



# Western Australian Speleological Group (Inc.)

(Founded 1958)

P.O. Box 67 Nedlands W.A. 6909

Full Council Member of the Australian Speleological Federation (Inc.)

*Telluris Operta Subire*

---

28 February 2005

The Secretary,  
Senate Environment, Communications Information Technology and the Arts References Committee  
Parliament House,  
CANBERRA ACT 2600  
email: [ecita.sen@aph.gov.au](mailto:ecita.sen@aph.gov.au)

---

## **Introduction - Who is the WASG?**

The Western Australian Speleological Group Inc. (W.A.S.G.) is the largest speleological group in W.A. The objectives of the group are “to promote and encourage speleology in Western Australia in all its aspects; to record and, if suitable, publish results of any investigations of the group, and to foster preservation of Western Australian caves in co-operation with other interested organizations”. The group’s motto is “Telluris operta subire”, that is, “to pass beneath the hidden (or covered) places of the earth”. W.A.S.G. is run by a committee, and members of W.A.S.G. are involved in all aspects of speleology, some of which include: archaeology, botany, conservation, exploration, palaeontology, hydrology, photography, surveying and zoology.

The W.A.S.G. is a full council member of the Australian Speleological Federation Inc. (A.S.F.), which is a Federation of the caving groups throughout Australia. The A.S.F. comprises of corporate caving clubs and associate caving clubs distributed throughout Australia. The A.S.F. liaises with government departments, private landowners, or companies involved with the management of cave and karst resources. The A.S.F. has provided consulting services relating to cave and karst management to public and private cave managers throughout Australia. The members of W.A.S.G. have assisted the A.S.F. in this process. They have also assisted many cave managers in the identification of the cave resources with the karst of their reserve, National Park or private land holding. This involves activities such as karst inventories, documenting and surveying caves, tagging cave entrances, and performing inventories of features and cave life within the cave.

The WASG would like to make a few comments on this Senate Inquiry. In Summary, the WASG would like to register its concern regarding the funding and resources that the Government has available to meet the objectives and management requirements of National Parks, Conservation Reserves and Marine Protected Areas – in particular with specific reference to karst areas.

Karst is a complex natural system and the existence of soluble rocks often leads to the development of karst features such as caves. Limestone is the most common soluble rock and most of the world’s caves occur in limestone. WASG members have documented a significant amount of what is known of karst in W.A. Members have a strong interest in management and often are on “advisory committee’s” to Government agencies involved in managing karst in Australia.

---

*"What we have now is all there will ever be ~ Conserve Australia's Caves"*

Caves are particularly vulnerable to disturbance. This may be from human visitors or due to surface management. It is for these reasons that a total catchment management approach is necessary for cave and karst management. We understand also that sustainability is such an important concept and an objective, which should be the underlying objective of all public land management agencies. In many instances “cave reserves” often have inadequate boundaries. This is due to the caves or karst areas not being protected at a time when the underground flows of the water, which formed the caves, were not understood. An example is where there are Pine plantations on the Gnangara Mound in Perth, WA – because at the time of planting, the effect of the plantations on the water table and associated caves was not known.

Please refer to more detailed comments below which are directly addressing the Terms of Reference.

## **Submission on the Senate Inquiry**

### **The funding and resources available to meet the objectives of Australia's national parks, other conservation reserves and marine protected areas, with particular reference to:**

In many instances the National Parks and conservation reserves were designated some time ago. Very few of these protected areas have adequate boundaries to protect the caves and the cave biota adequately. There are many instances where judicious acquisition has materially improved the quality and protection of caves. The provision of Federal funds to States to facilitate such acquisitions can considerably assist the States with national significant objectives whether karst, cave or biodiversity objectives such as to support EPBC Act (1999). It is important that a review of the karst areas in WA occur, with respect to the boundaries of National Parks and reserves. In particular, an assessment of adjacent land uses needs to be combined with up-to-date information regarding the specific geology, hydrology and biospeleology of each karst area.

#### **a the values and objectives of Australia's national parks, other conservation reserves and marine protected areas;**

We understand that in Australia with its States and Territories, legislation is different for each. The values and objectives are not in question. It is whether management is guided by them and perhaps whether they truly reflect modern objectives, which embrace habitat and ecosystems, approaches which protect all biota. The other aspect that needs consideration in the values and objectives of the National Parks and conservation reserves is that of geo heritage – that is the geological aspects of the karst environment, as opposed to purely considering the biological values as is the tradition.

