

## BREEDING THE YELLOW-BELLIED SEEDEATER

### *Sporophila nigricollis*

by Robin Restall

The Yellow-bellied Seedeater *Sporophila nigricollis* is a small finch that is widespread throughout most of Central America, the Lesser Antilles of the West Indies, and South America east of the Andes and south to northernmost Argentina. The male is unmistakable, it has the entire head black, the upperparts are olive-green and it is pale yellow below. It is a cheerful songster, but does not have a sufficiently powerful voice to make it attractive to the bird trappers, and so is seldom kept in cages in South America. Also, being common and comparatively easy to catch, it is of low commercial value, which also demeans it in the eyes of the trappers. The female is an attractive, greenish-olive above and a pale, buffy-yellowish below and has a horn-coloured bill.

It is normally a resident, particularly in riparian and marshy areas that are wet all year round. It is very responsive to periods of extended drought, when the grasses drop their seeds and die. When this happens it will wander and follow trails and clearings through woodland up to the subtropical zone. I have found it on grassy trails along the Cordillera del Norte of Venezuela at a higher altitude than any other *Sporophila* spp. It has been recorded up to 2,300m (approx. 7,500ft). I have usually found it in smallholdings and truck gardens, and it may often be found in areas that were once cultivated but which have become overgrown with grasses, especially the tall Guinea Grass *Panicum maximum*.

Yellow-bellied Seedeaters are usually encountered in pairs or small groups. The presence of a single adult male with several females in these groups suggests they are family parties, but I have often seen such groups at the beginning of the breeding season. Also, most successful nestings seem to produce a single fledgling, occasionally two, and a group of six or more birds would obviously be more than a single family. As it may take immature males more than a year to moult into adult plumage, it is likely that these groups are composed of several pairs and some juveniles foraging together, with some males still in cryptic, intermediate plumage.

During a heavy downpour one August in Caracas I watched an irruption of flying ants. A considerable number of our garden birds, mostly Tropical Kingbirds *Tyrannus melancholicus*, Blue-grey Tanagers *Thraupis episcopus* and Black-faced Grassquits *Tiaris bicolor*, were hawking the insects with equal skill. What impressed me at the time was the unexpected appearance of at least a dozen (12) or more Yellow-bellied Seedeaters; at one time I thought there were 20 of them. They too were hawking the alates. While I

often see the odd individual passing through my garden, I had never seen a group as large as this. How did they know there was a irruption of flying ants there? I once saw a male in my Caracas garden hawk a small moth from the air.

They normally feed by clinging to stems and taking the seeds of grasses and sedges, buds and leaves. My observations show their preferred food is the half-ripe seeds of Guinea Grass. They will work their way along paths through gallery forest, feeding from clump to clump. I was watching them amongst low-growing weeds on a mountain path in the Henri Pittier National Park, when some individuals dropped to the ground and hopped about, apparently picking up something, but I was unable to identify what it was.

The contact call is a sharp slightly querulous chirp, and also a sweet, slightly rising note. The song is a short but sweet outburst of twittering rolling notes that for me are rather reminiscent of those of a small, wild European Serin *Serinus serinus*. It lasts about one and a quarter seconds (which may seem astonishingly short to those accustomed to the comparatively languid song of larger birds, but is pretty typical for this type of bird). The male in my aviary will fly up to its favourite song perch, raise its head to an angle of about 45° and immediately utter a burst of song. It will look around and then utter longer versions, though never of more than two seconds, often with the wings held slightly away from the body and occasionally with a slight quiver. During these longer performances the head is not raised but held at a normal angle. I once saw a full display. The pair was very excited about a nest site, and it seems that this was part of the site acceptance process. Both birds travelled at an angle up into the bush, then out again, returning by the same route. The male was perched for much of the time in a position where the female passed before and below him. He spread his wings wide and held them drooped or hooded, and his tail was raised slightly and spread. He sang the whole while at the female as she quickly passed up into the crown of the bush, whereupon he followed her. I was unable to see if copulation followed. This happened twice in quick succession, and while moving, the female also had her wings slightly open and fluttering, and her tail slightly cocked and slightly fanned.

