

# Newspaws

For, of and by Q.NPWS staff

September 1985

## Assets review starts

A conservation review project is under way in the Service with a focus on the existing Service estate.

Specifically, the project will produce an inventory of vegetation communities within the park and reserve system, and update earlier assessments by Specht et al in 1974 and Stanton and Morgan in 1977.

The project will assist in strategic land use planning and particularly, in the evaluation and advocacy of park proposals.

Such information is an essential part of planning for the future consolidation of the Service estate.

Together with biogeographic surveys, flora and fauna surveys and other studies, this will ensure that a comprehensive framework can be formulated for the representation of the State's natural diversity in the park estate.

The information gathered in this project will also be valuable for park management planning, for interpretive needs and for other Service programs.

Initially, the extent of regional vegetation types on all large (over 1000ha) parks is being determined, based on the community types defined by Stanton and Morgan (1977 Rakes report) together with more detailed information on vegetation associations where possible.

It is planned that this phase will be completed by the end of this year.

This work involved broad scale vegetation mapping and the interpretation of existing maps and other data where possible.

A scale of 1:50 000-1:100 000 is being used for near coastal areas and 1:250 000 for remote parks.

In the longer term, it is suggested that a comprehensive data base be developed to combine detailed vegetation information with other environmental attributes including topography, geology and soils.

The possibility of linking this information with a CAD (computer aided drafting) package for mapped output is being investigated.

A pro forma for the collection and ready computer entry of this data has been devised and the final draft is being evaluated.

This project initially has had the support of two CEP staff based in Brisbane and Townsville.

Currently the project is being advanced by the assistance of regional, staff in regional centres and on parks.

To date, information for the first phase has been collected on about half of our parks and reserves.

Paul Sattler  
Chief Planning Officer



Pedestrian bridge in Woodgate National Park — \$350 in materials plus much sweat.

## When funds run out...

Late July saw the completion of a 20 week, four man CEP Project at Woodgate National Park.

Although relatively small in comparison to the majority of CEP projects, its achievements are far greater than anticipated.

Inclusive of the jobs undertaken were groundsel eradication, walking track and firebreak improvements, redevelopment of the North Shore campground, and construction of picnic tables, a pedestrian bridge, service ramp and a bird hide.

Funds for purchase of materials were limited and used quickly. Other avenues were investigated and proved successful.

Our appreciation must go to those government departments

and private individuals who supplied materials and loaned equipment.

Two large cast iron girders from a former railway overpass bridge formed the basis of the pedestrian bridge which links the melaleuca walking track system.

It spans a fast flowing tidal creek and is literally strong enough to support a tank.

The demolition of a timber traffic bridge on the Childers-Bundaberg highway provided 9in by 4in decking. These hard timbers were used for battering and the construction of a much needed service ramp and loading ramp. Materials cost for both structures amounted to less than \$500.

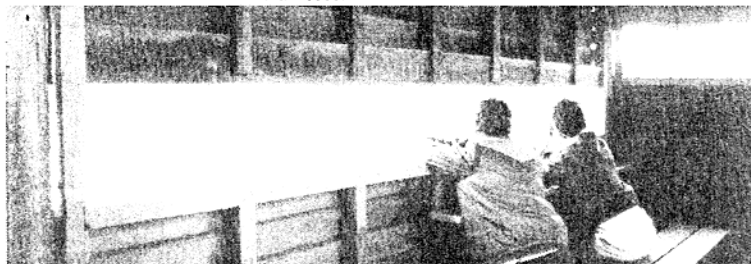
Because of the labour intensity of the project, it was decided to cut our own timbers for campground bollards, posts and rails.

The 'coup de grace' was the construction of the birdhide. Apart from the support posts obtained from the timbercutting, the remaining materials came from scrounging from various other sources in the Wide Bay Burnett sub region.

A park bird species list has been printed and is available from the park HQ and the Maryborough office.

The true worth of the project may be gauged by the self satisfaction of the men who undertook a hard task, and did it well.

Paul Kummerow



Spotters in the new bird hide overlooking wetlands.

## Filling in your gaps about that G.A.P.

Q.NPWS was selected to be one of the pilot departments for implementing the Government Accounting Package in the Queensland Government.

