Report on visit to wildlife reserves in the Pingelly District with officers of the W.A. Department of Fisheries and Wildlife

As part of an evaluation of new areas for research, Ann Petch, Jim Barrow, Eric Greenwood, Peter Farrington, Ernie Biddiscombe and Graham Arnold visited a number of wildlife reserves with Andy Burbidge, Bob Prince, Angas Hopkins and Ken Wallace of the W.A. Department of Fisheries and Wildlife. The problems faced by the Department in developing management strategies were discussed in detail and priority areas for research were given to us by Dr. Burbidge.

The problems

The Department of Fisheries and Wildlife is now charged with the management of some 1100 reserves in W.A. for the conservation of flora and fauna. They have very few staff, little information about the flora and fauna of the reserves and are faced with conflicts on management of the reserves from farmers, the bushfire board and shire councils who often consider them hazards to farming from vermin and fire.

Their research staff is four zoologists and one botanist. Much of their time is taken up with administration. The net research effort is equivalent to two zoologists and 0.7 of a botanist.

Research priorities

The following key areas were identified by Dr. Burbidge; they were not given a priority order.

1. A study of the effects of frequency and intensity of fire on the regeneration succession and vegetation structure. Short term (up to 5 years) work is inadequate because some species important for fauna may take 15-20 years to reach ideal size for shelter.

2. The development of management tools to control exotic plants in reserves.

3. A study of the physiology of growth and seed production in *Oxylobium* and *Gastrolobium* species. These species are considered to be vital to the maintenance of small marsupials. Tammar and other species have a high tolerance of fluoracetate and the predator (feral cat/fox): prey balance may well be determined by the abundance of these species both as food and shelter.

4. To determine the canopy size at which regenerating *Oxylobium/Gastrolobium* bushes become used by small marsupials, and how they are used.

5. To develop means of revegetating repurchased farmland into useful wildlife reserve.

6. To develop management strategies for reintroducing small marsupials into reserves such that near natural ecosystems can be developed.

7. To determine the wild animal use of the interfaces between reserves (including those on farms) and farmland.

8. To develop management plans for use by farmers to optimise the wildlife value of farms.

Collaboration

The Department will be able to provide reserves for research work, including use of its Tutanning Research Station. Local departmental staff would be able to keep an eye on field sites, and possibly help with some measurements. Some funds for such things as fencing would be available. However, it seems unlikely that their research staff could spend much time in direct collaborative research.

Conclusion

The wildlife of W.A. has received scant research and there is increasing pressure on it, with no reliable means of protection, in many cases, because of lack of information. There is a real need for CSIRO type research to assist the State Government to develop management plans for maintaining neglected but important resources. The Division has the expertise to handle several of the areas of high priority for research. Several of the staff in Program D are keen to be involved in this type of work.

G.W. ARNOLD
20/11/1978

GWA:DGS