In the wild, breeding begins about six weeks after the start of the rainy season, by which time the grasses have grown to a good height and have begun seeding. Here in northern Venezuela the rains usually begin in April, though it is not uncommon for them to begin earlier. From the size of the gonads of 27 adult males and 16 adult females noted on the labels of these specimens from Venezuela in the Phelps Ornithological Collection, birds are in breeding condition from May-October, with an apparent peak in June-August. One male in juvenile plumage, collected in June, had fully enlarged gonads.

In my experience, based on observations of several breedings in my aviary, it is apparently the female that selects the nest site, although there is no way of knowing whether the male had previously prospected it and indicated its desirability to the female. The site may be from about 1m (3ft 3in) to as high as 3m (9ft 9in) above the ground, and it is the female that starts to build the nest. The male will bring material and attempt to join in the building within an hour or so. Subsequently, both sexes gather and carry material to the site and both sexes participate in the construction of the nest. The finished nest is a deep cup made of grasses, reportedly lined with soft inflorescences and plant down but in the case of my birds, it was unlined. The nest looks quite flimsy, as do most *Sporophila* nests, but is surprisingly tough and durable. Nests in my aviary have withstood strong winds and very heavy rain, time and time again - often when there were eggs or nestlings inside. It is usually built in a small fork of twigs beneath a few leaves, but may be at the base of a palm leaf. In a detailed observation of a breeding in Panama (Alderton, 1961), the first few days, possibly even up to the first eight days of nest building, were spent binding gossamer threads of spiders' webs to the foundation of the nest before the first strands of fibre were put in place. This is undoubtedly why, despite looking frail, the nest is so well anchored and tough. It was found by French that the nest takes five to 12 days to build. In my aviary the nests have been built entirely of coconut fibre and have been bound by tying and rough knotting to the stems of a *Ficus* or a small bamboo. The four nests I have measured were 5cm (2in) across the cup and the inside of the cup was 5cm (2in) deep. They were invariably finished within a few days and the eggs were laid soon afterwards.

My aviary is attached to the house and goes right up to the roof. The floor of the aviary is 3.5m x 3.5m (approx. 11ft 6in x 11ft 6in) and has in the centre a shallow pond 1.5m x 1m (approx. 5ft x 3ft 3in). In the middle of the pond is a large tub containing a tall *F. benjamina* that reaches the roof. Half of the roof of the aviary is protected by the overhanging eaves of the house and plate glass over the mesh. The other half is open to the elements. The floor has heavy duty tiles and around the inside of the mesh sides is a row of *Phyllostachys aurea* bamboo and *F. benjamina* in tubs. These form a hedge that gives the birds some protection from wind and rain, and provide suitable sites for nesting.

The female of my pair first chose a plastic mesh canary nest cup that was attached to the wire, high up under the eaves of the house. She brooded the clutch, which I was unable to examine, for an incredible six weeks before abandoning it; the eggs being obviously infertile. During this time the male would perch nearby and chase away any bird that came near. He would sing frequently. Having deserted this nest, the female started prospecting for a new site and chose one in the top of the *Ficus*, only 1m (3ft 3in) from where

I sit and work at my computer, looking into the aviary. The female selected the site, and attempted to tie strands of grass to the stems. Having attempted this, she would then sit and wiggle as if she was moulding the nest cup, but the strands would fall away. The male came to this site with a strand or two, but did not attempt to build. This activity lasted a few days. The base of the nest was never formed.

The next day, May 12th, I saw the male flying into the *Ficus* much lower down. On examination, I found a nest partly built. The complete cup was constructed within three days and the female started sitting, so she must have laid almost immediately. Spiders' webs were not used to bind the threads. The nest was barely 5 cm (2 in) across and definitely 5 cm (2 in) deep. It looked really fragile. It was right up under the uppermost leaves of the *F. benjamina*, about 1.5m (approx 5ft) above the ground. When sitting in it the female could not be seen.

