

NOTES ON THE LIFE HISTORY OF THE YELLOW-BREASTED FLYCATCHER IN SURINAM

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The Yellow-breasted Flycatcher (*Tolmomyias flaviventris*) is one of the many medium-sized greenish flycatchers of tropical South America. The genus *Tolmomyias* comprises a group of four rather large-headed, flat-billed birds. Besides the above, these are the Yellow-olive Flycatcher (*T. sulphurescens*)—the largest; the Yellow-margined Flycatcher (*T. assimilis*); and the Gray-crowned Flycatcher (*T. poliocephalus*)—the smallest. In the field in Surinam, *T. flaviventris* is easily distinguished from the others in having the crown olive-green, concolor with the back and wings, whereas the crown is grayish in the local *T. sulphurescens* and *T. assimilis* and slate-gray in *T. poliocephalus*. *T. flaviventris* has the entire underparts yellow, more ochraceous on the throat and breast. Its length is about 5 inches; the weights of specimens collected by me in Surinam are: 11 ♂♂, 13 g (12–14); 13 ♀♀, 13.4 g (12.5–15.5).

In Surinam, *T. flaviventris* is quite common in the mangroves (*Avicennia nitida*), wherever they form a continuous forest of tall trees. It is equally common in the shade trees (*Erythrina*) of coffee plantations, a vanishing habitat in Surinam, now that such plantations are gradually being broken up. In the mangroves it is the only representative of *Tolmomyias*, but in the coffee plantations *T. poliocephalus* also occurs, albeit rarely. I have never found *T. flaviventris* outside the coastal plain in the savanna region. It also seems absent in the forests to the south, where *T. poliocephalus* and *T. sulphurescens* are found, the latter also quite commonly at forest edges. Outside the breeding season *T. flaviventris* is an unobtrusive, solitary, and arboreal bird, making itself conspicuous only by a high pitched and shrill “tchee-ee.” It feeds at a moderate height, taking insects in flight from among the foliage; only very seldom does it dart after flying insects.

Skutch (1960) published an extensive life history of *T. sulphurescens* in Central America, and I have given a summary of the nesting habits of *T. flaviventris* in Surinam (Haverschmidt, 1968). In the present article I will give the details, together with some additional observations. The breeding habits of *T. flaviventris* seem almost identical with those of *T. sulphurescens*, as described by Skutch.

DISPLAY

Skutch (loc. cit.) mentions no displays in *T. sulphurescens*, and I have observed what I consider to be displays of *T. flaviventris* only three times. On 10 May 1962, I watched two birds in my garden moving about in the trees.

One of them, while uttering a chirruping sound, made waving movements with one wing, closing it after each wave. The second bird came near but nothing further happened. Again the next day two birds were seen among the same trees. One of them made waving movements with its wings, alternating between the left and the right wing, but always with only one wing waving at the time; the closed wing was held somewhat loosely. I expected copulation to occur in this instance, but it did not follow. On 21 June 1962 in my garden, a nest was under construction—this consisting of only a few fibers hanging over a branch. A bird arrived with nest material in its bill, while another sat nearby. The sitting bird suddenly started slow, waving movements with its wings, alternating the left and the right wing, one at a time. The crown feathers were erected, forming a minute crest. Once more nothing happened in response, and the nest building did not continue; the fibers were later blown away and I did not see the bird anymore. Skutch (1960:364) reports a similar wing-waving behavior in *Pipromorpha oleaginea*, but I have not seen it in Surinam.

