

## FIVE NEW SPECIES AND ONE NEW RECORD SPECIES OF THE ANT GENUS *LEPTOGENYS* ROGER (HYMENOPTERA: FORMICIDAE) FROM YUNNAN PROVINCE, CHINA\*

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**Abstract** Five new species of the ant genus *Leptogenys* Roger are described from Xishuangbanna, Yunnan Province, China, i. e. *L. huangdii* sp. nov., *L. pangui* sp. nov., *L. zhuangzii* sp. nov., *L. laozii* sp. nov., *L. mengzii* sp. nov. A new record species for China, *L. crassicornis* Emery, was collected in the same area. A key based on worker caste is prepared for the 13 species known in China. Detailed figures are given for 12 species except *L. peuqueti* (Andre). The known Chinese species are divided into 4 species groups, i. e. *L. crassicornis*-group, *L. chinensis*-group, *L. diminuta*-group, and *L. zhuangzii*-group.

**Key words** Hymenoptera, Formicidae, *Leptogenys*, new species

*Leptogenys* Roger is a large genus in the family Formicidae, of which 206 species are known in the world, mainly distributed in the tropics (Bolton 1995). In Oriental, Indo-Australian and Australasian regions, the *Leptogenys* fauna were well investigated for the following areas: India, Myanmar and Sri Lanka (Forel 1900; Bingham 1903), Fiji (Mann 1921), Melanesia and New Caledonia (Wilson 1958).

In China, 7 species were recorded before this study. Wheeler (1930) firstly recorded 4 species and 2 subspecies in the mainland of China: *L. chinensis* (Mayr), *L. diminuta* (Smith), *L. minchinii* Forel, *L. peuqueti* (Andre), *L. kitteli altisquamis* Forel, and *L. kitteli siemsseni* Viehmeyer. Terayama (1990) listed 4 species in Taiwan of China: *L. chinensis* (Mayr), *L. diminuta* (Smith), *L. kitteli* (Mayr), and *L. confucii* Forel, while the last species is only recorded in Taiwan up to date. Tang and Wang (1995) reported 5 species in China, beside *L. kitteli* (Mayr), the other 4 species were the same as Wheeler (1930). Wu and Wang (1995) reported only 3 species: besides *L. diminuta* (Smith) and *L. kitteli* (Mayr), a new record species, *L. birmana* Forel, was added to the fauna of China. Xu (1996) published a taxonomic study of the genus and 7 species were treated: *L. birmana* Forel, *L. kitteli* (Mayr), *L. diminuta* (Smith), *L. peuqueti* (Andre), *L. minchinii* Forel, *L. chinensis* (Mayr), and *L. confucii* Forel; *L. birmana* Forel was reported as a new record for China. But the species, identified by Xu as *L. chinensis* (Mayr) by mistake, should be *L. minchinii* Forel in fact.

In studying bio-diversity of ants in Xishuangbanna of Yunnan Province from 1995—1998, 5 new species have been found, i. e. *L. huangdii* sp. nov., *L. pangui* sp. nov., *L. zhuangzii* sp. nov., *L. laozii* sp. nov., and *L. mengzii* sp. nov.. *L. crassicornis* Emery has been newly recorded from China. Up to now, 13 species of the genus are known in China.

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Standard measurements and indices are as defined by Bolton (1975): TL = total length, HL = head length, HW = head width, CI = cephalic index, SL = scape length, SI = scape index, PW = pronotal width, AL = alitrunk length, ED = maximum diameter of eye, ML = mandibular length, PL = petiole length, PH = petiole height, DPW = dorsal petiole width, LPI = lateral petiole index =  $PH \times 100 / PL$ , DPI =  $DPW \times 100 / PL$ . All measurements are expressed in millimeters.

The type specimens are deposited in the Insect Collection, Faculty of Resources, Southwest Forestry College, Kunming, Yunnan Province.

### Genus *Leptogenys* Roger

*Leptogenys* Roger, 1861, *Berlin. Entomol. Zeitsch.* 5: 41. Type species: *Leptogenys falcigera*, by subsequent designation of Bingham, 1903: 52.

Diagnosis of worker: Mandibles variously shaped, may be subtriangular, short linear, or strongly elongate. Median portion of clypeus usually projecting as a distinct lobe, usually with a longitudinal median carina. Palp formula 4, 4. Lobes of frontal carinae small, only partially covering the antennal insertions, the major portion of which is visible in dorsal view. Antennae 12-segmented, the antennal scapes usually long,  $SI > 100$ , very rarely shorter. Eyes present in all known species, varying from very large to minute. Dorsal alitrunk with promesonotal suture well developed; metanotal groove present, usually distinct, reduced or indistinct only in some minute species. Middle and hind tibiae each with a large pectinate spur and a smaller simple spur. Pretarsal claws distinctly pectinate in most species, the pectination reduced to two, three or four teeth in some, very rarely absent in some minute species. Petiole a node of varying configuration, very rarely a thick, tapering scale. Gaster usually constricted between first and second segments, the constriction very faint or absent in some case. Sting long and stout (Bolton 1975).

