



STEP Matters

Number 144, April 2008

STEP is nearly 30 years old — here is our 144th newsletter!

In this issue of *STEP Matters* we have a nice range of subjects. There are some positive ones. The upcoming talk by Nancy Pallin and Jane Gye and the Strickland State Forest walk should both be very worthwhile events. The Gyes and Pallins seem to go places where most others don't and to bring back amazing stories. Come along and bring your friends.

We report on the launch of *Sydney's Natural World* late last year and on the success of the Clean Up Australia Day at the western end of the Lane Cove Valley. But there the good news ends.

The proposal for development on the Adventist Hospital site continues to concern us and we report on the first Community Reference Group meeting held in March and on the preliminary design. We are in debate over the lack

of effectiveness of bioretention swales in preventing nutrient ingress to bushland and report on that issue in some detail.

Koalas are at risk from increasing CO₂ levels irrespective of whether global warming is happening or not and wildlife is less at risk from foxes and more from cars. We report on an example of urban ugliness along the railways and have a look at the population issue and how politicians and economists deceive us by talking about gross rather than per capita wealth.

The Australian Conservation Foundation's (ACF) failure to properly tackle the drivers behind the Traveston Crossing Dam proposal and the world food crisis are depressing but we confront them anyway.

As always, we welcome your feedback and suggestions.

Nancy Pallin and Jane Gye talk to STEP

Unspoilt Wildness: The Arnhem Land Experience — Fishing, Weaving and Digging Yams

Date: 10 June 2008

Time: 8 pm

Place: St Andrews Church Hall, corner of Chisholm and Vernon Streets, Turramurra

Nancy Pallin is one of the best known names in the world of conservation in New South Wales. Jane Gye, who accompanied her to Arnhem Land last year, joins Nancy to give a talk entitled *Unspoilt Wildness: The Arnhem Land Experience — Fishing, Weaving and Digging Yams*.

Arnhem Land is an area of nearly 100,000 sq km in the north-eastern corner of the Northern Territory. This Aboriginal-owned expanse is one of the last unspoilt areas of Australia and is made up of wild coastlines, deserted islands, rivers teeming with fish, lush rainforests, soaring escarpments and savannah woodland. It is a stronghold of the traditional Aboriginal culture of the Yolngu people, who live a lifestyle which blends timeless traditions with the latest in western technology.

While this area is virtually free from development, it faces real environmental threats from invasive species such as buffalo and pigs, and marine debris generated elsewhere and carried to Arnhem Land on the currents. Nancy and Jane will talk about some of their experiences in traversing this area and meeting the Yolngu inhabitants.

Nancy has a background in education and is a director of Paddy Pallin Pty Ltd. She is a founding member and chair of the Ku-ring-gai Bat Conservation Society and volunteer coordinator of the habitat restoration project in the Ku-ring-gai Flying-fox Reserve. She was chair of the successful Blue Gum High Forest Group and has a long history as a volunteer bush regenerator in areas across the North Shore. She was awarded the Centenary Medal for flying-fox conservation in 2003 and received an Australia Day Award for Outstanding Service to the Ku-ring-gai Community in 2005.

Jane Gye started work as a geologist but since 1982 she has been involved with bush regeneration and developed a broad background in environmental education. She was a member of Ku-ring-gai Council's Bushland Management Working Party for 10 years, ran a Bushcare group at the local school, and began the first Streetcare group in Ku-ring-gai. She currently works as a bushcare trainer with three local councils and is a committee member of the Australian Association of Bush Regenerators.

Nancy and Jane, both of course STEP members, promise an exceptionally interesting talk — not to be missed!

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Koalas at risk as trees lose nutrients

John Martyn spotted this article in
The Weekend Australian (5 April 2008, page 8)

It seems that koalas and other leaf-eating animals face a bleak future, with new research showing edible leaves are becoming inedible due to climate change.

