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THINKING ABOUT ESTABLISHING OR RE-ESTABLISHING A GARDEN ?

Not sure what style? Before you rush out to buy plants think about the area you want to have for a garden, and what you wish to achieve overall. Some examples are:

- low maintenance, simple, affordable
- to provide shelter or for relaxation
- to provide colour or fragrance
- a natural 'bush garden' mimicking the bush, and encouraging wildlife
- suitable for young families and incorporating play areas
- specific plants, or collector's garden
- formal or informal gardens or rooms
- traditional or seasonal, rainforest or coastal
- cottage or gardens with walking trails
- contemporary, or solely Australian
- with/without borders or other features and edgings

If you have a large rural piece you may only want to plant areas such as entrances, around the house, shelter belts, creek lines or even plants for fodder, bush foods, cut flowers or other interest towards farm diversification .

Only when you have decided this, can you realistically proceed to the next stage, of drawing up some sort of organised plan, which can change over time, and then a species list. Once this is done you can start selecting plant species for planting.

BE INSPIRED BUT REMEMBER, IN SMALL AREAS YOU CAN'T HAVE IT ALL.



A PLAN'S FRAMEWORK

As mentioned, drawing up a plan is necessary before any planting occurs. This is often called the framework from which you will work from, and generally contains three layers of plants. These are the understorey, the middle layer and the taller canopy plants. The upper layer (canopy) contains the larger trees and shrubs which form the outline, shape and coverage of the overall garden. The second or middle layer provides the structure of massed foliage plants against the lowest layer or understorey of decorative plants, flowers, herbs and groundcovers. In a bushland setting or other structured garden you may have more than three layers, however three is a good target to aim for. For rural property easements or edges two layers may be sufficient providing a row of larger trees and a second row of shrubs. In time, a third row could be considered such as saltbush species, or smaller ground covers.

The framework and structure levels planned on paper and put into practice will become the evolving garden over time. Consider the plant species with such things as colour, shape, texture, fragrance and form. Choose wisely a species that is known to do well in the particular area in which you intend to plant. It's no use planting a plant that likes to have wet feet, if you are planting in a desert or dry area.

Plant according to local conditions.

ANPSA DOMAIN NAME

<http://anpsa.org.au>

SOME USEFUL FREE INFORMATION ABOUT AUSTRALIAN PLANT NAMES articles by E.Hegarty & J.Sked. SGAP Qld.Bulletin Sept.2010.

Qld.'s DERM wildlife online website:

<http://www.derm.qld.gov.au/wildlife-ecosystems/wildlife/wildlifeonline/>

offers lists of species so far recorded in hundreds of Parks and reserves, Local Government areas (Councils) and other sites in Qld. These lists can help with identification of some plant (or animal) that you might see on a field trip or in your local area.

The website states: "The department's wildlife database contains recorded wildlife sightings and listings of plants, fungi, protists, mammals, birds, reptiles, amphibians freshwater fish, marine cartilaginous fish and butterflies in Queensland. This website enables you to access a list of wildlife that the department has recorded for areas such as National Parks, State Forests and Shires, or areas defined by the user."

The information is available as a PDF file-download specific or can be emailed to you.

Other useful sites include <http://www.anbg.gov.au/anbg/index-photo.htm> which gives access to photographs of native plants.

The Virtual Herbarium homepage is : <http://www.ersa.edu.au/avh/> now gives links to access the State Herbariums and many other sources of local information.

BOTANICAL JARGON

Adnate – United to a part or organ of a different kind, as stamens attached to petals.

Connate – Closely joined or united to a similar part or organ.

WHY PUT NATIVE SPECIES IN PONDS?

By Chris Jones (an answer to article by B. Lees, *Native Plants of NSW* October 2010.p.28)

Why not? Any wet area or object holding water becomes a breeding ground for wrigglers and mosquitoes. Anyone that has suffered from Ross River Fever, dengue, malaria or Encephalitis and survived - will tell you that these are mosquito borne diseases which can have serious consequences. My husband spent five days in a coma as a result of Viral Encephalitis and it was 'touch and go' on a number of occasions. He was bitten numerous times by mosquitoes in one day, and had what we believed to be a heavy head cold. We all know better now that this was the start of the disease. Fortunately, he is one of the lucky ones. With the severe natural floods that much of eastern Australia has experienced, people need to be aware that with these floods can come the influx, breeding and dispersal of large numbers of mosquitoes and mosquito-borne disease. Water whether a saucer full or a river can become a breeding ground.

