

**WESTERN GROUND PARROT INTERIM RECOVERY PLAN****ANNUAL REPORT****JANUARY 1999**

by Allan H. Burbidge

for the WA South Coast Threatened Birds Recovery Team  
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Department of Conservation and Land Management  
Wildlife Research Centre  
PO Box 51, Wanneroo WA 6065

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**Summary**

Progress on each of the recovery actions in 1998 was as follows:

1. Fire management actions including fire-break management helped constrain the effects of the summer 1997-98 wildfire in Fitzgerald River National park, but the population in the NE part of the park was lost.
2. Predator control (fox baiting) has continued at known Ground Parrot sites.
3. Dieback hygiene measures have been enforced at all known Ground Parrot sites.
4. No progress has been made on vesting of land in the Manypeaks area.
5. At least two populations appear to have increased in size, one lost due to wildfire, some base line data collected at Waychinicup/Manypeaks area by Birds Australia (WA Group), and the fate of one population (Cape Arid) is presently unknown.
6. Surveys carried out in the Waychinicup/Manypeaks area by Birds Australia (WA Group) provided some useful base line data.
7. Captive breeding and translocation not relevant at present time.
8. Recovery Plan to be written in 1999.

## **WESTERN GROUND PARROT INTERIM RECOVERY PLAN**

**Annual report, January 1999**

### **Recovery Actions**

#### **1. Fire management**

Work done under this plan has included firebreak maintenance in the vicinity of known populations of Ground Parrots. Fortunately, no wildfires have occurred in the vicinity of known Ground parrot locations in Cape Arid National Park or in the Manypeaks / Waychinicup area during the life of this plan. However, an extensive wildfire burnt about 60 000 ha of Fitzgerald River National Park (FRNP) from late 1997 into early 1998, burning all the known Ground Parrot habitat in the north-eastern section of the park, and half the 'Short Road' site (Burbidge 1998). Field inspection during April-May 1998 showed that the fire was quite hot, no suitable remnants were left in the north-eastern area, but several large islands of vegetation were left unburnt at the Short Road site. This represents about a 40% reduction in the amount of habitat suitable for Ground Parrots in FRNP.

It was fortunate that firebreak management at the time, combined with the earlier firebreak work carried out at this site under the Ground Parrot IRP, enabled the western part of the Short Road site to be saved from fire. Vegetation in this area has not been burnt for more than 35 years.

#### **2. Predator control**

Predator control (fox baiting) has continued at FRNP, Cape Arid National Park and in the Manypeaks/Waychinicup area. It is not known what effect this is having, but numbers of birds at the Short Road site appear to be increasing (see below).

#### **3. Dieback hygiene**

Dieback hygiene measures have been enforced at all sites during the life of this plan.

#### **4. Vesting of land in Manypeaks area**

No progress has been made on this issue.

#### **5. Documentation of known populations and monitoring of trends in population size/boundaries**

##### *Short Road, FRNP*

Part of this site was burnt in the extensive wildfires of summer 1989-90. Part of the same area was again burnt in summer of 1997-98.

A.H. Burbidge, J. Rolfe, S. McNee and B. Newbey surveyed this site in April-May 1998. The abundance of Ground Parrots was monitored by recording the number and direction of

all Ground Parrot calls heard at permanently marked listening sites that had been set up in May 1996. Listening was carried out in 1996 and 1998 as shown in the following table. In each year, some listening was carried out in the recently burned area and some in the long-unburnt area.

Year	morning	evening
1996	9	9
1998	7	7

Not all these sampling events are comparable because (1) in 1996 some experimentation was carried out to determine an optimal sampling and recording regime and (2) weather conditions varied between days within and between sampling periods. Because of such difficulties, detailed comparisons are difficult to do and yet to be made, but a preliminary examination of data (one evening from each monitoring period) follows.

Figures 1 and 2 are plots of calls heard by four observers at the corners of a permanently marked 400 m square in the long-unburnt area. Both data sets were collected in the evening under near calm conditions. The data in Fig. 1 were collected on 21 May 1996, and those in Fig 2 were collected on 1 May 1998. The closed circles indicate possible coincidences of recordings of calls from different observers. There are several possible sources of errors in allocating these, and different stringency levels can be placed on the selection of "coincidences". In this case, an exact time match was set as a constraint, although it is more realistic to relax this condition. In any case, it is clear that the number of calls recorded on the evening of 1/5/98 (335), and the number of coincidences (18), were rather greater than those recorded at the same sites and under similar conditions on 21/5/96 (83, 3). (Note that the number of coincidences does not equal the number of birds, but an increase in coincidences can be interpreted as an increase in the density of Ground Parrots). It was the opinion of each observer that the 1998 data represented the highest frequency they had heard at this site or any other site in Western Australia. Experience at this particular site goes back at least 10 years for each of the four observers involved in the 1998 monitoring.

