

the ground litter. In Feb., 1964, Campbell (3) erected an enclosure to ascertain the effects of the kiore on regeneration of the vegetation, and his findings will be awaited with interest.

Mention has been made of the old radar barracks. The opportunity was taken in June, 1966, to reglaze the windows, all of which had been destroyed by vandals, and to do other essential repairs, so that the building will now provide a base for parties for many years to come.

REFERENCES

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2. OLIVER, W. R. B., 1955: New Zealand Birds, 513
3. CAMPBELL, D. J., 1964: Report on the enclosure erected on Cuvier Island and Hen Island to determine the effects of the kiore *R. exulans* on vegetation regeneration. Bot. Dept., Victoria Univ.



SOME OBSERVATIONS ON BLACK STILTS

By M. F. SOPER

A total of six Black Stilt nests is no number to be drawing conclusions from; even tentative ones. On the other hand, when the total population of Black Stilts (*Himantopus novaezealandiae*) is down to about fifty birds as the recent Wildlife Survey indicates, every scrap of information becomes of value.

I found my first nest in a wet field four miles from Omarama on 10/11/58. This nest, containing four eggs, is of interest in that it is the only one I have seen incorporated as part of a colony of other nesting Stilts. It is also the only occasion I have seen Black Stilts elsewhere than on a river-bed. There were six Black Stilts, an unusually large number to see together — all pure — in company with twenty Pies. Six nests were found: five Pied and the one Black. The other Black Stilts did not, I am sure, have either eggs or chicks, and were not attached as mates to any of the Pies.

My next breeding birds were observed on 29/10/60 when two pairs were found; and again both pairs were pure Black and both had chicks estimated to be four or five days old. Both were on the Ahuriri river-bed.

The remaining nests were all found in the one area (Ahuriri river-bed) within a short time of one another.

On 12/10/65 a pair of pure Blacks was found with three recently hatched chicks; the (presumed) nest was situated in a precarious position on a small tuft of grass at the apex of a small island and contained one addled egg.

On 16/10/65 the nest of a Black x near-Black — a bird with slight white mottling of the cheeks and head — was located in a precarious position on a small tuft of grass in the middle of a ripple in one of the many side divisions of the river. There were three eggs and on 18/10/65, four. Like the previous pair these birds were well separated from their nearest neighbours.

On 18/10/65 I found another three-egg pure Black x pure Black nest, in a good position in the centre of an island. On 22/10/65 one of the eggs was found broken — one of the birds had obviously trodden on it — and incubation was estimated to be half completed.

On 20/10/65 a nest of four eggs, 30 yards upstream from the last nest was found to belong to a pure Black x pure Pied. These two nests are the only ones of the series (excluding the first) which could be said to be close together. At this nest I was able to confirm — or, at least, add weight to — an impression I had gained that Black Stilts have a different incubating rhythm from Pied Stilts. I have found that Black Stilts normally change over when incubating every 15-20 minutes. When I put a hide at this mixed pair's nest — and it is necessary to add here that Black Stilts are much more tolerant of a hide than are Pied Stilts — the Pied partner would not come near it. The Black from the first returned without hesitation, but every 15 minutes or so would stand up, fly to a nearby shallows, feed for 3 to 5 minutes and then return. At the end of the day I removed the hide and the following day observed the birds from the hide previously erected at the pair of Blacks 30 yards down stream. With the hide removed the Pied incubated happily, but, as a result of the Black's different incubation rhythm, had a very easy day of it. When the Pied relieved the Black, the Black would return in 20 minutes or so; but when the Black relieved the Pied, the Pied would stay away the usual Pied period of two hours — during which time the Black repeatedly flew off for a short feed and then returned.

On 22/10/65 a three-egg nest of a Black x dark "smudgy" Black was found well away from all other Stilts in a safe position on an island in mid-stream. The smudgy bird had a white face like a White-faced Heron's, large areas of white on the flanks and some white mottling on the lower abdomen. A hide was erected and it was interesting to observe that whereas the Black behaved with the usual tameness of Blacks, the smudgy behaved like a typical Pied — all 'yaps' and temperament! This clutch was judged to be near hatching as the chicks could be heard inside the eggs.

To my knowledge this is the first time that "Smudgy" birds have been proved breeding. The colouring of these smudgy-plumaged birds — which vary from those with a few white flecks about the head (as at nest 3) to those called "dark smudgies" (as at this last nest) to those called "light smudgies" (where the birds approach more the Pied pattern except that the areas normally white are peppered with black) — has been ascribed usually to hybridism; though the possibility of an immature "Black" plumage has not been entirely ruled out. The discovery of two breeding smudgy birds in a total of fifteen breeding Blacks — or 1 in 8 — rather, I imagine, discounts this last possibility, as breeding in immature plumage does not seem to be a regular occurrence — apart perhaps from occasional and presumably abnormal, exceptions. These breeding smudgies also rule out an attractive theory tentatively put forward to try to explain the rapidly decreasing numbers of the Black Stilt — that the hybrids are sterile. Obviously they are not. Admittedly no chicks were seen but the eggs of one clutch undoubtedly contained live embryos.

The field work which was associated with the nests described and which involved a greater number of birds than nests were found for, brought out some interesting differences in behaviour between the two species:—

- (a) Blacks are essentially solitary birds; not gregarious like Peds.
- (b) The nests of Blacks are usually widely separated; not in colonies as Peds tend to be.
- (c) Blacks prefer their own company to that of Peds.
- (d) Blacks, for preference, mate with Blacks or near-Blacks. One instance of Black x Pied is recorded.
- (e) Blacks change over when incubating much more frequently than Peds.
- (f) Blacks appear to place their nests in precarious positions more often than do Peds. Two of the six nests found looked very vulnerable (though one had hatched). One, after a very slight rise in the river, was found to be awash with the eggs submerged to a third of their depth. Whether harm came from this was not ascertained.
- (g) Blacks favour islands for nesting; more so than Peds.
- (h) Blacks are associated almost exclusively with river-beds. Only once were they seen elsewhere. This is by no means true of Peds in the same area.

None of this throws much light on the slow, remorseless decline of the *Black Stilt* which remains unsatisfactorily explained. Predation and alteration of habitat do not seem to be factors; neither does interference by man. Displacement by the more vigorous and successful Pied race could be a factor and there seems also to be a degree of breeding-out by a genetically dominant Pied pattern — this last evidently resisted in some measure by the Blacks as cross-breeding seems to be the exception. Whatever the cause, the fall in numbers over the last eight years is noticeable. I should be sorry to see the *Black Stilt* go. It is an attractive bird.



SHORT NOTE

LOW NESTING OF WHITE-FACED HERON

The impression gained from information published of the nesting habits of the White-faced Heron is a decided preference for rather high sites in eucalyptus or pine trees; the following nest record may well be of interest therefore owing to its siting.

Discovered on 18/3/66 on the lower reaches of the Matau branch of the Clutha River, the nest contained one addled egg, measuring 45 x 35 mm., the dried remains of one chick and two fully fledged young that flew the following day. The nest itself had been built on a willow branch that had grown horizontally from the river bank, the nest being some 36 feet from the bank and 8 feet or so above water, and composed totally of willow twigs. Viewed from the bank of the river the nest was at ground level.

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[Another point of note is the late season for young birds still to be in the nest. In northern New Zealand some White-faced Herons are already busy at their nests in June.—Ed.]