

The History of
Landcare in the Clarence
celebrating 25 years

1989—2014



Acknowledgements

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for Clarence Landcare Inc. © 2014

Cover photos: Clarence River and
Susan Island, Grafton.

Photos: Carole Bryant

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We would also like to thank Clarence Valley Council for their contribution to Clarence Landcare over the past 25 years.

A message from Clarence Landcare's Chairman

Twenty-five years ago the National Farmers Federation and the Australian Conservation Foundation formed the Landcare movement. The uncommon alliance between those two groups threw significant weight behind the pitch for a Landcare movement. A movement that put a spotlight on the challenges that faced the Australian landscape and the hope that Landcare would be able to make a difference.

Clarence Landcare began with the assistance of the Total Catchment Management in 1996 as the 4C's. Since then Clarence Landcare Inc has grown with members from the coast to the upper catchment building on the work that started years ago.

Clarence Landcare has been fortunate to have a Community Support Officer since the start. Debbie has been the life blood of the organisation, forming groups, assisting the groups with her knowledge of natural resource management and ensuring the office kept running. Over time the work load increased and Julie was employed to help out, mainly with the coastal groups. As our financial situation improved and the complexities of running the office became difficult to manage as well as keep the work on the ground flowing, Sue came to our rescue.

In spite of government funding cuts over many years, and a general declining trend in volunteering in Australia, Landcare remains passionate and optimistic about our future.

Landcare in the Clarence has evolved and has become more holistic in the approach to environmental issues.

We no longer focus on the restoration and protection of our natural environment. The improvement and enhancement of our productive landscapes ties their economic benefit to the existing environmental and social component that is Landcare.

Agriculture of the future will see the people of the cities and towns become more aware of where their food comes from and the trend towards organic is growing. Clarence Landcare is supporting the efforts of our farmers to ensure their produce is clean and green. We all have a common interest in farming – food. Years ago, engaging farmers in Landcare was seen as being “too green” but now the engagement with farmers, helping them to improve their properties and their productivity, is almost seen as mainstream.

The collaborative approach to environmental work within the catchment has also taken hold and we now not only involve landholders but Local Government, State Government, (through the Local Land Services), National Parks etc, and community organisations.

I welcome the ACF and NFF's recent call for a new decade of action that will tackle the challenges confronting Australia's land, water, wildlife and farmland.



Brian Dodd
Chairman

Contents

In the Beginning— <i>the first landcarers</i>	1
In the beginning— <i>the formation of Clarence Landcare</i>	1
Clarence Landcare— <i>communities caring for the environment</i>	2
Angourie Community Coastcare— <i>25 years of achievement!</i>	3
Landcare Link—“Binderay Farm” (Peter Bond and Susan Ariel)	6
Brooms Head Landcare— <i>restoring a dynamic natural landscape</i>	7
Landcare Link—“Arndilly” (Michael Martin & Meg Gordon)	8
Landcare Link—“Fig Tree Farms”	9
Iluka Landcare— <i>proudly sponsored by the Bert Hinkler Memorial Fund</i>	11
Iluka Landcare’s Pocket Rocket— <i>Kaye Jeffrey</i>	12
The Coastal Emu— <i>is it doomed?</i>	12
Maclean Landcare	13
Yuraygir Landcare— <i>sustained excellence</i>	14
Yuraygir Landcare— <i>transformation of Tucabia Reserve</i>	15
Waterlands Landcare	17
Sandon River Environmental Alliance— <i>occasional but systematic</i>	18
Nymboida Landcare— <i>they’re a weird mob</i>	19
Clarence Landcare’s Nurseries— <i>revegetating the valley</i>	20
Copmanhurst Landcare— <i>coping with erosion and water quality</i>	21
Clarence Valley Native Bees— <i>celebrating our native honey makers</i>	23
Clarence Valley Conservation In Action— <i>controlling the undesirables!</i>	24
Cowan’s Pond— <i>reviving a local wetland</i>	25
Elland Preservation Organisation— <i>looking after wetlands</i>	27
Upper Eaton Creek— <i>early history of successful erosion control</i>	28
Diggers Dunecare— <i>preserving undeveloped paradise</i>	29
Port of Yamba Yacht Club	30
Kangaroo Creek Landcare— <i>unity arising through conflict</i>	31
Landcare Link—Bill Burns ... <i>farming and conservation hand in hand</i>	33
Landcare Link—Russell Jago ... <i>a passion for protection and promotion of our natural history</i>	35
Where is Clarence Landcare Inc?	36
Contact us	36

In the beginning—the first landcarers

The first landcarers of the Clarence Valley may well have not considered themselves as such. At least, not in the way the term has been used since the National Landcare program was launched 25 years ago. But there is some evidence to suggest that such a word would not have sat inappropriately with the Bundjalung, Gumbaynggirr and Yaegl people.

These first Australians occupied the Clarence landscape for tens of thousands of years. During this time they practised a life of sustainability that enabled them to live off the land, without greatly depleting its resources. Their diet included fruit from native vegetation, fish from the rivers and ocean, and mammals such as wallabies.

By European standards of civilisation there is evidence they had permanent settlements and a developed material culture. In 1799 Matthew Flinders described large bark huts with rounded passageway entrances which protected occupants from wind and rain. The Arrawarra fish traps

are further evidence of probable permanent settlement in that area. The Clarence Valley was, and still is, rich in natural resources, so the traditional owners of this area would have lived very well and most likely did not need to move far.



John William Lindt. Two bearded men. 1873. Gift of Sam and Janet Cullen and family 2004. Grafton Regional Gallery Collection

The Aboriginal people of this area have lived off the land in more or less traditional ways until recently. Right up into the 1980's the people of Corindi, Maclean, and Yamba were living a lifestyle where bush foods and traditional cultural ways of dealing with food were maintained alongside the European economy and use of European foods. With some traditional owners, this knowledge and practice exists until today, ensuring the young and future generations are mindful of their living culture.

This is a very potent backdrop for Clarence Landcarers who today practice, improve, and promote the management of the land in a way that will ensure future generations can appreciate the legacy that has been left to them.

In the beginning—the formation of Clarence Landcare



Jim Knight

Clarence Landcare began in 1995 when local environmentalist, peace activist and social justice advocate Jim Knight, and a small group of interested people, organised the Clarence Care Coordinating Committee under the umbrella of the National Landcare Program. Jim was the founding chairperson, and remained on the Committee until his untimely death early in 2014. Other committee members from the early days were Bob Thompson (Smith's Creek), Laurie Davey (Minnie Water Dunecare), and later Bernie and Susan Stilgoe (Stockyard Creek). Laurie brought business expertise to the executive committee and added vital decisiveness to early meetings.



Debbie Repschlager



Julie Mousley



Susan Moore

The first employee, Debbie Repschlager, commenced in May 1996 and remains to this day. She was later joined by Julie Mousley and Susan Moore. Julie has not long left Landcare, so Clarence Landcare has enjoyed a remarkable period of stability with its front line staff.

Clarence Landcare—*communities caring for the environment*

For the past 16 years Clarence Landcare Inc. has been working with Landcare Groups, the wider community, government agencies and organisations in the field of Natural Resource Management (NRM) in the mid- lower Clarence Catchment.

The NRM issues that have been addressed whilst working with the community and other stakeholders includes coastal erosion, riverbank and gully erosion, riparian vegetation rehabilitation, weeds, habitat decline, decline of coastal wetlands, acid sulphate soils, sustainable agriculture, poor water quality, fish habitat, biodiversity across all landscape types, and threatened species. Through its community support staff and contractors, Clarence Landcare has on-ground working knowledge of NRM issues across all identified landscapes in the mid and lower Clarence areas.

Clarence Landcare works with private and public land managers, the community, and with government and non-government organisations including rural industry groups. The organisation has been working with Regional, State and Commonwealth agencies and grant programs for many years and has demonstrated its ability to link together many stakeholders in the development of projects that meet funding guidelines. **Clarence Landcare's skill, knowledge and awareness of sustainable agriculture practises** has been instrumental in facilitating delivery of training to large numbers of landholders and land managers.

Clarence Landcare Inc is a not-for-profit community based organisation which works to coordinate the activities of Landcare groups in the mid-lower Clarence as well as a growing number of individual landowners/ farmers. Working with local communities to develop skills at an individual and group level is another facet of the organisation. This includes assistance with the establishment and running of Landcare Groups and NRM projects. The level of self-sufficiency that many Clarence Landcare groups have reached is testament to the capacity of the organisation to engage the community and build capacity within it.

Representatives of Clarence Landcare attend a range of NRM working groups including North Coast Weeds Advisory Committee, Clarence Floodplain Partnership and Clarence Valley Council (CVC) NRM

team meetings. It has worked with CVC to promote their Riparian Management Strategy and helped raise awareness of best management practice for riparian land. It also works with CVC Project Officers and landholders on collaborative floodplain projects including revegetation.