We interpret the above results as indicating that Ground Parrot densities increased in the area around the monitoring points between 1996 and 1998. It is not possible at this stage to draw further conclusions in relation to densities of birds either at these points or at the site as a whole, as this sample only represents one evening in each sample period and the possible influences of nearby fire have not yet been investigated. However, the results do indicate that (1) with effort, monitoring of Ground Parrots under the conditions encountered in Fitzgerald River National Park is both feasible and useful and (2) Ground Parrots can occur in relatively high density in vegetation unburnt for 35+ years.

#### *NE part of FRNP*

As noted above (Action 1), this area was burnt in an extensive wildfire during summer 1997-98. It is considered that there are now no Ground Parrots remaining in this area.

#### *Drummond Track, FRNP*

This site was surveyed briefly in autumn 1998. Previously, only small numbers were recorded here, probably because of the frequency with which the area had been burnt in the

past. However, numbers recorded on this occasion were the highest ever for this site. This is probably due to a combination of fire exclusion and predator baiting.

#### *Waychinicup / Manypeaks*

The Western Australian Group of Birds Australia conducted several surveys in this area in 1998, with funding from World Wide Fund for Nature (Australia). These surveys mostly utilised volunteer input, with some support and assistance from CALM staff. Results of these surveys are currently being written up.

#### *Cape Arid National Park*

The Ranger at Cape Arid National Park (who is a competent field observer) has been unable to find Ground Parrots in the park in the last two years. The reasons for this are unknown. It may be that the population has declined, shifted, or dispersed. It is unlikely that the population has declined, as there is no apparent reason that it should. It is more likely that the birds have moved. When the birds were detected in the park in the mid-1980s they were confined to a small island of long-unburnt vegetation in an extensive 'sea' of recently burnt vegetation. The only fires in this area since that time have been small in extent. Now, about 15 years after the extensive wildfires, there is an extensive area of heath that is apparently suitable for Ground Parrots. If they have dispersed through this approximately 15 year old vegetation, they could be quite difficult to detect. It is planned to pursue this in 1999.

#### **6. Survey of areas possibly suitable for Western Ground Parrots**

There was no action on this question in 1998, other than in relation to Action 5, above. This mostly consisted of surveys carried out in the Waychinicup/Manypeaks area by Birds Australia (WA Group), providing some useful base line data.