The Chinese species of the genus *Leptogenys* can be divided into 4 species groups:

*L. crassicornis*-group: Squared head smooth, mandibles with dentate masticatory margin, antennae short. 3 species: *L. crassicornis*, *L. huangdii* sp. nov., and *L. birmana*.

*L. chinensis*-group: Elongate head smooth, mandibles with edentate masticatory margin, antennae elongate. 5 species: *L. pangui* sp. nov., *L. peuqueti*, *L. chinensis*, *L. minchinii*, and *L. confucii*.

*L. diminuta*-group: Elongate head longitudinally striate, mandibles with edentate masticatory margin, antennae evenly elongate. 2 species: *L. diminuta*, and *L. kitteli*.

*L. zhuangzii*-group: Elongate head densely punctate, mandibles usually with edentate masticatory margin, antennae elongate. 3 species: *L. zhuangzii* sp. nov., *L. laozii* sp. nov., and *L. mengzii* sp. nov.

### Key to the known species of *Leptogenys* of China based on worker caste

- 1 Masticatory margin of mandible with 3 or more than 3 teeth. Head nearly square ..... 2  
Masticatory margin of mandible without or with only 1 tooth. Head elongate, distinctly longer than broad ..... 4
- 2 Masticatory margin of mandible with 3 teeth, inner margin without tooth. In dorsal view petiolar node trapezoid (Figs. 1—4) (China: Yunnan Province; Myanmar) ..... *L. crassicornis* Emery  
Masticatory margin of mandible with more than 3 teeth, inner margin with teeth. In dorsal view petiolar node not trapezoid ..... 3

- 3 Inner margin of mandible with 1 tooth. In dorsal view petiolar node semicircular. Head and alitrunk black (Figs. 5—8) (China: Yunnan Province) ..... *L. huangdii* sp. nov.  
Inner margin of mandible with 3 or more than 3 teeth. In dorsal view petiolar node nearly crescent. Head and alitrunk dark reddish brown (Figs. 9—12) (China: Yunnan Province; Myanmar; India) ..... *L. birmana* Forel
- 4 Head smooth and shining ..... 5  
Head longitudinally striate or densely punctate ..... 9
- 5 Scape of antenna surpassed occipital corner by half of its length (Figs. 13—16) (China: Yunnan Province) .....  
..... *L. pangui* sp. nov.  
Scape of antenna surpassed occipital corner by less than half of its length ..... 6
- 6 Head, alitrunk and gaster without metallic luster (China: Zhejiang Province; Vietnam; Myanmar; Sri Lanka) .....  
..... *L. peuqueti* (Andre)  
Head, alitrunk and gaster with blue or purple metallic luster ..... 7
- 7 Median lobe of clypeus truncate at apex (Figs. 17—20) (China: Yunnan and Taiwan Provinces; India; Sri Lanka; Philippines) ..... *L. chinensis* (Mayr)  
Median lobe of clypeus extruding at apex ..... 8
- 8 Body black. Subpetiolar process rounded at apex (Figs. 21—24) (China: Yunnan Province, Hong Kong, Macao; Myanmar; India; Bangladesh) ..... *L. minchinii* Forel  
Body dark yellowish brown. Subpetiolar process a small triangular, angled at apex (Figs. 25—28) (China: Taiwan Province; Japan) ..... *L. confucii* Forel
- 9 Head longitudinally striate ..... 10  
Head densely punctate ..... 11
- 10 Clypeus with longitudinal central carina (Figs. 29—32) (China: Yunnan, Guangdong and Taiwan Provinces; Myanmar; India; Sikkim; Sri Lanka; Malaysia) ..... *L. diminuta* (Smith)  
Clypeus without longitudinal central carina (Figs. 33—36) (China: Yunnan, Guizhou, Hunan, Guangxi, Fujian, and Taiwan Provinces, Hong Kong; Myanmar; Sikkim; India) ..... *L. kitteli* (Mayr)
- 11 Masticatory margin of mandible as long as inner margin. Masticatory margin with 1 small tooth in the middle (Figs. 37—40) (China: Yunnan Province) ..... *L. zhuangzii* sp. nov.  
Masticatory margin of mandible shorter than inner margin. Masticatory margin without tooth in the middle ..... 12
- 12 Masticatory margin of mandible rounded into inner margin. Propodeum lower than promesonotum (Figs. 41—44) (China: Yunnan Province) ..... *L. laozii* sp. nov.  
Masticatory and inner margins of mandible separated by a blunt angle. Propodeum as high as promesonotum (Figs. 45—52) (China: Yunnan Province) ..... *L. mengzii* sp. nov.

