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THE BUSHFIRE PROBLEM

The perennial warning from the Director of Country Fire Brigades that hazard reduction burns should be carried out to minimise the possibilities of serious bushfires has again been publicised. The usual proviso that these deliberate fires should only be lit when weather conditions are suitable has also been included but all too often the judgment as to suitable conditions has proved deficient with the result that hazard reduction burns have become uncontrollable and caused serious and unnecessary damage to our bushland.

There is an ever-growing belief that hazard reduction burns do more harm than good although this is strenuously denied by the State Fire Commission. It is generally accepted that a regeneration burn to provide a good seed-bed for a new forest is a good practice, but beyond that fire should not be used as a tool.

One of this State's largest users of forest products is Australian Newsprint Mills Ltd. which for more than forty years has been harvesting our forests and using regeneration burns in order to re-establish them, which it has done most efficiently. It is the strict policy of this Company to prevent any fire once a young forest has been established and the re-growth areas in the Florentine Valley bear witness to its effectiveness.

The State Fire Commission should direct its efforts towards educating the public in the proper care of our forests rather than encouraging burning-off which has been responsible for the tragic deterioration of many forest areas.

RICE GRASS — *SPARTINA ANGLICA* ESTUARIES UNDER THREAT

J. Bayly-Stark

National Parks and Wildlife Service, Hobart

Estuaries have a very important place in coastal ecosystems. Nutrients washed down by freshwater streams and stirred by rhythmic tidal flow provide a rich environment for a diverse range of flora, birds, fish and invertebrate life.

Estuaries are also favoured by man as settlement sites. As a result many of our estuarine wetlands have been lost to land reclamation, port development, agricultural development and industrial pollution. Unfortunately we now have to add the insidious and potentially serious threat posed by *Spartina* to this list.

At present the taxonomy of the group in Tasmania is complicated and so I will use *"Spartina"* to denote the Tasmanian complex. *Spartina* is adapted to the brackish waters found in tidal reaches of estuaries.

Spartina is an intertidal grass of European origin and has been widely used around the world in land reclamation. It was introduced into the Tamar River in 1947 to stabilise the mobile mudflats bordering the navigation channel. It worked very well. By 1972 over 5.5 million square metres of Tamar River mudflats had been colonised by *Spartina*, (Phillips, 1975).

Spartina grows from seed, plant fragments or by rhizome extension to form rapidly expanding clumps which in time coalesce to form a sward of meadow. The dense shoots which rise from the root system trap and accumulate sediments. The effect of this process is to raise the intertidal surface until eventually a terrestrial environment is created. In the Tamar River *Spartina* has caused sediments to accumulate to depths of over 2m in places. (Phillips, 1975). Not only has *Spartina* colonised mudflats in the Tamar River but it has also colonised rock platforms and sandy beaches. (Phillips, 1975). The end result of this process is that large productive estuaries can be reduced to channelled streams.

Clearly such rapid and extensive changes to key estuarine environments must be to the detriment of native species which are unable to adapt to the new conditions. The National Parks and Wildlife Service is particularly concerned with the potential impact of this weed on migratory and residential waders. There are a limited number of important wader resorts in Tasmania (Anon 1979) and many of these could be substantially destroyed if *Spartina* were to become established. Further research is needed to establish just how serious a threat *Spartina* is to the plant and animal communities which go to make up an estuary. However, it is clear that waterfowl which feed on seagrass, *Zostera* spp., stand to lose large areas of feeding habitat.

Estuaries are also important breeding and feeding grounds for many freshwater and marine fish, including commercial species such as whitebait and oysters.

In the 1940's and 50's *Spartina* was planted in a number of estuaries. It has now been found in the following estuaries:— Montague River, Duck River, West Inlet, Port Sorell, Tamar River, Bridport and Little Swanport. In recent years it has been eradicated from the Derwent and Forth Rivers. The National Parks and Wildlife Service intends, with the co-operation of other authorities, to eradicate *Spartina* from all but the Tamar and Duck Rivers. In these latter areas *Spartina* is either too firmly established to contemplate control, or is providing much needed stabilisation of silt for the maintenance of navigable channels. Continued vigilance will be necessary to prevent new infestations originating from these established areas.

You can help by keeping an eye out for a rank grass, 20-100 cms talls, growing in the brackish intertidal zone. *Spartina* resembles young plants of the common reed *Phragmites communis* which occupies a similar niche but in less saline habitats.