THE NEST AND NEST-BUILDING

The nest of *T. flaviventris* is a pensile, retort-shaped purse with an orifice on the bottom at the side (Fig. 1). The nest is attached to slender, usually leafy twigs, and is made of what Skutch (op. cit.) aptly calls "vegetable horse hair," i.e. fine fibrous roots taken from branches. All the nests I have seen had a yellowish color, in contrast to those of *T. sulphurescens*, which were brownish black or black. Most of the nests are quite conspicuous and easy to locate, but are high up in trees and out of reach. I was able to inspect only seven nests, these at heights of 1½ to 3½ meters. In Surinam most nests of *T. flaviventris* are in close proximity to inhabited wasp nests. Out of 54 nests seen, including deserted ones, 41 (76%) were near a wasp nest, either of the large *Synoecca surinama* (which makes long corrugated nests plastered against the main stem of trees or strong branches) or of the smaller *Polybia* species (which make small saucer- or box-shaped nests attached to slender twigs). Wasp nests apparently have an attraction for several species of birds. On 4 June 1950, a Yellow-breasted Flycatcher and a female White-winged Becard (*Pachyramphus polychopterus*)—a species which very frequently nests near wasp nests in Surinam—tried to build at the same spot near a wasp nest. The becard, although considerably larger (weight about 21 gm), never succeeded in getting a foothold, as it was constantly driven away by both the flycatchers.

As previously reported (Haverschmidt, 1954), on 27 September 1953 I found a nest of the Southern Beardless Tyrannulet (*Camptostoma obsoletum*) fastened to an old *Tolmomyias* nest, near a wasp nest. On 6 July 1958, there



FIG. 1. Nest of *Tolmomyias flaviventris* in Surinam.

was a nest of a Yellow-breasted Flycatcher amidst a colony of Yellow-rumped Caciques (*Cacicus cela*), again near a large wasp nest. Old nests of this flycatcher are sometimes pilfered and the nest material used for building their new nests. On 29 January 1951, a nest was made on the remnants of an old one that I had found occupied on 23 July 1950—also near a wasp nest.

Nest-building is by the presumed female only, but what must be the male often accompanies the building bird, although I never saw him carrying material. Building may be carried on at a rapid rate. On 29 July 1952 a bird arrived with nest material 23 times during one hour of observation. The nest was in a deteriorated state on 8 August, and a new one was started immediately below it, once more near a wasp nest. On 22 April 1960 I found the beginning of a nest—consisting of a few fibers—hanging on a branch of a *Lagerstroemia* tree in my garden. The nest was at a height of about 3½ meters, near a small wasp nest identified as *Polybia occidentalis*. Although the bird was constantly at work, progress was slow, and the retort shape was first apparent on 2 May. On 22 May it looked completed, but by carefully inserting one of my fingers I could establish that there were still no eggs. On

26 May it contained one egg; nest-building therefore had lasted 34 days. On 27 May at 17:00 there was still one egg and on 28 May at 17:00 there were two eggs, completing the clutch. As in *T. sulphurescens* (Skutch, 1960), the eggs had been laid on alternate days. The eggs are creamy white with a few scattered dark purplish spots, mostly at the large end.

A clutch consists of 2 or 3 eggs. Of the 7 nests I was able to inspect, one had three eggs (3 May), two had three nestlings (22 June and 3 August), three had two eggs (28 May, 18 and 20 July), and one had a single nestling (9 June). The breeding season is a protracted one, with 38 occupied nests found as follows: January (2), April (1), May (8), June (10), July (10), and August (7). Two nests under construction were also found in September. These data show a predilection for the long rainy season, which lasts from mid-April until mid-August.

INCUBATION

Only one bird, presumably the female, incubates; I never saw the second bird take part. The first egg of the nest in my garden (clutch of 2 eggs completed on 28 May) hatched on 13 June at 15:30 and the second egg on 14 June at 7:00. The incubation period was thus 17 days. The eggs hatched on successive days, agreeing with what Skutch (1960) established for *T. sulphurescens*.

THE NESTLING PERIOD

The nestlings hatch naked, devoid of any down. They are dark in color; the inside of the mouth is yellow. They were fed by both parents, the food consisting of small insects—delivered to them one at a time. Prey was taken in flight from among the foliage, sometimes immediately below the nest. The bird bringing food alighted at first on a branch nearby; from there it shot right into the entrance to the nest, never clinging to the nest wall. When one bird was inside, either feeding or brooding the nestlings, the other one repeatedly tried to enter. The latter never succeeded, having to wait until the other bird left the nest. Excrement was taken away rather than eaten. The nestlings were no longer brooded after the age of 5 days. A summary of the feeding rate and the covering of the nestlings is given in Table 1.