The clutch usually consists of two, or occasionally three eggs. These are oval and the ground colour is off-white to buffy (pers. obs. in Venezuela, including in the case of this breeding), greenish-white (Alderton loc. cit.) or pale blue-green (French loc. sit.). They are richly marked with a variety of spots, small blobs and whorls of dark browns that tend to form a halo or cap at the wider end.

Only the female broods the eggs and nestlings, but both sexes feed the young. They are fed by regurgitation, but after a few days some food may be carried in the bill and fed directly. The diet consists of a mixture of small insects and soft seeds, normally the half-ripe seeds of Guinea Grass. The nestlings normally fledge at between eight and 10 days. In this case, two eggs hatched apparently on the ninth day, and the third simply disappeared. The nestlings were always silent, and even begged silently (in direct contrast to the noisy estrildid nestlings elsewhere). On two occasions I managed to photograph the two nestlings and on the seventh or eighth day, as I approached, a nestling rocketed out of the nest. I caught it, photographed it and tried to return it to the nest. I failed in this, of course! I never found the second chick. Both parents could be seen combing the leaves, particularly the undersides, and all along the metal frame of the aviary, looking for minute insects. I provided them with baby mealworms, but these were ignored. The nest was kept immaculately clean, and I never saw any faeces in or around the edge of it. Again in contrast with estrildid nests.

There were terrible downpours of rain during the day and night, and how the nest and its contents survived I cannot imagine. I watched the fledgling as it withstood a downpour a few days after it had fledged. It faced upwards into the rain, tightly hunched, and slowly edged up the inclined perch until an overhead leaf gave it some small respite from the drenching. I believe that as a result of these horrendous rainfalls the previous year, I



Young Yellow-bellied Seedeater seven or eight days after it left the nest possibly prematurely.



This photo taken 31 days after it left the nest shows the colouring of its underparts.



Another view of the same young bird which shows better the coloration of its upperparts.



Chick in nest beneath the uppermost leaves of a *Ficus benjamina*.

had lost fledglings from two subsequent broods of Black-faced Grassquits, and was prepared to lose this little mite, but it survived. I managed to track the bird every few days, and found it sitting quietly high in the *Ficus*, only a few inches (centimetres) below the roof of the aviary. It called frequently, but its penetrating "seep" was not at all easy to pinpoint. Yet again, in contrast to estrildid fledglings, whose chorus of chattering makes them really easy to find.

In Trinidad, after the nestlings fledged, ffrench (loc. cit.) cut the nest out of the shrub in which it had been built. The birds returned and started to build a new nest in the same location eight days later. I intended to collect the nest in my aviary, but two days after the nestling fledged, the nest had completely disappeared. Not a single fibre remained; the nest had obviously been cannibalized by other birds in the aviary for use in building their nests. Following the above breeding, the Yellow-bellied Seedeaters bred twice more, and on both occasions behaved almost identically from start to finish. In every case the nest was dismantled and presumably the materials were used elsewhere either by the same pair of Yellow-bellied Seedeaters, or other nest builders, or both.

The juvenile is very similar to the female except that it is slightly duller and not so yellowish below. By way of a footnote, in mid-September I caught the youngster from the first nest and banded it (ringed it) yellow-yellow, to distinguish it from the female which is banded pink on the right leg. The youngster was fat and healthy and quite vocal whilst I was holding it in my hand. Its belly was by then a rich creamy yellow, like that of the female, and was both brighter and richer in colour than that of any of the specimens in the Phelps Collection here in Caracas. There was no sign of any black feathering on the head, so it could well prove to be a female. However, it is not known how long it takes for a male to attain adult plumage, so assuming that one of the young birds is a male, I should be able to discover the answer.

## References

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