

A new genus and species of the Dictyopharidae from Australia belonging to a new tribe (Homoptera, Cicadina)

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A new tribe Cleotychni trib. n. for a new genus *Cleotyche* gen. n. with a new species *C. mariae* sp. n. from vicinity of Sydney (Australia, N.S.W.) is described.

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Cleotychni trib. n.

Habitus intermediate between orgeriine and calisceline types: fore part of body a little compressed; knees of fore legs directed in usual position more or less upwards in parasagittal plane, as in Caliscelinae. Head with well delimited trigons. Apical joint of rostrum half the length of subapical one. Only one side keel of pronotum present, probably the collateral one. Elytra strongly shortened, without keels. Tegulae absent. Upperside of abdomen without keels. Fore coxae with triangular lobe-like keel. Fore femora and tibiae dilated, foliate. Hind tibiae with two lateral spines only, one genicular and one in distal half of tibia. Apex of tibiae with 6 spines, two of them in medial group. First and second segments of metatarsus with platellae instead of spines, except large lateral common setaless spines. Arolium with one pair of chetoid sensilla. Claws with 3 setae. VIII sternite of male fused with pygofer. Pygofer with broad base, narrowed backwards. Styles without upper teeth but with upper lobe commonly bearing an upper tooth. Endoconnective fused with lower wall of pygofer, largely not connected with base of styles. Lateral lobe of third valvae of ovipositor without appendix; medial lobe of first valvae of ovipositor with two nervures; lateral lobes with bidentate apex.

This is a most peculiar tribe. Its significant characters may be divided into some groups.

1. Characters unique in the family Dictyopharidae: calisceloid habitus; apical joint of rostrum short; abdomen without keels;

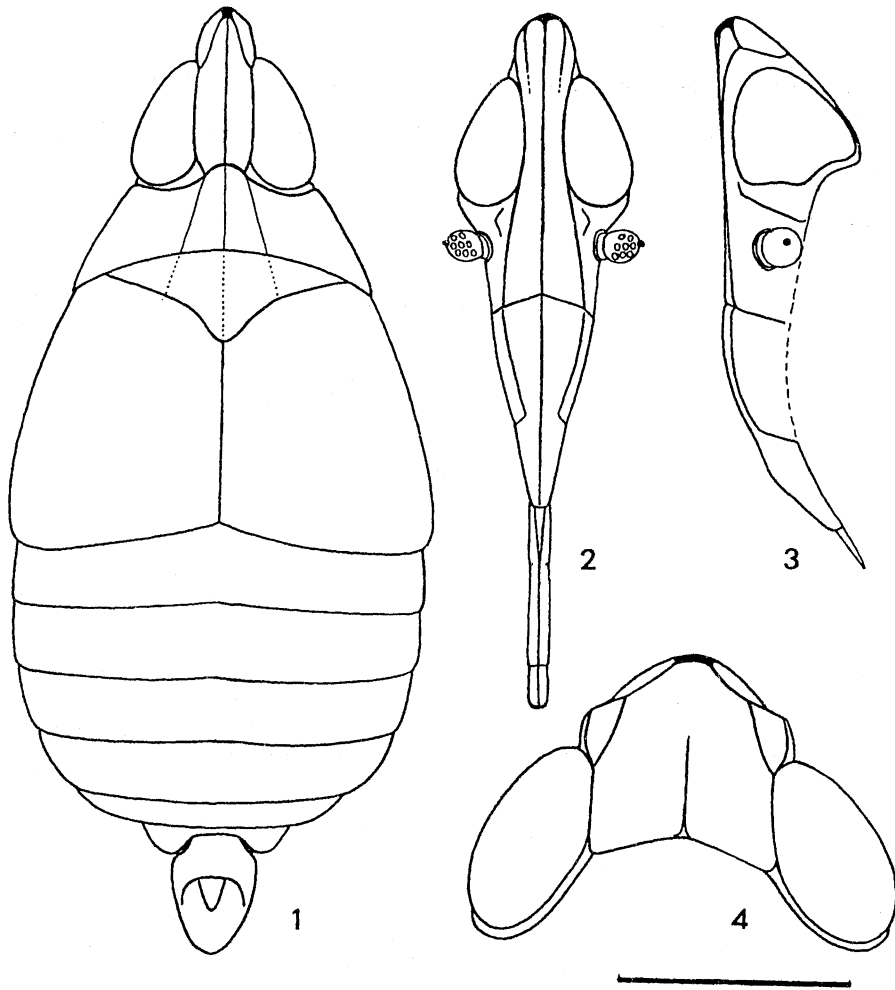
spines in proximal half of tibiae absent, except for genicular spine; platellae instead of setiferous spines on first and second tarsomeres of hind legs; in male, VIII abdominal sternite fused with pygofer; pygofer subconical with broad base; endoconnective fused with ventral wall of pygofer; styles without direct connection to endoconnective; lateral lobes of third valvae of ovipositor without sensory appendix; apex of lateral lobe of first valvae of ovipositor bidentate.