This meant that we had the task of sorting out the bugs in adapting this Package to the national parks environment.

Stage one of the implementation has been completed. That is, the system has been running in head office from July 1.

Stage two is the three-way matching process in head office. (Three-way matching involves the input of the order to the computer, followed by the goods received advice then thirdly the invoice).

Stage three is for Regions to input on-line to the computer on a three-way matching process.

The Regional Administration officers will be trained on the input to, and enquiry on the Government Accounting Package.

The Digital micro computers will act as terminals to the computer through a Telecom line. Due to the distance from Brisbane and the high cost of STD rates, a data line has been rented from Telecom. This gives access to Brisbane at a flat rate.

Moggill, on the other hand is a local call from the State Government Computer Centre where the IBM Mainframe that runs the Government Accounting Package is located. This

office will be connected through a dial-up revenue.

Each time the computer is dialed up the office is charged for the connection fee.

On completion of the three stages, this Service will be the first government department in or out of Australia to be using this package to this extent.

What does it mean for national parks? Timely financial information, on-line up to date enquiry of available funds, recording of encumbrances (orders placed), information of vendor history and long outstanding orders, status of paid and unpaid accounts are some of the advantages.

With every computer system, however, there are overheads.

These include the cost of computer processing time at the State Government Computer Centre, the cost of linking remote locations through Telecom and the cost of maintaining the system on to computer (account codes need to be input and named, Centre codes need to be input and named, these have to be combined where appropriate, reports need to be written, and many other areas require close monitoring).

These are just a few of the behind-the-scenes activities.

It is considered that this system will help to improve the level of financial awareness in this Service. This in turn will aid managers in the efficient use of the resources at their disposal.

John Halliday

# Psssssst . . .

Some of the Fraser boys made it to Brisbane for the Sands of Time premiere recently (see Ringtail).

All will see the outstanding film before long as the Service has received its copy of the 16mm film for services rendered.

Who was the wildlife ranger who couldn't find his way to his room in the dead of night at the Dalby meeting recently?

Far Northern RS Peter Hensler showed he had lost none of his story telling form when he popped into Head Office after the recent Toowoomba conference.

Surely Service staff must be barred from the proposed damper making contest at the upcoming Lawn Hill opening this month on the grounds of too much experience.

Was the person with a pack on his back looking like a tourist at Jardine River recently really Regional Director Peter Stanton?

Sue Green (Library) off north for a week to join her husband in a geological field survey in the Chillagoe area. She took her uni. homework to forget about ticks.

Wife Desley says Ian Saunders (Mt Moffatt) is recovering after his motor-cycle accident on the park recently. He's complaining about the weight of plaster rather than the itching.

Would you believe Damian McGreevey (media unit) had to work hard for two days in Birdsville recently to find a couple of horses for a Bush Beat segment? It seems everyone rides motor-cycles or trail bikes these days.

The series is a major co-production for the Service. It's in the same league as The Keepers series, and very demanding. If you are asked to help, do so as part of your job, not as any personal favour.

Many thanks to Ernie Wilkinson (Lamington) for his donation to the proposed Service museum collection.

He produced a green and beige Army slouch hat style hatband with the words 'National Park ranger'.

The following advertisement for Ringtail was rejected: Wanted — competent administration staff to join team in go-ahead regional centre. Work is challenging and varied. Training provided on site. Open arms await you. For further information ring . . .



Wedding bells toll for Central Region RS Ed Power and Sheila Scott in Rockhampton on Saturday, 21 September. That's why his eyes have been sparkling more than usual of late.

Do you know the Head Office phone number to dial after 23 October?

Judgments in the Cape Tribulation case handed down recently make interesting reading with reference to the National Parks and Wildlife Act.

An anonymous staffer modified the Page 1 picture caption of the display Ringtail to — At last! The electronic R.A.O.

Rangers content with their park slide shows should make an extra effort to attend the presentation of the prizewinners of the 1985 Brisbane International Diaporama Festival at the Bardon Professional Development Centre at 2.30 on Saturday 12 October.

Staffers Des Boyland, Greg Gordon, Noel Dawson, Gordon Wilkinson and Stuart James plus consultant Jim Gasteen have contributions to Agriculture and Conservation in Inland Queensland now available from WPSQ. It's a must for all interested in what rural nature conservation promises for the service.

