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Young Brush'tail possum in a hollow – urban wildlife
and significance in biodiversity conservation
see page 6

*(Photo: Peter Tonelli – TasNature)*

The Land for Wildlife Scheme in Tasmania is delivered through The Department of Primary Industries and Water in partnership with Wildcare Inc.
Welcome to the thirteenth edition of the Land for Wildlife newsletter. The deadlines for the editions for next year (2007) are 23 February, 27 July and 23 November if you would like to contribute an article or advertise an upcoming activity or event – please feel free to do so and let me know. I also encourage you to use the Members’ Page for any notes or events that other LFWers would be interested in. In many areas there are members who would like to meet other like-minded people, so activities like bird or botanical walks, revegetation site visits or any activity of interest to other members is a good way to achieve this.

This year has been quite busy with continued interest in the Land for Wildlife scheme, despite no active promotion of the scheme. To date we have 50 new properties registered - a warm welcome to the new members - with a further 29 property assessments in progress. In the last month or so there has been a sudden surge of interest with approximately 26 requests to join the scheme! I also had interest from people keen to become LFW assessors in the north of the state, which has been a great help as there has been increasing interest in the scheme from landowners in the central north to north west in particular. I have modified the two-day training course to cover small groups, or individual training. I would like to welcome and thank Peter Tonelli, Sue Oberg-Berry, Lynne Robertson, Sally Fenner and Guy Robertson who have recently completed the LFW assessor training.

In early October the Australian Plants Society of Tasmania held their ‘Wildflower Spectacular’ over three days in the Hobart City Hall – and it was quite spectacular. I shared a display with the Understorey Network covering not only LFW but other options available to private landowners through the Private Property Conservation Program. It was quite extraordinary the number of people who stopped to ask about LFW and the various other programs, or to show their support for the ‘good work’ these programs were doing to protect our natural environment. There was a lot of interest in people wanting to know how to provide wildlife friendly habitats or who were strongly supportive and committed to doing so already. There were many people who wished to register their properties as LFW, but unfortunately their properties did not qualify because of the small size and location within urban areas. The strong interest shown in protecting native wildlife species in urban environments has led me to write an article on biodiversity conservation of wildlife species and habitat in urban environments – a field which is becoming an increasing area and focus of research.

Other articles in this edition of the newsletter include an interesting article by Sarah on the association between Pardalotes, eucalypts and lerps. Jo Naylor from the Tasmanian Land Conservancy describes the fascinating history of the new Flat Rock Reserve which has recently been secured – this is a significant achievement, particularly as it is a hotspot for biodiversity. Janine Berechdee gives an update on the Protected Areas on Private Land (PAPL) program and the achievements of this very valuable nature conservation program. Invertebrates, the often overlooked species – Ruth Mollison tells why forest floors should be left ‘messy’ and how this is important habitat for the threatened velvet worms and stag beetles. Recently DPIW have launched the Natural Values Atlas which provides a wealth of information on Tasmanian flora and fauna and record of observations – this provides a valuable means of looking up threatened fauna or flora species, or record of other species which may occur on, or near your property. Details of what the Natural Values Atlas is and how to access it are provided by Kristy Goddard. Peter Stronach from Greening Australia has written an article on bush and stream incentive programs operating in the north west and south and talks about a recent field day which was attended by some LFWers. Field days and workshops are planned for next year which you may be interested in attending – contact Greening Australia (see article for contact numbers).

There are a few events early next year which may interest you, one is ‘Plants and ants at Birralee’ on Ron and Sarah’s property. The other are day activities on Bruny Island, at Longford, Lower Snug and Orford which the Understorey Network are holding, largely for seed collecting, but they also provide the opportunity to look at other vegetation communities, revegetation works or go on a botanical walk through a wetland and learn of the species found there. These are listed on the Members’ Page.

I hope you enjoy this volume of the newsletter. Please feel free to contribute articles or notes to the newsletters – I encourage you to do so, it would be nice to hear and share your experiences or advice. Feedback on the contents of this newsletter, or suggestions for information you would like to see included is most welcome.

I wish you all an enjoyable and safe Christmas and best wishes for the coming year.

From the Coordinator

Iona Mitchell

A tip to stop drownings

Following on from Sarah’s article ‘A scarce resource – leave logs for frogs’ (LFW Vol 9, August 2005) about frogs’ association with water, here is a simple tip to stop frogs drowning in water containers – yes, this can happen as I experienced. I collect rainwater off a section of roof into a tall bucket where one day I discovered the body of a poor drowned frog in the water. The bucket was half full and presumably the sides too slippery for it to climb back out. So now I keep a stick or other solid object sticking out of my rainwater buckets and even watering cans so that if frogs, or any other creature fall into the water they have a means of climbing back out safely. To prove the point, the photo shows one of my resident frogs who often climbs into my watering can – it even stays holding on while I water the garden!