On 23 June, when the nestlings were 9 days old, they were very noisy, peeping constantly and clearly audible when I stood at the nest tree. This made the nest quite conspicuous. As I did not see the birds on 27 June, I inspected the nest and found that it contained a single dead nestling; the other had disappeared. The nest was wholly intact, not damaged or out of shape, so I believe that it had been robbed previously by a snake. At any rate, the nestling period could not be established.

TABLE 1
SUMMARY OF THE CARE OF NESTLINGS

Date observed	Age of nestling	Time observed	Times fed	Time nestlings brooded	
				periods	minutes
16 June	2 days	16:55-17:55	12	17:08-17:15	7
				17:47-17:52	5
17 June	3 days	15:50-16:50	16	15:50-15:55	5
				16:02-16:04	2
				16:06-16:19	13
				16:24-16:33	9
18 June	4 days	10:40-11:40	14	10:51-10:56	5
				11:03-11:08	5
				11:10-11:19	9
				11:30-11:38	8
19 June	5 days	14:15-16:15	18	none	none
23 June	9 days	15:30-16:30	24	none	none

ENEMIES AND SECONDARY TENANTS OF NESTS

Apart from being robbed, apparently by snakes, occupied nests are sometimes pilfered by other birds. On 31 July 1949 a Gray-crowned Flycatcher (*T. poliocephalus*) repeatedly took nest material from an occupied nest of a Yellow-breasted Flycatcher. This it used for its own nest, under construction near a small wasp nest (Haverschmidt 1950). The *T. flaviventris* nest became so badly damaged that it was deserted.

Occupied nests were also taken over by Piratic Flycatchers (*Legatus leucophaeus*). On 17 March 1957 and on 3 October 1952 I observed pairs of the latter species feeding nestlings in nests of the Yellow-breasted Flycatcher. They fed their nestlings as they clung to the entrance.

SUMMARY

In Surinam, the Yellow-breasted Flycatcher inhabits tall mangroves and shade trees in the coffee plantations in the coastal plain. It feeds on small insects plucked in flight from among the foliage. The call is a shrill and high pitched "tchee-ee." A display consisting of slow waving movements of the wings moved alternately, was observed. The nest is a pensive, retort-shaped structure with the entrance at the bottom on the side, attached to slender twigs and usually at a great height. The presumed female alone builds the nest of yellowish fibers; building lasted 34 days in one case. Most nests (76 percent) are built near wasp nests. The 2 or 3 eggs are laid on alternate days and only the female incubates. Incubation lasted in one case 17 days, the eggs hatching on successive days. The nestlings are dark in color at hatching and devoid of down. They are fed on insects—one at the time—by both parents. They are brooded by one of the parents until the 4th day. The breeding season is a protracted one but mainly during the long rainy season. Apart from being robbed by snakes, the nests are sometimes pilfered by other birds and taken over by the Piratic Flycatcher.

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NORTH AMERICAN NEST RECORD CARD PROGRAM

Cornell Laboratory of Ornithology is promoting two special projects in its North American Nest Record Card Program for 1974, in addition to regular collection of nesting data. With the support of the World Wildlife Fund, the Laboratory has set up a national register of birds-of-prey to monitor their breeding success in the wild. This register is an independent section of the existing Nest Record Card Program, but information will be collected on regular nest record cards. Details of nest locality will be kept secret and maintained in a master file, from which data will be released only with permission of both the original investigator and the Laboratory. Data will go back many years, so breeding success can be calculated over a long period and annual variations and long-term alterations can be seen. These data will pinpoint species and areas of concern that will enable action to be taken.

The second special research area deals with colonial nesting, such as in certain wading birds.

The Laboratory makes a special appeal for nesting records of raptors and colonial nesting birds; however, nesting data on *all* species of birds of North America will continue to be collected. This includes data from previous years, and researchers with large amounts of original data are invited to inquire about ways of putting these data into a form that will be of permanent value to science.