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A new species of genus

Pseudodoniella CHINA & CARVALHO from China

(Insecta, Hemiptera: Miridae)

With 13 figures

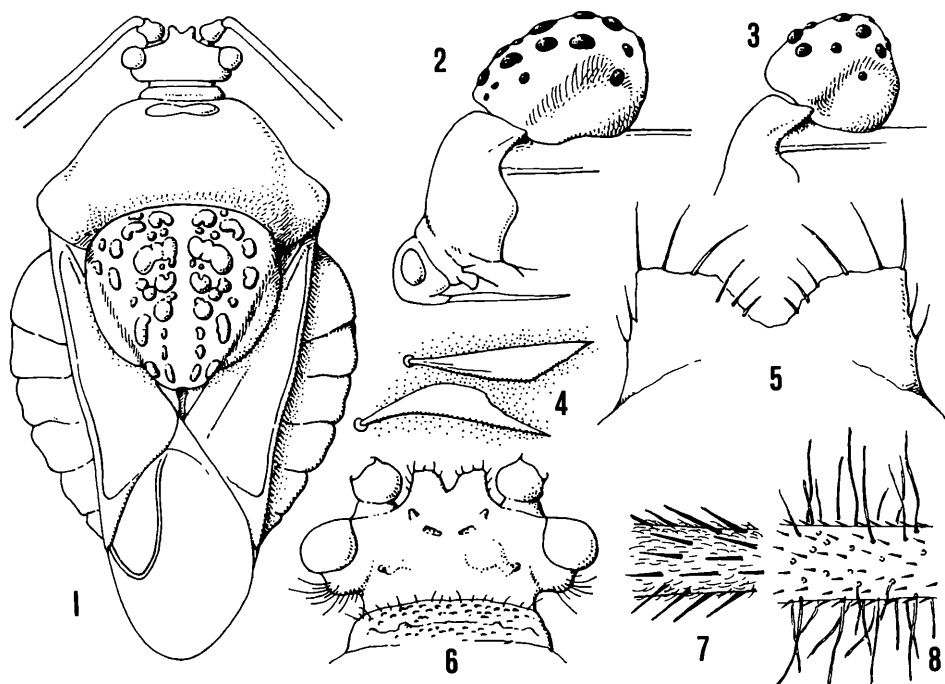
LE-YI Z H E N G
Tianjin

Abstract. *Pseudodoniella chinensis* sp. n. infesting *Cinnamomum cassia* Blume from South China is described and figured. The female genitalia characters of Odoniellini are briefly discussed.

Pseudodoniella chinensis sp. n.

Dark chestnut-brown to blackish-brown, shining. Pubescence yellowish brown, semierect. Head (figs. 1, 6) transverse. Eyes prominent. Frons and vertex without punctures, pubescence short and sparse, gradually denser and longer laterally and behind the eye. A pair of shallow concavities lateral to midline on posterior half of vertex with rim slightly raised, shortly extending postero-laterad and ending in a small tubercle; these concavities more extensive and rounded in female; deeper, smaller, more transverse and with its rim more raised in male. A pair of small transverse pits in front of concavities, smaller and more sharply defined in male. A small tubercle at anterolateral side of the above mentioned pit. Anterior frontal tubercle bifurcate (fig. 5). Antennae brown, segment IV and apical half of segment III piceus; segment I tubercle-like, segment II slightly club-shaped, segment III distinctly incrassate apicad, segment IV spindle-shaped. Pubescence of antennal segment II in female (fig. 7) with yellowish decumbent hairs and black stiff setae slightly shorter than segment diameter slantingly pointing; in male (fig. 8) with vertical elongate setose hairs a little longer than segment diameter and short semidecumbent black setae. Rostrum reaching to middle of mesocoxae.

