

NATURE NOTES

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Dear Girls and Boys,

Two years ago, when we visited New Zealand, we were driving to the "Mount Cook National Park", on the South Island, when we were arrested by a large sign on which was written these words:

"LET IT NOT BE SAID AND TO YOUR SHAME
THAT ALL WAS BEAUTY HERE, UNTIL YOU
CAME".

These words so impressed me, that I was determined to find out from what source they came, and it was not until last year, when we visited the lovely Devonport "Victoria Reserve" in Tasmania, that we saw the whole poem up for all to see. (See page 16 - Nature News).

The behaviour of careless people in our National Parks, Reserves and Gardens, is the cause of much ugliness and damage to one of our country's greatest assets, and tell me if you can, anything that mars the beauty of a place more than orange peel and cartons etc. carelessly flung down.

Best wishes to you all.

MRS. JEAN FIELD.

Identify these
things which begin
with "D"

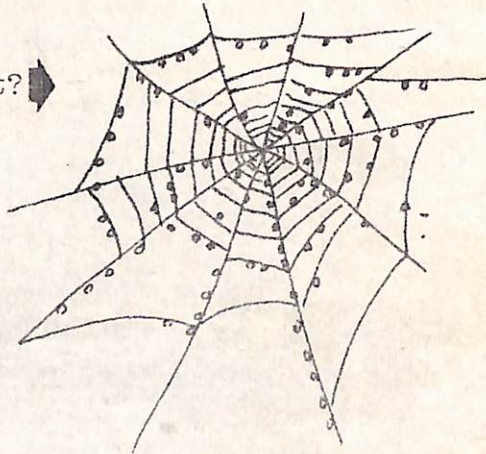


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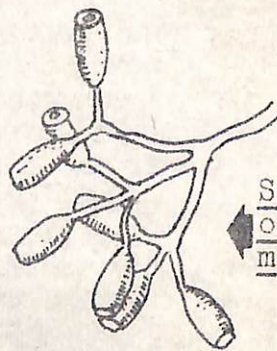
Grade _____

Things to Look for

*Have you seen dewdrops on a spider's web this year? What kind of a morning was it? Why is this kind of morning best? Were the spiders' webs all the same in shape or did you find some different ones?

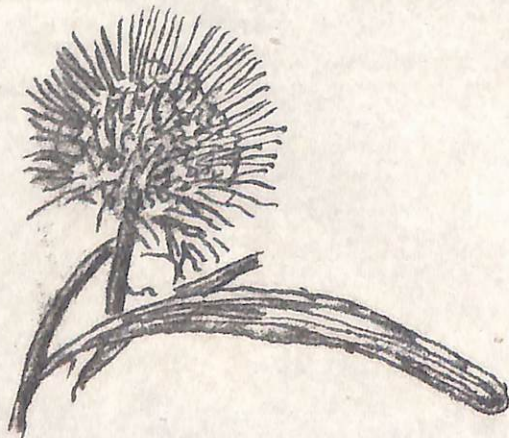


Have you found clumps of mistletoe in your area? If you look carefully you will find that the seeds are ripe and ready for spreading. How is this done? Have you squeezed a mistletoe seed? What other kinds of mistletoe have you found besides the drooping mistletoe? What trees are affected?



Sticky seeds
of
mistletoe.

The Pin-Cushion Hakea (*Hakea laurina*) is a very well known and beautiful shrub from Western Australia. It grows very well in Melbourne. Have you one in your garden?

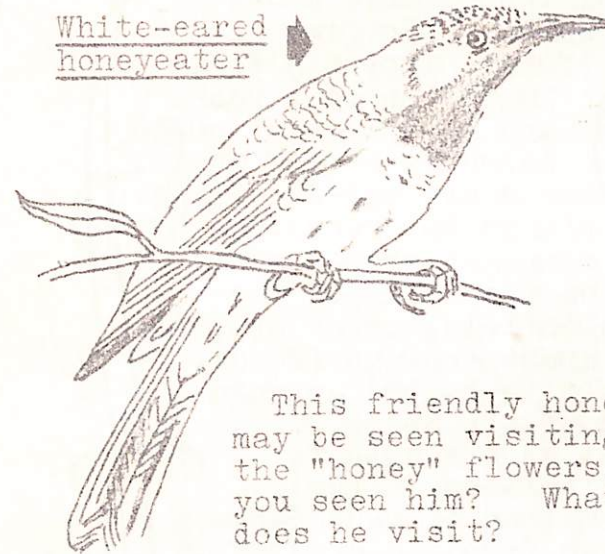


JULY



Can you name these flowers? They are all Victorian.