Clarence Landcare continues to engage and liaise with a range of primary industry stake holders in the mid-lower Clarence including individual primary producers and groups such as beef, sugar and dairy. The organisation works with both urban and rural landholders.

Site visits, when needed, are accompanied by the relevant technical officers from NRM government departments. It is common practice to refer enquiries on to the appropriate authority when necessary. Many links have been forged and a good working relationship has developed with staff from all authorities involved in NRM.

Staff and committee members have formed very good working relationships with all Local Aboriginal Land Councils in the Clarence Valley and link directly to the Aboriginal Extension Project Officer. Clarence Landcare has provided technical and funding application advice and support to the Birrigan Gargle Local Aboriginal Land Council (LALC), Yaegl LALC and Ngerrie LALC and have recently worked with Ngerrie LALC to develop Management Plans for their land.

Over the years Clarence Landcare has also worked with other non-government organisations such as Clarence Valley Afforestation Association, EnviTE, labour market programs (work for the Dole, Green Corps & Jobs Fund), Conservation Volunteers Australia, Greening Australia, Nature Conservation Council of NSW, Adult and Community Education (ACE), Valley Volunteers and the Clarence Valley Conservation In Action network (CVCIA).



Angourie Community Coastcare—*25 years of achievement!*



1989. Angourie Tombolo showing bitou bush "hummocks", erosion of the dune as "blow-outs" caused mainly by uncontrolled pedestrian access and wind action. Note also the severe infestation of bitou bush in the foreground



2004. The same view with the whole area revegetated.



1991. Boardwalk construction to Angourie Back Beach. Following boardwalk construction, revegetation of the steep slopes was achieved by successive plantings involving a number of working bees



2004. Growing vegetation provides shaded beach access

- Angourie Community Coastcare (ACC) formed
 - September 1989.
- Main work sites
 - Angourie Reserve (Green Point, Spooky beach, Angourie Pools, Angourie headland)
 - Yuraygir National Park (Angourie Point and Angourie Back Beach)
- Main work
 - Weed and erosion control, planting/revegetation
 - Fencing, construction and maintenance of pedestrian access track
 - Promotion of the local area (educational, environment, historical & cultural heritage values)
 - Development of recreational facilities
- Achievements over the past 25 years:

Volunteer and employment inputs

- About 15,000 in-kind hours by volunteers (over 250 volunteers have been involved over the years)
- 100 local board riders have assisted
- 100 job skills/Green Corps/EnviTE trainees gained valuable training alongside our ACC volunteers
- 1995/1996 Regional Environment Employment Program (REEP)/EnviTE (ACC project)

Construction and rehabilitation projects

- 450 m fencing installed
- Bitou reduction (and other weeds) – from 70% infestation to a manageable 5% in a total area of 26 ha - length of coast approximately 4 km
- Approximately 10,000 seedlings planted
- Spooky Beach landslip rehabilitation
- Pools area rehabilitation
- 400 m nature trail established with about 40 species markers
- 60 m boardwalk constructed
- 2.5 ha of erosion control

Angourie Community Coastcare—*25 years of achievement!* (continued)

- **Publicity and awareness raising**

- 240 school students were given guided tours
- Around 150 press releases to the local newspapers
- Angourie Surfing Reserve booklet 2007
- War Against Weeds brochures 2013
- Angourie birds pictorial map

- **Management and planning**

- Angourie Community Environment Plan 2009 (Protecting Angourie's Biodiversity)

- **Awards**

- 1997—State Government recognition as a demonstration site for best practice in coastal rehabilitation
- 2002—with Birrigan Gargle Landcare Group, State Community Action Award—Clean Beaches Challenge for their combined clean up of the old Angourie tip
- 2003—State Community Action Award—Clean Beaches Challenge for their work in restoring the natural values of the Angourie Reserve
- 2004—Natural Heritage Volunteers Award from the State Government to John Webber
- 2007—establishment of the Angourie Surfing Reserve

- **Recognition of individual members**

Difficult to list because some deserving people will always be left out. However honourable mentions include:

- Founders: John Batcheldor, Karen Joynes, John Webber
- Long term members: Helen Tyas Tunggal, John Webber
- Dedicated volunteers: Gary Brisbane, Robyn Cumming, Grant Jennings, Julie Fuller, Denis MacPherson, Alan Byrne



May 1991. Coastcare members, Karen Joynes and John Ambrose plant Marram grass. Much like a hair transplant protects the scalp from sunburn, the grass reduces wind speed at ground level, and therefore reduces erosion



May 1994. The same area now covered with vegetation



1995. Spooky Beach erosion control work in progress



2004. Spooky Beach successful erosion control. Planting by volunteers has contributed to natural rehabilitation

Angourie Community Coastcare—*25 years of achievement!* (continued)



Representatives of the Birrigan Gargle Landcare Group and Birrigan Gargle Land Council accept the NSW Community Action award in Sydney on behalf of the combined Clarence Coastcare groups involved in the Landcare project



Helen Tyas Tunggal and John Webber (Angourie Coastcare); Kay Jeffery and her sister, Joy Neave (Iluka Dunecare) pictured with the Minister assisting the Minister for Environment, Diane Beamer (centre) at NSW Parliament House when John and Kay were each presented with Natural Heritage Volunteers Awards from the state government.



July 2001. National Tree Day—Coast Care volunteers

These pages edited from text and photos by Julie Fuller and Helen Tyas Tunggal from a document prepared for Angourie Coastcare and Angourie Heritage Listing Submission 2006. Additional material and photos John Webber and Warwick Hoad

Landcare Link—"Binderay Farm" (Peter Bond and Susan Ariel)

Since 2007 Peter Bond (he really only answers to "Bondy") and partner Susan Ariel have operated the organically certified "Binderay Farm" on Armidale Road, Nymboida. They rear free range organically grown Tamworth and Large Black pigs. Both are heritage breeds originating in Britain. "The Tamworth was bred from wild forest pig stock", said Bondy. "There's three boar lines in Australia and these have been used to infuse new blood into English Tamworths, which were becoming inbred." Binderay pigs are slaughtered at an organically accredited abattoir at Booyong and sold both locally and further afield. Bondy also makes pork products which are sold at various markets.

"I've tried lots of things in my life" says Bondy, "including managing a back packer's hostel on the Queensland coast". He and Susan met when running a charter boat business on Lord Howe Island, where she was working as a nurse and massage therapist. Susan also helped run the charter boat business. Their stint at Lord Howe included Bondy taking a crew of three on his boat to successfully salvage a sunken catamaran 700 nautical miles east of Brisbane. "I was only concerned with the adventure" says Bondy.

About ten years ago they decided to move back to the mainland, and a rural lifestyle appealed to them both. They had always had an interest in organics and land stewardship and the riverside mud brick house and land they found at Nymboida had instant appeal. "We

originally planned to grow vegies on good rich 'flood mud' river soil." When they found the ground to be infested with thriving nut grass, they had to find a solution. "Geese were thought of at first" said Susan. "We'd heard about using geese for controlling weeds amongst vegetables, but were soon advised that pigs were a much better option to get rid of the nut grass". Bondy adds: "Not to mention probably a better option than solely growing vegetables."

The nut grass is now largely controlled, thanks to the pigs. Vegetables are also grown commercially, with the pigs coming in to turn over the soil after harvest. As well as being hand fed daily, the pigs are rotationally grazed within a cell grazing system, with pasture sown to a mixture of rye grass, wheat, and a legume such as cow peas.

Bondy and Susan have also worked hard at turning a section of Privet infested land back to a natural area with Callistemons, Melaleucas and other riparian plants. The Privet is under siege, and the selection of planted natives is also coming along nicely, as is the sequence of reclaimed ponds running through the property.

Bondy and Susan also host WWOOFers (Willing Workers on Organic Farms) on their farm. "It's a good life" says Bondy. "You mightn't make a fortune, but you live very well".



Large Black and Tamworth piglets



Susan and Bondy in front of a rehabilitated gully with privet removed and native vegetation planted

Brooms Head Landcare—*restoring a dynamic natural landscape*

The history of Brooms Head Landcare dates from a public meeting held in August 2011. Prior to this, in September 2010, Clarence Valley Council had held a “Coastal Erosion Day”. This was part of a state wide investigation into the few remaining Intermittently Closed and Open Lakes (ICOLs) on the NSW coast. Many of these ecologically dynamic water features, and the unique biodiversity associated with them, have historically been threatened by coastal development. Most recently, Hearn Lake ICOL near Coffs Harbour has endured this threat.

Robyn Sharp’s association with Brooms Head and the Lake Cakora ICOL dates back to the 1950s. Since then, she has seen the entrance open and close many times, as is the nature of such natural features. ICOLs are often affected by rising seas, storm events, or dry periods. All affect the level of water in these lakes and determine the extent of their openness to the ocean or to them being completely

sealed. Lake Cakora is influenced by rain water run-off into the lake, which puts pressure on the berm from the inside. When the protective berm is removed, the lake is vulnerable to high water waves lashing the shoreline edges of the lake.

