

THE VICTORIAN GEOLOGIST



February 2010

THE GEOLOGICAL SOCIETY OF AUSTRALIA
Victoria Division

First General Meeting for 2010
Thursday 25th February at 6:15 p.m.

Sea Change in Deep Time: The Origin of Whales

Dr Erich Fitzgerald

Museum Victoria, Melbourne
&
Smithsonian Institution, Washington, DC

**Fritz Loewe Theatre, Earth Sciences Building,
University of Melbourne**

Ever since Charles Darwin penned his Origin of Species, scientists have been both intrigued and frustrated by the question of whale origins. Only recently has a combination of genetics, anatomy, and most dramatically, fossils, shed light on this long-standing mystery of evolution. And it is fossils from the Oligocene (25 million years ago) of Victoria that have added a compelling new twist to the whale's tale. For these remarkable fossils illuminate the early evolutionary history of the largest animals that have ever lived, the baleen whales.

A NOTE FROM THE EDITORS

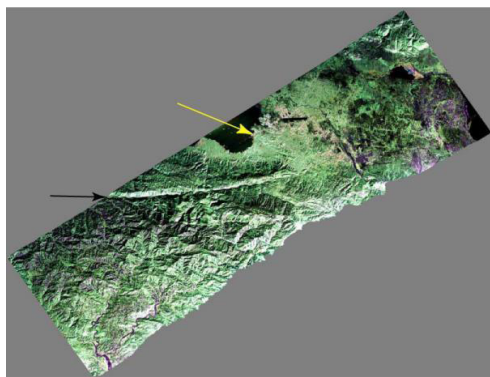
Welcome to the first edition of The Victorian Geologist for 2010! As always, we encourage our members to provide us with tid-bits of information such as photos and reports from field trips or holidays - anything geology related! If you have any ideas for the newsletter, including what you want to see printed (and what you don't!) please feel free to email either Peter or myself (email addresses on the back page). After all, the GSAV committee and newsletter editors are here to represent YOUR views and stories.

We look forward to the year ahead in 2010

Alison Fairmaid

Airborne Radar Captures Image of Post-Quake Haiti

Science Daily



JPL's Uninhabited Aerial Vehicle Synthetic Aperture Radar (UAVSAR) captured a false-color composite image of the city of Port-au-Prince, Haiti, and the surrounding region on Jan. 27, 2010. Port-au-Prince is visible near the center of the image. The large dark line running east-west near the city is the main airport.

Shortly before 5 p.m. local time on Jan. 12, 2010, a magnitude 7.0 earthquake struck southern Haiti. The earthquake's epicenter was about 25 kilometers (15 miles) west-southwest of Port-au-Prince, close to the west (left) edge of this image. The large linear east-west valley in

the mountains south of the city is the location of the major active fault zone responsible for the earthquake: the Enriquillo-Plantain Garden fault. The fault extends from the western tip of Haiti past Port-au-Prince into the Dominican Republic to the east of this image. Historical records show that the southern part of Haiti was struck by a series of large earthquakes in the 1700s, and geologists believe those were also caused by ruptures on this fault zone.

Satellite interferometric synthetic aperture radar measurements show that the Jan. 12 earthquake ruptured a segment of the fault extending from the epicenter westward over a length of about 40 kilometers (25 miles), leaving the section of the fault in this image unruptured. The earthquake has increased the stress on this eastern section of the fault south of Port-au-Prince and the section west of the rupture. This has significantly increased the risk of a future earthquake, according to a recent report by the U.S. Geological Survey.

Reference:

NASA/Jet Propulsion Laboratory (2010, February 2). Airborne Radar Captures Image of Post-Quake Haiti. ScienceDaily.

Retrieved February 8, 2010, from <http://www.sciencedaily.com/releases/2010/02/100202112204>.

FORTHCOMING EVENTS



AESC
australian earth sciences
convention

Earth Systems:

change
sustainability
vulnerability

4-8 July 2010

**National Convention Centre
Canberra**

In July 2010, an outstanding selection of national and international speakers, industry leaders, and key decision makers will meet in Canberra in the scenic Eastern Highlands, just a few hours drive from Australia's major ski fields.