Help prevent drownings – keep sticks in water containers, especially ones with slippery sides

( Photo: Iona Mitchell)
What is the long-term security of the assets on your property? Many people with *Land for Wildlife* agreements would undoubtedly put natural values high on the list of assets that make their land such a special place. Tasmania needs private landowners and governments to work together to ensure that what people take for granted today is available for future generations to enjoy.

*Land for Wildlife* has often been the instigator for landowners wanting to place a conservation covenant on their land to protect its natural values. *Land for Wildlife* assessors often recognise that certain landowners have areas of high conservation value on their property and with the support and interest of the Landowner refer them to the Protected Areas on Private Land Program for the possibility of pursuing a conservation covenant.

The National Reserve System (NRS) funded Protected Areas on Private Land Program (PAPL) is a joint initiative between the Tasmanian Department of Primary Industries and Water (DPIW), Tasmanian Farmers and Graziers Association (TFFGA), and Tasmanian Land Conservancy (TLC).

PAPL promotes and negotiates voluntary conservation agreements between the Tasmanian Government and private landowners with important natural values on their property. PAPL’s aim is to protect coastal areas, grassland, heathland, saltmarsh, threatened species and their habitat on private land. In total, there are 4,233ha of important vegetation secured by PAPL covenants.

Since the launch of PAPL in 1999 it has been highly successful in assisting landowners to protect threatened species and important vegetation communities that occur on their properties. Last year PAPL celebrated its 100th conservation covenant, with a get together at a covenanted block at Barilla Bay. PAPL continues to work with private landowners interested in pursuing conservation agreements.

The PAPL team would like to take this opportunity to thank everyone involved in making PAPL the success story it is today. Without the goodwill of private landowners the aims of protecting significant flora and fauna habitat, native vegetation and other important natural values on private land would not succeed. PAPL will ensure that all covenanted land will be monitored and the landowners supported into the future.

For further information on PAPL please contact the PAPL Coordinator at DPIW on (03) 6233 2716 or 1300 368 550, or the TLC on 6225 1399.
A new reserve in Tasmania’s biodiversity hotspot

Jo Naylor, Tasmanian Land Conservancy

The southern midlands region is part of an internationally recognised biodiversity hotspot. As well as supporting high overall species diversity, the region supports a large number of endemic species and a high concentration of threatened species.

In August 2006, a new 455ha reserve east of Bagdad was created on land formally owned by Gunns Limited. This magnificent result was achieved due to the hard work of the Southern Midlands Council, the local community group Friends of Chauncy Vale, Gunns Limited and the Tasmanian Land Conservancy (TLC).

The new Flat Rock Reserve links the historic Chauncy Vale Wildlife Sanctuary with the Alpha Pinnacle Conservation Area, creating a continuous protected area of over 1000 ha.

Flat Rock Reserve is part of a range of rocky dolerite hills, supporting remnant areas of silver peppermint forest and grassy blue gum forest - both priority communities for conservation. Areas of important rock plate grasslands provide suitable habitat for threatened annual plant species and orchids.

The reserve contains priority vegetation communities/ecosystems including:
- Inland E. tenuiramis (60ha) (High priority)
- Grassy E. globulus (45ha) (High priority)
- Dry E. obliqua old growth (40ha) (med priority)
- Dry E. obliqua (130ha) low priority
- Dry E. delegatensis (70ha) low priority
- Dry E. pulchella (90ha) low priority

Prior to the TLC’s involvement Gunns Limited offered the Southern Midlands Council a very generous and substantial 33% discount on the land to make the community purchase achievable.

The TLC finalised the arrangements by accessing funds from a number of sources including:
- major funding from the Commonwealth Government’s National Reserve System Program;
- major funding from the Tasmanian Private Forest Reserve Program, funded through the Commonwealth Government’s Natural Heritage Trust and;
- funds from regular TLC donors.

The three linked reserves will now be managed jointly by Southern Midlands Council, Parks and Wildlife Service Tasmania, Friends of Chauncy Vale and TLC.

The challenge ahead is to increase our understanding of the natural values of Flat Rock Reserve and to work with the local community to protect the land from wood hooking and refuse dumping. The Southern Midlands Council, in conjunction with Parks and Wildlife Service Tasmania, Friends of Chauncy Vale and TLC is currently developing a management plan.

Damien Mackey, Manager for Environmental Services and Development for the Southern Midlands Council has commented, “From a nature conservation point, the combined area of over 1000 ha is so much more than the sum of the individual parts.”