If you suspect you have found a patch of *Spartina*, other than in the Tamar and Duck Rivers, the National Parks and Wildlife Service would be pleased to receive a specimen, together with the name and grid reference of the location.

References

ANON. (1979) Palearctic Waders
TASMANIAN BIRD REPORT 7, 30-42

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ANOTHER HOBBY FOR A FIELD NATURALIST

M.L. Westbrook

Have you ever looked at the very beautiful little toadstools in the dark, damp, mossy rainforest and said to yourself "If only I could preserve them, what a lovely collection it would make!"?

Of course, for an expert photographer there is no worry, for the most accurate and colourful records can be taken to give pleasure to all who see them.

But there is another sideline for a person interested in Fungi — making spore prints. When out hiking take with you a flat tin, lined with plastic and cottonwool. Put the fungus upside down, cover with plastic before closing the lid. Or take several little tablet bottles and drop one toadstool into each. As soon as you get home, your very first job after taking off your pack is to deal with your specimens. The stem of the fungus is cut off at the top and the open cap with the gills or pores is placed on a piece of paper for several hours. The spores fall on to the paper and make a true print of the pattern of gills or pores on the fungus.

Some spores are white and show up well on black paper while others are dark and show up best on white paper. If great care is taken the print can be fixed by spraying gently with hair spray.

The prints can then be pasted into a notebook together with notes made on habitat (whether growing on dead or living wood, on bone or dung, in grass or on ground, in sun or shade, wet or dry conditions.) Morphology (size, shape, colour, thickness, surfaces, smell etc.). Season (rain is usually more important in Australia). Spores — shape and size (if you have a good microscope) and then,(if you can identify it by reference to a book such as 'A Field Guide to Fungi of South-East Australia, by Ross Macdonald & John Westerman) — its common and/or Scientific Name.

In time you can build up your own reference book on Fungi. Meanwhile, the hunt for specimens gives added interest to all your bush walks, and even a tour round your home garden, could add to your collection.

20,000 YEARS AROUND CARLTON BLUFF

by Kelsey Aves

My interest in the Carlton Bluff area developed as a result of our family camping in a delectable glade of banksias in the shelter of sand dunes on the Carlton Bluff estate — then reached only by a primitive sand track by the Carlton River, the farmhouse and cowsheds being the only buildings on the property. The consequent solitude we enjoyed for 6 or 7 years before inevitable development started. We eventually built a cottage there ourselves, and 'Roaring Beach' became 'Primrose Sands'.

The human history of the area might be said to have 3 phases — some 20,000 years of aboriginal occupation, about 200 years of white exploration and settlement, and about 20 years of modern 'development' — almost a logarithmic scale.

Referring to the article by Scott Cane and Jim Stockton in the 'Tasmanian Naturalist' for November 1977, Tasmania was probably first settled by people from the mainland of Australia some 23,000 years ago, during the end of the Pleistocene ice age, when the sea-level was about 70 metres lower than now. This meant that there was a land-bridge between Tasmania and Australia on the eastern side of what is now Bass Strait. By 12,000 years ago these people had reached southern Tasmania, but as the snowfields and glaciers melted Tasmania became an island about 10,000 years ago and men and animals were separated from mainland influences. For three or four thousand years Bass Strait widened as the ice melted. Since at least 8,500 years ago Carlton was inhabited by aboriginal people of the Oyster Bay tribe; in fact one of the middens by the river has been carbon dated to this age. Over most of the estate we used to pick up artifacts and there must still be plenty around.

As the article in 'The Naturalist' says, the climate into which the aborigines first ventured was colder and drier than now — about 8^{0}C. colder. From 25,000 to 10,000 years ago the main vegetation was grassland, but with a warmer and wetter climate trees increased and a savannah developed. The aborigines constantly used fire to maintain young grass for game, but left patches of trees for shelter and this was the habitat described by the French and English explorers of the end of the 18th Century — light savannah and heath country, which persists today where it has been allowed to.

Coming now to the phase of white exploration and settlement, Frederick Henry Bay was explored by Willaumez from D'Entrecasteaux's expedition in 1793 and Pt. Renard was named by him. It was further explored by Flinders in 1798 during his and Bass' circumnavigation of Tasmania and he named and spent a night anchored by Isle of Caves. Also a boat from the expedition of Baudin in 1802 entered the Carlton River.