So if you have a pond or wet area why wouldn't you put a natural control mechanism in place to counter the problems that will occur. If you have bog plants in pots in the water as well as other aquatic loving plants partly in/out of the water, and a few rocks, you have the natural environment for frogs and fish. Add native Australian fish not exotic fish, to feed on the insects. Birds, frogs and reptiles will find your pond. A pump will assist aeration of the pond and you can use a solar pump. If your pond is set up properly you will not need to clean it. If you do happen to have a large volume of insects your fish won't need feeding unless you wish to supplement them. They should get all they need from the natural environment. Cover your pond with netting. If really successful you will have birds drawn to your garden.

Water features such as ponds and fountains are very soothing and add another dimension to your garden.

VALUING TREE PLANTING

When you have been planting trees as protection and revegetation measures how do you value the success of such an action? Believe me, it's not by how many plants planted, or the numbers of years you have been doing so. So how do we measure success?

Simply, by the numbers of species returning to an area. Birds are the ideal ecological indicators - they are in general conspicuous, vocal, ubiquitous and diverse. There are birds in nearly every landscape as well as species for all niches - from nectar feeders to top level predators. Therefore number and type of species can give us a picture of habitat quality.

Revegetation sites provide excellent sites for bird surveying. In one of our revegetation sites we planted a range of local species and a trial patch of eucalypts grown for their timbers, bark and botanicals, with local shrubs and ground covers. In the first 12 months the insects came and then the birds. Surveys were conducted at 2 years, 5 years and 10 years to review progress of growth, and return of biodiversity. Each time we surveyed, regardless of the season, there were quite a large number of avian species - insectivorous and nectar feeders (eg. the wattlebirds, pardalotes, honeyeaters, weebills, babblers) as well as larger species (currawongs, owls and falcons). Admittedly in the beginning, the return of species seemed lower than that which was occurring within our heritage scrub adjacent. But with time, the species appeared to extend their area by including the revegetated section. More and more birds appeared in both areas. Not only birds, but native fauna could be sighted as well- kangaroos, emus, echidna, and

possums. Bees had also established a hive in nearby trees, and were actively collecting honey from the flowering eucalypts. A number of reptiles and other insects (native bees, wasps, mosquitoes) were sighted. But it was the bird species which were the best ecological indicators.

Try this in your revegetation patch. If you live in an urban area, you'll probably notice birds returning to areas, often not seen in the vicinity for quite some time. This in itself is valuable in 'returning an area to its previous condition'. The birds that return assist pollination, seed dispersal, insect control and nutrient recycling all of benefit to the overall environment.

Why not conduct a bird survey on your revegetation plot? Make it count by registering your interest with Birds Australia who can assist you with specific forms etc. Interested in growing trees or planting out raised tube stock? Give Greening Australia, Trees for Life, CALM, or local group etc. a call.

OUR NATIVE FAUNA

There are many species of Australian fauna just as there is with Australian flora. Did you know that there are several species of wombats (*Vombatus*) :- sturdy, burrowing marsupials that may weigh 25 kg. or more. Wombats used to be common in the uplands of the south eastern corner of Australia.

The largest marsupial family includes the kangaroos and wallabies. The Scrub Wallaby inhabits the edges of thick vegetation in parts of Queensland and New South Wales. The forested countryside of the eastern states is the main stronghold of the Eastern grey Kangaroo.

VIRUS THREAT

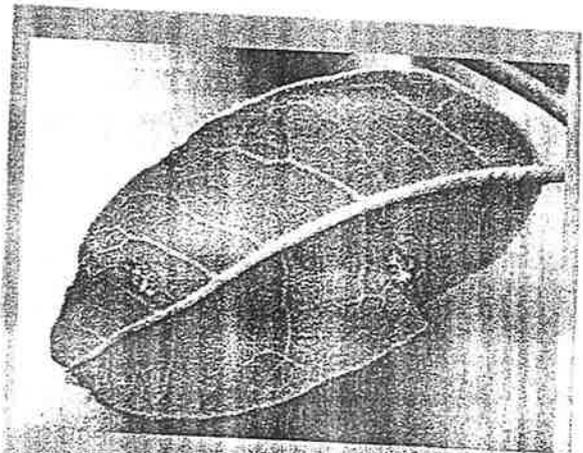
A number of viruses in the plant world threaten our native plants and animals. In a media release from SABC in August 2010 referred to indigenous Western Australian plants, including the kangaroo paw (the floral emblem of WA) said to be under threat from introduced viruses. How the threats impact on biodiversity, conservation, remediation and the wildflower industry were yet to be determined. Under an ARC project grant Dr. Stephen Wylie (WA State Agricultural Biotechnology Centre) and other partners, will focus on the role plant viruses play in affecting the sustainability of Australia's floral heritage, and in developing strategies to limit virus spread between native plant populations.

