

METHODS

Distribution was determined by sight records and by examination of published records; changes in population from published records, conversation with old identities in the districts, and records of liberations. These were correlated with the decrease in forest area and land development.

Due to the nature of the country in the study area it was not possible to visit every part. Some of the steeper and more inaccessible country was viewed from the air and vegetation surrounding the ponds was recorded. When possible these were later visited on foot and measured. A total of 400 ponds was visited. The size of ponds carrying broods, distance from nearest tree, type of vegetation in and around the pond, age and number in brood were recorded.

Moulting, post-moulting and non-breeding flocks were recorded for numbers, sex ratios, type of pasture on which they were feeding, the size of the nearest pond and the distance to it.

FEEDING

The goose-like trait of grazing exhibited by Paradise is evident when large flocks congregate after moulting. They are reputed to damage pasture by pulling grass, particularly in new pastures or crops and by fouling it. This was recorded as early as 1871 by Travers (p. 207).

The density of birds per acre varies with the time of the year. Table III shows the order of density per acre for the larger autumn post-moulting flocks and the smaller spring non-breeding flocks. The areas over which the birds were feeding at a particular time were paced out, converted and corrected to the nearest half-acre. Single birds apart from the main feeding flocks were discounted, but the flocks do not remain static, moving in several directions at once. If disturbed the birds may fly to other parts of the paddock or to another paddock, but if undisturbed the area grazed seems to be not much greater than the area they were first observed feeding on.

TABLE III.—ORDER OF DENSITY OF BIRDS PER ACRE

Type of flock	No. of birds counted in flock	Approximate area birds feeding on	Order of density/acre
Post-moulting	966	2.0 acres	485
	429	1.5 acres	285
	393	5.0 acres	80
	293	1.0 acres	295
	146	1.0 acres	145
	127	1.5 acres	85
	85	0.5 acres	170
Non-breeding	121	2.0 acres	60
	91	0.5 acres	180
	50	1.0 acres	50

The spring non-breeding flocks are often found on or near the areas where the autumn post-moulting flocks feed, as well as elsewhere. The density is not as great, the smaller flocks feeding over a relatively greater area than post-moulting flocks. As Table IV shows, the post-moulting flocks are very close to water, generally a stock pond. Feeding takes place not only on the best paddocks in the vicinity, but on the greener parts, which are usually near the pond or its outflow.