A NEW FOOD SOURCE FOR THE GLOSSY BLACK COCKATOO. The diet of the Glossy Black Cockatoo *Calyptorhynchus lathami* consists almost entirely of the seeds of casuarina trees (Casuarinaceae). Populations in the Eastern States feed on several species, including *Allocasuarina litoralis, A. torulosa, and A. verticillata* (Forshaw 1981). With the exception of a single report of feeding on *Acacia* seeds (Cleland 1942), all accounts of the Kangaroo Island population indicate that they feed exclusively on drooping sheoak *Allocasuarina verticillata* (Cleland and Sims 1968; Joseph 1982, 1989; Blakers *et al.* 1984).

As part of a study of their behavioural ecology, I observed a flock of Glossy Black Cockatoos in Lathami Conservation Park on Kangaroo Island on most days from March to November 1991. For the majority of this period the cockatoos foraged only on the attached seed cones of drooping sheoaks, an activity which occupied most daylight hours. Perched birds occasionally chewed the bark, wood or fruit of sugar gums *Eucalyptus cladocalyx*, but this occurred in association with maintenance activities rather than foraging and they did not appear to be obtaining significant quantities of food from *Eucalyptus* seeds.

However, on at least five occasions between 29 July and 28 September, the entire flock of up to 30 birds fed on the seeds of slaty sheoak *Allocasuarina muelleriana*, a smaller, shrubby casuarina which has not previously been reported as a food source for Glossy Black Cockatoos. In each case, the flock fed on slaty sheoak only during the morning, then switched to drooping sheoak for the rest of the day. Larger trees, over three metres high, seemed to be preferred. The woody seed cones were handled in the same fashion as those of drooping sheoak. The cockatoos picked a cone with the bill and transferred it to the left foot. Starting from the stem end, they then chewed the cone into shreds and extracted the seeds while slowly rotating it counter-clockwise.

The movement patterns of the birds and the timing of fruiting by the drooping sheoaks suggest that this change in diet was in response to a temporary shortage of suitable drooping sheoak seeds. From early April to June 1991 the flock foraged almost exclusively in one gully in the park, within one kilometre of a stand of sugar gums they habitually roosted in. During this time they fed only on drooping sheoaks although slaty sheoaks with attached cones were also present. On 22 June however, after several days of unusually frequent movements, the flock left the park and began feeding in a stand of drooping sheoaks one kilometre to the west. At the time of this move, new drooping sheoak seed cones were abundant but under-sized and greenish in colour, and were not eaten. The flock remained in the new area until 26 June when my observations were interrupted for several weeks. Upon my return on 29 July, the flock was foraging 1.5 km north of their original feeding area in an area with stands of large slaty sheoaks, and spending several hours a day feeding on them. Judging from the apparent age of the shredded seed cones, they had been feeding on slaty sheoaks for several days at least. On 6 August the flock returned to their original range in the park, where they fed both on year-old drooping sheoak cones and on the new cones which had turned red-brown in colour. From this date onwards they fed almost exclusively on drooping sheoak within their usual foraging range, although short bouts of feeding on slaty sheoak (40 minutes or less) were observed on 12 and 26 August, and 28 September. These bouts included feeding on previously ignored slaty sheoaks within the usual foraging area.

These observations suggest that when the preferred foraging areas became depleted, the flock moved first to a more distant stand of drooping sheoaks, and later, partially switched to an alternate food source until the new crop of drooping sheoak cones ripened. The period of daily feeding on slaty sheoaks lasted between eight and 37 days, and was probably much closer to the former.

In a second set of observations, National Parks and Wildlife Service ranger Terry Dennis noted chewed slaty sheoak seed cones on 21 September in the Eleanor River catchment, 7.5 km south of Parndana Township (Dennis pers. comm.). Approximately 40 chewed cone tops were collected in an area where slaty sheoaks 2.5-3.5 m in height were the dominant vegetation. No signs of feeding were found under nearby drooping sheoaks. The color of the chewed cones suggested a single feeding event no more than three days earlier. All of Dennis' previous observations, over nine years, of the distinctive feeding signs of Glossy Black Cockatoos were made in drooping sheoak vegetation.

These two occurrences of foraging on slaty sheoak were separated by 20 km and occurred during the same period, and they may indicate a temporary shift in diet by Kangaroo Island Glossy Black Cockatoos during August and September. The change did not seem to be caused by a lack of drooping sheoak seed

cones, as many attached seed cones remained on drooping sheoak trees during this period. However, Glossy Black Cockatoos show strong feeding preferences for individual trees (Clout 1989; pers. obs.). and many preferred trees had been stripped of seed-bearing cones. It is also possible that the nutritional value of the remaining seeds had declined with age. In either case, slaty sheoak is apparently not a significant food source at most times, but may be important during brief seasonal gaps in the supply of suitable drooping sheoak seeds.

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