

South West Native Title Settlement *By Simon Choo*

Issue 95

Spring 2015

*Time of Djilba and
Kambarang in the
Nyoongar calendar.*

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*Premier Colin Barnett with Noongar Elders.
Photo – Department of the Premier and Cabinet.*

On 8 June 2015 the State Government executed six South West Native Title Settlement Indigenous Land Use Agreements (ILUAs), covering 200,000km² of the south-west. The signing was significant as it represented the State Government's commitment to the largest and most comprehensive agreement to settle Aboriginal interests over land in the history of Australia.

The native title claims are Whadjuk (covering Perth metropolitan), the South West Boorah (Busselton, Pemberton, Nannup) and Harris Family (Yallingup, Margaret River), Ballardong (York, Northam, Hyden, Kondinin), Wagyl Kaip (Katanning, Gnowangerup, Albany), Yued (Jurien, Moora, Lancelin, Gingin) and Gnaala Karla Boodja (Mandurah, Bunbury, Donnybrook).

The settlement will bring enduring benefits for Western Australia and its Noongar community, and includes approximately \$1.3 billion in land and other benefits. While there are still legal procedures to be completed, it is hoped the full agreement will start to be implemented by mid-2016.

Noongar people will engage with Department of Parks and Wildlife to make decisions about how the conservation estate is managed. This will contribute to a new and lasting relationship between Noongar people and Parks and Wildlife based on the recognition of each party's connection to and responsibility for the land within the conservation estate, including:

- Noongar peoples' input into appropriate place names and signage in conservation areas.
- Options for Noongar small business and contracting opportunities (e.g. future tourism, accommodation development) in relation to the conservation estate.
- Improved employment opportunities for Noongar people on conservation estate.
- Noongar peoples' input into other Parks and Wildlife policies such as fire management plans.

This is an historic step and an opportunity for greater collaboration and strengthened partnerships between Noongar people, the State Government and its agencies such as ours.

Contact: Simon Choo, Department of Parks and Wildlife. 9219 9799 or [email](mailto:simon.choo@dpaw.wa.gov.au).

Urban Nature Update By Julia Cullity

Enjoy the bush in spring

This spring Urban Nature will run two guided nature walks to show the values that make Bullsbrook Nature Reserve and Bandicoot Brook special and to encourage community involvement. We will give you an insight into the plants, plant communities and animals that live in these reserves on the edge of our city, as well as discuss some of their management issues. Please join us on 24 October at Bullsbrook Nature Reserve and 31 October at Bandicoot Brook Reserve, Waroona. These two-hour walks will start at 9am and finish with morning tea. Please ring Julia 9442 0320 or [email](#) to register your interest or for more information.



Join Urban Nature for a walk in Bullsbrook Nature Reserve on 24 October.



Or come to Bandicoot Brook, Waroona on 31 October. Or come to both! Photos – Kate Brown.



The Natural History and Management of the Shoalwater Islands and Marine Park seminar was a great success with over 50 people attending. Presentation topics ranged from long-term studies on sea birds and the changing vegetation of the Shoalwater Islands to human impacts on sea lions and historical management of Penguin Island. For those who couldn't make it and for those who did, we are aiming to publish proceedings before the end of this year. We'd also love to hear from anyone interested in taking part in a rejuvenated friends group for the Shoalwater Islands; get in touch with us at [Urban Nature](#). Photo – Grazyna Paczkowska

I recently attended the inaugural Australian Citizen Science Association [conference](#) in Canberra. Over two days, the conference packed together loads of discussions, case studies and posters about objectives, planning, data collection and validity, technology, and the social interactions that enable citizen science to generate great research and management outcomes. Presentations ranged from international or national-scale projects like [Eremaea eBird](#) and the [Atlas of Living Australia](#) to more site-specific projects like [Prawn Watch](#) and water quality in the [Warrumbungle National Park](#).

Scientists were encouraged to give better feedback and to engage, communicate and promote how community involvement has improved understanding, management and decision-making

about biodiversity. Yes, biologists and naturalists were well-represented at the conference, but there was also a smattering of astronomers and health professionals. We will try to present some of the great projects I heard about in future articles.

This is Jill Griffiths' last issue as editor of *Bushland News*. Thank you Jill for the work you have put in over the past two years to bring us a great read. I will be taking on the editing role from next issue so everyone be gentle with me and I hope the standard doesn't slip too far. I'd like *Bushland News* to continue to be a forum that promotes your knowledge and experiences of bushland management, so please keep the [contributions](#) coming.

Summer *Bushland News*

Summer *Bushland News* contributions should be sent to [Urban Nature](#) by **Friday 27 November 2015**. *Bushland News* seeks original contributions. If your submission has been or may be published elsewhere please let us know.

This publication is available in alternative formats on request.

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Current and archived issues of *Bushland News* are available at www.dpaw.wa.gov.au/bushlandnews.

Reptiles need long-unburnt refuges

By Rob Davis

Reptiles in urban environments are particularly sensitive to disturbances such as fire due to their limited ability to disperse and recolonise. In a recently published [study](#) we monitored the recovery of the reptile population in Kings Park for five years following a summer bushfire. Our study used pitfall traps at five burnt and five unburnt sites within the park.

The good news is that the reptile community recovered quickly after the fire. Unburnt sites initially had a higher number of species and total abundance, but burnt sites rapidly converged, recording a similar total abundance to unburnt areas within two years, and a similar number of species within three years.

We found some species had a strong preference for unburnt areas and were never found in burnt areas, perhaps because of their reliance on leaf litter for habitat. No species showed a strong preference for recently burnt areas. These findings have implications for land managers and highlight the need to maintain long-unburnt patches within urban bushland remnants to help ensure the future persistence of a diverse urban reptile fauna. Systematic fire mapping and information on species ecology should be used to inform fire management guidelines.

Contact: Dr Robert Davis, Edith Cowan University. 6304 5446 or [email](#).



Gould's monitor was among the reptiles captured in the study.
Photo – Rob Davis.

Counting quenda



You can sign up to help count quendas this spring.
Photo – Alan Danks.

By Rebecca Boyland (WWF)

The 2015 Spring Quenda Count is now underway across south-west Western Australia.

This is the third consecutive year that WWF-Australia and the Department of Parks and Wildlife have run this popular citizen science event. The last two years have received a wonderful response, with 157 sites surveyed by 147 observers in 2013, and 139 sites surveyed by 140 observers in 2014.

