

Eighteenth Australasian Conference on Cave and Karst Management

**Margaret River, Western Australia
3 May to 9 May 2009**



WINDS OF CHANGE
ACKMA 2009
WESTERN AUSTRALIA

CONFERENCE HANDBOOK

CONFERENCE CONVENOR:

**Anne Wood, Caves Manager,
Department of Environment and Conservation, Western Australia**

Handbook prepared by: Kent Henderson, ACKMA Publications Officer

Conference supported by:



**Department of
Environment and Conservation**
Our environment, our future



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Margaret River, Western Australia.
3 May to 9 May 2009.

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Kent Henderson, Publications Officer, ACKMA Inc.

Cover Photos:

Left: An old postcard of Western Australian Caves
Right top: A view inside Mammoth Cave, Margaret River. Photo: *Caveworks*.
Right bottom: Abseiling into a cave. Photo: Ross Anderson.

Map acknowledgements:

Ken Grimes (maps on pages 29 & 74)
Dave Smith (map on page 62)

Conference Organising Committee – ACKMA 2009

Anne Wood (Convenor)

Jay Anderson
Ross Anderson
Jayme Hatcher
Renee Mouritz
Tracey Robins
Neil Taylor
Rauleigh Webb
Candace Williams
Peter Wood



The Conference Organising Committee in session

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WELCOME TO THE CONFERENCE

A very warm welcome to the 18th Australasian Cave and Karst Management Conference. This is the third ACKMA Conference to be held in the south west corner of Western Australia, the first held in 1981 at Yallingup was attended by 24 delegates, the second at Margaret River in 1991 was attended by 47 delegates, and this, the third, is expected to be attended by over 90 delegates (though *please* don't ask me the final number until after the conference!)

The Leeuwin-Naturaliste area in the South-west of Western Australia is an area of great natural charm and beauty. A stunning coastline of white sandy beaches interspersed with rocky headlands is fringed by limestone reefs and world class surf. Other natural features are the majestic forests, the south west's largest river, the Blackwood, and of course, the caves.

Caves were the first 'tourist attractions' in the region, and indeed within the south west of W.A., with many being opened for tours in the early years of the 20th Century. The earliest reserves (part of the present day Leeuwin-Naturaliste National Park) were put aside for '*protection of caves and flora health and pleasure resort*'.

Today the caves remain a great attraction, though now the region is known for much, much more. Vineyards producing world acclaimed wines, boutique breweries, fine dining, arts and crafts, chocolate, cheeses, and olives are just some of the attractions.

The Leeuwin-Naturaliste National Park, stretching 110km between Cape Naturaliste in the north and Cape Leeuwin in the south encompasses most of the remaining forested areas and includes much of the limestone in the area.

Four small enclaves within the National Park are vested in the two local tourism associations and contain the major show caves – Ngilgi, Mammoth, Lake and Jewel.

The conference hosts are the Department of Environment and Conservation, the agency that manages Western Australia's National Parks and the 100's of caves and karst features within them, including Calgardup, Giants, Crystal (Yanchep National Park); the Augusta Margaret River Tourism Association, manager of Caveworks, Mammoth, Lake and Jewel Caves; and Geographe Bay Tourism Association, manager of Ngilgi Cave.

Those of us fortunate enough to make this place our home proudly welcome you to this beautiful part of the world.

Anne Wood
Conference Convenor



Anne Wood. Photo: Kent Henderson.

GENERAL INFORMATION

Margaret River offers a full range of facilities and services.

It is a very popular destination for travellers from far and wide and for those seeking a “sea change” or “tree change”.

Climate

The climate for Margaret River in early May is likely to be mild in the day and cool at night.

Autumn has many still, mild days and is generally a beautiful time of year to experience the south west of Western Australia, however the cold and wet winter fronts may also make an appearance at this time so be prepared for very wet weather.

Our climate has been referred to as ‘more Mediterranean than the Mediterranean’.

Of our average 1147mm of rainfall, 616mm falls in the 3 winter months of June, July and August. The conference month of May averages 160mm of rain

Shopping

There are two supermarkets, Coles and IGA, both situated to the west side of Bussell Highway in the town center.

The town centre also has numerous cafes, restaurants and a variety of other shops.

Station Road Greengrocers, The *Foodroom* Lunch Bar and Blue Ginger Café are to be found in Station Road close to the MR Tourist Park and Country Cottages where many conference delegates will be staying.

Phone numbers

Emergency	000
MR Police	97572222
MR Hospital	97572000
Anne Wood	0427 525 445

Banking

The following banks have branches in Margaret River:

Commonwealth Bank of Australia
Westpac
Bankwest
ANZ
National Australia Bank
Bendigo [agency in 777 Pharmacy]

All are to be found on Bussell Highway in the town centre.

Medical

Margaret River District Hospital is located in Farrelly Street, opposite the Grange on Farrelly Motel, where some conference delegates are also staying. There are several medical practices, the one closest to the conference venue is Margaret River Surgery at 1 Station Rd (corner of Wallcliffe and Station). The two pharmacies are both located on Bussell Highway.

Post Office

Margaret River Post Office is on Willmott Road. Walk north along Bussell Highway until you reach the MR Hotel on your right. Turn right and walk one block up the hill to the Post Office.

Phone and internet communications

Mobile phones work throughout Margaret River Town, but away from the town reception is not consistent. Phone reception is available at Calgardup Cave, Lake Cave, and at Ngilgi Cave.

There is an internet café in Margaret River Bookshop on Bussell Highway.

Calgardup Cave	97577422
Caveworks	97577411
Ngilgi Cave	97552152

ACKNOWLEDGEMENTS

Thanks must go to the conference organizing committee comprising Jay Anderson, Ross Anderson, Renee Mouritz, Tracey Robins, Neil Taylor, Rauleigh Webb, Candace Williams and Peter Wood for their valuable time and input. Thanks must also go to Jayme Hatcher for her work in the initial stages of conference organization.

I would like to make special mention of Jay Anderson for all her work organizing the pre and post conference trips, Rauleigh Webb and Ken Grimes for producing the Conference Field Guide, Kent Henderson for producing the Conference

Handbook and providing ongoing advice and support (and harassment!), Ross Anderson for organizing the workshop for Wednesday afternoon, and Peter Wood for his support and assistance in many ways too numerous to list (feel welcome to ask Peter for details).

Thanks also to the many members of the caving fraternity for their help during the conference and to Molloy Island Volunteer Bush Fire Brigade for the use of their laptop and projector for the presentation of papers.

SPONSORS

The Department of Environment and Conservation (DEC) is the major sponsor of the Conference, contributing resources, staff time and coordination of volunteers to organize and manage the event. DEC also provided funding for the conference satchel, and DEC publications – *The Caves of Western Australia* and *Discovering the Leeuwin-Naturaliste National Park*. Thanks also to DEC for the venue of some conference events, Wharncliffe Eco Discovery Centre, and entry into Calgardup Cave, Giants Cave, Golgotha Cave and other caves

of the Leeuwin-Naturaliste National Park. DEC has also provided entry to Yanchep National Park and Crystal Cave during the pre-conference study tour.

The Augusta Margaret River Tourism Association has contributed staff time, the *Caveworks* center, Lake Cave and staff for the opening event and entry to Mammoth, Lake and Jewel Caves. AMRTA has provided the venue and refreshments for the interpretation workshop, which is being held prior to the commencement of the conference.

Geographe Bay Tourism Association has provided staff time and entry into Ngilgi Cave.

Stella Bella Wine has provided wine for the welcome BBQ and two other evenings.

Christian Fletcher Photo Images has provided a print to the value of \$550 and cards for each delegate.

This assistance is of all these organisations and supporters is gratefully acknowledged.

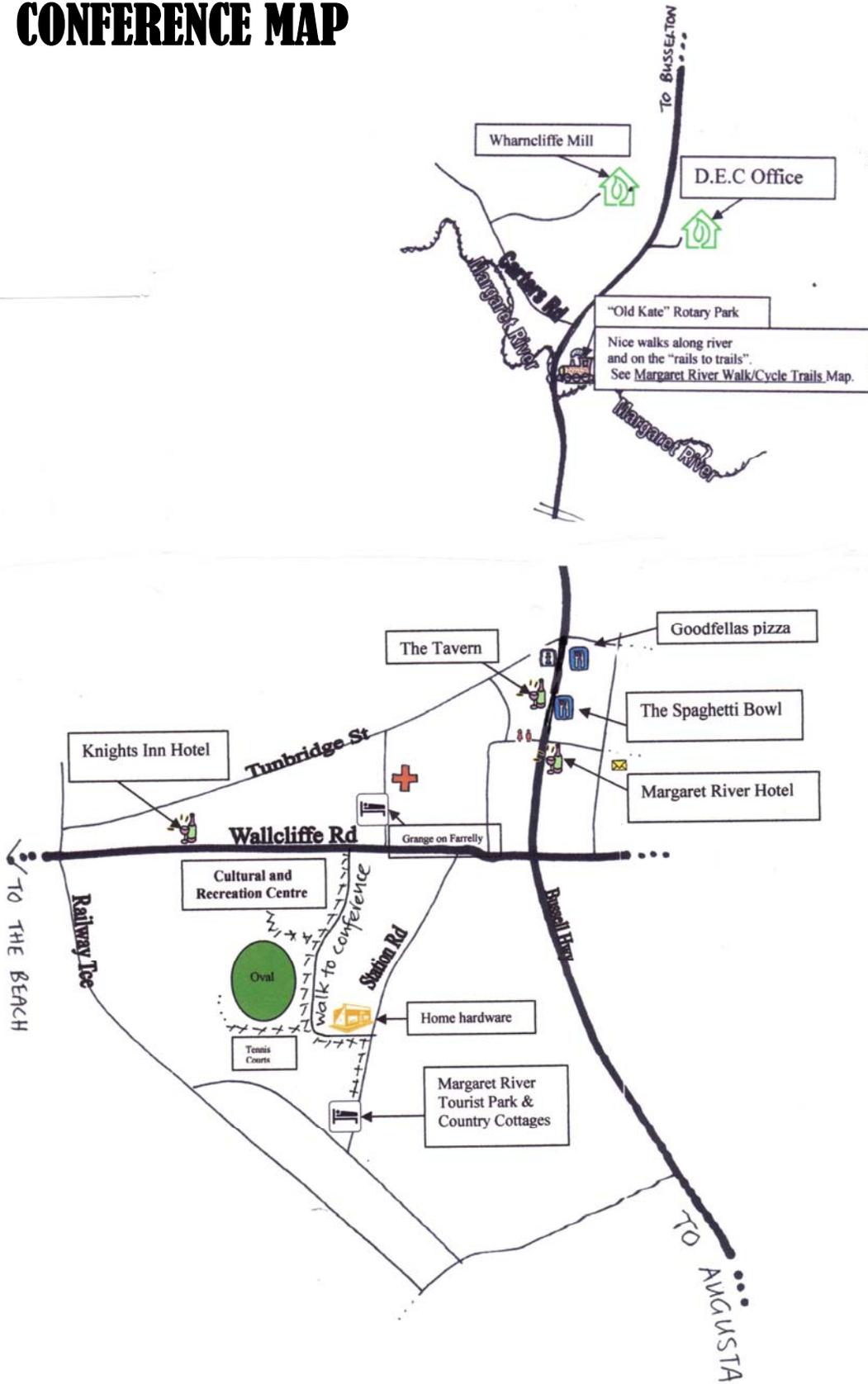
Yours in Cave and Karst Management,

Anne Wood,
Conference Convenor.

Right Above: *Caveworks, Margaret River*
Right Below: *Interpretation at Calgardup Cave*
Photos – Kent Henderson



CONFERENCE MAP



EIGHTEENTH AUSTRALASIAN CONFERENCE on Cave and Karst Management CONFERENCE PROGRAM

Conference Themes:
Innovations in Karst Management
Planning and Urbanization in Karst Lands
Heritage of Karst Areas

MARSHAL (with a loud voice): Kent Henderson

DAY 1 – SUNDAY 3 MAY – ARRIVAL DAY

Afternoon:

- 2.30 – 4.30pm. **Registration** (Department of Environment and Conservation [DEC] Margaret River meeting room). The Margaret River DEC office is located just off Bussell Highway just to the north of town.
- 5.30pm Buses leave Margaret River, for *Caveworks*, for the evening event.

Evening:

- From 6.00pm **OPENING FESTIVITIES** – *Caveworks* Visitor Centre. Welcome drinks.
- 6.15pm **WELCOME TO COUNTRY** – Wardan Aboriginal Cultural Centre.
- 6.45pm **OFFICIAL OPENING** of the 18th Australasian Conference on Cave and Karst Management by the **Hon. Troy Buswell**, WA State Treasurer, and Minister for Commerce; Science and Innovation; Housing and Works, and local member of parliament.
- 7pm BBQ Dinner.
- 9.30pm Depart for Margaret River

DAY 2 – MONDAY 4 MAY

Morning:

- 7am – 8.15am **Breakfast** – Margaret River Cultural Centre
- 8.15 – 8.45 Registration – Margaret River Cultural Centre
- 8.45 – 9am Housekeeping – Anne Wood, Conference Convenor

PAPER SESSION ONE Chair: Steve Bourne.

- 9.00 – 9.45am Paper 1. Dr. Julia James. **KEYNOTE ADDRESS.**
Ring in the changes in Cave Tourism.
- 9.45 – 10.10am Paper 2. Ken Grimes
Setting the Scene – *Syngenetic Karsts in the Southwest of Western Australia.*
- 10.10 – 10.25am Paper 3. Anne Wood
Setting the Scene – *Cave Management in the Leeuwin Naturaliste – an accident of history?*
- 10.25 – 10.50 **Morning Tea**

PAPER SESSION TWO Chair: Peter Chandler

- 10.50 – 11.15am Paper 4. Sasa Kennedy.
Thematic Interpretation – adding value to your tour and variety to your day.
- 11.15 – 11.40am Paper 5. Lindsay Hatcher.
Mammoth Cave Megafauna.
- 11.40am – 12.05pm Paper 6. John Brush.
Track marking in wild caves – The Yarrangobilly experience.

Afternoon:

12.15pm **BUSES LEAVE FOR LUNCH & AFTERNOON FIELD TRIPS**

NOTE: THIS PROGRAM REPEATS ON FRIDAY**BUS ONE.**Lunch at the **Lake Cave Tearooms.**

Group A: Lake Cave Tour **OR** short Contos Spring/Beach Walk
Afternoon tea

Mammoth Cave Tour

OR Longer Contos walk (if you choose this you will not visit Lake or Mammoth)

Group B: Mammoth Cave Tour

Afternoon tea

Lake Cave Tour **OR** short Contos Spring/Beach Walk**BUS TWO.**

Lunch at Boranup Café (adjacent to Boranup Gallery)

Group A: Giants Cave **OR** Golgotha Cave

Afternoon tea

Calgardup Cave

Group B: Calgardup Cave

Afternoon tea

Giants Cave **OR** Golgotha Cave

NOTE 1: Both Calgardup and Mammoth Caves offer short surface walk trails for those who would like an alternative to a cave visit.

NOTE 2: Sturdy enclosed footwear is required to visit Giants Cave. There is some rock scrambling and vertical ladders. The cave is 86 meters in depth and it is recommended that visitors to the cave have a moderate level of fitness. Golgotha is a former show cave with some beautiful speleothems, is fairly easy to access and is the major SW Australian site for Dr Pauline Treble's paleoclimate research.

BUSES RETURN TO MARGARET RIVER at APPROXIMATELY 5pm

Evening:

6.30pm. Walk or bus (depending on weather) to *The Spaghetti Bowl* on Bussell Highway, Margaret River, for the evening meal.

DAY 3 – TUESDAY 5 MAY

Morning:

7am – 8.15am **Breakfast** – Margaret River Cultural Centre

8.15 – 8.45am Registration – Margaret River Cultural Centre

8.45 – 9am Housekeeping – Anne Wood, Conference Convenor

PAPER SESSION THREE Chair: Dr. Julia James

9.00 – 9.25am Paper 7. Steve Bourne.
“Close to the Bone” – remodelling Victoria Fossil Cave, South Australia, Infrastructure,

9.25 – 9.50am Paper 8. Dan Cove and David Head
Synergy driving innovation in Cave Lighting.

9.50 – 10.15am Paper 9. Nick Haygarth and Arthur Clarke.
White Knuckles in the Underworld –the Wild Days of the Tasmanian Caverneering Club.

10.15 – 10.40am **Morning Tea**

PAPER SESSION FOUR Chair: Greg Martin

10.40 – 11.05am Paper 10. Travis Cross.
Monitoring and Management in the Waitomo Glowworm Cave.

11.05 – 11.30am Paper 11. Sasa Kennedy.
Adventure Activities as a Tool for Management

11.40am **BUSES LEAVE FOR LUNCH & AFTERNOON FIELD VISITS**

Afternoon:

Bus One 12.00pm Karridale Tavern for lunch
 1.30pm Jewel Cave **OR** Moondyne Cave Tour

Bus Two 12.15pm Augusta Bakery for lunch
 1.00pm Leave for Quarry Bay, Cape Leeuwin & Quarry Bay Tufa
 2.00pm Leave for Jewel Cave

PAPER SESSION FIVE Chair: Rauleigh Webb

2.30-2.55pm **Paper 12**. Lindsay Hatcher
Jewel Cave Redevelopment

Bus One 3.00pm Leave for Quarry Bay, Cape Leeuwin & Quarry Bay Tufa
 4.00pm Leave for ‘Explorus’
 4.30pm Explorus presentation
 5.00pm Depart for Margaret River

Bus Two	3.00pm	Jewel OR Moondyne Cave Tour
	4.15pm	Leave for 'Explorus'
	4.30pm	Explorus presentation
	5.00pm	Depart for Margaret River

BUSES ARRIVE at MARGARET RIVER at APPROXIMATELY 5.30pm
BUSES PICK UP PEOPLE for EVENING MEAL at 6.30pm

Evening:

7.00pm	Evening Meal at <i>Wharnecliffe Eco Discovery Centre</i> Bring along your musical instruments NOTE: Please dress warmly for Wharnecliffe as the dining area is not fully enclosed.
8.00pm	ACKMA Committee Meeting – Wharnecliffe Eco ED 'classroom'.

DAY 4 – WEDNESDAY 6 MAY

Morning:

7am – 8.15am	Breakfast – Margaret River Cultural Centre
8.15 – 8.45am	Registration – Margaret River Cultural Centre
8.45am – 10am	ACKMA ANNUAL GENERAL MEETING (See the Agenda on Page 53)
10am – 10.20am	Presentation on the ACKMA Trip to Mulu 2010 – Brian Clark
10.20 – 10.45am	Morning Tea

PAPER SESSION SIX Chair: Deborah Carden

10.45 – 11.10am	<u>Paper 13.</u> Dr. John Watson <i>Department of Environment and Conservation (DEC) Draft Caves and Karst Policy.</i>
11.10 – 11.35am	<u>Paper 14.</u> Jay Anderson and Alan Briggs <i>Filling the Gap – the role of a non-government karst conservation organisation in Australia.</i>
11.35 – 12noon	<u>Paper 15.</u> Ross Anderson Woodvale Swimming Pool Collapse
12noon – 12.25pm	<u>Paper 16.</u> Ross and Jay Anderson <i>Urbanisation and Karst Systems – living with karst in Western Australia.</i>

Afternoon:

12.30 – 1.10pm	Lunch, Margaret River Cultural Centre.
1.10pm	BUSES leave <i>Wharnecliffe Eco Discovery Centre</i>
1.30 – 4.30pm	WORKSHOP: PLANNING AND URBANISATION IN KARST LANDS <u>Venue:</u> <i>Wharnecliffe Eco Discovery Centre.</i> <u>Facilitator:</u> Ross Anderson.

It is well known that there are a number of values existing within karst areas, and that human uses of karst can conflict with environmental protection and conservation values.

This workshop will consider key issues required for planning and development in karst areas. It is expected that the workshop will be of most interest to land managers, environmental consultants and government agencies involved in planning within karst areas. The afternoon will consist of a series of short informative presentations on a number of key issues – from current legislation and policy documents, to key issues, factors to consider and then to examples of recent projects. There will be a group discussion on a number of related issues and consideration of any relevant outcomes.

4.30pm BUSES leave for Margaret River accommodation venues

OR

Tour to some of the world-famous **MARGARET RIVER WINERIES** and other local attractions. The tour will leave the Cultural Centre at 1.30pm. Details to be announced.

OR

FREE TIME. Enjoy Margaret River's Art Galleries, Coffee Shops, and Gift shops or walk a bit further to the river and take one of several walks along the Margaret River.

6.30m Walk or bus (depending on weather) to 'Goodfellas' on Bussell Highway for the evening meal.

DAY 5 – THURSDAY 7 MAY

Morning:

7am – 8.15am **Breakfast** – Margaret River Cultural Centre

8.15 – 8.45am Late Registration – Margaret River Cultural Centre

PAPER SESSION SEVEN Chair: Dr. Grant Gartrell

8.45 – 9.10am Paper 17. Greg Martin.
Waitomo Glowworm Caves Facilities Development

9.10 – 9.35am Paper 18. Dennis Williamson
Cape Range and Ningaloo Reef: a semi-arid Karst and Coastal Area unlike any other

9.35 – 10.00am Paper 19. Hein Gerstner
Cango Caves – A Progress Report.

10.00 – 10.25am Paper 20. Allan Griffin and Peter Austen
The Evolution of Management Models at Jenolan Caves – The Next Stage

10.25 – 10.45am **Morning Tea**

PAPER SESSION EIGHT Chair: Dan Cove

10.45 – 11.10am Paper 21. Rauleigh Webb.
The Winds of Change – a Karst Management Database

11.10 – 11.35am Paper 22. Brian Combley
A Snapshot and History of the Leeuwin Ridge

- 11.35 – 12.00 noon Paper 23. Dennis Williamson
The Nullarbor Karst System – managing an iconic dryland landscape of world significance via remote control?
- 12 noon – 12.50pm **Lunch**, Margaret River Cultural Centre.

Afternoon:

1.00pm **BUSES LEAVE FOR AFTERNOON FIELD TRIPS**

- Bus One**
- | | |
|--------|--|
| 1.30pm | Ellenbrook and Meekadorabee |
| 2.45pm | Leave for Ngilgi Cave |
| 3.15pm | Arrive Ngilgi Cave |
| 4.30pm | Leave Ngilgi Cave for return to Margaret River |
- Bus Two**
- | | |
|--------|--|
| 2.00pm | Ngilgi Cave |
| 3.15pm | Leave Ngilgi Cave for Ellensbrook and Meekadorabee |
| 3.45pm | Ellensbrook and Meekadorabee |
| 5.00pm | Leave for return to Margaret River |

BUSES ARRIVE MARGARET RIVER AT APPROXIMATELY 5.30pm

BUSES PICK UP PEOPLE FOR EVENING MEAL AT 6.30pm

Evening:

- 7.00pm Evening Meal at *Wharnecliffe Eco Discovery Centre*
RAFFLE in aid of the **ACKMA Life Member's Fund**
NOTE: Please dress warmly for Wharnecliffe as the dining area is not fully enclosed.

DAY 6 – FRIDAY 8 MAY

Morning:

- 7am – 8.15am **Breakfast** – Margaret River Cultural Centre
- 8.45 – 9.10am Presentation: **FUTURE EVENTS** – Andy Spate

PAPER SESSION NINE Chair: Peter Wood

- 9.10 – 9.35am Paper 23. Lisa King and Steve Bourne
Visitor Monitoring Needs within the Australian Fossil Mammal Sites World Heritage Area – Potential Applications for other Protected Areas
- 9.35 – 10.00am Paper 24. Brenton Knott
When to Turn the Tap Off.
- 10.00 – 10.25am Paper 25. Andy Spate
Climate Change and Karst

10.25 – 10.45am **Morning Tea**

PAPER SESSION TEN Chair: Andy Spate

- 10.45 – 11.10am Paper 26. Peter Buzzacott
The Cave Divers Association of Australia – Linking Land Owners to End-Users

- 11.10 – 11.35am Paper 27. David Merritt & Arthur Clarke
Cyclical bioluminescence in Cave glow worms
- 11.35am – 12.00 noon Paper 28. David Summers
The Need for International Collaboration to Achieve Sustainable Development in Show Caves.

Afternoon:

- 12.10pm **BUSES LEAVE FOR LUNCH & AFTERNOON FIELD TRIPS**
- BUS ONE.** 12.30pm Lunch at **Lake Cave Tearooms.**
- Group A:** Lake Cave Tour OR short Contos Spring/Beach Walk
Afternoon tea
Mammoth Cave Tour
- OR** Longer Contos walk (if you choose this you will not visit Lake or Mammoth)
- Group B:** Mammoth Cave Tour
Afternoon tea
Lake Cave Tour **OR** short Contos Spring/Beach Walk
- BUS TWO.** 12.30pm Lunch at Boranup Café (adjacent to Boranup Gallery)
- Group A:** Giants Cave **OR** Golgotha Cave
Afternoon tea
Calgardup Cave
- Group B:** Calgardup Cave
Afternoon tea
Giants Cave **OR** Golgotha Cave

NOTE 1: Both Calgardup and Mammoth Caves offer short surface walk trails for those who would like an alternative to a cave visit.

NOTE 2: Sturdy enclosed footwear is required to visit Giants Cave. There is some rock scrambling and vertical ladders. The cave is 86 meters in depth and it is recommended that visitors to the cave have a moderate level of fitness. Golgotha is a former show cave with some beautiful speleothems, is fairly easy to access and is the major SW Australian site for Dr Pauline Treble's paleoclimate research.

BUSES RETURN TO MARGARET RIVER at APPROXIMATELY 5pm**Evening:**

- 6.45pm Buses depart for the **CONFERENCE DINNER.**
(NOTE: Traditionally a DRESS UP Affair)
All Seasons Motel, Wallcliffe Road, Margaret River.
Master of Ceremonies: Brian Clark. **Presenter of Awards:** Kent Henderson.

DAY 7 – SATURDAY 9 MAY – departure day

Morning:

- 7.20 – 7.40am Bus will collect attendees to take them to breakfast at *Wharnecliffe Eco Discovery Centre.*
- 7.30 – 8.30am Breakfast
- 8.30am Bus will return attendees to accommodation
- 9.30am Bus leaves for Perth

ABSTRACTS OF PAPERS

in order of Scheduled Presentation

Paper Presenters are reminded that the final version of each paper is required **NO LATER THAN 30th June, 2009** please, to enable publication of the Conference Proceedings. Please email the same, with attachment, to **Rauleigh Webb**: webmaster@ackma.org

DAY 2 – MONDAY 3 MAY

PAPER SESSION ONE. Chair: Steve Bourne

9.00 – 9.45am **Paper 1.** Dr. Julia James. **KEYNOTE ADDRESS.**
Ringling in the changes in Cave Tourism.

In keeping with the conference theme ‘Winds of Change’ this presentation will briefly give an overview of some of the recent changes in cave tourism.

- The ever-growing variety of tours.
- World heritage caves.

All changes will be assessed by the speaker and given a bell rating from 10 to 0, rankings that will definitely be open to debate.

Examples will be taken from caves on six out of the seven continents and include:

- New caves opened and old caves re-opened for tourism.
- Refurbishing of existing tourist caves.

9.45 – 10.10am **Paper 2.** Ken Grimes
Setting the Scene – Syngenetic Karsts in the Southwest of Western Australia.

Western and Southern Australia have many karst areas developed on soft sandy limestones (calcarenites) which are quite differing to the traditional ‘hard-rock’ limestones found elsewhere.

to form collapse-dominated cave systems; a variety of surface and subsurface breccias and locally large collapse dolines and cenotes; and limited surface sculpturing (karren).

These are the syngenetic karsts of the youthful Quaternary dune limestones and related soft-rock karsts of the Tertiary limestones (which also show some syngenetic features).

In the southwest of WA syngenetic karst occurs in the coastal dune calcarenites of the Tamala Limestone.

In syngenetic karst speleogenesis and lithogenesis are concurrent: caves and karst features are forming at the same time as the loose sediment is being cemented into a soft, porous rock.

Many features are similar to those seen in Eastern Australia and elsewhere, however there are some interesting differences also.

The distinctive features of syngenetic karst are: shallow horizontal cave systems; a general lack of directed conduits (low irregular chambers occur instead); clustering of caves at the margins of topographic highs or along the coast; paleosol horizons; vertical solution pipes which locally form dense fields; extensive breakdown and subsidence

North from Perth, there is a long belt of Quaternary dune limestones that continues all the way to Cape Range (which is mainly Tertiary limestone). Within this the most interesting karst areas are the Nambung Pinnacles and the Yanchep area.

At Yanchep dune limestone overlies a quartz sand aquifer and aggressive water enters from below to dissolve caves at the base of the limestone.

