# Possible Intra-Regional Bird Migration in Trinidad and Tobago

**Richard ffrench**

Toftingal, Laurieston Road, Gatehouse of Fleet, Castle Douglas, Scotland DG7 2BE

## INTRODUCTION

The position of Trinidad and Tobago at the southern end of the West Indies island chain, linking them to the South American continent, raises some interesting problems relating to bird migration. The best known routes involve species that breed in North America or West Indies and migrate south to or through Trinidad and Tobago during the boreal winter. Because most of these populations have been studied for many years, and also because banding studies, primarily originating in North America, have provided valuable information on the movements of individuals, we are able to form a fairly accurate picture of where these species are at any time of year, and why they move from place to place.

To a much lesser extent we also know something about the regular annual movements of a few species that breed in southern South America and move northward during the austral winter, some of these spending the months from May to September on our islands (Table 1). In this paper I will deal partly with this second group, but also with a third group that comprises birds that breed locally but appear to be absent regularly from our islands for a period each year (Table 2). The main problem with this group is that of course one cannot be sure if the absence of some regularly seen individuals means that they have left the islands for the continent, or have merely moved to another part of the country. It is possible that during the moult (or for some other unknown reason) these birds become more difficult to find. We really know little about exactly what wild birds do during their annual moult. Maybe they just become more reclusive than at other times, giving the impression that they are indeed absent.

Only by making a systematic study of these species, and especially trying to find out where they go during the critical months of apparent absence, can we hope to come to adequate conclusions. Even after 40 years' experience I feel I have hardly been able to do more than make qualified guesses, and it is my hope that this paper, which deals only with land-based species, may stimulate others to focus on this issue. The data here come from my own observations and published records, and in addition I have drawn on information supplied by regularly visiting tour-groups of birdwatchers.

**Table 1. Non-breeding visitors from South America to Trinidad and Tobago.**

| Species | Usually present | |
|---|---|---|
| Lesser Nighthawk* | August | - October |
| Nacunda Nighthawk* | June | - October |
| White-collared Swift | July | - October |
| Ringed Kingfisher* | March | - June |
| Variegated Flycatcher | July | - September |
| Fork-tailed Flycatcher# | June | - September, |
| | also November | - February |
| Swainson's Flycatcher | July | - September |
| Crested Doradito* | June | - September |
| Small-billed Elaenia | May | - August |
| Lesser Elaenia* | May | - August |
| Blue-and-white Swallow* | June | - September |

*There are a few isolated breeding records on Trinidad for these species, some of them possibly suspect (ffrench 1997).
#There are two separate races involved.

## NON-BREEDING VISITORS FROM SOUTH AMERICA

The eleven species in Table 1 are mostly uncommon or rare species from the continent that are present during the austral winter months. Occasionally one may breed, but I believe these are unusual occurrences.

The two nighthawks are not particularly rare on Trinidad, and their presumed breeding records in my opinion require further confirmation (ffrench 1997). There is little doubt that the Ringed Kingfisher *Ceryle torquata* breeds regularly on the mainland, probably along its great river-courses. But the five less common

**Table 2 Trinidad & Tobago residents that may regularly visit South America**

| Species | Breeding period | | | Usually absent | | |
|---|---|---|---|---|---|---|
| Swallow-tailed Kite | March | - | August | September | - | February |
| Plumbeous Kite | March | - | August | October | - | January |
| Eared Dove | March | - | September | November | - | February (Trinidad) |
| White-necked Jacobin | January | - | February | ? October | - | December |
| Brown Violetear | February | | | September | - | November |
| Black-throated Mango | January | - | July | September | - | November |
| Ruby-topaz Hummingbird | December | - | June | September | - | November |
| White-tailed Goldenthroat | June | - | August | September | - | November (?+) |
| Long-billed Starthroat | March | - | April | September | - | November |
| Piratic Flycatcher | February | - | August | October | - | January |
| Caribbean Martin | April | - | July | October | - | December |
| Red-eyed (Chivi) Vireo | April | - | June | October | - | February (Trinidad) |
| Swallow-Tanager | April | - | June | October | - | February |
| Red-legged Honeycreeper | March | - | July | October | - | December |

species of flycatchers and the Blue-and-white Swallow *Notiochelidon cyanoleuca* are much more likely to be true southern migrants, moving north to escape the southern winter. In the case of the swallow collected specimens have been only of the southern race *patagonica*, and I strongly doubt the validity of Smooker's 1922 breeding record (1937) at Diego Martin of the nominate *cyanoleuca*, a highland race and unlikely to be breeding near sea-level.

The Fork-tailed Flycatcher *Tyrannus savana* provides an interesting situation, for this species has two separate, identifiable populations that visit Trinidad. The great majority belong to the nominate race, which breeds in southern S. America, migrating to the north of the continent during the austral winter and reaching Trinidad, Tobago and even occasionally Grenada and Barbados. A separate, paler race *monachus* breeds in Venezuela and countries north to Mexico; a few of these turn up on Trinidad between November and February, and may stay on, possibly escaping notice among the far greater number of southern migrants. Some *monachus* birds might even breed on Trinidad, but no records have yet confirmed such speculation.

