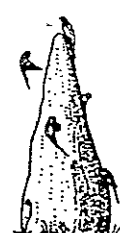


ANTBED

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

This newsletter is for those following the Golden-shouldered Parrot project since it began in 1992. The project, which is run by the Queensland Department of Environment with assistance from Environment Australia, is now in a phase of adaptive management, applying the findings of the research conducted in the first three years.

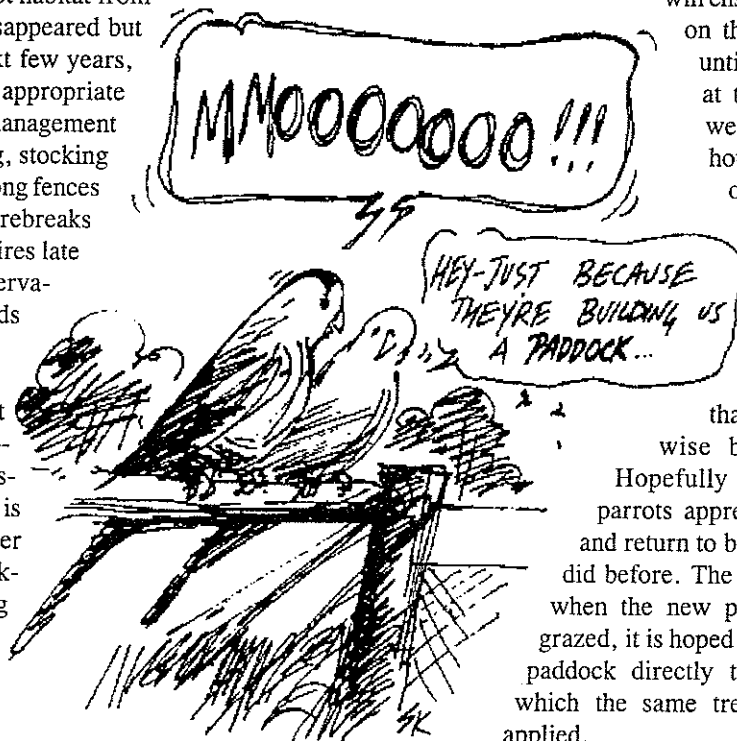
New paddock

In 1997 Tom and Sue Shephard of Artemis Station entered into an agreement with the Department of Environment to create the Artemis Antbed Parrot Nature Refuge. The nature refuge is an area of parrot habitat from which the birds have all but disappeared but in which it is hoped, in the next few years, nesting can be encouraged by appropriate management. The key to this management is fencing because, with fencing, stocking density can be controlled and along fences it is possible to create the early firebreaks which make it safe to light hot fires late in the year. As part of the conservation agreement, the Shephards agreed to fence the refuge using materials provided by the Department with generous support from the Queensland Ornithological Society and Birds Australia. Fencing on the Peninsula is tough, especially late in November when the hot creosote on the pickets slides through your burning hands and it takes fifty blows with a heavy hammer to drive the steel home. But the job was done and in March this year,

with the wet season over, the last of the flood gates was closed. They will stay closed until well into next wet season. The aim is to keep cattle out for the next year. This

will ensure there is grass on the drainage flats until it can be burnt at the start of next wet season. A good hot fire with plenty of fuel should help clean up ti-tree suckers as well as encouraging seeding in cockatoo grass that might otherwise be grazed off.

Hopefully the remaining parrots appreciate the effort and return to breed where they did before. The following year, when the new paddock will be grazed, it is hoped to build another paddock directly to the north to which the same treatment can be applied.



1997 season

1996 had been a good year because the range remained stable. In 1997, however, the contraction continued. Nests were scattered over most of the former range but at a lower density than in 1996. Also, for the first year since intensive surveying began, there was no nesting attempt on the remote Seventeen Mile Flat in the south-east of the parrots' range. A sudden population decline is likely to be the result of an epidemic or catastrophe. A gradual decline, particularly from the edge of a species' range, is likely to be caused by insidious habitat degradation. The contraction in the Golden-shouldered Parrot's range belongs to the latter category. We predict that the contraction will continue in 1998, but after that the trend should be reversed. A measure of success of the habitat management now starting will be the number of areas which regain their lost parrots.

