Tree

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TWEED RIVER ENVIRONMENT ECHO

(C/- Caldera Environment Centre, Ph 72 1121)
The Umbrella Newsletter of Tweed Environment Groups

Destiny is not a matter of chance, it is a matter of choice.
It is not a thing to be waited for, it is a thing to be achieved.
- William Bryan.

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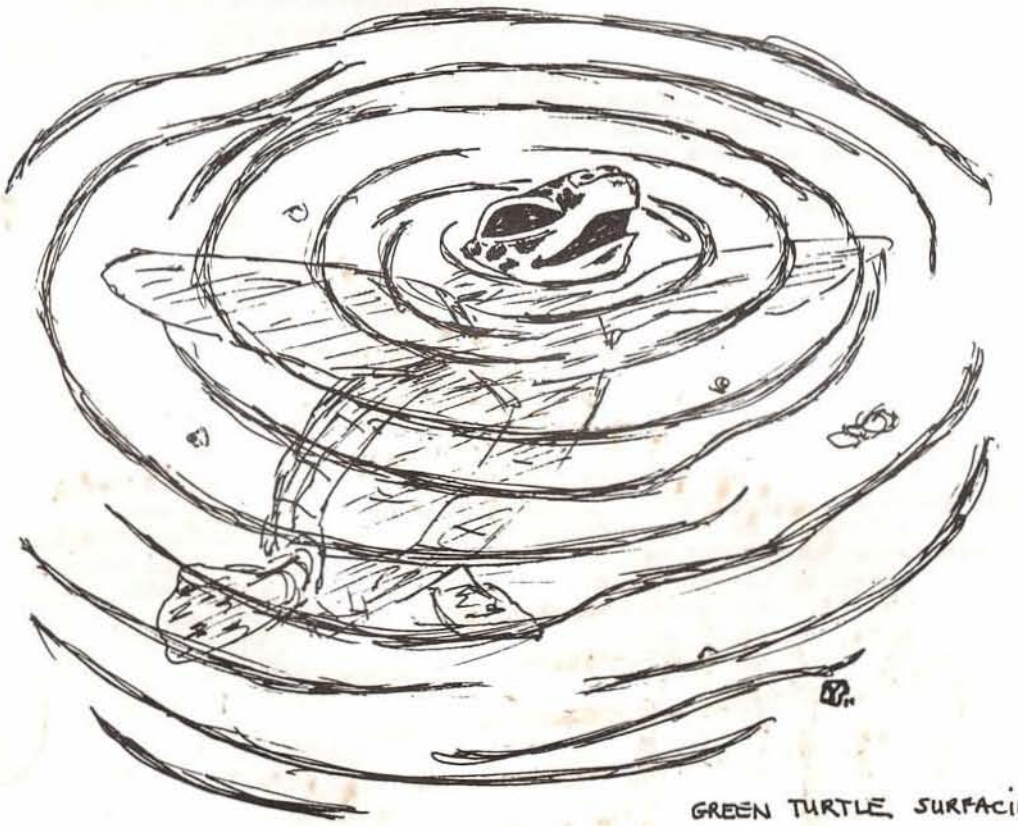

GREEN TURTLE SURFACING.

'PROGRESS' IS A MOOT POINT

Local, State and Federal governments will be lobbied to support a study into the forces driving the area's population growth, half of which comes from the southern states.

This action was decided at the Gold Coast and Hinterland Environment Council (GC&HEC) Moot at Pottsville Leisure Gardens on May 30.

Moot is an 'old English' term meaning an assembly of people and the GC&HEC, representing 16 environmental groups, discussed the regions human carrying capacity in respect of the environment.

Minister of Arts, Sport and Environment Ros Kelly, called for Australia-wide environmental reports after the Rio de Janeiro meeting in June last year and GC&HEC will be contacting environmental groups Australia-wide on their assessment and action.

GC&HEC secretary Brian Talbot said that natural resources were diminishing at an ever-increasing rate and that 'progress' was sending the area backwards.

He said the Tweed/Gold Coast region is one of the most sort after regions to live and because of this, town planning could not keep up with today's demand in public transport, schools, health, social service care, local shopping and recreation.

Mr Talbot has studied the Better Cities program but said that this mainly compacted on cities such as Sydney and Melbourne, the cities the people were deserting. Because of the expansion from the influx of people, social pressures were becoming more apparent.

He said Australia, because of its size, was developed around the transport system but now many could not afford a car or get their car serviced because of the economic downturn. This had a ripple affect on business which supports the car industry.

More people now were supporting public transport but this facility also can not keep up with demand. There has been much planning (and publicity) of the railway from Beenleigh to the Gold Coast and Tweed. The question of when will the community have access to rail travel to Brisbane remains in the hands of the politicians.

The following is a brief resume of contributions to the Moot:
What is a "Better" city? It depends on your attitude to the environment, whether people want to exploit it or care for it.

A 'node' (jargon is a way of life for some public servants) is being planned at Coomera of more than 100,000 people. Does bigger mean better? Will Coomera be better then than now and for whom?
Will farmers be better off having to sell their land, their lifestyle and their life-long identity? They will be richer in money terms, but the community will need more money because there will be less land to grow fresh fruit, vegetables and livestock. The built environment, which does not produce food, will sit on land that now contains our natural flora and fauna.

The built environment now contains a cheaper standard of housing because buyers are not being charged the true cost of the infrastructure of sub-divisions. People can not afford their 'dream home' any more and are being "clustered" together in cluster housing, town houses or villas.

The type of person leaving the cities to come here has changed. The elderly who are retiring are coming here as well as young families. These younger people think they can get a job in the tourist or building industry. The coast also attracts the unemployed because of our vast beaches and open spaces. The influx of these three types of people puts social pressures on the society. The pressure of materialism and leisure time instead of care for the environment. Gold Coast and Albert Shire population trends show a doubling in size in 10 to 13 years time.

