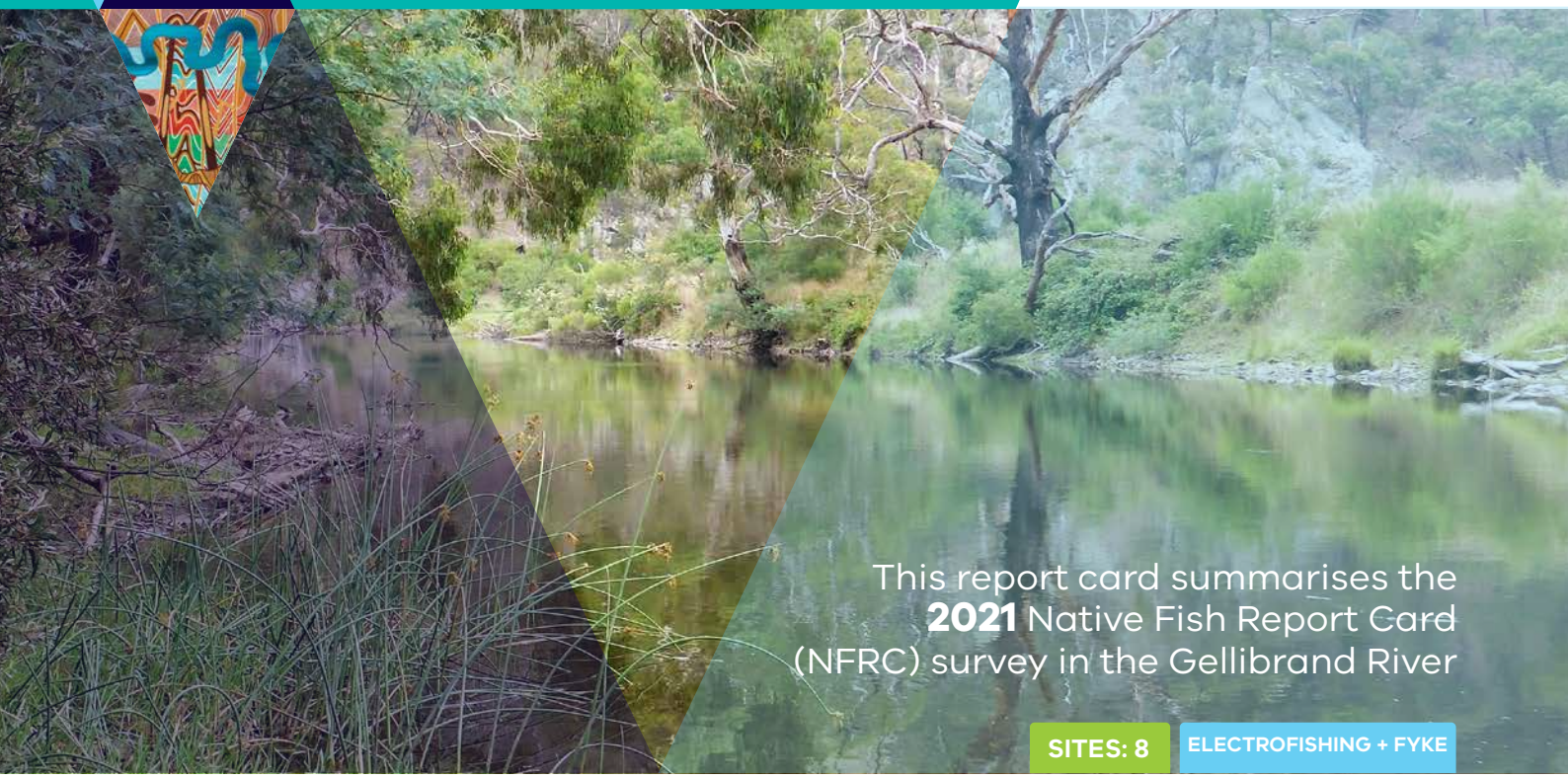
Gellibrand River 2021
Corangamite Region

Native Fish Report Card



This report card summarises the **2021** Native Fish Report Card (NFRC) survey in the Gellibrand River

SITES: 8 | ELECTROFISHING + FYKE

Fish found in the Gellibrand River for NFRC

Target Species

✓ *recorded in 2021*

✓ **River Blackfish**

Gadopsis marmoratus

Non-target species

✓ *recorded since 2017**

Large-bodied native species

- ✓ Australian Grayling
- ✓ Short-finned Eel
- ✓ Tupong

Small-bodied native species

- ✓ Australian Smelt
- ✓ Climbing Galaxias
- ✓ Common Galaxias
- ✓ Ornate Mountain Galaxias
- ✓ Pounched Lamprey
- ✓ Short-headed Lamprey
- ✓ Southern Pygmy Perch
- ✓ Spotted Galaxias

Exotic species

- ✓ Brown Trout

** Incidentally captured during NFRC surveys since 2017 but not measured as for target species.*

Fish community

The NFRC Program began in 2017, with a focus on targeting the monitoring of population dynamics of key iconic fish species that have high recreational and/or conservation values, in large rivers across Victoria. In the Gellibrand River, the target species is River Blackfish. Surveys occur in March/April each year, at six sites from upstream of Chapple Vale to Dandos Campground on the Gellibrand River and two sites on tributaries. Backpack electrofishing and fyke netting is undertaken in the Gellibrand River, whilst the backpack electrofishing only occurs in the tributaries. The equipment and habitats surveyed are focused on the River Blackfish, which are measured to determine population structures. Other fish species that are incidentally captured are recorded, but not measured to determine their population structures.

