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CHINESE ANTS COLLECTED BY PROFESSOR S. F. LIGHT
AND PROFESSOR N. GIST GEE

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In two collections recently received, one made by Professor S. F. Light in Southern China (Amoy and vicinity) and one by Professor N. Gist Gee in Northern China (vicinity of Peking), I find several forms not recorded in previous papers. In addition to several new forms, Professor Light has discovered the male of the very singular monotypic genus *Trigonogaster* Forel.

Dorylinæ

Enictus fergusonii Forel var. *hodgsonii* Forel.—Eight workers from Back Liang (Light).

***Enictus latiscapus* Forel var. *fumatus*, new variety**

MALE.—Differing from the typical form in sculpture and color. The whole body, including the mandibles and antennæ, opaque, the legs shining. Head black; mesonotum and dorsal and ventral surfaces of first to fourth gastric segments dark brown. Appendages, scutellum, epinotum, pleuræ, petiole and tip of gaster brownish yellow. Wings with dark brown veins and stigma (in the type much paler).

A single specimen from Amoy (Light).

This is probably the form seen by Bingham, who mentions a specimen in the British Museum from Rangoon, Burma, as being darker and more punctured and as being probably only a variety.

Ponerinæ

Odontoponera transversa F. Smith.—Three workers from Back Liang (Light).

Diacamma rugosum Le Guillou subsp. *geometricum* F. Smith.—One worker from Amoy (Light).

Diacamma rugosum subsp. *geometricum* var. *viridipurpureum* Emery.—A single worker from Amoy (Light), agreeing with specimens from the Philippines, the type locality of this variety.

Euponera (Brachyponera) luteipes Mayr.—Nine workers from Amoy and Back Liang (Light), and fifteen workers from Pei-hai, Peking (Gee).

Ectomomyrmex tonkinus Santsehi.—Numerous workers from Amoy, Back Liang, and Kuliang (Light).

Leptogenys (Lobopelta) kitteli Mayr. subsp. *altisquamis* Forel.—Numerous workers from Kuliang and Back Liang (Light).

Anochetus risi Forel.—A single worker from Amoy (Light).

Odontomachus hæmatoda Linnæus.—Six workers and a female from Back Liang and Kuliang (Light); eight workers from Wo-fu-ssu, Peking (Gee).

Myrmicinae

Aphænogaster famelica F. Smith.—A single worker from Amoy (Light).

Messor lobulifer Emery.—Numerous workers from Pei-hai, Peking (Gee).

Pheidole rhombinoda Mayr.—Numerous soldiers and workers from Kuliang (Light).

Pheidole indica Mayr.—Numerous soldiers, workers and dealated females from Foochow (Light).

Pheidole lighti, new species

SOLDIER.—Length: 4 mm.

Closely related to *Ph. capellinii* Emery. Head large, as broad as long, not broader behind than in front, with nearly straight, subparallel sides and deeply, angularly excised posterior border. Vertex impressed, the front truncated and distinctly concave. In profile the planes of the front and vertex are of about equal length and form a distinct obtuse angle with each other. Eyes small, moderately convex, with impressed orbits, situated at the anterior fourth of the sides of the head. Mandibles large and convex. Clypeus short, flat, with a median notch in the anterior border and a sharp but feeble carina in the middle. Frontal area very deep, transversely triangular. Frontal groove obsolete; frontal carinae very distinct, raised, widely separated, sinuate, diverging posteriorly and reaching the posterior third of the head where they are nearly three times as far apart as each is from the lateral border of the head. The antennal scrobe, bordered internally by the frontal carina, is distinct but shallow and is confluent behind with a similar but narrow space for the accommodation of the funiculus between two rugæ, the outermost of which passes very close to the internal orbit. Antennal scapes half as long as the distance of their insertions from the posterior corners of the head, slender, curved and slightly flattened basally. They do not reach to the ends of the frontal carinae. Funiculi rather slender, the 3-jointed club as long as the remainder of the funiculus; joints 2-5 as broad as long, joints 6-8 distinctly longer than broad. Thorax much narrower than the head and shaped much as in *capellinii*, the pronotum with prominent, rather sharp humeral projections, the promesonotal suture distinct, the mesonotum rapidly sloping backwards and downwards, somewhat convex anteriorly and behind the middle, with a distinct bituberculate torus. Mesoepinotal constriction short and deep. Epinotum small, with subequal base and declivity, longitudinally concave in the middle; the spines stout and acute, longer than broad at their bases, directed backward and outward and only slightly upward. Petiole small, twice as long as broad, its node somewhat compressed antero-posteriorly, with

