Quail Banding at Mudgee, New South Wales

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During the period from 15 January 1969 to 22 March 1970, 651 quail of four species were banded near Mudgee, N.S.W. Details of the species banded, the method of capture and its effectiveness, and changes in weight are set out.

The quail were banded on several adjoining properties at Stoney Creek, some 12 miles east of Mudgee, using a spotlight and a hand net as the means of capture. Of the 651 quail banded, 42 were retrapped on one occasion each and 10 others were shot for specimens for a joint survey being carried out by the Division of Wildlife Research of the CSIRO and the National Parks and Wildlife Service of N.S.W. Details of the plumage characteristics, sex, colour of soft parts, and since mid 1969, the weight of each bird have been recorded.

Method of Capture

The method of capture used during the study requires two operators, but works better with three. Quail are 'spotlighted' from a motor vehicle while it is driven around grass or stubble paddocks. One operator uses a spotlight while the other uses a hand net. The vehicle is driven around the paddock until a quail is flushed from the ground. The headlights are put out, the flying bird is kept in the spotlight beam, and the vehicle follows, stopping close to where the bird lands. As the squatting bird is 'held' in the spotlight beam, the third operator drops the hand net over it. When only two operators take part, the driver uses the hand net.

When the quail are captured, they are placed in a mesh bag in an open wooden box 24 inches by 8 inches by 6 inches and covered with a sack to prevent them damaging themselves. When the spotlighting is finished in each paddock, the quail are banded and released, and the operation moves to the next paddock.

The spotlight used is a 'Lucas Long Range' 12 volt 48 watt, type SLR7005. The hand net has a five feet long bamboo handle which screws onto a wire hoop 30 inches in diameter. The hoop is covered with one inch fibre net. The bamboo pole is quite flexible and this assists when dropping the net over the squatting quail.

The four species of quail caught during the operations are Stubble Quail *(Coturnix pectoralis)*, Brown Quail (*Synoicus australis*), Little Quail (*Turnix velox*), and Red-chested Quail (*Turnix pyrrhothorax*). In addition to the quail, other species caught include Maned Geese (*Chenonetta jubata*), Pipits (*Anthus australis*), Horsfield Bushlarks (*Mirafra javanica*) as well as rabbits but these were not banded!

Effectiveness of Method

Eighty-eight successful trips have been made averaging 6.8 quail per trip. No record was made of unsuccessful trips nor was the elapsed time of each trip noted. However, each trip usually lasts about two hours. The maximum number of quail caught in any one night was 55 birds. Between July and November (1969), few quail were caught because of the wet conditions which restricted vehicle movement and the fact that growing wheat and oat crops would have suffered considerable damage if the operations had not been curtailed considerably.

Windy and moonlight nights reduce the effectiveness of the method and best results have been obtained on cloudy, overcast nights or when the moon is in its first quarter. Approximately 70 per cent of quail flushed are captured successfully. More males than females have been caught and the males generally fly shorter distances.

Banding Details

The banding figures for each species, the number retrapped and those recovered shot, are set out in Table 1.

TABLE 1

Species	Number Banded	Number Retrapped	Number Recovered Shot
Stubble Quail	573	40	10
Brown Quail	1	—	—
Little Quail	44	—	2
Red-chested Quail	33	2	—
Total	651	42	12

The banding figures do not indicate correctly the proportion of each species present. From observations made when working with dogs in the same paddocks, it appears that the populations of Red-chested Quail and Little Quail are greater than the banding figures indicate. These two species prefer to run away from the motor vehicle during the spotlighting operations rather than flushing.

About eight per cent of the banded quail have been retrapped or shot. The longest elapsed time between banding and recapture for any individual was that of a Red-chested Quail (040-07416) which was shot 75 days later at the banding site. One Stubble Quail was retrapped 62 days after banding, five others over 50 days later, but the majority were retrapped within a few days of banding.

Two Stubble Quail were retrapped one month after banding half a mile from the banding location; all other "recoveries" occurred at the banding site.

Weight Variation

The quail are weighed in a cardboard cone, using "Pesola" 300 gramme scales. The changes in weight recorded for Stubble Quail are shown in Table 2.

Acknowledgement

I wish to express my appreciation for the co-operation shown by the property owners, who, with their families, assisted in various ways, making this survey possible. I would particularly thank Norman Kurtz, now a fellow bander, for his assistance.

A. K. Morris,
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TABLE 2

Band Number	Age	Date Banded	Weight	Date Retrapped	Weight	Gain or Loss
060-						
75407	J	23.1.70	48 grm	24.2.70	92 grm	+44 grm
				21.3.70	104 grm	+56 grm
75450	J	13.2.70	89 grm	24.2.70	109 grm	+20 grm
75451	J	13.2.70	55 grm	22.3.70	106 grm	+51 grm
75452	I	13.2.70	95 grm	24.2.70	94 grm	− 1 grm
75453	J	13.2.70	82 grm	24.2.70	101 grm	+19 grm
75454	J	13.2.70	85 grm	24.2.70	93 grm	+ 8 grm

Index to Current Australian Ornithology

The Field Investigation Committee of the Royal Australasian Ornithologists' Union is attempting to compile and publish an index to current ornithological research in Australia. This will not be a bibliography of published work, but a guide to research, in all phases, now being undertaken. Personal entries will be listed alphabetically by researcher's surname. Indices to species and fields of research will be provided.

The publication should contain sufficient information to enable the reader to determine the species being studied by another, the aspect of life history, and the broad field of investigation. It should enable a reader to determine who is working on what, and give him a ready means of assessing the relevance of other studies to his own, facilitating correspondence among individuals with common research interests.

Both amateur and professionals are urged to participate. Details should be sent or standard forms requested from the compiler: **Dr Douglas D. Dow, Department of Zoology, University of Queensland, St Lucia, Brisbane, Queensland, 4067.**