



Sustaining the natural integrity of Fraser Island together

February 2014

Inside this edition

Page

- Lou Coles back in the FINIA hot seat! 1
- FIDO doing their bit for natural integrity 1
- Saving Fraser Island from Crab's Eye 2
- QPWS Australia Day Volunteer Awards 2
- QWSG Shorebird Census..... 3
- More work for the George Haddock Trail..... 4
- IMCG Fraser Island Fens Study Report.....4-6
- Fraser Island Weeds of the Month 7
- Dates for your diary7-8
- Funding opportunities.....8-9

Welcome to the February 2014 edition of the FINIA newsletter, keeping FINIA members up to date with the current FINIA projects.

The next FINIA meeting will be held on Thursday 13 February at the Woocoo Community Hall in Oakhurst, starting at 10am and finishing at 2pm. A light lunch will be provided.

Please email any agenda items to contactFINIA@gmail.com

FINIA Support

*After a break in our support with some changes of staff responsible for Fraser Island, I am sure you will all be very excited to hear that the Maryborough office has managed to attract back Lou Coles, Public Contact Ranger – Fraser Island, QPWS. Lou was instrumental in getting a number of FINIA initiatives underway including the current format of the newsletters. Lou will starting back on 3 February and has agreed to take on our support role again – so please join me in making her feel welcome. **It's great to have you back!***

FIDO doing their bit for Natural Integrity

FIDO has maintained a very busy agenda physically working on natural integrity projects since FINIA last met. We have been so far involved with three projects and soon expect to add a fourth:

1. Eurong: We continue to work to get on top of the weed problems of Eurong. We are somewhat stymied though in our desire to get rid of the last Brazilian Cherries which were taking over Eurong because while we have received enormous cooperation from Eurong residents and landholders we don't have permission to remove these pests with a potential to spread from just two private properties. The cooperation of the Eurong Resort and Kingfisher ferry and nursery have enabled FIDO to help present the Eurong as a much more natural and weed-free village. The volume of Children's stories focussed on encouraging kids to be more are and more active in addressing weeds continues to grow. We are up to six stories to date. FIDO has another weeding week scheduled for 23 February to 1 March.
2. Fens: FIDO's fens project proved to be enormously interesting and productive. Already the scientific output is helping us to better appreciate and interpret the fens.
3. George Haddock Track: Approval has been given to make a start on this project that has had a long gestation and six years after the passing of George FIDO and NPAQ will start work at the Lake Allom barracks.
4. Happy Valley Abrus: This is a very serious problem. It is so serious that FIDO is prepared to deplete its very limited resources to run a special weeding operation to exclusively address the problems of Abrus in April. We will though be looking for more volunteers and support for this very challenging and aggressive weed.

John Sinclair, Fraser Island Defenders Organisation

Save Fraser Island from Abrus (Crabs Eyes)

During 2013 FIDO has been closely monitoring the advance of a pernicious weed *Abrus precatorius*. This weed is often referred to as Crab's eye because of its bright red and black seeds. It is rapidly taking over the back (western) part of Happy Valley between the shop and the dump and near vicinity the Rotary shelter. This weed is now rampant climbing trees and the dingo fence and smothering many small bushes. It shows every trait as being as difficult as Cats Claw creeper to bring control. It produces prodigious quantities of seed, sending out roots all along runners in contact with the ground and having a deep taproot making it extremely difficult to uproot. Worse than that the vine and very attractive seeds can be deadly poisonous.



Unless it is brought under control urgently it could escape from Happy Valley, the only place on Fraser Island where it is known to occur and escape into the adjacent National Park where control could be near impossible. Because of its capacity to aggressively take over the areas where it becomes established, FIDO considers the control of the control of Abrus in Happy Valley to be a higher priority even than Easter Cassia or Lantana.

