

## Research Note

### GLYPTOTERMES LIBERATUS (SNYDER)—(ISOPTERA: KALOTERMITIDAE): A NEW TERMITE RECORD FOR PUERTO RICO<sup>1</sup>

While visiting the Department of Entomology of the American Museum of Natural History in New York City during the summer of 1972, the author had the opportunity to study<sup>2</sup> various termite collections, particularly those from the Caribbean-Antillean Region. Specimens of a species new to Puerto Rico, *Glyptotermes liberatus* (Snyder), not yet recorded in the literature from this area, was found in the course of this study. The species was described originally as *Kalotermes (Kalotermes) liberatus* by Dr. Thomas E. Snyder<sup>3</sup> in 1929 from type material collected at Cinchona, Jamaica, West Indies.

The material studied at the American Museum was identified by Dr. A. Emerson as *G. liberatus* (Snyder). One vial bearing the label: "El Yunque, Puerto Rico, Caribbean National Forest, 4-IV-1947, in wet rotten wood, Coll. J. A. Ramos, 2,500 feet altitude," and another containing the same species, as determined by Emerson, had the label: "Maricao Insular Forest, in wet rotten wood, 3,000 feet high, Coll. J. A. Ramos."

A few days later, during the week of June 29 to July 6, the author visited the Division of Entomology of the U.S. National Museum (Smithsonian Institution) at Washington, D.C. In checking the termite collections there,<sup>4</sup> topotype material of *Glyptotermes liberatus* was again found, also determined by Dr. Emerson. This material consisted of four vials, all marked as follows: "collected in pine stump, Station 558, Cinchona, Jamaica, West Indies." The vials contained various forms or stages of the species; namely soldiers, workers, imagos or alates.

Dr. Thomas Snyder identified the species on the basis of a description of the soldier caste of a Jamaican termite previously identified by Dr. Nathan Banks,<sup>5</sup> as *Kalotermes posticus* Hagen. At that time, Dr. Banks thought the specimen was either the soldier of *posticus* or was undescribed. Because the identification as *posticus* was questionable, also because

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<sup>2</sup> The author is indebted to Dr. Kumar Krishna, Curator of the Isoptera at the American Museum of Natural History, for his kind assistance and advice during his investigations at that Institution.

<sup>3</sup> Snyder, T. E., New termites from the Antilles and Middle America, Proc. Entomol. Soc. Wash. 31 (4): 81, 1929.

<sup>4</sup> The author appreciates the cooperation received from Dr. David R. Smith while studying the termite collections at the U.S. National Museum.

<sup>5</sup> Banks, N., Antillean Isoptera, Mus. Comp. Zool. Bull. 62 (10): 477-9, 1919.

*posticus* probably was a *Cryptotermes*, perhaps *cavifrons* Banks, the specimen referred to above by Banks was described by Snyder as new under the specific name *liberatus*.

In his original description of *liberatus*, Snyder used Banks' 1919 description of the soldier of *posticus* as follows: "Soldier:—Head yellowish; mandibles brown, tips black, pronotum faintly brownish, body rather a dull yellowish, legs and antennae pale. Head about twice as long as broad, sides parallel, scarcely convex, broadly rounded behind, in front rather suddenly declivous, clypeus subquadrate; mandibles not as long as width of head, stout, toothed about as usual; antennae short, hardly longer than width of head, third joint not modified; eyes not noticeable; pronotum more than twice as broad as long, concave in front, slightly convex behind, sides rounded, hardly narrowed behind; head and body with scattered moderately long, erect hairs; legs short, hind femora much swollen. Length of head, 3 mm."

Several years after Snyder described *liberatus*, he<sup>6</sup> transferred the name to *Glyptotermes*, a generic group erected by Froggatt<sup>7</sup> in 1896, having *G. tuberculatus* as type species described from material collected in New South Wales and New Zealand. Krishna<sup>8</sup>, in his interesting paper on the revision and phylogeny of the family Kalotermitidae, discussed the genus *Glyptotermes*, furnished complete synonymy, and included 51 recognized species in it from the Australian, Indo-Malayan, Ethiopian, Papuan and Neotropical areas of the world. He included *G. liberatus* in his revised list of species in this genus, thus indicating the proper taxonomic position of the species.

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<sup>6</sup> Snyder, T. E., A catalog of the termites (Isoptera) of the world, Smithsonian Misc. Colls. Vol. 112: 1-490, Smithsonian Inst., Washington, D.C., Nov. 1949.

<sup>7</sup> Froggatt, W. W., Australian Termitidae. Part II. Proc. Linn. Soc. New South Wales, Vol. 21: 510-22, 1896.

<sup>8</sup> Krishna, K., A generic revision and phylogenetic study of the family Kalotermitidae (Isoptera), Bull. Amer. Mus. Nat. Hist., Vol. 122: Article 4, 307-408, 1961.