In the TLC’s five years of operation this latest acquisition brings the number of properties protected to eight. We are very excited to have achieved this latest win for Tasmanian conservation and especially thank those who support TLC regularly via monthly donations.

Plans are now being finalized for a team from Green Corp to work over a 14 week period in early 2007 to build fences, weed control, track work, 4WD track rehabilitation and installation of interpretative signage. The work will cover both the new Flat Rock Reserve and the Chauncy Vale Wildlife Sanctuary.

The Friends of Chauncy Vale Chairperson Heather Chauncy said “My parents would have been very pleased to know this inspirational area has now been permanently protected. It is a real win for preservation, education and benign walkers.” Heather Chauncy, is the daughter of the famous Tasmanian children’s author Nan Chauncy, whose family have a long association and connection with the area.

The family connection with the area dates back to 1914 when her grandfather bought land at Bagdad to establish an orchard and hut to provide retirement income.

In contrast to the backdrop of the First World War, the childhood bush experience made an enormous impression on Nan Chauncy (1900 – 1970). The area offered a rich natural experience of Australian wildlife with caves and creeks to explore.

Bringing the appreciation of the Australian bush to others was the cornerstone of Nan’s life. In the 1920's she trained as a Girl Guide leader and was appointed Captain of the First Claremont Company. A cottage was built on the land for Nan’s older brother that was later used for guide and scout expeditions.

In 1938 the land was given to Nan and Anton Rosenfeldt as a wedding present, the year before Heather was born. In the1940’s adjoining land was purchased, and in 1946 the property was declared a wildlife sanctuary. This was the first area of dry bushland to be conserved and the largest conservation area at the time in the Southern Midlands.

Anton was a specialist in animal conservation and the effect of habitat loss on animal populations. He saw the need to establish reserve areas for native fauna, including thylacines that were frequently seen here in the 1920s.

Over the years Nan wrote many scripts and novels inspired by this landscape, reflecting her love of the natural environment and the human connection to it.

Anton bequeathed the wildlife...
Greening Australia Tasmania manages several nature conservation incentive programs in Tasmania in conjunction with the regional NRM bodies. In the northwest two projects operate; one for the protection of remnant native vegetation and the other for streamsides and wetlands. In Southern Tasmania the incentives project provides a wider range of incentives to address vegetation, water and soil management issues, mainly in the Coal River and Swan/Apsley catchments. Greening Australia is managing the southern project in conjunction with Agricultural Resource Management and has close links to the Southern Tasmanian Property Management Planning initiative.

Greening Australia recently conducted several field days across Cradle Coast region that included talks by experts in the fields of river management, fencing, revegetation, weeds, farm management and farm nutrient budgeting. A number of Land for Wildlife landholders attended the Leven Valley field day. It was an unsettled weather day, but over 25 landholders braved the conditions to visit a property under new management that adjoins a stunning section of the Leven River at Dobsons Flats. Talks were given by Mike Askey-Doran from the River Section in DPIW, Christine Corbett from Greening Australia, and Guy Robertson from Cradle Coast NRM on various topics related to river and vegetation management. Property Manager Steven Blanden has completed riparian fencing around the property and showed us some excellent examples of revegetation works. The location is near the convergence of a number of vegetation communities, some being listed as threatened at a state scale.

Greening Australia will conduct more field days and workshops next year, so if you are interested in attending any or would like more information on incentive programs or other vegetation management advice in your area contact Greening Australia on 6223 6377 or 6432 1405.

Peter Stronach, Project Manager Greening Australia, Burnie.
Biodiversity conservation
– broadening the scope to include urban wildlife

As human population numbers continue to grow, more demand is placed on land for agricultural development and conversion of agricultural lands into urban sprawl. The loss and increase in fragmentation of native habitats is widely recognised as the most serious threat to the conservation of biodiversity (Main et al., 1999). To many, conservation is a thing which only occurs in wilderness areas such as National Parks and Reserves. However, it is recognised that many of the natural habitats considered essential for biodiversity conservation or protection of threatened species, occur outside National Parks and Reserves. A large proportion of wildlife species and habitats occur on privately owned land. The protection of biodiversity values is increasingly extending beyond reserve systems into many non-reserve areas and a wide range of people and organisations, including Land for Wildlife, are protecting our natural biodiversity on private land (Williams et al., 2001). Biodiversity is defined from the 1992 United Nation Convention on Biological Diversity as ‘the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems (Williams et al., 2001).