WATER and BIO-DIVERSITY
Australia is the driest continent. The lack of water inland has historically proved to limit human population as well as flora and fauna, so whatever water we have, we need to care for.

Rain on the slopes of Mount Warning's caldera, in the main, runs to the Clarence, Richmond, Tweed, Nerang and Coomera Rivers. Clear, odourless, tasteless water hits the plateau of the Hinterland and becomes polluted by Man because of the clearing and farming of the plateau as well as from the built environment, eg holiday resorts.

The pollution kills off a certain amount of our animals and insects. We have reduced the bio-diversity of the natural species and Man, not only in this region, is poorer for it.

The water collects into streams and creeks and continues down past the towns where it collects rubbish, sewage and waste products. More animals, insects are killed and the bio-diversity is reduced.

The water flows past industrial areas. It now collects acids, paints, oils and chemicals. Birds and fish are now added to the list that are killed off reducing the bio-diversity. Man is poorer for it.

Some of the water of the upper reaches are diverted into dams. Residents pay taxes and rates for the water to be converted back into clear water for drinking. Part of this clear water which we have just paid to be filtered for drinking is then polluted by us with excrement to become part of the sewage system. It is pumped into the ocean.

We keep telling ourselves that Man is the most intelligent being on earth!

Len Heggarty

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ENRICHLAND POLYCULTURE - Bush Food Permaculture.
by Vic Cherikoff.

As the end of the twentieth century nears, with the diversity of societies, richness of cultures, extensive communications and space-age technology, we still depend on a mere eight crop species as the basis of our food supply and none are native to Australia. Environmental biologists point out that natural systems retain their resilience against catastrophe through biological diversity. The simpler the system the less sustainable it is with time. Food production methods are invariably simple and depend on chemicals, capital intensity and petrodollars, and rarely considers the long term costs. Even Permaculture rarely pays attention to the diverse natural ecosystems it replaces or to the effects of nutrient run-off from Permaculture plots to adjacent natural areas or to using native species.

So what of the current bush foods trend by the food industry? In 1984, a sole restaurant, Rowntrees in Sydney, began working with bush foods. Seven years later there are over fifty including the Country Comfort chain, spread nationally. Increasingly caterers, tourist souvenir shops and delis are using bush foods, which also feature on Asian hotel menus, both as part of Aussie fare and as promotions by certain hotels and organizations like the Meat Marketing Authority of NSW. Bush foods have also been a focus in the recent Culinary Olympics (winning gold) and other international food competitions.

Over twenty readily available species have been selected as distinctly different to conventional foods in terms of taste, texture or application as to be marketable. The macadamia can be brought back into context as a bush food. Meats such as farmed emu and culled kangaroo are included and these provide some lessons for farmers. The macadamia is becoming internationally known as a native of Australia rather than the Hawaiian nut. This is actively used as a marketing tool by the macadamia nut industry which suffers not from a lack of identity but from oversupply. Trees have been overplanted and oversprayed with pesticides. Few alternatives to monoculture have been considered.

Government agricultural authorities continue to accept the status quo although one enlightened scientist has suggested that it is possible to increase nut production per tree by maintaining native bees. The small stingless bees are efficient, selective pollinators of macadamia flowers but pesticide usage kills them. In a mixed system, not only can yields be increased by the bees but their honey is currently 10 times that of the feral Italian bee. We now know that the European bee puts a chemical on flowers it pollinates which repels other insects. This is leading to the extinction of some plants.

Another example of new foods being forced into bad old ways is the emu which are being economically farmed but there are no free-range farms accenting organic methods. Government authorities promote conventional poultry raising methods and actively discouraging more suitable options by issuing licences only to large mainstream investors under the pretext of preserving wild stock from indiscriminate pillaging. Presently this precludes future dryland bush food farmers from regulating wild emu numbers by culling young birds for the table. This hindrance of passive farming is even more apparent with kangaroo population management in the east coast States.

No doubt time will show the Green Movement's successful push against the human consumption of culled kangaroos as one of their worst decisions this decade.

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Roos are still being culled to reduce their numbers but carcasses are wasted or used to feed introduced domestic pets which have their deleterious effects on the environment. Dogs add high levels of phosphorus into our low phosphorus Aussie soils causing the proliferation of weeds. Animals turn feral replace native species. Non-professional roo shooters cause animals needless suffering. Also environmental damage caused by a continued dependence on feral hard-hooved cattle and sheep will be due to the ignorant greenies who influenced the political lunacy. In a recession, Australian farmers on marginal land made by inappropriate agriculture are destroying stock they can't feed. What better time to begin to responsibly manage our native animals and create an industry to passively farming the two or three species of roo used for human consumption.

A possible future: Farms with a suitable balance of improved pasture, scrub habitat and available water naturally encourage roo numbers over that of unmanaged land. Certain aged roos are hunted and head-shot. The lean gamey meat is processed with current health inspection required by South Australian authorities, where for the past 18 years, it has been produced as a national model for human consumption. Proper management ensures healthy numbers and like cattle, valued animals are never in danger of extinction.

Now compare the beef industry. Cattle are free-ranged on cleared land eroding fragile soils and damaging waterholes reducing available water for native animals. Near-wild cattle are herded into road transport and onto abattoirs for slaughter and their fear is apparent. The cattle's adrenalin rush toughens the meat and various methods are used to tenderise the meat, which is high in fat and cholesterol and nutritionists suggest moderate intakes. By comparison, the more humanely produced roo meat is low in saturated fats, relatively high in poly-unsaturated fats, rich in flavour and eaten in smaller steaks. Which would you rather eat?