The latest Marine Parks trip to North West Island was an even bigger fiasco than last time — the boys brought back fewer coral trout and eradicated less feral cats! But they did have a good excuse — they were engaged in search and rescue on the high seas.

What do the Rockhampton staff really think of Terry Vowles? When he came back from holidays recently almost everyone who sits near him arranged to be out in the field; except for Alan Don who waited to say hello before rushing out the door too.

Despite searching high and low Bill Morley could not find the nasty smell in the office at Carnarvon, so he sat down to do some typing. The typewriter did not want to work at all. Further investigation found the culprit — a dead mouse.

After removing same with tweezers Bill settled to work again.

Before long he calmly announced that 'the typewriter is working better now but the smell is getting worse'. Has anyone received a perfumed letter lately?

'Tropical Orchids of Australia', the new book by Bill Lavarack and Bruce Gray, will be in the bookshops late this month. Orchid fanciers seeking an autographed copy should contact Bill at Pallarenda. Expected discount price is around \$40.

## Shop torque Unleaded petrol

Unleaded petrol can be used in most small-engined equipment in use on national parks, eg. chain saws, mowers, bikes etc. Most of this presently uses standard fuel.

Unleaded petrol, introduced to lower the amount of atmospheric pollution in exhaust gases, replaced standard grade petrol on July 1. Super grade petrol will remain on sale for many years, throughout the life of present vehicles designed to run on this higher octane petrol.

Unleaded petrol has a pale yellow colour to distinguish it from the red-coloured super grade. Unleaded petrol has a research octane number of 91 to 93, compared with the present 89 of standard grade petrol.

Super grade has a research octane number of 97. The octane number is a measure of the anti-knock properties — the higher the number the better the anti-knock quality.

Unleaded petrol could be used in these engines:

- All Honda equipment e.g. generators. With this, and all other makes of equipment there may be some rough running during the transition period if you are switching

from super. This is due to the loosening of any carbon deposits within the engine, and should be only temporary.

- Small engines: ANI Perkins (Briggs and Stratton), Norton Villiers (Wisconsin, Mitsubishi), Kohler and Robin
- Chain saws: Echo, McCulloch and Stihl
- Motor mowers: Victa and Masport

- Motor bikes: Yamaha, Suzuki and Kawasaki
- Outboard motors: Mercury. Also Johnson/Evinrude engines but not those that are more than 10 years old and are classed at P6 engines, which should be run on super grade petrol

- Larger petrol engines that have relatively low compression ratios, say less than 8.4 to 1.

- High performance engines that have high compression ratios must continue to run on leaded petrol. Super grade petrol or the use of a special additive is preferred for such engines.

In engines that had no hardened valve inserts, unleaded petrol could increase wear on valve seats.

A mixture of 80 percent unleaded petrol to 20 percent super grade petrol

could be satisfactory for engines of this type.

Doubts about the suitability of unleaded petrol for a particular engine should be checked with the manufacturer.

Unleaded petrol has been on sale in the U.S., Canada and Japan since the mid-70s so most newer engines, having been designed to meet the requirements of those markets, will be able to run on the new fuel satisfactorily.

It is important not to put super grade petrol in vehicles designed for unleaded petrol. From January 1 1986 all new petrol-driven vehicles must be designed to run on unleaded petrol.

The petrol inlets for these and the outlets on bowsers for unleaded petrol had been made smaller than those for super grade petrol to prevent this mistake.

Bowsers, hoses, fuel lines and tanks should be labelled to show that they contain unleaded petrol.

Finally, recommendations on the fuel to use as a substitute for standard grade petrol should be checked with engine manufacturers.

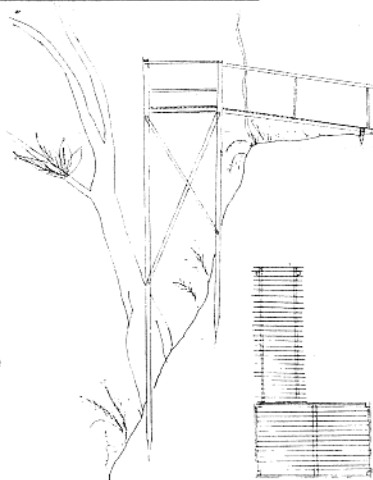
## Platypus platform

The task in Palmerston National Park was to build a platypus viewing platform on a steep bank in rainforest 7m above a pool in Henrietta Creek on the walking track system 200m from the camping area.

