

SEVEN NEW SPECIES AND ONE NEW RECORD OF *GERGITHUS* STÅL
(HEMIPTERA: FULGOROIDEA: ISSIDAE) FROM CHINA

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Abstract.—Eight Chinese species of the genus *Gergithus* Stål are treated. *Gergithus gravidus* Melichar is reported for the first time from China, and the following seven new species are described: *G. quinquemaculatus*, *G. spinosus*, *G. chelatus*, *G. parallelus*, *G. multipunctatus*, *G. pseudotessellatus*, *G. yunnanensis*. The eight species are described and illustrated, and a key is provided for their identification. *Ishiharanus* Hori, 1969, is proposed as a new synonym of *Gergithus* Stål, 1870.

Key Words: Hemiptera, Issidae, *Gergithus*, new species, new synonym, China

The planthopper issid genus *Gergithus* was established by Stål in 1870. Melichar (1906) placed it in the Hemiphaerinae of Issidae. Forty species are listed by Metcalf (1958). Subsequently, Hori (1969) reported on four species from Taiwan, China; Chou and Lu (in Chou et al. 1985) described one species, *Gergithus esperanto*, a junior synonym of *Hemisphaerius lysanias* Fennah (Che et al. 2006); and Chan and Yang (1994) described six species from Taiwan and raised two subspecies to specific level. Currently, fifty-two world species are known. In this paper, seven new species from China are described and illustrated, one new generic synonym is proposed (*Ishiharanus* Hori, a junior synonym of *Gergithus* Stål), and *Gergithus gravidus* Melichar is reported for the first time from China.

All type specimens are kept in the Entomological Museum, Northwest A & F University (NWAUFU) except the holotype of *Gergithus yunnanensis*, n. sp. which is deposited in the Institute of Zoology, Chinese Academy of Sciences (IZCAS).

Gergithus Stål, 1870

Gergithus Stål 1870: 756. Type species: *Hemisphaerius schaumii* Stål, by original designation.

Ishiharanus Hori 1969: 49–64. Type species: *Gergithus iguchii* Matsumura, 1916, by original designation. New synonym.

Description.—Body hemispherical. Head with eyes distinctly narrower than pronotum. Vertex broader than long, approximately quadrangular without

carina. Ocelli present or absent. Frons with disc coarse or smooth, slightly elevated. Frontoclypeal suture nearly straight or slightly arched. Clypeus distinctly produced downward. Rostrum long, reaching metatrochanter. Pronotum short and wide, with two pits on disc, anterior margin distinctly convex and posterior margin nearly truncate, disc depressed. Mesoscutellum nearly triangular, with two pits along lateral margin, disc slightly elevated, with spots or stripes. Tegmen nearly elliptical, coarsely reticulate, claval suture absent. Wing translucent, longer than half of tegmen, veins distinctly netlike. Legs relatively long, not dilated, lateral margin of hind tibia with 2 teeth. Spinal formula of hind leg (6-7)-(8-12)-2, indicating number of spines at apex of hind tibia and hind tarsomeres I and II.

Male genitalia symmetrical or asymmetrical, anal segment subtriangular or mushroom-shaped, pygofer with or without spines; aedeagus tubular, symmetrical or asymmetrical, with spiniform processes near apex or at base, or without process.

Remarks.—Hori (1969) designated *G. iguchii* Matsumura as the type species of *Ishiharanus* Hori by distinct color, short pronotum and smooth frons, but all these three characters also appear in species of *Gergithus*; thus we synonymize *Ishiharanus* with *Gergithus*.

Gergithus differs from other genera in Hemisphaeriinae by the hemispherical body, vertex not projected, frons without tubercles and wings longer than half of tegmen.

Distribution.—Oriental Region (China, Japan, Vietnam, Philippines, India, Singapore, Thailand, Myanmar, Sri Lanka); Palaearctic Region (Japan).

KEY TO CHINESE SPECIES OF *GERGITHUS*

- 1. Frons with 2 fasciae, 1 between eyes and 1 against frontoclypeal suture (Figs. 2, 15, 25, 34, 52) 2

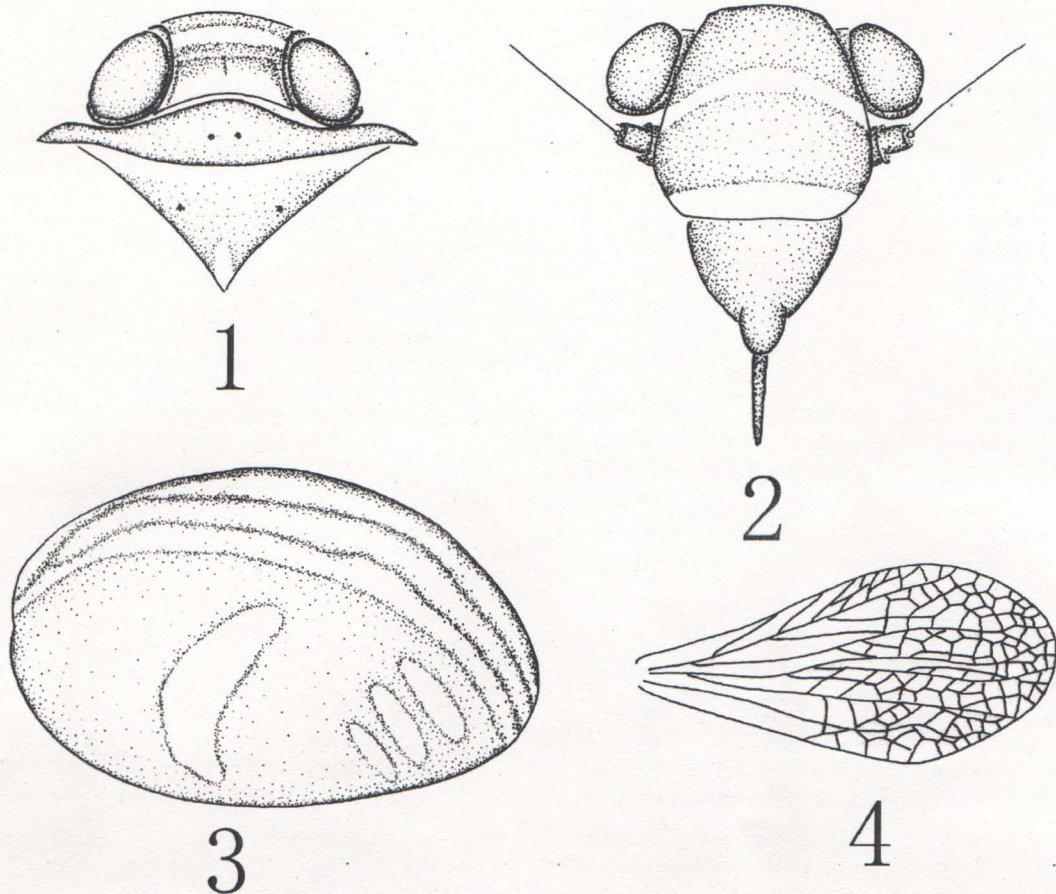
- Frons without or with 1 fascia (Figs. 6, 43, 61) 6
- 2. Tegmen with 3 subparallel yellow stripes along costal margin from base to apex, 1 lunate macula on disk, and 3 nearly elliptical subapical spots (Fig. 3)
 *G. gravidus* Melichar
 - Tegmen not as above 3
- 3. Pygofer produced but without spine (Fig. 38) *G. parallelus*, n. sp.
 - Pygofer strongly produced into large black spine (Figs. 19, 29, 56) 4
- 4. Anal segment with apical margin strongly convex (Fig. 28); aedeagus with 2 cheliform processes near base and 2 hatchet-like processes near apex (Figs. 30, 31)
 *G. chelatus*, n. sp.
 - Anal segment with apical margin truncate or slightly convex; aedeagal processes spiniform 5
- 5. Aedeagus with laterobasal processes symmetrical (Figs. 57, 58)
 *G. pseudotessellatus*, n. sp.
 - Aedeagus with laterobasal processes asymmetrical (Figs. 20, 21, 22) *G. spinosus*, n. sp.
- 6. Tegmen dark brown with 5 or 10 distinct yellow spots (Figs. 7, 44) 7
 - Tegmen yellowish hazel with dark brown stripe along costal margin and dark brown spot near apex (Fig. 62)
 *G. yunnanensis*, n. sp.
- 7. Tegmen with 5 spots (Fig. 7); aedeagus without spiniform processes (Figs. 11, 12) *G. quinquemaculatus*, n. sp.
 - Tegmen with 10 spots (Fig. 44); aedeagus with 2 spiniform processes at base and long spiniform processes fused with nearly quadrate process near apex (Figs. 48, 49) *G. multipunctatus*, n. sp.

