

The Australian

BIRD BANDER

A Winter Population of Pied Currawongs

P. D. STRONG

An account is made of banding the Pied Currawong (*Strepera graculina*) near Wollongong, N.S.W. The large size of the winter population is demonstrated, and notes are given on age characteristics of individuals and the age structure of the population. The recoveries are discussed.

The Pied Currawong is a problem bird. It is on the list of unprotected fauna for its attacks on orchards, but the forester holds it in high esteem for its attacks on stick insects. Its movements after its winter flocking are a mystery. It is a worthy object of study, and these notes are penned in the hope of interesting others to take up what the writer has had to leave uncompleted. Conclusions are tentative only, due to limited results.

Trapping

During the 1963-64 financial year I banded 278 Pied Currawongs in back yards at Austinmer, and a further 26 at Woonona, 3 miles SSW from Austinmer.

This success may be due to Austinmer's situation at the northern apex of a well populated, narrow, tapering coastal plain, which is the Wollongong area. The western boundary of this plain is a 1,000 ft. scarp, and further to the west is a dissected and unpopulated water-catchment area.

During the winter, a very large population of Currawongs invades the closely-settled coastal plain. These opportunists forage for food scraps and exotic berries in addition to their usual foods. The population is concentrated at times during the day at Austinmer, by the "funneling" of their foraging area in the convergence of scarp and coast-line, by the retention of trees within this village, and by the relative proximity of roosting sites in protected wet sclerophyll forest on the scarp.

My trap was large (see diagram), however I would recommend an even larger trap. The maximum number of Currawongs held was nine. At this point it might appear too crowded for more to enter, due to animals' tendency to keep a certain minimum distance between themselves. I generally placed the trap in tall Eucalypt woodland in the middle of the settlement. It was baited with large amounts of bread torn into rough chunks, and soaked in water.

During most of the day, stragglers were given a free feed with the door open. However, when the large flocks paid their regular visits at about 8 a.m. and 3 p.m., they were trapped either by the funnel or by the door, depending on the amount of supervision possible and on their changing preferences.

Jack Walsh (1965) used a top entrance trap with some success. This could be incorporated into the design in the text figure, and three alternative methods of operation would prevent the birds from "learning" the trap. Thus problems in re-trapping mentioned by Walsh would be decreased.

When catches fell, increased free feeding was made. When this failed, the trap was merely moved across the road, and successful trapping resumed.

It is therefore suggested that the birds associated danger more with the immediate locality than with the trap.

Care was taken to quickly place the birds in onion bags and remove them, to minimise scare to the rest of the population.

This trap was also successful in catching 35 Satin Bower-birds (*Ptilonorhynchus violaceus*) which associated with the morning flocks of Currawongs.

Size of Population and Population Density

The winter population in this area is very large. Flocks of 100-200 were common, and a sighting of banded bird was rare. Indeed, only 6 live retraps were made out of 304 banded. Sight records suggest lack of dispersal from the plain and scarp during winter. This would result in a high population density (population per unit area per unit time).

However, Doug Gibson reports (*in litt.*) that a bird he had banded in Thirroul (next to Austinmer) on 15.4.62 was found dead at the end of July, 1962, 8 miles NNE on the elevated plateau beyond the coastal plain, at Helensburgh. (This is the only Currawong Gibson has banded, making 100% recovery.) The winter movement of this individual suggests that an estimate of local population density must be made with caution. Nevertheless the area containing the winter population may still be quite circumscribed, though its boundaries may extend on to the plateau above the coastal plain.

Age of Population

Age characteristics

Young birds have "all the feathers on the throat, breast and abdomen edged or tipped with brown", (North, 1901). However, I found an extreme variation in the amount of brown on "young" birds, from birds fitting North's description, to birds having a limited and indistinct wash. I examined a random population from 1.5.64 to 7.7.64 and recorded the presence of brown, together with other possible juvenal characters such

TABLE 1

Numbers in random sample of Pied Currawongs from 1.5.64 to 7.7.64 at Austinmer, N.S.W., having various combinations of possible age characteristics.

Gape	Brown feathers	No brown	Bill
Swollen and light-coloured	14	4	Horn tip
	1	5	No horn tip
Not swollen and a darker colour	4	2	Horn tip
	3	9	No horn tip

Total Sample = 52

as a swollen and light-yellow gape, and a horn coloured tip of the lower mandible.

Although the sample was small and the measurement of gape colour was somewhat subjective, it would appear that the above three factors measured must be taken into consideration to determine age.

Assuming that North is correct in correlating brown feathers with immaturity, then Table 1 shows a positive correlation between immaturity, a horn tip of lower mandible, and a swollen and light-coloured gape. Therefore a definitely immature bird may have these three characters, and a definitely mature bird may have no brown feathers, a darker coloured gape which is not swollen, and a totally dark bill. This leaves, however, a relatively large indeterminate and transitional (?) population. Only extensive sampling together with the examination of the gonads will uncloud this issue.

Varying age structure

Using the gape alone as a test of immaturity, it was found that from April to May there was a rapid decrease in the percentage of immature birds.

TABLE 2

Age structure of random sample of Pied Currawongs in April and May, 1964, at Austinmer, N.S.W., using gape as test of immaturity.

	Adult	Immature	Indeterminate
April, 1964	17	54	3
May, 1964	50	53	10

It seems more likely that there was an influx of adults during May, rather than a change in gape characteristics of the birds present in April. Sight records as well as a 30% increase in banding indicate an increase in total population. This eventual movement of adults may be due to a breakdown of territorial bonds in the face of progressively unfavourable winter conditions, and social attractions eventually outweighing gonadal influence.

