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Scientific Note/Comunicação Científica

New records of *Dictyopsocus pennicornis* (Burmeister) (Psocodea 'Psocoptera': Psocidae: Psocinae)

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Abstract. First records of *Dictyopsocus pennicornis* (Burmeister), in the northeastern Brazilian states of Bahia, Ceará and Paraíba, are presented, with biogeographic comments.

Keywords: Bark-Lice; Geographic distribution; Neotropics, Psocids; Thyrsophorini.

Novos registros de *Dictyopsocus pennicornis* (Burmeister) (Psocodea 'Psocoptera': Psocidae: Psocinae)

Resumo. Os primeiros registros de *Dictyopsocus pennicornis* (Burmeister), nos estados brasileiros da Bahia, Ceará e Paraíba são apresentados, com comentários biogeográficos.

Palavras-chave: Distribuição geográfica; Neotropical; Piolhos de cascas de árvores; Psocídeos; Thyrsophorini.

The family Psocidae includes the subfamilies Kaindipsocinae, Amphigerontiinae and Psocinae (Yoshizawa *et al.* 2011), the latter including five tribes, one of which is Thyrsophorini. It is divided in two groups previously known as Cerastipsocinae and Thyrsophorinae (Yoshizawa & Johnson 2008). The tribe includes 15 genera, one of which is the monotypic *Dictyopsocus* Enderlein, represented by *Dictyopsocus pennicornis* (Burmeister), easily identified by the presence of small ramifying veinlets in the central area of the forewing. *Dictyopsocus* was raised by Enderlein (1901) to include the species then known as *Thyrsophorus pennicornis* Burmeister (Burmeister 1839). It was redescribed by New in 1973 and later, in 1978 was transferred and reduced to a subgenus of *Thyrsopsocus* by the same author, with a description of a female specimen (New 1973, 1978). The genus was reinstalled by Mockford (1992). The species is widely distributed, ranging from Venezuela to Argentina, near the border with southern Brazil (Lienhard & Smithers 2002). In Brazil *D. pennicornis* was recorded for the states of Amazonas and Santa Catarina (García Aldrete & Mockford 2009). The purpose of this note is to record the presence of *D. pennicornis* in three Brazilian northeastern states, with biogeographic comments. The specimens of *D. pennicornis* for this study were recently collected during expeditions as part of the Brazilian "PPBio Semi-árido" program, and are deposited in the Johann Becker Entomological Collection at the Museu de Zoologia da Universidade Estadual de Feira de Santana. Four specimens were collected in the States of: a) Bahia, municipality of Santa Terezinha, Serra da Jibóia, 12°51' S: 39°28' W, 10.XI.2010, 1 male, 1 female; b) Ceará, municipality of Ubajara, Parque Nacional Serra Grande, 02°49' S', 40°54' W, 1 male (Figures 1-13), and c) Paraíba, municipality of Areia, Brejo Paraibano, Reserva Pau Ferro, 26.IX.2011, 1 female (Figures 14-26). The specimes were dissected in 80% ethanol; their parts (head, right legs and wings, and genitals) were mounted in Canada balsam. Before dissecting, whole specimens were placed in 80% ethanol under a dissecting microscope, illuminated with cold, white light, and observed at 50X to record color. The images were taken with a Leica DFC295 attached at a stereoscopic microscope M205. The four specimens were collected in forest areas. Although their presence in the northeastern region of Brazil, in the semi-arid biome Caatinga, they are only known from forests enclaves, although extensive collecting was conducted in the semi-arid regions as part of the "PPBio Semi-árido" program, which aims to document the biodiversity of this biome. The absence of *D. pennicornis* in the other areas of the semi-arid region allows us to suggest that this species does not have the ability to disperse among the forest patches through the semi-arid matrix. They must have colonized those different areas when they were connected. With exception of Caracas and Argentina, all the other forests are part