The data collected during each count will help improve our understanding of how quendas (southern brown bandicoots) are surviving in urbanised areas. The count provides more than just individual sightings. It gives us an idea of how many animals there are and how these numbers change over time, while also giving us a better understanding of specific behaviours, breeding and threats.

To participate in the count, quenda observers are asked to pick a survey site approximately 50m by 50m and survey the area for quendas, as well as their tell-tale conical-shaped diggings, for two or more days within one week.

If you would like to help count quendas this spring, please [email](#).

EPA releases interim advice on Perth and Peel @ 3.5 million

In August the Environmental Protection Authority (EPA) released its interim strategic advice on *Perth and Peel @ 3.5 million*. The EPA backed plans for a more compact city to accommodate 3.5 million people in the future as the best way to protect our environment in the long term.

The EPA said the city could grow without compromising biodiversity, water availability

and quality, air quality and amenity – provided proactive strategies were put in place.

The advice focuses on the 9000km² region from Two Rocks to Myalup and from the coast to Wooroloo and Lane Poole Reserve in the east. It delivered 36 recommendations focusing on air and water quality, improving the

Swan and Canning rivers and Peel-Harvey Estuary as well as measures to protect biodiversity, the marine environment, human health, heritage and amenity. The EPA will deliver its final strategic advice in 2016.

[Download](#) a copy of the EPA's interim advice.

Protecting wild native rose: the role of weed management and fire

By Kate Brown and Cathy Bourke

For the last four years the Urban Nature Program and Parks and Wildlife's Perth Hills District have been working in one of the State's oldest national parks to gain a better understanding of the role of weed management and fire in recovery of rare flora. Wild native rose (*Diplolaena andrewsii*) is known from around 600 individuals across only two populations 17km apart on the Darling Scarp near Perth. A small shrub, up to one metre in height, with densely star-shaped hairs on the leaves, it is named for its deep red flowers that are produced through winter and spring. Its preferred habitat is wandoo and marri woodlands along hillsides among granite outcrops with the main population occurring in John Forrest National Park.

A major threat to populations of wild native rose is competition from weeds, particularly watsonia (*Watsonia meriana*), which invades relatively intact vegetation and forms dense stands along the Darling Scarp including critical habitat of the wild native rose. Fire facilitates invasion leading to profuse flowering after fire followed by prolific seed set, bulbil production and seedling recruitment in the following years.



Wild native rose. Photo – Kate Brown.



Watsonia invading critical habitat at our trial site. Photo – Kate Brown.

In spring 2010, serious weed invasions and fire history were mapped across the populations of wild native rose as part of a State NRM project addressing recovery actions for threatened flora. The maps formed the basis of a habitat restoration plan for the species including a recommendation to set up trials for managing watsonia where it was invading critical habitat.

Management trials

[Previous work](#) in banksia woodlands and seasonal clay-based wetlands indicates watsonia can be controlled very effectively with the herbicide 2,2-DPA (Dalapon) with little impact on co-occurring native species. In August 2011 a series of control and treatment plots were established where wild native rose occurred among dense infestations of the weed. Plants of wild native rose were tagged and numbered, and watsonia treated with 2,2DPA in September just before flowering, on corm exhaustion.

Population decline

The 2,2-DPA was very effective at controlling watsonia in the first year of treatment. However over the following three years, across both treatment and controls (no herbicide) there was a dramatic decline in the number of live adult plants of wild native rose. By 2014 the number of live adult plants in control plots had decreased by 97.5 per cent and in the herbicide treatment plots by 96.8 per cent.

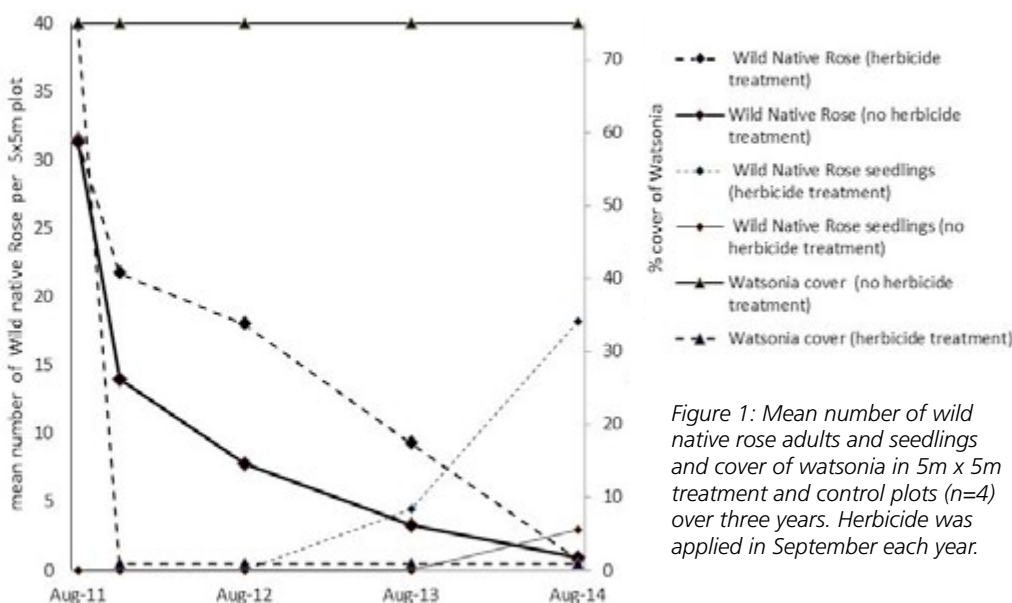


Figure 1: Mean number of wild native rose adults and seedlings and cover of watsonia in 5m x 5m treatment and control plots (n=4) over three years. Herbicide was applied in September each year.



Wild native rose growing in woodland on the Darling Scarp. Photo – Kate Brown.

Given that the decline occurred across treatment and controls, it did not appear to be related to the herbicide application. Interestingly there was quite prolific seedling recruitment in 2014. This occurred mainly in the herbicide treatment sites where there was no longer competition from watsonia.

The role of fire?

Wild native rose does not resprout following fire but appears to persist in the soil seed bank, with prolific germination following fire. Little is known about seedling survival post fire, time to first flowering or adult survivorship. Studies in south-eastern Australia indicate that other small shrubs in the same family as wild native rose, Rutaceae, may survive for only 10 years after fire. Interestingly fire history maps indicated our trial sites were last burnt in 2004. In addition new populations have been discovered in John Forrest in an area burnt four years ago. Indications are the decline of wild native rose at our trial site is linked to time since fire.