Many viruses are known to be spread by aphids. Australia has 13 indigenous species recorded, yet there are over 150 aphid species introduced from overseas. Many of these have facilitated movement of damaging viruses into and out of native populations.

Dr. Wylie has also discovered that 70% of individuals of the wetland plant species, *Triglochin*, were infected at one site alongside the Swan River, by the Introduced Bean Yellow Mosaic Virus (BYMV). The corm of the *Triglochin* was a valuable Aboriginal bush food, and the plant species plays a large ecological role in filtering grey water, nitrates and phosphates from waterways.

Another invasive species is myrtle rust, *Uredo rangelii*. This species is closely related to the fungi causing guava rust, and eucalyptus rust, and part of a complex of rusts that infect the Myrtaceae family of plants which include many native Australian plants.

Rusts are highly transportable. Their spores can be carried by means of contaminated clothing, infected plant material and equipment, insect movement, and by wind dispersal. These rusts affect commercial growing operations and native ecosystems.



Newly formed bright yellow pustules of Myrtle Rust on Turpentine

Disclaimer: The material in this publication was prepared from the most up-to-date information available at the time of publication. It is intended as a guide only and the publisher accepts no responsibility for errors.

MULCHES AREN'T JUST MULCHES

Phil Watson

A satisfying sense of achievement can be enjoyed by enthusiastic bush carers, gardeners and landscapers alike, following a revegetation or landscape planting which features a fresh blanket of neatly spread mulch. These, committed folk take it for granted that by spreading mulch they will not only enjoy an attractive landscape, but will be rewarded from an array of water-saving, weed reducing, disease minimising, fire retarding and nutrient releasing benefits.

However, recent scientific studies, reported in the "Gardening Australia" magazine suggest that the anticipated outcomes don't eventuate, primarily due to poor selection of mulch ingredients and an inconsistent range of particle sizes.

This article aims to provide a solution to the frequently experienced grower's frustrations associated with loss of plants as well as planting and growing time, due to the poor performance of the mulch.

Three types of mulch

As a brief background, mulches are grouped as either landscape mulch (sometimes referred to as groundcover or revegetation mulch), soil conditioner mulch or green mulch (uncomposted shredded trimmings).

Soil conditioner mulches (pea straw, Lucerne hay, compost, sea grass etc) are composed of a mixture of coarse and fine particles which will decompose into humus over short periods. As humus, these mulches can be dug directly into the soil. Here they contribute significant amounts of nutrients to the soil as well as improving soil structure by clumping together soil particles to form peds. This in turn enhances its water holding capacity and air flow into the soil (air filled porosity).

They are excellent for veggie patches and mulching around fruit trees or flower beds. However, since they rapidly break down, they are of little use as a landscape or revegetation mulch.

Landscape or revegetation mulch (pine or gum barks, composted recycled organic mulches, woodchips, various grades of gravels etc) are a specialised group of mulches composed of carefully graded chunky pieces which are slow to break down.

Green mulch This is treated separately as a problematical mulch type although it is normally considered to be landscape mulch. These popular green mulches are produced by the tree pruning contractors in their tub grinders from tree and shrub pruning or by the home gardener energetically stuffing pruning into their domestic mulching machines. Although cheaply available, caution should be given to its use since it doesn't act like landscape mulch. Users should be aware that it also results in nitrogen draw down problems and growth inhibiting properties derived from the phytotoxin chemicals (polyphenols) it contains.

