2\textsuperscript{nd} John de Laeter Memorial Lecture

7.00 pm, Monday 19\textsuperscript{th} March, 2012
Bankwest Theatre, Building 200A, Curtin University, Bentley
(map on back page)

Volcanoes, Asteroid Impacts and Mass Extinctions

FRED JOURDAN

The history of life on Earth is punctuated by large mass extinction events. The cause of these mass extinctions remains unknown and controversial. Isotopic and elemental Chemistry is a tool of choice that helps us understand why these extinctions occurred. In particular, chemical data shows that the extinctions are linked somehow to drastic climate changes at this time. What caused these dramatic changes? Various geochemical tools are used to establish the ages and characteristics of major events in Earth’s history such as large volcanic eruptions and massive asteroid impacts. In this talk, we will investigate the possible causes of past climate changes and mass extinctions and, the past

Fred Jourdan is a Senior Research Fellow at the John de Laeter Centre of Mass Spectrometry & Department of Applied Geology, Curtin University. He is director of the Western Australian Argon Isotope Facility dedicated to research in argon geochronology, the science of dating Earth processes. He obtained his PhD at Nice University, France in 2005. His research focuses on isotopic and chemical study of timescales and processes recorded in terrestrial and extraterrestrial materials, with a special focus on large volcanic provinces and impact events and their relationship with mass extinctions.

Members, Guests & the Public all Welcome
Enquiries: secretary@royalsocietyofwa.com or Lynne Milne 0414 400 219
http://www.royalsocietyofwa.com
This issue of the RSWA Proceedings was edited by Phil O’Brien and Lynne Milne
Annual Christmas Party 2011

The Annual RSWA Christmas Party was held on Wednesday 7th December at the new Western Australian Conservation Science Centre in Technology Park, Bentley and was attended by more than 60 members, friends and guests and our lovely Vice-Patron, Prof Lyn Beazley.

Atrium, WA Conservation Science Centre.

Tours of the Centre and the newly established planter boxes featuring an interesting selection of WA native plants were conducted by Juliet Wege, Ryonen Butcher and Kelly Shepherd. The tours were followed by a BBQ and a wonderful array of salads, desserts and nibbles brought along by everyone to share. Thanks are due to former Councillor Juliet Wege for organising the venue and tours and providing information on the Herbarium; Ryonen and Kelly for giving of their time; the WA Herbarium for allowing access to the facilities; and member Elizabeth Re for donating gift boxes that were presented to the tour leaders.

In the Centre’s courtyard. L-R. Jenny Bevan, Prof. Lyn Beazley and councillors Kate Trinajstic, Lynne Milne and Miira Gallegos

The Centre includes the Western Australian Herbarium and associated Reference Herbarium, Threatened Flora Seed Centre and genetics laboratories. The Western Australian Herbarium manages the State’s collection of scientific specimens of plants, algae and fungi. Taxonomists at the herbarium and in other herbaria in Australia and around the world use the collections and field research to describe new species, understand the distribution and variation in existing species, and build knowledge of the relationships of species to each other and to the environment. The new herbarium facility is state of the art and much thought has gone into its design - e.g. there is ample bench space for technical staff, research staff and visiting researchers to work with the collections; there are climate controlled storage rooms for working research collections and specimen loans from other institutions; and the scientist's offices have large windows facing the central atrium to provide natural lighting.

Specimens. There are currently more than 725,000 specimens in the collection. The collection continues to grow, largely as a result of botanical surveys and taxonomic research. The new facility has space for 1.2 million specimens. There are 4 specimen vaults that are climate controlled (at 16°C and 45% relative humidity) to help control hungry insect pests which pose a major risk to the collections. Climate control is just one part of a comprehensive integrated pest management approach, which has been designed to protect and preserve the collections. The specimens are stored in purpose built plastic boxes which help protect against physical damage, water damage (in
the event the emergency sprinkler system is activated) and insect damage.

