

## OTHER SPECIES FEEDING AT TERMITE GALLERIES OPENED BY GREY-CROWNED BABBLERS.

Birds that forage primarily or even partly on the ground must be adversely affected by severe droughts which destroy the normal forb and litter layers. During the worst periods of the 1979-1981 drought in southern Queensland, I was conducting field work on a pastoral property 8 km SE of Meandarra with the Meandarra Ornithological Field Study Unit of the University of Queensland. Tara Shire was officially declared drought stricken on 24 March 1980 (Queensland Department of Primary Industries, pers. comm.) after several months of deteriorating conditions it remained listed as such until the end of 1981. Surprisingly, many species that obtain some or all of their food on the ground did not decline noticeably (e.g. Grey-crowned Babblers *Pomatostomus temporalis*, Noisy Miners *Manorina melanocephala*, Pied and Grey Butcherbirds *Cracticus nigrogularis*, *C. torquatus*, Australian Magpies *Gymnorhina tibicen*, Australian Magpie-Lark *Grallina cyanoleuca*).

Counsilman (1980) reported termites as the predominant food in the stomachs of forty-one Grey-crowned Babblers collected from the Western Darling Downs between February and August. This species may rely heavily on termites during the dry season, and hence be adapted to exploit a resource that is well buffered against prolonged droughts. In over 1,000 hours of observing this species during the recent drought I noted the frequent use of specialized techniques by birds hunting termites. Babblers used their long, pointed, laterally-flattened bills to probe crevices, hammer holes in surface galleries then pry open these breaches, dig to subterranean galleries and roll cowpats and small sticks. Groups of Babblers frequently fed communally at opened galleries. In this note I describe several instances of other species exploiting or attempting to exploit termite galleries opened by Babblers.

**Australian Magpie** On 1 April 1980 a Magpie landed 2-3 m from a log at which several Babblers were opening galleries. As the Magpie walked up to the log the Babblers separated and moved back about 30 cm. The Magpie began to probe at the point where the Babblers had just been feeding, opening and closing its bill slightly as if picking up small items. Neither species acted aggressively. My movements frightened the birds and, checking the log, I found an open, active termite gallery with several live termites in and around the hole and on the ground.

On 3 April 1980 four Babblers in the same colour-banded group were feeding together at a gallery when a Magpie landed on the log scattering them. The Babblers stood a few centimetres away while the Magpie inspected the area where they had been active. It did not act aggressively toward the Babblers. The Magpie flew away a few seconds later without feeding and the Babblers returned to the same log.

These two events occurred within the territory of one pair of Magpies. It is quite possible, therefore, that the same individual joined the Babblers in both cases.

**Pied Butcherbird** On 3 April 1980 a Butcherbird landed near the same group of Babblers and approached four birds that were feeding at a subterranean termite gallery. The Babblers continue to feed, while the Butcherbird pecked occasionally at the ground near the gallery's opening, apparently picking up small objects. Two minutes later a fifth Babbler joined the others. The Butcherbird then displaced all five and began to feed vigorously at the breached gallery. The Babblers continued to forage nearby.

On 5 April 1980, a Pied Butcherbird landed beside three Babblers that were feeding at a gallery on a log. There was no aggression as the Butcherbird began to feed at the same site, its bill within 3-4 cm of the Babblers' bills.

**Noisy Miner** On 21 May 1980, a single Babbler opened a gallery on a small dead stick and began to feed. A Miner landed about a metre away, walked up to the log and began to feed alongside the Babbler. There was no aggression. The Babbler abandoned the site when the rest of its group flew off, and the Miner continued to feed for thirty seconds until I frightened it and confirmed that the site was an active termite gallery.

**Blue Bonnet** *Northiella haematogaster* On the morning of 25 July 1980, Carol Moffatt watched a Blue Bonnet displace a group of Babblers from a site that she confirmed was an open termite gallery. The parrot appeared to feed at or near the opening.

**Spiny-cheeked Honeyeater** *Acanthagenys rufogularis* On 12 March 1981 two Babblers were feeding at a subterranean gallery. A Spiny-cheeked Honeyeater landed less than a metre away and tried twice to approach them, craning its neck and reaching toward the site, but withdrawing each time after several seconds. It then landed beside a third Babbler at a different gallery and cautiously reached toward the site but drew back without feeding. Its behaviour left no doubt that it was attempting to investigate the sites but was too nervous to join the Babblers. I was quite close to the babblers (< 15 m) and this may have contributed to the bird's nervousness.

It is difficult to assess the significance of these interactions. They may occur more frequently than my observations suggest, as the Babblers I was studying were habituated to a human follower, and I was frequently close enough to them to discourage approach by an unhabituated bird.

None of these species is well adapted for the probing, prying and digging used by Babblers to find and open

termite galleries. I know of no records of these species hunting for termites. The events recorded here appear to be instances of opportunistic commensalism or weakly aggressive kleptoparasitism on a species able to locate a buffered resource under adverse climatic conditions.

These observations were made during the driest parts of the drought. The ground was devoid of any cover, there had been no appreciable growth of vegetation since December 1979 and larger insects typical of the forb and litter layers, such as grasshoppers, beetles, roaches and lepidopteran larvae, were virtually absent. Presumably other resources (seeds, subterranean insects) were also scarce. At least some of the species involved must have had difficulty finding their normal food.

Magpies, Pied Butcherbirds and Noisy Miners normally dominate Grey-crowned Babblers, and frequently fly at and chase them very aggressively (Counsilman 1980; King 1980; pers. obs.). During such encounters, the attacking birds usually hold their heads horizontally, bills pointed towards the babblers and approach with either a fast flapping flight or a level dive with the wings half folded. In the cases reported here, however, the birds attempting to exploit the opened termite galleries either landed apart from the Babblers and walked to join them, or flew in with an apparently non-aggressive flight, head and wings held high and feet extended for landing. The Babblers reacted weakly or not at all, in contrast to the alarm they usually display when approached closely by any of these species.

It is quite possible that one individual Magpie and one individual Butcherbird took part in the two interactions involving each of these species. If so, it may be that only some individuals discover the potential for exploiting the finds of Babblers and do so repeatedly. Such birds would benefit by encouraging mutual tolerance, perhaps accounting for the tendency towards commensal rather than parasitic exploitation.

That the Grey-crowned Babbler's finds of specialized food during droughts may be exploited opportunistically by other species suggests that the ability to learn how to obtain unusual foods from other species under adverse conditions might provide an important supplement to a marginal diet, even if the total amount of food acquired is low.

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