Landscape mulches require uniform sized chunky particles

Although many landscape mulches are spread with all the best intentions, they leave a high maintenance legacy simply because they are composed of more than the surprisingly small figure of 5% fine particles. The quality mulches (wood chips, chunky barks etc) are screened to a uniform particle size (15mm, 20mm, 30mm etc). This sieves out the finer particles, but does impose a significant increase in production costs. This screened finer organic material is not wasted as it supplies an ideal ingredient for soil conditioning compost. Summarised below are the benefits derived from Chunky Landscape Mulches (CLM) in contrast to the inherent problems associated with the Unscreened Landscape Mulches (ULM):

(Continued on page 4)

MULCHES ARE JUST MULCHES (Continued from page 3)

Many types of mulch are water wasters not water misers

ULM composed of fine and coarse particles initially soak up all the rain and irrigation rather than allowing it to flow freely down into the soil and onwards into the plant's root zone. Hence, due to its sponge like effect, there is a substantial volume of precious water lost to the soil especially during light showers. Ultimately a lot of the water held in the mulch layer is wasted since it evaporates back into the dry atmosphere.

ULM and especially the uncomposted tree mulches are notorious for their tendency to become hydrophobic (water repellent).

After a few months they compact down causing the smaller particles to fill up the air spaces between the larger particles resulting in an impervious layer over the soil. Coupled with this they form an ideal environment for rapid growth of fungi mycelium and the white actinomycetes (the white powder colour in mulch), which tend to strongly bind the soil particles into a very compact hydrophobic mass. Consequently it is nearly impossible for water to penetrate into the soil below. The only recourse is to regularly "fluff up" the mulch. Interestingly, as a temporary solution, this technique is used on the fine mulches spread under play equipment as soft fall to maintain its impact absorbing qualities.

Chunky mulches promote air flow and limit microbial nasties

CLM allow air to flow freely through the network of spaces between the chunky particles, ensuring the air in the soil (air filled porosity) is maximised. Air flow is an essential ingredient to inhibit excessive growth of unwanted disease micro organisms including infectious fungal diseases such as root and stem rot fungi (*pythium*, *phythphora*, *armillaria* etc.). ULM acts like a wet sponge during rainy periods which sits on the soil forming wet scarf-like bands around the stems and crowns of plants allowing these nasty fungi to dominate.

CLM on the other hand provides a constant airflow which allows the good microbes including the nutrient postmen of the soil *mycorrhiza* and nitrogen fixing *rhizobium* bacteria to dominate at the expense of the bad ones.

Chunky mulches are weed and fire retardant

The uniform grades of chunky particles in CLM mulches produce the advantages of restricting the germination of any wind borne weed seeds. The seed falls freely or is easily flushed by water, deep within air spaces of the mulch. If it does germinate the seedlings' first shots (plumules) would have a fight on their hands to reach the surface, and the first rootlets would find it difficult to permanently attach to the chunky particles. This contrasts to the ideal seed germination environment provided by the fine particles making up the surface of most ULM mulches. As a result, this eventuates in proliferation of weed maintenance problems.

Similarly in explaining the fire retarding properties of the chunky mulch, the presence of uniform chunky particle ensures limited flammability. These chunks are very hard to ignite by abandoned cigarette butts or matches in the wrong hands. In contrast, the ULM's fine organic materials are extremely flammable and they are hard to extinguish, smouldering for long periods.

Select your mulch carefully

In the light of the knowledge that mulches aren't just mulches careful consideration should be given to ensure the mulch selected provides the anticipated benefits. This hopefully will lead to the right mulch (rather than being swayed by cheaper alternatives) and consequently a vigorously growing landscape made up of healthy seedlings. ☺

BIRD ID FOR BEGINNERS

YAM DAISY in Victoria

Microseris lanceolata (syn. *Microseris forsteri*)

Aboriginal names: Mirr-n'yong, murnong, murr-nong (Geelong, Vic), muurang, myrnong (Vic.), yerat (Lake Condah, Vic.)
Other names: Murnong, native dandelion

Family: Asteraceae

Climate: Temperate

Habitat: Grassy, open plains and forests of SE Australia, including Tasmania.

Form: Small, clumpy perennial, 10-30cm in height, dormant from midsummer to spring.

Foliage: Long, narrow, finely toothed bright green leaves

Flowers: In spring the drooping buds are followed by deep yellow, daisy-like flowers with strap shaped florets

Seeds: The flowers turn into a dandelion-like blow ball in summer

Tubers: White-fleshed, sweet, tuberous roots, shaped like parsnips, 1-2.5cms long, mature spring to early summer.

