

# PNHA NEWS



Pittwater Natural Heritage Association - thinking locally, acting locally

## Life Of A Retarius (Net-Casting) Spider by Kristine Martin

Some years ago, at Careel Bay, my indoor potplants were home for a year for a Retarius spider, *Deinopis subrufa*, the species shown in PNHA newsletters 49 and 52. There were also many others living in the garden, so I was able to observe much of the life of these intriguing little creatures.

It was one of 113 spiderlings which, in late January, emerged overnight from the hole near the top of the spherical, hard-shelled case which I'd found in the garden and left, forgotten, on my kitchen table. Clustered in their nursery web between the egg-case and a nearby pot-plant, they hung head-down, first pairs of legs extended.

A nursery web (Image shown here from [www.ozanimals.com](http://www.ozanimals.com)) is made by the newly-emerged young of certain spider species, as each spiderling trails a strand of silk while they follow-the-leader away from the egg-case, to cluster for safety nearby. Here they remain for several days, resting or moving about the web occasionally, forming a tight bunch in hot sunlight, or scattering if disturbed, until they have shed their skin (as spiders must do a number of times as they grow to maturity), and the new skin has hardened. Then they are able to disperse, to live independently.



To move the spiderlings outside safely, I followed the advice of naturalist Densey Clyne and waited until they had all moved into one group on the potplant and most had shed their skin (between days 3 and 6). On the 6<sup>th</sup> day, those at the top of the plant were running to and fro, as if seeking the next place to move to, so I put the plant outside. Within an hour, almost all had dispersed into the nearby foliage.

Next morning, 3 of the remaining 6 had made their first tiny throw-nets, and were holding them as the adults do (see

picture in PNHA Newsletter 52), but dropped them and rushed back to the nursery web when disturbed, and the other 3 had moulted. All dispersed from the potplant into the garden on that (7th) day.

Retarius spiders are named after Roman gladiators, who, without armour and equipped with only trident and throw-net, were pitted against heavily-armed and armoured opponents. These tiny gladiator-spiderlings would have many dangers to face and much growing to do to reach adulthood, being only 5mm in body length, compared to the adults' 20-25mm. The space between their forefeet when resting would grow from 3mm initially to approximately 55mm for a mature male, and their first throw-nets at 3-5mm wide (unexpanded), would be 16mm for an adult male, able to stretch 2-3 times that width to catch prey as large as a cricket!

On the eighth day I found one of the spiderlings still in the kitchen, suspended head-down on its precisely engineered scaffold of silken lines, hopeful little throw-net held at the ready, above a line of small print on my bank statement on the table. I'd learned that the *Deinopis* would mature over a year. I let it stay, and kept a diary of its behaviour and development.

The small brown ants in the potplants were perfect first prey for a baby net-caster. I could watch how it made or repaired the scaffold of non-sticky lines on which it would wait with its throw-net above a place where the ants passed, how it made the rectangular throw-net of elastic, crinkled white silk combed out from the cribellum, in front of the spinnerets, then turned to judge the distance of drop to the "ant highway" by reaching down to touch it with its fore-toes.

Next, holding each corner of the net (which remains attached each side to the lines of the scaffold) in its first four feet, it would give it a good sideways and diagonal stretch (giving a glimpse of the net's full size). It would then settle to wait, hanging head-down by its two rear feet to a vertical line held with just enough loop so that, when a suitable prey

**Inside: Brown's Bay Bushcare; Bill Conroy; PNHA Update; PNHA Activities; Currawong; Weed Films; South African Plants; McCarrs Creek Foreshore; Jim Revitt Honoured; Eastern Pygmy Possums.**

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Net casting spider mage from [www.australianmuseum.net.au](http://www.australianmuseum.net.au)

passed directly beneath, it could let go and lunge down to trap the prey in the instantly-expanded, highly-elastic throw-net. It could also swiftly manipulate the throw-net to catch a prey to the side or above the target spot. Though so tiny, it was as deft and capable as the adults in the garden.

