

Geotourism, Geotrails and Geoparks – Golden opportunities for sustainable social and economic development



University of
South Australia

Friday September 1 2023
Prof. Patrick Robert James
UniSA STEM, South Australia

Geotourism, Geotrails and Geoparks – golden opportunities for sustainable social and

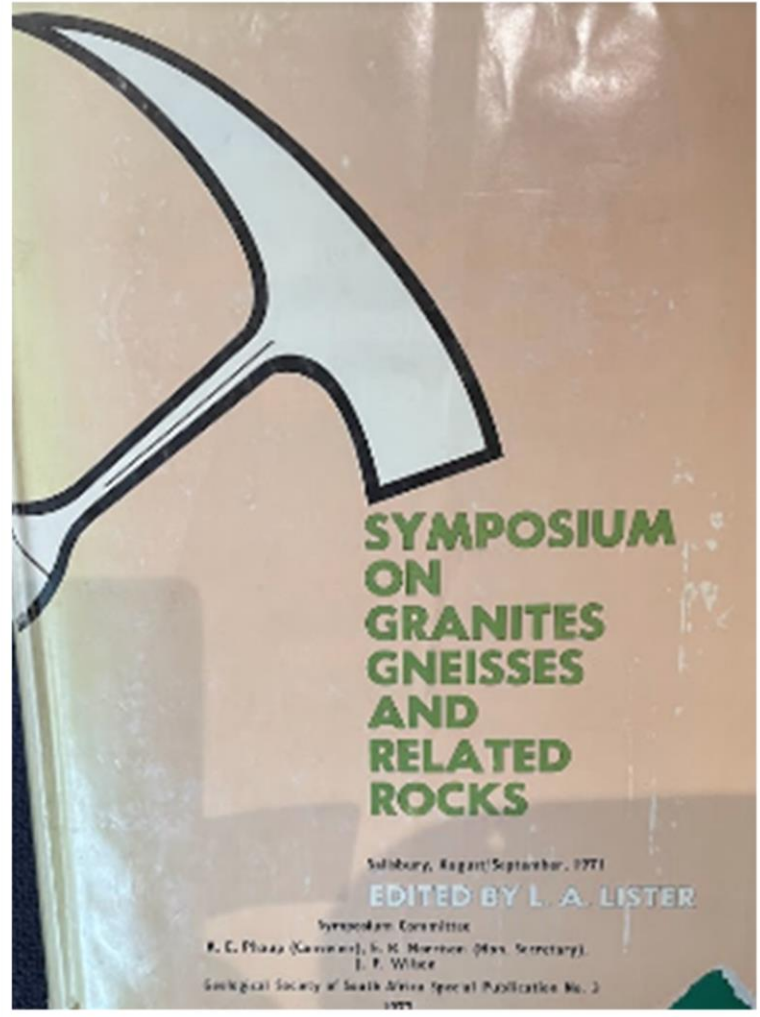
Professor Patrick James, University of South Australia, Science, Technology, Engineering
 Geotourism is a growing world-wide recreational and educational activity and is one con
 enhanced by an increased awareness of the need to protect and conserve our rich and v
 geomorphological landscapes, terrains, forms, features and processes provide a natural
 keenly and passionately defended by **Biodiversity** supporters. Geological conservation (C
 educated and scientific groups as the awareness of the fragility of our earth’s substrate a
 more critical and mainstream, in terms of its effects on our global “**Cultural**” heritage, es
 (Abiotic, Biotic and Cultural) themes embedded in Geotourism are becoming increasingl
 increasing array of visitors and tourists.

A key driver for this rise in public awareness and knowledge of the importance and relev
 across almost all continents. This movement began only recently (early 2000s) within Eu
 of Geoparks. A consortium of more than 30 Geoparks which were organised under the b
 expansion of this movement, and the subsequent UNESCO Global Geoparks network fur
 continents. These paved the way for the promotion of geology and geotourism to much
 in 48 countries, largely based still in Europe (94) and China (41) but with increasing num
 Indonesia (10)), plus S/Central America (12) and Canada (5) and only 2 in Africa in Moroc
 named Waitaki Whitestone Geopark in New Zealand.

There are many attributes required to become a Global Geopark. These include significa
 Geological Surveys, Museums, Universities. Business plans, management structures and
 needed with well-marked geosites, geotrails, signage and publicly available information



*Marble Arch Caves Global Geo
 Lakelands) was Pat’s first expe
 2nd International Global Geop
 2006. This Geopark now (post
 borders between Europe (Irela
 demonstrates the value of UG
 deprivation by significantly inc
 situated in Connacht where Pa
 whom he was named) fled fro
 the 1860’s due in part to the ir*



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Geoparks
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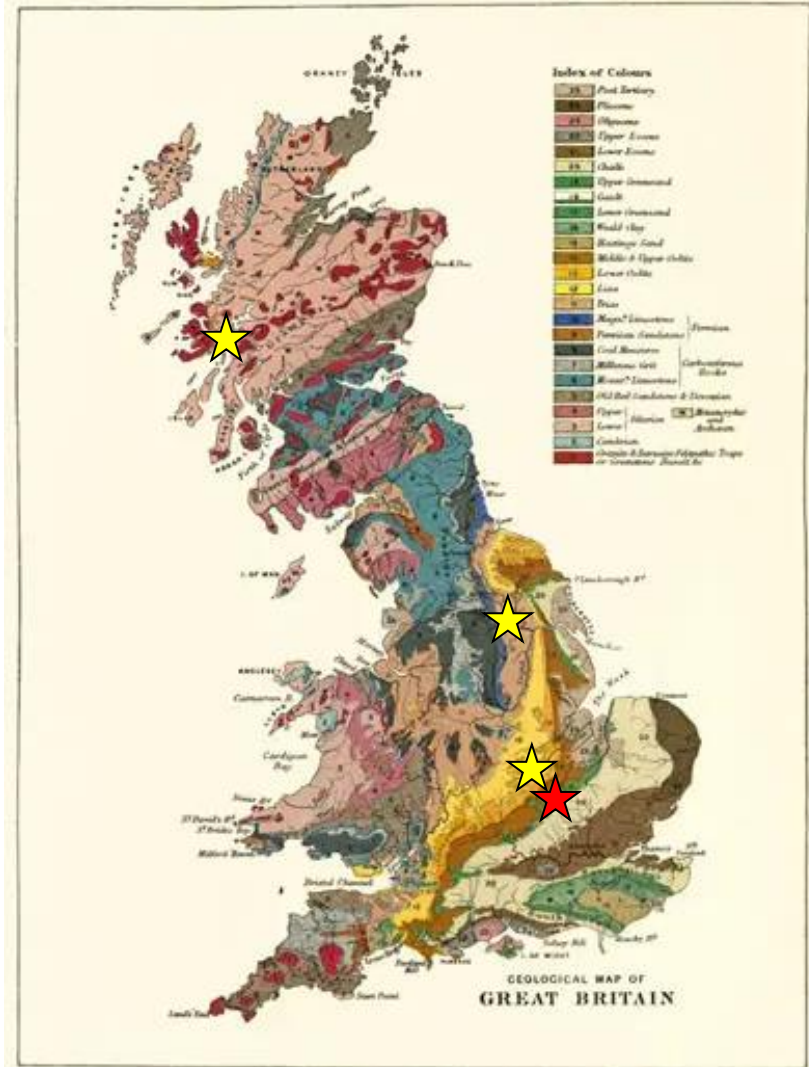
ents/councils,
 etation are

Pats Geology career



University of
Leicester

1968-1971



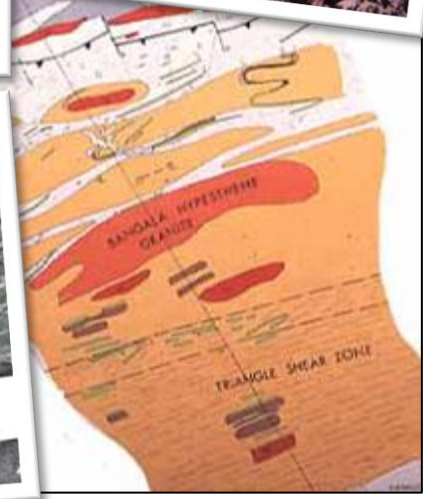
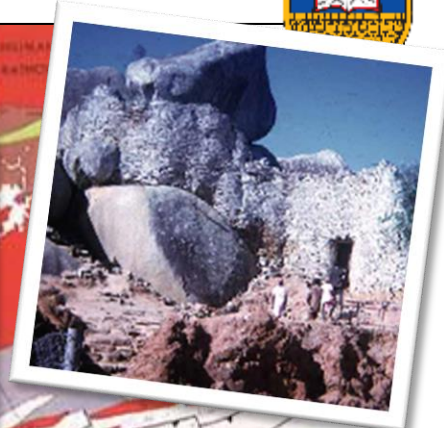


