

# Tasmanian Field Naturalists Club Inc. BULLETIN

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## Quarteriy Bulletin No 342

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The Tasmanian Field Naturalists Club encourages the study of natural history and supports conservation. People of any age and background are welcome as members.

For more information, visit website <u>http://www.tasfieldnats.org.au/</u>; email <u>info@tasfieldnats.org.au</u>; write to GPO Box 68, Hobart, 7001; or phone our secretary on mobile 0418 942 781.

We welcome articles and interesting photos for the Bulletin. If you would like to contribute to the next edition, please email the editor with your article or photos by 15 June.

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## Program

**General Meetings** start at **7.15 pm** for 7.30 pm on the first Thursday of the month, in the Life Science Building at the University of Tasmania.

**Excursions** are usually held the following Saturday or Sunday, meeting at 9.00 am outside the Museum in Macquarie St, Hobart. Bring lunch and all-weather outdoor gear.

If you are planning to attend an outing, but have not been to the prior meeting, please confirm the details as late changes are sometimes made.

Thurs 7 April	<b>Meeting</b> 7.15pm in Life Sciences building, University of Tasmania. Dave Sayers of the <u>Fox Eradication Program</u> will give us an update on the fox situation in Tasmania.
Sun 10 April	<ul> <li>Excursion along the Conningham Foreshore Track:</li> <li>9.00 am: meet outside the Museum in Macquarie St, Hobart</li> <li>9.40 am: regroup at Conningham Beach car park</li> <li>walk to the end of the beach, then east along the track for 2 km till we reach a cave (just before another car park)</li> <li>have morning-tea on the shore at the cave</li> <li>return, back to the cars by 1 pm.</li> </ul>
Thurs 5 May	<b>Meeting</b> 7.15pm in Life Sciences building, University of Tasmania. <u>Dr Simon Childerhouse</u> of the Australian Marine Mammal Centre will talk to us on <i>Southern Right Whales</i> .
For details of talks and excursions beyond this date, please check the website at <a href="http://www.tasfieldnats.org.au/">http://www.tasfieldnats.org.au/</a>	

## **From the President**

## **Michael Driessen**

The AGM was held on 3<sup>rd</sup> March 2011 and last year's committee members were re-elected to the same positions. I thank all the committee members for their work during the past 12 months including attending an extra committee meeting to get on top of a growing agenda. It was pleasing to see that attendances at club meetings and excursions had increased last year. Thanks to club members for attending these events and to Amanda Thomson and the committee for organising them.

The committee dealt with a number of matters during the year. We arranged for Blackgum Distributors to take over responsibility for the distribution of club's books. Although we get less financial return per book using a distributor, we have potential to increase our number of sales and we reduce the demands on members' time.

The Tasmanian Marine Naturalist Club dissolved last year and they passed on their assets to our club. We welcomed their members into our club with one year free membership. We are now responsible for, and receive the proceeds from, selling the publication *Between the Tasmanian Tide Lines*.

We have made progress towards having online payment of subscription fees and the purchase of club books from the club's website. Geoff Fenton and Neil Klaer have been working on this initiative and we hope to have this available for use this year.

I appreciated the enthusiastic support from members in setting up the monitoring program in the Peter Murrell reserves. Recently, we resurveyed the reserves and we will continue to review the clubs involvement in this program. Mark Wapstra continues to make progress on indexing the *Tasmanian Naturalist* and putting past issues on the web. There are a couple of projects we didn't manage to make much headway on last year, such as reviewing the library and getting club observations onto the Natural Values Atlas. We will continue to work on this next year.

I thank Betty and Adrian Bettingham-Moore who organise our suppers every evening after our meetings; Gilbert van Munster, who has stored and distributed the club books for many years; Nell Hilliard for organising a very successful and enjoyable Easter camp to Cradle Mt. I also wish to thank those people I have asked to write up field outings—asking for volunteers to do this task is one of the hardest things I do as President!

Looking ahead, I'm excited about the prospect of getting Simon Grove's guide to Tasmanian sea shells published. Simon has written a comprehensive guide to the seashells with 350 beautiful photos in a handy format. The guide should be in bookstores in the next few months and we plan to make it available at a discount to members.

The club will be responsible for organising Federation weekend in spring 2011. Out first choice option is to book Murrayfield on Bruny Island in October.

