Theope Doubleday, 1847 is the largest myrmecophilous genus in the butterfly family Riodinidae with 80 species. Since the genus was reviewed by Hall (1999), 11 new species were described (Gallard 2002, 2006; Hall 2008; Jauffret & Jauffret 2009; Brévignon & Gallard 2009) and others are likely to be discovered, especially in the Amazon basin (Hall 2008). In general, its species are small sized, with abundant iridescent blue scales on the dorsal surface and brown, gray or white ventrally. Characteristically, the butterflies of this genus land with their wings closed and the males perch in hilltops and ridge tops (DeVries 1997; Hall 1999).

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Seven Theope species are listed for the Atlantic Rainforest of Northeastern Brazil: six in the state of Paraíba (Kesselring & Ebert 1982; Hall 1999) and two in the state of Pernambuco (Hall 1999). This coastal rainforest forms the Pernambuco endemism center (sense Silva & Casteleti 2003), whose species richness still remains much underestimated (Tabarelli et al. 2006). The forest coverage of this biogeographic Region is currently scattered in very small and disturbed remnants due to cut down of rainforest and sugar cane plantations (Silva & Tabarelli 2000).

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Fig. 1. *Theope* species sampled in Igarassu, northern Pernambuco, Brazil: T. terambus – (a) pupae in lateral and ventral view, (b) male, D (c) male, V (d) female; T. virgilius – (e) male, D (f) male, V (g) female, D; T. pierzoides – (h) male, D (i) female, D; T. eudocia – (j) male, D (k) male, V (l) female, D; T. thestias – (m) male, D (n) male, V (o) female, D; T. leucanthe – (q) female, D (r) female, V; T. foliorum – (s) male, D (t) male, V (u) female, D. D = dorsal view; V = ventral view. Scale bar = 1 cm.
During one year of sampling, we have collected 71 individuals of seven *Theope* species (Table I, Fig. 1). Five species are new records for the state of Pernambuco (*T. eudocia*, *T. foliorum*, *T. terambus*, *T. thestias* and *T. virgilius*) and one – *T. thestias* – is a new record for the Northeastern region of Brazil. The closest area to Pernambuco in which this species occurs is in the municipality of Leopoldina, Minas Gerais, in Southeastern Brazil (Hall 1999), about 2000 km southwest of Igarassu.

The occurrence of *Theope* individuals was low throughout the sampling year and two seasonal peaks were verified: the first and highest on the wet season, from March to June and a discrete one on the dry season, from October to December (Fig. 2). The most temporally and spatially abundant species was *T. eudocia*, a common and widespread species, usually associated to secondary and degraded forest habitats (Hall 1999). These are common traits to most of the species found in this study (Hall 1999). All species were sampled in forest edges with the exception of *T. terambus*, which was also sampled in the forest understory (Table I).

Table I. Butterfly species of the genus *Theope* sampled in Atlantic forest fragments of Igarassu, Pernambuco.

<table>
<thead>
<tr>
<th><em>Theope</em> species</th>
<th>Number of individuals</th>
<th>Habitat</th>
<th>Height of flight (m)</th>
<th>Time of occurrence (h)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Forest edge</td>
<td>1.0-5.0</td>
</tr>
<tr>
<td><em>T. eudocia</em> Westwood, 1851</td>
<td>22</td>
<td>19</td>
<td>Forest edge</td>
<td>0.5-1.5</td>
</tr>
<tr>
<td><em>T. foliorum</em> H.W. Bates, 1868</td>
<td>2</td>
<td>4</td>
<td>Forest edge</td>
<td>0.5-1.5</td>
</tr>
<tr>
<td><em>T. leucanthe</em> H.W. Bates, 1868</td>
<td>0</td>
<td>2</td>
<td>Forest edge</td>
<td></td>
</tr>
<tr>
<td><em>T. pierioides</em> C. felder &amp; R. Felder, 1865</td>
<td>2</td>
<td>3</td>
<td>Forest edge</td>
<td></td>
</tr>
<tr>
<td><em>T. terambus</em> (Godart, [1824])</td>
<td>3</td>
<td>5</td>
<td>Forest edge/Understore</td>
<td>2.0-4.0</td>
</tr>
<tr>
<td><em>T. thestias</em> Hewitson, 1860</td>
<td>1</td>
<td>2</td>
<td>Forest edge</td>
<td>1.5-3.0</td>
</tr>
<tr>
<td><em>T. virgilius</em> Fabricius, 1793</td>
<td>4</td>
<td>2</td>
<td>Forest edge</td>
<td>2.5-4.0</td>
</tr>
</tbody>
</table>

Hall (1999) reported a female-biased sex ratio of 6:1 for two species of *Theope* (*T. decorata* and *T. guillaumei*). In the present study, there was no strong sex ratio bias but the proportion of females was slightly higher in some uncommon species (Table I).

The species of the “foliorum group” (*T. foliorum* and *T. leucanthe*, sensu Hall 1999), smaller and more fragile, were found flying in lower heights, whereas the larger and more powerful flyers (*T. virgilius*, *T. terambus*, *T. pierioides*) flew higher from the ground (Table I).

A female of *T. terambus* was found in the forest understory, approaching the leaves of an individual of *Schoepfia guianensis* AUBL. (Olacaceae) in a typical ovipositing behavior. After investigating the plant, a light to dark brown-mottled pupa of *T. terambus* (Fig. 1a) was found hidden in a foraging trail constructed by a species of *Pheidole* ant. It was attached to a tree branch by the cremaster, with its dorsal surface lying against the foraging trail wall. Pupation inside an ant built structure (carton) was already documented for *T. lycæina* by Hall (1999). This behavior may comprise a complementary strategy to avoid natural enemies, analogue to shelter building by several Lepidoptera species (see Kaminski et al. 2009), including other *Theope* (Hall 1999; Kaminski 2008).

After eight days, a male adult of *T. terambus* emerged (Fig. 1b-c). The plant individual was revisited on several other occasions to find additional immatures but none was found and the ants seemed to have abandoned their local foraging trail.

To date, there have been reports of *Theope* larvae associated with ants of the genera *Azteca*, *Solenopsis* and *Dolichoderus* (Harvey 1987; DeVries et al. 1992; DeVries 1997). Although we have not found *T. terambus* larvae associated to the ants, this is the first record of a relationship between ants and an immature stage (pupa) of this species. In *Theope*, myrmecophily in the pupal stage was already observed, for *T. thestias* and *T. pierioides* (Kaminski, pers. comm.).

*Pheidole* ants had already been documented in association with riodinids of the genera *Thisbe*, *Protonymphidia*, *Setabis*, *Nymphidium* and *Eurybia* (DeVries 1991; DeVries et al. 1992). This is the first record of an association between this ant genus and a species of *Theope*.

The utilization of *Schoepfia guianensis* as foodplant by *T. terambus* larvae needs to be confirmed, consisting on the first record of an Olacaceae species as hostplant for the genus *Theope* (Beccaloni et al. 2008). We believe it is a plausible
hypothesis, because of two significant evidences: a) the presence of a symbiotic ant species on the plant, which could have influenced the female to oviposit in an unusual plant species (Pierce 1984; Pierce & Elgar 1985), and b) the pupation on S. guianensis host plant, since this behavior is already known for other *Theope* species (Kaminski, pers. comm.).

These findings illustrate the current situation on the state of knowledge of many animal groups of Northeastern Brazil, especially those which requires more specific and methodic surveys. The rapid impoverishment taking place at local forest fragments (Silva & Tabarelli 2000; Lopes et al. 2009) demands intensified research effort, in order to further elucidate the poorly understood biodiversity of this region.

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