transverse superior border feebly impressed in the middle. Postpetiole nearly three times as broad as the petiole and about twice as broad as long, its sides rather sharply angulate behind the middle. Gaster smaller than the head, lenticular, subcircular. Legs rather long, femora somewhat incrassated in the middle.

Mandibles, gaster, legs and frontal area smooth and shining; remainder of body subopaque; mandibles with small, scattered punctures and a few indistinct striæ at the base. Clypeus and head finely and densely punctate; upper surface of latter loosely longitudinally rugose, the rugæ becoming faint behind the eyes, diverging on the front and becoming indistinct on the posterior portion of the vertex where there are a few shallow, longitudinal and somewhat shining foveolæ. Thorax, petiole and postpetiole very finely and densely punctate, most distinctly on the pleuræ; pronotum transversely rugulose. Gaster, with small, scattered piligerous punctures.

Hairs yellowish, bristly, erect, moderately abundant on the upper surface of the head and body but absent on the legs, except for a few on the fore coxæ and flexor surface of the fore femora. Appressed pubescence sparse and rather long, visible on head and gaster, more abundant on the legs and funiculi.

Ferruginous red; gaster, legs and funiculi yellow, the gaster with fuscous clouds posteriorly; basal and apical borders of mandibles broadly and sharply black; borders of clypeus, frontal carinæ and middle portion of scapes dark red.

WORKER.—Length: 2-2.3 mm.

Head subrectangular, as broad as long, with feebly convex, subparallel sides and straight posterior border. Eyes small and rather flat, a little in front of the middle of the sides of the head. Mandibles rather large, with minutely denticulate apical borders and two larger terminal teeth. Clypeus moderately convex, ecarinate, with broadly rounded, entire anterior border. Frontal area disinct, elongate; frontal carinæ subparallel, reaching back beyond the middle of the head, as far apart as their distance from the lateral borders of the latter. Antennal scapes reaching one-third their length beyond the posterior corners of the head. Thorax resembling that of the soldier, but the humeral projections less developed, the torus of the mesonotum not bituberculate and the epinotal spines more delicate and more erect. Upper border of petiolar node not impressed in the middle; postpetiole broader than long but only twice as broad as the petiolar node and rounded on the sides.

Mandibles, gaster and legs shining; head, thorax and pedicel subopaque, very finely and densely punctate, the front somewhat shining, the rugæ on the head feeble, sparse and rather indistinct.

Pilosity and color much as in the soldier, but mandibles not bordered with black and antennal scapes not darker in the middle.

Described from a single soldier and eight workers taken at Back Liang (Light).

This may prove to be an extreme subspecies of *Ph. capellinii* of Java and Sumatra, but comparison with Emery's description and figure reveals many small differences. The Chinese species is smaller and differently colored, with larger eyes, the epinotal spines are less erect in the soldier and more acute, the truncated front of the head is distinctly concave, the clypeus carinate, the surface of the head, thorax and pedicel less opaque, etc. *Ph. asperata* Emery from Tenasserim is also larger than *lighti* (soldier, 5.5-5.75 mm.; worker, 2.75-3 mm.), darker and differently

sculptured. The recently described *Ph. planifrons* Santschi from Cochinchina is somewhat similar to *lighti* in the shape of the head but in sculpture and pilosity is much more like *Ph. sharpii* Forel of India.