On a final note, I invite members to talk to me or committee members about the club to let us know how things are going and how we can improve things. We are always looking for suggestions for good speakers and excursions.

# Fishing for Skink on Mt Wellington—5<sup>th</sup> February Jane Catchpole

We set off from the cool Mt. Wellington summit car park in search of the southern snow skink. Our guide, Erik Wapstra, had armed us with several cunningly adapted fishing rods and then led the large party to a favoured fishing haunt—a sheltered hollow out of the wind. Here, both ourselves (children excluded), and the skink sought to find warm sunny spots on the rocks in which to bask!

Three methods of skink catching were employed. They could be caught with a steady and swift hand, but this was very tricky and usually unsuccessful for those unpractised in this art. Hence the fishing rods, which had been adapted to catch the skink in two different ways. One had an adjustable loop of fishing line at the end instead of a hook, which then acted as a noose to entrap the skink. This was a very effective method on flat rocks.

For those skink still warmly burrowed deep in the rock crevices, the other rods were employed. A dangling morsel of wriggling meal worm (hooks removed), proved irresistible to the skink. Once attached they were reluctant to let go of their mouthful so could be pulled up quickly before they let go.

We caught several southern snow skinks. All of the females were pregnant and carrying 3-4 young which would not be born until the spring, an adaptation to help them survive the harsh winter.

Our surprise catch of the day was three metallic skinks. These females were also pregnant but were due to have their young in the next week or two. Erik had not seen this lowland species so high on the mountain before. Is this another piece of evidence that conditions are warming?

After releasing our catch we gladly headed back to our cars for a bit of warming. Thanks to Erik for a most interesting morning.

# March 2011 Excursion—Peter Murrell Reserves

## Michael Driessen

Last year, TFNC members established a monitoring program in the Peter Murrell reserves. The monitoring focused on four fire management blocks. We surveyed mammals, birds, invertebrates and vegetation and some of this work was written up in the 2010 edition of *Tasmanian Naturalist*.

After our survey, one of the blocks was burned in autumn 2010. In March 2011, we resurveyed three of the blocks we surveyed in March 2010. We replaced one of the fire management blocks



Swamp rat

Fortunately the weather was kind to us. Most people attended on the Saturday when most activities were happening. Fiona Hume led a very keen group of members (Tony Knight, John Reid, Jane Elek, Amanda Thomson and Margie Latona) who surveyed birds along all of the transects (a distance of over 3.5 km through shrubby we surveyed last year (which had been burnt in 2009) with a new block that is scheduled for a fuel reduction burn in 2012. We did this because, from an experimental design perspective, it is more powerful to have data from both before and after a burn.

Thirty-four field naturalists attended the excursion to the Peter Murrell reserves which was held over both mornings of the weekend, with several members turning up on both days.



Weighing a potoroo

vegetation, and not counting walking between transects).

Penny Driessen, Anna McEldowny and Jane Catchpole established vegetation monitoring plots in one of the blocks and hope to complete the others in the coming months. Lynne Forster, Abbey Throssell, Kevin Bonham and Bob Rutherford cleared the invertebrate traps that had been set the week before.

On Saturday and Sunday, Peter Jarman, Neil Klaer and I cleared the mammal traps that were set the previous Thursday—thanks to Steve Bottom for his help setting traps.

Most of the work finished around lunchtime but the hardy bird observers continued on until mid-

afternoon on Saturday when there was some mention of whisky and a soothing radox bath.

The results of the 2011 survey are being compiled and will be reported either in subsequent Bulletins or the *Tasmanian Naturalist*.

A few observations are mentioned here. The block that was burnt to bare ground last autumn had a good covering of bracken.



Clearing an invertebrate trap

Under the bracken, the ground was mostly bare but with evidence that many plants were resprouting. A number of members noticed a lot of red mites in the burnt area and Kevin was a little concerned about the huge number of springtails that were caught in the pitfall traps and how they were going to be counted. Fifty-two mammals How much does it weigh?

representing six species were caught during the mammal survey (see table).

House mice, swamp rats and potoroos were the commonly caught mammals. The black rat was the first record of this species for the reserve. There were few captures in the burnt block; indeed all mammal captures in the burnt block were in patches that had escaped the burn.