Collar brown, shallowly punctured, median transversely and indistinctly impressed, with 4 small tubercles. Pronotum dark brown to blackish brown, darker in male than in female. Calli black. Punctuation of pronotum deep and dense, without any trace of smooth tubercles. Pubescence moderately long, semierect, each hair arising from upper rim of puncture at anterior side. Pronotum strongly declivent, in male almost perpendicular, hind lateral angle tongue-like adpressed, hind pronotal margin broadly concave. Scutellum (figs. 1, 2, 3) greatly inflated, vesicular, subspherical, slightly narrowed apicad, somewhat concave at apex; in lateral view female more ovoid in profile (fig. 2), male somewhat triangular with steeper hind surface (fig. 3); dorsally with a faint longitudinal median groove extending onto posterior surface, gradually deeper there and expanded into a triangular depression; lateral surface of scutellum slightly and broadly compressed. Colouration of scutellum brown with tuberculate discal area blackish, densely punctate all over, dorsally with many different sized black and shining tubercles; pubescence slightly shorter than that of pronotum, reclining.



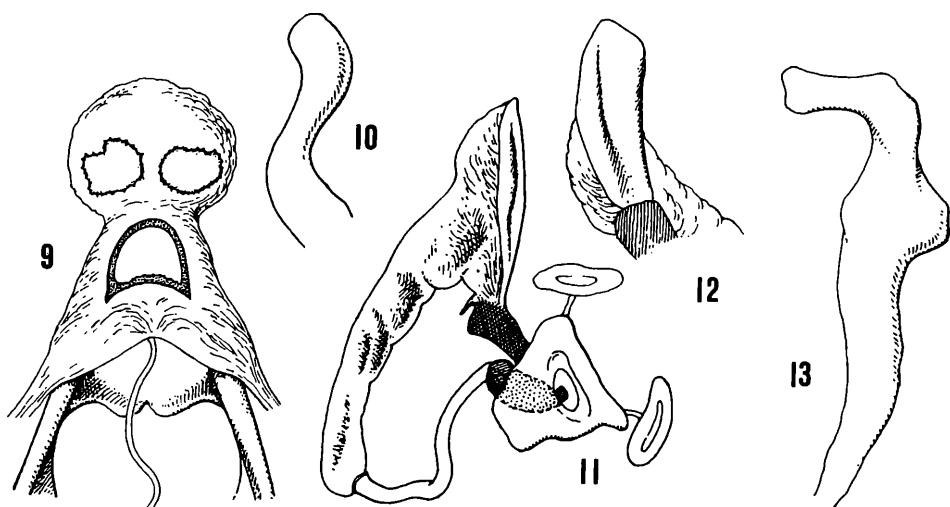
Figs. 1-8: *Pseudodoniella chinensis* sp. n.

1: Female, dorsal view - 2: lateral view of female - 3: same of male, showing scutellum - 4: scale-like hairs on corium - 5: anterior frontal tubercle - 6: head - 7: pubescence of 2nd antennal segment, female - 8: same of male.

Hemelytra blackish brown, dull, corium with a faintly pale area obliquely extending from inner angle of cuneus to costa, cuneus dark, clavus narrow, covered by scutellum leaving only apex exposed. Densely covered with short semierect or reclining hairs and erect or semierect black scale-like hairs, the latter slightly curved, flattened, tapering at both ends and pointed at apex (fig. 4). Membrane greyish black, somewhat pruinose on account of a dense pile of minute hairs, apical angle of cell subacute or a little more rounded.

Abdominal connexiva laterally strongly expanded and flattened, extensively exposed (fig. 1). Body beneath dark brown, medial two thirds of mesopleuron black. Legs dark brown, with coarse and stiff dark pubescence, dense, those on hind tibia a littler longer than tibial diameter. Hind tibiae slightly curved. Venter densely covered with brown decumbent hairs.

Left paramere (fig. 13) bending in right angle, apex widened and truncate, strongly humped opposite sensitive lobe. Right paramere (fig. 10) slightly bending, gradually widened apicad, apex roundly truncate. Aedeagus (fig. 11) very close to that of *Pseudodoniella pacifica* CHINA & CARVALHO. (CHINA & CARVALHO, 1951). Phallosome with a sclerotized plate-like anterodorsal portion with a pair of submarginal longitudinal thickenings (fig. 12), the remaining portion membranous, elongate, tube-like. At base of seminal duct close to phallobase an oval "ejaculatory reservoir" strongly sclerotized. Vesica with 4 small, crescent to semicircular sclerotized pads, 2 proximal, 1 median and 1 distal.