ANU Professor Bill Foley says 'What we are seeing, essentially, is that the staple diet of these animals is being turned to leather'.

Greenhouse experiments carried out at James Cook University by researcher Ivan Lawler have shown that artificially increasing the CO₂ levels reduces nitrogen and other nutrients in eucalyptus leaves and boosts toxic tannins. The leaves, already naturally low in protein, become increasingly untenable as a food source. Ultimately, mammals like koalas, greater gliders and possums can no longer accumulate the nutrients they need to reproduce. The researchers believe that this may explain mysterious population crashes among greater gliders and brushtail possums reported in some areas of pristine bushland in Queensland.

Numerous insect species also feed exclusively on eucalyptus leaves. The whole scenario is very disturbing for the future of Australian wildlife.

One overriding lesson from the koala story is that, even if you are a global warming sceptic, and there may be a few out there among STEP membership, the rise in CO₂ is an indisputable fact.

Clean Up Australia — 2008 campaign

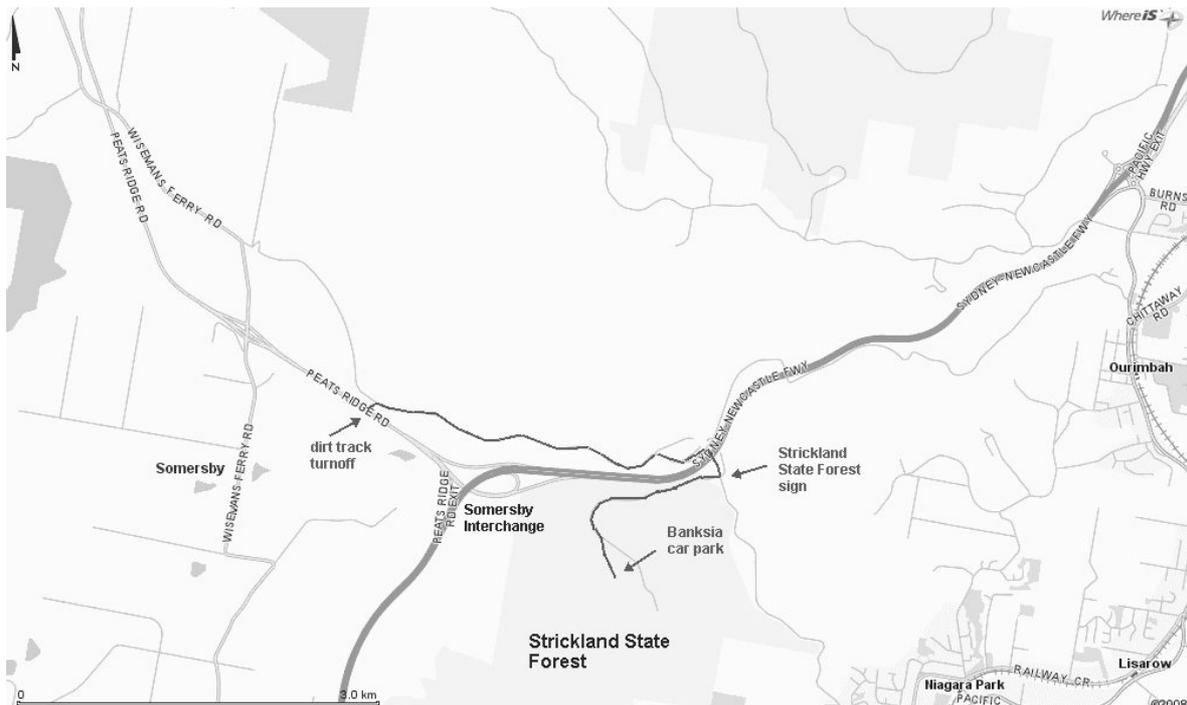
STEP committee member, Graham Jones, reports that the volunteer Clean Up Australia team at Thornleigh Oval was able to clean up the complete target area in Thornleigh. Fifteen bags of rubbish were collected at a total weight of 80 kg, plus a car battery and some building material amounting to another 20 kg. Thanks to those STEP members who supported this event.

