

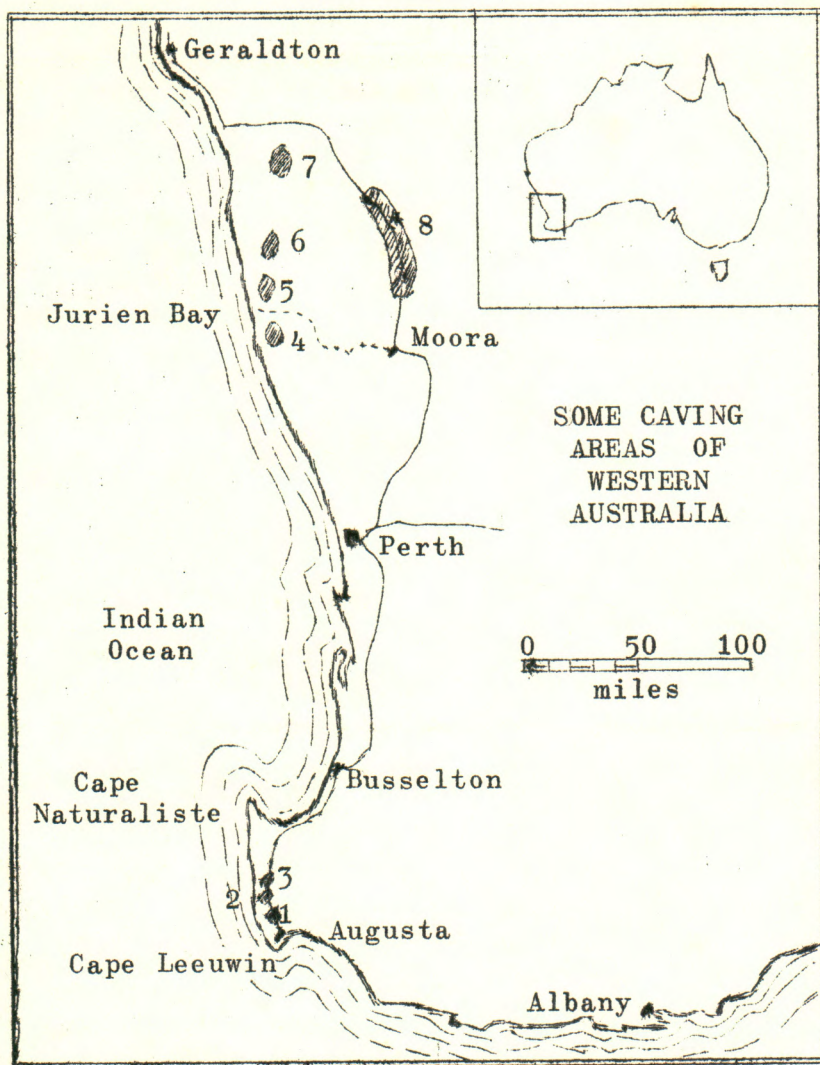
ASF

AUSTRALIAN
SPELEOLOGICAL
FEDERATION

NEWSLETTER

SEPTEMBER 1964

NUMBER 25



SOME CAVING
AREAS OF
WESTERN
AUSTRALIA

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miles

Annual subscription: One shilling and sixpence

Registered in Australia for transmission by post as a periodical

EDITOR: EDWARD G. ANDERSON

PRESIDENT: Elery Hamilton-Smith; 17 Helwig Avenue, Montmorency, Victoria. SECRETARY: Peter Matthews; 3 Holroyd Court, East St. Kilda, Victoria. TREASURER: John Noonan; 61 Beaconsfield Parade, Albert Park, Victoria. LIBRARIAN: Graham Wallis; 20 Malvern Avenue, Roseville East, New South Wales. PUBLICATIONS: Edward Anderson; 29 Farnell Street, South Curl Curl, New South Wales.

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Note: Whenever possible correspondence should be directed to the current address of the appropriate executive officer.

