

NEWSLETTER OF THE POVG (PERTH OBSERVATORY VOLUNTEER GROUP INC).

# The Acraman impact and its possible effect on the evolution of life

About 570 million years ago, an asteroid about 4.7 km in diameter (about the size of the Perth CBD) slammed into South Australia about halfway between Woomera and Ceduna. A small salt lake, Lake Acraman, now fills the crater site. The crater has been deeply eroded, but it was originally about 90 km in diameter (large enough to have swallowed greater Perth). The impact scattered ejecta over an area about 1000 km in diameter (equivalent to an area extending from Geraldton to Southern Cross and Albany). The Acraman structure is one of the best-documented impact events known and most of the criteria used to identify an impact have been recognised. It was about half the size of the impact event associated with the extinction of the dinosaurs at the end of the Cretaceous. Nevertheless, it was probably large enough to produce a dust cloud that blocked out sunlight and caused

Many geologists currently think that a

severe glaciation about 600 million years ago caused Snowball Earth conditions, which had a profound effect on the evolution of life, and gave rise to the first animals. However, detailed studies of microscopic fossils belonging to a type of marine phytoplankton known as acritarchs indicates an alternative scenario, and suggest that the diversification did not take place immediately after the glaciation, but could have been triggered by the impact.

Dr Kath Grey graduated from Sheffield University in England with a BSc Honours and MSc in 1971 before joining the Geological Survey of Western Australia, where she holds the position of Specialist Palaeontologist. She is also an Associate Researcher with the Australian Centre for Astrobiology at Macquarie University. Western Australia has extensive areas of rocks older than 500 million years, so for nearly thirty years she has specialised in

studying the earliest forms of life, and has published extensively on this subject. Much of her data is incorporated in the geological maps and reports compiled by GSWA. She is a leading expert in the study of stromatolites, structures built by microbes, and is optimistic that similar fossils will one day be found on Mars. In the early 1990s, she undertook a PhD correlating late Neoproterozoic rocks across a wide area of Australia using acid-insoluble microfossils belonging to various groups of planktonic green algae. As the data was compiled, she recognised that a significant change occurred in the fossil assemblages about the time of the Acraman impact. In 2003, the WA Division of the Geological Society of Australia awarded her the Gibb Maitland Medal, the State's highest honour for contributions to understanding the geology of Western Australia.

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### SPECIAL NOTICE

From all the members of the POVG, a very happy and long retirement to Peter Birch.
Your enthusiasm and humour will be greatly missed by us all.

# Vollie Quiz Night Extravaganza

Friday night July 15 saw a gathering unlike any other ever seen at the Observatory. Our inaugural quiz night went off with a bang. It all started at a vollie meeting a couple of months or so ago, when we were talking around the topic of the end-of-season windup. New vollie Noreen Townsend suggested we try something different: a quiz night. There seemed to be plenty of interest, and plenty of helpful suggestions .....

Not wanting the task of setting questions, I began making enquiries e.g. browsing the Net for likely sources. Ouch! It turns out that you can pay hundreds of dollars for quiz packs. My emailed appeal for help via the perthobsvollies newsgroup was answered by Jeanne Bell, mysterious keeper of the vollie stats, saying that she and her husband Ken could provide the questions and run the quiz show. How could I refuse? The rest is history.

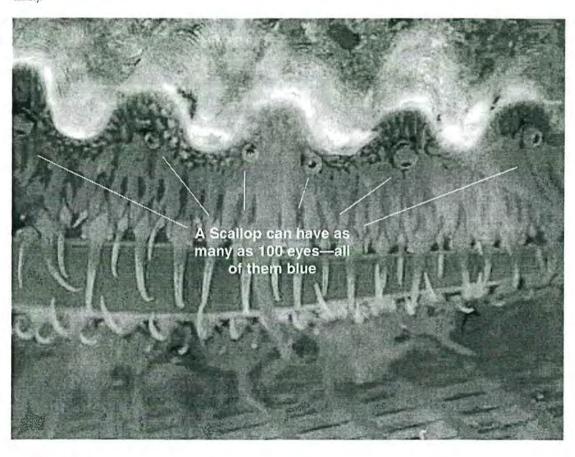
Jeanne and I liaised over the logistics of the event - how many people we could fit in, what prizes to get and how many, that sort of thing. Jamie okayed the expenditure, and we were off and running. We ended up with 43 people taking part, plus Jeanne and her 3 splendid family members running the show. It was a bigger gathering, with less expenditure, than at any windup since the vollie programme kicked off in 1996.

Thanks to all who came along and contributed to the fun of the night. Thanks also to Mike Freeman, Maxine Martin and Andrew Williams for donating prizes. Special thanks to Jeanne, husband Ken, sister Derril, and Derril's husband Andrew for running the evening. Honourable mention for Tania Emrich: she made scarves to donate, then took sick and couldn't come along.

Table 2 took off most of the top prizes: movie passes and bottles of plonk. For the next such event, these people will not be allowed to sit together: Jacquie, Elaine, Bevan & Leigh, Lloyd, and Tony & Dianna. I still say they should have had their scores reduced by one-seventh. With a further 10-point penalty for Bevan & Leigh arriving late. Shifting house is a feeble excuse. Greg Lowe

And one more thing: Jeff, what is the link between Frank Sinatra and a scallop?

They both have blue eyes! (Jeff)



# Peter Birch to Retire

It's difficult to imagine Perth Observatory without Peter Birch, but it's probably been a lot more difficult for Peter to imagine himself without the Observatory. In various ways he's had the good luck to be in the right place at the right time. He's also had the ability and the get-up-and-go to ride the crest of the wave of opportunity as it swept through.