One of the most significant threats to natural diversity identified in both the Tasmania and Australia State of Environment reports is the clearing of native vegetation and conversion to other activities or land use. The more intensive and hence largely irreversible forms of land clearing include plantation developments, replacement of native vegetation for improved pastures and cropping, inundation (eg dams), and urban growth. Since European settlement in 1803, half of Tasmania’s forests have been cleared and 90% of our woodlands. The greatest losses have occurred on productive soils largely cleared for agriculture with the lowest losses on the most infertile, unproductive soils. Urban growth and spread into agricultural and natural bush land is increasingly being recognised as one of the most significant threats to conserving natural biodiversity locally, nationally and in fact globally (Savard et al., 2000; DeStefano et al., 2005; FitzGibbon and Jones, 2006).

The greater percentage of the human population lives within urban or suburban environments and many urban-suburban dwellers attitudes and values to wildlife and nature differ from their rural counterparts (DeStefano et al., 2005). To many urban dwellers ‘wildlife’ are animals which live in natural environments. Many people do not recognise ‘urban wildlife’, that is, native animals living in habitats found in towns and cities (Lunney and Burgin, 2004). There is a growing trend and recognition of the importance of urban wildlife ecology and conservation and the need to protect and conserve biodiversity within urban environments. Indeed it is within the urban environment that many people will form their ethic of care for our native fauna, their concern for the conservation of remnant bushland and their interest in restoring degraded habitats (Lunney and Burgin, 2004).

Enhancing biodiversity in urban ecosystems can have a positive impact on the quality of life of urban dwellers, which increases environmental awareness and can in turn encourage greater preservation of biodiversity in natural ecosystems (Savard et al., 2000).

The significance of ensuring the persistence of urban wildlife is highlighted by the fact that 85% of people in Australia live in urban areas and that the type of engagement that urban dwellers have with their local environment and urban wildlife is likely to influence their view on conservation, not solely for threatened species, but for all flora and fauna species and habitats (Davies et al., 2004). This has greater meaning in the context that decisions made by this very large proportion of the population can have a major influence on future directions for natural and cultural heritage conservation (Davies et al., 2004).

The New South Wales National Parks and Wildlife Service undertook a research study in 2001-2002 to investigate how urban residents in NSW relate to living with wildlife and to identify means by which urban wildlife could increase engagement in conservation and hence encourage people to actively support the conservation of wildlife in urban environments (Davies et al., 2004). The research findings of this very interesting social research study have been published in a report titled “Urban Wildlife Renewal – Growing Conservation in Urban Communities” (http://www.nationalparks.nsw.gov.au/urbanwildliferesearch). Interesting findings were that the word ‘wildlife’ generally brought to mind larger animals, especially mammals, but also birds, reptiles and amphibians; very few people thought of invertebrates. Seldom were the terms ‘Ecosystem’ or ‘Biodiversity’ used in association with wildlife and appeared to be poorly understood, or else considered as issues elsewhere under some global category. The concept of urban ecology was poorly understood and native flora and fauna surviving in the urban area were seen as being a “left over” of the original environment rather than belonging there (Davies et al., 2004). Davies et al. (2004) indicated that people did not realise that some native plants and animals may be unique to their area and hence there was no recognition that the survival of these species may depend on our ability to live with them or to maintain their natural, modified or artificial habitats in urban areas.

The issue of conflict with wildlife in the urban environment is one which will be an on-going problem and challenge to overcome, although research is providing greater knowledge resulting in better management methods (Adams, 2005). There will always be some who welcome and enjoy wildlife, while others who will
see them as a pest and nuisance, some who prefer manicured lawns and gardens to those that enjoy an eclectic mix of diverse species and structure – this potentially may create tensions over neighbours' fences, but largely these tensions already exist. However, I'm intrigued by how one can influence change even at small scales between adjacent landowners. As an example, I am working towards creating a wildlife friendly garden and absolutely delight in the increase in bird species which frequent my garden and am rapt to have frogs, eastern barred bandicoots, lizards and native orchids present. My neighbour observes my activities and we have frequent 'over the fence' discussions of the rationale for species I have planted. It has been encouraging to see a gradual adoption of a similar approach. It is possible to effect change at a smaller scale, and collectively many people doing exactly this can effect change over a considerable area, all to the benefit of biodiversity conservation and wildlife species.

One of the classic conflict issues has been brushtail possums – people either like them or consider them a nuisance. This is a species which will pose a challenge for managers of urban wildlife because of the varied attitudes towards this species. Whilst brushtail possums may be considered common and high in numbers, they have disappeared from more than half of their previous range across Australia and are now common only in Tasmania, Kangaroo Island and some cities (Matthews et al., 2004). Urban environments have proved beneficial to brushtail possums as they provide increased food resources (fruit trees, ornamental plants, food scraps) and increased shelters and den sites, however there is always the risk of a higher incidence of mortality from motor vehicles, dog and cat attacks (Matthews et al., 2004). Brushtail possums are protected in NSW and there appears to be a trend of population decline. In NSW, the revised management strategy for captured possums states that they must be released within 50 m of the capture site; in extreme cases possums considered to be a nuisance are euthanised by a veterinarian if they can not be relocated to a suitable site. Translocation studies have shown a high percentage of mortality of possums that are translocated greater than 5 km from their capture site (Matthews et al., 2004). Management advice to reduce the risk of conflict with urban dwellers and brushtail possums include dealing with trees near buildings and power lines, deterring possums from roof spaces inside houses, providing nest boxes and protecting plants. The NSW Department of Environment and Conservation promotes living with possums and encourages means to reduce negative attitudes towards the species (Matthews, et al., 2004).