Pats Geology career 1971-1975



- G
- G
- G
- Greenstones

ZIMBABWE CRATON

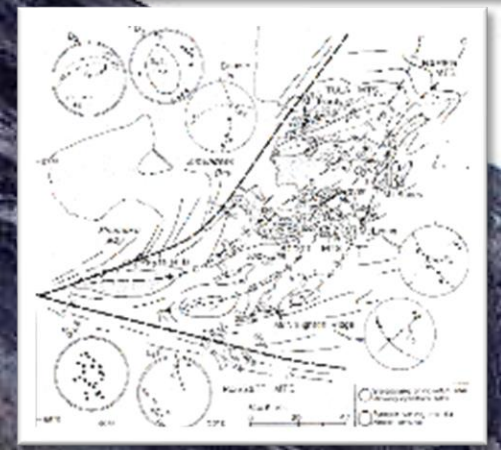
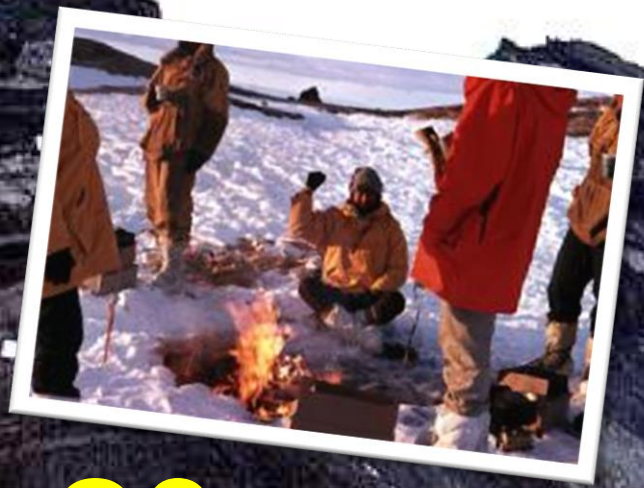
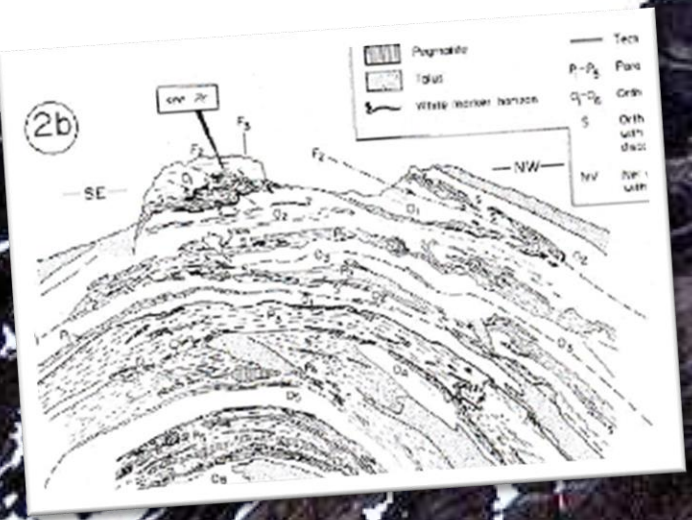




ANARE 76/77, 77/78, 79/80

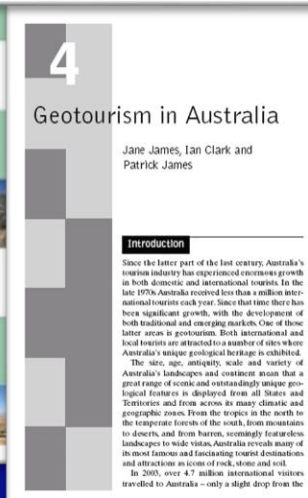
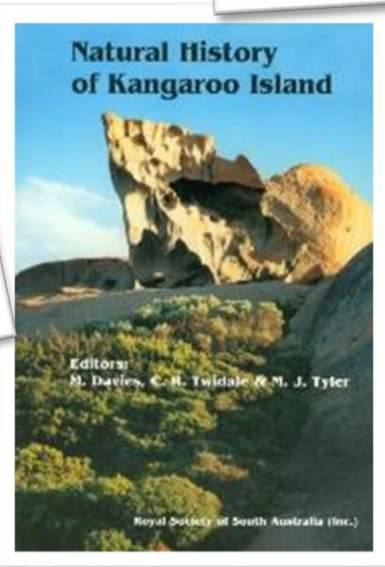
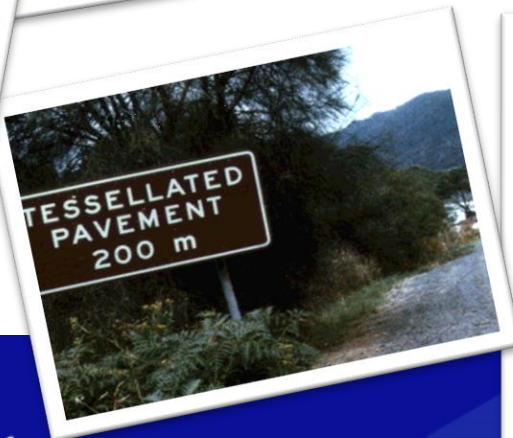
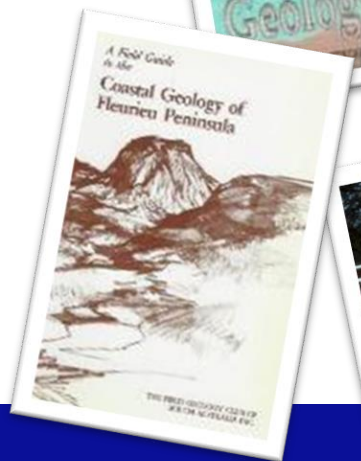
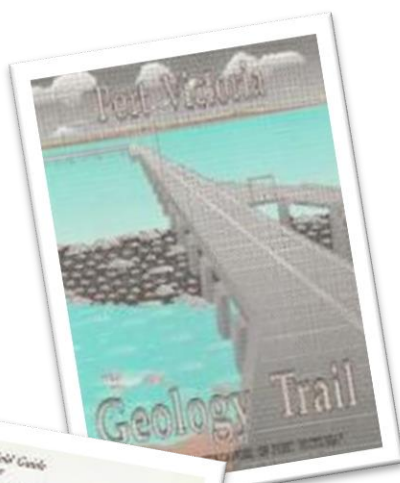


THE UNIVERSITY
of ADELAIDE



Q?

Teaching GeoScience- Education --> Geotourism



UNESCO Global Geoparks

Have you visited a Geopark?

Can you name one?

and how many there are in Africa,
Australia, Asia or in the world?



“UNESCO Global Geopark” is a BRAND (\$) and a CLUB



What is the closest UGGP to Harare?



GEOPARK RINJANI LOMBOK
Memuliakan Warisan Bumi Dan Mensejahterakan Masyarakat

Ngorongoro Crater, Tanzania



UNESCO Global Geoparks UGGP

UGGN is very new (<20 years)

EGN + CGN = UNESCO GGN (2004)

Now spread (APGN, CGN, LACGN,
AfGN?, AGN?)

<https://globalgeoparksnetwork.org/wp-content/uploads/2017/03/SPOT-GGN.mp4>



UNESCO Global Geoparks (UGGp)

- single, unified geographical areas
- where sites and landscapes of international geological significance are managed with a holistic concept of protection, education and sustainable development.