Fresh out of Uni, Peter found gainful employment at the Observatory in 1970 and got off to a good start by finding the asteroid 1970PA. Even better, he soon got official approval to name it after his wife Wendy: Asteroid 2993 Wendy. This was the era when Lowell Observatory's link with our Observatory was forged, and Peter was involved from the early stages. He's been

our main contact with Lowell since the mid-70s: over 30 years. He managed the Perth contribution to the International Planetary Patrol 1971-76. In 1977 he played an important part in the discovery of the rings around planet Uranus.

The mid-80s were an exciting time, dominated by the return of Comet Halley. In the lead-up to the Halley observing programme, Peter spent four months as a resident astronomer at Lowell Observatory in Flagstaff, Arizona. Our own 1985-86 Halley observing programme, highlighted by the collaboration with Lowell and the University of Maryland, brought us the opportunity to try the fledgling technology of CCD imaging. Peter was right there.

Ted Bowell of Lowell Observatory named

an asteroid in Peter's honour in 1989; asteroid 3924 Birch. As if to really cement the relationship with Lowell, Peter spent another four months as visiting astronomer there in 1994. He also was Acting Government Astronomer from December 1993 to June 1994.

This is just a sampling of some of Peter's career highlights. Being a modest chap, he didn't want any fuss made over his retirement. Nevertheless, all of us can remember times spent with Peter - for some of us, rather exciting times - Observatory functions, comet observing, eclipses, aurorae, various kinds of public viewing sessions both local and remote.

It'll be strange here without you, Birchy. Greg Lowe.

## Celebrate Science Week with the Perth Observatory.

ALL STAFF and VOLLIES

The Royal Society of Western Australia (RSWA) in conjunction with ASWA and SciTech are hosting a event at the Horizon Planetarium to celebrate Science Week. They have selected Astronomy as a theme, with a title of "The Hitchhiker's Guide to Astronomy", to capture a wide range of people for an audience.

They expect that professional scientists and their families, including school children, and the lay-population interested in astronomy will comprise the audience.

The Minister for Science will open the event, and myself, Alex Bevan and a speaker from ASWA will be giving presentations.

The rest of the night will be taken up with an ASWA Expo, a Perth Observatory display and a planetarium show.

The organisers want to know the number of Perth Observatory staff and volunteers who would like to attend. At this stage it is not known if there will be enough seats for family members etc.

I think it is important to show the Observatory's 'support base', especially in

frontof the Minister so I would appreciate it if as many as possible could attend. Please email me (jamieb@calm.wa.gov.au) by NOON Wed 3rd Aug if you want attend. Also, let me know of any family members etc who wish to attend - I may be able to swing them some seats.

DATE: Wed 17 Aug

TIME: 7pm

LOCATION: Horizon Planetarium, Scitech Jamie Biggs.

### PHASES OF THE MOON FOR 2005

JOIN THE
POVG NEWS GROUP
If you've got any news,
information or pics post them on
the newsgroup. To join simply send
your email address to Bevan Har-
ris at:
ngc2070@bigpond.com
To unsubscribe send an email to:
perthobsvollies-
unsubscribe@yahoogroups.com.a
u
To modify your subscription, visit
the group website at:
http//au.groups.yahoo.com/
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New Moon	First Quarter	Full Moon	Last Quarter
			Jan 4 01:45
Jan 10 20:03	Jan 17 14:57	Jan 25 18:32	Feb 2 15:27
Feb 9 06:28	Feb 16 08:16	Feb 24 12:54	Mar 4 01:36
Mar 10 17:10	Mar 18 03:19	Mar 26 04:58	Apr 2 08:50
Apr 9 04:32	Apr 16 22:37	Apr 24 18:06	May 1 14:24
May 8 16:45	May 16 16:56	May 24 04:18	May 30 19:47
Jun 7 05:55	Jun 15 09:22	Jun 22 12:14	Jun 29 02:23
Jul 6 20:02	Jul 14 23:20	Jul 21 18:60	Jul 28 11:19
Aug 5 11:05	Aug 13 10:38	Aug 20 01:53	Aug 26 23:18
Sep 4 02:45	Sep 11 19:36	Sep 18 10:01	Sep 25 14:41
Oct 3 18:28	Oct 11 03:01	Oct 17 20:13	Oct 25 09:17
Nov 2 09:24	Nov 9 09:57	Nov 16 08:57	Nov 24 06:11
Dec 1 23:01	Dec 8 17:36	Dec 16 00:15	Dec 24 03:36
Dec 31 11:12			

http://www.wa.gov.au/perthobs/hpc5mn03.htm

### PERTH OBSERVATORY VOLUNTEERS' GROUP

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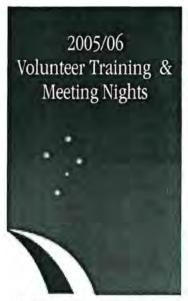
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http://www.wa.gov.au/perthobs



Perth Observatory Volunteers Group



Below are listed the training nights scheduled for 2005/2006.

Training is important for our volunteers, they enjoy it, and we need to support these staff members in return for the assistance they render.

All staff are directed NOT to ROSTER ANY ACTIVITY THAT WILL INTERFERE WITH TRAINING night attendees access to the lecture theatre and the VOF (and associated telescopes). Generally (but not necessarily depending on Public Holidays etc), these training nights are scheduled for 7pm the Monday after the week of Last Quarter. This list is also displayed on the volunteer notice board.

Also, could you please bring the details of this message to the attention of all staff under your direct supervision.

Your co-operation is appreciated.

Jamie Biggs.

### 2005

29 Aug 19 Sep 24 Oct 28 Nov

2006

23 Jan 27 Feb 27 Mar

18 Apr: (NOTE: thes is a

Tuesday)

22 May 19 Jun

17 Jul

21 Aug