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Welcome to the second edition of the FINIA newsletter for 2016, keeping FINIA members up to date with the current FINIA projects.

May is always a great time of the year on the island, with the temperatures a little lower for on-ground works.

Your next FINIA meeting will be held on Tuesday 10 May 2016 in the Reception Room, Maryborough Town Hall, starting at 10am and finishing at 2pm (a light lunch will be provided).

Please email any agenda items to contactFINIA@gmail.com.

Work Continues on George Haddock Track

Over the 2016 Easter weekend, 16 volunteers helped to honour FIDO’s obligation to maintain the George Haddock Track. The team cleared 17 km of track of fallen timber and major regrowth. During 2014, FIDO and National Parks Association of Queensland volunteers cleared 22.7 km of walking tracks along former logging tracks and roads in nine different sections of the 52 km George Haddock Track, supported by a Friends of Parks grant. No maintenance had been done since October 2013, except for a little clearing between Lake Coomboo and Hidden Lake.

During these latest clearing efforts, the swathe of cleared ground around the Harold Charles Barracks was greatly extended by stripping away regrowth and accumulated fallen debris. This will provide critical infrastructure with a greater safety margin from potential fires. It also created a larger flat area for campers participating in future working bees.



Track clearing was done manually, with little assistance other than from battery-operated chainsaws to deal with larger tree-falls across the track

John Sinclair (AO), FIDO

A BioBlitz for Fraser Island

A BioBlitz on Fraser Island (K'gari) has moved a few steps closer to reality with FIDO setting the proposed dates for the Blitz as 28 November – 4 December 2016. However, before FIDO can launch the promotion for the BioBlitz, which is supported by FINIA, the University of the Sunshine Coast (USC) and the Queensland Parks and Wildlife Service, supplementary funding is required to engage a coordinator to liaise with scientists and other participants and retrieve the vital data collected. At this stage, FIDO is only issuing advance warning to alert people to the proposed BioBlitz event: *Beach to Boomanjin and Birrabeen*.

Details of *Beach to Boomanjin and Birrabeen*

Fraser Island (K'Gari) is inscribed on the World Heritage list because of its biological, geomorphological and aesthetic values; however, much more biological research is needed to know the extent of K'gari's natural resources, with a BioBlitz of a discrete part of Fraser Island standing to add greatly to the ecological understanding of this site.

The BioBlitz, which is to be based at Dilli Village, aims to bring together teams of entomologists, botanists, ornithologists, zoologists, herpetologists and other specialist groups (fishes, fungi, etc.) to scour the study area. Each team will develop its own program and modus operandi. It is expected that the team leader will be responsible for compiling a report of the team's findings to add to the existing data banks being built at USC.

FIDO is seeking to appoint a coordinator before this project can proceed. The coordinator will recruit specialist scientists from a range of disciplines to study the defined research area, which covers a diversity of habitats, to develop an inventory of the natural resources and species within that area. FIDO will also recruit volunteers as necessary to assist scientists and specialists logistically.



The proposed study area will include a diverse range of ecotypes, including all 6 dune system types

The study area includes samples of all six dune systems, including Dune System 4 east of Lake Birrabeen and Dune Systems 5 and 6 in the vicinity of the Boomanjin airstrip. In addition, the area includes three large perched dune lakes, two creeks and a number of old swamps, as well as various forest types. It will be a broad transect of a wide range of ecotypes, from the beach through the foredunes and the freshwater aquatic environments of Govi and Gerrawea Creeks. It will also enable comparison between mined and unmined areas in both the foredune and hind dune areas. It will include the large peat swamp, with its flarks and fens, never before studied in detail.

Dilli Village has accommodation for up to 60 people, as well as a large camping area and 24-hour 240V power, which may be needed for some equipment. It also has a large meeting area. There will be opportunities at Dilli Village each night for the various teams to compare notes and share observations of their field work.

John Sinclair (AO), FIDO

Fighting Triffids

Peter Shooter continues to lead his teams of FIDO volunteers in their never-ending war against the very aggressive and invasive African subspecies of *Abrus prectorius*. The native *Abrus prectorius*, which does not naturally occur south of Gladstone, would never be termed aggressive in its natural range. As Peter prepares for another round of battle against this die-hard opponent in May (funded by BMRG), comparisons are being made to trying to eliminate triffids! However, Peter and his teams believe that, albeit slowly, they are beginning to gain the upper hand.