Management implications

- To best manage this species and ensure its conservation, we need a greater understanding of the role of fire in the persistence of populations over time. We require a detailed understanding of time to first flowering, adult survivorship and longevity of the soil seed bank.
- While fire may play a role in persistence of the species over time, fire also facilitates recruitment and persistence of watsonia.
- Control of watsonia before fire is integral to preventing spread and establishment of the weed and to ensuring successful post fire recruitment of wild native rose.
- By attempting to understand appropriate management for wild native rose and its critical habitat we hope to gain a better understanding of appropriate management of fire and weeds across John Forrest National Park.

Contact: Kate Brown, Parks and Wildlife by [email](#).

Myrtle rust – vigilance required By Julia Cullity

Myrtle rust is on the move and warmer weather is the time to keep an eye out for its distinctive bright yellow spores or pustules. Young infections often begin as purple leaf spots and in older infections the pustules can turn grey and withered. Myrtle rust only affects plants from the Myrtaceae family, which includes eucalypts, paperbarks and bottlebrushes.

Myrtle rust was first detected in New South Wales in 2010 and has since spread along the eastern seaboard. This year new outbreaks have been detected in Tasmania and the Northern Territory, 550km from Kununurra. Although it has not yet reached WA, its potential to do so is of great concern because more than 1500 native myrtaceous species occur in WA with the south-west hosting the most species of Myrtaceae in Australia. Rust spores can be spread by wind and animals but the most likely pathway into WA would be through human movement of contaminated nursery stock, freight or on the clothes,

equipment or vehicles of tourists and travellers, especially bushwalkers.

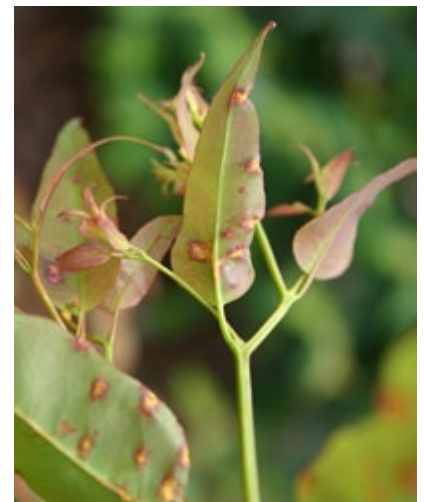
Originally from South America, the disease is caused by the fungus *Puccinia psidii* and affects healthy plants, attacking young foliage and buds leading to suppressed growth, loss of foliage, flowers and fruit and even death. If introduced to WA it could cause significant changes to our flora, with flow-on effects to fauna, however early detection and reporting will give us the best chance of minimising the impact and attempting to eradicate it.

What can you do?

- Learn to recognise myrtle rust.
- If you see myrtle rust don't take a sample or touch it, do take photos of the symptoms, the plant and precise location details. Contact the Exotic Plant Pest Hotline on 1800 084 881 and the local land manager.

More information

[Arrive Clean, Leave Clean](#) Department of Agriculture and Food WA [website](#) Parks and Wildlife [website](#)




Only myrtle rust causes bright yellow masses of spores on myrtaceous plants. Remember to look at the underside of the leaf, a preferred location, but take care not to disturb the spores as they are easily transported on clothes, skin or personal effects. Take photos, not a specimen, to report it. Photos – Geoff Pegg.

what's on


Opportunities for you to take part. Visitors always welcome but please confirm activities with the contact person. Most activities are FREE!

Recurrent activities


Saturdays 15 minutes before sunrise

 **Research into bird populations** with the **Herdsmen Lake Bird Banding Group**. Contact Bill Rutherford (ABBBS Coordinator) 0438 910 252 or [email](#).


Saturdays 8am–10am

 **Bushcare and rivercare activities** with **Bicton Environmental Action Group**. Second and fourth Saturday of each month. Contact Peter [email](#) or 0439 467 855.

Saturdays 8am–9.30am

 **Herdsmen Lake Bird Walk**. Third Saturday of each month. Meet at Herdsmen Lake Wildlife Centre, corner Flynn and Selby Sts Wembley. BYO sturdy shoes and viewing equipment. Gold coin donation. WA Gould League 9387 6079.


Saturdays 8am–9am

 **Guided walks** with Friends of **Koondoola**. Second Saturday of each month. Meet Gate 2, corner Koondoola and Burbridge Ave.


Saturdays 8am–9am

 **Guided walks** and meeting with Friends of **Landsdale**. First Saturday of each month. Meet at third gate Landsdale Rd, east of Landsdale Farm School, Darch.

Saturdays 8.30am–10.30am

 **Bushcare activities** with Swan Estuary Reserves Action Group at **Alfred Cove** A-Class Nature Reserve. Fourth Saturday of each month. Contact Cathie 9339 2439 or [email](#).

Saturdays 9am

 **Bushcare activities** with Friends of **Brixton Street Wetlands**. Third Saturday of each month. Meet Alton St, Kenwick. Contact Regina [email](#) or 9459 2964.


Saturdays, Sundays 9am–12 noon

 **Koala maintenance** at **Yanchep National Park**. Call Ciara 9303 7771.


Sundays

 **Wilson Wetlands** Action Group undertakes regular Sunday work mornings throughout the year. Contact 9258 7301 or [email](#).


Sundays 8am–9am

 **Guided walks** with Friends of **Marangaroo**. Fourth Sunday of each month. Meet at Gate 3, Decourcy Way.


Sundays 8am–10am

 **Bushcare activities** each Sunday with Friends of **Shenton Bushland**. Contact Dani 9381 3470 or [email](#).


Sundays 8am–10am

 **Bushcare activities** with the Friends of **Booragoon** and **Blue Gum Lakes**. First Sunday of each month. Contact Mary-Ann 9316 9716 or [email](#).

Sundays 8.30am

 **Bushcare activities** with Friends of **Wireless Hill**. Second and fourth Sunday of each month. Meet at main carpark. Contact Margaret 0402 105 649 or [email](#).


