

2004 No 3
August

Nerpulungup News

from the Friends of the Fitzgerald River National Park



Fitzgerald River National Park — central in Gondwana Link

The Gondwana Link project in its new form is now two years old and it continues to grow with significant momentum. It is attracting more interest and resources to the partnership and their projects which are aimed at protecting and restoring nature and providing community benefits from the south coast's remarkable biodiversity.

The focus areas remain the Corackerup and Pallinup Valleys between the Fitzgerald River and Stirling Range National Parks, and undertaking conservation advocacy in the vast area of unallocated crown land east of the rabbit proof fence known as "Z land".

Significant aspects of the project currently include the Nature Conservancy's Site Conservation planning process and the purchase and subdivision of a property by The National Trust of WA.

Site conservation planning is an iterative process that works through a spreadsheet system to build the documented design of a nature conservation plan. This is based on the selection of targets that encompass linked aspects of the biodiversity and landscape, an analysis of the issues affecting the target and the development of management and monitoring systems. The partners, with Keith Bradby and Amanda Keesing from the Gondwana Link coordination unit, have developed a plan for the Corackerup area with several targets including Carnaby's cockatoos and the creek systems.

A spectacular property on Norman Rd, Corackerup has been bought by the National Trust of WA through the Bush Bank Program as part of Gondwana Link. The 1150 hectare property is currently being subdivided, with Greening Australia WA to purchase the northern 751 hectares of bushland and abandoned paddocks, and neighbours Robert and Wispy Bayly acquiring the southern remainder of farming paddocks. The Greening Australia section contains breakaway systems and extensive areas of bushland as well as paddocks of native grasslands that form part of the connection between the Corackerup Nature Reserve and the Corackerup Creek unallocated Crown land reserve. Conservation works undertaken on this property will solidify this strategic link. A large part of the conservation works has been the establishment of around 50 hectares of woodland of the locally endemic Corackerup moort, *Eucalyptus vesiculosa*, which has a stronghold on the property.

The issue of the incorporation of Gondwana Link that was of concern to the Friends has been finally resolved. A new constitution has been developed with the help of the lawyer recommended by Ron Richards.

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Nathan McQuoid
President

A Fishy Tail - the remarkable story of the Spotted Minnow in WA

(Picture on page 3)

In WA the spotted minnow a small (30 - 70 mm long), semi-transparent, cylindrical, scaleless fish, lives only on the south coast between Walpole and Thomas River, in rivers, creeks and a few lakes. Towards the east of its range these habitats are often highly saline, temporary and subject to great variation in temperature, dissolved oxygen and nutrients.

But first to the big picture. It is a remarkable fact that the spotted minnow occurs over a larger range than any other inland (as opposed to oceanic) fish as it is also found in eastern Australia including Tasmania, New Zealand, and South America as well as the Chatham and Falkland islands. How is this possible? Isn't it extraordinary that the same fish (same species as biologists say) lives in clear mountain streams in New Zealand and in near desert conditions in the mallee of southern WA? Think of the country at the upper reaches of the Oldfield and Jerdacuttup rivers, for example. These were two questions that I couldn't get out of my mind when I commenced this study.

In New Zealand where it is known as the inanga or whitebait, the spotted minnow has been studied because it is the basis of an important recreational and economic fishery. Here and elsewhere fish migrate downstream and spawn in tidal estuaries on spring tides, the eggs hatch out of water on grassy banks on the following spring tide and the larvae go out to sea for 6-9 months. They then return to rivers and streams and the cycle repeats itself; most fish spawn and die, living for only approximately one year. Having a marine larval phase explains its occurrence on other southern hemisphere countries and islands - but that is another story. What then happens in WA where rivers are often land-locked? The Jerdacuttup River has not had contact with the sea for a probable 6 000 years and other rivers have only irregular contact and their estuaries are not tidal.