In 1803 white settlement began with Lt. Bowen founding the Risdon settlement and the following year, 1804, Collins transferred it to Sullivan's Cove, thus founding Hobart. Gradually settlers spread further afield. Sorell was officially named in 1821, and there were farms at Carlton by 1830, when the Quaker missionaries, Backhouse and Walker wrote of having meetings with them. The Carlton Bluff property was granted to E.J. Kennedy in 1851 and it has been farmed since then, probably for wheat in its early days and as a dairy farm and sheep run during this century. It was as sheep and cattle grazing country that we first knew it and our walks towards Primrose Point were over rolling green fields, closely cropped by sheep and rabbits and reminding us rather of the South Downs in England.

This was a habitat for Australian (Richard's) Pipit, Dusky Robin, Field-wren (Calamanthus), Skylark and Dusky Wood-swallow, but this has largely been displaced by urban development, and (Common) Starlings and House Sparrows are increasing very rapidly. However, Brown Thornbills and (European) Goldfinches are nearly always in the casuarinas on the cliff edge. The lagoon, also, used to attract many dotterels and often sandpipers but has changed and although it still has a few Red-capped and Black-fronted Dotterels (Plovers), we rarely see Hooded Dotterels (Plovers) or sandpipers. Mountain Ducks (Australian Shelducks) and Blue-winged Shovelers were often seen there, but it's several years since I've seen the Mountain Ducks. We still have (Pacific) Black Ducks and Chestnut Teal as well as Hoary-headed Grebes and Musk Ducks when the lagoon is not dried out. At one stage trail bikes used to career around the sedge clumps on the edge of the lagoon and must have discouraged the water and marsh birds.

Around our house we always have Little Wattlebirds in the banksias and usually Crescent and Yellow-throated Honeyeaters, Eastern Spinebills, Brown Thornbills, Scarlet Robins and Black-faced Cuckoo-shrikes in the summer. From the trees nearby we hear White-backed Magpies, Noisy Miners, Eastern and Green Rosellas and sometimes Clinking (Grey) Currawongs. Also, there are Brown Hawks (Falcons), and Swamp (Marsh) Harriers over the lagoon area. Laughing Kookaburras seem now to be resident.

The beach always provides interest with Southern Black-backed (Kelp) Gulls increasing and a pair of Pied Oystercatchers we know as George and Martha, though in the 25 years we have known them they must have changed their identity. The nearby Carlton Estuary seems to have a community of a score or more of these birds. Often about February skeins of thousands of Muttonbirds (Short-tailed Shearwaters) weave over the bay. Once we saw the dark shapes of two enormous rays (± 1.5M across) close inshore, and also once the triangular fin of a large shark. Permanent residents might see them more often.

In our garden skinks are common. Mountain Dragons were so tame that we could sometimes pick them up but now we have none and we suspect neighbours' cats.

The garden is planted mainly with Australian natives, most of which were given to us by Ron Smith. West Australian and mallee eucalypts give us great delight and there are also wattles, hakeas and grevilleas which encourage the honeyeaters.

While sheep were grazing few seedlings of the indigenous trees or shrubs had a chance to grow, but since sheep have been excluded casuarinas and banksias have re-generated in quantity around us. Despite the necessity to mow the grass in the garden, because of fire risk, *Pimedlia humilis* comes up again every year and *Diuris sulphurea* and *Microtis unifolia* grow within a few metres of the house. *Goodenia spp.* grow in the area too, and may well be the reason for the name Primrose Point and subsequently Primrose Sands.

. . . . . .

Most of us who are conservationists want nature to have its own way, at least in some places, believing that in the end it will achieve its own balance. 'In nature every species is important' said one of Walt Disney's early nature films. But alas, wherever prolific man and his modern technology move in, this natural balance is upset and even the making of a 'wild' garden alters the natural balance. Still, we must be thankful that, however tentatively, the movement for conservation is alive and growing and that 'development' is not as unrestricted as it was a few years ago.

WADERS AT MARION BEACH

L.E. Wall

On 29 November 1978 there was an unusual number of migratory waders on the ocean beach – 6 Eastern Curlews, 16 Bar-tailed Godwits, 2 Red Knots, 150 Red-necked Stints and 25 Ruddy Turnstones. This flock of Turnstones is the largest I have known in the southern part of the State. On 17 January 1979 there were 300 Red-necked Stings, 6 Eastern Curlews, 1 Whimbrel, 1 Grey Plover and 19 Bar-tailed Godwits.

