

Observations on nesting Straight-billed Woodcreepers *Dendroplex picus* (Furnariidae: Dendrocolaptinae) in French Guiana

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ABSTRACT: The Straight-billed Woodcreeper (*Dendroplex picus*) is largely insectivorous, but sporadically feeds on small vertebrates. It breeds in cavities, which makes it difficult to follow its breeding cycle. We report here on the use of thin dry branches and strips of bark of considerable length to provide a foundation for the actual nest in a deep woodpecker hole, and the use of dry snake skin to line the nest cavity. We also report the first record of nestlings being fed with eggs.

KEY-WORDS: breeding cycle, diet, nest building, reproduction, woodcreepers.

INTRODUCTION

The Straight-billed Woodcreeper (*Dendroplex*, formerly *Xyphorhynchus*, *picus* Gmelin, 1788) is widespread and fairly common to common in Panama and in northern and eastern South America. It is a polymorphic species with *c.*13 subspecies recognized (Marantz *et al.* 2003).

It favours vegetation edges and successional habitats, in a variety of open lowland situations such as arid desert scrub, mangroves, wooded savanna, river islands, gallery forests, forest edges, plantations and rural areas with scattered trees, open woodland, secondary woodland and seasonally flooded forest (Ridgely & Tudor 1994, Marantz *et al.* 2003). Its diet consists chiefly of small arthropods, but occasionally also of small vertebrates, such as small lizards. It mainly takes beetles, ants and insect larvae, less frequently spiders, wasps, hemipteran bugs, scorpions and pseudoscorpions, millipedes, cockroaches, grasshoppers and locusts, snails and alate termites (Marantz *et al.* 2003).

Straight-billed Woodcreepers have been found nesting in an old hole of a woodpecker, in a natural cavity in a hollow trunk, in a tree cactus or in a dead stump, or in a cavity in an arboreal termite nest, even in a gap between palm fronds, bromeliads or epiphytic orchids. The cavity entrance is situated between 1.25 and 9 m above the ground, and the nest-chamber remains either

unlined or is lined with bits of bark or stems and down from seed pods or other vegetable matter (Marantz *et al.* 2003).

The nominate race *D. p. picus* occurs from southern Venezuela throughout the Guianas into northern and eastern Brazil (Marantz *et al.* 2003). In French Guiana, this woodcreeper is common in the coastal region, where it prefers mangroves and remnants of lowland forest. It is absent from the forested interior (Tostain *et al.* 1992).

Our knowledge of the breeding biology of the mangrove-dwelling Straight-billed Woodcreepers on the Atlantic coast of north-eastern South America is limited to observations in Suriname and in the region of Belém, Brazil. In Suriname, Haverschmidt found a nest with two nestlings in an arboreal termite nest on 28 March 1947 (Haverschmidt & Mees 1994). In the Belém area, Oniki & Willis found a nest with nestlings in a grove of pupunha palms (*Bactris gasipaes*) far from forest on 7 December 1972 and another nest with nestlings in an isolated tree in a pasture on 30 March 1973. These nests were constructed inside hollow trunks, with the nest entrances at heights of 4 m and 9 m (Oniki & Willis 1983).

METHODS

We report here on a Straight-billed Woodcreeper nest constructed in an old woodpecker nest hole in a dead

awara palm (*Astrocaryum vulgare*) standing in a recently cleared area next to a strip of low forest (05°06'N; 52°35'W) along road D15 in the Marécages de Matiti in the coastal region of French Guiana (Figure 1). Road D15 connects road RN1 and the Dégrad Guatémala, a landing stage on the right bank of the Kourou River, opposite the town of Kourou. The 'marécages' or marshy savannas are a c.50 km² area of marshes and savannas with patches of lowland forest, and a few clearings and farms. Parts of the savannas have been converted into pastures for cattle. These marshy savannas are bordered by the Kourou River, road RN1 and the Atlantic Ocean.

The nest tree was visited almost daily in the morning hours between 28 July and 20 September. The nest was observed with Leica 10 x 42 binoculars from a distance less than 20 m for about 30 min per day. Only the more interesting observations are mentioned in the results.

The diameter of the nest tree at the height of the nest hole and of the nest entrance, as well as the length of a strip of bark used in nest construction, were calculated in relation to the total length of 20 cm of a Straight-billed Woodcreeper (18-22 cm in Marantz *et al.* 2003).