Species	Total captures (including recaptures)
Southern brown bandicoot	2
Eastern barred bandicoot	1
Long-nosed potoroo	11
Swamp rat	18
House mouse	19
Black rat	1
Blue tongue lizard	1
Total	53

## **Giant Slug Invades Tasmania**

#### Kevin Bonham

The black slug, Arion ater, is an enormous slug which occurs in northern Europe. It is around 10-15 cm long when crawling (5-6 cm when dormant) and can be recognised by the wrinkled nature of the tail end of the body, and the banded pattern around the edge of the mantle.

Until about ten years ago, the slug was littleknown in Australia, having turned up in Sydney long ago but comprehensively failed to thrive. Then, no later than 2001, the slug arrived in Victoria, and Museum Victoria started to receive calls from some Dandenong residents enquiring about the strange blob in their garden and wanting to know which planet it had come from.

Reports on the Museum Victoria website (http://136.154.202.7/discoverycentre/discoverycentre-news/2009-archive/black-slugs/) show that the slug is spreading and abundant in several parts of Victoria, with one Apollo Bay resident disposing of over twenty thousand specimens!

It seemed so plausible that *Arion ater* would hit Tasmania soon, that when recently asked which snail would be introduced to Tasmania next, I nominated it. Less than a week later, Belinda Yaxley sent me the photo below of a hunched-up *Arion ater* taken by Simon Jones, who recorded the species near Wynyard.

Checking with DPIPWE Biosecurity, it turns out that there have been a few other records in the last year or so, with Wynyard the hotspot so far.

Initially, I wasn't concerned about the slug's presence here, as I doubted it would do anything the long-established Leopard Slug (*Limax maximus*) had not already done. But with the massive numbers recorded from Victoria, it will be interesting to see what densities we get here and what sort of damage (if any) this creature might do.

Further reports (photos and good locality data welcome!) can be sent to me at

<u>k\_bonham@tassie.net.au</u> (underscore between k and b).



Giant slug (Arion ater)

I don't recommend handling the critter directly with bare hands (or any gloves you want to use again in a hurry) as its mucus is unpleasant and can be difficult to remove. However, feel free to prod it a bit if you haven't seen enough B-grade horror movies lately. Apparently it vibrates or rocks around when disturbed, to confuse predators.

With the completely unwelcome introduction of the pest snail *Cernuella virgata* in the last few years (alas now established at several points around the state) it seems we're under siege from foreign mollusc invaders.

Oh well... Perhaps we can have a black slug-led economic revival. In 18th century Sweden, the species was used as axle grease.

# The Downward Spiral of Our Mainland Rat Kangaroos

## **Dave Sayers**

## **Fox Eradication Branch**

The establishment of the European red fox (*Vulpes vulpes*) in Tasmania would be disastrous given Australia's poor record of mammalian extinctions. But what actually did happen on the mainland to our unique little mammals such as the rat kangaroos?

The first Australian mammal to be seen live in England was not the kangaroo (as would be expected), but rather a pair of rat kangaroos. These were exhibited at the Exeter Exchange in the Strand, London in 1789. This pair became known as the Long-nosed potoroo (*Potorous*  *tridactylus*) and was the first of what we now call the rat kangaroos to be discovered.

In 1961, a farmer in south-western Victoria supplemented his income by rabbit trapping. One morning while doing the rounds checking his traps, he came across a stranger. Being a field naturalist who was familiar with local wildlife, this animal was not known to him. Upon investigations with the local government agency, it was identified as a long-nosed potoroo, the first individual to be identified in Victoria for many years, where it was presumed extinct. The long-nosed potoroo is relatively common in Tasmania where past studies into aspects of their ecology revealed a diet of fungi and a close relationship with the surrounding ecosystem's health.

In the first century of European settlement, nine species of rat kangaroos were identified and named. It then took a further ninety years before another species was recorded, that being the northern bettong (*Bettongia tropica*).

A chance encounter during wild dog trapping in eastern Victoria in 1967 then led to the discovery of the long-footed potoroo (*Potorous longipes*).

Today, two of the eleven recorded species of rat kangaroos are presumed extinct, the desert rat kangaroo (*Caloprymnus campestris*) and the broad-faced potoroo (*Potorous platyops*).

The rest of the species have suffered serious range reductions with a number endangered to critically endangered. The Tasmanian bettong (*Bettongia gaimardi*) and burrowing bettong (*Bettongia lesueur*) are now extinct on the mainland, only found in Tasmania or a handful of islands off the West Australian Coast and at Shark Bay.

