



News of Friends of Grasslands

Supporting native grassy ecosystems

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May–June 2015

Getting to know a grassland, Monday 25 May

FOG's first non-working activity for 2015 is a visit to a Canberra urban grassland on a weekday afternoon in late May. This is the first stage of a three-part visit to the same small grassland during autumn, winter–spring and spring–summer. The aim is to become familiar with the variety of species characterising Natural Temperate Grassland (NTG), compiling a species list on each visit to see how it changes with season and learning the clues that reveal grassland quality. We will also learn how to survey, so as to be able to compare data between sites.

This year we are visiting the Blue Devil Grassland at Umbagog District Park in Latham, ACT. It is a 4 ha area of grassland which is cared for by members of Umbagog Landcare Group. You can read a little about it in their webpage and brochure on the Ginninderra Catchment Group website, <http://www.ginninderralandcare.org.au/>. (Next year we plan to visit a southside grassland, yet to be chosen.)

Led by Sarah Sharp and Margaret Ning, we will wander through this grassy landscape, which includes patches of good quality and lesser quality NTG. By the end of the hour, we should be able to distinguish good quality native grassland from poor-quality patches, both close to, and from a distance. At least 42 species (native and non-native) were noted during reconnaissance, including iconic examples such as Blue Devil *Eryngium ovinum*, Wild Sorghum *Sorghum leiocladum*, Barbed-wire Grass *Cymbopogon refractus*, a number of forbs and large areas of Kangaroo Grass *Themeda triandra*.

Park: south-west corner of Denny St, Latham (phone book map 9), near no. 36, and walk down the path to the grassland; or in Kippax shopping centre carpark nearest Southern Cross Drive and take the path and underpass to the grassland.

Time: start 4 pm and end at 5 pm (sunset).

Wear: Walking shoes/boots and clothes suited to the weather.

More detail: FOG activities team, activities@fog.org.au or margaret.ning@fog.org.au



Blue Devil *Eryngium ovinum* being pointed out among the Kangaroo Grass *Themeda triandra*, by Margaret at Umbagog, Latham, autumn 2015. Photo: Ann Milligan

Restoration activities

2 May, Saturday morning

FOG is joining Queanbeyan Landcare to battle woody weeds at **the Poplars**, the high-value woody grassland site, east of Lanyon Drive in Jerrabomberra near **Queanbeyan NSW**.

To find out the meeting time and place, and to ensure you are catered for, for morning tea and tools, register with John Fitz Gerald (john.fitzgerald@fog.org.au).

3 May, Sunday 9–12

Restoration work will continue at **Stirling Park, Yarralumla ACT**, on Sunday 3 May. This is the last time this season for work on deciduous trees such as *Sorbus*, as cold weather stops the flow of the plant juices, causing the glyphosate to be ineffective. (Evergreen plants such as *Cotoneaster* and *Pyracantha* can be cut and poisoned all year round.)

For details of work site and meeting place, be sure to REGISTER (see below) before the day. This also ensures that enough food and drink is provided for morning tea. Wear solid shoes/boots and dress for outside work.

If walking to the site, please note the ridge-top track may be closed after a controlled burn on Saturday 2 May on the western side of Stirling Park.

If driving, park in the rusty sculpture car park (Blue Gum Point) on Alexandrina Drive, and look out for fast traffic when crossing the road.

Other workparties at Stirling Park:

Wednesday 13 May

Sunday 31 May

Sunday 28 June.

Register for all weekend workparties with jamie.pittock@fog.org.au, and for mid-week workparties with pmcghie@optusnet.com.au.

FOG's activities in May, June and July are summarised on p. 14.

For other groups' activities see p. 6.

Contents of this issue are listed on p. 14.

FOG advocacy

Naarilla Hirsch

February

1. The ACT Government made available for comment 'Revisions to its Design Standards for Urban Infrastructure'. FOG noted that the standards raise awareness of the need to foster and protect biodiversity by requiring design and plant selection to respond to environmentally sensitive areas. FOG also asked that any revision of the list of plants for urban landscape projects give consideration to including in the Standard a section on 'edge species' to ensure selection of suitable plants for projects adjacent to nature parks and other environmentally sensitive areas such as Natural Temperate Grasslands.

March

2. The Land Development Agency released the 'Canberra Brickworks + Environs Planning and Development Strategy' for public comment. FOG had a number of concerns about the Strategy – one in particular is the disregard shown by the ACT Government towards potential impacts on Matters of National Environmental Significance (MNES) – Natural Temperate Grassland (NTG) and Golden Sun Moth (GSM) – should the Strategy be implemented. The area includes an NTG site identified by the Commissioner for Sustainability and the Environment (CSE), in her 2009 'Report on ACT Lowland Native Grassland Investigation', as a Conservation Category 2 site (a complementary conservation site). The Strategy and Master Plan appear to completely destroy all of the NTG and GSM habitat (despite the Strategy's ecological studies identifying values for the site), replacing it with a residential area and urban park.

FOG was also concerned about the discussion of offsets in the Strategy, despite the lack of mitigation options and the premature nature of this discussion given that it has not yet been referred to the Commonwealth for consideration of MNES. FOG's view was that the NTG area and GSM habitat should not be developed and should be provided with an adequate buffer to mitigate against nearby urban impacts, and that management of the area should be improved.

April

3. FOG provided comments on the 'Statement of Planning Intent: Guiding planning priorities for Canberra', released by the ACT Government. Components FOG saw as important in any Canberra planning priorities included:

- consultation with community;
- a balance achieved between environmental, social, economic, cultural and other values;
- providing adequate open space to be used for recreation, dog walking, etc., to limit pressures and impacts on conservation areas;
- all buffer zones for bushfire management, or similar, contained within development footprints;
- appropriate street and open space plantings;
- cat containment; and
- strategic environmental assessment applied to every area.

The full text of FOG submissions appears on our website.

ALERT! Final call for membership renewals

To be or not to be a FOG member? This newsletter is the turning point. If your membership is not current at 1 May, FOG's rules say you can no longer be sent newsletters or e-bulletins. A red dot on the last page of this newsletter issue, together with an inserted or attached renewal form, means we have not found your renewal for 2015 in either the PO Box or the bank account.

For renewing, the details you need are on the renewal form. However, if the dot is wrong or if you don't want to renew, please email us at membership@fog.org.au and tell us – and we'll update our records!