In recent years the entrance to the Lake has been open, making the shoreline vulnerable to severe ocean events, “We also had Pied Oyster Catchers nesting amongst vegetation high in the dune but since the berm went they haven’t been there” Robyn said. The Beach Stone Curlew is a rare and threatened species also known to occur at Brooms Head.

Installation of sand traps to Lake Cakora’s entrance, to ensure sand is not readily moved on by prevailing winds or water pressure from run-off on the inside, has since been effective in restoring the berm. “The initial trap was 1.8metres high”, said Robyn. “That’s not including the footings buried in sand.” Since then, a further 1.5 metres has been added, trapping even more sand. “That has meant a berm of around 3 metres closing the lake entrance”, said Robyn.

The work Brooms Head volunteers have done, and are continuing to do, will ensure that Lake Cakora, as one of a dwindling number of similar ecological natural features on the NSW coast, will continue to endure.



Regenerating dune area



Construction of sand trap to prevent wind erosion and to enable Lake Cakora berm to rebuild



September 2010. Well attended and successful Brooms Head Coastal Erosion Day



Entrance to Lake Cakora after a major storm, May 2011



Entrance to Lake Cakora taken from slightly different angle, June 2014



Houses on the edge of Lake Cakora

Thanks to Robyn Sharp for text information and photos

Landcare Link—"Arndilly" (Michael Martin & Meg Gordon)

The Broadwater property "Arndilly" was established in 1995 when Michael Martin and Meg Gordon purchased 1200 ha of Clarence River floodplain.

They produce beef cattle and believe that good cattle management, and managing the environment, can be done in a complementary way. The previous land managers practised set stocking. The property consisted of 11 big paddocks with cattle roaming over a large area. Fertilising with super phosphate, drainage of wetlands and large numbers of employees were part of the regime.

By contrast, Michael and Meg practise cell grazing, natural fertilising, and work the property themselves. "The fertiliser alone could now cost over a \$100,000 per year" says Michael. The 11 original paddocks have now been subdivided into more than 50 cells using electric fencing. Cell grazing is an intensive form of rotational grazing and involves large numbers of cattle confined to a small area for a short period of time. This short, sharp, high impact grazing for minimal time means more total available fodder is consumed. Less palatable grass, which broad-acre run cattle would normally avoid, is also eaten. Dung from the cattle has long been absorbed into the soil as fertiliser by the time the stock are put back in the paddock. "Many conventional farmers still think it's crazy, but it works" says Meg.

Michael and Meg are very appreciative of Landcare for the networking and training opportunities that have

been made available. Meg said "Meeting other farmers and like-minded people, and attending workshops like Lewis Kahn and Judy Earl's 'Grazing Management', and Carol and Harry Rose's 'Native Grass and Legume Identification' are terrific examples."

Michael and Meg recognise that there are areas such as the wetlands which need careful management. Some of the wet areas are grazed when dry, but are otherwise fenced off. The wetlands provide sanctuary for many birds, including the rare and threatened Black Necked Stork. "One year a pair of storks were tending four young", said Meg. "This is believed to be the most recorded in a single nest." Other birds include the Great White Egret, Black Swan, several duck species, and many other species.

Floods are another interesting part of life on the Clarence Valley floodplain. "When there's a big flood, it's often a case of holing up for a couple of weeks" said Michael. "When there's that amount of water, you're not going anywhere!"

Tree planting is also part of the "Arndilly" farming ethos. Each year, several hundred trees are planted, and self sown native species are often fenced off to allow them to grow.

And finally, although Meg thinks the word "sustainable" has become an over-worked cliché, this nevertheless best describes the way "Arndilly" is farmed.



Brolga and Black Swans on the "Arndilly" floodplain



Meg and Michael with regenerated bush near their house

Landcare Link—"Fig Tree Farms"



Farm reservoir which slows run-off, acts as water storage and also provides wildlife habitat. An island in the reservoir provides sanctuary against predators such as domestic dogs



The reservoir also provides sanctuary for more common species such as Pelicans, Black Swans, Ibis and ducks

Photo: Henry Sheehan

Joint winners of the 2013 North Coast Regional Landcare Sustainable Farming Award and State Award winners, Glenn Morris and Henry Sheehan's "Fig Tree Farms" lies between Waterview Heights and Seelands and highlights how farming can be successfully combined with conservation. Part of the total land area contains a wetland which was established by rebuilding the wall of the old reservoir with the assistance of Clarence Valley Council. Previous landholders had removed the wall of the reservoir to drain the wetland and increase the available grazing area.

"With the wall restored, we now have a permanent supply of water" said Henry.

"This reservoir also acts to slow down natural run off. This is controlled through a siphon which feeds into surrounding channels which run through the farm. This fills our channels with sufficient water to keep our soil profile charged with moisture. The water eventually ends up in the Clarence." Henry says it is a "triple win situation" for the farm, the local ecology, and the river, which ends up with "filtered crystal clear water running into it."

Another win-win for both the farm and the environment is the fenced gully erosion area planted out with trees. The trees have stabilised the erosion and provide habitat for local wild life. Livestock do not miss out, as they can choose whichever side of the fenced timber stand provides the most shade.

The work continues. Each year, 500 trees from local seed stock are planted along channels. These form wildlife corridors linking up other areas. Cardboard mulch is used to suppress weed growth around young trees rather than using chemical control.

As indicated by its awards, "Fig Tree Farms" is without doubt a leader in sustainable farming.

Landcare Link—"Fig Tree Farms" (continued)



Fig Tree Farms' home paddock with fig trees on the hill in the background. In the foreground is the fenced and planted gully



Channel with newly planted trees, of which 500 are planted annually. Note cardboard mulch for weed control in lieu of spraying chemicals



The reservoir which feeds the channels provides sanctuary for rare and threatened species such as this pair of Black-necked Storks (*Ephippiorhynchus asiaticus*)

Photo: Henry Sheehan



Fledgling Wedgetail Eagle (*Aquila audax*) waits for its parents to return with the next meal

Photo: Henry Sheehan



Iluka Bluff looking towards Woody Head

“Iluka Landcare has 20 active members who work weekly on either or both Wednesdays and Sundays. For the past five years the group has averaged over 2,000 hours per year, planting 3,500 trees. Robyn Sheedy, David Lohde and Gino Boono have been three standout members for their contribution over the past three years” - Ross Minchin, Secretary, Iluka Landcare



Robyn Sheedy planting, July 2014



School girls encouraged by Kaye Jeffrey at a planting day



A group of volunteers hard at work

In brief

- Yaegl Land prior to and since European arrival
- 1870. Permanent white settlement
- 1948-1982. Sandmining
- 1980. 136 ha of Iluka Rainforest declared a World Heritage area, the largest area of intact littoral rainforest in NSW
- 1984. Association of Iluka Residents (AIR) formed due to environmental concerns
- 1992. Weeds taking toll, AIR secured funding for research on flora and fauna in the World Heritage area
- 1993. Iluka Landcare was formed from a nucleus of AIR members. Since then there have been concerted efforts to control and remove weeds
- 1995. Delisting of World Heritage status threatened unless something was done with weed devastation. Iluka Landcare efforts ensured this threat was averted.
- Present: Iluka Landcare has 3 major ongoing projects: restoration of Iluka Bluff that formerly had 99% Bitou Bush coverage; reconnection of the Koala food corridor between Iluka Nature Reserve and Woody Head; and rehabilitation of World Heritage listed Iluka Nature Reserve, which has now reached maintenance mode.
- Community involvement includes: 15 years with local schools and 5 years with Southern Cross University students.
- Iluka Landcare acknowledges support received from National Parks, particularly technical support and advice while Iluka Landcare members put in the hours on the ground.

Thanks to Kaye Jeffrey and Ross Minchin for information and photos

Iluka Landcare's Pocket Rocket—Kaye Jeffrey

Kaye Jeffrey started her working life as a window dresser and ticket writer in Penrith. Ticket writing (traditional, stylish hand lettered signs) was and even now is still a skill required by artisans and signwriters. That was longer ago than Kaye cares to remember. She is now one of three still active foundation members of what was the Association of Iluka Residents (AIR) which formed in 1984 and was subsequently superseded by Iluka Landcare. The others are Margaret Hinkler and long serving treasurer Rod Dent. All are still active today in Iluka Landcare which formed in 1993.

Kaye is a driving force in Iluka Landcare and beyond. Her zeal and fervour far exceeds her diminutive stature, and her enthusiasm for the task at hand is a great motivator for the volunteers. Kaye has received several individual Awards such as National Individual Landcare Award-Silver (1999); NSW Government Heritage Volunteer Awards—Certificate of Appreciation; Southern Cross University—Community Engaged Learning Commendation. In 2012 Iluka Landcare won Keep Australia Beautiful's NSW Clean Beach Challenge and was runner up to Queensland for the National Award. The submission for this award was based on the Iluka Bluff Restoration Project.



Well done Kaye for being such a stalwart for Landcare and a beacon of encouragement for all Landcarers!

