

MORE RECENT READINGS

- Elery Hamilton-Smith

Sharples, Chris, 1997, *Karst Geomorphology and Values of the Tarkine*, Report to the Australian Heritage Commission and Tasmanian Conservation Trust Inc., 176 pp.

This is indeed a significant addition to the recent sequence of reports documenting the Tasmanian karst. The importance of the Tarkine region karsts has only been recognised in recent years, so despite the work done, and in particular, the thoroughness of this study, there are still large areas of the Tarkine which remain unexplored.

Essentially, the report describes the karsts of the region in considerable detail, presents an assessment of both conservation significance and management issues, then presents a series of recommendations for action. It is clearly written and well structured, so it is easy to read and understand.

The importance of the report lies firstly in the extent to which it contributes to the understanding of geoconservation principles and strategies which has been steadily developing in Tasmania over recent years. There is no question that the Tasmanian work is setting a standard in geoconservation thinking which has yet to develop in other states, and Sharples has again demonstrated the value of the Tasmanian approach.

Probably the most significant group of features reported upon here is the magnesite karst,

including caves, karren, and springs, one of which is thermal in character. Although some very minor karst features have been reported from magnesites in other countries, the scale and diversity of such features in the Tarkine unprecedented. In particular, the warm spring appears to be unique. From a geodiversity perspective, the proper recognition and protection of these features is of the highest importance.

Another very important feature is Lake Chisholm, which had been previously recognised and studied. This is an outstanding example of a sinkhole Lake, being situated within a Uvala some 200 metres in diameter.

Sharples recommends a number of sites should be added to the Register of the National Estate and others where their karst features should be formally noted in existing wilderness area registrations. But further exploration and assessment is required before adequate recommendations can be put forward on a number of other potentially significant areas. The quality of the documentation supporting these recommendations is impeccable and thus the report maintains the quality already demonstrated in other recent Tasmanian studies.

Clarke, Arthur, 1997, *Management Prescriptions for Tasmania's Cave Fauna*. Report to the Tasmanian RFA Environment and Heritage Technical Committee, 164 pp.

Establishing a framework for consideration of issues and strategies in the management of cave fauna is perhaps a more complex task than that which faced Sharples ; more importantly, Arthur Clarke could draw only upon general literature and inventory data and did not have available to him the sequential development of conceptualisation which had taken place in the geoconservation field. So, one must say that his report lacks the incisiveness and clarity of the Tarkine report. At the same time, he has laid a foundation and has made considerable movement towards establishment of a framework for continuing work. Further, he has carried out an exhaustive and very valuable search for evidence to clarify and further define the impacts of various environmental changes. It is therefore important reading for anyone concerned with bio-conservation in karst areas.

An important element of the study was the establishment of a data base of faunal occurrences in Tasmanian caves. Although a number of further data sources which could not be accessed within the present study are identified, he has collated information on 4,700 occurrence records, comprising 643 invertebrate species from 492 caves in 68 karst areas. Again, despite a great deal of work, this still leaves over 3,500 caves in some 230 karst areas where the fauna is completely unknown !

As well as the incomplete nature of field survey, a further major problem exists in the dearth of taxonomic resources to identify and describe the species collected. Any serious examination of cave fauna in Australia will reveal new and undescribed species (often also new at generic or even higher levels). This not only makes it extremely difficult to fully assess the significance of material, but even worse, makes the establishment of protective measures under current legislative and administrative arrangements extremely problematic.

Although Clarke tackles interpretation of what he terms (very appropriately) as 'karst biospace', he does not explore this to the extent which current knowledge would allow. He confuses the concepts of micro-caverns and meso-caverns, and does not use the latter term, even though it is the meso-caverns which are often a vital, perhaps most central, component of karst biospace. He also fails to discuss what is known about the environmental parameters of meso-caverns. This is perhaps the most disappointing part of his work.

By contrast, his detailed and very competent review of the impacts of surface disturbance to the karst environment (Section 4) is invaluable.

The recommendations reflect both the complexities of the problem and the extent to

which generalisations are difficult, each situation demands its own solutions. But 36 pages of recommendations constitute a marathon for those concerned with implementation! This section really needs re-structuring to develop and more clearly define key general strategies, then to tabulate examples of specific applications.

Juberthie, Christian, 1995, *Underground Habitats and Their Protection*, Council of Europe. (available in Australia & New Zealand from Hunter Publications, P.O. Box 404, Abbotsford, Victoria 3067. Telephone (03) 9417.5361, Fax (03) 9419.7154, Price \$ (Aus) 22.60 plus postage).

I am truly grateful to Philippe Axel of ISHA for drawing this volume to my attention. It is one of a series of reports prepared for the Council of Europe to further implementation of the Bern Convention on conservation of European Wildlife and natural habitats. The very fact that such a report appears under the auspices of the Council of Europe is eloquent testimony to the importance that might and should be attached to Arthur Clarke's work.

It briefly and very clearly outlines the nature of the underground environment and the vulnerability of this environment and its fauna. The main body of the report provides a country by country account of karst regions, the general character of the fauna, the legislative and other protective mechanisms and the current protective

I must finally say that am reluctant to voice this and criticisms, as I am all too aware of the problems in undertaking such a massive task within a very tight time-frame and the remarkable amount which Arthur nevertheless achieved.

status of the underground domain. Finally 8 pages of generalised recommendations are provided. There are also valuable bibliographies at both general and country levels. A recommendation on conservation of underground habitats, adopted by the standing committee on the Bern Convention in 1992, is included as an appendix.

It is a vital reference document for anyone concerned with the conservation of underground fauna - its value is not limited to the European continent. I particularly commend Juberthie's blunt statement that 'The anthropocentric view which limits protection of the underground environment and its habitats to caves must be abandoned.