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TWO NEW SPECIES OF TERMITES (INSECTA, ISOPTERA) FROM WESTERN BRAZILIAN AMAZONIA

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ABSTRACT – Dolichorhinotermes japuraensis, *sp.n. (Rhinotermitidae, Rhinotermitinae), and* Ibitermes tellustris, *sp.n. (Termitidae, Nasutitermitinae), collected in primary rainforest near the town of Maraã on the Japurá River, Amazonas State, Brazil, are described. Drawings of the soldier's head and worker's mandibles of both new species are presented.*

KEY WORDS: Isoptera, Japurá River, *Dolichorhinotermes japuraensis, Ibitermes tellustris,* Taxonomy.

RESUMO – Dolichorhinotermes japuraensis, *sp.n. (Rhinotermitidae, Rhinotermitinae), e* Ibitermes tellustris, *sp.n. (Termitidae, Nasutitermitinae), coletadas em floresta primária de terra firme próxima da vila de Maraã, Amazonas, Brasil, no rio Japurá, são descritas. Desenhos da cabeça dos soldados e das mandíbulas do operário das duas espécies novas são apresentados.*

PALAVRAS-CHAVE: Isoptera, Rio Japurá, *Dolichorhinotermes japuraensis, Ibitermes tellustris,* Taxonomia.

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INTRODUCTION

The termites of the Amazon Basin are poorly known, and there are enormous areas without collections. The first intensive collection of termites in the basin was that of the Mulford Expedition to Bolivia and Brazil in 1921 (Snyder 1926). Emerson's (1925) classic work treats the termites from Kartabo, Guyana, outside the Amazon Basin. Mathews (1977) studied the termites of Mato Grosso, Brazil, in an area dominated by "cerrado" vegetation.

I conducted an intensive collection of termites on the lower Japurá River in the municipality of Maraã, Amazonas State, Brazil (01°51'S, 65°27'W) in October 1988. This paper presents the descriptions of two new species of termites, *Dolichorhinotermes japuraensis* (Rhinotermitidae, Rhinotermitinae) and *Ibitermes tellustris* (Termitidae, Nasutitermitinae), the first result of the analysis of the material from Maraã.

Dolichorhinotermes japuraensis, sp.n.
(Figures 1–8)

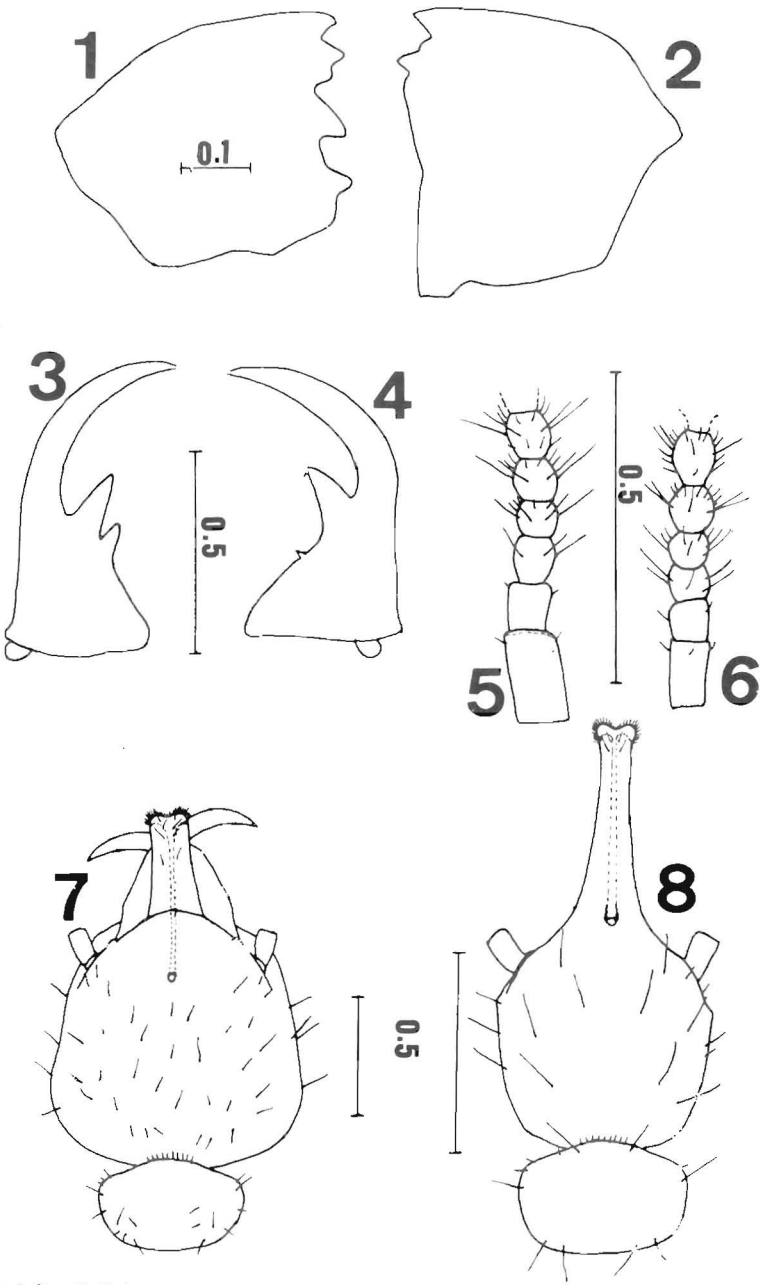
Type-Material – BRASIL. Amazonas State, Municipality Maraã, type colony MPEG 2853 deposited in the Museu Paraense Emílio Goeldi's entomological collections, holotype (major soldier), paratypes (four major soldiers and many minor soldiers and workers), 13.Oct.1988, R. Constantino col

