

## Notes on the natural history of *Taczanowskia* sp. (Araneae: Araneidae)

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### Introduction

The genus *Taczanowskia* Keyserling comprises five South American species (Roewer, 1942), and is most closely related to the Australian genus *Celaenia* (Simon, 1895). *Celaenia excavata* (L. Koch) spins no web, and probably uses volatile chemical attractants to attract its prey (male moths) into range for attack (McKeown, 1952), but nothing is known of the biology of *Taczanowskia*. In July 1978 I made brief observations of mature female *Taczanowskia* sp. on Hacienda Mozambique about 15 km SW of Puerto Lopez, Meta, Colombia, in an ecological zone classified by Espinal & Montenegro (1963) as dry tropical forest. Since these spiders are seldom found, it seems worthwhile recording what little I saw.

### Habitat

The spider was found about 1 m above the ground among the leaves of a small guava tree (*Psidium* sp.) growing in a small pasture of tall grass and weeds. The tree, which stood near one other, was about 30 m from the edge of the secondary forest bordering a large lake (Laguna Mozambique).

### Egg sacs and hatchlings

A group of three egg sacs was hanging in a small

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mesh of strong yellowish threads attached to the branches and leaves of the tree near the spider. Each sac was globular, with a "stem" on the upper side, and they resembled the sacs of *Mastophora* spp. drawn in Gertsch (1955). The walls of the sacs were stiff and strong, and the ball of eggs inside was cushioned in loose, fluffy silk.

Spiderlings which emerged from the sacs were pale white, and none had any visible swelling of the pedipalps, suggesting that the males do not emerge mature or nearly mature.

### Prey and predatory behaviour

The female spider was inactive during the day, crouching on the underside of a leaf with her legs drawn in around her body as in the photograph of a resting *Celaenia* in Forster & Forster (1973). She became active early in the evening (about 18.30) on the two nights I observed her, but did not spin a web of any kind. Instead she hung under a more or less horizontal line or lines facing downwards about 30° from vertical, with legs I and II partially spread. Often, but not always, she responded to the frequent changes of direction of the very light, erratic breeze by turning to face downwind, much as does *Mastophora* sp. (Eberhard, 1977). She reacted by extending her front legs when I made humming noises and when mosquitoes flew nearby.

On the first night it began to rain at about 19.00 and I left after spreading a plastic sheet on the ground under the spider to catch discarded prey. The next morning there were two moths (unidentifiable specimens of Pyralidae) wrapped in silk lying on the plastic. The next evening the spider captured two more pyralids between 19.00 and 19.20, and I succeeded in observing the capture of the second (the first was hung on the spider's resting line without being eaten; no web was spun to capture it). The second moth fluttered in a bouncing pattern towards the spider from downwind, alighted momentarily on an egg sac or a leaf, and continued on towards the spider. The spider spread her legs when the moth approached, and seized it with a sudden grab. She embraced it for a minute or so, then slowly turned it as she wrapped it. Five minutes after this capture, she began feeding, and I collected her and the prey.

## Discussion

At least as far as these fragmentary observations go, the natural history of *Taczanowskia* sp. seems to conform to what is known about species in genera thought to be closely related. It was found at a relatively open site like *Celaenia excavata* (McKeown, 1952) and *Mastophora* sp. (Eberhard, 1977), held its front legs in the same hunting position as *C. excavata* (McKeown, 1952), made egg sacs similar to those of several *Mastophora* species (Gertsch, 1955), *C. excavata* and *C. calotoides* Rainbow (McKeown, 1952) and *Cladomelea akermani* Hewitt (Akerman, 1923), behaved as if luring its prey chemically (oriented downwind, prey approached from downwind) like *Mastophora* sp. (Eberhard, 1977), captured only moths like *C. excavata* (McKeown, 1952) and *Mastophora* sp. (Eberhard, 1977), wrapped its prey like *C. excavata* (McKeown, 1952) and *Mastophora* sp. (Eberhard, in press), and had a daytime resting posture similar to those of *Dicrostichus* (McKeown, 1952) *Celaenia* (McKeown, 1952; Forster & Forster, 1973) and *Mastophora* spp. (Eberhard, in press). The only substantial difference was in having male spiderlings not emerge from the egg sac mature or nearly so as do those of *Mastophora* spp. (Gertsch, 1947, 1955; Eberhard, in press) and *Dicrostichus* (McKeown, 1952). These patterns of resemblance reinforce the grouping of the tribes Mastophoreae (= Glyptocranieae) and Celaenieae proposed by Simon (1895).

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