Strickland State Forest walk

Strickland State Forest displays one of the finest examples of the transition from dry to wet sclerophyll to rainforest in the greater Sydney area. The biodiversity of this forest is remarkable and it is now classified as a flora reserve. A portion of the forest contains an arboretum with 130-year-old plantings of giant timber trees. The tall trees on fertile soil set within a steep escarpment setting provide many photo opportunities. The pace will be relaxed and slow to allow the full beauty of this forest to be appreciated.

Booking required — see below.

Date: Sunday 4 May
Time: 9.45 am for 10 am start. Estimated finish 4 pm.
Place: Meet at Banksia car park, Strickland State Forest (see map below). Note there are two Peats Ridge Road turnoffs from the freeway. Use the second one from Sydney, at the Somersby interchange. Allow for 70 min from start of freeway at Wahroonga.
Grade: Moderate on established tracks. There will be some minor creek crossings.
Caution: One may encounter leeches in certain sections of the forest. Bring salt or insect repellent.
Bring: Suitable walking shoes are essential. Bring lunch, binoculars, camera. Afternoon tea will be provided at the end of the walk.
Contact: Andrew Little (aalittle@optusnet.com.au, 9924 7212 after 7.30 pm).



When will they ever learn? Water-borne nutrients and bushland degradation

It is well understood from casual observation and from scientific studies¹ that nutrients, primarily phosphorus, degrade Hawkesbury Sandstone bushland by creating conditions that favour exotic weeds at the expense of local flora. Phosphorus builds up in ecosystems over time and hence has a cumulative effect. It is also argued that additional water alone can change the makeup of plant communities². In these circumstances it seems sensible, even essential, that those charged with the management of our bushland heed these factors and strive to prevent water-borne nutrients from entering bushland. Unfortunately this is very often not the case in 2008.

Ku-ring-gai Council's very first plan of management³ recognised this and advised perimeter catchment drains to 'permanent watercourses'. That plan recognised that pollutant filters and traps or biological filters had a role in reducing, but not eliminating, the silt, nutrient and weed content of stormwater but that they needed regular maintenance to be useful. There is no chance of regular maintenance occurring over decades, let alone over centuries and therefore they are useless in preventing nutrient ingress.

Unless we are conserving our urban bushland for the centuries ahead we are of course wasting our time. If the bush is going to be lost then why devote resources to it now when they could be better employed in other conservation areas?

This brings us to the current situation that was brought to our attention through the submissions for the management of the bushland at UTS Lindfield. Both the consultants employed by UTS and Ku-ring-gai Council believe that the stormwater there should be directed into constructed bioretention swales — a sort of wetland — and then be allowed to drain into, or be absorbed into, the downhill bush. There is a theory, not borne out by science or field experience, that sufficient nutrients can be removed through uptake by plants in the swales and by coating the gravel media within the swales. This is of course nonsense as there would have to be 100% nutrient uptake and the plants and media would have to be constantly replaced in order for this hypothesis to be supported. Swales do of course have a function in retarding water flow, in filtration of solids and in providing wetlands. To think that they control phosphorus, however, is wishful and dangerous thinking. Their overflows should be piped away from bushland.

There are of course valid objections to channelling or piping stormwater directly to watercourses. The first has to do with the effects of the physical construction of channels or pipelines. We have no sympathy with such objections unless they threaten fragile areas of endangered flora or fauna. Putting a pipe through bushland can be achieved in a narrow corridor without the use of exotic fill and, done correctly, will be invisible aesthetically and biologically in a few years. On the other hand, let the phosphorus run free and the bush will start on a slow and painful death.