Urban wildlife is becoming an increasing area and focus of research. This greater knowledge of wildlife and plant populations and communities in urban areas has enabled a better understanding and the ability to provide and manage sustainable urban ecosystems (Adams, 2005). Adams (2005) takes a broad view of urban wildlife as one which includes nondomestic vertebrates and invertebrates of urban and urbanising areas, in addition to wildlife and plant associations. However, while the understanding of the dynamics of urban wildlife has increased, knowledge of the biological and social dimensions necessary for the development of effective management plans is extremely limited (FitzGibbon and Jones, 2005). It is important to incorporate public opinion, values and attitude of people who have an interest in the wildlife being managed while integrating this new input from research. Although it complicates the decision-making process, it is more likely to result in a satisfactory outcome for all concerned (FitzGibbon and Jones, 2005). FitzGibbon and Jones (2005) state that such inclusion of 'human dimensions' in urban wildlife management planning is particularly important because the risk of human-wildlife interaction and conflict is greater in urban environments.

With deforestation and urbanisation, the majority of remnant bushland in urban environments is generally the bits left after development, often because of severe building constraints, or areas which have not been developed as yet or set aside for future development (Adam, 2004). Thus urban bushland is very fragmented and includes formal conservation reserves and parks generally owned by local or state government authorities. With many developments the approach is to completely clear the land of all vegetation for ease of installation of roads, services and buildings and then re-plant as part of landscaping gardens or nature strips. Planning processes and legislation do not necessarily provide or guarantee protection (Adam, 2004) and regulatory mechanisms relied upon have often been ineffective at preventing the loss of wildlife habitat and the decline of endangered species particularly on private land (Main et al., 1999). In Tasmania, priority vegetation communities and threatened species have already been cleared or are under threat from clearance and development in the Greater Hobart and Greater Launceston areas (RPDC, 2003). While the habitat values of fragmented urban bushland patches are often reduced, they may be enhanced by being set in a matrix of gardens which may provide continuity of habitat and allow movement between patches for some species (Adam, 2004). An example of this has been shown by the Redland Shire Council in SE Queensland who have developed a program targeting property owners in particular areas of known koala habitats. The program largely came about from recognition of efforts needed to conserve the existing koala population in the shire and to conserve, manage and enhance corridors and linkages between isolated areas of remnant bush (pers. comm. Richard Collins, Redland Shire Council). The program targets residents in corridors between large reserves and encourages them to adopt a more fauna friendly approach to gardening. The linkages are also aligned to include gardens containing existing ‘habitat’ trees. The program started in 2004 and to date there has been a good response from property owners targeted.

The effects of deforestation and urbanisation have largely been better documented for birds with many promotional and educational materials about urban wildlife largely focusing on providing resources for birds, such as suitable attracting trees and shrubs (Catterall, 2004). Birds are also a useful ecological indicator of habitat condition and biodiversity – the dominance by noisy miner is a classic example of indicating severely modified environments. Providing resources useful for native bird species is more complex than planting local native species and consideration needs to be made of the role of spatial structure and habitats (Catterall, 2004). The presence of physical structure and
complexity is essential to provide habitat for moving, foraging, resting, breeding, and avoiding predators. Habitat requirement can vary depending on the morphology and behaviour of a particular bird species, also the habitat must be able to provide these requirements for living on a daily, seasonal or annual basis for the continued persistence of a species (Catterall, 2004). Loss of natural habitats at the periphery due to the expansion of urban development, or in remnant fragments within urban centres can severely impact some bird species to the extent of local extinction (Parsons and Major, 2004).

