

Article XXIV.—ANTS OF FORMOSA AND THE PHILIPPINES.

BY WILLIAM MORTON WHEELER.

The following lists are based on several small collections of ants that have been received at various times during the past five years by the American Museum of Natural History. The Formosan collection was made by Mr. Hans Sauter in the neighborhood of Takao (Takow) at the southern end of the island and comprises some twenty species, all Indomalayan in character and for the most part already known from other localities such as India, China, Burma, Java, Sumatra, etc. The list is well worth publishing, however, because there seem to be no previous records of ants from Formosa.

Although the Philippines have been frequently visited by collectors, the ant-fauna of these islands has received very little attention. Many years ago Frederick Smith described a few species, without mention of their precise localities in the archipelago,¹ and Emery added a number collected by E. Simon in the island of Luzon.² More recently Ashmead attempted to publish a list of the described Hymenoptera of the Philippines,³ but in enumerating the ants he completely overlooked Emery's contribution and merely recorded a few which he had identified from specimens received from Father W. A. Stanton and the species described by Frederick Smith. It seemed to me advisable and timely, therefore, to prepare a complete list of the species known to occur in the archipelago, including those in the collections of the American Museum of Natural History. These collections were made in several localities by Professor L. E. Griffin of the Missouri Valley University, Dr. E. B. Copeland, of the Government Laboratories at Manila, and Dr. H. M. Smith, of the United States Fish Commission. Nearly all the specimens belong, like those from Formosa, to well-known and widely distributed East Indian species, but they bear accurate locality labels and therefore furnish valuable faunistic information.

¹ Catalogue of the Hymenopterous Insects in the Collection of the British Museum. Pt. VI. Formicidæ, London, 1858.

² Voyage de M. E. Simon aux Îles Philippines. Ann. Soc. Ent. France, LXII, 1893, pp. 259-270, pl. vi.

³ Descriptions of New Genera and Species of Hymenoptera from the Philippine Islands. Proc. U. S. Nat. Mus., XXVIII, 1904, pp. 127-158, pl. i, ii.

I. SPECIES FROM FORMOSA.

1. **Diacamma rugosum** (*Le Guillon*) subsp. **sculptum** (*Jerdon*). Numerous workers. This, and not *D. vagans* F. Smith, is, according to Emery, the common form of the widely distributed *rugosum* in India, Ceylon and Burma.

2. **Monomorium latinode** *Mayr*. Many workers, females and males from several different colonies.

3. **Monomorium destructor** (*Jerdon*). Numerous workers.

4. **Pheidologeton diversus** (*Jerdon*). Numerous females, males and workers of all sizes from several colonies, agreeing perfectly with the well-known Indian form of this species.

5. **Pheidole sauteri** sp. nov.

Soldier. Length 2.75–3 mm.

Head subrectangular, decidedly longer than broad, a little broader in front than behind, with rather sharp anterior angles, deep occipital excision, roundly angular posterior corners and very feebly convex sides. The occipital furrow is deep, with a broad preoccipital impression. Eyes at the anterior fourth of the head. Mentum with two small, acute teeth. Mandibles convex, with two small apical teeth. Clypeus short, with a small but distinct median notch in its anterior border, ecarinate, with a rounded elevation in the middle behind. Frontal area small, triangular, impressed. Frontal carinae continued back on each side as a low ridge, forming the mesial border of a shallow, flat impression, or scrobe for the antennal scape. This impression is rounded behind, where it terminates half way between the eye and the posterior corner of the head. Antennae short and slender, scape reaching a short distance behind the eye; joints 2–8 of the funiculus small, subequal, as long as broad; two basal joints of clubs together as long as the terminal joint. Pro- and mesothorax very convex and much higher than the epinotum, rounded or angular in profile, without a torus; seen from above trapezoidal, as broad as long and fully half as broad as the head, with very prominent, subangular humeri. Declivous surface of the mesonotum forming nearly a right angle with the base of the epinotum; meso-epinotal constriction deep. Epinotum with subequal base and declivity and a longitudinal median impression; spines acute, half as long as their distance apart at the base, somewhat longer than broad at their base, directed upward and backward. Petiole twice as long as broad, near its posterior end with an anteroposteriorly compressed node, which has a straight upper border. Postpetiole $1\frac{1}{2}$ times as broad as the petiole, broader than long. Gaster elliptical, smaller than the head. Legs moderately long.