2. Characters associated with brachyptery and linked with larvalization: tegulae absent; one pair of chetoid sensilla on arolium; claws with 3 setae only; ocelli absent.

All characters similar to Orgeriinae are associated with brachyptery and consequently are not conclusive evidence of direct relationship. The new tribe is more similar superficially to some representatives of the advanced orgeriine tribe Almanini than to the plesiomorphic Ranissini. The nearly straight boundary between clypeus and metope, not characteristic of any Orgeriinae, should be noted.

3. Some characters of the new tribe are similar to those of the sister-family Fulgoridae: bidentate apex of lateral lobe of first valvae of ovipositor; absence of sensory appendix in lateral lobe of third valvae of ovipositor; two spines in medial group of spines at apex of hind tibiae.

The true relationship between the new tribe and some representatives of South American tribes Nersiini and Taosini is probably indicated by the characteristic bispinose lower bubble of theca and well de-



Figs 1-4. 1-3, *Cleotyche mariae* gen. et sp. n.: 1, body from above, male; 2, face and rostrum; 3, head, left side view. 4, *Taosa paraherbida* Muir, head, dorsal view. Scale: 1 mm.

limited trigones characteristic of some representatives of the tribe Taosini.

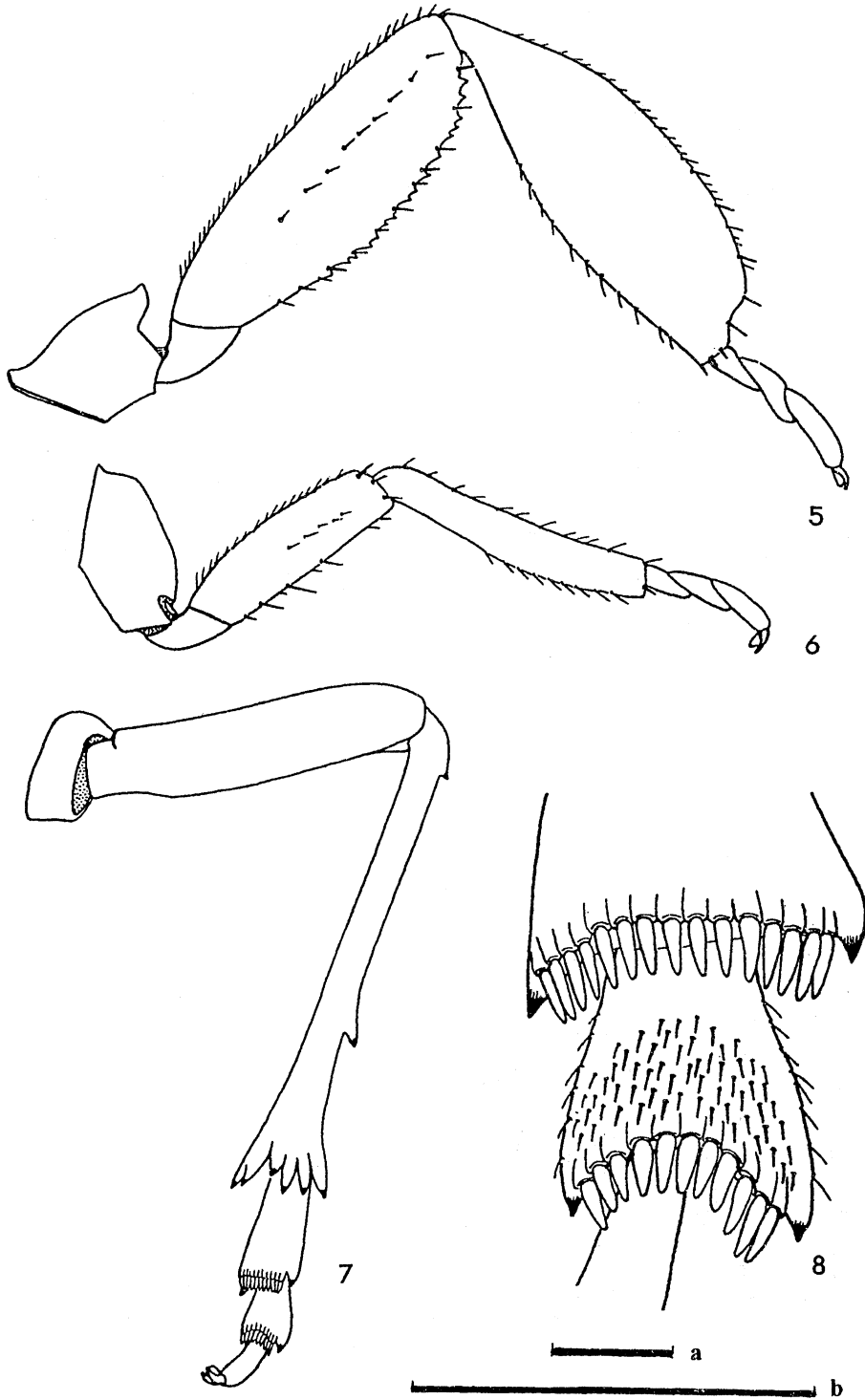
I consider the tribe Cleotychini to be a very peculiar member of the subfamily Dictyopharinae which in many respects is homoplastically similar to Orgeriinae. The tribe Cleotychini has no synapomorphic characters shared with the subfamily Orgeriinae.