White-eared
honeyeater

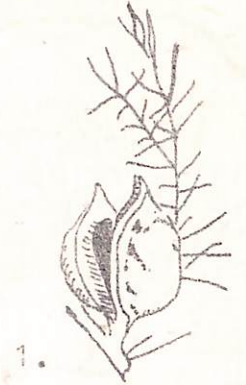


This friendly honeyeater may be seen visiting some of the "honey" flowers. Have you seen him? What plants does he visit?

Golden Wattle
Acacia pycnantha



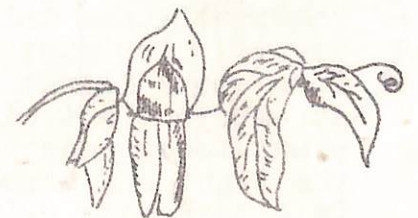
Is Golden Wattle early this year?



2.

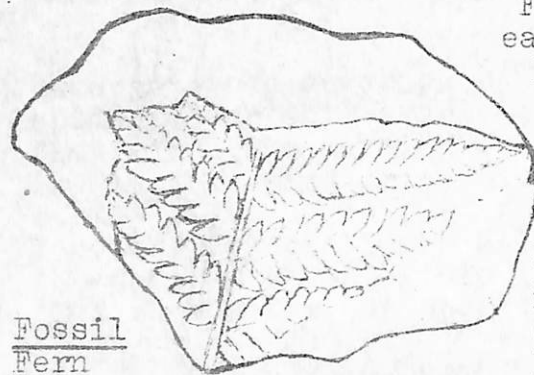


3.



4.

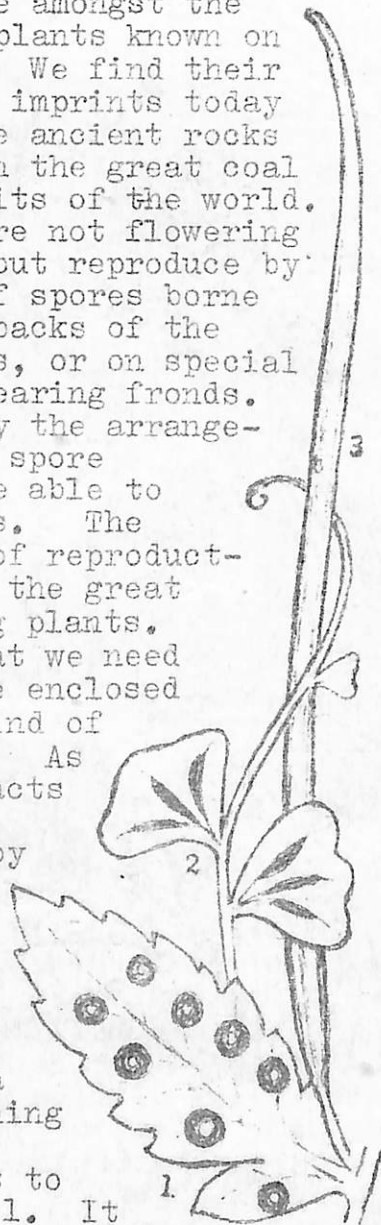
How Ferns Grow.



Fossil Fern
Koonwarra
Vic.

Ferns are amongst the earliest plants known on Earth. We find their fossil imprints today in the ancient rocks and in the great coal deposits of the world. Ferns are not flowering plants but reproduce by means of spores borne on the backs of the leaflets, or on special spore bearing fronds. It is by the arrange-

ment of these leaflets, and of the spore capsules, called sori, that we are able to separate the various fern families. The ferns have an interesting method of reproduction that distinguishes them from the great families of flowering and seeding plants. The masses of spores, so find that we need a microscope to examine them, are enclosed in a capsule held tightly by a kind of elastic band around the outside. As the spores ripen this band contracts and finally snaps, releasing the spores which are well dispersed by the wind. Only a few however, will find places suitable for the growth of new fern plants. Spores are long lived and it may take years before conditions favourable for their development occur. You must remember that a fern spore is not a seed, containing an embryo plant with a supply of plant food, ready to send a shoot to the light and a root into the soil. It is a much more primitive thing, as we shall see.