Pheidole javana Mayr.—Two soldiers and numerous workers and deälated females from Back Liang (Light).

Pheidole megacephala Fabricius.—Seven soldiers from Amoy (Light).

Crematogaster (Acrocælia) brunnea F. Smith var. *nicevillei* Forel.—A dozen workers from Kushan Mt. (1000 ft.), near Soochow (Light).

Crematogaster (Acrocælia) dohrni Mayr subsp. *artifex* Mayr.—Numerous workers and females from Kuliang, Back Liang, Amoy and Crocodile Islet, Liuwutieng, off the mainland, near Amoy (Light).

FEMALE (undescribed).—Length: 7.5–8 mm.

Head large, subrectangular, distinctly broader than long, slightly broader behind than in front, with straight posterior border and nearly straight sides. Eyes occupying nearly one-third of the latter and placed a little in front of the median diameter. Antennal scapes not reaching the posterior corners of the head. Thorax rather short, distinctly narrower than the head, somewhat more than twice as long as high. Base of epinotum very short and convex, passing abruptly into the much longer, vertical declivity, the spines of the worker represented by stout, blunt angles. Petiole similar to that of the worker; longitudinal groove on the postpetiole very feeble. Gaster large, of the usual shape.

Head sculptured much as in the worker but more shining; mandibles subopaque, coarsely striatopunctate; mesonotum, pedicel and gaster smooth and shining, with scattered piligerous punctures; pronotum, pleuræ and epinotum subopaque and finely striate.

Pilosity similar to that of the worker.

Yellowish brown with darker gaster; pronotum, coxæ, pedicel and sides of thorax brownish yellow. Wings clear and hyaline, with pale yellow veins and stigma.

Crematogaster (Acrocælia) dohrni Mayr subsp. *fabricans* Forel.—Numerous workers from Back Liang, and several workers, three deälated females and three males from Tsimei (Light). The head of the worker has the front smooth and shining in the middle. Apart from their somewhat smaller size (about 7 mm.), and somewhat darker color, the females agree very closely with those of the subsp. *artifex*. The male measures 4 mm. and is sordid yellowish brown, with the posterior portion of the head dark brown, the antennæ, tarsi, articulations of legs and sutures of thorax and gaster pale yellow. Wings hyaline with very pale yellow veins and stigma.

Crematogaster (Acrocclia) dohrni Mayr subsp.**fabricans** Forel var. **flaccida**, new variety

WORKER.—Length: 3–3.5 mm.

Differing from the other forms of *dohrni* in its small size, very feeble sculpture and pale coloration. The whole upper surface of the head is shining and nearly smooth, the sculpture being almost effaced except on the sides. The thoracic sculpture is also feeble and loose, leaving much of the surface shining. Pale brownish yellow, with darker gaster and the head in some specimens darker than the thorax. The gastric segments are broadly bordered with yellow. The epinotal spines are slender and acute.

Numerous specimens from Back Liang (Light).

Monomorium pharaonis (Linnæus).—Many workers and two dealated females from Amoy (Light).

Monomorium latinode Mayr.—Three workers from Amoy (Light).

Monomorium minutum Mayr. var. *chinense* Santschi.—Seven workers from Pei-hai and northwest of Peking (Gee).

Monomorium (Parholcomyrme) destructor F. Smith.—Four workers from Amoy (Light).

Trigonogaster recurvispinosa Forel.—Three workers and four males from Back Liang (Light), taken from a nest under a stone.

MALE (undescribed).—Length: 2.3–2.6 mm.