Cleotyche gen. n.

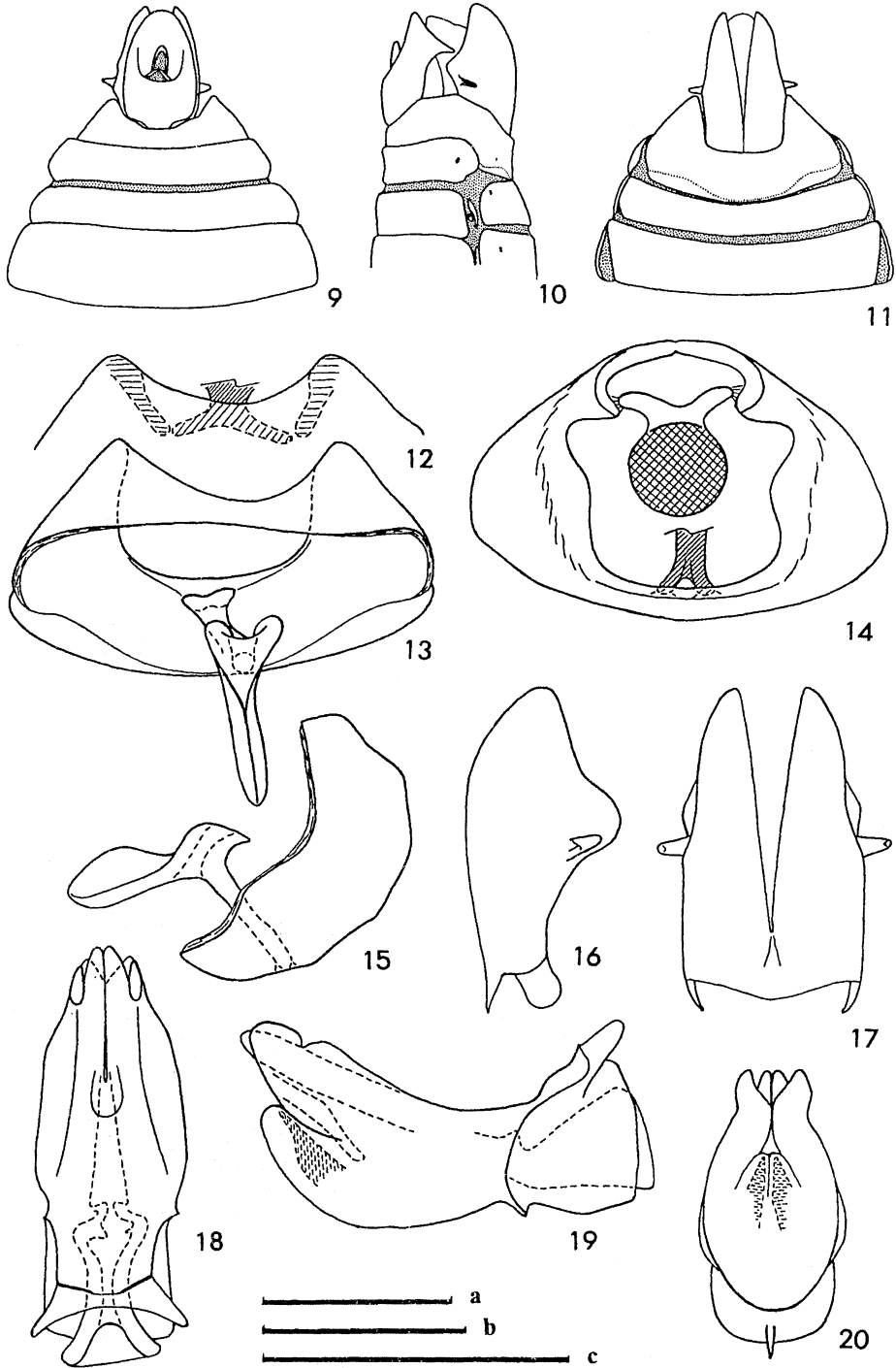
Type species *Cleotyche mariae* sp. n.

