



STEP Matters

Number 136, September 2006

Climate Change Talk and AGM

For our next talk we are fortunate to have as speaker Associate Professor Lesley Hughes from Macquarie University's Department of Biological Sciences. Lesley is chair of the NSW Scientific Committee and a member of the Intergovernmental Panel on Climate Change committee on climate impacts on biodiversity.

Climate change is already having impacts on species and natural systems. This talk will present climate trends and projections for Australia and discuss how these trends will affect species and ecological communities. Lesley will also discuss the implications of climate change for conservation and land use planning, particularly in the context of fragmented urban bushland.

Date – Tuesday 24 October

Place – St Andrews Church Hall, Vernon Street, South Turramurra

Time – 8 pm

The talk will be preceded by our AGM which will, as usual, be short. Light refreshments follow the talk.

SEE YOU THERE!

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Newsletter editor, John Burke	

Membership renewals are now due! Please check on the back page that your membership is current.

Spring Coast Walk



Cliffs at Cape Solander, Photo by John Martyn

Date – Sunday 8 October

Time – 10.30 am

Place – The Discovery Centre, Botany Bay National Park, Kurnell, via Captain Cook Drive, UBD Map 316 K6

Length – About 8 km

Grade – Moderate, no serious hills

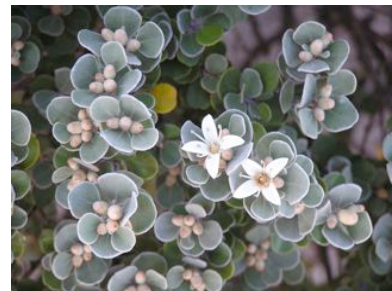
Contacts – Tim Gastineau-Hills 9449 2094 and 0419 251 586 or John Martyn 9449 7962

Caution - Use extreme caution approaching cliff edges due to fragile overhangs; there is little or no shade or shelter so provision for sun, wind or rain protection is needed

Bring - a picnic lunch if you want. STEP will provide the usual tea and bikkies at the end of the walk

Features - **The best cliff-top walk in the metropolitan area**, with rugged coastal scenery, breathtaking ravines formed along igneous dykes, and abundant heathland wildflowers.

The walk also features the unique and distinctive Eastern Suburbs Banksia Scrub vegetation on ancient sand dunes, most of which has been lost to development. There are spectacular 360° views from the Cape Bailey Lighthouse. Whales may be spotted from the clifftops on their southward migration with their calves. Bring binoculars and cameras. An optional extra is a stroll down to the historic Captain Cooks Landing Place before or after the walk, and a stop along Captain Cook Drive at the birdwatching site on Towra Point Nature Reserve.



Coastal Correa, *Correa alba*, one of the many beautiful heathland shrubs, Photo by John Martyn

STEP Inc

Community-based Environmental Conservation since 1978
PO Box 697, Turramurra, NSW 2074

Greenhouse and Council

Ku-ring-gai Council has a Greenhouse Action Plan, updated in July, which can be found on kmc.nsw.gov.au by typing 'greenhouse' into the search box and clicking on Cities for Climate Protection. It sets out five milestones:

- Develop an inventory and forecast for key sources of greenhouse gas emissions in the Council and community.
- Set an emissions reduction goal.
- Develop and adopt a Local Greenhouse Action Plan to achieve those reductions.
- Implement the Local Greenhouse Action Plan.
- Monitor and report on greenhouse gas emissions and implementation of actions and measures.

We are waiting for a promised Council report on progress with the milestones.

Book Review *Oil*



This is an excellent book for those keen to understand the history of the oil industry. From the first discovery in 1859 through the years of exuberance as petrol

was married with cars and roads and we were all suddenly mobile without a hint of the guilt and doubt that was to follow later. Matthew Yeomans summarises with great effect the all pervading place of oil in our lives: in plastics, medicines, all equipment with moving parts, production of food and practically everything else that we depend upon.

Yeomans, a Welshman living in the USA, takes us through the good bits and the bad. Amongst the latter are the devastating effects of the oil industry in countries without environmental controls, the "energy wars", the cartels, America's (and therefore Australia's) struggle with profligacy, and the hopes for a sustainable future. It is sobering that we are moving from oil discovery to peak oil in less than 200 years.

This is an easy-to-read book that provides a good perspective of the issues. One is brought to realise that we are all consumers, that we cannot stop consuming but that, with inspirational leadership, we could move to a sustainable way of life.