Brush-tailed bettongs (*Bettongia penicillata*) are now restricted to a few small pockets in southwestern Western Australia (where re-introduction programs are under way due to the success of the Western Shield Program to control fox numbers).

The rufous bettong (*Aepyprymnus rufescens*) is predominately found in its Queensland habitat, but has been pushed outside the majority of its original southern habitat. The Gilbert's potoroo (*Potorous gilbertii*) status is uncertain, with searches failing to find evidence of its presence since a 1994 discovery of a small population.

The sad list of rat kangaroo decline continues with extensive searches for the long-footed potoroo in NSW limited to a few hair samples and the occasional tooth in carnivore scats. The longnosed potoroo, common in Tasmania, is now extinct in South Australia and patchily distributed in Victoria, New South Wales and south-eastern Queensland. The musky rat kangaroo (*Hypsiprymnodon moschatus*) has suffered heavy spatial distribution largely due to loss of rainforest habitat. Considering that the weight range of these animals varies from 300 g to 3.5 kgs, why have our rat kangaroos suffered so heavily?

There are too many factors to have a detailed discussion within this article, however we know the introduction of the red fox and its spread across the mainland bore a huge impact on many of these species.

It is reported that foxes were released in the wild near Ballarat and Geelong around 1865-1870, with another release likely in South Australia soon after. The foxes spread slowly at first, but expansion increased after 1900 due to the abundance of food in their critical prey weight range (3 g to 5.5 kgs) and the large number of rabbits and hares that were present (see map below).

From the spread of the fox into NSW borders, it took as little as 10 years for the red fox to reach Queensland.

The introduction of foxes appears to correlate with declines in native mammal populations. An analysis of bounty records for rat kangaroos in New South Wales showed that these critters were abundant in the years before the fox arrived, but as fox numbers expanded, the rat kangaroos declined and were predominately gone within 10 years.

Woodlands within the south-west area of Western Australia received some protection from fox predation due to the presence of plants from the genus *Gastrsolobium*. Leaves from the plants within this genus contain the poison sodium fluroacetate (1080). Herbivores here contain a very high tolerance of this poison. However, red foxes were extremely susceptible to the poison and suffered secondary poisoning when predating on native animals in this region.

Having worked as an ecologist in Queensland for a number of years, I have been overwhelmed by the sheer number of small mammals present within Tasmania. This is a common story heard by mainlanders, but it is none the less relevant. The big land above Tasmania is a lesson to us of what impact feral mesopredators have had on the fragile Australian ecosystem over the past 150 years.



The establishment of typical density fox colonies in Tasmania would be a disaster for the Tasmanian bettong and long-nosed potoroo as well as up to another 76 (at least) species, including reptiles, amphibians and birds.

One thing we know is that the only time we as a society will have a chance to stop this from happening is before the red fox has a chance to colonise Tasmania. That time is now! The Fox Eradication Program (FEP) requires your support to eradicate this invader from our shores.

Support can be registered by allowing access to property (when requested) for FEP operations and to report all evidence of potential fox activity to the 24 hour hotline – 1300 FOX OUT (1300 369 688).

Further information can be obtained at www.dpipwe.tas.gov.au/fox

# When and Why was the Naturalist Edmund Higgins in Tasmania?

# Arthur K. Clarke, Honorary Research Associate, School of Zoology, University of Tasmania

Email: Arthur.Clarke@utas.edu.au

During research for the long awaited Haygarth and Clarke Tasmanian cave history book (that we hope to launch in May 2011), I have revisited the report of Higgins and Petterd (1884) who described the Tasmania cave spider. The original description of the Tasmanian cave spider (*Hickmania troglodytes*) by Edmund Higgins and William Petterd was based on specimens gathered, together with mammalian bone deposits, from an un-named cave reportedly in the Chudleigh district near Mole Creek in northern Tasmania.

In their paper read to the Royal Society of Tasmania on July 10th 1883, the spider was described as *"Theridion troglodytes"*. Since this original description of the Tasmanian cave spider there has been considerable speculation about this un-named cave where the spider specimens and bone deposits were collected. Higgins and Petterd referred to the site as *Bone Cave*, but in the late 1940's-early 1950's, cavers subsequently named it as *Picketts Cave*. Based on the cave description and a number of other early published sources relating cave discoveries in the South Mole Creek district e.g. Johnston (1888); Scott and Lord (1922), I was able to deduce that the mystery cave was Baldocks Cave (Clarke, 1999a; 1999b).