The Coastal Emu—*is it doomed?*



Formerly widespread in north-eastern NSW, the range of the Coastal Emu (*Dromaius novaehollandiae*) has contracted in recent years and there are now fears for its existence in its former stronghold within Bundjalung National Park. The small remnant population in Yuraygir National Park (between Taloumbi and Brooms Head to the east, south to Station Creek and west to Pillar Valley and the Shark Creek area), may well be the last surviving coastal emus.

Minnie Water local, and National Parks Ranger, Gina Hart, could also be described as a flightless bird expert. In addition to monitoring the coastal emu, she has worked with kiwis in New Zealand. Gina says that annual emu surveys seem to indicate a population of 100-120 birds in the Yuraygir area for the past fifteen years. "When the emu was first listed as an endangered

population in 2000, we would see dads with 15 or more chicks at foot. These days it's rare to see more than six young" she said. There is now greater public awareness for the plight of the emu. Pets are more likely to be controlled, local vehicle drivers are more conscious and attentive, and cane farmers who may have traditionally regarded it as a pest, are now supportive, or at least ambivalent.

So why the drop in clutch size? "We don't know", says Gina, "It may be the gene pool has reached critical levels and it's affecting fertility". Another unanswered question is whether the coastal emu is merely a smaller and darker morph of the still relatively common larger emus found further west, or if it is perhaps a separate species. Funding for research into DNA which could conclusively answer this has never been made available.

Maclean Landcare

Founded in 2008 by John Moore, Wendy Plater and Dermot Nunan, Maclean Landcare has become something of a leading light for its vision and action.

Although Dermot and John have since “retired”, Wendy remains an active member, and each Wednesday leads a small group of volunteers maintaining the bush at Maclean Lookout.

Besides being energetic with its on-ground works, hosting community workshops and running a nursery, the group is also active in NRM education both on

ground and through their excellent web site. Anne Stanton maintains the website as well as the Group’s Facebook page.

Maclean Landcare’s Mission Statement includes “Respect for and preservation of all Aboriginal sites in the area; the rehabilitation and preservation of remnant native vegetation, rehabilitation of and care for native flora and fauna, and the establishment of native wildlife corridors”.

Maclean also joins with nearby groups in helping with their activities.



Maclean Landcare’s Wendy Plater at Maclean Look out with Conservation and Land Management students



Maclean Landcare’s fifth birthday celebrations — L to R: Alastair and Dorothy Mouat, John and Beth Moore, Jude Raabe, Marlene Milos, Marion Tolson, Wendy Plater



Nursery Fun: Anne Stanton and Judy Raabe (in check shirts) help Yuraygir’s Peter Turland and Diggers Camp’s John Boyle load trees for project planting

Yuraygir Landcare—*sustained excellence*

Yuraygir Landcare Group is an umbrella for several different sites from Minnie Water, across Pillar Valley, to Tucabia. It also includes the Sandon-Wooli Community Nursery at Minnie Water which was initiated in 2002 by Yuraygir stalwart Denis Milne, who continues to coordinate the running of the Nursery.

The group dates from 1995, with many and varied work sites. Over the years, sites have been worked at Minnie Water Back Beach, the Wooli Peninsular, Rocky Point, and Illaroo (Yuraygir National Park).

For several years Paul Coleman led a group working on a council site next to the Coldstream River at Tucabia.

More recently, Peter Turland has been working on Tucabia Reserve (*see separate story*).

Together with many years controlling Bitou Bush, Yuraygir's main work has been controlling coastal erosion, track construction, and bush regeneration.

Yuraygir's enterprising work ethic has resulted in securing successful Coastcare, Community Action and Natural Heritage Trust grants. Bendigo Bank has also been a sponsor.

A major achievement of Yuraygir Landcare has been the restoration of Back Beach, after fires in 1994.



Shortly after the devastating fire of 1994



Before and after photos of the Headland at Back Beach. As well as the group's own efforts, Yuraygir Landcare has been assisted by EnviTE, Green Corps and Work for the Dole teams



Back Beach track after the 1994 fires. Diligent restoration work by Yuraygir Landcare now ensures the maintained access track is now shaded by regrowth vegetation



Thanks to Denis Milne for photos and information

Yuraygir Landcare—*transformation of Tucabia Reserve*

Peter Turland has always been passionate about conservation and the environment. Part of this passion has been growing trees. “I grow them, pot them on and give them away. You get people interested in growing and they get excited and it just goes from there!”

Peter Turland comes from “... a large plumbing family ... everyone’s a plumber!” he laughs. Well, not quite. Despite this family tradition, Peter trained to become an industrial chemist. After graduation he worked doing research in food laboratories as well as diabetes studies in the laboratory at Monash University.

Thirty years ago he sought a lifestyle change and moved to the Clarence Valley. Peter has always been passionate about conservation and the environment, and ten years ago he decided to complete a Diploma in Conservation and Land Management. With a qualification, together with his self-acquired natural history knowledge, Peter was both excited and dismayed to find a rare paperbark, *Melaleuca irbyana* (Weeping Paperbark) growing in a 2 ha Tucabia roadside paddock. The ground had been compacted by years of overstocking, and more recently had become a dumping ground for rubbish. It was also overgrown with thick *paspalum*. There were a small number of mature Weeping Paperbarks which although stunted and affected by livestock had managed to survive, together with a few large trees of other species. And there was an upside—the land was Council-owned.

Peter approached Clarence Valley Council (CVC) and a few of its officers mentioned that, despite being well known for its native and exotic street trees, Grafton did not have anything resembling a Botanic Gardens. After some persuasion he was granted permission to develop this vacant Council land.

That was six years ago. With Peter’s efforts “and help from a few others” his vision of a park with all the Clarence Valley’s plants represented (as well as promoting the existing and new paperbarks) is now well under way. Some local nurseries are now donating or selling low cost plants, including Landcare nurseries at Maclean and Minnie Water. A neighbour has supplied epiphytes to put in paperbarks; another paid \$50 for a rare orchid, and supportive letters are being written to the local paper. People on their morning jog or walking their dog now break up the monotony of the roadside by detouring through the park.

Nowadays, Council “dumps” its unwanted mulch at the site, which is formed into mounds to give trees and shrubs much friendlier, softer soil to grow in. The mounding was essential. As an example “I transplanted a struggling Deep Yellowwood onto a mound and it grew more in a month than it had during its first three years.” says Peter. He attributes the reduced growth to poor drainage and the hard compacted soil. A council worker now regularly mows the paths that meander amongst the mound-planted trees. These paths also lead visitors across wetland areas that were formerly drains and are now mini billabongs and ponds. These are fringed with *Cunjevois* and other plants supporting various bird life, such as the Black Ducks seeking refuge in thick *Lomandra*.

But Peter’s vision and enthusiasm is apparently endless. He has sourced funding and council support for installing picnic tables and seating, as well as an interpretive display shelter. He envisages each tree named with its common name in large writing and the Latin scientific name in small print “because most people aren’t interested in the Latin”. It is this uncomplicated approach that helps Peter connect with the average person and, in turn, get them excited about the work he is doing and what they are capable of achieving themselves.

Peter is excited at the prospect of an even greater variety of bird life, insects, lizards and frogs becoming attracted to the area as it continues to grow. With local schools already contributing, Peter hopes and plans for this to be a major local facility for Natural History education.



Peter Turland with a surviving large Weeping Paperbark. The Weeping Paperbark (*Melaleuca irbyana*) was named after Mr LG Irby, who was a botanical collector with the Technological Museum in Sydney, and who discovered this unique paperbark in 1912 near Coutts Crossing

Yuraygir Landcare—*transformation of Tucabia Reserve* (continued)

IN BRIEF

Peter's summary of the project so far:

- Initial planting of 300 *Acacia* species to establish a pioneer plant community. Development of an *Acacia* canopy combined with existing trees and shrubs would allow frost sensitive species to be planted (especially rainforest species). An important part of the planting regime was to heavily mulch all plants. CVC has recognised that the more the area is mulched the less mowing is required which is a cost saving for them.
- Planting days involving the Tucabia Public School have resulted in around 60 Weeping Paperbark seedlings planted – many of these are now 2 m high.
- Many species in the early plantings failed to grow (especially rainforest species) because of the poor soil drainage. This was solved by creating mounds to provide good drainage. Mulch was used extensively to cover all the mounds and mulching of new mounds is currently an ongoing system. The many mounds have the added advantage of creating numerous walking tracks between them.
- The main pond and the construction of numerous weirs along the existing drainage line, together with construction of several small ponds, has provided micro habitat areas for aquatic fauna and small birds.
- Included in the planting regime will be bush tucker species plus other aspects of plant diversity such as heath and wetland species, orchids, plants for small birds and butterflies, etc. Also, plants suitable as backyard garden plants will be included in the plantings to encourage the local and wider community to plant natives that are attractive, yet water wise and environmentally appropriate.
- There is a diverse range of plants. Presently they number about 100 species and 55 of those are rainforest species. All species planted are native to the Clarence Valley.



