

North Central  
Waterwatch

# catchment care

Spring Edition  
December 2011

## Regional Update

Hello Everyone,

It's that time of the year again...that's right – **MERRY CHRISTMAS!**

The last few months have been very exciting; with the release of the Frogs Field Guide, the Biodiversity poster series and planning for 2012 events.

Waterwatch was sad to say goodbye to Kelly Dunn who did amazing work over the past eight months. Some of you may still see Kelly around, as she is working with the Flood Recovery Employment Program (FREP). Kelly is helping to set up Flood Recovery work crews, assessing flood damaged properties and writing media releases about the progress of on-ground works. It is great to see her take on these new challenges; we wish her all the best in her new role with the North Central CMA.

Over the past couple of months Waterwatch has taken part in many activities across the North Central CMA region including: Platypus Information Sessions (attended by over 100 community members); almost 100 students took part in celebrating National Water Week; and the launch of the Frogs Field Guide at Smeaton was also a great success.

The Annual State Waterwatch Conference 2011 in Bendigo saw 18 Coordinators from across the State joining in activities which included; workshops on data management and the use of Community Water Quality data; a presentation by Brad Drust (Executive Manager Loddon and Avoca Catchments) on the 2010/11 floods in north central Victoria - including case studies on Benjeroop and Creswick. Discussion also sparked an interest about Waterwatch participation in future emergency response situations. Day 2 included a Workshop on the program itself, efficiency in reporting to investors and possible revenue for future funding for the program. Day 3 Coordinators had the opportunity to explore some of the North Central CMA priority reaches. We paddled along Serpentine Creek to see revegetation works and fencing along the creek that exclude stock from in the waterway, and met a landholder for questions and a further tour of the creek. Day 4 entailed GIS training at Bendigo TAFE. Coordinators found this to be beneficial and thought this should be a tool for developing maps and reporting.

It's been an exciting time for everyone involved in Waterwatch 2011! Please note, I am holidaying for two weeks over Christmas and will return on Monday, 9 January 2012.

Have a safe and happy holiday season,

Cass Davis  
**Regional Waterwatch Coordinator**





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*Stuart McLean (North Central CMA Board Member), Derek de Vrieze (Community Banking Manager, bankmecu), Tamsin Byrne (Sutton Grange and Axe Creek Landcare Groups) and Maurie Dynon (Guildford Upper Loddon Landcare Group) cutting the 25<sup>th</sup> Anniversary cake. Photo courtesy Anthony Webster*

The 25th Anniversary event was a great opportunity to recognise members of the Landcare community who were nominated for the Victorian Landcare Honour Roll. We were lucky enough to get two honour roll recipients, Maurie Dynon and Tamsin Byrne, to cut the cake and officially celebrate 25 Years of Landcare. Both Maurie and Tamsin have made significant contributions to their Landcare communities and were nominated by members of their group to be placed on the Victorian honour roll.

## Landcare Covers '25 years of' Ground

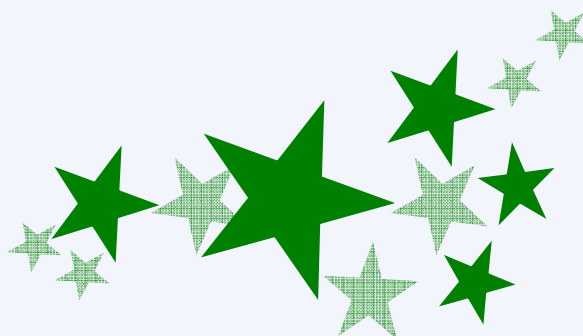
Hello everyone,  
Merry Christmas!!!

One of the highlights of the year for me would definitely have to be the 25th Anniversary dinner event on Friday, 25 November at Bress Winery. The night was a great success with almost 200 people coming from all over the catchment to celebrate this significant milestone. Those who came got to sample some of the local produce while catching up with old friends and making new ones. Guest speaker Shanaka Fernando entertained the crowd with stories from his life and how he came about opening 'Lentil as Anything' - the first pay as you feel restaurant in Melbourne.

