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A New Genus and a New Species of the Planthopper Tribe Eucarpiini (Homoptera, Cixiidae) from Southern Vietnam

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Abstract—A new genus, *Pterolophus* gen. n., was erected for the single species *P. anichkini* sp. n. from southern Vietnam. The new genus belongs to the tribe Eucarpiini and differs in a characteristic position of the wings at rest: they are obliquely raised over the abdomen and their inner (= ventral) surfaces are in contact.

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Nearly all the generic and specific diversity of the tribe Eucarpiini is concentrated in the Oriental Zoogeographical Region; only the species *Ptoleria straeleni* Synave occurs in the Ethiopian Region, being endemic to it. As previously reported (Emeljanov and Hayashi, 2007), the generic classification of the tribe remains poorly developed; however, the new genus described in the present publication sharply differs from all the others in the position of the wings at rest (raised over the abdomen) and in a large membrane (see the comment at the end of the paper).

The material was collected by the author during the field investigations, when he was an employee of the Russian-Vietnamese Tropical Center.

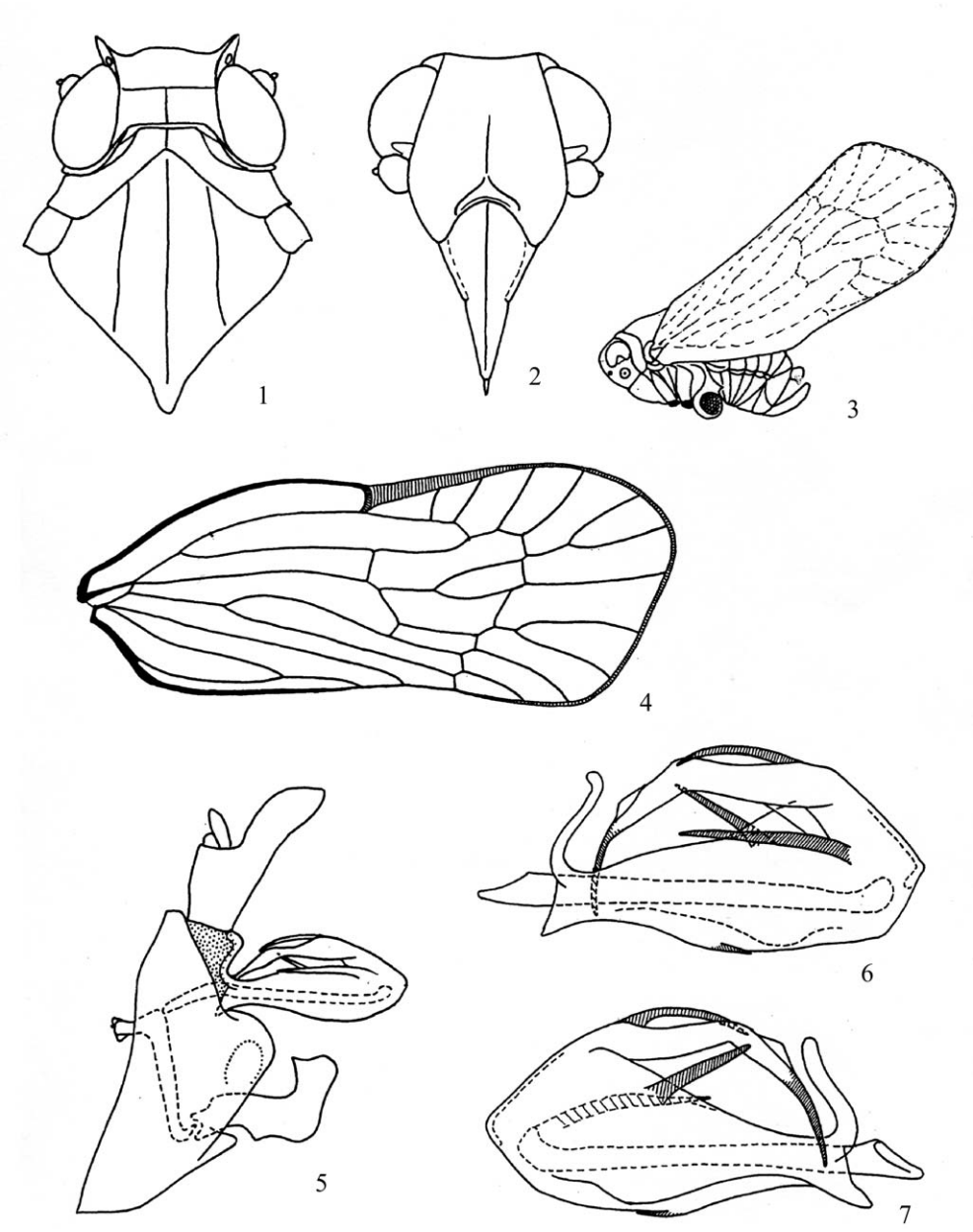
The types of the new species are deposited in the collection of the Zoological Institute, the Russian Academy of Sciences, St. Petersburg.