BEFORE...



...and AFTER mulching and planting



LG Irby's granddaughter, Judy Flint, Peter Turland, and well known Clarence natural history identity Roy Bowling



Billabong

Waterlands Landcare

The Waterlands Landcare Group was formed following a meeting chaired by Stan Mussared at Cowan's Pond. Debbie Repschlager was an extremely helpful support person who assisted in steering the group with the identification of plants, collection of native seed, propagation of local native vegetation and land management matters. The initial group consisted of seven committed landholders. The name "Waterlands" was a combination of Waterview Heights and Seelands, which is the area covered by our group.

Our group received grants in the first year, and areas of the Clarence River were fenced to prevent stock accessing the river. Margaret and Brian Good propagated many hundreds of native grasses and trees. Other grants allowed for gully stabilisation, soil management and regeneration, and extensive riverbank regeneration following the 2001 Clarence river flood. Many native species were either bought or propagated and then planted.

Three river regeneration projects were successful on three members' properties. The projects stabilised the areas, but unfortunately the flood in 2012 caused some damage to one of the sites when major landslips occurred. Other grants have allowed for an effluent system to be installed on the dairy property of a member. In later years this was improved upon by a further grant.

Margaret and Brian Good have done a wonderful job in clearing unwanted vegetation and weeds, then regenerating a dry creek area from their property and

establishing a great area which has attracted many native birds and animals. Brian also won the "Landcarer of the Year" in 2008, in recognition of his dedication to the land. The Goods have propagated many hundreds of plants, trees and shrubs.

Three members have served on the Clarence Landcare Executive committee over a period of years, but personal commitments have caused these positions to be vacated. Many happy times have been experienced with our group's social functions, such as the camp oven dinners we held to raise funds. Our group also catered for numerous meetings of Clarence Landcare Inc.

Over the past few years it has been very difficult to obtain funding which has been disappointing for our members and has made it difficult to maintain interest in the cause. Our group continues to meet and the friendships are upheld as we all maintain our properties. We currently have 11 financial members.

Waterlands Landcare owes Debbie Repschlager, Landcare Community Support Officer, many thanks for her assistance that has been freely given in the thirteen years our group has been in existence. Debbie has always been available to assist when asked and over the period has helped with identification, propagation and the myriad of questions thrown at her. On behalf of our group we would like to say, "a job well done Deb." We have all enhanced our knowledge by attending meetings, seminars and workshops over the years.

Contributed by Pauline Wallace, Waterlands Landcare



BEFORE and shortly AFTER rehabilitation work on the Clarence by Waterlands Landcare

Sandon River Environmental Alliance—*occasional but systematic*

Back in 1972, Sue Whitelaw's parents retired from Sydney and bought a house at the Sandon. Sue and husband Brian were travelling at the time. "You'll be home soon and disappointed when you see it", said Sue's mother: "It's really ISOLATED". "Soon" wasn't until six years later when they (finally) did see it. That time away started for Brian and Sue as a surfing expedition to South Africa, and continued as they worked as teachers in England, Spain, Italy and Canada.

Far from being disappointed in Sue's parents' remote retirement choice, the Sandon is where the Whitelaws now spend a good portion of each year.

The Sandon Ratepayers Association was formed in the early 1990's. This is the umbrella under which the Landcare chapter was formed, when in 1998 the group applied for a grant to aerial spray the Bitou Bush. This was a pioneering experiment for New South Wales—Bitou Bush had never been sprayed this way before. Funding was secured for 5 years, after which National Parks have continued the work until the present as part of a maintenance program.

Brian and Sue were instigators in this early work. They already had a long connection to the Sandon and knew it well before Bitou Bush became a problem.

"It's a different place to most" says Sue, "because there is no real community as such". This is because the village is mostly a holiday place, and it is rare to have everyone there at the same time. "Some families only come at Christmas, others two to three times a year. Bill Biddle, an early stalwart "is now retired and on the road to lots of other places, but he may come back later for extended periods". Despite these infrequent get togethers, working bees, which often include friends and other non regular visitors, can be quite successful.

Primary work continues to be controlling Bitou Bush. Two endangered plants occur in the area, *Chamaesyce psammogeton*, and *Calystegia soldanella*, while a third, *Olax angulate*, is vulnerable because of its extremely limited distribution (it only occurs between the Sandon and Woolli).



Sue and Brian Whitelaw



"The Hatch" Beach, 1982 — before Bitou Bush



Chamaesyce psammogeton



Calystegia soldanella, flower, and vine with flowers

Thanks to Jeff Thomas, NPWS, and Brian and Sue Whitelaw, for information and photos

Nymboida Landcare—*they're a weird mob*



Group Coordinator, Pamela Denise, is possibly better known throughout the Clarence (and beyond) for her art work and as a community artist involved in many projects.

Apart from a brief respite she has been the Coordinator of Nymboida Landcare since 2002. She's also the Secretary and Treasurer!

Regular Saturday morning working bees (held once each month), followed by a communal lunch where members bring a plate, has been the mainstay of Nymboida Landcare's success since its inception in 1995. Lunch, and the social gathering during and after, often extends well into the afternoon.

Nymboida Landcarers work all Saturday morning on a nominated member's property, as well as Cartmill Park and the Police Station paddock. Many properties, but by no means all, are on the Nymboida River and the work done may have a different focus for each property.

Members' interests range from cattle and other livestock grazing, to purely environmental, (or a combination of both) and almost always include Privet and Lantana control.

Coordinator, Pamela Denise, says the success of the group is the self sufficiency of the members and their willingness to take responsibility for tasks. This includes maintaining the tools trailer, organising the hosting of the next working bee, and ensuring this is advertised in the local Grapevine Newsletter.

Reflecting the diversity of the Nymboida community, the group members' occupations range from those working their own farms, natural resource professionals, artists (including Pamela), a State Government project manager, to nurses, tradespeople and retirees. While new people have joined over the years, the majority of original members have remained since the group's inception, making this a very successful and stable group.



Nymboida Landcare is a reflection of a diverse community"

Clarence Landcare's Nurseries—*revegetating the valley*

Green thumbs seem to be pretty prevalent amongst Clarence Landcare members.

Sandon-Wooli nursery

Leading the charge is retired school teacher Denis Milne, who in 2002 attracted funding to enable the Sandon-Wooli Nursery at Minnie Water to become established. The nursery, thanks to Denis and his volunteers, is now a thriving focal point for Landcarers and residents in the area. Plants are propagated from local seed—with plants colour-coded to indicate whether their origin is Sandon, Minnie Water, Wooli or elsewhere. Residents are encouraged to plant local species to help maintain the biodiversity of the area.

Clarence Valley Council nursery, Maclean

Maclean Landcare volunteers, headed up by Anne Stanton and Wendy Plater, manage the Clarence Valley Council's community nursery in Ironbark Drive, Townsend. They propagate a range of local native species, which are on sale to the public, and are given free to local Landcare groups who are actively engaged in re-vegetation projects in the Clarence Valley.

Induna School nursery

The newest nursery is run by the students of Induna School in South Grafton. Enthusiastic young men took up the challenge of propagating seeds for Clarence Landcare's biodiversity project. Many trays of Lomandra and Red Kamala were among the first successfully propagated seed.

Seed collected by both paid collectors and Landcarers, is given to the nurseries to germinate and grow on. This should ensure that Clarence Landcarers are spoilt for choice, with no shortage of stock for the many projects in which they are engaged.

In addition, several Landcare groups operate their own nurseries. These include Iluka, who took over the formerly council-operated nursery at Saltwater; Peter Turland's nursery at Pillar Valley; another at Copmanhurst, and two nurseries operated by Nymboida Landcare members.



Induna students proudly display some of their propagated seeds



Minnie Water's Denis Milne, Clarence Landcare's Sue Moore and volunteer Tom Turnbull at the Sandon-Wooli community nursery

Copmanhurst Landcare—*coping with erosion and water quality*

Copmanhurst Landcare's beginnings date back to a meeting in early 1993. Landholders got together with the Total Catchment Management Authority and Copmanhurst Shire Council to work on gully erosion projects.

Through funding provided by Conservation and Land Management (CALM), members addressed pasture management, dung beetles, riparian fencing, revegetation, gully erosion and creek rehabilitation issues on private properties. This included the project for Max and Barbara Webb (see separate story). Members held working bees at each project site, initially once each fortnight. The group also held many successful field days on farm planning, weed identification and soil erosion, through the promotion of some of their project sites. As well as members' own properties, these sites included the riverbank at Copmanhurst Crown Reserve.

The Copmanhurst Riverbank Erosion Mitigation Project was a large project which attracted \$35,000 in funding.

Stabilising the massive riverbank wall that exists beyond the Copmanhurst Rodeo Grounds, was a major project that involved group members, Copmanhurst Shire Council, and the Total Catchment Management Authority. Importantly, the water reticulation supply for Copmanhurst was also located adjacent to the riverbank. Therefore, improving water quality was a significant concern for both the group and for residents of the village of Copmanhurst which relied upon the water supply. With comprehensive design plans in place for the riverbank rehabilitation, the group also continued to apply pressure on the state government to provide funds for a new water supply for Copmanhurst Village.