He impressed everyone when he mentioned he rode to the event from Melbourne – yes, Melbourne!

Merry Christmas  
And have a Safe and Happy  
New Year

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## Quality Assurance and Quality Control

In August 2011 two-thirds of monitors in the North Central CMA region took part in the Waterwatch annual QA/QC week. QA/QC is part of the Waterwatch program to ensure that the Monitor's data collected is consistent and meets the state objective for Community Water Quality data.

Waterwatch Victoria produces chemical 'mystery samples' which are distributed across Victoria. Monitors and Coordinators take part in testing the 'mystery samples'. The testing assesses the accuracy of equipment used, Monitor's skills and testing methods.

Over 76% of the phys-chem tests were within the acceptable range for results. This is great news. Thank you everyone who took part in this year's QA/QC week testing.

I will be sending individual results out in the coming weeks. I will notify and make an appointment to catch-up and go over the equipment and methods with anyone who did not meet the acceptable range in the testing.

If you have any further questions please feel free to contact myself, Cass Davis.



*Margaret and Bill Moody test their mystery samples at the Castlemaine QA/QC event.*

Photo by Cass Davis

## Waterwatch Data Management System

Over the past two years Waterwatch has been working on a new Data Management System. This involves the accumulation of 19 years of 'community collected' Waterwatch Victoria data into one online, publicly accessible system. You can currently access river health data for over 6,200 sites since 1993; of which 1,521 are currently active.

The link below is provided for you to investigate sites for Water Quality data in the North Central CMA region!

[www.vic.waterwatch.org.au/](http://www.vic.waterwatch.org.au/)

*I found this works better in Mozilla Firefox program.*

## A blast from the past

*From The Argus, 25 March 1955*

A HUGE willy-willy similar to a minor tornado, spread havoc for 15 minutes in the small township of Boort, 169 miles from Melbourne on the edge of the Mallee at 2pm today. It swept towards the town from the east, spiralling swiftly up to 500ft then spreading out into a mushroom.

The willy-willy carried reeds and bird life into the air from Lake Boort.

Townpeople had a hectic time as dust, debris and reeds spiralled into the sky. Immediately afterwards, violent thunder and lightening and drenching rain struck the town. More than 100 points of rain fell in 25 minutes.

Mr. William Rye, of Boort, one of scores of startled watchers, said "It was a fantastic sight as it whirled across the lake, then over land.

"It would have knocked over a lot of places if it had roared through the town itself."

"A black streak extending from the clouds to the ground, it raced towards the lake for five minutes before reaching the water and sucking it up for hundreds of feet.

"The water spout roared into tall red gum trees, bending the tops over.

"The paddocks looked as if they had been hit by a flood and the Boort-Bendigo road was covered with seaweed.





The whirlwind seemed to vanish upwards, then swept to earth again as it passed over a channel, sucking up more water."

"It rose again and finally vanished into heavy black clouds.

"The weirdest part about the whirlwind was its absolute silence as it covered more than a mile," added Mr. Rye.

## 2011 State Landcare Awards

Victoria's Minister for Environment and Climate Change, Ryan Smith has paid tribute to thousands of Landcare volunteers across the state at the 2011 Victorian Landcare Awards ceremony at Government House with Governor Alex Chernov AO QC.

Mr Smith said the awards celebrated the 25th Anniversary of Landcare and the great work done by thousands of volunteers across the state who make a difference in their local environment by supporting and maintaining the great natural assets throughout Victoria.

"Landcare is a grass-roots environmental movement that was started by a group of Victorian farmers in the 1980s and what has been achieved since then deserves our praise and ongoing support," Mr Smith said. "The winners of the 2011 Victorian Landcare Awards embody the enthusiasm and commitment that has made Landcare in Victoria what it is today and I'd like to congratulate the Highly Commended and all nominees for their solid efforts.

Waterwatch would like to say congratulations to Tamsin Byrne who was nominated onto the honour roll 15 years of volunteering

Tamsin is also a dedicated Waterwatch volunteer who heads out monthly with David and Jennifer to collect monthly Water Quality data from three sites in the Sutton Grange region.