Gergithus gravidus Melichar
(Figs. 1-4)

Gergithus gravidus Melichar 1906: 61.

Description.—Female. Length (including tegmen): 6.5 mm. Length of tegmen: 5.2 mm.

Vertex black with 2 yellow transverse fasciae at base and at apex. Eyes dark brown. Frons piceous brown with 2 yellow transverse fasciae, 1 between eyes, and 1 beyond frontoclypeal suture. Clypeus piceous black. Rostrum brown. Pronotum piceous black. Mesoscutellum piceous black with yellow fascia at



Figs. 1-4. *Gergithus gravidus* (♀). 1, Vertex and thorax, dorsal view. 2, Frons and clypeus. 3, Tegmen. 4, Wing.

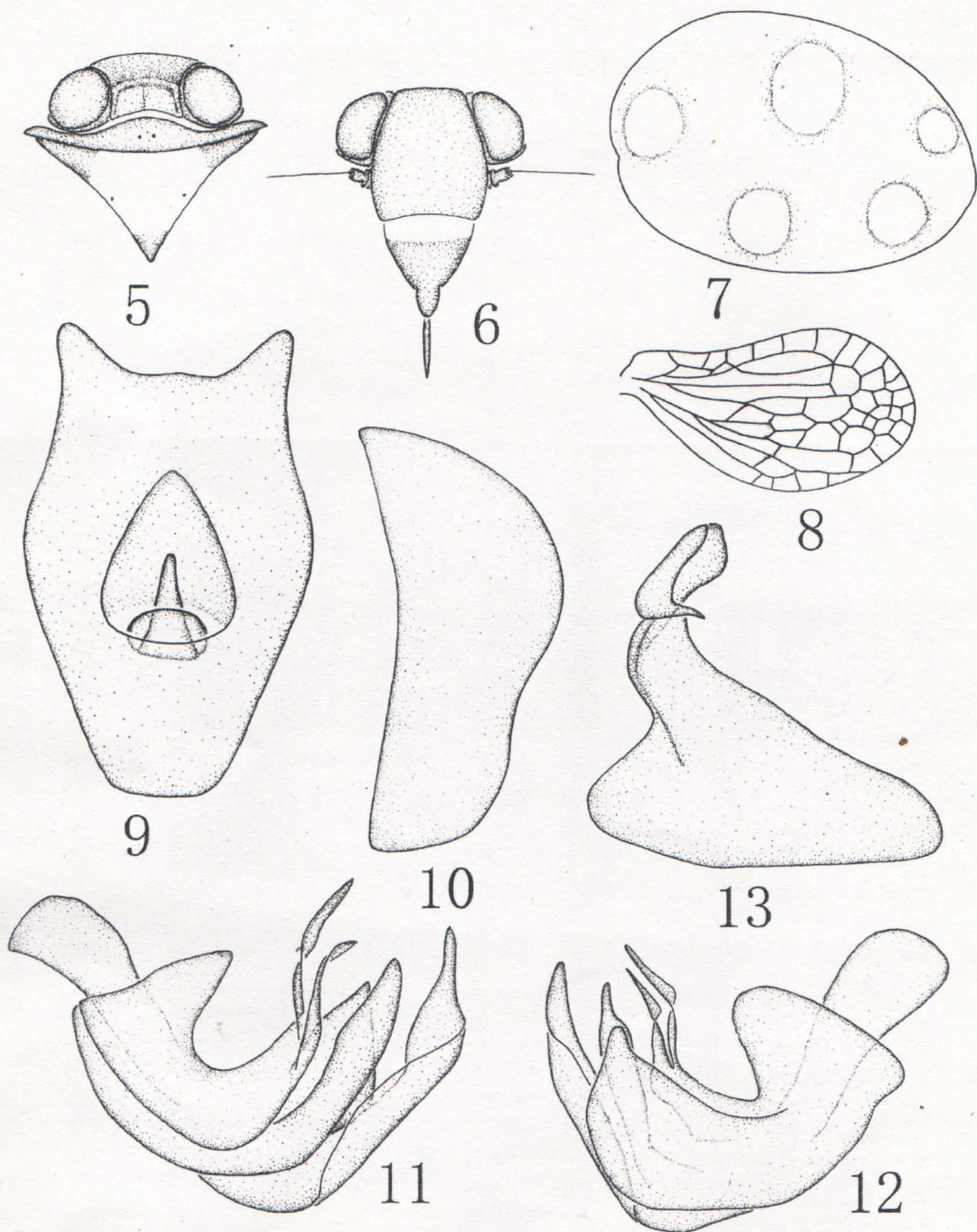
anterior margin and longitudinal yellow short stripe at posterior angle. Tegmen piceous black with 3 subparallel yellow stripes along costal margin from base to apex, 1 lunate macula on disk, and 3 nearly elliptical subapical spots (Fig. 3). Wings and legs hazel. Femora with black fasciae, two sides of femora and tibiae black. Venter piceous black, apex yellow. Dorsum of abdomen hazel.

Vertex wide and ecarinate, disc slightly depressed. Frons slightly convex, broader than long, midlength $0.8\times$ longer than greatest width, $1.7\times$ wider at widest part than at base. Frontoclypeal suture nearly straight. Pronotum

wide posteriorly, roundly sinuate. Mesoscutellum broad and short, $2.1\times$ wider at widest part than long in middle. Tegmen nearly elliptical, $1.5\times$ longer than widest part; veins protruding. Wing large, $0.8\times$ length of tegmen. Spinal formula of hind leg 6-9-2.

Material examined.—1♀, China, Guangxi Zhuang Autonomous Region, Lingtian, 3 June 1984, coll. Wu Zheng-liang and Lu Xiao-Lin; 1♀, China, Guangxi Zhuang Autonomous Region, Longzhou, Nonghu, 13 June 1980, coll. Mao Ji-Zhen.

Distribution.—China (Guangxi); Vietnam. This is a new record for China.



Figs. 5-13. *Gergithus quinquemaculatus* (♂). 5, Vertex and thorax, dorsal view. 6, Frons and clypeus. 7, Tegmen. 8, Wing. 9, Anal segment, dorsal view. 10, Pygofer, lateral view. 11, Aedeagus, left side. 12, Aedeagus, right side. 13, Genital style, lateral view.

Gergithus quinquemaculatus Che, Zhang,
and Wang, new species

(Figs. 5–13)

Description.—Male length (including tegmen): 5.1 mm; length of tegmen: 4.7 mm. Female length (including tegmen): 5.3 mm; length of tegmen: 4.9 mm.

Vertex, frons, and eyes dark brown. Clypeus dark brown with yellow fascia against frontoclypeal suture. Rostrum brown. Pronotum dark brown. Mesoscutellum yellow. Tegmen shiny brown, with 5 distinct yellow spots arranged 1, 2, 2 from base to apex of tegmen (Fig. 7). Wings hazel, veins dark brown. Legs hazel. Forefemur black at base, fore- and midtibiae with black stripes. Venter dark brown, apex of venter slightly black. Abdominal dorsum dark brown.