***Leptogenys crassicornis* Emery, New record for China (Figs. 1—4)**

*Leptogenys crassicornis* Emery, 1895: 462 (w.) Burma.

Workers: TL 4.8—5.0, HL 1.07, HW 0.88—0.92, CI 83—86, SL 0.70, SI 76—79, PW 0.63—0.67, AL 1.77—1.83, ED 0.07—0.10, ML 0.57—0.60, PL 0.40—0.47, PH 0.57—0.58, DPW 0.33—0.37, LPI 125—146, DPI 77—88 (5 measured). For a full description see Emery (1895) and Bingham (1903).

Material examined: 8 workers, No. A96—656, 840 m, Menglun, Mengla County, Yunnan Province, Mar. 6, 1996, CHEN Zhi-ping; 8 workers, No. A96—744, 1 000 m, Menglun, Mengla County, Yunnan Province, Mar. 12, 1996, XU Zheng-hui; 1 worker, No. A96—1211, 950 m, Mengla, Mengla County, Yunnan Province, Mar. 12, 1996, CHEN Zhi-ping.

***Leptogenys huangdii* sp. nov. (Figs. 5—8)**

Holotype worker: TL 5.2, HL 1.27, HW 1.07, CI 84, SL 1.00, SI 94, PW 0.73, AL 1.93, ED 0.17, ML 0.63, PL 0.40, PH 0.60, DPW 0.43, LPI 160, DPI 108. Head nearly square. Occipital margin almost straight, shallowly depressed. Occipital carina distinct. Occipital corners blunt but distinct. Lateral sides of head weakly convex. Inner margin of mandible with 1 small tooth, masticatory margin with 5 large teeth and 3 small teeth. Clypeus has blunt and stout longitudinal central carina, median lobe rounded at apex.

Apex of scape just reached to occipital corner, segments 4—9 of flagellum about as broad as long. Eyes smaller. In profile view dorsum of alitrunk weakly depressed at metanotal groove, promesonotal suture distinct. Dorsum of propodeum straight, about 1.8 times as long as declivity, in profile view posterodorsal corner rounded, declivity shallowly depressed. Petiolar node anteroposteriorly compressed, in profile view anterior face evenly convex, dorsal face convex, posterior face straight; in dorsal view the node nearly semicircular, width: length = 5:3. Subpetiolar process large, triangular. Constriction between the two basal gastral segments weak. Mandibles finely and longitudinally striate. Head, alitrunk, petiole and gaster smooth and shining. Anterior 1/3 of head finely and longitudinally striate. Dorsal of head and body with abundant erect or suberect short hairs, without pubescence. Antennal scapes with abundant decumbent hairs and dense decumbent pubescence. Femora and tibiae with dense decumbent hairs. Head and alitrunk black, with blue metallic luster. Petiole and gaster blackish brown. Mandibles, antennae, clypeus, legs and gastral apex reddish brown. Tarsi brownish yellow.