The Reference Herbarium is a special-purpose, public access facility housing representative specimens of all known plant species in the State. It is used widely by consultants, researchers and the public to help identify wildflowers and other plants.

The Threatened Flora Seed Centre is Western Australia's principal seed banking facility for rare, threatened and poorly known native plant species. It houses over 3500 seed collections (each of which has a matching herbarium specimen voucher) and has banked 75% of the State's Threatened Flora. The Seed Centre stores living seeds as an insurance against environmental catastrophe, and is a major component of DEC's efforts to prevent extinction of WA's rare and endangered species. The Centre is also closely linked to DEC's translocation programme that establishes new populations of vulnerable plant species in areas away from threats that have caused them to decline. Almost 100 new populations of species have been established under this programme.

Gardens and planter boxes. The gardens around the Conservation Science Centre building reflect the scientific research that goes on inside it. Landscaped grounds on the west side represent the Pilbara region and on the east, the Goldfields region. Raised planter boxes are scattered around the building, on the outside near the entrances and in the courtyard. Different beds feature different groups or families of plants, with species selected so that there will be some flowering all year round.

Congratulations to Prof Richard Hobbs, WA Scientist of the Year*

Internationally renowned ecologist Professor Richard Hobbs has been named WA Scientist of the Year for his outstanding contributions in helping preserve key elements of unique West Australian ecosystems.

In a career spanning more than three decades, Professor Hobbs’ research has laid the foundations for significant developments in our understanding of the management and conservation of ecosystems and landscapes, as well as managing invasive species and restoring degraded ecosystems.

The RSWA extends its warmest congratulations to Prof. Hobbs.

Bernard Bowen, inducted into the WA Science Hall of Fame*

In a long and distinguished career, Dr Bernard Bowen has made a significant contribution to fisheries research, marine resource management, environmental protection and radio astronomy in Western Australia.

Dr Bowen held the position of Director of the Department of Fisheries for 23 years and has chaired many committees in the science field at a state, national and international level. He has played a significant role in the development of four research institutes: the WA Fisheries and Marine Research Laboratories; the WA Wildlife Research Centre; the WA Marine Science Institution and the International Centre for Radio Astronomy Research.

*Source – UWA University News
In 1991, Dr Bowen was appointed as a Member of the Order of Australia for his services to the fishing industry and in 2001 was awarded an Honorary Doctorate from Murdoch University in recognition of his distinguished career.

The RSWA extends its warmest congratulations to Dr Bowen.

OBITUARY

Gillian Perry (nee Jenkins)
19/10/1943 – 22/8/2011

Gillian Perry, one of Australia’s foremost botanical nomenclaturists, and a former member and office bearer of the Royal Society of Western Australia, passed away unexpectedly in August 2011.

Born in Perth, Gillian was the only child of two well-known Western Australian zoologists Clee Francis Howard Jenkins and Eileen Jenkins, both long-time members and office bearers of the Royal Society.

Gillian attended The University of Western Australia, graduating with a Bachelor of Science, with a major in Botany in 1967. A student of Professor Brian Grieve, her initial interest was in plant physiology and after positions with the Forests Department and the University’s Institute of Agriculture, she moved to a research position at Macquarie University, NSW working on plant hormones. A Master of Science degree with a thesis on gibberellins, completed under Professor Arthur McComb, was awarded in 1974.

In 1971 Gillian returned to Perth and joined the Western Australian Herbarium, then a part of the Western Australian Department of Agriculture. Gillian’s initial work, for the Flora of Australia, was on the genus *Logania*, however her interest turned to the neglected weed flora of the state and she quickly became the authority for weedy plant identification and nomenclature for the Agricultural Protection Board officers, Agricultural Advisors and farmers of the state’s vast agricultural areas.

From 1974 to 1980 Gillian, and husband Michael Perry, served on the Council of the Royal Society as Joint Honorary Secretaries. This followed a long family tradition as her father Clee Jenkins is the Society’s longest serving President.

