# ANTBED

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An occasional newsletter about the Golden-shouldered Parrot produced by Gabriel Crowley and Stephen Garnett.


This newsletter is for the many people who have shown an interest in the research on the Golden-shouldered Parrot since it began in August 1992. The work is being conducted with funding from the Queensland Department of Environment and Heritage, the World Wide Fund for Nature (Australia) and the Australian Nature Conservation Agency. This issue describes some of our observations during the 1994 breeding season.

## Breeding Season

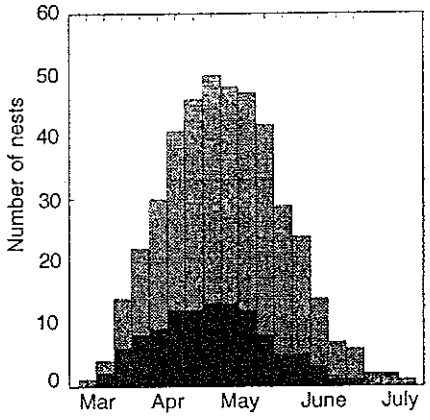
Various bird books state that Golden-shouldered Parrots start nesting in March, April or May, and continue through to August. We have been keen to get a more accurate measure as the length of the breeding season determines the number of young that can be produced in a year.

The first nests we found during the 1993 breeding season already contained full clutches, and we wondered how many we had missed. In 1994, therefore, we began searching for nests long before the parrots even looked amorous. We were remarkably successful, first because Sue Shephard joined us in the search, second because we had motorbikes. Whereas last year we were confined to areas which we could reach easily from the formed road, and even then we had to wade long distances up the soggy flats, this year we were able to scour over 400 square kilometres. Though we certainly missed some nests, we must have found well over half, judging from the proportion of fledglings in our study area that are now wearing bands.


During February we found many termite mounds on which pairs had been prospecting. We watched several pairs flying from mound to mound, digging a short distance then flitting off to try another mound. One pair dug nine scrapes in a single morning, but in none did they dig a complete nest. The female does most of the digging while the male sits on top of the mounds chattering encouragement. Digging is done exclusively with the bill, the feet being used only to scrape broken fragments of mound from the nesting chamber.

The first egg was laid on 1 March and the last on 25 May. We couldn't be sure we hadn't missed earlier or later nests but the figure below, showing the number of nests active each week, suggests that very few nests are likely to have had eggs in them before this time. The first clutches were laid when the seed of Cockatoo Grass *Alloteropsis semialata* was at its most abundant around the nests, and the nesting birds were seen to feed on it. By the time the last clutches were laid much of the grass had dried off and we suspect there was a shortage of high protein food.

The length of the breeding season probably varies between years. In both years we have studied the birds the wet season has ended suddenly and early. Hopefully this year it will last longer.




**No. nests active each week in 1993 (black) and 1994 (stippled).**

## Nesting Mounds

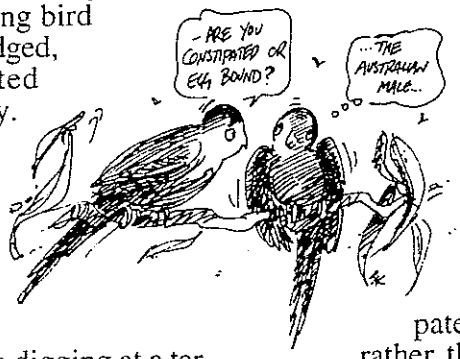
Before we began the project it was feared that the termite mounds used by the parrots for nesting were being knocked over by cattle, and that there might not be enough mounds to go around. To find out whether this is true we have been studying the growth and survival rates of mounds.

It was an easy theory to disprove. Only one nesting mound out of 110 has been bumped by some animal. It was no more than cracked, the young fledgling successfully. Several hundred mounds untouched by the parrots have also been marked and measured. They too have been virtually untouched.

