nesting in dead wood on trees including cocoa. Will tend Homoptera.



Tetramorium sericeiventris × 31



Tetramorium species F × 62.5

T. sericeiventris

TL 3.92 HL 0.93 HW 0.78 SL 0.90 FW 0.59

Colour orange-brown, except gaster very dark near black.

Head, alitrunk and pedicel densely and finely punctate with overlying rugoreticulation, rugae longitudinal especially on head and dorsal alitrunk. Gaster with extremely fine puncturation. Propodeal spines relatively long, narrow triangular, pointing slightly upwards. Petiole node with sloping anterior face merging through rounded obtuse angle into dorsal face with slightly convex profile; posterior face near vertical. Erect setae stout, sparse, moderately long.

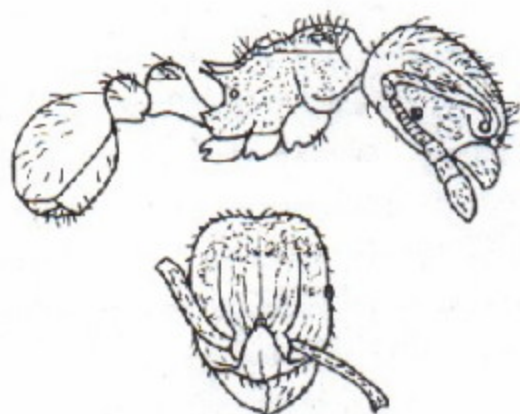
Basically a savannah species but found nesting in insulated ground in forest zone.

Tetramorium species F

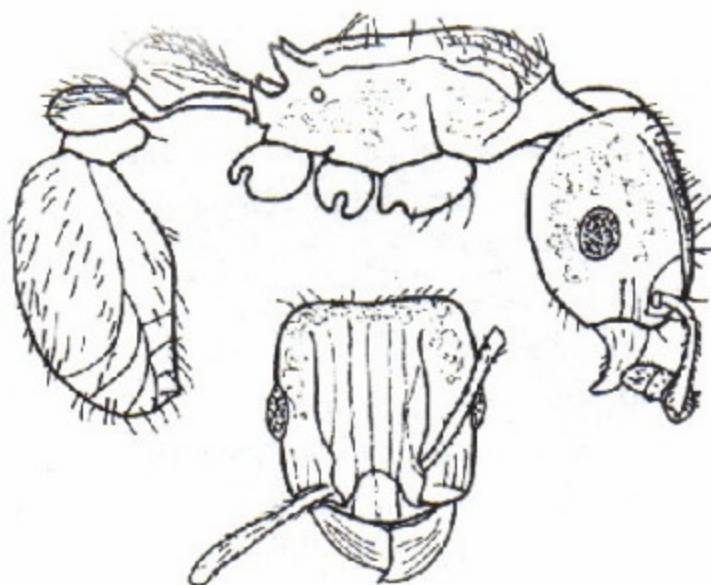
TL 2.02 HL 0.51 HW 0.48 SL 0.40 FW 0.31

Colour yellow-brown, gaster darker and shiny. Head, alitrunk and pedicel finely punctate with puncturations generally arranged longitudinally. Propodeal spines short, upturned, triangular. Petiole node short, anterior and posterior faces near vertical; dorsal face flat in profile but sloping downwards to posterior. Small, acute subpetiolar spine. Erect setae short, stout, moderately abundant.

Nests in dead wood on ground. Will tend aphids on cocoa flowers and cherelles near the ground, and will build tents.



Tetramorium species I $\times 31$



Tetramorium species K $\times 31$

Tetramorium species I

TL 2.43 HL 0.65 HW 0.59 SL 0.50 PW 0.40

Colour yellow-brown. Sculpturation on all except gaster reticulate, fine on lateral alitrunk. Petiole node short more or less with domed profile but flatter dorsally. Propodeal spines moderately long triangular, pointing slightly upwards. Eyes small. Erect setae relatively abundant, fine, moderately long.

Found in a wet, rotten pawpaw stump at CRIN by Bolton.