Higgins and Petterd (1884) record that their ...specimens were obtained from a recently discovered cave in the Chudleigh district... being taken to the site by a guide, likely to be Arthur Pickett, who ...most liberally allowed Mr. Frederick Henry, of Launceston, to select, for our examination, specimens, not only of the Arachnidae but also of the mammalian remains deposited in the fissures of the rock embedded in the earthy floor of the cave...some of which are...agglutinated by thick stalactitic incrustation....

Having become an amateur historian from a background as a cave biologist, I was keen to sleuth out more information on Messrs. Henry, Higgins and Petterd, to discern their expertise and why or how they came together to be studying a cave at South Mole Creek.

From the early 1840s, the scientific community in Tasmania, including zoologists and naturalists, had been told to look out for bones in the bottom of caves. See *Tasmanian Journal of Natural Science*, Vol. 1 (3), 1843, p. 227, cited in Haygarth & Clarke (2011, in prep.). The "great bone caves of England and France" were often cited; see Scott and Lord (1922). There seems little doubt that Messrs. Henry, Higgins and Petterd had been alerted to the cave's recent discovery, one of the so-called New Caves (Clarke, 1999b), because of the mammalian bone deposits. The subsequent revelation of "a new cave inhabiting spider" was probably an accident.

Although Higgins and Petterd (1884) quite accurately record the nature of the cave spider and its egg sac, their published species description is relatively simplistic, probably because neither of them were arachnid specialists. [It should be noted, that although described here from a cave, this spider is an epigean (surface) species commonly found in a range of dark, moist and sheltered habitats, in wet forest or rainforest, in abandoned mine adits and often underneath old wooden bridges.]

There are several records relating to Frederick Henry in northern and western Tasmania in the 1880s, so it is unlikely they are the one and same person. It is possible that Henry was a regular visitor to caves in the district. The name "FRED W HENRY" appears as an undated signature underneath a Maltese cross symbol all deeply engraved on calcite flowstone in the "Registry Office" of Wet Cave at Mole Creek (unpublished research, Clarke and Haygarth). Located in the upper reaches of the Mole Creek, near Caveside, Wet Cave was alternately known as one of the Western, Westward, Oakden, Chudleigh or Old Caves, together with the downstream Honeycomb 1 Cave (Haygarth & Clarke, 2011, in prep.). These two caves had been regularly visited since the 1840s with guided tour operations commencing in the early 1850s. Aside from wading through icy cold waters to view a myriad of cave formations, the presence of glow-worms was one of the major attractions. Tourists were encouraged to register their visit, signing their names on the cave walls and formations often recording a date and sometimes their town of origin.

Edmund T. Higgins and William F. Petterd were presumably both field naturalists who dabbled in a number of different fauna related studies.

In recent email correspondence with TFNC President, Mike Driessen reports that Higgins and Petterd described several species of rats and mice in Tasmania, largely based on colour variation, including introduced species. In another more recent email from Kathryn Medlock Senior Curator (Vertebrate Zoology) at the Tasmanian Museum and Art Gallery, she advises that in 1882, Higgins and Petterd described several species of Antechinus in Papers and Proceedings of the Royal Society of Tasmania (PPRST); none of these species' names are now valid! Katherine goes on to add that Higgins and Petterd donated 15 specimens of Tasmanian mammals to the British Museum (Natural History) in 1887; these included species described in PPRST in 1883.

Neither Higgins nor Petterd are listed in the Bibliography of Australian Entomology (Musgrave, 1932) so they are clearly not entomologists. However, in the online version of the Australian History of Biography, Petterd is described as naturalist, who in the early 1880s owned and operated a boot and shoe shop in Launceston.

But who was Edmund Higgins and how or why was he in Tasmania? Was he based in Victoria or South Australia and perhaps visiting Tasmania on a collecting trip? While in Tasmania, was he associated with the Queen Victoria Museum in Launceston, TMAG in Hobart or was he simply a naturalist friend of Petterd, invited to undertake the Baldocks Cave study?

Based on the recent email correspondence from Kathryn Medlock, it is likely that Higgins was a member of the Royal Society of Tasmania, at least in 1882 and 1883, so Higgins is likely to be further published. The long-tailed mouse *Pseudomys higginsi* is obviously named in honour of Edmund Higgins. It appears he is also responsible for the etymology of several other species including the scorpion tailed spider *Arachnura higginsi* (F. Araneidae) and possibly also the obscure dipteran fly species *Pseudogaurax higginsi* (F. Chloropidae) and the tardigrade *Echiniscoides higginsi* (F. Echiniscoididae), a microscopic aquatic invertebrate.

