

THE SEA CAVES OF TALIA, EYRE PENINSULA, SOUTH AUSTRALIA

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Introduction

The Talia caves first came to our notice from a tourist booklet extolling the virtues of the Eyre Peninsula, South Australia. We visited the area on our way back from the Nullarbor in January this year. The caves we visited are on the shore of Anxious Bay west of Talia Station on the Flinders Highway, approximately 190 kilometres south-east of Ceduna (Fig. 1). The features we visited are listed as E-17 Talia Sea Cave, The Woolwash and E-18 Erosion Sinkhole, The Tub, under the Eyre Peninsula in the Australian Karst Index (Matthews, 1985). The index lists a number of caves in the Talia - Elliston region, but the extent of the aeolian calcarenite surprised us and clearly more karst features may be found there. In particular, there is extensive use of karst groundwater from the thin lens of calcarenite, while there are numerous shallow solution dolines in the hinterland.

Geology and Geomorphology

The Talia caves and karst form part of the Newlands land system (CSIRO, 1977). This system is comprised of mobile calcareous dunes, swampy depressions and calcreted dunes whose dominant land covers are coastal heath, sown pastures and cereal crops. The area is semi-arid with a mean annual rainfall of 400mm. The western shore of the Eyre Peninsula consists of Quaternary calcarenites that in the Anxious Bay area unconformably overlie early Tertiary sandstones that have been planed by a marine incursion during the late Tertiary or early Pleistocene. The coastal cliffs are around 10m high above shore platforms sloping at 10 to 15 degrees. The coast is a high energy environment with the shore platforms continually swept by a large swell. Coarse clastic deposits of cobbles and sand have been emplaced in the caves and on ledges above normal tidal range. This can be seen clearly (Fig. 2) near the entrance to Woolshed Cave.

Well developed jointing in the sandstone has permitted development of rocky headlands and geos, the latter allowing penetration of sea water into and underneath the calcarenite. Collapse of the calcarenite cliffs is aided by this undercutting, making the present cliffs ephemeral features.

The Caves

The Woolshed Cave is located at the foot of a short cliff and extends into the cliff for approximately 80 metres. A steep bank of cobbles and boulders at the end indicate that the cave would not be accessible at high tide. Sloping ledges on either side of the passage (Fig. 3) have formed at the contact of the calcarenite and the sandstone, and are covered by a steep and partially consolidated bank of cobbles and coarse sands. There are numerous tafoni on the entrance overhang and small sandy stalactites. It is interesting to note that the cave E-17 is now known as the Woolshed Cave and given a different geology than stated in the karst index.

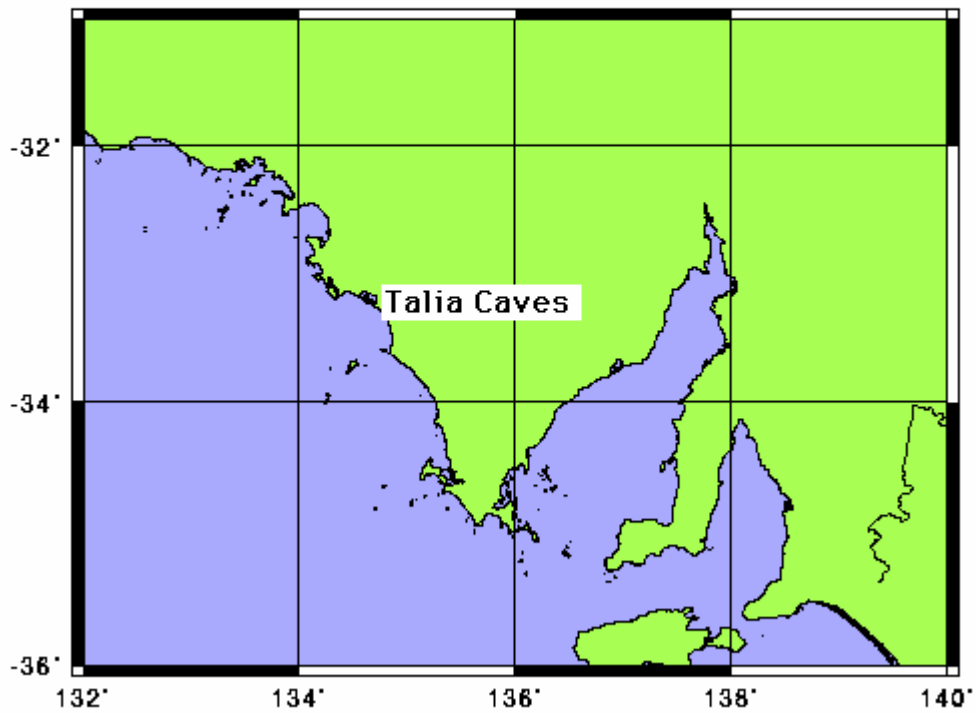
The Tub is a collapsed doline back in from the cliff edge with some of the original cave still existing between the doline and the foot of the sea cliff (Fig. 4). This short cave is a flattened ellipse which is inundated at high tide and whose floor is developed in sandstone. Seepage springs occur at the landward side of the doline and may aid further wall collapse. During storms the whole floor of the doline is inundated.

Management

The Woolshed Cave and The Tub are on public land and are managed by the local Elliston council. As the features are in a high energy geomorphic environment, human impacts (which are possibly minor) are soon eradicated. The local tourist organization has provide simple but effective interpretation (Fig. 5) of the features which is simple, correct and to the point. They have recognized that natural geomorphic processes are very active - "further change is inevitable".

Hands-on management mainly takes the form of signposting, cliff-top fencing and hardening of access roads and tracks. Interpretation and access all appear to have been carried out quite sensibly and economically. The council is to be congratulated on enhancing the safe enjoyment and interpretation of these unusual and significant coastal landforms.

Eyre Peninsula



REFERENCES

Matthews, P. G. 1985. Australian Karst Index, Melbourne, Australian Speleological Federation Inc.

CSIRO, 1977. Environments of South Australia. Province 4. Eyre and Yorke Peninsulas, Canberra, CSIRO Division of Land Use Research.