FIGURE 1. Site where the Straight-billed Woodcreepers (*Dendroplex picus*) nested. The dead awara palm (*Astrocaryum vulgare*), approximately 7.5 m high, is situated in the middle of the photo, right of a living one. The entrance of the old nest hole of the Spot-breasted Woodpecker (*Colaptes punctigula*) used by the woodcreepers, is visible about 2 m below the top of the dead trunk (white arrow). Photo by M. G. A.

RESULTS

At the end of July 2012, M. G. A. found a pair of Straight-billed Woodcreepers inspecting an old nest hole of Spot-breasted Woodpecker (*Colaptes punctigula*) in a dead awara palm. The dead trunk standing a few meters south of the roadside was approximately 7.5 m high and had a diameter of around 13.5 cm at the height of the nest hole. The oval nest entrance was about 5.5 cm x 8.0 cm and was situated about 2 m below the top of the dead trunk (Figure 1).

On 30 July 2012, M. G. A. watched the Straight-billed Woodcreepers bringing parts of thin dry branches and strips of bark to partly fill the deep cavity of the woodpecker's nest hole (Figures 2). One strip of bark had a length of about 15 cm.

On 1 August, a pair of Brown-crested Flycatchers (*Myiarchus tyrannulus*) tried to occupy the nest hole. One of the flycatchers was seen at the entrance of the nest hole with pieces of dry snake skin, probably used as nest lining (Figure 3). However, the pair of Straight-billed Woodcreepers managed to dislodge the flycatchers.

On 11 August, a woodcreeper was seen at the entrance of the nest hole with a bit of dry snake skin, probably the one brought to the nest by the flycatchers, which it took back inside to line the nest (Figure 4).

On 20 and 30 August, a woodcreeper was observed sitting in the nest entrance for a long time.



FIGURE 2. The Straight-billed Woodcreepers (*Dendroplex picus*) bringing a thin dry branch, and a strip of bark about 15 cm long, to partly fill the deep cavity of the old woodpeckers nest hole. Photo by M. G. A.

On 6 September, two adults were seen to bring food to the nest. One brought an unidentified arthropod and seconds later the other arrived with a small egg in its bill (Figure 5).

On 19 September, a pair of Green-rumped Parrotlets (*Forpus passerinus*) inspected the nest hole and on September 20th, they were engaged in pre-nuptial feeding at the entrance of the nesthole (Figure 6). They were not disturbed by the Straight-billed Woodcreepers, which had disappeared from the vicinity of the nest tree around 15 September. Therefore we presume that the Straight-billed Woodcreeper nestlings had fledged shortly before that date.

DISCUSSION

Straight-billed Woodcreepers nest in a variety of cavities, often in an old woodpecker nest. Figure 2 shows that thin dry branches and strips of bark of considerable length, sometimes larger than the diameter of the nest entrance and almost up to the size of the adult itself, are used to provide a foundation for the actual nest in a deep woodpecker nesthole. Figure 4 shows that pieces of dry snake skin may be used to line the nest cavity.

Straight-billed Woodcreepers, as all woodcreepers, are chiefly insectivorous. They typically take small arthropods, but they also occasionally take small vertebrates, *e.g.* lizards. Eggs as food items for woodcreepers have until now only been mentioned for the White-throated Woodcreeper (*Xiphocolaptes albicollis*) which was observed to take bird eggs from cavity nests



FIGURE 3. One of the Brown-crested Flycatchers (*Myiarchus tyrannulus*) with a piece of dry snake skin tries to occupy the nest hole of the woodcreepers. Photo M. G. A.

(Marantz *et al.* 2003). We thought that, based on its size, the egg brought to the nest to feed the nestlings was a hummingbird egg, but an egg of an arboreal lizard, *e.g.* an *Anolis* species, cannot be excluded. However, finding bird eggs should be easier than finding lizard eggs.

Woodcreepers nest in natural cavities, which makes it difficult to closely follow the breeding cycle. The incubation and nestling periods of woodcreepers are,



FIGURE 4. One of the Straight-billed Woodcreepers (*Dendroplex picus*) with a piece of dry snake skin in its bill, probably the one brought to the nest by the flycatchers. Later it took the skin back inside the nest hole to line the nest cavity. Photo by M. G. A.



FIGURE 6. A pair of Green-rumped Parrotlets (*Forpus passerinus*) engaged in pre-nuptial feeding at the entrance of the nest hole after the nestlings of the Straight-billed Woodcreepers (*Dendroplex picus*) had fledged. Photo by M. G. A.