Summary of key health indicators for target species in 2021

Species	Key Health Indicators		
	Recent recruitment	Multiple size classes	Mature fish present
River Blackfish	Yes	Yes	Yes

Recent recruitment means young-of-year fish

River Blackfish are a lowland species, generally found at altitudes below 200 metres. This species has suffered a decline in distribution and abundance across Victoria[1]. The Gellibrand River was previously known as having a well-established River Blackfish population with large adults present[2].

Non-target species

The non-target fish species that have been incidentally recorded in the Gellibrand River during NFRC surveys since 2017 are:

Large-bodied native species

Other large-bodied species recorded in surveys are Australian Grayling, Short-finned Eel and Tupong. Numbers of Australian Grayling are low in the Gellibrand River catchment and the species is rarely found. Records from the NFRC are only the third (2017), fourth (2018) and fifth (2019) confirmed records of this species in this river. Australian Grayling have been found at the lowest site on three occasions during NFRC surveys, with only one other detection recorded. The Short-finned Eel and Tupong are diadromous species found throughout coastal Victoria.

Small-bodied native species

The Australian Smelt is a common species distributed across all of Victoria. The Common Galaxias, Climbing Galaxias and Spotted Galaxias as well as Pouched Lamprey and Short-headed Lamprey are diadromous species found across coastal Victoria. The Ornate Mountain Galaxias is known from West Gippsland across to the Gellibrand area. Southern Pygmy Perch are more common in offstream habitats such as wetlands, billabongs and lagoons.

Exotic fish species

Brown Trout are present throughout the Gellibrand River occurring in low to moderate abundances, however they are not a dominant species.

Other native fish species known from the Gellibrand River

Some fish species known to occur in the Gellibrand River have never been recorded during NFRC surveys. This includes the Flatheaded Gudgeon which is a common species across Victoria.

Other notable species

Surveys have also recorded Southern Victorian Spiny Crayfish and Platypus.

1. Khan MT, Khan TA, Wilson ME 2004. Habitat use and movement of river blackfish (Gadopsis marmoratus R.) in a highly modified Victorian stream, Australia. Ecology of Freshwater Fish, 13: 285–293.

2. Koehn, J. 1984. Survey of angling and recreational use of the Gellibrand River, south-western Victoria. Arthur Rylah Institute for Environmental Research Technical Report Series No. 10. Department of Conservation, Forests and Lands. Fisheries and Wildlife Service Victoria.

Environmental and Management Context

Environment

Low flow conditions were present in all five sampling seasons..

River rehabilitation efforts in the Gellibrand River

Many rehabilitation actions have occurred, and are underway, to improve the health of the Gellibrand River. These are informed by the Corangamite Waterway Strategy 2014-2022 as well as an Estuary Management Plan. Actions include revegetation, weed control including large scale removal of Willows, fencing of riparian areas, bank stabilisation, reintroduction of instream woody habitat, removal of migration barriers and pest control. Some fish monitoring has occurred, including related to rehabilitation efforts. The Corangamite Catchment Management Authority, DELWP and the Victorian Fisheries Authority support rehabilitation and management of the Gellibrand River and its fish community.

See ARI website for further information about the Native Fish Report Card program.

The NFRC program, and related monitoring initiatives, provide improved understanding of the structure of fish communities and how rivers can be best managed.

Figure 1. Map showing the section of Gellibrand River where NFRC sampling occurs

Figure 2. A River Blackfish

Figure 3. Returning a River Blackfish to the water

River Blackfish

Gadopsis marmoratus

Native Fish Report Card

Key Health Indicators

- Recent recruitment
- Multiple size classes
- Mature fish present

Monitoring Results	
Total number of fish caught	43
Fish per 1km of waterway	22.81
Largest fish by length (cm)	48
Largest fish by weight (kg)	1.09
% of the catch that is legal size	37.2

GELLIBRAND RIVER | RECREATIONAL SPECIES

Abundances of River Blackfish (*Gadopsis marmoratus*) appear to be higher in 2017, albeit this is largely from additional recruits captured in that year (Figure 4). Recruits, juveniles and adults have been recorded in all five years (Figure 4, Figure 5). All young-of-year River Blackfish were found in the two tributary sites of the Gellibrand River, not the mainstem, and the Gellibrand mainstem only has adult fish, highlighting the potential importance of tributary habitats for the population in Gellibrand River catchment. Only low abundances of River Blackfish were detected in the mainstem (9-18 fish each year, despite six of the eight sites being on the mainstem). River Blackfish have only been detected at the most upstream site in Native Fish Report Card sampling in 2019.

