

Gunbower Forest was a hive of activity when Museum Victoria visited the Gannawarra Shire in October for a 'Bioscan' to discover and record the biodiversity of the region.

About 30 Museum of Victoria researchers, students and expert volunteers spent eight days working with Traditional Owners, Parks Victoria, DELWP and the North Central CMA.

The survey looked at birds, reptiles and amphibians, fishes, and freshwater and terrestrial invertebrates.

The endangered Murray hardyhead (*Craterocephalus fluviatilis*) was recorded and photographed, as were more than 125 species of birds and more than 100 species of moths.

Professional photographers were on hand to capture high-resolution images of the animals, which they will use to generate a

library of remarkable imagery.

Species lists and distributional data were also generated, helping to document and profile the biodiversity of the region.

A range of public engagement events were also held across the week including a focus on cultural history of the area with Traditional Owners, a pop-up natural history museum event for local schools, and a Science in the Pub event.



"Scanning" water samples for waterbugs.

Big Cohuna Festival kids Catch a Carp Day

Almost 50 children braved the mozzies to do their bit for carp control at the annual Catch a Carp event at Apex Park in Cohuna earlier this month as part of the Big Cohuna Festival.

The North Central CMA provided plenty of bait in the hope of catching as many carp as possible from the Gunbower Creek. Unfortunately the carp had other ideas with only three caught on the day.

"There was plenty to do while the fish weren't biting including having a taste of carp cooked in a variety of ways, learning about sustainable fishing practices from Fishcare volunteers and checking out the turtles Turtles Australia brought along",

North Central CMA Project Officer Amy Russell said.

The big winners on the day were the Wilson family who caught the biggest fish, which weighed in at 3.5kg. Next was Liam Edge (2kg) and Henry Gaiter (1kg).



The proud winners and their prizes.

This newsletter is made possible by funding provided by The Living Murray initiative of the Murray-Darling Basin Authority.

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The Living Murray is a joint initiative funded by the New South Wales, Victorian, South Australian, Australian Capital Territory and Commonwealth governments, coordinated by the Murray-Darling Basin Authority.



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Welcome to the 15th edition of the Flooding for Life community newsletter.

A lot has been happening since the last edition, with natural flooding bringing the forest to life. We hope you've had the chance to get out and enjoy what's been on offer.

Forest flourishing in response to natural flooding

Gunbower Forest is experiencing a natural flooding event on a scale not seen for many years.

Natural flooding of the forest began in August and continued throughout September and October, peaking when flows reached 57,984 megalitres a day (ML/d) over Torrumbarry Weir on the 17 October. This was larger than the 2010/11 flood, when flow at Torrumbarry peaked at about 52,000 ML/d.

More than 7,000 hectares have been inundated in the upper, middle and lower sections of the forest this year, inundating many areas that rarely receive water, such as the black box and grey box woodlands on the

higher sections of the forest.

"This natural flood is providing a suite of short and long-term benefits to the forest," North Central CMA Project Manager Anna Parker said.

"Aquatic vegetation is thriving as a result, and the forest is alive with activity from all the critters that call the forest home."

The natural event has provided a great opportunity for on-ground monitoring of the flooding, including how the birds, frogs, fish and vegetation respond. Information collected will be used to help manage environmental water events in the future.



Aquatic vegetation throughout Gunbower Forest is thriving in response to natural flooding.

CONTACT

North Central CMA
Reception
Ph: 03 5448 7124

Anna Parker
Gunbower Forest project manager
Email:
anna.parker@nccma.vic.gov.au

Kira Woods
Gunbower Forest project officer
Email:
kira.woods@nccma.vic.gov.au



Waterbirds spoil for choice

Natural flooding in the forest, and the response of aquatic plants and water bugs, has provided ideal conditions for a waterbird breeding event this year. Hundreds of birds will make the forest their temporary home for up to six months as they use the productive forest to raise their young.

