



PERTH OBSERVATORY
Department of Conservation and Land Management

Perth Observatory Volunteer Newsletter

June 1997

Editor: Nikola Angus

Thank you to all staff and volunteers who were able to attend the meeting and dinner held at Lawnbrook Packing Sheds on the 9th of June. A wide variety of topics were discussed some of which had to do with the Observatory.

Some points brought up were:

1. Intake of more volunteers for later this year
2. Children on night tours
3. Training nights
4. Feedback from the night tours

Highlights for June

June sees Comet Hale-Bopp and Comet Encke very low in the western evening sky, however Encke is not visible to the naked eye. The end of June will be the last time to see Hale-Bopp until October when it can be seen in rising during the mid of the month.

Venus can be seen low in the west-northwest horizon just after sunset and will become easier to see as it moves away from the sun. While **Mars** is visible in the north west evening sky, fading as its distance from us increases. **Jupiter** is visible late in the evening sky rising about midnight in the east. Earlybirds can see **Saturn** in the northeast sky just before the beginning of twilight whereas **Mercury** is moving back toward the Sun and will not be observable until after mid June.

With the Milky Way expanding across the sky from east to west many objects can be observed. High in the south above the celestial pole lies **Centaurus the Centaur**, a Centaur being a Greek mythical half-man, half-horse beast. Centaurus is one of the largest constellations and envelopes Crux, the Southern Cross the smallest. The cross is standing vertical high in the southern sky at around 9pm. Objects associated with the Crux are Kappa Crucis (Jewel Box Cluster) which lies below the Beta (Mimosa) arm of the cross, and the Coal Sack which is a massive cloud of interstellar dust and gas that lies east of the Alpha (Acrux) arm of the cross. The Pointers of the Southern Cross are made up of Alpha Centauri, a double star which is the third brightest star in the sky, when viewed through telescope a third faint star comes into view, this is Proxima Centauri which is the closet star to the Sun (4.23ly away). Beta Centauri the prominent companion to Alpha is in fact more than 450ly away. Across from Beta lies Omega Centauri a fuzzy star like object that in fact is one of the brightest and richest globular cluster containing millions of stars.

Training Nights

As mentioned at the meeting Vic Levis has nominated himself as Training Night Coordinator. The training nights will take place on the first Monday after the last quarter of the Moon.

The training nights will be designed to help you:

- Use the different telescopes
- Identify and find objects in the night sky

Vic will contact people for the training nights, those still on probation will be given priority. A training night will be held prior to the beginning of September tours. More information will be advised closer to the date.

Observatory News

There are still some delays in the return of resurfaced mirror for the Lowell from the US but hopefully all will be operational by next month.

Tom Smith will soon return from his trek in China no news of whether any meteorites have been collected.

Attached to this month's newsletter are copies of the Night Tour Attendance figures as well as results from the Visitor's Survey. Night tour attendance set a record and the Government Astronomer sincerely thanks all volunteers and full time staff who contributed to this impressive result.

Facts and Figures

Facts and Figures for this month have been kindly sent in by Jacqui Milner.

The colour of Stars and their temperature.

Alpha Centauri is a binary (double) star. The majority of stars in our galaxy are binary stars. It is easy to see that both components of this pair are yellow stars, like our own Sun. The colour of a star is an indication of its temperature. White is hot, yellow is warm and red is cool. This is similar to heating and cooling an iron bar. When it is extremely hot it will glow white, changing colour as it cools down to a dull red and eventually black when it is cold. Sirius, is also an example of a hot white star. Antares, another binary, and Betelgeuse are cool red stars.

Magnification in a Telescope.

There's always a visitor who asks "What magnification is that?". Unless you have a calculator handy it can be hard to do the sums in your head. The formula is simple though - it's the focal length of the telescope divided by the focal length of the eyepiece being used. If you have a 20mm eyepiece in the Calver telescope, which at f/10 has a focal length of 3125mm (10x12.5 inches) the magnification will be roughly 156 times

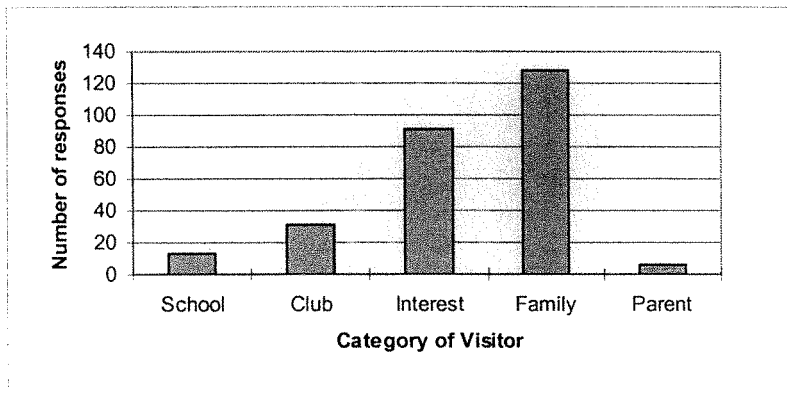
To have any information, user friendly explanations and hints published please send in the information to the Observatory attention Volunteer Newsletter.

