

The cryptic nest of the Orange-crowned Manakin *Heterocercus aurantiivertex*

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Se describe por primera vez el nido del Manakín de Cresta Naranja *Heterocercus aurantiivertex*, que fue localizado en bosque inundable a la orilla de un pequeño afluente del río Tigre, en el nororiente peruano. El nido, similar al de otros manachines, consistía en una copa poco profunda de delicadas fibras vegetales, en la estremidad de una rama a media altura sobre el agua. Fue observada la hembra incubando y alimentado, principalmente con pequeños insectos, a las dos crías recién eclosionadas de los dos únicos huevos. La hembra fue la única que atendió el nido, y durante la incubación adoptó una remarcable postura erguida, simulando que esta posada en la rama. Se discute el valor adaptativo de esta estrategia, así como las similitudes del nido con el de otras especies de manachines.

On 27 February 1996, I found a nest of Orange-crowned Manakin *Heterocercus aurantiivertex* at Quebrada Aguaruna (c.03°22'S 74°58'W), a small, blackwater stream on the middle course of the río Tigre in northern Peru. I had been observing a female that appeared particularly restless, moving continuously from perch to perch, emitting the interaction vocalisation², a short trill with a decided metallic quality. There was no male territory nearby. The female manakin eventually settled on the nest, which was c.4 m above the water, on a horizontal branch of a large *Parkia* sp. (Leguminosae) tree over the stream. The nest tree was within forest, but relatively isolated from neighbouring trees. The nest was a shallow, loosely woven cup within the fork of a thin branch that hung to the side of the tree's canopy. The nest was c.15–20 mm in depth, with a diameter of 45–55 mm. It was woven so openly of delicate vegetable fibre that it was possible to see through it easily from below. It contained no other material, such as moss or leaf fragments that are commonly used in nest construction by other mana-

kins^{6,9}. The rims of the nest appeared to be attached to the supporting branch by a spider web. Because the nest was active, I did not collect it. During the female's absence, I climbed the tree and observed the nest, with binoculars, from a distance of c.5 m. It contained two greenish-white eggs with a wide ring of reddish-brown speckles at the larger end. A chick was in the process of hatching from one of the eggs, at c.14h30. It was almost halfway out of the shell, shaking its head and emitting a tiny sound at the slightest vibration of the nest branch. When the female eventually returned, it immediately ingested an item from inside the nest, which I believe was a fragment of egg shell. I viewed the contents of the nest at 09h30 the following day, by which time the second chick had hatched.

I was able to observe the nest over a period of 5 hours on 27–28 February. As expected in this polygynous lekking species, the female alone attended the nest. The incubation posture of the female, in which she appeared to be perched normally on the forked branch, was remarkable. The



Figure 1. Female Orange-crowned Manakin *Heterocercus aurantiivertex* at a nest on the río Tigre, northern Peru; note the very shallow depth of the nest cup (José Alvarez Alonso)

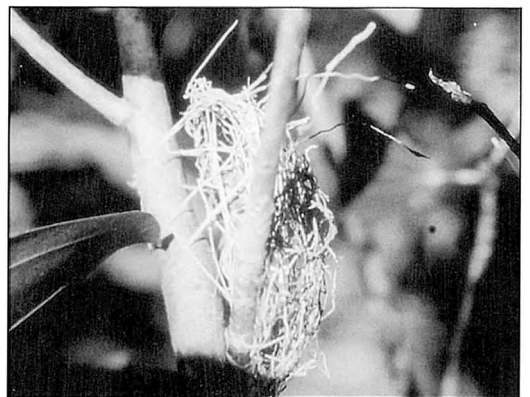


Figure 2. Inactive nest of Orange-crowned Manakin *Heterocercus aurantiivertex* (José Alvarez Alonso)

cup of the nest was scarcely wider than the diameter of the female's breast, and was largely transparent, such that it effectively disappeared when the bird was incubating. The female maintained an exaggeratedly upright position, in which most of the breast was well above the rim of the nest, while the tail extended beyond the opposite rim and was angled towards the ground. The nest cup was so shallow that the head and breast and entire undertail-coverts and tail were clearly visible from various perspectives (Fig. 1). The female's cryptic, upright incubation posture was probably facilitated by the attachment of the nest rim to the supporting fork with a spider web, an elastic material that would permit a slight shift in orientation of the nest. Additionally, selection of a nest site at a height and on a branch typical for foraging adults may suggest to predators a state of vigilance rather than secrecy.

Most passerines, including other manakins, incubate and brood in a sunken, horizontal position, often with no more than the bill or head, and tail tip, visible above the rim, so as to remain as unobtrusive as possible. *Heterocercus aurantiivertex*, as reflected in both nest site selection and architecture, and behaviour of the female, has evolved a distinctly different predator-avoidance strategy. In this regard, it is interesting to note some convergences among unrelated or distantly related birds, such as Moustached Tree-swift *Hemiprocne mystacea*³ (B. Whitney pers. comm.) and Buff-throated Purpletuft *Iodopleura pipra*^{5,11}. These species adopt similar upright incubation postures on a small nest, largely hidden by the female's body, and situated in a typical foraging station (in both cases, high on exposed bare limbs). Similarly, species of potoos (Nyctibiidae), which build no nest, incubate in a posture and in a spatial setting typical of their diurnal roost⁴.

Within the first half-hour of observation, the female *H. aurantiivertex* became accustomed to my presence in a canoe c.7 m away. Although generally motionless while incubating, the female left the nest 2–5 times/hour, for periods of 1–10 minutes, to forage for arthropods in the vicinity. The first chick was fed a small insect captured on a nearby branch, even before it had fully left the shell. Once both chicks had hatched, the female made foraging trips 6–8 times/hour, usually returning with an insect, which was beaten on a nearby limb, prior to being fed to the young. On the second day, the female fed a partially mashed, reddish fruit (probably *Ficus* sp.) to one of the chicks. Whenever the female perched on the rim of the nest, it lightly ruffled its plumage and emitted a quiet (barely audible at a distance of 7 m) descending trill.

I found another, inactive, nest c.15 m from the active nest on the opposite side of the stream. It was situated within the fork of a thin branch, 5.5 m

above the water, in a *Ficus* tree. This nest (Fig. 2) was the same size and structure as the active one, and I suspect it was from an earlier breeding attempt by the same female.

The architecture and placement of both nests of *Heterocercus aurantiivertex* closely match the description of a nest of Yellow-crowned Manakin *H. flavivertex*, although the flimsy construction of the latter nest suggested to the observers that it was incomplete⁸. One interesting characteristic shared by the two species' nests is attachment to the supporting branch principally with a spider web. Use of spider webs in nest construction has been reported in several other genera of manakin (*Lepidothrix*⁹, *Pipra*⁹, *Manacus*^{1,9} and *Chiroxophia*^{1,6,7}). However, substrate attachment apparently by spider web alone has been reported only for Blue-crowned Manakin *Lepidothrix* (formerly *Pipra*) *coronata*⁹ and White-throated Manakin *Corapipo gutturalis*¹⁰, the nest of which is much like those of *Heterocercus* species, except for the inclusion of a small amount of moss on the exterior. Among piprids *Heterocercus* and *Corapipo* uniquely share some elements of courtship displays (especially an elaborate 'above-the-canopy' flight display) and a silky-white gorget or ruff². Nest architecture may lend additional support to the hypothesis² that *Heterocercus* and *Corapipo* are sister genera.

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