South from Perth there are a few caves and springs where the Swan and other rivers cut through the dune ridges. In the Leeuwin-Naturaliste region a belt of dune limestone up to 6 km wide contains numerous caves (see conference Field Guide for details). Early work by speleologists (eg Bain and Bastian) in this area contributed to the concept of syngenetic karst. The special aspect of this area is the shallow impermeable basement, which can guide the water flow through the dune sand above. The caves are best developed in the older more-cemented dunes and are of three types: *linear caves*

formed by cave streams which follow buried valleys above the impermeable basement; *breakdown* systems, including the ‘inclined fissure’ type, which modify and can completely replace, earlier solutional caves; and the horizontal watertable *maze caves* of the Augusta area – the last are relatively rare in the Leeuwin-Naturaliste region but common elsewhere. Water tracing has mapped some conduit flows from stream sinks at the inland margin of the dunes, through intermediate through-flow caves to springs on the coast, but much of the underground water flow seems to be lost offshore.

10.10 – 10.25am

Paper 3. Anne Wood

Setting the Scene – *Cave Management in the Leeuwin Naturaliste – an accident of history?*

The main purpose of this brief paper is to provide an outline of the various bodies involved with management of caves and karst in the Leeuwin-Naturaliste area.

separate reserves originally gazetted between 1902 and 2004.

From 1901 to 1910 the Caves Board was responsible for overseeing the management of show caves in the SW of Western Australia. In 1911 State Hotels, a body having an association with tourism, was given this responsibility, heralding an era of management and infrastructure decline. In 1958 management of Yallingup Cave (now Ngilgi) passed to the Busselton Tourist Bureau, and management of Lake, Mammoth and Moondyne passed to the Augusta Margaret River Tourist Bureau. Most of the limestone and karst features in this region are within the Leeuwin-Naturaliste National Park (LNNP), which is made up of 36

In the present day the Department of Environment and Conservation manages the Leeuwin-Naturaliste National Park. Two of the caves within the park, Calgardup and Giants, are open to the public and entry to all others in the LNNP is controlled via the Cave and Abseil Permit System. Under the permit system, about ten sites are classified as ‘Adventure Caves’ and the rest as ‘Restricted Access’.

The two tourism associations continue to manage the better known show caves. Geographe Bay Tourism Association manages Ngilgi Cave. The Augusta Margaret River Tourism Association manages Lake, Mammoth, Jewel and Moondyne Caves.

PAPER SESSION TWO Chair: Peter Chandler

10.50 – 11.15am

Paper 4. Sasa Kennedy.

Thematic Interpretation – adding value to your tour and variety to your day.

To many visitors one cave tour is much like another; the same can be said of many guides.

convey a message which will encourage visitors to support them in their conservation endeavours.

This paper looks at how karst managers can effectively utilise the principles of thematic interpretation to give their tours a point of difference, raise the standard of guiding at their site and improve job satisfaction for their guiding staff.

The paper will clarify the difference between a guided tour and an interpretive tour; explain the use of themes; give practical examples of interpretive techniques; suggest cost-effective ways to build staff skills and interest; and show how thematic tours can assist you in on-selling your product.

In addition the paper will show how by using effective thematic interpretation management can

11.15 – 11.40am

Paper 5. Lindsay Hatcher.
Mammoth Cave Megafauna.

In 1904 Edgar Robinson – superintendent of the caves and cave guide Tim Connelly were constructing a walkway, when one of the gentlemen unearthed some rather large odd bones. In the same year Connelly notified his good friend Colonel LeSeouf.

As a result Ludwig Glauert was seconded to the Museum with the brief of Paleontological Research in the entire South-West. During the years of 1909 – 1915 two sites in Mammoth Cave, were excavated by the W.A. Museum. Many bones of extinct animals including megafauna' bones were found. At this time the Mammoth Cave was also called the “Dawn of Creation”, a name which probably originated from the discovery of fossils of

extinct animals and suggesting that here, in this cave, was the beginning of creation

Excavations produced a sizeable fossil collection, some 10,000 specimens; Glauert's total excavation amounted to some 30 cubic meters of soil. But unfortunately the stratigraphic relationship was poorly documented, probably due to inadequate resources and time constraints, making any assessment of relative ages of the material extremely hard.

The assemblage contains 34 vertebrate species, most of which are small and typical of the south-west today. However several types of extinct marsupials are represented i.e. Megafauna our Giant Marsupials.

11.40am – 12.05pm

Paper 6. John Brush.
Track marking in wild caves – The Yarrangobilly experience.

At Yarrangobilly Caves in New South Wales, track marking has been used in a number of wild caves for more than 30 years with the aim of limiting visitation impacts. In most cases, the marked tracks have been installed to reduce damage to calcite decoration, but they have also been used to protect bone material and to minimise impacts on sediment deposits. Over the

years, a variety of materials has been used, ranging from green paint to retro-reflective markers and wire lines. This paper briefly covers the history of track marking efforts, reviews the methods used and considers their effectiveness and impacts on the caves. It also draws some conclusions that may be useful in considering track marking projects in other areas.

DAY 3 – TUESDAY 4 MAY

PAPER SESSION THREE

Chair: Dr. Julia James

9.00 – 9.25am

Paper 7. Steve Bourne.
'Close to the Bone' – remodelling Victoria Fossil Cave, South Australia, Infrastructure.

The viewing area in Victoria Fossil Cave was established in 1970 to allow visitors to the cave to view the fossils deposit. It was built during a phase of active research when researchers were often in full view and able to speak to visitors about recent discoveries.

The original infrastructure elevated visitors but there were many shortcomings with the design.

- Line of sight for visitors was compromised with handrails interrupting the view of the deposit.

- Visitors were a substantial distance from the deposit and close up viewing not possible without compromising safety of visitors and fossils.
- Visitors could get no sense of the size of the deposit due the cave morphology.
- Materials used in infrastructure were by today's standards inappropriate, steel handrails that had rusted. The paths and platform were concrete.

The redevelopment set out to achieve 7 objectives:

- To create a clearer view of the deposit when viewed from a distance.
- To allow visitors a close up view of fossils.
- To provide visitors with a view of the entire deposit to give a better sense of its dimensions.
- To utilise more cave friendly materials for protection of the cave environment and utilise “reversible” infrastructure-for easy removal when the time comes.
- To create a more comfortable and flexible working environment for site interpreters.
- To create a more comfortable environment for visitors.
- To create a more immersive, interactive visitor experience

This paper outlines the thinking and processes behind the redevelopment of the viewing area, difficulties and how they were overcome and thinking behind the design and materials used.

9.25 – 9.50am **Paper 8.** Dan Cove, David Head and David Rowling
Synergy driving innovation in Cave Lighting.

There have been enormous advances made in recent years in the field of cave lighting. These advances have been made in lighting technology, most importantly the evolution of high intensity LEDs, in automation and control, efficient uninterruptable power supply and also in the overall underlying lighting design philosophy. It is important to realise the multi-disciplinary nature of the challenge presented when considering a new cave lighting project, as these advances are being made by individuals in potentially quite disparate areas.

The recent experience of relighting the *Orient* at Jenolan Caves NSW, highlights the necessity of a collaborative effort, as innovation in all areas was driven by a dynamic process of technology influencing design, but also of design philosophy forcing the continued development of available technology. The ultimate result of this synergy is a far superior cave experience than would have been achievable otherwise, and also provides a most conducive situation for the growth and development of the individuals involved.

9.50 – 10.15am **Paper 9.** Nick Haygarth and Arthur Clarke.
White Knuckles in the Underworld
–the Wild Days of the Tasmanian Caverneering Club.

Australia’s first speleological organisation, the Tasmanian Caverneering Club (TCC), was established in 1946. It ushered in an exciting post-World-War-II era of cave discovery in Tasmania.

The TCC’s instigator, geology professor Sam Carey, channelled students, field naturalists and bushwalkers into underground exploration. Equipment and techniques were relatively primitive. Sam’s war-issue Blitz Wagon vehicle was kept busy answering government requests that the TCC explore and advise on existing and former show caves. At Newdegate Cave at Hastings, the Binney Tunnel was excavated with the idea of opening new underground passages to tourists.

Wild caves and white knuckle adventures were the real revelation, however. The Ida Bay karst in southern Tasmania remained largely unexplored more than half a century after Europeans first

entered some of its caves. Both Mystery Creek Cave and Exit Cave were probed, with astonishing results. In northern Tasmania, the discovery of Lynds Cave, and the gradual revelation of Croesus and Kubla Khan’s splendours (particularly Kubla Khan’s spectacular ‘Pleasure Dome’ chamber), were early highlights.

In 1960 a northern branch of the TCC established by Launceston-based member Bob Woolhouse and others extended cave exploration in the Mole Creek region.

Some early cavers returned to the terrestrial world of bushwalking, rock-climbing or bird-watching. Increased leisure time, improved camera technology and specific speleological interests, especially cave biology, gave others new scope for developing their subterranean interests, however.

PAPER SESSION FOUR Chair: Greg Martin10.40 – 11.05am **Paper 10.** Travis Cross.*Monitoring and Management in the Waitomo Glowworm Cave.*

Continuous climate monitoring has been done in the Waitomo Glowworm Cave since 1998. This is done using a network of Campbell CR10x data loggers. Carbon dioxide, inside/outside temperature and relative humidity, draft direction and strength and rock temperature is measured.

Climate parameter are logged at either 10, 30 minute or 4 hour intervals. Day supervisors monitor a real-time climate display that allows day to day management decisions to avoid any potential harm to the cave.

An initiative is underway to try and reliably count glowworms numbers in the main Glowworm Grotto. This is to determine if there is seasonal glowworm population variation and to give us

warning if there is any dramatic reduction in numbers.

Counts have been achieved by attaching at removable photomonitoring boom/mount to the cave wall that extends close to the middle of the Grotto. Overlapping digital photos are taken from the boom that are stitched together, giving a photographic sweep of the whole Grotto ceiling.

The stitched photograph is analysed using a computer program called “Image J”, which was initially developed for counting stars. This system is in its early stages of development but results to date show that there are between 3400-3600 glowworms in the Glowworm Grotto.

11.05 – 11.30am **Paper 11.** Sasa Kennedy.*Adventure Activities as a Tool for Management*

This paper aims to stimulate discussion of the role of adventure activities in a karst environment. Many karst areas offer guided tours to the public but by offering a range of adventure opportunities you can reach a whole new market, build return business, help develop community interest in karst environments and instil a minimal impact ethic in your visitors.

The paper will look at a range of commercial adventure activities, from kids’ soft adventures to spotlighting walks (via caving), which are suited to

karst environments and discuss how they can be used to encourage visitors’ understanding and support of management decisions. It will consider whether the licensing of commercial operators to provide adventure activities can support management needs in the same way as in-house activities.

The paper will also touch on the ways in which providing opportunities for staff adventure activities and encouraging speleological club involvement can benefit management.

PAPER SESSION FIVE Chair: Rauleigh Webb2.30 – 2.55pm **Paper 12.** Lindsay Hatcher*Jewel Cave Redevelopment*

The Augusta Margaret River Tourism Association (AMRTA) recently received over whelming support from its membership, to undertake the well needed Jewel Cave Preservation and Redevelopment Project. The AMRTA, managers of Jewel Cave, are extremely excited about the project and are committed to cave management and tourism within the region contributing \$1.1 million of its own funds to the \$3.1million project.

The Jewel Cave project looks at eco-sensitive buildings and infrastructure that will compliment the natural environment, upgrading 50 year old wiring and lighting, creating an interpretive centre and cafe to increase education and visitor amenities and the re-vegetation (with endemic plants to the site) of the existing site to help recharge the water table and preserve site integrity.

Margaret River architects, Willcox and Associates have been awarded the contract to design and build the interpretative centre and café at the Jewel Cave site as part of the upgrade of the facilities. The Willcox and Associates concept was in keeping with our brief and in particular answered our requirement for environmentally sustainable features through its attention to passive solar design, natural ventilation, solar water heating, insulation, water storage and efficiency, minimal artificial light and waste management systems.

It is anticipated that the whole project, including the new car parks, the building and the work within the cave will take approximately two years to complete. The full plans and working drawings are available to view at the ACKMA 2009 conference and the AMRTA is excited to be able to walk delegates through the project. This project has been at least twenty years in the development and the AMRTA would like to thank past managers and committee for having the foresight and commitment to ensure the stunning Jewel Cave is preserved and protected.



DAY 4 – WEDNESDAY 5 MAY

PAPER SESSION SIX Chair: Deborah Carden

10.45 – 11.10am **Paper 13.** Dr. John Watson

Department of Environment and Conservation (DEC) Draft Caves and Karst Policy

The Western Australian Department of Environment and Conservation (DEC) has a specific role in the conservation and protection of caves and karst under three main legislative instruments:

- The *Conservation and Land Management Act (1984)* – relating to the management of protected areas such as national parks, nature reserves and State forests
- The *Wildlife Conservation Act (1950)* under which wildlife (flora and fauna) is protected State-wide (hence including stygofauna and troglifauna)
- The *Environmental Protection Act (1986)* which also applies State-wide and addresses environmental pollution, consideration of statutory land use planning processes and assessment of major

development proposals, all of which may involve potential impacts upon caves and karst

The draft *Caves and Karst Policy* has been developed to a near final stage through consultation both internally (DEC staff) and externally (a number of karst and speleological experts including several ACKMA members).

This presentation will provide:

- an update of progress with the draft policy,
- an indication of some of the major strategies proposed and
- an outline of the steps required for its finalization towards release for more general public comment

11.10 – 11.35am **Paper 14.** Jay Anderson and Alan Briggs
Filling the Gap – the role of a non-government karst conservation organisation in Australia.

This presentation outlines the development of a new Conservation Group in WA. The Caves and Karst Conservation Foundation is set up under the WA National Trust, specifically to protect and conserve caves and karst areas. To use the American terminology, the Foundation is effectively a ‘Conservancy’.

The National Trust has many attributes that set it aside from other public and private organisations. The National Trust is set up under a State Act of Parliament, and has approval under the Australian Taxation Office to operate as a charity bringing with it tax deductibility for donations of land and money. The National Trust is an active organisation with an impressive list of credits and is well respected internationally. The National Trust (WA) is involved in a range projects and outcomes regarding conservation and interpretation of the State’s natural heritage.

The National Trust has the ability to establish conservation appeals for a range of natural heritage projects. In this case we are establishing an appeal for cave conservation. The appeal will be managed by a committee established under the Council of the National Trust of Australia (WA). The Purpose of the Appeal is to receive donations of land and money to conserve the values of caves and karst and to educate the community for the protection of these values. The

10.35 – 12 noon **Paper 15.** Ross Anderson
Woodvale Swimming Pool Collapse

Caves and Karst are some of the most vulnerable ecosystems in the world. The Karst Landscape on the Swan Coastal Plain (including Yanchep National Park) represents an important part of the earth’s geological diversity. The limestone in this area of Western Australia exhibits unique characteristics due to the nature of its development.

The geology of the northern suburbs of Perth comprises, in part, a large area of coastal Aeolian limestone (also known as: Tamala limestone and Aeolian calcarenite), observed as a series of distinct landforms roughly parallel to the coast. Several

Appeal is referred to as the ‘Caves and Karst Conservation Foundation Appeal’.

The Appeal is operated by the Caves and Karst Conservation Foundation committee – a separate group of people who also manage The Caves and Karst Conservation Foundation. The key constitutional objectives of the Foundation are:

- To conserve and protect caves and karst systems as natural assets.
- To interpret caves and karst systems.
- To educate the community about caves and karst systems and their values.
- To provide leadership in environmental management and natural heritage management of caves and karst systems.
- To facilitate the increase of scientific knowledge about caves/karst

This new organisation will fill the gap between the ASF, ACKMA and state Conservation Agencies. The Foundation will be active in project management – seeking to raise funds to put back into cave and karst management. The Foundation will be in a position to provide support to private land managers and non-government cave managers. The Caves and Karst Conservation Foundation will bring ‘caves’ to the general public, fostering a desire for people (other than speleo’s) to be involved in the conservation and interpretation of caves and karst systems.

authors have recognized three main units that occur from east to west: The Bassendean Dune system, the Spearwood Dune system and the Quindalup Dune System

During March 2007, a sinkhole developed in a backyard of a residential property in Woodvale. This resulted in the collapse of a swimming pool and the loss of around 44,000 Litres of water overnight. During the months that followed, local and State Government agencies and other service companies assessed the situation without resolution.

In July 2007, Ross Anderson of Dissolved Rock Pty Ltd, contacted Mike and Sonja Pilkington to make the offer of assistance in the investigation of subsurface conditions and possible remedial actions that could be undertaken to stabilise the sinkhole that was evident in the rear north western corner of their property.

The offer entailed a site visit to the property to undertake on ground investigations using Ground Penetrating Radar (GPR), downhole camera equipment and a surface inspection of the property and surrounding neighbourhood.

It was assessed that the connection to the ground surface displayed in the backyard of the property was most likely a solution tube rising from a cavity

at or near watertable level. The Perth Ground water atlas estimates that the ground water in the Woodvale area is approximately 15.5 metres AHD. Using available information and cave data an estimate of limestone thickness was made.

Two reports were submitted to the land owners and parliament member Judy Hughes. In the following months the property was bought by the government and remedial works undertaken to fill the depression.

The property was then sold by the government with a notification on the title and restriction of use for the rear northern section of the property. Acknowledgements: Lex Bastian, Ian McCann, Jay Anderson, and Greg Joyce.

12 noon – 12.25pm **Paper 16.** Ross and Jay Anderson

Urbanisation and Karst Systems – living with karst in Western Australia.

Urban development and its associated impacts is one of the major karst management issues within south-west Western Australia.

The unique karst system that runs along the WA coastline faces many issues: water abstraction, catchment vegetation, impacts by development, visitation and management impacts. Protecting the karst system from current development and the impact of Perth's expanding population is a huge task.

There have been a range of karst issues and outcomes to date. In some areas, speleologists have been able to work with landowners, developers or the local Government to assess a proposed subdivision for caves and karst features. Speleologists are sometimes not involved or are not allowed access to land to make appropriate comment on potential impacts to caves and karst or advice is disregarded.

A lack of timely consultation with specialists or a lack of understanding of the complexity of karst, can result in environmental damage. It is important that all who are involved in management and planning decisions within karst systems, are aware of the IUCN Guidelines for Cave and Karst Protection. Likewise, the EPA have Guidance Document 33 – for Planning and Development – including a significant chapter on karst.

This paper discusses two case studies within the karst system. One locality has had significant impacts on karst features, despite the features being identified by speleologists.

Plans for part of this area include installing a road that will bisect land with a large number of caves and karst features – and the karst system that exists in native Tuart bushland is at risk. In the other locality, speleologists have been able to contribute to the protection of the karst in a proposed subdivision. As a result, the part that contains karst may be either incorporated into a bushland reserve or be purchased by the Government to add to the National Park.

The Speleological groups are working with numerous local groups and Government agencies to improve recognition of environmental management and safety issues associated with karst in the area.

The paper reviews the outcomes and considers the key issues. As Perth's population increases, subdivision and development will continue to occur. Karst impacts will continue unless there is a change in attitudes regarding the importance of karst and karst features, and their management. A collaborative approach is essential to achieve appropriate management of karst in this area. This paper will propose some options for successful outcomes.

DAY 5 – THURSDAY 6 MAY

PAPER SESSION SEVEN Chair: Dr. Grant Gartrell

8.45 – 9.10am **Paper 17.** Greg Martin.
Waitomo Glowworm Caves Facilities Development

The entire visitor complex at the Waitomo Glowworm Caves was lost by fire on 14 December 2005. Since that time major negotiations have taken place between the land owners, Ruapuha Uekaha Hapu Trust and the Department of Conservation, with the lease holders for the resource, Tourism Holdings Limited, to achieve a significant rebuild of these facilities to meet today's tourism market. This presentation will cover

some of the issues in the design of this \$11 million facility and some of the challenges that are being faced in a global economic downturn and a nationally declining international tourism market. The Waitomo Glowworm Caves are an iconic tourist destination in New Zealand and are part of the 'tourism brand' contributing to the national identity of the country.

9.10 – 9.35am **Paper 18.** Dennis Williamson
Cape Range and Ningaloo Reef: a semi-arid Karst and Coastal Area unlike any other

The Ningaloo Coast Region of Western Australia is an extraordinary semi-arid karst and coral reef marine environment. The Gondwanan associated geomorphology of Western Australia's Cape Range, with basic rocks of the coastline of the ancient Tethys Sea, reflects continental drift, subsequent uplifting and evidence of seven of thirteen global geologic themes as identified by Dingwall et al., 2005. Unusual tectonic plate subduction and orogeny processes have created an emergent landscape in which sea level changes over long periods are evident in four wave-cut terraces. Cape Range also has an extensive network of over 700 caves, mesocaverns and anastomosing tubes extending to an anchialine groundwater zone. The earth's history, paleoclimate and past life forms are recorded in a rich fossil and sub-fossil accumulation, particularly in relation to the Ningaloo Reef development as a near-shore barrier reef, not a "fringing" reef as thought until recently. An outstandingly rich array of on-going geomorphic, karst, hydrologic and oceanographic processes occur.

These are associated with marine, avi-fauna, terrestrial and subterranean speciation, endemism and refugia processes. The Cape Range is a centre of endemism and a relictual taxa refuge for one of the world's largest and most significant groups of terrestrial and aquatic troglobitic species surviving within a karst system, including the only known example of a Remepede (*Lasionectes exleyi*) community in the southern hemisphere. The Ningaloo Coast oceanic currents and nutrient cycles; marine flora and fauna speciation, endemism, refugia, breeding/spawning and migratory processes are also outstanding. The outcome is one of the world's most unique and complex combinations of highly diverse lithological, hydrological and ecological processes. Although the authors are convinced of the area's global significance, recognition of its values through adequate protected area status and management has been a slow process, with some way to go in the future.

9.35 – 10.00am **Paper 18.** Hein Gerstner
Cango Caves – A Progress Report.

Africa is the cradle of humankind – from Australopithecus to the oldest modern humans to be discovered. Although virtually ever rock shelter overhang or shallow cave contains either pre-historical or historical remain (or both), proper cave systems are not that frequently found. Except Cango. This ancient pre-Cambrian limestone host one of the larger systems in Southern Africa and definitely boast the best developed show cave in the sub-Sahara. This paper is an attempt to firstly introduce this limestone

cave and secondly describe the attempts made by the management to keep abreast with cave best practice models and appropriate applications as well as dealing with local politicians who often battle to understand the ethics and sensitivity of such unique non-renewable resources and heritage. This paper is our attempt to conserve, educate and taking up responsibility of managing an 'inherited' heritage for the next legacy (should we be so lucky that they realize the responsibility).

10.00 – 10.25am **Paper 20.** Alan Griffin and Peter Austen

The Evolution of Management Models at Jenolan Caves – The Next Stage

Our previous paper examined the impact of privatisation accommodation and the commercialisation of its cave tours. This was part of the Greiner Government's overall reform agenda which focussed on the application of New Public Management Principles.

It was concluded the business model adopted in 1989 at Jenolan, had more to do with the commercial issues at Jenolan than the introduction of New Public Management Principles. The lessons learnt from the initial foray into commercialisation of the Jenolan tourist operations is now aiding the development of long term management arrangements at Jenolan.

Since 2007, extensive work examining management options to best ensure the commercial and environmental sustainability of Jenolan has been undertaken. The experience gained by Government

in its management of an integrated business at Jenolan since July 2006 has greatly assisted this work.

This paper presents the results of this recent work and examines two options; either of which might serve as the Jenolan business model for the short to medium term. The development of the options was complicated by three factors: the rapidly changing nature of regional tourism and competition for discretionary spending; the emergence of a holistic approach to geo-tourism and geo-management; and the impact of the current international financial environment.

The two options present a balanced approach to the objectives of commercial and environmental sustainability utilising the strengths and expertise of the public and private sectors.

PAPER SESSION EIGHT Chair: Dan Cove

10.45 – 11.10am **Paper 20.** Rauleigh Webb.

The Winds of Change – a Karst Management Database

The Australian Speleological Federation (ASF) created the Australian Karst Index in 1985. Today cave managers have little more than that 1985 karst index on which to base management decisions.

What is required is a Karst Management Database that is designed to hold not only the basic information about a cave or karst feature such as cave length, depth etc but also to hold details of ALL of the details relating to every karst feature that they manage.

The database should hold ALL research information that has ever been undertaken for every cave and karst feature. The database should also classify this information so that at any time a Cave

Management Prescription for any cave or karst feature can be generated by the database using ALL of the management information that is available at the time of generation.

Such a Karst Management Database is being designed to collate all fields of research including geology, archaeology, paleontology, aboriginal heritage and site information etc It would also contain general data such as maps, photographs, videos etc all related to one or more karst feature. This paper outlines the design of the database and how it will be build to simplify a cave managers job of collecting the varied data that is required to make informed decisions about the caves and karst features that they manage.

11.10 – 11.35am **Paper 22.** Brian Combley

A Snapshot and History of the Leeuwin Ridge

A series of Photographs of the area and the caves both historic and current with a broad overview of historical events affecting the Leeuwin Ridge Karst Area. The photos include aerial photos of icons of

the area such as Cape Naturaliste Margaret River and Cape Leeuwin along with historic locations such as Caves House, Ellensbrook and Wallcliffe House.

11.35 – 12.00 noon **Paper 23.** Dennis Williamson
The Nullarbor Karst System – managing an iconic dryland landscape of world significance via remote control?

The Nullarbor Karst is the largest karst area in Australia (200,000 km²) and the largest contiguous karst formation in the world. The Nullarbor is globally unique due to its simple and youthful geologic history, its saline hydrology within a carbonate aquifer, its extensive crystal weathering. Karst processes are active and unlike other desert caves of the world, the Nullarbor underground is being hollowed out at observable rates.

The Nullarbor is the only arid or semi-arid karst that has undergone a short period of subaerial weathering and limestone diagenesis, but has vast caves and limitless underground water. The arid nature of the Nullarbor Karst is highly significant in terms of the type and variety of speleothems and other karst features within the caves.

The area may potentially have 50,000 karst features, including dongas, blowholes, rockholes, dolines and caves of various types with dry and unique underwater sections exist. However, only 3500 karst features have been examined and recorded. The area supports a wide range of ‘at risk’

rare, endangered, vulnerable and/or endemic flora and fauna species on the ground surface areas.

Within the soils, regolith and cave passages, a wide range fauna exist, including troglofauna, stygofauna, guanofauna, edaphobites, bat species and bird species. Some of these features are contained within existing conservation reserves, but many are located in off-reserve properties. Despite the Nullarbor’s world significance and being revered in Australian folklore and contemporary romantic images of the Australian Outback and wilderness, the complex geomorphological and hydrologic processes of the area are poorly understood.

Recently prepared Interim Management Guidelines provide a “remote control” framework for management of the area’s resources and various land use threats. However, dryness, remoteness and current economic barrenness seem to conspire against appropriate levels of protection, research and management of this karst area of world significance.

DAY 6 – FRIDAY 7 MAY

PAPER SESSION NINE Chair: Peter Wood

9.10 – 9.35am **Paper 23.** Lisa King and Steve Bourne
Visitor Monitoring Needs within the Australian Fossil Mammal Sites World Heritage Area – Potential Applications for other Protected Areas

The Australian Fossil Mammal Sites World Heritage Area consists of two distinct sites, Riversleigh and Naracoorte. Located over 2,000 km apart and in two different Australian States, Queensland and South Australia, each site is managed by their respective State government agencies.

Monitoring is an essential part of protected area management and has traditionally concentrated on the biological and physical components of sites. The systematic collection of visitor data has been generally overlooked by protected area managers who have instead relied on more ad hoc approaches for a variety of reasons. This paper reviews the benefits of visitor monitoring and identifies visitor

data collection activities at Riversleigh and Naracoorte. It then discusses issues and gaps in visitor data at these two sites and suggests relatively low cost collection options which could be explored by any management agency.

The paper concludes that a systematic visitor monitoring program should be implemented across the Australian Fossil Mammal sites to collect comprehensive baseline data for future planning and management purposes.

Keywords: World Heritage Area, Australian Fossil Mammal Sites, Riversleigh, Naracoorte, visitor data collection, tourism planning and management, protected areas

9.35 – 10.00am **Paper 24.** Brenton Knott
When to Turn the Tap Off.

The climate operating over the south-west of Western Australia is changing, notably with reduction in rainfall. Concomitant with this, there is increased pressure of land-use, some of it showing remarkably little ecological wisdom. One of the major regional aquifers is the Gngangara Mound between the Swan and Moore rivers. The Mound reached an elevation of about 70 m asl and, on its western slope, assisted in the formation of caves in the area of Yanchep National Park with cave streams lined by tuart (*Eucalyptus gomphocephala*)

tree root mats. This reliable food supply supported a diverse, abundant and zoologically important groundwater fauna.

In the summer of 2000/2001, the streams dried, and the government response has been to remediate the situation – by restoring local mounds within selected caves. I will review briefly the fauna, the history of the remediation, and suggest that it is all futile given that it is not possible to predict reliably future climate of the region.