¹ Leishman MR, Hughes M and Gore D Soil phosphorus enhancement below stormwater outlets in urban bushland: Spatial and temporal changes and the relationship with invasive plants. *Australian Journal of Soil Research* 2004, **42**, 197–202

² Water balance and bushland management. *STEP Matters* No 136, September 2004

³ *Plan of Management for Bushland Areas*, Ku-ring-gai Municipal Council, 1984

A more valid objection, however, is the addition of nutrients to watercourses. Our urban creeks and rivers are already polluted from urban runoff and some are all but biologically dead. Obviously each site needs to be assessed. At UTS Lindfield, discharge could be to below the weir at Delhi Road and thus a small nutrient load would be added to a huge body of water and minimal harm done. At the Adventist site at Wahroonga, however, the watercourse is much smaller and the effect of the additional nutrients would have to be assessed.

It would be good practice to go back to a zero baseline and look at all contributors of nutrients to watercourses rather than simply excluding the last source. It is also essential that we take more stringent measures to limit nutrient input. Thus it may well be that nutrients from sewer overflows and from fertilisers used in the catchment discharge nutrient in volumes that dwarf those that would come from the UTS or Adventist sites. Educating the community about reducing or eliminating fertiliser use and about picking up dog and other faeces may all be very effective ways of improving water quality in our urban watercourses. Without doubt the upgrading of our sewer system to prevent the disastrous raw sewage overflows during storms would have a very positive effect.

We are amazed at having to write this article. We are disappointed at the lack of concern shown by consultants and councils and outraged that they are not prepared to grapple with the problem and to provide science-based solutions.

Hope the cat's OK

In *STEP Matters* No 141 there was an article about cat bibs, a plastic device that does not harm pussy but which dramatically reduces their ability to hunt. It is estimated that domestic cats kill 100 million native animals per year.

In an attempt to inject a little appropriate humour we suggested that the bibs were a good idea for people who love their cats too much to strangle them. Unfortunately one family took offence and resigned from STEP. We can't afford to lose members so we want to make it perfectly clear that we don't advocate cat strangling and trust that not too many family pets have come to an untimely end because of the article!

STEP committee

John Burke
Tim Gastineau-Hills
Susie Gemmell
Graham Jones
Bruno Krockenberger
Michelle Leishman
Andrew Little
John Martyn
Barry Tomkinson
Jim Wells
Helen Wortham
Newsletter editor — John Burke

Make a difference

Get a friend to join STEP

Do we need railway fencing?

STEP committee member, Jim Wells, spends time in trains

On my railway journeys I have cause to ponder upon vegetation control in the railway corridor. Some would say the railway corridor in our part of the world is simply a weed patch; others that it has the potential to be worthwhile bushland in a suburban setting. These long strips do provide protection for birds and other fauna in the thickets of native and exotic plants and also often provide habitat and wildlife corridors. Undoubtedly the railways have problems with vegetation control. There are steep slopes on cuttings and embankments, access problems and some small inconvenient areas.

However this note concerns a particular issue — the use of ugly wire mesh cyclone-type fencing. Typically this type of fencing is used along boundaries separating the railway from roads and paths.

I suspect that cyclone fencing does not help vegetation management. Creepers tend to grow on it and even branches of trees and shrubs will grow through it. Very often there is a narrow strip alongside the road or path, which someone other than the railway has to deal with and which tends to be neglected.

So why have the fence at all? To keep out the graffiti taggers and vandals, you say. Sorry, but this fencing does little to deter or stop these people as they can readily access railway property from platforms. Really, the only reasons appear to be to control people such as the very young or old who might wander into dangerous areas and to deter people making shortcuts where the available bridges or underpasses are inconveniently located.

Melbourne gets by without this sort of fencing. All that separates the road from the railway track is a typically grassed area much like the sort of open space you see in Canberra. Conditions are different there — there is much less rainfall so vegetation control is easier. There are also fewer cuttings and embankments on the railway lines and slopes of these structures tend to be gentler.