Abrus precatorius subsp. *africanus* is native to tropical Africa (i.e. Sudan, Kenya, Tanzania, Uganda, Rwanda, Niger, Togo and Namibia), Madagascar and some islands

in the western Indian Ocean (i.e. Mauritius and the Seychelles). The African subspecies closely resembles Australia's native *Abrus precatorius* subsp. *precatorius* that occurs in northern parts of Western Australia, Northern Territory and Queensland as well as southern Asia and the western Pacific. Although found to the north, the Australian subspecies has never been reported on Fraser Island. The two sub-species are difficult to differentiate but the African variety is not a native to Fraser Island where it is extremely aggressive and difficult to eradicate where it has become established.

Although a number of websites state, "*Infestations are also being actively controlled on Fraser Island,*" this is far from the case and limited control measures along with three consecutive El Nino seasons have now enabled it to become entrenched.

Abrus now is the prime target for FIDO's weeding operations in 2014. We want to ensure that Abrus doesn't crop up anywhere else on Fraser Island before it is too late. It is for this reason that FIDO is prepared to draw on its own resources to launch a special weeding trip to focus on Happy Valley exclusively in April.

FIDO already has been assured of cooperation and support of Fraser Island Retreat the resort in Happy Valley. The savings made because of the free ferry service that the Kingfisher Group provides to enable positive work such as this also assists and encourages this voluntary work.

John Sinclair, Fraser Island Defenders Organisation

QPWS Australia Day Volunteer Appreciation Certificate

It's our great pleasure to announce that several of our FINIA members were recently recognised by Queensland Parks and Wildlife Service for the work that they have done benefitting the natural environment, community and visitors to Fraser Island.

Queensland Parks and Wildlife Service recognised John Sinclair of Fraser Island Defenders Organisation for his many contributions including coordination of programs - weed control, revegetation, erosion control, walking track development, research, and community education.

Don and Lesley Bradley were also recognised for their many years of work with the Sandy Cape Lighthouse Conservation Association undertaking weed control and program coordination at Sandy Cape.

Other recipients of the QPWS appreciation certificate were:

- Susan Drury (general ranger duties and dingo safety education);
- Jason Kellam, Ellen and Dave Dean (general ranger duties and weed control);
- Ross and Keith Nimmo (Orchid Beach Rural Fire Brigade);
- Violet Hopkinson (wildlife care and rehabilitation);
- Catherine Liddington (threatened species research); and
- Sheridan Kelly and Emily Milburn (general ranger duties work experience).

Congratulations John, Don, Lesley and all the other worthy recipients! It's great to see so many FINIA members being awarded for their efforts to protect the natural integrity of Fraser Island.

Queensland Wader Study Group: Summer Census Count of Great Sandy Strait & Fraser Island Shorebirds

The Queensland Wader Study Group visited the area on the 6th and 7th of December 2013, for their Summer count of both the migratory and resident shorebirds that congregate at roost sites throughout the Great Sandy Strait and on Fraser Island.

The Queensland Wader Study Group was established in 1992 as a special interest group within Birds Queensland, to monitor shorebird populations in Queensland and to work towards their conservation. They have been visiting the region regularly since this time, and due to this dedication have compiled comprehensive records of shorebird numbers, through their annual winter and summer census and monthly counts by local volunteers.

This data helps monitor trends in the population and assists Queensland Parks and Wildlife Service (QPWS) in improving awareness of shorebirds and their habitat through education and interpretive initiatives.



These feathered visitors from the northern hemisphere have made remarkable long-distance seasonal migrations and rely on a chain of highly productive wetlands to rest and feed, building up sufficient energy to fuel the next phase of their journey. They face numerous threats to their survival during their marathon journeys, for example loss of food sources and resting areas along the East Asian/ Australasian Flyway due to the reclamation of wetlands.

Some of the high tide roost sites monitored during the summer census included Bogimbah Creek, Little Woody Island, Poyungan Rocks, Picnic, Duck, Mangrove, Bookar, Garden, Dream, and Stewart Islands, the south tip west Moonboom, Toowoora Creek, Inskip Point, Coolooloi Creek, North Spit on Fraser Island, and Puthoo, Moon and Coongul Creeks.