Taste: like sweet potatoes or parsnips

Bush food: Main staple food of Aboriginals of Victoria & SA. Women and children dug up large numbers of tubers from the shallow soil using their wooden digging sticks. The tubers can be dug up at anytime after flowering until they start to grow again in autumn. Old tubers are brown, fresh tubers have a purple skin. Raw tubers are crisp with a bland, slightly bitter taste. May be eaten raw, but generally roasted. Yam daisy tubers contain high amounts of potassium, magnesium, sodium, calcium, iron and zinc. Protein content 1.5 %, carbohydrate content 13.3%. When baked the yam daisy tubers dry out and become crisp. Tubers can be boiled like potatoes, served with butter and herbs, added to soups, or fried as chips. They may be steamed, cut into matchstick sized strips and stir-fried or battered and fried. Rather a spicy hot taste.

Status: Yam daisy is now almost extinct or the plains of Western Victoria.

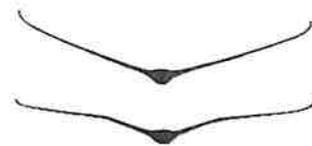
Pests: livestock, and snails

*Information sourced: Keith & Irene Smith
 Grow Your Own Bushfoods, 1999*

Wedge-tailed Eagle

The Wedge-tailed Eagle is Australia's largest bird of prey. With a wingspan of nearly 2.5 metres and an average weight of 3.5kg, it is the fourth largest eagle in the world.

Apart from the Little Eagle, the Wedge-tail is the only 'true' eagle species in Australia, possessing long legs that are fully feathered to the toes. It is easily identified by its size, its large diamond-shaped tail and obvious primary feathers that give its wingtips a 'fingered' appearance. It is usually seen soaring on upswept wings at heights up to 2km.



Like many raptors, wedgies have different colour morphs depending on their age. Immature birds are generally golden in colour, and progressively darken with age to achieve the almost entirely black appearance of mature adults, which also possess a golden wing-band and chestnut nape (or neck) feathers.

Its scientific name *Aquila audax* means bold eagle, but in fact they are shy and wary of humans. It is rare to find a wedgie that will stand its ground and appear bold even during nesting. However, we did once drive up to a wedgie that was feeding on road kill and reluctant to move. As we came to a halt, it glared at us over the car bonnet, underlining how big they are close up.

At breeding time, pairs of eagles circle high over their territories in a display of ownership defending the area around their nest from other wedgies. The size of the territory varies according to food supply, but is generally 30-50 sq km in area. They build their nest in a prominent location, usually the tallest tree, with a good view of the surrounding countryside. However, if trees are absent, they will use shrubs, cliff faces and even the ground.

The nest is a massive structure, often more than 2m deep, made of dead branches and sticks lined with green leaves which are added regularly when the young is present. A nest on our property is big enough for an adult human to lie down on fully stretched out. Several nests normally exist in one territory. Little is known about why they do this and what makes them choose the one they breed in each year, but it is probably related to the proximity of abundant food resources.

Breeding times vary from year to year and location to location, but most eggs are laid in June-August. One to three eggs are laid. Both parents share nest building, incubation and feeding the young. Survival rates depend on local conditions, prey abundance and the amount of disturbance. The young fledge when they are 80-90 days old. Usually only one survives, especially if food is scarce, as the oldest and largest chick will kill its smaller siblings.

Carrion is an important part of the bird's diet, while live prey ranges from lizards to kangaroos. They favour rabbits when available, while lizards are an important food source in arid areas.

A QUICK GUIDE TO Reptiles, frogs and mammals in Tasmania

Reptiles

Tasmania has no turtles (Order Chelonia) or crocodiles (Order Crocodylia) so all our reptiles are squamates (Order Squamata): snakes and lizards. Australia has an incredible diversity of this order, but Tasmania only hosts a modest eighteen species of lizard and three species of snake. However, we have a high degree of endemism with seven species found nowhere else but here.

Reptiles in cold climates are usually viviparous (giving birth to fully developed young) and that trend continues in Tasmanian reptile fauna, with only three typically oviparous (egg laying) species, the mountain dragon, delicate skink and eastern threelined skink.