Vertex lightly wrinkled, wide and nearly quadrangular, $2.1\times$ wider at apex than long in middle line, disc slightly depressed. Frons slightly convex, narrower than long, midlength $1.25\times$ longer than greatest width, $1.1\times$ wider at widest part than at base. Frontoclypeal suture arched. Pronotum narrow and posteriorly roundly sinuate. Mesoscutellum broad and short, $2.5\times$ wider at widest part than medial length. Tegmen nearly elliptical, $1.8\times$ longer than widest part. Wing large, $0.8\times$ length of tegmen. Spinal formula of hind leg 6–9–2.

Male genitalia: Anal segment moderately long in dorsal view, longer than medial width. Lateral margin strongly convex, apical margin strongly concave; in lateral view basal margin almost straight, ventral margin strongly convex, angles tapering. Anal tube situated about in middle of anal segment. Pygofer in profile slightly longer ventrally than dorsally; dorsocaudal angle strongly produced. Connective fused with aedeagus, U-shaped, asymmetrical, with lateral, ventral and dorsal lobes; in dorsal view, dorsal lobes long and narrow, right and left dorsal lobes asymmetrical, left lobe

distinctly longer than right; in lateral view, lateral lobes robust with apex slender, asymmetrical, left lobe distinctly longer than right; in ventral view, ventral lobe tortuous and very long, apex tapering, spinelike. Aedeagus stout, strongly curved downward medially, without spiniform processes. Genital styles with apical margin wider than median, subtriangular and rounded at ventrocaudal margin, process short and stout, hooked near base, inner apical angle incised in caudal view, 1 long carina along ventrocaudal margin; dorsal and ventral margins not parallel.

Types.—Holotype δ , China, Guangxi Zhuang Autonomous Region, Longzhou county, Sanlian, 13 June 2000, coll. Chen Jun. Paratypes: 1 ♀ , China, Guangxi Zhuang Autonomous Region, Longzhou county, Sanlian, 14 June 2000, coll. Zhu Chao-Dong; 1 ♀ , China, Guangxi Zhuang Autonomous Region, Longzhou county, Xiangshui, 8 June 1980, coll. Liang Xian-Fa (NWAUFU)

Diagnosis.—This species is similar to *Gergithus iguchii* but differs from the latter by the dark brown tegmen with five yellow spots and the spinal formula of the hind tibia as 6–9–2.

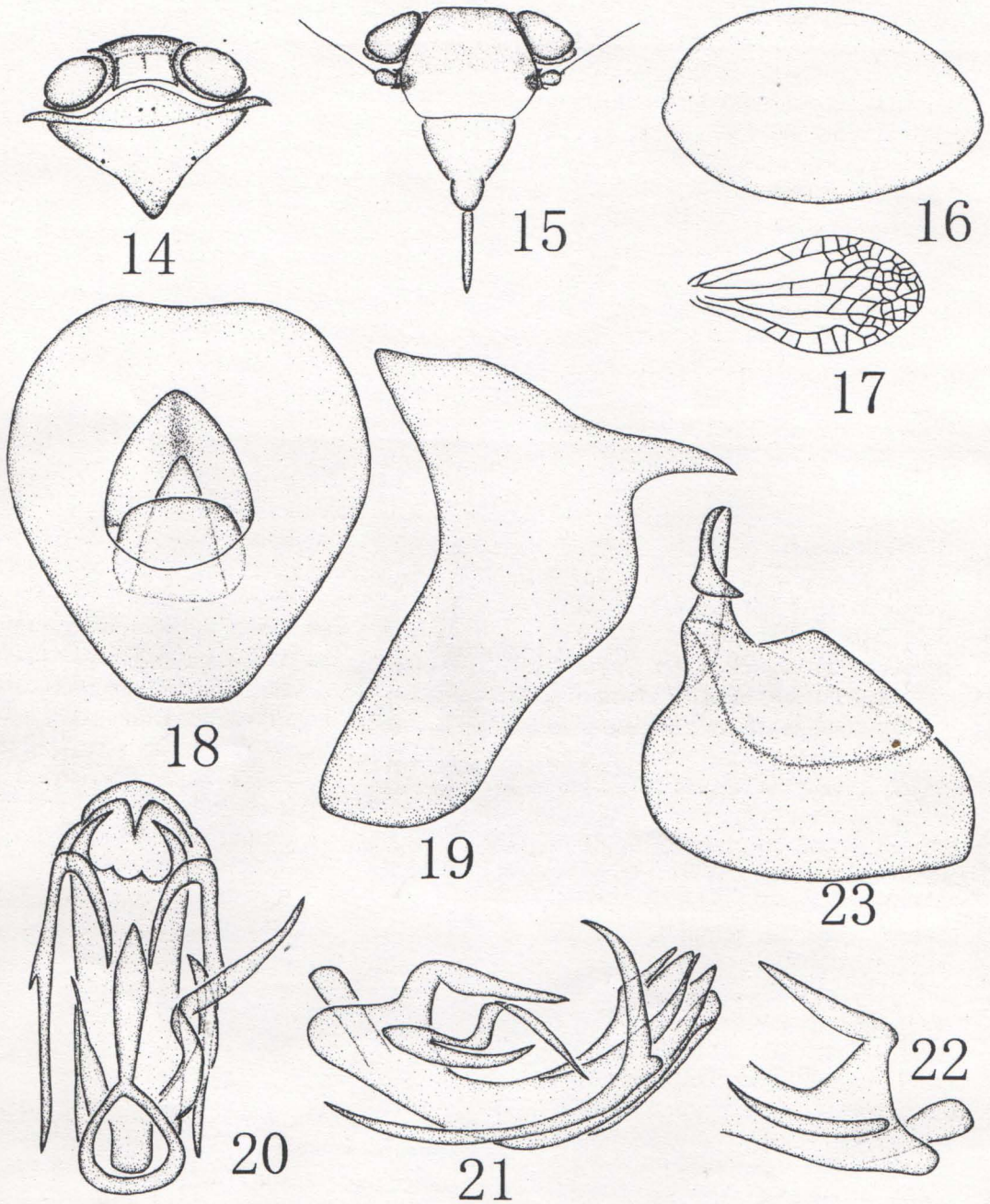
Etymology.—The Latin word “*quinquemaculatus*” refers to the five distinct yellow spots on the tegmen.

Gergithus spinosus Che, Zhang, and
Wang, new species

(Figs. 14–23)

Description.—Male length (including tegmen): 6.0 mm; length of tegmen: 4.9 mm. Female length (including tegmen): 6.2 mm; length of tegmen: 5.1 mm.

Vertex dark yellowish green. Eyes black. Frons hazel with 2 pale green fasciae, 1 narrow, between eyes and 1 broad, against frontoclypeal suture; black spot on each side of frons near antenna. Clypeus piceous black, apex and base pale green. Rostrum brown.



Figs. 14-23. *Gergithus spinosus* (δ). 14, Vertex and thorax, dorsal view. 15, Frons and clypeus. 16, Tegmen. 17, Wing. 18, Anal segment, dorsal view. 19, Pygofer, lateral view. 20, Aedeagus, dorsal view. 21, Aedeagus, left side. 22, Basal part of aedeagus, right side. 23, Genital style, lateral view.

Pronotum hazel with anterior margin and disc pale green. Mesoscutellum dark yellowish green. Tegmen yellowish hazel (female with irregular dark brown spot on disc of tegmen). Wing brown. Legs hazel, fore- and midfemora with black fasciae, hind femur black, fore- and midtibiae with black stripes. Venter dark brown, apex of venter yellowish. Abdominal dorsum dark brown.