More bad news from CSIRO scientists in their ivory towers directing their misguided attention at the quandong. There appears to be a lack of understanding as to the nature of wild foods and their variation in taste and quality. It is said the quandong fruit is too bitter to eat and dried fruits are better than fresh for flavour. Suggested processing methods ignore CSIRO's efforts at selection development. The quandong's potential is obvious but production costs must be reduced. Not surprisingly, monoculture plantations are been advocated and CSIRO even list all pesticide dosages 'needed' for marketable fruits. How else can native plants be grown in an area where the pests are also native? Perhaps CSIRO think polyculture is a novel way of producing 'polyticians'.

So where's the good news about bush foods? To date, supplies come from private and public plantings and from Aboriginal communities harvesting from their traditional managed lands. The urban harvests could be easily expanded ten-fold with a little co-ordination of urban plantings using available farm land with its rich soil, adequate rainfall and close labour resources. Such monocultures are difficult to establish due to dwelling density, concrete and bitumen areas. Polyculture is needed. There is no doubt that the potential of urban farming of nature strips, parkland and domestic property is grossly under-valued.

In the bush, Aborigines are at the forefront of the wild food industry. Several Aboriginal communities and a growing number of non-Aboriginal farmers have been presented with a plantation farming system called Enrichland Polyculture designed by Bush Tucker Supply P/L. The system was developed for Aboriginal groups that had

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access to harvestable bush foods from their traditional lands. The features of this system are:

* environmentally & culturally appropriate
* mixed species system
* minimum input
* non-disruptive to existing bushland OR
* a more natural structure for cleared land
* diversification of income
* creation of ecological niches for native species
* concentration on indigenous species
* return to Aboriginal land management methods
* designed to allow for mechanical harvesting
* water harvesting principles applied
* can involve exotic species in the design
* suitable for urban and rural production

The method is under constant development as it is established in untried habitats but as with Permaculture, the principles can be applied to areas from desert to rainforest.

Bush food production has the opportunity to redress conventional food production shortcomings. An advantage is its suitability as a support for conventional farming, initially by the inclusion of productive species in windbreaks and as shelter; as landscape plants round utility areas (homes, sheds and driveways); or as buffer to bushland, wildlife reserves etc.

A number of points to consider in growing native species for food:

* which local species are economic?
* can a viable production method be based on these alone?
* are there suitable, available niches to grow these on the property? * what marker plants are there on the block? * are there large numbers of nitrogen fixing species locally? * are trees stunted or deep-rooted? * which species prefer undisturbed ground? * which plants are needed for soil stability or water quality?
* what animal habitats should be preserved or created?
* harvest methods?
* which pioneer species to be planted, which species as structural components or depend on structural integrity and which are to be planted later?
* how are future commercial species to be included?
* what is the degree of planting intensity for each micro-climate?
* are any introduced species likely to become weeds?

It's apparent many of the above are common to Permaculture as well. The primary difference is the awareness of the indigenous environment; the in-fertility of our soils and the intrinsic value of native species. Permaculture could be viewed as a closed system of foreign plants and animals forced to grow in barely suitable soil. While it is sustainable, is it appropriate for Australia? Enrichland Polyculture can be a way to 'Australianise' agriculture as we rediscover the lessons of sustainability from what remains of the Culture of the Land.

This article is condensed *Full article available from Caldera Environment Centre.*

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** NATIONAL KOALA WEEK **

The last week of July has been set aside as National Koala Week to draw attention to the plight of our endangered koalas. It is of extra significance to us because Tweed Shire is home to one of the largest koala colonies remaining in NSW.

The Koala Rescue Unit will be holding street stalls in Murwillumbah and Tweed Heads in late July to bring home to the public the plight of koalas and the importance of protecting their coastal habitat.

If you wish to help or want to know more, phone Koala Rescue Unit - 761284 or 743148
or Wildlife Carers - 793353

Considering Tweed Shire Council's Rural Residential Strategy tends towards subdivision into small acreage, we continue the second part of a series looking at cleaner, environmentally responsible household practices.

A CONSUMERS' GUIDE TO CLEANING AND GREENING

How To Use Less Pollutants

1. Experiment With Less

Using less chemicals in your home doesn't mean that you have to accept a lower standard of cleanliness. Remember, your house isn't an operating theatre or scientific laboratory and certainly isn't the battlefield of dangerous germs that is shown on our TV screens. Manufacturers' instructions are not the final word on product use because the sellers have a financial interest in making you use more. So start to vary the way you use chemicals. Begin by experimenting with the **amount** of chemicals you use. See how little you can get away with.

2. Give Cleaners More Time To Work

If chemical cleaners are given **more time** to do the job, you will need to use less of them. Soak pots and plates in the sink. If clothes are really dirty, rub them with soap and soak before washing. Soak stains on porcelain and laminex (see recipes below). Soak the toilet bowl. Leave mould and oven cleaners on overnight. For tough grime on stove tops place sodden cloth over grime until grime is softened and easily removed.

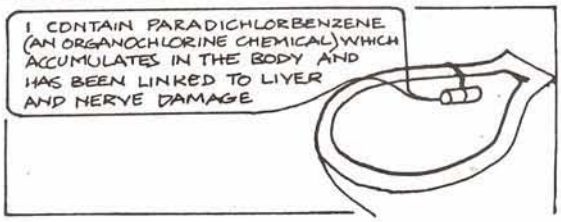
3. Prevent Dirt Build-up

If you do it regularly, housework need never become overwhelming. And quick action on a spot, stain or mark will solve little dirt problems fast and save further effort.

4. Use Better Cleaning Tools

The "quick and easy" convenience of harsh chemical cleaners have made us forget about the advantages of brushes, scourers and cloths as effective cleaning tools. The stronger your implements, the less you'll need to use harsh chemical cleaners. Steel wool is a brilliant, cheap all-rounder and scrubbing brushes are now available with long handles.