President's report at FOG AGM 2015

Sarah Sharp

Many thanks to all the committee members for their considerable input in our anniversary year in 2014. Without their consistent support and assistance FOG couldn't operate. Many of the committee members have taken on specific roles, and provided considerable input, as described in their reports.

I also wish to thank other FOG members, who, while not on the committee, undertake a range of activities on behalf of FOG. These include Jamie Pittock for his ongoing organisation and supervision of workparties on national land and liaison with National Capital Authority and Yarralumla residents, Linda Spinaze for organising the annual monitoring at Scottsdale, Richard Bomford for maintaining the website, Barbara Payne for her contribution to the advocacy group, Geoff Robertson for his considerable input into the organisation of the October forum, Janet Russell for her role as information contact and collecting and sorting mail and Andy Russell (and Barbara) for their roles as Public Officer.

Kris Nash, Stephen Horn, Rainer Rehwinkel and Isobel Crawford have decided not to nominate for the committee this year. I thank them all very much for their contribution to FOG through serving on the committee. Kris has very ably maintained the secretariat role for some years, with well-kept records of correspondence and has brought much experience and provided practical advice to the committee. Isobel has had a long-standing role on the committee, and taken on various projects, including Vice-President and Newsletter Editor; I am very pleased to announce that, despite no longer remaining on the committee, she has volunteered to maintain the membership records, so will retain a strong link with FOG. Stephen's and Rainer's involvement and contributions have been very valuable, and are much appreciated, and it is hoped that their relationship with FOG is maintained. I wish Kris, Stephen, Rainer and Isobel all the best as they pursue other interests.

Our financial position is strong. Leon has undertaken a restructure of the accounts, which makes it easier to identify individual components, as our finances have become more complicated. Not only do we maintain finances to cover memberships and direct costs such as provision of newsletters,

...continued next page

President's report from the FOG AGM 2015, continued

but we have several grants to account for: several for on-ground work and for preparation of the 'Woodland Flora' book, as well as special events including the Forum. We also maintain adequate funds from donations and interest from the general account to provide an annual \$1000 donation to support a selected landholder project. Many thanks to Leon for the considerable work he has undertaken to ensure the finances of FOG are easily understood, accurate and always at hand.

Members also represent FOG in committees, including the K2C committee, the Conservation Council's Biodiversity Working Group, Bush on the Boundary groups, the Canberra Airport Group, Murrumbidgee to Googong Pipeline, Majura Parkway development, ACT Government's Conservation Effectiveness Monitoring Program, the Monaro Region Weed Committee and the Save Stirling Park Group. (Some of these are outlined in separate AGM reports.) The efforts of all FOG members who participate in these groups and ensure liaison between organisations is greatly appreciated.

2014 was the 20th anniversary for FOG, and several events in the year celebrated this. A three-day forum was held in October–November with participants from Victoria, NSW and ACT. (See separate AGM report.) It was a most successful event and we were asked, several times, were we going to hold similar events annually (not on your life, I say!!!). However, we are considering the need to have some form of more regular fora, probably at a much reduced scale of organisation and expense and ideally in cooperation with other organisations.

In November there was a great dinner at the Mugga Mugga Education Centre, to mark the anniversary of FOG's inception. Many past active members attended, and it was a great opportunity to catch up with old friends and colleagues.

On-ground restoration work, in 19 workparties, was undertaken at Stirling Park, Yarramundi Reach and Hall Cemetery and at the Poplars in Queanbeyan. Activities included weed control, planting, surveys and, through grants, contract spraying of herbaceous weeds and Blackberry and planting by Greening Australia. We have a very strong cooperative relationship with the National Capital Authority. Our restoration work has recently been extended to the block to the east of Stirling Park managed by TAMS, in partnership with Molonglo Catchment Group and the indigenous community.

Other activities, as described in AGM reports, include monitoring at Scottsdale in cooperation with Bush Heritage Australia, several outings to visit sites within the region, and our regular mid-winter presentation. Together with the website, our newsletter continues to provide a wealth of material on these activities, as well as information of more general interest to FOG members. Many thanks to all the contributors to the newsletters, and to Ann Milligan and Richard Bomford for maintaining and managing newsletter and website respectively.

FOG has strong relationships with other non-government organisations. In 2014 these included the Conservation Council ACT Region, Kosciuszko2Coast, the Southern Tablelands Ecosystem Park, the Molonglo, Ginninderra and Southern ACT Catchment Groups, ACT Landcare, Australian Network for Plant Conservation, Greening Australia, Stipa and the Australian Association of Bush Regenerators. These relationships enable FOG to utilise opportunities to engage more fully with other groups and foster participation in activities. Many FOG members are directly involved in these or other conservation groups. A less recognised, but important asset for FOG as a member of the Conservation Council is that we are able to utilise their offices for meetings, at no cost. This is greatly appreciated.

To conclude, I want to emphasise most particularly the outstanding work achieved by FOG members, much of which is undertaken cooperatively with other organisations and community groups. It is the relationships we have within the group and with other groups that give us so much energy and impetus to continue to advocate for grasslands and other grassy ecosystems and their component species. FOG is highly regarded as a group that is hard-working with high integrity, has a significant knowledge base and is respectful of other opinions and attitudes. I am sure that this will continue, based on the high calibre and dedication of active members. My thanks to you all for your support in my role as president.

Only the President's report is being published in *News of FOG* this year. Members were emailed all the reports in March, and they can be read online at <http://www.fog.org.au/AGMs/2015%20AGM%20reports.htm/> Please write to FOG Newsletter editor, at PO Box 440, Jamison Centre ACT 2614, if you can't access them there.

Notes from the FOG Committee

This is FOG's committee for 2015, with our four new committee members asterisked:

Sarah Sharp (President)
Kim Pullen (co-Vice President)
John Fitz Gerald (Secretary)
Leon Pietsch (Treasurer)
Ann Milligan (Newsletter, co-Vice President)
Naarilla Hirsch (Advocacy team coordinator)
David Crawford* (Activities team coordinator)
Margaret Ning (Activities team)
Paul Archer* (Activities team)
Barbara Payne* (Advocacy team)

Tony Lawson (Advocacy team)
Ross Dennis* (Advocacy team)
Katherina Ng
Andrew Zelnik
Public Officer: Andy Russell.
Membership Officer: Isobel Crawford

Grants agreed to in March

The committee has authorised FOG donations to:
Artists Society of Canberra for the native grasslands art prize;
Environmental Defenders Office (ACT) (once only);
Conservation Council ACT Region; Kosciuszko2Coast (K2C).