Management of remnant local bushland or individual animal species are often dealt with in isolation and urban wildlife has not so far been included in the framework of comprehensive plans (Lunney and Burgin, 2004). Urban wildlife need to be part of any urban plan, catchment plan, or overall plan for biodiversity and these plans must follow an approach of integrated management with urban wildlife conservation in the planning process (Lunney and Burgin, 2004; Hobbs, 2005). The overall connectivity of a landscape needs to be considered with assessment of the relative isolation between patches (habitats), linking corridors and the nonhabitat (matrix or gardens) of urban environments (Hobbs, 2005). The encouragement of planting native vegetation for wildlife needs to incorporate habitat suitable for the wildlife species – floristic composition and structural diversity will greatly influence the faunal species which inhabit the vegetation (Lunney and Burgin, 2004). Lunney and Burgin (2004) caution that poor selection of species and/or combinations could favour the dominance of some species which may become regarded as pests, and lead to local extinction of other species. A long term study of the influence of management and vegetation changes on bird species recorded in Kings Park (Western Australia) also highlighted the fact that if it is desired to have greater diversity of bird species in urban environments then it is necessary to have structural as well as plant species diversity (Recher, 2004). The study by Recher (2004) also highlighted important faunal species which many people overlook or do not consider, that is, invertebrates, especially for insectivorous bird species. Invertebrates – eg beetles, worms, and butterflies, all have a very important role to play. Some people may not realise that without invertebrates, we would not see other larger species in our urban areas.

Urban habitat values are influenced by the choices people make as individuals. Providing greater knowledge of how to provide a wildlife friendly habitat in an urban environment and creating an attitude of welcoming wildlife in urban gardens will greatly promote a more positive attitude towards urban wildlife and nature conservation in general (Davies et al., 2004). There are very real benefits for encouraging biodiversity conservation within the urban environment by creating wildlife friendly spaces and more environment friendly practices. These include reduced chemical use through natural pest control from insect feeding birds, reduced water use from growing native drought tolerant species, increased production from fruit and vegetable gardens from natural pollination, reduced wildlife road kill by increasing awareness and hence modifying driving practices and creating an environment of enjoyment and relaxation simply by watching nature. This can have environmental benefits which extend beyond garden boundaries such as reduced water demand, reduced chemical runoff into storm water systems and ultimately waterways, and increased survival chances for native species.

It has been recognised that there is a need to achieve broad community engagement in support of nature conservation and sustainable land use practices on private land, largely focusing on properties within the urban or suburban fringe. It is also recognised that for broad landscape conservation to be successful it needs the support of the wider community, not just individual landowners. There is a significant gap in promoting and encouraging participation in natural diversity conservation for ‘smaller’ landholders. As suburban sprawl and other forms of land clearing continue to reduce wildlife habitat and safe refuge, gardens increasingly become more important for providing space, food, water, shelter and a place to rear young. We should strive to reduce the impact of urbanisation on wildlife. Additionally, another important consideration is that the success of meeting the challenge of protecting biological diversity in urban areas will be a good measure of the commitment to protecting ecosystems worldwide (Adams, 2005). Adams (2005) quite rightly states that if we cannot act as responsible stewards in our own backyards, the long-term prospects for biological diversity on the rest of the planet look grim.

Iona Mitchell

References:


Land for Wildlife Newsletter deadline for 2007

If you have items you would like posted on the members’ page or even articles you would like to contribute to the newsletter, please note the deadline for the next newsletter is FEBRUARY 23rd 2007

See “From the Coordinator” article for other 2007 editions deadlines

We encourage and welcome your input and contribution.

FURNISHINGS FOR VELVET WORMS AND STAG BEETLES

The message with conserving habitat for some of our smaller creatures is don’t clean up the forest floor! It provides essential furniture for some of our more unique invertebrates, such as the flightless stag beetle and the ancient velvet worm.

Tasmania’s threatened species of stag beetles are designed like miniature bulldozers, with a hardened wing cover fused over their abdomens, allowing them to push their way through the remains of rotten logs, and layers of leaf litter, on the floor of wet forests. The males have distinctive large jaws, (similar to stag horns) that are used for displaying and fighting rather than chewing. The adults probably don’t feed, relying instead on the energy reserves laid down as larvae. Most of the two to three year lifecycle of a stag beetle is spent as a beetle larvae, chewing through the fungi-rich rotten wood of large old logs, usually only present in old growth wet forest.

When the larva is large enough to pupate, it forms a chamber under or inside the log, then hatches out several months later into an adult beetle. The main purpose of the adult is to find a mate, breed then die – usually in one season, although some males may over winter.

Similarly, velvet worms rely on a well furnished forest floor, with very large rotten logs and layers of leaf litter to provide a home for smaller prey such as slaters and crickets. Velvet worms are an evolutionary relic, providing a link between worms and arthropods—they move hydrostatically like segmented worms, have 15 – 17 pairs of non-jointed legs and shed their exoskeleton periodically as they grow to full size. Their velvety appearance is from lots of small papillae covering their soft body.

Velvet worms are very efficient nocturnal hunters moving through the leaf litter at night and sensing small prey, such as slaters, with their long antennae. When a suitable prey item is found, they capture it by quickly and precisely ejecting a sticky substance over it from a pair of modified appendages on their head.

