GRANITE ROCK RESERVES

Some time ago, the Western Australian Wild Life Authority recommended that a considerable number of granite rocks, together with adjoining Crown Lands, be maintained for the conservation of fauna and flora, particularly for scientific studies.

Scientifically, these rocks are of particular value because:-

1. They act as modifiers of habitat through their effect on the climate of their verges. The effects of the shade they throw on the southern aspects and run off of rainwater on all sides produces conditions which favour a unique flora and fauna. Typical examples are the occurrence of ferns and other plants in comparatively arid districts many miles from their point of widespread occurrence. This isolation gives opportunities to study adaptive radiation in plants and animals and other evolutionary factors.

2. Many of them shelter relict species not found elsewhere and in the pools which form after rain, successions of aquatic life occur which give an opportunity for studying the effects of arid environments on this type of fauna.

3. Some are the main strongholds of interesting forms of lizards, frogs, wallabies and many invertebrates.

4. Taken as an array of areas, they provide a series of assemblages of plants and animals as cross sections of the southern part of the State. They thus show gradations in the occurrence of flora and fauna on north-south and east-west clines.

The main forms of damage from which these rocks need to be protected are:-

1. Clearing or grazing of vegetation.

2. Repeated indiscriminate burning and shooting.

3. Trampling of vegetation and disturbance of rock cover by picnic parties and introduction of exotic plants.

4. Disfigurement with litter or paint, unauthorized vehicular tracks and mining for road or building

materials.

Two other forms of man-induced changes on granite rocks occur by:

(a) Modification as a water catchment area

(b) Inclusion in farmland where they become accessible to grazing and trampling by sheep and cattle.

The first of these usages, insofar as it uses granite slabs for walling the water catchment channels, destroys the habitat of all these animals - lizards, spiders etc. which shelter beneath rocks. However, there are some slabs and rock pools which remain, and immediately adjacent land is undisturbed.

The second of the changes, (b) above, leads to complete destruction of the habitat; adjacent flora is grazed out, the rock loses lichens etc. because of trampling, slabs are broken and removed and pools polluted by sheep and cattle droppings. Clearly, once a rock is included in a farm its ability to retain its biological characteristics are limited. Nevertheless, it seems unnecessary to have only rocks of a "wilderness" status as reserves and it is advisable to have a number of categories, e.g. (i) Wilderness; (ii) Picnic and local beauty spot, (iii) Water catchment. An array of rocks with district usages is most likely to ensure the maintenance of these unique areas.

In general, the size of the rock is not important, i.e. a very large size is not, in itself, necessary before an area is reserved. The ideal would be a more representative array of all sizes of granite rocks included in the reserve system. Large rocks have an advantage in that there is greater topographic relief and hence a more diversified fauna and flora. In addition, large rocks in the eastern limit of the wheatbelt area have a good catchment and run-off which often allows small populations of the wetter types of plants and animals (now found much further west) to persist as relicts.

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