Using strong cleaning tools goes hand in hand with using softer cleaning agents. If you learn to use the products listed below you can tackle almost any cleaning problem without damaging the environment or your family's health.



Alternatives For Cleaning • In The Kitchen

All Purpose Cleaner: Mix 2 heaped tablespoons bicarb soda with 1 tablespoon white vinegar. Store in air tight container. For really stubborn spots use with an old tooth brush and scrub well.
Aluminium Pans: To shine, boil a mixture of vinegar and water in them.
Bench tops and stainless steel sinks: Clean with plastic scourer and soap or bi-carb soda. Stubborn dried-on spots can be soaked by leaving a sodden cloth on them for ten minutes and then wiping off.
Blocked Drains: Use rubber plunger to clean grease-blocked drains
Brass: Shine with a loose paste of vinegar and salt.
Burnt pots: Dissolve two teaspoons of bi-carb soda in water and bring to the boil in the saucepan. When cool, clean off with a scourer or steel wool.
Chrome: Polish with apple cider vinegar.
Copper: Using a soft cloth, rub with vinegar. Polish with a dry cloth.
Decanters and Vases: Clean with uncooked rice and a little tea with a few tea leaves or clean with crushed egg shells and a little vinegar.
Dishwasher: Biodegradable dishwashing powders manufactured by Herbon and by Caring are now available in some health food stores. The use of conventional dishwashing detergents (that are non biodegradable) can be minimized by using washing soda each alternate wash. This way you use only half the amount of detergent while avoiding scum build up which can occur when using washing soda only
Dishwasher Rinse Aid: Use white vinegar to prevent spotting and streaking.
Dishwashing by Hand: Use pure soap or soap flakes. Dissolve soap by rubbing between gloved hands or use a wire basket shaker.
Fridge cleaning and deodorising: After cleaning with warm water and soap, wipe down with vanilla essence or leave an open packet of bi-carb soda in the fridge.
Kettle: To remove hard water encrustation, boil equal parts vinegar and water in the kettle.
Ovens: Make a paste of bi-carb soda and water. Apply with a spatula to the inside of the warmed oven. Leave to dry and then clean off with a stiff brush or scourer and very hot water.
Oven Racks: Use the laundry sink to soak racks in washing soda dissolved in hot water.
Pewter: Polish with the outer leaves of a cabbage and then buff with a soft cloth.
Silver: Make a solution of one part washing soda to twenty parts water and put into an aluminium pan. The effervescent bubbles that are created are not toxic. Dip the silver into the mixture briefly. Rinse in hot water then dry with a clean soft cloth.
Tea Stains: Rub cups and mugs with salt or lemon juice or scour with steel wool.

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ACID SULPHATE SOILS

June (1993) was the month for Acid Sulphate Soils on the Tweed.

Commission of Inquiry into Bakers Lake

The Commission of Inquiry into Bakers Lake, West Kingscliff, was held on the 1st-4th June, in the Council Chamber. The C.E.C. was described as being "beyond the pale" by the solicitor representing John Baker & Sons & Associates, because of "inflammatory &/or defammatory statements". Apologies were offered and accepted, but it was reassuring that the principal argements presented by the C.E.C. were also submitted by Dr. Mike Melville, U.N.S.W., Yolande Stone, DOP, Sydney, and Henry James, Tweed Valley Conservation Trust.

At this mid-way stage of the enquiry, it seems that the Commissioner, Dr. Mark Carleton, is seeking a plan of Management from the developer which will re-assess their analysis of the causes for acidity, and which will probably include the use of lime in large quantities, to neutralise the top 3.0 metres of the 4.0 hectare lake site. A catchment/drainage basic based analysis and management plan is also needed to determine hydrological and water quality problems and implications for the West Kingscliff area.

The Commissioner appears to be "trouble shooting on the run" which is useful and necessary, but it would be a lost opportunity if the message to developers is merely one that liming is the solution to excavating large lakes on the Tweed Delta floodplain. A more radical appraisal of alternative strategies to the whole question of floodplain development, and the excavation of artificial lakes to win fill, should also be considered by a higher, state-wide tribunal, such as a Commission of Inquiry.

These ideas will form the basis of the C.E.C. "submissions in reply" in August before the next hearing of the Commission on 24th August.

National Conference on Acid Sulphate Soils

On the 24th & 25th June, a National Conference on Acid Sulphate Soils was held at Greenmount Beach Resort, Coolangatta. The key-note speaker was one of the two principal world authorities of ASS, Dr. David Dent from the University of East Anglie, UK. He was a well-informed and entertaining speaker, who drew on his wide experience of ASS in Holland, Africa, and the Mekong Delta of Vietnam. Compared to some tropical floodplains, our Tweed Estuary is not as extremely acid, but all participants acknowledged the seriousness of the local problem.

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Some twelve other speakers from NSW, Canberra (CSIRO) and South Australia, spoke on a wide range of associated aspects such as:

- Sulphur concentration processes in the roots of mangroves and the oxidation of iron pyrite (FeS_2) to form sulphuric acid.
- The action of microbes in warm soils to form iron pyrite, ferric hydroxide and sulphuric acid.
- The drainage of canefields and the evapotranspiration rates and moisture uptake of sugarcane.
- Acid sulphide soils formation in saline landscapes in the Adelaide Hills, S.A..
- Epizootic Ulcerous Skin disease (red spot) on fish and the implications of wetland drainage and ASS for the fishing industry.
- Engineering problems and possible solutions to enable development. The solutions were mainly theoretical, and the only convincing remedies appear to be neutralisation with lime, burial under soil, or inundation with water.

Unfortunately, Nobles Lake and the proposed Bakers Lake, scarcely rated a mention, and a unique opportunity to discuss the urban development problems facing the Tweed floodplain received no focussed attention from the distinguished panel. Micalo Island, Yamba, received some attention, but speakers were reticent because of the current application before the Land & Environment Court to challenge the validity of the Development Consent.