Mandibles shining, with small, sparse punctures, and on the outside near the base, with a few coarse striae. Clypeus smooth and shining in the middle, more opaque and longitudinally rugose on the sides. Head subopaque, with the antennal scrobes uniformly and densely punctate; remaining surface, including the posterior corners, reticulate rugose, with punctate interrugal spaces; front and

anterolateral third of head longitudinally reticulate rugose. Thorax, petiole and postpetiole scarcely more shining than the head, feebly and indistinctly rugulose; meso- and metapleuræ densely punctate. Gaster and legs smooth and shining.

Hairs yellow, moderately abundant; suberect on the body, more reclinate on the legs and scapes.

Reddish-yellow; margins of mandibles, and anterior border of head and clypeus deep red, masticatory border of mandibles narrowly black. Antennæ and legs yellow; gaster sordid yellow with a large black patch on the tergite of each segment.

Worker. Length 1.3–1.5 mm.

Head subrectangular, nearly as long as broad, excluding the mandibles; sides convex, posterior border straight. Mandibles with convex outer borders; inner borders denticulate and with two larger apical teeth. Clypeus convex, with a faintly notched anterior border. Antennal scapes reaching a little beyond the posterior corners of the head and lying in faint depressions representing the scrobes of the soldier. Eyes convex, distinctly in front of the middle of the head. Thorax rather narrow, pro- and mesonotum rounded above and on the sides, but more depressed than in the soldier; torus of mesonotum very feeble; mesoëpinal constriction rather pronounced. Epinotum with subequal base and declivity, the latter sloping, armed with two teeth which are as long as broad at their bases, but much further apart than long. Petiole more than twice as long as broad, with subparallel sides and an abrupt but rather low node at its posterior end. Postpetiole campanulate, a little broader than the petiole, about as long as broad. Gaster elliptical; distinctly smaller than the head. Legs rather long and robust.

Mandibles smooth and shining, with small, scattered punctures. Clypeus shining but rugulose. Head, thorax, petiole and postpetiole opaque, densely and finely punctate; front of head indistinctly longitudinally rugulose; nodes of pedicel somewhat smooth and shining above. Gaster and legs smooth and shining.

Pilosity and coloration as in the soldier, but the former is shorter and sparser and the head and thorax are somewhat paler and less reddish.

Described from several soldiers and workers from a single colony.

This species is closely related to the other members of an oriental group of *Pheidole* comprising *parva* Mayr, *magrettii* Emery, *capellinii* Emery, *simoni* Emery and *proxima* Forel. The soldier of *sauteri* has a much longer and more rectangular head than that of *parva* of Ceylon and India, the clypeus is notched and the pro- and mesonotum are not densely punctate. The soldier of *magrettii* of Java is larger (3.6–4 mm.), its mesonotum has a transverse ridge and the epinotum is transversely rugulose. The worker is fuscous, with paler legs. The soldier of *capellinii* of Java is even larger (4.75 mm.), has the posterior corners of the head smoother and more shining and the thorax has a different shape and is much more heavily sculptured. In form the soldier of *Ph. proxima* of Australia is very much like that of *sauteri*, but the posterior third of the head is smooth and shining, the antennal scrobes are much feebler, the thorax is more heavily sculptured and the color is paler. Perhaps the species here described is merely a subspecies of *Ph. simoni* Emery from the Philippines. This form, however, has the base of the gaster opaque.

6. **Pheidole javana** Mayr. Several soldiers and workers from a single colony.