#### **7. Taking birds for captive breeding or translocation**

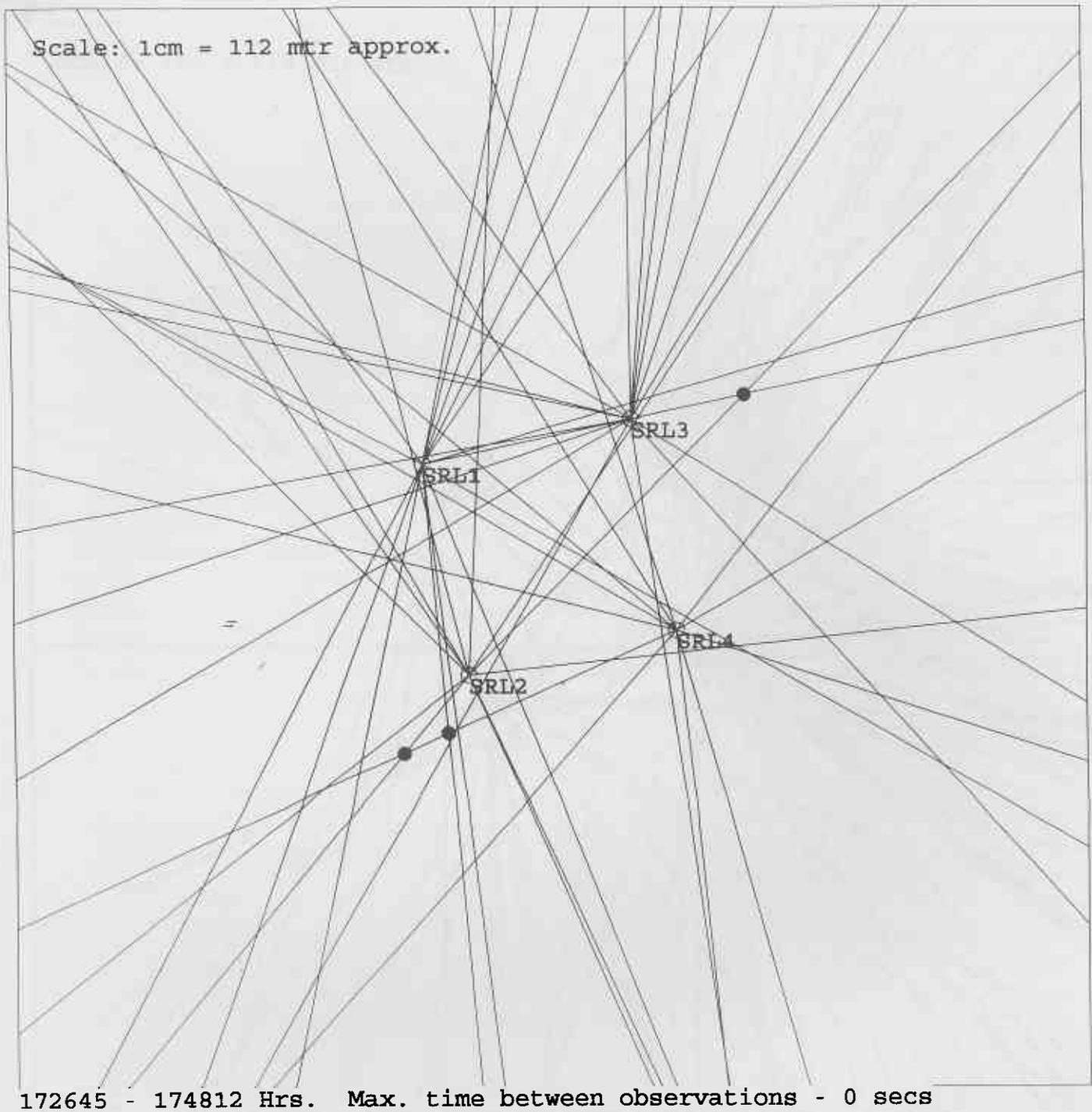
Taking of birds for captive breeding or translocation is not intended in the life of this plan.