Vertex slightly wrinkled, disc slightly depressed, wide and nearly quadrangular, $1.3\times$ wider at apex than midlength. Frons slightly convex, narrower than long, midlength $1.1\times$ longer than width at widest part, $1.6\times$ wider at widest part than at base. Frontoclypeal suture nearly straight. Pronotum narrow and posteriorly almost straight. Mesoscutellum broad and short, $2.1\times$ wider at widest part than medial length. Tegmen nearly elliptical, $1.9\times$ longer than widest part. Wing large, $0.8\times$ length of tegmen. Spinal formula of hind leg 6-10-2.

Male genitalia: Anal segment moderately long, in dorsal view nearly trapezoid, about equal in length to medial width; lateral margin strongly convex, apical margin slightly concave, basal margin almost straight, in profile ventral margin strongly convex. Anal tube near middle of anal segment. Pygofer in profile almost equal ventrally to dorsally, dorsocaudal angle strongly produced, spinelike. Connective fused with aedeagus, U-shaped, asymmetrical, with lateral, ventral, and dorsal lobes; in dorsal view, dorsal lobes bilobate, tapering to apex, long, apical margin undulate; in lateral view lateral lobes bilobate, apex tapering; in ventral view, ventral lobe distinctly shorter than dorsal and lateral lobes, apex broad and rounded. Aedeagus stout, strongly curved downward medially, with 5 spiniform proprocesses, 2 lanciform processes near apex and 3 short spiniform processes near base 1 dorsally and 2 laterally, asymmetrical. Genital styles with apical margin wider than median, subtriangular and

rounded at ventrocaudal margin, process short and stout, hooked near base, inner apical angle incised in caudal view, ventrocaudal margin with subapical process below a nearly quadrate carina; dorsal and ventral margins not parallel.

Types.—Holotype ♂, China, Hainan Prov., Jianfeng Mountain, 7 June 1984, coll. Lin You-Dong. Paratypes: 2♀, same data as holotype; 1♀, China, Hainan Prov., Jianfeng Mountain, 4 December 1974, coll. Yang Chi-Kun; 1♂, China, Hainan Prov., Jianfeng Mountain, 13 August 1981, coll. Gu Mao-Bin; 1♀, China, Hainan Prov., Jianfeng Mountain, 26 June 1981, coll. Gu Mao-Bin (NWFU)

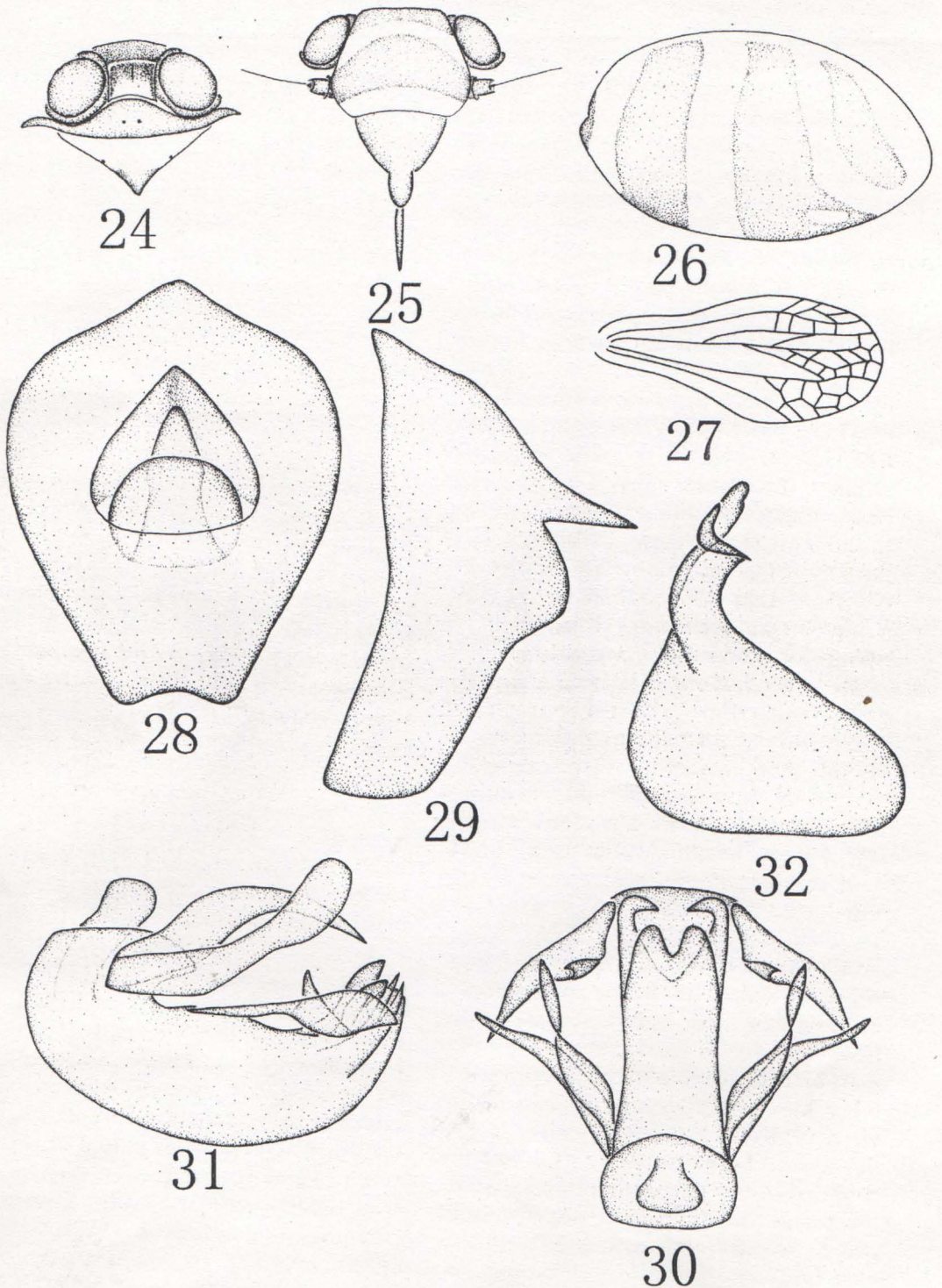
Diagnosis.—This species resembles *Gergithus formosanus* Metcalf, but differs from the latter by the frons with two transverse fasciae and two black spots near the antenna, and the aedeagus with five processes.

Etymology.—The Latin species name "*spinusus*" refers to the spiniform dorso-caudal angle of the pygofer.

***Gergithus chelatus* Che, Zhang, and
Wang, new species**
(Figs. 24-32)

Description.—Male length (including tegmen): 4.8-5.0 mm; length of tegmen: 3.9-4.1 mm. Female length (including tegmen): 5.1 mm; length of tegmen: 4.2 mm.

Vertex dark brown, basal part pale green. Eyes black. Frons dark brown with 2 narrow pale green fasciae, 1 between eyes and 1 against frontoclypeal suture. Clypeus and pronotum piceous black. Rostrum brown. Mesoscutellum pale green, posterior angle dark brown. Tegmen brown, with 4 pale-green transverse fasciae and pale-green subapical spot. Wing hazel. Legs hazel, fore- and midfemora and tibiae with black stripe, hind femur black. Venter dark brown, apex pale green. Abdominal dorsum dark brown.



Figs. 24-32. *Gergithus chelatus* (δ). 24, Vertex and thorax, dorsal view. 25, Frons and clypeus. 26, Tegmen. 27, Wing. 28, Anal segment, dorsal view. 29, Pygofer, lateral view. 30, Aedeagus, dorsal view. 31, Aedeagus, left side. 32, Genital style, lateral view.

Vertex wrinkled, $1.2\times$ wider at apex than medial length, disc distinctly depressed. Frons convex, narrower than long, $1.1\times$ longer medially than greatest width, $1.6\times$ wider at widest part than at base. Frontoclypeal suture nearly straight. Pronotum wide and posteriorly roundly sinuate. Mesoscutellum narrow and short, $2.1\times$ wider at widest part than medial length. Tegmen $1.6\times$ longer than widest part. Wing large, $0.8\times$ length of tegmen. Spinal formula of hind leg 6-9-2.