7. **Pheidole megacephala** (Fabr.). Several soldiers, a deälated female and many workers from four colonies.

8. **Cremastogaster rogenhoferi** Mayr. Numerous workers swept from vegetation.

9. **Cremastogaster subnuda** Mayr var. **formosæ** var. nov.

Worker. Length 2-2.7 mm.

Differing from the typical *subnuda* in its darker color. The head, gaster and legs, with the exception of the tarsal joints, are black; the thorax and pedicel dark brown or blackish, with reddish sutures. It is evidently closely related to the var. *nicevillei* Forel of Calcutta in size and shape, but smaller, much darker and more slender than several of the other varieties and subspecies enumerated from southern Asia by this author (*rabula* Forel, *nilgira* Forel, *notabilis* Forel, *contemta* Mayr).

Five specimens swept from vegetation.

10. **Triglyphothrix striatidens** Emery. Two workers.

11. **Iridomyrmex glaber** (Mayr). Numerous workers from a single colony.

12. **Tapinoma melanocephalum** (Fabr.). Many workers and two deälated females from five colonies.

13. **Plagiolepis longipes** (Jerdon). Several workers and a deälated female from two colonies.

14. **Plagiolepis mactavishi** Wheeler. Ten workers and a deälated female.

15. **Prenolepis longicornis** (Fabr.). Many workers and two deälated females from three colonies.

16. **Camponotus maculatus** (Fabr.) subsp. **taylori** Forel var. **formosæ**, var. nov.

Numerous major and minor workers from four colonies seem to represent a variety very near the var. *albosparsus* Forel from the Himalaya. The head of the worker major is dark chestnut brown, opaque and densely punctate, slightly shining on the occipital region and sides. Mandibles and anterior third of clypeus red. Thorax and legs brown, with yellowish sutures and articulations. Gaster black, shining, with yellowish posterior margins to the segments; no yellow spots on the venter, but a pair of yellow spots on the dorsum of the first and another more widely separated pair on the dorsum of the second segment. The first pair is sometimes confluent as in *albosparsus*. The coloration of the worker minor is similar, but the dorsal gastric spots are proportionally larger and more rectangular, the

anterior pair more frequently confluent and the venter of the first and second segments is often yellow. As I have not seen the types of *albosparsus* I am not certain that *formosæ* deserves even varietal rank. Forel mentions another similar variety which is "paler, with the head of the worker minor reddish and the spots on the gaster larger and confluent," from Victoria, Hong Kong.

17. **Camponotus irritans** (*F. Smith*). A single soldier.

18. **Camponotus dorycus** (*F. Smith*). Several workers, major and media, and a winged female seem to represent a variety of this species, but I hesitate to describe them till I am able to compare them with more material of the known forms than I possess at present.

19. **Polyrhachis dives** *Mayr.* A number of workers swept from plants with Diptera and other insects.

20. **Polyrhachis latona** sp. nov.

Worker. Length 5.5 mm.

Head nearly as broad in front as behind, longer than broad and, excluding the mandibles, as high in the region of the frontal carinæ as long; sides subparallel, posterior border evenly and broadly rounded. Eyes convex. Clypeus strongly carinate. Frontal carinæ closely approximated and parallel in front, diverging behind. Antennæ slender. Thorax convex and evenly rounded above, flattened on the sides, nearly as high in the mesothoracic region as long, with distinct promesonotal suture and strong lateral carinæ. From above the thorax is distinctly broader in front than behind, with straight sides. Pronotum $1\frac{1}{2}$ times as broad as long, in front with a pair of acute spines directed forward and very slightly outward, in line with the lateral carinæ. Mesonotum fully three times as broad as long, separated from the pronotum by a distinct notch in the carina on each side and by similar notches from the epinotum. Mesoëpinotal suture absent. Base and declivity of epinotum subequal, the former trapezoidal, nearly as long as broad in the middle, separated from the abrupt and distinctly concave declivity by a straight transverse ridge, terminating at the carina on each side in a small but distinct tooth. Declivity of epinotum abrupt, concave and with a distinct carina on each side continuous with that of the anterior segments. Petiole broader than the epinotum, slightly convex in front, more strongly so behind, its border with a slight median projection in the middle and on each side with two acute, upwardly directed and closely approximated spines, the more mesial of which is long, more tapering and somewhat curved inward, as long as the distance from its base to middle of the upper petiolar border; lateral spine acuminate, not longer than broad at its base. Gaster and legs of the usual shape.

