

THE GRANITE BELT NATURALIST

MONTHLY NEWSLETTER OF THE

STANTHORPE FIELD NATURALIST CLUB

P.O. BOX 154

STANTHORPE, Q., 4380.

OFFICERS AND COMMITTEE 1979-1980

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LYLE THOMPSON
JOHN O'DONNELL
FRANK WILKINSON

MEETINGS - 4th WEDNESDAY of each MONTH at C.W.A. ROOMS at 8 P.M.

OUTINGS - Each SUNDAY PRECEDING the FOURTH WEDNESDAY of the Month.

ANNUAL SUBSCRIPTIONS

SINGLE - \$4.00

FAMILY - \$6.00

AIMS OF THE CLUB

1. TO STUDY ALL BRANCHES OF NATURAL HISTORY.
2. PRESERVATION OF THE FLORA AND FAUNA OF QUEENSLAND.
3. ENCOURAGEMENT OF A SPIRIT OF PROTECTION TOWARDS NATIVE BIRDS, ANIMALS AND PLANTS.
4. TO ASSIST WHERE POSSIBLE IN SCIENTIFIC RESEARCH.
5. TO PUBLISH A MONTHLY NEWSLETTER.

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Minutes of General meeting - Wednesday, Feb. 27, 1980. Present 27; Apologies 5.

President extended a welcome to all present and a special welcome to our visitors from Dalby. The President extended congratulations and best wishes on behalf of all members to David Pfrunder and Judith Sweet on their engagement. Apologies - as entered in the attendance book. Moved by Mr. F. Wilkinson and seconded by Mr. L. Thompson that the apologies be accepted. Carried.

Minutes - of the General meeting held Nov. 28th, 1979 'be taken as read' in Newsletter. Moved by Mrs. H. Marsden and seconded by Mrs. J. Stevenson. Carried.

Inward Corresp. - Youth Centre Management Committee; Information and Application forms for N.P.A. seminar at Camp Stacey; letter from Tony Ewart; letter from John Oxley Library; letter from Mr. M.S. Moulds; 2nd letter from N.P.A. re our submission on Sundown; Letter from Australian Post re mailing publications; Newsletters from - Uni. of Q'ld. Speleological Society; Toowoomba Field Nats. Club; N.P.A. also annual report; Habitat; Conservation & Bush Rescue Assoc.; Richmond Valley Nats Club. Press Statements from - Hon. I.J. Giblin, Minister of National Parks. A 1980 Calendar from N.P.A.

Outward Corresp. - Radio Station 4QS; letters of thanks Mr. Brian McDonagh; Maurice Passmore; Keith Hungall, Roger Newman and Alex Harslett for supplying 4 wheel drive vehicles for Nov. Outing; Stanthorpe Rotary Club thanking them for their interest in our concern re clearing trees on Southern Approach to Stanthorpe. Radio Station 4QS re Feb. meeting and outing.

Moved by Mr. D. Pfrunder and seconded by Mr. L. Thompson that the inward correspondence be received and the Outward adopted. Carried.

Treasurer's Report showed a credit balance February 27th, 1980 of \$146.41.

Accounts to be passed for payment -

February room rent 5.00

February Magazine Postage \$5.83

Moved by Mrs. D. Archer and seconded by Mr. L. Thompson that the Treasurer's report be adopted and the accounts be passed for payment. Carried.

Outing Reports

Christmas D.B.Q. - held December 9th at the residence of Mr. & Mrs. Colin Hockings. Mrs. Janet Hockings reported that 20 attended and a good evening was enjoyed by all.

February Monthly Outing - held on Sunday, February 24th, 1980. Mr. John O'Donnell led an interesting and successful outing through "Mountain Park" - a sheep and cattle property in the Dalveen Area.

March Monthly Outing - To be held on Sunday, March 23rd, 1980.

Location - Mundubermere area - Leader Tom Archer.