10.00 – 10.25am **Paper 25.** Andy Spate
Climate Change and Karst

Karst and their dependent environments have been around for a long time. Consequently they have been exposed to much climatic change through time. Taking just the last 66 million years through Tertiary and Quaternary times we have had much hotter, wetter, drier and colder conditions. These have shaped karst environments, their processes, biota, sediments and so on. What we have today has survived these climatic swings plus, perhaps the impacts of environmental change brought about by a number of human invasions.

weather in region x or y. The pulls, pushes and interrelationships of atmospheric and oceanic circulation make understanding the impact on terrestrial environments where we live extraordinarily complex. It may mean that some places are colder and/or wetter rather than just warmer.

If it is difficult to say what happens in regions x and y, it is going to be difficult to even more complicated to predict or understand what will happen to karst processes. These processes produce and maintain the karst environments we manage, research and enjoy today. This paper explores some impacts of climatic factor change on karst processes.

Global warming, whether produced by natural processes or humans inputting greenhouse gases such as carbon dioxide and methane, will produce climate changes. These may not produce warmer

PAPER SESSION TEN Chair: Andy Spate

10.35 – 11.10am **Paper 26.** Peter Buzacott
The Cave Divers Association of Australia – Linking Land Owners to End-Users

The Cave Diver's Association of Australia (CDAA) formed in 1973 in response to a number of high-profile cave diving deaths and today has nearly 700 members and a safety record that is second to none. Land owners and managers entrust CDAA with ensuring the safety of divers through training, access conditions and equipment requirements. Often land owners impose site-specific caveats and entrust the CDAA to enforce those access rule, which they do through a range of measures including the punishment of offences with suspensions, fines and/or, in the extreme, expulsion from the Association.

Benefits to landowners include that they have a single point of contact (a site manager), day-to-day enquires regarding access are dealt with on their behalf, and over time the CDAA often install and maintain infrastructure such as steps, ladders and benches. Benefits to members include that high-quality training is available in Australia, access is negotiated for and arranged on their behalf, a network is available to locate appropriately experienced guides, and there are many sites now with infrastructure such as a gantry for lowering gear and kitting-up benches.

The challenges the CDAA face at the start of the 21st century include the emergence of new technology, such as re-breathers and scooters, and the increasing affordability of travel, and with it cave-diving tourism. Each year CDAA members dive in Europe, Asia and the Americas, and they assist international cave divers to visit Australian

caves by administering and policing a visitor's permit system. The CDAA is Australia's largest cave diving organisation and one of the largest in the world. This presentation will describe the (overall successful) relationship between land owners/cave managers and the cave-diving members of the CDAA.

11.10 – 11.35

Paper 27. David Merritt & Arthur Clarke

Bioluminescence in cave glow-worms: signs of altered circadian rhythmicity

Glow-worms emit light from cells in the malpighian tubules to attract prey into their webs. They are found in suitable wet caves as well as in rainforest settings. Forest glow-worms cease glowing on exposure to light so they glow only at night. They possess a circadian rhythm of light output, demonstrated in the laboratory through their ability to maintain cyclical glowing for many weeks in constant darkness. Because glow-worms reach high population levels in caves where they do not receive strong daily resetting stimuli, we investigated whether cave glow-worms are rhythmically bioluminescent. We developed a

remote time-lapse digital imaging setup to record light output levels at 10 minute intervals for up to 5 days. Analysis of light output of the Tasmanian glow-worm, *Arachnocampa tasmaniensis*, and the New Zealand glow-worm, *A. luminosa*, in wild caves established that both species maintain strong rhythmic light output. The time of peak light output is different to forest glow-worms: cave populations glow most brightly when it is daylight outside the cave and most weakly during the night: they are completely out of phase with adjacent rainforest populations. We discuss the possible basis of the phase-shift and synchronization within caves.

11.35 – 12.00 noon

Paper 28. David Summers

The Need for International Collaboration to Achieve Sustainable Development in Show Caves.

Sustainable development means that the environment meets the needs of the present without compromising the ability of future generations to meet their own needs. In response to the importance of the need to achieve sustainable development the International Show Caves Association (ISCA) has established the International Commission on Sustainable Development in Show Caves to consider ways and means by which show caves can achieve sustainable development, to propose long

term plans by which the world's show cave community can deal more effectively with the achievement of sustainable development and to recommend ways that the concern for the achievement of sustainable development in show caves can be translated into recognition and greater co-operation among the different countries of the world. To achieve these goals there is a fundamental need for international collaboration.

POSTER PRESENTATIONS

The following posters will be presented at the Conference (for which abstracts have been received):

Laterite Karst

Ken G. Grimes

Laterite karst is a special type of silicate parakarst (formed in silicate rocks such as sediments or granite) – *parakarst* refers to karst-like landforms formed by solution of non-carbonate rocks. However, although solution is involved in laterite karst, it is not the only process, so there is an

overlap between parakarst and pseudokarst. Laterites are a type of *deep weathering profile*. Deep weathering involves the intensive chemical weathering of the minerals in a rock over a long period of time.

The minerals are converted to new forms which may be soluble, and can be removed in solution (analogous to karst); or may be softer, such as clay minerals, or crumbly, such as residual sand grains, and can be washed out of the rock by flowing water – a pseudokarst process called *piping*. Both processes produce cavities and other karst-like forms. Localised precipitation of the dissolved material forms hard bands known as *duricrusts* – these are responsible for many of the mesas seen in inland Australia, and provide a solid roof that caves can form beneath.

Laterite karst is common in tropical Australia but examples also occur in temperate climates (e.g. SW Western Australia, Kangaroo Island and western Victoria). Laterite karst shows a stronger analogy with the *syngenetic karsts* (in soft porous

calcarenites) than with the classical "hardrock" karsts – both laterites and syngenetic karsts have simultaneous solution and cementation of the "rock" and show the influence of caprocks (duricrusts) on cave development. The poster illustrates the variety of resulting karst-like landforms, which vary from broad-scale (shallow dolines, or "pans", up to 2 km across, and rarer collapse dolines) through a variety of meso-scale features such as caves, solution pipes and pinnacles to smaller-scale tubelets, vughs and breccias.

Laterite karsts can have some management problems similar to true karst. Sinkholes can develop rapidly in the wet season and threaten roads, railways and buildings. Rapid underground flow through vuggy porosities can transmit polluted waters, or cause flooding problems in mines.

New species of cave and forest litter dwelling Trechini (Coleoptera Carabidae): emerging patterns in morphology, distribution and evolution of Tasmanian cave beetles

Stefan Eberhard¹ & Pier Mauro Giachino²

1. Subterranean Ecology, Scientific Environmental Services, PO Box 280 North Beach, WA 6920, Australia. Email: stefan@subterraneanecology.com.au. www.subterraneanecology.com.au

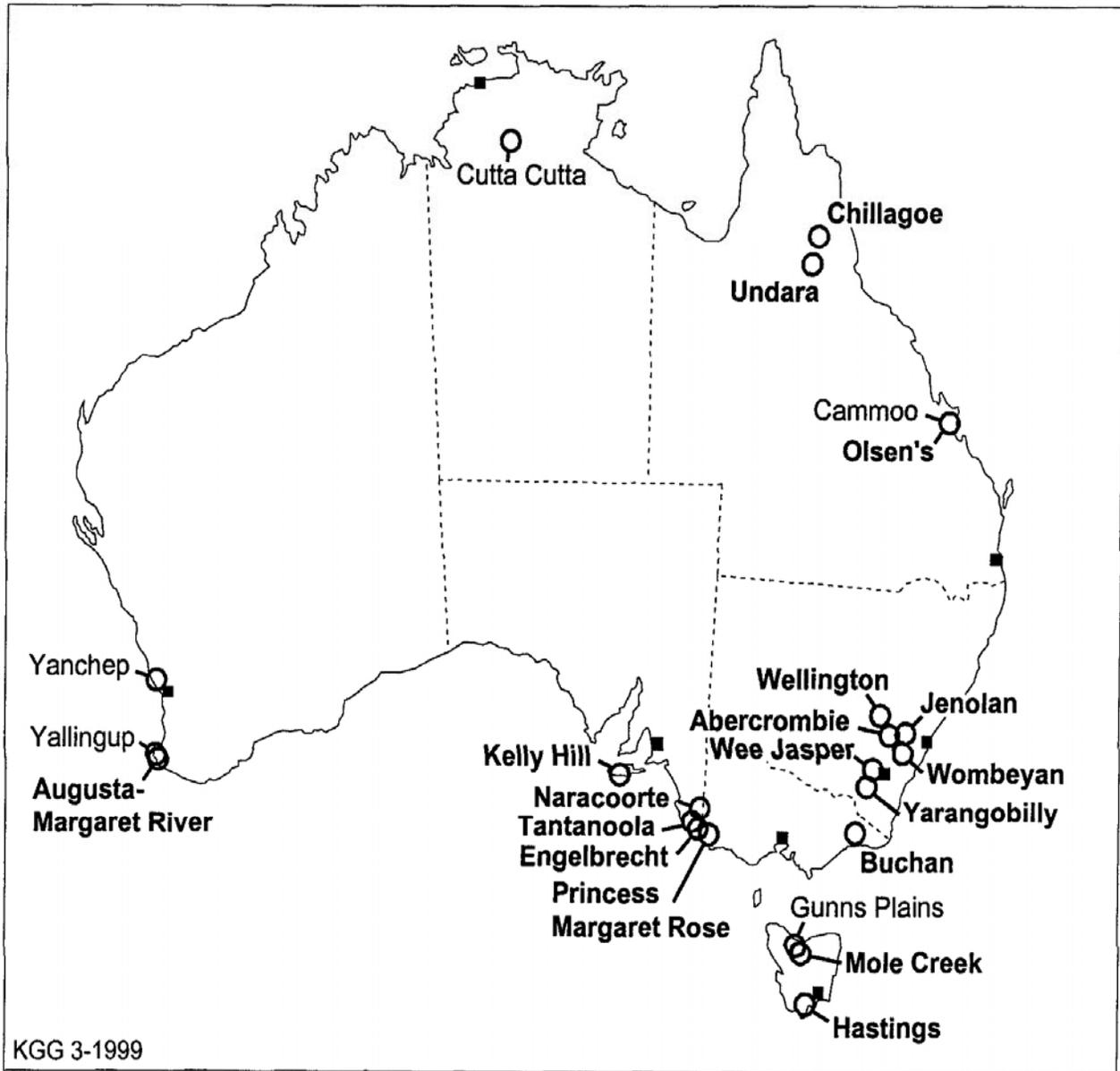
2. Settore Fitosanitario Regionale, Environment Park, Palazzina A2, Via Livorno 60, 10144 Torino, Italy

Nine new morpho-species of Tasmanian cave and forest litter dwelling Trechinae are identified from the closely related genera *Tasmanotrechus* Moore 1972 and *Goedetrechus* Moore 1972 (Coleoptera: Carabidae). In both genera the identified new species, as well as those species previously described, exhibit differing degrees of troglomorphy, however *Tasmanotrechus* spp. are less troglomorphic than *Goedetrechus* spp. Typical troglomorphisms include progressive elongation of legs and antennae, and progressive reduction in eye size. Other modifications are related to the shape of the pronotum, and changes in body size.

It is proposed that present day troglobitic trechines are derived from troglophilic progenitors that colonised subterranean environment from adjacent forest litter habitats during Pleistocene interglacial periods, while retreat of forests during glacial periods isolated subterranean populations from surface populations facilitating troglogenesis. Distribution patterns in the troglomorphic species exhibit characteristic short range endemism coinciding with discrete karst areas, or even discrete

caves within a single karst area. At regional scale, the most highly troglomorphic species are found in southern karsts, while central and northern karsts appear to be characterised by less troglomorphic species.

The Pre-Last Glaciation, which was more extreme than the Last Glaciation, involved extensive ice cover with associated hydrologic, geomorphic and vegetation changes to karsts located in northern and central inland settings, while karsts in southern near-coastal settings were less affected by glaciation. It is hypothesised that the highly troglomorphic species group (*Goedetrechus mendumae* group) found in southern karsts represent an earlier phase of subterranean colonisation, while the less troglomorphic species groups (*Goedetrechus parallelus* and *Tasmanotrechus cockerilli* groups) found in the central and northern karsts represent more recent colonisation(s). Extinction of older troglobites may have occurred in the central and northern karsts that lay proximal to, or were partly overridden, by glacial ice during the Pre-Last Glaciation.



Location of Australia's Show Caves. Map by Ken Grimes.



LIST OF DELEGATES/ATTENDEES

(alphabetically arranged)

FULL TIME ATTENDEES (attending 3–5 days):

1. JAY ANDERSON

3rd Conference Attendance

P. O. Box 443, Cloverdale, Western Australia. 6985.

Ph: (08) 9721 6523 (home), 0407 473 539 (mobile). Email: rossjay@iinet.net.au

Jay is a speleologist with particular interests in cave and karst management and environmental protection—she holds several roles at international, national and state levels. Past President – Australian Speleological Federation.

2. ROSS ANDERSON

2nd Conference Attendance

P. O. Box 443, Cloverdale, Western Australia. 6985.

Ph: (08) 9721 6523 (home), 0407 473 539 (mobile). Email: rossjay@iinet.net.au

Dissolved Rock – Karst Consultancy, Convener – ASF Australian Cave Rescue Commission, and Speleologist.

3. ANN AUGUSTEYN

8th Conference Attendance

Capricorn Caves, 30 Olsen Caves Road, The Caves, Queensland. 4702.

Ph: (07) 4934 2087 (home), (07) 4934 2883 (work), (07) 4934 2936 (fax). Email: capcaves@cqnet.com.au

Fellow of ACKMA. Ann and late Ken Augusteyn have owned and operated Capricorn Caves, Rockhampton, Queensland since 1988. Open daily for guided tours, the caves host successful educational programs, outdoor recreation activities and underground opera. Scott Hocknull, Queensland Museum excavated a significant palaeontology site in 2005. The rare fern *Tectana Deuexa* is being recovered under a threatened species program. Queensland award winner for eco-tourism.

4. PETER AUSTEN

2nd Conference Attendance

P. O. Box C283 Csulpo, Bathurst, New South Wales. 2795.

Ph: (02) 6332 5888 (work), (02) 6332 9399 (fax), 0417 298 904 (mobile).

Email: peter.austen@jenolancaves.org.au Director, Jenolan Caves Reserve Trust.

5. DR. CLAIRE BAKER

5th Conference Attendance

P. O. Box 267, Yungaburra, Queensland. 4884.

Ph: 0418 722 550 (work / mobile). Email: bugsyklaire@yahoo.com.au

Claire's interest in caves began when her PhD on Australian Glow-worms began taking her to these fascinating ecosystems. Claire now work as a consultant for a number of eco-tourism companies and continues to lecture and teach in the field for the University of Queensland.

6. STEVEN BOURNE

6th Conference Attendance

P. O. Box 134 Naracoorte, South Australia. 5271.

Ph: (08) 8762 0301 (home), (08) 8735 1175 (work), 0428 833 752 (mobile)

Email: bourne.steven@saugov.sa.gov.au

President of ACKMA. Fellow of ACKMA. On 12 month contract as Deputy Regional Conservator. Six and a half years as manager of Naracoorte Caves, and two years at Tantanoola Caves WH site for Department for Environment and Heritage. Keen interests in fossils, bats, and all things cave. Work closely with the tourism industry to showcase caves.

7. JOHN BRUSH

1st Conference Attendance

P. O. Box 383, Erindale Centre, Australian Capital Territory. 2903.

Ph: (02) 6231 4294 (home), 0429 314 294 (mobile). Email: johnbrush@ozemail.com.au

Member and past president of Canberra Speleological Society Inc. An interest in Caves and Karst (extending over several decades) with particular emphasis on cave exploration and documentation and management of wild caves.

- 8. DAVID BUTLER** **4th Conference Attendance**
637 Deviot Road, Deviot, Tasmania. 7275. Ph: (03) 6394 7686. Email: lueena@bigpond.com
Northern Caverneers Inc. Volunteer work with Karst and Caves in association with Tasmanian Parks and Wildlife Service and Forestry Tasmania. Involved with the Tasmanian Speleological Liaison committee.
- 9. DALE CALNIN** **7th Conference Attendance**
Buchan Caves Reserve, Caves Road, Buchan, Victoria. 3885.
Ph: (03) 51559414 (home), (03) 51621908 (work), (03) 96190813 (fax). Email: dcalnin@parks.vic.gov.au
Fellow of ACKMA. Ranger in Charge of Buchan Caves Reserves & Snowy River National Park (West). Responsible for the management of Buchan Caves and the National Park and wider karst areas of Buchan and Murrindal.
- 10. PETER BUZZACOTT** **1st Conference Attendance**
17 College Row, Bunbury Western Australia. 6230.
Ph: (08) 9721 1479. Email: reefdiving@eftel.com.au
Cave Divers Association state representative for WA, National Association for Cave Diving- life member. Western Australian Speleological group member. Cavers Leeuwin Incorporated member.
- 11. DEBORAH CARDEN** **6th Conference Attendance**
Naracoorte Caves, P. O. Box 134, Naracoorte, South Australia. 5271.
Ph: (08) 8762 3412 (work), 0409 006 710 (mobile). Email: carden.deborah@saugov.sa.gov.au
ACKMA Karst Science Officer. Fellow of ACKMA. Usually located in New Zealand at Punakaiki, working out of Westport. I'll be at Naracoorte Caves National Park until September 2009, enjoying a change of location and some challenging work. Interests include walking/hiking, caving, reading and growing herbs and vegetables, family and friends.
- 12. PETER CHANDLER** **10th Conference Attendance**
277 Te Anga Road, Waitomo Caves, New Zealand. 3993.
Ph: (+64 7) 878 7621 (office & home), 027 327 9892 (mobile). Email: pete_lib@xtra.co.nz
Life Member of ACKMA. Past President of ACKMA. Currently NZ Vice President. Co-Manager/Director 'Spellbound Ltd – Eco Cave Tours'. Previously co-owner of Blackwater Rafting (for 16 years). Interests in all aspects of cave management and visitor experience. Waitomo museum board member.
- 13. LIBBY CHANDLER** **3rd Conference Attendance**
277 Te Anga Road, Waitomo Caves, New Zealand. 3993.
Ph: (+64 7) 878 7621 (office & home), 027 327 9892 (mobile). Email: pete_lib@xtra.co.nz
Co-Manager/Director 'Spellbound Ltd – Eco Cave Tours'.
- 14. BRIAN CLARK** **9th Conference Attendance**
Gunung Mulu National Park, via Miri, Sarawak, Malaysia, 98008.
Ph: 00116085792304, Fax: 00116085792305, Mobile: 0128 833 759.
Email: brianclark@mulupark.com
Formerly manager of Naracoorte Caves (and Tantanoola Cave) in South Australia and now Manager of Mulu Caves in Sarawak, Malaysia. Former President and now Life Member of ACKMA. Particular interest in developing educational tourism in and around caves. Convenor, 13th ACKMA Conference, Mt. Gambier, 1999.
- 15. ARTHUR CLARKE** **5th Conference Attendance**
P. O. Box 245, North Hobart, Tasmania. 7002.
Ph: (03) 6228 2099 (office and home). Email: arthurc@southcom.com.au
Fellow of ACKMA. Honorary Research Associate, School of Zoology, University of Tasmania. Cave Biologist, investigating biodiversity and ecology of cave-dwelling species in cave/karst ecosystems in Tasmania, and elsewhere. Added interests are the conservation and history of caves and karst in Tasmania. Accompanying to the Conference: **Siobhan Carter**.

16. MARJORIE COGGAN**1st Conference Attendance**

P. O. Box 383, Erindale Centre, Australian Capital Territory. 2903.

Ph: (02) 6231 4294 (home), 0429 314 294 (mobile).

Email: johnbrush@ozemail.com.au

A member of the Canberra Speleological Society Inc and has a range of cave and karst related interests.

17. JULIA COGGINS**1st Conference Attendance**

P. O. Box 35, Two Rocks, Western Australia. 6037.

Ph: (08) 9561 5287 (home), (08) 9561 1004 (work), (08) 9561 2316 (fax), 0427383299 (mobile).

Email: julia.coggins@dec.wa.gov.au

Volunteer Coordinator, Yanchep National Park. Chairperson, Yanchep National Park Advisory Committee.

18. BRIAN COMBLEY**1st Conference Attendance**

RMB 200, Molloy Island, Western Australia. 6290.

Ph: (08) 9758 4114 (home), 0428 912 480 (mobile).

Email: brian@crystalcs.com

Member of Cavers Leeuwin Inc.

19. TRAVIS CROSS**3rd Conference Attendance**

Waitomo Glowworm Cave, Private Bag 501, Otorohanga, New Zealand 3940

Ph: (+647) 8788 288 Ex 722 (work), (+647) 8788 858 (fax), 0212221415.

Email: travis.cross@thlonline.com

Environmental Officer for Waitomo Glowworm Caves, Ruakari and Aranui Caves, NZ.

20. DANIEL COVE**1st Conference Attendance**

P. O. Box 127 Oberon, New South Wales. 2787.

Ph: (02) 6336 0320 (home), (02) 6359 3926 (work), (02) 6359 3307 (fax), 0458 201 724 (mobile)

Email: dan.cove@jenolancaves.org.au

ACKMA Interpretations Officer. Manager of cave operations at Jenolan Caves, New South Wales. Has been involved in Cave and Karst management for fifteen years, and is broadly interested in environmental management, cave lighting and the methodology of guiding.

21. BRETT DALZELL**5th Conference Attendance**

P. O. Box 569 Ceduna, South Australia. 5690

Ph: (08) 8625 2978, (08) 8625 3144 (work), (08) 8625 3123 (fax), 0409 209 410 (mobile)

Email: dalzell.brett@saugov.sa.gov.au

District Ranger, Department for Environment and Heritage South Australia, based in Ceduna. Responsible for the South Australian section of the Nullarbor Karst. Keen caver and environmentalist.

22. GEOFF DEER**3rd Conference Attendance**

1479 Gunns Plains Road, Gunns Plains, Tasmania. 7315.

Ph: (03) 64291133 (home), (03) 64291388 (work), (03) 64291362 (fax), Mobile 0411294778.

Email: gunnsplainscaves@bigpond.com

Manager, Gunns Plains Caves, Tasmania. Had a general interest in caves as a young bloke crawling into holes in Flinders Ranges SA. After meeting Trish we visited more. Result – took over the lease of Gunns Plains Caves – loving it! Discover the Magic!

23. TRISH DEER**2nd Conference Attendance**

1479 Gunns Plains Road, Gunns Plains, Tasmania. 7315.

Ph: (03) 64291133 (home), (03) 64291388 (work), (03) 64291362 (fax), Mobile 0411294778.

Contact same as Geoff except Mobile: 0411294761, Email: geoffdeer@bigpond.com

Gunns Plains Caves – started work at caves when I was 13yo. Fulfilled my dream when Geoff, Benjamin and I took over the lease in 2004. What a great office to work in.

24. KIRSTY DIXON**1st Conference Attendance**

P. O. Box 201, Exmouth, Western Australia. 6707.

Ph: 9949 4350 (home), 9947 8001 (work), Mobile: 0427 997 394. Email: kirsty.dixon@dec.wa.gov.au

Dept of Environment and Conservation, Exmouth District, Nature Conservation Coordinator.

25. BRETT FARQUHARSON**4th Conference Attendance**

P. O. Box 2024, Bowning, New South Wales. 2582

Ph: (02) 6227 6133 (home), 0412 427 051 (mobile). Email: emibagarap@aapt.net.au

Scout Association – Abseil and Cave instructor and assessor; member of CSS. Accompanying to the conference: **Lesley Farquharson**.

26. ROB FOULDS**1st Conference Attendance**

5/31 Wellington Street, Mosman Park, Western Australia. 6012.

Ph: (08) 9384 1834 (home). Email: foulds.rob@gmail.com

Interests in Cave Fauna, groundwater hydrology, and has a limited acquaintance with speleothems repairs.

27. HEIN-JACQUES GERSTNER**2nd Conference Attendance**

P. O. Box 255, Cudtshoorn, Southern Cape, South Africa. 6620.

Ph: (044) 2724509 (home), (044) 2727410 (fax), (044) 2728001, 082 568 5691 (mobile).

Email: heing@congo caves.co.za

Manager of Congo Caves, South Africa.

28. DR. GRANT GARTRELL**5th Conference Attendance**

P. O. Box 27, Mount Compass, South Australia. 5210.

Ph. 61 08 8556 9100 (home & work), Fax: 61 08 8556 9142. Email: blueberrypatch@bigpond.com

ACKMA Treasurer, and ACKMA Fellow. Life member – Cave Exploration Group (South Australia).

Interests include cave meteorology, cave morphology, conservation and interpretation. Co-discoverer World Heritage listed Fossil Cave, Naracoorte. Retired physicist and currently a farmer.

29. ALAN GRIFFIN**3rd Conference Attendance**

22 Helvetia Avenue, Berowra New South Wales. 2081

Ph: (02) 9456 5226 (home), (02) 9995 5271 (work), 0412 444 801 (mobile)

Email: alan.griffin@environment.nsw.gov.au

Retired head of Jenolan Caves Reserve Trust.

30. PETER GRILLS**1st Conference Attendance**

21 Codrington Street, Barnsley, New South Wales. 2278.

Ph: 0419 820 920 (work/mobile). Email: peterg@resco.com.au

Works in mining.

31. KEN GRIMES**4th Conference Attendance**

RRN 795 Morgiana Road, Hamilton, Victoria. 3300.

Ph: (03) 5573 4503 (home). Email: Regmap1@ozemail.com.au

Consultant Geologist, specialising in Karst studies. Member of ACKMA, ASF, VSA and CEGSA, and the Geological Society. Co-editor of ‘Helictite’ The Journal of Australasian Speleological Research. Interested in all types of Karst and Pseudokarst.

32. LINDSAY HATCHER**1st Conference Attendance**

100 Bussell Highway, Busselton, Western Australia. 6285.

Ph: (08) 9757 7411 (work), 0429 082 967 (mobile).

Email: lindsayhatcher@margaretriver.com

Natural environment and projects manager, Augusta Margaret River Tourism Association. Oversee all AMRTA sites ensuring ongoing maintenance/safety/upkeep/and new projects undertaken.

- 33. DAVID HAY** **1st Conference Attendance**
Locked Bag, Jenolan Caves New South Wales. 2790.
Ph: (02) 6359 3924 (work), (02) 6359 3307 (fax), 0419 465 913 (mobile)
Email: david.hay@jenolancaves.org.au
Guide- Historical events, Jenolan Caves
- 34. NIC HAYGARTH** **2nd Conference Attendance**
Unit 3, 42 Frederick Street, Perth, Tasmania. 7300.
Ph: (03) 6398 1334 (home/work), 0420 502 896 (mobile), Email: lakelea22@yahoo.com.au
Hon. Research Associate University of Tasmania. Freelance historian and writer.
- 35. DAVID HEAD** **2nd Conference Attendance**
43 Huntingwood Due, Huntingwood, New South Wales. 2198.
Ph: (02) 9729 0996 (home), (02) 9671 9965 (work), (02) 9671 9900, 0404 450 507 (mobile)
Email: davidhead@weidmuller.com.au
Designer and manufacturer of LED lights for caves.
- 36. NICHOLAS HEATH** **2nd Conference Attendance**
PMB 38, via Kingscote, South Australia. 5223. Email: heath.nicholas@saugov.sa.gov.au
Ph: (08) 8559 7231 (work), Fax: (08) 8559 7373. Mobile: 0439 890 838.
Senior Guide, Kelly Hill Caves, Kangaroo Island.
- 37. KENT HENDERSON** **12th Conference Attendance**
P. O. Box 1080, Newport, Victoria. 3015.
Ph: (+61 3) 9398 0598 (home), 0407 039 887 (mobile), Fax: (+61 3) 939 80523.
Email: kenthen@optusnet.com.au ACKMA Life Member. ACKMA Publications officer & Assistant Executive Officer. Editor, ACKMA Journal for past twenty-one years. Author of eight books on show caves.
- 38. DR. JULIA JAMES** **3rd Conference Attendance**
School of Chemistry, F11, University of Sydney, New South Wales. 2006.
Ph: (02) 9319 1415 (home), (02) 9351 3329 (fax)
A/Prof Julia James is an honorary research associate within the school of chemistry, The University of Sydney, Australia. She is a Past President of the International Union of Speleology. She is a member of two NSW Dept. of the Environment and Climate Change committees – the Karst Management Advisory Committee and the Greater Blue Mountains World Heritage Area Advisory Committee (the Jenolan Karst Conservation Reserve forms part of this World Heritage Area). Her specialist area in speleology is chemistry and extends across its interfaces with a number of other scientific disciplines. She has in recent years consulted on World and National heritage, sustainable cave development, and cave and karst management. She has over a hundred speleological publications and contributed to books on speleology.
- 39. CASSANDRA JURY** **1st Conference Attendance**
33 Tunbridge Street, Margaret River, Western Australia. 6285.
Ph: (08) 9757 2202 (home), (08) 9757 3740 (fax), 0427 070 951 (mobile).
Email: cassjury@westnet.com.au
Cape to Cape Catchments Group – catchments management to protect biodiversity and water quality.
- 40. GEOFF KELL** **2nd Conference Attendance**
Carey's Cave, Wee Jasper, New South Wales. 2582.
Ph: (02) 6227 7247 (home), (02) 6227 9622 (work). Email: geoff@weejaspercaves.com
Manager of Carey's Cave Wee Jasper, maintenance, marketing and touring of the cave for 17 years. Developing different approaches for involving visitors in the cave experience.
- 41. ROB KLOK** **1st Conference Attendance**
Department of Environment and Conservation, Margaret River, Western Australia. 6280.
Ph: (08) 9757 9648, Mobile: 0427 525 393. Email: rob.klok@dec.wa.gov.au
Caves Ranger, Department of Environment and Conservation.

