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Department of Biodiversity,  
Conservation and Attractions

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## CALM EDUCATION RESOURCES

### WHERE TO GET THEM

#### CALL PERSONALLY:

##### Metropolitan -

50 Hayman Road  
COMO WA 6152

3 Hackett Drive  
CRAWLEY WA 6009

3044 Albany Highway  
KELMSCOTT WA 6111

5 Dunbar Road  
WANNEROO WA 6055

##### Other -

Visit our Regional and District  
Offices (Phone (09) 367 0333  
for addresses, or check country  
telephone directories.

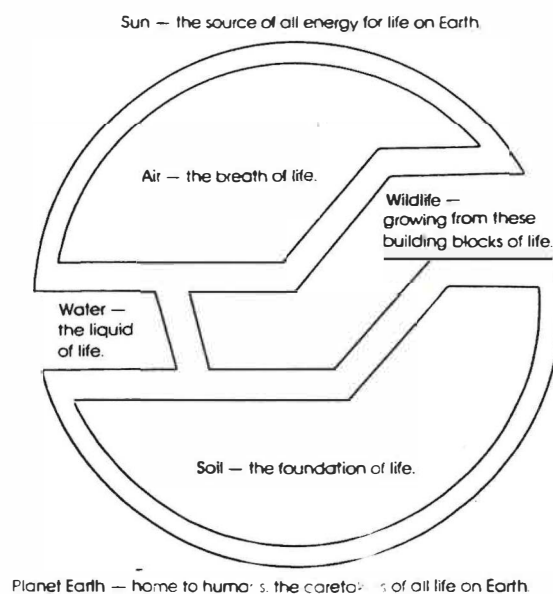
#### PHONE FRONT COUNTER ENQUIRIES:

(09) 367 0481/(09) 367 0437

#### FOR VIDEOS AND FILMS PHONE:

Robyn Weir  
(09) 367 0333

FOR FURTHER ENQUIRIES AND ASSISTANCE WITH PROGRAMME DEVELOPMENT  
PHONE: THE ENVIRONMENTAL EDUCATION OFFICER (09) 367 0333.



## Getting BushEd With C.A.L.M.

The Community Education Section of the Department of Conservation and Land Management (CALM) fosters awareness, appreciation and understanding of the natural environment. So encouraging attitudes and behaviour compatible with conservation of flora and fauna and management of forest, park and reserve ecosystems.

CALM applies a number of strategies towards achieving these objectives of community education. These include provision of training programmes for teachers, group leaders and CALM staff; activities programmes (summer holiday park activities; and others on request); facilities (such as Field Study Centres, Visitor Centres, display shelters, drive trails and nature trails); talks, workshops and seminars; liaison with Government and non-government organisations; and a wide range of publications.

### 1. CALM TRAINING PROGRAMMES FOR TEACHERS AND GROUP LEADERS

#### **EARTH EDUCATION WORKSHOPS**

Nature discovery programmes that lead the learner to ecological understandings.

CONTACT : Environmental Education Officer (09) 367 0333

#### **PERUP FOREST ECOLOGY COURSE**

A hands on introduction to applied ecology methods focusing mainly on animals in the forest environment.

CONTACT : Community Education and Interpretation Officer (097) 71 1988

#### **EXPEDITION SKILLS COURSE**

Practical training in expedition leadership

CONTACT : Dept Sport & Recreation (09) 421 4666

#### **OUTBACK SAFETY AND BUSHCRAFT COURSE**

Practical preparation for safe and enjoyable trips to the bush and for the protection of the bush

CONTACT : Front Counter (09) 367 0333

#### **ENVIRONMENTAL EDUCATION WORKSHOPS**

As requested.

CONTACT : Environmental Education Officer (09) 367 0333

## 2. FIELD STUDY CENTRES AND CALM

CALM provides a number of centres from which environmental studies can be conducted. Each centre offers ready access to a forest environment that encourages students to consider forest management issues such as

- conservation
- recreation
- resource management and utilisation e.g. timber
- fire protection
- disease and control e.g. dieback
- catchment water quality control
- extractive industries e.g. bauxite mining
- rehabilitation

Those centres, administered by the Ministry of Education, are of varying size and purpose. Details concerning facilities and equipment provided, booking procedure and suitable programmes are available from the CONTACT PERSON indicated.