Spore Capsule

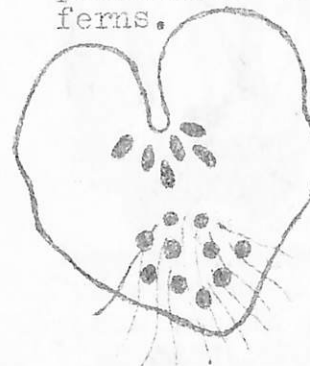


Releasing the Spores.



Growing Spore

Next time you are in a fern gully see if you can find the tiny prothallus amongst a cluster of little ferns.



Prothallus

under side with organs

Some spore patterns on different ferns. 1. Shield Fern.

2. Necklace Fern. 3. Strap Fern.

It begins as a single cell that grows by the process of cell division until a tiny green leaflike scale, called the prothallus, takes shape, which attaches itself to the soil by fine rootlets. On the under side this scale develops male and female organs, corresponding to the ovaries and anthers of a flower. The female part, termed the archegonium, actually produces an egg, which is fertilised by sperm that swim across from the male part, the antheridium. It is from this fertilised egg that the baby fern grows, drawing its food for a time from the green prothallus, until it can form roots of its own. This process is called the Alternation of Generations.

It means, briefly, that the fern plant, as we know it, the Sporophyte generation, grows and sheds the spore. The spore must develop the prothallus, the Gametophyte generation, before it can produce the new fern.

There are about 90 different ferns in this State and FERNS OF VICTORIA & TASMANIA by N.A.Wakefield is a good handbook for their recognition.



Young Fern Plant

Floral Emblems.

* July is the flowering month of the Native Pink Heath, "Epacris impressa" which has been declared Victoria's State Floral Emblem, and is one of our protected wild flowers.



↑
Pink Heath
(Vic.)

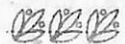


↑
Cooktown
Orchid
(Qld.)



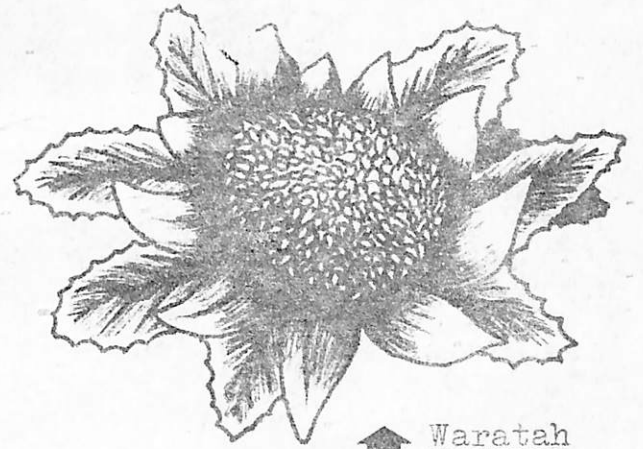
↑
Kangaroo Paw
(W.A.)

* Did you know that every State in Australia, has it's own special Floral Emblem; a flower which is especially identified with a certain place, and which is often only found in that particular spot and nowhere else in the world?



July Nature Notes--6

* Tasmania has just declared it's magnificent Blue Gum - Euc. Globulus its State Floral Emblem: not a flower to be sure, but a beautiful tree which grows in its fine forests, and which is most spectacular with its silver foliage shining in the moonlight.



↑ Waratah
(N.S.W.)

* New South Wales has chosen the fire red Waratah - Telopea speciosissima, Queensland the Cooktown Orchid, South Australia and the Northern Territory have jointly chosen the scarlet Sturt's Desert Pea, and Western Australia the unique red Kangaroo Paw.



↑
Blue Gum
(Tas.)



