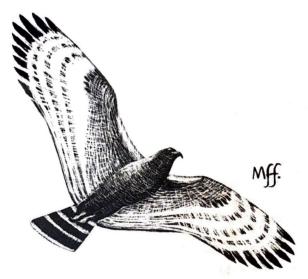
OBSERVATIONS AT A GRAY HAWK'S NEST

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Information about the breeding behaviour of birds of prey in the Neotropics is scarce, partly because of the difficulty of finding nests high in forest trees and the large amount of suitable nesting habitat. Hence the nests of birds such as the Gray Hawk (Buteo nitidus), White Hawk (Leucopternis albicollis), and Common Black Hawk (Buteogallus anthracinus), all fairly common residents of Trinidad, have rarely been found.



Grey Hawk

We were therefore particularly lucky when a pair of Gray Hawks nested close to our house on a scrubby hillside above St. Augustine. Since we were able to watch the nest with binoculars and telescope from an upstairs window, it is perhaps surprising that we did not find the nest until the young bird had hatched! Our attention was first drawn to the birds towards the end of March 1973 when we frequently heard their mewing calls and occasionally saw an adult nearby. Between March 15 and 22 there was a bush fire in the little valley to the



east of the house which destroyed a lot of the secondary bush and scrub, but left unharmed some large trees at the bottom of the valley.

On April 1 we watched a Gray Hawk fly to a nest in one of these trees, and begin to feed a white downy chick, which was estimated to be one to two weeks old. The nest was a small platform of twigs and sticks in a fork, about 60 feet up.

During the next two weeks we saw the chick almost daily and often an adult at the nest or sitting in a tree about 40 yds from the nest and at about the same level. This perch was the favourite lookout position; two other perches slightly further from the nest were used for shorter periods. An adult bird was present on one of these perches for most of the day, and would give the alarm by mewing loudly if anyone walked along the track close to the nest. We were amused to see the adult on lookout being mobbed by small birds, including Tropical Mockingbirds, a hummingbird and a flycatcher. We kept a special note of where the adult bird went at dusk, and on several occasions watched it fly down nearer to the nest and disappear into the foliage of an adjacent tree.

On April 14 the young bird was seen standing up in the nest and its appearance had changed from the white downy chick of two weeks earlier. Now it had brown feathers on the back, although some down could still be seen on the head. The adult bird fed the young by tearing pieces off the prey with its beak and then passing them to the nestling, but four days later we saw the chick trying to feed itself from prey left in the nest.

On April 20 we attempted to record "a day in the life of a Gray Hawk nestling" by making observations of what was happening at the nest and lookout tree every 15 minutes from dawn (0615) to dusk (1830). Our main aim was to find out how many meals the nestling had in a day. The adult was first seen at the nest feeding the young at 0700, had disappeared at 0715, but was back feeding the young at 0730 and 0750. Feeding was over by 0805, and from then until 1700 the adult bird sat in one or other of the lookout trees and no feeding took place (unless a brief visit was missed between our observations every 15 minutes). At 1715 the adult had gone, but 15 minutes later it was back at the nest feeding the nestling. From 1745 to 1810 the adult was feeding itself in one of the lookout trees, but by 1820 it was back feeding the young bird, probably from the same item of prey it had brought shortly after 1715. Feeds on other days were noted as follows: 1800 (April 1), 1745 (18th), 1430 (21st), 0915 (23rd), and 1500 (29th).

We first saw the young bird standing and flapping its wings on April 20 (it nearly overbalanced!), and this form of wing exercise took place increasingly from that date. On April 25 the appearance of the chick was noted as follows:— chocolate-brown back, light buff underparts heavily streaked with dark brown, creamy-buff head with dark mark through and behind eye, nape of neck also dark brown.

From April 28 onwards we watched the nest whenever possible to be sure when the chick fledged. Leaves were beginning to open on the nest tree, partially obscuring our view of the nest, but on April 30 and May 1 the chick was still there. However on May 2 we were unable to see the chick in the nest though an adult bird was on one of the regular perches most of the morning. On May 3 we had proof that the chick had fledged successfully, as at 1720 there was a lot of mewing and three Gray Hawks, including the rich chocolate-brown young, were seen together. The smaller of the two adults, presumably the male, perched in one of the regular lookout trees, and the female flew from him, carrying food, to the young bird perched in a tree higher up the valley. Later we watched the young bird making short flights from tree to tree, appearing clumsy in comparison to its parents.

This was our last view of the birds close to the nest site, but on May 15 we saw an adult pounce on a lizard, probably a Zandolie (Ameiva ameiva), in a roadside verge about 200 yards from the nest. It flew up with the prey into a tree, paused for a while, and then flew out of sight.

DISCUSSION

We were not able to distinguish the sex of the adults except when they were seen together on May 3, but by analogy with published observations on birds of prey it was probably the female which kept watch and fed the nestling, while the male hunted to feed the whole family. The brief absence of the adult immediately before two feeds on April 20 would thus be due to the female leaving the vicinity of the nest to meet the male bringing prey. In some other birds of prey in temperate zones the female starts to hunt in the latter stages of the fledging process, to help feed a brood of several large young. In the case of our Gray Hawk nest, with only one nestling, perhaps the male was able to supply sufficient food throughout the fledging process on his own.

Stensrude (quoted in ffrench, 1973) states that a pair of Gray Hawks in Arizona drove other hawks away from the nesting territory. We saw a Yellow-headed Caracara (Milvago chimachima) on April 19 and a Zonetailed Hawk (Buteo albonotatus) on April 20 close to the nest without any response from the Gray Hawk perched in the lookout tree.

Assuming that our estimate of the chick's age on April I was correct, and t hat the incubation period is about a month, then t he Gray Hawk's egg must have been laid in the latter half of February. Our es-

timate for the fledging period is 39-46 days.

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ffrench, R. P. 1973 $\,$ A Guide to the Birds of Trinid ad and Tobago . Livingston, Pennsylvania.