Imago – Unknown.

Major Soldier (Figures 3–5, 7) – Head yellow, labrum yellow-brown, lighter toward apex, base of mandibles yellow, brown toward apex and marginal teeth. Head broadest in back, with numerous bristles. Abdomen and legs pale yellow. Antenna pale yellow, with 16 segments, the second longer than the third and fourth. Labrum elongated, broadest at base, with numerous long hairs at apex. Tergites with long bristles on posterior margin. Sternites with scattered short bristles on surface and longer bristles on posterior margin. Tibia with long bristles. Femur with few short bristles. Tibial spurs 2:2:2. Left mandible with two large pointed teeth, the second smaller than the first. Right mandible with one single pointed marginal tooth and a very small tooth at base. Pronotum yellow, almost trapezium-shaped, with medium-sized bristles on margins and few medium sized bristles on surface; middle of anterior margin with numerous short bristles.

Measurements (in millimeters) of five major soldiers: length of head with labrum 1.50-1.52; length of left mandible 0.80-0.81; length of labrum 0.39-0.45; length of pronotum 0.31-0.38; width of pronotum 0.58-0.64; length of hind tibia 0.70-0.78; width of head 1.05-1.09.

Minor Soldier (Figures 6, 8) – Head yellow with long bristles, widest behind the antennae; posterior margin rounded. Labrum yellow-brown, elongated, broadest at base, with numerous long hairs at apex. Mandibles yellow-brown, straight, slender and sharp-pointed, not visible from above. Antennae pale



Figures 1-8 – *Dolichorhinotermes japuraensis,* sp.n. Worker: 1. left mandible; 2. right mandible. Major soldier: 3. left mandible; 4. right mandible; 5. antenna; 7. head, dorsal view. Minor soldier: 4. antenna; 8. head, dorsal view. Scales in millimeters.

yellow, 14 segments, second, third and fourth subequal; segments becoming longer and broader toward apex. Chaetotaxy of abdomen and legs similar to that of major soldiers. Pronotum yellow, almost trapezium-shaped, with four long bristles on antertior margin and four on posterior margin; middle of anterior margin with numerous short bristles.

Worker – mandibles in Figures 1, 2.

Measurements (in millimeters) of five minor soldiers: length of head with labrum 1.05-1.14; width of head 0.55-0.56; length of labrum to fontanelle 0.50-0.56; length of left mandible 0.30; length of pronotum 0.25-0.28; width of pronotum 0.44-0.48; length of hind tibia 0.59-0.63.

