Life History Data for Three Tyrant Flycatchers

Victor C Quesnel
P.O.Box 47. Port of Spain, Trinidad.

The subjects of this note are the Pied Water-Tyrant, the White-headed Marsh-Tyrant and the Great Kiskadee. They are all common in Trinidad and, at first sight, it seems surprising that ffrench (1991) gives no information on incubation or fledging for any of them.

However, their nests have two features in common that may account for this - inaccessibility and dome shaped architecture. The first two species build nests in shrubs near to, overhanging, or within a body of water, and although the nest may be within a metre of the ground or water surface, the location will often make repeated access impractical. The Great Kiskadee, on the other hand, builds nests high in trees, often spiny trees such as the swamp immortelle (*Erythrina glauca*), and the nest is usually out of reach or too difficult to get to for repeated observations. All three species build domed nests with side entrances, and this too hinders observation. Without a dentist's mirror or its equivalent, it is impossible to see into any of the nests without risking damage to them. Thus, all observations must be made by touch instead of by sight, with a consequent decrease in accuracy.

I have been fortunate that the ponds at Haven Hill Farm where I live, attract the first two species, and the semi-isolated trees of swamp immortelle, milkwood (*Sapium glandulosum*) and crappo (*Carapa guianensis*) attract the third. All three species have nested regularly "on my door-step" during the past twelve years. Thus, it has been relatively easy for me to study several nests of the first two species, and to make repeated observations on one nest of the Great Kiskadee that was built on crop support wires in a greenhouse that was temporarily out of use. At a height of only three meters from the ground it was easily accessible by ladder.

Pied Water-Tyrant - *Fluvicola pica.*

1. The nest was 1.5 m above ground in a tomato plant. Three eggs were laid, one each on 9, 10, and 11 July 1990. Two chicks hatched on 23 July and the third on 24 July for incubation times of 12 days (2) and 13 days (1) from the date of the third egg. The chicks all left the nest on 2 August 1990, two being seen nearby afterwards. Times to fledging were thus 11 days (1) and 12 days (2).

2. The nest was about one metre above ground in a *Solanum jamaicensis* plant. Three eggs were laid, one each on 26, 27 and 28 February 1991. Two chicks hatched on 12 March and the third on 13 March between 0800 and 1040 hr for incubation times of 12 days (2) and 13 days (1) from the date of the third egg.

On 24 March the nest was found in a partially collapsed condition, with one fledgling lying on the ground below, covered with ants but still alive though unable to fly. There was no sign of the other two chicks; possibly they were the older chicks and had flown successfully at 12 days from hatching.

3. The nest was about 1.5 m above ground on a wire support for a barbadeen vine. When found on 21 January 1992 it contained two eggs. On 3 February it contained one egg and one chick though early in the morning it had contained two eggs. The unhatched egg did not hatch subsequently. Taking the day of finding as the start of incubation, this lasted 13 days. The chick flew on 15 February and was seen being fed by the parents up to 23 February 1992. The time to fledging was thus 12 days.

The observations at the first two nests suggest that incubation began after the second egg was laid as it must have done in the third nest where only two eggs were laid. If this happened, all the eggs would have taken 13 days to hatch. At all the nests the observations are compatible with 12 days for fledging.

ffrench (1991) records nesting in the months of June - October and January. The above records add February to the list and I have other records for eggs in May.

White-headed Marsh Tyrant- *Arundinicola leucocephala.*

1. The nest was discovered about one week before the eggs were laid. It had been built on a fluorescent light fixture in a greenhouse, about three meters from the ground. Three eggs were laid, one each on 13, 14 and 15 August 1988. Two chicks hatched on 1 September and the third on 4 September. On 15 September the chicks were still in the nest. The nest was not checked on 16 or 17 September but the behaviour of the parents showed no change from that of the preceding days. On the morning of 18 September the bahaviour of the parents was noticeably different and on checking the nest I found it empty. I was afraid that the chicks had been lost to a predator, but later that day I saw one, and on the following day I saw two and presumed that all had left the nest safely on 18 September. If incubation started after the laying of the third egg, it lasted 17 days for two eggs and 18 days for one egg. If incubation began after the laying of the second egg (as seems to occur for *Fluvicola pica*), incubation would have taken 18 days for all three eggs. Assuming that all chicks flew on the same day (as seems likely), fledging took 16 days for one chick and 17 days for two chicks.

2. A nest less than two meters up in a black sage shrub (*Cordia curassavica*) contained three chicks when found on 5 March 1994. They were still there on 19 March. On 20 March, while I tried to count the chicks by feel, one flew out and landed in the middle of the pond on the bank of which the shrub was growing. With flapping motions of it's wings the chick managed to paddle its way safely to the opposite bank where it climbed out and hid itself in the shrubbery. Later that day both remaining chicks vacated the nest, and were seen on a nearby shrub with the female parent. Fledging thus took a minimum of 15 days, which fits well with the results from the first nest .