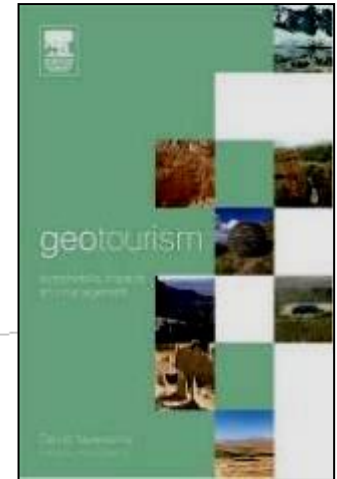


“Bottom-up approach of combining conservation with sustainable development while involving local communities - becoming increasingly popular”



Coastal & Marine Geotourism – Rinjani Lombok UGGP – July 2023

European Geoparks ~25 yrs ago



European Geoparks Network (formed in 1998)

Germany (Vulkaneifel),
France, (Haute Provence)
Greece (Lesvos)
Spain (Maestrazgo)
UK (Marble Arch)



Marble Arch Caves
Global Geopark



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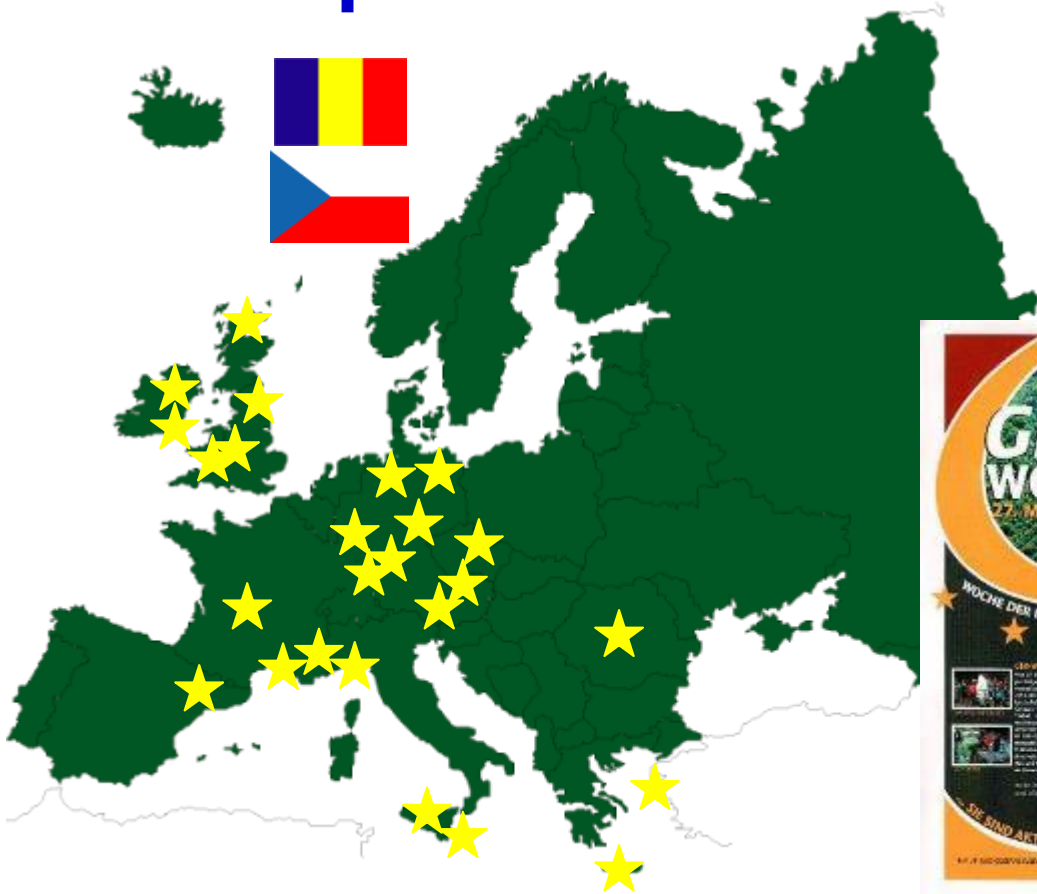
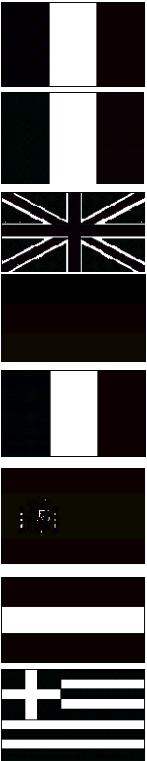


“Geoparks are a combination of art and science”

European Geoparks 2004



Geoparks Week



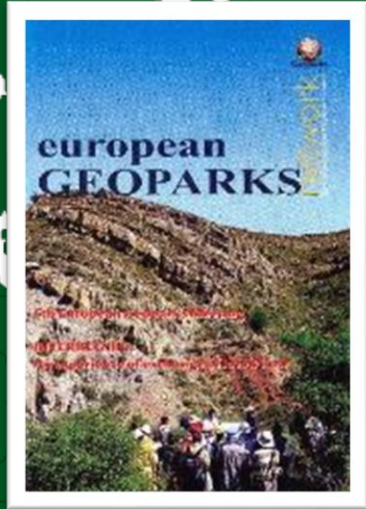
UNESCO GLOBAL GEOPARKS (UGG)

Established in February 2004

Comprises all 25 members of the European Geoparks Network plus 12 members of the National Geoparks Network of PR of China plus one member in IRAN



2nd Intl. Conference Belfast Sept. 2006



Magazine

Geoparks Week





Return to my Irish family, Mayo Bog!



Patrick
Robert
James



Patrick
Robert
Byrne



Celebrating Earth Heritage,
Sustaining Local Communities



Department of
Enterprise, Trade
and Investment
www.deti.gov.uk
**Geological Survey
of Northern Ireland**

The 2nd International Conference on Geoparks

September 17 - 21, 2006
Belfast
Northern Ireland

Geocommunity & Geoconferences

James PR, James JA, Clark IF, Sellar A and Savage C
(2006) Geotourism Strategies in the Adelaide Fold Belt and
Flinders Ranges of South Australia: competing options for
conservation, marketing and protection.