Moyra McRae (Senior Conservation Officer, NRM), QPWS

The recent announcement of Friends of Parks grants included a \$25,000 grant to enable two FINIA members, National Parks Association of Queensland and the Fraser Island Defenders Organisation to begin work on the George Haddock Track. This long-vaunted project will honour a man whose entirely voluntary contributions to National Parks throughout Queensland and on Fraser Island in particular. He helped establish FINIA back in 2005.

It will utilize 41 kilometres of pre-existing logging tracks and link these track sections up with 10.9 kilometres of new tracks. The project that has been approved under the Friends of Parks to specifically:

It is planned to commence work with a weeklong working bee from 23rd to 30th March, 2014 that will specifically focus on getting the barracks and outbuildings into good shape. While any volunteers will be welcome those with building, c



John Sinclair, Fraser Island Defenders Organisation

In late November and early December 2013 the Fraser Island fens were scrutinized by a team of international peatland scientists from eight countries with a variety of disciplines. They were from the International Mire Conservation Group (IMCG) and they were joined in part by scientists from University of Queensland led by Dr Patrick Moss, who has been working on the ages of the fens of the Great Sandy Region for the past two years, and two biologists from EcoSciences Queensland.

The leader of the IMCG Study team, Richard Lindsay described the field work at Puthoo as the hardest he has ever done due to the density and height of the vegetation and because the ground surface is so variable with sudden steep drops and rises. He summarized the study's objectives with the following background:

Although peatland ecosystems occur on every continent except Antarctica, and even there can be found to dominate the outlying Antarctic islands, the major part of the peatland resource is located in northern temperate, boreal and sub-arctic regions. The distribution of peatlands in sub-tropical regions is markedly discontinuous and apparently limited in total extent. This is because peatland formation requires an excess of static or slow-moving water giving rise to low oxygen levels in order to reduce the rate of plant decomposition sufficiently to produce peat. Where waterlogging is provided by groundwater or surface water, the system is said to be 'minerotrophic' and is more commonly known as 'fen'.

Where waterlogging is provided exclusively by direct precipitation inputs with no direct contact between the living vegetation and mineral-enriched groundwater or surface water, the system is said to be 'ombrotrophic', which is more commonly referred to as 'bog'. In warm regions such waterlogging is generally provided by groundwater, but in such warm regions the rate of evaporation and rainfall input are also therefore key elements in the water balance. In northern temperate, boreal and sub-arctic regions, peatlands on gentle slopes fed by groundwater which is provided intermittently by, for example, snow melt, often form distinctive surface patterns, most typically in the shape of long narrow irregular 'strings' separated by wide shallow pools known in Scandinavia as 'flarks'. The 'string' ridges are only a metre or so wide but may be as long as a kilometre and are aligned, counter intuitively, directly across the direction of water flow. They moderate the flow of the intermittent water supply and hold water in the system for longer, thereby maintaining waterlogged conditions in the strings. For the remainder of the year these systems are fed by slow groundwater seepage or they are frozen, or they are dry.

It is therefore of considerable interest to find extensive patterned peatlands on sub-tropical Fraser Island where there is high evaporation, no snow melt and no possibility of freezing. The interest is further enhanced by the fact that the Moon Point fens display a surface pattern quite unlike that of typical temperate or boreal fens with 'strings' and 'flarks'. The pattern observed in the south-eastern corner of the Moon Point fens more closely resembles either sub-arctic polygonal mires (a mire being any peat-forming system) with underlying permafrost, or the patterns typical of rain-fed peat bogs in temperate and boreal regions. Clearly there is no permafrost on Fraser Island, ruling out the processes associated with sub-arctic mires. The possibility that the balance between rainfall and evaporative losses could support a peat bog ecosystem, supported exclusively by direct precipitation inputs, seems extremely remote. The Moon Point fens (and other patterned peatlands on Fraser Island) therefore present something of a conundrum. Parts of the peatland complex appear to mirror patterned fen systems which generally rely on snow melt and periods of freezing but the Fraser Island sites have no possibility of experiencing such conditions. Meanwhile other parts of the complex appear to mirror even more extreme conditions of freeze-thaw, or resemble peatlands from a climate with regular rainfall inputs and low evaporative losses. None of these various sets of conditions appears to apply in the case of the Fraser Island fen complexes.

