

across south-central Brazil), *C. s. guaricola* in Venezuela (east Guárico and west Anzoátegui, in the north-east of the country) and *C. s. amazonum* in Venezuela (east of the Andes in the west of the country), Colombia, Peru, the Guianas and Brazil (north-east Roraima, east Amazonas and west, central and north-east Pará)<sup>12</sup>. In Ecuador, *C. s. amazonum* occurs in the east Andean foothills, subtropical zone and lowlands, occupying the canopy and borders of humid forest and secondary woodland at c.200–1,200 m, where it is rare and local<sup>17,18</sup>. Only the nest and eggs of the nominate race have been described, from south-east Brazil<sup>16</sup>. In June 2015, GRJ found an active nest of *C. s. amazonum* at Macas (c.02°19'7.75"S 78°07'2.26"W), prov. Morona Santiago, Ecuador, at 965 m elevation. It contained two nestlings. GRJ videotaped the nest using a Canon 7D with a 100–400 mm lens for a total of 10.42 minutes, on 28–30 June, at different times of the day.

#### Nest location and description

The nest was c.10 m above ground in the branches of an ornamental *Ficus* sp. (Moraceae) tree. The tree was c.20 m tall and c.1.7 m in diameter. It was in a garden surrounded by secondary vegetation on the outskirts of Macas. The nest can be described as covered / irregular based on the system for categorising nests of Neotropical birds<sup>19</sup>; it comprised interwoven twigs, covered with moss and a mossy dome / roof covering the incubation chamber, which was accessed via a lateral entrance. It rested between three narrow terminal branches 1.5 m from the main trunk (Fig. 1).

#### Nestlings and parental care

Two nestlings were present when the nest was found. We observed sibling rivalry. Only the female fed the nestlings ( $n = 4$  feeding bouts). The older nestling (with open eyes) accessed most food delivered. Just once, we observed the male visit the nest with food; it supplied a small larva to the female, while the latter was feeding the

young a green caterpillar. It was impossible to determine if the item supplied by the male was fed to the nestlings or ingested by the female. The main prey recorded on video were caterpillars of different sizes (Fig. 2). The female perched in the nest entrance to feed the young. Depending on the size of the prey, the female took 11 seconds to >2 minutes to deliver food (Table 1). A few differences were noted between the nestlings: one had open eyes, while the other had its eyes closed to partially open (28–29 June). Both begged and were active most of the time. The nestling with open eyes had a dark grey capital tract<sup>14</sup>, with sparse greyish natal down. The gape was whitish in both nestlings. On 30 June, sexual dimorphism was visible as the 'older' nestling (a female) had greyish down feathers on the crown, a narrow white orbital ring, and bright olive-green, unsheathed back and primary feathers.

#### Discussion

In Brazil, the nest of the nominate subspecies was described as a cup type, similar to those of *C. bicolor* and *C. cinereum*<sup>3,10,11</sup>. Cahill *et al.*<sup>2</sup> compared the nests of Tamarugo Conebill *C. tamarugense* and Chestnut-vented Conebill with those of Giant Conebill *Oreomanes fraseri* from Bolivia, finding similarities in shape (cup type), as confirmed by Estades & López-Calleja<sup>4</sup> for *C. tamarugense*. Most documented nests of thraupids, including *Conirostrum*, are open cup / uncovered. The nest of *C. s. amazonum* in Ecuador was also an open cup, but with a mossy roof / dome structure (Fig. 1). A roof / dome has also been reported for *Oreomanes fraseri*<sup>2</sup>.

The domed nest shape might represent protection from climatic factors, a product of material availability, vegetation in the surroundings or to avoid predation<sup>9</sup>. Ribon & Simon<sup>16</sup> described the *C. s. speciosum* nest as 'hidden' in a dried-up *Cecropia* sp. leaf. Firme *et al.*<sup>5</sup> suggested that certain species may display intraspecific variation, building nests of diverse shapes, using

#### Notes on the nest and breeding of Chestnut-vented Conebill *Conirostrum speciosum amazonum* in southern Amazonian Ecuador

The genus *Conirostrum* is almost endemic to South America and comprises ten species, of which five occur in Ecuador: Chestnut-vented Conebill *C. speciosum*, Bicoloured Conebill *C. bicolor*, Cinereous Conebill *C. cinereum*, Blue-backed Conebill *C. sitticolor* and Capped Conebill *C. albifrons*<sup>17,18</sup>. A few nests and other aspects of the breeding biology of *Conirostrum* have been published<sup>3,4,8,10,11,16</sup>, but in general such data remain incomplete for most species in the genus.

Chestnut-vented Conebill occurs from Venezuela to northern Argentina, and is a widespread inhabitant of forest, wooded borders, gallery forest and clearings<sup>18</sup>. Three subspecies are recognised: *C. s. speciosum* in Peru, Bolivia, Argentina, Paraguay and eastern Brazil (east



Figure 1. Nest of Chestnut-vented Conebill *Conirostrum speciosum*, Macas, Morona Santiago prov., Ecuador, 29 June 2015 (Galo Real J.)



Figure 2. Female Chestnut-vented Conebill *Conirostrum speciosum* feeding young a green larva, Macas, Morona Santiago prov., Ecuador, 29 June 2015 (Galo Real J.)

different materials, and placing them in distinct sites obligated by physical features surrounding the nest<sup>9</sup>. In Brazil, the materials of *C. s. speciosum* were fine dry petioles and the site of the nominate race was also in an area of secondary vegetation subject to frequent disturbance<sup>16</sup>. We were unable to collect the nest to analyse its components because it was destroyed by rain.

The nestlings produced high-pitched calls when the female approached, thus predators might have been attracted<sup>1,15</sup>. The high risk of nest predation at forest edges and on the outskirts

of urban areas has been well documented<sup>6,13</sup>. It is noteworthy that c.7 days after the last video recording (30 June), the nest was found empty. No fledglings were observed accompanying adults or following mixed-species flocks in the vicinity, but given the lack of a reliable methodology to define the fate of a nest or to find evidence left by a predator<sup>20</sup>, our assumption that the nest was predated must be treated with caution.

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Table 1. Nest activity. Records 5 and 12 (a, b): timing of food delivery (female arriving and leaving the nest) accurately recorded; records 2 and 4 (c): time of food delivery, but video stopped while female was still at the nest; and records 1 and 3 (d): female started brooding but video stopped.

Date	Record no.	Total recorded time (min:sec)	Feeding length (min:sec)	Brooding (female in nest)	Nestlings (min:sec) %adults not at nest
28 June 2015	1	0:23		0:23 <sup>d</sup>	
	2	2:06	2:06 <sup>c</sup>		
	3	0:48		0:48 <sup>d</sup>	
	4	0:30	0:30 <sup>c</sup>		
29 June 2015	5	0:23	0:11 <sup>a</sup>		0:12
	6	0:47			0:47
	7	0:34			
30 June 2015	8	1:10			1:10
	9	0:08			0:08
	10	0:51			0:51
	11	0:58			0:58
	12	1:47	0:16 <sup>b</sup>		1:31

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