

POLYCHRUS MARMORATUS (NCN). **MATING.** The neotropical genus *Polychrus* contains five medium-sized (120–150 mm) diurnal arboreal species (Peters and Orejas-Miranda 1986. Catalogue of Neotropical Squamata. Part II, Lizards and Amphisbaenians. Revised ed. Smithsonian Institution, Washington, DC. 293 pp.). Vitt and Lacher (1981. *Herpetologica* 37:53–63) described mating in *P. acutirostris*, and Beebe recorded but did not describe mating in *P. marmoratus* (Beebe 1944. *Zoologica* 29:195–216). Here we describe mating by *P. marmoratus* in eastern Brazilian Amazônia.

Our observations were made at Floresta Nacional de Carajás (06.0569444°S, 50.145°W, datum: SAD69, elev. 500 m). Lizards were captured on the morning of 23 December 2004 in low vegetation along a road in continuous forest. They were placed in a transparent plastic tub (25 × 35 × 15 cm) in a room under artificial (fluorescent) light where the temperature was a constant 24°C (slightly below field temperature at the time of capture). Observations began at 1800 h the same day, when we found the male riding the female's back while biting her neck and trying to penetrate her cloaca. Copulation began at 1820 h and lasted more than an hour. The male made rhythmic movements with his pelvis until 1930 h, and during all this time, a white secretion was visible on his vent. After copulation, the male disengaged from the female, gaped and made atypically fast respiratory movements. The male remained on female's back until 2315 h. The female remained passive throughout all the process and no interactions were observed after separation.

Mating in *P. marmoratus* is similar to mating in *P. acutirostris*. However, prominent differences exist, including the longer copulatory period and the absence of aggressive behaviour on the part of the female post-copulation; however, these differences may be artifacts of the captivity that only field observations can elucidate. Vitt and Lacher (*op. cit.*) observed female aggressive behavior toward the male before copulation and concluded that females select their mates. Our observations began after mating had begun, preventing us assessing pre-copulatory behavior.

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RHACODACTYLUS AURICULATUS (Gargoyle Gecko). **SAP FEEDING.** *Rhacodactylus auriculatus* is a large (125 mm maximum SVL) diplodactylid gecko endemic to mainland New Caledonia (Bauer and Sadlier 2000. *The Herpetofauna of New Caledonia*. SSAR, Ithaca, New York. 322 pp.). Between 28 July and 4 August 2004, an adult female (122.8 mm SVL, 36.0 g) that was being tracked by radiotelemetry in Parc Provincial de la Rivière Bleue, Province Sud (22.1000°S, 166.6444444°E, datum: WGS84; elev. 225 m), was seen licking sap from a *Cunonia macrophylla* tree on three separate nights. During daylight hours, she perched on vegetation within a radius of < 3 m from the tree, returning within 2 h of sunset to feed on a wound on the tree trunk. During video-documentation lasting 69 min 56 sec, this female licked the

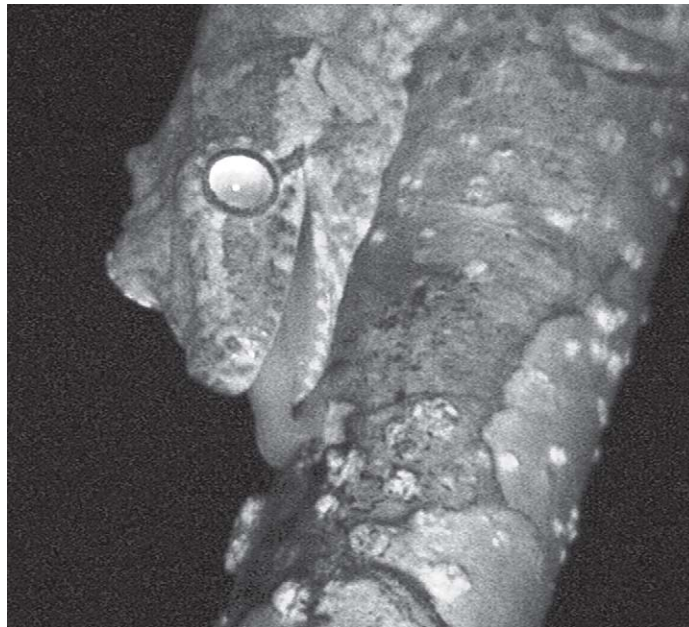


FIG. 1. Infrared video still of *Rhacodactylus auriculatus* feeding on the sap of *Cunonia macrophylla*.

sap 662 times (Fig. 1). Licking was intermittent; several consecutive licks were followed by pauses of up to 1 min 41 sec.

Rhacodactylus auriculatus has been reported to feed on flowers and flower parts since the species was first described. Bavay (1869. *Mém. Soc. Linn. Normandie* 15:1–37) observed *R. auriculatus* feeding on flowers of *Geissois* spp., another member of the Cunoniaceae. Flower consumption by *R. auriculatus* has further been confirmed by the recovery of anthers and stamens referable to either the family Cunoniaceae or Myrtaceae from the stomach of a preserved specimen (Bauer and Sadlier 1994. *Russ. J. Herpetol.* 1:108–113) and Bauer and Sadlier (2001. *Amphib. Rept. Conserv.* 2:24–29) reported *R. auriculatus* activity on a flowering *Geissois* sp., though ingestion of plant material was not observed. Our observation constitutes the first field-based report of *R. auriculatus* feeding on sap and further supports the regular dietary use of plants of the Cunoniaceae by *R. auriculatus*.

Many gecko species (chiefly insular forms) have been implicated in frugivory or nectivory (Whitaker 1987. *New Zeal. J. Bot.* 25:315–328; Cooper and Vitt 2002. *J. Zool. London* 257:487–517), however field observations of feeding on sap has previously been recorded only for three species of the genus *Gehyra* (Couper et al. 1995. *Mem. Qld. Mus.* 38:396; Dell 1985. *W. Aust. Nat.* 16:69–70; Letnic and Madden 1998. *W. Aust. Nat.* 21:207–208). Because they are rapidly absorbed by the digestive tract, nectar and sap are difficult to identify in gut contents retrieved from preserved specimens. Flower parts consumed incidentally to high-energy nectar can indicate nectivory (Bauer and Sadlier 1994, *op. cit.*), but sap feeding is virtually undetectable unless a feeding event is actually observed.

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