Oil, Matthew Yeomans, The New Press, 2004

Inconvenient Truth

Global warming issues are the subject of a new film titled *An Inconvenient Truth*. The documentary follows former US presidential contender Al Gore in his quest to jolt people into action to reduce greenhouse gas emissions. It is based on a presentation Gore has given tirelessly around the world in the past few years. He emphasises the need for action and presents some simple solutions that one can take home and act upon. The film recently premiered at the Sydney Film Festival and will be released in September.

Inconvenient Friends

Those of you that felt some sympathy for the gardeners beset by Brush Turkeys will feel even more sympathy while admiring the fortitude of Jenny Schwarz, former STEP committee member recently moved to Tasmania, who has sent us this report.

After reading the article on Brush Turkeys, I thought I'd tell you of my "friends or foes". My backyard is a good size with two magnificent Tasmanian Blue Gums and half a dozen different Acacia. I planted a few natives and they are thriving. Over the hill behind is natural bush where there are bandicoots so on my next trip to the local native nursery I asked what I should plant to attract them. "Grasses", they said so I planted *Poa labillardiera* and *Themeda*.

News spread and within a month a few bandicoot diggings appeared. But then there appeared some much bigger holes and the dandelions were being dug up and eaten. "Rabbits", I thought, but there were strange droppings and my birdbath had been toppled.

Late one night at Easter I looked out and saw two very small wallabies looking back. They had pretty pointed faces, grey fur and white tips to their tails. Tasmanian Bettongs had moved in. My new friends were aerating and weeding my garden to perfection. I was so excited until.... One morning I discovered some of my garlic had gone and the next morning the rest had been eaten. Now their tastes are developing further; parsley, chives, baby carrots, lettuce and spinach are all on their menu. Friends have become foes. But they are still delightful and I have gone back to the local organic store. I have planted some raspberry canes but don't expect to harvest many. Almost forty bird species visit my garden and at least some of them are sure to have exotic tastes in food.

Blue Gum High Forest

The campaign to conserve all the Blue Gum High Forest between Mona Vale Road and Rosedale Road is making good progress. It remains only to acquire No 102 Rosedale Road-but this is expensive real estate.

Negotiations for government funding and a public appeal are being vigorously pursued. To find out more visit the STEP website and go to the Blue Gum section and Current Issues. Blue Gum High Forest is listed as critically endangered and this site is the largest one left.



Ku-ring-gai Guided Walks

Ku-ring-gai Council has a series of walks throughout the year. John Martyn has just led one on the STEP Track but there are three left this year.

Dalrymple-Hay to see the Blue Gum High Forest on Saturday 21 October.

Flying Foxes - see the animals up close and in their natural habitat on Thursday 2 November.

Moonlight Meander - spotlighting in the Lane Cove Valley bushland on Friday 15 December.

There is no charge but bookings are essential. Contact Council for further information on 9440 8552.

STEP not an Acronym

STEP emerged as a result of the fight over the netball courts in South Turramurra almost 30 years ago and was first called South Turramurra Environmental Protection. We must have made an impact because many people continue to treat STEP as an acronym despite it not being so since 1987. Just as BHP and CSR have outgrown their modest origins then so have we! STEP now has members from over sixty postcodes – including, still, many from South Turramurra.

Water Balance and Bushland Management

Dr Andrew Little is a STEP committee member and former Ku-ring-gai Councillor who chaired Council's Environmental Studies Group. Andrew is very involved in bushland rehabilitation.

Photosynthesis is the underlying physical process that supports the growth of our bushland. On the poorer infertile soils both may be nutrient limited. However in mainland Australia they are generally limited by available water. This is reflected in the structure of plants – trees with vertically suspended leaves for photosynthesis in the cooler parts of the day, and small leaf plants in keeping with the solar energy rich and dry environment. Surrounding land use can alter the structure and composition of bushland by significantly increasing water available to the vegetation root zone. Understanding water balance (i.e. the amount flowing into and out of an area) is therefore crucial to the proper management of urban bushland.

Water balance has been extensively studied from the scale of individual plants to broad catchments. The pathways by which water is recycled in the environment has been found to depend mainly on the rainfall, land use and vegetation type. In the annual rainfall band of 800 to 1500 mm

which corresponds to much of Sydney, forested areas on a catchment-wide basis recycle around 80% of the annual rainfall to the atmosphere by evapotranspiration (a combination of surface evaporation and plant transpiration). The corresponding figure for tree-cleared grassed areas is only around 60%. The principal reasons for the difference are that trees have a considerably larger total leaf surface area for a given ground area and are more exposed to the drying effects of air movement. They also have larger root systems and so can exploit deeper soil water reserves. About 20% of the annual rainfall is run-off as groundwater or surface flows in forests while the figure is 40% for grassed areas and nearly 100% for hard urban surfaces such as roads and roofs. Depending on the intensity of the rainfall event and the land slope this run-off is often available to vegetation further downhill.