Most prey were treated as dangerous, and often, once the spider had thrown the net, it would scramble up to its lines above, safely out of the way, until the prey had either freed itself or, as in most

cases, become fully entangled. Then it would move cautiously down and, if all was well, turn and, suspended head-up by 1 foreleg, wrap the catch by rotating it briskly with the middle legs, combing out more and more silk with the rear legs, until it had a secure parcel. It might warily raise and lower the catch on its connecting line, held in one fore-toe, very lightly, a few times, like fishing with a hand-line, before it moved down to dispatch it with a bite to eat it at leisure. At other times it would wrap and bite immediately. Sometimes it would "multi-task" by eating, holding its support lines and making a new net all at the same time, with great dexterity of all 8 legs.

As the spider grew in size with each moult (every few weeks), its prey changed from small brown ants, to black

ants, then sugar ants and so on. It could, as well as catching its own prey, take items I offered, e.g. mosquito, fly, etc off the end of a moistened paintbrush, by dabbing the net over it, tweaking net and catch off the brush very dexterously with its forefeet, then wrap the catch. Sometimes it seized the catch from the brush in its jaws without wrapping it and un-kinked the throw-net for re-use.

If the throw-net became broken or badly tangled, the spider could dispose of it by delicately ravelling it up with its fore-toes into its mouthparts and "eating" it, then make a new one, or if only slightly tangled it would be deftly untangled for re-use. It would drink water when misted with a sprayer, sipping daintily from its toes, or clambering down from its resting lines to drink from a droplet.

It would moult nine times throughout the year (excluding the first moult within the egg-case) each time emerging larger and longer-legged. It rested and fasted for several days before each moult, and for some hours after when it was soft, weak and very vulnerable, hanging head-down in its hiding place among the higher leaves, until it was able to move easily and make a new throw-net.

Its colour changed with each moult – black initially, then after the first moult: paler with white leg-bands and toe-tips; then rusty-tan with white leg-bands. After the fifth, in June, at four and a half months old, it clearly showed the triangular white patch on the underside of the cephalothorax ("head-chest") which distinguishes the male *D. subrufa*.

For further reading, visit websites [www.findaspider.org.au](http://www.findaspider.org.au) and [www.australianmuseum.net.au](http://www.australianmuseum.net.au)

## Brown's Bay Bushcare

The **Brown's Bay Bushcare** group was successful in sourcing grant funding through the Federal Government 'Caring for our Country' program. The Brown's Bay site contains Littoral Rainforest Threatened Ecological Community and is characterised by tall Cabbage Tree Palms, many rainforest species and a spectacular waterfall. Brown's Bay Bushcare group are a dedicated group and are very deserving of this much needed assistance. Stay posted for upcoming community field days.

Brown's Bay Bushcare meets 1<sup>st</sup> Monday of each month 10am – 1pm. Botham's Beach Reserve has received a lot of bush regeneration work over the past 12 months as a result of a 'Caring for our Country' grant.



Olive-backed Oriole, photo by Nevil Lazarus

PNHA is assisting with this project. On October 16<sup>th</sup> we led a bird walk at McCarrs Creek to highlight its value as bird habitat. The bird of the morning was Olive-backed Oriole, with two easily visible nests and lots of activity.

## Vale Bill Conroy – "the Tick Man"

The community lost a committed and inspirational environmentalist when Bill Conroy passed away recently. Bill, often referred to locally as "the tick man", was involved in research into tick-borne diseases, particularly the hunt for the organism causing Lyme disease. Many of us contributed to that quest by leaving ticks in specimen jars in polystyrene boxes hung on his front fence.

Our thoughts and best wishes go to his family.

Ticks were a small part of his activities. A full account of his remarkable life was published in the Sydney Morning Herald of 21.10.2010. See:

[www.smh.com.au/national/obituaries/agricultural-issues-in-png-fed-his-intellect-20101020-16u4m.html](http://www.smh.com.au/national/obituaries/agricultural-issues-in-png-fed-his-intellect-20101020-16u4m.html)

## AGM , 28<sup>th</sup> August, Katandra Bushland Sanctuary

The new PNHA Committee is: Marita Macrae, Lis Capel, Gary Harris, Sue Anderson, Ken Hughes, David Palmer, Annette Bonnefin and Caroline Kades.

Our Guest Speaker and PNHA Member Paul Mahon talked about Fox Control. Paul specialises in Carnivore Pests in the Pest Management Unit, NSW Dept of Environment and Climate Change. The success of fox control is somewhat questionable, as foxes quickly move into vacant territories. Research continues on the effect of fox control on wildlife in Kuringgai and Garigal NPs.