Integument soft and collapsible. Head, including the eyes, as long as broad. Eyes rather large, cheeks very short, the sides of the postocular region as long as the eyes, converging posteriorly to a projection on which the large but not very convex ocelli are situated. Mandibles small, triangular, edentate, with acute tips. Labial palpi 2-jointed; maxillary palpi 4-jointed. Clypeus very convex, as long as broad, with projecting, entire anterior border. Frontal area distinct, triangular; frontal carinæ obsolete. Antennæ 12-jointed; scape very short, scarcely longer than broad; first funicular joint swollen, globular, as broad as long, remainder of funiculus very slender, all the joints much longer than broad, the last extremely slender and filiform, as long as the two preceding joints together. Thorax rather long, mesonotum somewhat broader than the head, as broad as long, moderately convex but not overhanging the pronotum, apparently without Mayrian furrows, but this is not easily determined owing to the shrivelling of the integument. Scutellum large and convex; epinotum low and narrow, unarmed, the straight backwardly sloping base fully three times as long as the nearly vertical declivity with which it forms a rounded obtuse angle. Petiole and postpetiole slender, without distinct nodes, the former scarcely pedunculate, about twice as long as broad, slightly enlarging posteriorly, convex above; the latter scarcely broader and not longer than broad. Gaster elongate, parallel-sided, narrowed in front and broadly rounded behind, flattened above and very convex beneath, with five well-developed segments. Cerci distinct; genitalia large but completely retracted into the gaster. Legs slender. Wings with feebly developed venation; the anterior pair with a single large complete cubital cell, an open submarginal and open discoidal cell; the posterior pair with a couple of indistinct longitudinal veins. Pterostigma rather poorly developed.

Smooth and shining, without sculpture, except the ocellar triangle, which is reticulate.

Hairs white, delicate, short and pointed, of uneven length, rather numerous on the body, reduced to appressed pubescence on the legs. Wings rather densely pubescent, the hind pair with rather long fringing hairs on their posterior borders.

Sordid whitish; legs and antennæ white; ocellar triangle brown; remainder of head and the thorax also somewhat more infuscated than the pedicel and gaster. Wing opaque whitish, with very pale brownish veins.

This very singular little ant seems to have been taken only once previously, at Poona, in Western India, by Wroughton. The discovery of the male is of considerable interest because its taxonomic position among the other genera of Myrmicinae has been very problematic. Forel believed it to be related to *Pheidole*, but Emery, who in his letters to me repeatedly referred to his difficulty in settling its relationships, finally placed it provisionally in his 'Genera Insectorum' just after *Lophomyrmex* and just before *Pheidologeton* in his tribe Pheidologetini. The male *Trigonogaster*, which is not larger than the worker, indicates that the female may not be very much larger, whereas both sexual phases of the Pheidologetini are of unusual size compared with their conspecific workers. The males, moreover, are very different from that of *Trigonogaster*. It will be necessary, therefore, to remove this genus from the tribe to which Emery assigned it. While its male resembles the male *Pheidole* in several characters, it is still more like the male of *Monomorium*. In fact, it agrees so closely with the males of this genus that I propose to include it in the tribe Monomorii as defined by Emery and immediately after the type genus, of which Emery justly remarks in his 'Genera Insectorum': "This proteiform genus comprises numerous species with exceedingly indeterminate characters. It is *par excellence* a stirp genus, from which have been derived a number of other genera that keep repeating the stirp characters with variations. It is also a very ancient genus since species of *Monomorium* (6 species) make up nearly a third of the ant fauna of New Zealand."

Pheidologeton diversus Jerdon.—Numerous soldiers, intermediates and workers from Amoy (Light).

***Dilobocondyla fouqueti* Santschi var. *lighti*, new variety**

WORKER.—Length: 4.5 mm.

Differing from the typical form in its smaller size (the true *fouqueti* from Hanoi, Tonkin measures 5.8 mm.), and the color of the legs. The trochanters and four terminal tarsal joints on all the legs are red, the coxæ, femora, tibiæ and basitarsi deep red, almost black. The antennal scapes and first funicular joint are ivory yellow, with a short brown streak on the middle of the former. In the typical form, according

to Santschi, the funiculi, trochanters and femora are yellowish brown, the tibiae and metatarsi of the median and hind legs blackish brown.