Luckily, *Abrus* exists only in Happy Valley and its immediate surrounds. Another factor in the favour of Peter and his team is that all of the evidence suggests that the plant's spread is constrained by its manner of dispersion: in the foot pads of dingos. There is no evidence to suggest that birds disperse the poisonous bright red and black seeds that give the plant its colloquial name of Crab's Eye. The *Abrus* thus follows very closely the roads in and out of Happy Valley and, with the exception of an area north of Happy Valley that is a known dingo lair area, is not being carried too far from the main Happy Valley infestation.

As a result of trials, it has been found that manual removal of *Abrus* (even cut and paint) is almost impossible unless treatment areas are revisited at least weekly. Therefore, the most effective way to control *Abrus* is by chemical spraying with glyphosate. Peter's teams have to comprise some very fit warriors, to lug 15 kg backpack sprays through heavy bush and up steep slopes; however, they do it with good grace to protect K'Gari's natural integrity, oftentimes coming back for more.



A shot of a heavily infested area on Education Department land at Happy Valley in March before treatment. This is all regrowth since it was sprayed in November 2015, possibly all new seedlings. All the growth was on the ground or on small shrubs to 1 metre, with none up in the canopy. Canopy infestation was all destroyed in November.

A major problem in controlling *Abrus* is that it is a prodigious seeder and the germination rate of the seeds is alarming. Peter's battle plan is:

1. to maintain regular spraying to kill existing *Abrus* before it seeds
2. to continually go over previously treated areas to kill off any seedlings from seed dropped previously, before they can seed again
3. to make it a priority to eliminate all *Abrus* outside the dingo fence to stop the spread of *Abrus* beyond Happy Valley, before closing in on the last of the enemy inside the perimeter.

Knowing how long the seed remains viable is critical. For this reason, one of Peter's fellow volunteers, Peter Dorney, a Sunshine Coast nurseryman, in March set up scientific germination trials to answer this vital question. This prompted Su Dawson to find some seeds that she had put away in 2013 to see if they would germinate. Beating the triffid-like *Abrus* will require strength, enthusiasm and a bit of science.

Side activities: The team did a bit more than just spray *Abrus* in March. Apart from their ‘work’, they would walk the beach and collect litter—lots of litter, and some was huge. Peter Shooter reported:



FIDO volunteers with beach rubbish for the tip. The main item is a bamboo raft, sadly upside down. From left: Pete Dorney, Geoff Welsh, Peter Shooter and Charlie Charldsworth. Photo courtesy of Chris Brietenbach

Every day in his spare time Geoff walked the beaches collecting man-made ‘flotsam and jetsom’ and depositing it in piles for later collection. On the last day of our trip, we took the trailer to Eurong and swept the beach from Eurong to Eli Creek. Many large items including pallets, drums, rope, poly pipe, oyster racks and more were removed. Geoff’s piles contained all the predicted items—thongs, bottles and plastic bags, to name a few. The most spectacular, and by far the largest, piece collected was a bamboo raft, half buried in sand, high on the beach. We finally got it out with the help of a tow from the 4WD. This raft is very well made with skilful bamboo joinery and lashing.

John Sinclair (AO), FIDO

Sustainable Transport Study for Fraser Island (K’Gari)

For almost a year, FIDO and QPWS were at an impasse over FIDO’s proposal to fund a feasibility study into the building of a light rail from Kingfisher Resort to Eurong. The QPWS saw four major impediments to them supporting such a study, while FIDO remained alarmed at the down-cutting of the fragile sand roads, with the scoured out sediment ending up in other locations.

FIDO estimates that, on average, every visitor to Fraser Island travelling by any form of 4WD (including buses) is responsible for stirring up more than a tonne of sand that will be scoured downslope when it rains. Some of this ends up in Fraser Island’s precious lakes. FIDO has long been calling for a stop to the unnecessary stirring up of surface sand and, for 42 years, has been advocating a light rail alternative to 4WDs.

A meeting with Environment Minister Steven Miles on 11 April helped to resolve the stalemate between FIDO and QPWS. It was resolved that the environmental impact of road down-cutting on K’gari needs to be urgently addressed. The agreed outcome was that FIDO will commission and pay for an independent ‘Sustainable Transport Options for Fraser Island (K’Gari)’ study. This study will explore all options, including light rail, to reduce the current environmental impact of visitation.