Sundays 8.30am–9.30am

 **Guided walks** followed by meeting with Friends of **Mirrabooka**. First Sunday of each month. Call Jan 9344 2872.


Sundays 9am–11am

 Friends of **Lake Claremont** busy bee and morning tea, second Sunday of each month. Meet at the south end of Strickland Street, Swanbourne. Current focus: hand weeding. Wear closed in shoes, hat and long-sleeves. Gloves and tools provided. Contact 0416 614 696 or [web](#).


Sundays 9am–11am

 **Bushcare activities** with **Cottesloe** Coastcare. First Sunday of each month. Contact Robyn 9384 7668, [web](#) or [email](#).


Sundays 9am–12noon

 **Bushcare activities** with the Friends of the **Spectacles** (Kwinana). Third Sunday of each month. Contact Lynda 0419 983 956 or [email](#).


Sundays 9.45am–12 noon

 **Bushcare activities** with the Friends of **Piesse Brook**. Third Sunday of each month. Contact Gerry 9293 2517 or [email](#).

Mondays 7am–8am

 Norma's Monday Morning **Weeding Group**. Friends of **Lake Claremont**. Learn basic hand weeding techniques and identification. Meet south end of Strickland Street. Phone 0413 282 515.


Mondays 9am–11am

 **Litter collection** with Swan Estuary Reserves Action Group at **Milyu** A-Class Nature Reserve, **South Perth**. Second Monday of each month. Contact Cathie 9339 2439 or [email](#).

Mondays, Wednesdays, Fridays 9am–12 noon

 **Bushcare activities** and wetlands walk trail maintenance with **Yanchep** National Park Volunteers. Call Ciara 9303 7771.


Tuesdays 7am–9am

 **Bushcare activities** with Swan Estuary Reserves Action Group at **Alfred Cove** A-Class Nature Reserve each Tuesday. Contact Cathie 9339 2439 or [email](#).


Tuesdays and Thursdays, 8am–10am

 **Coastal dune bushcare activities** – weeding and planting. Stirling Natural Environment CoastCare (SNEC). Contact Sheldon 0488 190 651, Rae 0419 191 710 or [website](#).

Wednesdays, 3pm–5pm during school term

 **Wildlife Wednesdays**. Join 'Eco-Warriors' at **Herdsmen Lake** Wildlife Centre. Contact 9387 6079 or [email](#).


Thursdays 8am–9am

 **Bushcare activities** every Thursday with **Byford** Enviro-Link. Call Kristy 9526 0199.

Thursdays 9am–1pm

 **Bushcare activities** in **Margaret River** with the Capes Volunteer Team. Call 9757 2202.


Thursdays 9am–11am

 **Bushcare activities** fourth Thursday of each month at **Baldivis** Children's Forest. Contact [website](#) or [email](#).


Thursdays and Sundays 10am–12 noon

 Every Thursday and Sunday, **Kanyana Wildlife Centre**, Discovery Centre Tours. Close encounters with native animals and interactive Discovery Centre. \$15/adult, \$10/child, \$12/senior, \$40/2A2C. Bookings essential [web](#), 9291 3900 or [email](#).

Thursdays or Fridays 9am–4pm


 Wetland, bushcare and nursery activities with **Cockburn Wetlands** Centre. Contact Denise 0412 081 540 or [email](#).

Fridays and Saturdays 7pm–9pm


 First Friday and second Saturday every month, **Kanyana Wildlife Centre**, Nocturnal Tours. Meet nocturnal native wildlife and hear about endangered species breeding programs. \$20/adult, \$12/child, \$55/2A2C. Bookings essential [web](#), 9291 3900 or [email](#).

October


2 Friday, 10am–2pm

 **World Animal Day**, meet wildlife conservation groups and their native animals and learn what you can do to help them. \$8 per person. Bookings essential. [Piney Lakes](#).


2 Friday, 7.30pm

 **Kimberley during the wet season** with Matt Barrett [WA Nats \(P\)](#).


4 Sunday, 9.30am

 Excursion to **Ellis Brook** Valley Reserve with Perth Branch WA Naturalists, call 0488 517 104.


3 Saturday, 9am

 **Free walk** with Friends of **Bold Park** Bushland Volunteer Guides. [BGPA](#).


4 Sunday, 4pm–6pm

 **Work day**. Friends of **Mary Carroll Wetland**. Meet car park Eudoria St Gosnells. Tools and morning tea supplied. Call Unice 0434 831 230.


5 Monday, 9am

 **Work day**. Friends of **Mary Carroll Wetland**. Meet car park Eudoria St Gosnells. Tools and morning tea supplied. Call Unice 0434 831 230.


8 Thursday, 9am

 **Free walk** with Friends of **Bold Park** Bushland Volunteer Guides. [BGPA](#).


9 Friday, 7.30pm

 **Numbats in Western Australia** Project Numbat Inc [WA Nats \(DR\)](#).


10 Saturday – 11 Sunday, October, any time

 **11th Annual Western Australian Beach Clean Up**
All clean up materials are provided, all you need is a pair of hands and some energy to spring clean our beaches. Contact [web](#), [email](#) or 0437 511 620.

11 Sunday, 9am


 **Free walk** with Friends of **Bold Park** Bushland Volunteer Guides. [BGPA](#).

13 Tuesday, 6pm–9pm

 Beyond Gardens' **Bush Foods in the Backyard** Seminar. Free. Held at **Piney Lakes** but [bookings](#) at Beyond Gardens.

Please send us your January, February and March 2016 events by Friday 27 November 2015.

Activities key

 **Hands on** – bushland and wetland management activities.

 **Walks and tours** – look, listen and enjoy guided walks and excursions.

 **Skills development activities** – talks, presentations, training courses and workshops.

 **Meetings and events** – group meetings, expos, festivals and conferences.

Registration/contact details

BirdLife WA Phone 9383 7749
Monday – Friday 9.30am – 12.30pm or [email](#). All walks are free. Bookings not essential.

BGPA Bold Park Bushland Volunteer Guides. Walks leave from the Tuart car park on Perry Lakes Drive, City Beach. Contact [web](#), 9480 3996 or [email](#).

Piney Lakes Environmental Education Centre, Leach Highway, Winthrop. [Bookings](#).


WA Nats (P) Perth Branch WA Naturalists
Hew Roberts Lecture Theatre, UWA, Clifton St, Nedlands.

WA Nats (DR) Darling Range Branch
WA Naturalists CWA Hall, Central Rd, Kalamunda. Call 0407 906 620.