Fig. 9-13: *Pseudodoniella chinensis* sp. n.

9: Female genital chamber and seminal depository, dorsal view - 10: right paramere - 11: aedeagus, lateral view - 12: sclerotized portion of phallosome, dorsal view - 13: left paramere.

Female genital chamber dorsomedially with a heavily sclerotized semicircular ring with hind margin slightly concave. Seminal depository with a pair of weakly sclerotized and irregularly toothed ring at proximal half (fig. 9).

Measurements (in mm): Female: Head length (from apex of frontal tubercle) 0.9, with 1.8. Antennal segments length 0.45 : 2.5 1.6 : 1.4. Collar width 1.5. Pronotum length 1.8, width 4.3. Scutellum length 2.7, width 2.15. Abdomen width 5.0. Body length 8.5-9.0. Male: Head length 0.6, width 1.6. Antennal segments length 0.4 2.4 1.4 1.1. Collar width 1.0. Pronotum length 1.35, with 3.5. Scutellum length 2.0, width 2.25. Abdomen width 3.8. Body length 7.0.

Material: Holotype ♂, paratypes 6 ♀♀, China: Guangxi Province (Cen-xi, Mt. Yun-kai, alt. 2000 m, 22° 55' N, 111° 0' E, 1991. XI. 11, X. X. Xian leg., on *Cinnamomum cassia*). Type material in collection of Biology Dept., Nankai University.

Biology: Feeds on the upper part of stem and branches of *Cinnamomum cassia* Blume (Lauraceae), a commercial plant cultivated in South China used as herb medicine and condiment. The infestings cause crackings, malformations, tumors on stem and finally the death of the plant.

Remarks: CHINA & CARVALHO (1951) erected the monobasic genus *Pseudodoniella* based upon *P. pacifica* CHINA & CARVALHO. ODHIAMBO (1962) united *Parabryocoropsis* CHINA & CARVALHO with *Pseudodoniella* in finding some intermediate features between the two and thus expanded the definition of *Pseudodoniella*. The present new species differs from the 6 known species (all found from New Guinea) in having a widened apexed left paramere, bending right paramere, tuberculate scutellum and normal pronotum without any trace of tubercles (in the other known species of *Pseudodoniella*, either both the scutellum and pronotum lack tubercles or both are tuberculate), thus seems showing some deviations from the main bulk of the genus *Pseudodoniella*. But as the aedeagal structures are of the same type of *P. pacifica*, and the genus *Pseudodoniella* and its allies (including *Rhopaliceschatus* REUTER, 1903, found from West China, of which both the pronotum and scutellum not tuberculate and abdominal connexivum not

exposed) seems to be in need of a revision at the generic level, this new species is here tentatively treated as a member of *Pseudodoniella*.

On the ringed glands (or parietal glands) of female genitalia in Bryocorinae, KULLENBERG (1947) and SLATER (1950) found no sclerotized rings in *Bryocoris* and *Monalocoris*, SCHMITZ (1968) reported paired narrow rings on the genital chamber at the posterolateral side of the entrances of the oviducts in *Helopeltis*. In the Odoniellini, CARAYON (1977) described in *Sahlbergella* and *Distantiella* an unpaired crescent ring in front of the oviduct entrance on the genital chamber and a pair of weakly sclerotized toothed rings on the seminal depository. Those in the *Pseudodoniella chinensis* sp. n. are basically of the same type with only the unpaired ring differently shaped. Therefore, it is possible that a type with an unpaired ring on genital chamber and a pair of toothed ring on the seminal depository is one of the common characters of this tribe.

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Author's adress:

Le-Yi Zheng Prof., Department of Biology, Nankai University, Tianjin - 300071 (China-PRC)

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Autor(en)/Author(s): Zheng Le-Yi

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