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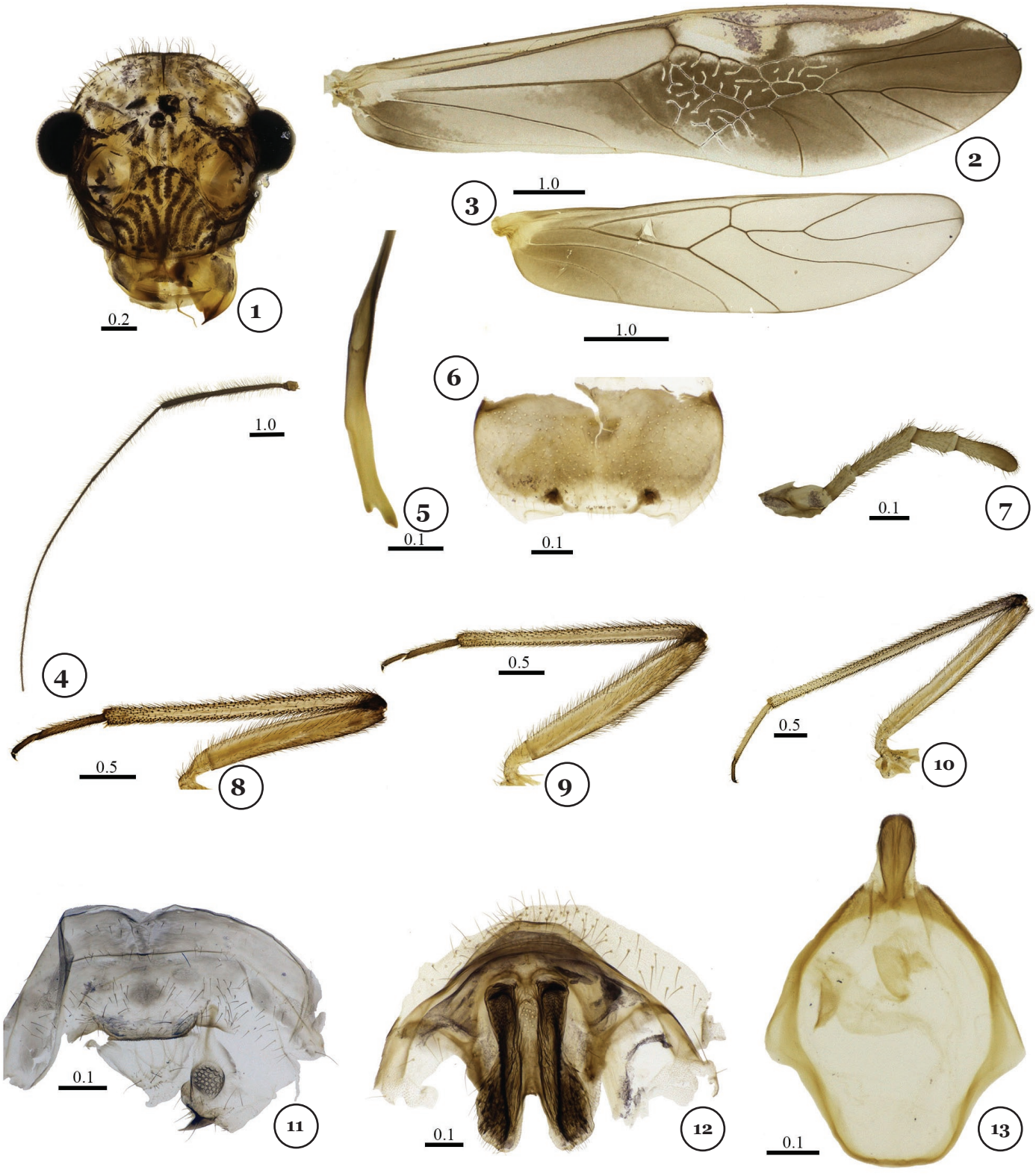
of the Amazonian rainforest, Caatinga forest enclaves or Atlantic rainforest. They were connected at different periods of time in the Tertiary (Rylands *et. al.* 1996) and in the Quaternary (Marks *et. al.* 2002), during forest expansion periods due to global climate changes, although there are different hypotheses regarding how they were connected (Bigarella & Andrade-Lima 1982; Cracraft 1994; Silva & Casteleti 2003). This study indicates that *D. pennicornis* and possibly other species of Psocoptera, as an old and widespread group, is a good model for biogeography studies. A study to resolve the relationship between *D. pennicornis* populations and more sampling effort might endorse the species distribution story, which would support more evidence for one of the hypotheses about the Amazonian rainforest and Atlantic rainforest connection (Melo Santos *et. al.* 2007).



Figures 1-13. *Dictyopsocus pennicornis* (Burmeister). Male. 1. Front view of head. 2. Forewing. 3. Hindwing. 4. Right antenna. 5. Right lacinial tip. 6. Labrum. 7. Right maxillary palp. 8. Right foreleg. 9. Right midleg. 10. Right hindleg. 11. Clunium, right paraproct, and epiproct. 12. Hypandrium. 13. Phallosome. Scales in mm.