WA Nats (NS) Northern Suburbs Branch
WA Naturalists Henderson Environmental Centre, Groat St.

WA Nats (KRM) Kwinana, Rockingham, Mandurah Branch WA Naturalists Call 9524 2290.

17 Saturday, 7.30am

 **Bird survey.** Kings Park, meet corner Saw Ave and May Dr. [Birdlife WA](#).


17 Saturday, 9am

 **Free walk** with Friends of Bold Park Bushland Volunteer Guides. [BGPA](#).


18 Sunday

 **National Bird Week** launch. Walks and talks, learn about and meet rare birds, kids competitions, photo exhibits. **Bold Park Ecology Centre** and Peregrine House. [Email Birdlife WA](#).

18 Sunday, 2pm

 Excursion **Wilkins Road Reserve, Kalamunda** with Darling Range Branch WA Naturalists, call 0407 906 620.


21 Wednesday, 7.30pm

 **How plate tectonics shape our world** with Jenny Bevan [WA Nats \(NS\)](#).


22 Thursday, 7.30am

 **Bird walk. Lake Monger,** Cambridge meet at the most westerly car park off Lake Monger Dr. The walk will take two to three hours. [Birdlife WA](#).


23 Friday, 8am–3.45pm

 **Canoeing on the Canning** experience the river and its floodplain by boat on this professional development day for teachers, youth group leaders and community group members. \$55, contact SERCUL 9458 5664 or [email](#).


24 Saturday, 9am–11am

 **Bullsbrook Nature Reserve** guided walk with Urban Nature. Ring Julia 9442 0320 or [email](#).


25 Sunday 8am

 **Bird walk.** Bibra Lake, Cockburn meet in the first car park at the northern end of the lake off Progress Dr. [Birdlife WA](#).


25 Sunday, 9am

 **Free walk** with Friends of Bold Park Bushland Volunteer Guides. [BGPA](#).


25 Sunday, 9am–11am

 **Baigup Wetland work morning.** Park end of Milne St, Bayswater, walk under Garret Rd Bridge, look for wetlands work day sign. Contact 0435 270 307.

25 Sunday, 10am


 Excursion to **John Forrest** National Park with Rick Curtis. [WA Nats \(KRM\)](#).

31 Saturday, 9am–11am


 **Bandicoot Brook Reserve,** Waroona. Urban Nature. Ring Julia 9442 0320 or [email](#).

November


6 Friday, 7.30pm

 **Bush Flies and Dung Beetles** with John Matthiessen [WA Nats \(P\)](#).

8 Sunday, 10am

 Excursion **Lake Clifton** stromatolites with Perth Branch WA Naturalists, call 0466 360 022.


12 Thursday, 8am

 **Bird walk. Pelican Point,** Crawley, meet at gazebo at the end of Australia II Dr, Crawley). [Birdlife WA](#).


13 Friday, 7.30pm

 **Nocturnal birds and nest boxes** with Simon Cherriman [WA Nats \(DR\)](#).

14 Saturday, 7.30am

 **Bird walk. Lake Claremont.** Meet at Lake Claremont Golf Club car park, Lapsley Rd, Claremont. [Birdlife WA](#).

15 Sunday, 8.30am–12 noon

 **Plant sale.** Exhibition Ground (off Fraser Ave) **Kings Park.** A rare chance to buy unusual native plants. All funds from the plant sales support projects and research in Kings Park and Botanic Garden, visit [website](#).


18 Wednesday

 **Wasp watching** with Terry Houston [WA Nats \(NS\)](#).


20 Friday, 7pm–9.30pm

 **Night Stalk.** Friends of Mary Carroll Wetland. Meet car park Eudoria St Gosnells. Call Unice 0434 831 230.


22 Sunday, 9am

 **Beach Sweep – Shoalwater Bay** [WA Nats \(KRM\)](#).


22 Sunday, 2pm

 Excursion **Victoria Reservoir – Walliston** with Darling Range Branch WA Naturalists, call 0407 906 620.

21 Saturday, 9.30am–1.30pm


 **Bush Survival for Families** with Vanessa Paget. Learn essential advice for surviving in Australian bushlands, such as location, building shelter and finding food. \$7 per person. Bookings essential. [Piney Lakes](#).

24 Tuesday, 5pm–7pm


 **Bidi Katitjiny Aboriginal Women's Trail, Guided Tour and Tucker.** Join us for a walk and yarn with a local Aboriginal woman, then a bit of tucker prepared using native spices. \$7 per person. Bookings essential. [Piney Lakes](#).

December


5 Saturday, 7.30am

 **Bird walk.** Big Carine Lake. Meet in car park off Beach Rd, Carine. [Birdlife WA](#).


6 Sunday, 9am

 Excursion **Penguin Island,** [WA Nats \(KRM\)](#).

6 Sunday, 4pm–6pm

 **Walk and work.** Friends of **Mary Carroll Wetland.** Call Unice 0434 831 230.

16 Wednesday 7.30am

 **Bird walk. Clarkson Reserve,** Maylands. Meet in car park on east side of the tennis courts off Clarkson Rd. [Birdlife WA](#).

Highlights

Sunlit Spring. A range of school holiday activities for different age groups ranging from 4–12. Activities include caving, canoeing, bush tucker, animal encounters and more. Daytime and nocturnal activities included. Contact *Nearer to Nature*, Perth Hills Discovery Centre, Mundaring, 9295 2244, [web](#) or [facebook](#).

Outdoors October. A month-long celebration of activities in the outdoors across WA. Visit the [website](#) to find or promote an event.

18 October – 24 October and 1 November – 7 November

Western ground parrot survey with Parks and Wildlife in Cape Arid National Park. Volunteers required to camp in remote areas with limited facilities. Good hearing is needed and the ability to walk through bush without tracks. [Register](#) your interest.

18 October – 25 October

Perup Voloutour Conservation and Science Safari tour with Global Gypsies company. Work with Parks and Wildlife scientists and conservationists on fauna research projects. Escorted, catered, cabin accommodation. Two-wheel-drive vehicles welcome. Fees apply. [Bookings](#).

19 October – 25 October

Aussie Backyard Bird Count during National Bird Week. Birdlife Australia's second annual nationwide bird survey. You need 20 minutes, a favourite green patch and good eyesight. [Register](#).

27 October – 31 October

Coast to Coast Conference 2014 – Coastal Knowledge for Coastal Change, a forum about coastal, estuarine and marine matters, Mandurah. Visit the [website](#).