42. SASA KENNEDY**1st Conference Attendance**

95 St Georges Crescent, Faulconbridge New South Wales. 2776.

Ph: (02) 4751 8431 (home), (02) 4753 2056/(02) 6359 3924 (work), (02) 4753 2028 (fax), 0425 329 688 (mobile). Email: sasa.kennedy@tafensw.edu.au

Jenolan Caves Reserve Trust- Cave Guide and Adventure Guide. JCMAPS committee member. SUSS and ISS active member. Blue Mountains TAFE- coordinate/teach interpretive and Cave Guiding.

43. LISA KING**1st Conference Attendance**

P. O. Box 5N, Cairns, Queensland. 4870.

Ph: (07) 4042 1726 (work), (07) 4042 1474 (fax). Email: volcanolisa@hotmail.com

James Cook University, Cairns – PhD student in tourism. My PhD is on investigating the role of the World Heritage brand in attracting visitors to protected areas in Queensland, Australia. My research interests include geo-tourism, World Heritage, island tourism, needs assessment and community engagement. Funded to the Conference through the ACKMA Life Member's Fund.

44. MOIRA LIPYEAT**3rd Conference Attendance**

29a Celia Street, Redcliffs, Christchurch, New Zealand. 8081.

Ph: (+64 3) 384 2570 (home). Email: lipyeat@xtra.co.nz

NZSS member, long term interest in limestone landscape both under and over ground. ACKMA member. Interested in Cave history as in "Delving Deeper", published in 2003.

45. GREG MARTIN**11th Conference Attendance**

5 Roberts Way, Flagstaff, Hamilton, New Zealand. 3210.

Ph: (+64) 854 0255 (home), (+64) 7858 1007 (work), (+64) 7858 1001 (fax), (+64) 274 751 460 (mobile).

Email: gmartin@doc.govt.nz

Past president & ACKMA life member. Walkato Conservator – Department of Conservation, Hamilton, New Zealand. Chairman, Waitomo Caves Management Committee.

46. DEREK MASON**7th Conference Attendance**

81 Maungakawa Road, Cambridge, New Zealand. 3494.

Ph: (+64 7) 823 5525 (home), (64 7) 823 3525 (fax), 0275 778 829 (mobile).

Email: thorntonridge@xtra.co.nz

Land Owner of commercial private cave. Interested in environmental impact on cave morphology.

47. MARY McCABE**4th Conference Attendance**

64 Wentworth Terrace, Rockhampton, Queensland. 4700.

Ph: (+61 7) 4927 1051, 0427 377 455 (mobile).

Member of ACKMA, Central Queensland Speleological Society and the Australasian Bat Society.

48. WILL McCUTCHEON**1st Conference Attendance**

P. O. Box 483, Barnsdale, Victoria. 3875.

Ph: (03) 51520683, Fax: (03) 96789570, Mobile: 0418 586 116. Email: wmccutch@parks.vic.gov.au

Parks Victoria – Chief Ranger East Gippsland; Chair of state-wide Cave and Karst Advisory Committee.

49. MANDY MCLAUCHAN-ANDREWS**1st Conference Attendance**

5 Sylvaner Place, Margaret River, Western Australia. 6285.

Ph: (08) 9757 7411 (work).

Augusta Margaret River Tourism Association – Senior Guide. I am interested in expanding my knowledge on caves from around Australia to share with fellow staff and visitors.

50. TIMOTHY MOULDS**3rd Conference Attendance**

4/25 Eric Street, Como, Western Australia. 6152.

Ph: (08) 6468 1246 (home), (08) 6222 8973 (work), 0429 792 834 (mobile).

Email: timothy.moulds@yahoo.com.au

Tim is a consulting invertebrate ecologist with GHD in Perth. He has a passion for all subterranean fauna with a strong interest in that associated with non-karstic voids. Tim also has a strong interest in Cave and Karst Conservation.

51. DR. DAVID MERRITT**2nd Conference Attendance**

School Biological Sciences, University of Queensland, Brisbane, Queensland. 4072

Ph: (07) 3892 6706 (home), (07) 3365 3478 (work), (07) 3365 1655 (fax). Email: d.merritt@uq.edu.au

Glow-worm biology, particularly the regulation of bioluminescence in glow-worms.

52. RENEE MOURITZ**2nd Conference Attendance**

P. O. Box 170, Yallingup, Western Australia. 6282.

Ph: (08) 9755 2585 (home). Email: a.test@iinet.net.au

Member of the conference organizing committee. Environmental science background with an interest in cave and karst management. Member of CLinc – Cavers Leeuwin Incorporated.

53. JEFF MURRAY**1st Conference Attendance**

15 New Bond Street, Midland, Western Australia. 6056.

Ph: (08) 9273 7199 (home), 0428 941 566 (mobile). Email: ozyadventurer@hotmail.com

A member of the Western Australian Speleological Group, and the DEC Cave Management Advisory Committee (representing the Defence force).

54. PATRICK NYKIEL**1st Conference Attendance**

Lot 163, Orchard Drive, Roleystone, Western Australia. 6111.

Ph: (08) 9397 6011, Mobile: 0423 979 102. Email: patrick.nykiel@gmail.com

A member of Roleybushcare, WASG, Scouts. Interested in environmental sustainability and management.

55. RHONDA OSHANEK**1st Conference Attendance**

80 Gifford Road, Dunsborough, Western Australia. 6281.

Ph: (08) 9759 1451 (home & work), Mobile: 0404 993 606. Email: roshanek@gmail.com

A member of Cavers Leeuwin, trained as a scientist, now run a freelance editing and writing business, mostly involving science writing (some Journalism).

56. MEEGAN OVERSTONE**1st Conference Attendance**

Ngilgi Cave, P. O. Box 133 Yallingup, Western Australia. 6282.

Ph: (08) 9755 2152.

Cave Guide, Ngilgi Cave.

57. CAROLINA PAICE**1st Conference Attendance**

7 Sylvania Place, Margaret River, Western Australia. 6285.

Ph: (08) 97573381 (home), (08) 97577422 (work), Mobile: 0417 180 899, Email: paice@westnet.com.au

Carolina works in the DEC managed caves in the Margaret River area and as a DEC Eco-education officer.

58. BARRY RICHARD**8th Conference Attendance**

42 Edith Road, Jenolan Caves, New South Wales. 2790.

Ph: (02) 6335 6239 (home/work/fax), 0428 619 709 (mobile)

Email: relax@jenolancabins.com.au

Fellow of ACKMA. Owns and operates 'Jenolan Cabins' at Jenolan Caves. Casual guide at Jenolan Caves.

Life member and patron of Blue Mountains Speleological Club.

59. TRACEY ROBINS**1st Conference Attendance**

45 Dunnet Road, Nannup, Western, Australia. 6275.

Ph: 0427525009 (work), Mobile: 0428642907.

Email: tracey.robins@dec.wa.gov.au

DEC National Park Ranger; previously worked in DEC caves. Member of WASG and Cavers Leeuwin.

60. DAVID ROWLING**2nd Conference Attendance**

Locked Bag, Jenolan Caves New South Wales. 2790.
Ph: (02) 6359 3924 (work), (02) 6359 3307 (fax), 0458 204 630 (mobile)
Email: david.rowling@jenolancaves.org.au
Electrician, Jenolan Caves

61. BIAN RUMEI**2nd Conference Attendance**

Gunung Mulu National Park, via Miri, Sarawak, Malaysia, 98008.
Ph: 00116085792304, Fax: 00116085792305, Mobile: 0128833759. Email: brianclark@mulupark.com
Senior Guide in charge of human resources at Mulu NP, Sarawak, Malaysia.

62. CATHERINE SELLARS**1st Conference Attendance**

C/- Yarrangobilly Caves, PO Box 472, Tumut, New South Wales. 2720.
Ph: (02) 6454 9597 (home/work), (02) 6454 9598 (fax), 0429 859 472 (mobile).
Email: catherine.sellars@environment.nsw.gov.au
Caves assistant – Yarrangobilly Caves.

63. CHESTER SHAW**10th Conference Attendance**

P. O. Box 67, Mole Creek, Tasmania. 7304.
Ph: (03) 6363 1433 (home/fax), 0418 362 341 (mobile). Email: trog18@bigpond.com
Life Member of ACKMA. Retired manager, Mole Creek Caves, Tasmania. However still maintain a very keen interest in Cave & Karst management. Now also collect cave memorabilia.

64. JEFFRY SIMUN**1st Conference Attendance**

Gunung Mulu National Park, via Miri, Sarawak, Malaysia, 98008.
Ph: 00116085792304, Fax: 00116085792305, Mobile: 0128833759. Email: brianclark@mulupark.com
Senior Guide in charge of visitor access infrastructure at Mulu National Park. Sarawak, Malaysia.

65. ANDY SPATE**14th Conference Attendance**

2/10 Victoria Street, Hall, Australian Capital Territory. 2618.
Ph: (02) 6230 2322 (home/fax), (02) 6230 9966 (work), 0407 293 301 (mobile)
Email: andyspate@aliencamel.com
ACKMA Life Member, and Past President. Currently ACKMA's International Relations Officer. CEO & Tea lady: *Optional Karst Management*. Consultant on cave & karst management, interpretation training, landscape rehabilitation, and cave & karst exploration.

66. DAVID SUMMERS**1st Conference Attendance**

P. O. Box HM 1373, Hamilton, HM FX, Bermuda.
Ph: (+1 441) 734 7006 (home), (+1 441) 295 1700 (work), (+1 441) 292 5429 (fax).
Email: dsummers@bcec.bm
President – International Show Caves association; President – The Crystal Caves of Bermuda.

67. ROBERT SUSAC**1st Conference Attendance**

377 Karaborup Road, North Carabooda, Western Australia. 6033.
Ph: (08) 9405 5157 (work), (08) 9306 1641 (fax). Email: rasmus@gmail.com
Department of Environment and Conservation – Technical officer, science division – wetlands group.
Natural resource monitoring project. Yanchep caves advisory committee. Western Australian Speleological Group. Wanneroo Environmental Advisory Committee.

68. SIMON TAYLOR**1st Conference Attendance**

Ngilgi Cave, P. O. Box 133, Yallingup, Western Australia. 6282.
Ph: (08) 9755 2152 (home), (08) 9755 2022 (fax).
Email: am@geographebay.com
Attractions/resources manager of Geographe Bay Tourism Association. Manager of Ngilgi Cave, Yallingup.

69. DIANNE VAVRYN**9th Conference Attendance**

28 Barmoya Road, The Caves, Queensland. 4701.

Ph: (07) 4934 2788 (home), Mobile: 0427 524 514. Email: <dlvavryn@westnet.com.au>

Fellow of ACKMA. Casual Ranger – Queensland Parks and Wildlife Service (Bat Cleft – guide for 30 years). Tour Guide at Cammoo Caves – 1984, and Olsen’s Capricorn Caverns, 1985 – 1997. Organizing Committee Member: 10th Australasian Conference on Cave and Karst Management, 1993; and 8th Australasian Bat Society Conference, 1997. Sub-editor, ACKMA Journal. Interested in all aspects of Karst, its management, flora/fauna, and helping others to understand their importance and need.

70. DR. JOHN WATSON**6th Conference Attendance**

Department of Conservation & Environment, 120 Albany Highway, Albany, Western Australia. 6330.

Ph: (08) 98424500. Email: john.watson@dec.wa.gov.au

Special Projects Officer (DEC). Inaugural Convenor IUCN/WCPA Cave and Karst Working Group. Member IUCN/WCPA Mountains Task Force and Cave and Karst Task Force.

71. VAN WATSON**5th Conference Attendance**

P. O. Box 13, Waitomo Caves, New Zealand. 3993.

Ph: (+64 7) 878 8375 (home), (+64 7) 878 6219 (work), Mobile: 021 417 814, Fax: (+64 7) 878 5190

Email: van.watson@thlonline.com

Operations Manager Black Water Rafting and Ruakuri Cave. Currently trying to get clear of day to day operations to work on infrastructure upgrade in Aranui Cave.

72. RAULEIGH WEBB**11th Conference Attendance**

27 Beckenham Street, Beckenham, Western Australia. 6107.

Ph: (08) 9356 5550 (home), 0419 946 764 (mobile), (08) 9264 5557 (work). Email: rauleigh@iinet.net.au

Fellow of ACKMA. ACKMA Webmaster and Information Technology Officer. General interest in Cave Management with emphasis on Cave Conservation by Management. Interested in cave conservation relating to cave management, development of cave management practices that reduce impacts on caves and karst. Accompanying to the conference: **Samantha Webb**.

73. MIKE WINN**1st Conference Attendance**

Dalton Way, Molloy Island, Western Australia. 6289

Ph: (08) 97584058 (home). Email: winn@molloyisland.com.au Member of Cavers Leeuwin.

74. ANNE WOOD**5th Conference Attendance**

Department of Environment and Conservation, 14 Queen Street, Busselton, Western Australia. 6280.

Ph: (08) 9757 7035 (office), (08) 9758 8979 (home), (08) 9757 7422 FAX, Mobile: 0427 525 445, or 0407 193 250. Email: anne.wood@dec.wa.gov.au

Caves manager, Department of Environment and Conservation – South West Region. Manager of Calgardup & Giants Caves (public access *self-guided* caves), and other karst sites in the Leeuwin-Naturaliste Nat. Park. Member: Cavers Leeuwin Inc. for over 20 years.

75. PETER WOOD**5th Conference Attendance**

P. O. Box 388, Margaret River, Western Australia. 6285.

Ph: (08) 9758 8979 (home), 0427 387 272 (mobile). Email: annepeter2@bigpond.com.au

Member: Cavers Leeuwin & Department of Environment and Conservation – Cave Management Advisory Group. A farmer/wine producer in the Margaret River Region.

76. PHILIP WOOD**7th Conference Attendance**

23 Romilly Street, Westport, New Zealand. 7825.

Ph: (+64 3) 789 8106 (home), (+64 3) 789 8800 (work/fax). Email: complex@ihug.co.nz

Fellow of ACKMA. Foundation member of ACKMA – long time cave explorer – mapped Buller Area including Honeycomb Hill – Metro – Babylon – Megamania. 12 years, West Coast Parks & Reserves, West Coast Conservation Board – over 40 years, Scouting and Westport Rotary Club. 16th ACKMA Conference Convenor. Menswear Retailer.

- 77. BARBARA ZAKRZEWSKA** **1st Conference Attendance**
12 Markham Way, Balga, Western Australia .6061.
Ph: 0403 775 742 (mobile). Email: baszka@iinet.net.au
Background in Geology and palaeontology. Member, Western Australian Speleological Group.
-

PART-TIME ATTENDEES (attending 1–2 days):

- 78. SOPHIE BISHOP** **1st Conference Attendance**
c/- DEC, 14 Queen Street, Busselton, Western Australia. 6280.
Ph: (08) 97805506, mobile: 0433 157 096.
Email: sophie.bishop@dec.wa.gov.au
Planning officer for DEC – Preparing a new management plan for the Parks of the Blackwood Plateau, and finalizing the Capes (Leeuwin-Naturaliste) Management Plan.
- 79. ALAN BRIGGS** **1st Conference Attendance**
c/- National Trust (WA), 4 Havelock St, West Perth, Western Australia. 6872.
Ph: (08) 9321 6088 (work), 9324 1571 (fax). Email: alan.briggs@ntwa.com.au
Alan is the manager of the ‘natural Heritage’ and has responsibility for Bushbank and Conservation Covenant Programmes. He has 35 yrs experience in land management and has lectured for 10 yrs in sustainable tourism and ecotourism at ECU. He has a keen interest in working with other individuals, agencies and companies to achieve greater involvement in the natural environment of WA.
- 80. SHANE DOWNES** **1st Conference Attendance**
26 Tunbridge St, Margaret River, Western Australia. 6285.
Ph: (08) 9780 5217 (work), (08) 9757 2512 (fax). Email: shanedownes@amrsc.wa.gov.au
Manager of Statutory Planning – Shire of Augusta Margaret River. Review of policies / procedures and assessment of planning applications.
- 81. JARED DRUMMOND** **1st Conference Attendance**
29 Wooredah Crescent, Prevelly, Western Australia. 6285.
Ph: (08) 9757 1524 (home), (08) 9780 5268 (work).
Email: jarreddrummond@amrsc.wa.gov.au
Environmental Planner, interest in outdoor recreation.
- 82. BRETT HUNTLY** **1st Conference Attendance**
P. O. Box 1024, Margaret River, Western Australia. 6285.
Ph: (08) 9757 7281 (home/fax), 0407 084 945 (work/mobile), Email: brett@outdoordiscoveries.com.au
Commercial provider representative at DEC Cave Management Advisory Committee. Commercial caving guide and trainer assessor of DEC Cave Leader Courses.
- 83. GARY HUNTON** **1st Conference Attendance**
C/- Yanchep National Park, Yanchep, Western Australia. 6035.
Ph: 08 95611004 (work), Fax: 08 95612316.
DEC employee, involved in cave monitoring.
- 84. CLINT KIRKHAM** **1st Conference Attendance**
c/- Ngilgi Cave, PO Box 133, Yallingup, 6282
Ph: (08) 97552152. Cave Guide at Ngilgi Cave.
- 85. DAWN KLOK** **1st Conference Attendance**
c/- Post Office, Cowaramup, Western Australia. 6284, Ph (08) 97579648.
Email: rob.klok@dec.wa.gov.au
Past employee of *Caveworks* & past employee of DEC managed caves. Member of Cavers Leeuwin.

86. DR. BRENTON KNOTT**1st Conference Attendance**

M092 Zoology, University of Western Australia, 35 Stirling Highway, Crawley, Western Australia. 6009.
Ph: (08) 6488 2223. Email: bknot@cyllene.uwa.edu.au
Department of Zoology, University of Western Australia

87. SONIA LAMOND**1st Conference Attendance**

9 Benedick Rodd, Coolbellup, Western Australia. 6163.
Ph: (08) 93311398 (home), (08) 9213 2065 (work), Fax: (08) 9322 2611, Mobile: 0407 214 734.
Email: slamond@walga.asn.au
Works in the Perth Biodiversity Project.

88. CHRISTIE MAHONY**2nd Conference Attendance**

P. O. Box 60, Walpole, Western Australia. 6398.
Ph: (08) 98401765 (home), (08) 98400400 (work), Mobile: 0403 744 326.
Email: christie.mahony@dec.wa.gov.au
I am an interpretation officer for the Dept of Environment and Conservation in Walpole. I was previously involved with cave management and guiding at Yanchep National Park for three years.

89. ROBYN McBEATH**6th Conference Attendance**

17 Barrett Street, Margaret River, Western Australia. 6285.
Ph: (08) 9757 2980 (home), 0448 975 729 mobile.
Email: past.president@ackma.org
Immediate Past President, ACKMA. Fellow of ACKMA. Former manager, *Caveworks* and AMRTA.

90. PHIL MCGUIGAN**1st Conference Attendance**

235 Drake St, Morley, Western Australia 6065.
Ph: (08) 9343 3363, Mobile: 0427 008 384.
Member of Western Australian Speleological Group.

91. DREW MCKENZIE**1st Conference Attendance**

Cape to Cape Catchments Group, 27 Tunbridge Street, Margaret River, Western Australia. 6285.
Ph: (08) 9757 2202. Cape to Cape Catchments Group – catchment management to protect biodiversity.

92. PAUL MORTON**1st Conference Attendance**

80 Gifford Road, Dunsborough, Western Australia. 6281.
Ph: (08) 9759 1451 (home & work), Mobile: 0404 993 606.
Email: pbmorton@gmail.com
A member of Cavers Leeuwin.

93. INGA PRICE**1st Conference Attendance**

7 Preston Court, Two Rocks, Western Australia. 6037.
Ph: (08) 9561 2030 (home), (08) 9561 1004 (work), (08) 9561 2316 (fax). Email: inga.price@dec.wa.gov.au
Yanchep National Park – Visitor Service Personnel and cave guide.

94. ALISON PRICHARD**1st Conference Attendance**

Yanchep National Park, Wanneroo Road, Yanchep, Western Australia. 6037.
Ph: (08) 9561 1004 (work), (08) 95612316 (fax), 0438 160 981 (mobile).
Email: Alison.Prichard@dec.wa.gov.au
Manager of Yanchep National Park.

95. JUDY SHAW**1st Conference Attendance**

P. O. Box 529, Mirrabooka, Western Australia. 6941. Ph: (08) 9343 3363, Mobile: 0427 008 384.
Email: shawhorizons@myoffice.net.au
Member of Western Australian Speleological Group. Operates 'Shaw Horizons', a company conducting caving and abseiling activities.

96. JENNY TATTAM**1st Conference Attendance**

3 Waverley Rd, Cowaramup, Western Australia. 6286.
 Ph: (08) 9755 5543 (home), (08) 9780 5277 (work), (08) 97572512 (fax).
 Email: jennytattam@amrsc.wa.gov.au
 Planning Officer, Shire of Augusta-Margaret River.

97. SHARON THWAITES**1st Conference Attendance**

P. O. Box 329, Margaret River, Western Australia. 6285.
 Ph: (08) 97572623, Email: shazjoy@hotmail.com
 Sharon works in DEC managed caves and is a member of Cavers Leeuwin.

98. CANDACE WILLIAMS**2nd Conference Attendance**

C/- Post Office, Cowaramup, Western Australia. 6284.
 Ph: (08) 97555487 (home), mobile: 0417 953 071. Email: cowntown81@yahoo.com
 Former supervisor (manager), Ngilgi Cave, Western Australia.
 Interested in eating, caving, fishing, reading.

99. DENNIS WILLIAMSON**1st Conference Attendance**

2 Avendon Boulevard, P. O. Box 1036 Glen Waverly, Victoria. 3150.
 Director of Geoscience International, a division of Scenic Spectrums Pty Ltd. Dennis is a geographer and landscape planner who has been involved in a wide range of natural, scenic, recreation and tourism resource management issues as a consultant and as an individual concerned about the wise stewardship of environmental and cultural heritage resources in the US and Australia since the early 1970's.

100. BRETT WOODROFFE**1st Conference Attendance**

c/- Ngilgi Cave, P. O. Box 133, Yallingup, Western Australia. 6282.
 Ph: (08) 97552152. Cave guide at Ngilgi Cave

101. RENATA ZELINOVA**1st Conference Attendance**

19 Manta Pass, Mindarrie, Western Australia. 6030.
 Ph: (08) 93059382 (home), 92132047 (work), Mobile: 0447 303 792. Email: rzelinova@walga.asn.au
 WALGA – Manager, Perth Biodiversity Project. Quinns Rocks Environmental Group – committee member.
 Environmental issues affecting Quinns Rocks, City of Wanneroo and WA.

CAVES GUIDES CONFERENCE / WORKSHOP WELLINGTON CAVES, NEW SOUTH WALES

Sunday 25 July – Wednesday 28 July 2010

Date & Duration: The Gathering will be conducted between 25 July and 28 July 2010. The gathering will run from Sunday evening until (and including) Wednesday evening. On Thursday and beyond we will provide for optional visits to the Western Plains Zoo, the Burrendong Arboretum and other local attractions. **Registration:** Will take place from Noon on Sunday 25 July 2010.

Presentations: Firstly, and most importantly there will be time for you to present and promote your site! We also expect to have talks and workshops from scientists and cave divers who have worked at Wellington – as well as workshops on interpretation and guiding and on cave infrastructure ideas.

Accommodation: A range of accommodation styles is available ranging from: campsites, van sites and cabins to units (able to accommodate up to six people). There are also hotels and motels in Wellington – 10 km away.

Cost: The registration cost per delegate (excluding accommodation, but including all meals and tea breaks), based on today's prices is expected to be \$150 for the four days. Accommodation costs on site currently range from \$23 per 1 or 2 adults & \$5.50 per extra person (powered campsites) to \$72 per 1 or 2 adults & \$10.50 per extra person for Golf View Cabins.

Location and transport: The Wellington Caves Complex is situated on the Mitchell Highway eight km south of Wellington, NSW, ninety km north of Orange and sixty km south of Dubbo.

Contact: Chris George: caves@visitwellington.com.au

ACKMA OFFICE BEARERS: 2008 - 2009

PRESIDENT:

Steve Bourne, Naracoorte Caves, P. O. Box 134, Naracoorte, South Australia. 5271.
Ph: (08) 8762 3412 (office), (08) 8762 1231 FAX, Email: <president@ackma.org>

IMMEDIATE PAST PRESIDENT:

Robyn McBeath, 17 Barrett Street, Margaret River, Western Australia. 6285.
Ph: (08) 9757 2980 (home), 0448 975 729 (mobile), Email: past.president@ackma.org

NEW ZEALAND VICE-PRESIDENT, & ACKMA NZ ADMINISTRATOR:

Peter Chandler, *Spellbound Tours*, P. O. Box 4, Waitomo Caves, New Zealand.
Ph: (+64 7) 878 7621 (office & home), Email: <nz.vice.president@ackma.org>

AUSTRALIAN VICE-PRESIDENT & KARST CONSERVATION OFFICER:

Rolan Eberhard, Department of Primary Industries, Water & Environment,
G. P. O. Box 44A, Hobart, Tasmania. 7001.
Ph.: (03) 6233 6455 (office), (03) 6233 3477 (FAX), Email: <aus.vice.president@ackma.org>

EXECUTIVE OFFICER, & NZSS LIASION OFFIER:

Dave Smith, Department of Conservation, P. O. Box 38, Te Kuiti, New Zealand.
Ph.: (+64 7) 878 1050 (office), (+64 7) 878 8534 (home), email: <executive.officer@ackma.org>

TREASURER & MEMBERSHIP RECORDS OFFICER & A.S.F. LAISION OFFICER:

Dr. Grant Gartrell, P. O. Box 27, Mt. Compass, South Australia. 5210.
Ph: (08) 8556 9100, (08) 8556 9142 (FAX), Email: <treasurer@ackma.org>

PUBLICATIONS OFFICER & ASSISTANT EXECUTIVE OFFICER:

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Ph: (08) 9356 5550 (home), 0419 946 764 (mobile), Email: <webmaster@ackma.org>

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Ph: (02) 6336 0320 (home), (02) 6359 3926 (work), (02) 6359 3307 (fax), 0458 201 724 (mobile)
Email: dan.cove@jenolancaves.org.au

KARST SCIENCE OFFICER:

Deborah Carden, Dept. of Conservation, 72 Russell Street, Westport, New Zealand.
Naracoorte Caves, P. O. Box 134, Naracoorte, South Australia 5271
Ph: (08) 8762 3412 (work), 021 023 575 61 (mobile). Email: carden.deborah@saugov.sa.gov.au

INTERNATIONAL RELATIONS OFFICER:

Andy Spate, 2 Hoskins Street, Hall, ACT, Australia 2618
Tel.: (02) 6230 9966 (office), 0407 293 301 (mobile), Email: <internationalrelations@ackma.org>

CONFERENCE CONVENOR:

Anne Wood, Department of Environment and Conservation, 14 Queen Street, Busselton, Western Australia. 6280. Ph: (08) 9757 7035 (office), (08) 9758 8979 (home), (08) 9757 7422 FAX, Mobile: 0427 525 445, or 0407 193 250. Email: anne.wood@dec.wa.gov.au

PUBLIC OFFICER:

Professor Elery Hamilton-Smith, AM, P. O. Box 36, Carlton South, Victoria. 3053.
Ph. (03) 9489 7785 (home), (03) 9481 2439 FAX, Email: <elery@alphalink.com.au>

SUCCESSION OF ACKMA OFFICERS SINCE FOUNDATION

	1987-89	1989-91	1991-93	1993-95	1995-96	1996-97	1997-98	1998-99	1999-00
President	E. Holland	E. Holland	A. Spate	A. Spate	M. Chalker	M. Chalker	G. Martin	G. Martin	B. Clark
Aust Vice President	J. Sutherland	A. Spate	K. Kiernan	N. Kell	B. Allen	A. Augusteyn	A. Augusteyn	R. McBeath	R. McBeath
NZ Vice President	D. Williams	D. Williams	D. Williams	P. Dimond	G. Martin	G. Martin	P. Chandler	P. Chandler	P. Chandler
Executive Officer	E. Hamilton-Smith	E. Hamilton-Smith	E. Hamilton-Smith	E. Hamilton-Smith	A. Spate	A. Spate	A. Spate	D. Gillieson	D. Gillieson
Treasurer	N/A	N/A	G. Hammond	D. Rebbechi					
Conference Convenor	K. Wilde	K. Tritton	A. Augusteyn	C. Shaw	P. Dimond	P. Dimond	B. Clark	B. Clark	M. Chalker
Publications Officer	K. Henderson								
Educ. Off. - Australia	N/A	N/A	N/A	S. Hardy	S. Reilly	S. Reilly	N/A	N/A	N/A
Educ. Off. - New Zealand	N/A	N/A	N/A	N/A	J. Ash	J. Ash	N/A	N/A	N/A
ASF Liason Officer	N/A	N/A	N/A	N/A	E. Holland				
Info. Off. - Australia	N/A	N/A	N/A	N/A	N/A	N/A	R. McBeath	P. Bell	P. Bell
Info. Off. - New Zealand	N/A	N/A	N/A	N/A	N/A	N/A	D. Smith	D. Smith	D. Smith
Karst Science Officer	N/A	A. Spate	A. Spate						
Public Officer	N/A	N/A	N/A	N/A	E. Hamilton - Smith	N/A			
	2000-01	2001-02	2002-03	2003-04	2003-04	2004-05	2005-06	2006-07	2007-08
President	B. Clark	P. Dimond	P. Chandler*	R. McBeath	R. McBeath	S. Bourne	S. Bourne	S. Bourne	S. Bourne
Aust Vice President	R. McBeath	S. Bourne	S. Bourne	S. Bourne	S. Bourne	R. Eberhard	R. Eberhard	R. Eberhard	R. Eberhard
NZ Vice President	P. Chandler	P. Chandler	Vacant	P. Chandler					
Executive Officer	D. Gillieson	R. Lyons	R. Lyons	R. Lyons	R. Lyons	D. Smith	D. Smith	D. Smith	D. Smith
Treasurer	D. Rebbechi	G. Gartrell							
Conference Convenor	M. Chalker	L. Little	L. Little	P. Wood	P. Wood	D. Calnin	D. Calnin	A. Wood	A. Wood
Publications Officer	K. Henderson								
Interpretation Officer	N/A	D. Cove							
Inform. Tech & Webmaster	N/A	N/A	N/A	R. Webb					
ASF Liason Officer	A. Clarke	A. Clarke	G. Gartrell	K. Henderson	K. Henderson				
Info. Off. - Australia	M. Thurgate	J. Taylor	J. Vincent	N/A	N/A	N/A	N/A	N/A	N/A
Info. Off. - New Zealand	D. Smith	N/A	N/A	N/A	N/A				
Karst Science Officer (Aus)	A Spate	A. Spate	A. Spate	I. Household	N/A				
Karst Science Officer (NZ)	N/A	N/A	N/A	N/A	N/A	D. Carden	D. Carden	D. Carden	N/A
Karst Science Officer	N/A	D. Carden							
Public Officer	E. Hamilton - Smith								

LIFE MEMBERS & FELLOWS of ACKMA Inc.

