



PERTH OBSERVATORY
Department of Conservation and Land Management

Perth Observatory Volunteer Newsletter December 1997 Editor: Jacquie Milner

The editor would like to wish all staff and volunteers a very Merry Christmas and a Happy New Year! Next year's night tours start on January 2nd and there are still nights in January without volunteers to help so please find a space for yourself. Rosters for February and March are also available now and extra Deep Sky Tours are added as required.

Highlights in the Sky

Mercury will be lost in twilight for most of the next month. It is always difficult to see around the summer solstice as twilight lasts longer now than in winter. Mercury reaches inferior conjunction (the planet passes between the Earth and the Sun) on the 17th of December and it will then reappear in the morning sky at the end of the month. **Venus** will also start to sink back into the twilight as it, too, moves towards inferior conjunction. Watch it move back towards **Mars** as the month progresses. **Jupiter** is starting to move out of Capricorn into Aquarius and is also sinking towards the west. **Saturn** starts the night in the northern sky and is high in the north-west during the evening.

Some interesting conjunctions between the moon and planets occur throughout January, starting with Saturn passing only 0.5° from the moon on January 5th. Jupiter and Mars make a close approach to each other on January 21st. Check in your handbook for further details.

Handbooks for Volunteers

Don't forget to pick up your free handbook for volunteers if you haven't already got yours. Look for your name on a yellow envelope next to the signing-on/off book. Additional copies are available at \$15 (- 20% staff discount) each.

Volunteer Programme Awards

Congratulations to all staff, especially the volunteers, for the award of certificates of recognition for the Night Tours Volunteer Programme from the National Bank Community Link Awards and Volunteering WA. Special thanks must go to Trevor Dunn for the hard work in writing the applications that led to the awarding of the certificates.

Observatory News

- The Observatory held an astronomy field night for the Fremantle Festival on Sunday 30th of November, the last night of the festival. About 250 people viewed Saturn, Jupiter and Venus from South Terrace, opposite Gino's.
- Fifty guests came to the Observatory for the Time Capsule event on Monday 1st of December. This included the dedication of the South Celestial Pole Pointer in memory of the late Mr Philip Utting, husband of honorary historian Dr Muriel Utting.
- The public lecture under the stars on Friday 5th December was well attended by 250 people (and a bandicoot) who came to hear world famous astrophotographer Dr David Malin give his lecture "A Universe of Colour". Thanks to all staff (full-time and volunteers) who helped out on the night.
- The 2nd Annual Astrofest at Joondalup on Saturday 6th of December was an interesting day and was good public relations for astronomy and associated clubs and organisations. About 1200 people attended. Thanks again to all staff (full-time and volunteers) who attended to help.

- Dr Dave Schleicher, visiting from the Lowell Observatory in the USA, observed comet Hale-Bopp with Peter Birch. They used both the photometer and the CCD system on the 24 inch telescope.
- The CCD has been improved so that one fill of liquid nitrogen (used to cool the CCD) will last 10 hours instead of 6 hours, as was the case previously. This advantage means that the liquid nitrogen will last the whole night without needing recharging. The search for supernovae continues

...and some bad news...

There will be no Christmas BBQ this year as there have been just too many events in the one month. There will be one next year so you just need to wait a little longer!

Can you help the Editor?

Due to work commitments Jacquie is finding it hard to get the newsletter printed on time. She is wondering if anyone would be able to take over the job of editing the Volunteer Newsletter at the Perth Observatory. She will still be able to contribute articles and information to help you out. If you are interested please leave a note on the Volunteer notice board before December 22nd, when she is next rostered on.

New Volunteer Project Approved: Observatory Assistants

This project is designed to increase the scientific output of the Observatory, wherein volunteers assist full-time staff with observing, writing simple programs, analysing and checking data etc. It also has the virtue of "legitimising" activities of about 10 current volunteers involved in such areas as astrophotography work and the volunteer newsletter. If you are interested please keep reading this newsletter. Should assistance be required it will advertised here. As you can imagine volunteer involvement in the assistant projects will require a great deal of preparation, planning and training to maximise the benefit to all concerned.

The Seven Sisters

The Pleiades (pronounced plee-ay-dees) is one of the best known clusters of stars in the sky. This cluster of young, blue-white, hot stars can be found in the constellation of Taurus. The brightest stars are named after the seven daughters of Atlas and Pleione. But have you tried to count them? There are only six that stand out. This has led to myths and legends around the world, including myths from Australian aborigines, as to what has happened to the missing daughter. Look in any astronomy book on star lore and you will probably find several pages devoted to Pleiades mythology.

One explanation of how they were turned into stars is that they were pursued by Orion the Hunter (who rises about the same time as the cluster) and Aphrodite turned them into white doves to help them escape. The Greek legend says that it was Merope that disappeared from the sky, as she married a mortal when the other six sisters married gods, and so she hid her face in shame. In Aboriginal mythology they were seven princesses and one was stolen away. On one night tour I had a man of Aboriginal descent tell me his mother still sang the Song of the Pleiades at sunrise and sunset.

Photos of the Pleiades show them to be surrounded by a delicate blue nebulosity. This is a reflection nebula, caused by light from the new stars reflecting off the remains of the dust and gas that they formed from. Binoculars will reveal more stars; altogether there are about 250 in the cluster, which lies only 420 light years away - quite close! Only low magnification is required to get a good view of them; a magnified view through a telescope seems to look straight through the cluster, showing only a small portion of it.