Down-cutting along 0.5 km of Woralie Track between the eastern edge of the rainforest and the turnoff to Lake Allom has carved a canyon 2 m deep. Thousands of tonnes of sand have been relocated downslope from these cuttings

In 2002, a study by Gutteridge Haskins & Davey Pty Ltd (GHD) on K'Gari found:

- Moderate severity smothering: 6% of road network
- Moderate down-cutting: 7% of road network
- High-severity siltation: 8 sites
- Cultural heritage site: 1 site impacted by roads
- High-severity smothering: 1% of road network
- Severe down-cutting: 2% of road network
- Moderate severity siltation: 12 sites

Using money from the Barbara Winkley bequest that FIDO anticipates to receive in the near future, FIDO will seek to revive the GHD study commissioned in 2000 by the QPWS that was halted prematurely in 2002 just as it was nearing a critical conclusion. The now proposed study will, among other things, update the 2002 information to determine how the state of K'Gari's roads has changed in 15 years.

John Sinclair (AO), FIDO

Green Army Battles for K'Gari's Natural Integrity

Work is underway in Fraser Island World Heritage area by the first 9-person Green Army team, which includes three young Butchulla men. Despite encountering hold-ups in gaining approval for overnight residence on the island, as well as delays in beginning training, the Green Army team is being kept busy with the important tasks of removing rubbish, lantana, groundsel and other weeds from the main entry road near the Wanggoolba ferry landing, and lantana control in Dundubara creek.

As they return each week as part of their six-month program, every member of the team is gaining a greater familiarity with Fraser Island (K'gari) and personally benefitting from the training and experience they are receiving. As part of their work, the Green Army team has received training in safe chemical use, as well as fencing construction and deconstruction. They have been using these new skills to contribute to K'gari's natural integrity.

It is hoped that as the program progresses, the productivity of future teams will benefit from overcoming the challenges that any new partnership arrangement must face (especially for an area as significant as the Fraser Island World Heritage Area). In this way, we hope that the CVA Green Army teams will be an ongoing presence on Fraser Island and will be able to make an even greater contribution to weed and erosion control in some very critical areas of K'Gari.

Announcements and Acknowledgements

Weeding Volunteers Sought

Peter and Maree Prior are seeking volunteers for weeding trips in the second half of this year. Dates and locations are as follows:

- Happy Valley, 4–10 September
- Eurong, 22–29 October
- Happy Valley, 6–12 November.

Details and application forms can be found at: <http://fido.org.au/call-for-volunteers-to-work-on-kgari-second-half-2016/>

A Big Thanks to WordPress!

For the last two years, FINIA's website-hosting service, WordPress and Automatic, have been very kindly providing us with a \$30 discount on our annual fees. We would like to thank WordPress and Automatic for their support. It is greatly appreciated!

New Research Alert!

The Journal of Coastal Research recently featured two articles that might be of interest to readers of this newsletter. If the summaries below whet your appetite for more information, pdfs of these papers are provided via the FINIA blog.

A review of coastal dunefield evolution in southeastern Queensland

Graziela Miot de Silva and James Shulmeister

This paper summarises existing research on dunefield progression on the southern coast of Queensland. The aim is to identify the possible controlling factors in the dunefields' evolution. Gaining an understanding of dunefield progression in southern Queensland, and the relative contributions of sea level change and climate to phases of activity, is made especially interesting by the length of this system's records of Quaternary dunefield evolution. At the same time, however, the chronological sequence of these phases is largely unknown. This study pieces together what is known and assumed about the progression of these phases and the triggers that may have initiated them, as an important step towards more thoroughly understanding this system and what it has to say about the relative thresholds of sea level change and climate in dunefield progression and what might cause one factor or the other to dominate in dune emplacement phases.

This article is available on the FINIA blog, at: <http://finia.org.au/2016/05/20/new-research-alert>

Ground penetrating radar observations of present and former coastal environments, Great Sandy National Park, Queensland, Australia – Focus on Moon Point, Fraser Island

Allen M. Gontz, Adrian B. McCallum, Patrick T. Moss, and James Shulmeister

This paper reports on a subset of data collected from a larger study to investigate past shoreline complexes of Fraser Island and the northern end of the Cooloola Sand Mass. In this paper, the focus of discussion is information gathered from 10 reconnaissance-level ground penetrating radar lines in the Moon Point area of Fraser Island during July 2014. Using the radar data, the authors characterise the site and its units, discuss some aspects of its likely development, and draw initial conclusions about its age. Building on this important first step in understanding the dynamics and evolution of this system, future work will focus on developing chronologies associated with the GPR stratigraphy, extract climate proxies from preserved coastal systems and reconstruct the paleogeography.