The large White-collared Swift *Streptoprocne zonaris* is well-known on Trinidad during July to October, when large bands roam the mountains. Its great power of flight enables this species to cover great distances in the course of one day, yet we have little idea where this population breeds. Vagrants occur on both Tobago and Grenada, but the only West Indian breeders are in the Greater Antilles. It seems more likely that those visiting Trinidad come from colonies in the mountains of northern S. America, where it is known to nest behind waterfalls. Of course they may not return from Trinidad to their nests every night; there is speculation that this species could well spend the night soaring high above ground, possibly even sleeping on the wing (Lack 1973).

## TRINIDAD AND TOBAGO RESIDENTS

The fourteen species in Table 2 are all known to breed regularly on Trinidad and/or Tobago, but in some cases breeding records are few. Habitats and ecological situations are variable, ranging from hill forest to lowland scrub/savannah and even sea-coast. Some individual analysis is necessary here.

**Swallow-tailed Kite** *Elanoides forficatus.* Records of its occurrence between September and February are

only occasional. From March to August birds are seen usually in small (or sometimes quite large) groups, and several nests have been found over the last 35 years, usually in forested areas. Isolated records from Tobago show that this species wanders widely. There is evidence of a regular passage through Panama (Ridgely 1976), with occasional vagrants occurring in the northern West Indies (Raffaele *et al* 1998).

**Plumbeous Kite** *Ictinia plumbea.* A regular breeding visitor, especially common in the south of Trinidad, but also seen over northern forests. It seems to flock mostly on migration, especially in August. Recorded nests have all been in southern forests. It is unclear where this population goes between September and February. As with the previous species, migrating flocks move through Panama in February and again in August. Could "our" birds be involved in those movements? One way to find out might be to band our young birds in the nests.

**Eared Dove** *Zenaida auriculata.* Unlike the others in this group, this is probably a fairly recent arrival from the continent, since the species was not mentioned by collectors of the 19th century such as Leotaud and Kirk. It has recently colonised some Lesser Antillean islands such as St Vincent and St Lucia (Raffaele *et al* 1998), so is probably expanding its range northwards. Breeding occurs from March to September (and occasionally in other months), and migratory or dispersing movements have been seen on Tobago, at Toco and Soldado Rock mostly in August. On Trinidad the species particularly favours mangroves and adjoining savannahs, but seems to be scarcer from November to February, whilst on Tobago it is widespread in the scrublands of the southwest.

**White-necked Jacobin** *Florisuga mellivora.* Hummingbirds are particularly difficult birds to monitor, and the provision by people of artificial feeders may well affect their movements or status. This species seems to be resident on both islands, for a few nests have been recorded in January and February; but it is unclear whether they remain in the area during the last three months of the year. A dead bird was found in early November at Pointe-a-Pierre, nowhere near its normal habitat, which implies local movement, if not indeed migration to the continent. (Note. There is also some evidence that a similar forest-dwelling hummingbird on Tobago, the White-tailed Sabrewing *Campylopterus ensipennis* is largely absent during September - December from its breeding-grounds on the Main Ridge. It has been suggested that it moves to lower altitudes on Tobago at that time, but I am not certain whether this has been confirmed. But if it is not on Tobago, where does it go?)

**Brown Violetear** *Colibri delphinae.* Another high-forest species on Trinidad, conspicuous during its breeding period in the dry season because of its prominent song. Nesting has only been recorded in February. Very hard to find during the later wet season from August to November, when not singing. Does it leave the island?

**Black-throated Mango** *Anthracothorax nigricollis.* A conspicuous and common species during January to August, when most breeding records occur, but much less common from September to November, although occasional individuals have been seen then (ffrench & ffrench 1977, Feinsinger *et al* 1985). Although the species does breed in higher parts of the Northern Range, it is also common at sea-level, so its scarcity in later months does not seem to involve altitudinal migration. The reason for the departure of this species and others from the islands was thought by Feinsinger and his team to be a food shortage involving nectar-producing flowers during a three-month period from September to November. Presumably such a shortage might vary somewhat annually, which would account for the occasional records of these species during those three months.

**Ruby-topaz Hummingbird** *Chrysolampis mosquitus.* The situation for this species seems to mirror that for the last, even though on Trinidad its habitat is more limited to lower altitudes than on Tobago. Records are scarce between September and November, whereas it is quite common during its breeding season, especially on Tobago.

**White-tailed Goldenthroat** *Polytmus guianumbi.* This uncommon species frequents savannahs and scrub, but also appears in suburban gardens, feeding on the

flowers of plants such as *Russellia* sp. and *Lagerstroemia* sp. Its nesting period is clearly later than those of most other local hummingbirds; most nests have been found during the early rainy season on waterlogged savannahs. It is usually scarce from September to March, even though there are a few records between December and March.