Indeed, lack of fencing is common overseas. A few years ago, when cycling along a road in France, I was surprised to find the only thing separating the road from a very busy railway, the main line to Bordeaux with TGV trains doing perhaps 180 km/h, was a small ditch and a metre or so of grassy vegetation.

OK, if we have to have fencing, what sort is appropriate? There are much more attractive metal alternatives to mesh fencing but increasingly the railway, as with the RTA on roads, is installing acoustic screens. These can be transparent or not, but if not, local residents can have views cut off and the railway passengers feel 'closed in', much as if they were travelling in a tunnel. It would be good to see more attractive fencing while maintaining the corridor's value as habitat.

In case you missed it

Batteries supporting wind

The CSIRO and Cleantech Ventures Pty Ltd have developed a hybrid battery that promises to be capable of storing energy effectively as it has a larger capacity than existing batteries, can be recharged quickly and is long lasting. It is proposed for evening out the short-term peaks and troughs in wind power generation. Wind power is currently much cheaper than solar and this battery could assist us in matching Denmark and northern Germany where 30% of their electricity comes from wind power.

(Wind energy around the clock, *ECOS* 141, February/March 2008)

Kennedy is green entrepreneur

Australian environmental activist, Danny Kennedy, moved to the US a year or so ago and leads the firm Sungevity which aims to efficiently and painlessly put solar cells on residential rooftops. You enter your address on its web site and satellite-imaging software zooms in on your rooftop, measures its dimensions including pitch and azimuth and then draws for you what it looks like, gives you a quotation and calculates your return on that investment — all before you get up from your computer. At present it's only available in California but you can access its web site at <http://greenwombat.blogs.fortune.cnn.com/2008/04/18/the-dell-of-solar-energy/>.

Ethanol food crisis

Two factors indicate that ethanol won't be the answer when the oil runs out. Firstly its production requires huge amounts of water. A proposed new plant in Florida requested a supply of 1,500,000 litres a day! (Don't mix, *The Economist*, 1 March 2008).

Conversion of food production to ethanol has already contributed to the current world food shortage and with an additional 2.5 billion people to feed over the coming decades the chance of ethanol being able to make a difference to fuel supplies appears remote.

The Adventist Hospital proposal

As previously reported in these newsletters we have here another example of a developer running to Frank Sartor to avoid having to deal with the local community. The Minister has complied by calling-in the project under Part 3A of the Environmental Planning and Assessment Act and thus will determine just what can be done on the site and so leave Ku-ring-gai Council powerless.

That the Johnson Property Group (JPG) has been a major contributor to the Labor Party is not evidence of corruption but certainly represents a conflict of interest for the Minister and NSW Government (see www.democracy4sale.org/index.php). \$286,000 is reported as having been donated since 2004/05. As reported in the major newspapers recently, there seems to be a high correlation between developers making political donations and controversial projects. See for instance 'NSW: Planning under the microscope', *The Sun Herald*, 6 April. We cannot understand why an organisation such as the Adventist Conference Association allows itself to be associated with such an environment.

However community scrutiny cannot be completely evaded and part of that is the Community Reference Group (CRG) that will meet three or four times throughout the evaluation process. Cynics would say that the CRG is simply a device for Sartor to say that the community has been consulted while he does exactly what he wants. Optimists, to which group the STEP committee belongs, believe that we can make a difference through the CRG and associated processes. The first CRG meeting was held on 6 March and attended by some 22 people from the hospital, the Adventist Conference, the community, the Department of Planning, JPG, Hornsby and Ku-ring-gai Council staff and councillors Malicki, Andrew and Hall.

This first meeting was primarily to inform members of the process to be undertaken under Part 3A and to answer any questions arising. The procedure involves:

1. The Director-General's requirements were issued on 9 April (see www.planning.nsw.gov.au/asp/pdf/07_0166_wahroonga_estate_dgrs.pdf).
2. JPG needs to engage specialist consultants to undertake technical studies to address the Director-General's requirements.
3. JPG's consulting team needs to document the outcomes of technical studies in a comprehensive Environmental Assessment Report.
4. The Department will check the adequacy of the Environmental Assessment Report to ensure that the Director-General's requirements have been addressed.
5. The Department will coordinate a public exhibition for review.

