

Bunda Cliffs — exploration update 2017

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Four separate trips to the Bunda Cliffs of the Nullarbor were undertaken in 2017. The Bunda Cliffs are unique, reaching up to 100 metres above sea level for a 173 kilometre stretch in a semi-arid coastal region; they present a unique opportunity to investigate relatively recently exposed karst features. Around 15,000–18,000 years ago sea levels were around 100 metres lower than today's levels and, since then, rising sea levels and erosion have resulted in retreat of the cliffs, exposing the caves.

The prospects are fascinating, especially as it is possible that when the sea level was lower, the modern-day cliffs were accessible from the surface or from low-lying land (now eroded away), much like the escarpment above the Roe Plain to the west. In the Bunda Cliff caves there are remains of extinct animals, heightening the possibility that evidence of human activity might also be discovered.

The first trip of 2017 was an aerial mapping project to identify new cave targets, followed by a short reconnaissance trip to evaluate a potential 'walkdown' site. The third trip was the main expedition in August which included cavers who attended the International Speleological Congress in Sydney. The last field trip in November took place to recover some extraordinary animal bones.

To date, 89 cliff caves have been investigated during the Bunda Cliffs project. This presentation will cover a brief history of exploration, the 2017 results and the plans for future exploration.

Over 200m
of cliffs
fallen to sea
in 2 years!



Systematic Exploration of the Bunda Cliffs

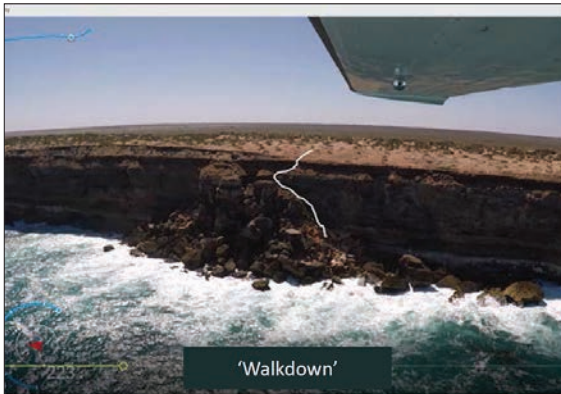
- Expeditions: 1999, 2012, 2013, 2015
- March 2017: aerial photographic survey completed
- April 2017: walkdown investigated
- August 2017: main expedition after UIS Congress
- November 2017: collection of bones
- 2018: television interest and new techniques



Expeditions

Aerial Survey

- New 4k and 2.7k video
- 3,500 high-resolution stills
- GPS encoded data
- New targets for main expedition
- (Same pilot and aircraft as 1999 expedition)



Walkdown

Could this site be one of the five named walkdowns recorded by Daisy Bates?



2017 Expedition

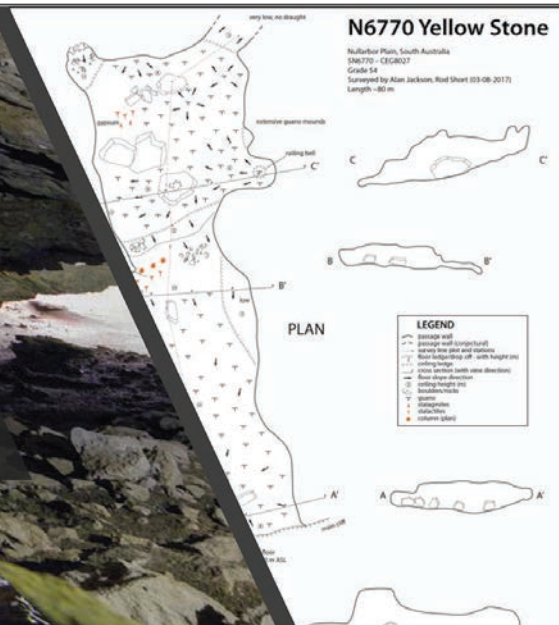
N6749 Swallows and Amazons

- Large recess behind rockpile
- Old cave between Wilson Bluff LS and limestone above
- Eroded calcite 2.85 ± 0.14 Ma
- Skeletons
- Approx. 100m long, draughting (lead)



N6770 Yellow Stone

- Unusually large passage
- Approx. 20m wide, 5m high
- Stops abruptly at 80m



N6763 Schrödingers Bat

- Significant guano deposits in entrance
- Detailed mapping and survey
- 600m of generally wide and low passage
- Spectacular gypsum
- Calcite 5.85 ± 0.36 Ma
- Complete skeleton of *S. harrisii*





