



**THE  
FERN SOCIETY**

**OF  
VICTORIA**

**Inc.**

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**NEWSLETTER**

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PRESIDENTS REPORT.

Our efforts to recruit new members at the Garden State Festival were rather disappointing but we do welcome those who joined and hope they enjoy the activities of our Society (over page).

I would like to thank all those who assisted with our stand, in supplying their favourite ferns and spending time tending the ferns and manning the display.

Our society can be proud that Chris and Lorraine Goudey were chosen by the judging panel to receive an Award of Excellence for the Quality of display - originality and contribution to the industry. Chris and Lorraine were exhibitors on the stand adjoining our Society.

Although Sunday October the 11th was decidedly damp we met the South Australian Fern Society at Kallista and after warm greetings we lunched together around a large log fire and then moved on to the walking track to try to locate *Cyathea marcesans*. Although we were unsure at the time further research proved the two specimens were in fact *C. marcesans*. Finally after some three hours we said farewell and our S.A. friends moved off to visit Bob Fletchers nursery at Seville.

Our second monogrammed Society glass with *Asplenium flaccidum* has proved very popular with just twenty left so be sure you do not miss out.

Several members are incapacitated at present Rod McConchie slipped and broke his leg, Albert Jenkins had a mishap with a circular saw and Derek Griffiths is in hospital recuperating after surgery, we do hope all are soon completely recovered and fully active again.

Lorraine Hansford carried the flag for our ladies when she took over from Derek as speaker at Mt. Macedon. She must have performed well as she sold 18 of Dougs booklets. Well done Lorraine.

Albert Jenkins will be our speaker for November and although still recovering from a very severe injury to his hand Albert will have a very interesting talk for us. His assistance during the Garden State festival was first class and I thank him most sincerely.

Please note that this meeting will be at the Camberwell Elderly citizens hall with a diagram of location on Page 3.

Special effort winners.

- |                 |                  |
|-----------------|------------------|
| 1. Jean Boucher | 5. Betty Allgood |
| 2. Norma Hodges | 6. Max McCalie   |
| 3. John Oliver  | 7. Nance Logan   |
| 4. Barry White  |                  |

Congratulations all !

# THURSDAY

## - NOVEMBER 19 -

### elderly citizens hall

405 Camberwell Road

# CAMBERWELL

SPEAKER - ALBERT JENKINS

SUBJECT - MY WAY WITH FERNS

Albert will be bringing along some rare ferns and telling us how he grows them an excellent night is assured, don't miss it!!

\* \* \* \* \*

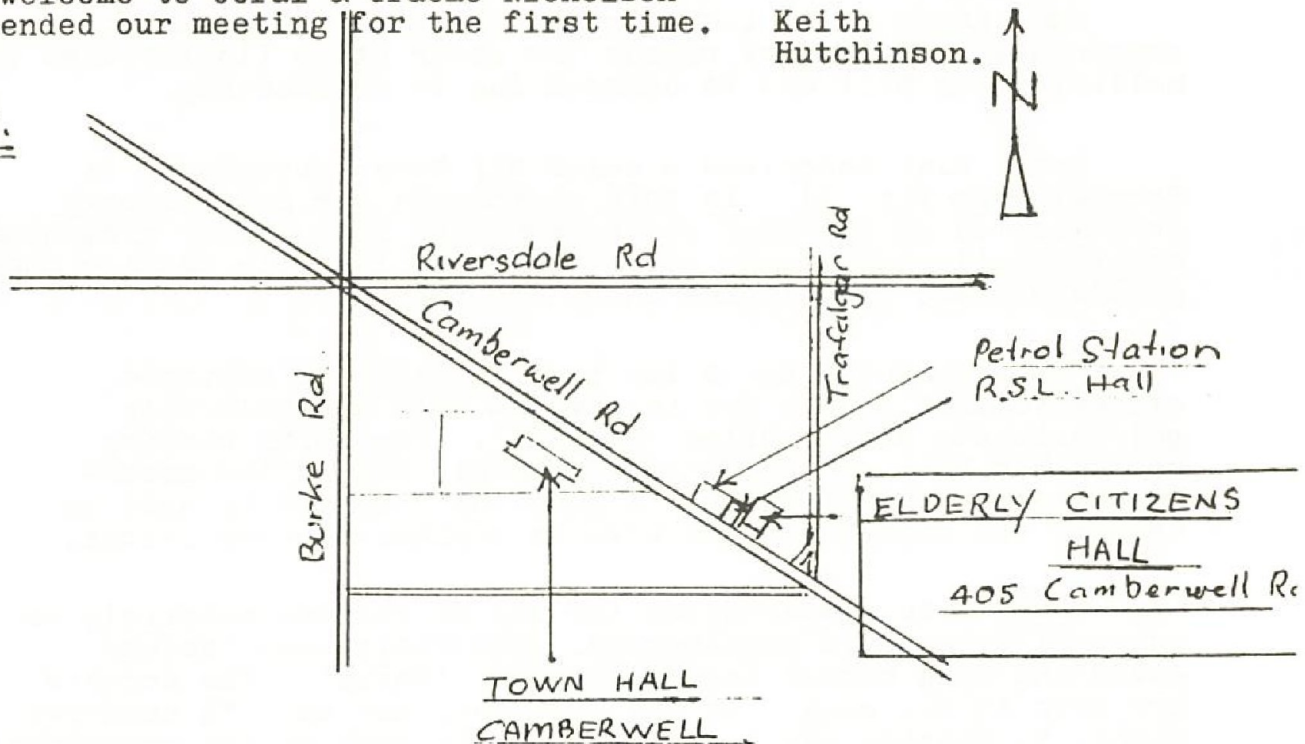
Finally, please remember our membership drive. Perhaps a membership to a friend would be a nice Christmas present.