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C O V E R : This map shows the location of some of the caving areas of the West, as described in this issue's feature article. The eight areas and some caves are:

1. AUGUSTA; Easter Cave, Jewel Cave and The Labyrinth.
2. ARUMVALE; Crystal Cave, Strong's Cave and the Arum System.
3. WITCHCLIFFE; Mammoth Cave, Calgardup Cave, Rudduck's Cave, Connolly Cave and Lake Cave.
4. SOUTH HILL RIVER; Pretty Cave, Quondong Cave, Thousand Man Cave and Army Cave.
5. JURIEEN BAY; Hasting's Cave, Drovers' Cave, Smithy's Cave and Goosberry Cave.
6. STOCKYARD GULLY; ANU Cave, and Beekeepers' Hole.
7. ARROWSMITH RIVER; Arramall Cave and River Cave.
8. MOORA GROUP; Coorow Cave.

ASF LIBRARIAN, Graham Wallis,
has changed his address to:

20 MALVERN AVENUE,
ROSEVILLE EAST,
NEW SOUTH WALES.

This is also the official address of the ASF Library.

Material for publication in the ASF Newsletter should be forwarded to the Publications Officer, at least one month in advance of the month of publication.

Because of automatic address-
ing, subscribers are asked to
notify any change of address
without delay.

MISCELLANEOUS NOTES

- ★ PMSS have changed their address.
New address of this society is:

c/o GORDON BAIN (PRESIDENT),
PO BOX 425,
PORT MORESBY, TPNG.

- ★ **Highland Caving Group**, in Sydney, have reapplied for admission to membership of the Federation. The Secretary has received a comprehensive and generally favourable report on the Group, compiled by the NSW Co-ordination Committee. The matter is included in the Perth Conference agenda.

- ★ Persons compiling cave listings for the ASF Handbook should note that the Secretary would like them to include "...a short note on the structure and operation of their record keeping systems, including who does the cave numbering in any area and so on."

- ★ Opening day of the **Perth Conference** has been changed to: THURSDAY, DECEMBER 31, 1964. In case members have not received details of the general organization of the Conference, which were printed in the March issue of the newsletter--obtainable from society secretaries--this information is repeated hereunder:

Accommodation. At camp a few miles from Perth. (Wembley, I think --Ed) Full catering, huts, beds, conveniences etc. If 45 persons book in, cost for 3-4 days will be £3-4. More persons will mean a lower cost. **The Conference** will be held at the camp site.

Caveman's Dinner will be an extra charge of about £1.

Transport. More cars brought over from the east will mean fewer transport difficulties where trips are

concerned.

Excursions. Selected areas are described in this newsletter. All areas are readily accessible by roads and little walking is necessary.

Equipment. Camping gear (tents optional); usual trogging gear (wet suits or jumpers for Easter Cave); carbide will be supplied. Several extra 30 or 50 foot ladders will be required and visiting societies are asked to oblige. First Aid (including snake bite outfits) will be an asset. WA is hot and dry in summer.

Persons intending to participate in the Conference are requested to make application to: MR. TERRY BAIN, BOX S1349, GPO, PERTH. They should include their name, address and club, anticipated date of arrival, and intentions with regard to accommodation, Caveman's Dinner and excursions. The organizer would like to know of any transport and its capacity and the WASG Committee require written absolution of all legal responsibility from the parents of participants under 21 years of age.

As yet we have not been informed of the address of the camp and no contact in Perth has been given, but (and don't tell him I told you) I happen to know that the organizer--Terry Bain--resides at: 43 LATROBE STREET, MOUNT YOKINE.

DOWN UNDER, ALL OVER

Inadvertently omitted from this column in March was news from SASS of a new area near Nowa Nowa. Two caves, in soft-rock, Tertiary limestone, have been explored, each consisting of a simple stream passage passing through a ridge. One houses a large bat colony and is probably Australia's dirtiest and most unpleasant cave.

CAVING AREAS OF THE WEST

Western Australian
Speleological Group

Below, we describe the eight caving areas we have selected for visits after the ASF Conference in January 1965. They represent only a portion of known West Australian caves and, with the exception of the Kimberleys, the Nullarbor and Exmouth Gulf, are a fair cross-section of the best and most interesting of our caves.