But the mounds do grow exceedingly slowly, and the bigger they get the slower they grow. We found parrots nesting in mounds from 75cm to 255cm high (average 161cm) and from 106cm to 292cm in girth (average 150cm). The mounds grow more slowly in girth than in height. On the basis of our measurements we estimate that the youngest mound used for nesting, 106cm around the base and 143cm high, was 24 years old. The average nesting mound is probably about 50 years old. The oldest mound used by the parrots began pushing up from the ground in the 1890s.

## Before an egg can be fertile.....

Most bird species' mating is rarely witnessed in the wild, so we consider we have been lucky to see it twice in our parrots. The first time, immediately after the last young bird in a nest had fledged, was unexpected and perfunctory. On the second occasion, however, we were able to watch the entire performance.

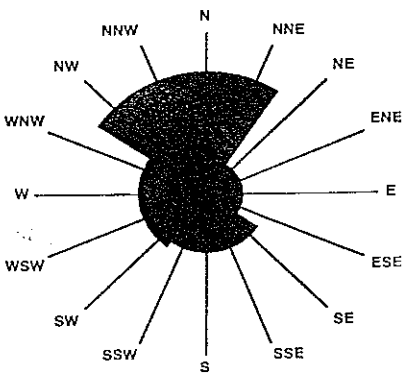



The pair were digging at a termite mound, investigating a hole a different pair had excavated a few weeks earlier. They then flew to feed 100 metres away but it was soon evident that the female had no appetite. She walked about stiffly and didn't bother to peck. Soon afterwards a butcherbird called and they flew into a nearby tree to preen. We first suspected that something else was intended when the female moved unusually close to her mate. Unsettled by the intrusion into his personal space, he strolled away to another branch to straighten the barbs of his tail feathers. She followed, sidling up to him and amorously raising her tail, fluffing up her rump feathers and drooping her wings (to tell the truth, she looked constipated or egg-bound rather than seductive). Still no go. He shuffled away and began preening the feathers on his belly. Over the next five minutes she approached him four times, and we thought he would never get the message. Finally, his toilet apparently complete, he seemed suddenly to notice her. He raised his crest, strutted past her, took a close look at her rump, and hopped abroad for 48 seconds of tail-twisting nuptial bliss. Three weeks later she laid her first egg.

## N... direction

We are often asked whether Golden-shouldered Parrot nests face in any particular direction, there being a common perception that most nests face north. This idea may have arisen from studies of magnetic mounds in which the nests have to face north or south, the long axis of the mounds, because a parrot digging from east or west would soon emerge on the other side.


Nests in the round conical mounds, however, can be built from any direction — and they are. Our measurements show that the quadrant most favoured is between north-west and nor-nor-east. As can be seen from the diagram below, a moderate number of nests face south and west and a few east or north-east. We do not know why the birds show this preference; the direction a nest faces makes no difference to its likelihood of success.




Direction of nests from centre of mound (relative no. in each quadrant)

## Golden-shouldered Parrot Recovery Team

The first meeting of the Recovery Team was held in Cairns in April 1994. About 25 people attended including representatives from all but one of the properties where parrots occur (the missing property was in hospital), all the major funding bodies (ANCA, WWF and QDEH), the Cape York Peninsula Pastoral Advisory Group, the Cairns and Far North Environment Centre, the Cape York Peninsula Land Use Strategy and numerous QDEH employees with responsibility for areas where the parrots occur.

The conclusions of the meeting related mostly to burning with agreement from two of the property owners to begin burning after the first storms. If possible fires will be lit at the same time in nearby national parks. If funds and fuel allow, the burning will begin this year. Otherwise it will certainly begin in 1995.

The meeting approved the draft recovery plan which, briefly, recommends continuation of the field research until the end of the 1995 breeding season, followed by burning and monitoring for at least the subsequent three years. After the meeting interstate visitors were put to work at the study site searching for and watching nests so they would get some idea of the difficulties of the field research.

The next meeting will be held in mid-1995.

THANK YOU ANDREW

We have been blessed with the help of many volunteers but Andrew Ley deserves special mention. Twice Andrew has spent three weeks with us following parrots, watching nests and bullying us to keep our computing records backed up. Next month he is returning to help band birds. A more useful helper one could not find and we are most grateful.