

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 *Zanolie (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 Zone-tailed 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 1 was correct, and that the incubation period is about a month, then the Gray Hawk's egg must have been laid in the latter half of February. Our estimate for the fledging period is 39–46 days.

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SOME NOTEWORTHY BIRD RECORDS FROM TOBAGO

By Richard ffrench
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It is an unfortunate fact that, although the island of Trinidad has over the last century been comparatively well studied and documented by competent resident ornithologists (e.g. Leotaud, Belcher, Smooker, Snow, etc., and see my article in this journal 1971), its sister island of Tobago, has been sadly neglected in this respect. Many ornithologists and bird-watchers have indeed visited Tobago for a few days or even weeks at a time, but hardly any have experienced the benefit of a prolonged stay. Two notable exceptions to this generalisation are James Kirk and J. J. Dinsmore.

Kirk (1883) was a resident of Tobago in the mid-19th century, and his list of native and migratory species of birds is very interesting. However, it suffers from a very confusing nomenclature, making it often impossible to be sure of the validity of his records (ffrench 1973a), and it is not clear as to which of the species listed is represented by museum specimens. I have found some of Kirk's material in the British Museum, but certainly much of it is now dispersed, if indeed it was ever deposited there.

J. J. Dinsmore and his wife spent almost a year from September 1965 to July 1966 living on Little Tobago island studying its ecology with special reference to the status of the Greater Bird-of-Paradise *Paradisaea apoda*. His observations on the bird life of that small island (Dinsmore 1967, 1969, 1970 & 1972) are of exceptional value and interest. But of course they do not cover the main island of Tobago, and the habitats of Little Tobago are comparable only to certain areas of the main island.

It is therefore clear that we can expect substantial additions to our knowledge of the birds of Tobago, which are not likely to become as well studied as those of Trinidad until a competent ornithologist takes up permanent residence in Tobago, or (hopefully) until a resident Tobagonian takes up a serious interest in ornithology.

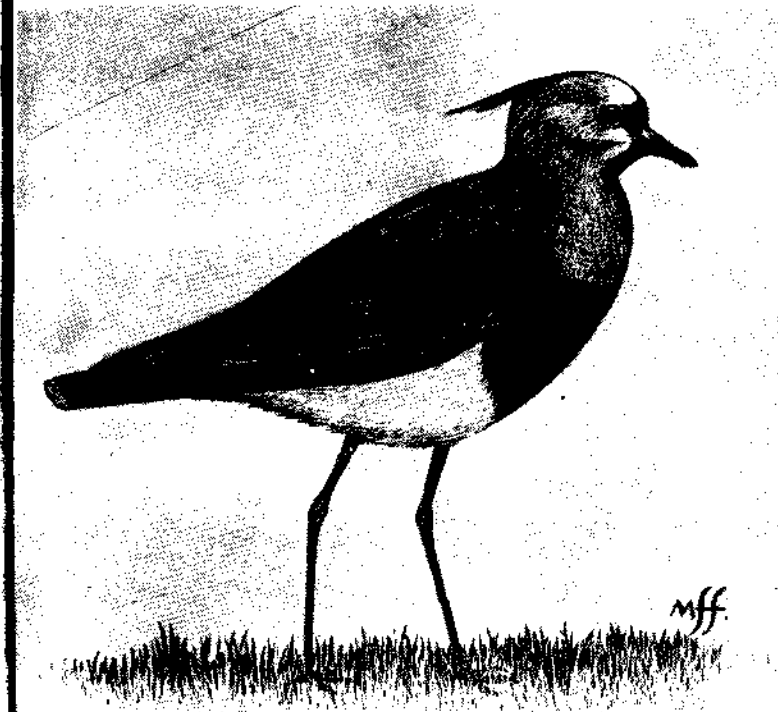
In the last year I have had occasion to visit Tobago for short periods each month in the course of a population study of birds at Grafton Estate. The following records, mostly obtained during these fleeting visits, indicate the degree to which our knowledge of Tobago's bird life might be improved under constant surveillance.

White-necked Heron *Ardea cocoi*. An adult bird showing the white neck, breast and thighs contrasting with black sides of breast and abdomen, was well seen at Bloody Bay River, some distance from the sea, on 16th February 1974 by my wife and myself, along with George Reid and Peter Hope Jones. This appears to be the first published record for Tobago; the species is widespread in South America, and regularly visits Trinidad during the first half of the year.