Introduction

With the exception of Area 8--the Moora Group--the areas lie in the Pleistocene - Recent Aeolianites, which are consolidated calcareous sandstones varying in compactness and proportion of carbonate. These coastal limestones, formed originally as sand dunes, stretch over 2000 miles from near Esperance to the Northwest Coast. From Cape Naturaliste to Cape Leeuwin (Areas 1, 2, and 3) and points east they overlies Pre-Cambrian rocks while northwards they overlies Tertiary sediments. As the rock is wind-formed, a notable feature is the absence of joint and bedding planes, and the presence of an impervious travertine cap encloses a friable rock underneath. Consequently, theories of cave origins have had to be modified. Only in some places does the Aeolianite exceed 150 feet in thickness.

Area 1 - Augusta

Southernmost area to be visited; 205 miles from Perth on good bitumen. Caves lie in narrow band of limestone between underlying granites and overlying sand dunes. Caves reach depth of 140 feet where water table occurs in Easter Cave, Jewel Cave and The Labyrinth. Phreatic characteristics in all these caves. Area 1 has very heavy rain-

fall and luxuriant vegetation. Cave decoration is at its best; particularly striking are straws--longest is 19 feet 4½ inches (5,91 metres)--helictites and crystals. The Big Three have plenty of scope for further discoveries. The Jewel is a tourist cave; the other two each require up to 12 hours to satisfactorily visit them.

Area 2 - Arumvale

This area is 15 miles closer Perth than Augusta; centred around Overtime Lodge, our base camp in Southwest. Main feature of caves in this area--especially Crystal Cave, Strong's Cave and the Arum System--is that they are linear or stream caves. They share this feature with Area 3 but not with Area 1 which features lakes along the water table. Cave decoration is on a par with Area 1; but as there are more collapses from the surface the bone content becomes more significant. The Arum System, together with Mammoth Cave and Rudduck's Cave (both in Area 3), show stream entry from off the granites and into the sides of consolidated dunes in which the caves occur.

Area 3 - Witchcliffe

This area adjoins Area 2 and is a further 15 miles closer Perth; it represents the northern part of the limestone strip while Area 2 represents the southern part. Area 1 lies in a separate limestone strip. Rainfall is slightly less than farther south and this results in a reduced stream flow and less dense surface vegetation. Mammoth Cave, Calgardup Cave and Rudduck's Cave are on the edge of the limestone (cf. Arum System) and are thought to link drainage with Connolly Cave on the coast and some 2 miles distant. Lake Cave, which actually carries a stream, is thought to re-surge at sea. Other features of this area are large collapse entrances up to 200 feet in diameter

and over 100 feet deep, and a high concentration of fossil material (Mammoth Cave); over 60 known caves occur in a small strip a couple of miles long.

The remaining areas are north of Perth:

Area 4 - South Hill River

Chief caves are the Nambung Valley Caves; 150 miles north of Perth with some gravel roads (good condition in summer). Caves lie on high ground above Nambung Valley, the stream going underground through a yet undiscovered cave. Dry in summer, the creek carries a winter flow; there are masses of live decoration in some of the caves. Only a small number of the caves are known to WASG. Among the better-known caves are Pretty Cave, Quondong Cave, Thousand Man Cave and Army Cave.

Area 5 - Jurien Bay

Fifty miles farther north is Jurien Bay, approached either from Nambung or from the main Geraldton Highway. In common with all areas north of Perth, this area has a very much lower rainfall and vegetation is reduced to scrub which makes cave locations easier to spot (near trees). Chief interests here are the phosphate and bone deposits; cave bats are seldom found south of Jurien Bay. The caving is very easy. Best known caves are Hastings' Cave, Drovers' Cave, Smithy's Cave and Goosberry Cave. Two exceptionally interesting streamcaves are also known.

Area 6 - Stockyard Gully

Thirty-five miles north of Jurien Bay is the Stockyard Gully area with its winter flowing gully and cave and a line of dolines culminating in ANU Cave and Beekeepers' Hole. There is very great potential in this area where new caves are concerned—unfortunately our trips

to the area have been limited in number by heavy winter rains and flooding tracks. Both ANU Cave and Beekeepers' Hole contain deep water ending in sumps. Drainage is through the Gully, along the line of holes, ANU Beekeepers' Hole and out to sea.