Construction is basic, four timber posts, a 2m by 1m platform, and a 2m by 850mm access ramp, nailed with the posts cross braced for rigidity.

To avoid damage to the fern covered bank, no foundations were built. The posts sharpened and soaked in creosote were swung into place with block and tackle and hammered in. The total cost was \$300.

The platform is accessible to wheelchairs. Problems are that people will try to reach the water, and also try to feed the platypus. One said: I took half a loaf of bread for the platypus but they weren't interested!



David Bender



## Interleaves



The list of brochures, signs and displays planned for this financial year is quite formidable!

Possibly the most exciting are the Cardwell and Heron Island Information Centre displays being prepared.

Cardwell should be completed by Christmas and Heron Island by Easter.

On a smaller scale, the recent RNA Show display in Brisbane had a good reception from the Show crowds.

Not your typical everyday display — it featured a computer national park survey (piloted in Far Northern Region), a talking robot ranger called Herbot, a 'pick a park' quiz, 'listen to a ranger' panel, slide show and video send-up, 'Day in the life of a Ranger'.

This display has been designed to travel the State so everyone should see it in the next year or so.

Information sheets and species lists continue to be prepared and produced in increasing numbers — thanks to the co-operation of park staff and regional interpreters.

Some of the latest additions include Noosa National Park Visitor Information, Tchupala (Palmerston National Park) self-guiding walk, Eungella Park Guide and species lists for Mt Moffatt, Lakefield, Girraween, Palmerston, Lake Eacham, Springbrook and Cape Hillsborough National Parks.

New brochures underway include Mossman Gorge, Lawn Hill, Conway, Mt Elliot, Mt Moffatt, Eurimbula, Taroom district, Southern Cooloola, Mon Repos, Woodgate, Burrum River,

Main Range, Bunya Mountains, Lake Broadwater, Mt Barney, Queen Mary Falls, Moogerah Peaks, Ravensbourne/Crows Nest Falls, St Helena, D'Aguilar Range, Glass House Mountains Information Sheets, a camping guide, field excursions brochure (for teachers) and a new RNC brochure.

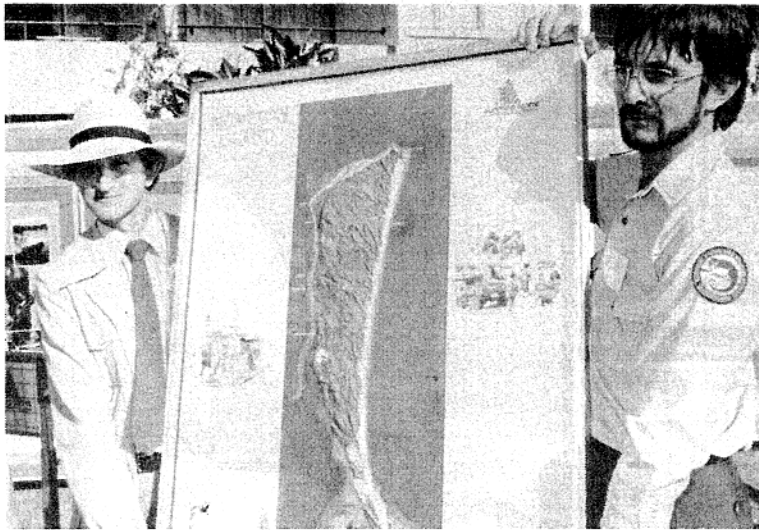
Other productions include a corals poster, Eungella orientation sign and Chillagoe Caves office sign.

Now that posters are being sold, have you got any good ideas for sale items? Let your regional interpreter or Trevor Vollbon know.

The next Australian Ranger Bulletin is on public communication and interpretation — it should be particularly relevant to most staff.