Tetramorium species K

TL 4.42 HL 1.01 HW 0.84 SL 0.75 PW 0.62

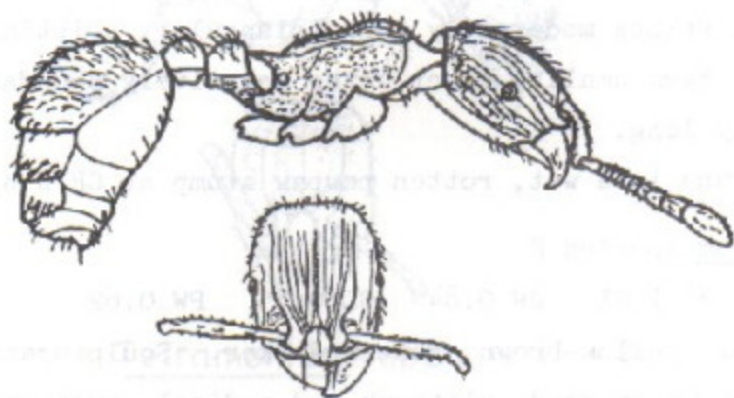
Colour pale yellow-brown, gaster darker. Sculpturation faint rugoreticulum on head, alitrunk and pedicel, rugae most pronounced on dorsal surfaces. Propodeal spines short, acute, upturned. Petiole with rounded anterodorsal face, posterior face sloping inwards to base, in dorsal view node ovoid with narrow apex posteriorly. Postpetiole with similar shape but shorter. Minute down-pointing subpetiolar spine. Erect setae yellow, moderately long and abundant.

Probably arboreal, found on cocoa where nests in debris filled crevices.

Tetramorium species near K

TL 4.51 HL 0.98 HW 0.87 SL 0.73 PW 0.65

Not drawn as morphologically almost identical to species K. Colour dark yellow-brown, rugae more distinct probably due to darker colour. More common than K, also arboreal found on cocoa nesting in dead pod and crevices.



Tetramorium species Q × 31



Tetramorium species T¹ × 31

Tetramorium species M

TL 2.33 HL 0.56 HW 0.48 SL 0.44 PW 0.34 (not drawn)
 Morphologically very similar to species F. Colour very dark yellow-brown, extremities lighter. Head, alitrunk and pedicel reticulopunctate with longitudinal rugae on dorsal surfaces. Propodeal spines short, upturned, triangular. Petiole node as F. Erect setae more abundant and somewhat longer than F especially on alitrunk.

Nests in ground, found on lower parts of cocoa tending aphids.

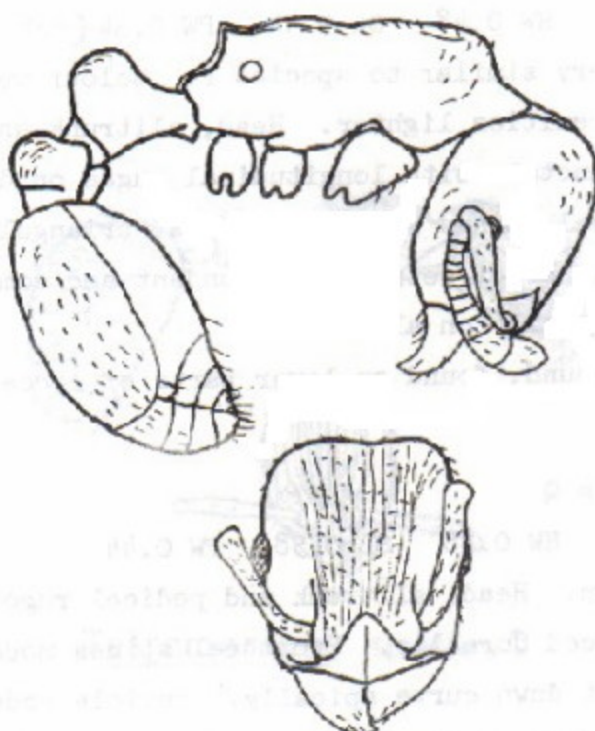
Tetramorium species Q

TL 2.80 HL 0.65 HW 0.58 SL 0.58 PW 0.44
 Colour yellow-brown. Head, alitrunk and pedicel rugoreticulate, rugae more pronounced dorsally. Propodeal spines moderately long, acute, slight down curve apically. Petiole node with distinct anterior face, posterodorsal face curved. Eye small. Erect setae abundant, moderately long.