Southern population

In 1996 Tom and Sue Shephard and other local property owners surveyed for parrots in remote portions of the northern part of their range. This was followed up in 1997 when they went with National Parks rangers Danny Chew and Brett Edwards into the southern part of the species' range near Chillagoe. Most of the first day was spent getting unbogged but eventually the expedition reached what turned out to be excellent parrot country. Twenty four nests were found and 95 Golden-shouldered Parrots were seen over an area of about 50 km². As with last year's survey, the map of sightings from this year will act as a base against which a repeat survey in five year's time can be compared. The only management that can be undertaken in this remote area is storm burning from a helicopter but, if that is indeed the best strategy, there should be at least as many parrots there in 2002.

The gasline and the parrot.

For some years there has been a grand plan to pipe gas from New Guinea to Queensland. This planning has now reached an advanced stage and, in 1997, PNG Gas sought advice on where to put the pipe that is to run down the centre of Cape York Peninsula so as to avoid having an impact on the parrot. Fortunately a route was available that was both economically feasible and avoided the current range of the parrot altogether. It is this route that the company is currently planning to use. In addition the company has generously donated \$6,000 towards conservation management of the Golden-shouldered Parrot, money that will be used to fund supplementary feeding over the next two years.

NHT Cape York

In March 1998 Senator Robert Hill announced that an additional \$42,000 is to be spent on the Golden-shouldered Parrot this year as part of a \$40 million package designed to institute world best practice land management on Cape York Peninsula. These funds will allow us to do several things we were unable to do before. First of all it will enable the doubling of the Antbed Parrot Nature Refuge so that the possibilities for adaptive management are greatly increased. Secondly we can see what the planned burning and cattle management is doing to the plants, something we need to know if the proposed management regime is to benefit pastoralists as well as parrots.



Mound use

The elegant conical mounds of *Amitermes scopulus* most commonly used by the parrots for nesting appear at first sight to be a superabundant resource. Although they grow very slowly, the average annual growth rate being no more than 2 cm, it seemed unlikely there could be shortage. Long term nest monitoring, however, suggests this assumption should be investigated. First of all only a tiny proportion of mounds have had chambers dug in them more than once. Secondly this year we had evidence that the parrots actively reject mounds used earlier. Often parrots dig short tunnels into mounds but do not attempt to excavate a chamber. These scrapes, as we term them, had little significance until we peered into some dug into mounds we knew had been used previously for nesting. Though the outside of the mound was unblemished, the scrape led to a rotten interior where four years earlier there had been a chamber. It went no further. We do not know how many large mounds contained nests before we met them, and shall not know whether nesting sites are limiting until known nesting mounds are used again.

Mites

Ecology is something that can be studied at any scale. Parrots need to be studied over 100's of km² but there is a whole world inside their nests. First few nests lack moth larvae. In 1994 we sent a series of pupae to Ted Edwards at CSIRO Division of Entomology because no adult moths



had been collected since 1922. He discovered that the larvae can stay in their cocoons for at least three and a half years under laboratory conditions in Canberra, emerging in groups erratically in different seasons throughout that period. Only once, in the middle of egg laying, have we seen an adult moth in the chamber, but they must be around all the time. Apart from the moths, there are maggots from a blowfly, so-called starling mites, occasional frogs, crickets and spiders. Finally there are the animals we cannot see. Recently Matthew Shaw of the Department of Entomology at Queensland University has asked for samples of old nest material in which he is certain there will be whole communities of unknown microscopic mites that get carried around on the feathers of birds. Presumably all would disappear if the parrots did not dig their homes.

Feeders and woodswallows

In the last two years seed has been provided throughout the wet season at a place where parrots gather in the dry season near a flock of Black-faced Woodswallows. It is an area where parrots used to breed, but had not done so for two years. The results have been most promising. In both 1996 and 1997 there were several nests near the feeder so, for the 1997/8 season, a second feeder was erected at the site of another woodswallow flock. Early results from 1998 suggest that this too has resulted in more nests nearby. This year food was provided throughout the wet season but by March no parrots were interested. Even though dry seed was available, the parrots preferred green grass seed growing nearby.

Organisation

For the past few years Sue and Tom Shephard have been conducting all the field work on the parrots with administrative assistance from Leasia Felderhof in Atherton and Daryn Storch in Cairns, and help with writing up and interpreting their observations from ourselves on far away Kangaroo Island. But the north would not let us go and we are now able to take a more immediate interest in the project from our new base in Cairns. Those interested in the project can reach us on 07-40528736, email stephen.garnett@env.qld.gov.au or write to Department of Environment, P.O.Box 2066, Cairns, Qld 4870.