Male genitalia: Anal segment moderately long, in dorsal view nearly oval, longer than medial width. Lateral margin strongly convex, apical margin convex, basal margin slightly concave, in profile ventral margin strongly convex. Anal tube near middle of anal segment. Pygofer in profile slightly longer ventrally than dorsally, dorsocaudal angle strongly produced, spinelike. Connective fused with aedeagus, U-shaped, symmetrical, with lateral, ventral, and dorsal lobes; dorsal lobes bilobate in dorsal view, tapering with apex rounded; in lateral view lateral lobes bilobate, tapering to acute apex; in ventral view, ventral lobe distinctly shorter than dorsal and lateral lobes, apex rounded. Aedeagus stout, slightly curved downward medially, with 4 spini-form processes, 2 cheliform processes near base, and 2 hatchetlike processes near apex. Genital styles with apical margin wider than median, subtriangular and rounded at ventrocaudal margin, process short and stout, hooked near base, inner apical angle incised in caudal view, process short and tapering, a short carina along dorsalcaudal margin, dorsal and ventral margins not parallel.

Types.—Holotype ♂, China, Hainan Prov., Jianfeng Mountain, 25 July 1983, coll. Hua Li-Zhong. Paratypes: 1 ♂, China, Hainan Prov., Jianfeng Mountain, 8 July 1982, coll. Liu Yuan-Fu; 2 ♀, China, Hainan Prov., Jianfeng Mountain, 15 July 1981, coll. Liu Yuan-Fu; 1 ♀, China, Hainan Prov., Jianfeng

Mountain, 5 August 1982, coll. Liang Cheng-Feng (NWAUFU)

Diagnosis.—This species is similar to *Gergithus lineatus* Kato, but differs from the latter by the tegmen with four fasciae and one spot, and the frons with two transverse stripes.

Etymology.—The species name is derived from the Latin word “*chelate*,” referring to the aedeagus with chelate processes.

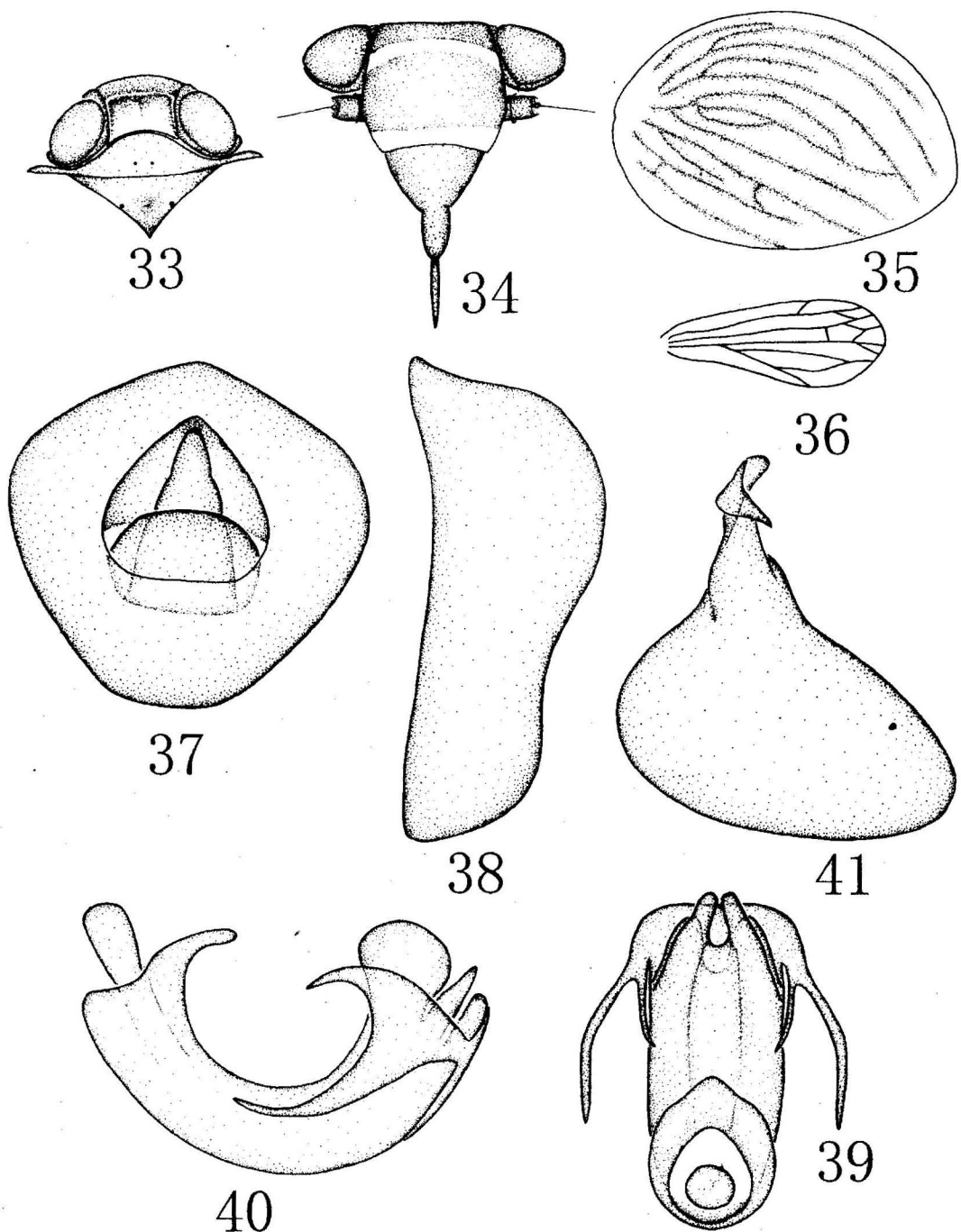
Gergithus parallelus Che, Zhang, and Wang, new species

(Figs. 33-41)

Description.—Male length (including tegmen): 3.9 mm; length of tegmen: 3.4 mm. Female length (including tegmen): 4.3 mm; length of tegmen: 3.8 mm.

Vertex dark brown, basal half pale yellowish green. Eyes dark brown. Frons brown with 2 narrow pale-green fasciae, 1 between eyes and 1 against frontoclypeal suture. Clypeus brown with base pale brown. Rostrum and pronotum brown. Mesoscutellum yellowish green, posterior angle dark brown. Tegmen yellowish hazel with veins dark brown. Wing brown. Legs hazel, fore- and midfemora and tibiae with black stripes. Venter dark brown, apex slightly hazel. Dorsum of abdomen pale yellowish green.

Vertex wrinkled, twice as wide at apex than medial length, disc distinctly depressed. Frons slightly convex, about as broad as long, $1.1\times$ longer medially than greatest width, $1.5\times$ wider at widest part than at base. Frontoclypeal suture slightly arched. Pronotum wide, posteriorly almost straight. Mesoscutellum narrow and short, $2.9\times$ wider at widest part than medial length. Tegmen $1.5\times$ longer than widest part; veins distinct and thickened, forming concentric arcs. Wing small, $0.65\times$ length of tegmen. Spinal formula of hind leg 6-9-2.



Figs. 33-41. *Gergithus parallelus* (♂). 33, Vertex and thorax, dorsal view. 34, Frons and clypeus. 35, Tegmen. 36, Wing. 37, Anal segment, dorsal view. 38, Pygofer, lateral view. 39, Aedeagus, dorsal view. 40, Aedeagus, left view. 41, Genital style, lateral view.