The team did many transects to plot the water flow, the temperature, conductivity and pH of the water as well as the vegetation and the micro-topography. A vast amount of data was collected and recorded and plotted on computers. The results of the field-work are proposed to be published in a paper to be published in "Mires and Peat", the journal of the IMCG. There will be an interim progress report in the bulletin and newsletter of the IMCG.

The Fraser Island Defenders Organisation hosted the study supported for the workshop by grants from the Burnett Mary Regional Group and the Norman Wetenhall Foundation and by the Queensland Parks and Wildlife Service who provided free access to Fraser Island and the Lake Coomboo barracks and the Kingfisher Group provided free ferry service.

This aerial photo of the Puthoo Fens Complex taken during the workshop shows the area studied. The photo has North at the top and south at the bottom. The patterned fens are in the foreground and the string fens are in the background at the top of the photo. The edges of the patterned fens and the fingers extending from the high dunes towards the centre of the fens have no pools because they have a stronger flow of water. It can also be noted that the alignment of the strings that occur are generally more or less at right angles to the flow of water which emanates from the high dunes on the right hand side of the photo.



Some observations relevant to the Puthoo Patterned Fen:

1. Two types of fens occur in the Puthoo complex: Patterned Fens and String fens. The string fens are the result of intermittent high surface flows of water, possibly augmented by groundwater. Similar string fens occur in Canada and Finland where they are fed mainly by snow melt.
2. The water source is the aquifers in the adjacent high dunes that are higher than the fens.
3. The water in Puthoo Fen is fed under pressure to emerge as springs in the near the margin of the complex.
4. Where there is the most upwelling pools may be entirely absent or the pools are fewer and smaller e.g. the fingers extending into the peatland and around the edges closest to the dunes.
5. The larger pools occur where there is least upwelling.
6. The formation of pools results from peat becoming drier and compacted, making it harder for the water to get away.
7. During the six days from the time a test pipe was inserted into the fens a water column of 5.5cms rose above the level of the water in the fens indicating the water pressure. Given more time it was expected that the water would have risen higher.
8. As water moves in all directions from the centre of the patterned complex they become progressively shallower/smaller.
9. The source of the peat in the Puthoo Fen is mainly the sedge *Empodisma minus*.
10. The flarks are formed by the peat becoming compacted as the peat dries out.
11. The longer strings separating the pools are aligned more or less across the flow of the water through the fen.

More details are anticipated as the scientists analyse their data.

John Sinclair, Fraser Island Defenders Organisation

Fraser Island Weeds of the Month!

Inspections in Fraser Island townships shows great cooperation and some great progress from most residents and communities in removing known weedy plants in gardens and surrounding areas.

A large amount of individual Umbrella trees have been removed along with some large broad leaved pepper trees, mother of millions, madeira vine and ground asparagus fern. This work could not have been achieved without FINIA associates assistance, thank you.

Mother of Millions and Live leaf (Declared class 2 and local law) *Bryophyllum* sp

- Mother of millions as its name implies spreads easily
- Is a succulent plant from Madagascar
- Grey green leaves have small teeth on leaf ends or live leaf has scalloped edged broad leaves.
- Grows 30-180cm tall
- New plants grow from plantlets on leaves
- Tubular bell shaped orange red flowers in winter
- Poisonous to animals
- Found in older style gardens along foreshore and riverside areas, often used as an ornamental garden plant
- Control with registered herbicide or carefully by hand removal and place in a bag for disposal.



Glory lily (Local law No. 3)

- Perennial herb with climbing stems with tendrils at the tips from Africa and Asia
- Shiny narrow green leaves die off in winter and produces long lived underground tubers.
- Yellow, orange and red flowers with turned back petals to expose the stamens October – May.
- Found in bushland, coastal habitats and gardens. Also tolerates nutrient-poor soils.
- Spreads by garden refuse and birds.
- Control by collecting and destroying seed pods and dig out small patches and bag ensuring tubers removed completely. Chemical control in Dec and then Feb using glyphosate & water at 1:50(20mL/L) + Metsulfuron methyl at 1.5g/10L water (with surfactant). Before using any herbicide, always read the label carefully and apply strictly in accordance with direction on the label.