Online Registration and Call for Papers now available at



www.geoparks2006.com

UNESCO World Heritage

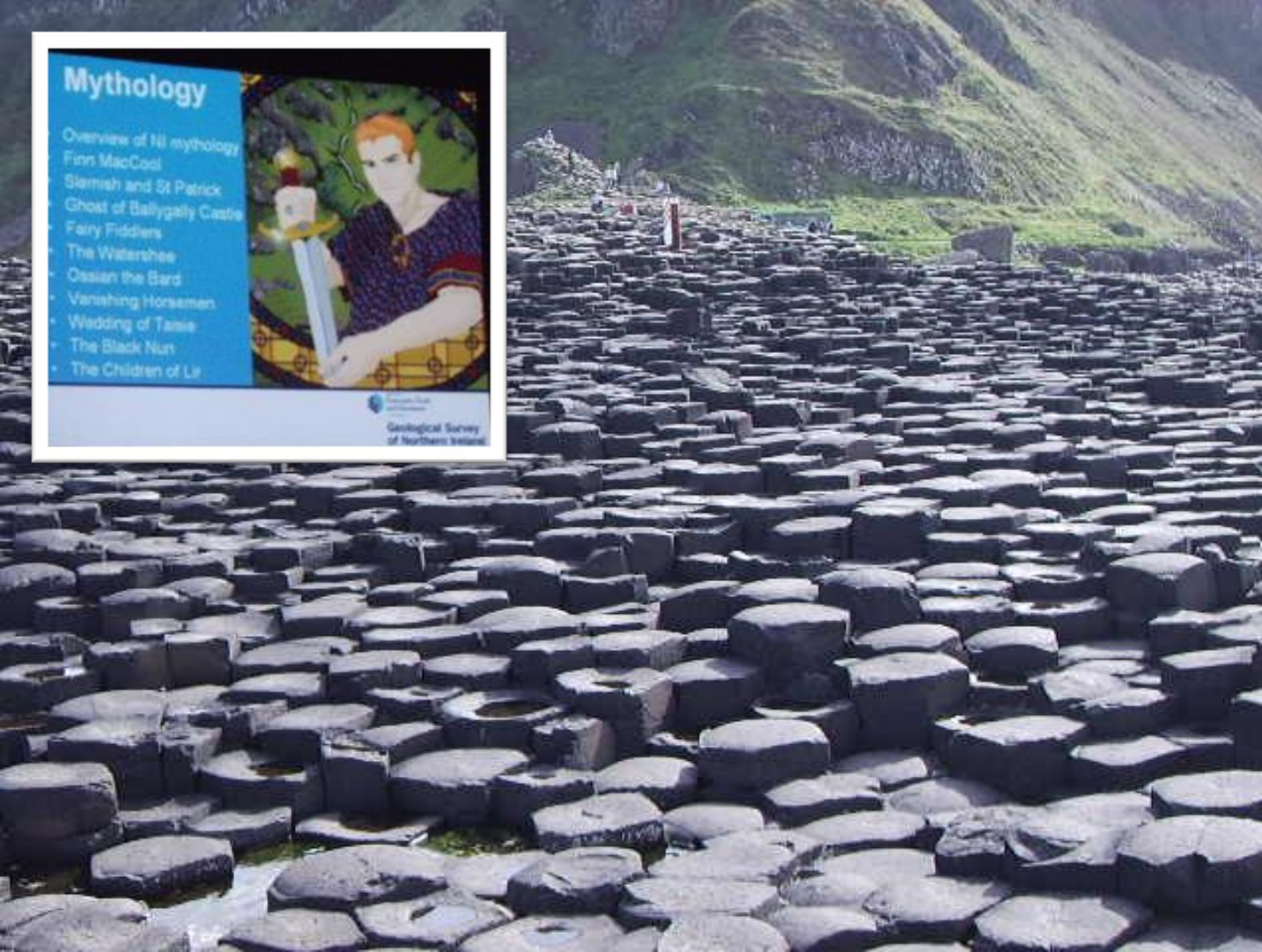


Mythology

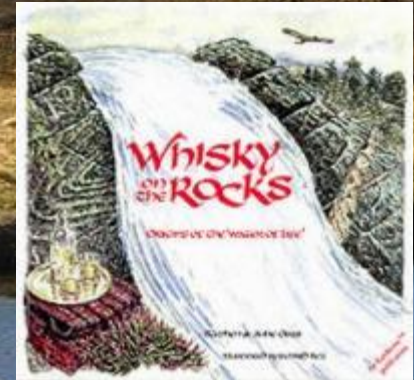
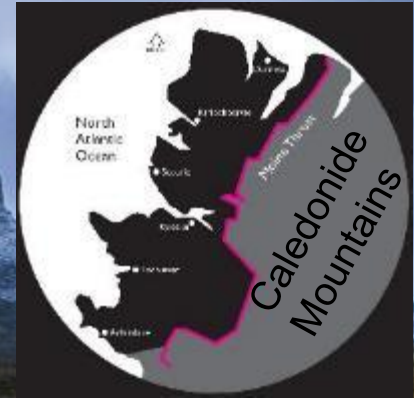
- Overview of Irish mythology
- Finn MacCool
- Sláine and St Patrick
- Ghost of Ballygally Castle
- Fairy Fiddlers
- The Watershee
- Ossian the Bard
- Vanishing Horsemen
- Wedding of Taisee
- The Black Nun
- The Children of Lir



Geological Survey
of Northern Ireland



7th EUROPEAN GEOPARKS CONFERENCE Northwest Highlands Geopark (Scotland UK), Sept 2007



James PR, Clark IF, James JA and Ng CY, (2007) Urban Geotourism and Geoparks: combining sustainable urban development with national geoheritage

Geocommunity & Geoconferences

The Geopark's communities...



For a full list of activities, services and accommodation in each community, see local information on the back cover of this leaflet.

- Rock Route
- Public Route
- Historic
- Viewpoint
- NWH Geopark Boundary



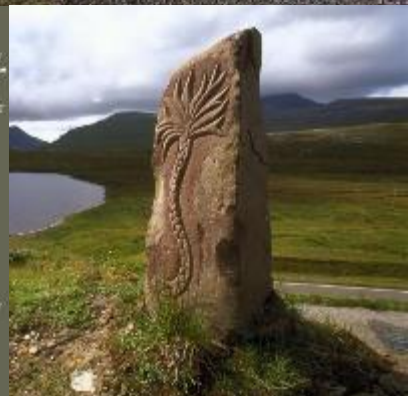
Driving Routes

There are many popular driving routes in the North West Highlands Geopark. The Rock Route is a Scottish Natural Heritage route with landscape interpretation where 'Public Routes' will take you off the main roads to explore the farms and communities of the region. The 'North Coast 500' also makes the length of the Geopark.

Rock Route
www.nwhgeopark.com/1776464

Public Routes
www.nwhgeopark.com/public

North Coast 500
www.northcoast500.com



Fishing and Boat Trips

The crystal clear waters in our region provide excellent angling opportunities. Rivers are usually suitable for game & trout and can be stocked by local providers (see www.nwhgeopark.com for more information). Explore the coast and loch systems for boat (summer only) around the Summer Isles, Lochness Glen Gair, Mends, Kinlochbervie and Cape Wrath.

Accessible paths

There are several wheelchair and buggy friendly paths in the North West Highlands. One path, Little Ayrish, has sections accessible for dogs and is called a 'Paw-friendly' or 'paw-friendly' path. The path up to the Rock Room at Kinloch Crag is also possible for wheel-chair users.

Access & Good Fieldwork Codes

We encourage all visitors including researchers to be good stewards of our landscape and geological heritage by following the Scottish Outdoor Access, Geological Coding and our Fieldwork Codes: www.nwhgeopark.com/16761



Durness & Cape Wrath

An ancient stronghold of the clan Mackay. Sandy beaches, shops, 20hr fuel, puffins, an old church, craft village, a good walking network (guide books available in the shops) and marlin fish (summer only) in the Firth of Durness. Wander up to the mainland UK. Visit Stron Gairn, an enormous Inverness cauldron where you can take a short boat trip into a cave system, or search for the rare Scottish pine and sea birds at Paraid Head.



Kinlochbervie

Small annual Scotland's most North-Westerly fishing port or enjoy a walk along Cleishmore beach—a haven for wildflowers. A walk to Sandwood Bay is a longer stretch of the leg but well worth the effort for the views of wild-segen sea and peatland. Kinlochbervie has shops for trout, sea loquax and a fuel station (just 20hr).



Scourie

Pick up a copy of the Paths around Scourie leaflet to find some great walking routes or visit Harris Island, see some fascinating seabird colonies and explore the remains of an abandoned township dating to the 1800s. Seek out some Bronze Age remains behind Scourie village. There are shops and 20hr fuel in Scourie village.



Assynt & Lochinver

Lochinver is the main township in Assynt and here you will find shops and services (including fuel) (just 20hr). The harbour is busy and on the edge of town you can explore the meandering paths of Cullag Woods.

Visit stunning sandy beaches at Anghrèich and Quillean and see raptor marks in the sandstone and evidence of a waterborne impact at Stone An Iron Age broch stands named at Glachnoll and walks around Glen Lonrag lead to 18th century archaeological.



The Summer Isles & Coigach

Experience the tranquility of the Summer Isles from the Coigach shore or by boat. Benne Flòr, the largest of the Summer Isles has its own post office and prints to order (special stamps). There are crafts, fuel (just 20hr), shops and services in Coigach. Dùbhal is the largest settlement.

Rock climbing is very popular for experienced climbers along at Raib and Staic Polach is popular with hill walkers both are made from Trossachs Sandstone which wanders into limestone, limestone and basalt. Dùbhal has a lovely white sandy beach and there are Bronze Age hut circles to hunt for on the moors.



Eriboll, Tongue & Melness

Loch Eriboll is over 100m deep. It is placed and has been used by the Navy as an anchorage for over a century. Visit the lockings on a prokaryote of last called and Reactor or walk up to an incredibly well preserved prehistoric wheel house.

If you're heading east, Tongue and Melness have shops and fuel (just 20hr). The landscape is dominated by Gairn Bharraich, whose origins are steeped in mystery.

The Geopark's eastern boundary the Moine Thrust runs against the Flow Country, one of the most important wetlands in Europe.

Inchnadamph & Elphin

The limestone around Inchnadamph and Elphin creates a gross landscape and some spectacular cave systems. The Bone Caves have produced some of the oldest animal remains in Scotland and the River Caves in Glen Traigh are popular with experienced users.

Visit the Raich and Hare monument on the shores of Loch Assynt, a tribute to the Victorian geologists who mapped the region during the 19th century. Gairn's castle sits upon a spit of land in the Loch and has been constructed using many different rock types—see how many you can spot.



Geotourism Interpretation is:

- Guidebooks about rocks, landscapes and places
- Posters – Geoscapes
- Tourist Guides - GeoPark Rangers
- Interpretation Centres (Knockan)
- Maps/VR – NW Highlands
- Brochures, Signs and trail guides
- Geological Art!!!!-----→
- Bumper Stickers
- T Shirts, Hats, Gifts
- GeoFood



**Geodiversity &
Geointerpretation**

Q?

Visitor Interpretation Centre, Knockan Crag, Scotland – simply the best?