A warm welcome to Coral & Graeme Nicholson who attended our meeting for the first time.

Kindest Regards,

Keith  
Hutchinson.

CITY.



Trams pass the hall Route 75 Stop No 50

The hall joins an old house, beside the R.S.L. hall.

SPEAKER REPORT - SPEAKER: GEOFF CONNELLAN.

SENIOR LECTURER IN PLANT SCIENCE AND ENGINEERING, BURNLEY  
CAMPUS OF VICTORIAN COLLEGE OF AGRICULTURE & HORTICULTURE.

TOPIC: SOLAR HEATING OF GREENHOUSES.

Geoff commenced by saying that he would cover greenhouse equipment and materials as well as Solar heating in his talk.

There are two methods of collecting solar energy for greenhouses. Systems are either air based or water based. At Burnley there are examples of both types of systems.

Geoff described a water based system used to heat a 4.3 metre wide tunnel greenhouse, (see Fig. 1). The solar energy is collected from a collector which was constructed by fixing small bore EPDM tubing on to a cement sheet which had 50mm of insulation on the rear to reduce heat losses. The collector was inclined at approximately 40° and faced north. The collector was covered (glazed) with a polyethylene film to increase the collector efficiency during cold periods.

A small pump circulates the water through the collector to the floor of the greenhouse. The heat is then released to the greenhouse. Typically the solar greenhouse air temperature is 8°C higher than outside air temperature during the coldest part of the night (see Fig. 2). However as there is not adequate solar radiation then the temperature in the solar greenhouse will fall below this level unless some other form of backup heating is used.

Care needs to be taken in the selection of solar collector components. If for any reason the water stops flowing then the collector can boil and be damaged due to overheating.

Geoff also described a solar air based greenhouse at Burnley (see Fig. 3). In this greenhouse the solar energy is collected on the roof at the southern side of the greenhouse and the collected energy stored in rockpiles both outside the greenhouse and also inside under the benches.

The greenhouse has a low profile shape to minimise excessive heat losses and is covered with a double skin polycarbonate sheet called 'Polygal'. The solar heating system has been providing approximately 60% of the greenhouse energy requirements. A desk top computer is used to control the greenhouse and also to monitor the conditions.

Geoff also commented on the use of various materials as internal screens in greenhouses. Materials used include woven and spun bonded polyesters e.g. 'Marix'. The screens are used in two ways. In one case they are used to conserve energy by keeping the heat in the lower part of the greenhouse. In the other case they are used as shading screens to prevent excessive stress on plants as a result of direct radiation.

The screens need to be white, to reflect solar radiation, lightweight, ease to handle and fold and also to be able to withstand the adverse conditions in the greenhouse.

Geoff also commented on the various shadeclths in use today. It is not expected that there will be a variation in growth due to the colour of the shadecloth as shadeclths work by absorbing solar radiation. It is preferable to install the shadecloth outside the greenhouse with a gap of approximately 300 mm to allow heat to be transferred to the surrounding air.