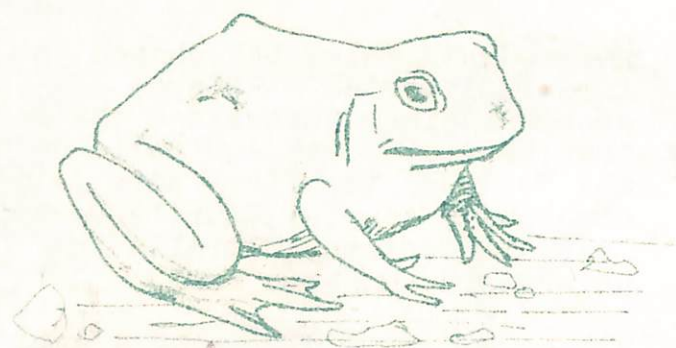
* Nearly every State in the world has a Floral Emblem, can you find out what they are? Here is a start: England the Rose, Scotland the Thistle - you carry on. Good hunting!

↑ Sturt's Desert
Pea
(S.A. & N.T.)



Animal Movement

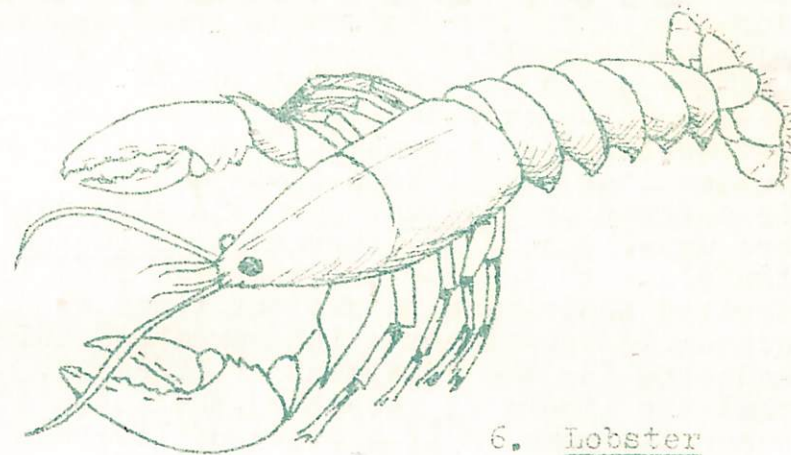
1. Animals have many different ways of covering themselves and for many different reasons. Each type of covering seems to be most suited to the particular animal wearing it. Can you tell what kind of covering each of these well-known animals has and of what particular use it is to that animal - Is it for warmth? Is it for protection? - - - - -



2. Frog



4. Hawk



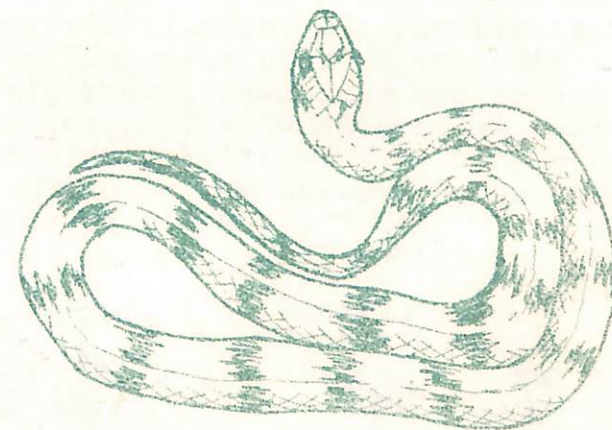
6. Lobster



3. Rainbow Trout



5. Platypus



7. Tiger Snake

8. See if you can discover any other kind of covering animals use and why!!

Liverworts

★ Mosses and Liverworts belong to the main division of plants which include all non-flowering plants. They are mostly fairly small. The Liverworts we are likely to see look just like a flattened green mass, on this is a frond or thallus. On the undersurface of it there are usually rootlike threads or rhizoids which attach the plant to the surface where we find it. Liverworts derived their name in ancient times when it was the custom to use plants which resembled human organs as medicine for the treatment of diseases. It was thought that the liverwort resembled the lobes of the liver - hence its name. If a piece of liverwort is broken from a plant and left in the soil it usually develops into an entire plant. We can expect to find them in moist places which have considerable shade; but under dry conditions they usually disappear and then it takes some time for them to re-establish themselves.

● ● One of our commonest liverworts is Lunularia. Its surface is covered with tiny pores, but there is a moon shaped mark in which is clustered many small gemmae which are washed out of the cups and scattered in rain. The other common liverwort is Marchantia which has different outgrowths for male and female plants.