Opaque black throughout, slightly lustrous and densely and finely punctate. Mandibles finely longitudinally striated.

Hairs yellowish, erect and very sparse, confined to the mandibles, clypeus, anterior surface of the fore coxæ and tip of the gaster. Pubescence yellowish gray, densest and longest on the head, thorax and especially on the gaster, where it con-

ceals the surface; more dilute on the pleuræ, legs, antennæ and petiole, so that these parts appear blacker.

Described from two specimens taken in sweepings.

This species is closely related to *P. relucens* Latr., *mayri* Roger and *proxima* Roger. It is smaller than any of these forms, its frontal carinæ are more approximated in front than in *mayri* and *proxima*, the pilosity is very different, the promesonotal and mesoëpinotal notches in the lateral carinæ are not so deep, the pronotal spines diverge less and the mesial petiolar spines are much shorter, not curved backward and nearer to the lateral spines. From *relucens*, *latona* also differs in its more robust and less tapering pronotal and mesial petiolar spines, the straighter transverse epinotal carina, shorter and less dense pubescence and absence of suberect hairs on the thorax and base of the gaster. From *P. connectens* Emery the new species differs in having the epinotum carinate on the sides behind and in the color of the legs; from *labella* F. Smith in the shape of the base of the epinotum, which in this species is barely a third as long as broad, in the color of the tibiæ, etc.

II. SPECIES FROM THE PHILIPPINES.

1. ***Diacamma rugosum*** (*Le Guillon*). According to Emery, F. Smith's *Ponera versicolor* from the Philippines and Sarawak is the typical form of this species. He states that Roger demonstrated this by an examination of Smith's types. The words in the latter's description: "black, with purple, violet and green tints in different lights," lead me to suspect, however, that Smith really had before him specimens of what Emery has more recently called var. *viridipurpureum* (*vide infra*). *D. rugosum*, under Smith's name *versicolor*, is also cited by Ashmead from the Philippines.

2. ***Diacamma rugosum*** subsp. ***geometricum*** (*F. Smith*). var. ***viridipurpureum*** *Emery*. Originally described from Antipolo, Luzon, from two specimens collected by E. Simon. Twenty-three workers from Benguet (H. M. Smith) and four from Bantayan (L. E. Griffin) agree closely with Emery's description of this superb variety, except that the ground color of the legs is black instead of brown.

3. ***Diacamma rugosum*** subsp. ***sculptum*** (*Jerdon*). Two workers from Trinidad (H. M. Smith) evidently belong to the typical form of this subspecies, which occurs also in Burma, India and Ceylon. Two other specimens received from Ashmead and collected at Manila by Rev. W. A. Stanton are somewhat larger and more robust, blacker and with coarser sculpture, but may also be assigned to this subspecies.

4. **Diacamma rugosum** subsp. **sculptum** var. **vagans** (*F. Smith*). To this variety I refer six workers from Papagon Island (H. M. Smith). The cephalic striæ are rather faint in some specimens, stronger in others, arcuate and converging to the frontal carinæ behind the antennal insertions. The semicircular striæ on the first gastric segment are faint and, on the sides and posterior border of the segment, obsolete. The pubescence is not abundant and the hairs are very short and sparse. The body is blackish bronzed, the metallic reflection being most pronounced on the gaster. The legs, mandibles and antennæ are chestnut brown. Length 9–10 mm.

5. **Odontoponera transversa** (*F. Smith*). This species is cited by Emery from Antipolo, Luzon. Two workers were taken at Bantayan by L. E. Griffin.