North Central CMA Project Officer Will Honeybun said: "We have been undertaking waterbird monitoring in the forest over the past few months, recording and counting all birds observed or heard and any evidence of breeding such as nests, eggs and chicks.



Black Swan eggs discovered during a recent survey at Little Reedy lagoon.

"In previous years waterbird breeding has been mainly confined to the semi-permanent wetland and lagoon complexes, however this year waterbirds have countless options when selecting a breeding site in the forest, and are proving difficult to detect from on-ground surveys."

A fly-over of the forest is planned for early December to gain a better indication of the number and distribution of waterbirds so we can better target on-ground surveys and manage the water in the forest.



*Bird ecologist Rick Webster monitoring for waterbirds in Little Reedy Wetland Complex
Photo: D.Kleinert*

Fish monitoring underway

Managing carp is one of the biggest challenges for environmental water managers across the Murray Darling Basin.

"To better understand the way carp move between the forest and Murray River we have caught and tagged 40 carp from the forest. The movement of these carp is tracked by a network of loggers in the forest. The tags work like an e-tag on your car, sending a signal to the logger each time the carp swims past," Project Officer Kathryn Stanislowski said.

"We are interested to know when and where the carp move during a flood, in particular if they leave the forest as the forest drains, or if most stay in the wetlands."

At the same time the carp were tagged, electrofishing surveys were also conducted. A number of golden perch, silver perch and Murray cod were found, close to where the carbon-rich water was exiting the forest.

The presence of these fish indicates the natural flooding is also providing benefits to the native fish. The flood waters are full of bugs and other small fish for these larger species to eat.

"This is the first time golden perch have been observed on the floodplain which is significant as it shows that they do move on and off to the floodplain to access the floodplain resources," Kathryn said.

"The information gathered through the fish monitoring will help us better understand how carp behave during flood events and will be useful look at long term management options for carp in Gunbower Forest."



Inserting tags allows carp to be monitored as they move across the forest.

Rare orchid recorded for the first time in Gunbower

A new population of a nationally endangered orchid has been unearthed in Gunbower Forest. The floodplain rustyhood (*Pterostylis cheraphila*) was discovered during a baseline survey to monitor the effects of grazing pressure at a relatively undisturbed patch of endangered woodland vegetation. About 95 plants were found occurring in a concentrated area.

The find is significant because the only other site where the species has ever been found is on the Wimmera River between Murtoa and Dimboola in the west of the state

North Central CMA Project Manager Adrian Martins said: "Initially only three rosettes were found and the identity of the species was only confirmed when it flowered.

"At first we didn't know what it was, and thought it was another orchid species (also threatened) until it flowered and the diagnostic features were fully visible allowing orchid experts to confirm its identity."

Native orchids have a complex and fascinating ecology which includes species-specific symbiotic relationships with mycorrhizal fungi and pollinators.

The pollinator of the floodplain rustyhood is an insect belonging to the fly family Keroplatidae in the tribe Orfeliini. This species of fly has not yet been described and reportedly only flies on sunny, hot days after 2pm.



Floodplain rustyhood. Photo: Adrian Martins.

Barapa spreading the word in the forest

The Barapa Water for Country project team has been out and about recently, talking about beautiful Gunbower Forest. Audiences at the Australian Stream Management conference in the Blue Mountains, and at the Australian Society for Limnology conference in Ballarat, heard about the project and about the value of water from a cultural perspective. The project was also a finalist at the recent Australian Landcare awards in Melbourne.



Aunt Esther at the Landcare awards with Don Burke.

Field surveys were conducted once again by the Barapa Culture team in November. Run across two weeks, the cultural surveys identified and recorded sites of cultural heritage and any culturally important plants. The flooding restricted access to some sites, but that didn't stop the team who took to canoes to reach and record sites visible in the floodwater. The work conducted by the team further adds to the impressive cultural record of the area.



Recording of an earth mound in March 2016.