Stocking

No stocking has occurred.

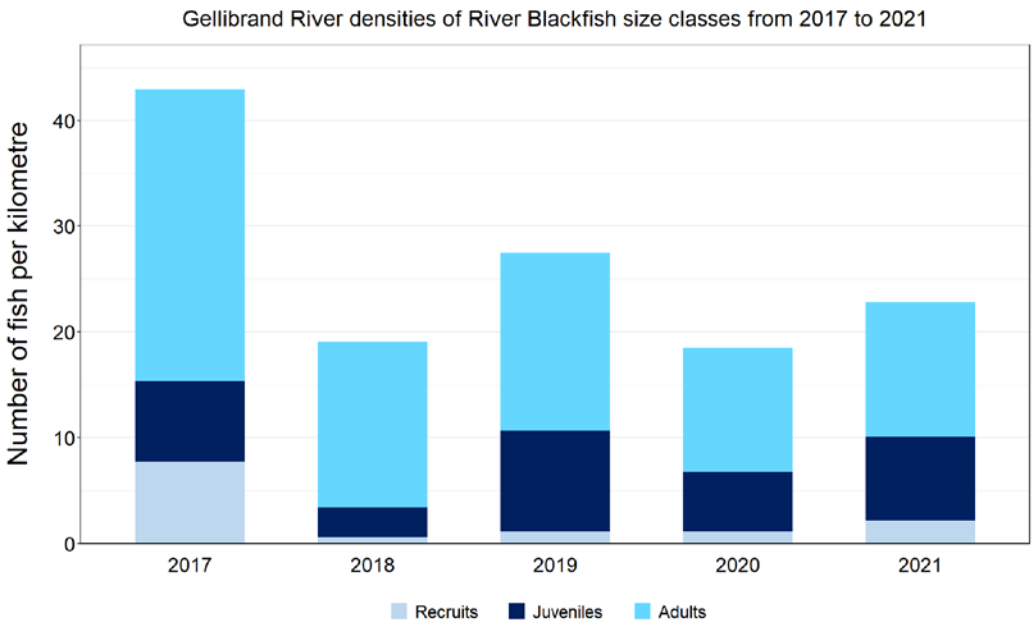


Figure 4. The densities of recruits, juveniles and adult River Blackfish for NFRC surveys in the Gellibrand River from 2017 to 2021

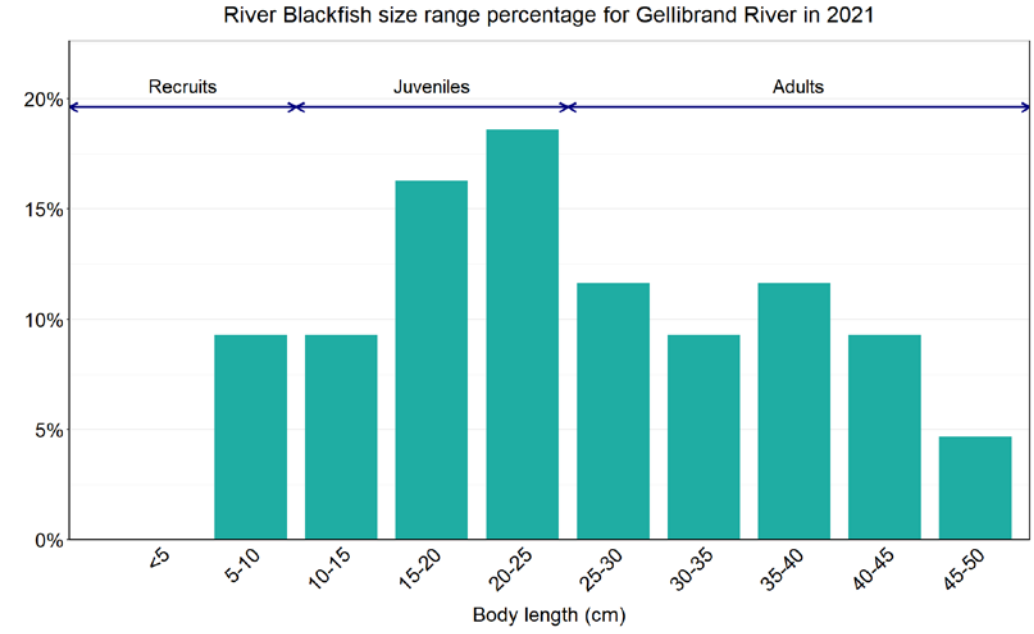


Figure 5. The size range percentage of River Blackfish measured from the Gellibrand River during NFRC surveys in 2021.