Departure Time 9.30 a.m. from Weeroona Park.

March Meeting Wednesday, 26th March, 1980. C.W.A. Rooms at 8 P.M.

After Meeting Programme: Guest Speaker - Miss Desley McDonagh.

Subject - A slide programme featuring New Guinea; New Ireland and New Britain.

GENERAL BUSINESS -

A Committee meeting to decide the Club's programme of outings and meetings for the next 6 months will be held on Monday, March 10th at the residence of Mr. & Mrs. Tom Archer at 8 P.M.

Closure - 9.20 p.m. After Meeting Programme: Guest Speakers Mr. & Mrs. Tom Archer presented an interesting programme with slides and comments on their recent trip to Tasmania. Our thanks to Mr. & Mrs. Archer for stepping in at such short notice to present this programme.

Ed. Note due to space - the minutes had to be slightly abridged.

MOUNTAIN PARK OUTING.

This outing has produced two reports and I believe this is indicative, of the interest and thought it prompted. The first is by John O'Donnell and the second by Bob Harslett.

'Mountain Park' Outing..... By John O'Donnell

The cars were parked under a clump of stringybarks. Several people who didn't wish to walk the full circuit, remained here to spend a quiet day.

Even the walkers seemed to be reserving their strength, and finally sallied forth well after the morning -tea time. For a while the way was across typical well improved granite grazing country, overstocked, overcleared and overburnt. Here the go-ahead naturalists were in their element, and tried to convince the property owner to keep the land in its present state by poisoning wattle trees etc. The grazier argued that the young trees should be allowed to grow because it was poor old Mother Nature's way of trying to repair the damage caused by white man. The presence of springs and swamps and lack of birds etc. are mute results of the removal of trees and logs, and keeping the grasses grazed right down.

We climbed higher into dreadful timbered land, grey and blue gums, and gum topped box on soil derived from traprock. Here grasses were rank, and the true naturalists started to look around. A flock of scarlet honeyeaters soon had the crowd's attention. (It was interesting to note that the flock was very actively feeding on flowering *Acacia melanoxylon*, not red *Callistemon* as is their wont). Such wildflowers as *Veronica arenaria*, *Lotus* and two species of *Glycine* (*clandestina* & *latrobeana*) *Pratia* sp. and the charming little blue flower *Ruellia* (*Brunoniella*) *australis* were visible to the keen eye.

Not far on, scrub margin species blackwood (*Acacia melanoxylon*) and Brush Box *Tristania conferta* appeared. Continuing down towards the creekbed grasses gave way to maidenhair fern and large patches of vine-s. The centre of the scrub remnant was three large blueberry ash trees (*Elaeocarpus obovatus*, with vines hanging from the trunks and branches.

The lunch break was announced here as it was a cool pleasant spot amongst the ferns. Most of the jumping ants present were friendly. The biggest member of the group climbed a rare *Clerodendrum* tree for samples (very beautiful, in design and colour, bright red and dark green). The vine *Smilax australis* was abundant, and Jean found yet another strange plant, this one with deep crimson flowers. The group reluctantly moved on, as it was hot outside. A species of *Solanum* (*S. nemophilum*) was found, which yields a steroid drug. The commercial possibilities of coercing members into harvesting the leaves and carrying them in their empty rucksacks were suggested but met with little interest.

Somewhere way up in the hills the group found sandstone outcrops, (Marburg formation). This area is interesting on the Granite Belt because it is small (about 10 square miles) and has been "improved" (equals destroyed) for agricultural purposes, and one of the results has been salt accumulation in and near the creeks. Weakened vegetation, increased runoff following clearing, grazing and trampling by domestic stock on this fragile area has resulted in soil erosion. Lack of time prevented the group from visiting areas under repair.