Comparisons – The major soldier of *D. japuraensis* is easily distinguished from *D. longilabius, D. longidens, D. tenebrosus,* and *D. latilabrum* by the single pointed marginal tooth of the right mandible. These species present the tooth of the right mandible with two points, or have two teeth on the right mandible. The labrum of the major soldier of *D. japuraensis* is proportionally shorter than that of the other species. The minor soldier of the other species present the labrum proportionally longer, more slender and the fork broader than in *D. japuraensis; D. longilabius* has the third segment of antenna longer; *D. tenebrosus* has the antenna with 15-16 articles; *D. latilabrum* has longer mandibles.

Distribution – Known only from the type-locality.

Etymology – The specific name derives from the Japurá River.

Remarks – The type colony was collected in a rotten log on the ground.

Ibitermes Fontes, 1985:18

Type-species: *Ibitermes curupira* Fontes, 1985:19 by monotypy.

The new species of this genus described in this paper shows some differences from the original description. The modifications of the description of the genus are listed bellow.

Soldier – Postclypeus inflated or not. Labrum of variable size, visible or not from dorsal view. Number of bristles on head capsule variable. Mandibles without teeth, sinuate or not. Superior line of nasus convex in profile.

Worker – Left mandible index 0.93-1.6.

Remarks – The degree of development of the postclypeus in the soldier seems to be a specific character, not a generic one. The absence of teeth in the soldier's mandibles and the shape of the worker's mandibles are more important characters. The relationships of these two species to *Embiratermes* and the

related genus *Armitermes* are not clear. This can only be resolved by future studies with more complete collections, including imagoes.

Ibitermes tellustris, sp.n.
(Figures 9-18)

Type-Material – BRASIL. Amazonas State, Municipality Maraã, type colony MPEG 2833, deposited in the Museu Paraense Emílio Goeldi's entomological collections, holotype (soldier), paratypes (soldiers and workers), 12.Oct.1988, R. Constantino col.; MPEG 2829, paratypes (soldiers and workers), 11.Oct.1988, R. Constantino col.; MPEG 2888, paratypes (soldiers and workes), 18.Oct.1988, R. Constantino col.

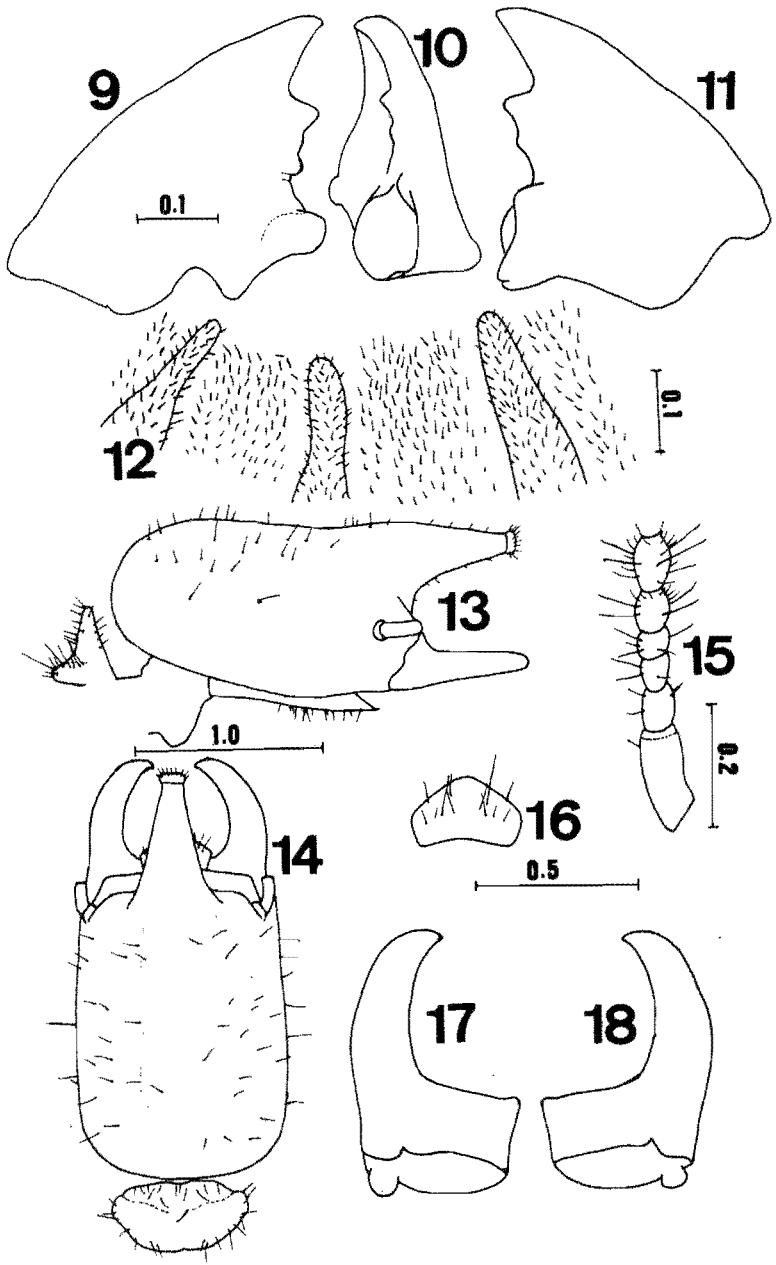
Imago – unknown.

