

## OBSERVATIONS AT A NEST OF PALE-LEGGED HORNERO IN SOUTHEASTERN PERU

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**Abstract.**—In tropical South America the Pale-legged Hornero (*Furnarius leucopus*) inhabits lower flood plain forest where its mud nest is built in trees near water. The observed pair built their nest in mid to late October, laid eggs in early November and incubated 16–17 d. Two nestlings left the nest 26 and 33 d after hatching. Male and female fed the nestlings equally. These observations from the Tambopata Reserve in southeastern Peru are the first published data on the breeding biology of the Pale-legged Hornero.

### OBSERVACIONES SOBRE EL ANIDAMIENTO DE *FURNARIUS LEUCOPUS* EN EL SURESTE DE PERÚ

**Sinopsis.**—Se sabe muy poco sobre la biología reproductiva del Hornero de Patas Pálidas (*Furnarius leucopus*). Esta ave habita en bosques anegados y construye su nido de lodo en vegetación cerca del agua. Una pareja fue observada construir su nido en un árbol de *Cecropia* desde mediados de octubre hasta finales del mes, aovó a principios de noviembre e incubó por 16–17 d. Ambos adultos alimentaron a los pichones. Los últimos abandonaron el nido a la edad de 26 y 33 d, respectivamente.

In contrast to the Rufous Hornero, *Furnarius rufus*, there are no published data on the breeding biology of the Pale-legged Hornero, *Furnarius leucopus*. The former occurs mainly on the pampas and in disturbed environments, while the latter lives mainly in tropical wooded areas.

I observed a nest from 25 October to 25 December 1985 in the Tambopata Reserve, located on the Rio Tambopata, southwest of Puerto Maldonado, southeastern Peru. The male and female were individually marked with color bands. Observations were made from a blind close to the nest.

#### HABITAT

The nest was in a lower flood-plain forest close to the Rio La Torre, a tributary of the Rio Tambopata. During the rainy season from Nov.–Mar. this area is often flooded. The vegetation is mainly *Cecropia* stands, with thickets of *Gynerium* cane, small glades with herbaceous vegetation, *Heliconia* and bamboo also occurring in the area.

#### NEST

The mud nest was built on a looped branch of a *Cecropia* tree (Fig. 1), and hung over water at the edge of an oxbow lake (known locally as the Marsh). The supporting branch was rather thin, and the nest foundation was flattened on both sides, becoming more spherical only in its upper part. The nest base included two lateral branches (Fig. 1), which made the contact area between the nest and the branch larger and more



FIGURE 1. Incomplete nest of the Pale-legged Hornero.

secure. The nest measurements: length (without branches)—29 cm, height—21 cm, height of the entrance—9 cm, and width of the entrance—5 cm. The chamber wall was about 13 mm thick. The weight of the dry nest was about 2 kg. The chamber floor was situated slightly higher than the floor of the vestibule, and was lined with some grass-like plants.

#### NEST BUILDING

I found the nest on 25 Oct. 1985 when its foundation and part of the side walls were already completed, giving it the look of a wide cone with a large central opening (Fig. 1). On 28 Oct. 1985 the nest roof was completed, and during the next 2 d the entrance aperture became narrow and sickle-shaped as the birds built the inner septum. The nest was completed on 1 Nov. I estimated that on the day of discovery, the nest was approximately 50% built, and completing it took 8 d. Both adults built the nest and their contributions were about equal. There was no apparent division of labor. On each visit a bird brought a large pellet of wet mud in its bill, put it on the frame of the nest and distributed it with quick, short movements of the bill. On four occasions the bird brought leaves mixed with the mud. At first the birds collected nest material at a distance of about 30 m from the nest, but later from almost under the nest. While building the birds came to the nest alternately; only rarely were both birds present simultaneously. Periods of building lasting 16–

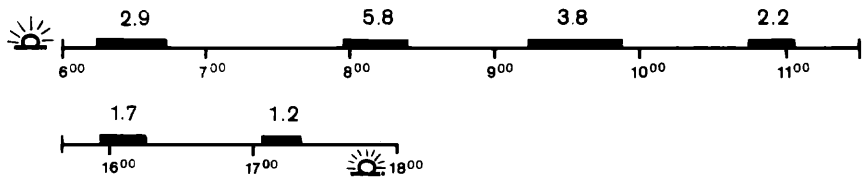


FIGURE 2. Periods of active nest-building nest (heavy line) during 8 h of observation on 29 Oct. 1985; figures refer to number of visits with nest material per 10 min periods.

74 min alternated with inactive periods of 47–160 min (Fig. 2). On 29 Oct., during eight hours of observation, the birds came to the nest with material 46 times. The bird arriving after an inactive period seemed to check if the newly built part was dry enough, if so, the pair would set to work again. In the middle of the day periods of inactivity were shortest, probably because the higher insolation dried the wet material more quickly.

At the beginning of the observation period, one of the birds, probably the male (at that time the birds were not yet banded) sat on one of the nest's lateral support branches and displayed by raising its spread wings, holding them motionless while showing a contrasting pattern on their upper side, and closing them slowly. The wing pattern consisted of two light yellow and two dark bands arranged alternately. The displaying bird made a crouching motion, and the display was accompanied by singing. During the display the second bird was nearby.

#### EGG LAYING, INCUBATION, AND NESTLING PERIOD

The eggs were laid on 3–4 Nov., and approximately hatched on 20 Nov., so incubation lasted 16–17 d. During incubation the birds added to the grass lining. Clutch-size was probably two eggs, as two nestlings left the nest, and after their departure I found no unhatched eggs or their remnants in the nest, or remains of a third nestling.

The nestling period lasted 26–33 d. One of the nestlings left the nest (or was destroyed—although I found no remains) 8 d earlier than the other. Both parents fed the nestlings, and their contribution was about equal. During 29 h of observation on nine different days the female fed the nestlings 36 times (49%), and the male 37 times (51%). The feeding rate was rather low (Table 1). At approximately 15 d of age the nestlings began to stick their still naked heads out of the chamber into the vestibule where they were fed. They had yellow gapes. On days with direct solar radiation, the nestlings were gaping and keeping their heads in the vestibule. Similar behavior was observed in the incubating adult and was probably a cooling mechanism.

#### CONCLUSIONS

In this species nestlings were fed infrequently and the nestling period was long. Such a reproductive strategy could be expected, taking into consideration the safety of the nest which seems to be essentially inac-

TABLE 1. Nestling age and feeding rate in the Pale-legged Hornero.

Brood size	Nestling age (d)	Feedings/h
2	1-2	1.7
	16	5.0
	17	2.4
	20	5.7
	22	5.0
1	25	2.7
	29	1.7

cessible to predators. In the Rufous Hornero the nestling period seems to be shorter, and the feeding rate higher; in the case of a pair feeding three 11 d-old nestlings the number of feedings/h at different times of day was as follows: 0430 to 0530: 23 feedings; 1000 to 1100: 9 feedings; 1200 to 1400: 5 feedings; and 1600 to 1700: 11 feedings (Hermann and Meise, *Abh. Verh. naturw. Ver. Hamburg* 10:117-152, 1966). Perhaps the food supply is also better in a more open landscape in the temperate zone.

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