Degree of brachyptery as in Orgeriinae. Habitus more similar to that of *Caliscelis* and related genera of Issidae, although lateral compression is weaker in abdominal part. Head narrow, moderately prolonged.

Coryphe more than 3 times as long as broad, parallel-sided, juts out before eyes not more than on one fourth of length, its median keel strong but abrupt just before apex, fore part of coryphe lancet-parabolic, according to its narrowing to apex, surface of oblong and impressed trigons becoming open on each side. Apical callus small and dilated downward. Coryphe slightly raised anteriorly and joining metope in profile at acute angle. Metope narrow, elongated, narrowed between lower parts of eyes, a little broadened upward and more distinctly downward; clypeal boundary shallowly concave; intermedial keels of metope developed in upper part only, not reaching the level of eye middle; medial keel strong, complete. Eyes in profile



Figs 5-8. *Cleotyche mariae* gen. et sp. n. 5, fore leg, ventral view; 6, middle leg, ventral view; 7, hind leg, ventral view; 8, metatarsus, ventral view: apical part of basal segment, middle segment and basal part of apical segment; setae shown on middle segment only. Scales: a, 0.1 mm for Fig. 8; b, 1 mm for Figs 5-7.



Figs 9-20. *Cleotyche mariaae* gen. et sp. n. 9-11, apical part of abdomen (9, dorsal view; 10, left side view; 11, ventral view); 12, hind dorsal part of pygofer showing articulation of phallobase; 13, pygofer and endoconnective, dorsal view; 14, pygofer, caudal view, showing articulation of phallobase and endoconnective; 15, pygofer and endoconnective, left side view; 16, stylus, right side view; 17, styli, ventral view; 18-20, penis (18, dorsal view; 19, right side view; 20, caudal view). Scales: a, 1 mm for Figs 1-3; b, 0.5 mm for Figs 12-17; c, 0.5 mm for Figs 18-20.