Geopark Ranger



Geodiversity & Geointerpretation

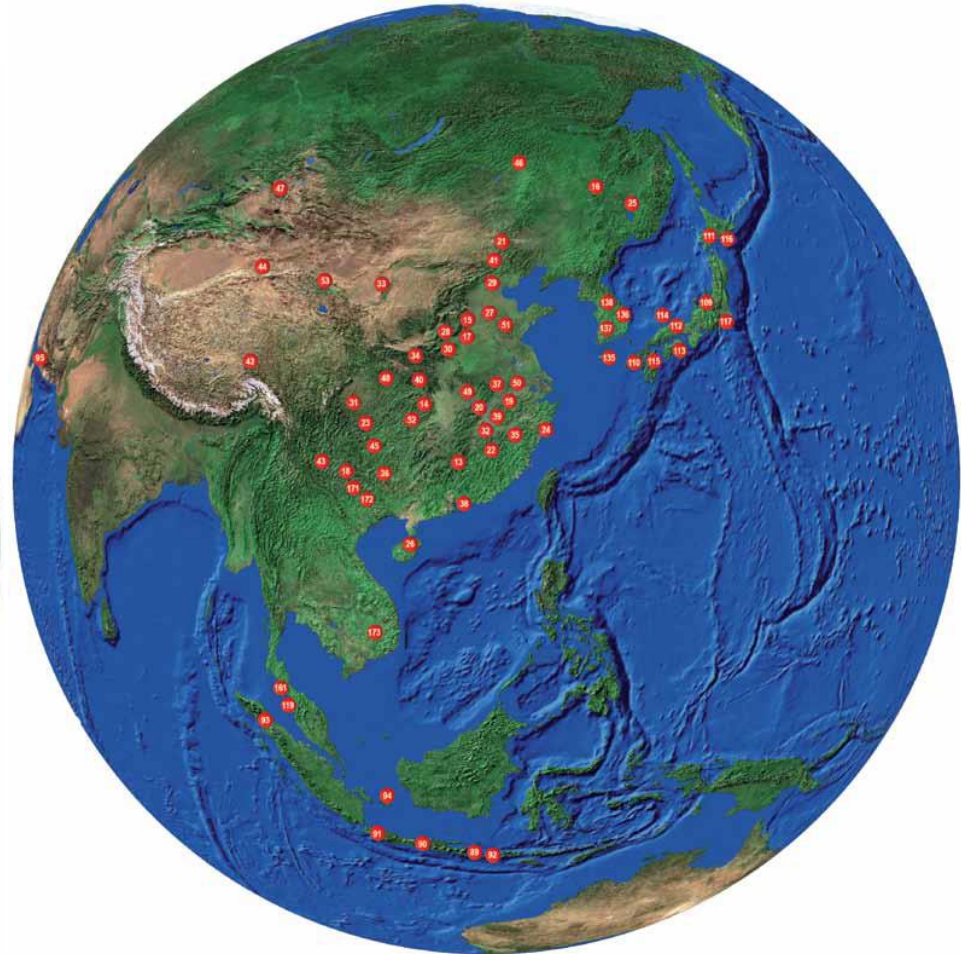
The Moine Thrust



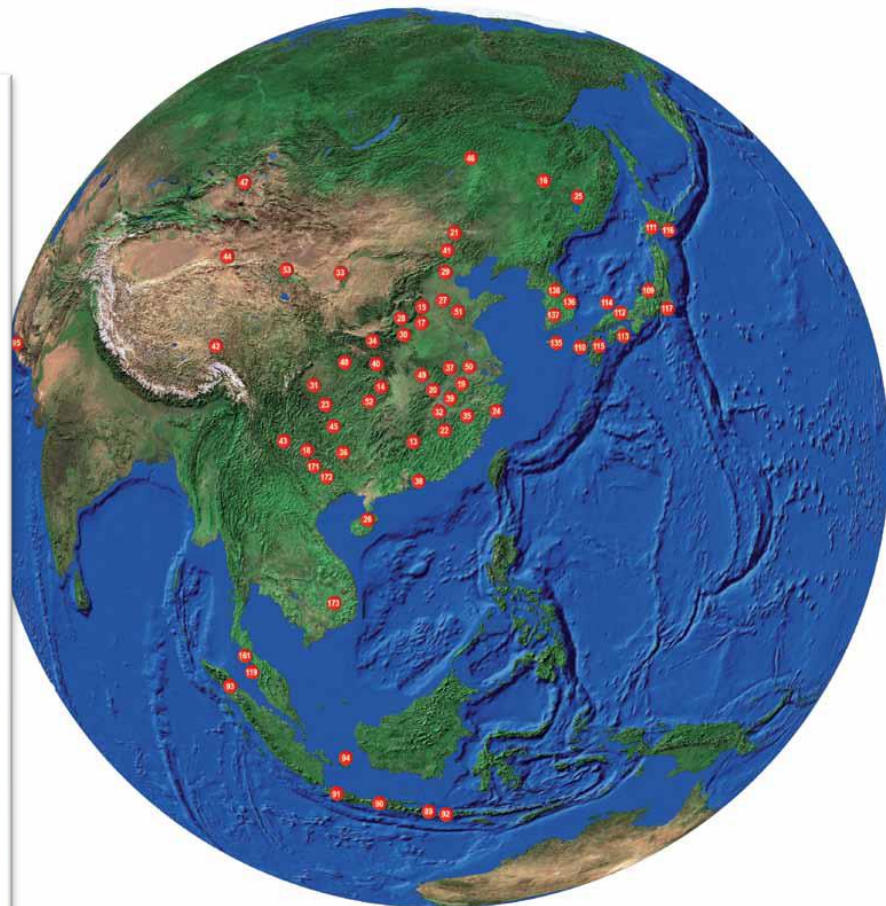
CYCLE GEOTOURISM



Geoparks in Europe



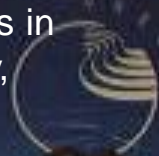
Geoparks in China



Jiaozuo Geoparks Conference 2006

第一届国际地质公园发展研讨会——科学与管理
THE 1st INTERNATIONAL SYMPOSIUM ON DEVELOPMENT WITHIN GEOPARKS: SCIENCE AND MANAGEMENT

James PR, James JA and Clark IF, (2006) Geoparks in Australia - Sustainable development with Geodiversity, Geoconservation and Geotourism.



Sponsored by
International Union of Geological Sciences
People's Government of Jiaozuo City
Chinese Academy of Geological Sciences
Geological Society of China
China National Geoparks Association

Organized by
People's Government of Jiaozuo City
Chinese Academy of Geological Sciences
Geological Society of China

Networking - Geocommunity & Geoconferences



Geocommunity & Geoconferences – Jiaozuo 2006

★ Yuntaishan Global Geopark 2006



Geotourism & Geo(Sci)ed

Geoventures & Geotours



Geoventures & Geotours

Red Rock Gorge Geotrail, Yuntaishan



Geoventures & Geotours

Mass Geoventures & Geotours



GEO(Heritage) SITES



The Yuntaishan
Butterfly Stone

Geoventures & Geotours



2nd International Conference on development within Geoparks, Mt Lushan – June 2007 ★

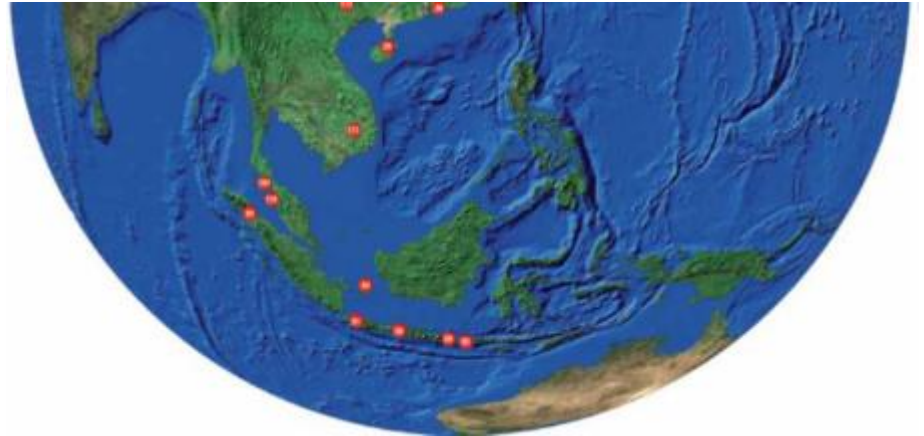


Geocommunity & Geoconferences

Q?

James PR, Clark IF and James JA . “Glorious Kangaroo Island, its Caves and its Beauty Spots” JF Bradley, 1926: tales of earthquakes and volcanoes from eighty years past in a potential “geopark” in South Australia.