### **JARRAHDALE FIELD STUDY CENTRE - 50 kms S.E. of Perth**

CONTACT : Education Officer, Armadale District  
Education Office (09) 399 0666

### **MUNDARING FIELD STUDY CENTRE - 40 kms E of Perth**

Administered by Belmont Senior High School YEO and AUS programmes (co-ordinators Brian Hedgley and Rob Boulden)

CONTACT : (For Bookings) CALM Mundaring (09) 295 1955

### **ICY CREEK BUSH CAMP - 12 kms S of Dwellingup**

A delightfully secluded site on Icy Creek, a tributary of Nanga Brook

CONTACT : Youth Education Officer Morley Senior High  
School (09) 276 5766

### **DRYANDRA FIELD STUDY CENTRE - 26 kms N.W. of Narrogin**

CONTACT : Lions Dryandra Forest Village (098) 84 5231  
or (098) 83 6020

**DONNELLY RIVER FIELD STUDY CENTRE** - 294 kms S of Perth -- 15 kms from Bridgetown

CONTACT : Donnelly River Holiday Village (09) 383 2094  
or (097) 72 1292

**PERUP FIELD STUDY CENTRE** - 50 kms E of Manjimup

CONTACT : CALM, Graham Norrish (097) 711988

**TWERTUP FIELD STUDY CENTRE** - Fitzgerald River National Park, E of Albany

CONTACT : Fitzgerald River National Park Association,  
Joan Bathgate (098) 35 5020 or Mary Hart  
(098) 35 5043

The many other centres that can facilitate environmental education are included in the booklet: "Recreational Campsite Directory 1988/89" published by the Camping and Outdoor Education Association of Western Australia. Secondary school Youth Education Officers and primary school principals received copies of this booklet in 1989. Otherwise contact Camp Schools Officer, Ministry of Education (09) 420 4828.

### 3. VISITOR CENTRES, DISPLAY SHELTERS, INTERPRETATIVE SIGNS AND TRAILS

CALM is progressively establishing interpretative displays, signs and trails in national parks, nature reserves and state forests that tell stories about the environment. They are designed to assist understanding and encourage various experiences, and can be used as a teaching aid.

Visitor centres are established at Milyering (Cape Range National Park Exmouth), Manjimup Timber Park, various CALM offices; and are being developed at Millstream Homestead and Northcliffe.

Display shelters are found in most major national parks and forest recreation sites. Interpretative trails are being established in each major ecosystem. Enquire at regional offices for specific details.

### 4. CALM EDUCATIONAL RESOURCES

A range of materials are available and teachers are invited to visit CALM offices to view them.

**Resource Notes** : curriculum linked, covering ecology and management in the jarrah and karri forests and semi-arid regions of the State.

**Information Sheets, Information Notes** : over 40 of them covering a wide range of topics

**Exploring Series** : Exploring Granite Outcrops, Exploring Coastal Wetlands; small booklets covering ecology, suitable for upper primary students upwards

**Explorer Series** : "Goldie and the Riddles of Life" - a focus on the habitat of the frog, with follow up activities suitable for primary students; "Riccardo the Ornate Dragon Lizard" to be released soon.

**Posters** : (saleable item) on wildlife, land management, granite outcrops, minimal impact bushwalking

**Landscape** : (saleable item) 4 issues per year, featuring articles on W A's conservation, wildlife and forests. A useful library acquisition.

**Videos and films for loan** : Covering a range of topics : wildlife, conservation, forest management, national parks, marine parks, minimal impact bushwalking

#### 5. REQUESTING CALM ASSISTANCE

- \* Call personally to collect resources (Front Counter): 50 Hayman Road, Como
- \* Phone Front Counter enquiries to request a mail-out: (09) 367 0481/(09) 367 0437
- \* For videos and films phone Robyn Weir (09) 367 0333
- \* For further enquiries and assistance with programme development phone Environmental Education Officer (09) 367 0333
- \* Field excursions or talks : Given plenty of lead time and a clear statement of learning objectives, CALM may be able to assist. This may be in the form of advice on best study sites, provision of maps and background information, suggestions on suitable study topics, and possibly input into your field excursion. Remember: our field officers have many competing duties, some of which may override even the best plans e.g. fire emergencies. We ask you to establish contact with the nearest District Manager, then send in the completed form titled: "Schools and Group Excursions".

