

# **OBSERVATIONS ON A CATTLE EGRET (*Bubulcus ibis*) NEAR CHRISTCHURCH AIRPORT, JULY TO OCTOBER 1974**

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## **ABSTRACT**

An immature Cattle Egret was observed over a period of three months. The ecosystem in which the bird was placed is discussed with particular reference to the associated cattle, territory occupied and interaction with other herons and with humans. Notes are given on aspects of behaviour including feeding, resting, preening and flight characteristics.

## **INTRODUCTION**

On the morning of 11 July 1974, one of us observed a NZBC cameraman taking photographs of what appeared to be a smallish white heron which was walking about in a field a few metres from the road on the east side of Harewood Road, several hundred metres north of the junction of Pound Road near the Christchurch airport. The bird appeared little concerned with the attention it was getting and stalked about casually amongst members of a herd of red and white and black and white cattle grazing there. It appeared completely oblivious of the passage of noisy, heavily laden shingle trucks, which were passing every few minutes. Later, the bird was to become quite wary of any direct human attention. Since no telephoto lens was available it was deemed necessary to approach as closely as possible, so a slow stalk was commenced. At a distance of about 5 metres, the bird suddenly showed alarm and flew off parallel to the fence, alighting near the western boundary of the field. Several rather unsatisfactory 35 mm Ektachrome colour slides were obtained.

Initially, some difficulty was encountered in positively identifying the species to which the bird belonged. There were a number of reasons for this, apart from general ignorance which we freely concede. Firstly, the bird appeared virtually identical in every respect other than size to a White Heron (*Egretta alba modesta*). This included its relative proportions which were checked against an excellent colour slide of the latter made by M. Landreth in the stream bed behind Staveley the previous autumn. Its size agreed most closely with that of the Little Egret (*E. garzetta*); however, the single yellow colour of the beak and the absence of bare skin on the face did not tally. To add to the confusion, one of us had made at least two, if not three sightings of Cattle Egrets during the preceding one-and-a-half decades in Canterbury, the birds being on each occasion in the "buff" phase and regrettably without realising the ornithological significance or that there was an eclipse plumage which differed. The identification was established to our satisfaction by joint reference to standard works

(e.g. Falla, Sibson & Turbott 1970), to previously published material (Westerskov 1974) and by private communication by one of us with Messrs G. Harrow and G. Tunnicliffe.

It was determined to establish a watch and to keep the egret under observation for as long as possible. To this end one or the other of us managed to visit the site several times each week for the succeeding three months.

### THE SITE

The field in which the bird spent most of its time while under observation is substantially rectangular, both boundaries being some hundreds of metres long, with a cut-out in the north-east corner, being bounded on its north side by a hedge in front of an irrigation ditch, its east side by a line of conifers (*Pinus radiata*), its south side by a wire fence and Harewood Road and on its west side by conifers and a patchy hedge. Although flat in the overall sense that it is not pitched in any direction, it is traversed diagonally by ridges between hollows of several metres depth made by an old watercourse system associated with the Waimakariri river. It was sown with pasture grasses for cattle feed and this was being supplemented with hay and silage from time to time. Near the south-east corner of the field there is a large barn painted a dark green, behind which the egret would take refuge at times when it became aware of undue attention. Near the south-west boundary there are several pine trees and posts adjacent to a farm house and on one of these in very wet weather, the bird would sometimes perch between feeding sessions.

### THE CATTLE

This pasture contained a herd of perhaps twenty red and white and black and white cattle beasts, together with several riding hacks which came and went. During one phase of its two distinct modes of feeding behaviour, the egret associated closely with the cattle; yet it was never observed to ride about on any of the beasts' backs as has been noted elsewhere. It was also most noticeable that at all times the cattle appeared to accept the presence of the bird without resentment, even to the extent of being prepared to move out of its way. Reciprocally, the egret showed little fear of them and was apparently undisturbed when actually struck by the whisking of the beasts' tails.