The good news

JPG has completed a Preliminary Environmental Assessment Report and this was made available to the CRG. Whereas the original proposal shown to Ku-ring-gai Council in late-2006 involved some 2,000 residences it seems that this has been reduced to 988 which in turn reduces to a net 688 as 300 existing residences will be demolished. There is a great emphasis on car pooling and the ability of staff to cycle or walk to work within the precinct. There is the possibility that staff now commuting from the Central Coast will be able to live within the precinct.

The bad

The proposal still includes a 42% increase in the hospital floor area and an 800 pupil K to 12 school and other buildings with no guarantees that this will be the end of it. There is no undertaking that we won't be forced to consider further major expansions in the future. There is valuable bushland that is threatened by this and by future developments. The preliminary traffic report is hard to believe and traffic chaos is likely.

The bush

Until we see a comprehensive evaluation from a competent consultant we don't want to be too definitive about just where the most important bush is and its extent. We know that there is Blue Gum High Forest and Sydney Turpentine Ironbark Forest, both of which are critically endangered. These must be protected. In addition all the bushland has immense value in its own right, as habitat and as a corridor as it is contiguous with the surrounding Lane Cove Valley bushland.

The traffic

1. The report commissioned by JPG last year reaches some really remarkable conclusions. It claims that the traffic on Pennant Hills Road (PH Rd) will 'reduce markedly' after the tunnel connecting it to the M2 is built. This is of course pure fantasy. Any improved travel times will attract traffic onto PH Rd — people who now catch the train or make other arrangements because of the misery of the congestion. If it stays less congested a little longer people will start to live further from where they work and make other demographic decisions that will ensure that the road stays congested.
2. The report, apart from claiming less congestion on PH Rd after the tunnel, is remarkably silent about other factors in the future. The City of Cities report estimates that Sydney will grow by 1.1 million from 2004 to 2031 — a 25% increase. Much of this huge increase will be in the north-west sector with consequent additional demand on infrastructure. Roads such as the Comenarra Parkway, PH Rd and the Pacific Highway will become, and stay, saturated. This report is therefore useless without a proper look into the future.
3. Another future event that is ignored is expansion of the hospital after the current proposal. It was made quite clear at the first CRG meeting and in the documents that there will be much more expansion later. We need to know how that would affect traffic and where the additional staff would be accommodated.
4. The traffic study assumes that physical improvements will be made at intersections along Fox Valley Road and the Comenarra Parkway. It does not explain how that will help when the Pacific Highway is too congested to allow traffic to flow onto it from Fox Valley Road or when the Comenarra Parkway is one line of stopped traffic from PH Rd. And again, it takes no account of the certainty that induced traffic will fill any lessening of congestion that did occur.
5. There is no evaluation of the risk that emergency vehicles will be blocked from the hospital by traffic congestion.
6. There is no evaluation of the traffic effect of the hospital and its precincts expanding in the future.

We hope that JPG will have these anomalies addressed in a new or amended report and that Ku-ring-gai Council will commission its own report. There is a long way to go in this saga. We shall keep you informed.

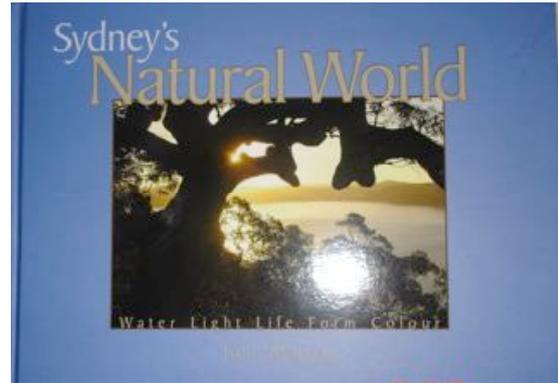
Sydney's Natural World launch

Helped along by some good publicity and word of mouth, *Sydney's Natural World* has continued to sell steadily. We have been encouraged by the number of repeat orders as people discover what a great present these books make.