## **RESOURCE NOTES**

### **Jarrah Ecosystem Concepts**

- #17 Trees
- #18 Geology
- # 1 Marsupials
- # 2 Birds
- # 3 Frogs
- # 4 Snakes and Lizards

### **Jarrah Management**

- #11 Dieback
- #12 Managing Dieback
- #10 Reasons for Rarity
- #16 Fire

### **Ecology**

- #14 Numbat adaptations
- # 5 Parrot adaptations
- # 6 Tammar populations
- # 7 Arid zone populations
- # 8 Seabird populations
- # 9 Noisy Scrub-bird habitat
- #13 Western Swamp Tortoise habitat
- #15 Macrozamia - inter relationships
- #19 Possums, habitat trees and fire
- #20 Genetic diversity and conservation of the grass wattle

### **Fire**

- # 6 Tammar
- # 7 Arid Zone populations
- #16 Fire management
- #19 Possums, habitat trees and fire

### **Endangered Species**

- # 9 Noisy Scrub-bird
- #13 Western Swamp Tortoise
- #10 Reasons for rarity

# school & group excursions



Thank you for your enquiry about  
\* an excursion to this area  
\* a school talk

We want to help your group gain the maximum benefit from the experience. To do this, we need to know your plans and objectives well in advance.

So, could you please complete this form and return it to us soon?



Name of group/school .....

Contact person .....

Address .....

Post Code ..... Telephone No. ....

Date(s) of proposed visit(s) .....

Times .....

Age/level .....

No. of participants .....

Subject area(s) .....

.....



Where applicable please answer the following:

Aims of visit (e.g. environmental awareness, recreation, etc)

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What do you hope your group will gain from the visit?

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What pre-visit activities have you planned?

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What follow-up activities have you planned?

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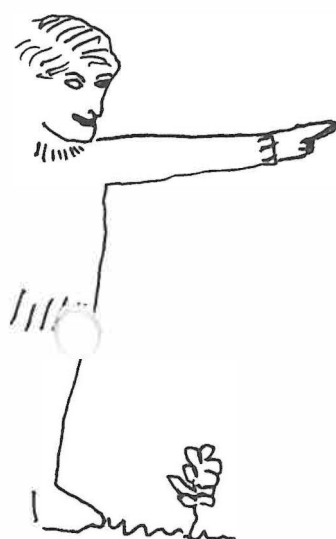
How would you like us to help?

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After this form has been returned we will confirm further details by phone or letter. Thanks for your help - we hope your excursion will be enjoyable and educational.



## GUIDELINES FOR TEACHERS

This set of criteria is designed to help teachers requesting a visit from an officer of the Department of CALM at school or during an excursion.

### General Criteria

1. Make contact well before the visit is required.
2. Make sure the request is specific. Provide information about the:
  - . Mode of presentation, e.g. activity, lecture.
  - . Content objectives, e.g. to provide specific information or to promote awareness and appreciation of the environment.
  - . Audience, e.g. number, age, subject/topic studied.
3. Prepare students for the visit. Make sure they know how it will fit in with their course work, provide background information and activities. CALM may be able to provide appropriate material on request.
4. Take a positive role in the visit and provide adequate supervision.

### Excursions

5. Try to visit the area beforehand (or contact CALM) to make sure that it is a suitable venue for the activities planned.
6. Familiarize the group with the area to be studied using maps, slides, photos, etc.
7. Acquaint your group with the appropriate environmental code of behaviour for the excursion site.
8. Teach the class field study techniques if these are to be used (unless this is the main objective and is to be done by the CALM officer).

### Ideas for Follow-Up Activities

- . Use relevant articles from Landscape or Forest Focus as a basis for subsequent lessons.
- . Display field work.
- . Use field work as a basis for projects or experiments.
- . Extend field work to school grounds.
- . Debate issues arising.
- . Prepare future management proposals for hypothetical situations.
- . Prepare articles for the local paper or school magazine.
- . Present a slide show or photographic display.
- . Create posters.