News roundup



Photo: John Fitz Gerald

Gungahlin Valley Ponds launch, Friday 20 April

John Fitz Gerald

A small crowd attended the launch of the water quality and habitat project at Gungahlin Valley Ponds, ACT, by Meegan Fitzharris, MLA for Gungahlin. The photo shows the outdoor education facility at the site. The wing-like structure was designed to represent waterbirds including the migratory Latham's Snipe which has been observed locally. On the hill (not shown) above the ponds, the grassland has also been highlighted through an informal trail with explanatory signs summarising environmental and cultural values. FOG visited the site in February 2013 when the engineering works were nearing completion. Most site work since then has involved landscaping, weed control and wetlands planting.

Stirling Park restoration plantings saved by water tank

Peter McGhie

At the end of last August, 25 members of FOG and Save Stirling Park Group (SSPG) planted around 200 trees and shrubs – Eucalypts, Acacias, Bursarias and some Brachychitons – on both sides of the Stirling Park ridge and on the top of the ridge itself. There were some reasonable rain events in early spring and early January but in the subsequent warm, very dry weeks some of the plants were struggling to survive, especially those in exposed areas. So the call went out to FOG and SSPG members who had volunteered to water if they were available on the chosen day.

Avid readers of *News of Friends of Grasslands* will recall that the January–February issue featured a 1000 litre water tank being installed on the top of the ridge, and later kindly filled by members of the Two Rivers Rural Fire Brigade from Cotter Road. On Saturday 21 March the tank was finally put to use. Seven volunteers arrived, armed with their own and three of FOG's 9 litre watering cans, and in just over an hour we had delivered around 2–3 litres to each of the surviving trees and shrubs.

Most of what we had planted are doing well, and the watering will have helped them to flourish, but there have been some losses, probably around 20%.

There are two lessons to be learnt from our experience in this restoration project. First, in



Restoration rescuers, l-r: Sue Archer, Mike Lewis, Patrick Anderson, Pam and Allan O'Neil and Vince McMahon. Photo: Peter McGhie.

situations where water is available, water sooner rather than later, and do not wait for promised showers. Second, unless there has been heavy rain, 2 or 3 litres of water delivered directly to the base of the plant will be of much more benefit than the few millimetres delivered by summer showers, should they actually arrive.

News roundup, continued

Hall Cemetery, 7 March and 11 April

John Fitz Gerald

On both FOG's work mornings, 8 to 9 volunteers turned up and enjoyed comfortable and fine weather restoring the woody grassland in Hall Cemetery, ACT.

In March the work in the woodlands was mainly spraying and digging up fleshy weeds such as Thistles, Plantain and Cleavers. We also cleared and trimmed some exotic grasses near our planted Bursarias and the cemetery's front gate, and removed a few Briar Roses. The top photo at right shows workers in their mid-morning break when we were joined by Janet and Andrew Russell who managed the FOG work at this site until early 2014. The mature trees in the woodland and cemetery blocks are also visible, as is the signage for the site. Margaret Ning generously followed up later with some additional weed spraying.

In April, FOG's work on the familiar list of weed plants continued, but entirely by digging or chipping, this time. After clearing in the drainage line, we planted 12 *Carex appressa*, raised from local seed, back into the area where spraying in previous work has resulted in loss of some native plants. We had the company of small mixed flocks of honeyeaters moving high in the treetops preparing for their annual migration away to warmer places.

ACT Government's Territory and Municipal Services team has planned an autumn prescribed burn of 1.7 ha of the woodlands on the side of the cemetery nearest Wallaroo Road, for ecological reasons. The Fire Operations Unit has done significant work clearing around plantings, large trees and fences, planning to burn areas of tall exotic grass in particular. FOG mapped locations of all of last September's lily plantings plus a big cluster of Silver Wattle, and the Fire Unit plans to keep these protected if possible.

As of mid-April, burning has not occurred. Unfortunately one of the consequences is that thistles have germinated in some of the cleared zones, near trees and fence, and grown fast in the damp autumn. Some of April's weeding effort therefore had to go to knocking out such thistle rosettes.



Above, left–right: Jenny Clarke, Kat Ng, Stephen Horn, Andy Russell, Geoff Robertson, Leon Pietsch, Margaret Ning and Graeme Clarke. Photo: John Fitz Gerald.

Below: Jenny weeding out thistles in April, with burrs of Bidgee Widgee *Acaena novae-zelandiae* syn. *A. anserinifolia* (~1 cm diameter) in the foreground. Photo: Ann Milligan.



Radio program: 'The other green army: Part 1'

If you are quick, you may catch an interesting radio program online, on some of the history of the long-term fight against invasive weeds, including the method developed by the Bradley sisters, 'the Bradley Method'.

The program is on ABC Radio National website and when accessed on 27 April the page said this program will be removed in 8 days time; that would be ~4 May.

<http://www.abc.net.au/radio/programitem/pgobVwR0P6>

News roundup, continued

Call to help restore McLeods Creek NR, 1 May and 8 May, Friday

The Mcleods Creek Nature Reserve, near Gundaroo NSW, protects a rare remnant of Box-Gum Grassy Woodland complementing an adjacent area of endangered Natural Temperate Grassland. **Volunteers are called for**, to help on:

Friday 1 May 2015 at 10 am: Applying seed of shrub layer species in a 3 ha area of the reserve.



Photo: Steve Lewer/OEH

Friday 8 May 2015 at 10 am: Erosion stabilisation of a gully head and side-arm gully, with straw bales, jute matting and log ladders.

For details, REGISTER with Susannah Power, ph. 02 62297059, susannah.power@environment.nsw.gov.au

Activities coming up – other groups

Thursday 7 May at 7 pm: 'Local reptiles', a talk by Geoff Robertson, of ACT Herpetological Association and FOG, on how to find and identify reptiles in the Canberra region and his own various encounters with them. Murrumbateman Landcare Group meeting, Murrumbateman recreation hall, NSW.

26–27 May: Nature Conservation Council of NSW 10th Biennial Bushfire Conference, Surry Hills NSW. The title is 'Fire and restoration: Working with fire for healthy lands'. Details are available at <http://actlandcare.org.au/node/2009/>.