## Congratulations Tamsin

From the North Central Waterwatch Team

## Spring Waterwatch Activities

- ◆ Naturally Loddon Canoe Tour
- ◆ 2011 State Waterwatch Conference
- ◆ Frog Field Guide Launch at Smeaton, VIC
- ◆ Six Platypus Information Sessions

### **Bug Blitz @ Castlemaine Primary School**

*Tuesday 15th September*

Happy Valley Reserve in Castlemaine hosted a 'bug blitz' day for Castlemaine Primary School Grade 5 and 6 students. The lucky students had five different activities to rotate through during the day including; planting trees; looking for terrestrial bugs; and also a macro invertebrate session.



*Student from Castlemaine Primary School finds a frog at bug Blitz.*

**Photo by Castlemaine Primary School**

Armed with plastic spoons, ice trays and plastic microscopes, these students were in charge of finding the aquatic life that resides in Forest Creek. These junior scientists enthusiastically used their best patience to wait and see if there were any movements of water bugs within their sample.

The students found a great diversity of macroinvertebrates - which is excellent in terms of the health of the creek. Many frogs were heard calling also indicating a flourishing wetland environment. The day was a great success and a big thank you is in order for the Castlemaine Primary School staff and other volunteers.

*Story by Kelly Dunn  
North Central CMA*





## **Bendigo Family Nature Club and Waterwatch**

*Sunday 18 September 2011*

The Bendigo Family Nature invited Cass Davis to Reservoir 7 to investigate macroinvertebrates in the waters of the frog pond.

It was a calm and warm spring day with bird calls and a frog 'croakcophony' greeting the first arrivals, making it worthwhile being alive and certainly being there.

After an introduction by Tam Marwood, Cass led a very informative discussion about what we might find in the frog pond water.

Cass was able to engage the children with questions before they got their hands wet and muddy, prompting some very good answers about macroinvertebrates. She then led more than 30 children (aged 2 to 12 years), parents and grandparents to the frog pond where she carefully collected a healthy sample of muddy water in a bucket.

At the shelter everyone soon made quick use of the variety of equipment, especially the charts and the magnifying devices. This allowed children to see in greater detail the many living things in the water and to learn about the creatures they identified.

Cass was at hand to answer questions and solve problems with the very eager children. It wasn't only the small children who were amazed with the variety and complexity of such tiny creatures; some very 'very' old children could not be held back from finding out what lived in a healthy frog pond.

Gauging by the enthusiasm and positive comments on the day there are many participants looking forward to what the next Family Nature Club will feature.



*Left: Cass Davis collecting a sample from the Frog Pond. Right: Indi looking through the microscope for bugs.*

**Story and photo by Stuart Fraser  
Bendigo Family Nature Club**

## **National Water Week**

*Tuesday 18 October 2011*

North Central Waterwatch, the City of Greater Bendigo, Coliban Water, Shire of Campaspe and Friends of the Bendigo Botanic Gardens celebrated and raised awareness of National Water Week to schools across the North Central CMA region.

*What is National Water Week?*

National Water Week (NWW) aims to raise awareness of the importance of taking care of our catchments.

A catchment is an area of land that drains to one point, usually a creek or river. All land in Australia is part of a catchment.

How we live and work in these catchments has an impact on the quality of water that drains into these waterways. Poor management practices on land can lead to deterioration in water quality. Poor water quality is damaging to the natural environment and increases the level of treatment that our water requires.

After the HUGE success of delivering NWW activities at the Bendigo Botanic Gardens in 2010 to three local schools, a partnership was formed to host another National Water Week event in 2011.

Eppalock, Golden Square and St. Josephs Primary Schools were asked to join in celebration of NWW at the Bendigo Botanic Gardens. Almost 100 students were engaged in activities such as; a study of macro invertebrate (Water Bugs), Water Wise Gardens, Story of a River and Creek side vegetation study.