### TERRITORIAL BEHAVIOUR — THE SYSTEMS CONCEPT

To a human observer, this field with its herd of cattle, occasional ponies, several Australian magpies and a flock of Chaffinches, appeared to differ in no significant or ascertainable way from any number of nearby fields containing herds and yet there was a definite attachment by the bird, either to a particular piece of territory, or a particular herd or perhaps more likely, to the unique combination or "system" which they, together with unnoticed factors, comprised. This was

made evident whenever the bird was sufficiently disturbed to fly an appreciable distance, when it could have quite readily joined a similar herd in an adjacent field near a hedge, or to continue circling until it deemed itself safe to rejoin the selected cattle.

There were only two occasions when it was observed to have crossed over the western boundary into a field shared at times by the same herd of cattle; once when disturbed on the afternoon of discovery and on the occasion of its last sighting on 9 October when the cattle had been cleared from the original field for over a week. During the period of observation on those occasions when the bird was not immediately visible, the adjacent fields and herds, at distances of up to two kilometres from the site, were searched unsuccessfully to find out whether the bird had an alternative range. Often the egret appeared after some time, having been hidden in one of the hollows and/or by the flanks or legs of the cattle with which it associated.

### FEEDING BEHAVIOUR

There were two distinct phases of feeding; the commensal relationship when the bird attended the various beasts in the herd, moving between their feet, having to dodge aside to avoid being repeatedly struck by swishing tails, etc., quite evidently without fear and with total acceptance by the cows. At such times observation through binoculars showed that it was picking up worms, grubs and insects from the ground, presumably disturbed by the beasts' feet. Since our bird, "*Ardeola*," was never noticed perching or attempting to perch on any of the cows, it was presumed that an absence of ticks may have resulted in a diminished incentive. It would be presumptuous to enlarge on the relationship observed between the bird and the cattle on the basis of these limited observations. However, it was apparent, subtle and extant to a sufficient degree at times to be able to say that there appeared to be some mutual communication whereby the bird established itself, knew and was known to, accepted and was accepted by, the cattle. It is our conclusion that observation and analyses by persons versed in communications techniques should be rewarding.

In the second phase, the bird stalked along by itself often parallel to the western or northern boundaries of the field, or in one of the hollows, occasionally stabbing or thrusting with its beak when it was seen once more to have worms or insect larvae in its bill. The movements of the bird were less desultory and distinctly more purposive at such times, although on wet and cold days it frequently had a most dejected appearance, interspersing its feeding with protracted periods of sitting one-legged upon a pole.

From the lack of interest of the many passers-by, it must be assumed that many persons mistook the bird for an escaped White Leghorn hen from the nearby farm. Its behaviour certainly subscribed

to such a conclusion on one occasion when it was seen to be alternately walking and scratching its way through a pile of recently dropped silage, picking out grubs in a manner reminiscent of a domestic fowl.

#### RESTING AND PREENING BEHAVIOUR AND APPEARANCE

Another occasional gesture which was also reminiscent of the behaviour of Pea Fowls was the stretching of one wing towards the ground with all the flight feathers distended. Since the wing is relatively of enormous size, the subsequent retraction and folding into the normal resting position is a study in elegance of design and performance. When not feeding, the bird had a habit of resting for longish periods of time — several tens of minutes — one on one leg, showing a distinct preference for the left, the other being fully retracted out of sight. On a number of occasions when it recommenced walking, the bird appeared to be distinctly lame for a minute or two, after which time the stiff limb evidently regained full mobility. This one-legged stance might occur on the ground or when perched on the post described previously. Preening was irregular and never protracted in our experience and was sometimes carried out between picking up insects and sometimes while resting. Some birds, e.g. Spurwing Plovers (*Lobibyx novaehollandiae*), appear remarkably spruce at all times; the Cattle Egret had a wide range of appearances from the picture of elegance with every feather in place, to a somewhat untidy and distinctly dejected state, with some feathers wind ruffled.

#### INTERACTION WITH ALLIED SPECIES

Several hundred metres west along Harewood Road from the field occupied by the Cattle Egret, there are several tall pines which are used as a roosting place by a pair of White-faced Herons (*Ardea novaehollandiae*). On one occasion these birds overflew the egret at about 30 m altitude, with the lighting conditions such as to present silhouettes. This produced clear evidence of some degree of recognition, evidenced by disturbed behaviour. The bird ceased feeding and moved agitatedly for several seconds and appeared to be preparing to fly after them, then it settled down to feed once more.