This article is available on the FINIA blog, at: <http://finia.org.au/2016/05/20/new-research-alert>

A third study of interest, led by USC student Marion Howard, was recently published in PLOSOne. Again, a PDF version of this paper will be available on the FINIA blog, at: <http://finia.org.au/2016/05/20/new-research-alert>

Patterns of phylogenetic diversity of subtropical rainforest of the Great Sandy Region, Australia indicate long term climatic refugia

Marion G. Howard, William J. F. McDonald, Paul I. Forster, W. John Kress, David Erickson, Daniel P. Faith, Alison Shapcott

This study tests the patterns of rainforest diversity and relatedness in the Great Sandy Region at a fine scale to investigate why this region exhibits greater phylogenetic evenness compared with rainforests on white sands in other parts of the world. From the findings, Fraser Island and Cooloola show evidence of having been rainforest refugia, and the Great Sandy Region's significance for the conservation of phylogenetic variability is emphasised.

Finally, Linda Behrendorff (QPWS) and colleagues have a new paper out through Nature. This paper can be viewed online, at: <http://www.nature.com/articles/srep23469>

Insects for breakfast and whales for dinner: the diet and body condition of dingoes on Fraser Island (K'gari)

Linda Behrendorff, Luke K.-P. Leung, Allan McKinnon, Jon Hanger, Grant Belonje, Jenna Tapply, Darryl Jones & Benjamin L. Allen

This paper represents the first published study characterising the diet of the Fraser Island (K'gari) dingo population, and discusses the body condition and health of this population relative to other dingo populations. According to the results, the K'gari dingo population is capable of exploiting a wide variety of food sources, from insects to whales. Thus, far from supporting the anecdotal contention that the K'gari dingoes are 'starving' or in 'poor condition', these findings reveal the K'gari dingo population to be in good to excellent physical condition and health.

Weed of the Month – Easter Cassia

Easter cassia, *Senna pendula* var. *glabrata*, is native to South America. The shrubs are easy to spot this time of year as they are in flower. This weed is not classified under the Land Protection (Pest and Stock Route Management) Act 2002; however, it is classified as an environmental weed by the Fraser Coast Regional Council.

It is a successful invader to disturbed sites. Its main distribution on Fraser Island is at Eurong and Happy Valley, with small patches found at Indian Head, Orchid Beach, Sandy Cape and Moon Point. Easter cassia is controlled both chemically and physically. Methods include stump cutting, foliar spray, basal bark spraying and hand pulling small plants. There is no known biological control, but Easter cassia is intolerant of fires. For further information, go to:

www.frasercoast.qld.gov.au.



Flowing Easter Cassia

Dates for the Diary

What: FINIA Meetings
Where: Maryborough and Fraser Island (TBA)
When: Tuesday 9 February, Tuesday 10 May, Tuesday 9 August and Tuesday 8 November 2016
For: Regular catch up meeting for FINIA partners with a mixture of agenda items raised by participants and guest speakers.
Cost: FREE
More info: contactfinia@gmail.com or call Sue Sargent on (07) 4181 2999.

What: FIDO Weeding in Happy Valley
Where: Happy Valley, Fraser Island
When: 6-12 March and 8-14 May 2016 (Sunday to Saturday)
For: Peter Shooter will be leading two trips to help tackle the heavy weed infestation in and around Happy Valley. A group of 8 will share one of the comfortable holiday houses in Happy Valley. The group will focus on containing a particularly aggressive weed with poisonous seeds, *Abrus prectorius* Var *Africanus* that is heavily impacting on the vegetation but isn't found anywhere else on Fraser Island. The group aims to tackle the *Abrus* to prevent seeds being set for another crop of this virulent weed.

Cost: \$200
More info: John Sinclair - john@sinclair.org.au or phone 0418 650 535
What: **CVA Naturewise Conservation holiday – Fraser Island Conservation**
Where: Departing and returning to Maroochydore
When: 14-18 March and 9-13 May 2016
For: 4 night's accommodation on Fraser Island, return transfers from Maroochydore, all meals. Maximum 7 passengers, Conservation Volunteers guide, conservation activities, scheduled sightseeing activities on Fraser Island

Cost: \$720 (camping)
More info: www.naturewise.com.au, bookings@naturewise.com.au or phone 1800 032 501

What: **FIDO George Haddock Track Working Bee**
Where: Fraser Island
When: 24-28 March 2016
For: This 4-day working-bee will be focused on maintaining the George Haddock Track in the northern part of Fraser Island over the Easter weekend. Volunteers should arrive on Thursday prior to Easter (24th) March) and leave at the end of Monday 28th March. This trip requires bush walking so a high level of fitness is essential. Preference will be given to those with 4WD transport.