If you didn't see the review of John Martyn's book in the *Sydney Morning Herald* then go to www.smh.com.au/news/environment/glory-of-the-world-within/2008/04/15/1208025189886.html. There was also an excellent review in the *North Shore Times*.

The launch in November was a great success with the Wildflower Garden hall being packed to capacity. It was good to be able to catch up with so many STEP members where there was time to socialise after the formalities of the launch.

The book can be ordered on www.step.org.au or on the order form in this newsletter.



STEP committee member, Barry Tomkinson (left) was the MC at the launch and the guest speaker was Dr Tim Entwistle (right), Executive Director of the Botanic Gardens

The author, Dr John Martyn had a few words to say



The hall was packed for the launch



John happily signed books – here for STEP member Jenny Bradshaw

Thanks to Damian Gore for the photos of the launch. They can be seen in colour in the newsletter posted on www.step.org.au.

Fox kill versus road kill

The fox baiting programme over the past ten years has yielded excellent results. Around Sydney, the southern brown bandicoot population has rebounded, both as reported by NPWS and by residents suddenly having their lawns dug up. Mortality rates for shorebirds along the NSW coast such as the little tern have improved dramatically and wallabies are being seen in suburban Sydney streets and backyards. Further away, the endangered yellow-footed-rock wallaby population in Mutawintji National Park increased 600% over the first four years of baiting. The Sydney North Region of NPWS is carrying out studies to gather more accurate data on the effectiveness of the programme in Ku-ring-gai Chase and Garigal National Parks.

One unintended outcome of this successful programme is that more animals are being hit by cars. Wallabies have been killed on Burns Road at Wahroonga and on the Comenarra Parkway. Wallabies are also killed on the roads in Ku-ring-gai Chase National Park every week where there are low traffic densities and wildlife signs.

While some rope bridges have been installed for possums there seems to be little evidence of their effectiveness. Other than wholesale fencing there seems that there is little that can be done to protect wallabies and anything else that gets onto the roads.

Until a smarter idea comes along perhaps an intensive education programme for drivers is our only chance of reducing road kill. Underpasses, overpasses and animal crossing points have all been used with degrees of success overseas (see www.hcn.org/servlets/hcn.Article?article_id=4624) but whether our wildlife will respond to such initiatives remains to be seen. In the meantime we should take heart that a smaller problem that is out in the open is replacing a big but hidden fox problem. That's an advance!

Wealth and population

In *STEP Matters* No 141 we reported the buoyant economic conditions in Japan in the face of predictions that its falling population would cause great economic hardship. Previously we have also argued, see *STEP Matters* No 135, that GDP per capita is a superior measure of how we are doing than gross national GDP. Now we are pleased to report that that great bastion of rightish economics, *The Economist*, has seen the light and now agrees with us (March 15, 2008)

The conventional wisdom has had it that over the past five years the USA, with 2.9% pa real GDP growth, did better than Japan with only 2.1% growth. When one looks at the per capita growth, however, Japan wins with 2.1% against The USA's 1.9%. The Economist goes on to point out that "—Australian politicians often boast that their economy has had one of the fastest growth rates among the major developed nations – an average of 3.3% over the past five years. But Australia has also had one of the biggest increases in population; its GDP per head has grown no faster than Japan's over this period."

Once one accepts the per capita measure as the correct one of course the definition of a recession also changes. With a declining population as in Japan, Russia or Italy there could be a decline in gross GDP while there was an increase in per capita GDP.

This all has great implications for the environment. Once the conventional wisdom changes to favour population reduction rather than population increases then pressure will come off our natural ecosystems and our overcrowded cities. Scarce resources will last longer and effort will be able to be diverted to achieving sustainability rather than to achieving unsustainable growth.