Paul Hopkins.

GREEN QUIZ Number 9

1/ Reproductively, what makes seahorses so unusual?

2/ Who wrote "A Brief History of Time"?

3/ What is the name of the potential scenario where the core of a nuclear reactor burns through the bottom of its containment & down into the earth?

4/ What is Queensland's floral emblem?

5/ How many million people live in Australia?

6/ How many legs does a tick have?

7/ What was the occupation of irishman James Stott after whom Stotts Creek and Island were named?

8/ In which Australian state is Mt Bartle Frere the highest mountain?

9/ To which Australian state are Jarrah trees native?

10/ What feature of democracy was pioneered in Victoria in 1856?

ANSWERS P. 15.

Compiled R.V.J.

GYPSY MOON CONCERT

Thanks to all those people who provided food and time for our fundraising effort at Stokers Siding on July 3rd. $180 was raised for the Caldera at this event. We may be catering for another show in August - XYLOSAX - stay tuned.

TWEED STUDENTS SAY 'YES' TO SYMPOSIUM

Six students from Kingscliff High School School and five from Tweed River High School have been invited to the Youth Earth Symposium (YES) at Numinbah Valley on August 1, 2 and 3.

This is the first time that students from NSW have been invited.
YES co-ordinator Sally MacKinnon from the Gold Coast and Hinterland Environment Centre said that these two NSW schools had become renowned in environmental studies.

YES began in 1991 when Miami State High School had an excursion to the Hinterland and students returned to their classmates with the news that learning about the environment was fun and exciting.

Last year YES began in earnest with many students form South-East Queensland schools attending. Ms MacKinnon now has many letters from students telling of how the Symposium had changed their lives.

This year there will be pre-symposium camps on July 9-11, 16-18, 23-25 at the Numinbah Valley Environment Education Centre with the August Symposium at Camp Bornhoffen.

Volunteers are needed to supervise the camps and on Sunday, June 13 about 30 volunteers turned up at Numinbah Education Centre for their 'training'.

An interesting part was 'The Factory'. The Factory is where the nourishment and growth of a tree is literally symbolised as factory work in the bush. Thirty people were put to work in the factory, receiving water, acting as 'animals', making plant nutrients, making energy to 'grow' a tree. Floods and droughts were brought to life with the voice of the 'boss' and the 'union' organiser.

Co-ordinator of the Numinbah Valley Education Centre David Farnworth said that education is better in the big picture.

"Rather than getting a frog and cutting a frog up and saying 'Liver, kidney, pancreas. Earth Education would rather have a frog in a pond, a pond in the water cycle with the frog in its community of life.

"That makes more sense to earth education than just breaking a frog up and naming its parts.

"A frog in a pond is worth more than five frogs in formaldehyde." he said.

Mr Farnworth said he knew people that can "rattle off the statistics for global destruction and pollution yet they still take plastic bags when they shop. He said that these same people would then tell you that one of the biggest food retailers gives out more than 30 million plastic bags at the checkout each year.
He said that that thinking has to be turned around to to say: "People accept more than 30 million plastic bags a year at the checkout from only one retailer."
Education is more than the classroom, it is the awakening of the mind to see things that before you were blind to.

-Len Heggarty

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POTTSVILLE Primary School • "A HIVE OF ACTIVITY"

Pottsville Primary School has a deserved reputation for being environmentally active. "Tree" interviewed some Year 6 students who have been involved in projects over the past couple of years, and Assistant Principal Eric Singh, who has co-ordinated a great deal of these activities.

Q: Is Environmental Education a priority at this school? What form does it take?

Eric: We don't have a separate program for Environmental Education - it's more a perspective through which we teach the other areas of the curriculum. It has no higher priority than any other subject. For instance, in Social Studies we might be looking at indigenous peoples of the world. We'd definitely study the local aboriginals and how they looked after the environment and lived in harmony with nature. The aboriginals and the environment complemented each other.

Environmental Education is more than the "greening" of schools, though this is important, of course. It's an awareness of the uniqueness of our local environment, and how we can complement and protect it. Our environment also includes man-made structures. We encourage our students to have a practical awareness. With younger students, the scope is limited: They are becoming familiar with background information. Students in the higher years are interested in media events, such as oil spills, but also in local issues which they see around them - plastics and fishing-lines in the estuary, litter in the "Leisure Gardens". We believe that it's important to begin with small-scale awarenesses and responsibilities which are close to students' lives.

Q: What kinds of projects has your school been involved in in the past couple of years?

Eric: On "World Environment Day", we have a "Clean-up-school" day. Parents, teachers and students cooperate in cleaning up classrooms and school grounds, and we also plant some trees. It makes the school look great, which is difficult under normal circumstances because of the size of our grounds and our growing student numbers. We have areas where "family trees" have been planted - a family plants and cares for their chosen tree. We have also planted a school coastal Rainforest area.

We are involved with "Dune Care". Bronwyn Scott visited the school and spoke with students, parents and teachers. We have our own coastal area where we've pulled the Bitou bush and regenerated native plants. We are now monitoring our work.

We have worked at the Pottsville Leisure Gardens since its beginning. We propagate the Eucalypts which Koalas eat, and have planted to create Koala corridors. Other schools often contact us about the practicalities of camping there, or the types of activities which work best.

We've made the school a community recycling depot for glass and metals. We did attempt to recycle our compost, but we found problems with the sorting- some students didn't understand the process, which left us with some pretty messy and time-consuming work. But we'd like to re-think the idea in future.

We have a lot of contact with Kingscliff High School, which is very environmentally active. We are jointly involved in Land Care and Dune Care projects, germinating, propagating and planting out. On "World Environment Day", we have a special assembly which is run by our students. They choose topics and prepare speeches (see boxes). Kingscliff High School donates some trees which we plant.