30 May, 7 pm: World Environment Day dinner, organised by Conservation Council ACT Region. National Arboretum Canberra. Guest speaker: Judy Horacek. \$95 per head, or \$90 early bird by 30 April. See <http://conservationcouncil.org.au/>.

June–July, Provenance Workshops: organised by Australian Network for Plant Conservation. Half-day workshops on the current understanding of native seed provenance issues in ecological restoration. Details: www.anpc.asn.au/workshops. To express interest, contact Martin Driver, ANPC Project Manager, ph. 0400 170 957, email projects@anpc.asn.au.

15–16 July: The NSW Grasslands Society 29th Annual Conference, Goulburn NSW. The theme is: 'Making pastures pay'. For details, email Janelle Witschi, ph. 02 6369 0011, secretary@grasslandnsw.com.au.

20–26 July: ACT Tree Week, culminating in National Tree Day, Sunday 26 July. Activities by several groups, including FOG.

1–3 September: 2015 NSW Landcare Conference, Turners Vineyard, Orange NSW. The theme is 'From the ground up – Celebrating the international year of soil'. The organisers are calling for recommendations on speakers and workshops and have set up an online survey for responses. For details: Central Tablelands LLS, <http://centraltablelands.lls.nsw.gov.au/>.

12–15 October: NSW Weeds Conference, Cooma NSW. Theme: 'Weeds – The future, innovation & adaptation'. Early bird registration is open till 30 June. For details, see <http://www.weedscooma.com.au/>.

'Native Grasslands' ASOC art show

Kathryn Wells



Isla Patterson, water colourist, with Kate Lundy at the launch of the 'Native Grasslands' exhibition. Photo: Kathryn Wells

The Native Grasslands theme for the annual art show of the Artists Society of Canberra (ASOC; 12–18 April) produced over 60 evocative works in a range of media on paper and canvas. Subjects included studies of the grasses themselves as well as flowering plants featured in still life and landscapes, as well as select unique fauna especially Golden Sun Moths, Emus and Dragons. Also there were abstract renditions of the light, colour and ephemeral flowers, immersing the viewer in the experience of grasslands, which was the style of the winner, Angharad Dean, for her work on canvas.

It was an exciting and pleasing opening night (13 April), with high engagement by the artists, and speeches from Kate Lundy the Patron of ASOC (and former ACT Senator), John Knox the Managing Director of ACTEW Corporation, Alan Jones the Chair of ASOC, and Kathryn Wells the Manager of the Myer Foundation–K2C Native Grasslands Project. Tom Baker and Karen Williams of Molonglo Catchment Group were acknowledged not only for their support as sponsors but also for raising awareness of grasslands as an endangered local ecosystem. Principal sponsors for the event were ACTEW Water and the three Catchment Groups of the ACT, as well as FOG and the Myer Foundation–K2C Native Grasslands Project.

Grasslands struck chords with artists, sponsors and viewers alike. Staff of organisations such as Greening Australia and Bush Heritage, as well as grassland researchers from the ANU Fenner School, were there with a crowd of supporters and guests. Everyone appeared to greatly enjoy the art works and the jazz ensemble Tilt.

This is the second time ASOC has focused on grasslands; the first was in 2011 in conjunction with FOG when the theme was 'the beauty of grasslands'. It is likely that ACTEW Water and ASOC will continue their association in the new venue at Bunda St, Civic, ACT, and also with grasslands as a theme, in future years.

For photographs of the art works and the opening, see: https://www.facebook.com/pages/Artists-Society-of-Canberra/149443601882361?sk=photos_stream

News roundup, continued

Launch of Bush Heritage Australia's research strategy, 'Saving our species'

Sarah Sharp

On a blustery cold 'Monaro' day, Wednesday 8 April, while snow fell on the nearby Brindabellas, Bush Heritage Australia launched a new 10-year science program at their property 'Scottsdale Reserve' near Bredbo in southern NSW.

This private conservation organisation manages properties covering more than 5,000,000 ha throughout Australia, protecting many threatened species and providing habitat for an enormous range of extant flora and fauna. Within SE NSW there are five properties managed by Bush Heritage, all within the Kosciuszko2Coast area (www.k2c.org.au).

The science program aims to double the organisation's science capacity, by supporting 120 projects by 2025 through collaborative research, science fellowships and citizen science. The six research themes are: 1. Landscape connectivity, 2. Habitat refugia, 3. Introduced species and over-abundant native species, 4. Fire ecology, 5. Threatened species management and recovery, 6. Restoration ecology.

Several studies being undertaken at Scottsdale are outlined in the strategy handbook, and show the broad focus at this reserve. One is 'Effectiveness of grassy box woodland restoration', within research theme 6, in which restoration methods and conditions to maximise survival rates for eucalypts are being trialled and monitored by Greening Australia and students from the Australian National University. Also at Scottsdale, in the Murrumbidgee River, is the project 'Macquarie Perch – Critical requirements for recovery', within research theme 2, being undertaken by PhD candidate Prue McGuffie from University of Canberra.

The launch was addressed by Professor Hugh Possingham of the University of Queensland, who stressed the importance of collaborative research and the work undertaken by Bush Heritage to conserve and manage a range of ecosystems and component species. Professor Possingham directs the ARC Centre of Excellence for Environmental Decisions (<http://ceed.edu.au/>) and the National Environmental Science Program Threatened Species Recovery Hub (<http://nerpdecisions.edu.au/>).

FOG's strong relationship with Bush Heritage Australia since 2008 at Scottsdale Reserve has been via monitoring of trials to reduce the abundance of African Lovegrass *Eragrostis curvula*, and via monitoring



of changes to African Lovegrass dominance in native grassland elsewhere on the property. This work by FOG is a contribution to understanding of the dynamic interrelationships of African Lovegrass with native herbaceous vegetation, and it is aimed at reducing the impact of this highly invasive species. For more information about the monitoring we do, contact Linda Spinaze, linda.spinaze@fog.org.au.

The day had extensive media coverage, hence the helicopter in the photos above, taken by Margaret Ning.

The 'Saving our species' program handbook can be downloaded from <http://www.bushheritage.org.au/>.

Call to help the Conservation Council ACT Region with funding

FOG has been asked, as a member group of the Conservation Council ACT Region, to include the following (edited) appeal in our newsletter.

