



Title: 'Para Wetland'

Description: Tussock grassland at the point where farmland gives way to the Para Wetland

Photographer's name: Noelle Bennett

Where and when: Para Wetland. Tuamarina, Marlborough. August 2021.

Sustainability: Para Wetland can be found not far outside Blenheim (New Zealand), on the road to Picton. In pre-colonial days, it used to be a large kahikatea and totara swamp. It supported large numbers of fish and birds, and those in turn provided an important food-gathering source for Māori.

So, what exactly are wetlands? They occur in areas where surface water collects or where groundwater seeps through to the surface. Typical examples would include swamps, bogs, estuaries and some river edges. Although today we recognise what important and hugely diverse ecosystems they are, it's not that many years ago that they were considered to be useless wastelands and were often used as waste disposal sites if they were considered to have no potential as pasture. At that time there was no understanding that wetlands had the potential to benefit not only wetland species but also by serving many functions like flood control, erosion control, water table maintenance, water purification. Ecological economists now categorise these as 'regulating' ecosystem services that keep systems safe and healthy – they are worth billions of dollars if you care to count them up, and they are provided by nature free of charge provided we maintain the ecosystems in good health.

In essence, wetlands act as a giant sponge, helping to control water flow and water quality. Wetland plants slow the flow of water from the land when it rains and then in summer, the stored water is slowly released from the wetlands, helping to maintain water flow. They are probably some of the most productive places on Earth, providing, as they do, such a substantial food source for fish, birds and other animals whilst their micro-organisms (fungi and bacteria) decompose and recycle nutrients.

As far as the Para Wetland was concerned, because there was such a limited difference in the height of the northern

and southern ends of the swamp, draining it proved to be impractical so the wetland escaped the fate of so many others. But it was decided to plant willows instead, the theory being that they would stop the wetland from flooding. However, what it actually did in practice was to severely degrade the habitat, wiping out much of the native flora and fauna.

Now, the 122 hectare wetland is being 'reclaimed' from the willows which were essentially choking it to death. Willows were restricting water flow, so they now have been poisoned and left to rot (it was simply impractical to try to remove them all). Now they stand dead on their feet, skeletal monuments to the unwittingly flawed thinking of days gone by - monuments that wouldn't look out of place in a dystopian world. Floods and strong winds see more and more of them topple over and then the decay process takes over. Life replenishes life.

Waterfowl and fish populations are now increasing. There is native tree regrowth and improved water quality. Para Wetland is slowly but surely returning.

Photographer's notes: This image was taken in the middle of winter at the Tuamarina end of the Para Wetland where the Wetland abuts farmland.

Photo specs: This image is a composite of three images which have each been taken using different exposure levels in order to maximise the dynamic range of the finished photograph. Technical specs: The main image was taken using a Panasonic DC-G9 camera and a Panasonic Lumix G-Vario 12-35mm f/2.8 lens. Exposure details - 1/100sec at f8 with an ISO of 100 and a focal length of 30mm (60mm full frame equivalent).

Digital specs: 7707 x 5534 pixels (42.65MP) @ 300dpi

Key words: wetland, Para Wetland, diversity, Tuamarina, Marlborough, ecosystem services, willows, , Noelle Bennett, Ecosystems Photography, sustainability.

Price: \$250 (incl. GST) for use of the digital image. Visit www.ecosystemsphotography/sales for details & to order, or to get a quote if you would like a high-quality print.

Donation: The price includes a \$100 donation to a sustainability organisation or project of your choice, or otherwise for The National Wetland Trust <https://www.wetlandtrust.org.nz/>.

We recommend that the donation goes to The National Wetland Trust to support their work on raising appreciation for wetlands. They are a Not-for-Profit organisation that is run by volunteers and donations. They have a Discovery Centre at Rotopiko near Hamilton, but also support education, outreach and policy for wetland conservation, recovery and creation.

Image ref: NB#006 (please use this reference in all orders and correspondence).

Noelle Bennett
28 December 2021