Q: Has the local community been involved with your environmental projects?

Eric: We try to involve parents and any other interested people as much as possible.

Q: What plans would you like to see developed in the future?

Eric: Very soon, we'll be moving to a new site - most of our classrooms here are "demountables" and student numbers are steadily growing. So we're not doing anymore planting here. Instead, we're developing projects outside the school, and looking at our new site in terms of trails, a shade-house, and planting for shade and to attract specific animals (eg. vines

for the "Birdwing" butterfly). A creek runs at the back of the site, so we are very interested in "Stream Watch". a program where we take responsibility for the condition of a part of a watercourse, and monitor living and non-living aspects.

In our shadehouse, we'd like to propagate plants for sale (to support the running of the shadehouse), and for planting in the wider community. I'd like to see the school become a "revegetation centre", where people come to purchase local natives and we can supply land-care projects, as well as planting out our own school ground.

"Tree" talks to some Year 6 students:

Q: What kinds of projects have you been involved in in the last couple of years?

Ross (11): Planting "family trees", a coastal rainforest in the bottom corner of our schoolground, recycling, planting trees for Koalas.

Q: Are you more interested in global or local issues?

Rachael (12): Mainly local issues, like planting locally endangered trees and cleaning up the school on "Clean up Australia Day".

Q: What sort of issues does the TV make you aware of?

Tracey (12): Polluting mainly. Ocean outfalls, oil spills, and the kinds of things we can do about them.

Q: Are all the children interested in learning about the Environment?

Josh (11): Young people are interested because they're the ones making the decisions tomorrow.

Tracey (12): We can educate our parents. Sometimes adults doubt us because we're children.

Abbey (12): They sometimes say, "We won't be there when it happens, so we don't worry about it."

Q: Will you be environmentally active when you go to Kingscliff High School next year?

Kylie (11): Yes. There are more facilities there, so we'll have more opportunities.

Sarah (12): We'll be able to help other schools with projects like "Dune Care". We can speak out about issues. It will be fun.

Q: Has this school given you an environmental awareness?

Abbey (12): Every time we hear something on the news, we become more aware. Teachers are especially interested in the environment: if something happens, they tell us - we have an environmental bulletin board.

Rachael (12): It's the students who decide which issues we'll tackle. We'd like all people to be more aware, because time is running out. We are the adults of tomorrow, so we can do something about it.

Jane Bunnett.

ENDANGERED SPECIES

Every year thousands of tonnes of plastic, fishing line, rope and thousands of kilometres of fishing nets are dumped into the world's oceans. Often seals become entangled in dumped fishing nets and are unlikely to survive. High prices from overseas encourage many people to smuggle animals out of our country. Whaling in Australia began soon after European settlement and humback whales very nearly became extinct. Animals and plants are most likely to die when their habitats are destroyed. About fifty species of introduced animals live wild in Australia. Many of them killing native wildlife. About 60% of the coastal wetlands of N.S.W. have been drained or filled for housing, destroying many habitats for plants and animals. Since the settlement of Australia by Europeans in 1788 27 species of mammals and plants and about 100 species of plants have become extinct. For example the Tasmanian Tiger, the platypus frog, the Toolache wallaby and many others have become extinct and many others are close to it. So let's make sure they stay here by protecting their habitats and keeping them from pollution.

THANKYOU

Ross Kealy 11.

CONTINUED OVER...

Food

In Australia we are lucky because we can eat almost any kind of food we want.
Because we have to eat,we naturally think food is good for us.
Our eating habits can be harmful to ourselves as well as the environment.
Much of the food we buy has been altered in some way to pres rve it or to make it look attractive.
It takes a lot of energy to can,freeze,vacuum seal,bottle and generally process our food.More energy and resources are used to package and transport it to our stores and then to our tables.
Packaging uses trees,water metal,glass and plastics,which therefore adds to our every growing waste problem.
A great deal of these resources are non-renewable.
We use a great deal more resources when we eat fast foods,take-aways,t.v.dinne: ect...
WHAT CAN YOU DO?

Well you could.....
1. Cook for yourself.
2. Grow your own vegetables.
3. Recycle your plastic bags,papers and bottles.
4. Don't eat as many take-aways

To sum it all up THINK BEFORE YOU BUY! Tracey 12

STREAM WATCH

Do you know about the Catchment Streamwatch program? It's a fantastic opportunity to explore your environment via straight forward but accurate testing of local waterways over a wide range of water quality parameters, including faecal coliform, nutrients and physical indicators.

Initiated by Sydney Water Board, it's hands-on science teaching at its best and it also overlaps neatly into many other curriculum areas. It requires the purchase of a Streamwatch Kit (approx. $2,500) but sponsorship has been easy to find according to schools which are currently participating. You will need a computer to allow you to access Keylink (the network to other data sources). You'll also need at least three teachers willing to be trained in the program. Contact either Greening Schools or Rosie Bate (02) 895 7107 for further information.

Land Management.

Learning to manage our land and keeping it for future generations is very important.
The earth's fertile land is disappearing at a frightening rate as forest s are cut down and modern farming methods destroy the soil.
Poor farming methods have led to millions of hectares of farming land and natural land turn to desert.
Top-soil is being eroded away and fertilisers are needed to produce crops.
The salt level in our soil has been rising gradually since European farmers arrived in Australia.
In order to stop our soils dying, we must change our methods of farming.
Organic farming is a better method of farming which treats the soil as something to be valued NOT as a resource which can be used and destroyed.
The rapid destruction of forest's is one of the major contributors to land destruction.
The first part of the sol ution is to plant trees to encourage the water table to drop again.
Some more sol utions are to ...
1. Plant more trees.
2. Don't destroy plant s which causes soil to erode away.
3. Try Organic farming.

Kylie 11.