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A Field Guide to the Bushland of the Upper Lane Cove Valley		SOLD OUT, but being revised		
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Lane Cove Valley		\$15		
Middle Harbour Valley. Sheets 1 and 2 Bungaroo and Roseville Bridge		\$15		
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Saving the Mary River turtle

ACF gets it wrong — again

It seems obvious that the proposed Traveston Crossing Dam on the Mary River would be an environmental disaster. It could contribute to the extinction of the Mary River turtle, the Mary River cod and the Queensland lungfish. It would affect wetlands and destroy fertile farm land. We should all write to oppose it and to assist in that the ACF has information at www.acfonline.org.au/default.asp?section_id=249. There is also an article in the current issue of the ACF magazine, *Habitat* (Save the Mary River turtle, April 2008). So far so good!

What the ACF fails to do is to identify the forces that are driving the Queensland Government towards building this dam and just what the realistic alternatives are. Its web site tells us that salvation lies in demand management, the capture of stormwater and an expandable modular desalination plant. There is not a word about for how long these solutions will do the job. Not a word about real sustainability for Queensland. This is the same ACF that tells us each to do our bit to reduce our environmental footprint — presumably so that we can have power hungry desalination plants dotted around our coastline!

Now the Bureau of Statistics (www.abs.gov.au) tells us that recently Queensland has been growing at 1.9% p.a. and the City of Brisbane tells us (www.brisbane-australia.com) that such growth is 'booming', 'brilliant' and 'sexy' so we can assume that the growth will continue. That means that the demand for water will double every 38 years. Now doubling of demand is a very serious thing. Exponential growth is unrelenting and in 152 years Brisbane will need eight times the water it uses now. Offsetting this with recycling or the Traveston Crossing Dam will be futile and the desalination plants and the power stations to drive them will be massive.

So if the campaign to stop the dam is successful now, then it will be almost certainly be built by desperate politicians in the future and there is little difference in the grand scheme in losing the Mary River turtles now or in 50 years or so. The ACF is failing its members and Australia by being too gutless to discuss what's driving the push for the dam and what the outlook is for the centuries ahead. Exponential population growth is the ultimate unsustainable factor. The ACF must learn that!

What's to eat?

Recently the newspapers have been reporting food shortages and civil unrest as a consequence. What is happening? Has the Malthusian prediction come to pass? Has food consumption at last outpaced our ability to provide it? Professor Julian Cribb thinks so. In a recent article (The coming famine, *Cosmos* 20, April/May 2008) he points out that the more than 9 billion people expected by 2050 will want to eat as much as 13 billion people at today's nutritional levels because of the move to higher protein diets in places like China. He points out that the world wide water crisis, the loss of fertile land to cities and the rise of biofuels are all going to make things more difficult. If all that is not worrying enough he then points out that global warming will also reduce productive farming areas.

Professor Cribb believes that the answer lies in investment in farming research, modifying our diets and in limiting population. In order to do that our societies must shed their current apathy.

The Economist (The new face of hunger, 19 April, p 200) has also looked at the issue and reckons that 'the world of cheap food has gone'. It blames inefficient markets, changes in diet in China and India and biofuels. The World Bank believes that another 100 million people will be pushed into poverty. Last year rice prices rose 16% and wheat 77%, but in 2008 rice is up 141%.

The Economist looks forward to the attainment of a new equilibrium once farmers respond by planting more, and more efficient methods such as genetic modification are brought into production.

The outlook is, however, for more rainforest to be lost, for impoverished soils to be flogged to death and for more civil unrest. Nowhere does *The Economist* mention how the additional 2 billion plus people coming over the next 40 years are going to be fed. They don't mention the P word — perhaps they have their heads in the sand of denial just as the ACF has!

Expect our major conservation organisations and governments to ignore the problem until it's totally out of control and millions more starve to death every year.



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