<p>LIFE MEMBERS OF ACKMA Inc. Awarded to members who have made an outstanding and long term contribution to the Aims of the Association.</p>	<p>FELLOWS OF ACKMA Inc. Awarded to members who have made a distinguished and ongoing contribution to the Aims of the Association.</p>
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NAME:	Date elected a FELLOW	Date elected a LIFE MEMBER
Alan Costigan		21 May 1993
Roy Skinner (deceased)	4 May 1995	21 May 1993
Clyde Stiff		21 May 1993
Michael Chalker	21 May 1993	4 May 2001
Ernst Holland	21 May 1993	4 May 1995
Prof. Elery Hamilton-Smith	21 May 1993	4 May 1995
Andy Spate	21 May 1993	6 June 1998
Dave Williams	21 May 1993	4 May 1995
Dr. Kevin Kiernan	4 May 1995	
Kevan Wilde	4 May 1995	2 May 1997
Brian Clark	2 May 1997	4 May 2007
Kent Henderson	2 May 1997	11 May 2002
Rauleigh Webb	2 May 1997	
Nicholas White	2 May 1997	
Peter Dimond (deceased)	6 June 1998	
Greg Martin	6 June 1998	4 May 2007
Dennis Rebbechi	6 June 1998	
Neil Kell	23 April 1999	
Chester Shaw	23 April 1999	10 May 2003
Dianne Vavryn	17 June 2000	
Peter Chandler	4 May 2001	14 April 2005
Arthur Clarke	11 May 2002	
Peter Bell	10 May 2003	
Robyn McBeath	10 May 2003	
Dave Smith	10 May 2003	
Dr. Grant Gartrell	31 May 2004	
Lana Little	31 May 2004	
Barry Richard	14 April 2005	
Phil Wood	14 April 2005	
Steve Bourne	6 May 2006	
Dale Calnin	6 May 2006	
John Ash	4 May 2007	
Ian Houshold	4 May 2007	
Ann Augusteyn	17 May 2008	
Deborah Carden	17 May 2008	

PRESIDENT'S AWARD

Presented at every ACKMA Conference (since the inaugural award in 2001) to the person adjudged to have written the best paper or article in the ACKMA Journal over the preceding two years. The judges are Professor Elery Hamilton-Smith and the President of the day. Previous winners:

1999 – 2001
2001 – 2003

Steve Bourne
Mary Trayes

2003 – 2005
2005 – 2007

Carol Ramsey
Rolan Eberhard

ACKMA's OUTSTANDING CONTRIBUTION to CAVE AND KARST MANAGEMENT Award

This rare award was inaugurated in 2007. Thus far only two awards have been made:

3 May 2007	Jim Werker and Valerie Hildreth-Werker (USA)
28 March 2008	Michael Chalker (NSW)

PRESIDENTS of ACKMA Inc.

Ernst Holland	1987 – 1991	Peter Dimond	2001 – 2002
Andy Spate	1991 – 1995	Peter Chandler	2002 – 2003
Michael Chalker	1995 – 1997	Robyn McBeath	2003 – 2005
Greg Martin	1997 – 1999	Steve Bourne	2005 –
Brian Clark	1999 – 2001		

AIMS of ACKMA Inc.

- To develop improved standards in the management of the cave and karst heritage of the Australasian region.
- To provide for liaison between services to, and joint action by, those interested in cave and karst management.
- To carry out or cause to be carried out any scientific research which may further the improvement of standards in cave and karst management.
- To formulate and promote policies and initiatives in cave and karst management.
- To do any other things which are conducive or incidental to the attainment of the above.

A BRIEF HISTORY of ACKMA Inc.

Conferences on Cave and Karst Management have been held in this region since 1973. From then until 1983, they were organized under the auspices of (but not organised by) The Australian Speleological Federation, the first five being termed Australian Conferences on Cave Management and Tourism. The 6th Conference was held at Waitomo Caves, New Zealand in 1985. On 16 May 1987 the *Australasian Cave Management Association* (ACMA) was formed at a meeting held at Yarrangobilly Caves during the 7th Conference in New South Wales. All conferences since have been referred to as Australasian Conferences on Cave & Karst Management.

The Association re-named itself *The Australasian Cave & Karst Management Association* (ACKMA) at the subsequent biennial General Meeting associated with the 8th Conference held at Punakaiki, New Zealand, in 1989. At the 1995 biennial General Meeting at Derwent Bridge, Tasmania, during the 11th Conference, the Association became incorporated as *ACKMA Inc.* Prior to that date Officers of the Association were elected to two-year terms. The tenure of officers is now twelve months. The *Proceedings* of the first sixteen Conferences thus far held have been published, and are also available on CD Rom. A CD Rom of the Proceedings of the Seventeenth Conference (Buchan 2007) will be published shortly.

The first edition of The ACMA (later ACKMA) Newsletter was published in June 1988 – a mere 12 pages. It was thereafter published half-yearly until 1993. For the subsequent 18 months, it was published quarterly, with two full 'Journal Editions', and two (minor) 'Newsletter Editions'. The publication was permanently renamed the **ACKMA Journal** from Edition 16 issued in September 1994, and from Edition 19 (June 1995) it was been issued quarterly as a full Journal.

SIGNIFICANT EVENTS

in AUSTRALASIAN CAVE & KARST MANAGEMENT since the FOUNDING of ACKMA in 1987

1987

- 10 – 17 May **7th Australasian Conference on Cave & Karst Management, NSW**
 16 May ACMA Founded, Yarrangobilly Caves, New South Wales
 October Blackwater Rafting, Waitomo, New Zealand, opens for business

1988

- June Edition 1 of the ACMA Newsletter published

1989

- 10 –14 April **8th Australasian Conference on Cave & Karst Management, Punakaiki, NZ.**
 14 April ACMA becomes ACKMA - Biennial General Meeting, Punakaiki
 February Ruakuri Cave at Waitomo closed to the public
 June Water Cave re-discovered at Wellington Caves
 July 1989 Ruakuri Cave Karst Walkway at Waitomo Caves completed
 August 1989 ACKMA team prepares a Report on Cutta Cutta Caves, Northern Territory
 September 1989 New Zealand ACKMA team advises on cave management in Tonga

1990

- Early 1990 Jillabenan Cave, Yarrangobilly, re-wired & given universal access
 13 –14 May 1st Cave Guides Gabfest, Yarrangobilly Caves, New South Wales
 14 June Waitomo Glowworm Cave comes under a partnership of the Department of Conservation and Ruapuha Uekaha Hapu Trust for ownership and management
 June Eastern Chamber Extension, Fairy Cave, Buchan, completed for opening
 1 – 2 Severe flooding of Wombeyan and Abercrombie Caves, New South Wales

1991

- 3 – 5 March 2nd Cave Guides *Gabfest*, Wombeyan Caves, New South Wales
 9 – 15 September **9th Australasian Conference on Cave & Karst Management, Margaret River, Western Australia**
 12 December 1991 National Parks and Wildlife (Karst Conservation) Bill and the Wilderness (Karst Conservation) Amendment Bill pass through the New South Wales Parliament

1992

- 8 January Jersey Cave Centenary Celebrations, Yarrangobilly Caves, New South Wales (following complete re-wiring and re-development)

8 – 9 February	1st Australian Karst Studies Seminar/Workshop, Buchan, Victoria
17 – 18 March	3rd Cave Guides <i>Gabfest</i> , Naracoorte Caves, South Australia
February	International Network on Cave Protection and Management, established under the commission on National Parks & Protected Areas (CNPPA) with significant Australian involvement
March	New Entrance Tunnel and re-development of Gaden Coral Cave, Wellington Caves, New South Wales, completed
April	Olsens Caves, Rockhampton, Qld, universal access constructed and opened
17 April	Cammoo Caves, Rockhampton, Queensland, becomes self-guiding
31 July	Benders Quarry near Exit Cave, Tasmania, closed by the Federal Government
9 August	Undara Volcanic National Park, North Queensland, officially opened
August	Neil Kell awarded Churchill Fellowship to study cave lighting in U. S. A.
3 September	ACKMA Committee meets in Melbourne
November	Glowworm Cave at Waitomo, New Zealand, re-lit
Nov – December	Waitomo Museum of Caves extended
26 December	Moondyne Cave, Western Australia, re-opened as an Adventure Tour cave

1993

1 January	Peter Dimond, Waitomo Museum of Caves Director, received <i>the Queen's Service Medal</i> , in New Zealand New Years Honour List
24 – 26 March	4th Cave Guides <i>Gabfest</i> , Buchan Caves, Victoria
17 – 23 May	10th Australasian Conference on Cave & Karst Management, Rockhampton, Queensland
24 – 29 May	Post Conference Study Tour to Undara and Chillagoe Caves, Queensland
20 – 22 November	2nd Karst Studies Seminar/Workshop, Wombeyan Caves, New South Wales
October	Wet Cave, Naracoorte, SA, opened as self-guided tourist cave
13 November	Jubilee Cave Centenary Celebrations, Jenolan Caves, New South Wales
11 December	Grand Arch self-guided Tour officially opened, Abercrombie Caves, NSW
December	Tinted Cave (self-guided), Wombeyan Caves, New South Wales, completed & opened

1994

14 – 18 March	5th Cave Guides <i>Gabfest</i> , Jenolan Caves, New South Wales
8 April	Newly-constructed <i>Education Centre</i> at the Waitomo Museum of Caves officially opened by Rt. Hon. J. B. Bolger, Prime Minister of New Zealand
10 April	Victoria Cave Centenary Celebrations, Naracoorte Caves, South Australia
14 May	ACKMA Committee meets in Sydney, New South Wales

15 May	Joint ACKMA – ASF Executive Meeting
10 July	2nd Australian Seminar on Spelean History, Sydney University, NSW
July	Rehabilitation Plan for Newdegate Cave, Hasting Caves, Tasmania, released
August	New Zealand ACKMA members from both North and South Islands meet informally at Waitomo.
December	Naracoorte Caves inscribed on the Word Heritage List

1995

10 January	New Lighting & Re-development of Princess Margaret Rose Cave, Western Victoria, officially opened
29 April	Cave Creek Tragedy, Paparoa National Park, South Island, New Zealand
29 April – 7 May	11th Australasian Conference on Cave & Karst Management, Tasmania
4 May	ACKMA Incorporated inaugurated
19 June	<i>Determining an Environmental and Social Carrying Capacity for the Jenolan Caves Reserve</i> document officially launched.
11 August	ACKMA officially incorporated (in Victoria)
October	ACKMA's <i>South East Karst Province of South Australia Report</i> published
7 October	<i>Bat Cave Teleview Centre</i> officially opened, Naracoorte Caves, South Australia
December	<i>Blackwater Cafe</i> (new Blackwater Rafting headquarters) opened, Waitomo Caves, New Zealand.

1996

January	New Jenolan Caves Reserve Trust building opened in Bathurst, NSW
February	ACKMA 'multilateral' Cave Guide exchanges
13-15 February	3rd Australian Karst Studies Seminar/Workshop, Naracoorte Caves, SA
4 – 8 March	6th Cave Guides <i>Gabfest</i> , Kelly Hill Caves, Kangaroo Island, South Australia
20 May	New Ticket Office opened, Jenolan Caves, New South Wales
9 June	ACKMA Annual General Meeting weekend, Taralga, New South Wales
1 August	<i>Directory of Caves in Australia & New Zealand</i> published
7 September	Redeveloped Cathedral Cave, officially opened, Abercrombie Caves, NSW
13 November	Mole Creek Karst National Park, Tasmania, proclaimed
15 November	Phosphate Mine "Cave" officially opened, Wellington Caves, New South Wales

1997

16 January	New day-use facilities officially opened, Royal Arch Cave, Chillagoe, Queensland
21 February	<i>Caveworks</i> Interpretation Centre officially opened, Lake Cave, Margaret River, Western Australia

- Early 1997 IUCN *Guidelines for Cave and Karst Protection*, edited by an ACKMA team, is published
- 27 April – 4 May **12th Australasian Conference on Cave & Karst Management, Waitomo Caves, New Zealand**
- 4 May – 8 May Post Conference Study Tour - Takaka Karst, South Island, New Zealand
- 18 October Junction Cave Centenary Celebrations, Wombeyan Caves, New South Wales

1998

- 26 January Anne Atkinson becomes a *Member of the Order of Australia* for services to geology at Undara in Australia Day Honours List
- 10 – 13 February 4th Australian Karst Studies Seminar/Workshop, Mole Creek Caves, Tasmania
- 15 – 20 March 7th Cave Guides *Gabfest*, Augusta/Margaret River Caves, Western Australia
- March ACKMA Report on Cape Range karst released by the WA Government
- March-April ACKMA team undertakes management study on Christmas Island
- June 10th Anniversary Edition of the ACKMA Journal published (No. 31)
- 13 June **ACKMA Annual General Meeting weekend, Jenolan Caves, New South Wales**
- July Severe flooding in the Glowworm Cave, Waitomo, New Zealand
- August Wombeyan Caves Plan of Management, released, New South Wales
- September Mammoth Cave, WA, upgrade completed, opened as a “self guided” cave
- 3 December Giant’s & Calgardup Caves, Margaret River, Western Australia, re-opened as Tourist “self Guided” caves.
- 4 December Wonambi Fossil Centre, Naracoorte Caves, South Australia, officially opened by the South Australian Premier, Hon. John Olsen.

1999

- 18 – 24 April **13th Australasian Conference on Cave & Karst Management, Mt. Gambier, South Australia**
- 24 April Te Anau Caves, South Island, New Zealand – cave upgraded officially opened
- 25 – 27 April Post Conference Study Tour to Karst & Volcanics of Western Victoria
- April ACKMA Life Member’s Fund inaugurated
- April CD Rom – *ACKMA Insights* – launched
- July Cammoo Caves, Queensland, sold to the Queensland Parks & Wildlife Service, closed as a Tourist cave, and added to the Mt. Etna Caves National Park
- 8 October ACKMA & ASF Joint Executive Meeting, Canberra, Australian Capital Territory
- 27 November Official Handover of Cammoo Caves to Queensland Parks & Wildlife Service
- November Black Water Rafting Ltd. assumes control of Mason’s Glowworm Caves, NZ
- 3 December New Visitor Facilities opened at the Glowworm Cave, Waitomo, New Zealand

2000

- 4 – 7 February 2000 5th Australian Karst Studies Seminar, Wellington Caves, New South Wales
- 28 February – 3 March 8th Cave Guides *Gabfest*, Wombeyan Caves, New South Wales
- 12 June 2000 Brian Clark, Manager of Naracoorte Caves, South Australia, is awarded the Public Service Medal in the Queen’s Birthday Honour List
- 17 June **ACKMA Annual General Meeting weekend, Buchan Caves, Victoria**
- 7 August New displays of Waitomo Museum of Caves, New Zealand, officially opened
- 11 October Australian Geological Survey Organisation “Discover Australian Caves” Education Kit launched, Yarrangobilly Caves, New South Wales.
- November Lake Cave, Margaret River, Western Australia, re-lighting and re-fit, completed
- 6 – 9 November Limestone Quarrying and Conservation Workshop, Bathurst, New South Wales
- 29 November Greater Blue Mountains Area, New South Wales (including Jenolan Caves), inscribed on the World Heritage List
- December Upgrade of Lucas Cave, Jenolan Caves, New South Wales, completed.

2001

- 26 January Professor Elery Hamilton-Smith awarded Membership of the Order of Australia (AM) in Queen’s Australia Day Honours List.
- 4 March Official Opening of new Hasting Caves Visitor’s Centre, Tasmania
- 30 April – 5 May **14th Australasian Conference on Cave & Karst Management, Wombeyan Caves, New South Wales**
- 5 - 7 May Post Conference Study Tours to Yarrangobilly Cave & Cooleman Plains, and to Abercrombie & Jenolan Caves, New South Wales
- 26 May – 29 May Asia Pacific Forum of Karst Eco-systems and World Heritage, Gunung Mulu National Park, Sarawak, Malaysia
- 1 – 2 December Lake Cave Centenary Celebrations, Margaret River, Western Australia

2002

- 3 –8 February 9th Cave Guides *Gabfest* (Cave & Karst Presenters Workshop), Naracoorte Caves, New South Wales
- 5 May Professor Elery Hamilton-Smith awarded Honorary Doctorate of Applied Science by RMIT University, Melbourne.
- May Re-lighting of Newdegate cave, Hastings, Tasmania, completed by Neil Kell.
- 11 May **ACKMA Annual General Meeting, Yarrangobilly Caves, New South Wales.**
- 10 July – 10 August ACKMA has a stand at the International Cave Expo, Korea.

4 December New Visitor's Centre at Buchan Caves, Victoria, officially opened.

2003

5 – 12 May **15th Australasian Conference on Cave & Karst Management, Chillagoe Caves and Undara Lava Tubes, North Queensland.**

May Re-lighting of Cutta Cutta Cave, Northern Territory, completed by Neil Kell

August River Cave Centenary Celebrations, Jenolan Caves, New South Wales

20 December Memorial Dedication Ceremony to the late Peter Dimond, Waitomo Museum of Caves, New Zealand

2004

24 – 28 May 10th Cave Guides Workshop, Mole Creek, Tasmania.

29 – 30 May **ACKMA Annual General Meeting Weekend, Mole Creek, Tasmania.**

24 July Launch of 'Friends of Wellington Caves', New South Wales

11 September Lucas Cave Upgrade Officially Opened, Jenolan Caves, New South Wales

10 – 19 October Limestone Coast (IGCP 448) 2004 Workshop, Naracoorte Caves, South Australia

August Publication of the Mole Creek Karst National Park Management Plan, Tasmania

6 November New Book: *Caves & Karst of Wombeyan* launched, Wombeyan Caves, NSW

November *The Cave of the Spirit*, Waitomo, NZ, opened as a show cave by Spellbound Tours.

December *Caves and Caving* Exhibit opened at Tasmanian Museum & Art Gallery, Hobart.

2005

29 March – 2 April 10th Conference on Australasian Paleontology (CAVEPS), Naracoorte Caves, SA

6 – 10 April ACKMA Pre-Conference Study Tour, South Island, New Zealand

10 -17 April **16th Australasian Conference on Cave & Karst Management, Wesport, South Island, New Zealand.**

17 – 22 April ACKMA Post-Conference Study Tour, South Island, New Zealand

28 July Re-developed Ruakuri Cave at Waitomo Caves, NZ, officially opened.

8th November Legislation passes the NSW Parliament transferring Wombeyan, Abercrombie and Borenore Caves, and the Jenolan karst, to the NSW Parks & Wildlife Service.

14 December Fire destroys above ground infrastructure at the Glowworm Cave, Waitomo, NZ.

2006

6 – 7 January Bushfires devastate Yanchep National Park, Western Australia

17 February	Damage to speleothems in Crystal Cave, Yanchep, Western Australia, after break-in by vandals
26 February–3 March	11th Cave & Karst Presenters Workshop, Margaret River, Western Australia.
6 – 8 April	Fire devastates external Infrastructure and doline at Mammoth Cave, Margaret River, Western Australia.
12 April	New re-lighting of The Temple of Baal, Jenolan Caves, officially opened.
5 – 8 May	ACKMA Annual General Meeting Weekend, Kangaroo Island, South Australia.
13 September	Peter Chandler and John Ash received the New Zealand Order of Merit a ceremony in Auckland, for services to tourism.
23 October	Newly-developed Nettle Cave at Jenolan officially opened.
21 – 26 October	ACKMA represented at the 6th International Show Caves Association, Bermuda.

2007

17 -18 March	Centenary Celebrations of the Discovery of Fairy Cave, Buchan, Victoria.
29 April – 5 May	17th Australasian Conference on Cave & Karst Management, Buchan Caves, Victoria.

2008

10 –16 February	12th Cave & Karst Presenters Workshop, Jenolan Caves
14 March	Michael Chalker retires as Manager of Wombeyan Caves, after 20+ years service.
17–19 May	ACKMA Annual General Meeting Weekend, Capricorn Caves, Queensland.
June/July	Gunns Plains Cave, Tasmania, re-lit by Neil Kell.
1–10 September	13th International Symposium of Vulcanospeleology, Jeju Island, South Korea.
21–26 September	19th International Symposium of Subterranean Biology, Fremantle, Western Australia.
27 September	Formal handover of the Mt Etna quarries by <i>Cement Australia</i> to the Queensland Parks and Wildlife Service.
7 October	Yarrangobilly Caves, NSW, <i>Caves House</i> officially re-opened.
4 December	10th Anniversary celebrations of the opening of the Wonambi Fossil Centre
5 December	Buchan Caves formally re-commissioned, after upgrade.

2009

4 – 5 April	Celebration of the Centenary of the opening of Alexandra Cave, Naracoorte, SA.
3 – 5 May	18th Australasian Conference on Cave & Karst Management, Margaret River, Western Australia.



Australasian Cave and Karst Management Association Inc
Annual General Meeting

Wednesday 6 May 2009 (8:45am)
Margaret River Cultural Centre, Margaret River, Western Australia

The Annual General Meeting of the Australasian Cave and Karst Management Association will be held in the Margaret River Cultural Center, Wallcliffe Rd, Margaret River, Western Australia, on **WEDNESDAY, 6 MAY 2009, COMMENCING AT 8:45am**. All members and interested people are invited to attend this meeting. Please come along and participate in the running of your Association.

AGENDA

1. Apologies
2. Confirmation of the minutes of the previous meeting (held the Conference Centre, Capricorn Caves, Rockhampton, Queensland, 17 May 2008)
3. Any actions arising from those minutes
4. Receipt of reports from the Committee upon the business of the Association during the preceding year
5. To elect officers of the Association and the ordinary members of the Committee

Note that the officers of the Association are a President, two Vice-Presidents, a Treasurer, an Executive Officer, the Convenor of the Association's next conference, and an Editor/Publications Officer.

All these positions are vacant as of the date of the Annual General Meeting. Also to be elected are three ordinary members of the Committee. Currently these positions are allocated the following tasks: Karst Science Officer, Interpretations Officer, and Information Technology Officer & Webmaster. Note that the responsibilities outlined above for ordinary members of the Committee are not defined in the Rules of the Association and can be reset according to the wishes of the new committee. Nominations received for positions as at 1 March were as follows:

POSITION	NUMBER TO BE ELECTED	NOMINEE	PROPOSER	SECONDER
President	One	Steve Bourne	Andy Spate	Armstrong Osborne
Vice President (Aus)	One	Anne Wood	Kent Henderson	Dianne Vavryn
Vice President (NZ)	One	Peter Chandler	Dave Smith	Travis Cross
Executive Officer	One	Dave Smith	Peter Chandler	Travis Cross
Treasurer	One	Grant Gartrell	Dianne Vavryn	Kent Henderson
Publications Officer	One	Kent Henderson	Anne Wood	Peter Wood
Conference Convenor	One	Tony Culberg	Rolan Eberhard	Cathie Plowman
Committee Members	Three	Rauleigh Webb	Kent Henderson	Elerly Hamilton-Smith
		Deborah Carden	Steve Bourne	Kent Henderson
		Dan Cove	Grant Commins	Scott Melton

6. To consider the budget, income and expenditure of the Association.
7. To set the membership fees of the Association.
8. To receive and consider the statement to be submitted to the Victorian Incorporation Associations Office by the Association in accordance with section 30 (3) of the Act
9. To consider the day-to-day operation of the Association and the following items of general business:
 - 9.1. To receive reports on the AGM at Mulu, Sarawak in 2010, and the Conference in Tasmania in 2011
 - 9.2. To consider submission/s for the hosting of the 2013 ACKMA Conference
 - 9.3. To appoint a Public Officer (Elerly Hamilton-Smith is retiring). Committee recommendation: Miles Pierce.
 - 9.4. To present the President's Award for the best article/paper in the ACKMA Journal (2007-2009).
 - 9.5. To elect a recipient of ACKMA's Outstanding Contribution to Cave and Karst Management Award (if nominated)
 - 9.6. To elect Fellows and/or Life Members (if nominated)
 - 9.7. To consider recommendations from the ACKMA Committee (if any)

Dave Smith,
 ACKMA Executive Officer.

MINUTES – ACKMA ANNUAL GENERAL MEETING

17 May 2008, Rockhampton, Queensland, Australia

Opened 11:15am, Capricorn Caves Eco Lodge.

Present

Ann Augusteyn, Mary Trayes, Dominic Cove, Cameron James, Di Vavryn, Kent Henderson, Pete Chandler, Steve Bourne, Dave Smith, Andy Spate, Ann Wood, Pat Culberg, Tony Culberg, Chester Shaw, Alan Griffin, Elery Hamilton-Smith, Greg Martin, Peter Austen, Peter Wood, Deborah Carden, Arthur Clarke, Cathy Plowman, David Butler, Brett Farquharson, Geoff Deer, Claire Baker, Mark Gahan, Derek Mason, Mick Chalker, Miles Pierce, Mary McCabe, Barry Richard, Grant Commins, Libby Hall, Rhonwen Pierce, Andrew Hammond, Robert Augusteyn, Fiona Knudsen, Rolan Eberhard, Robin Richard, Debbie Mason, Lana Little, and Catherine Sellars.

Apologies

Neil Collinson, Ross Anderson, Jay Anderson, Dr. Grant Gartrell, Rauleigh Webb, Brett Dalzell, Ian Houshold, Dale Calnin, and Will McCutcheon.

Tribute

Robert Augusteyn presented an audiovisual tribute to Ken Augusteyn who passed away recently.

Previous minutes

Accepted as a true and accurate record (Spate/Chalker). Carried.

No actions required from last AGM. Any matters arising are also agenda items.

Receipt of reports

Moved that all Committee reports be accepted (Shaw/Carden). Carried. Treasurer's report considered below.

