OBSERVATIONS ON THE SPOT-BACKED WEAVER, (*PLOCEUS SPILONOTUS* VIG.)

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THROUGHOUT the areas in South Africa included in Natal and parts of Zululand and Pondoland, this Weaver, known by the Zulus as iHlokohloko, is probably the most abundant species of the Ploceids.

Unlike many of the other species of Weavers, this bird is exceedingly adaptable and therefore has a rather wide distribution and occurs in several types of environment. Its main requirement aside from food and water is the presence of trees suitable for shelter and nest building. The birds nest in loose colonies, selecting one or more trees growing fairly close together and hang their nests on long slender twigs. They particularly favor the introduced bamboos, and eucalyptus trees, often establishing large colonies which may overflow from the original site to several other trees. A colony of these birds is in a constant state of activity, singing, nest building, and courtship, with the accompanying noise. Flocks leave and return throughout the day and occasional sharp panics produce an absolute though ephemeral silence, which is quite startling in comparison to the usual bustle and rush. The sudden periods of quiet are similar in effect to the sudden cessation of croaking in a pond of frogs or tree-toads, loud noisy calling on all sides, then sudden quiet, broken at first by a few adventurous individuals making tentative trials and leading the entire flock back to its noise once more.

The flocks feed on the ground, eating sprouting grain or even fairly hard newly planted seed, and probably insects also. They are also competitors of domestic fowls for their food, and often gather in large numbers around pig-pens where they feed on bits of scattered food. From such rather sordid surroundings they will dash off to visit an Erythrina, uHluzi, Eucalyptus, Gravillia, or other nectar bearing flowering tree and gorge on the abundant food available in such places. They are more prominent as nectar feeders than any other species except the Sunbirds. Individuals are frequently collected with their heads well dusted and feathers somewhat glued together with pollen and nectar. Undoubtedly they are a factor in pollination of certain plants.

The individual songs are rather attractive. The first notes coming in easy runs are rather musical, but the last note or notes are squeaky, gasping sounds as though wrung out to the last "bitter end."

One colony was observed carefully; the observations extending from the first visit of the flock to the nesting tree, a large Acacia partially overhanging a river, until after completion of nest building when a pair of

Little Sparrow Hawks raided them persistently and drove them away. Unfortunately it is impossible to give a complete account of their life history, owing to the fact that these Hawks terminated the activities in the colony prematurely, but an account up to the time of nest desertion may prove of interest.

After several casual visits to the tree, nest building commenced on September 18, and progressed steadily for several days. At first there were only a few birds, not more than eight or ten in the flock, but the activities seemed to attract other individuals who soon added their nests to those which had been started first, so that by October 9 there were twenty-five nests in the one tree.

A nest starts as a loosely woven ring about the size of its final smallest diameter. Several strands of the building material are tightly fastened to the supporting branch in such a position as to bring the transverse plane of the finished nest along the same axis as the twig to which it is attached. When the strands composing the circle have been built into a diameter of about an inch, the rest of the nest is added. This original circle forms the dividing point between the very short neck and the pocket. The rest of the material is woven to this early framework, strand by strand. The weaving is done by poking one end of a strip of material, over and under and over and under, then the strip is grasped and pulled tight, and pushed over and under, etc., until the entire strand has been woven into place. The process is essentially the same as any weaving except that a piece may pass under either several or only one other strand at different points, and thus makes an uneven finish. The bill is used as a pair of forceps and is an excellent tool.

The nesting material was obtained from the blades of reeds growing along the river (*Phragmites communis*). The blades were split into strips from an eighth to a quarter of an inch wide and from a few inches to a foot or so in length.

When the nest is partly completed the male hangs to the lower edge of the opening and with fluttering wings and loud calls moves or shakes the nest, rotating it from side to side violently, meanwhile looking alertly in all directions. Within a minute or two a female will fly up to the nest, give it a thorough inspection and depart again, for they take no part in the construction work, at least until after all the externals have been completed.

All the leaves on the twig to which the nest is attached, and usually those on nearby twigs also, are removed, clipped off at the base. A tuft of leaves is often left at the fastening point of the nest and tip just beyond this point. A few are usually worked into the nest itself and show as living green after the strands of the nest material have become dry and brown.

It is interesting to speculate as to the reasons for this clipping off the living leaves. The nests are thus exposed in plain view as large lumps

attached to the ends of slender twigs. The most obvious but possibly not the correct answer would be that it is a protection from marauding terrestrial and arboreal enemies that are unable to fly and must trust their weight to the nest support. Bare twigs would appear dead and therefore dangerous. The living leaves at the nest remain as guarantees to the owners of the nest that their support is still living and has not died and weakened. These suppositions may be close to the truth or it may be that the habit is simply a nervous demonstration. In any case the general effect is that of a large group of nests attached to dead twigs, but any animal habitually preying on the birds might be expected to sense that the green leaves in the nest indicated safety, and eschew those not so decorated.

The violent shaking of the nest by the male during courtship is a practical demonstration that the nest is firmly attached to a staunch twig and will not fall off, but ordinarily the ground under a large colony is littered with a good many nests that have proved faulty and in spite of a safe appearance have fallen to earth, almost always carrying a part of the twig with them.

About the middle of October the little Hawks previously mentioned, put in their appearance and from that time the numbers of birds at the tree steadily diminished, probably due to continual harrying. By October 23 the tree was practically deserted. There is no way of knowing the exact relationship between the Hawks and numbers of birds killed or the effect of the harrying, but it is possible that the presence of a thriving colony of Weavers a mile away may have aided the desertion of a dangerous and therefore unsatisfactory site. It is certainly true that a colony, although started by one flock receives accessions from other groups.

After the breeding season is over, the site is deserted but from time to time one may find smaller colonies building a few nests which are usually deserted without ever being completed. One such colony was watched for a time early in March. None of the nests was completed, i.e., lined, and the entire proceeding seemed to be merely an expenditure of surplus sporadic post-seasonal courtship energy. The natives maintain that such nests are built as sleeping quarters. The theory was not investigated.

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