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Trypoxylon (Hymenoptera: Crabronidae) in Tobago, West Indies

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ABSTRACT.—Sixteen species from the mud-nesting solitary wasp genus *Trypoxylon* are recorded for the first time from Tobago. All but one of these appears to be conspecific with a species recorded from the nearby island of Trinidad. These results are compared with our faunistic knowledge of the genus from Trinidad and the Antilles.

KEYWORDS.—*Trypoxylon*, Crabronidae, Tobago, Caribbean

Trinidad and Tobago are continental islands lying close to northeastern South America. Their biota is closely related with that of the nearby mainland, from which they have been separated for about 10,000 years (Comeau 1991). The land area of the two is about 4,800 and 300 km², respectively. Biotically, Trinidad is far better known of the two.

Trypoxylon is a worldwide genus with 630 known species (Pulwaski 2005), divided into two subgenera. Of these, the subgenus *Trypoxylon* is worldwide, while *Trypargilum* is restricted to the New World. Present estimates of the New World fauna are 86 species of the subgenus *Trypoxylon* and 94 of *Trypargilum* (Bohart and Menke 1976; Coville 1982). All studied *Trypoxylon* (both subgenera) provision their nests with paralyzed spiders and make their nests at least partly of mud.

Trypoxylon is almost unknown faunistically in the islands of the Caribbean, or West Indies, except for Trinidad, Cuba, Hispaniola, Dominica and Grenada. The known species of these five islands amounts to 42, six, four, two, and two, respectively (Callan 1991; Evans 1972; A.W. Hook unpubl.; Pulwaski 2005; Richards 1934, 1936, 1969; Starr and Hook 2003). Our sparse knowledge of the genus in the West Indies is further illustrated by the fact that none of the 10 species (ignoring *T. texense* Saussure introduced into Jamaica, Hispaniola, and Puerto Rico, Coville 1982; Pulwaski 2005) recorded from the Antilles (i.e., the island arc extending from Grenada to Cuba) is known from more than a handful of specimens (Evans 1972; Richards 1934, 1969). One of the Antillean species, *T. grenadense* Richards, is also recorded from two states of Brazil (Amarante 2002).

We are not aware of any previous records of *Trypoxylon* in Tobago. Our purpose here is to report a substantial expansion in the number of known species from this island. This report is not intended as a revision, and we have not compared any species with types. Appendix footnotes are added for those morphospecies that key to and that are structurally similar with described species. Comments follow the morphological terminology of Richards (1934, 1936) and Coville (1982) when appropriate and note differences with species descriptions they resemble.

During February-May 1994 Marinus J. Sommeijer ran a Malaise trap near the town of Goldsborough, about midway along the southern coast of the island. The trap was in a neglected citrus orchard that bordered rain forest. From 1988-1990, David Rooks ran a similar trap in deciduous seasonal forest on the small island of Little Tobago, 2.8 km northeast of the main island of Tobago. The Goldsborough trap, in particular, yielded a surprisingly large number and diversity of *Trypoxylon*. The results from these two traps were supplemented by hand collecting in various parts of Tobago by both authors. This effort added few additional specimens and no additional species.

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As seen in the Appendix, we found 16 species and each of these except Species B appears conspecific with material that we have seen from Trinidad. A notable feature of this list is the number of species whose identity is uncertain. Adult *Trypoxylon* tend to have species-specific physical features, so that sympatric species can usually be separated with confidence. However, the genus needs a great deal of revision, and it is often difficult to match morphospecies with published descriptions or even to assign them to species groups. In addition, there are certainly many neotropical species remaining to be described.

It is our untested impression that *Trypoxylon* in Tobago tend to be smaller than conspecific individuals in Trinidad. We should also note that most of the Tobago specimens are females. One species that is conspicuously absent from our Tobago records is *Trypargilum albitarse* Fabricius. This large species is conspicuous in Trinidad, where its organ-pipe nest is abundant and persistent on buildings, yet it did not appear in any of our malaise samples, and we have not noticed nests in Tobago.

Voucher specimens deposited in the Land Arthropod Collection of the University of the West Indies each bear an identification label (species or morphospecies A-L) and a voucher label UWIAC 1022. A second set of vouchers of each species are deposited in the Brackenridge Field Laboratory Insect Collection (voucher label UTEC 1022) at the University of Texas at Austin.

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APPENDIX. *Trypoxylon* recorded from Tobago in the course of this study. Species groups are based on Richards (1934) and Amarante (2005). Numbers indicate the no. of specimens from each of the two main localities.

Species	Goldsborough	Little Tobago	Total
<i>Trypargilum superbum</i> group			
<i>T. species A</i> ¹	22		22
<i>Trypargilum spinosum</i> group			
<i>T. salti</i> Richards	11		11
<i>Trypargilum punctulatum</i> group			
<i>T. lactitarse</i> Saussure	3		3
<i>Trypargilum nitidum</i> group			
<i>T. nitidum</i> Smith	28		28
<i>Trypoxylon fabricator</i> group			
<i>T. species B</i> ²		22	22
<i>T. species C</i> ³	22	53	75
<i>T. species D</i> ⁴	36		36
<i>T. species E</i>	111	34	145
<i>T. species F</i>	2		2
<i>Trypoxylon marginatum</i> group			
<i>T. species G</i> ⁵	2		2
<i>T. species H</i>	4	2	6
<i>T. species I</i>	8		8
<i>Trypoxylon rufidens</i> group			
<i>T. rufidens</i> Cameron	33		33
<i>Trypoxylon figulus</i> group			
<i>T. species J</i> ⁶	33	60	93
<i>T. species K</i>	2		2
<i>Trypoxylon scrobiferum</i> group			
<i>T. species L</i> ⁷	1	2	3
Total	318	173	491

¹Close to *T. olfersi* Richards, more extensive yellowish-testaceous coloration.

²Close to *T. cornigerum* Cameron, gastral tergum with short longitudinal furrow.

³Close to *T. grenadense* Richards, hindocelli separated by one half their diameter from eyes; area beneath metapleural flange either very weakly or not defined, proepisternal keel indicated laterally.

⁴Close to *T. trinidadense* Richards, gastral tergum with a longer longitudinal furrow.

⁵Close to *T. punctivertex* Richards, area beneath metapleural flange defined; hindocelli separated by one diameter from each other.

⁶Close to *T. staudingeri* Richards, posterior surface of propodeum is narrower and deeper above, crossed by 2-3 carinae posteriorly.

⁷Probably *T. scrobiferum* Richards, agrees with Amarante (2005).