Male genitalia: Anal segment moderately long, in dorsal view nearly square, lateral margin strongly convex, apical margin convex, basal margin almost straight, and ventral margin in profile strongly convex. Anal tube near base of anal segment. Pygofer in profile distinctly longer ventrally than dorsally, dorsocaudal angle slightly produced. Connective fused with aedeagus, U-shaped, symmetrical, with lateral, ventral, and dorsal lobes; dorsal lobes bilobate in dorsal view, tapering to rounded apex; in lateral view, lateral lobes bilobate, tapering to rounded apex; in ventral view, ventral lobe apex nearly truncate, shorter than dorsal and lateral lobes. Aedeagus stout, slightly curved downward medially, and with 2 spiniform processes, V-shaped near apical part. Genital styles with apical margin wider than median, subtriangular and rounded at ventrocaudal margin, process short and slender, hooked near base, inner apical angle incised in caudal view, dorsal and ventral margins not parallel.

Types.—Holotype ♂, China, Hainan Prov., Nada, 1 June 1983, coll. Zhang Ya-Lin. Paratypes: 1 ♂ 1 ♀, China, Hainan Prov., Jianfeng Mountain, 3 June 1983, coll. Gu Mao-Bin; 1 ♀, same data as holotype; 1 ♀, China, Yunnan Prov., Xishuangbanna, Mengla, 20 April 1982, coll. Zhou Jing-Ruo and Wang Su-Mei (NWAUFU)

Diagnosis.—This species resembles *Gergithus chelatus*, but differs from the latter by the tegmen without transverse bars and only the apex of the aedeagus with a V-shaped processes.

Etymology.—The Latin word "*paralelus*" refers to the dark lines (veins) of the tegmen.

***Gergithus multipunctatus* Che, Zhang,
and Wang, new species**

(Figs. 42–50)

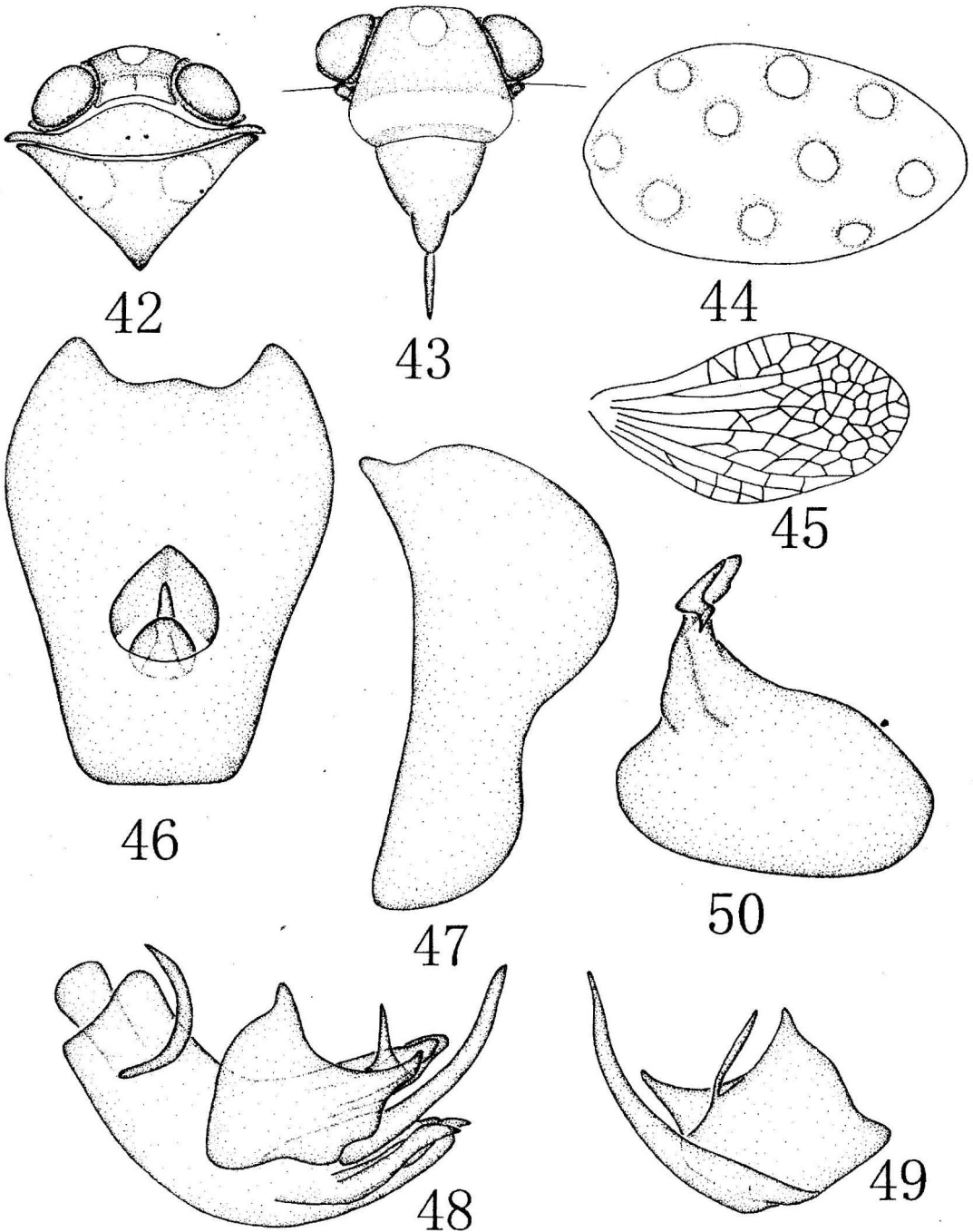
Description.—Male length (including tegmen): 6.2 mm; length of tegmen:

5.2 mm. Female length (including tegmen): 7.1 mm; length of tegmen: 6.2 mm.

Vertex brown. Eyes black. Frons dark brown with yellow fascia near frontoclypeal suture, and yellow spot near apex. Clypeus dark brown. Rostrum brown. Pronotum dark brown. Mesoscutellum brown, with 2 yellow lateral spots. Tegmen dark brown with 10 yellow spots arranged 1, 2, 1, 2, 1, 2, 1 from base to apex of tegmen. Wing hazel, veins dark brown. Legs, abdominal dorsum and venter hazel; apex of fore- and midfemora black, fore- and midtibiae black, and apex of venter black.

Vertex wrinkled, wide, nearly quadrangular, 2.5× wider at apex than medial length, disc distinctly depressed. Frons convex, narrower than long, 1.2× longer medially than greatest width, 1.6× wider at widest part than at base. Pronotum narrow and posteriorly roundly sinuate. Mesoscutellum twice as wide at widest part as medial length. Tegmen 1.6× longer than widest part. Wing large, 0.9× length of tegmen. Spinal formula of hind leg 6–7–2.

Male genitalia: Anal segment large, nearly trapeziform in dorsal view, longer than medial width. Lateral margin slightly convex, apical margin strongly concave, basal margin slightly concave, ventral margin in profile almost straight. Anal tube between midlength and base of anal segment. Pygofer in profile similar in length ventrally to dorsally, dorsocaudal angle strongly produced. Connective fused with aedeagus, U-shaped, asymmetrical, with lateral, ventral and dorsal lobes; dorsal lobes bilobate in dorsal view, tapering to rounded apex; lateral lobes bilobate in lateral view, tapering to acute apex; in ventral view, apex of ventral lobe truncate, shorter than dorsal and lateral lobes. Aedeagus with 2 short spiniform processes near base and long spiniform process fused with nearly quadrate process near apex (Figs. 48, 49). Genital



Figs. 42-50. *Gergithus multipunctatus* (♂). 42, Vertex and thorax, dorsal view. 43, Frons and clypeus. 44, Tegmen. 45, wing. 46, Anal segment, dorsal view. 47, Pygofer, lateral view. 48, Aedeagus, left side. 49, Processes of aedeagus, right side. 50, Genital style, lateral view.

styles with apical margin wider than median, subtriangular and rounded at ventrocaudal margin, process short and stout, hooked near base, apex tapering in caudal view, inner apical angle incised, carina along ventrocaudal margin, dorsal and ventral margins nearly parallel.