Genus ***PTEROLOPHUS*** Emeljanov, gen. n.

Type species *Pterolophus anichkini* sp. n. (Figs. 1–7).

The new genus demonstrates all the features characteristic of the tribe Eucarpiini, except for its fore wings obliquely raised at rest and directed obliquely upwards and backwards in such a manner that the posterior part of the abdomen remains entirely open.

Description. Coryphe transverse, 2–2.5 times as wide as long; its anterior margin straight; lateral margins moderately diverging backwards; posterior margin concavely trapeziform, straight along most length but deflexed backwards at margins, which making posterior angles of coryphe attenuating backwards; median carina sharp. Metope rather wide, transversely concave because of its high lateral carinae projecting forwards and sideways. Lateral margins of metope diverging from coryphe to level of antennae, convexly curved opposite antennae, then converging to clypeal suture; lower and upper margins of metope subequal in width; coryphal margin shallowly concave; clypeal margin deeply concave about as far as level of lower margins of antennae. Median carina distinct in clypeal half and indistinct in metopal half. Surface of metope uneven: pale spots marking low tubercles. Clypeal margin of metope keel-shaped raised from median carina toward sides, similarly to that in the genera *Dystheatias* Kirk., *Kirbyana* Dist., and some others. Postclypeus with high lateral carinae, with sharp median carina, and with lateral carinae distinct only in basal half. Rostrum reaching hind coxae, its apical segment about half as long as subapical one. Lateral ocelli large. Antennae small, with spherical 2nd segment. Eyes with unfaceted bay in lower part above antennal bases. Pronotum short; its disc narrower than coryphe, straightly truncate anteriorly, obtuse-angularly bent posteriorly. Scutellum long, with lateral margins steeply sloping downwards; carinae 3 in number, lateral carinae slightly diverging backwards. Fore wing elongate, moderately widening in basal third, parallel-sided in middle third, weakly widening again in area of membrane owing to its anterior margin deviating forwards and to posterior margin deviating backwards. Membrane occupying nearly half of entire length of wing. Costal margin concave in area of nodus where fore wings closed with each other over abdomen. Basal intermedial cell with convex posterior margin; short vein *mcu* originating from 1/3 of posterior mar-



Figs. 1–7. *Pterolophus anichkini* gen. et sp. n.: (1) anterior part of body, dorsal view; (2) head, anteroventral view; (3) general lateral view (legs are not shown), female; (4) fore wing; (5–7) male genitalia [(5) genitalia, left lateral view; (6) penis, left view; (7) penis, right view.

gin, it about half as long as basal section of *MP* (*bmp*). Proportions and characters of structure of legs typical of the tribe. Hind tibia without lateral teeth, apex of tibia with 5 (rarely 6) teeth; 1st segment of hind tarsus with 9 teeth, marginal teeth and 4th tooth from inner (posterior) margin without subapical setae (platellae) (as those in the genus *Kirbyana* Mel.: see Tsaur and Hsu, 2003); length of this segment (measured along plantar surfaces) slightly exceeding lengths of two others. Abdomen hump-shaped, similarly to that in the other representatives of the tribe.

Pygophore of female with pair of small, longitudinally oval wax areas situated on larger depression of wall of pygophore.