Officers and members of the committee

In most cases the number of nominations matched the positions available and those nominated as per the agenda were declared elected. In the case of the committee, one nominee was not a financial member and the other three nominees were taken as elected. There were two nominations for Australian Vice President and a scrutinised ballot was held. The officers and committee of the Association for 2008-9 are:

Position	2008-9 holder	Position	2008-9 holder
President	Steve Bourne	Publications Officer	Kent Henderson
Vice President (Aus)	Rolan Eberhard	Conference Convenor	Anne Wood
Vice President (NZ)	Peter Chandler	Committee Member	Deborah Carden
Executive Officer	Dave Smith	Committee Member	Dan Cove
Treasurer	Grant Gartrell	Committee Member	Rauleigh Webb

Treasurer's report

Kent Henderson tabled reports from Australia and New Zealand on behalf of Dr Grant Gartrell. We currently hold around \$11k in the Australian account and \$15k in New Zealand. Report accepted (Henderson/Deer). Carried.

Moved that a report be submitted in accord with the [Victorian] Associations Incorporation Act s.30 requirements. (Henderson/Culberg). Carried.

Membership fees

Moved that membership fees remain the same for the coming year (Culberg/Chandler) Carried.

General business

Conference/meeting proposals

- (i) Margaret River Conference 3-9 May 2009. Ann Wood gave a report on progress. A full programme has been designed. A Nullarbor trip is likely to be available.
- (ii) Mulu AGM 2010. Confirmed that this was still on for 2010. Around 30 people at the meeting expressed firm interest in attending.

Fellows and Life Members

There were no nominations for Life Members.

Fellow – Ann Augusteyn – Kent Henderson spoke nominating Ann as a Fellow

Fellow – Deborah Carden – Greg Martin spoke nominating Deborah as a Fellow

Both nominations were accepted by acclamation. The President presented certificates and the Fellows spoke.

Life Members Fund

Recommendations from Committee meeting that (i) \$5k is moved from the general accounts to the Life Member's Fund and that (ii) the criteria for support by the Life Member's Fund expand to include karst managers from developing countries. Moved Henderson/Spate. Carried.

General notices from members

- An ACKMA Outstanding Contribution Award was made to Mick Chalker in March 2008
- Appreciation was received from the Hildreth-Werkers for their inaugural award
- A voice training guide is now available on the ACKMA website (Cathie Plowman)
- 2011 ACKMA Conference (Tasmania) is likely to be held on the north coast (Tony Culberg)
- Moved to note Ian Houshold's good work as Karst Science Officer (Arthur Clarke/Di Vavryn). Carried.
- Intl Committee for Subterranean Biology is holding their symposium in WA this year (Arthur Clarke)
- ASF Conference 4-9 January 2009, Sale, Victoria. Info on ASF website (Miles Pierce)
- successful Cave Guides Conference recently held at Jenolan (Barry Richard)

President Steve Bourne thanked Ann Augusteyn and staff, and the staff of Queensland Parks and Wildlife, particularly Scott Book and Dianne Vavryn, for their organisation of the weekend.

Meeting closed 12:10pm

SUBMISSION TO HOST THE 20TH AUSTRALASIAN CONFERENCE ON CAVE AND KARST MANAGEMENT, in 2013, at WAITOMO CAVES, New Zealand.

Waitomo Caves, New Zealand, offers to host the 2013 ACKMA Conference. Waitomo is one of Australasia's leading cave destinations. It is about three hours south of Auckland, the main entry port for New Zealand. The area has numerous adventure and show cave tours available, as well as thousands of hectares of karst hill country. A good range of accommodation options is available in a small central area. The last ACKMA Conference held in Waitomo was in 1997. There have been several new caves opened since then, and the main visitor building at the Glowworm Cave has been completely rebuilt.

One highlight of the Conference for delegates will be Kent Henderson running naked down the main street of Waitomo. Somewhat foolishly, Kent once promised to do so if Ruakuri Cave visitation topped 30,000 per annum. A new deck has been built at the front of the tavern for this spectacle. Medical support and counseling will be available for spectators.

Dave Smith
Peter Chandler

Committee Annual Reports

2008 - 2009

PRESIDENT'S REPORT

- Steve Bourne

Looking back at the report I presented to the AGM held at the Buchan Conference in 2007, I noted that many projects had been implemented in recent times. The redevelopments and improvements to Australasian caves seem have not slowed since that time with many more on the horizon. I particularly look forward to viewing the Jewel Cave proposals in Western Australia, seeing the work Dale Calnin and his team have undertaken at Buchan and getting back to New Zealand to see how Waitomo has been rebuilt after their devastating fire.

Although I can't claim the frequent flyer points that Kent can, I have managed to visit Jenolan, Wombeyan, Yarrangobilly, Kelly Hill, Yanchep, Margaret River and of course Rockhampton area caves (at last year's AGM) in the past two years. Consistent at all sites is staff and management striving for continuous improvement- cave tourism in Australasia would appear to be quite healthy.

ACKMA has been invited to comment on various management plans in the past 12 months. Some members have provided individual comment and I thank them for that. I have provided some comment on behalf of ACKMA in line with our objectives.

A workshop on the "State of Karst in Western Australia" was convened by Jay Anderson after the inaugural International Geotourism conference in Fremantle in August 2008. I chaired the workshop at Jay's invitation and found the diverse group assembled to discuss issues to share passion for karst protection. One thing was clear was that while there may be a genuine desire to improve karst knowledge and management, conservation agencies are faced with many competing priorities. I fear the current economic situation will present extra challenges all round.

There has been one major change in the world of caves and karst in the past year. Elery has stepped aside as the chair of the IUCN Caves and Karst Working Group after a long stint at the helm. Elery has indicated he will continue to work of projects

for a few more years and I can't help but admire his dedication to his work. He has also relinquished his position as Public Officer for ACKMA, a position he has held for many years. On behalf of ACKMA, I thank Elery for his outstanding contribution over many decades and acknowledge the enormous impact he has had on so many people involved in the field. I wish him well in his "retirement", although we all know he will always be an active and valuable contributor.

The ACKMA journal continues to be an excellent source of information in keeping members abreast of news in the cave world. The last year's issues have been outstanding with an excellent blend of articles. Kent deserves high praise for his dedication in producing the journal, as do all contributors for taking the time to inform members of their work.

Grant continued in the role of treasurer and we can be assured the books will always be in good shape while Grant is in charge. Rauleigh continues to do a great job with the website, and I can safely vouch that it is often viewed, given the interest in the Naracoorte and Tantanoola Caves manager job advertised on the site. Dave Smith has been an excellent Executive Officer but I understand he wishes to step aside. Thankyou for your contribution over many years Dave, especially the work on producing the CD ROMS of conference proceedings. Rolan has also stepped aside from the committee but I hope he continues to write for the journal, his articles are well researched and insightful. Such a committee makes the job of the president an easy one!

I would like to thank the Western Australian conference organising committee for their hard work in developing an excellent conference program. I look forward to the experiences on offer in Margaret River.

AUSTRALIAN VICE PRESIDENT'S REPORT

- Rolan Eberhard

I can report that planning for the 2011 ACKMA conference in Tasmania is well advanced, primarily thanks to the efforts of Tony Culberg, Pat Culberg and Cathie Plowman. And, although the news is somewhat dated now, I note that the Australian Senate's Environment, Communications, Information Technology and the Arts Standing Committee has released its findings on the Committee's inquiry into Australia's national parks, conservation reserves and marine protected areas. ACKMA's submission, one of 22 listed in an appendix to the report, drew attention to the special characteristics of karstlands from a management perspective and the critical role of conservation reserves in their protection. The report is a lengthy document which concludes with 18 highly generic recommendations. It betrays an extremely biocentric view of the environment, which is disappointing, particularly so given the growing awareness that geodiversity including karst is

worthy of protection in its own right, not just because it provides habitat for plants and animals. Even the opening paragraph of a minority report provided by the Australian Greens unabashedly declares that 'we believe that the primary role and raison d'être of protected areas is the protection of biodiversity'. Keep beating the drum; the message will get through eventually.

Due to other demands on my time I have been less involved in ACKMA business lately than I might have hoped. I attended the AGM weekend at Capricorn Caves, a well organised event at an interesting venue; however, I will not be able to attend Margaret River. Accordingly, I will not stand for re-election to the ACKMA executive in 2009-2010. I have enjoyed my time on the committee and look forward to participating in future ACKMA events.

NEW ZEALAND VICE PRESIDENT'S REPORT

- Peter Chandler

For ACKMA NZ it's been a year of business as usual, with a new government, there are expectations of minor changes to the 1991 Resource Management Act, and incorporating it into an Environmental Protection Agency.

As was done in the Waitomo catchment many years ago, the initiative to fence larger waterways and streams on dairy and other farms is mostly gaining acceptance.

An *Environment Waikato* decision to prosecute a farmer for wetland destruction near Piopio sends the right message. On the ground there are continued production pressures on karst which happens to be in rural or urban or commercial sites, with land disturbance by machinery and stock, and nutrient runoff.

As we meet in Western Australia (and a big thanks to the Organising Committee!), the re-development of (2005 fire-destroyed) visitor facilities at the Waitomo Glowworm Cave continue at pace.

There have been a number of Australian ACKMA visitors to our shores, in particular David Merritt researching cycling of Glowworm brightness then returning to have input to Waitomo Glowworm Cave Management committee.

With the global recession there are challenging times ahead for operators who have expectations of continued growth projections, though niche opportunities exist with one new adventure operator now in business locally. There is more need than ever to manage our karst resources sustainably.

EXECUTIVE OFFICER'S REPORT

- Dave Smith

The organisation continues to run smoothly with no real administrative issues in the last year. Very little significant correspondence has been received or sent by the Association. Minutes, agendas etc have been completed and are available. Thanks to the

other officers of the Association for their responses to those tasks that have come up. I hope you're all having a good time in Margaret River while you read this. If you're reading it before you get there, take ten points and go to the top of the class.

TREASURER'S (& MEMBERSHIP RECORDS OFFICER'S) REPORT

- Dr. Grant Gartrell

This report, together with a full financial statement, will be circulated at the Annual General Meeting.

INTERPRETATION OFFICER'S REPORT

- Dan Cove

It has been particularly pleasing in recent years to see an ever increasing general awareness of the importance of on-site interpretation and interpretive guiding as a vital component of the overall visitor experience. Attendance at conferences in 2008 such as the Global Geotourism Conference in Freemantle, and the IAA conference in Adelaide have highlighted not only this pleasing trend, but also how well placed current best practice thinking in cave and karst interpretation is when compared to interpretation in other comparable tourist and nature based activities. One great strength of cave and karst interpretation is its ability to transform a 'tour' experience into a broader message on environmental stewardship, and thus for cave sites to be flagship areas for eco-tourism and geo-tourism generally.

There has also been a great deal of recent healthy debate on the nature of guiding, with many cave sites experimenting with the traditional format of 'the guided tour'. This experimentation was a particular focus of the 'Cave Presenters Conference', held at Jenolan Caves in 2008, and is contributing a healthy avenue for debate. The interpretation workshop to be held prior to the 2009 ACKMA conference is yet another positive step in the further development of interpretive skills within the profession. Training of guiding staff is also increasingly identified as being of tremendous importance. It has been a focus area at Jenolan recently, and is an area in which I am hoping to conduct a review of on a national level over the coming twelve months.

PUBLICATIONS & MEMBERSHIP OFFICER'S REPORT

- Kent Henderson

Publications:

The past twelve months has seen four ACKMA Journals published, Numbers 71, 72, 73, and 74. The success of the Journal is very largely determined by the quality of its contents, and I am most grateful to all our contributors, particularly those ACKMA committee members who contribute regularly, for their ongoing support.

The costs of production have remained steady over past the twelve months. The print run per issue is currently 260 copies. I would like to particularly thank my sub-editors, Dianne Vavryn, Grant Gartrell and Steve Bourne who continues to do such a fantastic job.

I usually send them page proofs with very little notice, which they always turn them around promptly. The quality of the Journal is in no small measure a reflection of their efforts. I would also like to thank the members of the ACKMA Editorial Committee who have been a great support to me over several years now, particularly the Committee Chairman, Professor Elery Hamilton-Smith,

although thankfully there services as arbitrators were not required in the previous twelve months. I would also like to thank our Treasurer and Membership Records Officer Dr. Grant Gartrell, who has done a great job in his dual role. We have worked very well together, and together with the efforts of our Executive Officer, Dave Smith, the administration of ACKMA has flowed very smoothly indeed.

Membership:

Membership of the Association is currently 243, up slightly on last year. Note that membership includes a small number of reciprocal members (organizations with which ACKMA is cross affiliated or otherwise associated) where no fee is paid either way. Membership trends to be somewhat cyclical, with numbers increasing after each full Conference, but otherwise it tends to be relatively stable – in no small measure due to the work of our Treasurer and Membership Records Officer, Dr. Grant Gartrell, and Peter Chandler in New Zealand, to whom we are all most grateful.

KARST SCIENCE OFFICER'S REPORT

- Deborah Carden

This report should go down in the history of ACKMA as the shortest karst science report ever written.

My input into karst management was minimal for most of the first part of the 2008/09 period. In June 2008 I was seconded by my NZ employer, the Department of Conservation, to a non-karst role that concluded in December. Contact with ACKMA associates in that time was virtually nil – both ways i.e., from or to me.

On the conclusion of the secondment I was successful in gaining a Department for Environment and Heritage position to manage the Naracoorte Caves National Park and World Heritage Area and the Tantanoola Conservation Park in South Australia. The sites are exceptionally busy and the work varied and very interesting.

With regard karst science the relevance with Naracoorte focuses primarily around the fossil deposits and the Southern Bent-winged bats. The latter are of some concern with their falling

numbers in Bat Cave. They are healthy enough and the cause in the fall in population has not been determined. I did note that in the heat waves in February this year the insect populations were badly affected e.g., virtually no night-flying insects after the third day of the first heat wave, and this would not help the bat situation. Maybe they are more spread out than in the past, into other caves. However, suppositions can shortly be done away with as a targeted, comprehensive research project starts tonight. This will be a topic that we can report on to ACKMA over the next few years.

Fossil associated research is ongoing with Liz Reed's work and at present we have a Flinders Honours student, Amy Macken, in residence. Amy's research is in Grant Hall in Victoria Fossil Cave, under Liz's supervision. This work is potential ACKMA article too.

The next few months will produce some material that ACKMA members should find very interesting.

INTERNATIONAL RELATIONS OFFICER'S REPORT

- Andy Spate

The last year has been incredibly busy for me – three trips to Korea plus 9 weeks in northern Australia and a trip to Taiwan coming up immediately before the ACKMA Conference at Margaret River.

My international relations activities this year – other than the above – have mainly been answering queries about Australia for cavers, school children and a few scientists. I have also, perhaps unsuccessfully, contacted a number of colleagues about their possible attendance at Margaret River. At the Jeju Island in September I did a bit of boosting of ACKMA with various entities including David Summers of the International Show Caves Association. You will have the pleasure of meeting him at the Conference.

I will be attending the East Asian Geoparks Workshop in Taiwan where I will be boosting Wee Jasper, Wellington, the Flinders Ranges and

Australia's only Geopark - Kanawinka in Western Victoria.

Next year ACKMA and ASF will be co-hosting the 14th Vulcanospeleology Conference at Undara in August next year – with a fieldtrip to Western Victoria – this will be an opportunity for ACKMA people to meet with international cave people.

After I returned from my show cave trip to Europe a few years ago I suggested in the ACKMA Journal that there might be opportunities for 'casual' cave guiding employment in the northern summer. A few people have said they might be interested – the pay etc might not be up to Australian/New Zealand standards but it could be fun and certainly different. If anyone is interested they might like to send me a one-two page resume and I can pass them onto my contacts in Slovenia, Slovakia, Italy, Austria and France.

INFORMATION TECHNOLOGY OFFICER / WEBMASTER'S REPORT

- Rauleigh Webb

The 'Jobs' section that advertises jobs in the cave and karst arena has been a little lean this year with only 2 jobs being advertised during the year.

The new 'Members only' area has been added to with a number of forms being added to this area and following a committee decision ALL of the Journal articles are still available online but only to members.

Just login to the members area and when you select the Journals menu option all articles are displayed.

From the public menu only one random journal article per journal is made available. Further additions to the 'Members only' sections of the website are requested.

Costs for the website are consistent. The current hosting site has been upgraded with a new data

centre and no problems have arisen with the service provider.

The ACKMA mailing list activity has remained similar to last year with only 85 messages posted in the last twelve months compared with 82 in 2007.

The guestbook implemented in May 2006 **still** has had only three messages left in it. If little happens this year I will remove it.

The usage stats for the website look good. Check out the website stats for the last 12 months in Figure 1 and Figure 2 below.

Highlights are visits are down from 69,467 last year to 56614 visits over the 12 month period with an average of 163 visitors per day down from 201 per day last year.

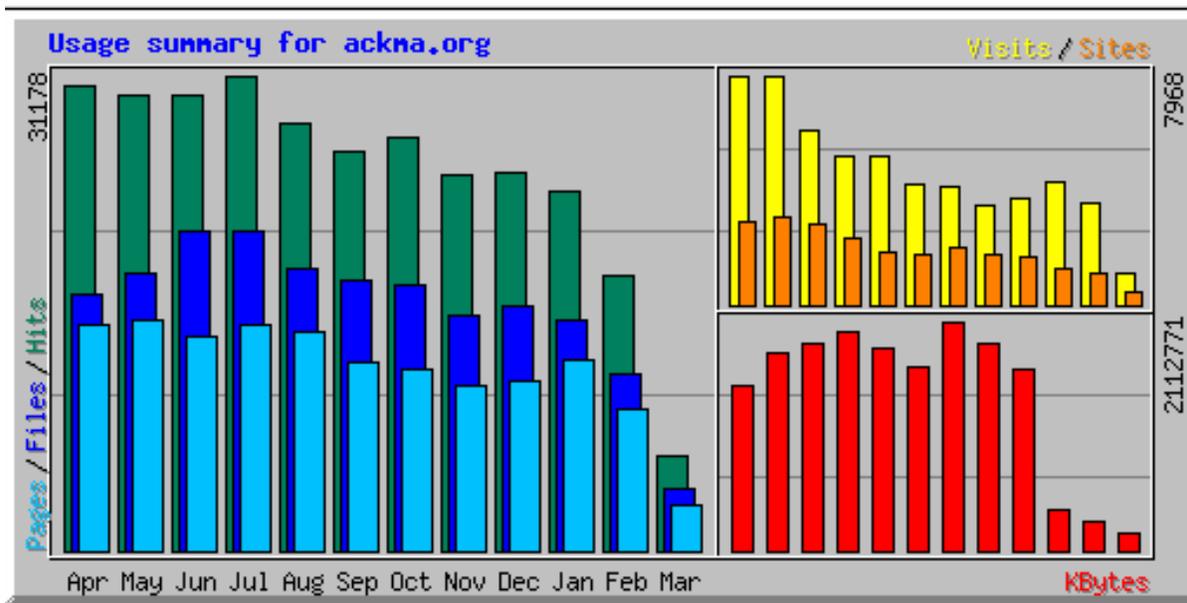


Figure 1

As an indication of how everyone is accessing the website here's the top ten pages used to enter the site for December 2008 – See Figure 3.

If you want to see how the website is going at anytime just go to:-

<http://ackma.org/webalizer/>

This link will show you the last 12 months statistics for the site and you can look at many more statistics by the month.

Summary by Month										
Month	Daily Avg				Monthly Totals					
	Hits	Files	Pages	Visits	Sites	KBytes	Visits	Pages	Files	Hits
Mar 2009	772	505	373	138	447	165219	1104	2985	4043	6183
Feb 2009	644	413	330	125	1067	273611	3525	9243	11572	18047
Jan 2009	762	486	401	136	1275	370622	4236	12448	15085	23650
Dec 2008	802	520	359	118	1664	1660141	3667	11158	16123	24873
Nov 2008	823	513	361	115	1768	1906312	3478	10835	15403	24718
Oct 2008	874	560	384	132	1957	2112771	4119	11919	17380	27114
Sep 2008	874	593	413	139	1766	1691920	4192	12408	17795	26248
Aug 2008	904	598	463	166	1793	1865859	5168	14379	18556	28040
Jul 2008	1005	677	476	166	2301	2008939	5155	14757	20994	31178
Jun 2008	993	696	470	202	2817	1915287	6084	14106	20889	29817
May 2008	961	585	489	255	3054	1813870	7918	15171	18165	29817
Apr 2008	1016	560	493	265	2876	1520167	7968	14817	16826	30491
Totals						17304718	56614	144226	192831	300176

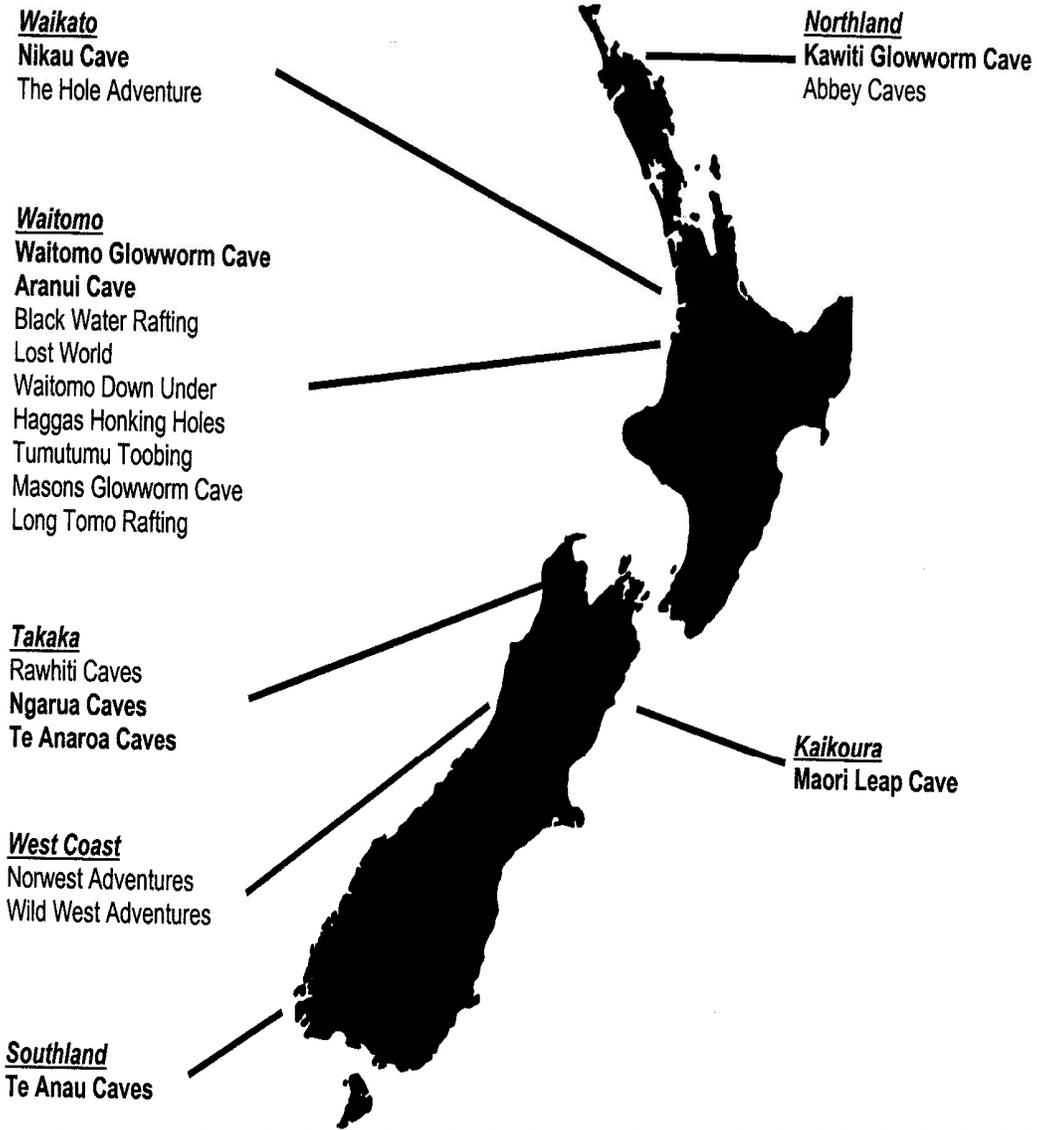
Figure 2

Top 10 of 1977 Total URLs By KBytes					
#	Hits	KBytes		URL	
1	28	0.11%	55119	3.32%	/journal/65/Understanding Tasmania's Northwest Karstlands - Ian Household.PDF
2	10	0.04%	43653	2.63%	/conf2007/slides/Buchan Conference Movie_0001.wmv
3	26	0.10%	39437	2.38%	/journal/65/Notes from British Columbia - Carol Ramsey.PDF
4	49	0.20%	33173	2.00%	/journal/65/Fossils Open Day at Mt Etna - Dianne Vavryn.PDF
5	87	0.35%	31206	1.88%	/journal/63/Hydro Power Proposal in Timor - Greg Middleton et al.pdf
6	37	0.15%	28600	1.72%	/journal/65/Where exactly is Bermuda - Andy Spate.PDF
7	21	0.08%	28160	1.70%	/journal/58/Ramsey Article.pdf
8	85	0.34%	27443	1.65%	/journal/71/Age and Origin of the Jenolan Tourist Caves - Warren Peck.pdf
9	19	0.08%	24511	1.48%	/journal/65/Karsting Around in Mexico - Kent Henderson.PDF
10	31	0.12%	21046	1.27%	/journal/Karst Management in British Columbia.pdf

Figure 3

Anyone wanting to put information onto the website is encouraged to contact me and have it placed online. Only too happy to help but I can't do things if no-one asks!!