Television and other media coverage gave the project considerable publicity. As a result, it became a demonstration model for future gully erosion projects. However, the Copmanhurst riverbank site continues to remain one of the largest erosion sites in the Clarence. Persistent severe floods ensure many tonnes of soil continue to be washed away from the river wall and carried downstream.

Fortunately, with the advent of the Regional Water Supply scheme, and the resultant Nymboida River pipeline, poor water quality for human consumption is no longer an issue.

Since its existence, Copmanhurst Landcare has contributed many hours to combating erosion and improving water quality.

Individual members between 1993 & 2002:

Leone Roberts, Karl Roberts (deceased), Kevin Fahey, Robert Fahey, Jim Fahey, Neil Heinze, Rob Smith, Larry & Therese Adams, Rick & Judy Donoghue, Bernie & Susan Stilgoe, David Clausen, Matt Foley, John & Pat Mackay, Greg & Michelle Llowarch, Rob Giggins, Bernadette Hanley, Kevin & Lorrelle Death, Frank Sheldon, Barbara Webb & Max Webb (deceased), Susan Moore.

Thanks to Sue Moore for compiling the information for this article

"Larry Adams, of Copmanhurst, and Copmanhurst Landcare vice-president, Kevin Fahey, discuss practical farming procedures which help maintain soil quality at the Roberts family property at Mylneford. The men took part in a National Landcare Day workshop at the weekend where farmers had their soil samples tested for texture and pH, calcium and magnesium content. National Landcare Day is on Friday"

***- from Grafton's Daily Examiner newspaper
29 August, 1994***



Rehabilitation of the eroded riverbank, involved Landcare, the TCMA, and local government



District Agronomist, John Betts, and Associate Professor in soil microbiology at the university of New England, Dr Alan Lloyd, led the workshop on soil conservation for Clarence Valley farmers at the weekend. Farmers were tutored by a panel of expert speakers on the physical, chemical and biological aspects of soil and how it could be better managed to ensure its contribution to farming in the future

- excerpt from Grafton's Daily Examiner newspaper 29 August, 1994

Clarence Valley Native Bees—*celebrating our native honey makers*

It was following a healthy gathering of people at a Native Stingless Bee Workshop that the Clarence Valley Bees Landcare group was formed. Over 50 people attended the historic Grafton Experiment Farm (now Primary Industry Institute) to see Brisbane-based entomologist, Dr Tim Heard, talk about and demonstrate keeping native bees.

These insects are tiny, about one quarter the size of the European honey bee, and produce far less honey than the commercial European honey bee. But the honey is extremely tasty, and these little bees don't sting!

But those are not the only reasons for the interest in native bees. At the first gathering of would-be members of the Clarence Valley Bees group, held in the Clarence Landcare office earlier this year, native bee enthusiasts gave a variety of reasons for their interest.

This enthusiasm augurs well for the promotion of native bees in the Clarence Valley.



Bee Group member Meryl England watches as Tim Heard pours and sieves extracted honey at the Grafton Workshop



The unique shape of the honeycomb of the common native stingless bee *Trigona carbonaria*



Common Native Stingless Bee
Trigona carbonaria

Photo: Carole Bryant

Clarence Valley Bees group members give a variety of reasons for their interest in native stingless bees...

- connection with native bees as a child
- concern for lack of bees for pollination
- what range of plants do native bees pollinate?
- accessing native bees at a reasonable cost
- dealing with bush hive recovery
- wanting to know about the competition with feral bees
- wanting to get a queen bee
- we have 10 hives built already (have used special "bee safe" paint)
- want to assist others with hives
- interested in biodiversity
- have had lifetime interest – family hive is a log kept in the shade
- inter-relationship with other types of bees and differences in which plants they feed from
- where are they living?
- find out what went wrong when robbing the hive and the hive died
- a lot to learn
- a shortage of bees
- not enough native bees around anymore

Clarence Valley Conservation In Action—*controlling the undesirables!*

Clarence Valley Conservation In Action Landcare (CVCIA)—“the CIA” to its members—was founded in November 2008 by then National Parks & Wildlife employee Sharon Lehman, as a way to network people who wanted to be involved in local conservation projects on a practical level. Sharon was frustrated with the lack of resources available to fight on-ground problems such as the spread of the Cane Toad (*Bufo marinus*). “If you’re not in the know, it can be difficult to work out who to talk to or how to make a difference locally, so the CVCIA puts people in touch with each other, as well as the relevant government department and contact person”.

Although originally CVCIA was formed in an attempt to control the Cane Toad (members have caught and humanely euthanised over 18,000 toads since inception), this has since expanded to controlling other environmental pests such as the Common Myna (*Acridotheres tristis*), also known as the Indian Myna. Cane Toads and Common Mynas threaten biodiversity across Australia and are increasing their range at an alarming rate. Cane toads are effectively eradicating many species of Australian native wildlife which fatally prey upon them, while Mynas are taking over the habitat, and especially the homes, of hollow-dwelling species. Mynas are reputed to be sufficiently aggressive and persistent to displace native animals as large as Brush-Tailed Possums from their hollows.

Orara River landholders Kevin and Laura Noble took on the job of coordinating Myna control. According to Laura, “In 2009, the CVCIA became a Landcare group with the assistance of Clarence Landcare. This has been a marriage made in heaven—at least for us!—and has enabled CVCIA to evolve into the active organisation it is now.”



Common Myna “caller” bird (foreground) with trap in the background

CVCIA Landcare is currently involved in Cane Toad control and Common Myna control, but has also been involved in shorebird and Coastal Emu (*Dromaius novaehollandiae*) monitoring; Asian House Gecko (*Hemidactylus frenatus*) monitoring; an anti-litter campaign and other community and environmental activities in the Clarence Valley. Sharon says “Members are welcome to raise issues of concern and if we can actively help out, we will try. The emphasis is on actually doing something and involving the whole family, while trying to reduce the need for long, tedious meetings”.

The Common Myna bird eradication team was organised in 2011 and since then 6,300 Common Mynas have been trapped and euthanised using “caller” birds or recordings of a Common Myna call to successfully entice birds into the traps. One member’s commitment over the past 5 years has resulted in 1200 birds being trapped in just one suburban back yard.

Both the Cane Toad and Common Myna projects have successfully applied for grants, and have received some additional funding and assistance from Clarence Valley Council and NPWS. Education plays an important role in CVCIA’s goals, especially in species identification as there are several species of native frogs that are superficially similar in appearance to that of the Cane Toad, while the Australian Native Noisy Miner (*Manorina melanocephala*) is sometimes mistaken for the Common Myna. CVCIA also aims to educate the public on the environmental impacts of the Cane Toad, Common Myna bird and other environmentally damaging species.

The CVCIA is non-political with a focus on on-ground action. More information can be found on the website: <http://cvcia.org.au/> or blog: <http://cvcia.blogspot.com.au/>



Sharon Lehman shows off a large female cane toad captured in the Clarence Valley

Text from material provided by Laura Noble and Sharon Lehman

Cowan's Pond—reviving a local wetland

Originally a Travelling Stock Reserve, Cowans Pond was gazetted on the 28th December 1973 as a Reserve for the Preservation of Native Flora & Fauna. In 1974 Nymboida Shire Council was gazetted as Trustee, and the closed road on the eastern side of Cowans Pond was included in the reserve in 1975.

In 1976 the first committee formed with the assistance of the Clarence Valley Field Naturalists, and did the first plantings around the pond in the late 70's.

Brian Dodd has been chair since February 1992. "Water hyacinth has been a major problem" he says. "It has been removed a few times manually and chemically. Pond plants were sourced to plant after its removal but they died a couple of years later during drought both from lack of water and birds eating the plants".

Two islands were constructed in August 1993 to provide breeding areas for the numerous waterbirds that frequent Cowans Pond. A bird hide was built by Grafton TAFE students to enable minimal disturbance to wildlife during observation.

In March 1994 water supply and taps were connected to facilitate planting. Merv Bultitude supplied a number of nest boxes for the Red Gums and these were placed in the trees by Northern Rivers Electricity during November 1994.

In March 1995 Bruce Cole-Clarke, Department Conservation and Land management, identified the trees in the reserve and labels were purchased and installed.

In 1997 a staged management plan was developed and compiled for proposed works on the pond. An information board was compiled with the assistance of

Greg Clancy and NPWS. In March 1998 a small ceremony was held to commemorate installation of the information board.

In 1998 Stage 1—the revegetation of the pond area itself, was undertaken and Tea Trees and Callistemon were planted. Some of the trees were planted by the South Grafton Brownies during their Conservation Badge course run by Brian.