'The Conservation Council is the peak environment body in the ACT region. It provides support for over 40 community groups all working to ensure a safer and healthier environment for all Canberraans. In the 2014 May Federal budget, all federal funding was removed: that is, 20% of the Council's annual budget was stripped away. The Council is now calling on its supporters to assist the people who support us.

Can you make a donation to the Conservation Council ACT and help make sure that the community's voice for the environment remains strong?

To donate, please ring the Conservation Council on 02 6229 3200 with your credit card details, or visit www.conservationcouncil.org.au/support-us/donate/. All donations over \$2 are tax deductible.'

SERRATED TUSSOCK – a partly misleading name?

John Fitz Gerald

Nassella trichotoma, the highly invasive grass from South America, and one of just three grass Weeds of National Significance for Australia, is much despised by landholders and managers, especially in the Central and Southern Tablelands of New South Wales. The accepted common name is Serrated Tussock, but another of its common names, Yass River Tussock, comes from it being recognised as a problem early on in the Yass region. Records show that it has been declared a noxious weed here since 1938. As a very major weed, it features in plenty of information available both in written literature and on many websites.

For FOG weed control volunteers, our work sites on National Capital Lands and at Hall Cemetery fortunately have only minor occurrences of Serrated Tussock though we do occasionally need to eradicate some tens of tussocks from small infested areas. Old Cooma Common also has some patches.

Leaves of this tussock grass are tightly rolled, about 0.5 mm thick, and rough to the touch when the grass is held between fingers starting at the leaf tip and drawn through to the base. However, the roughness is different from plant to plant, and varies with the dryness of the leaf. I have looked carefully with my trusty 10x hand lens but never been able to find any of the serrations that are described in most of the information packages.

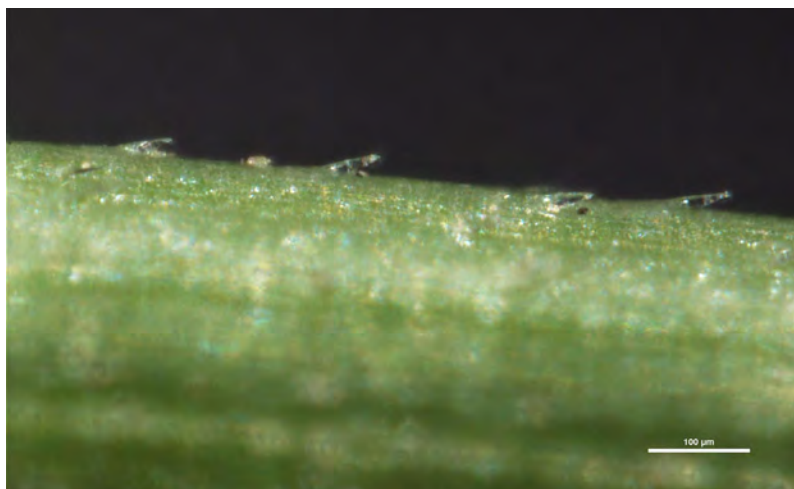
However, look at what I saw with a more powerful microscope (top photos).

I found no regular or saw-tooth structures corresponding to serrations that the name evokes. Instead, the roughness of Serrated Tussock comes from widely spaced and minute bristles that are pressed closely to the leaf and point upwards towards the leaf tip.

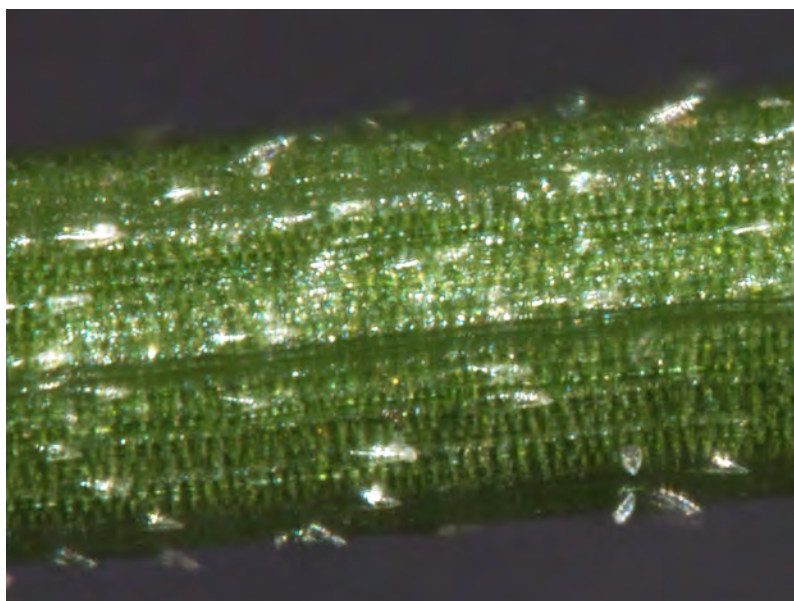
The length of each bristle is around 1/20th of a millimetre, and their width is much smaller than that. The photos (top right) show two rolled leaves. Both are at the same magnification, with the white scale bar on the uppermost image being 0.1 mm long. The upper image, from a plant that was very rough to touch, shows sharply pointed thin bristles. In comparison, the other leaf felt much smoother and its bristles (lower image) turn out to be blunter, wider and maybe softer judging from some appearing to have bent away from the leaf surface. For both images the tip of the leaf lies to the right.

Going back to the published information, I found a few descriptions of the leaf that stated bristled rather than serrated, but these were certainly the exception.

So, should we be calling this weed, one of Australia's worst, 'Bristled Tussock'? I don't like the chances of getting that one accepted!



Above and below: Leaves of *Nassella trichotoma* at high magnification, showing bristles, not teeth! Photos: John Fitz Gerald, at the Seedbank, Australian National Botanic Gardens. ©ANBG



A reminder of the whole plant, *Nassella trichotoma*, on display at the Bush Friendly Garden, Floriade, 2013. Photo: Ann Milligan.



Memorial service for Laurie Adams at Mount Gingera

Andrew Zelnik and Paul Cheeseman

A memorial service to farewell Laurie Adams (see obituary in *News of FOG* January–February 2015) was held on Sunday 12 April 2015 at the summit of his beloved Mount Gingera located on the ACT–NSW border at the western edge of Namadgi National Park.

