



CAVE SCIENCE

POST GRADUATE INSTITUTE OF ARCHEOLOGY
UNIVERSITY OF KELANIYA SRI LANKA

ARMSTRONG OSBORNE



THE UNIVERSITY OF
SYDNEY

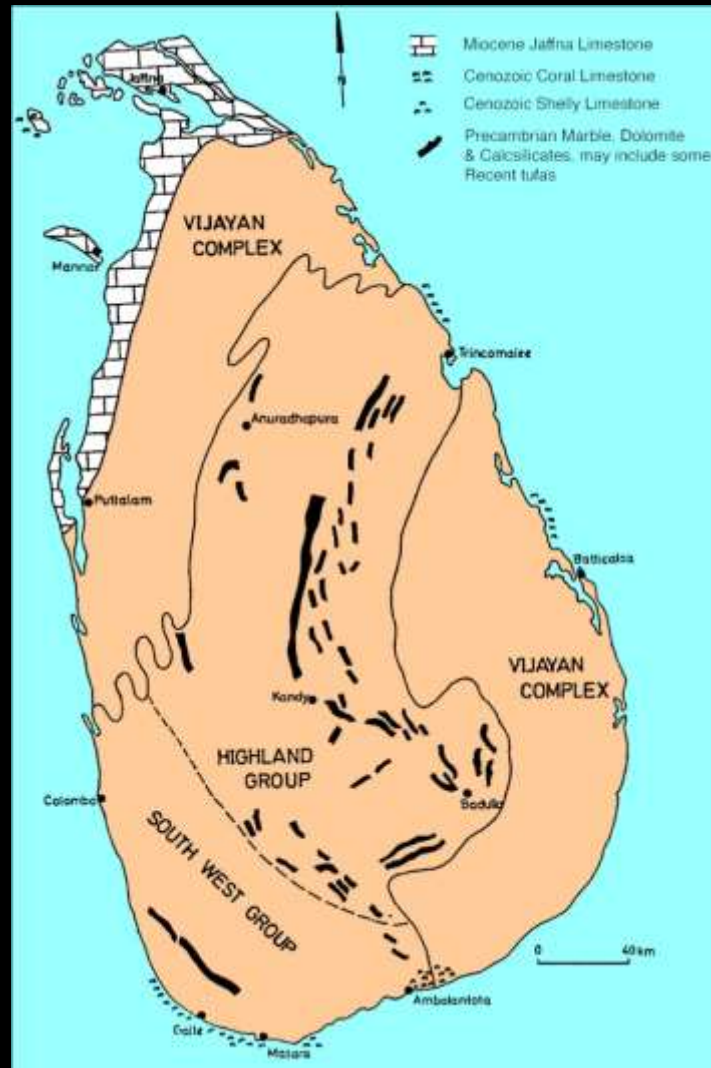


SRI LANKA





SRI LANKA, BASIC GEOLOGY



CAVES & KARST-LIKE FEATURES IN SRI LANKA

- › CARBONATE KARST IN JAFNA LIMESTONE
- › CAVES IN CARBONATE TUFA
- › SURFACE KARST IN PROTEROZOIC GRANITE GNEISS
- › “SOLUTION” CAVES IN GRANITE GNEISS & META CARBONATES
- › TECTONIC & BOULDER CAVES IN GRANITE GNEISS
- › CAVES IN IRON ORE
- › SOIL PIPING CAVES



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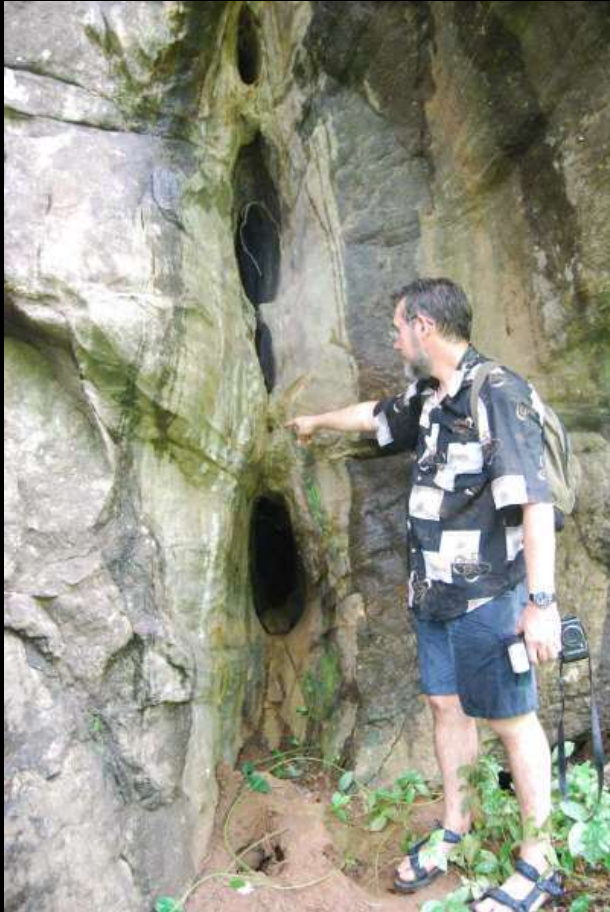
SPELEOLOGY & CAVE SCIENCE IN SRI LANKA

