

# TIMOR KARST AND CAVES

## overview of the project

This project conducted by the Newcastle and Hunter Valley Speleological Society discovered 27 new caves in the Timor karst system in the Upper Hunter Valley. The group originally set out to update 30 year old records of the caves as 23 additional caves had been discovered since its initial publication in 1976. This project has resulted in a new publication titled *Timor Caves — Hunter Valley, New South Wales*, which documents the 80 caves at Timor.

The new publication provides comprehensive information on the history and development of the caves, cave descriptions, maps and the ecology both within and surrounding the caves. The sensitivity of the caves' environment and their surroundings are also highlighted. The detailed information contained in this book has provided information for researchers, local government and landholders. This document is a significant outcome as it provides a historic record of the caves system.



Grass trees growing amongst limestone

## how the project was carried out

The project began by compiling existing information on the cave system, which formed the basis for 19 field assessments, which collected detailed descriptions of cave location, length, depth and key features of the cave. Researchers from other fields, including bat ecologists, vegetation consultants and bird watchers participated in the cave assessments to collect information on the flora and fauna both within and surrounding the caves.



Flowstone in Rock-me Cave at Timor

A total of 108 bird species and six distinct vegetation communities were identified. Each specialist contributed a chapter to the book on the features they had observed, to give an overall picture of the diverse and unique range of flora and fauna of this area.

Details from the field assessments were used to create comprehensive descriptions and maps of 57 of the caves, with the remaining 23 caves having detailed descriptions only. Details of the equipment required to transverse each cave were also listed (this list included ropes, ladders and abseiling equipment).

## outcomes now and in the future

This project produced a resource that made scientific knowledge about Timor karst and caves accessible for the general public. The book is being used as a base for education programs dealing with karst landscapes and also highlights to visitors the sensitivity of the cave environment and their susceptibility to damage as a result of human disturbance. It is hoped that through the education

materials provided in this resource that future conservation of this irreplaceable landscape can be achieved.

A poster has been produced in conjunction with the Department of Environment, Climate Change and Water, Karst Conservation Unit to highlight the history of cave development, the unique environments that occur within them and how fragile they are, including the importance of conserving these areas. A copy of the poster is made available with each copy of the book.

This project has provided a platform for further study of Timor caves and has resulted in additional caves being found and an increased knowledge of other features of the area, including invertebrates, bats, birds and vegetation.

## benefits, challenges & lessons learned

The publication can be used as a support tool for educators to deliver environmental education programs as it provides:

- Information for students about cave and karst values
- Suggests reading lists at the completion of each chapter for more information about each topic.

The time taken to fully document all the details gained during field assessment was much greater than initially anticipated. It is estimated that for every hour of field work undertaken an hour is required to make this information ready for publication. This resulted in a delayed completion of the project, however it also created a more comprehensive final publication.

Having individuals contribute to each chapter took time to collate and delays were incurred in receiving information from each participant. It was recognised that considerable time needs to be spent ensuring that time lines are realistic and that those involved adhere to them.