In attendance was an 18-strong gathering comprising his close friends, past and present staff members and associates from the Australian National Herbarium and Australian National Botanic Gardens, and members of National Parks Association of the ACT and Friends of Grasslands. These included Teena Harkins, Emily Harkins, Deborah Thomas, Judy and Dave Kelly, Annabel Wheeler, Rosemary Purdie, Murray Fagg, John Hook, Maggie and John Nightingale, Marion Garratt, Anna Monro, Emma Toms, Nunzio Knerr, Paul Cheeseman, Geoff Robertson and Andrew Zelnik. Isobel Crawford and Tony Brown expressed their regret at being unable to attend.

We initially met at the Mount Ginini carpark at 9.30–10.00 am (photo below by Paul Cheeseman) before heading south to Mount Gingera. Most of us walked the initial 5.6 km, passing through the sub-alpine woodland dominated by Snow Gum (*Eucalyptus pauciflora* subsp. *pauciflora*), stopping in at Pryor's Hut on the way. Past the hut we joined a small party that had initially gone ahead by vehicle. We then made the remaining steep, at times heart-pounding, 1.1 km ascent on foot to reach the summit around midday where we were fortunate to be greeted by a sunny and relatively clear sky and magnificent 360-degree panoramic views over the ACT to the east and NSW to the west.

Adjacent to the summit marker, Teena led the memorial service, followed by Maggie, both of them reflecting on Laurie's life and achievements in and out of botany.



Teena led the Memorial Service for Laurie on Mt Gingera. Photo: Andrew Zelnik.

After sharing some more stories about Laurie we scattered his ashes to the wind and onto the mountain. Geoff did the honours by holding the urn while many of us took turns at distributing the ashes. By a strange coincidence this is not the first time the ashes of an Adams have been scattered on Mount Gingera. Graeme Barrow in the 2nd edition of his guide book on high country day walks in the ACT, entitled *Exploring Namadgi & Tidbinbilla*, relates the story of bushwalker Bill Adams whose ashes were scattered there in 1995, as were the ashes of Bill's wife, Joan Adams, 23 years earlier.



(Above) Laurie's ashes were scattered from the urn. Photo: Paul Cheeseman.

(Below) Gathering at the summit before the service. Photo: Dave Kelly.



Afterwards we shared lunch together and then headed back. The weather closed in and it started to rain as the last of the party descended from Mount Gingera onto the main walking track. We walked back to the Mount Ginini carpark, spirits buoyed by the plethora of flowering native forbs, Flame Robins (such as the male in photo below by Andrew Zelnik) pouncing and retreating before us along the track, and a rainbow to the east.



Pryor's Hut. Photo: Andrew Zelnik.

...continued next page

Memorial service for Laurie Adams on Mount Gingera, ACT–NSW, continued

Of course, in a fitting tribute to Laurie, many of us took the opportunity on the way up to Mount Gingera and on the way back to do a bit of botanising and to appreciate the mountain landscape, the fauna, and the aforementioned abundance of native plants still in flower.



(Above) Deep duplex soil profile beside the track, and a grasshopper (below).
Photos: Andrew Zelnik



Of special significance, a short distance to the south of Pryor's Hut, were a few small patches of a flowering subspecies of the Native Gentian, *Gentianella muelleriana* subsp. *jingerensis* (L.G.Adams) Glennie (syn. *Chionogentias muelleriana* subsp. *jingerensis* L.G.Adams), one of many gentian species Laurie has described and named. The Australian Plant Name Index (APNI) etymology indicates 'The epithet is derived from Mt Gingera, Namadgi National Park, the type locality. The use of the initial "J" rather than "G" has been adopted to reflect more objectively the Aboriginal phonetic jingera (= a remote and mountainous forested region); ...'.



Native Gentian, discovered and named by Laurie Adams. Photo: Andrew Zelnik



(Above) Billy Buttons *Craspedia* sp.
Photo: Andrew Zelnik

(Left, above) *Euphrasia* sp. on slope of Mt Gingera. Photo: Geoff Robertson.

(Left, below) Mountain Lettuce *Podolepis robusta* north of Pryor's Hut.
Photo: Andrew Zelnik.

(Right two photos) *Brachyscome* sp. in two colours on Mt Gingera.
Photos: Andrew Zelnik.



In conclusion, the memorial service was a poignant, joyous, and uplifting experience which it was a privilege to have attended and participated in.



(Above) *Xerochrysum* sp., Everlastings, north of Pryor's Hut.

Our thanks go to Teena Harkins and Maggie Nightingale for their overall organisation and coordination, and to Margaret Ning for her coordination on behalf of FOG. We also acknowledge the excellent assistance of ACT Parks and Conservation's Michael Harrison, Ranger in Charge – Murrumbidgee, for providing permission to conduct the service in a wilderness area, for access and logistic support, for finding two lost party members and guiding them in person, and for spraying down the undercarriage of those cars travelling the wilderness track in from Mount Ginini carpark.



Making a good recovery

(an interview with Jamie Pittock on 'A Question of Balance', www.aqob.com.au)

Dr Jamie Pittock, Associate Professor of Environment and Society at ANU, is also a volunteer project coordinator with the community organisation Friends of Grasslands (FOG) and explains some of their success in the Australian Capital Territory.

'The Australian Capital Territory is an epicentre for the conservation of grassy ecosystems because, when the territory was created, the Federal Government compulsorily acquired all the freehold land. There was less incentive for owners to make pasture improvements or apply fertilisers, meaning that the grasslands are often in better condition. There were also many sites set aside for all sorts of government purposes, like the site for the proposed national museum, that were never developed. These sites retain a great deal of plant diversity and many threatened species that have been eliminated elsewhere in NSW and Victoria.

'One type of ecosystem that FOG is conserving is the 23 ha of lowland temperate grassland at Yarramundi Reach. Another is the 52 ha of grassy woodlands at Stirling Park. In 2009 FOG entered into a partnership agreement with the National Capital Authority (NCA), allowing FOG volunteers to enter those sites and do conservation work that required expert knowledge or a lot of labour, something that modern contractors don't know how to do or can't do cheaply. Since then some two-thirds of Stirling Park has been cleared of woody weeds, making a change from a weed-infested understorey to open grassy woodlands. The noticeable visual change over five years encourages volunteers to come back.

'Stirling Park is located near where people live. One negative aspect of that is that it attracts dumping of garden waste. This is counteracted by the development of a whole community of local volunteers who constantly watch the site, reporting problems to police or government land managers. This has led to a more successful governance of this public space. Indeed, the site was originally proposed for a new residence for the Prime Minister and subdivisions for embassies but this inspired local residents to join with FOG volunteers and commit to restoring the site.