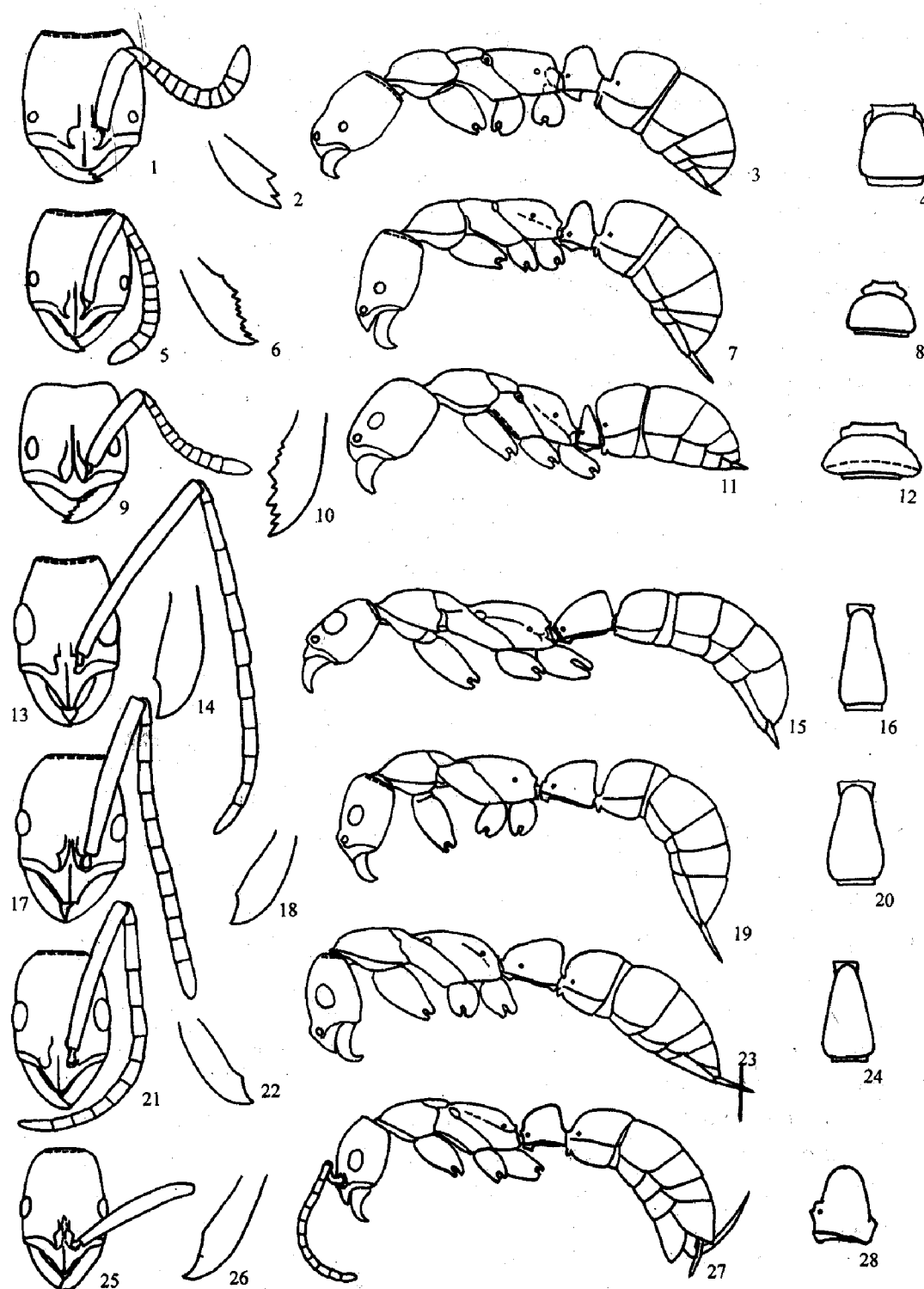
Paratype workers: TL 4.8—5.2, HL 1.23—1.30, HW 1.00—1.07, CI 79—84, SL 0.97—1.03, SI 94—97, PW 0.70—0.77, AL 1.73—1.90, ED 0.17—0.18, ML 0.60—0.70, PL 0.37—0.40, PH 0.53—0.60, DPW 0.38—0.43, LPI 142—150, DPI 96—109 (5 measured). As holotype.

Holotype: Worker, No. A96—565, 830 m, Menglun, Mengla County, Yunnan Province, Mar. 6, 1996, XU Zheng-hui. Paratypes: 7 workers, with same data as holotype; 1 worker, with same data as holotype but No. A96—1178, 700 m, CHEN Zhi-ping; 14 workers, No. A97—1147, No. A97—1152, 660 m, Karst Monsoon Forest, Cui-pingfeng, Menglun Town, Mengla County, Yunnan Province, Aug. 10, 1997, LIU Tai-yong.

This new species is close to *L. birmana* Forel, but with body smaller; head and alitrunk are black; inner margin of mandible has only 1 tooth; and petiolar node is relatively thick, width: length = 5:3.

***Leptogenys pangui* sp. nov.** (Figs. 13—16)

Holotype worker: TL 13.5, HL 2.50, HW 1.63, CI 65, SL 3.45, SI 213, PW 1.40, AL 4.50, ED 0.70, ML 1.20, PL 1.57, PH 1.23, DPW 0.67, LPI 79, DPI 43. Body large. Head distinctly longer than broad, obviously narrowed backward. Occipital margin nearly straight, shallowly depressed. Occipital carina distinct. Occipital corners bluntly angled. Lateral sides weakly convex. Mandibles slender, inner margin without tooth, masticatory margin with 1 apical tooth and 1 small basal tooth. Clypeus with sharp longitudinal central carina, median lobe truncate at most apex. Scape of antenna surpassed occipital corner by 1/2 of its length. Ratio of length of the basal 3 segments of flagellum expressed as, segment 1: segment 2: segment 3 = 4:10:9. Eyes large. In profile view dorsum of alitrunk deeply depressed at metanotal groove. Pronotum and mesonotum evenly convex. Promesonotal suture distinct. Dorsum of propodeum long and straight for most of its length, about 3.5 times as long as declivity. Petiolar node strongly and laterally compressed, in profile view longer than high, nearly triangular, without distinct anterior face, dorsal face weakly convex, posterior face straight; in dorsal view about 2 times as long as broad, narrowed forward. Subpetiolar process small, triangular. Constriction between the two basal gastral segments distinct. Mandibles with dense micropunctures and sparse large