#### **b whether governments are providing sufficient resources to meet those objectives and their management requirements;**

Several of the key karst areas in the State have long expired management plans. Given the huge amount of time it has taken for these key documents to be updated, it is clearly obvious that the CALM does not have the sufficient resources in its planning section to undertake what is required to meet the objectives and management requirements.

Over the past 2 year period, despite several speleological consultation meetings with CALM regarding these areas, there is still no draft management plans released for two of those areas.

### 1. Leeuwin-Naturaliste National Park

The Leeuwin-Naturaliste National Park Management plan, dated 1989-1999 has not been finalised or renewed. This is 7 years out of date.

### 2. Yanchep National Park

The Yanchep National Park Management plan is dated 1989-1999 - 7 years out of date and in need of considerable revising. In addition, The Yanchep National Park seriously needs a specific "cave manager" as a matter of priority (a similar position to that in the LNNP would be ideal). There is a need for an integrated approach to management in the area. Yanchep National Park has had several key staff leave in the last 2 years, none of these individuals have been replaced. We understand that many of the vacant positions are being undertaken by individuals who are already undertaking other functions/roles. In particular a recent employee in the key role of Conservation Ranger was not replaced and as such the TEC have received little focus or ongoing monitoring as they should have.

There are several Threatened Species and a "Threatened Ecological Community" in this karst area. A recovery plan is in place and CALM has a specialist recovery team that meets to address issues. The main concern to speleologists is the situation for the cave fauna in the stream caves. The Government project to direct artificial supplementation to the cave stream in the Crystal Cave is not addressing aspects of the local environment that could reduce the threat to the karst ecosystems. The Government needs to hasten their plans to reduce the Pine Tree Plantations in the east. The catchment to the east is significant to the karst hydrology and CALM needs more resources to assess and monitor the area's hydrology, geology and biospeleology.

It is concerning that the National Park still does not have a dedicated scientific officer to oversee or monitor the adaptive research that is occurring in the National Park. There is a need for specific monitoring and implementation of plans. The WA Government needs to address these issues as a matter of priority.

Unfortunately, CALM has still not obtained any further capital works funding in their budget for KEY infrastructure upgrading. The plans to alter the lighting in Crystal Cave, to remove the lampenflora or to upgrade the infrastructure have yet to occur. The recent break-in and significant vandalism to this part of the National Park also indicates that the security may need assessment and upgrading also. All of this is of great concern and indicates a need for more resources in the management of this important karst area.

### 3. Cape Range National Park

The Cape Range National Park Management plan is dated 1987-1997 and has been in the process of review for some time. This is now 9 years out of date and was recently released for public comment until April 2006.

### 4. Nullarbor Region - South Coast Management Plan

There has been no progress on the Regional management plan, dated 1992-2002. This is now four years out of date.

### 5. Kimberley Region

The review of nature conservation reserves in the Kimberley in 1991 needs further follow-up. The WA Museum outlined some of the recommendations that were made in 1995, regarding the karst areas of the Kimberley. A submission made by the ASF in 1980 was referred to by the WA Museum. We still consider the caves and karst of the Kimberley are of considerable international significance.

The area's current land management regime does not adequately provide for the reservation and protection of important karst features. It also does not recognise outstanding opportunities to

incorporate features into existing reserves, features that would considerably enhance the value of those reserves. The ASF submission in 1980 recommended that there be a thorough integrated survey of all the cave and karst features of the Limestone Ranges of the West Kimberley and that such a survey should examine geomorphological and biological attributes as well as aboriginal relicts. It is understood that at that time, it was recommended that the WA Museum be requested to make a survey of the caves and springs for the limestone ranges. It is understood that this survey has never been conducted. It is our recommendation that the current status of the karst areas in the Kimberley needs progressing and resources need allocation to this. We consider that the caves and karst of the West Kimberley are of considerable international significance.