'It is harder to attract volunteers to the temperate grasslands site, partly because it is located away from where people live and partly because many people have a harder time relating to a grassland. More skill is needed to identify the weeds in native grasslands, and herbicides are used which many volunteers don't like.

'FOG uses three different types of herbicides. Glyphosate, a broad spectrum herbicide, is daubed onto the stumps of woody weeds. It is used partly because it's less toxic and partly because it's cheaper. Broad-leaf weed sprays will leave the native grasses intact but kill invading herbs like St John's Wort. In some cases woody weed-specific sprays are used which will knock out plants like Blackberry. Qualified sprayers supervise such sprays, making sure that the volunteers are safe.

'The NCA has a very experienced man in charge of land management who has reinstated patch burning onto the sites, partly as an urban fire risk reduction measure. FOG has worked closely with him to schedule weed control activities. Weeds are removed a year prior to burning; the burning then kills off some of the weeds and seedlings that were missed.

This tandem work enhances the value of the work that each organisation does.

'Approving the patch burns in Canberra is a convoluted exercise. The bureaucracy is horrendous for the government staff involved. Leaflets have to be sent to all neighbouring residences for some distance from the site, and while it would be better for the ecology of the site to have more frequent burns the results are still fantastic. A lot of native wildflowers that were crowded out by over-mature grass tussocks have come back, a rewarding recovery.

'Maintaining the grasslands by burns also helps the fauna. The Striped Legless Lizard and the Earless Dragon lizard, for instance, need the shelter of grass tussocks, rocks and cracks in the ground along with open areas for hunting. These animals were once widespread over the plains on the Monaro Tablelands but overgrazing by livestock and kangaroos, pasture improvement that has removed native grasses, and weed invasion has seen their habitat shrink. Habitat also needs to be maintained for the Golden Sun (mouthless) Moth.

'A number of threatened plant species also occur in these habitats. Stirling Park is home to the second biggest remaining population of the wildflower Button Wrinklewort. Sadly, the beauty of native grasslands is often overlooked, and they are perceived as wastelands or long grasses sheltering snakes. Those people miss the beauty of wildflowers like *Dianella* and bluebells which would be right at home in gardens and city landscapes – instead of weed plants like *Agapanthus*. Hopefully, over time, people will come to appreciate them more. Just like the grasslands, they too should be making a good recovery.'

Interview reprinted with permission from AQOB, April 2015

Sarah Sharp is also interviewed, about Friends of Grasslands, on this website. See (shortened link) <http://bit.ly/1DBvGx3>

A grab about AQOB from its website:

Presented by Ruby Vincent, "A Question of Balance" is a grassroots environmental show that is aimed at the general community to show that we can do things to improve our environment and STILL maintain an enjoyable standard of living.

...

The stories and soundfiles from each radio program* are presented individually on this website which is maintained by Victor Barry and Ruby Vincent. Over time, the site has expanded into an evergrowing environmental resource. With the hundreds of interviews and stories now available on the site, the simplest way to find a particular topic, is to type a key word into the SEARCH window.

*Frequency 107.3 2ser

Cultivation corner: grassland species in cultivation

Autumn garden

Janet Russell

The garden looked rather sad, until the rain came. The birds have been some focus for us as the migrating honeyeaters stop for a while in our garden to frolic in the bird bath. We had ten Yellow-faced Honeyeaters and one White-eared Honeyeater for a while. We also had honeyeaters fly over in tens, nothing like the hundreds that fly across some of the migratory paths in Canberra. The insects are quiet although there is still evidence of their presence.

The pollinating project of the busy insects which visited the *Lomatia myricoides* Long-leaf Lomatia in the summer has born fruit. The plant started life in our garden as tube stock and was planted out in May 2005, and after its first substantial flowering the shrub is covered in seed pods (main photo) although many of them are now empty. The wings of the seeds (~2 cm long) are as thin as gossamer and there is a triangular corner which obviously contains the power-house (photo below). At first I thought that the seeds had rotted because so many of the corners were blackened and dotted with green. I found a photo of *Lomatia arborescens* Tree Lomatia seed however, and they have more or less the same structure and appearance. I am assuming that the seeds are viable and may try germinating them. Apparently they germinate readily from fresh seed.

Lomatia myricoides is designed for survival. It is hermaphroditic and this explains how it managed to produce so many pods of seeds as I do not think there are any other specimens growing locally. It also has a lignotuber to help it survive bushfires or drought. It grows naturally in moist, sheltered conditions in various ecosystems from wet



sclerophyll forest to the Monaro dry tussock grasslands. Our shrub is planted on the southern side of the house so it is sheltered but does not enjoy moist conditions. It seems to be thriving all the same. I didn't expect to see the results of the insect activity quite so quickly.

There was more surprising insect activity this summer – or it may be more accurate to say 'inactivity'. Andy had a rather nasty surprise when he picked up what looked like a very large seed pod. What he had not realised was that it was covered in a mass of spines that are very painful and which can be difficult to remove from the skin once there. I carefully picked the 'seed pod' up afterwards intending to throw it away in the bin as I thought it was from a feral garden plant. I shook it and I heard what sounded like a sizeable seed inside so I decided to cut it open. It was tough and fibrous and what I found inside was not vegetable but animal – a shiny brown chrysalis, about 4 cm long (photo bottom left, with the cocoon, 10 cm long). I spoke to a friendly entomologist and he responded straight away that it was a White-stemmed Gum Moth *Chelepteryx collesii*. He said it had probably fallen from a tree. I put the pupa back in its cocoon. It apparently emerges in autumn and is quite common in south-eastern Australia. Check out the CSIRO blog if you would like to know more – it also has a photo of its rather striking caterpillar.

Nothing stays the same. We will have to wait for late winter, early spring to see which of the plants benefited from the late rains and which ones missed moisture at the crucial time. The pattern of rainfall through the year determines the composition of the regeneration of the garden. There was very little *Hibbertia* flowering this season for some reason, but the plants were spared the ravages of the caterpillars that often descend on some of them in numbers, denuding them of leaves. Nature moves in mysterious ways – mysterious to me at least.