After a quick look at an old quarry we started for home. A lightly ringbarked north-facing slope was given a quick examination. During

Mr. John O'Donnell's report Cont.

ringbarking five years ago, several trees per acre were left for shade. The theory was that, since stock prefer to graze in sunny areas, then mottled shade might reduce the grazing pressure. It appears that the theory is sound, and that a good balance of production, wildlife and soil conservation has been established.

Members headed for the cars like horses on the way home, and copious cups of tea completed an enjoyable day.

John O'Donnell.

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Report on Mountain Park by Bob Harslett.

John O'Donnell is dedicated to the return of fertility of his land to at least the level which existed before white man came to the area. He is highly critical of normal land use in the grazing industry. Three factors which disturb him are too much use of super phosphate, too many stock and too much eradication of trees. John believes that the careful management of stock numbers and refraining from the use of superphosphate or sprays, native grasses of good quality will be reinstated and build up in the pasture. He points out that in conditions of overstocking, stock (more particularly sheep) eat the nutritious grasses and leave such undesirable types as spear grass. In our walk we were able to observe how some sections of his property that appear to be regenerating very well. John must be congratulated in having the courage to put his convictions to the test. He is genuinely concerned for the long term future of our Australian land and is willing to sacrifice a portion of the earning of dollars to show others how much better our land would be under different management. Some costs can also be actually reduced. Less stocking has shown that worm infestation and fly strike is considerably reduced.

Bob Harslett.

INSECT NOTES. Everyone enjoyed looking at the brilliantly coloured moth. The Parrot Moth (*Agarista agricola*) was just emerged and rested peacefully to be photographed. Being a moth adapted to day-flying habits, its colours rival butterflies. It was noted that eggs were being laid on a creeper, a rainforest climber, with edible tubers and black berries (edible but insipid). It belongs to the Vitaceae family and *Cayratia clematidea*. The moth is closely related to the "Vine Moth" J.H.

BIRD NOTES. The most exciting sighting on the 'Mountain Park' outing was a Masked Owl. It was sitting in a small cave caused by wind erosion in the sandstone. It allowed us all a very good viewing before leaving for another perch.

Mrs. Temple-Watts was a guest upon this outing and her company was much enjoyed by those who stayed by the creek and observed plants and birds. Mrs. Betty Temple-Watts is a well known Australian bird artist, with a number of book illustrations to her credit, and a splendid knowledge of birds. "Birds of the High Country" is completely illustrated by her. J.H.

Feb. Programme: Tom and Dot Archer gave us an excellent programme both picture-wise and in commentary, and our thanks for it and I'm sorry space does not allow a fuller account.

During the year Mr. Brian McDonagh has addressed the meeting on two occasions. He has made a special effort to present these as discussion exercises, and certainly on the second occasion there was a good response to his desires. We will print some notes from these discussions, notes which were carefully researched by Brian. Some may make us think again about these important issues.

"One definition of the word "energy" is, "The capacity for doing work", thus one form of energy can be converted into another, potential into kinetic, mechanical into heat, mechanical into electrical etc.

Lets look where energy is going to in the country and the cities.

We are all familiar with peak hour traffic, with millions of cars all going to and from work, with one person inside. In most cities 80% of these people could travel by public transport, but do not.

Without a car the 20% would change their address or workplace so that they could get to work, and they may yet have to, if there is any work.

The design of the cities, even those planned help this waste, with the business area in one place, industry in another and people living somewhere else. The standard of the cities encourage people to rush all over the place for leisure instead of having it locally.

Air conditioning and lighting of major constructions is a great user of energy.

In some cities in America the council has banned clothes lines because they are untidy. How stupid can people become and how wasteful of supplied energy instead of natural energy, for drying. Bigger, faster more flashy cars than your neighbour is also gross waste of power.

In the country we have some of the vices of our city cousins, and some beauts of our own. Perhaps the worst criminal waste in the country is fattening cattle by feeding grain, which has taken oil to grow. The steak is nice and tender, but most of the fat has to be cut off, and the meat has to be garnished and seasoned to have any flavour.

