A new species of *Enchenopa* (Hemiptera: Membracidae) from the Brazilian Atlantic Forest

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ABSTRACT. *Enchenopa luizae* sp. nov. (holotype female from Brazil, State of São Paulo, municipality of São José dos Campos, Parque Natural Municipal Augusto Ruschi at 23°04'05"S, 45°56'22"W, 06.VIII.2011, R. La Rosa leg. deposited in DZUP) is described and diagnosed from the Atlantic Forest Vale do Paraíba, São Paulo, Brazil. The new species is very similar to *Enchenopa monoceros* (Germar, 1821) in overall aspects but much larger and with inconspicuous lateral secondary carinae. The fourth instar nymph is also briefly characterized.

KEY WORDS. Insecta; Membracinae; Membracini; taxonomy; treehopper.

*Enchenopa* Amyot & Serville, 1843 is one of the largest genera within the treehopper tribe Membracini. The members of this genus are all morphologically similar, making the species identification very difficult. The main features that define this group are: pronotum produced anteriorly in a more or less developed horn (anterior process), ornated with a pair of strong lateral carinae that extend from the tip of the anterior process to the mid-lateral portion of the posterior process, and two to four secondary short carinae on each side of the metopidium. In some cases, the anterior process may be reduced or simply angulate, as in *Leioscyta* Fowler, 1894. Species of this genus, however, lack secondary carinae. *Enchenopa* was described by AMYOT & SERVILLE (1843) to include a unique species, *Membracis monoceros* Germar, 1821. In the catalogue of McKAMEY (1998), 24 species are listed, 14 of which occur in Brazil. Subsequently, SAKAKIBARA & MARQUES (2007), ROTHEA & CREÃO-DUARTE (2007), STRÜMPEL & STRÜMPEL (2007), and SAKAKIBARA & MARQUES (2010) described six species from Brazil, respectively: *Enchenopa auridorsa* Sakakibara & Marques, 2007, *E. fusca* Sakakibara & Marques, 2007, *E. cucicae* Rothéa & Créao-Duarte, 2007, *E. minuta* Rothéa & Créao-Duarte, 2007, *E. brasiensis* Strümpel & Strümpel, 2007, and *E. loranthacina* Sakakibara & Marques, 2010. Additionally, LENCIONI-NETO & SAKAKIBARA (2014) recorded *Enchenopa beebei* (Haviland, 1925) for the first time in Brazil, based on specimens from state of São Paulo. It was originally described from Guiana (Haviland 1925), and was subsequently recorded for Colombia and Venezuela (Strümpel & Strümpel 2014). Recently, Strümpel & Strümpel (2014) revised *Enchenopa*, providing comprehensive species descriptions, identification keys, and illustrations. They recognized 116 valid species, 25 of which are found in Brazil.

In this paper, a new species is described from the Brazilian Atlantic Forest municipality of São José dos Campos, Vale do Paraíba, state of São Paulo.

**TAXONOMY**

*Enchenopa luizae* sp. nov.

Figs. 1-6

Diagnosis. Entirely black, except forewings with apical translucent whitish area close to internal angle; legs with tarsal segments yellow. Anterior pronotal process short, obtuse; lateral carinae conspicuous, extended from apex of horn to mid-lateral of posterior process; secondary carinae short and barely visible.

Measurements (in millimeters). Female. Total length 7.61; length of pronotum 6.17; length of head 1.50; width of head 2.01; distance between humeral angles 2.28; length of forewings 5.26.

Description. Female holotype. General color dull black; forewings opaque with a whitish translucent spot at apical margins extended through part of limbus (Fig. 1); undersurface of thorax, abdomen, and legs, black, tarsi yellow.

Head triangular (Fig. 2), wider than long; eyes globoso, egg-shaped in lateral view; ocelli conspicuous, closer to eyes than to each other; vertex almost flat, superior margin arched, supraantennal ledges triangular; frontoclypeus laminar, rounded apically. Pronotum, in lateral view, more or less triangular; anterior process obliquely projected above head, short, blunt, relatively wide and rounded at apex (Figs. 1, 3); median carina well marked and foliaceous; posterior process tectiform, acuminate, attaining internal angle of forewings; lateral carinae

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strong, extended from apex of anterior process to about mid-
lateral of posterior process; secondary carinae very weak, two
at each side of metopidium, barely visible (Fig. 1).

Nymph. A single nymph has been collected, probably of
the fourth instar (Figs. 4-6), together with the holotype female.
It closely resembles the nymphs of other species of Enchenopa.
The body is somewhat recurved, with very conspicuous colora-
tion, with yellow, whitish-yellow, and black bands. Head yel-
low, eyes black; pronotum, lacking anterior process, black with
the posterior angle (posterior process) yellow; a black transver-
sal band at mid-pronotum showing, in dorsal view, a yellow
diamond-shaped patch; meso- and metanotum black, bearing
dorsally a pair of small scoli; wing-pads yellow and black; abdo-
men with the basal four visible segments yellow, the rest black;
all the segments with a pair of dorsal scoli, with the same color
as the segments, slightly bent backward; legs yellow.

Material examined. Holotype female. “BRASIL. São Paulo:
São José dos Campos/06-VIII-2011/Col. R. La Rosa” “P[arq][ue]
Nat.[ural] Municipal/Augusto Ruschi/23°04’05"S-/45°56’22”W”.
The type is deposited in the “Coleção de Entomologia Pe J. S.
Moure”, Departamento de Zoologia, UFPR, Curitiba, Paraná
(DZUP). Additional specimen. 1 nymph (probably of fourth in-
star), same data as the holotype.

Etymology. The species is dedicated to Luiza Maria de
Atayde Lencioni (first author’s wife) for her support on his re-
search activities.

Remarks. This new species is similar to E. monoceros (Fig. 7)
in having the body entirely black, short and blunt anterior process,
and opaque forewings with translucent apical spot. However, E.
luizae sp. nov. is almost twice as large, and shows very weak sec-
ondary carinae, which are almost imperceptible; the translucent
spot on the forewings is smaller, confined to the apical limbus.
STRÜMPEL & STRÜMPEL (2014) divided the genus in ten species-groups taking on account the color pattern (presence or absence of colored patch on pronotum), size of anterior process, sexual dimorphism, forewings venation, and genitalia, as follow: beebei-group, minuta-group, gladius-group, castanea-group, andina-group, curvata-group, albidorsa-group, biplaga-group, ansera-group, and albifrons-group. Due to its characteristics, *E. luizae* sp. nov., belongs to andina-group, together with *E. andina* Schmidt, 1924, *E. eurycephala* Strümpel & Strümpel, 2014, and *E. loranthacina* Sakakibara & Marques, 2010. Using the key provided by these authors, *E. luizae* sp. nov. runs into the couplet 49, keys out together with *E. monoceros* and *E. andina*. Below, the couplet 49 that has been modified to include the new species:

49. Forewings with yellowish-white apical patch; subapical cells approximately as long as corresponding apical cell; color dull black or dark castaneous, median carina concolor ... ................................................................. 49a

49’. Forewings without apical patch, apex dark-translucent; subapical cells as long as corresponding apical cell; color brilliant-black, median carina reddish-brown .................. ............................

49a. Pronotum with secondary carinae well developed; forewings apical patch occupying all distal margin and extended inward to middle of apical cells 3-4 ............

................................................................. *E. andina* Schmidt

49b. Pronotum with secondary carinae inconspicuous; forewings apical patch small, occupying only part of limbus ................................................................. *E. luizae* sp. nov.

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