He also said that it was important during the hot summer months to allow plenty of ventilation in the greenhouse and also to ensure that there is plenty of water available. Water plays an important role in keeping down air temperatures during extremely hot periods.

In thanking Geoff, Barry White congratulated him on his very thorough preparation and his comprehensive coverage of his subject. All members responded with warm acclamation.

\* \* \* \* \*

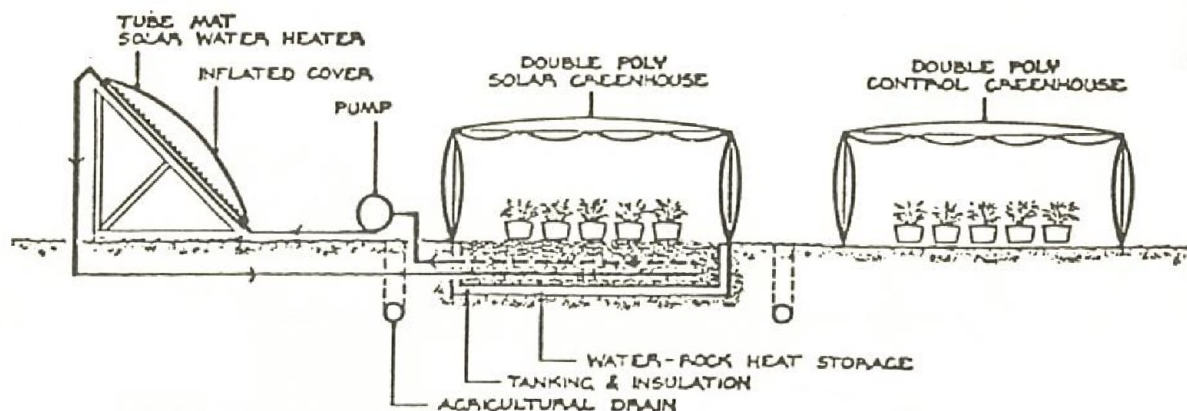


FIG. 1 Layout of solar water collector and flooded floor greenhouse test facility at Burnley.

Continued over . . . . .

