



# Lower Murray River

## Quarterly newsletter

Issue 18: September to December 2023

Welcome to issue 18 of the Lower Murray newsletter, where we provide updates on our work monitoring ecological responses to Commonwealth environmental water delivery in the Lower Murray.

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## Project updates

- Six stream metabolism, five zooplankton and four fish larvae trips have been concluded. During trip two in early November, native perch (golden and/or silver perch) eggs were observed in samples from most sites, and a few golden perch larvae were noticed during sampling in late November. However, the final numbers of golden perch larvae and the presence of other native large-bodied fish will be confirmed once identification starts in 2024.
- Seven Murray cod larvae were sampled using light traps downstream of Locks 3 and 4, in November 2023, compared to none in November 2022 and three in November 2021. We are looking forward to the next Murray cod targeted trips, as the early findings suggest a good recruitment year for Murray cod.
- Natal origin analysis ( $n = 5$ ) of young-of-the-year golden perch collected in March–April 2023, indicated most fish (4 of 5 analysed) originated from spawning in the Lower Murray, downstream of Darling River junction, with one individual coming from the Darling River. The presence of native perch eggs (golden and/or silver perch) in samples collected in the Lower Murray between late October 2022 and early January 2023, also provided evidence of local spawning.
- Age structure analysis of golden perch and silver perch in 2023 indicated the survival of fish spawned in 2021-22 which now represent strong cohorts in the populations. One year old (1+) golden perch represented 41% of the sampled population whilst 1+ silver perch represented 43%.
- Unfortunately with the high flows, four introduced species greatly increased in abundances. These were common carp, goldfish and redfin perch, sampled by electrofishing, and eastern gambusia, sampled using fyke-nets.



Golden perch larvae. Photo credit: SARDI



Exotic species, unwanted catch after the high flows. Photo credit: SARDI

# Faith Morgan, a young Ngarrindjeri lady with big plans

The Indigenous Ecology in Action (IE&A) workshop has been running at Calperum Station for a few years and intends to involve school students from years 7–9 learning on country. During the workshops students learn about western science and cultural knowledge. One of the main objectives is to keep students engaged and learning.. Since 2021, around 60 students attended four IE&A workshops, co-hosted by Calperum Station and SARDI, and funded by the Commonwealth Environmental Water Holder (CEWH). Faith Morgan, one of the students who attended the first workshop has shared her learning experience with us and we couldn't be prouder of her achievements.

## Faith's words

The Riverland has always been home to me and my family. I was born and raised in Renmark and my family lives across the Riverland in Renmark, Berri, Barmera, Loxton, and Gerard.

The Murray River is the foundation to my connection to country. Growing up, my family would always spend time near the river. During summers, my family would go fishing, swimming and would always sit down and have a feed by the river until it got dark. The sounds of the birds and slow-moving water would make me feel so calm. I would listen to stories from my grandmother about when she was little and how she would spend time down at Redbank, Gerard, with her brothers and her parents. Each time we went fishing we would hope to catch a Callop to have a feed.

The first time I was exposed to land care practices would be when I first started working at Calperum Station. On my second week out at Calperum, we went to Murphy's Dam and planted a whole lot of new plants. We also set up an irrigation system which was a hose connected to a shuttle with drippers placed at each plant. This would slowly water all the plants at the same time. To keep these plants protected we placed tree guards on most of the plants then placed branches over the plants with no guards.

I first took part in an activity with SARDI in June 2021 as a student. I found this activity quite enjoyable, we learned how to set up the fish traps and got to go into the water with the suits. We also got to help identify the fish that was caught in the traps. We identified them with fish ID books and with the help of Qi-feng and Luciana from SARDI.

I took part in this activity again in June 2023 as a staff member at Calperum Station. My responsibility as a staff member was to help supervise and help the students when needed, which was very different to when I was a student doing the activity. It felt rewarding to see how much the students enjoyed setting up the nets and identifying the fish.

Something that I took away from my schooling years would be that it helps to push your boundaries and to never be scared to fail because at the end of the day you either succeed or you learn.

My first job was a ranger at Calperum Station. When I first started in May, I was unsure of what was expected of me but as time went on, I grew more confident in my role and loved coming to work. Through my employment at Calperum I learned a range of new skills and grew a passion for the environment around me. Being in a place that is so connected to caring for country has helped me decide what I want to do in the future.

## Faith's future plans

Before I started at Calperum, I thought that studying social work was my set plan for 2024. However, after being exposed to the environment at Calperum as well as how people help conserve and protect the land and its animals, I realised I was more interested in environment compared to social work. With the help from another staff member at Calperum, I was able to transfer my course from social work to a Bachelor of Science – Conservation and Biodiversity which I will be studying in 2024.





Student, Faith Morgan. Photo credit: SARDI



Faith's Ranger training qualifications



IE&A workshop students, Faith Morgan in on the right side. Photo credit: SARDI



Faith working at Calperum Station (left). Photo credit: SARDI

# Engagement and communications updates

- During this quarter, the Lower Murray team spent most of our time engaging and consulting with the Ngarrindjeri Aboriginal Corporation (NAC) and River Murray and Mallee Aboriginal Corporation (RMMAC) about plans for on-ground monitoring. Both groups would like to have their young fellas trained in monitoring 'Ponde' (Murray cod) using electrofishing while their elders watch from a distance.
- The future of the Indigenous Ecology in Action (IE&A) workshops were discussed with the Calperum Station manager, following an increase in demand from many Riverland schools, which would like to access on-country learning activity. Having extra resources to run more workshops would be beneficial to many First Nations students from the Riverland region. During the meeting, plans were made to trial using weaving to make traditional fishing artefacts, which should occur April 2024.
- Finally, our team have been partaking in discussions, online workshops and reviewing strategies for the 'Knowledge Exchange Communication and Engagement' and 'Cultural Outcomes' components of the CEWH Flow-MER 2.0 Program.

## What's next

- Reporting on the results of the 2022-23 season is underway. It is also time to continue field sampling and in the new year start processing the laboratory samples (sorting and identification).
- Over the next quarter, a short video will be produced to summarise the science and present scientists involved in the MER program. Videos will also showcase lessons learned and the results achieved during MER 1.0.

For more information about the work we do, visit the [Flow-MER website](#) and follow us on [Facebook](#) or [X](#).