Location of New Zealand Show Caves and Adventure Tour Operations



New Zealand Attendees – 16TH ACKMA CONFERENCE, West Coast, South Island, New Zealand, 2005
 Left: The North Islanders. Right: The South Islanders

ATTENDANCE AT AUSTRALASIAN CAVE & KARST MANAGEMENT CONFERENCES 1973 – 2009

Note: Attendees at only one Conference are not listed

- | | |
|---|--|
| <p>1ST CONFERENCE Jenolan, NSW, 1973.
40 Attendees.
Convenors: John Dunkley & Elery Hamilton-Smith</p> <p>2ND CONFERENCE Hobart, Tas., 1977.
18 Attendees.
Convenors: Roy & Andrew Skinner, Greg Middleton,
& Tony Culberg</p> <p>3RD CONFERENCE Mt. Gambier, SA, 1979.
30 Attendees.
Convenors: Ed Bailey, Graham Pilkington,
& Tony Robinson</p> <p>4TH CONFERENCE Yallingup, W. A., 1981.
24 Attendees.
Convenors: John Watson, Joy Smith, Keith Tritton,
& Rauleigh Webb</p> <p>5TH CONFERENCE Lakes Entrance, Vic., 1983.
25 Attendees.
Convenors: Alan Costigan & Arnold Clarke</p> <p>6TH CONFERENCE Waitomo, NZ, 1985.
31 Attendees.
Convenor: Dave Williams</p> <p>7TH CONFERENCE New South Wales, 1987.
34 Attendees.
Convenor: Andy Spate</p> <p>8TH CONFERENCE Punakiki, NZ, 1989.
40 Attendees.
Convenor: Kevan Wilde</p> <p>9TH CONFERENCE Margaret River, WA, 1991.
47 Attendees.
Convenor: Keith Tritton</p> | <p>10TH CONFERENCE Rockhampton, Qld., 1993.
62 Attendees.
Convenor: Ann Augusteyn</p> <p>11TH CONFERENCE Tasmania, 1995.
63 Attendees.
Convenor: Chester Shaw</p> <p>12TH CONFERENCE Waitomo, NZ, 1997.
55 Attendees.
Convenor: Peter Dimond</p> <p>13TH CONFERENCE Mt. Gambier, SA, 1999.
82 Attendees.
Convenor: Brian Clark</p> <p>14TH CONFERENCE Wombeyan, N. S. W., 2001
83 Attendees.
Convenors: Michael Chalker & Andy Spate</p> <p>15TH CONFERENCE Chillagoe/Undara, Qld, 2003.
73 Attendees.
Convenors: Lana Little, Val Speedie & David Gillieson</p> <p>16TH CONFERENCE Westport, NZ, 2005.
72 Attendees.
Convenor: Phil Wood</p> <p>17TH CONFERENCE Buchan, Vic, 2007
89 Attendees.
Convenor: Dale Calnin</p> <p>18TH CONFERENCE Margaret River, WA, 2009
101 Attendees.
Convenor: Anne Wood</p> |
|---|--|

Those noted in **BOLD** below are registered as Attendees at the 18th Conference

16 Conferences

Hamilton-Smith, Professor Elery

I – 1973, II – 1977, III – 1979, IV – 1981, V – 1983, VI – 1985, VII – 1987, VIII – 1989,
IX – 1991, X – 1993, XI – 1995, XII – 1997, XIII – 1999, XIV – 2001, XVI – 2005, XVII –
2007

14 Conferences

Spate, Andy

IV – 1981, V – 1983, VI – 1985, VII – 1987, VIII – 1989, IX – 1991, X – 1993, XI – 1995,
XII – 1997, XIV – 2001, XV – 2003, XVI – 2005, XVII – 2007, XVIII – 2009

13 Conferences

White, Nicholas

III – 1979, V – 1983, VII – 1987, VIII – 1989, IX – 1991, X – 1993, XI – 1995,
XII – 1997, XIII – 1999, XIV – 2001, XV – 2003, XVI – 2005, XVII – 2007

12 Conferences

- Henderson, Kent** VII – 1987, VIII – 1989, IX – 1991, X – 1993, XI – 1995, XII – 1997, XIII – 1999, XIV – 2001, XV – 2003, XVI – 2005, XVII – 2007, XVIII – 2009
- Webb, Rauleigh** IV – 1981, V – 1983, VIII – 1989, IX – 1991, X – 1993, XI – 1995, XII – 1997, XIII – 1999, XV – 2003, XVI – 2005, XVII – 2007, XVIII – 2009

11 Conferences

- Chalker, Michael** V – 1983, VI – 1985, VII – 1987, VIII – 1989, IX – 1991, XI – 1995, XII – 1997, XIII – 1999, XIV – 2001, XV – 2003, XVII – 2007
- Chandler, Peter** VI – 1985, VII – 1987, IX – 1991, XI – 1995, XII – 1997, XIII – 1999, XIV – 2001, XV – 2003, XVI – 2005, XVII – 2007, XVIII – 2009

10 Conferences

- Martin, Greg** VI – 1985, VIII – 1989, IX – 1991, XI – 1995, XII – 1997, XIII – 1999, XIV – 2001, XV – 2003, XVI – 2005, XVII – 2007
- Clark, Brian** VII – 1987, VIII – 1989, IX – 1991, X – 1993, XI – 1995, XIII – 1999, XIV – 2001, XV – 2003, XVII – 2007, XVIII – 2009
- Shaw, Chester** IX – 1991, X – 1993, XI – 1995, XII – 1997, XIII – 1999, XIV – 2001, XV – 2003, XVI – 2005, XVII – 2007, XVIII – 2009

9 Conferences

- Holland, Ernst** I – 1973, VI – 1985, VII – 1987, VIII – 1989, IX – 1991, X – 1993, XI – 1995, XIII – 1999, XIV – 2001
- Williams, David** III – 1979, IV – 1981, VI – 1985, VII – 1987, VIII – 1989, IX – 1991, X – 1993, XII – 1997, XIII – 1999
- Richard, Barry** IX – 1991, XI – 1995, XII – 1997, XIII – 1999, XIV – 2001, XV – 2003, XVI – 2005, XVII – 2007, XVIII – 2009
- Vavryn, Dianne** X – 1993, XI – 1995, XII – 1997, XIII – 1999, XIV – 2001, XV – 2003, XVI – 2005, XVII – 2007, XVIII – 2009

8 Conferences

- Ash, John** VI – 1985, VIII – 1989, XI – 1995, XII – 1997, XIII – 1999, XIV – 2001, XVI – 2005, XVII – 2007
- Augusteyn, Ann** IX – 1991, X – 1993, XI – 1995, XII – 1997, XIII – 1999, XV – 2003, XVII – 2007, XVIII – 2009
- Dimond, Peter *** VI – 1985, VIII – 1989, IX – 1991, X – 1993, XI – 1995, XII – 1997, XIII – 1999, XIV – 2001
- Wilde, Kevan** VI – 1985, VII – 1987, VIII – 1989, IX – 1991, X – 1993, XI – 1995, XII – 1997, XIII – 1999
- Calnin, Dale** V – 1983, IX – 1991, XIII – 1999, XIV – 2001, XV – 2003, XVI – 2005, XVII – 2007, XVIII – 2009
- Wood, Phil** VIII – 1989, X – 1993, XI – 1995, XIII – 1999, XIV – 2001, XVI – 2005, XVII – 2007, XVIII – 2009

7 Conferences

- Costigan, Alan** I – 1973, II – 1977, III – 1979, IV – 1981, V – 1983, VI – 1985, XVII – 2007
- Houshold, Ian** V – 1983, VII – 1987, XI – 1995, XIII – 1999, XV – 2003, XVI – 2005, XVII – 2007
- Tahi, Robert** XI – 1995, XII – 1997, XIII – 1999, XIV – 2001, XV – 2003, XVI – 2005
- White, Dr. Susan** V – 1983, VIII – 1989, IX – 1991, X – 1993, XI – 1995, XIII – 1999, XVII – 2007
- Mason, Derek** XII – 1997, XIII – 1999, XIV – 2001, XV – 2003, XVI – 2005, XVII – 2007, XVIII – 2009

6 Conferences

- Bourne, Steven** XIII – 1999, XIV – 2001, XV – 2003, XVI – 2005, XVII – 2007, XVIII – 2009
- Carden, Deborah** XII – 1997, XIII – 1999, XV – 2003, XVI – 2005, XVII – 2007, XVIII – 2009
- Clarke, Arthur** XI – 1995, XIII – 1999, XIV – 2001, XVI – 2005, XVII – 2007, XVIII – 2009
- Collinson, Neil** XI – 1995, XII – 1997, XIV – 2001, XV – 2003, XVI – 2005, XVII – 2007
- Gartrell, Dr. Grant** XIII – 1999, XIV – 2001, XV – 2003, XVI – 2005, XVII – 2007, XVIII – 2009

Kiernan, Dr. Kevin	VII – 1987, VIII – 1989, IX – 1991, X – 1993, XI – 1995, XV – 2003
Kell, Neil	VII – 1987, VIII – 1989, IX – 1991, X – 1993, XI – 1995, XIII – 1999, XVII – 2007
McBeath, Robyn	XI – 1995, XII – 1997, XIII – 1999, XV – 2003, XVI – 2005, XVIII – 2009
Schurr, Geoff	VIII – 1989, X – 1993, XII – 1997, XIV – 2001, XV – 2003, XVI – 2005
Smith, Dave	XII – 1997, XIII – 1999, XIV – 2001, XV – 2003, XVI – 2005, XVII – 2007
Watson, Dr. John	II – 1977, IV – 1981, IX – 1991, X – 1993, XI – 1995, XVIII – 2009
Watson, Van	XI – 1995, XII – 1997, XIV – 2001, XVI – 2005, XVII – 2007, XVIII – 2009

5 Conferences

Baker, Clare	XIV – 2001, XV – 2003, XVI – 2005, , XVII – 2007, XVIII – 2009
Bell, Peter	IX – 1991, X – 1993, XI – 1995, XIII – 1999, XV – 2003
Dalzell, Brett	XIII – 1999, XIV – 2001, XV – 2003, XVII – 2007, XVIII – 2009
Grimes, Ken	XIII – 1999, XIV – 2000, XV – 2003, XVII – 2007, XVIII – 2009
Mickie, Dr. Neville	XI – 1995, XIII – 1999, XIV – 2001, XV – 2003, XVII – 2007
Millar, Ian	VI – 1985, VIII – 1989, XII – 1997, XV – 2003, XVI – 2005
Pierce, Miles	XI – 1995, XII – 1997, XIII – 1999, XVI – 2005, XVII – 2007
Pierce, Rhonwon	XI – 1995, XII – 1997, XIII – 1999, XVI – 2005, XVII – 2007
Rebbechi, Dennis	IX – 1991, XI – 1995, XIII – 1999, XV – 2003, XVII – 2007
Reilly, Steve	XI – 1995, XIII – 1999, XIV – 2001, XVI – 2005, XVII – 2007
Tritton, Keith *	IV – 1981, VII – 1987, VIII – 1989, IX – 1991, X – 1993
Wood, Anne	XIII – 1999, XIV – 2001, XV – 2003, XVII – 2007, XVIII – 2009
Wood, Peter	XIII – 1999, XIV – 2001, XV – 2003, XVII – 2007, XVIII – 2009

4 Conferences

Butler, David	XV – 2003, XVI – 2005, XVII – 2007, XVIII – 2009
Culberg, Tony	II – 1977, XV – 2003, XVI – 2005, XVII – 2007
Dunkley, John	I – 1973, III – 1979, V – 1983, XIV – 2001
Eberhard, Rolan	IX – 1991, XI – 1995, XVI – 2005, XVII – 2007
Farquharson, Brett	XIV – 2001, XVI – 2005, XVII – 2007, XVIII – 2009
Gillieson, Prof. David	XI – 1995, XIII – 1999, XIV – 2001, XV – 2003
Hearn, David	IX – 1991, X – 1993, XIII – 1999, XIV – 2001
Little, Lana	IX – 1991, XI – 1995, XIV – 2001, XV – 2003
McCabe, Mary	XIII – 1999, XV – 2003, XVII – 2007, XVIII – 2009
Shaw, Kay	XIII – 1999, XIV – 2001, XV – 2003, XVI – 2005
Tane, Norman	IX – 1991, X – 1993, XI – 1995, XII – 1997

3 Conferences

Anderson, Jay	XV – 2003, XVII – 2007, XVIII – 2009
Augusteyn, Ken *	IX – 1991, X – 1993, XI – 1995
Ash, Martha	VI – 1985, XII – 1997, XIII – 1999
Bauer, Jo	VII – 1987, VIII – 1989, IX – 1991
Bradley, Phil	IX – 1991, X – 1993, XI – 1995
Callaghan, John	I – 1973, V – 1983, XII – 1997
Carey, Adrian	I – 1973, III – 1979, VII – 1987
Chandler, Libby	IX – 1991, XV – 2003, XVIII – 2009
Cross, Travis	XVI – 2005, XVII – 2007, XVIII – 2009
Deer, Geoff	XVI – 2005, XVII – 2007, XVIII – 2009
Eberhard, Stefan	XI – 1995, XII – 1997, XIII – 1999
Fletcher, Andrew	XIII 1999, XIV – 2001, XVI – 2005
Gaukrodger, John	VI – 1985, VII – 1987, VII – 1989
Griffin, Alan	XVI – 2005, XVII – 2007, XVIII – 2009
Hardy, Sue	IX - 1991, X - 1993, XI – 1995
James, Cameron	XIII – 1999, XIV – 2001, XV – 2003
James, Dr. Julia	XV – 2003, XVI – 2005, XVIII – 2009
Kermode, Les *	VI – 1985, XII – 1997, XIII – 1999
Larkin, Patrick	IX – 1991, XI – 1995, XIII – 1999
Lyons, Dr. Ruth	XI – 1995, XII – 1997, XV – 2003

Lipyeat, Moira	XVI – 2005, XVII – 2007, XVIII – 2009
Macrow, Peter	II – 1977, III – 1979, IV – 1981
Matthews, Peter	III – 1979, IV – 1981, V – 1983
Merritt, Dr. David	XIV – 2001, XVI – 2005, XVIII – 2009
Middleton, Greg	I – 1973, II – 1977, XV – 2003
Moulds, Tim	XV – 2003, XVI – 2005, XVIII – 2009
Parkes, Graham	VII – 1987, VIII – 1989, XVII – 2007
Plowman, Cathie	XV – 2003, XVI – 2005, XVII – 2007
Scrimgeour, Ray	XI – 1995, XII – 1997, XIV – 2001
Taylor, Neil	IX – 1991, X – 1993, XII – 1997
Thurgate, Mia	IX – 1991, XI – 1995, XIII – 1999
Trayes, Mary	XIII – 1999, XV – 2003, XVI – 2005
Walker, Noel	XI – 1991, X – 1993, XI – 1995

2 Conferences

Abel, Martin	XIV – 2001, XVI – 2005	Ingafield, Jo	XIII – 1999, XIV – 2001
Aitken, Ken.	III – 1979, IV – 1981	Kim Ryeon	XVI – 2005, XVII – 2007
Allen, Ross	IX – 1991, X – 1993	Kell, Geoff	XVII – 2007, XVIII – 2009
Allen, Bruce	III – 1979, XI – 1995	Prof. Kyung Sik Woo	XV – 2003, XVI – 2005
Anderson, Ross	XVII – 2007, XVIII – 2009	Lindberg, Kriste	XIII – 1999, XIV – 2001
Austen, Peter	XVII – 2007, XVIII – 2009	May, John	II – 1977, IV – 1981
Baird, Jane	VIII – 1989, XVI – 2005	Newton, Mike	IV – 1981, IX – 1991
Benjamin, Serena	XVI – 2005, XVII – 2007	Mahony, Christie	XVII – 2007, XVIII – 2009
Butz, Mark	I – 1973, VII – 1987	Mouritz, Renee	XVII – 2007, XVIII – 2009
Champness, Graham	VI – 1985, VII – 1987	Osborne, Dr. Armstrong	V – 1983, XIV – 2001
Chew, Danny	XIII – 1999, XV – 2003	Rautjoki, Harri	VI – 1985, VIII – 1989
Culley, John	I – 1973, III – 1979	Rea, Tom	XIII – 1999, XIV – 2001
Davey, Adrian	III – 1979, VII – 1987	Rebbechi, Carol	X – 1993, XV – 2003
Davidson, Penny	XIII – 1999, XIV – 2001	Rebbechi, Sylvia	X – 1993, XV – 2003
Deer, Trish	XVII – 2007, XVIII – 2009.	Robinson, Lloyd	I – 1973, IX – 1991
Ellis, Cliff	III – 1979, IV – 1981	Rowling, David	XVII – 2007, XVIII – 2009
Emery, Ephraim	XV – 2003, XVI – 2005	Rumei, Bian	XVII – 2007, XVIII – 2009
Finn, Stephanie	XIV – 2001, XV – 2003	Skinner, Andrew	II – 1977, III – 1979
Flett, David	VII – 1987, X – 1991	Skinner, Roy *	I – 1973, II – 1977
Gertsner, Hein	XI – 1995, XVIII – 2009	Speedie, Val	XIII – 1999, XV – 2003
Griffiths, Paul	XIII – 1999, XV – 2003	Stokes, Tim	XIV – 2001, XVI – 2005
Hamilton, David	VII – 1987, IX – 1991	Swabey, Stephen	XV – 2003, XVI – 2005
Hardy, Sue	X – 1993, XI – 1995	Thomas, Julie	VII – 1987, VIII – 1989
Haygarth, Nick	XVII – 2007, XVIII – 2009	Vanderstaay, Keith	XIV – 2001, XV – 2003
Head, David	XVII – 2007, XVIII – 2009	Vavryn, Joe	IX – 1991, X – 1993
Heath, Nicholas	XVII – 2007, XVIII – 2009	Williams, Candace	XVII – 2007, XVIII – 2009
Heyne, Ken	XII – 1997, XIII – 1999	Wood, Graham (Chippy)	XVI – 2005, XVII – 2007
Hunter, Deborah	XI – 1995, XIV – 2001	Woods, Jonathan	XIV – 2001, XV – 2003

* denotes deceased

SYNOPSIS of 18th ACKMA CONFERENCE ATTENDANCE

Conference Attendance. Those attending their:

1st Conference	56	6th Conference	7	11th Conference	1
2nd Conference	13	7th Conference	1	12th Conference	2
3rd Conference	8	8th Conference	3	14th Conference	1
4th Conference	3	9th Conference	2		
5th Conference	5	10th Conference	3		

Attendees by location.

Western Australia	52	Tasmania	6	Bermuda	1
New South Wales / ACT	16	South Australia	5	South Africa:	1
New Zealand	8	Victoria	5		
Queensland	6	Malaysia	3		

PRE-CONFERENCE STUDY TOUR

Yanchep Caves National Park

Saturday 2 May 2009

A one day visit to Yanchep National Park. A bus will be provided for transport from Perth to Yanchep and return. Includes a talk by geologist Lex Bastian, visits to Crystal Cave, Cabaret Cave and Boomerang Gorge.

Attendees:	8.	Julia Coggins	17.	Derek Mason
	9.	Kirsty Dixon	18.	Mary McCabe
1.	10.	Brett Farquharson	19.	Barry Richard
2.	11.	Rob Foulds	20.	Catherine Sellars
3.	12.	Dr Grant Gartrell	21.	Rob Susac
4.	13.	Ken Grimes	22.	Dianne Vavryn
5.	14.	Nic Haygarth	23.	Van Watson
6.	15.	Kent Henderson	24.	Barbara Zakrzewska,
7.	16.	Moira Lipyeat		

CAVE GUIDES WORKSHOP

CaveWorks Theatre

Sunday 3 May 2009

Organizer: **Dan Cove**, ACKMA Interpretation Officer. This workshop for cave staff in Western Australia (and elsewhere), will examine current 'best practice' thinking on the subject of interpretive guiding, though focused specifically on cave guides. It will include presentations on the theoretical aspects of guiding, examples and ideas from experienced practitioners, and practical exercises for all participants. Sessions will include:

- *The Importance of Themes*
 - Why it is important to develop a theme for cave tour
 - The difference between a theme and a subject
 - How to go about developing themes
- *Objectives of guiding*
 - How to create an emotional response in visitors
 - Making science relevant
- Including the conservation message
- *Theatrical Guiding*
 - Role play – bringing history to life
 - Character based guiding
 - The importance of research
- *Guides as entertainers*
 - The importance of interaction
 - Listening to the visitor
 - Alternate approaches to the 'Guided Tour'

Sessions presenters:

1. **Sasa Kennedy** – Jenolan Caves guide, caver and teacher of Interpretive Guiding at Blue Mountains college of TAFE.
2. **Geoff Kell** – Manager of Carey's Cave , Wee Jasper.
3. **David Hay** – Jenolan Caves Guide, school teacher and thespian.

POST-CONFERENCE STUDY TOUR

Leeuwin-Naturaliste National Park and Area

Saturday 9 May – Monday 11 May 2009

Three days in the Leeuwin-Naturaliste area. Visits to caves and karst surface walks to suit the interests of participants. Includes three nights accommodation at Glenbrook, food and transport (**Historical Note:** Glenbrook was the site of the 9th Australasian Conference on Cave and Karst Management in 1991).

Attendees:	4.	Deborah Carden	9.	Mary McCabe
	5.	Marjorie Coggan	10.	Andy Spate
1.	6.	Kirsty Dixon	11.	Catherine Sellars
2.	7.	Rob Foulds	12.	Phil Wood
3.	8.	Ken Grimes		

REPRESENTATION AT CONFERENCES 1973 to 2007

	<u>Buchan</u>	<u>Chillagoe</u>	<u>Cutta Cutta</u>	<u>Abercromb.</u>	<u>Hastings</u>	<u>Jenolan</u>	<u>Kelly Hill</u>	<u>Marg. River</u>
1st - 1973	✓	✓	✓	✓	✓	✓	✓	x
2nd -1977	✓	x	✓	x	✓	✓	x	x
3rd - 1979	✓	x	✓	x	✓	✓	✓	x
4th - 1981	✓	x	✓	x	x	x	x	✓
5th - 1983	✓	x	x	x	x	✓	✓	x
6th - 1985	✓	x	x	x	x	✓	x	x
7th - 1987	✓	✓	x	✓	x	✓	x	✓
8th - 1989	✓	x	x	x	x	✓	x	✓
9th - 1991	✓	x	x	x	✓	✓	x	✓
10th - 1993	✓	✓	x	✓	✓	✓	x	✓
11th - 1995	✓	✓	x	✓	✓	✓	x	✓
12th - 1997	x	x	x	x	x	✓	x	✓
13th - 1999	✓	✓	x	✓	✓	✓	✓	✓
14th - 2001	✓	✓	x	✓	✓	✓	✓	✓
15th - 2003	✓	✓	x	✓	✓	✓	✓	✓
16th - 2005	✓	x	x	x	x	✓	✓	✓
17th - 2007	✓	x	x	✓	x	✓	✓	✓
18th - 2009	✓	x	x	x	x	✓	✓	✓
TOTALS:	17	7	4	8	9	17	9	13
	<u>Mole Creek</u>	<u>Naracoorte</u>	<u>Capricorn</u>	<u>P.M.R.</u>	<u>Tantanoola</u>	<u>Te Anau</u>	<u>Waitomo</u>	<u>Wee Jasper</u>
1st - 1973	✓	x	x	x	x	x	x	✓
2nd -1977	✓	✓	x	x	x	x	x	✓
3rd - 1979	x	✓	x	✓	x	x	✓	x
4th - 1981	x	✓	x	x	x	x	✓	x
5th - 1983	x	x	x	✓	✓	x	x	x
6th - 1985	x	✓	x	x	x	x	✓	x
7th - 1987	x	✓	x	x	✓	x	✓	✓
8th - 1989	x	✓	x	x	✓	x	✓	x
9th - 1991	✓	✓	✓	x	✓	✓	✓	x
10th - 1993	✓	✓	✓	x	x	✓	✓	x
11th - 1995	✓	✓	✓	✓	x	✓	✓	x
12th - 1997	✓	✓	✓	x	x	✓	✓	x
13th - 1999	✓	✓	✓	✓	✓	x	✓	x
14th - 2001	✓	✓	x	x	x	✓	✓	✓
15th - 2003	✓	✓	✓	x	x	✓	✓	x
16th - 2005	✓	✓	✓	x	x	✓	✓	x
17th - 2007	✓	✓	✓	✓	✓	✓	✓	✓
18th - 2009	x	✓	✓	x	✓	x	✓	✓
TOTALS:	11	16	9	5	7	8	15	6
	<u>Wellington</u>	<u>Wombeyan</u>	<u>Yallingup</u>	<u>Yanchep</u>	<u>Yarrangobilly</u>	<u>Other NZ</u>		
1st - 1973	x	✓	✓	x	x	x		
2nd -1977	✓	✓	x	x	x	x		
3rd - 1979	x	✓	✓	✓	✓	x		
4th - 1981	x	✓	✓	✓	✓	x		
5th - 1983	x	✓	✓	x	✓	x		
6th - 1985	x	✓	x	x	✓	✓		
7th - 1987	✓	✓	✓	x	✓	x		
8th - 1989	x	✓	✓	x	✓	✓		
9th - 1991	✓	✓	✓	✓	✓	✓		
10th - 1993	✓	x	x	x	✓	✓		
11th - 1995	x	✓	✓	✓	✓	✓		
12th - 1997	x	✓	x	x	✓	✓		
13th - 1999	✓	✓	x	x	✓	✓		
14th - 2001	✓	✓	x	x	✓	✓		
15th - 2003	x	✓	x	x	✓	✓		
16th - 2005	x	x	x	x	x	✓		
17th - 2007	x	✓	✓	✓	✓	✓		
18th - 2009	x	✓	✓	✓	✓	✓		
TOTALS:	6	16	10	5	15	12		

MEMBERSHIP OF ACKMA Inc. as at 1st April 2009

Member Name	Location
1. Abercrombie Caves	NSW
2. Aley C & T	USA
3. Alice Shanks	NZ
4. American Cave Conservation Association	USA
5. Anderson J & R	WA
6. Andrew Lawrence	Sultanate of Oman
7. Aquifer Tours	SA
8. Ash J & M	NZ
9. Atkinson A & V	Qld
10. Augee M	NSW
11. Augusta-Margaret River Tourist Bureau	WA
12. Austen P	NSW
13. Australasian Bat Society	ACT
14. Australian Serials Unit	ACT
15. Baddeley G	Vic
16. Baird J	NZ
17. Baker Dr Claire	Qld
18. Barnes R	VIC
19. Bat Conservation International	USA
20. Bauer J & P	NSW
21. Benjamin S	TAS
22. Blanden S	TAS
23. Bogdan Debevc	SLOVENIA
24. Bourne S	SA
25. Bradford G	NSW
26. Bradley C	ACT
27. Bromley R	NZ
28. Brush J	ACT
29. Buchan Caves	VIC
30. Butler D & Plowman C	TAS
31. Callaghan J	NSW
32. Calnin. D.	Vic
33. Cango Caves	South Africa
34. Canterbury Caving Group	NZ
35. Capricorn Caves	QLD
36. Carden D	NZ
37. CAREY'S CAVE	NSW
38. Cave Exploration Group [S.A.] Inc.	SA
39. Cave World	NZ
40. Chalker M	NSW
41. Chandler P	NZ
42. Chillagoe Caving Club	QLD
43. Chitty D	VIC

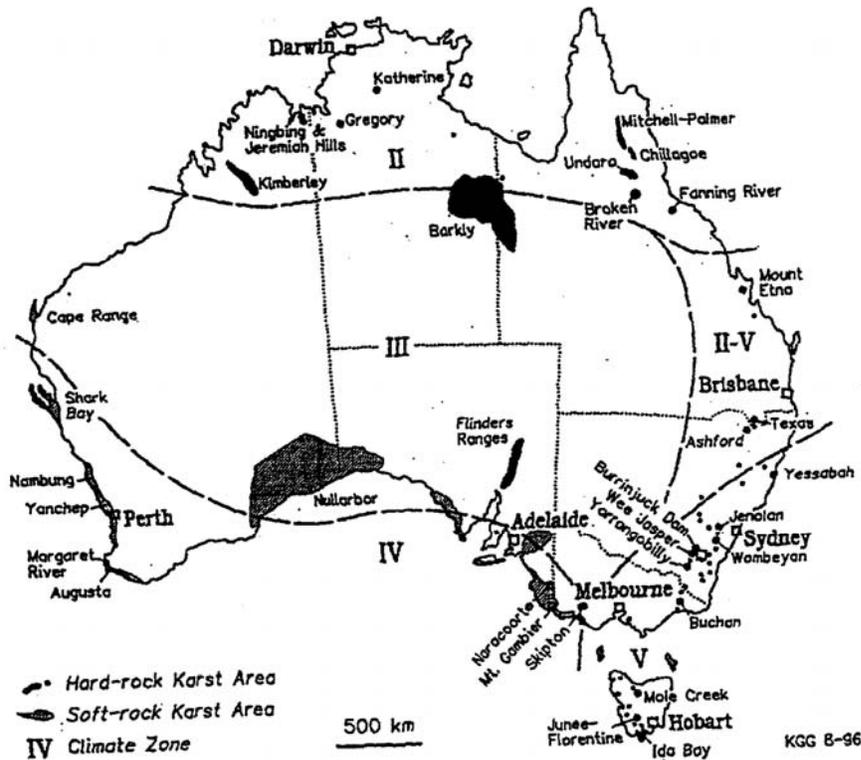
Member Name	Location
44. Choi M	SA
45. Clark B	MALAYSIA
46. Clark, Ian D, Ass. Prof.	Vic
47. Clarke A	TAS
48. Collinson N	NZ
49. Commins G	NSW
50. Cooney C.	NSW
51. Costigan A	VIC
52. Cove D & D	NSW
53. Culberg A & P	TAS
54. Dalzell B	SA
55. David Summers	BERMUDA
56. Davidson P.	NSW
57. Dept for Environment & Heritage	SA
58. Dept for Environment & Heritage	SA
59. Dept of Conservation & Land Management	WA
60. Dept of Environment & Heritage	SA
61. Dept of Environment & Heritage	SA
62. Devevec A	SLOVENIA
63. Downey W	QLD
64. Dr Guilhelm de Gruilly	FRANCE
65. Dr Pavel Bella & Ing. Peter Gazik	SLOVAKIA
66. Drysdale Dr. R	NSW
67. DUNKLEY. J.	ACT
68. Eberhard R	TAS
69. Eberhard S	WA
70. Eddison A & I	NSW
71. ENGELBRECHT CAVE	SA
72. Farquharson, A.	NSW
73. Farquharson, B	NSW
74. FERRARI B.	VIC
75. Fiordland Travel	NZ
76. Flavel Stan	SA
77. Fleming K	NSW
78. Fleming N	NZ
79. Flinders University Speleological Society Inc	SA
80. Foulds Rob	WA
81. Francois Leguat Ltd	MAURITIUS
82. Friends of Naracoorte Caves	SA
83. Gahan M	QLD
84. Gartrell G.	SA
85. Geographe Bay Tourism Assn Inc	WA
86. Gillieson D Prof.	Qld
87. Gordon L Smith	USA
88. Griffin A	NSW
89. Griffiths P	Canada V9W 8A2

Member Name	Location
90. Grimes. K.G.	VIC
91. Grindley D	SA
92. Guiding Organisations Australia	QLD
93. GUNNS PLAINS CAVES	TAS
94. Hagen B	QLD
95. Hamilton Tomo Group	NZ
96. Hamilton-Smith. E.	VIC
97. Hammond. G.	VIC
98. HASTINGS CAVES	TAS
99. Hatcher J	WA
100. Haygarth N	TAS
101. HENDERSON. K	VIC
102. Henry R	NZ
103. Highland Caving Group	NSW
104. Hills Speleology Club Ltd	NSW
105. Holden C & J	NZ
106. Holland E	NSW
107. Howarth S	NSW
108. Hunter D	TAS
109. Hymeir Kamarudin	MALAYSIA
110. Illawarra Speleo Society Inc	NSW
111. Indiana Karst Conservancy	U.S.A.
112. James C	Qld
113. James J Dr.	NSW
114. Jenolan Caves Historical & Presevation Society	NSW
115. Jenolan Caves Reserve Trust	NSW
116. John Giuliani	JAPAN
117. Joy K	NZ
118. Karst & Geodiversity Unit	NSW
119. Kell N	NSW
120. Kim Ryeon	Republic of Korea 200-943
121. King Lisa M	QLD
122. Kyung Sik Woo Prof.	South Korea
123. Lewis, Ian D	VIC
124. Library	TAS
125. Lipyeat M & D	NZ
126. Little L	QLD
127. Lynn K. Roebuck,	USA 37360-9504
128. M. Alain Frances	FRANCE
129. Maclucas J	SA
130. Malaysian Karst Society	MALAYSIA
131. Maori Leap Caves - Scott Robinson	NZ
132. Marinelli R	Italy
133. Marshall C	NSW
134. Martin G	NZ
135. Mason D	NZ