6. **Leptogenys** (**Lobopelta**) **diminuta** (*F. Smith*) var. A single worker from Papagon Island (H. M. Smith) approaches the typical Indian form of the species in the sculpture of the head, but the thorax is more like that of the Ceylonese var. *sarasinorum* Forel. It probably represents a new variety, but the material is insufficient for description. It is certainly not the subsp. *striatula* Emery, which has the petiole broader than long and the sutures surrounding the mesonotum more distinct than in the typical form. The true *diminuta* is recorded by Forel from Salak, Java, and by Emery from several localities in Sumatra.

7. **Euponera** (**Brachyponera**) **luteipes** *Mayr*. Recorded by Emery from Antipolo, Luzon. Forel mentions its occurrence at Buitenzorg, Java.

8. **Bothroponera glabriceps** *Emery*. This species, which is very closely related to *B. tesserinoda* Mayr, is based on specimens from Mindanao.

9. **Odontomachus hæmatodes** *L.* Recorded by Emery from Manila.

10. **Odontomachus infandus** *F. Smith*. This species was originally described from the "Philippine Islands." Emery records it from Antipolo, Luzon, and Ashmead includes it in his list of Philippine ants.

11. **Odontomachus papuanus** *Emery* subsp. Emery mentions this from Manila but does not describe it.

12. **Odontomachus sæviissimus** *F. Smith*. Nine workers from Romblon (H. M. Smith) agree very closely with Smith's original description of this species.

13. **Sima allaborans** (*Walker*). Emery cites this species from Manila, Antipolo and Quruña, and Ashmead also mentions it from the Philippines.

14. **Monomorium destructor** (*Jerdon*). Cited by Emery from Manila and Antipolo.

15. **Monomorium pharaonis** (*L.*). Numerous workers and dealated females from Bais, Negros Oriental (L. E. Griffin).

16. **Monomorium gracillimum** (*F. Smith*). Many workers of the typical

Burmese form from a locality between Sablon and Naguillan, Luzon (H. M. Smith).

17. *Solenopsis geminata* (Fabr.) var. *rufa* (Jerdon). Numerous workers from Bais (L. E. Griffin) are recognizable as belonging to this variety on account of their red color and the spine on the mesosternum. Emery cites *S. geminata* from Manila and Antipolo, and it is probable that his specimens also belonged to this South Asiatic variety and not to the typical form of the species, which lives in the West Indies and the adjacent American tropics.

18. *Pheidologeton diversus* (Jerdon). Recorded by Smith under the name *Pheidole ocellifera* from "Burmah, Hong Kong, Philippine Islands." It is also cited by Ashmead from the locality last mentioned.

19. *Pheidologeton pygmaeus* Emery var. *albipes* Emery. Originally described by Emery from worker specimens taken by Simon at Antipolo, Luzon.

20. *Pheidole simoni* Emery. Described by Emery from a single soldier taken at Manila. It resembles *Ph. sauteri* from Formosa (*vide supra*) very closely, but has longer antennal scapes and the base of the gaster is opaque.

21. *Pheidole* sp. A form "allied to *Ph. longicornis* and *velox* Emery," of which Emery saw only a single worker from Antipolo.

22. *Cremastogaster ochracea* Mayr. Recorded by Emery from Antipolo, Luzon.

23. *Cremastogaster simoni* Emery. Originally described from worker specimens taken by Simon at Manila and Antipolo.

24. *Cremastogaster semperi* Emery. Like the preceding originally described from specimens taken at Manila by Simon.

25. *Cremastogaster longiclava* Emery. The types of this species were taken by Simon at Antipolo.

26. *Cremastogaster crassicornis* Emery. Types from Manila, collected by Simon. These resemble *C. brevis* Emery of Java.

27. *Cremastogaster bicolor* Mayr var. *imbellis* Emery. Described from single worker and female specimens taken at Manila and Antipolo by Simon.