TOXIC CHEMICALS CONFERENCE

Newcastle
26th June, 1993.

About 30 people attended from different parts of Australia. Senator Robert Bell and members of his office were in attendance.

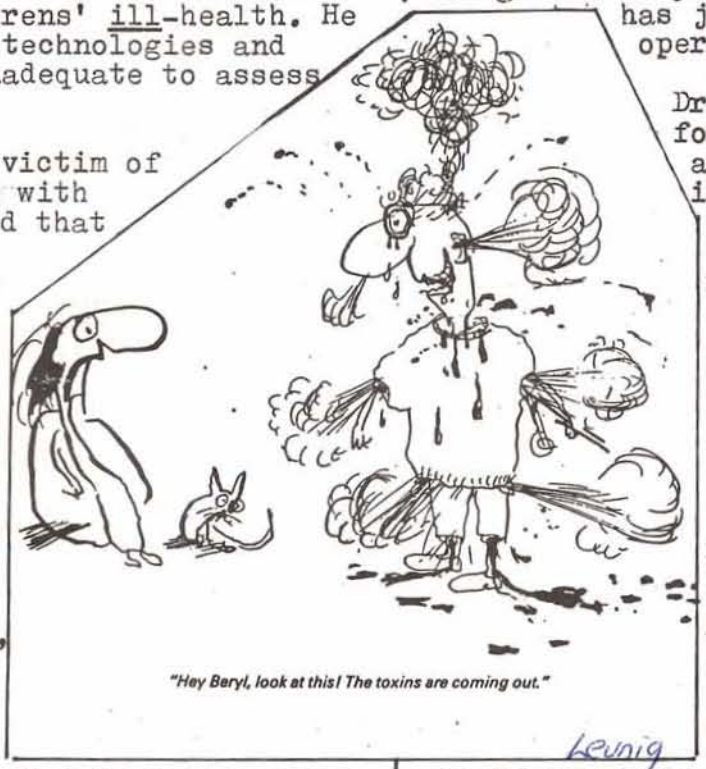
Many of the people were victims not only of chemical assault, but frustration in being heard by politicians and bureacracy. Trixie Whitmore talked about chemical exposure to Dieldrin and how blood tests sent to the United States revealed 44 times the amount of Dieldrin above the level considered'safe' for human ingestion.

Harry Budd, a paediatrician, suggested childrens' health had become poorer over the last 20 years and that we were not talking about childrens' health anymore, but childrens' ill-health. He said that current technologies and techniques were inadequate to assess what is happening.

Sue Rafferty, victim of aeroplane spraying with Mancozeb, proferred that her enquiries had revealed there was a cancer epidemic in the U.S. and she particularly wanted to know why food additives with known carcinogens are still on the market. (See p13, June issue of "Tree".)

David Williams, an organic farmer for 20 years and a member of the Biological Farmers of Australia, said that he was involved in residue testing for organic certification. He said there were heavy metal residues of Cadmium involved in Superphosphate usage, and that their checks for 44 chemicals scan to a level of parts per billion. Department of Agriculture tests were not low enough and his own checks showed that chemical residues still turn up on organic farms many years after their conversion. He also said that one effect of the Level Playing Field in Trade agreements was that the N.H.&M.R.C. had lowered the M.R.L.'s on Lindane. Chinese peanuts that formerly had Lindane residues too high for the Australian market are now acceptable.

Michael Sorase a Vietnam veteran has deformed children and has been told the deformities may pass through three generations. He is also sick of burying his friends. As a result of the Royal Commission, affected veterans have been placed in the second level of repatriation and are now covered for cancers even though the Commission established no connection between the spraying of Agent Orange and the "mishaps" of the veterans. Nothing is available for his children even though his 18 year old daughter has just had her 18th operation.



"Hey Beryl, look at this! The toxins are coming out."

Leunig

Dr. Kate Short, formerly of the Toxic and Hazardous Chemicals Committee, expressed the fact that we have limited resources and our strength lies in our persistence (usually resulting from chemical sensitivity from a spraying incident.) She acknowledged that we have not the resouces to interpret the toxicological data, but that we must work to free up our access to toxicological data packages. She also said that we should have the right to know about pesticide residues in ordinary foods and about chemical residues in houses. She stressed that the means for assessing pesticide residues in the Department of Public Health Market Basket Survey were far from satisfactory. There was general acknowledgement by participants at the conference, that there was little use dealing with the National Health & Medical Research Council. Dr. Short mentioned also that there was currently a push to market Australian agricultural produce as "clean and green".

In a "brainstorming" event that followed Dr. Short's talk, it was decided that energy from chemically opposed groups would be most effectively used, if it was channelled into the following directions:

1. Exposé of the ridiculousness of Australian agricultural produce being marketed as clean/green.

2. Broadcast of the information that showed a reproductive risk with women & the increasing sterility of male sperm.

3. Legal precedents - particularly "right to know" legislation. "Right to know" that would include more comprehensive labelling of chemical products; the "right to know" quantities of chemicals used; "right to know" all toxicological data; and chemical registration information readily available to all.

4. Reversal of onus of proof so the responsibility for the proof of safety/non-safety passes from the consumer to the producer.

5. Aerial spraying.(There is a petition opposing aerial spraying now awaiting signatures in the C.E.C.)

6. Widespread publication of residue audits.

Marian Grinter spoke of Data Bases. A method had been established of placing maps on computers and all toxic dump & emission spots were placed on the map. Up till the time of this method, the fight was engaged with statistics, & that was not satisfactory when the sample base was continually changed. With the computer, people wanted to know what were the flashing red dots that showed up on the screen as being in their backyard. It was the use of this graphic tool that basically opened up the enquiry into tick dips.