Member Name	Location
136. Matthews E. W.	NSW
137. Matthews P.	VIC
138. McBeath R	WA
139. McCabe M	Qld
140. McKay K & J	NZ
141. Melton S	NSW
142. Merritt, Dr D	Qld
143. Michie N. A.	NSW
144. Middleton G	TAS
145. Millar I	NZ
146. Miller Tom	USA
147. Mole Creek Caves	TAS
148. Moore T	NSW
149. Mott K.	SA
150. Moulds T	WA
151. Moylan M & R	QLD
152. Nat. Parks & Wildlife Service	NSW
153. National Caves Association	U.S.A.
154. Ngarua Caves	NZ
155. Norwest Adventures Ltd	NZ
156. Nurse B S	NSW
157. NZ Speleological Society	NZ
158. Orange Speleological Society	NSW
159. Osborne Dr R	NSW
160. O'Toole D	TAS
161. Parkes. G.	VIC
162. Pavlovich Kathryn	NZ
163. Peck Dr W	VIC
164. Pfitzner V	SA
165. PIERCE. M. & R.	VIC
166. Poulton R K	NSW
167. Princess Margaret Rose Cave	VIC
168. QPWS Rockhampton	QLD
169. Ramsey C L	CANADA V9W 1A6
170. Rea T	USA
171. Rebbechi. D. A.	QLD
172. Reilly, S.	NSW
173. RICHARD. B.	NSW
174. Robins T	WA
175. ROBINSON. L.	NSW
176. Rowling D	NSW
177. ROWLING J	NSW
178. Ruapuha Uekaha Hapu Trust	NZ
179. Rumei Bian	MALAYSIA
180. Rutledge J	NSW
181. Scrimgeour R	NZ

Member Name	Location
182.Sellars C.	SA
183.Shades of Death Cave	QLD
184.Shannon C H	Tas
185.Sharples C	TAS
186.Shaw C & K	TAS
187.Short J	NZ
188.Slabe Dr T	SLOVENIA
189.Smith D	NZ
190.Smith G K	NSW
191.Smith M J	ACT
192.Southern Tasmanian Caverneers Inc	Tas
193.SPATE. A.	ACT
194.Speedie M. V.	QLD
195.SRGWA	WA
196.State Library of Victoria	VIC
197.Stiff C	NSW
198.Stokes Dr T	Canada V9T I97
199.Stone Dr F	USA
200.Strategic Management, University of Waikato	NZ
201.Stubbs, Angus	NZ
202.Sydney Speleological Society Inc.	NSW
203.Sydney, Joe	NSW
204.Taylor Neil	WA
205.The Geoscientist	TAS
206.Tomas Zorman	SLOVENIA
207.Traves M	NZ
208.UNDARA EXPERIENCE	QLD
209.VAN DYK. J.& K.	VIC
210.Vavryn. D.& J.	QLD
211.W.A. Speleological Group	WA
212.Waitomo Caves Museum - Celina Yapp	NZ
213.Waitomo Caves Museum - Glen Bailey	NZ
214.Waitomo District Council - John Moran	NZ
215.Waitomo District Council - P Davey	NZ
216.Waitomo Down Under	NZ
217.Waitomo Glowworm Caves Ltd - Robert Tahī	NZ
218.Waitomo Glowworm Caves Ltd - Travis Cross	NZ
219.Waitomo Wilderness Tours att: Simon Hall	NZ
220.Walsh P	NSW
221.Watson V	NZ
222.Watson. Dr. J.	WA
223.Webb. R.	WA
224.Weidmuller	NSW
225.Wellington Shire Council	NSW
226.Wells V & G	NZ
227.White. N.	VIC

Member Name	Location
228.White. S.	VIC
229.Whittaker T	NZ
230.Whyte R	NSW
231.Wild West Adventures	NZ
232.Wilde K	NZ
233.Williams D	NZ
234.Williams. Prof. P	NZ
235.WOMBeyAN CAVES	NSW
236.Wood A	WA
237.Wood P	NZ
238.Wood P	WA
239.Wood S	VIC
240.Woodward A & P	NZ
241.Wylie J & G	NSW
242.Yanchep National Park	WA
243.Yarrangobilly Caves	NSW



Distribution of karst areas and climate provinces in Australia

Tropical-climate zone (II); subtropical dry-climate zone (III); transitional zone with winter rain (IV); warm-temperate zone extending to warm-temperate/tropical transitional climates zone (V, II-V). Map compiled by Ken Grimes from data in Bridgewater (1987); Gillieson & Spate. Reference: Smith, D. W. (Ed). Cave and Karst Management in Australasia XII. Proceedings of the 12th Australasian Conference on Cave and Karst Management, 1997. p 17.

RULES OF THE AUSTRALASIAN CAVE AND KARST MANAGEMENT ASSOCIATION INC.

ABN :87 698 816 592

NAME

1. The name of the Incorporated Association is the Australasian Cave and Karst Management Association Inc.(in these rules called "The Association").
- 1.1 The association is incorporated under the law of the state of Victoria, in Australia

(b) in any other case, to the Public Officer of the Association.

- (3) Words or expressions contained in these Rules shall be interpreted in accordance with the Interpretation of Legislation Act 1984 (Victoria) and the Act as in force from time to time, unless they are already defined in these rules.

OBJECTS & POWERS

2. (1) To develop improved standards in the management and interpretation of cave and karst heritage in the Australasian Region.
- (2) To enhance liaison between agencies and those interested in cave & karst management.
- (3) To encourage and support scientific research which may further the improvement of standards in cave and karst management.
- (4) To formulate and promote policies and initiatives in cave and karst management.
- (5) To do any other things which are conducive or incidental to the attainment of the above.
- (6) To achieve the above objects the Association has, inter alia, the power to:
 - (a) Publish magazines, Journals, Occasional Papers, whether printed, electronic, digital or other,
 - (b) Organise a conference, symposium, seminar, meeting, lecture or similar function
 - (c) Sponsor, subsidize, or otherwise support research consistent with the above
 - (d) Provide a clearing house for information and skills in karst management
 - (e) Enter into contracts to provide services related to Caves and Karst.

APPLICATION FOR MEMBERSHIP

- 4.(1) A natural person who is nominated and approved for membership as provided in these Rules is eligible to be a member of the Association on payment of the annual subscription payable under these Rules.
- (2) A person who is not a member of the Association at the time of the incorporation of the Association (or who was a member at that time but has ceased to be a member) shall not be admitted to membership—
 - (a) unless nominated as provided in sub-clause (3); and
 - (b) the admission as a member is approved by the Committee.
- (3) A nomination of a person for membership of the Association—
 - (a) shall be made in writing; and
 - (b) shall be lodged with the Association.
- (4) As soon as is practicable after the receipt of a nomination, the Secretary shall refer the nomination to the Committee.
- (5) Upon a nomination being referred to the Committee, the Committee shall determine whether to approve or to reject the nomination.
- (6) Upon a nomination being approved by the Committee, the Secretary shall, with as little delay as possible, notify the nominee in writing of the approval for membership of the Association and request payment within the period of 28 days after receipt of the notification of the sum payable under these Rules as the first year's annual subscription

INTERPRETATION

- 3.(1) In these Rules, unless the contrary intention appears—

“Committee” means the Committee of Management of the Association.

“Conference” means a conference held in conjunction with each alternate Annual General Meeting, at which technical papers on topics relevant to ACKMA will be delivered

“Fellow” means a person elected pursuant to clause 4(9)

“Financial Year” means the year ending on 31 March.

“General Meeting” means a general meeting of members convened in accordance with Rule 12.

“Honorary Life Member” means a person elected pursuant to rule 4(10)

“Member” means a member of the Association.

“Ordinary Member of the Committee” means a member of the Committee who is not an officer of the Association under Rule 22.

“Register” includes paper, electronic or other forms of record, provided that a printed copy can be readily created of the contents

“The Act” means the Associations Incorporation Act 1981 of the State of Victoria in Australia.

“The Regulations” means Regulations under the Act.
- (2) In these Rules, a reference to the Secretary of an Association is a reference—
 - (a) where a person holds office under these Rules as Secretary of the Association—to that person; and

- (7) The Secretary shall, upon payment of the amount referred to in sub-clause (6) within the period referred to in that sub-clause, enter the nominee's name in the register of members and, upon the name being so entered, the nominee becomes a member of the Association.
- (8) A right, privilege, or obligation of a person by reason of membership of the Association—
 - (a) is not capable of being transferred or transmitted to another person; and
 - (b) terminates upon the cessation of membership whether by death or resignation or otherwise
- (9) In recognition of special services to the Association an Annual General Meeting may elect no more than three persons at any one such meeting to the standing of Fellow.
- (10) In recognition of distinguished services to the Association an Annual General Meeting may elect no more than three persons at any one such meeting to the standing of Honorary Life Members.
- (11) Honorary Life Members shall have the same responsibilities and privileges as other members, but shall be excused the payment of any annual subscription.

ENTRANCE FEE AND ANNUAL SUBSCRIPTION

- 5.(1) The annual subscription is as determined from time to time by resolution of the Annual General Meeting and is payable in advance on or before 1 July in each year.
- (2) The entrance fee shall be determined by resolution of the Annual General Meeting.

REGISTER OF MEMBERS

6. The Secretary shall keep and maintain a register of members in which shall be entered the full name, address and date of entry of the name of each member and the register shall be available for inspection and copying by members upon request.

DISPUTES AND MEDIATION

- 7.(1) The grievance procedure set out in this rule applies to disputes under these Rules between—
- (a) a member and another member; or
- (b) a member and the Association.
- (2) The parties to the dispute must meet and discuss the matter in dispute, and, if possible, resolve the dispute within 14 days after the dispute comes to the attention of all the parties.
- (3) If the parties are unable to resolve the dispute at the meeting, or if a party fails to attend that meeting, then the parties must, within 10 days, hold a meeting in the presence of a mediator.
- (4) The mediator must be—
- (a) a person chosen by agreement between the parties; or
- (b) in the absence of agreement—
- (i) in the case of a dispute between a member and another member, a person appointed by the committee of the Association; or
- (ii) in the case of a dispute between a member and the Association, a person who is a mediator appointed or employed by the Dispute Settlement Centre of Victoria (Department of Justice).
- (5) A member of the Association can be a mediator.
- (6) The mediator cannot be a member who is a party to the dispute.
- (7) The parties to the dispute must, in good faith, attempt to settle the dispute by mediation.
- (8) The mediator, in conducting the mediation, must—
- (a) give the parties to the mediation process every opportunity to be heard; and
- (b) allow due consideration by all parties of any written statement submitted by any party; and
- (c) ensure that natural justice is accorded to the parties to the dispute throughout the mediation process.
- (9) The mediator must not determine the dispute.
- (10) If the mediation process does not result in the dispute being resolved, the parties may seek to resolve the dispute in accordance with the Act or otherwise at law.

RESIGNATION AND EXPULSION OF MEMBER

- 8.(1) A member of the Association who has paid all moneys due and payable by the member to the Association may resign from the Association by first giving one month's notice in

writing to the Secretary of his or her intention to resign and upon the expiration of that period of notice, the member ceases to be a member.

- (2) Upon the expiration of a notice given under sub-clause (1), the Secretary shall make in the register of members an entry recording the date on which the member, by whom the notice was given, ceased to be a member.
- 9.(1) Subject to these Rules, the Committee may by resolution—
- (a) expel a member from the Association;
- (b) suspend a member from membership of the Association for a specified period; or
- (c) fine a member an amount not exceeding twice the annual subscription.
- If the Committee is of the opinion that the member—
- (d) has refused or neglected to comply with these Rules; or
- (e) has been guilty of conduct unbecoming a member or prejudicial to the interests of the Association.
- (2) A resolution of the Committee under sub-clause (1)—
- (a) does not take effect unless the Committee, at a meeting held not earlier than 14 and not later than 28 days after the service on the member of a notice under sub-clause (3) confirms the resolution in accordance with this clause; and
- (b) where the member exercises a right of appeal to the Association under this clause, does not take effect unless the Association confirms the resolution in accordance with this clause.
- (3) If the Committee passes a resolution under sub-clause (1), the Secretary shall, as soon as practicable, cause to be served on the member a notice in writing—
- (a) setting out the resolution of the Committee and the grounds on which it is based;
- (b) stating that the member may address the Committee at a meeting to be held not earlier than 14 and not less than 28 days after service of the notice;
- (c) stating the date, place and time of that meeting;
- (d) informing the member that he or she may do one or more of the following: (i) Attend that meeting; (ii) Give to the Committee before the date of that meeting a written statement seeking the revocation of the resolution; and (iii) Not later than 24 hours before the date of the meeting lodge with the Secretary a notice to the effect that he or she wishes to appeal to the Association in general meeting against the Resolution.
- (4) At a meeting of the Committee held in accordance with sub-clause (2), the Committee—
- (a) shall give to the member an opportunity to be heard;
- (b) shall give due consideration to any written statement submitted by the member; and
- (c) shall by resolution determine whether to confirm or to revoke the resolution.
- (5) If the Secretary receives a notice under sub-clause (3), he or she shall notify the Committee and the Committee shall convene a general meeting of the Association to be held within twenty-one days after the date on which the Secretary received the notice.
- (6) At a general meeting of the Association convened under sub-clause (5)—
- (a) no business other than the question of the appeal shall be transacted;
- (b) the Committee may place before the meeting details of the grounds for the resolution and the reasons for the passing of the resolution;
- (c) the member shall be given an opportunity to be heard; and
- (d) the members present shall vote by secret ballot on the question whether the resolution should be confirmed or revoked

- (7) If at the general meeting—
 (a) two-thirds of the members vote in person or by proxy in favour of the confirmation of the resolution, the resolution is confirmed;
 and
 (b) in any other case, the resolution is revoked.

a quorum, those members who signed the requisition for, but fail to attend, the special general meeting shall reimburse the Association for the costs of calling the meeting and the reasonable travel costs of all who did attend such failed meeting.

ANNUAL GENERAL MEETING

- 10.(1) The Association shall in each calendar year, and no later than 31 July, convene an annual general meeting of its members.
- (2) The annual general meeting shall be held on such day as the Committee determines.
- (3) The annual general meeting shall be specified as such in the notice convening it.
- (4) The ordinary business of the annual general meeting shall be—
 (a) to confirm the minutes of the last preceding annual general meeting and of any general meeting held since that meeting;
 (b) to receive from the Committee reports upon the transactions of the Association during the last preceding financial year;
 (c) to elect officers of the Association and the ordinary members of the Committee; and
 (d) to receive and consider the statement submitted by the Association in accordance with section 30 (3) of the Act.
 (e) to fix the annual subscription and entrance fee
- (5) The annual general meeting may transact special business of which notice is given in accordance with these Rules.
- (6) The annual general meeting shall be in addition to any other general meetings that may be held in the same year.

SPECIAL GENERAL MEETING

11. All general meetings other than the annual general meeting shall be called special general meetings.
- 12.(1) The Committee may, whenever it thinks fit, convene a special general meeting of the Association and, where, but for this sub-clause, more than fifteen months would elapse between annual general meetings, shall convene a special general meeting before the expiration of that period.
- (2) The Committee shall, on the requisition in writing of members representing not less than 5 per cent of the total number of financial members, convene a special general meeting of the Association.(3) The requisition for a special general meeting shall state the objects of the meeting and shall be signed by the members making the requisition and be sent to the address of the Secretary and may consist of several documents in a like form, each signed by one or more of the members making the requisition.
- (4) If the Committee does not cause a special general meeting to be held within the month after the date on which the requisition is sent to the address of the Secretary, the members making the requisition, or any of them, may convene a special general meeting to be held not later than three months after that date.
- (5) A special general meeting convened by members in pursuance of these Rules shall be convened in the same manner as nearly as possible as that in which those meetings are convened by the Committee and, all reasonable expenses incurred in convening the meeting shall be refunded by the Association to the persons incurring the expenses.
- (6) Notwithstanding sub-rule (5) above, if any special general meeting called pursuant to sub-rule (2) or (4) lapses for want of

NOTICE OF MEETING

- 13.(1) The Secretary of the Association shall, at least 14 days before the date fixed for holding a general meeting of the Association, cause to be sent to each member of the Association at the address appearing in the register of members, a notice by pre-paid post stating the place, date and time of the meeting and the nature of the business to be transacted at the meeting. A notice sent by email which has been acknowledged meets this requirement.
- (2) No business other than that set out in the notice convening the meeting shall be transacted at the meeting.
- (3) A member desiring to bring any business before a meeting may give notice of that business in writing or by email to the Secretary, who shall include that business in the notice calling the next general meeting after the receipt of the notice.

PROCEEDINGS AT MEETINGS

- 14.(1) All business that is transacted at a special general meeting and all business that is transacted at the annual general meeting with the exception of that specially referred to in these Rules as being the ordinary business of the annual general meeting shall be deemed to be special business.
- (2) No item of business shall be transacted at a general meeting unless a quorum of members entitled under these Rules to vote is present during the time when the meeting is considering that item.
- (3) Five members personally present (being members entitled under these Rules to vote at a general meeting) constitute a quorum for the transaction of the business of a general meeting.
- (4) If within half an hour after the appointed time for the commencement of a general meeting, a quorum is not present, the meeting if convened upon the requisition of members shall be dissolved and in any other case shall stand adjourned to another day in the same week at (unless another place is specified by the Chairperson at the time of the adjournment or by written notice to members given before the day to which the meeting is adjourned) at the same place and if at the adjourned meeting the quorum is not present within half an hour after the time appointed for the commencement of the meeting, the members present (being not less than 3) shall be a quorum.
- 15.(1) The President, or in the President's absence, a Vice-President, shall chair each general meeting of the Association.
- (2) If the President and Vice-Presidents are absent from a general meeting, the members present shall elect one of their number to chair the meeting.
- 16.(1) The Chairperson of a general meeting at which a quorum is present may, with the consent of the meeting, adjourn the meeting from time to time and place to place, but no business shall be transacted at an adjourned meeting other than the business left unfinished at the meeting at which the adjournment took place.
- (2) Where a meeting is adjourned for fourteen days or more, a like notice of the adjourned meeting shall be given as in the case of the general meeting.

- (3) Except as provided in sub-clause (1) and (2), it is not necessary to give notice of an adjournment or of the business to be transacted at an adjourned meeting.
17. A question arising at a general meeting of the Association shall be determined on a show of hands and unless, before or on the declaration of the show of hands a poll is demanded, a declaration by the Chairperson that a resolution has, on a show of hands, been carried or carried unanimously or carried by a particular majority or lost, and an entry to that effect in the Minute Book of the Association is evidence of the fact, without proof of the number or proportion of the votes recorded in favour of, or against, that resolution.
18. (1) Upon any question arising at a general meeting of the Association, a member has one vote only.
- (2) All votes shall be given personally, by proxy or by postal vote, as per rule 36.
- (3) In the case of an equality of voting on a question, the Chair of the meeting is entitled to exercise a second or casting vote, in accordance with the common law.
19. (1) If at a meeting a poll on any question is demanded by not less than three members, it shall be taken at that meeting in such manner as the Chair may direct and the resolution of the poll shall be deemed to be a resolution of the meeting on that question.
- (2) A poll that is demanded by the (on the election of a) Chairperson or on a question of an adjournment shall be taken forthwith and a poll that is demanded on any question shall be taken at such time before the close of the meeting as the Chair may direct.
20. A member is not entitled to vote at any general meeting unless all moneys due and payable by the member to the Association have been paid, other than the amount of the annual subscription payable in respect of the current financial year.
21. (1) Each member is entitled to appoint another member as a proxy by notice given to the Secretary no later than 24 hours before the time of the meeting in respect of which the proxy is appointed.
- (2) The instrument appointing the proxy shall be on the form distributed with the notice of meeting.
- (e) the Convener of the Association's next ensuing conference
(f) a Publications Officer
- (2) The provisions of Rule 25 so far as they are applicable and with the necessary modifications, apply to and in relation to the election of persons to any of the offices mentioned in sub-clause (1).
- (3) Each officer of the Association shall hold office until the conclusion of the annual general meeting next after the date of his or her election but is eligible for re-election.
- (4) In the event of a casual vacancy in any office referred to in sub-clause (1) the Committee may appoint one of its members to the vacant office and the member so appointed may continue in office up to and including the conclusion of the annual general meeting next following the date of the appointment.
24. (1) Subject to section 23 of the Act, the Committee shall consist of—
(a) the officers of the Association;
(b) no more than three ordinary members—each of whom shall be elected at the annual general meeting of the Association in each year,
and
(c) the immediate past president.
(d) up to two co-opted members as provided for in section 24(4)
- (2) Each ordinary member of the Committee shall, subject to these Rules, hold office until the conclusion of the annual general meeting next after the date of election but is eligible for re-election.
- (3) In the event of a casual vacancy occurring in the office of an ordinary member of the Committee, the Committee may appoint a member of the Association to fill the vacancy and the member so appointed shall hold office, subject to these Rules, until the conclusion of the annual general meeting next following the date of the appointment.
- (4) The elected members of the Committee may at any time co-opt up to two additional members to the Committee to carry out specific functions. The co-opted members terms will lapse at the conclusion of the annual general meeting next following the date of the appointment, although they will be eligible to be further co-opted by the incoming committee as necessary. The co-opted members may fully participate in the affairs of the Committee except that they may not vote.

COMMITTEE OF MANAGEMENT

22. (1) The affairs of the Association shall be managed by the Committee of Management constituted as provided in Rule 24.
- (2) The Committee—
(a) shall control and manage the business and affairs of the Association;
(b) may, subject to these Rules, the Act and the Regulations, exercise all such powers and functions as may be exercised by the Association other than those powers and functions that are required by these Rules to be exercised by general meetings of the members of the Association; and
(c) subject to these Rules, the Act and the Regulations, has power to perform all such acts and things as appear to the Committee to be essential for the proper management of the business and affairs of the Association.
23. (1) The officers of the Association shall be—
(a) a President;
(b) two Vice-Presidents;
(c) a Treasurer;
(d) a Secretary

ELECTION OF OFFICERS AND VACANCY

25. (1) Nominations of candidates for election as officers of the Association or as ordinary members of the Committee—
(a) shall be made in writing, signed by two members of the Association and accompanied by the written consent of the candidate (which may be included in the form of nomination); and
(b) shall be delivered to the Secretary of the Association not less than seven days before the date fixed for the holding of the annual general meeting.
- (2) If insufficient nominations are received to fill all vacancies on the Committee, the candidates nominated shall be deemed to be elected and further nominations shall be received at the annual general meeting.
- (3) If the number of nominations received is equal to the number of vacancies to be filled, the persons nominated shall be deemed to be elected.
- (4) If the number of nominations exceeds the number of vacancies to be filled, a ballot shall be held.

- (5) The ballot for the election of officers and ordinary members of the Committee shall be conducted at the annual general meeting in such usual and proper manner as the Committee may direct.
- (6) A person may nominate for more than one position. Positions shall be filled in the order set out in rule 23(1). Election to a position shall cause all other nominations of that person to lapse.
26. For the purposes of these Rules, the office of an officer of the Association or of an ordinary member of the Committee becomes vacant if the officer or member—
- ceases to be a member of the Association;
 - becomes an insolvent under administration within the meaning of the Companies (Victoria) Code; or
 - resigns from office by notice in writing given to the Secretary
 - becomes of unsound mind or a person whose person or estate is liable to be dealt with in any way under the law relating to mental health
 - If at a special general meeting called for that purpose is removed from the position by a two thirds majority of those present and entitled to vote at that meeting

PROCEEDINGS OF COMMITTEE

- 27.(1) The Committee shall meet at least once in each year at such place and such times as the Committee may determine.
- (2) Special meetings of the Committee may be convened by the President or by any four of the members of the Committee.
- (3) Notice shall be given to members of the Committee of any special meeting. The notice shall specify the general nature of the business to be transacted and no other business shall be transacted at such a meeting.
- (4) Any six members of the Committee constitute a quorum for the transaction of the business of a meeting of the Committee.
- (5) No business shall be transacted unless a quorum is present and if within half an hour of the time appointed for the meeting a quorum is not present the meeting shall stand adjourned to the same place and at the same hour of the same day in the following week unless the meeting was a special meeting in which case it lapses.
- (6) At meetings of the Committee—
- the President or in the President's absence a Vice-President shall preside; or
 - if the President and Vice-Presidents are absent, such one of the remaining members of the Committee as may be chosen by the members present shall preside.
- (7) Questions arising at a meeting of the Committee or of any sub-committee appointed by the Committee shall be determined on a show of hands or, if demanded by a member, by a poll taken in such manner as the person presiding at the meeting may determine.
- (8) Each member present at a meeting of the Committee or of any sub-committee appointed by the Committee (including the person presiding at the meeting) is entitled to one vote and, in the event of an equality of votes on any question, the person presiding may exercise a second or casting vote, in accordance with common law.
- (9) Written notice of each committee meeting shall be served on each member of the Committee by delivering it to the member at a reasonable time before the meeting or by sending it by pre-paid post addressed to him or her at his or her usual or last

known place or abode at least two business days before the date of the meeting.

- (10) Subject to sub-clause (4) the Committee may act notwithstanding any vacancy on the Committee.

SECRETARY

28. (1) The Secretary of the Association shall keep minutes of the resolutions and proceedings of each general meeting and each committee meeting in books provided for that purpose together with a record of the names of persons present at committee meetings.
- (2) Any financial member of the Association shall have access to the minutes and other records in normal business hours, subject to giving three working days' notice to the Secretary

TREASURER

29. (1) The Treasurer of the Association—
- shall collect and receive all moneys due to the Association and make all payments authorised by the Association; and
 - shall keep correct accounts and books showing the financial affairs of the Association with full details of all receipts and expenditure connected with the activities of the Association. All records shall be kept in Australian dollars.
 - may create an imprest account for the committee organising a conference, on such terms and conditions as the Treasurer deems appropriate.
 - may create an imprest account for any sub group of members, on such terms and conditions as the Treasurer deems appropriate.
 - the custodian of any such imprest account must provide the Treasurer with a statement of income and expenditure annually.

CHEQUES

- 30 (1) All payments shall be made by cheque or electronic funds transfer.
- (2) All cheques, drafts, bills of exchange, promissory notes and other negotiable instruments shall be signed by the Treasurer and one other officer.

REMOVAL OF MEMBER OF COMMITTEE

- 31.(1) The Association in general meeting may by resolution remove any member of the Committee before the expiration of the member's term of office and appoint another member in his or her stead to hold office until the expiration of the term of the first-mentioned member.
- (2) Where the member to whom a proposed resolution referred to in sub-clause (1) makes representations in writing to the Secretary or President of the Association (not exceeding a reasonable length) and requests that they be notified to the members of the Association, the Secretary or the President may send a copy of the representations to each member of the Association or, if they are not so sent, the member may require that they be read out at the meeting.

SEAL

- 32.(1) The Common Seal of the Association shall be kept in the custody of the Secretary.
- (2) The Common Seal shall not be affixed to any instrument except by the authority of the Committee and the affixing of the Common Seal shall be attested by the signatures either of two members of the Committee or of one member of the Committee and of the Public Officer of the Association.

ALTERATION OF RULES AND STATEMENT OF PURPOSES

- 33. These Rules and the Statement of Purposes of the Association shall not be altered except in accordance with the Act.

NOTICES

- 34.(1) A notice may be served by or on behalf of the Association upon any member either personally or by sending it by post to the member at the address shown in the Register of Members.
- (2) Where a document is properly addressed prepaid and posted to a person as a letter, the document shall, unless the contrary is proved, be deemed to have been given to the person at the time at which the letter would have been delivered in the ordinary course of post.

BYLAWS

- 35. The Association in General Meeting may create, adopt, vary, modify, abolish or otherwise change one or more Bylaws.

Any motion dealing with a Bylaw shall be included in the Notice of Meeting.

WINDING UP OR CANCELLATION

- 36. In the event of the winding up or the cancellation of the incorporation of the Association, the assets of the Association shall be disposed of in accordance with the provisions of the Act.

THE GHOSTS OF CONFERENCES PAST



Attendees – 14TH ACKMA CONFERENCE, Wombeyan, New South Wales, 2001



Attendees – 15TH ACKMA CONFERENCE, Chillagoe/Undara, Queensland, 2003



Attendees – 17TH ACKMA CONFERENCE, Buchan, Victoria, 2007