Gillian’s work on the weed flora of Western Australia led to a growing interest in nomenclature, the branch of taxonomy concerned with the application of plant names, and following her retirement from the Western Australian Herbarium in April 1994, she devoted the rest of her life to the pursuit of nomenclatural stability in taxonomy. An intensely private person, her role in global nomenclature was not well known but had international impact. She attended, and was active in, the Nomenclature Sections of every International Botanical Congress from 1981 to 2011, a span of 30 years.

During that time she authored or co-authored no fewer than 69 proposals to amend and clarify the Botanical Code, also serving on the Permanent Nomenclature Committee for Vascular Plants from 1999 until her death in 2011. She had a special interest in lectotypification and the recommendations of the Special Committee set up in 1987, of which she was a member, were very important in clarifying the rules on this difficult area. Gillian’s many contributions were specifically recognised in the Acknowledgements of the Committees report.

The XVIII International Botanical Congress held in Melbourne in July 2011 will be remembered as historic, with three major decisions regarding botanical nomenclature: electronic publication of names, the cessation of mandatory Latin for diagnoses, and changes to the handling of fungal names. Gillian was involved in all of these. She was particularly instrumental in finding a solution and consensus to the thorniest issues involved in the latter, and for her efforts, the report of the mycological section of the congress named her an ‘honorary mycologist’.

It was in returning to Perth following the Congress that Gillian died, in her sleep, at Ceduna, South Australia. She is survived by husband Michael Perry.

Acknowledgments

We thank Kevin Thiele, John McNeill and Michael Perry for providing important details on Gillian’s life and career.
Australian Museum Eureka Prizes

The annual Australian Museum Eureka Prizes reward excellence in the fields of research and innovation, leadership and commercialisation, school science and science journalism and communication. The Eureka Prizes are a unique partnership between the Australian Museum and 22 sponsors and supporters. See the Eureka Prizes website at http://eureka.australianmuseum.net.au/ for more information on the 25 individual prizes, how to nominate, and information on past winners. Entries close at midnight AEST on 4th May, 2012.

ASTROFEST

Saturday 31st March, 5.30 – 9.30 pm

Curtin Stadium, Curtin University (next to Edinburgh Oval)

Astrofest is back! Don't miss all the wonder and excitement of the skies at Perth's premier astronomy and science festival, to be held at Curtin Stadium on March 31.

With activities, displays, special guests and telescopes of all shapes and sizes, Astrofest 2012 is sure to get people of all ages and backgrounds switched on to astronomy and science.

Astrofest 2012 is also a free event and is coordinated by the 'Astronomy WA' collective, The Astronomical Group of WA (AGWA), ICRAR, Scitech and the WA branch of the Australian Science Communicators (ASC-WA) with support from ASWA, BTOW, CSIRO, Curtin University, Department of Commerce, Geraldton Astronomy Group, Gingin Observatory, Lotterywest, Perth Observatory, and the University of Western Australia.

To learn more and register attendance go to: http://www.astronomywa.net.au click on ‘get involved’, ‘events’ and ‘Astrofest’.

EDITOR’S REPORT March 2012

The new Editorial Board came into effect on 1 January 2012.

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Contributions should be sent to:

Editor-in-Chief
Journal of the Royal Society of Western Australia
104 Hensman Street
South Perth WA 6151

OR email to journal@royalsocietyofwa.com

Revised instructions to authors will be on the RSWA (royalsocietyofwa.com) website shortly

The Royal Society of WA Library is held at
Kew St, Welshpool

Email: rswa@museum.wa.gov.au
Phone: 9212 3771
Facsimile: 9212 3882

A new front page for the combined WA Museum and Royal Society library catalogue:
Map to Bankwest Lecture Theatre, Curtin University

**Location:**
Bankwest Theatre, Building 200A
Curtin University, Bentley

**How to get there:**
From Car Park 3, follow path as indicated to stairs and overpass. Bankwest Theatre entry is on the left through courtyard.

(Interactive map available at http://properties.curtin.edu.au/maps/)