Collection of the 'Nullarbor' Devil

Cliff Caves Visited in 2017

- 89 cliff caves so far
- Mapping
- Plenty of targets and follow up
- Increasing the knowledge of the Nullarbor

| Number | Name | Description |
|--------|---------------------------|------------------------------------|
| NAB701 | Loping Cave | Loping Cave - Major Karri Features |
| NAB702 | Old Cave | Old Cave - Major Karri Features |
| NAB703 | Old Cave | Old Cave - Minor Karri Features |
| NAB704 | Minor Features / overhang | Minor Features / overhang |
| NAB705 | Old Cave | Old Cave - Minor Karri Features |
| NAB706 | Old Cave | Old Cave - Minor Karri Features |
| NAB707 | Old Cave | Old Cave - Minor Karri Features |
| NAB708 | Old Cave | Old Cave - Minor Karri Features |
| NAB709 | Old Cave | Old Cave - Minor Karri Features |
| NAB710 | Old Cave | Old Cave - Minor Karri Features |
| NAB711 | Old Cave | Old Cave - Minor Karri Features |
| NAB712 | Old Cave | Old Cave - Minor Karri Features |
| NAB713 | Old Cave | Old Cave - Minor Karri Features |
| NAB714 | Old Cave | Old Cave - Minor Karri Features |
| NAB715 | Old Cave | Old Cave - Minor Karri Features |
| NAB716 | Old Cave | Old Cave - Minor Karri Features |
| NAB717 | Old Cave | Old Cave - Minor Karri Features |
| NAB718 | Old Cave | Old Cave - Minor Karri Features |
| NAB719 | Old Cave | Old Cave - Minor Karri Features |
| NAB720 | Old Cave | Old Cave - Minor Karri Features |
| NAB721 | Old Cave | Old Cave - Minor Karri Features |
| NAB722 | Old Cave | Old Cave - Minor Karri Features |
| NAB723 | Old Cave | Old Cave - Minor Karri Features |
| NAB724 | Old Cave | Old Cave - Minor Karri Features |
| NAB725 | Old Cave | Old Cave - Minor Karri Features |
| NAB726 | Old Cave | Old Cave - Minor Karri Features |
| NAB727 | Old Cave | Old Cave - Minor Karri Features |
| NAB728 | Old Cave | Old Cave - Minor Karri Features |
| NAB729 | Old Cave | Old Cave - Minor Karri Features |
| NAB730 | Old Cave | Old Cave - Minor Karri Features |
| NAB731 | Old Cave | Old Cave - Minor Karri Features |
| NAB732 | Old Cave | Old Cave - Minor Karri Features |
| NAB733 | Old Cave | Old Cave - Minor Karri Features |
| NAB734 | Old Cave | Old Cave - Minor Karri Features |
| NAB735 | Old Cave | Old Cave - Minor Karri Features |
| NAB736 | Old Cave | Old Cave - Minor Karri Features |
| NAB737 | Old Cave | Old Cave - Minor Karri Features |
| NAB738 | Old Cave | Old Cave - Minor Karri Features |
| NAB739 | Old Cave | Old Cave - Minor Karri Features |
| NAB740 | Old Cave | Old Cave - Minor Karri Features |
| NAB741 | Old Cave | Old Cave - Minor Karri Features |
| NAB742 | Old Cave | Old Cave - Minor Karri Features |
| NAB743 | Old Cave | Old Cave - Minor Karri Features |
| NAB744 | Old Cave | Old Cave - Minor Karri Features |
| NAB745 | Old Cave | Old Cave - Minor Karri Features |
| NAB746 | Old Cave | Old Cave - Minor Karri Features |
| NAB747 | Old Cave | Old Cave - Minor Karri Features |
| NAB748 | Old Cave | Old Cave - Minor Karri Features |
| NAB749 | Old Cave | Old Cave - Minor Karri Features |
| NAB750 | Old Cave | Old Cave - Minor Karri Features |





A new tool in development

- Lots of interesting finds need expert assessment
- A proof of concept IP camera with two-way audio comms was developed and tested inland
- This technology will be evaluated in wireless format for the investigation of finds in the cliff caves

- New targets identified
- Several caves need pushing
- Extraordinary bone heaps
- Guano piles (and bats)
- Record, map and have fun
- Photograph and film
- Wireless underground to surface video trials

Next Trip – July 2019