TECHNIQUES

METHODS FOR TRAPPING QUAIL FINCHES *ORTYGOSPIZA ATRICOLLIS*

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Members of the Estrildidae (waxbills, finches, mannikins, etc.) are frequently caught during mistnetting (Barnard 1988, Scogings 1988, Brown 1991, Oatley 1991, 1992, Raijmakers 1992). This is probably due mainly to their predominantly granivorous diet, ensuring that they are regular visitors to artificial feeding sites, and also to their regular visits to water. Where arboreal estrildines are present, the erection of mistnets invariably provides the ringer with a number of these small seedeaters.

One member of this family however which is not often recorded on SAFRING schedules is the Quail Finch *Ortygospiza atricollis*. Oatley (*in litt.*) informs me that only 325 Quail Finch records occur in the SAFRING database. By way of contrast, some of the commoner estrildines ringed number close to this on an *annual* basis: e.g. Blue Waxbill, 667 (Oatley 1992); Common Waxbill, 356 (Oatley 1992).

The main reason for the poor representation of Quail Finches is due undoubtedly to the difficulties in trapping this primarily terrestrial grassland species. Ward *et al.* (1989) discussed trapping methods for various grassland species, including Quail Finches, but gave insufficient detail regarding the methods for this species.

MATERIALS AND METHODS

A number of different methods have been used in attempts to catch Quail Finches, with varying measures of success.

1. Vertical mistnet

Mistnets (12 m and 6 m) were erected in a fallow oats land on a farm in the Karkloof district, Natal, during 1986 in an attempt to catch Quail Finches which were abundant there. Birds were flushed both by walking through the land near the nets, and by driving a vehicle towards the nets. Nets totalling 84 m were in position for three days.

2. Funnel trap

Weld-mesh cages (800 mm x 400 mm x 400 mm), each fitted with two small wire funnels at ground level, were placed in grassland at sites (1,5 m^2) which

had previously been cleared and baited with seed.

3. Spring-hoop trap

This trap (Ward *et al.* 1989) consists of two semi-circles of heavy-gauge fencing wire attached to a large steel rat trap. One piece of wire is fixed to the substrate, while the other is attached to the spring mechanism of the trap, which, when activated, springs open to form a circular hoop-like structure. An oversized piece of mistnet is attached to the circumference of the open trap. The area inside the trap was baited with seed, and cardboard Quail Finch decoys, together with sound recordings, were used to attract birds to the site.

4. Horizontal mistnet draped over vegetation

This method involves spanning nets of various lengths over vegetation associated with water or marshy areas, where Quail Finches drink and bathe. Nets are anchored at each end by ropes threaded through the shelf loops (which would normally be held by poles when nets are erected vertically). The rope ends are pegged to the ground. The two outermost shelf loops should be fastened in such a way so that they do not slide on the rope, thereby maintaining the tautness of the net and separation of the shelf loops. The net is then draped over the vegetation, either over the water, or at the water's edge. Care should be taken not to stretch the net too much, and the net should be raised, if possible, about 200 mm above the water's surface. This can be done by placing stakes (sticks, other pieces of wood or similar material) under the anchoring ropes. If the vegetation is of a suitable height, such stakes are unnecessary.

It is easiest for two people to lay the nets in the following way:

1. Space the shelf loops of the net onto two poles (about 1,5 m long). This allows the net to be easily untwisted if necessary.

2. Using the poles, the unfurled net can be lifted free of vegetation, and moved into the desired position. Carefully lower the net into its position.

3. With the poles still in place, thread the anchoring rope through the shelf loops and peg each end of the rope to the ground. The poles can now be removed. Take care not to peg the rope too tightly, as this brings the net close to the water surface. Some slack in the rope allows for the insertion of supporting stakes if required.

4. Space the shelf loops as required on the rope, and fasten the two outer loops to the rope to prevent them slipping, causing the net shelves to concertina.

5. Spread the net carefully over the waterside vegetation, ensuring it is not too taut. Place stakes in position to raise the net to the desired level above the water.

Choice of trap site

Choosing the correct net site is the most important aspect in determining the effectiveness of this

method. Quail Finches are erratic in their choice of feeding site, but appear to use the same drinking and bathing sites on a regular daily basis. Such sites are usually situated where sufficient vegetation cover is present close to the water. Careful observation of this species will show that birds coming to drink usually land a short distance from the water before venturing to the water's edge to drink. Very often the birds will then retreat to the shade of a nearby grass tussock to rest, or to preen if they have bathed.

The ideal trapping site is therefore a shallow waterbody offering vegetation cover right at its edge, providing shelter for the birds. Nets could be sited partly over open water and partly over the vegetated shoreline.

Quail Finch behaviour and trapping effectivity

Quail Finches are largely terrestrial, and drink dew if available from vegetation early in the day. Visits to standing water will thus be mostly during the hotter hours of the day, after a period of feeding, and when dew is no longer available. Trap successes should therefore be highest during the period mid-morning to mid-afternoon.

Because of the dangers of high ambient temperatures at this time, and that of birds drowning as they dangle, helpless in nets, frequent net checks must be made.

5. Other methods

One other method involves placing pieces of mistnet around small bushes at the edges of waterbodies (J Grosel, *pers. comm.*). This method has apparently been used effectively in dry areas where birds must move from the shelter of small clumps of vegetation some distance from water, to the water's edge to drink. The pieces of net are draped in such a way that the birds become entangled when returning to or leaving the shade of the small bush.