Increases in available water from altered land use pose a threat to the ecological integrity of plant communities

Many of the critically endangered ecological communities on shale soils are water limited and so the significant

increases in available water from altered land use up-hill pose a threat to their integrity. This is particularly the case with Blue Gum High Forest which exists within the narrow rainfall band of 1050 to 1400 mm. The boundaries to reserves should be to ridge lines or up-hill from cleared land use. Where this is not possible excess run-off and groundwater needs to be intercepted and directed away from reserves.

The recent planning for bushfire protection legislation has created special difficulties for bushland which is located below urban ridge top development. Cleared fire protection zones lead to increased water availability further down the catchment and actually promote greater plant growth and fuel accumulation. For example dry sclerophyll woodland has a maximum fuel rating of 25 t/ha while for wet sclerophyll forest the figure is 40 t/ha. Again it is important the excess run-off and groundwater is intercepted and directed to local drainage lines where low fire risk riparian vegetation can be grown. The buffer zone may be mechanically contoured to retain some of this water for growing a band of special moisture retaining vegetation which can help in reducing fire intensity and ember attack on property.

STEP Committee

John Burke	Neroli Lock	Bruno Krockenberger
Tim Gastineau-Hills	Andrew Little	Jim Wells
Michelle Leishman	John Martyn	Helen Wortham

Membership Renewals for 2006-2007 Now Due

If the year '06' is printed underneath your address on the next page your membership is due for renewal.

Please complete the form below, indicate any changes needed to the address label, and mail the completed form and payment (by cheque payable to STEP Inc) to:

Step Inc, PO Box 697, Turramurra, NSW 2074

Contact Helen Wortham if you have any problems (9144 2703, secretary@step.org.au).

	Unit cost	Number	Cost (\$)
Membership (only complete if 06 is shown on address label on next page)			
Single (per financial year)	\$16		
Family (per financial year)	\$20		
Life	\$200		
Field Guide to the Bushland of the Upper Lane Cove Valley	\$30		
Maps of Walking Tracks (cost of maps to non-members is \$20)			
Lane Cove Valley	\$15		
Middle Harbour Valley. Sheets 1 and 2 Bungaroo and Roseville Bridge	\$15		
Middle Harbour Valley. Sheets 3 and 4 Northbridge and North Harbour	\$15		
Donation (donations of \$2 or more tax deductible)			
E-mail address _____		Total cost	

Destroying the City – Where are the Limits to Growth?

There is endless discussion in the media on the future of Sydney.

However, very few commentators, political parties, or environmental organisations have seen the elephant in the lounge room. No one wants to talk about limits to growth although it is growth that is wreaking huge change in our communities. If you don't like all of what's going on now you will be horrified by what's coming up.

Media commentary fails to account for the dimension of time except in the very short term. Here in Sydney we are participating in a process that started some 200 years ago and which, if not interrupted, will see high density high rise from Bondi to Penrith and which will see urban bushland and national parks retreat or disappear.

At a growth rate of just 1% p.a. Sydney will have 30 million people within another 200 years or within 100 years at 2% p.a. growth. If we halve our per capita consumption of scarce resources we shall, with 30 million people, be consuming at four times the current rate. To consider that as reasonable is surely ludicrous! It is even more ludicrous, however, that the wider community is not discussing it. We have the likes of the ACF and the major political parties devoid of a population policy. Groups like STEP concerned about the preservation of urban bushland and others like FOKE, more concerned about preserving our built heritage, will be wasting their time if we aren't prepared to discuss limits to growth. Already the old precincts that grew up along the North Shore

railway line are doomed. High-rise is coming to a Ku-ring-gai town centre near you very shortly: you can look at the plans already. Urban consolidation has created more need for playing fields¹. It's only a matter of time before urban bushland is appropriated to relieve the inexorably increasing people pressure. Prevention of loss of urban bushland is basic to STEP's existence - the problem is that the threat is long term and incremental.

As an intelligent society, surely we can decide on what sort of a future we want rather than waiting for the passage of time and vested interests to make that decision for us.

¹ Michael Duffy, Sydney Morning Herald 26/8/06, *Obesity game plan short of a few fields*¹



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