## **c any threats to the objectives and management of our national parks, other conservation reserves and marine protected areas;**

### 1. Leeuwin Naturaliste National Park (LNNP).

There are four “Aquatic Root Mat Community in Caves of the Leeuwin Naturaliste Ridge”. These are a “Threatened Ecological Community” that are listed under the EPBC Act as endangered. A recovery plan is in place and CALM has a specialist recovery team that meets to address issues

There was a recent proposal on adjacent land to the LNNP that could be classified as a threat. Despite the existence of the TEC In the LNNP, we are advised that CALM did not have the sufficient resources to provide appropriate written advice when requested by the Shire of Augusta Margaret River during 2005. It also appears that verbal advice of the TEC was received too late in the process for the Shire to include the existence of the TEC In the planning process. As a result of this, and a combination of other Environmental Agencies lack of awareness of the TEC, the Shire approved a proposal for a Eucalyptus Plantation directly adjacent to the LNNP and in an area likely to provide a threat to the TEC. Due to a combination of factors, the proposal Is now not likely to proceed, however the Issues of the need for thorough Interagency consultation and communication, Including communication with speleological groups, remain as necessary to ensure the objectives and management of the State's National Parks Is appropriate.

### 2. Yanchep National Park

The “Aquatic Root Mat Community in Caves of the Swan Coastal Plain” are a listed species under the EPBC Act. This is listed as a “Threatened Ecological Community” that is endangered. A recovery plan is in place and CALM has a specialist recovery team that meets to address issues.

The main concern is the situation for the cave fauna in the stream caves. Further to what was reported previously, the CALM, Water Corporation and Waters and Rivers Commission have been artificially maintaining water to certain areas in attempts to maintain the subterranean stygofauna habitats. The Government project to direct artificial supplementation to the cave stream in the Crystal Cave lasted only several weeks. It is understood that the water has been switched off due to concerns regarding oxidised irons in the karst system. It is our understanding that there is no longer any living stygofauna in this cave or in the Root Matt communities in this cave. It is still our opinion that the key threat to this area is the existence of pine plantations in the catchment of these caves – where the pine trees are reducing recharge to the superficial aquifers, and are removing water from the aquifer, thus contributing to the lowering of the Gngangara Mound (the watertable). The Government needs to hasten their plans to reduce the Pine Tree Plantations in the east. We reiterate that this should be a priority as the catchment to the east is significant to the karst hydrology.

### 3. Cape Range National Park

The Cape Range is a whole geological unit that is not totally included within the National Park. The key threat to the National Park's management would be the impact of any mining on the rest of the Cape. This would affect the karst hydrological system and subterranean fauna. It is important that the National Park boundaries are extended to include the rest of the Cape and that the Mining Reserve is removed. It is our assessment that Cape Range deserves World Heritage listing and this should be facilitated by Federal agencies.

### 4. Nullarbor – areas of UCL and conservation reserves

The Nullarbor is a large, significant karst area, where visitation impacts on the karst system are difficult to assess. It is clear to many speleologists that the Nullarbor is an area that desperately needs appropriate management. There is still no "on-ground" management of the caves and karst, and as such, there is no monitoring of impacts or conditions. The threats of visitation can significantly affect the conservation values of the area. There are areas of Unreserved Crown Land and several conservation reserves. The area desperately needs some on-ground management and monitoring, particularly of impacts to sensitive environments such as caves.

The other issue of importance regarding the Nullarbor Plain is that it has to be one of the most iconic areas of Australia. The cave and karst values of the Nullarbor are superlative on a world scale. Recent research has shown that the caves contain bone assemblages from recent to past eras and cave biota much of which is cave adapted (troglobitic) and unique to caves on the Nullarbor. It is our assessment that the Nullarbor deserves World Heritage listing and this should be facilitated by Federal agencies in cooperation with both the South Australian and Western Australian Governments.

## **d & e the responsibilities and record of governments with regard to the creation and management of national parks, other conservation reserves and marine protected areas, with particular reference to long-term plans**

It is understood that, for a number of reasons related to conflicts of interests, in the past many of the early reservations of cave and karst areas were only protected as minimal areas. The conflicts were alternative uses such as mining, forestry and agriculture. Only a few of these early reserves have been increased in size and most have not had their status improved from reserve to National Park. It is important that a review of these lands occur, to properly reflect their importance to science or the economies of local and regional communities.

In particular, there needs to be further investigation of the need for Federal Cave/Karst Resource Protection legislation. It is our opinion that this should be proposed in order to provide some legal protection for the very important caves/karst throughout Australia. For example countries such as the USA have such significant legislation. **In conclusion**, it is highly evident that most agencies in WA are under resourced, under skilled and severely lacking in the specialist knowledge required to manage karst ecosystems.

Yours sincerely



**Jay Anderson**  
**WASG Conservation Officer**