A single specimen from Amoy (Light).

Pristomyrmex pungens Mayr.—Five workers from Back Liang (Light). Viehmeyer is undoubtedly right in regarding *P. japonicus* Forel as a mere synonym of this species.

Tetramorium guineense Fabricius.—One female and numerous workers from Kuliang and Foochow (Light).

Tetramorium caespitum L. subsp. *jacoti* Wheeler.—Numerous workers from Pei-hai, Peking and northwest of the latter city (Gee). Emery's subsp. *tschushimæ* described in 1925 is a synonym of this form, which was described in 1923. I had erroneously attached *jacoti* as a variety to the subsp. *semilæve* Ern. André. Among the material collected by Prof. Gee I am able to distinguish two other Chinese forms of *T. caespitum*, which may be described as varieties of *jacoti* though they more closely approach the typical *caespitum* in sculpture.

***Tetramorium caespitum* subsp. *jacoti* var. *geei*, new variety**

Differing from the typical *jacoti* in the sculpture of the nodes, that of the petiole being finely rugulose and opaque and finely and densely punctate, but both have a small sharply defined, elongate, very smooth and shining area in the middle near the anterior end of the segment. The epinotal spines are as strong as in *jacoti* and the mesoepinotal constriction as distinct.

Numerous workers from Soochow (type-locality), between Shanghai and Foochow, and Mokanshan (Gee).

***Tetramorium caespitum* subsp. *jacoti* var. *annectens*, new variety**

Smaller than the two preceding forms and the body darker and more piceous. The thorax is shorter, with much feebler mesoepinotal impression, the epinotal teeth much smaller. Both the petiole and postpetiole are subopaque and sculptured throughout, the former irregularly rugulose, the latter regularly longitudinally rugulose. The proportions of the petiole and postpetiole are very much as in the typical *jacoti* and var. *geei*.

Described from eleven specimens from Pei-hai, Peking (Gee).

Dolichoderinæ

Dolichoderus (Hypoclinea) taprobanæ F. Smith var. *obscuripes* Santschi.—Numerous workers from Amoy (Light).

Iridomyrmex anceps Roger.—Numerous workers from Amoy (Light).

Tapinoma melanocephalum Fabricius.—Four workers from Amoy (Light).

Tapinoma geei, new species

WORKER.—Length: 1.8–3 mm.

Head subrectangular, even in the smallest individuals, as broad as long, as broad in front as behind in the largest but somewhat narrowed anteriorly in the smallest specimens, with rounded sides and posterior corners but straight posterior border. Eyes perfectly flat, large, longer than their distance from the anterior borders of the cheeks, the posterior orbits at the median transverse diameter of the head. Mandibles with numerous minute denticles which grow gradually longer toward the apex which forms a single large tooth. Clypeus rather short, convex in the middle; its anterior border with a small but distinct notch in the middle, and a sinuation on each side; posterior clypeal suture very faint. Frontal area and groove obsolete, frontal carinae short, subparallel, somewhat closer together than each is from the lateral border of the head. Antennal scapes reaching not more than one-fourth their length beyond the posterior corners of the head; all the funicular joints decidedly longer than broad, the first as long as the two succeeding joints, the second two-thirds as long as the third. Thorax rather short and thickset; pronotum broader than long, mesonotum as broad as long, together in profile forming an even but feeble convexity; mesoëpinal impression short and distinct; epinotum short, much lower than the mesonotum, its base short, convex and rounded but not projecting, rounding into the flat, sloping declivity which is straight in profile and about three times as long as the base. Petiole small, elliptical, its anterior border thickened to form a vestigial node. Gaster rather large, elliptical but not pointed posteriorly, first segment overhanging the petiole and provided with a median impression for its accommodation.

Shining, including the mandibles very finely, densely and feebly punctate.

Hairs and pubescence white, the former sparse, present only on the mandibles, clypeus and tip of gaster, the latter forming a pruinose investment of the whole body but not concealing the shining surface.