Geoparks in SE Asia, Langkawi/Malaysia, Satun/Thailand, Vietnam, Indonesia



Regional Conference on Asia Pacific Geoparks

★ Langkawi November 2007



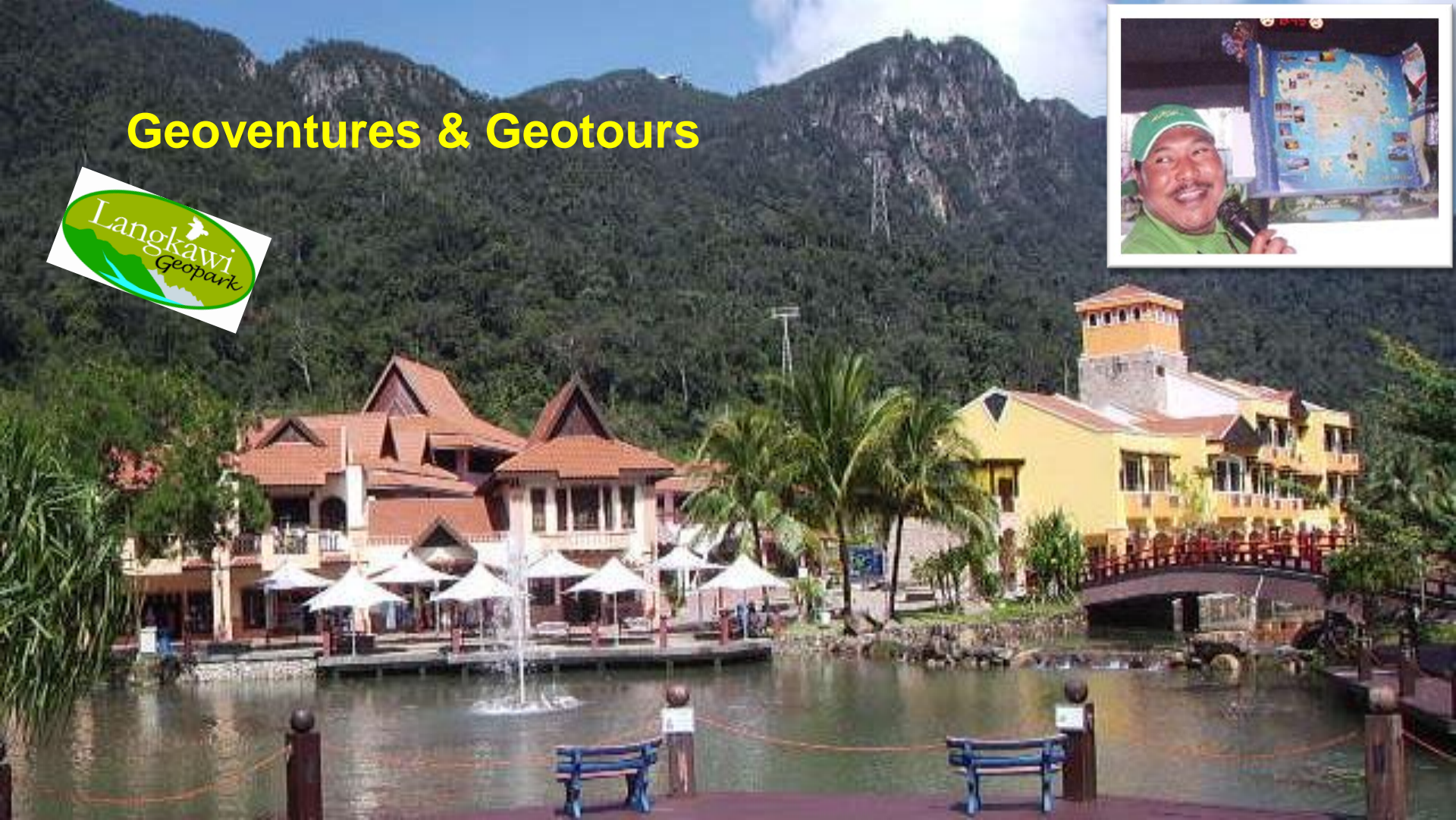
James JA, James PR and Clark IF, (2007) Using the National Heritage and Tourism Thematic Interpretation Framework (NHTTIF) as an interpretive planning tool to develop the concept of an island geopark on Kangaroo Island, Australia.

Geocommunity & Geoconferences

An UGG is “a single unified geographical area where sites and landscapes of international geological significance are managed with a holistic concept of protection, education and sustainable development”



Geoventures & Geotours



Geoventures & Geotours



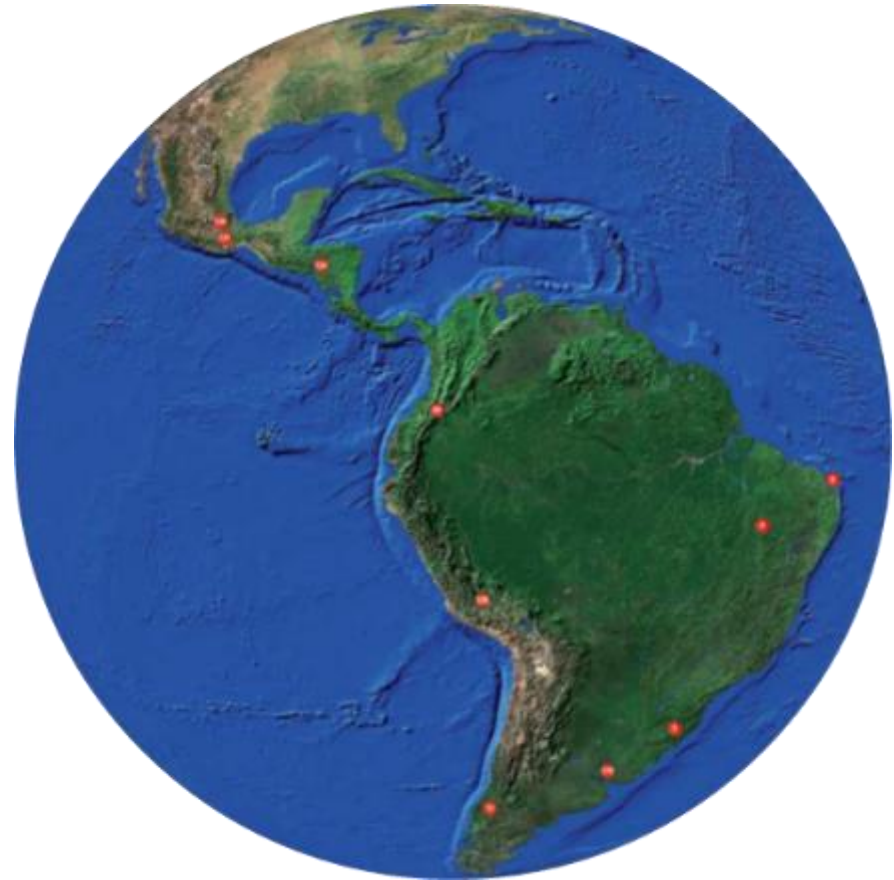
OK, so what makes a GEOPARK?

1. **Geoconservation & Geoheritage** - Safeguarding geological heritage (SSSI/Geosites/Monuments/Geoscience Research)
2. **Geotourism & Geo(Sci)ed** - Transferring knowledge to general public, local community, students and visitors (by Geosigns & Geotrails etc)
3. **Geoventures & Geotours** - Supporting “**sustainable**” economic activity for the local (esp.indigenous) population (eg Geopark Rangers)
4. **Geodiversity & Geointerpretation** - Increasing the public’s awareness and appreciation of geological objects, features and processes esp. “Deep Time” and “Geohazard” information & mitigation
5. **Geocommunity & Geoconferences** - (geo)cooperation/ networking between all stakeholders – local community, tourists, government(s), museums, university, exploration, mining, quarrying

plus Management Team/Committee, Budget, Business Plan, Marketing Plan with Projects – AND A WEBSITE!!!!

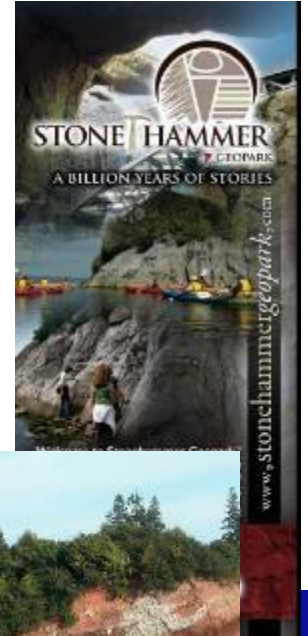
**You need all of these! “to become a UGG
(Geopark) you have to already be one!” Q?**

Geoparks in the Americas – SACGN & CGN (USA?)



