Soft Parts: Bill and legs black; eye dark brown.

Calls: To my ear the calls were unlike those of the other members of the *Chalcites* genus. They were uttered in a plaintive, unhurried manner, and all the notes were well syllabified. The most frequently heard call "Air-beee-care", had the middle syllable softer and more drawn out than those at the beginning and the end of the call. This note, which was emitted for minutes at a time, was sometimes varied to "Air-bare-beee" and "Air-beee-keee". In both variations the last syllable became highly inflected and approached the excitement scream of *basalis* and *plagosus*. The second most common call was an extension of the one that was frequently heard, a slow "Air-beee-care-tare". In this case the last syllable was louder than those preceding it.

Although I was not previously familiar with the Shining Bronze-Cuckoo (Chalcites lucidus) in the field, after consulting the relevant literature, and making an examination of specimens, I would say that the Altona bird was of that species. Apart from knowing well the Narrow-billed and Golden Bronze-Cuckoos, I have had some field experience of the other two Australian Bronze-Cuckoos, the Rufous-breasted (C. russatus) and the Little Bronze-Cuckoo

(C. minutillus).

Apparently this New Zealand breeding species has not been known to lay eggs in Australia. For that reason it would seem unusual for the bird to be in this country during the month of November.

Notes on the Grey Butcher-bird

By K. A. HINDWOOD, Sydney

Near Sydney the Grey Butcher-bird (Cracticus torquatus) may commence to build its nest as early as July, though August is the usual month for the start of the breeding season, which continues until the end of January or even February, in which month I have seen young birds out of the nest still being fed by their parents. An out-of-season nesting has been recorded by A. J. North (1906) who met, at Enfield (a Sydney suburb) on May 27, 1894, a boy with a fledgling Butcher-bird which he had recently taken from its nest.

Nests are built of twigs and are, externally, rather untidy in appearance. The well-formed bowl for the eggs is neatly lined with rootlets or grasses and is about four inches in diameter and some two inches in depth. The normal clutch is four, though three and five eggs may be laid. Several clutches of seven eggs have been recorded. In one such case (Robinson 1955) there was no noticeable variation in the eggs and only one bird was seen at the nest while it contained eggs. In two other instances (Belcher 1914 and White 1914) the seven eggs were clearly separable into two sets of four and three, indicating that two birds had laid in



Plate 6

Photo by Otho Webb

Nest and eggs of the Grey Butcher-bird.

the respective nests. Eggs vary from dull green to light brown and are spotted with reddish markings; average measurements are 31 mm x 21 mm.

Studies of nesting Butcher-birds over the years have indicated that the hen bird alone broods the eggs and the young. Males frequently bring food to sitting females, even feeding them when small young are in the nest. Both sexes bring food to the nestlings and after giving it to them usually wait to see if they void; if they do so the excreta it taken as it is ejected and then dropped some distance from the nest.

Nests are built in saplings or small trees and may be as low as

six feet or, rarely more than thirty feet above the ground.

In September, 1954, at Middle Harbour, near Sydney, I saw a Grey Butcher-bird in fully adult plumage (i.e. with a black or almost black cap) quivering its wings and squeaking like a young bird; shortly afterwards it was fed by a bird in similar plumage (presumably a male) and then it returned to its nest and three eggs some forty feet away in a Banksia tree. Near the nest at this time was a fully-grown Butcher-bird in immature plumage, its immaturity being indicated by the striations in its facial feathers.

An opportunity to study in some detail a similar association of an immature bird with a nesting pair of Butcher-birds occurred at Lindfield, Sydney, during August, September and October, 1966. The almost completed nest of these birds was found on August 20. Four eggs were laid towards the end of that month or early in September. On September 12 the female (with a black crown slightly tinged with brown) was sitting at 5 p.m. when the male (with a completely black crown) came to the nest and gave her some food which she held in her bill for two or three minutes. Nearby was a immature Butcher-bird. The female, still with the food in her bill, left the nest and flew down the hillside followed by the immature bird which was uttering soft "appealing" notes. I did not see the actual transfer of food but shortly afterwards I noticed the immature bird knocking what appeared to be the same food against a dead branch.

Taking into account the normal nesting times of the species and other factors such as plumage and behaviour, it was estimated that the immature bird associating with its presumed parents at this nest was between six and nine months old, and was probably

one of a brood of the previous season.

Until the four young left the nest, an event that took place during the last two or three days of October, the immature bird was constantly in the trees nearby, but not once was it seen to bring food to the nestlings—a task that was undertaken by both the adult birds. The immature, or "brown" bird as I called him in his less aggressive moods, seemed to have adopted the role of a "watchdog". Everytime I went near the nest he voiced his protests in loud, intimidating calls and not infrequently he flew at me uttering harsh "Keerrk" notes. The male attacked only occasionally, he was more inclined to perch nearby and burst into an animated, rollicking song which was probably induced by excitement. The female was much quieter than the other two birds though all three attacked me at one time or another during the many visits I made to the nest.

It would be interesting to learn at what age Grey Butcher-birds acquire fully adult plumage: in other words, how old are they when their crowns become black or blackish? North (1906) describes the adult male as having a black crown and the female a brown crown, and this is often the case with breeding pairs. Male birds sometimes breed before attaining a black crown. However, observations in the field, and photographs, indicate that breeding pairs are often much alike in plumage, though generally the crown of the female is not quite as dark as that of

the male.

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