**Figs. 1—28** Workers and ergatogyne of *Leptogenys*.

1—27. Workers; 28. Ergatogyne; 1—4. *L. crassicornis* Emery; 5—8. *L. huangdii* sp. nov.; 9—12. *L. birmana* Forel; 13—16. *L. pangui* sp. nov.; 17—20. *L. chinensis* (Mayr); 21—24. *L. minchinii* Forel; 25—28. *L. confucii* Forel. 1, 5, 9, 13, 17, 21, 25. Head in full face view; 2, 6, 10, 14, 18, 22, 26. mandible in dorsal view; 3, 7, 11, 15, 19, 23, 27. body in profile view; 4, 8, 12, 16, 20, 24. petiolar node in dorsal view; 28. petiolar node in lateral view; 9, 11, 12. after Xu (1996); 25, 27. after Ogata (1987); 28. after Terayama (1990).

punctures. Clypeus finely and longitudinally striate. Head, alitrunk, petiole and gaster smooth and shining, with quite sparse piliferous punctures. Head and body with abundant erect long hairs, suberect short hairs and very sparse decumbent pubescence. Vertex with dense pubescence. Scapes of antennae with sparse suberect long hairs, subdecumbent short hairs and dense decumbent pubescence. Femora and tibiae with decumbent hairs. Body black, with blue metallic luster. Mandibles, flagella of antennae, legs and posterior margins of each gastral segments blackish brown. Pilosity brownish yellow.

Paratype worker: TL 12.8, HL 2.45, HW 1.60, CI 65, SL 3.30, SI 206, PW 1.45, AL 4.30, ED 0.70, ML 1.15, PL 1.53, PH 1.20, DPW 0.77, LPI 78, DPI 50 (1 measured). As holotype, but hairs on dorsum of head and body very sparse.

Holotype: Worker, No. A98—995, 650 m, Menglun, Mengla County, Yunnan Province, Sep. 15 1998, XU Zheng-hui. Paratype: 1 worker, No. A96—756, 640 m, locality as holotype, Mar. 4, 1996, XU Zheng-hui.

This new species is close to *L. chinensis* (Mayr), but with body much larger; scape of antenna surpassed occipital corner by  $1/2$  of its length; petiolar node triangular, obviously longer than high, without distinct anterior face.

***Leptogenys zhuangzii* sp. nov.** (Figs. 37—40)

Holotype worker: TL 7.4, HL 1.70, HW 1.10, CI 65, SL 1.63, SI 148, PW 0.93, AL 2.53, ED 0.25, ML 0.87, PL 0.80, PH 0.93, DPW 0.70, LPI 117, DPI 88. Head rectangular, much longer than broad. Occipital margin straight, occipital carina distinct. Occipital corners rounded. Lateral sides of head nearly parallel. Mandibles slender, masticatory margin as long as inner margin, inner margin without tooth, masticatory margin with 1 small tooth in the middle of the blade except the apical tooth, the basal corner rounded. Clypeus with sharp longitudinal central carina, median lobe extruding at apex. Scape of antenna surpassed occipital corner by  $1/3$  of its length. Joints of flagellum longer than broad, ratio of length of the basal 3 segments expressed as, segment 1 : segment 2 : segment 3 = 4 : 5 : 4. Eyes moderate large. In profile view dorsum of alitrunk deeply notched at metanotal groove. Promesonotum convex, promesonotal suture distinct. Dorsum of propodeum weakly convex, about 2.5 times as long as declivity, declivity weakly convex. In profile view petiolar node roughly trapezoid, anterior face short, slightly convex, about  $1/2$  as high as posterior face, anterodorsal angle rounded, posterodorsal corner roundly extruding, dorsal face convex, posterior face straight. In dorsal view the node slightly broader than long, width : length = 10 : 9, narrowed forward. Subpetiolar process cuneiform, ventral face with a rounded notch. Constriction between the two basal segments distinct. Mandibles weakly longitudinally rugulose. Clypeus longitudinally striate. Head, alitrunk and petiole with close fine punctures and retirugulae, lateral sides of mesonotum and metanotum coarsely and longitudinally rugose. Gaster smooth and shining, with very sparse piliferous punctures. Dorsum of head and body with abundant erect long hairs, suberect short hairs and sparse decumbent pubescence. Head with dense pubescence. Scapes, femora and tibiae with abundant suberect long hairs, subdecumbent short hairs and dense decumbent pubescence. Body black. Mandibles, flagella, femora, tibiae, tarsi and gastral apex blackish brown to yellowish brown.