Both these animals have specialised lifecycles and habits that are reliant on the furnishings of undisturbed wet forest floor – large rotten logs and layers of leaf litter. The supply of rotten logs is dependant on the natural ageing process of the forest trees, which can take hundreds of years. Excessive removal of standing dead trees for firewood, means that the stock of logs on the forest floor isn’t replenished. Similarly, hot frequent wildfire removes most of the potential habitat on the forest floor.

Both these animals have restricted ranges living in relatively small islands of suitable habitat – the East Coast is home to several threatened species of stag beetles and velvet worms, each species has been mapped according to its range.

If you have wet forest on your land, please consider the habitat requirements of these small and cryptic but unique inhabitants in managing your land.

Ruth Mollison
Understorey Network Coordinator
Email: ruth.mollison@understorey-network.org.au
Phone: (03) 6234 4286
I eagerly await the Striated Pardalotes’ return. In early August, flocks of tiny birds fly south and their delightful tinkling songs and contact trills hint that spring is just around the corner. For almost twenty years a pair has returned to our home and on a conveniently positioned tree stump just below their nest they perform with outstretched wings their courtship dance.

Pardalotes are diminutive birds. Though rarely seen, their breeding songs and contact calls are uttered repeatedly as they forage amongst the foliage of eucalypts. With their short, stout, partially notched beaks designed to peck substances off leaves, pardalotes are among the most specialised feeders in eucalypt forests and woodlands throughout the country. The foods they mostly seek are psyllid insects and an associated exudate called lerp.

Psyllids, in the family Hemiptera, are sap-sucking insects that are particularly associated with eucalypts. They exude a sweet sugary substance that hardens to afford them a protective covering known as lerp. Because lerp are rich in carbohydrate, they provide an important high energy food source for a range of forest birds, especially pardalotes, thornbills and honeyeaters.

Tasmanian forests support three pardalote species. Spotted and Forty-Spotted Pardalotes are residents while the Striated Pardalote returns to coastal Victoria, New South Wales and southern Queensland after breeding in Tasmania.

The Forty-spotted Pardalote is endemic to Tasmania and is now classified as endangered. Though never common, it used to range throughout the north and east but is now confined to restricted pockets in the island’s southeast. Its close association with white gum (E. viminalis) which has been extensively cleared and now covers less than half its original range may be the reason for its decline.

All pardalotes are cavity nesters. Spotted Pardalotes nest at the end of tunnels they excavate in loose soil; Striated Pardalotes usually nest in tree hollows but will also nest in steep banks, particularly riverbanks. Forty-spotted Pardalotes nest in hollows in trunks, branches, stumps, fence posts or fallen wood and occasionally in wall crevices or banks.

After breeding Spotted and Striated Pardalotes wander in search of lerp. In years when eucalypts don’t flower or flower sporadically, outbreaks of lerp are also important sustenance for large honeyeaters that aggressively defend the rich food source and chase away the tiny pardalotes. The unpredictability of lerp outbreaks and the difficulty in locating them away from their familiar home range can sometimes lead to mass mortality.

There are few places in the country where three species of pardalotes co-exist. Their close association with eucalypts makes them less able than more generalist feeders to adapt to changes in the landscape.

The clearing and fragmentation of forests as well as the death of senescent eucalypts all threaten the viability of their habitat and we must ensure that the two more common species don’t suffer the losses of the third.

References:


Surrey Beaty and Sons, Chipping Norton

Pardalotes, eucalypts and lerp
by Sarah Lloyd

Lerp covered psyllid insects on eucalypt leaf (magnified - photo taken through a microscope)
(Photo: Sarah Lloyd)
January 7th 2007 ‘Plants and ants at Birralee’. A walk up the track to Sarah and Ron’s place. Meet at the bottom of the track at the end of Denmans Road at 10.00a.m. Birralee is 15km north of Westbury on B72. Turn left into Priestleys Road after the Birralee Hall then after about 500m turn right into Denmans Road (opposite white picket fence). For people coming from the west along the Frankford Highway, turn right into Priestly’s Road about 2km after Frankford. Travel for approximately 6km then turn left into Denmans Road. 4WDs are needed to negotiate the 2km track to Sarah and Ron’s house. For more details phone Sarah (03) 6396 1380.

Understorey Network Field Days

Bruny Island farm visit and seed collection

Where: ‘Murrayfields’ Property, North Bruny Island.

Ferry Info: Car Ferry leaves Kettering at 9:30am (arrive at 9am for car-pooling). Full fare return $25.

Directions: On Bruny travel approx. 8km along road from ferry to main intersection. Turn right towards south Bruny. Murrayfields entrance is about 1km along on left side, drive in to shearing sheds.