Recoveries and Movement of Population

All my recoveries, except one made 3 miles NNE at Wombarra, were in a southerly direction. All were near the coast except one 49 miles WSW at Penrose† which is approximately 36 miles inland. An interesting recovery was made at Nethercote,† N.S.W., via Pambula, 200 miles SSW. Those distant from the Wollongong area were made after the population had left this area.

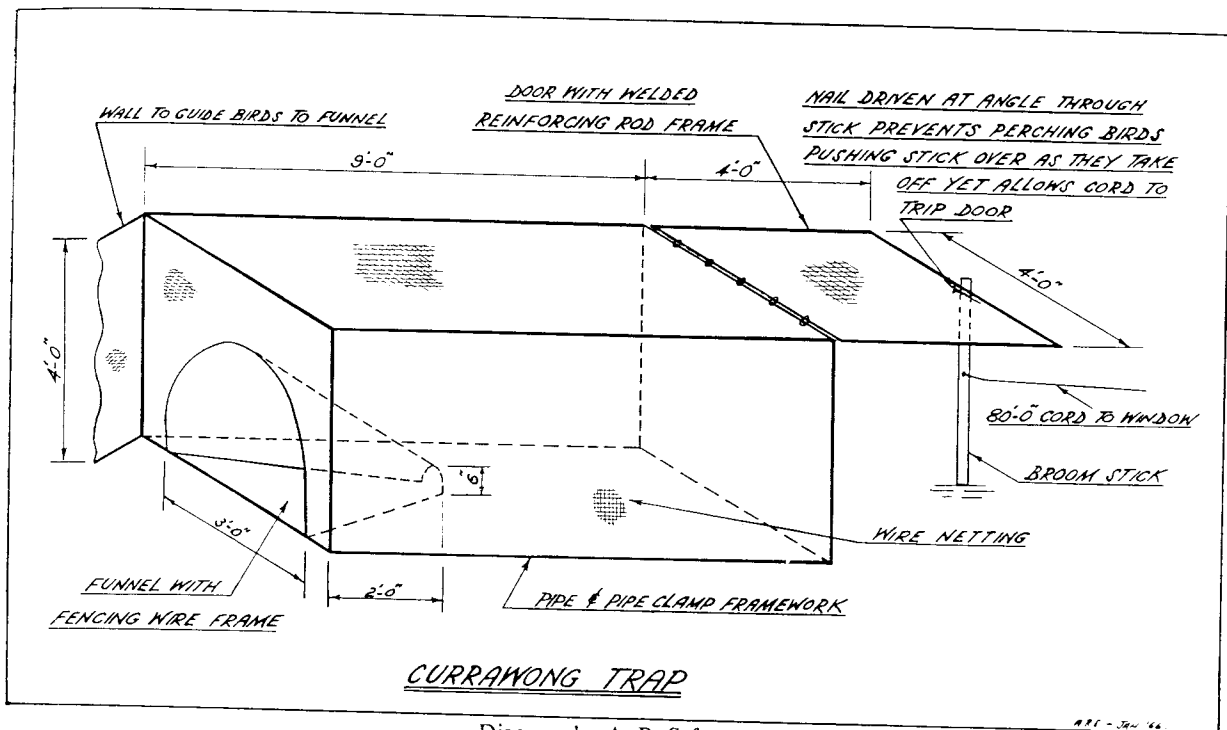


Diagram by A. R. Sefton.

TABLE 3

Recoveries of Pied Currawongs banded at Austinmer, N.S.W., during 1963-64 financial year.

Distance in miles from banding place.	No. recovered	Locality
0	11*	Wollongong
1-5	5	"
8	1	"
49	1	Penrose
200	1	Nethercote

* Includes six live retraps.

Currawongs are thought to make an altitudinal migration. This arises from sightings of larger numbers in elevated areas during the breeding season, and larger numbers in the lower areas during the non-breeding season.

Significant evidence concerning specific horizontal direction is not available. In the absence of specific direction, a random movement within geographical limitations must be suggested.

The recoveries listed in Table 3, and the absence of northerly recoveries with only 20 miles' distance from the heavily populated Sydney area, do suggest a southerly movement from this area. Unfortunately they have low significance, considering their small numbers, and the fact that

recoveries depend on human settlement. (The surrounding area is sparsely populated, with the exception of the coastal plain).

My Penrose† recovery, Noel Burnett's Armidale† recovery, and Jack Walsh's Goulburn recovery (Walsh, 1965) lend support of relatively low significance to a southerly movement to higher altitudes.

However, long-distance recoveries from a high-altitude banding station maintained by D. J. Wimbush at Island Bend, Kosciusko Region, do not show the expected converse movement (5th, 7th, 8th Annual Reports of the Australian Bird Banding Scheme).

I have not found any other recorded long-distance Currawong movements. We must therefore return to the original hypothesis of random altitudinal migration.

References

Lane, S. G. and Liddy J. (1965), "Backyard Trapping", *Aust. Bird Bander*, 3:9-13.
 North, A. J. (1901), "Nests and Eggs of Birds found breeding in Australia and Tasmania", White, Sydney, 1:8.
 Walsh, J. E. (1965), "Notes on the Pied Currawong", *Aust. Bird Bander*, 3:53.
 P. D. Strong, 166 *Mary Street, Grafton, N.S.W.*

† See Recovery Round-up p. 19.