Great Kiskadee -*Pitangus sulphuratus.*

The incomplete nest was discovered in the greenhouse on 5 April 1992 and is the only nest I have seen just three meters from the ground. Its construction

was followed day by day and checked for eggs every second day until the first egg was found. Three eggs were laid, one each on 13, 14 and 15 April. The nest was not checked again until 29 April, after which it was checked every day. On 3 May it seemed to contain two eggs and two chicks. On 13 May there was one chick and no eggs This situation lasted until 19 May when the chick was found dead and infested with maggots. The wing quills had grown out 3-4 mm from the cases and the breast feathers were yellow. I estimated that another 6-7 days were needed for full fledging.

I have resolved the uncertainties caused by not being able to see into the nest as follows. The appearance of two chicks in the nest on 3-5 May was incorrect and probably caused by feeling the head and body of one chick as two separate objects and hence two chicks. Only one chick hatched, on 3 May after 18 days measured from the laying of the third egg. It died 16 days later, possibly 6-7 days from full fledging. This puts the Great Kiskadee with only five other local Tyrant flycatchers that have long incubation periods of 18-20 days (ffrench 1991). Two of the five, the Boat-billed Flycatcher (*Megarhynchus pitangua*) and the Yellow-olive Flycatcher (*Tolmomyias sulphurescens*), have fledging periods of 22-24 days so that my estimate is entirely reasonable. Unfortunately, the parents did not reuse the nest and another opportunity like this is unlikely to recur.

An interesting question remains. How were the eggs removed from the nest? Presumably one or both of the parents removed them and did the job by taking the eggs into the widely opened bill one at a time.

Reference:

ffrench, R. 1991. ***A guide to the birds of Trinidad and Tobago, 2nd edition,*** *Comstock Publishing Associates, Ithaca, New York.*

BOOK REVIEWS

Birds of Trinidad & Tobago:A Photographic Atlas.

Russell Barrow. 1994
Media and Editorial Products Ltd., Port of Spain, Trinidad.
121 pp 131 colour plates, 2 maps, 1 line drawing.

Although Trinidad and Tobago has a long tradition of interest in natural history - the Field Naturalists' Club having recently celebrated its centenary - for some unaccountable reason there has for most of this century been a lack of expertise and interest in ornithology amongst those born and bred here. It is therefore with the greatest of pleasure that I welcome the appearance of Dr. Russell Barrow's book, a truly local production in every sense. Hearty congratulations are in order, principally of course to the author/photographer, but also to the publishers, printers and corporate sponsors for their belief, courage and determination in bringing the work to fruition. I know only too well the many frustrations that can attend such an enterprise, and it is greatly to the credit of all concerned that all obstacles were so successfully overcome. The outcome is an attractive, well-produced volume, which will not only give much pleasure in itself, but will also serve to promote environmental awareness in this country.

The book presents photographic portraits, in "coffee-table" format, of 81 species of birds found on Trinidad and Tobago (less than one-fifth of those recorded). Each species is represented by one or two pictures, many of these in close-up, and often depicting male and female (and sometimes immature) plumage. The pictures are accompanied by a short note, explaining where the birds may be found, some points of identification, or some detail of behaviour. Each species is designated by the definitive English name, the scientific name, and an approximate measurement of length. In his Introduction the author disclaims a scientific approach, describing the book as primarily a photographic atlas. The species were selected for their attractive colour, as well as to cover a broad range of habitats.

The Introduction also includes detailed advise on photographic equipment and techniques, clearly a speciality of the author. Two diagrams depict Tobago and northern Trinidad, with 3-letter acronyms to pinpoint certain localities favoured by the author in his studies, with brief notes relating to each. Three of these acronyms are general, indicating a species is widespread throughout either island or both. Finally, an index gives page references for all species mentioned in the book.

The prime purpose of the book is photographic portraiture, and in this it generally succeeds with distinction. The great majority of pictures are very well exposed and accurately focused, with beautiful colours true to life. One of the hardest colours to reproduce photographically is blue, and the picture of the Blue-gray Tanager on page 113 is less successful than the others, appearing as rather intense greenish turquoise instead of the delicate greyish blue of real life. A more serious error appears on page 49, where the right-hand bird facing the Green Hermit is mis-identified a Little Hermit, when it is actually a Rufus-breasted Hermit. In some other pictures the attitudes and habitat appear contrived rather than natural. It may be intriguing to see birds caught in the act of taking off or landing, but it can also look decidedly odd. In addition, quite a few pictures show unmistakable signs (e.g. unnatural poses or extreme close-ups) of having been taken in studio conditions with captive birds,which might properly have been mentioned in the Introduction. This in no way detracts from their value as beautiful and interesting pictures.

Since the author makes it plain that this is not a scientific treatise, it seems inappropriate to be critical of the text on points of taxonomic or behavioural detail. The species accounts convey