What I found was that fish migrate *upstream* instead, after winter rain or summer flooding, and spawn as far up as it is physically possible to go e.g. where the western arm of the Phillips River crosses Bridger Road or where the Jerdacuttup crosses Woodenup Road. Although I didn't locate a precise spawning site I confidently predict that they will not be out of water as the chances of another flood in this part of the world are just too slim. Some larvae are then washed gently downstream to larger pools where they grow to adults. Now there is a problem here; as most local fish only live for one year too, what happens in years of little or no flow? (- as we certainly do have them!) If they all died without spawning in a dry year they would be extinct in next to no time. Cunningly, they have a fall-back strategy of spawning in dry years on falling water levels in larger, permanent river pools which ensures their survival in our variable and unpredictable climate.

How do they cope with other environmental extremes? They can withstand saline water to approximately one and a half times that of seawater, they do not tolerate water warmer than approximately 28 °C which probably explains

why in WA they only occur on the south coast. They also cope with very low dissolved oxygen levels by gulping air at the water surface. This was amazing to watch and it took me quite a while to figure it out particularly as these fish use counter-shading to make themselves invisible when viewed from above the surface of the water.

Like most research this study asked as many questions as it answered. For example I noticed that WA fish are considerably smaller than elsewhere. I suggested that this was due to the requirement to be small to avoid predation by aquatic

heron or hoary-headed grebe which are often present in our small and confined river pools. But I don't really know. There may be other reasons such as smaller insect food of low nutritional value or growing in relatively warm water if they spawn late.

The study revealed that spotted minnows are what biologists call adaptive opportunists (as opposed to specialists). This is often the case with animals that have wide distributions. They are endowed with genetic traits which they modify or adapt to their local environmental situation. Migration upstream instead of downstream when local rivers became closed to the sea and estuaries became non-tidal is a superb example of this.

My final responsibility as a researcher was to comment on the conservation and management of spotted minnows in WA. At present they are common and widespread within their range. As they can withstand high salinity and use river flow or flooding to utilise habitat that would otherwise be unavailable or for spawning, I first thought they were perhaps pre-adapted to take advantage of some changes that might be occurring to our rivers. Then I realised that if riparian vegetation is going to change, as is already happening in places e.g. the upper Phillips River, and structurally diverse woodlands and shrublands are replaced by succulent, salt tolerant heath plants, this will eventually threaten minnows. This is because the present woodlands provide shade that cools the water in summer and as much of their food is terrestrial insects and spiders that fall in the water, these in turn are dependent on natural riparian vegetation. As most of the minnows' range is in lands that are either cleared for agriculture or otherwise affected by it, their ultimate widespread survival is largely dependent upon integrated catchment management and protection of riparian vegetation.

And now that my study is complete, how do I feel about these little fish when I see them in our local rivers? I have a strange feeling of wonder, respect and affection for which I can't find an appropriate word in the English language.

This story is an abbreviated account of the Master of Philosophy research conducted by Andy Chapman at Murdoch University (& FFRNP committee member). Andy studied fish from Moates Lake near Albany and from the Phillips, Jerdacuttup and Oldfield rivers near Ravensthorpe. As well as Murdoch University Andy acknowledges the support of many volunteers who assisted in fish collecting as well as a Fishcare Grant from Fisheries WA. Andy can be contacted on (08) 98381149.

Natures News - Fitzgerald River National Park Ranger's report

The winter months provide a wonderful time to enjoy the serenity of Fitzgerald River National Park. On many occasions it is possible to enjoy the beaches by yourself apart from the frolicking Southern Right Whales and Bottle-nosed Dolphins.

There have been plenty of Southern Right Whales along the coast this year particularly along Trigelow Beach and at Point Ann, however whales have been observed along the Hopetoun coast as well. There is also an unusually high number of Humpback Whales in the area, mostly in Doubtful Island Bay. The Humpbacks usually travel in a pod of 4 or 5; they move much more quickly than the Southern Rights but tend not to come as close to shore.

Visitors to Pt. Ann may have noticed a couple of young ladies looking through a dumpy level at the whales. Rebecca has returned with another off-sider, Josie to further her PhD study on Southern Right Whales. Rebecca says the population of Southern Right Whale is growing by about 10% each year; the current global population is about 7000 whales and Australia's population is about 1600. This is still along way below the pre-whaling population, which is not known, but a minimum estimate of 26000 right whales were killed in Australian and New Zealand waters alone between 1827 and 1899. Just imagine the view at Pt. Ann, when the whale population recovers.