28. *Tetramorium pacificum* Mayr subsp. *subscabrum* Emery. The worker of this subspecies was originally described from Antipolo, but, according to Emery, it occurs also in Ceylon and New Caledonia.

29. *Tetramorium guineense* (Fabr.). Numerous workers and dealated females of this common tropicolitan form were taken at Bais by L. E. Griffin. It is also recorded from the Philippines by Ashmead.

30. *Myrmicaria subcarinata* (F. Smith). A single worker taken at Benguet, Luzon (H. M. Smith) belongs to this species but differs from

typical specimens in having the longitudinal ridges on the epinotum connected by equally prominent transverse ridges. The gray hairs on the body and appendages are long and abundant. The material is not sufficient to permit of the establishment of a new variety.

31. **Myrmicaria** sp. Two males received from Ashmead and collected by P. I. Stangel at Bay Laguna, Philippines, are labelled "*M. philippinensis* Ashmead," apparently a MS. name. This species should not be recognized as the specimens are probably males of *subcarinata* or of some other well-known species of the genus.

32. **Dolichoderus bituberculatus** (Mayr). Several workers and females from Zamboanga Forest, Mindanao (E. B. Copeland), a whole colony comprising males, females and workers, taken in a bunch of grapes at Bantayan (L. E. Griffin), and a number of workers taken by H. M. Smith, at Santa Cruz Laguna ("in decaying cocoanut-wood"), San Miguel Harbor, Ticao Island, Benguet and Ramblon. This species, which is common in India, Burma, Java and Sumatra, is also recorded by Ashmead from the Philippines and by Emery from Manila, Antipolo and Quruña.

33. **Iridomyrmex glaber** (Mayr). Three workers from Bais (L. E. Griffin).

34. **Iridomyrmex smithi** sp. nov.

Worker. Length 2.5–3 mm.

Head longer than broad, elliptical, as broad in front as behind. Mandibles rather slender, minutely denticulate. Clypeus flattened, with a broad, shallow, median excision in its anterior border. Frontal area large, triangular, convex. Frontal groove absent. Eyes rather large and prominent. Antennæ long and robust; scape reaching fully $\frac{1}{2}$ its length beyond the posterior border of the head; funicular joints cylindrical, all at least twice as long as broad. Thorax slender, resembling that of *I. anceps* Mayr in shape, but the epinotum more convex and abruptly rounded in front. Pronotum moderately convex, as long as broad, through the humeri a little narrower than the head. Mesonotum narrow, cylindrical, a little broader behind than in front, nearly as long as the pronotum, with nearly straight sides, in profile with sloping, feebly convex upper surface, continuing the curve of the pronotum. Epinotum somewhat broader than the mesonotum, as high as long, with abruptly convex base, especially in front, and somewhat flattened, sloping declivity. Petiole small, narrow, longer than broad, subelliptical, with the node very low and inclined forward, its posterior surface flat and gently sloping. Gaster of the usual shape. Legs long.

Whole body, including the legs and scapes, subopaque, rather densely and finely punctate; epinotum and mesopleuræ with coarser punctures, those on the mandibles large and sparse.

Hairs and pubescence yellowish-gray, long and rather abundant, the former suberect on the body, scapes and legs, the latter longest and most conspicuous on the gaster.

Black; funiculi and mandibles reddish-brown, the latter with yellowish borders; articulations, spurs and tarsi of legs yellow.

Female (deälated). Length 3.4 mm.

Resembling the worker, except in the structure of the thorax and the somewhat paler color of the mandibles and antennal funiculi. The mesonotum is transversely impressed behind, the epinotum rather low and rounded, without distinct basal and declivous surfaces; the petiolar node is very low and blunt. Wing articulations yellow.

Described from eight workers and a single female taken on Ramblon Island (H. M. Smith).

This species is related to *I. lævigatus* Emery and *anceps* Mayr but differs from both in the shape of the head and epinotum, in pilosity, sculpture and in its somewhat smaller size.