Thanks to our hosts, Katandra Bushland Sanctuary, for providing a lovely venue.

### Sacred Kingfisher Nestboxes

Five have now been erected in the Warriewood Wetland between the end of the first boardwalk and the beginning of the second, as you walk from Katoa Close to Garden St. Monitoring has so far not shown they are being used. Kingfishers are calling in Irrawong Reserve across Garden St.

**Another DA for 88 Binburra Road, Avalon** has been lodged with Pittwater Council. We objected to one lodged late last year on the grounds that it would impact on an endangered ecological community. We also objected to this second DA as it is not substantially different.

## PNHA Activities

**Pittwater Ecopaddle** was postponed from October 3 to 10<sup>th</sup>, when the weather was kinder. Participants enjoyed the day on beautiful Pittwater. Many thanks to Tony Carr who organises the kayaks and to Mia Dalby-Ball who provided the eco-commentary

### Coming Up:

**Mona Vale Market Day** Sunday 28<sup>th</sup> November. PNHA will have a stall, with a weed display and information, and new cards, some T shirts and hats. Come and give us a hand or just drop in. We'll be near the Library.

**Goodbye Ben** ... Bushcarers will be sorry to say goodbye to Ben Coddington, Pittwater Council's Bushcare Officer. His energy and enthusiasm have made a difference to our bushcare groups. He's taking a position as a botanist in Wollongong. We wish him and his family all the best.

## Currawong Battle On Again with new DA

Unlike the previous development application for the site, for which planning powers were removed from Pittwater Council by the state government, this time the Council will assess the application.

However a decision on the development application will be made by the Joint Regional Planning Panel following the assessment.

PNHA opposes this DA. We support Pittwater MP Rob Stokes' suggestion that Currawong should be acquired by the State Government for public use, offering modest holiday accommodation with access to the historic buildings and the shore.

For more information go to: [www.friendsofcurrawong.com](http://www.friendsofcurrawong.com)

## Weed Films

Pittwater Eco Warriors films, produced by John Illingsworth, are a great way to learn about weed control in Pittwater. You can see them on YouTube by clicking on these links:

Madeira Vine  
[www.youtube.com/watch?v=4L7GBMF2NU4](http://www.youtube.com/watch?v=4L7GBMF2NU4)

Asparagus Fern  
[www.youtube.com/watch?v=NYjIHxuXAHs](http://www.youtube.com/watch?v=NYjIHxuXAHs)

Cassia/Senna  
[www.youtube.com/watch?v=mJm7kA7YLkc](http://www.youtube.com/watch?v=mJm7kA7YLkc)

Moth Vine  
[www.youtube.com/watch?v=a5ncXvKSeFc](http://www.youtube.com/watch?v=a5ncXvKSeFc)

Gazania  
[www.youtube.com/watch?v=y0wTANdbPbw](http://www.youtube.com/watch?v=y0wTANdbPbw)

Ochna  
[www.youtube.com/watch?v=2sRm6rBsjVI](http://www.youtube.com/watch?v=2sRm6rBsjVI)

Another way is to go Google, click on Videos and type in weed name and the word *removal*.

There's also a great video of the recent Asparagus Fern Out Day at Rocky Point to view:

<http://www.youtube.com/watch?v=A0SwmNS1kMM>

## Eastern Pygmy-Possum



A female Eastern Pygmy Possum (*Cercartetus nanus*) was recently released into Katandra Bushland Sanctuary after being nursed back to health following an attack by a domestic cat.

When found and passed on to WIRES, she was in

very poor health, injured, covered in ticks and weighed just 11 grams. After reaching a healthy weight of 21 grams, the temporary hollow log nest used by her foster carers was attached to a tree in the hope that she will find a safe home in the Sanctuary. She was unable to be released in the area where she was found due to the busy roads and the presence of a large number of cats.

Eastern Pygmy Possums are tiny active marsupials growing to between 7 and 11 cm in body length with a tail just as long. They have an almost bare, prehensile tail and big, forward-pointing ears. Healthy adults weigh between 15 and 43 grams.



These 2 photos: A Tasmanian Pygmy Possum (Image: Jamie Harris, [www.warra.com](http://www.warra.com))



Being nocturnal, Pygmy Possums rest by day in a nest of shredded bark in a small tree hollow or under the loose bark of a tree, often in holes too small for other types of possums. They are mainly solitary animals, each possum moving around and using a number of nests.