Great Black Hawk *Buteogallus urubitinga*. I had an excellent view of an adult bird on 31st July 1974 over secondary forest near the road between Charlotteville and Anse Fourmi. The bird called its typical scream, a long-drawnout ooo-eeeeee. Though the species was previously known from Tobago, it is evidently rare, this being the first time I had seen it there, in spite of many visits into hilly, forested country.

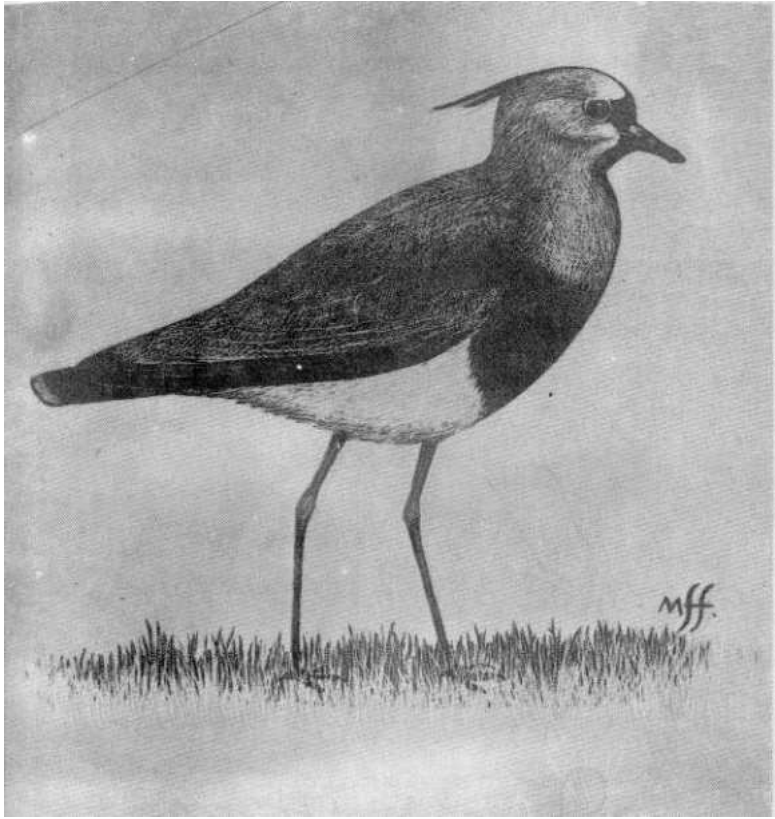
Wattled Jacana *Jacana jacana*. On 21 December 1974 an adult of this species was seen well at a distance of some 12 yards by W. Richard Barchet, an experienced American ornithologist. It was feeding in a ditch at the Friendship Estate dump and allowed a fairly close approach before flying, to reveal the diagnostic yellow wing-patches. This is the first record for Tobago, somewhat surprising since the species is usually regarded as sedentary. However, some local dispersal undoubtedly takes place and a passage from Trinidad and Tobago might have been assisted by the recent tropical storm "Alma", which affected areas of Trinidad in August 1974.

Southern Lapwing *Vanellus chilensis* In late November 1974 two birds of this species were observed at Lowlands by a party of four Swedish ornithologists, including L. Ohlsson and R. Staav. At that time Tobago had been affected by three days of heavy, almost continuous rain. These are the first records for Tobago, though the species has been recorded regularly in Trinidad since 1961 (French 1973b), mostly between May and July. Recently birds have been seen in Trinidad in later months of the year, and in fact breeding has been suspected at Waller Field.



Southern Lapwing

Common Potoo *Nyctibius griseus*. During the early months of 1974 an adult bird was seen roosting about 15 feet up in a tree at Grafton Estate. It must have been viewed by hundreds of visitors, and was often photographed and filmed. Judging from the regular calls heard between June and August it is likely that breeding took place.



White-tailed Sabrewing *Campylopterus ensipennis*. It was with extreme pleasure that I saw at close quarters a male of this species on 16th February 1974; it was in a ravine in hill forest just off the road from Roxborough to Parlatuvier. My wife was with me, as were George Reid and Peter Hope Jones. Although possible sightings of this species had been made on various occasions in the last two years, this was the first occurrence which I could personally vouch for since the disaster of Hurricane Flora in 1963. On that occasion the hill forest, typical habitat of this beautiful hummingbird, was almost totally destroyed and all the vegetation in the area was completely desiccated for several days, ensuring the extirpation of almost all those forest hummingbirds which had survived the actual storm.