- 
- › NO LOCAL CAVING GROUPS
 - › BRIEF VISITS BY EUROPEAN CAVERS
 - › SOME COMMERCIAL ADVENTURE CAVING
 - › SOME COLONIAL SCIENCE IN 19th Century
 - › SOME LOCAL SCIENCE IN 1960s
 - › STRANGE GERMAN DATABASE



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HOW DID I GET THERE ?



June 2009



August 2010

THE PROJECT



CAVE SCIENCE
POST GRADUATE INSTITUTE OF ARCHEOLOGY
UNIVERSITY OF KELANIYA SRI LANKA

Aims:

To introduce Cave Science at PGIAR

To develop local skills and expertise

To establish a Sri Lanka karst database

To develop a postgrad Cave Science Course

BUT research & funding is required before

Course development is possible

Commenced October 2008

AO 2 Visits to SL, Jun 2009, Aug 2010

WW 1 Visit to Australia, Oct 09



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THE TEAM & THE CAR



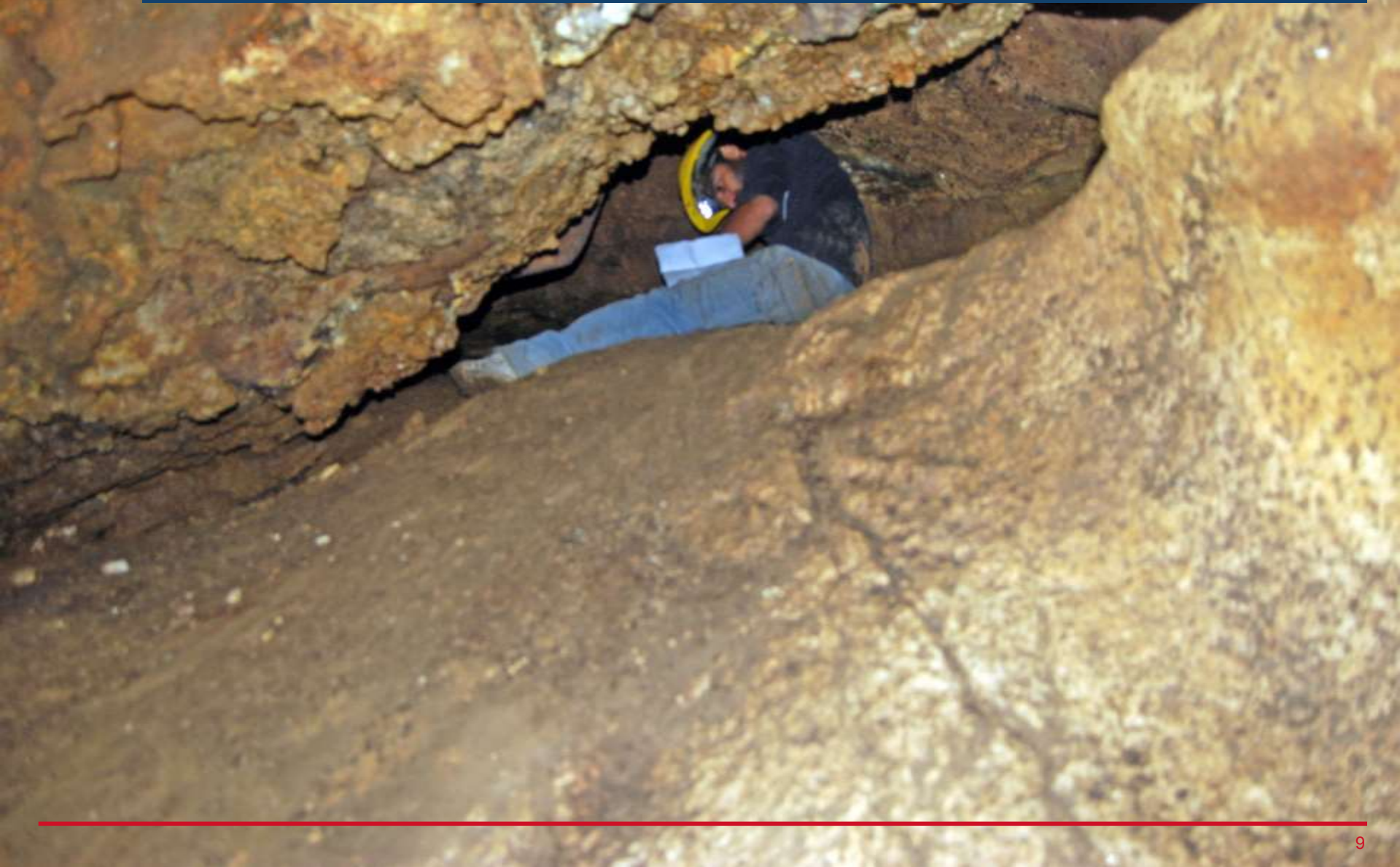
Leader: Dr Wasantha Weliange
Architect: R.S Dandeniya
Archaeologist : Prageeth Elgiriya
Geologist: Pathmakumara Jayasingha