Paratype workers: TL 7.1—7.8, HL 1.63—1.70, HW 1.10—1.13, CI 65—68,

SL 1.63—1.67, SI 147—148, PW 0.93—0.97, AL 2.47—2.60, ED 0.23—0.27, ML 0.87—0.90, PL 0.77—0.83, PH 0.87—0.93, DPW 0.67—0.70, LPI 108—122, DPI 83—88 (5 measured). As holotype.

Holotype: Worker, No. A97—2331, 1 280 m, secondary monsoon evergreen broad-leaf forest, Papo, Meng'a Town, Menghai County, Yunnan Province, Sep. 10. 1997, XU Zheng-hui. Paratypes: 7 workers, with same data as holotype.

This new species is close to *L. confucii* Forel, but with body black; head, alitrunk and petiole with close fine punctures and reticulae; head as broad in front as in post; masticatory margin of mandible with 1 small tooth in the middle.

***Leptogenys laozii* sp. nov.** (Figs. 41—44)

Holotype worker: TL 4.6, HL 1.00, HW 0.67, CI 67, SL 1.03, SI 155, PW 0.60, AL 1.57, ED 0.17, ML 0.50, PL 0.50, PH 0.60, DPW 0.40, LPI 120, DPI 80. Head roughly rectangular, distinctly longer than broad. Occipital margin straight, occipital carina obvious. Occipital corners rounded. Anterior 2/3 of lateral sides of head relatively straight, posterior 1/3 narrowed backward. Mandibles slender, inner margin without tooth, masticatory margin with only 1 apical tooth, basal corner rounded. Clypeus with sharp longitudinal central carina, median lobe extruding at apex. Scape of antenna surpassed occipital corner by about 1/3 of its length. Segments of flagellum longer than broad, the second and third joints about equal. In profile view dorsum of alitrunk deeply depressed at metanotal groove. Promesonotum evenly convex, promesonotal suture distinct. Dorsum of propodeum slightly convex, about 3 times as long as declivity, declivity weakly convex. In profile view petiolar node trapezoid, lowering down forward, anterior face nearly straight, about 1/2 as high as posterior face, anterodorsal angle rounded, posterodorsal angle bluntly extruding, dorsal face evenly convex, posterior face straight. In dorsal view the node as broad as long, narrowed forward. Subpetiolar process small, nearly square, posteroventral corner dentiform. Constriction between the two basal gastral segments distinct. Mandibles and clypeus longitudinally striate. Head, alitrunk and petiole densely punctate. Lateral sides of pronotum smooth. Lateral sides of mesonotum and metanotum longitudinally rugose. Gaster smooth and shining. Dorsum of head and body with abundant erect long hairs, suberect short hairs and decumbent pubescence. Dorsum of head with dense pubescence. Scapes, femora and tibiae with abundant subdecumbent hairs and dense decumbent pubescence. Head, alitrunk and petiole brownish black. Gaster blackish brown. Mandibles, antennae, clypeus and legs reddish brown.