When: Tuesday, 16th of January 10:30am to 1:30pm.

Bring: ID books, paperbags, pen, secateurs, refreshments, hat, protective footwear.

A great opportunity to visit this spectacular property, have a look at revegetation sites and collect seed.

Northern Wetland Plant ID & Seed Collection

Where: Woodstock Lagoon at ‘Springbank’ Longford. Travel 4.5km along the Bishopsbourne Road from Longford, to just past the ‘Springbanks house, to a marked paddock gate.

When: Saturday, 20th of January, 11am to 1 pm.

Bring: ID books, paperbags, pen, secateurs, refreshments, hat, protective footwear.

Micah Visiou, the Seed Collecting Officer for the Botanical Gardens Seedbank will lead a walk through these special wetlands, and assist with reed/sedge identification and seed collection.

Channel farm visit and seed collection

Where: ‘Fort Chimo’ property, 449 Old Station Road, Lower Snug.

RSVP for directions and map.

When: Sunday, 28th of January 11am to 1pm.

Bring: paperbags, secateurs, pen, ID books, refreshments, hat , protective footwear.

A great opportunity to visit this lovely working farm, with extensive coastal bush. We will be collecting seeds for the seedbank.

East Coast plant ID walk and seed collection

Where: Friends School Property, Happy Valley Road, Orford.

When: Wednesday, 31st of January. Meet at 10am at the new café near the main bridge at Orford.

Bring: paperbags, secateurs, pen, ID books, refreshments, hat , protective footwear.

We will be identifying the understorey plants on this dry coastal bushblock, and collecting seed for our seedbank.

Please RSVP to Ruth Mollison for Understorey Network field days

Ph: 6234 4286, Mobile 0407 352 479, ruth.mollison@understorey-network.org.au
**Land for Wildlife**

**Contacts**

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**Events**

*(refer to Members Page (page 11) for details)*

- **January 7**  
  Central North Field Naturalists field trip ‘Plants and ants at Birralee’ to Sarah and Ron’s place at Birralee.

**UNDERSTOREY NETWORK FIELD DAYS**

- **January 16**  
  ‘Murrayfields’, North Bruny Island, farm visit, look at revegetation sites and seed collection.
- **January 20**  
  ‘Springbank’, Woodstock Lagoon, Longford, botanical walk through wetlands and seed collection.
- **January 28**  
  ‘Fort Chimo’, Lower Snug, farm visit, coastal bush and seed collection.
- **January 31**  
  Friends School Property, Orford, identifying understorey plants in dry coastal bushland and seed collection.

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**Land for Wildlife Program: Vision, Mission and Goals**

1. **Vision**

   - Land owners and land managers integrate the principles and practices of nature conservation into overall land management.

2. **Mission**

   - Land for Wildlife encourages and facilitates voluntary nature conservation by:
     - building on existing community networks;
     - sharing information and learning;
     - supporting and recognising land owners and managers; and
     - having nature conservation principles put into practice on unreserved land.

3. **Goals**

   **Long term and medium term**
   
   1. Nature Conservation principles are applied and practices are integrated with overall land management.
   2. Land for Wildlife contributes to ecologically, economically and socially sustainable property management.
   3. Land for Wildlife contributes to a healthy and diverse ecosystem.
   4. Information is gathered and shared, learning about managing for nature conservation on unreserved land is facilitated.

   **Immediate**
   
   5. Existing community networks are involved and expanded.
   6. There is broad community participation in Land for Wildlife.
   7. Adequate resources are provided to the Land for Wildlife program.
   8. Land owners and land managers are given support and their voluntary contributions to nature conservation on unreserved land are recognised.
   9. The numbers of land owners and land managers participating in Land for Wildlife increase.
   10. There are adequate distribution of and connections between native habitats managed for nature conservation to ensure viability of populations of native plants and animals.
   11. A comprehensive, integrated database of information is established, maintained and is accessible.

Source: Land for Wildlife (Tasmania) Implementation Plan 1998

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**Thinking of selling, or have recently sold your property?**

Please let the LFW Coordinator know so that we can collect the sign or register with the new owner. Transfer of registration does not occur with change of ownership and the new owners are invited to join the scheme. The Land for Wildlife sign(s) allocated for display on land which is registered in the scheme remain the property of the Department of Primary Industries and Water.

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If undelivered return to:
Land for Wildlife  
PO Box 44, Hobart, Tas 7001  
Phone: (03) 6233 6427  
Fax: (03) 6223 8603  
Email: Iona.Mitchell@dpiw.tas.gov.au

Please contact the authors before reproducing material from this newsletter.

The views expressed in this publication do not necessarily reflect the policies of the Land for Wildlife Program or the Department of Primary Industries and Water.