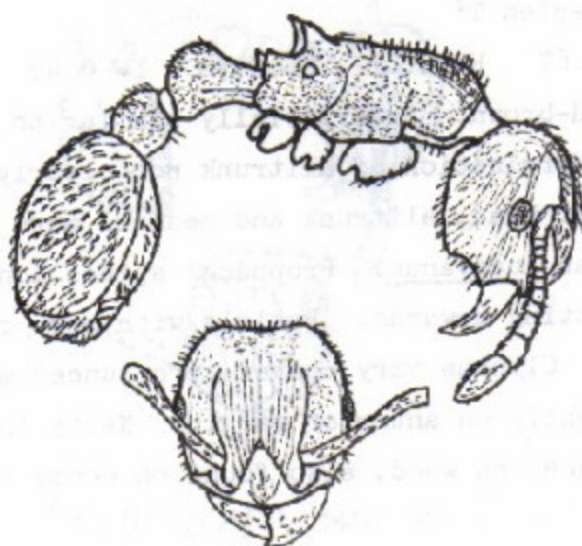
Found in a dry, dead log in kola plot at CRIN by Bolton.

Tetramorium species T¹

TL 2.86 HL 0.67 HW 0.61 SL 0.56 PW 0.42
 Colour dark red-brown. Superficially similar to lucayanum; eye smaller. Margination of alitrunk not clearly defined. Sculpturation of head, alitrunk and pedicel more reticulate, less rugose than lucayanum. Propodeal spines long, acute triangular pointing upwards. Petiole with more rounded anterior face. Clypeus very convex, pronounced medial carina projecting slightly on anterior margin. Nests in dead wood on ground, forages on wood, also found on cocoa trunk at 100 cm.



Tetramorium species T² × 62.5



Tetramorium species T³ × 31

Tetramorium species T²

TL 2.32 HL 0.53 HW 0.47 SL 0.37 PW 0.31

Colour golden-yellow, shiny translucent cuticle. Only sculpturation is faint rugulation on dorsum of head. No margination of alitrunk, all dorsolateral edges rounded. Propodeal spines dentiform, obtuse triangular. Petiole node with sloping anterior face rounding into posterodorsal face; postpetiole smoothly domed. Subpetiolar tooth relatively large, obtuse triangular. Erect setae sparse, very short.

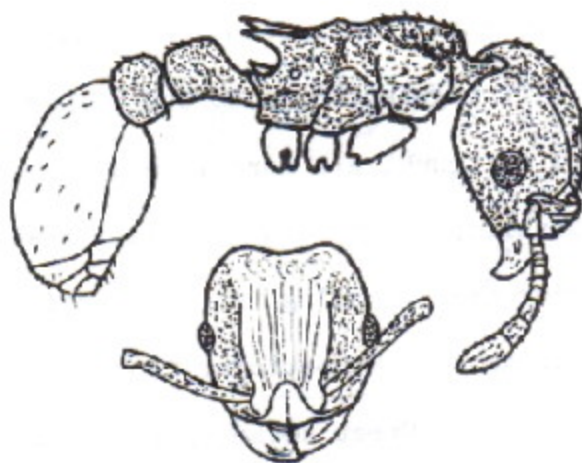
A single specimen collected from a cocoa tree.

Tetramorium species T³

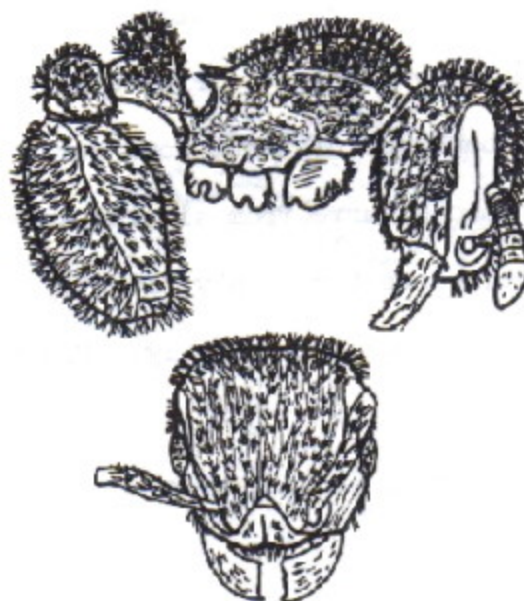
TL 3.55 HL 0.79 HW 0.75 SL 0.65 PW 0.47

Colour orange-brown, gaster browner. Sculpturation reticulorugose on head and dorsal alitrunk; lateral alitrunk and pedicel finely and densely punctate. Propodeal spines well developed with broad base and distinct down curve of upper edge. Petiole with smooth curve from sloping anterior face to posterodorsal face; postpetiole only slightly convex in profile. Clypeus markedly convex medially. Erect setae short, abundant.