Although I have not sighted any other published Royal Society accounts by Edmund Higgins, aside from the 1884 Higgins and Petterd monograph and brief mention in Scott and Lord (1922), an online search reveals the following. Edmund T Higgins arrived at Port Phillip (Melbourne) on January 22<sup>nd</sup> 1840 coming from Leith on the square rigger *John Bull*; he married Catherine Callaghan in 1841 at the Roman Catholic (St Francis) church, in Melbourne. Some of his studies are recorded in the following publications:

Newman, E. (1842) List of insects collected at Port Philipp, South Australia, by Edmund Thomas Higgins, Esq. (continued): *Entomologist*, vol. 1, pp. 361-369; 401-405, 1840-42 (1842);

Higgins, E.T. (1869) Description of a new Genus and Species of Prionidæ. *Transactions of the Royal Entomological Society of London*, 17: 11-12;

Higgins, E.T. (1872) Description of new. Species of Shells discovered by Mr. Clarence. Buckley in Ecuador. *Proc. Zool. Soc, London*, 1872: 685-687;

Anon. (1880) Higgins, Edmund Thomas, *Bull. Soc. Ent. Fr*. (5) 10: xcvii.

There may be several other published references as well, presumably most of which are not online. If anyone has any further knowledge of Edmund Higgins or can answer any of my queries, I would be very pleased to hear from you.

#### References

Clarke, A. (1999) BALDOCKS CAVE (?) as the site locality of Tasmanian Cave Spider. *Speleo Spiel*, 312 (February-March, 1999): 4.

Clarke, A. (1999m) Baldocks Cave: the site locality for the Tasmanian Cave Spider - Historical references relating to the early discovery of limestone in northern Tasmania and the caves of the Chudleigh [Mole Creek] district. *Cave Management in Australasia 13 – Proceedings of the thirteenth Australasian Conference on Cave and Karst Management*, Mount Gambier, South Australia, 18-24 April, 1999 Pp. 130-136.

Haygarth, N. and Clarke, A.K. (2011, in prep.) Wonderstruck: Treasuring Tasmania's Caves and Karst. A History of Cave and Karst Tourism and Conservation in Tasmania; currently 312pp.

Higgins, E. and Petterd, W. (1884) Description of a new cave-inhabiting spider, together with notes on mammalian remains from a recently discovered cave in the Chudleigh district. *Papers & Proceedings of the Royal Society of Tasmania*, 1884: 191-192.

Johnston, R.M. (1888) *Systematic Account of the Geology of Tasmania*. Walch & Sons, Launceston.

Musgrave, A. (1932) *Bibliography of Australian Entomology, 1775-1930, with Biographical Notes on Authors and Collectors*. Royal Zoological Society of New South Wales, Sydney, September 1932.

Scott, H.H. and Lord, C. (1922) Studies in Tasmanian mammals, living and extinct: Number 4 - The cave deposits at Mole Creek. *Papers & Proceedings of the Royal Society of Tasmania*, 1922: 6-8.

## **Subscriptions Reminder**

ave you paid your 2011 subs yet? A reminder that membership subs are due on 1 Jan each year.

Please send a cheque payable to Tasmanian Field Naturalists Club Inc, addressed to the Treasurer TFNC, GPO Box 68, Hobart, 7001; <u>or</u> pay by EFT to BSB 067102 Account number 28000476 in the name of Tasmanian Field Naturalists Club Inc. PLEASE put your surname AND initials in the transfer so I can identify the payments.

If you have joined since October last year your subs will carry over to 2011.

Membership rates are: Adult—\$30, Family—\$35, Concession—\$25.

# Photo Feature—On the Subject of Reptiles

## Simon Fearn

Simon Fearn is undertaking research on Tasmanian snakes including trophic ecology.



#### **Photo credits**

Swamp rat—Steven Bottom Weighing a potoroo—Steven Bottom Clearing the invertebrate traps—Natalie Tapson How much does it weigh?—Natalie Tapson Giant slug *Arion ater*—Kevin Bonham On the Subject of Reptiles—All photos by Simon Fearn