#### **8. Recovery plan**

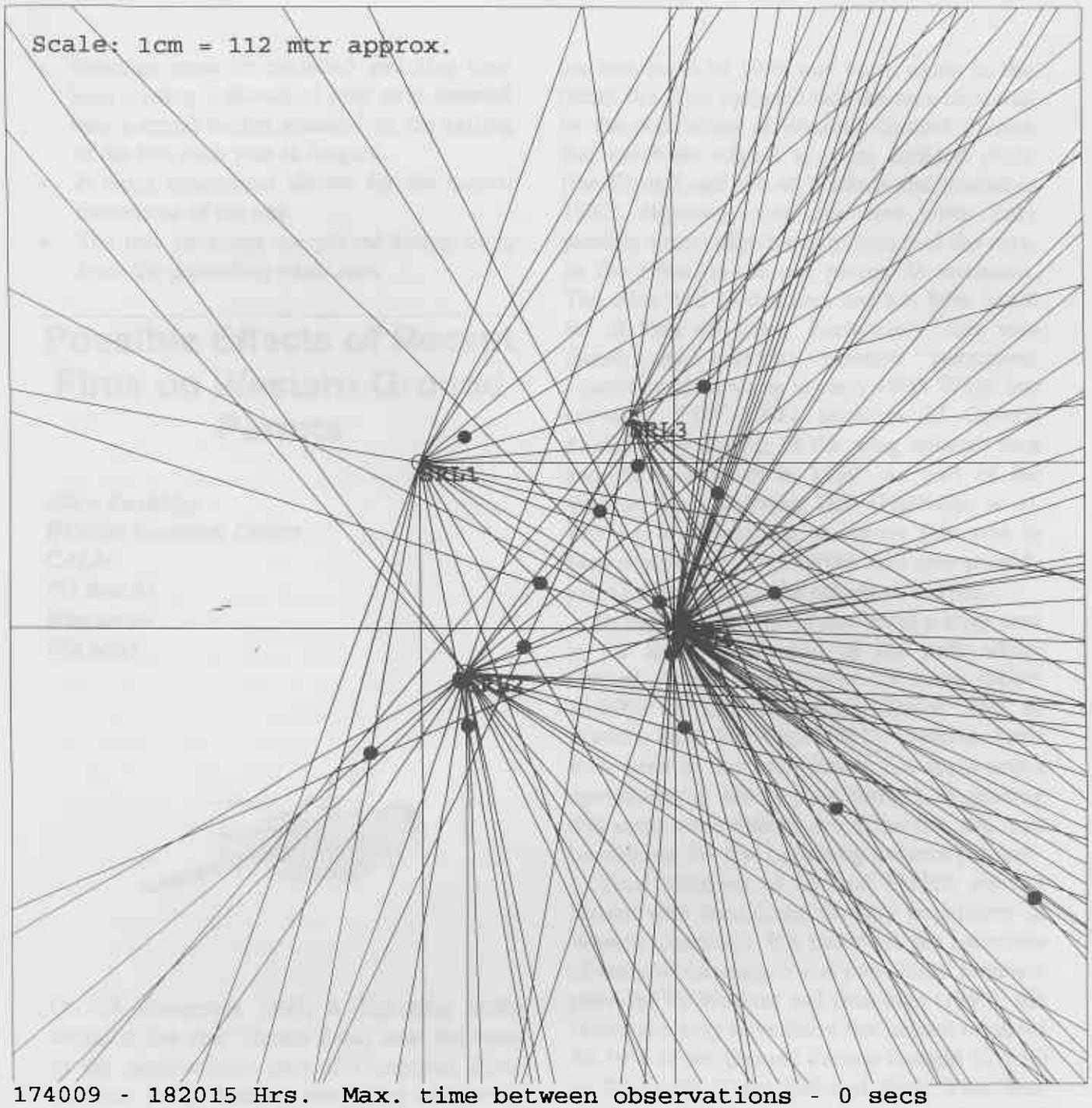
Writing of a recovery plan is scheduled for 1999.

#### **References**

Burbidge, A. H. 1998. Possible effects of recent fires on Western Ground Parrots. *Eclectus* 4: 15-16. (copy attached).



**Figure 1:** Plots of calls heard by four observers at the corners of a permanently marked 400 m square in the long-unburnt area on 21 May 1996. The closed circles indicate possible coincidences of recordings of calls from different observers.



**Figure 2: Plots of calls heard by four observers at the corners of a permanently marked 400 m square in the long-unburnt area on 1 May 1998. The closed circles indicate possible coincidences of recordings of calls from different observers.**

- Possums must be excluded and also feral bees - using a biscuit of pest strip inserted into a metal basket attached to the ceiling of the box each year in August.
- A chain attachment allows for the natural movement of the tree.
- The box openings are placed facing away from the prevailing wind/ rain.

## Possible Effects of Recent Fires on Western Ground Parrots

Allan Burbidge  
Wildlife Research Centre  
CALM  
PO Box 51  
Wanneroo  
WA 6065



On 27 December 1997, a lightning strike started a fire near Thumb Peak, near the coast in the south-eastern part of Fitzgerald River National Park. Weather conditions and access problems meant that the fire was not extinguished until 22 January, after it burnt a large part of the park. The total area within which the burn occurred was about 90 000 ha, but the burn was quite patchy and probably only about 60 000 ha were actually burnt (G. Broomhall and M. Grant pers. comm.).

This fire may have had a greater effect on Western Ground Parrots (*Pezoporus wallicus flaviventris*) than the several fires which combined to burn 123 000 ha of the park in December 1989 (McCaw *et al.* 1992). Some of

the area burnt in 1989 was burnt again in the recent fire. This included half the area occupied by the population of Western Ground Parrots that has been subject to most detailed study (the 'Short Road' site of Watkins and Burbidge 1992). However, this area was burnt only patchily where edge burns moved into the area, so the effect on Ground parrots is unknown. The other half of this area has not been burnt for at least 40 years. Fortunately, this area (burnt and unburnt) includes permanent vegetation plots set up in early 1990. When last surveyed (May 1996) densities of Ground Parrots were similar in the long unburnt area and the area burnt in 1989. As part of the Western Ground Parrot IRP (Burbidge *et al.* 1997) it was proposed to survey this area in May of this year. This survey will now provide extra information on the effects of the fire.