Types.—Holotype ♂, China, Hainan Prov., Jianfeng Mountain, 19 June 1983, coll. Gu Mao-Bin. Paratypes: 1 ♂, China, Hainan Prov., Jianfeng Mountain, 27 August 1981, coll. Gu Mao-Bin; 1 ♀, China, Hainan Prov., Jianfeng Mountain, 25 June 1981, coll. Gu Mao-Bin; 1 ♀, China, Hainan Prov., Jianfeng Mountain, 4 August 1983, coll. Liu Yuan-Fu; 1 ♀, China, Hainan Prov., Jianfeng Mountain, 2 August 1982, coll. Liang Cheng-Feng (NWAUFU)

Diagnosis.—This species is similar to *Gergithus iguchii*, but differs from the latter by the dark brown tegmen with ten yellow spots arranged 1, 2, 1, 2, 1, 2, 1 from base to apex and mesoscutellum dark brown with two yellow spots.

Etymology.—The specific name "*multipunctatus*" refers to the 10 yellow spots on the tegmen.

***Gergithus pseudotessellatus* Che, Zhang,
and Wang, new species**
(Figs. 51–59)

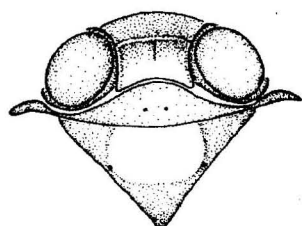
Description.—Male length (including tegmen): 6.2 mm; length of tegmen: 5.2 mm. Female length (including tegmen): 6.4 mm; length of tegmen: 5.3 mm.

Vertex brown with basal part yellow. Eyes black. Frons dark brown with 2 yellow fasciae, 1 between eyes and 1 against frontoclypeal suture. Clypeus dark brown. Rostrum brown. Pronotum brown. Mesoscutellum dark brown with large medial spot. Tegmen dark brown, basal half with 3 large elongate spots, apical half with 6 or 7 smaller elongate spots at apical margin. Wing

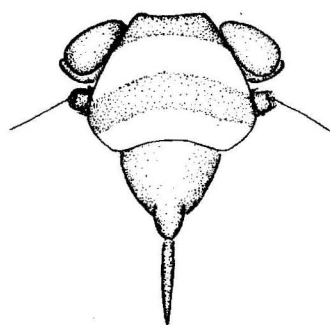
hazel, veins dark brown. Legs brown, fore- and midfemora with dark brown fasciae, fore-, mid- and hindtibiae with dark brown stripes. Venter hazel, apex yellow. Abdominal dorsum dark brown.

Vertex wrinkled, $1.3\times$ wider at apex than medial length, disc distinctly depressed. Frons slightly convex, narrower than long, midlength $1.1\times$ longer than greatest width, $1.8\times$ wider at widest part than at base. Frontoclypeal suture slightly arched. Pronotum wide and posteriorly arched. Mesoscutellum narrow and short, $2.1\times$ wider at widest than medial length. Tegmen $1.6\times$ longer than wide at widest part. Wing large, $0.8\times$ length of tegmen. Spinal formula of hind leg 6–10–2.

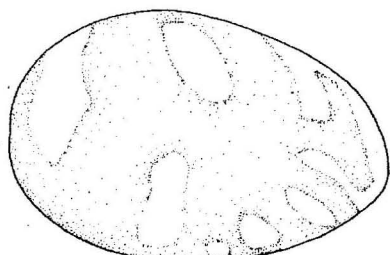
Male genitalia: Anal segment moderately large, in dorsal view nearly oblong, about equal in length to medial width. Lateral margin convex, apical margin nearly truncate, basal margin almost straight, and ventral margin in profile strongly convex. Anal tube near middle of anal segment. Pygofer in profile slightly longer ventrally than dorsally, dorsocaudal angle strongly produced into large black spine. Connective fused with aedeagus, U-shaped, symmetrical, with lateral, ventral, and dorsal lobes; dorsal lobes bilobate in dorsal view, tapering, angle acute and apical margin distinctly convex; lateral lobes bilobate in lateral view, tapering, apex acute; in ventral view, apex of ventral lobe nearly truncate, shorter than dorsal and lateral lobes. Aedeagus symmetrical, stout, slightly curved downward medially, with 5 spiniform processes (Figs. 57, 58), 2 long near apex, 1 dorsal and 2 S-shaped lateral processes. Genital styles with apical margin wider than medial, subtriangular and rounded at ventrocaudal margin, process short and stout, hooked near base, inner apical angle incised in caudal view, dorsal margin undulate, dorsal and ventral margins not parallel.



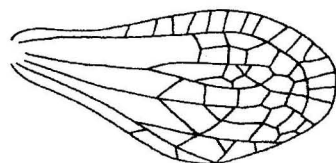
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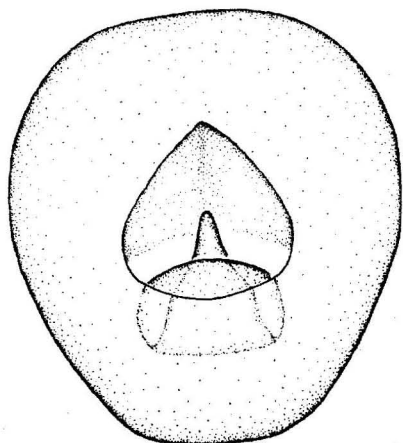
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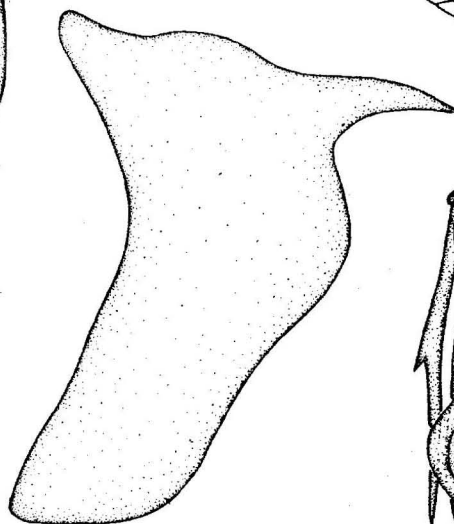
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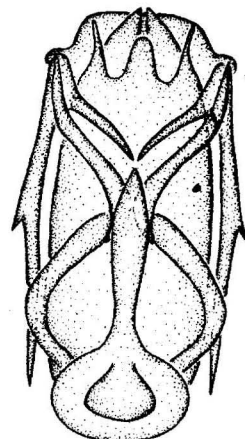
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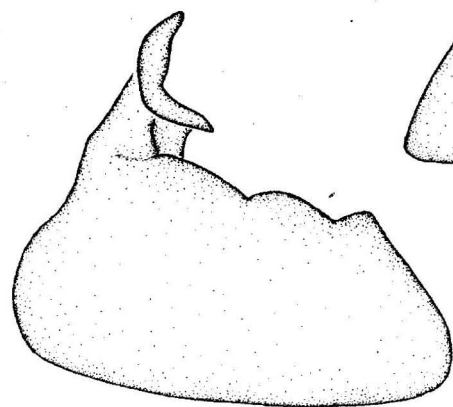
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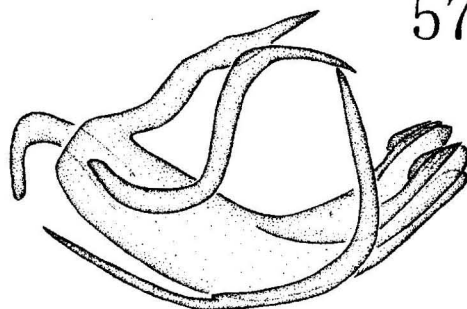
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Figs. 51-59. *Gergithus pseudotessellatus* (δ). 51, Vertex and thorax, dorsal view. 52, Frons and clypeus. 53, Tegmen. 54, Wing. 55, Anal segment, dorsal view. 56, Pygofer, lateral view. 57, Aedeagus, dorsal view. 58, Aedeagus, left side. 59, Genital style, lateral view.