Brown; mandibles, scapes, first funicular joint, anterior portion of clypeus, thorax, petiole and legs brownish yellow; thorax often clouded with brown or entirely brown, but of a paler shade than the head and gaster.

Described from numerous specimens taken by Prof. Gee near Peking (Pei-hai and northwest of the city).

This species seems to be very close to the recently described *T. sinense* Emery from Manchuria but differs in having a distinctly notched clypeus, somewhat longer scapes and funicular joints, a more shining surface and differently shaped epinotum. From *T. sessile* Say and *erraticum* Förster, *geei* differs in having decidedly larger and more flattened eyes, a more thickset thorax, less angular epinotum, smaller clypeal notch, straight posterior border to the head, finer punctation of the mandibles, etc.

Tapinoma rectinotum, new species

WORKER.—Length: 2 mm.

Head subrectangular, in some specimens slightly longer than broad, in others as broad as long, with straight subparallel sides and straight posterior border, the posterior corners rounded. Eyes feebly convex, rather large, longer than their distance

from the anterior borders of the cheeks, their posterior borders at the median transverse diameter of the head. Mandibles convex, with more oblique apical borders than in *geei* and more crossed. Clypeal border with a small but distinct median notch, the posterior suture distinct. Frontal area and groove obsolete, frontal carinæ very short, subparallel. Antennal scapes exceeding the posterior corners of the head by one-fourth their length; second funicular joint very short, broader than long, scarcely more than half the length of the third joint; third and remaining joints somewhat longer than broad. Thorax rather compressed laterally in the mesothoracic and epinotal regions which are of the same length and width; in profile the dorsal outline of the pro- and mesonotum and base of epinotum form nearly a straight line, the impression at the mesoëpinotal suture being only slightly more pronounced than at the promesonotal suture; the sloping epinotal declivity straight in profile and scarcely more than twice the length of the base into which it passes imperceptibly by a large curve. Petiole small, narrow, flat, about twice as long as broad, merely somewhat thickened at its anterior end to form a very vestigial node. Gaster broadly elliptical, not pointed posteriorly, first segment broadly covering the petiole and impressed in the middle for its accommodation.

Whole body shining and very finely and densely punctate, covered with very fine, dust-like, whitish pubescence, which does not conceal the surface. Hairs few, confined to the mandibles, clypeus and tip of gaster.

Brown black; mandibles, anterior portion of clypeus, antennæ and legs brownish yellow, the antennæ somewhat darker; coxæ, femora and tibiæ slightly infuscated.

Described from five workers taken by Prof. Gee at Pei-taiho, Northern China.

This small species is easily recognized by the profile outline of the thorax.

Technomyrmex albipes F. Smith.—A number of workers from Amoy, Kuliang and Back Liang (Light).

Formicinae

Anoplolepis longipes Jerdon.—Numerous workers from Amoy (Light).

Plagiolepis manczshurica Ruzsky.—A single worker from Pei-hai, Peking (Gee).

Camponotus (Camponotus) japonicus Mayr var. *aterrimus* Emery.—Ten workers from Kuliang (Light) and three from northwest of Peking (Gee).

Camponotus (Tanæmyrmex) barbatus Roger subsp. *albosparsus* Forel.—A major and three minor workers from Back Liang (Light).

Camponotus (Tanæmyrmex) carin Emery.—A minor worker from Amoy (Light).

Camponotus (Tanæmyrmex) friedæ Forel.—Numerous workers and males from Amoy and Kuliang (Light).

Camponotus (Tanæmyrmex) nicobarensis Mayr. var. *exiguoguttatus* Emery.—One minor worker from Amoy (Light).

Camponotus (Tanæmyrmex) variegatus F. Smith var. *dulcis* Emery.—Several major and minor workers and one female from Amoy and Kuliang (Light).

Camponotus (Tanæmyrmex) variegatus F. Smith var. *mitis* F. Smith.—Three workers and a female from Back Liang and Amoy (Light).