23 November – 26 November

Australasian Wildlife Management Society Annual Conference 2015. Wildlife Management in a Changing Environment, a theme to reflect the rapid human changes caused by urbanisation, extraction industries and clearing, topics extremely relevant for the WA environment. Mercure Hotel, Perth. [Registrations](#).

Learning opportunities

Learning about fairy terns

The Conservation Council WA (Citizen Science Program) is pulling together a *South West Fairy Tern Project*, funded by the State NRM Office. Working with state agencies, local government, NRM and conservation groups and local communities it aims to develop local strategies and networks to conserve the threatened fairy tern (*Sternula nereis*).

There are two Australian meta-populations of fairy tern, one along the entire coast of WA south of Broome and the other in south-eastern Australia. Volunteers are invited to join a series of workshops and field days held along the coast this spring and summer.

- Turquoise and Silver Coasts (NAR) – Jurien Bay, 4 October
- Nornalup Inlet – Walpole, 16 and 17 October 2015
- Peel-Yalgourup – Mandurah, 5 and 6 December
- Abrolhos Islands – Rat Island, 12 and 13 December

Contact: Dr Nic Dunlop. 0409 014 030, [email](#) or tern project [email](#).

Kids learn to be bush scientists *By Felicity Bradshaw*

Primary school children, armed with notebooks, are leaving their classrooms and exploring nearby bush as scientists. *Be a Bush Scientist*, published by the Centre for Learning Technology, UWA, is a distilled version of my experience as Professor Don Bradshaw's research officer. I wrote the program, as a 'Scientist-in-Schools', in collaboration with a Year 1 teacher, exploring a bush corner in Woodlands as an 'outdoor classroom'.

Using the fundamentals of science, [the program](#) enables children to investigate different sites, record in their notebooks, measure and analyse their data. Although focussing on banksia woodland, it is successful in other areas of a schoolyard and is now integrated into the Australian Curriculum in Biological Sciences for years 1 to 4.

Please send us your regional report (150–200 words) and a photo by Friday 27 November 2015. Text may be edited in response to volume of submitted reports.

Healthy walks in the wetlands *By Donna Turner*

In May and again in August, the Friends of The Spectacles hosted two 5km walks around the largest lake of The Spectacles wetlands in Kwinana, with support from the City of Kwinana and funding for catering from the Heart Foundation.

The walk gave people a chance to view plants ranging from riparian to banksia woodland, along with birdlife and reptiles. A pair of tiger snakes sunning themselves on the track during the August walk helped speed up the pace. Walkers were able to study the impact fire has on the bushland and marvel at the regrowth that started in May.

The short boardwalk on the south side of the lake led us to a dry lake in May and so we were delighted to see water in the lake during the August walk. A number of people used our walking sticks, made from balgas and beautifully decorated by local Aboriginal residents.

People enjoyed seeing the diversity of plant and animal life in the area and then chatting over a healthy and tasty morning tea. These events are a great opportunity to showcase The Spectacles and to work with the City of Kwinana.

Contact: Lynda Smith, Friends of The Spectacles by [email](#).



After walking 5km, walkers enjoyed a healthy morning tea, sponsored by the Heart Foundation. Photo – Donna Turner.

Busy planting season at Lake Claremont *By Rose Senior*

The combined efforts of the Friends of Lake Claremont (FOLC), the Town of Claremont and a host of enthusiastic volunteers have led to a flurry of activity in the Lake Claremont bushland area throughout the 2015 planting season with 32,275 native seedlings planted.

This year the focus has been on two major projects. The restoration of a third of a hectare of buffer zone on one side of the wetland, funded with a SALP grant, aims to enhance wildlife habitat and protect the lake bed. The transformation of half a hectare of degraded land near the north-east corner of the lake into banksia woodland was funded with a State NRM grant. The site was a rubbish dump in the 1960s and our long-term goal is to provide a habitat for Carnaby's cockatoos.

More than 1000 volunteers participated in the 2015 planting season. This included students from local schools, university students, corporate groups, Conservation Volunteers Australia and large numbers of community volunteers and their families.

There have been a number of significant planting days.



Members of Shah Satnam planted almost 10,000 seedlings at Lake Claremont in the 2015 planting season. Photo – Heidi Hardisty.

- National Tree Day (26 July), when 120 volunteers from the Tzu Chi Buddhist Foundation combined with employees from Mitsui & Co Ltd and a handful of local people to plant 1500 seedlings.
- National Student Volunteer Week (8 August), when 70 students from Notre Dame, UWA, Curtin and Murdoch universities planted 2500 seedlings in wet and windy weather.
- Indian Independence Day (15 August), when members of the Shah Satnam Green S Welfare Force Wing planted 1265 seedlings.

Over recent years members of Shah Satnam have contributed enormously to our community. This year they have worked tirelessly on six occasions, planting almost 10,000 seedlings – nearly one third of the total. Twenty-five and sometimes 30 members of the Green S Force have worked with us on each occasion.

The Lake Claremont revegetation work has taken a high degree of organisation, commitment and generosity on the part of many individuals and organisations. Thanks to everyone! Initial inspection of the revegetated areas suggests that the majority of seedlings are thriving in their designated locations.

Contact: Friends of Lake Claremont by [email](#).

Carnivorous plants provide funds

By Tammy Pinkerton

A dedicated team at UWA's School of Plant Biology in Kings Park has come up with a new way to help fund the expansion of a living collection of carnivorous plant specimens for educational and display purposes.

In late 2012, Dr Shane Turner proposed a collaboration of research scientists and volunteers from the Friends of Kings Park propagate and sell potted carnivorous plants to home gardeners. The proposal was embraced with enthusiasm by a loyal team of volunteers known as the Orchid Carers.

On the eve of celebrating 10 years' work on the conservation of rare WA orchids, the group embarked on this new challenge of propagating and growing carnivorous specimens. Now known as the Orchid and Carnivorous Plant Group, volunteer Lyn Rowland explained that the new project has worked in well with their annual program propagating and maintaining the orchids.

The Friends of Kings Park now have two species of carnivorous plants available to the public: *Drosera binata*, a hardy insectivore that the Friends had been using for years in their glasshouse to snare insect pests such as fungus gnats and other small bugs. The pygmy drosera is a daintier and more ornamental predator, however both put on a striking display of flowers.