VISITOR FORM SURVEY RESULTS:

Remember all those survey forms we handed out at the end of the tours ??

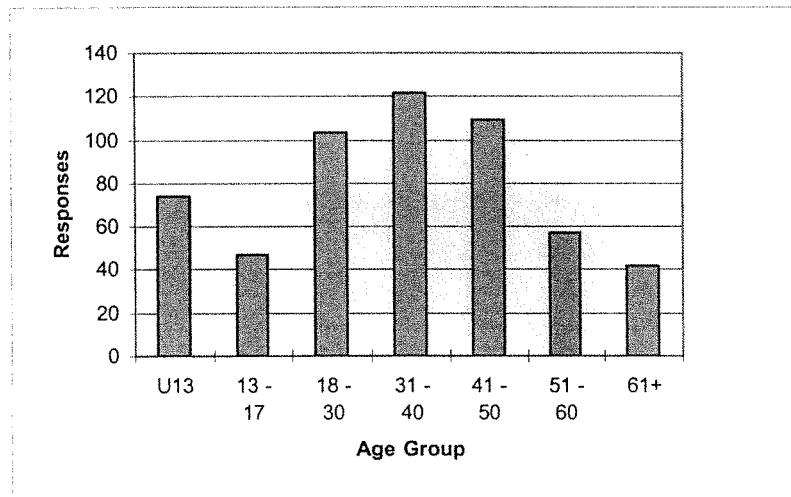
They have finally been analysed, and while they don't show up anything startling, it is good to see hard evidence of most of the trends that we expected.

The number of samples of visitors worked out at 552, but not all questions were answered by all respondents.



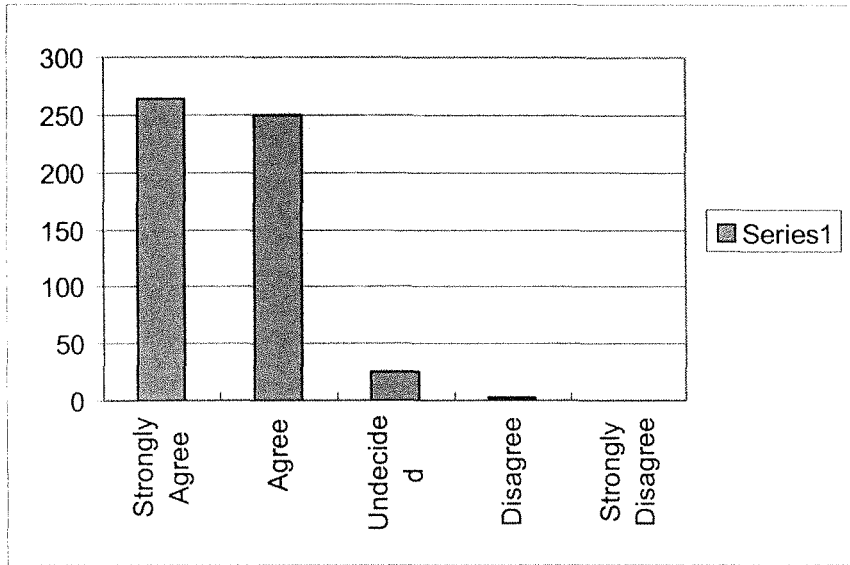
Visitor Category:

This was expected - the tours are oriented toward families.

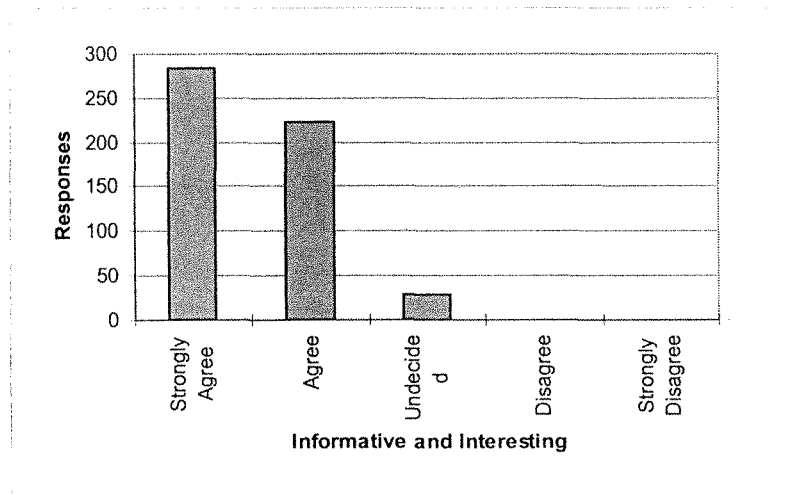


Age Group:

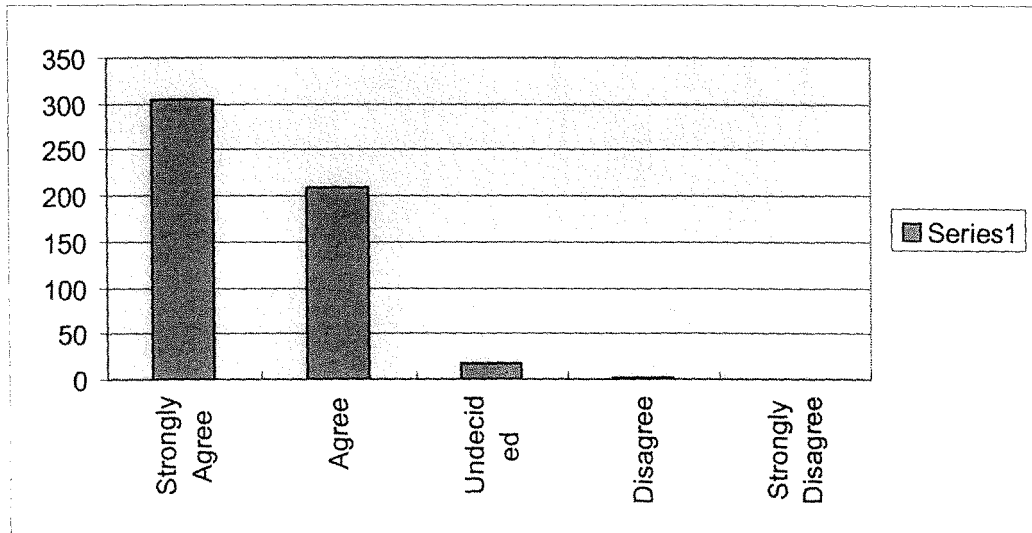
This backs up the 'family' trend - the lack of teenagers is a bit surprising.



Question "Did the information presented increase your knowledge and awareness of Astronomy?"
 This question has been used as a performance indicator for several years, and the percentages have not changed much.

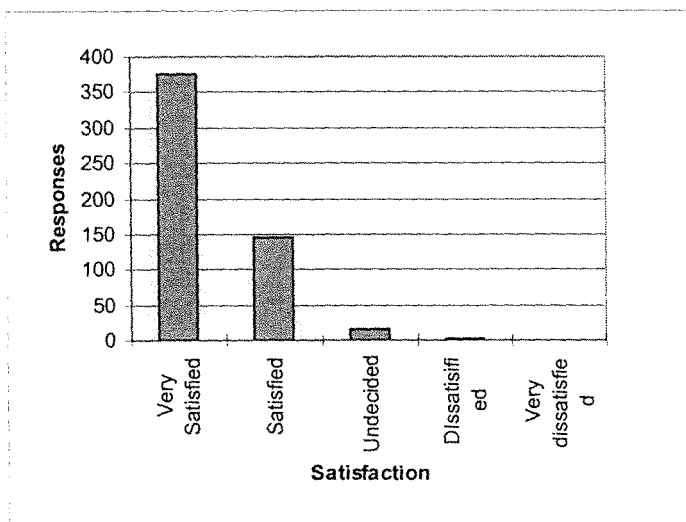


Question "Was the tour guide able to inform me and maintain my interest?"
 Obviously we are doing a good job here.



Question "Was the tour entertaining?"

People expect to be entertained as well as to look through telescopes. This is one of the harder aspects of running the tours - to keep up the discussions, and avoid long awkward silences in the domes.



This was the response to the question "How satisfied are you with your tour of Perth Observatory?"

This is an encouraging result that tells us we are doing a lot of things the right way.

These responses are a useful tool in tour management, and will be used in presentations to be made in the Observatory Annual Report. Certainly, they are an excellent lever when requesting more funding from our masters, and for justifying the continuation and possible expansion of our public program.

Peter Birch Astronomer, 1997 June 11

NIGHT TOUR ATTENDANCE - *INCREASING*

monthly				cumulative			
month	94/95	95/96	96/97	month	94/95	95/96	96/97
SEP	68	124	114	SEP	68	124	114
OCT	144	168	486	OCT	212	292	600
NOV	245	115	528	NOV	457	407	1128
DEC	186	162	641	DEC	643	569	1769
JAN	320	151	505	JAN	963	720	2274
FEB	656	321	564	FEB	1619	1041	2838
MAR	407	68	399	MAR	2026	1109	3237
APR	168	262	567	APR	2194	1371	3804
MAY	161	236	364	MAY	2355	1607	4168