After lunch, there was a concentration on the three most specific and pressing issues:

1. Aerial Spraying
   a. Injunctions
   b. New legislation - Chemically opposed groups to be kept informed.
   c."Fobbing off" methods used by sprayers - need to formulate questions on this for presentation to Federal legislature by Robert Bell.
   d. Need for post-surveillance feedback - currently there is none.

2. Information - "Right to Know"
   1a. Information for strongbase for communication.
   b. Information dissemination from this.
   c. Coordinated information system.
   2a. Need to collect existing information from overseas and establish our own information system from that.
   b.Communication of these issues to the people so they will demand the "right to know".
   c. Establishment of own community surveys; own fact sheets etc. This information needs to be communicated backward and forward between groups.

3. Chemical Exposure in Schools
   Has politically important effect because it involves children. Identified such questions as why is it that certain chemicals should not be used and yet they are all over the schools? Apparently 29 chemicals are restricted in other countries but used here in Australia.

A list of names and addresses of people who attended the meeting has been circulated among participants. From this, it is assumed the C.E.C. will be able to establish a more comprehensive toxicological data base.

Geoff D.

Answers to GREEN QUIZ Number 9

1/ Males give birth to young 2/ Stephen Hawking 3/ The China Syndrome 4/ Cooktown Orchid 5/ Seventeen 6/ Eight 7/ Freed convict who became a boatman and cedar getter 8/ Queensland 9/ Western Australia 10/ Secret ballot.

·A·G·M·

AGM *** IMPORTANT NOTICE *** AGM

The August meeting of the Caldera Environment Centre - on Monday August 9th - will be our Annual General Meeting. All positions will be declared vacant and elections held for all offices. The A.G.M. is an important occasion at which policy and future direction will be discussed. All Caldera members and supporters are urged to attend. Please keep this date free!

The C.E.C. wishes to announce that at the AGM some changes to our Constitution will be suggested. This is to enable the group to be included on the National Register of Voluntary Conservation Organizations. Decisions for or against these changes will occur at the AGM.

ANNUAL GENERAL MEETING
Court House Hotel, Murwillumbah
Monday August 9th at 7.30p.m.

Caldera Environment Centre

Next Meeting
Monday 12th July, 7.30pm
Court House Hotel Murbah

A.G.M.
Monday 9th August

Events of Environmental Significance
Total Environment Centre Conferences on Local Government.
The Total Chemical Load: Public Health & Environmental Issues Fri. July 23rd sat., July 24th
YWCA Theatre, 5 Wentworth Ave., Sydney

Wild Things Lecture Series
Hallstrom Theatre, Australian Museum, William Street, Sydney, 6.00-7.00 PM
Cost $7, $5 concession.
Mon. August 9th
Life on the edge; a natural history of the Broadheaded Snake. John Webb, Sydney University.

Environmental Law Workshop
Uniting Church Hall, Byron Bay
17th July, 1993; 9.30 to 4pm.
Fee $25 (waged), $15 (unwaged)
Ph. (066) 85 7528

DISCLAIMER: The opinions expressed in "Tree" are the writers, and not necessarily those of the Caldera Environment Centre, producers of "Tree".

SUPPORT YOUR LOCAL ENVIRONMENT CENTRE- Act locally!
Become a member of the Caldera Environment Centre and receive your monthly copy of TREE magazine.
Caldera Environment Centre, P.O. Box 90, South Murwillumbah 2484.

Name.....
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Phone.....

Membership: Regular $20
Family $25
Concession $12

'Tweed River Environmental Echo'
Newsletter of The Caldera Environment Centre

T.R.E.E. is now printed on RECYCLED PAPER by Print Spot, (066) 72 4443

P17 July '93

CURRENT CALDERA CONCERNS

CHINDERAH - BILLINUDGEL BYPASS

There are four alternative routes proposed by the R.T.A. for the North Coast Motorway. Upgrading of the Coast Road; a route between Cudgen Lake and Round Mountain; a route through the cane-lands between the two ranges of hills; upgrading the Pacific Highway through the Burringbar Range. Upgrading the highway would be the cheapest option, whilst the cane-lands route is the shortest. The Eastern coastal wetland/habitat route would be an ecological and scenic landscape disaster.

CUDGEN LAKE - ROUND MOUNTAIN TRUST

A management trust of N.P.W.S., C.a.L.M., Director of Development Services (T.S.C.) and Cr. Bob Brinsmead, has been announced by the Minister for Land & Water Conservation, George Souris. A trust will not be able to guarantee the protection and proper eco-system management that a Nature Reserve under the N.P.W.Act would have ensured.

TOTAL CATCHMENT MANAGEMENT COMMITTEE

A politically lopsided committee dominated by conservative farmers, especially cane farmers, has been chosen & announced for the Tweed by Don Beck. There is no representation from N.P.W.S., or state or Council Planning Depts and no ecological or conservation expertise. The local soil conservation officer, Bruce Hungerford, arguably should have been the chairperson, but was omitted.

INTEGRATED LOCAL AREA PLAN - ILAP

A Commonwealth Government funded programme to review strategic town planning, and to integrate town planning with Council financial planning, is currently under way. The review is being made by two consultants from Lismore and could be quite a radical step forward if it is fully accepted by Council.

LOCAL AREA REVIEW PLAN - LARP

A State Government funded programme to review and streamline the Development and Building Approvals assessment process is currently being conducted by a Sydney consultant for Tweed Shire Council. Lets hope planning standards (?) are maintained.

RURAL RESIDENTIAL PLANNING POLICY

A review of the basis for rural residential planning is currently being conducted by T.S.C. strategic planning unit, but is not being co-operatively received by local land holders and farmers. The review has been largely undermined by the irrational extension of the Schedule Four Roads category. The problems of sewerage (excreta recycling), roads and services are major thresholds. Rethinking of the Carbon Cycle is desperately needed to rationalise our wasteful misuse of energy & fertiliser.