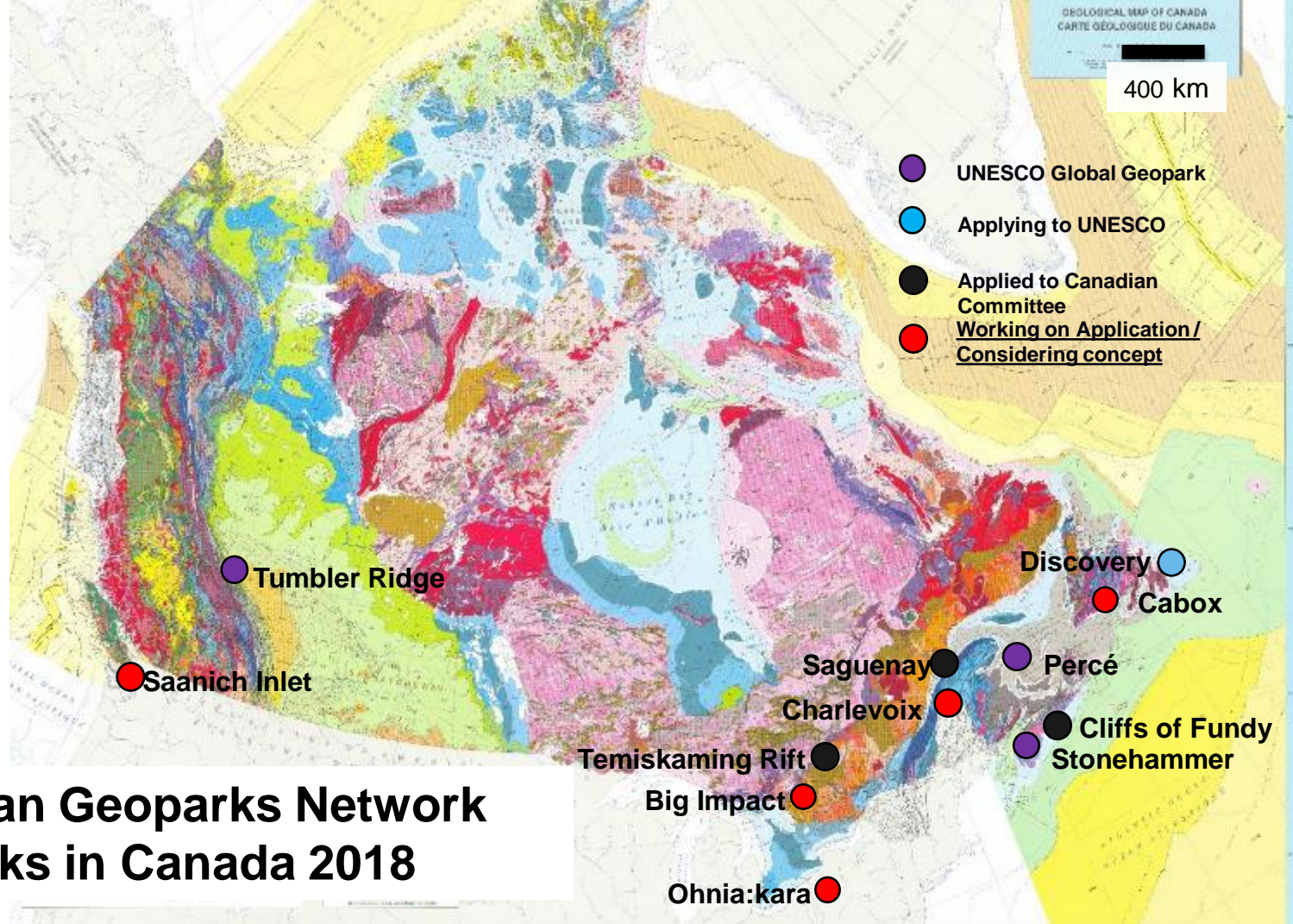
Stonehammer Global Geopark: North America's **First** Geopark

- A billion years of stories
- Geological tourism
- Ten principal activities



400 km

- UNESCO Global Geopark
- Applying to UNESCO
- Applied to Canadian Committee
- Working on Application / Considering concept



Canadian Geoparks Network Geoparks in Canada 2018

Geoparks in Africa & Australia?



3rd International UNESCO Global Geoparks Network conference - Terra Vita Geopark – Osnabruck June 2008



**Clark IF, James PR, and James JA (2008) The Difference
Between a Rock and a Hard Place: Using Geology to Add Value
to the Nature-based Tourism Experience.**

Kanawinka Geopark

Website - "One of the most important aspects of a Geopark is the link between the geology and the people;

their stories, culture and history that builds a sustainable source of geotourism, brings jobs to rural and indigenous people and helps protect sites of importance and promote geoheritage"



Mt Shank young dormant Australian volcano active only 5400 years ago

BUT THEN, in 2009

“the Australian Government advised UNESCO that Australia would not recognise the Kanawinka Geopark because of the deficient UNESCO process in declaring it.”



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South Australia

A screenshot of a Microsoft Internet Explorer browser window displaying the website for Kanawinka Global Geopark. The address bar shows the URL 'http://www.kanawinkageopark.com/'. The page features a large header with the text 'KANAWINKA GLOBAL GEOPARK' and 'South West Victoria & South East South Australia'. To the right of the header is the 'GLOBAL GEOPARKS NETWORK' logo. Below the header is a navigation menu with links for 'Kanawinka', 'Visiting Kanawinka', 'Kanawinka Knowledge', 'Creative Kanawinka', 'Global Geoparks', and 'Fact Sheets'. A central banner reads 'The Geology that forms the Landscape, Culture and Communities of South West Victoria and South East South Australia'. On the left side, there is a 'News and Coming Events' section with a date '17-20 April 2010' and a link to the 'Second Global Geotourism Conference'. The browser's taskbar at the bottom shows the 'start' button, several open tabs, and the system clock at 2:42 PM.

PENSIONE





2016-2023 – Nature Foundation SA Witchelina and Hiltaba Geotours



The Ridgetop Track Geotour



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South Australia

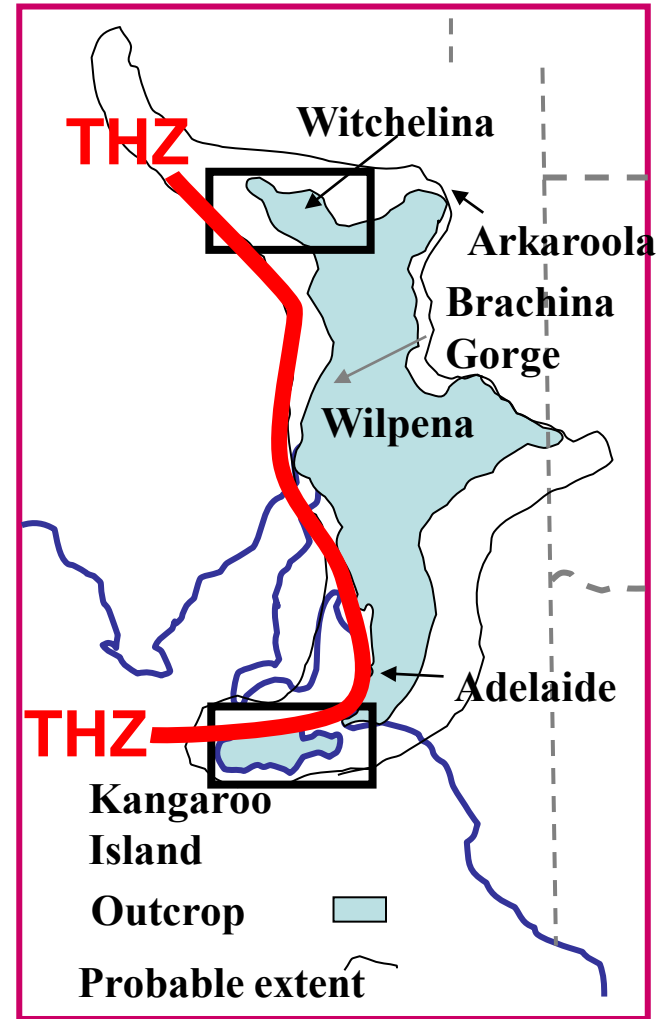
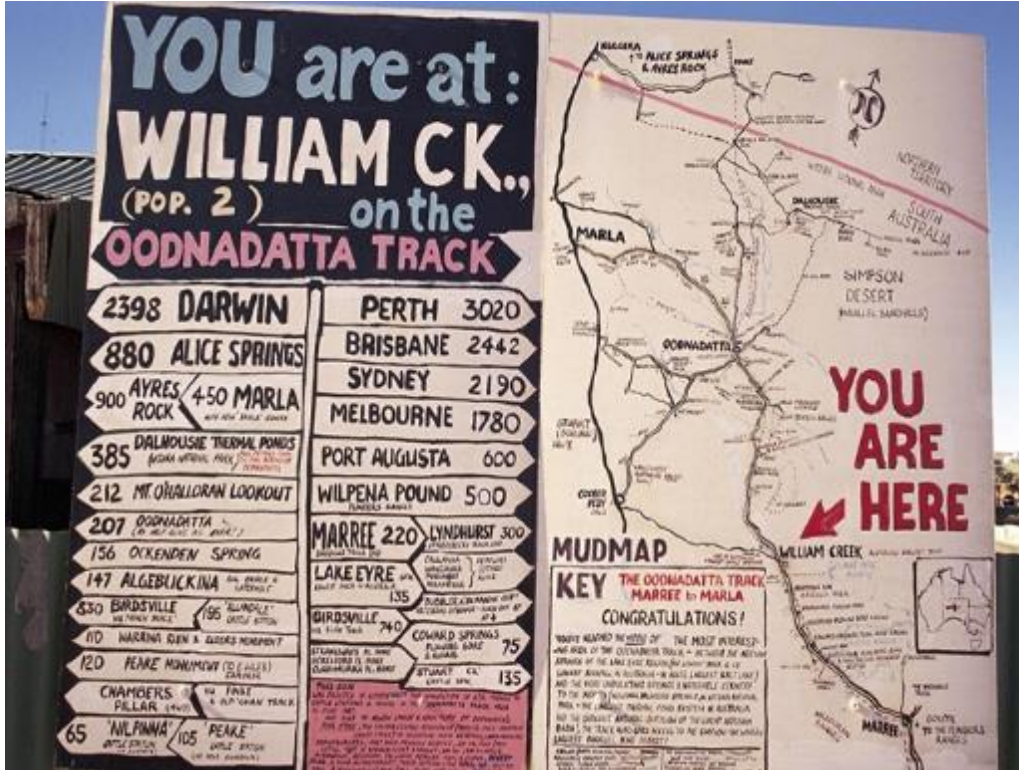
“Wild & Wicked