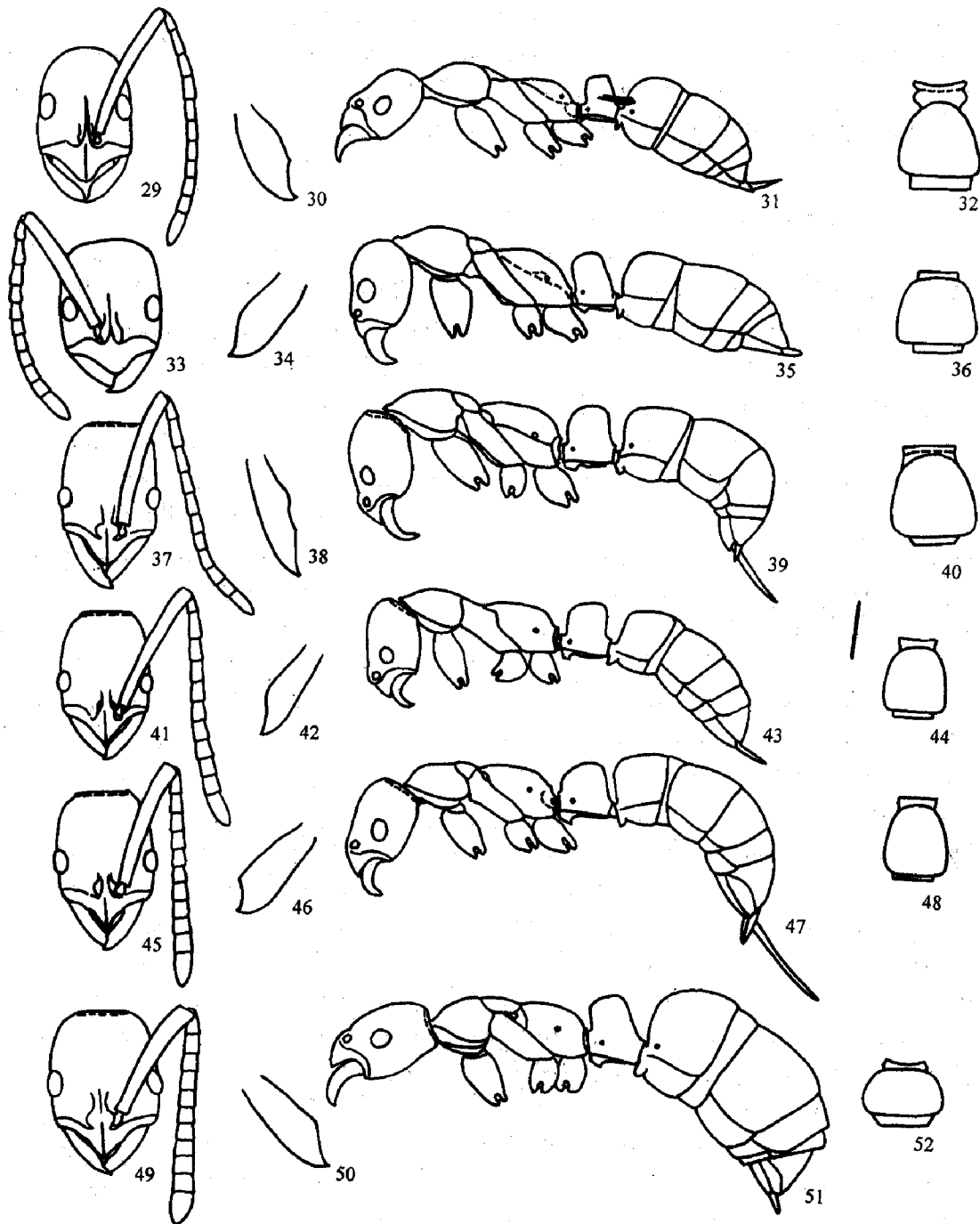
Paratype workers: TL 4.5—5.0, HL 1.00—1.07, HW 0.63—0.70, CI 63—67, SL 0.97—1.07, SI 152—160, PW 0.58—0.60, AL 1.50—1.57, ED 0.13—0.20, ML 0.47—0.53, PL 0.47—0.50, PH 0.60—0.63, DPW 0.38—0.42, LPI 120—129, DPI 77—83 (4 measured). As holotype, but body reddish brown to brownish black.

Holotype: Worker, No. A98—1010, 650 m, Menglun, Mengla County, Yunnan Province, Mar. 6, 1998, XU Zheng-hui. Paratypes: 4 workers, with same data as holotype.

This new species is close to *L. confucii* Forel, but with dorsum of alitrunk deeply depressed at metanotal groove; head, alitrunk and petiole densely punctate; body reddish brown to brownish black.

***Leptogenys mengzii* sp. nov. (Figs. 45—52)**

Holotype worker (Figs. 45—48): TL 5.2, HL 1.10, HW 0.75, CI 68, SL 1.03, SI 138, PW 0.68, AL 1.63, ED 0.22, ML 0.57, PL 0.57, PH 0.63, DPW 0.43, LPI 112, DPI 76. Head distinctly longer than broad, nearly rectangular. Occipital margin



**Figs. 29—52** Workers and Ergatogynes of *Leptogenys*.

29—48. Workers; 49—52. Ergatogynes; 29—32. *L. diminuta* (Smith); 33—36. *L. kitteli* (Mayr); 37—40. *L. zhuangzii* sp. nov. 41—44. *L. laozii* sp. nov.; 45—52. *L. mengzii* sp. nov.; 29, 33, 37, 41, 45, 49. Head in full face view; 30, 34, 38, 42, 46, 50. mandible in dorsal view; 31, 35, 39, 43, 47, 51. body in profile view; 32, 36, 40, 44, 48, 52. petiolar node in dorsal view; 29, 31, 32, 33, 35, 36. after Xu (1996).



