

The Geological Society
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tag



Virtual GESSS 2020

AESC 2021

Taking field trips online

Aspirational rocks for the NRG

Feature 2

New Rocks and Landscapes books in the pipeline

The Qld Division is extending the coverage of our series of popular Rocks and Landscapes books, which are one of our main outreach activities to the general public and explain the geology of various regions across the state in a clear, non-technical manner. They are also popular with geologists who want a simple introduction to areas they are visiting.

The most recent book, *Rocks, Landscapes and Resources of the Great Artesian Basin*, published in 2017, has rapidly become one of our best sellers. This is not the least because it is being sold at The Australian Age of Dinosaurs Museum of Natural History at Winton, a must-visit attraction for all grey nomads and families holidaying in western Qld.

A book on the rocks and landscapes of the Toowoomba region written by Edwin Willey and others has been in production for some time, and we are happy to report that it is now ready to go to press. However, to take advantage of a discount offered by our printers if we submit two books at the same time, the Division is fast-tracking another book that we have discussed for some years — on the rocks and landscapes of the Mount Isa region in north-west Qld.

As all readers of TAG would know, north-west Qld is one of the premier mineralised regions in Australia, but apart from that, it boasts fascinating and complex geology and spectacular scenery. The geology is dominated by its Proterozoic succession, but also has areas of Cambrian karst in the Georgina basin (Camooweal caves and the spectacular Lawn Hill or Boodjamulla National Park) and the Cenozoic vertebrate faunas at Riversleigh.

The book will be co-authored by Laurie Hutton and myself, Ian Withnall, who worked in the area for many years with the Geological Survey of Qld, and will be edited as usual by Warwick Willmott. Drafts of the introductory chapters have already been written, but an important aspect of each book is detailing where visitors can go to see the rocks and explaining the origin of the landforms. Although Laurie and I have field notes of sites going back many years, we realised that it was necessary to return to the field and drive the main routes that visitors are likely to take and select outcrops that are accessible and best explain aspects of the geology. We also needed to refresh our memories of the scenery and landforms that a visitor is likely to see from a car window. A trip had been planned for May, but the COVID restrictions on travel scuttled these plans, so the fieldwork was rescheduled for the end of September.

Warwick as editor was keen to participate, and Tony Shellshear offered to come along and provide his 4WD. Tony manages one of our other outreach initiatives, the supply of rock and mineral sets to schools, and was interested in adding to his supply of material for the sets.

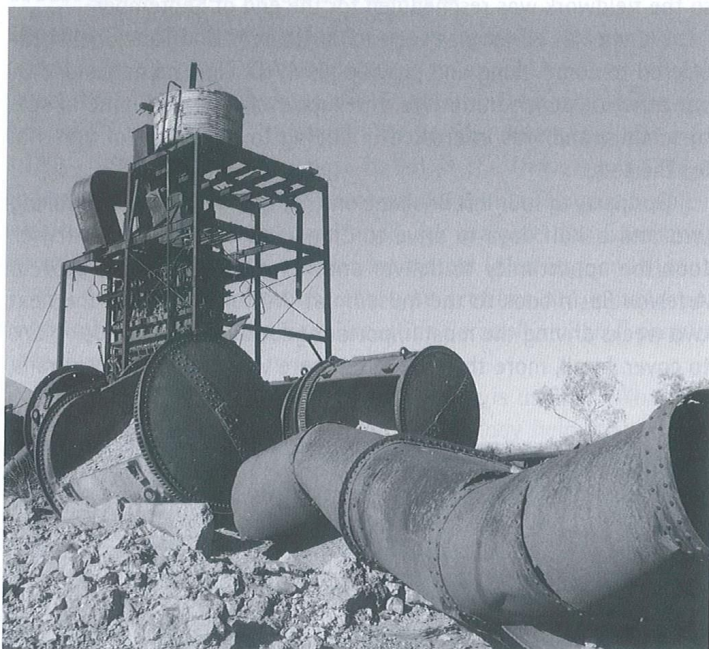
Our party of four left Brisbane on Thursday 17 September, taking two-and-a-half days to drive to Cloncurry. On the way, Warwick took the opportunity to deliver another 100 copies of the *Great Artesian Basin* book to the museum at Winton. We spent the next two weeks driving the most important geotrails that the book plans to cover. In all, more than 100 sites were visited along these trails,



Negotiating the track along the former tramway to the Wee MacGregor copper mine. Ore was railed from here to the Kuridala smelter between 1910 and 1920. The Cloncurry and District Historical Society is actively promoting the area as the Ballara Mining Heritage Trail and the geology will be covered by the new GSAQ Rocks and Landscapes book. All images courtesy Ian Withnall