Blue-backed Manakin *Chiroxiphia pareola*. On 21 July 1974 at Grafton Estate a nest of this species was found with two spotted eggs measuring 24.75 x 17.75mm and 24.25 x 18.5mm; the female was incubating. This is the first occupied nest of this species to be found in Tobago, and the first of the race *atlantica* (Dalmas). The nest was typical of a manakin, a deep but flimsy cup of rootlets with a base of dead leaves, saddled in the lateral fork of a sapling about 6½ feet from the ground in well-shaped secondary forest, quite close to a stream. By 2nd August the eggs had hatched, but the young had disappeared, a very common fate for young manakins of other species. A second, very similar nest was found on 11th August only 15 yards away from the first. It was empty but seemed older. Breeding in this species may well begin early in the year in Tobago, judging from the intensity of display.

House Wren *Troglodytes aedon*. A nest found below the roof of the house at Grafton Estate on 14th September 1974 contained four eggs of this species and nine of the parasitic Shiny Cowbird *Molothrus bonariensis*. This is by far the largest number of cowbird eggs I have found in one nest, though the record appears to be fourteen (French 1973b). It is thought that each cowbird egg is deposited by a different female, and certainly these nine were of quite variable colour and shape. Incidentally, I removed the cowbird eggs, and the four young wrens successfully hatched and fledged.

Red-breasted Blackbird *Leistes militaris*. Following a report from the party of Swedish ornithologists mentioned above, I found at least



Common Potoo

four males and one female of this species on 19th December 1974 at the Lowlands savannah. The males were displaying and singing. These are the first authentic records of this species for Tobago, although Meyer de Schauensee (1966) mistakenly included Tobago in the range of the species. It is interesting to speculate on the manner in which this apparently sedentary species reached Tobago, especially in view of the Northern Range of Trinidad effectively barring dispersal to the north from the central plains where the species is common. Again, perhaps "Alma" was responsible.

Bobolink *Dolichonyx oryzivorus*. On 17 February 1974 an immature bird of this species was studied at distances down to six feet at the Friendship Estate dump by my wife and myself, along with George Reid. Its tail was very abraded, it seemed to be in heavy moult, and made very short, weak flights, often only for a few yards, as it fed on insects among the low shrubs and weeds. This is the first record for Tobago, though the species has been recorded once from Trinidad (in June!), and is regular on autumn passage through the West Indies to South America.

Northern Parula Warbler *Parula americana*. On 19 December 1974 an individual of this species was mist-netted at Grafton Estate. After being carefully examined and photographed it was released. Though in many respects similar to the Tropical Parula *P. pitaiyumi*, it could be distinguished by the distinct whitish eye-ring, and by the underparts, of which the chin, throat and upper breast were bright yellow, whilst the rest were whitish, with the lower abdomen faintly tinged yellow. This is the first record for Tobago, but as Bond (1970) pointed out, it was to be expected. The Tropical Parula is listed for Tobago on the strength of three specimens said to have been taken near Charlotteville many years ago (Hellmayr 1906); but there have been no records since then, and one wonders whether Hellmayr's record is authentic. The northern species is a regular if rare winter visitor to the Lesser Antilles.

Purple Honeycreeper *Cyanerpes caeruleus*. On 21 August 1972 I saw two, possibly three, individuals of this species on the trail near Pigeon Peak. The long, decurved bill effectively precluded confusion with the congener, *C. cyaneus*, already known from Tobago. Although this record has already been published (ffrench 1973b), no details were given at that time. It seems highly probable that these individuals were

related to some captive birds brought from Trinidad and released at Charlotteville about the time of Hurricane Flora. Otherwise, the species has not hitherto been reported from Tobago.

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FEEDING METHODS OF SOME TRINIDAD HUMMINGBIRDS

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The hummingbird family includes hundreds of species which vary in size, bill length and bill shape. Many flowers are pollinated by hummingbirds and Grant and Grant (1968) have shown that the shapes, sizes and structures of the flowers visited are adapted to maximise the