## GUIDELINES FOR TEACHERS AND GROUP LEADERS TAKING EDUCATIONAL EXCURSIONS TO NATIONAL PARKS AND RESERVES

Guide to national park and reserve field excursions.

National parks and reserves are nature's classroom - ideal places to study natural systems and processes and the ways people affect them.

The very best examples of Australian habitats are protected and preserved in our national park and reserve system. Here you can see first-hand the effects of bush fires, cyclones, storms, erosion and natural succession and discover for yourself the special world of nature.

As a teacher you can help children develop an awareness of their environment and a caring attitude towards nature. The outdoor setting is a powerful inspiration for learning.

Here are some hints to make your field excursion to a national park or reserve a more rewarding experience.

Before the excursion:

- Phone or visit the local park office beforehand.
  - Find out which park suits your school's needs.
  - Obtain pre-visit brochures, maps and references.
  - Make any bookings for ranger talks and campsites.
  - Ask the ranger if he/she can plan a special activity for your students when they visit.
- Research the park thoroughly and obtain or prepare your student worksheets.
  - Try to visit the park before the excursion and check out the walking tracks and facilities.
  - Choose your study sites.
  - Design worksheets which encourage observation and participation. Keep written responses to a minimum. More complicated study can be done in the classroom.
  - Send a copy of the worksheets to be done on-site to the ranger before the excursion.
  - Arrange alternative activities and sites if weather conditions are unsuitable.
- Plan a series of lessons on nature conservation/park management leading up to the excursion.
  - Your field excursion should not be just a stop-gap but part of an integrated school program.
- Have a classroom session on the park and explain park rules so your students know how to behave on-site.
- Select suitable staff to accompany the excursion. Choose teachers who are familiar with an outdoor teaching environment and are prepared to discipline students, if necessary. Include someone with First Aid expertise.
- Attend any in-service training on field studies provided by the Education Department or park authority.
- Give your students a comprehensive gear list to suit park conditions so they are well prepared. Consider clothing, hats, raingear, insect repellent, sunburn cream, sturdy footwear, sleeping bags, binoculars, food and drink.

During the excursion:

- . Supervise your students closely.
  - Make sure park rules are followed.
  - Don't monopolize park facilities and annoy other visitors.
  - Discipline is not the ranger's role.
- . Keep the noise level down.
  - Try to camp away from other visitors, but stay within designated camping areas.
- . Conduct activities which involve no collection, removal or disturbance of the park's wildlife, plants, rocks, etc.
- . Make full use of any self-guided walks or educational displays provided by the Parks Service.
- . Make sure the worksheets are challenging and relevant but allow plenty of scope for the students to enjoy the park.
- . Plan your activities to minimize disruption to other park visitors or the park environment.
  - Keep activity groups to manageable size, especially on narrow walking tracks (no more than fifteen students per teacher). Small groups usually provide opportunities for better learning experiences for participants.
- . Enjoy any special activities arranged by the park ranger (slide talk, guided walk, spotlighting).
  - Remember to thank the ranger - he/she has probably fitted you into a busy schedule.
- . Try not to lose anyone - search and rescue is expensive. Keep the ranger informed on your movements within the park.
- . Take a First Aid Kit and be responsible for your group's First Aid and safety in the bush. Don't rely on ranger staff, except in an emergency.
- . Try to help your students gain an appreciation of ecological relationships and principles and human impact on natural resources so they can develop sound personal values on conservation.
  - Aim for an experience other than detailed observations and documentation which can be boring.
- . Give copies of your worksheets to the ranger so that other excursion groups can benefit from your experience and knowledge.

After the excursion:

- . Capitalize on what your students have learnt with follow-up classroom activities.
- . Encourage the students to write and thank the park authority and any rangers who were particularly helpful - you'll be welcomed back next visit.
- . Try to build on your student's environmental awakening throughout the school year.
  - Develop your student's ability to incorporate this environmental consciousness into their daily lives.
  - Encourage your students to value our national parks and other natural areas so that they are still available when their grandchildren want to visit them.