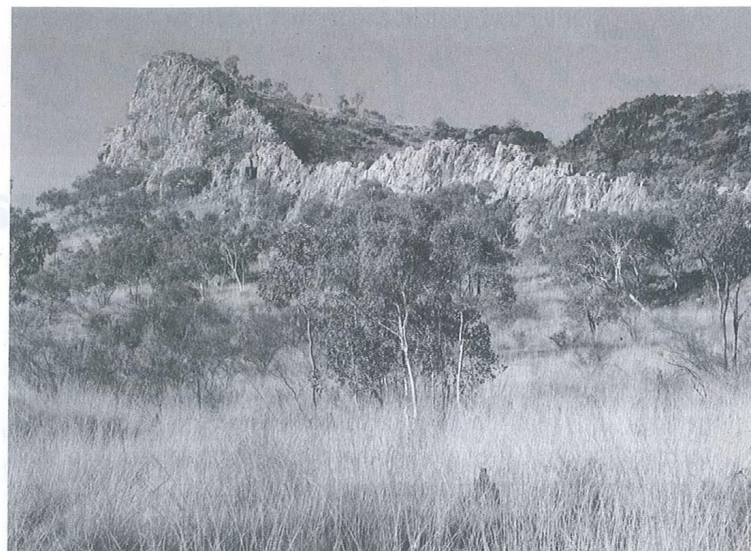


Giant amphibole crystals in calcite at the Tribulation calcite quarry. We resisted the temptation to smash this beautiful rock, which could be a candidate for the National Rock Garden



Remains of the Kuridala smelter, which processed ore from the Hampden copper mine and other mines from the surrounding region prior to 1920

although not all were considered significant enough to feature in the book. Most of the geotrails are in the central part of the inlier between Cloncurry and Mount Isa and south to Duchess, Kuridala and Dajarra. However, a visit was also made to the Lawn Hill area. Explaining the geology of sites to Warwick and Tony, who had never worked in or visited this complex area, gave Laurie and myself a good inkling of what will be needed to explain the rocks to the lay readers. Compared with the topic of his last book, the *Great Artesian Basin*, where you can drive for 200 km through the same geological unit, Warwick found the changes in geology over very short distances due to complex faulting and folding somewhat hard to get his head around, as he struggled to come up with a single, catchy theme for a particular geotrail.



China Wall, a quartz-filled segment of the Pilgrim Fault, a major, long-lived crustal break in the Mount Isa Inlier



Laurie Hutton and Tony Shellshear at the Tribulation calcite quarry, north of Mary Kathleen, about to sample a large amphibole crystal for the GSA-Qld school rock and mineral sets

We made opportunities to visit some of the information centres that we hoped might agree to stock the book when it is published. The reactions ranged from lukewarm to reasonably enthusiastic. However, in spite of the COVID restrictions and being late in the season (temperatures were already in the mid to high 30s), the roads were busy with caravans and most of the free camping areas were packed, so we could see the sales potential if we can find the outlets.

Tony had much success in adding to his supplies of rocks and minerals, collecting bulk supplies of mica schist, quartzite, pegmatite, calcite cleavage rhombs, K-feldspar, mica, hornblende and malachite. His 4WD began to object to the load in his trailer, so we shipped 350 kg of rocks back to Brisbane midway through the trip.

Another opportunity that presented itself was checking out some outcrops that may be suitable sources for inclusion in the National Rock Garden in Canberra (see article by Mike Smith and

Ken McQueen in the News section of this issue). Peter Rea from Xstrata took us to visit an outcrop of Eastern Creek Volcanics just south of the city of Mount Isa, but we also assessed other potential candidates further afield — folded calc-silicates in the Corella Formation, giant amphibole crystals in calcite and stromatolitic limestone in the Lady Loretta Formation.

We returned to Brisbane on 4 October, and now the challenging work of putting the book together starts. We hope to have it ready for printing early in 2021.

IAN WITHNALL



Laurie Hutton, Tony Shellshear and Warwick Willmott at the last site visited on the trip, the Fullarton River garnet fossicking area in schist of the Llewellyn Creek Formation



Ian Withnall at the Tribulation calcite quarry, north of Mary Kathleen, examining giant calcite cleavage rhombs



Warwick Willmott, Peter Rea (Xstrata) and Tony Shellshear examine a potential National Rock Garden candidate from the Eastern Creek Volcanics