Marchantia
(male)



Marchantia (female)



Lunularia

and Mosses



★ Mosses are simple flowerless plants. Winter is the time when mosses are found at their best. They do not require very much soil. For those children and people who wish to know the species, we need to look at the shape of the capsules, the shape of the leaves, presence or absence of nerve or midrib, whether the leaf margins are entire or not, and other details for which we must at times use a microscope. But use of a hand lens can show how delicate and beautiful many of these small plants really are.

● ● Sphagnum mosses are of great ecological importance. Even though an individual plant may be many inches in depth it is only the upper part which is living. However the dead lower part does not decay easily for the bog water is very acid. The sphagnum bogs of the mountain retain a great deal of water which is slowly released to feed the mountain streams. This ensures that there is a continual flow of water to the country - usually farm land below. If these sphagnum bogs are destroyed - as has taken place by overstocking with cattle in some of the high mountains - these streams are either dry or very little water flows in them during much of the summer months.

● ● The leaves of mosses are never lobed or divided. They like moist places although some are able to withstand some dry weather.

★ Where to look

Tree Roots
Trunks, Branches
Decaying Stumps
Grassy Places
Gardens - Moist Drives
Paths
Walls and at the foot
of walls
Old Roofs.

Tortula muralis

Wall Screw Moss





LETTER BOX

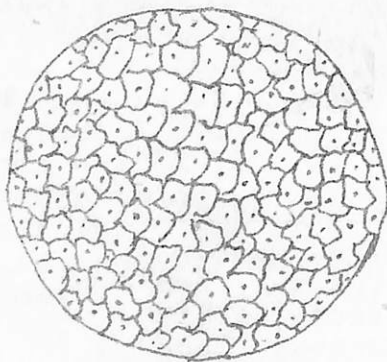
Send your letters to :-

Editor, 'Nature Notes',
S.S. No. 4860, BLACKBURN LAKE
Florence Street,
NUNAWADING. 3131.

Letter number one for July comes from Nerio Baldini of Heathmont East and an interesting one it is too.

* The enclosed flower or fruit came from a tree growing at Tumut in the Snowy Mountains area.

Would you please identify the tree it came from and give me some more information about it.



Maclura pomifera
Osage orange

ED. Your fruit, Nerio, certainly set us a poser. It was finally identified as an Osage Orange (*Maclura pomifera*) or *Maclura aurantiaca*. This is from a tree that was first found growing in the country of the Osage Indian of Southern U.S.A. It is a quick growing deciduous tree used by the Osages for making their bows. The white man first used it for hedges and palings for his fences. The female tree produces rough green orange like fruit which is inedible. The *Maclura* genus of plants are closely related to the mulberry.

Aurantiaca means 'like an orange' although the fruit cannot be eaten. Male and female flowers are produced on separate trees. What other trees have this habit?

* Elizabeth Doig of Ringwood State School writes -

During the May holidays I have been keeping a wildflower diary of all the wildflowers that have come up over the last few weeks in our garden. We are lucky in having a small area of natural bushland where we have found over twenty different kinds of wildflowers.

Among the orchids the tiny greenhood orchid has been the first to flower. Other wildflowers that grow in our garden include milkmaids, blue squills, blue pincushions, rice flowers, chocolate lilies and trigger plants.

ED. The tiny greenhood orchid is easily recognized because the flowers are turned inwards to the stem. This is one of Ringwood's rarest orchids.

A native plant's sanctuary in a home garden is an excellent idea if you have an area of natural bushland that you can set aside for this purpose. I hope some of our other readers, if not able to have an actual sanctuary, may be at least able to plant part of their garden in native shrubs and trees. You may be surprised how many new birds will be encouraged to visit your area.



Tiny
Greenhood

Pterostylis conchinea.

* From Bronwyn Alexander, Grade 6 of Blackburn Lake comes this story.

While doing my work one morning I noticed a Willy Wag Tail on the loud speaker outside our window. Our teacher did not see it until everybody called out, and it flew away. After awhile it came back and pecked at the window, for on the inside was a moth. Sometimes I leave bread and water for the birds on the lawn.

ED. Yes Bronwyn one can get much enjoyment in watching birds at play while unobserved. Keep up the good work.

