



The making of wetland wonderland

By Ben Vincent

Figure 1 (above): Wetland vegetation booming in spectacular fashion, boasting a diverse array of species each playing their part in this colourful ecosystem on the eastern edge of the Gingham Wetlands. Gamillaraay language used where applicable. Photo Credit - Ben Vincent

Traditional Gamilaaraay Language of the Gomeri nation used in this article (M.McKemey & H. White- Bush Tucker, Boomerangs and Bandages)

The wetlands of the Gwydir are currently exactly that... very wet. This is very different to the very dry conditions that prevailed in 2019. Since completion of Copeton Dam in the mid 70's to support agriculture, there has been less frequent natural inundation of the Gwydir wetlands.

Figures 1 & 2 show part of the Gwydir Wetland State Conservation Area, in the north-eastern part of the Gingham Wetlands - an area which is often just beyond reach of environmental water delivery alone, and often found in a dry state, dominated by terrestrial vegetation species.

The wet conditions that commenced in 2020 and continue to now, have produced a series of floods including a very large flood in 2021. All of the Gwydir wetlands got wet.

Native seeds and tubers which have been dormant since the last inundation (in 2016) were triggered into germination and growth by the ongoing inundation.



Figure 2: Floodplain woodland wetlands on the eastern edge of Gingham Wetlands in early 2022. Photo Credit - Ben Vincent



Figure 3: Red Water Fern (*Azolla filiculoides*) & Water Couch (*Paspalum distichum*). Photo Credit - Ben Vincent

While environmental water delivery is typically utilised to maintain core wetland vegetation during drier times, it also contributes proportionally to the maintenance and improvement of vegetation condition by piggy backing on and extending the duration and extent of larger natural flow events.

The extra water on top of natural flows, at times like these enables the extended wetting of additional vegetation communities which lay towards the outer extent of the wetland periphery (i.e. water couch) and into floodplain woodland wetlands (i.e. coolabah).

Recently, environmental water managers provided extra flows to maintain water levels to support bird breeding in the Gwydir Wetlands. The floodplain vegetation communities that fringe the core wetlands are benefitting too (Figure 4).

Seeing the vegetation respond in this way highlights its resilience and exemplifies the importance of natural floods and the role of environmental water in wetter periods. This expansive wetland is now supporting a plethora of organisms that are thriving after just adding water.



Figure 4: Black-winged Stilts (*Himantopus himantopus*) making the most of the revived wetland. Photo Credit - Ben Vincent

RESILIENCE?

In ecology, resilience is the ability of an ecosystem to absorb change following ecological disturbance and then recover to an original state.

In this case, the wetland was exposed to severe drought followed by back-to-back flooding and showed resilience through re-emergence and dominance of wetland plants. The ability for these species to then fruit and flower, replenishes the wetland seedbank and ensures that these species can persist in the future.

Managing water for the environment is a collective and collaborative effort, working in partnership with communities, private landholders, scientists and government agencies - these contributions are gratefully acknowledged.

We acknowledge the Traditional Owners of the land on which we live, work and play. We also pay our respects to Elders past, present and emerging.



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