Types.—Holotype ♂, China, Hainan Prov., Diaolu Mountain, 4 May 1965, coll. Liu Si-Kong. Paratypes: 1 ♂, China, Hainan Prov., Limu Mountain, 21 May 1963, collector unknown; 5 ♀, China, Hainan Prov., Diaolu Mountain, 18/27 May 1964, 4 April 1964, 8/14 May 1964, coll. Liu Si-Kong; 1 ♀, China, Hainan Prov., Limu Mountain, 1 August 2002, coll. Che Yan-Li and Wang Zong-Qing (NWAUFU)

Diagnosis.—This species resembles *Gergithus tessellatus* Matsumura, but it can be distinguished from the latter by the frons with two fasciae and the aedeagus complex with five spiniform processes.

Etymology.—The Latin prefix “*pseudo*” refers to the similarity of this species with *Gergithus tessellatus*.

***Gergithus yunnanensis* Che, Zhang, and Wang, new species**

(Figs. 60–67)

Description.—Male length (including tegmen): 4.6 mm; length of tegmen: 3.7 mm.

Vertex brown. Eyes dark brown. Frons dark yellow with yellow fascia against frontoclypeal suture. Clypeus hazel, with dark brown fascia against frontoclypeal suture. Rostrum brown. Pronotum and mesoscutellum hazel. Tegmen yellowish hazel with dark brown stripe against costal margin and dark brown spot near apex. Wing hazel. Legs hazel, fore- and hindfemora with dark brown fasciae, fore- and hindtibiae with dark brown stripes. Venter hazel, apex dark brown. Abdominal dorsum hazel.

Vertex $2.1\times$ wider at apex than medial length, disc slightly depressed. Frons broader than long, midlength $0.9\times$ longer than greatest width, $1.2\times$ wider at widest part than at base. Frontoclypeal suture nearly straight. Mesoscutellum broad and short, $2.2\times$ wider at

widest part than medial length. Tegmen $1.3\times$ longer than wide at widest part. Wing large, $0.8\times$ length of tegmen. Spinal formula of hind leg 6–7–2.

Male genitalia: Anal segment small, nearly oval in dorsal view, longer than medial width. In dorsal view, lateral margin slightly convex, apical margin strongly concave, basal margin concave; in lateral view, ventral margin strongly convex. Anal tube near middle of anal segment. Pygofer in profile slightly shorter ventrally than dorsally, dorsocaudal angle produced. Connective fused with aedeagus, U-shaped, asymmetrical, with dorsal, lateral, and ventral lobes; in dorsal view, dorsal lobes deflected to left side of aedeagus and ventral lobe to right side; dorsal lobes bilobate with apex tapering, 2 knifelike processes near middle; in lateral view, lateral lobes bilobate, apices obtuse; in ventral view, ventral lobe asymmetrical, apical margin slightly concave and right angle tapered to apex. Aedeagus stout, slightly curved downward medially, with 2 spiniform processes near midlength. Genital styles with apical margin wider than median, subtriangular, and rounded at ventrocaudal margin, process short and stout, apex tapering, hooked near base; in caudal view, inner apical angle incised, dorsal and ventral margins not parallel, genital style with a carina below process.

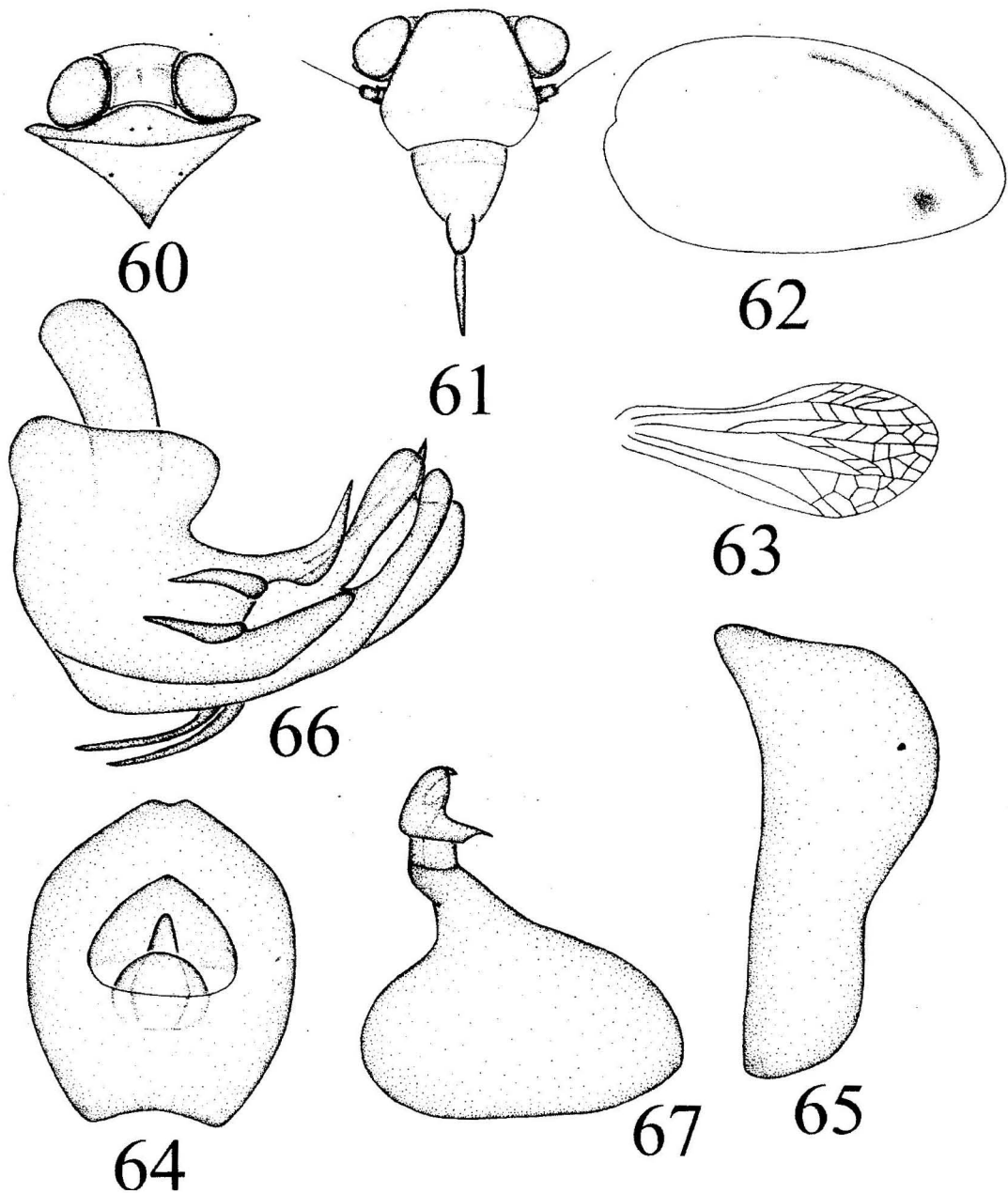
Type.—Holotype ♂, China, Yunnan, Xishuangbanna, Kongming Mountain, 21 September 1957, coll. Zang Ling-Chao (IZCAS)

Diagnosis.—This species is similar to *Gergithus rotundus* Chan and Yang, but differs from the latter by the tegmen with one dark brown spot and stripe, and the spinal formula of hind leg 6–7–2.

Etymology.—The name of the new species refers to the type locality, Yunnan, China.

ACKNOWLEDGMENTS

We thank M. D. Webb (The Natural History Museum, London) for revising



Figs. 60–67. *Gergithus yunnanensis* (♂). 60, Vertex and throat, dorsal view. 61, Frons and clypeus. 62, Tegmen. 63, Wing. 64, Anal segment, dorsal view. 65, Pygofer, lateral view. 66, Aedeagus, left side. 67, Genital style, lateral view.

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