35. **Tapinoma melanocephalum** (*Fabr.*). Numerous workers from Bais (L. E. Griffin). Also recorded by Emery from Manila and Antipolo.

36. **Technomyrmex albipes** (*F. Smith*). Recorded by Emery from Manila, and also mentioned by Ashmead as occurring in the Philippines.

37. **Plagiolepis longipes** (*Jerdon*). Many workers from Bais (L. E. Griffin) and a single specimen from Santa Cruz Laguna, Manila (H. M. Smith).

38. **Prenolepis** sp. A single winged female from Santa Cruz Laguna (H. M. Smith). It cannot be identified without the males or workers.

39. **Æcophylla smaragdina** (*Fabr.*). Cited by F. Smith from the Philippines. Several workers in my collection, bearing the same general locality label (H. M. Smith), are indistinguishable in structure from typical specimens collected in India and Cochin China and do not therefore belong to the following variety.

40. **Æcophylla smaragdina** var. **subnitida** *Emery*. A form of this variety, originally described from New Guinea and the Island of Morotai, is recorded by Emery from Antipolo, Luzon. This form approaches the Australian subsp. *virescens* (*Fabr.*) in the shape of the head, which is more rounded behind than in the typical *subnitida*.

41. **Camponotus gigas** (*Latr.*). This, the largest of all known ants, is recorded by Ashmead from the Philippines. It has long been known from adjacent Indomalayan regions.

42. **Camponotus maculatus** (*Fabr.*) subsp. **mitis** *F. Smith* var. **crassinodis** *Forel*. Several workers and a deälated female from Bais (L. E. Griffin). The major workers are almost indistinguishable from a Burmese type specimen given me by Professor Forel.

43. **Camponotus pallidus** (*F. Smith*). Mentioned by Ashmead as occurring in the Philippines.

44. **Camponotus pallidus** var. **subnudus** *Emery*. Recorded by Emery from Manila.

45. **Camponotus** sp. An undescribed species belonging to the *maculatus* group, but represented only by a single worker minor, is recorded by Emery from Antipolo.

46. **Camponotus herculeanus** L. subsp. **japonicus** Mayr. A female specimen from Mindanao is referred to this northern subspecies by Emery.

47. **Camponotus cinerascens** (Fabr.). Mentioned by Ashmead as occurring in the Philippines.

48. **Camponotus corallinus** Roger. This species was described by Roger from Manila and referred to *Colobopsis*. It seems not to have been seen since and Emery leaves its position in the great series of *Camponoti* in doubt.

49. **Camponotus pubescens** Mayr. This species also belongs to the subgenus *Colobopsis* in the broad sense. It is recorded by Emery from Manila.

50. **Camponotus nigricans** Roger. Originally described from a single female, taken in Manila, as a variety of *platypus* Roger. Emery records a worker from Iolo.

51. **Camponotus platypus** Roger. This was described from female specimens taken at Manila. Emery records it also from Mindanao. Workers are unknown.

52. **Camponotus quadrisectus** (F. Smith). The types (female) of this species are also from the Philippines. Emery saw a specimen of the same sex from Mindanao. There are three major workers from Manila (H. Viehmeyer) in the collection of the American Museum.

53. **Polyrhachis thrinax** Roger subsp. **saigonensis** Forel. Recorded by Emery from Manila and Antipolo.

54. **Polyrhachis thrinax** subsp. **javana** Mayr. Recorded by Emery from Quruña, Luzon.

55. **Polyrhachis philippinensis** F. Smith. The types of this species, as the name indicates, were from the Philippines.

56. **Polyrhachis mayri** Roger. Recorded by Ashmead from the Philippines.

57. **Polyrhachis diana** sp. nov.

Worker. Length 5-5.5 mm.