Found nesting in soil at base of a cocoa tree.



Tetramorium species T⁴ ×31



Triglyphothrix species B ×31

Tetramorium species T⁴

TL 3.17 HL 0.78 HW 0.73 SL 0.59 PW 0.47

Colour red-brown, gaster darker. Apart from fine rugae on dorsum of head, sculpturation of head, alitrunk and pedicel solely of fine, dense puncturation. Propodeal spines broad, elongated triangular, flat alignment. Petiole with almost vertical anterior and posterior faces, rounded angular junctions with slightly convex dorsal face. Postpetiole with slightly convex profile. Erect setae very sparse, very short.

Nest in ground.

Genus Triglyphothrix Forel

Diagnostic features

Similar to Tetramorium but antennal scrobes usually well developed, deep and divided into upper and lower compartments by a longitudinal ridge. Setae trifid or multifid, usually abundant giving ant a furry appearance to the naked eye.

Triglyphothrix species B

TL 3.52 HL 0.87 HW 0.78 SL 0.57 PW 0.62

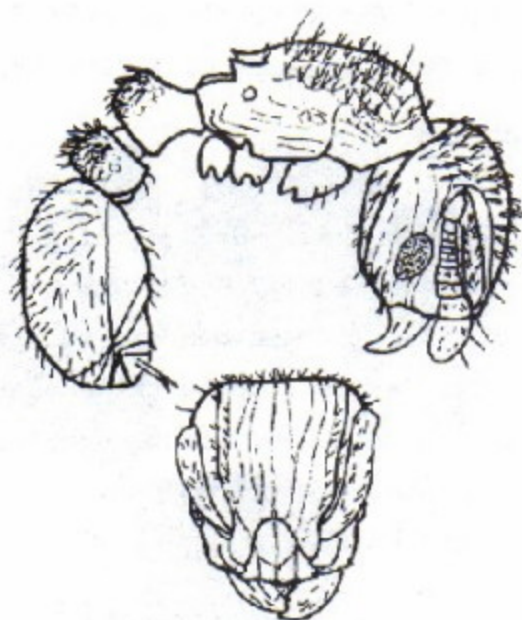
Colour red-brown, gaster darker. Setae trifid, white, very dense. Head, alitrunk and pedicel sculpturation of coarse reticulation. In profile alitrunk convex, all margins rounded. Propodeal spines flat, acute triangular. Petiole and postpetiole with high domed nodes; minute subpetiolar denticle. Antennal scrobes well developed.

Nests in hard packed soil.



rt. antenna
missing

Triglyphothrix species D $\times 31$



Triglyphothrix species T¹ $\times 62.5$

Triglyphothrix species D

TL 2.64, other dimensions not measured as specimen in poor condition. Colour very dark red-brown. Sculpturation of coarse rugoreticulum on head, alitrunk and pedicel. No marked antennal scrobes. Propodeal spines reduced to short acute teeth. Petiole and postpetiole longitudinally compressed. Setae trifid, moderately abundant.

Single specimen from base of tree in garden at CRIN, by Bolton.

Triglyphothrix species T¹

TL 1.77 HL 0.44 HW 0.40 SL 0.31 PW 0.30

Colour dark brown near black, legs and antennae yellow. Head, alitrunk and pedicel coarsely but faintly rugoreticulose. Propodeal spines short, upturned triangular. Petiole with distinct anterior and posterior faces, short peduncle, dorsal face convex with distinct longitudinal median crest. Moderate triangular subpetiolar tooth. Antennal scrobes well defined. Erect setae relatively sparse, mostly bifid, simple on gaster.

Found on ground and lower parts of a cocoa tree.