Some other interesting facts about Right Whales is that the females grow the largest up to about 100 tonnes in weight and 17m in length (Humpbacks grow to a similar length but weigh about 50 tonnes). The female Rights become sexually mature at 10 years of age and on average produce 1 calf every 3 years. They have a gestation of about 12 months.

Apart from Right Whales and Humpbacks there was an observation of a Blue Whale off of Pt. Ann early in May. It would be nice to think we could see these as regular visitors in the future as well.

Some of the major works planned for the coming year include re-sheeting another section of Pabelup Drive, improving the East Mylies carpark and replacing the Four Mile Beach viewing platform and staircase.

The Western Shield aerial fox baiting program will continue in September.

There is still some prescribed burning to do before summer arrives, this includes a burn to the north of the Quaalup Homestead and one south of Witt Road.

The wildflower display is spectacular at the moment and will improve as the weather warms up. There are many Qualup Bells on Hamersley Drive and the brilliant Scarlet Banksias are flowering near West Mt. Barren. The orchids have been a bit slow, however Banded Greenhoods and Donkey Orchids can be seen at the moment.

The Bobtails' presence on the roads again indicates spring is just around the corner. Let's hope the rain continues to keep this seasons crops growing. Of course the 4 wheels tracks in the park will be closed after significant rain to reduce the risk of spreading the dieback fungus in the park. Please contact your local Ranger to find out about road conditions before leaving home.

An important fact to note for fisherman and those wanting to drive on the park beaches is that unregistered vehicles are not permitted on any public lands in Western Australia, which includes CALM managed lands. Please make sure your vehicles are registered before entering the park.

For the fisherman—there have been reasonable catches along the coast, in particular salmon trout and herring. I'm told big skippy are being caught as well.

Hope to see you enjoying the park someday,

Peter Wilkins
Senior Ranger

WA's Spotted Minnow—see previous page

"Dr Gunther has lately shown that the Galaxias attenuatus inhabits Tasmania, New Zealand, the Falkland Islands and the mainland of South America. This is a wonderful case, and probably indicates dispersal from an Antarctic centre during a former warm period."

Charles Darwin, on the distribution of *Galaxias maculatus* in 'The Origin of Species' 1859.

Plate 1 Galaxias maculatus from Carracarrup Creek.



Bert and Babs Wells— a personal tribute

I first met Bert and Babs at Beverley Springs station in the Kimberley in August 1974. I remember the occasion well; they were guests of the owners John and Marion Nixon and were staying in a delightful rondavel guesthouse in the tropical homestead garden. I was there as part of a biological survey party bound for the Prince Regent River Reserve; Bert and Babs were joining the survey to photograph the elusive black grass wren.

Since then our paths have crossed many times in different places usually in the course of biological field work for me and wildlife photography for them. I have come to know them well. They were always totally dedicated to each other, passionate about their photography and conservation, generous and hospitable to a tee and always interested in their friends and their families.

On photographic field trips an established procedure was for Bert to remain in camp attending to the technical complexities of wildlife photography. Babs on the other hand would scout ahead and around, always on foot with trademark binoculars slung around her neck, looking for subjects, usually nesting or un-photographed birds. Babs is an accomplished ornithologist in her own right and on many occasions her observations added substantially to the knowledge gained on biological surveys.

In April 1984 we met in Balladonia en route to the Nullarbor Plain. Bert and Babs had been trying to locate the Balladonia wombat colony - one of the very few in WA - to photograph hairy-nosed wombats. They then joined us at several sites on the Plain, at one of which Bert set up a hide at a rabbit warren. In their view a photographic record of the state's fauna would be incomplete without the ferals as well as the natives. On this trip a colleague, Norm McKenzie, and I came upon the place where they were camped, somewhere between Rawlinna and Zanthus, as we returned to the Eyre Highway. It was towards the end of the day. We pulled up of course, and although we were not expected, a cold beer and a hot meal were in front of us as the sun went down.