Camponotus (Myrmosericus) rufoglaucus Jerdon subsp. *paria* Emery.—One worker from Amoy (Light).

***Camponotus (Myrmamblys) itoi* Forel subsp. *lighti*, new subspecies**

WORKER MAJOR.—Length: 5–6 mm.

Differing from the typical *itoi* of Japan in having the head fully as broad as long, with longer antennal scapes, which surpass the posterior border of the head by twice the diameter of their tips. Base of epinotum distinctly concave. The mandibles, clypeus, cheeks, antennæ, legs and pronotum red; the femora and tibiæ darker, the pronotum often more or less infuscated except at its borders. Ventral portion of petiole and borders of gastric segments yellowish. Sculpture and pilosity as in the typical *itoi*.

WORKERS MEDIA AND MINOR.—Length: 3.5–5 mm.

Head even of the smallest workers only slightly longer than broad. Antennal scapes extending one-third their length beyond the posterior border of the head. Clypeus merely subcarinate. Base of epinotum rather deeply concave in profile. Paler portions of body and appendages more yellowish than in the major, and this coloration extending also to the sides of the mesothorax and epinotum, or the whole thorax may be brownish or reddish yellow with fuscous spots on the dorsal surface. Coxæ and femora clouded with fuscous.

Numerous specimens from Back Liang (type-locality) and Amoy (Light), "in rotten wood."

This subspecies resembles the var. *tokioënsis* Ito in the color of the pronotum, but the latter has the head longer and its sculpture is feebler. Viehmeyer has based a subsp. *kwansienensis* from China on a worker media. Its head is described as longer than broad, the clypeus as carinate, the antennal scapes extending one-fifth their length beyond the posterior border. The sculpture seems to be coarser than in the typical *itoi* and the pronotum is concolorous with the remainder of the thorax.

***Camponotus (Myrmamblys) itoi* subsp. *lighti* var. *okamotoi*, new variety**

WORKER MINOR.—Length: 3–3.6 mm.

Differing from the preceding in having the head, thorax and a large spot on the dorsal surface of the first gastric segment brownish red, the posterior portion of the head and dorsal portion of the meso- and epinotum slightly brownish. The legs are

paler and more yellow. The whole surface of the body is smoother and more shining than in *lighti*. The base of the epinotum is quite as concave as in that form.

Two specimens taken by Mr. K. Okamoto on the mainland near Amoy.

Polyrhachis (Myrma) striata F. Smith.—Three workers from Amoy (Light).

Polyrhachis (Myrma) mayri Roger.—Seven workers from Back Liang and Kuliang (Light).

Polyrhachis (Myrmhopla) dives F. Smith.—Numerous workers, females and males from Foochow, Amoy, Kushan Mt. (1000 ft.), Back Liang and Kuliang (Light).

Polyrhachis (Cyrtomyrma) rastellata F. Smith subsp. *demangei* Santschi.—Three workers from Back Liang (Light).

Paratrechina longipes Latreille.—Several workers from Amoy (Light).

Paratrechina (Nylanderia) birmana Forel.—Several workers and males and one female from Amoy and Foochow (Light).

Paratrechina (Nylanderia) vividula Nylander.—Five workers from Amoy (Light).

Pseudolasius risi Forel.—Several workers and males and one female from Back Liang (Light). These were taken from a nest under a stone at 2000 feet in an open pine forest. Owing to the difficulty in distinguishing the species of *Pseudolasius* I subjoin a detailed description of all the phases of this ant. Forel described the worker and female rather briefly.

WORKER.—Length: 2.2–3 mm.