This possum is listed as a vulnerable species.

From **Katandra Bushland News**

Pollinating Banksia flowers (Image: [australianmuseum.net.au](http://australianmuseum.net.au))

## McCarrs Creek Foreshore Restoration Project

We have been fortunate to receive grant funding to help conserve the bushland of three beautiful reserves along the McCarrs Creek Foreshore.

The McCarrs Creek Bushcare group were recently successful in their grant application to the Hawkesbury Nepean Catchment Management Authority. The money will fund the Cicada Glen Creek project which will include bush regeneration contractors, 2 community planting days, a bird watching walk around the reserve and education on native plants and weed removal techniques for surrounding residents. Good work McCarrs Creek Bushcare!!!!

McCarrs Creek Bushcare meets 3<sup>rd</sup> Sunday of Each Month from 8 till 11am.

Photo at left:

*Browns Bay Bushcare group at work. Browns Bay is a rainforest gully on McCarrs Creek beyond Church Point, with several plants quite unusual in Pittwater.*



# South African Plants

by Marita Macrae

I recently did a wildflower/walking tour of the Western and Northern Cape Provinces of South Africa. This is one of the world's botanical hotspots. The Fynbos and Karoo vegetation have thousands of species which include many more daisies, bulbs and herbs than we see around Sydney, though fewer trees.

Our countries share the Gondwana plant family Proteaceae, with representative genera such as Protea, Leucadendron and Leucospermum in South Africa, and Waratah, Grevillea and Banksia in Australia.

Many South African native plants are familiar to us as garden plants, and weeds. Some are Agapanthus, Dietes, Sailor Boy Daisy, Watsonia, Zonal Geraniums, Ochna (Mickey Mouse plant), Bitou and Boneseed, various Asparagus Ferns, Freezias, Gazanias, Ehrharta erecta and so on. I never got used to seeing Bitou as a prized pot plant or used in landscaping and was pleased to see a Bitou Tip Moth caterpillar feasting on a Bitou bush near the Cape of Good Hope lighthouse. This moth has been introduced to NSW to help control Bitou.

However, *Acacia saligna* (called Port Jackson wattle in SA) was abundant in damper areas and in brilliant flower. Various Eucalypts, *Myoporum montanum* and Coastal Teatree are some of the weeds from Australia.

A weed is truly a plant out of place!

The trip was organised by Ramblers Worldwide Holidays from England. It will run again next year. For more information: [www.ramblersholidays.co.uk/Holiday\\_Information.aspx?HolidayID=4810](http://www.ramblersholidays.co.uk/Holiday_Information.aspx?HolidayID=4810)

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## Jim Revitt Honoured

*Pittwater Council has recognised the contribution of one its founding fathers, the late Jim Revitt, by unveiling a commemorative walk named in his honour.*

*Jim Revitt, who died in November 2009 at the age of 78, is widely acknowledged as being one of the leading community figures in the battle to create a separate local government area for the people of Pittwater.*

*Although choosing not to become an elected Councillor, Jim Revitt played a leading role in various community organisations and grassroots movements, including the Save Mona Vale Hospital Committee, the Pittwater Escarpment Committee, the Elanora Heights Progress Association, the Pittwater Residents Association and the Pittwater Natural-Heritage Association.*

*The walkway, in Irrawong Reserve in Warriewood, was named the 'Jim Revitt - Irrawong Walk' at a special ceremony on Friday 22 October. Jim Revitt's widow Rosemary and his two sons David and Damian unveiled a special commemorative sign on the walkway, accompanied by Mayor Harvey Rose, Pittwater Councillors, community members and senior staff.*

*Jim had been a PNHA supporter for many years and played a pivotal role with PNHA in the Pittwater Escarpment Committee to prevent subdivision for residential development on the Warriewood Escarpment. The high quality of PNHA's Introductory Field Guide to Birds of Warriewood Wetland and Irrawong Reserve is due to Jim, who envisaged a much better book than we would have been able to produce with our meagre grant funds for that purpose. With David James, he convinced the son of the former owner of the Warriewood Wetland, Henry Roth, to make a generous donation towards its production. Sales of that book have now resulted in about \$17 000 going to Pittwater Council's conservation of the area.*

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