Fig. 1. Industry disturbing the landscape (Photo: Robin Chapple)

Dampier Archipelago Rock Art

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On Australia's west coast, about 1500 km north of Perth lies an archipelago of 42 islands. These islands are covered by one of the world's largest collections of rock art. As a student in conservation of monuments and sites at the KULeuven (Belgium) with a background in geology I participated in a campaign led by the National Trust of Australia to fight for the preservation of this heritage. I got this opportunity as part of my participation in the Sharing our Heritages exchange program between the EU and Australia. The rock art of Dampier Archipelago is endangered by its designation as one of the most important industrial development sites of Australia.

Until around 6000 years ago, due to the sea level rise after the last ice age, a group of hills became what are now the islands of Dampier Archipelago. The islands are mainly composed of granophyre, but there are also occurences of gabbro, granite and dolerite. These stones form low hills composed of angular boulders that to many people may look like they have been piled up there by the iron ore industry, but actually are the normal weathering form. These boulders are covered with petroglyphs that were made by the removal of material by pecking and engraving. The visibility of these petroglyphs is enhanced by the contrast in colour between the different layers of the rocks. The fresh material is grey, but it does not play an important role in the rock art due to its hardness and the presence of a weathering layer. This weathering layer is several centimeters, softer and pink coloured which contrasts with the very thin shiny red to black layer that forms the outer surface of the blocks through which most of the petroglyphs have been made.

Very little is known about the original inhabitants, as of the Jaburara who were the people living in the area when the Europeans arrived no one survived, in the nineteenth century they were deported or killed by diseases and in a big massacre. But the enormous

collection of rock art they left behind provides evidence for many thousands of years of a now lost culture. Estimates of the amount of art range from 3690 sites to more than a million individual petroglyphs, making it one of the world's largest collections, of which also the diversity and quality are unique. There are images of living and long extinct animals, such as turtles, kangaroos and the thylacine and of anthropomorphic creatures, as well as geometrical designs and many more subjects that probably served both a spiritual and educational purpose. Other forms of rock art present are stones that have been arranged in terraces and standing stones.

The art is under threat of industrial development since that started in the area in the 1960s / '70s and resulted in the connection of what is now Burrup Peninsula to the mainland, as well as the location of petroleum and chemical industry on the former island. Industry started with the construction of a port for shipping iron ore from the Pilbara. This deep water port also attracted plants for the processing of gas from the nearby Northwest Shelf Project and subsequently large energy consuming chemical industry, producing for instance fertilisers.

Fig 2. The famous climbing men and an archaic face (Photo: Thomas van der Linden)

Air pollution and building activity are the two ways in which industry possibly threatens the art. The pollution of the industry is likely to result in the dissolution of the outer surface layer and thus the loss of contrast and consequently the petroglyphs will be lost when they become invisible. Also 40 percent of the surface of Burrup Peninsula has been allocated for industry, which means that large parts have to be cleared and flattened to accomodate plants. This would involve the moving or removal and thus the loss of the petroglyphs in almost half the area.

Despite its value, by specialists considered to be of world heritage level, the Australian government is very slow in the recognition and actually actively stimulates the destruction of the remains of a now disappeared old culture for short term economical gain. One organisation to recognise the value is the World Monuments Watch who gave Dampier Archipelago a place on its "List of 100 most endangered sites" and provides funds for the campaign for the preservation of the rock art.

The destruction of the rock art of Dampier Archipelago will mean that an invaluable expression of culture will be lost for ever. This policy evidences a lack of respect for the memory of a no longer existing culture that goes back many thousands of years longer than that of the people who destroy it.

The international conference on "Geoheritage for sustainable development"

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This conference, in the spar town of Druskininkai in southern Lithuania (May 27-30, 2006), was held under the auspices of ProGEO (European Association for the Conservation of geological Heritage) Northern European Working Group, IUGS Commission GEM (Geosciences for environmental management) working group IBC (International borders – Environmental concerns), Lithuanian Geological Survey. Polish Geological Institute, and the Institute of Geology and Geography, Lithuania. It was held under the auspices of INTERREG project 2005/041 (Elaboration of geoenvironmental assumptions for 'Geopark Yotvings' in the cross-border Polish-Lithuanian area) and IUGS-ICSU project "Application of geoscience for sustainable development of cross-border areas". The aims of the conference were: to promote better understanding of geological heritage in Northern Europe and to aim at an increasing level of awareness concerning geological knowledge and related problems in society; to promote best practice on such matters as inventory, on-site management, planning, development of geotourism etc.; to strengthen trans-boundary co-operation and promote initiatives in application of elements of the geological heritage in sustainable development. Over 45 people attended the conference from eight European countries.

Lars Erikstad, Norway, set the scene for the first session on 'Geodiversity and geological heritage of Northern Europe – from local to international significance' by outlining difficulties that could be encountered in establishing traditional projects in some European countries and went on to discuss the possibilities of achieving more positive action by linking geodiversity with biodiversity, geoconservation with cultural heritage and geoheritage with landscape planning and tourism. Other papers outlined geoconservation activity in a number of European countries where such co-operation is achieving results. It was clear that ProGEO could act as an important partner in many such projects.

The second session on the 'Geological heritage and sustainable development in cross-border context' centred on the Lithuanian/Polish border area, the Suwalki/Suvalkija and Dzūkija region, known for its exceptional beauty and its wilderness. It is a landscape resulting from its geological structure, tectonics, the palaeorelief of the basement, the influence of ice

Photo: Albertas Bitinas, leader of field trip in Lithuania at the stand explaining the geological origin of the Bobos Darzas spring to visitors of the Dzukija National Park.