1999 Stage 2—the revegetation of part of Cowans

Creek that runs through the reserve, was completed with the assistance of the EnviTE "Work for the Dole" crew. Stan Mussared provided project management for this project. Bruce Tucker extended the water supply to these new areas of plantings to make watering of the plants easier.

In March 2000 the area between the Gwydir Highway and the Pond was prepared for planting by slashing the grass and spraying to control further regrowth. In April 2000, a Work for the Dole team from EnviTE, under the supervision of Stan and Bruce, commenced the planting of 1,400 trees

and shrubs in April 2000. In subsequent years EnviTE teams put up a picnic shelter, built a small low viewing platform with timber donated by Bruce, and re-clad the bird hide.

Some of the funding for the planting of the trees came from the Roadside Revegetation Program with the remainder utilising Natural Heritage Trust funding.

Since that first committee formed in the 1970s, the evolution of Cowans Pond has seen it become an environmental asset to the Clarence Valley, that today is enjoyed by many. It also serves as an important natural history educational tool for local schools.



The Daily Examiner report of the time labelled it "the Bledisloe Cup of ornithology" when in 2002, a "lost" northern hemisphere species, the Northern Pintail Duck arrived at Cowan's Pond. The event attracted keen birdos from far and wide. It was, and remains, only the second recorded southern hemisphere sighting of the Northern Pintail Duck (the first being in Western Australia in 1986)

Cowan's Pond—reviving a local wetland



BEFORE and AFTER planting the entrance to Cowan's Pond



BEFORE and AFTER planting the edges of the pond overflow



Looking across Cowan's Pond from West to East. The background was originally as bare as the foreground, which is privately owned grazing property. The bird hide is just visible on the far side of the pond

Information and photos:

*Jo Tucker
Rosemary Brinkworth
Stan Mussared
Brian Dodd*

Elland Preservation Organisation—*looking after wetlands*

Elland Preservation Organisation is a relatively new Landcare group but members are long standing advocates for environmental land management issues and activities. The group was successful in implementing an Australian Government Caring for our Country—Community Action Grant. Based adjacent to the Orara River near Coutts Crossing, the project aims to protect Elland wetland, riparian vegetation, create corridors, and carry out threatened species, Weeping Paperbark (*Melaleuca irbyana*), rehabilitation.

The grant helped with activities including weed control on the Orara River for riparian rehabilitation. The main weeds focussed on are Cat's Claw Creeper (*Dolichandra unguis-cati*), Lantana (*Lantana camara*) and imported Dutchman's Pipe (*Aristolochia elegans*—not to be confused with the native species *Pararistolochia praeviosa* and *Aristolochia acuminata*). The weeds are an issue due to their threatening nature and aggression with the potential to smother native vegetation. EnviTE was contracted to implement the work.

The fencing of Elland wetlands has protected the wetlands and adjoining threatened species habitat. Fencing and establishment of seed stock has resulted in the rehabilitation and expansion of existing populations

of Weeping Paperbark, using livestock grazing control in the area.

The work also delivered improved habitat for wetland species including the Comb Crested Jacana (*Irediparra gallinacea*)—near the southern extent of its range. It also improved habitat for the Black-necked Stork (*Ephippiorhynchus asiaticus*) and Black Swan (*Cygnus atratus*) both of which breed in the area. The work has also provided improved connectivity for wildlife adjacent to the wetland area and will further extend the area of Weeping Paperbark. It will also alleviate the threat of choking vine weeds such as Cats Claw Creeper and Weed of National Significance (WoNS), Lantana, which has the potential to pose a threat to native plant populations.

Over 600 native endemic plants were planted to create connectivity and habitat, address critical habitat links and provide a focus for involving further local landholders in Landcare activities to enable expansion of the group.

Thanks to EnviTE Project Officer Mick Webb for information



Graeme Budd and EnviTE team members planting inside a fenced part of Elland wetlands.

Upper Eaton Creek—*early history of successful erosion control*

Upper Eaton Creek Landcare group formed to address problems as pictured. Over-clearing and over-grazing had left the naturally highly dispersible soils vulnerable to flash flooding, which can be a regular event for the area. Without the protection of natural vegetation, soils in the creek washed away rapidly, forming deep eroded gullies and creek banks.

In 1996, the group received a government grant to construct a concrete chute and repair and revegetate the creek banks along a section of the headwaters of Eaton Creek. The area was fenced off from stock and the construction work completed in two stages. At the time of writing, the concrete chute has only been lightly tested by a minor flash flood but it appears successful and the area is now well grassed.

“The major and long term part of the project is revegetation. To that end, we surveyed the flora species in the hills above Eatons Creek. This area has proved to be richly diverse in both rainforest and woodland species and provided us with a valuable living seed bank. Most of the 1000 plus trees planted were propagated from seed collected in the hills above us. Currently we are assessing seed availability, viability and germination rates. We have also conducted research on which plants will cope with drought and frost. These factors are important in saving both time and effort and ultimately will result in faster regeneration.” - Barbara Webb

“By spring we expect to have planted another 1000 and in the 1997-98 season we expect to propagate and plant 4000 more trees. The project is not expecting miracles overnight. It is a long term commitment to regeneration and reforestation of our waterway. However we do expect that within five years this section of Eatons Creek will be unrecognisable from the barren landscape of yesteryear.”

- quote from grant application 1996

The late Max, wife Barbara and daughter Kerrie Webb were early Clarence Landcare pioneers in promoting conservation in conjunction with the grazing of cattle and importantly recognising that neither were mutually exclusive. It is a vivid illustration of how the Landcare movement has come such along way since the Webb's efforts and applications which may have been seen as possibly extreme at the time by conventional farmers and which are now accepted by many as mainstream practice.



Erosion blow out prompting serious rehabilitation strategy



The rehabilitated area withstanding flood

Thanks to Barbara Webb for photos and information

Diggers Dunecare—*preserving undeveloped paradise*



Lance (left) and Desley Blemmings (right) at work with Rhonda James (centre) at a bush regeneration working bee above the Spring Gully beach access track

IN BRIEF

- Diggers Camp Dune Care formed 1992

Achievements

- Track to beach through “Hippy Hollow “
- Bitou, Lantana and Senna close to eradication, but follow up always required
- 1000s of hours of volunteer labour
- Hundreds of trees planted
- Beach access tracks improved
- Fire hazard reduction - removal of fallen trees from the reserve
- Annual community participation in Clean Up Australia Day
- 1995—botanist Melissa Morley is one of the first to identify endangered *Olax angulata* growing in heath land
- 2003—won “Beach Spirit Award” (Cleanest beach on North Coast). Criteria included anti-litter initiatives and visitor experience

Engangered species *Olax angulata* which grows in Digger's Camp heathland

The Yuraygir landscape has a vivid and diverse human history. Before 1788, its rich marine and land resources supported a relatively dense population of Yaegl and Gumbainggir people.

Since 1788, however, it has been an isolated place in an economically marginal region. The soils of its forests, heathlands and swamps did not support agriculture. Its distance from the Pacific Highway and inland farming and regional centres meant that it was not easily accessible. This helped this landscape elude the estate and resort development that boomed along the coastline north and south of it from the 1960s.

The upside of this has been the dedication of committed locals (both visitors and residents) with personal vested interests in ensuring the natural vegetation is restored to the prominence currently enjoyed by locals and visitors.

In 1960 the Department of Lands completed a survey to rationalise occupation of the reserve. As a result 28 residential lots were released for sale. This facilitated the removal of private temporary dwellings from the scenic escarpment camping area, however a prime area of the reserve was offered for disposal. Further residential blocks were released in 1967 and in 1984 the public road into Diggers Camp was formally placed under the control of Council. The final release of blocks took place in 1991 with a total of 44 residential lots created. About a third of these contain permanent residents.

By the late 1930s professional fisherman were permanently camped with their families at Diggers Camp. Forty five years later, a small number of alternative life-style people were more or less permanently camped in the recessed part of the Northern side of Diggers headland. The unofficial but well known name of “Hippy Hollow” is named for these campers.

Port of Yamba Yacht Club



Volunteers arrive to work on Dart Island



Jack Claxton

Jack Claxton (above) and his wife Neva, moved from Armidale to Yamba in 1991. Jack was a former academic at New England University “in genetics” and quiet Yamba was an ideal place to retire.

Being a keen “yachtie”, Jack joined the Port of Yamba Yacht Club. “We enjoyed the sight of Dart Island when venturing back to port after being on the open sea”, said Jack. “The island is the closest piece of land to Yamba, a clear marker when returning to port.”

In 1994, a fire swept through the island, enhanced by sprayed lantana, which had dried to become highly combustible. The fire burnt a considerable amount of vegetation. This prompted Jack and a few other dedicated volunteers to form a group to deal with the aftermath. Work included revegetation and weed control. The group was further assisted by an EnviTE Green Corps team working in the area.

Thanks to Jack Claxton for information and photos



Lantana waiting to explode into flames



Green Corps take a break from work on the island

Founding Kangaroo Creek Landcare member Claire Purvis (formerly Aman) remembers the group first forming in 1992.