straight, occipital carina obvious. Occipital corners rounded. Lateral sides of head relatively straight, slightly convex. Mandibles slender, inner margin without tooth, masticatory margin without tooth except the apical one, basal corner bluntly angled. Clypeus with sharp longitudinal central carina, median lobe extruding at apex. Scape of antenna surpassed occipital corner by about  $1/3$  of its length. Segments of flagellum longer than broad, the second and third joints equal. Eyes moderate large. In profile view dorsum of alitrunk notched at metanotal groove. Promesonotal suture distinct. Dorsum of propodeum straight for most of its length, about 2.5 times as long as declivity, declivity straight. In profile view petiolar node roughly trapezoid, lowering down forward, anterior face very short, slightly convex, about  $1/3$  as high as posterior face, posterior face straight, dorsal face evenly convex, anterodorsal corner rounded, posterodorsal corner roundly extruding. In dorsal view the node about as broad as long, length:width = 6:5, narrowed forward. Subpetiolar process nearly triangular, posteroventral corner dentate. Constriction between the two basal gastral segments distinct. Mandibles smooth, sparsely punctate. Clypeus longitudinally striate. Head densely punctate, surface between punctures smooth. Alitrunk longitudinally rugose and sparsely punctate, but pronotum, median portions of lateral sides of mesonotum and metanotum, and dorsum of propodeum smooth and shining. Petiolar node and gaster smooth and shining, but lateroposterior margin of petiolar node with coarse rugae and punctures. Dorsum of head and body with abundant erect long hairs and suberect short hairs, dorsum of head with dense decumbent pubescence. Scapes, femora and tibiae with sparse subdecumbent hairs and dense decumbent pubescence. Body black. Mandibles, clypeus, antennae, legs and gastral apex reddish brown.

Paratype workers: TL 4.5—5.1, HL 1.03—1.05, HW 0.72—0.73, CI 68—71, SL 0.97—1.02, SI 132—142, PW 0.63—0.68, AL 1.50—1.53, ED 0.18—0.20, ML 0.47—0.50, PL 0.50—0.57, PH 0.60—0.63, DPW 0.40—0.43, LPI 112—120, DPI 71—83 (5 measured). As holotype, but body blackish brown to black.

Paratype ergatogynes (Figs. 49—52): TL 4.9—5.1, HL 1.07—1.17, HW 0.77—0.83, CI 71—72, SL 0.90—1.00, SI 117—120, PW 0.67—0.70, AL 1.50—1.53, ED 0.18—0.20, ML 0.53—0.57, PL 0.43—0.50, PH 0.67—0.73, DPW 0.50—0.53, LPI 147—154, DPI 107—123 (3 measured). As holotype, but petiolar node anteroposteriorly compressed with width: length = 5:3 in dorsal view, antennae relatively shorter, gaster relatively larger.

Holotype: Worker, No. A97—2249, 1 600 m, deciduous broad-leaf forest, Papo, Meng' a Town, Menghai County, Yunnan Province, Sep. 9, 1997, XU Zheng-hui. Paratypes: 8 workers, with same data as holotype; 1 ergatogyne, with same data as holotype but No. A97—2250; 2 workers, 1 ergatogynes, No. A97—1176, 660 m, karst monsoon forest, Cuipingfeng, Menglun Town, Mengla County, Yunnan Province, Aug. 10, 1997, ZENG Guang; 7 workers, 1 ergatogyne, No. A98—945, 660 m, karst monsoon forest, Cuipingfeng, Menglun Town, Mengla County, Yunnan Province, Mar. 17, 1998, ZENG Guang; 8 workers, No. A98—72, 1 120 m, mountain rain forest, Guanping, Jinghong County, Yunnan Province, Mar. 5, 1998, LIU Tai-yong.

This new species is close to *L. confucii* Forel, but with head densely punctate; lateral sides of head nearly parallel; body blackish brown to black.

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## 中国云南细颚猛蚁属五新种一新记录种记述 (膜翅目: 蚁科)

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记述采自云南西双版纳细颚猛蚁属 *Leptogenys* Roger 5 新种: 黄帝细颚猛蚁 *L. huangdii* sp. nov., 盘古细颚猛蚁 *L. pangui* sp. nov., 庄子细颚猛蚁 *L. zhuangzii* sp. nov., 老子细颚猛蚁 *L. laozii* sp. nov., 孟子细颚猛蚁 *L. mengzii* sp. nov.。在同一地区发现中国新记录种 1 种: 粗角细颚猛蚁 *L. crassicornis* Emery。编制了细颚猛蚁属中国已知 13 种的工蚁分种检索表。提供了除勃固细颚猛蚁 *L. peuqueti* (Andre) 外 12 个种的详细特征图。中国已知种类被划分为 4 个种组: 粗角细颚猛蚁种组 *L. crassicornis*-group, 中华细颚猛蚁种组 *L. chinensis*-group, 条纹细颚猛蚁种组 *L. diminuta*-group 和庄子细颚猛蚁种组 *L. zhuangzii*-group。

**关键词** 膜翅目 蚁科 细颚猛蚁属 新种