Witchelina”



Kuyani-Willouran
Georegion

Witchelina – “Gateway to the Outback”





Kuyani-Willouran Georegion

“NF Witchelina Station”

- 4,220 km² (KI)
- Sensational geology
- Metamorphic fold-thrust terrain
- >90% rock exposure



And stunning views from Space!



Handbook of South Australian Geology

Edited by..... L. W. Parkin
with contributions by ... J. B. Firman
R. K. Johns
N. H. Ludbrook
B. P. Thomson
H. Wopfinger

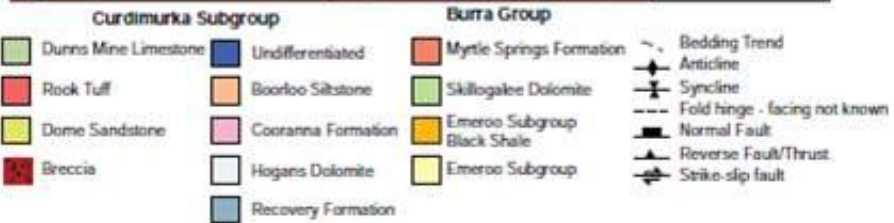
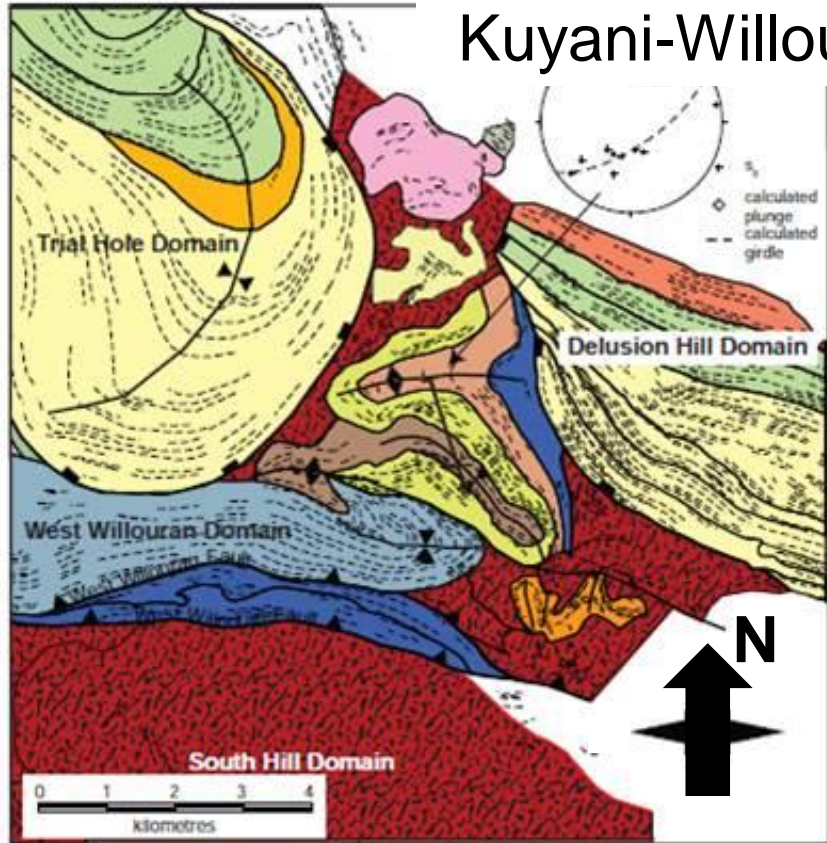
Geological Survey of South Australia
1969

Field sections in Proterozoic Series
Givry section of the Willeroo
District, 24 miles southwest of Murray.
Scale—1 inch = 1 mile.
Illustration (Photo: Gavin Sharp)



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South Australia

Kuyani-Willouran Georegion



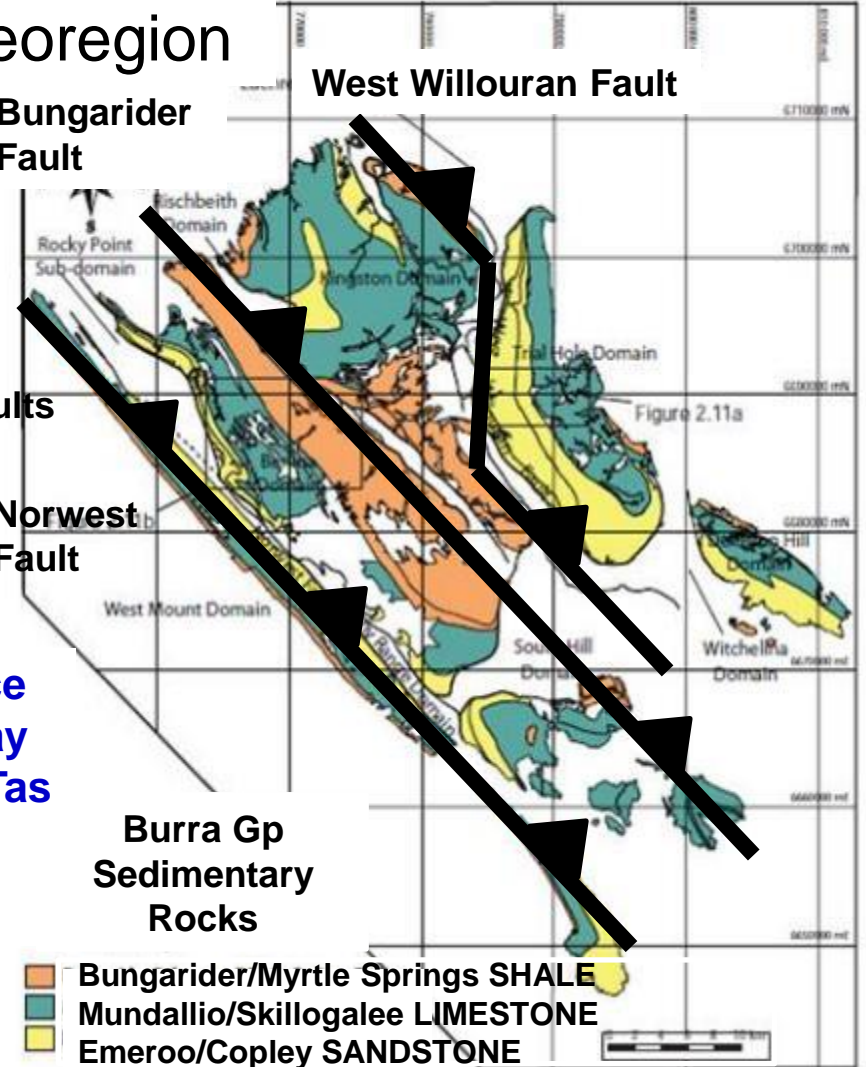
3 Main Faults

Norwest Fault

Wallace
Mackay
PhD U Tas
2011

Bungarider Fault

West Willouran Fault



Burra Gp
Sedimentary
Rocks

Bungarider/Myrtle Springs SHALE
Mundallio/Skillogalee LIMESTONE
Emeroo/Copley SANDSTONE