Pamela Harmon-Price

# By sleight of hand



Technical Services Branch manager Trevor Vollbon and Moreton Bay District Ranger Vic Bushing with a relief model of Moreton Island received on the island recently from the Environment and Administrative Services Minister, Mr Tenni. According to the first issue of Brushtail, the Southern Region's newsletter, Vic managed to 'sleight of hand' the model which was used to produce contour shading for Sunmap's new Moreton Island map.

# Facts on Fraser

The Fraser Island Recreation Area program will start to operate as an on-site management authority in February 1986.

This is one of the facts about Fraser Island.

Are you being bombarded with complex questions about Fraser Island's Recreation Authority?

Do you know anything about the new recreation area or are you feeling like a mushroom in the dark?

Here is the latest information regarding the Fraser Island Recreation Area. Hopefully it will assist you in dealing with those tricky questions people ask.

The area's management will be a co-operative effort by the Service and the Department of Forestry.

The work program associated with the commencement of the authority has been designed to ensure that the delicate Fraser Island environment is managed to maintain its natural beauty and long-term viability while enabling visitors to enjoy safe and healthy nature-based recreation.

The initial work program will focus on beach clean-up, facility improvement and education.

The Service is keen to provide a strong emphasis on education. This will begin with the first contact, the issue of a permit and

follow through to organised interpretive programs.

The booking system for Fraser Island will be different from the Service's usual method — permits will be issued at a number of locations.

Fraser Island residents and tradesman with legitimate business on the island will be exempt from the fees.

Details of funding and the works program will be released soon and in November details of the regulations will be known.

The aim of the regulations and the Act is not to restrict enjoyment but to manage the resource. Activities such as fishing, beach camping and scenic driving will continue.

A staff training school will be held in November to train relevant staff to carry out their duties under the new management system.

A park guide for the entire island should be available in December. This publication provides information about facilities, permits, the island generally and management.

Noel Dawson  
Regional Director  
Southern Region

## Personnel news

## Comings and goings

Changes are always occurring in Service staff — new faces, people coming and people going, not to mention the 450 plus in positions.

It is hoped to make this section a regular part of Newspaws so that the person you speak to or write to in the next region or in Head Office or even in your own region is not a stranger.

Among recent appointments: Lyn Gough from Police Department to management services officer; Mike

Stapleton from Public Service Board to senior management services officer; Bob McTaggart to senior personnel officer; Mark Weaver to regional superintendent, Northern Region; and Alan Beckman from Forestry Department to Eungella National Park.

Among recent transfers: Paul Murray to Public Service Board; John Halliday to Department of Health; Bill Knott and Lloyd Robins to Treasury Department (though they will be around for some months); and Rod Denman, seconded to the Casino

Control Division of the Treasury Department.

Among internal transfers: Brett Porter, Girraween to Hermitage; Bob Schulz, Binna Burra to Green Mountains; Bill Fienady, Natural Arch to Binna Burra; Ernie Wilkinson, Binna Burra to Natural Arch; Bob Laws, Girraween to Hermitage; and Cameron James, Blackdown Tableland to Carnarvon Gorge.

Late news: Neil Mee, to acquisitions officer, Research and Planning Branch; Geoff Cole, to Field Operations Officer.

# Newspaws: Are you being served?

Thanks to those who completed the Newspaws survey. Almost 500 questionnaires were distributed and 52 staff responded.

Although statistically acceptable, a 10 percent response rate is disappointing and I can only conclude that most Service staff:

- don't read Newspaws;
- hate questionnaire surveys;
- are too busy to complete a simple questionnaire; or
- couldn't give a . . . !

Most respondents:

- devour Newspaws word by word! (Or skip read it);
- like the present format (newspaper);
- like the present content (really!);
- Like the present editorial style. (How many did you bribe, Don? A few were game and said they did not like the journalistic style!); and
- don't want to return to the old format for Ringtail.

A few objected to the gossip and trivia (others want more!); and a few objected to political references (perhaps they were referring to Ringtail).

Four people volunteered to be editor (a thankless task!) — Gil Field, Ric Nattrass, Peter Slaughter and Marc Hockings (but not until 1987!). A few others were dobbed in!

Many useful suggestions were made about positive changes to Newspaws:

- continue with four pages;
- more information on regional/field events, individual projects, current Service happenings, individual staff;
- introduce new staff;
- column on what's happening in other government departments;
- more attention to wildlife and marine park matters;
- information on vacancies/new positions, appointments and promotions;
- more emphasis on nature conservation.