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DEVELOPING LOCAL SKILLS





NO, NORTH IS THIS WAY!





SURFACE KARST ON GRANITE GNEISS, 2009





WAWULPANE CAVE, PALLEBEDDA, 2009





SIGNIFICANCE OF GNIESS CAVES



- › Abundant in central highlands
- › Many modified and used as temples
- › Contain important archaeological sites, historic & Palaeolithic
- › Important role in legends
- › Significant bat population
- › Invertebrates & microbes not studied
- › Unusual minerals and cave sediments



KUKALUWAGALA TEMPLE CAVES 2009





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KOSGALA WAWAL, RATHNAPURA DISTRICT, 2010





STRHREEPHURA CAVE, RATHNAPURA DISTRICT, 2010





PALPOA CAVE RATHNAPURA DISTRICT, 2010





FAHIYANGALA TEMPLE CAVE, 2010





NITRE CAVE, MEEMURE, KNUCKLES 2010





WEATHERING, CARBONATES & SPELEOGENS



SPELEGENESIS IN GNEISS

- › Evidence for Phantom Rock at Kukaluwagala
- › No evidence for simple parakarst
- › Solution of both silicic and carbonate bedrock
- › Cave are not just holes left after carbonate removed
- › No clay residue from feldspar weathering
- › Deep weathering of cave floors due to guano
- › Caves look like karst caves
- › Breakdown common, but clearly secondary
- › Origin of large vaulted chambers unclear
- › Little known yet about network caves and inner sections of caves
- › Caves contain perched pools of still water



TWO CRACK CAVE, TECTONIC CAVE, 2010





IRON ORE CAVE, 2009





PIPING CAVE, KNUCKLES, 2010



Cave Guide at Postojna Cave

----- Forwarded message -----

From: **Marjan Vilhar** <marjan.vilhar@gmail.com>

Date: 2010/9/29

Subject: Re: From australia

To: Pen Osi <osincave@hotmail.com>

Greetings dear Pen from Slovenija....

I was very surprised when when I saw your mail. I was on long holiday (caving in Albanija) and I just now found your mail

between piles of imails (facebook, Ads....) *sorry*. We are well in Slovenija, survive heavy rainfall now we are slowly preparing for winter and cold weather.

Of course I am still interested about caves in Australia *always interesting thing -caves-* the only problem is vacation, because over the winter I am also working....

Something about me: name: Marjan (Mario) Vilhar Postojna Slovenija old 26 years member of cave Club Luka Čec Postojna....

Web page of club: <http://www.dzrj-lukacec.si>

Above some pictures from expedition in Albanija -more interesting pictures on web page- ...

Greetings on the other side of the World *I hope that you have beautiful memories on Slovenija*

Marjan