Robber Fly and Scorpion Fly, an accomplished insect predator and a gymnast

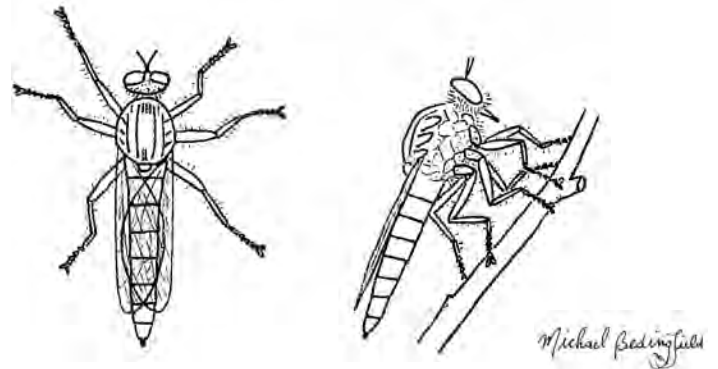
Michael Bedingfield

The world of insects contains an incredible variety of shapes and forms, and they have adapted to live in a multitude of situations. In summer when they are most active, I come across a something new and different quite frequently. In grassy ecosystems they dominate the biodiversity in numerical terms.

The Robber Fly and Scorpion Fly both prey on insects, and they both perch on vegetation and wait for an unsuspecting creature to come along, but they have different ways of catching their prey.

The Robber Fly (drawing at right) comes from the order Diptera, the family Asilidae. It is also known as the Assassin Fly, these common names coming from its aggressive, ambushing behaviour. The larvae are cylindrical-shaped grubs that are tapered at the front and back. They live in the soil or rotting wood. The adults are characterised by having large eyes and excellent vision, and strong legs that point outward from the large thorax. They have a long thin abdomen. When at rest, their single pair of wings is held parallel and above the abdomen.

They are good fliers, and will perch on a twig, branch or grass stem, or on the ground, and will spring quickly off their powerful legs to catch slow or fast flying insects as they flutter or zoom past. Some species catch insects that have landed nearby. They are capable of overcoming creatures larger than



themselves, such as dragonflies. With a firm grip on the captured insect they will inject it with neurotoxins and digestive enzymes. They have a sharp proboscis for sucking the body fluids.

The female is recognisable by the ovipositor at the tip of the abdomen. She is more aggressive than romantic, and a courting male approaches cautiously so she won't attack and eat him! They prefer habitats with open or scattered vegetation, including grasslands and woodlands. They are very common, and can be seen in town perching on garden plants and clotheslines. About 340 species have been described for Australia, but the total number is higher, and there are over 7000 described species worldwide. The specimen in the drawing was about 20 mm long, but they can be smaller or larger.



Scorpion Fly with Billy Button, ACT. Photo: Michael Bedingfield

Scorpion Flies (photo at left) are classified in the order Mecoptera. They are not related to Scorpions, but the common name relates to some species in which the male's sex organs look similar to the sting of a Scorpion. They also curl their abdomen back in the same way, but are quite harmless. Scorpion Fly larvae look similar to caterpillars and live in the soil or in ground debris. The food taken varies by species; some are predatory and others eat dead plants and insects. The adults have two pairs of wings, long spindly legs, and claws for gripping. They have biting and chewing mouthparts at end of a beak-like structure on the head, and good vision with their compound eyes. Both larvae and adult live in moist environments, such as marshes and soaks. The adult's diet also varies with species, and mainly consists of other insects, but they may also eat pollen, nectar and mosses. In some species a courting male will offer the female a gift of an insect as food, which she eats while they mate. They are sometimes called Hanging Flies. When hunting they use their forelegs to hang from low vegetation, and capture small passing insects with their hind-legs. Their flexible claws will snap tight to hold a small insect. My photograph shows an adult clinging to the flower of a *Craspedia variabilis* (Billy Buttons). This patch of daisies was growing in a drainage line that is usually wet and boggy in spring, in an area of grassy woodland. The insect's body was about 25 mm long. There are about 550 described species worldwide.

Robber and Scorpion Flies are very much a part of the drama of living and surviving in the diverse world of insects and other small creatures, and are worth looking for when you are out and about.

References. These websites: csiro.au, en.wikipedia.org, australianmuseum.net.au, pir.sa.gov.au. The book *Encyclopedia of insects and arachnids* by Maurice and Robert Burton (1984).

Contacts for FOG groups and projects

Refer to the website, www.fog.org.au, for more information

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Promoting wider knowledge of grassy landscapes

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Old Cooma Common, NSW, margaret.ning@fog.org.au

Education: Southern Tablelands Ecosystems Park (STEP)
at National Arboretum Canberra: secretary@step.asn.au

Activities: activities@fog.org.au

Media spokesperson: Sarah Sharp (0402 576 412)

FOG activities in May, June & July

Date	Activity	Contact
Sat 2 May	Poplars, Queanbeyan, workparty	john.fitzgerald@fog.org.au
Sun 3 May	Stirling Park workparty	jamie.pittock@fog.org.au
Wed 13 May	Stirling Park workparty	pmcghie@optus.com.au
Mon 25 May	Umbagog Blue Devil grassland visit	margaret.ning@fog.org.au
Sun 31 May	Stirling Park workparty	jamie.pittock@fog.org.au
Sun 28 June	Stirling Park workparty	jamie.pittock@fog.org.au
Sat July t.b.a.	Mid-winter talk at Mugga Mugga with guest speakers	david.crawford@fog.org.au
Sat 25 July	Tree Week walk in the Parliamentary Triangle	paul.archer@fog.org.au
Sun 26 July	Stirling Park workparty	jamie.pittock@fog.org.au

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Alert! Final call for membership renewals

President's report at AGM 2015

News from the FOG Committee

News roundup

– Gungahlin Valley Ponds launch, Friday 20 April

– Stirling Park restoration plantings saved by water tank

– Hall Cemetery, 7 March and 11 April

– Call to help restore McLeods Creek NR, 1 May & 8 May

– Activities coming up – other groups

– 'Native Grasslands' ASOC art show, Kathryn Wells

– Launch of Bush Heritage Australia's research strategy

Serrated Tussock – a partly misleading name? *John Fitz Gerald*

Memorial service for Laurie Adams, *Andrew Zelnik and*

Paul Cheeseman

Jamie Pittock interviewed on *A Question of Balance*

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Robber Fly and Scorpion Fly, *Michael Bedingfield*

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