In addition, the recent fire burnt a large area in the north-eastern part of the park where Ground Parrots were known to occur (about 75-80% of the 'Hamersley Drive' site of Watkins and Burbidge 1992). Several birds were seen in this area during fire suppression operations (M. Moore pers. comm.), suggesting that some were able to avoid the fire and may be utilising the few remaining unburnt patches.

Total numbers of Ground Parrots are not known with confidence for any population in Western Australia, but based on the estimates of areas of occupation and population numbers provided by Watkins and Burbidge (1992), the recent fire may have burnt the habitat of about 40-50% of the Ground Parrots thought to exist in Fitzgerald River National Park. This does not necessarily extrapolate to a loss of 50% of the birds, depending on whether they were able to re-locate or survive in higher densities in the remaining unburnt patches. However, it is likely that some loss would have occurred either as a direct result of the fire or as an indirect consequence of crowding in the remaining unburnt patches. The worst case would be a loss of about half the Fitzgerald River National Park population and about a quarter of the total estimated population of the Western Ground Parrot (Burbidge *et al.* 1997)

but, because of the patchiness of the burn in many areas, the actual effect will be less than that.

Previous experience (Burbidge *et al.* 1997) suggests that the birds at the Short Road site will recolonise the burnt area from the adjacent long unburnt area or unburnt patches within about six years, assuming there are no further fires. In fact, if there are significant unburnt patches within the recently burnt area, use of the recently burnt area for foraging is likely to occur within about a year. However, re-colonisation of the Hamersley Drive area is expected to take longer, as the burn was much more extensive. The nearest area with a population of any size is the Short Road population, a little over 10 km away. This is not far for a Ground Parrot to fly, but it will probably still be quite some time before they re-colonise from there. Re-colonisation of the Hamersley Drive area is therefore likely to be determined by the numbers of Ground Parrots left in any unburnt patches within this area.

In May of this year I propose to monitor the population at the Short Road site and investigate the possible effects of the fire elsewhere, as part of the recovery effort outlined in the Western Ground Parrot Interim Recovery Plan (Burbidge *et al.* 1997), and report back to the Recovery Team.

#### References

- Burbidge, A.H., Blyth, J., Danks, A., Gillen, K. and Newbey, B. 1997 Western Ground Parrot Interim Recovery Plan 1996-1999. Interim Recovery Plan No. 6 in J. Pryde *et al.* (eds) Interim Recovery Plans 4-16 for Western Australian Critically Endangered Plants and Animals. Western Australian Wildlife Management Program No. 29. CALM, Perth.
- McCaw, L., Maher, T. and Gillen, K. 1992 Wildfires in the Fitzgerald River national Park, Western Australia, December 1989. Dept of Conservation and Land Management, Western Australia, Technical Report No. 26.
- Watkins, D. and Burbidge, A.H. 1992. Conservation of the Ground Parrot in Western Australia. Pp. 46 - 49 in L. Joseph (ed) Issues in the Conservation of Parrots in Australasia and Oceania: Challenges to Conservation Biology. RAOU Report No. 83.

## Pesquet's Parrot Under Investigation

Gregory S. Pryor  
Department of Zoology  
University of Florida  
Gainesville  
Florida  
USA 32611

As a graduate student at the University of Florida, USA, I am investigating the Vulturine, or Pesquet's Parrot *Psittirichas fulgidus*, a threatened and endemic parrot of New Guinea's highland rainforests. Formal research involving this fascinating parrot has not yet been conducted.

Brief accounts of Pesquet's Parrot in the field and in captivity have suggested it is a highly specialised frugivore that depends entirely upon a diet of a few unique species of figs and the occasional flower. A review of the literature shows a paucity of information on the parrot's life history, ecology, biogeography, distribution, systematics, and physiology. Nothing is known about its breeding biology in the wild, and the first and only account of a Pesquet's Parrot nest in the wild was only recently described. The parrot also appears to have low population densities and large year-round home ranges.

The bright red feathers of Pesquet's Parrot are prized by native highlanders for use in ornamentation and headdresses; exploitation of these beautiful birds for their feathers appears to be increasing. Because its feathers are widely used and highly valued, Pesquet's Parrot is heavily hunted and its populations are