We have many smaller wastes, like artificial drying of grain.

Lets have a broader look at the estimated uses of energy in Australia. (The last year I could find is 1971-72. An estimated 2% went on agriculture, forestry and fishing, while 27% went on transport, while 4% went on recreation and entertainment.

People are now studying what might be called "an energy chain" in the new discipline which is called "energy accounting". For each unit of digestible food energy eaten in Australia at least five units are expended on making it available. The expenditure of fuel for that single unit into our stomachs breaks down as follows:-

0.6 units to the farm gate.

2 units from the farm to the store.

2.8 units from the retail store to the plate.

Similiar results have come to light in Britian and America. Utah State University did a break-down of a 1lb. can of sweet corn, the unit 'k!..eel... can equals:-

Growing.... 450

Processing.. 665

Packaging.. 1,105

Transport(450m.) ..231

Marketing.....654

Dishwasher.....430

In other words the dishwasher, washing the plate, consumed as much energy as it took to grow the corn.

Freezing food is a big user of energy. It is estimated that maintaining that 1lb. of corn frozen for i year requires 17 times the

Brian McDonagh's notes Cont:-

energy that is necessary to can the same amount.

What this all proves I don't know, but perhaps it gives one reason why the farmer is so miserably paid for his produce!

Now let's look at where energy of the future is likely to come from.

Most of the direct use of solar energy now is in domestic heating.

However there are several other uses, commercially viable. Solar cells for charging a battery for electric fences, using cells like light meter cells for heating swimming pools (Guyra). A solar still for fresh water (Coobar Pedy)

There is a large experiment in Arizona where a solar dish is used to heat water, which boils freon (a refrigeration fluid with a low boiling point). It operates an irrigation pump, producing 50hp. (Of course freon is one of those things which destroys the ozone layer and we will all fry or freeze!!)

Recently a solar electricity system was opened at White Cliffs in western N.S.W. The new microwave system connecting Alice Springs is almost completely powered by solar cells. (Robin McCosker and Errol Walker were able to enlarge on this facet) In India and Australia solar heat is used for cooking. For cooking something like an aluminised umbrella, upside down, of course, with a cooking pot placed at the focal point.

In France a large solar furnace is used commercially in the smelting of alloys. The one great problem, how does one store energy when the sun is not shining?

Wave action. Another idea being tried is wave action. A float anchored offshore bobs up and down like a duck and that vertical motion converted to electricity. 200kms of these floats 1km apart, off the Hebrides could supply 50% of the British demand for electricity, just using present technology.

Tidal Power. Has also been tried and an experimental plant is operating in France and has been for 20 years. The major problem is harnessing the energy, because it is large masses of water at low head.

Wind Power. Wind mills are not new, indeed have been in use for thousands of years. Wind generators have been used in Australia for many years. The same problem of what to do when the wind is not blowing occurs. Batteries are expensive, bulky and of limited use.

For some years (in the 1940's) there was a windmill in Kentucky, supplying power to the grid system. This was 'no toy', the blades were 5 tons each in weight, but it finally blew to pieces, which was also the fate of another large mill tried in France.

Windmills don't necessarily have to look like windmills. Most of us will have seen the little cups on weather vanes, that also is a type under observation. Another showing promise is a contraption like a vertical egg-beater. Although very efficient, and much less prone to damage, by overload, its efficiency drops off, at other than optimum wind velocities.

In Australia wind power shows no promise, other than for minor use. Just not enough wind unless in places like Cape Leuwin & Kangaroo Is. The Western Australian Government is very interested in Wind Power, and overseas much effort is being expended on ideas. One being a series of 200 ft. high towers, offshore, each with 6 mill-generator units. Brian also spoke of Ethanol, Methanol, Methane, Hydrogen and atomic powers, and these will be continued in the next issue.

Thank you Brian for these notes.