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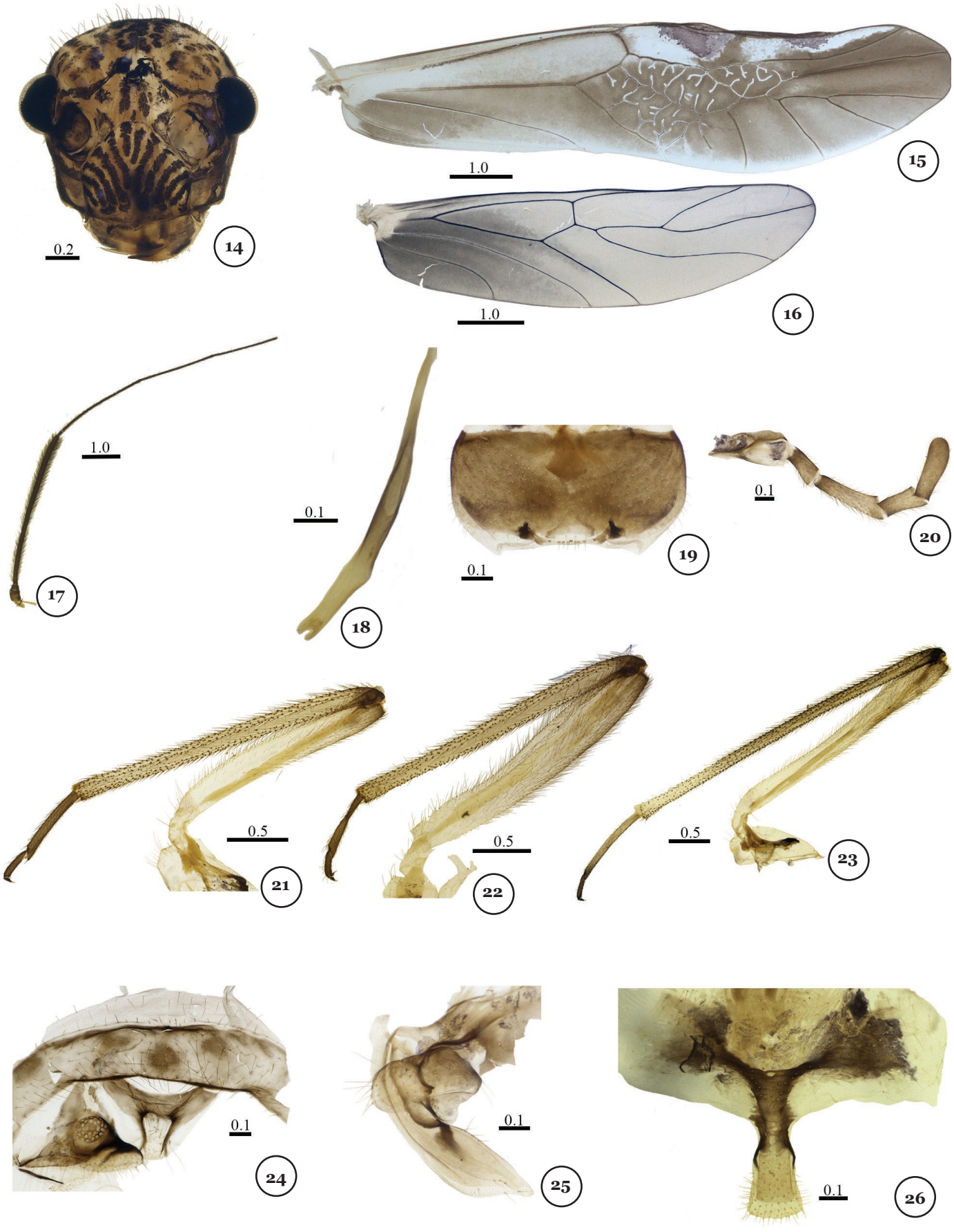

Figures 14-26. *Dictyopsocus pennicornis* (Burmeister). Female. 14. Front view of head. 15. Forewing. 16. Hindwing. 17. Right antenna. 18. Right lacinial tip. 19. Labrum. 20. Right maxillary palp. 21. Right foreleg. 22. Right midleg. 23. Right hindleg. 24. Clunium, right paraproct and epiprocto. 25. Gonapophyses. 26. Subgenital plate.

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