rounded triangular, below with shallow concavity above antennae; postocular crest small; antennae small; lateral ocelli absent. Postclypeus triangular with three strong keels; anteclypeus narrow and steeply tectiform, with strong median keel; lateral keels of postclypeus not prolonged on anteclypeus. Rostrum slightly extending beyond hind coxae, its apical joint half as long as the subapical one. Pronotum long, conical, narrowed anteriorly, a little shorter than coryphe. Disc of pronotum narrow, oblong, narrowing anteriorly, about 1.5 times as long as wide at hind margin; fore margin of disc rounded; discal keels including median one distinct but not strong. Pronotum in addition to discal keels with keels on sides only, the latter not reaching its hind margin. These keels probably are collateral but not lateral, because there are vestiges of another keel dorsally to them. Fore margin of pronotum beyond eyes concave; hind margin shallowly concave, in middle part nearly straight. Scutellum short and broad, half as long as pronotum, without distinct keels, its hind corner obtuse-angulate. Elytra without tegulae, smooth with dull surface, without keels, transversely truncate behind; costal borders enveloping the body at its sides; hind margin of elytra reaching III abdominal tergite. Abdomen from above convex, smooth; tergites without keels; in female, tergites VII and VIII shortened; in male, only VIII tergite shortened. Fore legs with dilated femora and tibiae nearly as in *Caliscelis*, fore coxae with obtuse-angulately projected fore keel, as in some Orgeriinae (*Parorgerioides* Brgv., *Anorgeriopus* Kusn., etc.). Hind tibiae with genicular spine and another lateral spine in apical half; apical row consists of 6 spines: 2 of the medial group and 4 of the lateral one. First and second segments of metatarsus with dilated apices bearing 12 (11-13) hyaline platellae with low socles corresponding to reduced spines and flanked by one strong setaless spine on each side. Claw with three lateral setae. Arolium with one pair of chaetoid sensilla.

Male. VIII abdominal sternite short and completely fused with pygofer. Pygofer subconical, narrowed caudad, moderately depressed dorsoventrally, with broad base, and hind border with rounded lateral lobes, deep ventral incision for styles and shallow dorsal incision for anal tube are present. Anal tube oblong oval with a pair of subapical lateral projections. Styles fused basally, spoonlike, drawn together, with large dorsal projection which has a rounded apex with-

out common tooth, and with lateral tooth on lateral wall of stylus; dorsal projection of stylus closing sides of genital chamber basally of anal tube projections. Endoconnective fused ventrally with wall of pygofer near hind margin; its direct functional connection with styles lost. Dorsal plate of endoconnective narrow and laterally compressed, with high dorsal crest. Penis subcylindrical, slightly bent dorsad, with a pair of longitudinal keels divided by incisure in two unequal parts, apical lobe-like part thicker and shorter. Upper bubble of theca not developed; lower bubbles bearing two pairs of large sclerotized lateral spines. Spines in repose (with non-inflated bubbles) retracted inside of phallosome, forming upper wall of lower apical lobe. Phallobase with large cylindrical apodeme around basal sclerotized part of aedeagus.

Female genitalia. Ovipositor rather large, rounded. Lateral lobe of third valvae of ovipositor without sensory appendix; lateral lobe of first valvae of ovipositor with bidentate apex; medial lobe with two sclerotized nervures. Anal tube large and rounded.

Cleotyche mariae sp. n.

Holotype. ♂, **Australia**, New South Wales, Pearl Beach, 15 km SE of Gosford, stony open places with grass amongst low bush in light forest, 13.IV.1997 (Emeljanov), preserved in the Australian National Insect Collection (ANIC), Canberra.

Paratypes. 15 ♂, 22 ♀, same locality, 8-14.VI.1997 (Emeljanov), preserved in the Zoological Institute, St. Petersburg, the Australian Museum, Sydney, and the collection of M.J. Fletcher, Orange (N.S.W.).

Description. Head reddish; clypeus below epiclypeal lobes, rostrum and lorae black; eyes dark; apical callus somewhat darkened. Pronotum mid- to dark brown except for an almost white band along the hind border between the lateral keels. Scutellum dark brown. Elytra mid- to dark brown with white band along hind margin. Abdomen black, more smooth and shining than elytra and remaining fore part of body. VIII tergite with white irregularly rounded spot extending to hind margin of VII tergite; in female, a narrow longitudinal brown line present behind this spot on pygofer and anal tube. Hind side of body and legs dark brown to black. Fore legs with white tarsi; femora with indistinct subapical transverse band; similar but subbasal band present on tibiae; these bands in halfbent legs continue each other; middle and hind tibiae lightened api-

cally to light brown, middle and hind tarsi also light brown.

Length of male 3.9-4.1 mm, female 4.5-4.7 mm.

Etymology. The species is dedicated to Mrs. Maria Schreider who kindly organized our stay with D.E. Shcherbakov at the

Crommelin Biological Research Station in Pearl Beach where we have collected a valuable material.

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