Students all received a show bag and a special plant to take home. We have received great feedback from schools who took part in the activities and look forward to hosting the 2102 NWW. As always we are looking for volunteers to help out with planning and delivering activities at next year's event. If you are interested in being involved please contact:

Cass Davis.

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**National  
Water  
Week**

16 - 22 October 2011



## Catchment Care Features

### *River Detectives Get Wet*

What a busy month our River Detectives have had! Spring brings with it macroinvertebrate identification activities for our primary school scientists. Due to the weather heating up and subsequent warming of our creeks, dams and rivers, many macroinvertebrate populations start their busy mating and breeding season.

We have now visited all our River Detective schools to deliver a macroinvertebrate session with some great results! Students sifted through film trays full of river water to establish which macro invertebrate were present and their sensitivity rating to pollutants and other aquatic life.

Some great identifications were made with each school finding a large and diverse abundance of aquatic bugs; which paints a fantastic picture for in-stream habitat in our region. These results assist us in determining the current health of rivers and creeks in the North Central CMA region. A big 'well done' to our River Detectives! We hope you enjoy your Christmas holidays and look forward to future sessions. 😊



*River Detective students investigate what macroinvertebrates are present in their local waterway.*

**Story by Kelly Dunn  
North Central CMA**

### *Water Weed of the Quarter*

**Common Name:** Water hyacinth

**Scientific name:** *Eichhornia crassipes*

Water hyacinth is one of the world's worst aquatic weeds. It infests rivers, dams, lakes and irrigation channels on every continent except Antarctica. It devastates aquatic environments and costs billions of dollars every year in control costs and economic losses.

Water hyacinth is native to the Amazon basin in South America and was brought to Australia in the 1890s as an ornamental plant. Water hyacinth grows in still or slow-flowing fresh water in tropical and temperate climates. Optimum growth occurs at temperatures between 28°C and 30°C, and requires large amounts of nitrogen, phosphorus and potassium.

Although this plant will tolerate a wide range of growth conditions and climatic extremes including frost, it is rapidly killed by ocean strength saline waters. Water hyacinth is justifiably called the 'world's worst' aquatic weed due to its ability to rapidly cover whole waterways.



In Australia it forms dense, impenetrable mats over the water surface. Specific impacts include:

- ◆ Blocking irrigation channels and rivers
- ◆ Restricting livestock access to water
- ◆ Destroying natural wetlands
- ◆ Eliminating native aquatic plants
- ◆ Reducing infiltration of sunlight
- ◆ Changing the temperature, pH and oxygen levels of water
- ◆ Reducing gas exchange at the water surface

**Story by Kelly Dunn  
North Central CMA**

**Photo: Water Hyacinth, DPI**





## 2012 National Soils Forum – Bendigo, 8 and 9 March

The North Central Catchment Management Authority (CMA) is hosting the 2012 NATIONAL SOILS FORUM in Bendigo.

The forum will bring together key landholders, local farmers, scientists and policy makers to discuss how we secure the productive and environmental values of our soils in north central Victoria.

- Date:** Thursday 8 and Friday 9 March 2012  
**Times:** Thursday 10am – 5.30pm: Field trips and trade exhibitions  
 5.30 pm: Civic reception  
 7pm: Gala dinner  
 Friday 8.30am – 5.30pm: Forum and trade exhibitions  
**Venue:** Quality Resort All Seasons, McIvor Road, Bendigo

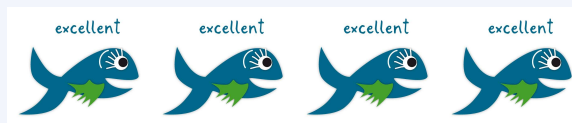
Keynote speakers include Dr Julian Cribb, journalist, editor, science communicator and author of *The Coming Famine* and Dr. Peter Carberry, Deputy Director for the CSIRO Sustainable Agriculture Flagship program.

The forum will include field trips and trade exhibits, and cover climate change, contemporary farming systems, and economic circumstances that place pressure on the land.