Head subrectangular, as broad as long and as broad in front as behind, in the large individuals with rather deep and angular, in the smallest with much feebler excision of the posterior border. Eyes very small, imperfectly developed, consisting of only a few facets, placed well in front of the middle of the head. Mandibles strong, with oblique 4-toothed apical borders, the teeth subequal and the minute third tooth of most other species entirely absent. Clypeus very convex in the middle, its anterior border very feebly sinuate in the middle and on the sides, with an indistinct denticle on each side near the mandibular articulation. Frontal area distinct, triangular. Antennæ rather stout, the scapes in large workers scarcely reaching, in small workers slightly surpassing the occipital border of the head; funicular joints 2–3 distinctly broader than long, penultimate joint as long as broad. Thorax thickset, not longer than the head including the mandibles. Pronotum convex and rounded above; mesonotum transversely elliptical, convex and sloping. Mesoepinotal constriction short but pronounced, with prominent metanotal spiracles. Epinotum short, the base in profile horizontal and nearly straight, rounding into the sloping declivity which is straight and twice as long as the base. Petiole inclined forward, much compressed anteroposteriorly, narrowed above, with acute, entire and rounded superior border. Gaster large and convex above. Legs long and rather stout.

Head and mandibles subopaque, very finely and obscurely reticulate-punctate; remainder of body and especially the gaster, shining, more sparsely and more indistinctly punctate.

Hairs and pubescence pale yellowish, the hairs erect or suberect on the body, rather short and somewhat bristly, moderately abundant, dense on the head, sparser on the remainder of the body and on the appendages.

Yellow; the antennæ and legs paler, mandibles brownish, with dark brown borders; middle portions of gastric segments faintly clouded with brown.

FEMALE (deälated).—Length: nearly 6 mm.

Head distinctly broader than long, broader behind than in front, with nearly straight posterior border. Mandibles 5-toothed, the third tooth being present but very small. Eyes large and convex, as long as their distance from the anterior border of the cheeks. Ocelli on a distinct eminence. Scapes extending a short distance beyond the posterior corners of the head. Thorax as broad as the head through the eyes; mesonotum as broad as long, somewhat depressed; epinotum evenly sloping, without distinct base and declivity. Petiole similar to that of the worker; gaster more elongate, elliptical.

Thorax and gaster more opaque and more densely punctate than in the worker and with denser, longer pubescence. Color darker, more brownish yellow; gaster dark brown, with paler borders to the segments; head with a large, poorly defined dark brown spot on the vertex; mesonotum with a large rectangular and scutellum with a transverse spot of the same color; anterior border of epinotum also somewhat infuscated.

MALE (undescribed).—Length: 2.3–2.5 mm.

Head subrectangular, as long as broad, with slightly rounded sides and perfectly straight posterior border. Eyes convex, somewhat less than half the length of the sides of the head. Apical borders of mandibles indistinctly denticulate. Ocelli moderately large, on an eminence as in the female. Antennal scapes reaching one-third their length beyond the paired ocelli. Thorax broader than the head; mesonotum very convex and rounded anteriorly, as broad as long, subcircular from above. Epinotum sloping, feebly convex, without distinct base and declivity. Petiole very small and low, cuneate in profile, with rather sharp, entire superior border. Legs slender.

Subopaque, or glossy; gaster slightly more shining.

Hairs much less abundant than in the worker, long and conspicuous only on the head, scutellum and posterior segments of the gaster, very short and sparse on the legs and scapes. Pubescence finer, more dilute and more appressed than in the worker.

Yellowish brown; posterior portion of head dark brown; legs, antennæ, genitalia and sutures of thorax and gaster paler, brownish yellow. Wings opaque, slightly tinged with brown; veins pale but narrowly outlined with dark brown.

Pseudolasius sp.—Eight males of a larger species than *risi* from Kuliang (Light) cannot be identified without the workers or females. These specimens measure 4.5 mm.

Formica rufibarbis Fabricius var. *glabridorsis* Santschi.—Thirteen workers from Pei-hai; Peking (Gee), agreeing with Santschi's description. They lack the erect hairs not only on the thorax, but also on the head.

Formica (Proformica) jacoti Wheeler.—Three workers taken northwest of Peking (Gee).