RESULTS AND DISCUSSION

Although Quail Finches visited sites where funnel traps and spring-hoop traps were set, none were caught. Two birds only were caught in vertical nets, using a vehicle to flush them from beneath the nets. Of the methods described, the horizontal net method is the most effective and efficient. During three hours of trapping along a small stream at Oribi, Pietermaritzburg, Natal in March 1987, in excess of 60 Quail Finches were caught using 36 m of nets. This was an exceptionally good site, which made use of water flowing over flat, black rocks in grassland. The dark rocks made the nets invisible to incoming birds. More recently, during monthly outings (November 1991 – September 1992) to a pan near Petrusburg, Orange Free State, a total of 130 Quail Finches have been caught and ringed using the horizontal net method. Details of daily and seasonal differences in abundance of these birds at the ringing site will be published elsewhere.

The exclusivity of this method for trapping Quail Finches is indicated by the low numbers of individuals of other species caught at the Petrusburg site (Table 1). No record was kept of numbers of birds of other species caught at the Oribi site, but species

included Orangebreasted Waxbill *Sporaeginthus subflavus*, Red Bishop *Euplectes orix* and Orangethroated Longclaw *Macronyx capensis*.

Although birds of other species are caught at the Petrusburg site, these often actively avoid the nets, and drink rather at more open areas away from the nets. Quail Finches, however, favour the more vegetated areas, and, presumably also as a result of their almost vertical landing approach, are caught more frequently. Most are caught when landing, while a few are also trapped when taking off, especially when flushed by someone walking nearby.

The advantage of the horizontal net method over the others using mistnets is that the nets are not as easily visible to incoming birds when landing, whereas vertical nets are highly visible in such open habitats. The horizontal net method capitalizes therefore on the vertical take-off and especially landing behaviour of these small birds, on their preference for vegetated watering sites, and on the low visibility of nets to approaching birds.

The technique described is a useful tool with which to study these fascinating birds. Potential exists for the study of local or nomadic movements, of moult and other morphological development (particularly seasonal changes to soft parts and plumage), and the population dynamics of this species. The greater the number of ringers involved in handling these birds, the easier it will be to learn more about this somewhat elusive high-flier that we often only hear and rarely see.

TABLE 1

NUMBERS OF BIRDS TRAPPED AT PETRUSBURG SITE:
NOVEMBER 1991 – SEPTEMBER 1992

SPECIES	NO. OF INDIVIDUALS
QUAIL FINCH	130
NAMAQUA DOVE	2
LARKLIKE BUNTING	3
LEVAILLANT'S CISTICOLA	3
CAPE WAGTAIL	2
GREYBACKED FINCHLARK	6
KAROO ROBIN	2
THREEBANDED PLOVER	1
GOLDEN BISHOP	2
RED BISHOP	4
CAPE SPARROW	5
BLACKCHESTED PRINIA	1
REDHEADED FINCH	3
YELLOW CANARY	1
TOTAL	169

I would be happy to give advice regarding choice of net sites and other queries relating to these birds. I would also appreciate receiving mensural data for Quail Finches, and should anyone embark on a ringing project involving this species, please let me know.

ACKNOWLEDGMENTS

I am grateful to the Council and Directors of the National Museum for allowing me to publish this paper, and to Dawie de Swardt for his assistance in the field.

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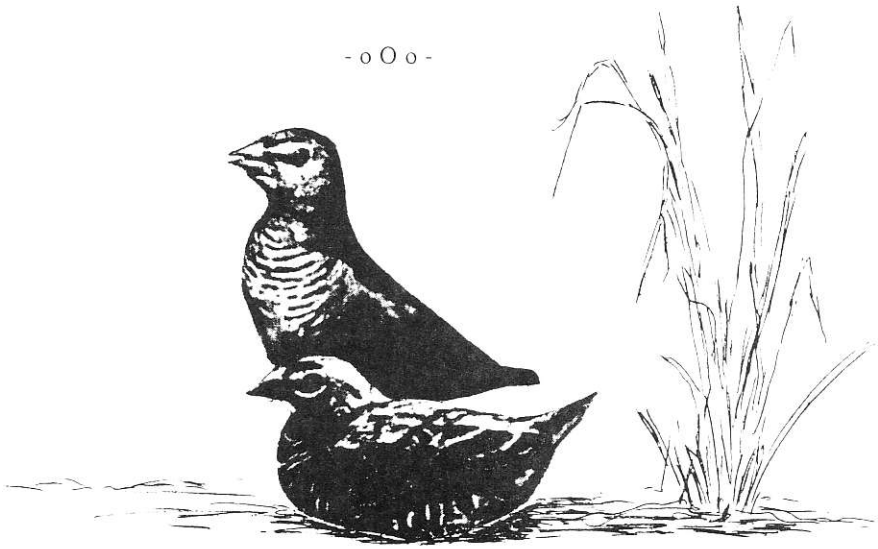

Knowledge of effective ways of trapping Quail Finches could be misused by commercial bird trappers supplying the cage bird trade. Although SAFRING NEWS has a select private mailing list, readers should take care that their copies are not made available to those that might illegally profit from knowledge of effective trapping techniques. **[Ed.]**