Of all Bert and Bab's photographs my favourite is perhaps the black and white of the long-tailed dunnart with its erect tail carried like a banner as it presides over its rockpile. In small measure I have an association with this photo as I was present with Phil Fuller and Jim Lane in June 1981 on the Young Range in the Gibson Desert when it was captured. The dunnart was then driven 300 km on the Gunbarrel Highway to Warburton and flown to Perth to make its photographic debut.

By their own admission the north in general and the Pilbara in particular always held a powerful attraction for Bert and Babs. In spite of this, the opportunity to photograph a rare and little known marsupial, the dibbler, had them heading to the deep south in 1986. This time it was to the Fitzgerald River National Park, that outstanding national park between Bremer Bay and Hopetoun. Again I remember the occasion with clarity. We were camped on a firebreak north of Roes Rock. The captive dibblers were reluctant subjects. Their activity patterns did not match ours. I remember one night waking to sounds in camp well after midnight, the dark and silent camp was intermittently lit by flash for the next few hours. The dibblers were active, the photos were splendid and a framed copy still adorns one of my walls at home. Not all missions met with such success. The following year they returned to the national park to where I had previously trapped another rarity, the heath mouse. Five days trapping did not repeat the previous result. Also at about this time Bert and Babs came to Twertup Field Studies Centre to share some of their secrets, particularly high speed flash, with some of the 'friends' of the national park.

At around about this time Bert received another international photographic award. With characteristic modesty, when I congratulated him, he snorted and said, 'just another piece of fruit!'. It took me a while to work out that he was using a term from his air force days in reference to letters after ones name. I think now that he was also saying that the award wouldn't have come his way without Bab's contribution.

Towards the end of the 1980s the old faithful three speed, square Nissan patrol, familiar to many and veteran of so much tripping around WA was pensioned off and replaced by a brand new Toyota FWD. With masterly understatement Bert explained their decision to me 'She was well run-in and we have made an investment in our future'.

One of the privileges of an Australian field biologist's life is the opportunity to experience and explore a vast and varied land. The other is the chance of sharing this opportunity with people who are capable, caring and committed. This is no better exemplified than by my association with Bert and Babs Wells.

Bert Wells passed away in October 2003. His passing prompted me to dig out field diaries of trips we shared together which formed the basis of this tribute. The photographic collection resulting from all this work was eventually purchased by CALM. Some of their work, including my favourite, can be seen in their book 'The wild Pilbara - iron country and its natural wonders'. 1982. Jaycees Community Foundation Inc.

Twertup Art Weekend: presented by Southern WILDERNESS ART Trips October 1st - 3rd

Driven by a love of the south coast Perth artist, Louise Lodge, has recently purchased a property in Hopetoun. Over many years she has been visiting the area for inspiration, returning with drawings, paintings and photographs. She is a new member of the FFRNP and this has led her to the decision to offer a weekend art course aimed particularly at people from the metropolitan area, giving them an opportunity to experience and learn about the FRNP and meet some Friends.

Louise, who is also an experienced educator dedicated to opening people's eyes to the visual wonders of the south coast wilderness, will lead the art work-shops. She has also gathered a group of people who will share their knowledge about this part of the south coast with course participants and those members of the FFRNP who would like to take part in the social gatherings: (* see below)

- **Nathan McQuoid** (our President, and Manager of South Cost Region Greening Australia WA) will provide expertise on local flora.
- **Andy Chapman** (FFRNP committee member) will provide insights into the native fauna of the area. Andy is a well known zoologist based in Ravensthorpe who has worked on many natural history research projects with the FRNP
- **Bill Moir** (our greatly-respected FFRNP geologist) will talk about Twertup's spongelite cliffs and the mountain ranges which stretch across the Park.
- **Carol Pettersen** is based in Albany and is one of seventeen children born to a traditional Noongar woman from the Ngudgu and Meenang Peoples. Her father is a white man and she proudly lives with her dual culture. She will share traditional knowledge of culture, land and environment in the context of yesterday, today and tomorrow.

