

Corellas: prone to separation

From 1977 to 1983 Dr Graeme Smith, of the CSIRO Division of Wildlife and Ecology in Western Australia, studied the breeding ecology of the western long-billed corella in that State's wheat belt. His research revealed that this species suffers from what could seem an alarmingly high degree of marital instability.

Corellas, like galahs and red-tailed black cockatoos, have adapted well to large-scale agricultural development in the south-west of Western Australia over the past 70 years; in fact, corellas adapted so well to the new sources of food made available by wheat-farming that they were once persecuted by farmers, though their numbers have since recovered.

Dr Smith concentrated on a 300 sq. km study area centred on Burakin, 150 km north-east of Perth — a representative mosaic of farming land with remnants of woodland, shrubland and heath. It contained a fairly stable breeding population of about 40 breeding corellas, with a larger group of locally nomadic immature birds.

Breeding took place in spring, after adult pairs had chosen nesting trees: Dr Smith listed 62 nests in 48 trees, all of them salmon gum (*Eucalyptus salmonophloia*). Corellas looked for a natural cavity or hollow between 6 and 10 m above ground and situated to offer some shelter from wind and rain. The female laid an average of three eggs, which hatched 22–26 days later. The male and female shared incubation and brooding duties almost equally, spending 94–98% of the day looking after the chicks during the first week or so after hatching, feeding them (up to 16 times a day) or searching for food.

In December, after the nestlings had grown feathers and left the nest, they and their parents joined up with the local immature group and began moving to the Dalwallinu area (60 km to the north-west) where corellas from an estimated 6000 sq. km gathered in two or three large flocks that occasionally combined to form a flock of up to 1200 birds.

After the young corellas were weaned in March, the majority of birds drifted back to their breeding areas. Most pairs remained together, but at least some adults sought new partners from among the local flock, whose members were well known to birds of breeding age.

Although the factors leading to 'divorce' among corellas are unknown (and, given our inability to appreciate life from a corella's point of view, likely to remain so), Dr Smith's research indicates that their reproductive life is nothing if not complex: 15% of corellas divorce, often more than once, compared with 8% of galahs, 1% of Carnaby's cockatoos and a single record of divorce in pink or Major Mitchell's cockatoos.

A corella involved in one divorce may often be implicated in others: one female corella, labelled OB in Dr Smith's study population, had been mated with a male, OA, for 3 years when, in 1979, she divorced OA. She divorced new mates in 1980 and 1981.

In 1980 another female, HH (who had been seen in the company of OA when she was a year old) paired with him but did not breed. The couple reared a single young the following year; then in 1982 HH died and OA paired (and bred) with a 3-year-old female, XX.

The rate of divorce is higher among couples breeding together for the first time, but there is no suggestion that breeding success or failure are factors in divorce.

On average, corella pairs produce only 1.2 young to independence per year and only half of them survive to 3 years of age. Pairs must breed for 5–13 years simply to reproduce themselves. However, corellas may continue to reproduce for 16 years or more (the species can live for 50 years in captivity), providing them with plenty of opportunities to replace breeding pairs and, indeed, to add to the size of the flock. Dr Smith's research indicates that populations are increasing slowly, and that what may appear to be a high rate of divorce is, in fact, largely confined to birds attempting to breed for the first time.

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Breeding ecology of the western long-billed corella, *Cacatua pastinator pastinator*. G.T. Smith. *Wildlife Research*, 1991, 18, 91–110.

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