Checklist of Snakes and Lizards in Tasmania

Family ELAPIDAE

White-lipped snake	<i>Drysdalia coronoides</i>
Tiger snake	<i>Notechis ater</i>
Lowland Copperhead	<i>Austrelaps superbus</i>

Family AGAMIDAE:

Mountain Dragon	<i>Rankinia diemensis</i>
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Family SCINCIDAE:

Three-lined skink	<i>Acritoscincus duperreyi</i>
She-oak skink*	<i>Cyclodomorphus casuarinae</i>
White's skink	<i>Egernia whitii</i>
Delicate skink	<i>Lampropholis delicata</i>
Bougainville's skink	<i>Lerista bougainvillii</i>
Mountain skink*	<i>Niveoscincus orocryptum</i>
Northern Snow skink*	<i>Niveoscincus greeni</i>
Southern Snow skink*	<i>Niveoscincus microlepidotus</i>
Spotted skink*	<i>Niveoscincus ocellatus</i>
Pedra Branca skink*	<i>Niveoscincus palfreymani</i>
Tasmanian Tree skink*	<i>Niveoscincus pretiosus</i>
Metallic skink	<i>Niveoscincus metallicus</i>
Southern Grass skink	<i>Pseudemoia entrecasteauxii</i>
Tussock skink	<i>Pseudemoia pagenstecheri</i>
Glossy Grass skink	<i>Pseudemoia rawlinsoni</i>
Blotched Blue-tongue lizard	<i>Tiliqua nigrolutea</i>
Southern Water skink	<i>Eulamprus tympanum</i>

* endemic

For Tasmania's reptiles you need only one book: *Snakes and Lizards of Tasmania* (2001) by Mark Hutchinson, Roy Swain and Michael Driessen. (Fauna of Tasmania Handbook no. 9). It has a key for each species, distribution maps and colour photographs of each species. It is available from most good bookshops for around \$17.00.

Frogs

It is amazing that the moss froglet was not found until 1993. It's preference for soggy areas in the moorlands of the south west probably helped keep it hidden from scientific view. The discovery of the moss froglet brought the total frog fauna of Tasmania to a modest 11 species, with two sub-species of the Banjo frog.

Checklist of Frogs in Tasmania

ORDER ANURA

Family HYLIDAE

Tasmanian Tree Frog*	<i>Litoria burrowsae</i>
Brown Tree Frog	<i>Litoria ewingii</i>
Green and Gold Frog	<i>Litoria raniformis</i>

Family MYOBATRACHIDAE

Subfamily LIMNODYNASTES

Southern Banjo Frog	<i>Limnodynastes dumerilii insularis</i>
Mottled Banjo Frog	<i>Limnodynastes dumerilii variegatus</i>
Striped Marsh Frog	<i>Limnodynastes peronii</i>
Spotted Marsh Frog	<i>Limnodynastes tasmaniensis</i>

Subfamily MYOBATRACHINAE

Moss Froglet*	<i>Bryobatrachus nimbus</i>
Common Froglet	<i>Crinia signifera</i>
Tasmanian Froglet*	<i>Crinia tasmaniensis</i>
Tasmanian Smooth Froglet	<i>Geocrinia laevis</i>
Southern Toadlet	<i>Pseudophryne semiarmorata</i>

* endemic

1. Again for frogs we are lucky in Tasmania to need only one book, another of the Fauna of Tasmania Handbooks - no. 6. *Frogs of Tasmania* (2003) by Murray Littlejohn, describes Tasmania's 11 species of frogs with colour photos, distribution maps and keys to adult frogs, to male calls, to eggs and to tadpoles. Available in most good bookshops for around \$20.00
2. For more in-depth information, the Department of Primary Industries, Water and Environment website has a fantastic herpetology bibliography. Go to www.dpiwe.tas.gov.au and follow the links as follows Natural Environment → Plants and Animals of Tasmania → Wildlife and Game → Mammals or Reptiles and Frogs. Under the Reptiles and Frogs heading there is a *Bibliography of Tasmanian Herpetology*. This has an amazing list of references that should keep any keen herpetologist happy.

- In the above website, also under the Reptiles and Frogs heading, if you look in Frogs of Tasmania you will find recordings of the calls of all species.
- <http://frogs.org.au/frogs/of/Tasmania/> is an excellent frog website and has information for frogs throughout Australia.
- The Fauna of Tasmania Handbooks can all be ordered through the post from the University of Tasmania. Visit their website <http://www.zoo.utas.edu.au/FOT2/Booklet/FOT.htm> for more information.