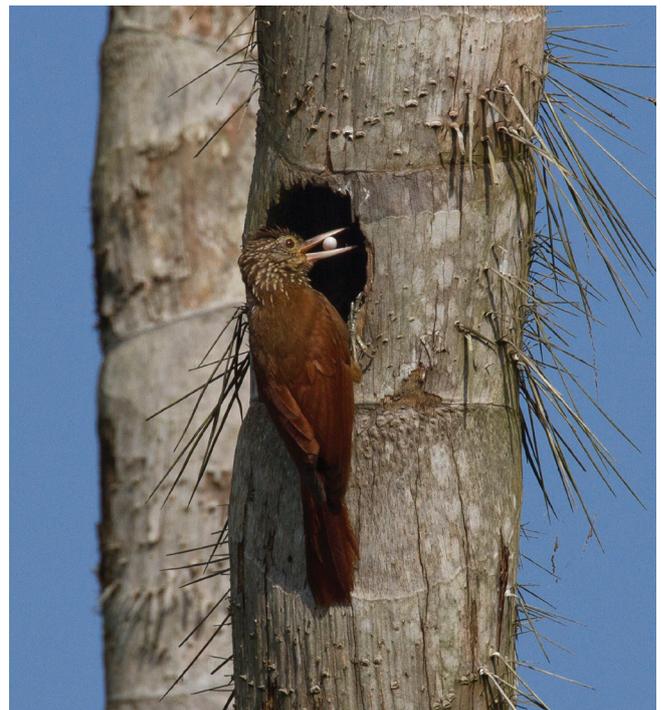
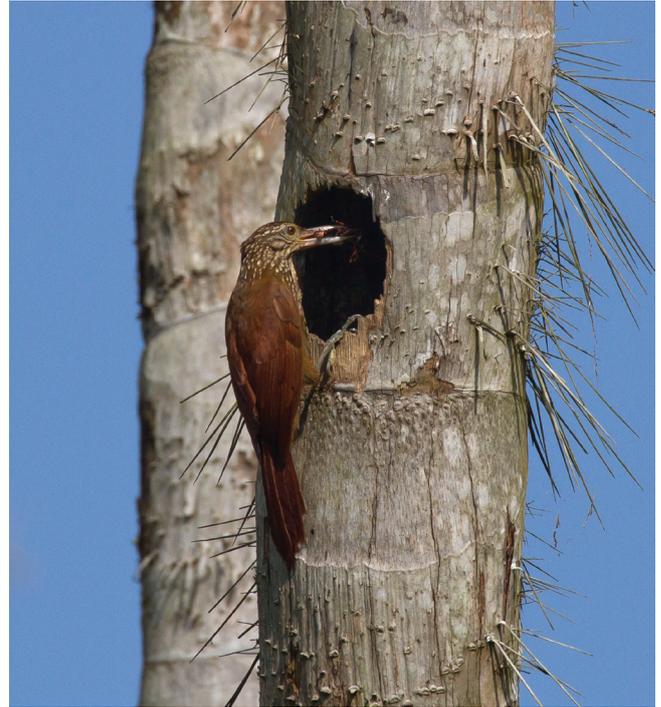


FIGURE 5. The Straight-billed Woodcreepers (*Dendroplex picus*) with a large, unidentified insect, and a lizard or hummingbird egg to feed the nestlings. Photo M. G. A.

therefore, poorly known. These periods are estimated to be, respectively, about 16 days and 18-20 days for similar sized woodcreepers of the genera *Xiphorhynchus*, *Dendroplex* and *Lepidocolaptes* (Marantz *et al.* 2003). After considering the size of food items brought to the nestlings on 6 September, we estimated they were then between 12 and 14 days old. With the above mentioned periods in mind, we calculated that the eggs were laid between 5 and 10 August. With incubation starting thereafter, the

eggs have hatched around 25 August. Fledgelings left the nest between 10 and 15 September. This breeding thus coincided with the onset of the long dry season, which in French Guiana normally lasts from mid-August to the end of November.

A nest with young was found at the end of March in Suriname, thus in the short dry season of February and March (Haverschmidt & Mees 1994). The nest we found, contained nestlings at the end of August – beginning of September. Therefore we can conclude with Marantz *et al.* (2003) that Straight-billed Woodcreepers on the Guiana Shield *i.e.* the Guianas and adjacent regions, breed in the short and in the long dry season there.

The old Spot-breasted Woodpecker nest hole, in which the Straight-billed Woodcreepers nested, was also claimed by other bird species such as Brown-crested Flycatchers and Green-rumped Parrotlets. This competition between several bird species may reflect an actual shortage of suitable nesting sites for cavity nesting species in areas of marshes and savannas with patches of lowland forest in the coastal region. Here the only suitable cavities for nesting are mainly old woodpecker holes in dead awara palms.

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