Canberra is not only the nation's capital and heart of policy development, but it is also home of two of Australia's premier geoscience organisations Geoscience Australia and the Australian National University's Research School of Earth Sciences (birthplace of the famous SHRIMP mass spectrometer that has revolutionised Earth Science research over the past two decades).

Early Registration is still available until April 2, 2010

visit: <http://www.aesc2010.gsa.org.au/registration.html>



GIANT
ORE DEPOSITS
DOWN-UNDER

13th Quadrennial IAGOD Symposium 2010

Adelaide Convention Centre

Adelaide, South Australia

6 - 9 April 2010



ADELAIDE | SOUTH AUSTRALIA | 6 - 9 APRIL

The objective of the International Association on the Genesis of Ore Deposits (I.A.G.O.D.) is to promote international co-operation in the study of the genesis of ore deposits and to further the growth of knowledge in this field. These tasks are achieved in several ways. International symposia are organized by IAGOD, and a variety of meetings and symposia are held in conjunction with other organizations interested in the genesis of mineral deposits.

Registrations for the 2010 symposium is available now.

Visit: <http://www.alloccasionsgroup.com/IAGOD2010>

Dinosaur Had Vibrant Colors, Microscopic Fossil Clues Reveal **Science Daily**

A recent study published in *Science* has revealed vibrant coloured feathers belonging to a 150 million year old dinosaur. By analysing melanosomes – colour-imparting cellular organelles – researchers at Yale University have been able to assign colours to an entire animal fossil. The analysis was so precise that the team was able to assign colors to individual feathers of *Anchiornis huxleyi*, a four-winged troodontid dinosaur that lived during the late Jurassic period in China. This dinosaur sported a generally gray body, a reddish-brown, Mohawk-like crest and facial speckles, and white feathers on its wings and legs, with bold black-spangled tips.



Credit: By Michael DiGiorgio/Courtesy Yale

The new discoveries provide a wealth of insights into the compelling history of feather evolution in dinosaurs prior to the origin of modern birds. The study documents that color patterning within feathers and among feathers evolved earlier than previously believed. Further, these results indicate dinosaur feathers may have evolved for communication.

Journal Reference:

Quanguo Li, Ke-Qin Gao, Jakob Vinther, Matthew D. Shawkey, Julia A. Clarke, Liliana D'alba, Qingjin Meng, Derek E. G. Briggs, Long Miao, Richard O. Prum. Plumage Color Patterns of an Extinct Dinosaur. *Science*, Online February 4, 2010 DOI: 10.1126/science.1186290

Upcoming 2010 Annual General Meeting

The AGM will be held on the 29th of April. It is now time for all of our members to consider becoming involved in the GSAV for 2010/2011. We have a few committee positions that have been vacant for sometime, and are always welcoming and encouraging people of all ages to attend committee meetings to find out what goes on behind the scenes.

Nominations will open for executive positions in the committee, along with general committee member positions in the coming months. We encourage you to consider nominating yourself or someone else. If you have any questions about what the committee does and what the positions entail, please feel free to contact any of the committee members listed on the last page of this newsletter, or emailing our secretary Adele at adele.seymon@dpi.vic.gov.au

Something interesting to share? Want to see your name in print?

Don't be bashful, contribute to the GSA(V) monthly newsletter!

If there are any events, happenings, news, or views that would be of interest to the membership, please send your details and information to Peter Hoiles at p.hoiles@pgrad.unimelb.edu.au

We'd be glad to hear from you

FORTHCOMING SEMINARS AND EVENTS

to be presented at
GSA (Victoria Division) meetings

Note: unless otherwise indicated, all 2010 talks will be held in the
Fritz Loewe Theatre, Earth Sciences Building, University of Melbourne.

March 25	TBA
April 29	Annual General Meeting

WELCOME TO OUR NEW MEMBERS



Monika Niessing
Nicholas Barker
Alan Aitken

Visit the GSAV on www.vic.gsa.org.au or the GSA on www.gsa.org.au
• Renewing your GSA membership is easy - it can now be done online. •

CONSIDER CONTRIBUTING TO TAG!

It is member contributions which make TAG a member magazine—please keep the contributions coming and assist with informing all of the membership (not just your Division) about your activities.

Please send your news to: tag@gsa.org.au



tag

GSA (VICTORIA DIVISION) COMMITTEE

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