The forum is delivered under the North Central CMA's Farming for Sustainable Soils project – an initiative supported by the Australian Government's Caring for our Country program.



For further information and registration including details of field trips, contact the North Central CMA on 03 5448 7124 or email [info@nccma.vic.gov.au](mailto:info@nccma.vic.gov.au) Please RSVP by 9 February 2012.



### What fish am I?

I am a small fish only growing to 30 cm.

I travel no further than 30 metres from home.

I am *nocturnal* and *benthic*, which means I am active at night and live around the bottom of the river.

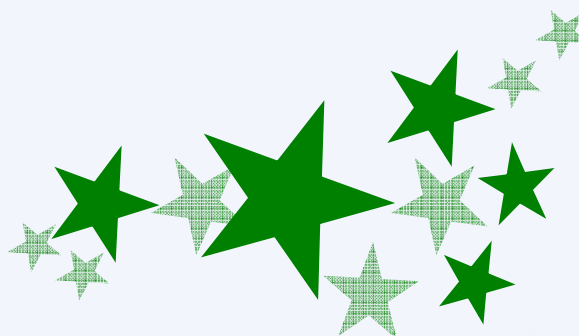
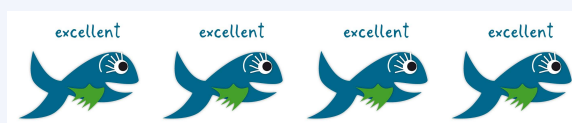
I am carnivorous and eat small insects, yabbies and larvae.

I lay my eggs in hollow logs and in-between rocks. My eggs are protected by the male.

I breed in spring through to summer.

I am a R\_\_\_\_\_ B\_\_\_\_\_

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# North Central CMA Projects 14<sup>th</sup> 2011 International River Symposium Poster Plate Award

In February 2011 the Waterwatch program submitted an abstract to the 14th 2011 International River Symposium. The River Symposium is an International Rivers Conference attended by leading scientists, community groups, government agencies and corporate leaders from over 25 nations. The symposium is the ultimate river and water management conference where the latest thinking and proven solutions are explored and debated.

Due to overbank flows within the Loddon River, the Waterwatch Program, along with the Loddon Stressed Rivers project, took the opportunity to test the hypothesis of macroinvertebrate resilience post drought periods (Humphries 2006; Boulton 2003).

In June 2011 an opportunity to present the abstract in the form of a poster was extended.

With three months to collate the data and prepare the final report the poster was developed.

I headed off to Brisbane with the poster tightly in my arms. On the Monday morning we arrived at the symposium when I put up my poster on the display boards provided.

On the last day, the winner of the Poster Plate Award was announced, the award is sponsored by eWater and the judges award the winning poster to the one that is the most informative, innovative and well designed. To my delight the winning poster was mine! Wow, I cannot explain the feeling of winning an international prize - I am still in shock!

Before I sign off, I would like to acknowledge the many hands that helped to bring this poster to life: Nicole Bullen, Phil Slessor, Jon Leever, April Curatolo, Jodie Odgers, Ashley Bevan, Tess Grieves, Michelle Maher, Kelly Dunn and Mal Brown. Without everyone's contribution and support this would not have been possible - thank you.