**Long-billed Starthroat** *Heliomaster longirostris.* Although Victor Quesnel (1977) has challenged my previous assertion that this species is uncommon and a probable seasonal migrant, I certainly do not agree with him that it may be "the second most abundant hummingbird on Trinidad"! I do accept that during September to November individual birds may sometimes be found feeding at flowering plants in gardens (but never in significant numbers, compared with, say, Copper-rumped or White-chested Emeralds *Amazilia* spp.). Feinsinger's studies found the species remarkably consistent in its choice of food-source, principally *Erythrina* sp. and *Mandevilla hirsuta*, while Quesnel found a bird or birds in his garden feeding mainly on Ixora. Breeding records in March and April indicate their main period of abundance; I am still not convinced that most birds of this species remain on Trinidad from September through November.

**Piratic Flycatcher** *Legatus leucophaius.* This common species is well-known from its parasitic dependence on various icterids and other flycatchers, whose nests it appropriates. Its insistent calls, delivered usually from a tree-top, draw the attention especially during February to August; but it may be mainly absent on the continent from October to January, when its call is rarely heard. On the other hand, it is hardly a conspicuous bird when it is not calling. Is it possible that it does not leave, but merely escapes notice by remaining silent?

**Caribbean Martin** *Progne dominicensis.* Resident in many Caribbean islands from the Greater Antilles south to Tobago (Raffaele *et al* 1998) during January to September, breeding between April and July, this species becomes scarce or absent from Tobago during October to December. It has never been reliably recorded on Trinidad, but most observers believe it to spend the non-breeding season in South America. This assumption, however, needs some positive evidence.

**Red-eyed** or **Chivi Vireo** *Vireo chivi.* (*olivaceus*) Here there is a particularly puzzling situation, possibly involving up to four different populations, or even different species (ffrench 1991); of these the northern breeders (*olivaceus*) are known to migrate south during the fall through the West Indies, with some birds reaching northern S. America and presumably Trinidad. A closely related population seems to be resident on Tobago (Dinsmore 1972, ffrench & ffrench 1977). Yet another group breeds on Trinidad from April to June, when it is highly vocal, but appears to be absent from October to February, when its song is never heard. It might be helpful to carry out extensive trapping on the Bocas islands, a favourite habitat of the species, during the period October to February, which should confirm its presence or not.

**Swallow-Tanager** *Tersina viridis.* A regular and conspicuous species in northern Trinidad, breeding from April to June, but records are very spotty during the non-breeding period. Known on the continent to flock when not breeding, so is unlikely to escape notice on Trinidad if present at that time. Its erratic nature is well-known in South America (Ridgely & Tudor 1989); I believe it must leave Trinidad in the off-season.

**Red-legged Honeycreeper** *Cyanerpes cyaneus.* An attractive and conspicuous resident of both islands, frequenting mainly the high forests, and breeding from March to July (though few nests have been found). Its appearance does seem erratic, by comparison with its congener the Purple Honeycreeper *C. caeruleus*, which can be found in large numbers at the Asa Wright Nature Centre feeders at most times of the year. The Red-legged seems to be absent particularly from October to December, and may indeed leave the islands altogether.

## DISCUSSION

Although it is not absolutely certain that the species mentioned above do in fact leave the islands for the continent, it seems at least likely that some of them do. In an equable climate it does not seem reasonable to suppose that adverse weather conditions force them to

depart. The reasons are likely to be based either on food-supply or population pressure. Where in-depth studies have been carried out (e.g. Feinsinger *et al* 1985), the shortage of nectar in certain areas is likely to be the over-riding cause of migration. It is much more difficult to show this in the case of species that live on insects or larger prey.

Population pressure may force species to migrate into Trinidad and Tobago in order to find breeding space, as in the cases of Piratic Flycatcher, Caribbean Martin and Swallow-Tanager. It may also cause emigration because of over-population (e.g. Eared Dove). We find cases of this kind of dispersal coming into Trinidad from the continent (e.g. recent records of continental immigrants into Trinidad like Pied Lapwing, Double-striped Thick-knee and Burrowing Owl). It may well happen the other way too. We know of isolated instances of movements between the islands and Venezuela. On Soldado Rock I found individual birds, such as Ruddy Quail-Dove, Pied Water-Tyrant, *Elaenia* sp. and a hummingbird, that were clearly moving one way or the other (ffrench 1989). I also watched a flock of Lilac-tailed Parrotlets coming over the sea towards Chacachacare from the Venezuelan Paria peninsula. These movements may well be much more common than we think. The circumstances that cause movements may in some cases be temporary, so that "new" species turn up, only to disappear again. There was a recent arrival of the Red-breasted Blackbird on Tobago, but after a few years it seems to have gone, perhaps because of a shortage of genetic variation. Did this also happen in the case of the Oilbirds on Tobago (ffrench 1993), or was that merely a food-foraging influx? In some cases movements may result from ancestral habits formed centuries ago when ecological conditions were different from today. Before we can hazard too many guesses, we need to establish the facts more firmly than I have been able to do.

If the birds are not in fact absent, they may be more difficult to find because they are in moult, a time when it is always more difficult to study birds, because they become more reclusive. Not surprisingly, most ornithologists tend to study species during the breeding season, when they are more active (and therefore more "interesting"). Here again there is much scope for future study. I hope somebody will take up the challenge.

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