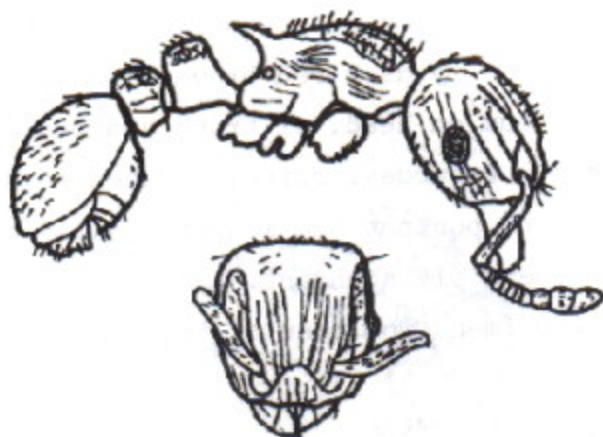
Genus Xiphomyrmex Forel

Diagnostic features

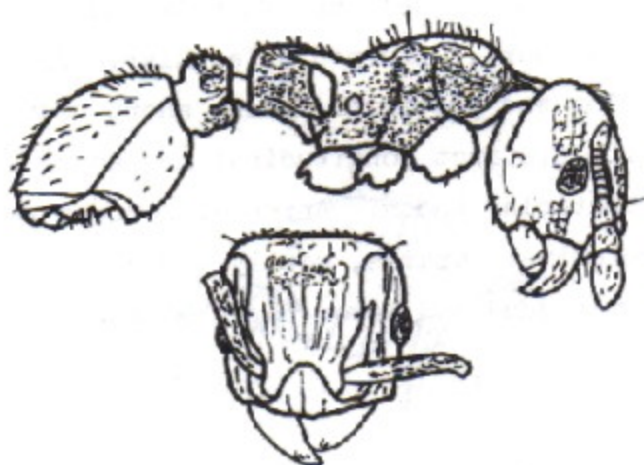
As Tetramorium but antennae 11-segmented with 3-segmented club. Sting with spatulate apical appendage, projecting at shallow angle. Some species completely unsculptured and polished, most with some sculpturation. In some one or both pedicel segments may be scale-like, usually in unsculptured species.

Xiphomyrmex species A

Specimens from Ghana, on cocoa. TL 2.77. Brown, shiny, unsculptured. Head with distinct antennal scrobes; also medial dorsal longitudinal carina running full length of head and two shorter carinae one each side between medial and frontal carinae. Pedicel segments thick scales.



Xiphomyrmex species F $\times 31$



Xiphomyrmex species H $\times 31$



Xiphomyrmex species T¹ $\times 31$

Xiphomyrmex species F

TL 2.80 HL 0.70 HW 0.70 SL 0.47 PW 0.50

Colour dark red-brown. Sculpturation primarily rugose on head and alitrunk; pedicel coarsely reticulate. Antennal scrobe distinct. Propodeal teeth well developed, slight down turn apically. Petiole with distinct near vertical posterior and anterior faces, dorsal face only slightly convex; short, blunt subpetiolar tooth. Postpetiole convex in profile. Setae moderately long, fairly abundant.

Found on open ground, nest in deadwood on ground.

Xiphomyrmex species H

TL 3.76 HL 0.84 HW 0.78 SL 0.54 PW 0.62

Colour orange, gaster and dorsal surfaces darker. Sculpturation of head, alitrunk and pedicel mainly reticulate, fine on lateral alitrunk. Antennal scrobes defined. Propodeal spines large, broad, blunt, flat. Petiole with distinct vertical anterior and posterior faces, dorsum slightly convex. Subpetiolar tooth minute. Erect setae moderately abundant and long.

From leaf litter at CRIN, by Bolton.

Xiphomyrmex species T¹

TL 2.24 HL 0.56 HW 0.50 SL 0.34 PW 0.40

Colour yellow-brown, gaster darker. Head, dorsal alitrunk and pedicel rugoreticulate; lateral alitrunk punctate. Antennal scrobes defined only as extensions of frontal carinae. Propodeal spines moderately long and broad. Petiole with vertical anterior and posterior faces, dorsum short, slightly convex; subpetiolar tooth acute triangular. Erect setae moderately abundant and long.

Nests in ground of garden and drive.