### About the poster:

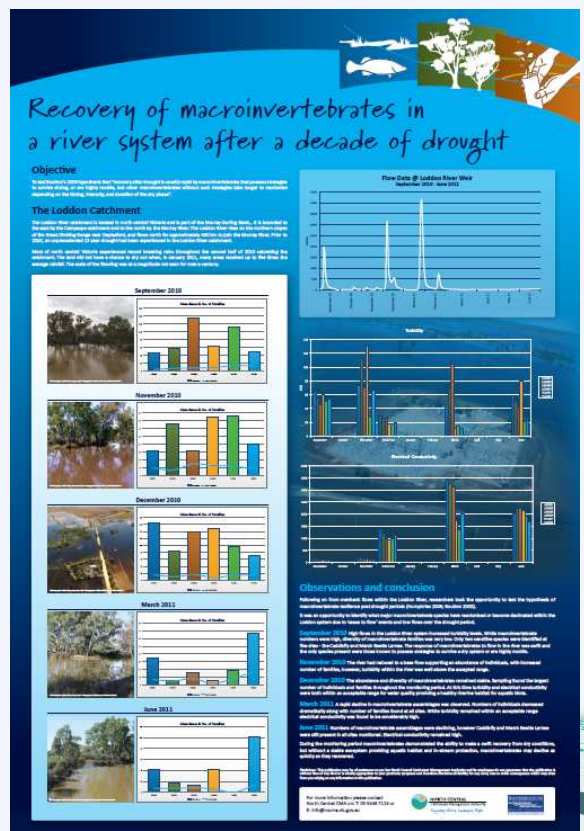
The Loddon River is part of the Murray-Darling Basin, located in north central Victoria. It is bounded to the east by the Campaspe region and to the north by the Murray region. The Loddon River

rises on the northern slopes of the Great Dividing Range near Daylesford, and flows north for approximately 430 km to join the Murray River. Cairn Curran and Tullaroop reservoirs are the main storages that collect water from the upper parts of the catchment.

Prior to 2010, the Loddon River catchment had experienced 13 years of drought. Most of north central Victoria experienced record breaking rains throughout the second half of 2010 which saturated the catchment.

The land did not have a chance to dry out when, in January 2011, many areas received up to five times the average rainfall. The scale of the flooding was at a magnitude not seen for over a century. In January alone more than 20% of Victoria was affected by floods.

Following on from overbank flows within the Loddon River, researchers took the opportunity to test the hypothesis of macroinvertebrate resilience in post drought periods (Humphries 2006; Boulton 2003). It was an opportunity to identify what major macroinvertebrate species have recolonised or become decimated within the Loddon River system due to 'cease to flow' events and low flows over the drought period.

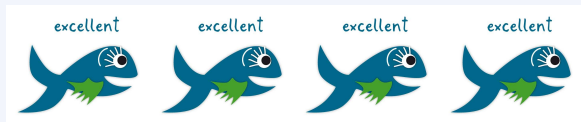




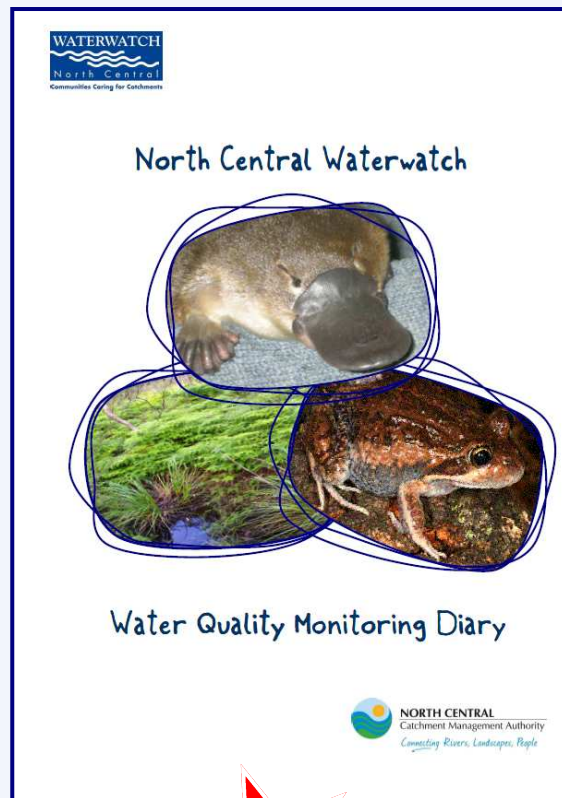


Answer: *What fish am I?*

I am a River Blackfish



Don't forget I will be sending our new diaries out next year!



The North Central Waterwatch program would like to thank the following organisations for their contribution to the program in 2011



CITY OF GREATER BENDIGO



Coliban WATER

SHIRE OF CAMPASPE



Rochester Campaspe Water Services Committee



Department of Sustainability and Environment