Neil Wilcox, Grade 6, Yarra Valley C.of E. School writes-
We live in Healesville and our garden has had many
strange visitors. The most interesting of these have
been the koalas. We have had two in our garden. I saw
one when I came home from school. I was sitting in the
lounge when my dog started barking, I looked out the
window and saw it. It was waddling down to a waterhole.
After drinking for a very long time it climbed to the
highest tree in the garden and sat there. After a few
hours it left. The other koala came about noon one day.
Mum telephoned Mr.Mullet, the Healesville Sanctuary
Director and he came with some men and a net and caught
it. It had apparently escaped from the koala enclos-
ure in the Sanctuary. Koalas aren't supposed to drink.
Have you any idea why that one did?

EP: An interesting observation Neil. It is a fallacy
to say that koalas never drink, but it would be most
unusual for them to drink at great length. This is the
year of the Koala in Victoria and much research is being
done on this remarkable marsupial. Mr.T.Oxlee of the
School Forestry Department will be very glad to hear
from you.

ARTICLES IN THIS ISSUE

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	H.Tobin.
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Answers to Questions Page 3.

- | | |
|-------------------|----------------------|
| 1. Silky Hakea | 2. Banksia |
| Hakea sericea | Banksia integrifolia |
| 3. She-oke | 4. Dusky Coral-pea |
| Casuarina stricta | Kennedya rubicunda |

Answers Vol.5, No 4 (Cover) from top to bottom, left to
right. 1. Cocoon (Ribbed Case Moth) 2. Centipede,
3. Correa, 4. Cowry, 5. Cockatoo, 6. Chiton,
7. Cuttlefish, 8. Cormorant.

NEXT ISSUE due at Depots on WEDNESDAY 7th AUGUST.

Men in Nature



BARON FERDINAND VON MÜLLER
(OR MUELLER,) K.C.M.G., M.D.,
Ph.D., F.R.S., GOVERNMENT
BOTANIST (1852-1896) : BORN
1825, DIED 1896.

When ill health forced him to leave Germany for a
warmer climate, Ferdinand von Müller chose to live in
Australia. His tremendous contribution to our know-
ledge of Australian plant life is probably unequalled
by any other scientist.

* Here are some of his achievements:

- 1852 - appointed Government Botanist in Victoria and
held the post until he died. He travelled the
whole state in search of specimens in the
first two years of his appointment.
 - 1855 - travelled with Gregory's exploration party to
Northern Territory.
 - 1857 - appointed Director of the Melbourne Botanical
Gardens and resigned in 1873 when people
objected to his strict and formal setting-out
of the gardens.
- Between 1858 and 1881 - he published 11 volumes
about plant life and founded the National Herbarium
and developed it to one of the best collections of
plants in the world.
- 1871 - created a Baron.
 - 1879 - made a Knight.

It is estimated that he wrote over 3,000 letters
per year and his usual working day was 16 hours.
Von Müller's ideas on forest conservation and re-
planting were very advanced for his times.

Nature News

Here is the full poem from Page 1 which gives in a few words, a message to us all. ● ● ● ●

"COME FRIEND, ENJOY YOUR PICNIC AT YOUR EASE,
BESIDE THE SEA, BENEATH THE SPREADING TREES,
BUT LEAVE NO TRACE OF YOUR WAYSIDE MEAL -
NO EMPTY BAGS, OR SCATTERED ORANGE PEEL,
NO BROKEN BOTTLES LITTERED THROUGH THE GRASS,
OTHERS MAY VIEW THIS WITH DISTASTE AND PASS.
SO LET IT NOT BE SAID AND TO YOUR SHAME,
THAT ALL WAS BEAUTY HERE, UNTIL YOU CAME.

* * * * *

S E E I N G S T A R S

✧ Australian astronomers have measured the size of some stars using a new type of optical instrument.

✧ Their difficult feat is similar to measuring the size of a penny 3000 miles away.

✧ This is how it works!

✧ Light is collected from a star with two optical instruments separated by a short distance. Electrical methods are used to compare the strength of the two light signals. The equipment for making these observations has been built at Narrabri Observatory N.S.W. It consists of two mirrors mounted on trucks, which travel round a circular railway track 615 feet in diameter. Each mirror is of 225 inches in diameter, bigger than the one at Palomar Mountain, California. The result is a movable open-air telescope which can be pointed accurately at individual stars.