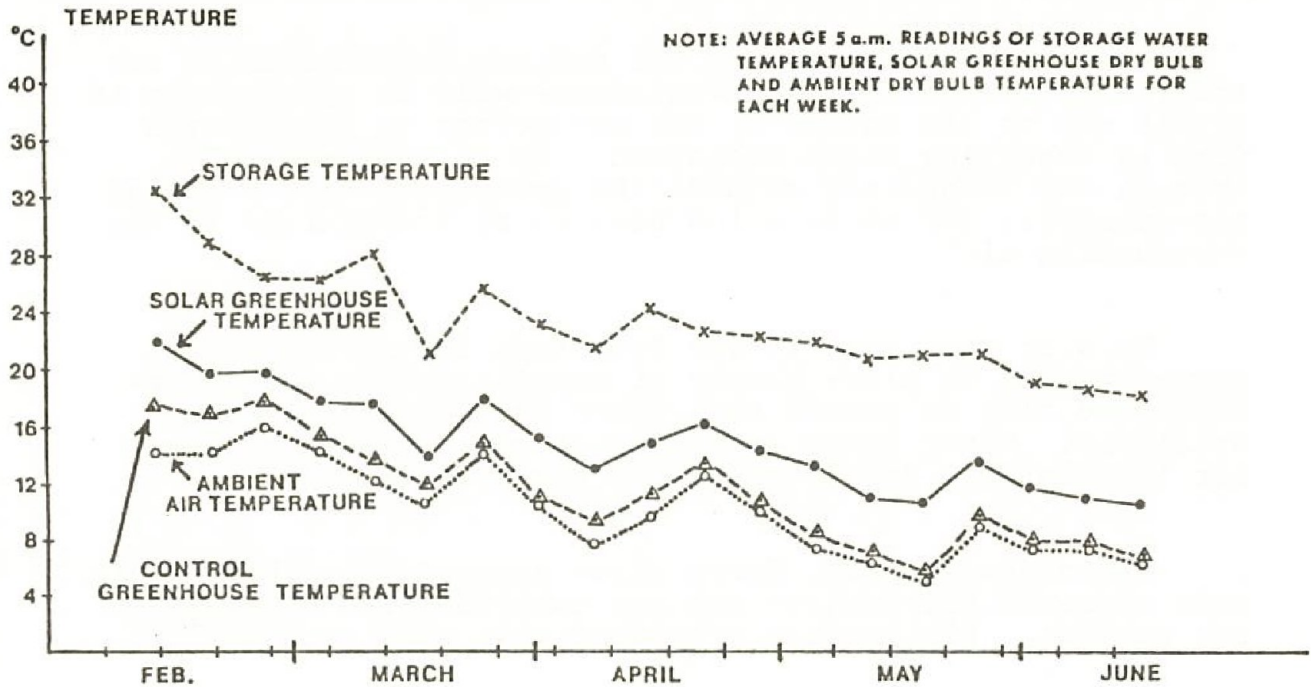


FIG. 2

Long term performance of solar greenhouse floor storage system

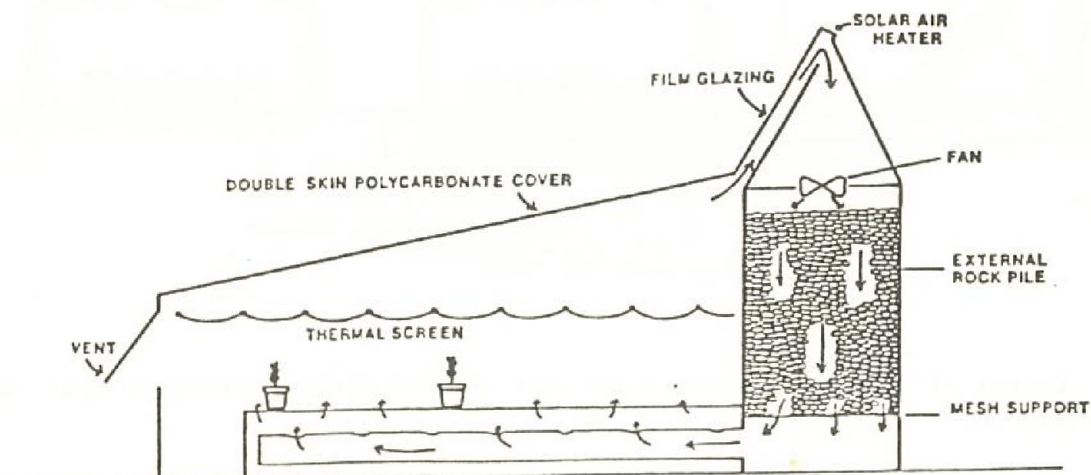


FIG. 3

Barnley Low Energy Greenhouse - External Rockpile

**What Maxicrop is:**

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Seaweed contains over sixty different trace elements and numerous naturally occurring growth factors, many of which are known to be important for plant growth and development.

**What Maxicrop does:**

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Many of the natural growth factors are also absorbed through the leaves, and encourage deeper root development and sturdier growth.

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- \* Improved propagation of seedlings and cuttings.
- \* Stronger, healthier, more even growth of crops.
- \* Greater ability to withstand stress such as severe cold or drought.
- \* Better quality produce, less wastage at harvest time and storage.
- \* Increased availability to crops of other nutrients in the growing medium.

Further research continues to provide sound answers to the value of seaweed and horticulture. Maxicrop contains all properties that seaweed offers in a form readily available to plants and soil.

**How to apply Maxicrop.**

Maxicrop, when diluted as recommended, can be applied as a foliar treatment to the leaves of all plants. This is often the quickest way of giving help when it's most needed.

This can be done by using one of the many types of spray units on the market.

A watering-can or hose end sprayer is another simple means of applying Maxicrop.

The dilution rates applicable to this leaflet refer to Maxicrop Plant and Soil. If applying Maxicrop Complex or Multiple Concentrate use three times the amount of water shown.

A more detailed leaflet on the uses of Maxicrop Complex and Multiple Concentrate is available on request.



ASPLENIUM  
PALEACEUM -  
MT PERRY FORM.