Area 7 - Arrowsmith River

This is the northernmost area to be visited; distance is about 280 miles north of Perth with bitumen and 20 miles of good gravel. Arrowsmith River drains into Arramall Lake, which overflows into Arramall Cave and River Cave. These two are horizontal caves radiating out from the lake, Arramall Cave being about 1 mile long and River Cave about 600 yards (550 metres). Decoration is limited but the area is geologically interesting.

Area 8 - Moora Group

This area lies along the Geraldton Highway between 140 and 170 miles north of Perth. Coorow Cave occurs in a shallow lens of silicified dolomitic limestone surrounded by Palaeozoic rock (cherts). The limestone has a two-directional system of joints and this is reflected in the cave form. The limestone has been dissolved leaving quartz veins outstanding in a unique box-work structure. The very low humidity leads to mummification of animal carcasses.

Summary

The caves of the Southwest (Areas 1, 2 and 3) offer the greatest attractiveness where cave decoration is concerned, in addition to providing some sport and lots of scientific interest (mainly geomorphological and palaeontological). Scrub-bashing is harder than in the north but access roads are much easier and caves are usually close to cars! Technical problems are small; Labyrinth and Easter (espec-

ially the latter) require movement in water; shafts vary from 35 to 90 feet (11 to 27 metres) and are all from the surface; crawls are few and far between; rock climbing is unnecessary (as well as being dangerous in the friable limestone). Wet suits (or warm jumpers) will be assets in Easter Cave where water temperature is 62°F (17°C), air temperature a few degrees higher and where immersion is 80 to 100% for most of the 12 hours a trip requires. You are warned!

The northern areas are less known than the southern and here the main problem in summer will be surface heat and drought. Water is at a premium; roads tend to get dusty and sandy.

All camping is in the open except in Areas 1, 2 and 3 where Overtime Lodge--a Forestry hut--provides some shelter. Summer is the dry season here, so fires are rigidly controlled. Low temperatures and rain are very unusual in January. Photography is worthwhile in most caves, cameras needing protection to get them into Easter Cave through 10 to 12 inches (25 to 30 cm.) of water with 1 inch (2,5 cm.) airspace.

ASF 5TH BIENNIAL CONFERENCE PROGRAMME

Opening. Thursday December 31, 1964
Mr. Duncan Merrilees, Curator of Palaeontology, WA Museum will give an address on palaeontology with special reference to fossils in Southwest caves.

Business. The business agenda has been circulated to member societies.

Papers.

1. Origins of the WA Aeolianite: Dr. J. Gentilli, Senior Lecturer in Geography, WA University.

2. The Origin of the Southwest Caves: (author forthcoming?).

3. The Turkish Speleological Society's International Conference and Excursion, 1964: Mr. J. Jennings, Australian National University.

4. Progress in Australian Bat Banding: Mr. E. Hamilton-Smith.

5. Safety in Cave Diving: Mr. J. Noonan.

Films.

1. Under the Nullarbor: Dept. of Interior.

2. The Bats: Polish film.

Slides.

1. Bustamente: from NSS (USA), 96 slides with tape commentary.

2. Climax Cave, Georgia: with written and tape commentary.

3. Edited private collections.

Dinner. The Conference will be followed by the customary Caveman's Dinner.

Excursions. Conference-goers are invited to join trips to any of eight selected areas, containing some of Australia's largest, most beautifully decorated and unusual caves.

ABSTRACTS AND REVIEWS

JENNINGS J. N. & SWEETING 1963. The Limestone Ranges of the Fitzroy Basin, Western Australia. Bonner Geologische Abhandlungen, 32.

An excellent account of the limestone ranges of the Kimberley Region and required reading for anyone interested in this area or in Karst morphology in general.

JENNINGS J. N. & SWEETING 1963. The Tunnel, a cave in the Napier Range, Fitzroy Basin, Western Australia. Trans. Cave Research Group Great Britain, VI (2) : 53-68.

A detailed description of the Tunnel, with an outline of various hypotheses concerning the origin of this cave.

--Elery Hamilton-Smith