Pygophore of male symmetrical, compressed, its height along anterior opening nearly 3 times its width; dorsal wall narrow (short); ventral wall long; lateral margins projecting posteriorly in shape of rounded lobes, connecting dorsally with dorsal part of posterior margin of pygophore at concave obtuse angle; inner wall of lobe with nearly free, dorsoventrally stretched

sclerotization fused with sclerotization of outer wall only over short dorsal area and also fused ventrally (nearly in one point) with sides of dorsal wall of posteroventral projection. Ventrocaudal projection simple, obtuse-angled. Stylus L-shaped, with 2 ventral projections on basal genu and with truncate and slightly emarginate apex. Anal tube oblong-oval, with concave ventral wall, much higher as far as point of attachment of segment XI and its appendages. Penis moderately elongate, phallobase on whole simply countered; dorsally, at right, near middle, penis bearing process directed anterodorsally, and at left, it bearing smaller process directed anteriorly; theca bearing ventrally 2 longitudinal parallel ridges, among which right one higher and bearing at its middle small tooth directed caudally. Distal segment of penis rather narrow, its median part with long process directed toward apex of segment (i.e., dorsally and anteriorly at rest), apex of segment terminating with long, gently arcuate process which at rest crossed with base of theca along right wall. Suspensorium of theca high, slightly deflexed caudally.

Pterolophus anichkini Emeljanov, sp. n. (Figs. 1–7)

Description. General coloration brownish, spotted; wings with darker, uniformly colored areas. Coryphe, pronotal disc, and mesonotum pale brown. Metope brown, to dark brown ventrally, entirely covered with uneven pale spots; 3 large and 1 (lower) small keel-shaped swellings present near carina before clypeus. Genae, lora, and clypeus dark brown; carinae of postclypeus with pale, nearly white spot on both ends. Rostrum pale brown. Antennae dark brown. Pronotum laterally of scutellum brown, with pale spots. Mesoscutum pale brown, with 2 pairs of transversely widened dark spots forming 2 unsharp transverse bands; sides of scutellum brown, with pale spots at lateral margins. Tegulae brown and pale brown, vaguely spotted. Longitudinal veins of fore wing mostly pale, covered with black granules; cells of corium and membrane almost entirely dark brown, slightly spotted and with vague pale brown areas in basal half of corium and in posterior part of membrane; area of pterostigma whitish, with black granules on costal margin. Clavus pale brown, also with black granules. Males paler than females, basal part of corium pale brown, middle part with indistinct brown transverse bands merging with each other near costal margin of wing. Each cell along margin of membrane, from pterostigma to vein *CuA2*, with bright white rounded spot. Sides and lower part of prothorax brown, with pale carinae and margins of sclerites. Fore and middle legs brown, slightly darker than tarsi. Hind leg nearly dark brown, tibia with pale spots. Abdomen almost entirely dark brown, open posterior tergites with pale spots on granules: 3 on each half of tergites IV–VII and 2 on tergite VIII.

Length of male body measured as far as apex of abdomen 2.4–2.9 mm, as far as apices of folded wings 4.9–5.1 mm; length of female body as far as apex of abdomen 2.8–3.2 mm, as far as apices of folded wings 5.5–5.8 mm.

Material. Vietnam, *Dong Nai Province*: Cat-Tien Nature Reserve, 11°25′N, 107°25′E, 4.V.2012, 2 males; 5.V.2012, 1 female; Ma-Da memorial, "Strakhov Road," 11°18′N, 107°04′E, 29.V.2012, 1 male—holotype, 1 female; 28.VI.2012, 1 female (Emeljanov).

The new genus belongs to that part of the tribe Eucarpiini, which is characterized by a long *bmp* (the section of *MP* from its base to the cross-vein *mcu*) and by the cross-vein *mcu* shifted distad or replaced by anastomosis *MP–CuA*. This character in the genera *Kirbyana* Mel., *Bajauana* Dist., *Dilacraeon* Fenn., *Phytocentor* Fenn., and *Pterolophus* is combined with a distinctive position of vein *rm*: it is more proximal than the bifurcation of *M*. The genus *Pterolophus* differs from the above genera in the proportion of the membrane and in the distinctive position of the wings at rest, which resembles that in some Derbidae: the wings are obliquely raised over the abdomen and contact with each other by the inner (lower) surfaces. The presence of a keel-shaped frontal swelling before the clypeus and the transverse coryphe also distinguish *Pterolophus* from most genera of this group.

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