BLACK CURRAWONGS ATTACKING A WEDGE-TAILED EAGLE

L.E. Wall

At Sloop Point, south of Cape Sorell, on 7 December 1978 a group of Black Currawongs was seen diving at something on a steep bank just above the seashore. The subject of the attack proved to be a Wedge-tailed Eagle which appeared to be little disturbed by the currawongs but took to flight when I showed myself.

PLUMAGE CHANGES IN THE BANDED STILT

Cladorhynchus leucocephalus

L.E. Wall

Following submission of my note to "The Emu" (vol 78 p 163) J. Berry found another bird of this species at Great Bay, Bruny Island, about 35 kilometres south of Lauderdale where the earlier sightings had been made, on 31 July 1977 and I saw it there on 7 August. I noted that the pectoral band was dull brown in colour with some white patches. I saw it again on 11 March 1978 when the band was complete and coloured rich chestnut, but on several subsequent visits I have not found it.

The bird at Lauderdale was observed frequently between April 1977 and its disappearance in June 1978 and the following plumage changes were carefully noted:–

16/4/77 full rich chestnut band
17/5/77 " " " "
23/7/77 Losing band ?
8/10/77 white patches on the dull brown band do not appear to be increasing
28/1/78 no band: dark smudge on belly only
26/2/78 band fully outlined but light rufous in colour, with plenty of white still showing. It was resting but was constantly pecking at the breast, apparently affected by the new band feathers growing out.
4/3/78 band well defined but not yet fully coloured and is still 20% white, finely spotted throughout.
11/3/78 As stated above I studied one bird at Great Bay, Bruny Island, on this day and then went to Lauderdale as quickly as possible to see whether there was one in each location. The bird at Lauderdale was found with about 10% of white feathers in its band while the Bruny Island bird had a complete band.
28/5/78 full rich chestnut band.

It seems clear that at about the end of July each year the colour of the band fades from rich chestnut to dull brown and some feathers are lost resulting in the band bearing a mottled appearance, and this remains for three or four months. The band is completely moulted in December or January but the black belly patch may not be entirely lost. Restoration of the full band may take as long as three months. As mentioned in my earlier note it has been generally accepted that the pectoral band, having been attained at maturity, becomes a permanent feature of the plumage although at least two authors, J. Jones (Emu 45: 12) and Roy Wheeler (Emu 55: 286), have expressed doubt on this point and this is now confirmed.

THE RUFOUS WHISTLER *(Pachycephala rufiventris)* IN TASMANIA

Frances P. Foster

Newman (1976) and Green (1977) cite references to its occurrence on King Island but there have not been any authenticated records of it occurring on the Tasmanian mainland.

At 1030 hours on 12 October 1980 I heard a bird calling in dry sclerophyll 100 metres from the homestead at "Bel Respiro", Green's Beach, near the mouth of the Tamar River. Though vaguely familiar I could not associate it with any of the species known to occur in the area. Upon investigation I found it to be a young male Rufous Whistler just attaining mature plumage. Its colour pattern made it easily distinguishable from the Golden Whistler (*P. pectoralis*) which is common in the area. Its steel grey crown and back, white throat above a black pectoral band, rufous breast streaked with brown and rufous belly were clearly visible through 10 x 50 binoculars.

I watched the bird on several occasions for a total of two hours throughout the day, during which time it called regularly while feeding amongst the foliage in the tops of the eucalypts. It was still in the same area at 0630 hours the following morning but has not been seen since.

I was previously acquainted with this species, having observed it at Aireys Inlet in the Otway Ranges, Victoria.

References:— Newman, O.M.G. 1976. Tas. Bird Report No. 5.
Green, R.H. 1977. Birds of Tasmania.

(I have two second-hand and unconfirmed reports which have never been published: one near Corinna in 1966 and the other near Liena in 1964. — Editor)

CATTLE EGRET KILLED BY HAWK

In May 1975 P. Fielding was given a Cattle Egret which had been attacked and killed by a hawk (species unknown). This is the only one I have had in my hand and I was interested to note that the soles of the feet were green. The only description I know of which includes this feature is in Prade and Grant's "South African Birds".

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