Juliet Musgrave, Fraser Coast Regional Council

Dates for the Diary

What:	The 1st South East Queensland Island Forum: 'Tourism, Transport and Local Economies'
Where:	North Stradbroke, Russell & Macleay Islands
When:	Monday 24 th to Wednesday 26 th February 2014 (registration closes Mon 17 February 2014)
For:	Following the inaugural Australian Small Island Forum held on Lord Howe Island in May 2012, Redland City Council and Southern Cross University are now organising a similar event focussing on the coastal islands of Queensland. The objective of the forum is to provide an opportunity for Islanders and people who are enthusiastic about Islands to come together, learn from each other, discuss common issues and discover ways of working together.
Cost:	\$60 (for three days) or \$20 and \$40 for individual half-day and day attendances – 50% reduction for full time students and unemployed attendees (and Wednesday evening session on Russell – free admission). Registration is payable on day - cash only.

More info: For information on panels and speakers email: philip.hayward@scu.edu.au or <http://sicri-network.org/seqif1/>. For more information or to register, email your contact details and the days you will be attending to seqif@redland.qld.gov.au or phone (07) 3829 8775.

What: **FIDO Bush Regeneration Trip**

Where: Fraser Island – from Brisbane or Sunshine Coast

When: ~~23 February to 1 March 2014~~ (FULL), 11-17 May and 18-24 May

For: Costs include transport, island tours, food and accommodation. Volunteers aim to complete 20 hours of volunteer work during the week focussing on weeding operations and monitoring the impacts to the natural integrity of Fraser Island. This will be done by visual and photographic recording during the course of the week. There's also ample time to explore parts of the island lead by John Sinclair and he is keen to show as much of it off as possible!

Cost: Happy Valley Trip 11-17 May (Free), Eurong Trip 18-24 May (\$200)

More info: www.fido.org.au or <http://www.finia.org.au/econtent.php?eid=32>

What: **CVA Naturewise Conservation holiday – Fraser Island Conservation**

Where: Departing and returning to Maroochydore

When: 17-21 March 2014, 12-16 May, 23-27 June

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: From \$840

More info: www.naturewise.com.au, bookings@naturewise.com.au or phone 1800 032 501

What: **FIDO & NPAQ George Haddock Track**

Where: Fraser Island

When: ~~23-30 March 2014~~ (FULL), 8-14 June and 5-11 October 2014

For: We are aiming at a minimum of 20 hours of volunteer work during the week. While any enthusiastic volunteers will be welcome, those with navigation, map reading and GPS skills to define the track; people with chainsaw or track building skills will be particularly appreciated.

Cost: FREE

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

Funding Opportunities

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: Closing date for next for next round 28 February 2014

Email: cbf@treasury.qld.gov.au

Phone: (07) 3247 4284

Website: <http://www.olgr.qld.gov.au/grants/apply/guidelines/index.shtml>

What: **Jupiters Casino Community Benefit Fund**

For: One-off grants of up to \$150,000 (inc. GST) for not-for-profit organisations to help them provide community services or activities that benefit communities.

When: Closing date for next for next round 28 February 2014

Email: cbf@treasury.qld.gov.au

Phone: (07) 3247 4284

Website: <http://www.olgr.qld.gov.au/grants/apply/guidelines/index.shtml>

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: Expressions of interest open 10 March 2014 for May round of projects (get in early!)
Phone: (03) 5472 1316 - Elizabeth (Beth) Mellick , Executive Officer
Email: beth@nwf.org.au
Website: <http://www.nwf.org.au/>

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 Mullum Trust C/o Deloitte Private - (03) 9671 6658
Email: rneoh@deloitte.com.au
Website: <http://thetrusteeformullumtrust.myob.net/>

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>