Cost: \$100
More info: John Sinclair - john@sinclair.org.au or phone 0418 650 535

What: **Australian Heritage Week**
Where: Fraser Island
When: 16-24 April 2016
For: Australian Heritage Week is an annual national celebration of Australia's unique heritage. It is an opportunity for all Australians to join together to celebrate our shared and special heritage. FINIA partners are encouraged to get involved with hosting a range of exciting activities during Australian Heritage Week to showcase Fraser Island to the rest of the country.

More info: <http://heritage-week.govspace.gov.au/>

What: **FIDO Bush Regeneration at Eurong**
Where: Eurong, Fraser Island
When: 23-30 July
For: Why not join FIDO for their next regeneration week scheduled for volunteers to work on weeds, nursery and the nature walk?

Cost: \$200
More info: John Sinclair - john@sinclair.org.au or phone 0418 650 535

What: **Fraser Island ECO Excursions for Schools**
For: ECOllaboration is also taking school bookings for ECO Excursions to Fraser Island. These excursions link to the Australian Curriculum for subjects in Science, Geography, Maths, History, Civics, Business, Arts, Health and Technology and also meets the cross curriculum priority of sustainability in the curriculum.

More info: For a personalised and fully costed experience contact jacqui@ECOllaboration.org.au or call (07) 5313 4059.

Funding Opportunities

What: **Norman Wettenhall Foundation – Small Environmental Grant Scheme**
For: Projects that enhance or maintain the vitality and diversity of the Australian natural living environment. Objectives of the Small Environmental Grants Scheme (up to \$10K) are to support Australian biodiversity projects that are concerned with one or more of the following: monitoring/recording data, community education, community capacity building

(training) and research/science. NWF has funded projects ranging from supporting local communities to maintain or restore habitat; to the production of education kits; and the publication and dissemination of research information.

When: February grant round is currently open.
Phone: (03) 5472 1316 - Elizabeth (Beth) Mellick, Executive Officer
Email: beth@nwf.org.au
Website: <http://www.nwf.org.au/>

What: Gambling Community Benefit Fund

For: One-off grants of up to \$35,000 (inc. GST) for not-for-profit organisations to help provide community services or activities that benefit the Queensland community.

When: Round closes 29 February 2016
Email: cbf@treasury.qld.gov.au
Phone: (07) 3247 4284
Website: <http://www.justice.qld.gov.au/corporate/sponsorships-and-grants/grants/community-benefit-funding-programs>

What: Australian Geographic Society Sponsorship

For: Founded by Dick Smith, Each quarter up to \$15,000 is made available for Australian Geographic Society Project Grants. Funding provided by the Society for Project Sponsorship target all four Project Categories: Science, Community, Adventure and Environment. The society also offers seed grants between \$500 and \$3000.

When: Round closes 30 April 2016
Phone: (02) 9263 9825
Email: society@ausgeo.com.au
Website: <http://www.australiangeographic.com.au/society/sponsorship/2013/11/apply-for-sponsorship>

What: The Mullum Trust

For: Supports projects which have significant, ongoing or catalytic environmental outcomes. Grants are available from \$100 to \$10,000. Projects with specific localised environmental outcomes are preferred, although projects which are locally based but have far reaching impacts are also encouraged.

When: Ongoing
Phone: Mr Ryan Neoh on (03) 9671 6658
Email: rneoh@deloitte.com.au
Website: <http://thetrusteeformullumtrust.myob.net/>

What: Cheaperthanhotels Fundraising and Sponsorship Program

For: Cheaperthanhotels offer a wide range of opportunities for sponsorship and fundraising support for community groups, non-profit organizations, schools, universities and sports clubs. Each organisation will be assessed on a case by case basis and you could gain anything from \$250 up to \$25,000 a year in funding.

When: Ongoing
Phone: (02) 8263 5111
Website: <http://www.cheaperthanhotels.com/sponsorship/>

For those of you that like Facebook – you may want to keep an eye on **Australian Grants and Awards** page who keep a watchful eye on additional funding opportunities as they become available:

<https://www.facebook.com/ausgrants>