Some of the more interesting comments were:

- 'Our customers love them — we hand them out like hot cakes' (hope you mean Ringtail!);

- Are you prepared to be Editor — 'No way!';
- A few specifically mentioned how much they enjoyed the article on early track construction at Lamington;
- A few want more controversy and honesty about what's happening in the Service.

The message that seems to be coming through loud and clear is that Newspaws could be a best-seller if regional staff made more contributions to each issue.

Remember — The deadline for the next issue is 15 November. Please pen to paper, we'd love to hear from you!

Pamela Harmon-Price

Editor's note: Responses have had an effect already. You may notice some items in this issue. Contributions from some regions are conspicuous by their absence.  
Don Marshall

# Overseers know their weeds

Weeds are always in someone else's backyard until you see them in your own.

National and environmental parks are no exception which was discovered by 13 park overseers who attended a weed and chemical school in August.

The three-day course was organised by Jerry van Delft at Moggill for Southern Region staff.

Lecturers were from the Alan Fletcher Research Station, Queensland Agricultural College, Water Resources Commission, Brisbane City Council, Department of Primary Industries and the Service.

They instructed participants in weed identification and the safe and effective use of chemicals.

QAC lecturers also gave a practical demonstration of field equipment which may be of use in the Service.

It has been recognised that the weed infestations in our parks are of major concern to Service staff and local landholders as is the indiscriminate use of chemicals in park areas.

These points were highlighted in the three days followed by a



discussion on the legal requirements for use of herbicides in public places.

On completion of the course, each overseer sat for the chemical operator-distribution control certificate (successfully) and will now prepare weed control programs for respective park areas.

All participants found the course worthwhile.

Regional centres will receive copies of the notes compiled for the course.

For further information contact Jerry van Delft at Moggill.

Remember the old saying, it's the squeaky weed that gets the oil.



# Outside and in



Outside the new Mon Repos centre are members of the park development team (picture top). The lower picture shows the inside of the new building at lunch time. Now turn to Ringtail and read Paul Kummerow's report.



Who said money was short? Our camera caught Mainland Estate senior clerk Graham Hudson hard at work at the guillotine trimming his new supply of Monopoly money. For what purpose we can only guess.

## Outdated, narrow

'Seashore Ecology' — T. Carefoot and adapted for Australia by R. D. Simpson University of Queensland Press, St Lucia, 278 pp + xxiii, RRP \$35 Hardcover.

The standard descriptive reference about Australian shores has been Dakin's 'Australian Seashores' published in 1952, although depicting specifically the seashore environs of NSW.

There is little doubt that the time is ripe for the preparation of a new and authoritative account of Australian seashore ecology, especially with respect to rocky shores which have received by far the most attention.

Thus an unholy alliance, presumably to redress this absence, has been struck between the author of a North American book published previously and a dutiful Australian disciple.

In 1977, Carefoot's 'Pacific Seashores: A Guide to Intertidal Ecology' was published and added to the already burgeoning barrel of descriptive volumes about rocky shore ecology with particular reference to northern hemisphere studies.

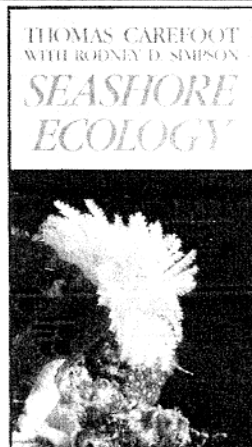
Apparently the aim of this latest edition was to use Carefoot's original opus infiltrated with examples of Australian studies provided by Simpson so that concepts of intertidal ecology could be identified with local organisms.

In other words, Carefoot's original edition has been plucked from ignominious residence in that great mausoleum known as academic remainders and touted as this year's model by simply masquerading as a supposedly poignant insight into the state of affairs down-under.

According to the blurb this latest edition is directed to the professional ecologist and . . . yes you guessed it! . . . that ever elusive erudite layman.

The book begins with a rather superficial account of Australian coastal geomorphology which is then followed by that perennial chapter on the processes of water movement and the consequences for intertidal beasts with only cursory mention of Australian examples.