“During the dry period in 1991, local conflict arose over water rights. As creek flow diminished, arguments flared about water pumping – how much, what for, was there a limit? A meeting was held, where accusations were made. Stan Pitkin suggested a constructive path, and a group was formed to collectively look after the land, water and vegetation of Kangaroo Creek. This approach brought traditional farmers and environmentalist newcomers together in a practical way that was great for the community. The first thing we did was travel 5 km of the creek by canoe, looking at erosion and clearing. We selected a site where the creek bank was vertical, and accessed \$5000 in funding for a stream bank stabilisation project. This project was ongoing for about three years, and involved fencing, groyne work and hundreds of hours of planting and maintenance.”

Stan Pitkin started the group and helped bring a diverse range of local people together with a common interest—looking after Kangaroo Creek. Stan farmed at Kangaroo Creek at the time, and was a member of the Total Catchment Management Committee. Stan was Chair, with Claire as Secretary and Treasurer. Others included Andi Aman, Jim Knight, Delree Philp, Ann Mulligan, Ian Cameron and Alison Kelly, Adam Smith, Donald Bowles, Bradley McLennan, Marlene and Barry Peters.

Claire said the group also accessed funding to compile a community

inventory of the Kangaroo Creek. A survey was instigated to gauge what people wanted to know; after which information was produced on local weeds, erosion control, bushfire management, local flora and fauna, water quality, soils, geology, land capability and population change. The Creek was also fenced on several properties. On a schools education level, Kangaroo Creek Landcare hosted Streamwatch “Bug Hunts”.

Like Claire, while having since moved from Kangaroo Creek, Stan Pitkin is still a resident of the Clarence Valley. “I can say, that having been back to one of the work sites in my current employment, the creek vegetation is much better. Then devoid of any vegetation, (there is) now significant *Casuarina* populations in evidence.”

For Claire, when asked about any achievements the group made, her modest reply was “Nothing famous, but it did bring people together out of conflict.” This statement alone is indicative of the many untold successes of Landcare in being able to unite people of diverse interests with a common theme, goal or benefit.

While, in Claire’s words, the group petered out in the late 1990s/early 2000s as people moved away and/or found employment elsewhere, she commented “it’s a good job the group was born again!”

Today, the reincarnation of Kangaroo Creek Landcare is led by Steve Gonano and Merye White. Delree Philp is still a member, and regular working bees are held on members’ properties.

SADLY, YOU DON’T ALWAYS WIN

Many members of Kangaroo Creek Landcare vehemently disapproved Forest Enterprises Australia’s purchase of Bardool Station and the establishment of a large scale timber plantation.

Hundreds of hectares of grazing land were ploughed and planted with predominantly Dunn’s white gum (*Eucalyptus dunnii*), a non-indigenous species, with many huge existing eucalypts destroyed in the process.

A large proportion of the surrounding hillside above Kangaroo Creek was planted out, with multiple swales created to trap water for the planted trees. Residents feared the alteration to the natural landscape would affect rainfall run-off to the valley.

When the company was eventually placed in receivership, much of the affected land was returned to grazing, as it was prior to establishment of the plantation.

Kangaroo Creek Landcare—*unity arising through conflict* (continued)



While some sections of the Kangaroo Creek hillside and valley retain the planted trees (top), the majority have been bulldozed into windrows and bon-fire heaps, returning the land to grazing (see *story previous page*)



Late 1990s. Upper Kangaroo Creek, with bare denuded riparian zone but with regenerating River oaks (*Casuarina cunninghamiana*) in creek alluvium..

“Having been back to one of the work sites in my current employment, the creek vegetation is much better. Then devoid of any vegetation, (there are) now significant *Casuarina* populations in evidence.” - Stan Pitkin, founding member and original Chair, Kangaroo Creek Landcare



Many parts of the creek are now protected by fencing, enabling the growth of species such as *Casuarina* which protect the banks from erosion



Bill Burns—three generations of farming Romiaka Island



Participants at a field day on Romiaka Island

Bill Burns is a farmer. He is also a private land conservationist. His Romiaka Island property is a great example of how a grazing property can be successfully combined with promoting and maintaining biodiversity.

Romiaka Island is one of nearly one hundred islands found along the 70 kilometre length of the lower Clarence River. The island is near Yamba and lies between two channels which connect the Clarence River to the large coastal lagoon of Lake Wooloweyah. Over 100 ha in size, the island is freehold and has been managed by three generations of the Burns family. Rich in native plant and animal diversity, it has significant conservation values.

Bill was concerned about stock trampling sensitive vegetation; weed invasion; and erosion-induced damage to mangrove and salt marsh habitat. In 2008 he contacted the Northern Rivers Catchment Management Authority (NRCMA). The outcome built upon conservation work Bill had begun undertaking with Clarence Landcare and Wetlandcare Australia in the 10 years prior to contacting NRCMA.

The work that was done as a result of this contact became a showcase site for the NRCMA. Extensive work was carried out including repairing eroded river bank and restoring protected mangrove habitat. Stock were also excluded from endangered saltmarsh habitat by relocating the stock crossing away from the saltmarsh. Funding through a Community Action Grant enabled replanting of lost subtropical coastal floodplain forest species. This has further increased biodiversity and a seed bank has been created for future projects in the area. Natural regeneration has been encouraged by stock exclusion fencing. Contractors undertook initial control of weeds, while regular inspections and control is now done before the problem becomes too big to handle.

This article is a summary of material collected and written for the booklet "SUSTAINABLE FLOODPLAIN FARMING" by the NRCMA. Text and photo contributors include Nigel Blake, Julie Mousley, and Debra Novak

Landcare Link—Bill Burns ... *farming and conservation hand in hand (cont'd)*

Problems, solutions and outcomes ...



Problem: river bank eroded with resultant loss of mangroves and fish habitat



Solution: bank stabilised with rock fillets with mangroves recolonising and creating fish habitat



Outcome: six months later mangroves begin regenerating



Problem: 2007—a cattle crossing over saltmarsh, which has resulted in trampling and degrading the saltmarsh



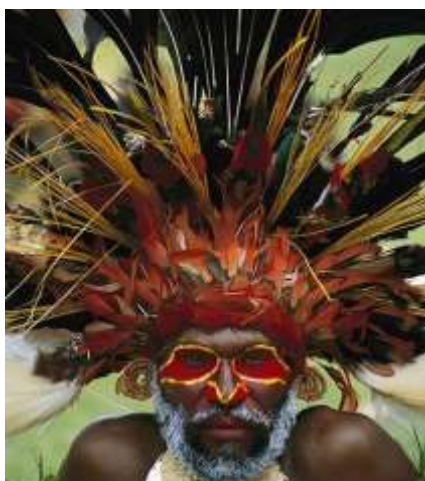
Solution: 2009—an alternative crossing was constructed away from the saltmarsh



Outcome: 2009—recovery of old stock crossing

Landcare Link—Russell Jago

... a passion for protection and promotion of our natural history



Images such as this were etched in Russell's memory early in life. The photo depicts a headdress of Bird of Paradise, Lorikeet and other parrot feathers on a Papua New Guinea local.

Image courtesy: www.visualphotos.com

Russell's passion for wildlife spills over into wildlife photography as seen in the examples below



A Brolga (*Grus rubicunda*) pair



Detail of engorged *Morelia spilota*. Nominally a "Carpet snake", this python is typical of the intergrade between Diamond and Carpet Pythons, which occurs on the Mid-North Coast, including the Clarence

Russell Jago was born in, and spent the first ten years of his life, in Goroka, Papua New Guinea, where his English father was a school teacher. He has early memories of the annual Goroka show, where locals from far and wide would attend, many in full traditional regalia. This included colourful headdresses and clothing composed of animal skins and Bird of Paradise feathers. Not surprisingly with early impressions such as this, Russell grew up with a fascination of the natural world. It shaped his view and developed into his occupation.

Russell works as a fauna and environmental consultant. He is contracted by organisations such as NSW National Parks & Wildlife Service, local councils, Landcare offices, and carries out work for private clients/individuals. His work often involves trapping, banding, weighing and identifying wildlife. Additionally, Russell is a keen photographer.

Russell bought his Pillar Valley property, "Blackbutt Hollow", in 2005 but had become a Landcare member "some time before that". He purchased "Blackbutt Hollow" to preserve and enhance the natural environment of the country he is passionate about. Since buying the block, he has a completed Property Vegetation Plan and carried out "over 4 ha of weed control and maintenance". Material obtained from creating firebreaks has been used as fill for erosion control in two major gullies.

Russell is excited to have several rare and threatened species living on the block. This includes a pair of Powerful Owls which nest in the vicinity "about every other year in a large Blackbutt". Other species include Rufous Bettong, Squirrel and Yellow Bellied Gliders, and Glossy Black Cockatoos, with the Coastal Emu also known to visit.



Brown bandicoot



Introduced pest: cane toads (*Bufus marinus*) in amplexus

Where is Clarence Landcare Inc.?



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