BULBIL



ASPLENIUM PALEACEUM - MT. PERRY FORM

Rod Pattison writes of his discovery of this interesting form of *Asplenium Paleaceum* on Mt. Perry Qld. During his field trip in the wide bay - Burnett Region - he collected other similar forms of asplenium and initially thought that they and the Mt. Perry find were perhaps variations of *Asplenium Attenuatum Multilobum* (which can be lobed entire) or in some instances even new species. However on closer examination he noticed their coarse texture and dull green colour which did not seem to accord with the smooth textured *Attenuatum* and its variants.

Rod then approached Peter Bostock of the Qld University Botany Department hoping he may be able to assist with identification of the specimens collected. Peter kindly responded with the following notes.

**A note on the identification of Asplenium attenuatum and A. paleaceum.**

Peter D. Bostock, Botany Dept, University of Queensland.

Rod Pattison has asked for my opinion on the identity of his collections of *Asplenium* from southern Queensland (particularly the Wide Bay - Burnett region, west of Bundaberg) on a number of occasions, and I have often 'hedged my bet' on whether the plants in question were *A. paleaceum* or *A. attenuatum*. I have recently seen (and collected) some of these forms, including a bipinnate *A. paleaceum*, and when Rod suggested that I compile a note on the difficulties experienced in identifying the species, I decided to take a fresh look at the problem.

The species appear at first to be fairly easily distinguished, particularly when forms of *A. attenuatum* which have unlobed fronds (var. *indivisum*) or only a few lobes at the base of the lamina (var. *attenuatum*) are compared with the typical form of *A. paleaceum*. But when the frond of *A. attenuatum* is fully pinnately-lobed and the drawn-out rhachis of the frond has only a very narrow border of lamina, the boundary between the two species becomes blurred. Published descriptions and illustrations (see references below) do not cover the full range of variation in these apparently closely-related species.

The southern limit of *A. paleaceum* is reached in the Wide Bay - Burnett region. In this area *A. paleaceum* is found in a few semi-evergreen vine thickets, while *A. attenuatum* is a common fern in similar habitats throughout the region. Both species exhibit great variation in frond form and at first glance, there seems to be an intergrading between the 'classical' form of *A. paleaceum* and the pinnately-lobed forms of *A. attenuatum*. But some morphological differences are discernable, and I have listed them in the table below. The table is based on plants with pinnate or pinnatifid fronds, and covers collections from the above-mentioned area of southern Qld as well as north Queensland specimens held in the Queensland Herbarium. The description of the lamina of *A. paleaceum* as 'dull dark-green prominently striated' follows the terminology of Jones and Clemesha (1981).

Microscopic characters, including scales of rhizome, rhachis and lamina and the ornamentation of the perispore (outermost spore wall) may prove helpful but I have not accumulated enough data at present to assess their worth. I would appreciate comments on the usefulness or otherwise of the tabulated differences or on other characters which people may be using to distinguish the species; pressed fronds from plants of known localities would also be greatly appreciated.

	<u>attenuatum</u>	<u>paleaceum</u>
apex of frond	usually long, drawn-out tail with some lamina attached & a bud present <u>at</u> the tip	has terminal leaflet OR drawn-out naked primary rhachis with a bud <u>near</u> the tip
leaflets	lack a distinct petiole on most lobes (the lamina forms a pseudo-petiole)	true petiole present on most leaflets (petiole not winged)
	midrib of leaflet absent or indistinct	midrib usually present although not strongly differentiated
	leaflet margins not dentate or only bluntly so	leaflet margins often with acicular teeth
	lowest leaflets ca. oblong/circular	lowest leaflets obscurely three-lobed
	lamina glossy dark-green, not striated above.	lamina dull dark-green, prominently striated above.

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On behalf of our Fern Society I would like to thank BILL ROBERTS OF ROSANNA GARDEN SUPPLIES for loaning several rolls of roll-a-pack edging for our stand at the show. I would also recommend a call at his Nursery opposite Rosanna Railway Station for any garden needs as his friendly advice and excellent service is becoming well known.

The Editor.

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D I A R Y     D A T E S .

VENUE - CAMBERWELL ELDERLY CITIZENS HALL  
405 Camberwell Road, Camberwell.

NOVEMBER: 19th Thursday - ALBERT JENKINS  
SUBJECT: "My way with ferns"

DECEMBER: 10th Thursday - MARY FROST and Dorothy Forte  
SUBJECT: Nephrolep is

NOTE. In the event of a power strike on the evening  
of any meeting, we regret that the meeting  
must be cancelled.

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