Mammals

Lack of foxes, hopefully an ongoing phenomenon, has meant that Tasmania has kept the smaller marsupial species that are either extinct or on the verge of extinction on the mainland of Australia. This includes the tiger and eastern quolls, the bettong, potoroo and Eastern barred bandicoot. All these species have stable populations in Tasmania, a fact we tend to take for granted. And also in our favour we still have relatively large amounts of intact habitat on the island, despite our high rate of clearfelling. This should also not be taken for granted. I'm sure I'm not alone in being able to see the huge decrease in remnant vegetation that has occurred over the last couple of decades. It is very interesting to speak to the older residents in your area to find out what species they notice are not around anymore.

Checklist of Native Terrestrial Mammals in Tasmania

ORDER MONOTREMATA

Family ORNITHORHYNCHIDAE

Platypus *Ornithorhynchus anatinus*

Family TACHYGLOSSIDAE

Short-beaked echidna *Tachyglossus aculeatus*

ORDER POLYPROTODONTA

(Carnivorous Marsupials and Bandicoots)

Family DASYURIDAE

Tasmanian devil* *Sarcophilus harrisi*
 Spotted-tail quoll *Dasyurus maculatus*
 Eastern quoll *Dasyurus viverrinus*
 Dusky antechinus *Antechinus swainsonii*
 Swamp antechinus *Antechinus minimus*
 White-footed dunnart *Sminthopsis leucopus*

Family THYLACINIDAE

Thylacine (extinct) *Thylacinus cynocephalus*

Family PERAMELIDAE

Eastern barred bandicoot *Perameles gunni*
 Southern brown bandicoot *Isodon obesulus*

ORDER DIPROTODONTA

(Possums, Kangaroos and Wombats)

Superfamily MACROPODOIDEA (Macropods)

Tasmanian bettong* *Bettongia gaimadi*
 Long-nosed potoroo *Potorous tridactylus*
 Forester (Eastern grey kangaroo) *Macropus giganteus*

Bennetts (Red-necked) wallaby *Macropus rufogriseus*

Tasmanian pademelon* *Thylogale billiardieri*

Family PETAURIDAE

Common ringtail possum *Pseudocheirus peregrinus*
 Sugar glider *Petaurus breviceps*

FAMILY PHALANGERIDAE

Common brushtail possum *Trichosurus vulpecula*

Family BURRAMYIDAE

Eastern pygmy possum *Cercartetus nanus*
 Little pygmy possum *Cercartetus lepidus*

Family VOMBATIDAE

Wombat *Vombatus ursinus*

ORDER CHIROPTERA (Bats)

Family VESPERTILIONIDAE

Little forest bat *Vespadelus vulturinus*
 Southern forest bat *Vespadelus regulus*
 Large forest bat *Vespadelus darlingtoni*
 Chocolate wattled bat *Chalinolobus morio*
 Goulds wattled bat *Chalinolobus gouldii*
 Lesser long-eared bat *Nyctophilus geoffroyi*
 Tasmanian long-eared bat *Nyctophilus sp*
 Eastern falsistrelle *Falsistrellus tasmaniensis*

ORDER RODENTIA (Rats and Mice)

Family MURIDAE

Water rat *Hydromys chrysogaster*
 Long-tailed mouse* *Pseudomys higginsii*
 New Holland mouse *Pseudomys novaehollandiae*
 Broad-toothed mouse *Mastacomys fucus*
 Swamp rat *Rattus lutreolus*

*endemic

- Once again we are fortunate to have a great photographic field guide in *Tasmanian Mammals: a field guide*, by Dave Watts, that gives you all you need in one book.
- However, most mammals tend to be tricky to actually see. They tend to be nocturnal and secretive but sometimes you can find other signs of their presence. *Tracks, scats and other traces: a field guide to Australian mammals*, by Barbara Triggs 1996, gives details on skulls, paw prints, scats, diggings and other marks such as distinctive scratchings on trees. It will change the way you look at the bush. Barbara is 'the' expert in identifying Australian mammals by their hair. This often requires looking at a hair in cross section. She has been an invaluable resource for researchers throughout Australia who use hair traps to determine whether a species still occurs in a particular area. Hair traps consist of some sort of tube with a delicious smelling something at one end (often with pistachio essence included) and double-sided sticky tape attached for the animal to hopefully rub against. Hairs are also collected via predator scats and regurgitations. Now there's a job!

Therese Smith