The relationship of science working together with the community, Dr Adam Cross explains, is a mutually beneficial cycle. The plants grown and sold help raise funds for projects such as the field trips, lab work and the living collection of the research team. This in turn helps the science team and volunteers develop a range of these intriguing plants for the public.

Contact: Tammy Pinkerton, King Park. 9480 3679 or [email](#).

Feral bees in bushland reserves *By Una Bell*

One problem that has not received much attention is the increase of feral bees in bushland reserves. Apart from taking food resources from native birds and animals, the bees are using nesting hollows for hives.

Black Cockatoo Reserve in Mundaring has seen an alarming increase in feral bees. In 2004 there were only six hives, but in April 2015, the number had risen to 36, and this was despite attempts to control the bees. Funding of \$5500 was successfully sought from SALP (2015) for BEE-GONE: Restoring Fauna Habitat in the Bugle Tree Gully Catchment. In order to gain a better understanding of the problem, and also to find a sustainable solution, UWA bee researchers have become involved in the project. We need to find the best method to control and manage bees, including those in backyard bee hives and manage bushland reserves.

So far, the Friends group, Green Army, and the Shire of Mundaring Bushcare Team have been involved.

At the moment we don't have all the answers, but we're working on it.

Contact: Friends of Black Cockatoo Reserve. 9295 1668.



Nesting hollow with feral bees, Bugle Tree Gully Park, Mundaring. Photo – Una Bell.

Rallying together for Ruabon-Tutunup

By South West Catchments Council

The Ruabon-Tutunup Rail Reserve is one of only two remaining intact vegetation linkages that cross the Swan Coastal Plain, from the scarp to the coast. The linkage provides important habitat and contains several occurrences of threatened ecological communities and threatened flora.

The South West Catchments Council (SWCC), Shire of Busselton and Parks and Wildlife staff have been working with adjacent landholders to protect and enhance the conservation values of the reserve since 2011. Over the past year, weed control, revegetation, pest animal control, dieback control and fire management activities have been undertaken.

In response to community requests to reduce fuel loads in the reserve, a fire management committee was established and prescribed burns were conducted in June 2015. It is hoped that natural regeneration will now follow and that species that have reduced in population size or are now uncommon in the reserve may germinate, increasing species. In the next three years, weed control in the reserve will have a particular focus on the areas that were burnt this year.

This project is supported by the SWCC, through funding from the Australian Government's National Landcare Program.

Contact: Sarah Molloy, SWCC. 9781 3112 or [email](#).

Crowd funding By Jill Griffiths

Crowdfunding has emerged as a credible means of gathering funds for a whole range of endeavours, including environmental projects. In essence, crowdfunding is an old form of sponsorship, whereby patrons (backers) provide money to creators. But the modern slant on it is that it is now facilitated over the internet, with host sites providing the platform for creators to tell potential backers about their project and facilitating a secure means of money transfer.

There are a range of crowdfunding sites, including [Kickstarter](#) and [Pozible](#).

Curtin University PhD student Ashleigh Wolfe successfully used Kickstarter to raise more than \$6000 to get started radio tracking reptiles in Perth's urban bushland.

"My research, GPS tracking reptiles in Perth, is new and innovative, but a hard sell because the set-up cost was so high (around \$50,000). All I needed was \$5000–\$10,000 to get off the ground and start collecting some data, but most grant bodies want a more complete result for their money. As my research is so public-oriented, I started talking with local community groups, such as WA Naturalists and WA Herpetological Society and peers, and it was suggested I give crowdfunding a try."

One of the risks for people seeking funding through crowdfunding schemes is that you usually only get the money if you reach your set target. This rule is established by the platform hosts to protect project backers – they don't end up giving money to a project that doesn't get off the ground – and also as a safety net for project initiators – if you only get \$1000 pledged towards a project that needs \$10,000 to make it happen, the reality is you won't be able to do much. So it works as a safety net for all concerned. But it does mean that you need to be very careful in setting your goal.

Another challenge, particularly for conservation projects, is in finding appropriate rewards to give backers. Generally, the sites work by giving particular rewards depending on the level of support a backer offers. This works fine if you are an author publishing a book or an inventor creating a new water-saving shower head, as you have tangible products to supply to backers at specific funding levels. Conservation and research are a little less tangible.

"As I'm doing science research, I needed to find something tangible as a reward or my project wouldn't have been eligible (for



Fabulous photos of wildlife provided an opportunity for Ashleigh Wolfe to offer postcards as a reward to backers who provided funds for her research project. Photo – Ashleigh Wolfe.

Kickstarter)," Ashleigh said. "Fortunately, working in the field, I was able to take some great photos and offer postcards and prints as rewards, on top of other things – you can see everything [online](#)." Ashleigh said that her Kickstarter project was so successful that she doesn't need to run it again, as she's now managed to attract enough attention from other funding bodies to make her project viable. But she said that if she was considering doing it again for another project, the first thing she would consider was whether or not the project had enough community backing. She believes crowdfunding is worth a go if you're willing to put in the effort. "It is really important to get your message across both in text and visually to as many people as you can," she said.

Ashleigh believes realistic targets and good marketing are essential and offers the following tips to those aspiring to obtain crowdfunding:

- "Have a video (essential) – make it interesting, and keep it under three minutes.
- Use social media to develop an audience (highly important). If you are going to be using the internet to try to raise money, you need a positive internet presence.
- Use updates and send them to your audience over the period of your crowdfunding.
- Don't be too ambitious – some crowdfunder sites won't give you the money unless you've raised up to or beyond your goal. Is your goal \$2000 and you raised \$1999? No funding!
- Don't stress too much! People like to leave things to the last minute. 80 per cent of my funds were raised in the last week."

Funding opportunities

Australian Geographic Sponsorship provides up to \$15,000 in four categories: science, environment, adventure, community. [Applications](#) close **30 November 2015**.

Cockburn Landowner Biodiversity Conservation Grant Program provides funding to Cockburn landowners for on-ground works that conserve and improve bushland and/or wetlands on private property. Up to \$3000 available. [Applications](#) close **31 October 2015**.

Ian Potter Foundation Environment and Conservation grants support preservation of biodiversity and sustainability. Large grants, \$100,000 or more, support landscape-scale programs and small grants, up to \$20,000, fund awareness raising

projects. [Expressions of Interest](#) open **9 November** and close **11 December 2015**.