Soldier (Figures 13-18) – Head elongated, with sides almost parallel from dorsal view, yellow to yellow-brown, bristles as figured. Nasus conical, not reaching the apex of mandibles, brown. Mandibles robust, curved inward, very enlarged at base, without teeth, base yellow-brown, middle brown, apex dark brown. Pronotum narrower than head, incised in the middle of the anterior margin, yellow, with many bristles on margins and few bristles on surface. Mesonotum and metanotum with bristles on posterior margin. Tergites and sternites with many short bristles on surface and a row of longer bristles on posterior margin. Labrum oriented downward, visible from above, yellow, with bristles on surface. Postmentum elongated, moderately inflated, yellow. Postclypeus not inflated. Antenna with 14 segments, the second longer than third and fourth, second and fifth approximately the same length, third and fourth, approximately the same length. Anterior coxa without projection outside. Tibial spurs 2:2:2.

Measurements (in millimeters) of 12 soldiers of three samples: length of head to tip of nasus 1.95-2.10; length of head to side base of mandibles 1.41-1.50; width of head 1.05-1.17; height of head excluding postmentum and nasus 0.82-0.88; width of pronotum 0.66-0.75; length of hind tibia 0.78-0.83.

Worker – Head capsule rounded, with scattered short to medium sized bristles. Postclypeus moderately inflated, with few bristles. Chaetotaxy of abdomen as for soldier. Pronotum, mesonotum and metanotum with scattered short bristles on surface and longer bristles on margins. Labrum with scattered short bristles and a few longer bristles. Antenna with 14 segments. Mandibles as in Figures 9-11. Left mandible index approximately 1.6. Enteric valve armature with three more or less cylindrical plates convered with numerous short sharp spines (Figure 12).

Comparisons – The soldier of *I. curupira* has the postclypeus inflated and projected between the bases of the mandibles, the mandibles are sinuous and the nasus is more curved in profile. The worker's left mandible in *I. curupira* has the



Figures 9-18 – *Ibitermes tellustris*, sp.n. Worker: 9. left mandible; 10-11. right mandible; 12. enteric valve armature. Soldier: 13. head, lateral view; 14. head, dorsal view; 15. antenna; 16. labrum; 17. left mandible; 18. right mandible. Scales in millimeters.

first marginal tooth closer to the apical tooth than in *I. tellustris*, and consequently the left mandible index is different.

Distribution – Known only from the type locality.

Etymology – The specific name derives from *tellus*, earth, soil.

Remarks – *I. tellustris* was collected in diffuse galleries in soil rich in organic matter, and at the base of an abandoned nest of *Embiratermes neotenicus* (Holmgren), and seems to be a subterranean humus feeder.

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