The Jenolan Caves Survey Project as of 2008

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The Jenolan Caves Survey Project Group is preparing a "State of the Art" survey of the Jenolan Tourist Caves. The only complete survey of the tourist caves was carried out in the early 20th century and was published as a plan and section in 1925. A re-survey was commenced in 1987 and "Walls" (Texas Speleological Society) was chosen for reduction of the survey data because of its simple text file input and Scalable Vector Graphics output that imports directly into Adobe Illustrator. Cave entrances were linked by a surface theodolite network and tied in to the Australian Map grid. Computer drafting was performed using Adobe Illustrator as its brush and symbol libraries allow a consistent style and its layers are maintained when exported to Adobe Portable Document Format (PDF). An aerial surface survey with a resolution of five metres was used to produce a 3D model with the caves below the surface terrain. The current survey plan will be compared with that published in 1925. In collaboration with the Jenolan Caves Historical and Preservation Society naming and location of features has been carried out; so far 567 named features are identified. This detailed examination of the cave features has enabled the creation of "Then and Now" files in which older engravings and photographs have been compared with the present state of the features. The Adobe Illustrator files have additional layers that may be devoted to any particular task such as speleothem cleaning or infrastructure changes such as re-lighting a cave. The plan and surface map have been used to assess the impact of a car park on a cave and in a palaeontological study. It will be argued that for illustrating what visitors will encounter on a traditional or adventure tour, a developed long section and associated sketch is best.

Cave Invertebrates of the Northern Territory

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Due to an accident to the author, this paper was not presented at Karstaway

Abstract

Cave invertebrates from two karst areas in the Northern Territory were sampled during June and July 2006. The karst areas sampled were Pungalina in the Carpentaria region, and Bullita Cave in Gregory National Park. This was the first invertebrate sampling conducted at Pungalina. Invertebrates were sampled in both karst areas using a combination of hand collecting and baited pitfall traps.

Six caves at Pungalina were sampled which revealed a diverse and abundant fauna, particularly associated with guano deposits within the significant cave systems of Totem Pole Cave (PUN-7) and Ballroom Cave (PUN-11). Invertebrate groups collected included arachnids (spiders and pseudoscorpions), Myriapoda (millipedes) crustaceans (isopods, and anaspid syncarids), and insects, with the latter being the most diverse. Insects collected consisted of Coleoptera (Tenebrionidae, Dermestidae, Jacobsoniidae?, Scarabidae), Hemiptera (Reduviidae and Cixiidae?), Orthoptera (Grylloidea), Blattodea (Noctico-lidae). The majority of all invertebrates collected were from the transition zone and classified as troglophiles.

Bullita Cave was sampled opportunistically in numerous sections of the cave to allow for possible varied invertebrate distribution within greater than 100 km of surveyed passage. Invertebrates were more abundant within the deep cave zones situated at the eastern and northern extent of the main limestone outcrop. Invertebrate sampling was also conducted in adjacent karst areas. Invertebrates collected included arachnids (araneae, pseudoscorpions, scorpionida) and insects (coleoptera, hemiptera, orthoptera, and diptera). Special note is made of the collection of a troglobitic scorpion (Buthidae: *Lychas*) from the deep zone of Bullita Cave. This single specimen represents only the third confirmed troglobitic scorpion recorded from caves in Australia (excluding Christmas Island).