IMPACT Philanthropy Application Program distributes funds from charitable trusts and endowments to not-for-profit organisations in all sectors including conservation and environment. \$200,000 maximum per application. Applications **open in November 2015**. [Register your interest](#).

Norman Wettenhall Foundation Small Environmental Grant Scheme funds biodiversity conservation projects up to \$10,000 concerned with monitoring and recording data, community education, training, research and science. [Applications](#) open **December 2015**.

Keepers of the Creek By Judi Payne



Long-necked tortoises found their way into the Payne's veggie patch. Photo – Judi Payne.

Keepers of the Creek Friends Group care for a section of Jarrah Creek (about 300m in length), that runs from opposite Henderson Road down to the large pool on the corner of Riley and Stoneville roads. With the help of Chris and Diane from the Shire of Mundaring, the group has cleared a huge hedge of blackberries and other weeds from the creek. Keepers coordinator Judi Payne tells the Keepers' story.

I have lived on the same block which backs onto Jarrah Creek since I got married close to 40 years ago. Sadly over the years with increased population pressures, exotic plant escapees from gardens and the reduction in reliable winter rain, the creek had gone from flowing all year round to overgrown with weeds and flowing only after heavy winter rain.

After hearing about the work of existing 'friends groups', a couple of our neighbours and us decided to restore Jarrah Creek between Jarrah Road and the pool at the corner of Riley Road. There were many sections that were so overgrown, blackberry being one of the main problems, that they were impassable. With the absence of water all year round there had also been a reduction in the amount of wildlife and the variety of species.

It has been slow progress but over the last two and a half years, with the support of Chris and Diane from the Shire of Mundaring, we are now seeing the benefits, with the creek now starting to look like it used to years ago.

We have not reached the end of our section of the creek yet so there is still plenty to do.

Apart from the pleasure in seeing the creek regain some of its former beauty, I was delighted to see two tortoises between the beds of our vegetable patch in March 2014.

The resident magpies also spotted the visitors and were none too happy. The magpies continually swooped and screeched at the tortoises despite my efforts to be a mobile scarecrow. I don't know whether the location was not suitable or they were scared of magpies but they left and went back down to the creek.

We did some research online and believe they were looking for a site to lay eggs. The vegetable patch is about 40m from and about 10–15m higher than the highest flood level that we have seen. I left them alone and do not know if eggs were laid that day but over the next few days we could not see any signs of ground that looked like it had been dug.



Creek line overgrown with weeds.



Clearing blackberries in summer.



A section after weeds removed, natives planted and bank re-enforced. Photos – Judi Payne.

When I shared the exciting news with Kaylene Watts, she suggested we try to attract more tortoises to our place by providing different types of soil for nest sites. We already had a mound of soft sand that was close to the veggie patch so we decided to try loose pea gravel and fine clay which resembles the natural ground above the creek line.

Kaylene spoke to Keith Campbell of Mundaring Landscape Supplies who kindly donated a load of gravel which we placed next to the veggie patch on the assumption that the tortoise knew that the veggie patch was the correct location. There still have been no obvious signs of digging in either location but animals in the wild don't always seem to know when you are trying to help. Who knows? Maybe one year they may like the options in the vegetable garden.

Resources

New publications

Lifting the bonnet on Wheatbelt Woodlands: a guide to the connection between landscape and vegetation in Southwest Australia.

McQuoid, Nathan. *Ultimo: WWF, 2014*. Paperback, 164 pp., colour photographs, maps. \$35.00. This guide aims to help woodland owners, managers and everyone with an interest in conservation to understand the woodlands of south-west Australia better in order to manage them more effectively.

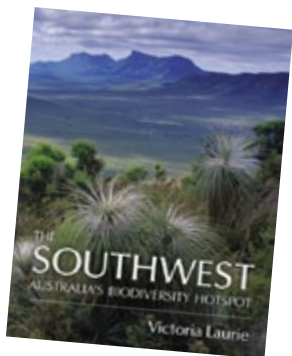


Orchids of Margaret River and Australia's southwest capes.

Scott, Jane. *North Fremantle: Cape to Cape, 2015*. Paperback, 152 pp., colour photographs, text illustrations, map. \$20.00. Full of clear colour photographs, this book will aid in identifying orchids found in the region. Each species is illustrated by at least one photograph and details are provided on appearance, habitat, distribution and flowering times.

The Southwest: Australia's biodiversity hotspot.

Laurie, Victoria. *Crawley: UWA Publishing, 2015*. Paperback, 229 pp., colour photographs, map. \$45.00. In this lavishly illustrated book, Victoria Laurie uncovers the south-west of Australia. Driven by her passion for this country, Laurie presents us with the voices of scientists and those dedicated to protecting the region.



Research

Nield AP, Enright NJ, Ladd PG (2015) Study of seed dispersal by Emu (*Dromaius novaehollandiae*) in the Jarrah (*Eucalyptus marginata*) forests of south-western Australia through satellite telemetry *Emu* 115 (1) 29-34.

Majer JD, Heterick B, Gohr T, Hughes E, Mounsher L and Grigg A (2013). Is thirty-seven years sufficient for full return of the ant biota following restoration? *Ecological Processes* 2 (19).

Renton Michael, Standish Rachel, Shackelford Nancy (2014). How will climate variability interact with long-term climate change to affect the persistence of plant species in fragmented landscapes? *Environmental Conservation* 41(2) pp. 110–121.

Website Watch

Australia's Best Nature and Ecology Blogs a selection of the most entertaining and informative [posts](#) by Australian bloggers on ecology, biodiversity, natural history & sustainability.

wWEB Wildlife Ecology and Behaviour a collaboration of wildlife ecology and behaviour researchers across WA universities [blog](#) about their latest research.

The Great Cocky Count report will soon be published on the BirdLife [WA website](#).

Fire and Restoration – [proceedings](#) of the 10th biennial bushfire conference, 26-27 May 2015 have been published by the Nature Conservation Council (NSW).

Lookout for Turtle frogs



Actually... keep your ears open for the [call](#) of the turtle frog. You'd have to be very lucky to spot the small (5cm) creature. Once a year this WA burrowing frog emerges to call for a mate on the first night after rainfall events between October to December. They then pair up and retreat underground for the rest of the year. Eating termites and not needing standing water, the frogs mate underground and hatch fully formed frogs without a tadpole stage. This fellow is calling. Photo – Adrienne Markey

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