Head longer than broad, about as broad behind as in front and nearly as high through the frontal carinae as long, with rather straight, subparallel sides and broadly rounded posterior border. Eyes large, very prominent. Clypeus somewhat depressed, carinate. Frontal carinae very prominent, closely approximated in front, further apart behind but scarcely diverging. Thorax broader in front than behind, with flattened sides, strongly carinate above on the sides, fully as high through the mesopleurae as long, evenly convex above in profile. Pronotum fully $1\frac{1}{2}$ times as

broad as long, with a pair of straight acute spines, directed forward and slightly outward and continuous behind with the lateral carinæ. These are interrupted by rather deep notches at the boundary between the pro- and meso-, and between the meso- and epinotum. Promesonotal suture distinct, mesoëpinotal suture feebler, especially in the middle. Mesonotum four times as broad as long. Base of epinotum convex, trapezoidal, less than twice as broad as long, separated from the steep, concave and somewhat longer declivity by a prominent transverse ridge which terminates on each side in a short, blunt tooth in the lateral carina. This carina is continued down the side of the declivity and ends in a small swelling just above the metasternum. Petiole broad, anteroposteriorly compressed, convex in front, flattened behind, thickened below, with a broadly and evenly rounded upper margin, and with two approximated spines on each side. The mesial spine is tapering, pointed, much shorter than half the median border of the petiole and curved outward and backward so that it clasps the base of the gaster. The lateral spine is a mere tooth, acute but not longer than broad at the base. Gaster and legs of the usual shape.

Body black throughout, apparently opaque and finely punctate or shagreened, but so thickly and uniformly overlaid with dense, appressed, silvery pubescence that the surface is invisible. The pubescence on the legs and antennæ is shorter and more dilute so that these parts appear blacker. Hairs white, very sparse, short, and confined to the mandibles, clypeus and tip of the gaster.

Six workers from Butuan, Mindanao (H. M. Smith.)

This species is closely related to *P. latona* described above, but is easily distinguished by its more abundant and silvery pubescence, shorter thorax and the different shape of the petiole and its spines. It differs from the other members of the *relicens* group enumerated under the description of *latona* in the same characters as that species.

58. ***Polyrhachis cyaniventris*** *F. Smith.* Originally described from the Philippines.

59. ***Polyrhachis maligna*** *F. Smith.* The types of this species were also from the Philippines.

60. ***Polyrhachis murina*** *Emery.* Recorded by Emery from the Philippines.

61. ***Polyrhachis pubescens*** *Mayr.* Recorded by Emery from Antipolo, Luzon.

62. ***Polyrhachis rastellata*** *F. Smith.* Mentioned by Ashmead as occurring in the Philippines.

63. ***Polyrhachis bihamata*** (*Drury*). Six workers from the Zamboanga Forest, Mindanao (E. B. Copeland). Emery records it from Antipolo, and Ashmead includes it in his list of Philippine Hymenoptera.

64. ***Polyrhachis bellicosa*** *F. Smith.* Mentioned by Ashmead as occurring in the Philippines.

65. ***Polyrhachis armata*** (*Guill.*). Two workers from the Zamboanga Forest (E. B. Copeland). This species is also cited by Ashmead.

66. **Polyrhachis sexspinos** (*Latr.*). F. Smith described specimens of this species from the Philippines.

67. **Polyrhachis abdominalis** *F. Smith.* Cited by Ashmead.

68. **Polyrhachis abdominalis** var. **reversa** *Ern. André.* The types of this variety are from the Philippines.

69. **Polyrhachis bicolor** *F. Smith.* Recorded by Emery from Antipolo, Luzon. Also mentioned by Ashmead as occurring in the Philippines.

70. **Polyrhachis argentea** *Mayr.* Recorded by Emery from Manila and Antipolo.

71. **Polyrhachis dives** *F. Smith.* A single worker from Trinidad, Philippines (H. M. Smith). Recorded also from Manila by Emery.

72. **Polyrhachis aciculata** *F. Smith.* This species, long ago described from the Philippines, has not since been seen by myrmecologists. Emery includes it among the species *incertæ sedis*.