On another occasion, the pair of White-faced Herons flew in, landing in the field near the north-west boundary and commenced to work their way diagonally towards the south-east corner. The Cattle Egret vacated the field immediately and flew up into the lower branches of an old willow tree near one of its resting places beside an irrigation ditch on hot afternoons. It hopped and flew from branch to branch in a most agitated fashion watching the other herons feeding, while they took no evident notice of it. Eventually it flew off in a northerly direction.

Contrary to Westerskov's remarks (1974) to the effect that the Cattle Egret is a socially inclined species, this bird appeared resentful of intrusion.

### FLIGHT CHARACTERISTICS

Consequent upon various disturbances such as attempts to get close enough to photograph the egret and occasionally from movements of its own volition, there were opportunities to observe take-off, climbing flight, gliding and landing behaviour. The apparent speed and ease with which the bird became airborne, stood out in sharp contrast to its evident reluctance to fly when disturbed.

It preferred to stalk away if there were sufficient time and room; although on a few occasions it flew short distances with no apparent stimulus. At take-off it appeared to jump into the air, presumably to allow freedom for the down-beat of the large wings. The rapidity of climb evidenced a considerable power to weight ratio; while sustained flight showed the slow wing beat of the herons generally. On several occasions, after circling the field several times at altitudes between 50 and 30 metres the bird would glide down at a shallow angle and at considerable speed to make a "wheeler" style landing terminating in a short run. It appeared to prefer this to stalling in and using its wings and tail as air-brakes. However, it was quite capable of making "parachute" type landings, as was evidenced when it was flying about from branch to branch of the willow tree, landing atop the post, etc.

One quite remarkable feature was the fashion in which the bird locked its legs, placing one foot over the other and interlacing the toes in preparation for sustained flight. It was immediately clear that this would increase rigidity and reduce parasite drag from its undercart to a minimum.

### INTERACTION WITH HUMANS

It was apparent throughout the period of observation that this bird took no notice whatsoever of moving motor transport, regardless of noise, size, colour, etc., and, initially, of stationary vehicles or their occupants. Regretably, however, it appeared as a direct result of deliberate approach to become increasingly aware and restive in the presence of vehicles stopping nearby and would walk away or fly off if it saw persons leaving them, usually to alight two or three hundred metres away in the north-west corner of the field where it sometimes took refuge in a ditch.

### GENERAL APPEARANCE

#### *Size:*

At best this could only be estimated by comparison with fence wire spacing, the size of other birds — the White-faced Herons for example — and the size of the cattle. It is believed to have been about 55-60 cm with the head lifted and the neck straight. It was slightly smaller though not by much than either of the white-faces.

*Shape and Proportions:*

The body appeared very slightly less slender than those of the two White-faced Herons; similarly, the neck was not so long in proportion when extended. The bill, however, appeared to be of identical shape. The legs were long, and strongly developed.

*Colour:*

The egret's plumage was a brilliant snowy white when first seen and remained so throughout the whole period of observation. Considerable care was taken to note whether there was any sign of the development of the characteristic buff colour associated with the breeding period. The fact that no change took place tended to confirm our opinion that this was a young bird. The bill was lemon yellow and the legs a dark slate grey, these members also remained unchanged throughout the three-month period of observation.

*Gait:*

The slow, deliberate, long stepped gait deserved special mention; the comparable movements of the White-faced Herons appear quite random by comparison.

### CONCLUSION

To our considerable regret, the bird's stay was prematurely terminated when the farmer broke up the immediate eco-system by transferring the cattle elsewhere at the beginning of October, so that the grass would grow for subsequent conversion to hay. The egret stayed for a few days, being seen several times in the adjacent field to which some of the beasts had been moved. When they were moved again, the bird disappeared and could not be traced despite an extensive search carried out for the next two months of all the nearby properties which appeared to offer similar conditions.



#### LITERATURE CITED

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