The next two chapters are the core of this book and address specifically the processes affecting the distribution and



abundance of intertidal species assemblages on rocky shores.

Unfortunately, the authors continue to promulgate the rather antiquated orthodoxy that upper vertical limits of species distributions are determined by physical factors such as salinity and temperature whereas the lower limits are determined by biological factors such as predation and competition.

The fact that there was not even any mention of the challenges to the orthodoxy is lamentable. Furthermore, no serious attempt is made to discuss Australian sandy shore nor tidal forest ecology despite the availability of pertinent literature.

The chapter on seashore vegetation, written independently by Barson and Heatwole, is completely out-of-place in this book although it is a useful but brief introduction to Australian coastal plant assemblages.

The exceptional features about this book is that it was prepared without consultation with any of the leading researchers of the various facets of Australian intertidal ecology and that very little of the extensive published literature concerning Australian seashore studies was referenced.

Quite simply this book is superficial, out-of-date, and irrelevant to anyone wishing to be informed about the current concepts of intertidal ecology in general and the state of affairs with respect to Australian studies in particular.

Milani Chaloupka  
Maritime Estate Management Branch  
Brisbane

## For food 'market'

'Plant life of the Great Barrier Reef and adjacent shores' — A. B. Cribb and J. W. Cribb. 1985. University of Queensland Press, St Lucia, Qld. 294 pp. RRP \$25 Hardcover.

'Plant life of the Great Barrier Reef and adjacent shores' is basically a compendium of pretty pictures identifying an assessment of marine algae, seagrasses, 'mangroves', and terrestrial plants found commonly along the Queensland coast.

There are no vascular plants unique to the Great Barrier Reef island and thus it is merely a prudent marketing gambit to assemble a number of colour pictures of plants described in detail elsewhere and package them under the imprimatur of the Great Barrier Reef.

Most of the terrestrial plants considered in this book are characteristic only of the southern portion of the Great Barrier Reef and coastal Queensland, clearly reflecting the authors' familiarity with this region.

However, most of the islands on the Great Barrier Reef do not occur in this region and the island flora in the central and northern regions are quite different.

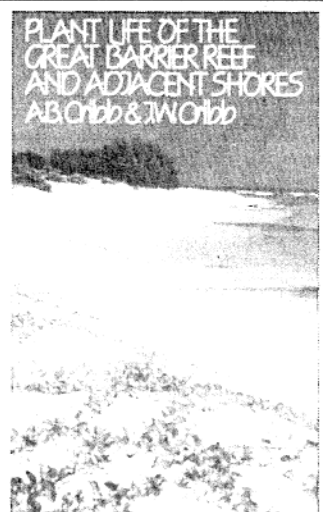
Nevertheless, some plants found on Green Island and Low Isles near Cairns have been included but these islands are hardly indicative of the 'northern islands' referred to by the authors.

Consequently, the title of the book is most misleading. There is more to the Great Barrier Reef than the 15 cays in the southern end.

Moreover, the authors in their introduction to islands of the Great Barrier Reef do not even mention the existence of low-wooded islands despite their uniqueness to the Great Barrier Reef.

The associated notes are not very informative and in fact there is little reference to natural history at all.

Despite such information being available more attention is given to heralding for instance that a particular alga may be 'eaten with vinegar or salad dressing'.



Such pearls of wisdom should surely be subordinate to providing appropriate naturalist information such as the distribution of the plant throughout the Great Barrier Reef region, whether a native or introduced species, flowering times, fruits, associated fauna, and so on.

In addition, the continued and unnecessary use of incorrect species names is also irritating; for instance the authors choose to use *Euphorbia* as the generic name for *Chamaesyce* atoto, *Wedelia* for *Melanthera* biflora.

The authors continue to promulgate incidentally a number of misguided perceptions concerning ecological patterns and processing purported to occur on the coral cays of the Great Barrier Reef.

For instance, the supposed concentric zone orientation of cay vegetation, the facilitation model of primary succession, decaying bird induced *Pisonia* seedling germination, and so on.

I can only commend this book to those culinary plant aficionados hankering to know which alga you should toss with the 'thousand island salad dressing' or which herb was used in Brazil as an adulterant in tea.

After careful scrutiny, the naturalist will find it quite disappointing.

Milani Chaloupka