The schedule for the weekend in brief will be as follows:

Friday (pm) - Arrive , settle in, meet other participants and be introduced to Twertup and weekend activities.
 Saturday - Morning walk. Painting/drawing/photography session. Lunch. Flora and fauna of the FRNP
 Sunday - Morning walk. Art session. Lunch. Indigenous stories of the FRNP. Geology of the FRNP.
 Monday - Excursion to Pt Anne or Fitzgerald Inlet. Participants will be able to draw, paint or take photographs along the way. Information and discussion on flora, fauna, landforms and Aboriginal heritage will be provided at points of interest on the drive to the coast. 4WD transport will be shared.

*** Members of the FFRNP are encouraged to come out to Twertup on either Saturday or Sunday afternoon for a social gathering and to meet the workshop participants.**

Participants will need to bring their own sleeping bag (or equivalent) and pillow, and enough food to contribute to 3 communal evening meals. Self-catered lunch will be provided as will tea, coffee, and biscuits. Twertup facilities include stoves, cooking facilities, crockery and cutlery, beds, toilets and water.

For participants from Perth an information session will be organised prior to the trip.

- The cost—for the full weekend \$330 (\$280 concession); for one day \$110 (\$94). This includes accommodation.
- Numbers are limited to 15 people.
- **A non-refundable deposit of \$50 is required by 17th September** with the balance payable by **24th September**.
- Members of the FFRNP are eligible for concessions.
- Cheques are to be made payable to Louise Lodge.

For more details contact **Louise Lodge. P.O. Box 1510, East Victoria Park 6981**

Email: louisemlodge@westnet.com.au

Web: <http://members.westnet.com.au/louisemlodge>

Telephone: 0427 700 613

Registration form: please forward to the above address

Name

Address.....

.....

Ph Number. H..... WF

Email.....

Payment.

Concession

Member Friends of the FRNP

Fitzgerald Biosphere Review – an update

The project to review the knowledge of the Biosphere area, initiated by the Friends and funded through Lotterywest, is well underway. The project is essentially an update and extension of the 1980 report for the former National Parks Authority by Barry Muir. Where the Muir report was concerned with the Fitzgerald River National Park only, the current project covers the broader Fitzgerald Biosphere area – essentially from Beaufort Inlet in the west to the Jerdacuttup catchment and Ravensthorpe Range in the east, north to the edge of Lake Magenta Nature Reserve and south to include near-coastal marine waters.

The 1980 report found that there was a lack of biological data particularly in relation to some fauna groups, vegetation and flora of specific habitats, and genetic and evolutionary studies of the Fitzgerald's unique and restricted plant species. It also highlighted that there was a great deal of unpublished research which was not available to people who were involved in management and decision-making or who had an interest in the Park.

So far, the project is unearthing a lot more published information than was available in 1980, but many of the earlier findings and recommendations are still valid. A lot of the knowledge is still in unpublished reports or other formats, and a considerable amount of the project time is being spent trying to find the sources of the unpublished work. The assistance of people like Brenda Newbey, Andy Chapman, Angela Sanders, Gil Craig and Keith Bradby in allowing access to their collections of papers has been greatly appreciated. Not surprisingly, most of the work uncovered so far has taken place within the FRNP or in the coastal strip. The main areas still requiring further research are the marine waters, unpublished University theses and reports commissioned as part of mining and other land use investigations.

A database of source materials is under construction, and will include summaries or abstracts as well as information on the custodianship of the material. The database is being developed in consultation with the Gondwana Link partners, so that it can be linked to the wider "Knowledge Connection" system they are developing. As well, the project will produce a summary report of the state of knowledge for the Fitzgerald Biosphere, and identify the main knowledge gaps that need to be filled. A physical collection of all the main papers is also being considered and could be housed in a local library so that it is freely available.

For further information on the project, contact Paula Deegan on 9842 5232 or 0428 842 532, or e-mail pauladee@bigpond.net.au

Apology from the Editor

In the last edition I inserted a membership form with the incorrect subscription details. The correct amounts are: Family \$25; Individual \$15; concession \$10. I hope that this did not inconvenience any members.
Priscilla.

TWERTUP ROSTER

September: Anne.	January: Broadbents
October: Angela and Mark.	February: Nathan
November: Rosey and Ron.	March: AGM
December: Barbara Miller.	

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