Native Fishery Report Cards – 2024:

Report cards for nine important recreational and threatened non-recreational native freshwater fish from 10 priority streams

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Brett A. Ingram, Jason Lieschke and David Dawson

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Front cover
Cover photos recognise the role of the Victorian Fisheries Authority in stocking native fish into Victoria's lakes and rivers to support recreational fishing and conservation of threatened fish species. In 2021-22, the VFA reached a massive milestone by stocking 10 million fish across the state.

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Executive Summary

Fishery report cards provide a quick and concise means of presenting complex and detailed fish population data in a simplified format for readers to digest. These report cards are being used by the Victorian Fisheries Authority (VFA) to engage and inform anglers about the status and health of important recreational species in the state.

The *Native Fish Report Card Program* (*NFRCP*), which has been conducted annually since 2017, uses fish population surveys to produce *Health cards* for nine important recreational and threatened non-recreational large-bodied native freshwater fish from 10 priority streams in which they occur in Victoria. These species are Australian bass, estuary perch, freshwater catfish, golden perch, Macquarie perch, Murray cod, river blackfish, silver perch and trout cod.

Electrofishing and fyke netting in some locations were used to capture fish. These methods are effective sampling tools that can provide a snapshot of the presence and abundance of fish at the time of sampling. But they do not catch all the fish present and often fish are observed but cannot be caught. Therefore, the numbers of fish presented in the *Native Fishery Report Cards* should be considered as an indication of the fish present only.

Results from these annual surveys are combined with results from similar historic fish surveys dating back to the early 1990s. These are then summarised into a *Native Fishery Report Card* to assess long-term trends in catch rates, fish size structure (presence of multiple year classes, mature fish and recent recruits) and to provide a health assessment for each species in selected streams. Information from the *Angler Fishing Diary Program* was also used in assessment of fish in the Glenelg River.

Native Fishery Report Card results

In 2024, an overall rating of Very Good was assigned to three species (Australian bass, golden perch and Macquarie perch), Good for four species (estuary perch, Murray cod, river blackfish and trout cod) and Low for two species (freshwater catfish and silver perch).

Since the previous assessment in 2023, the health assessment for three species has changed:

- Estuary perch has improved from Moderate to Good
- Golden perch has improved from Good to Very Good
- Macquarie perch has improved from Good to Very Good

Further information regarding these assessments is provided in the report cards below.

Status of small-bodied native fish

There have been considerable declines in the distribution and abundance of many small-bodied native fish, and some are now considered threatened in Victoria. Although small-bodied native fish are also collected as part of fishery surveys to assess species of commercial and/or recreational value, their status is rarely included in fishery assessment reports. Results from current and historic fisheries surveys described in this report were used to assess the status of 24 species of small-bodied native fish, including two-spined blackfish, bony bream, seven galaxias species, Australian grayling, five gudgeon species, two lamprey species, unspecked hardyhead, three pygmy perch species, Murray-Darling rainbow fish, Australian smelt and tupong.

Small-bodied native fish were likely to be either under-represented or absent from surveys described in this report because the survey methods were not designed to target either small-bodied species or the habitats in which they may be more abundant (e.g. smaller river tributaries and backwaters). Some species are threatened, are less often recorded, have either patchy or restricted distributions and/or occur in small numbers. Consequently, status ratings for small-bodied native fish used presence-absence (detection frequency) data in selected streams.

In the streams surveyed in 2024, eight small-bodied native species (including five galaxias) had a detection rating of rare or absent, two occasionally detected, four regularly detected and 10 commonly detected.

Species	Rivers	2024 Results						
		5-year abundance	10-year abundance	Multiple year classes	Mature fish	Recent recruitment	Maximum size	Overall rating
Australian bass	Mitchell R., and Thomson R. & Macalister R.	⇧	⇔	✓	✓	✓*	Some	Very Good
Estuary perch	Glenelg R.	⇧	⇔	✓	✓	✘	Some	Good
Freshwater catfish†	Lindsay R. & Mullaroo Ck, and Wimmera R.	⇔	⇔	?	?	?	?	Low
Golden perch	Goulburn R., Gunbower Ck, Lindsay R. & Mullaroo Ck, and Wimmera R.	⇔	⇔	✓	✓	Some*	Some	Very Good
Macquarie perch†	Ovens R. and Yarra R.	⇔	⇔	✓	✓	Some*	✓	Very Good
Murray cod†	Goulburn R., Gunbower Ck, Ovens R., Lindsay R. & Mullaroo Ck	⇔	⇔	✓	✓	Some*	Some	Good
River blackfish†	Gellibrand R. system	⇔	⇔	✓	✓	Some	Some	Good
Silver perch†	Gunbower Ck and Wimmera R.	⇔	⇔	?	?	?	?	Low
Trout cod†	Goulburn R. and Ovens R.	⇔	⇔	✓	✓	Some	Some	Good

⇧ = Increasing, ⇩ = Decreasing, ⇔ = Stable or variable (up and down), ✓ = Good numbers, **Some** = A small number, ✘ = None. ? = Insufficient information. * May include stocked fish.

† (blue text) Listed as threatened under the the *Flora and Fauna Guarantee Act (1988)* (https://www.environment.vic.gov.au/conserving-threatened-species/threatened-list)

Rare or absent	Occasionally detected	Regularly detected	Commonly detected
Galaxias, climbing	Lamprey, shortheaded	Blackfish, two-spined	Bream, bony
Galaxias, flatheaded†	Pygmy perch, southern†	Gudgeon, Cox's†	Galaxias, common
Galaxias, mountain		Lamprey, pouched	Galaxias, ornate
Galaxias, spotted		Gudgeon, carp	Grayling, Australian†
Gudgeon, striped			Gudgeon, flathead
Pygmy perch, Yarra†			Hardyhead, unspecked
Gudgeon, dwarf flathead			Pygmy perch, Ewen†
Galaxias, obscure			Rainbowfish, Murray-Darling†
			Smelt, Australian
			Tupong

† (blue text) Listed as threatened under the the *Flora and Fauna Guarantee Act (1988)* (https://www.environment.vic.gov.au/conserving-threatened-species/threatened-list)

Introduction

Fishery report cards

Fishery report cards provide a quick and concise way of presenting complex and detailed fish population data in a simplified format for readers to digest. These report cards are being used by the Victorian Fisheries Authority (VFA) to engage and inform anglers about the status and health of important recreational species in the state. Fishery report cards have been prepared for popular estuarine fish, trout and freshwater native fish.

Preparation of the *Native Fishery Report Cards* has been a partnership between thehttps://www.deeca.vic.gov.au/ Department of Energy, Environment and Climate Action (DEECA), formerly the Department of Environment, Land, Water and Planning (DELWP), the Victorian Fisheries Authority (VFA) and Recreational Fishing License Holders (through Recreational Fishing License Trust Recreational Fishing Grants Program). The report cards use information from fish population surveys of important recreational and threatened non-recreational large-bodied native freshwater fish from 10 priority streams in Victoria in which they commonly occur (Table 1, Figure 1). The priority rivers were selected in collaboration with catchment management authorities (CMAs), scientists and expert recreational fishers, and are identified as reference rivers for monitoring and assessment in the Victorian *Freshwater Fisheries Management Plan* (Victorian Fisheries Authority 2018).

Native Fishery Report Cards for large-bodied species presented in this report combine information from contemporary electrofishing surveys with historic electrofishing surveys dating back to the early 1990s to assess long-term trends in catch rates, fish size structure (presence of multiple year classes, mature fish and recent recruits) and the current health of nine native fish species (Australian bass, estuary perch, freshwater catfish, golden perch, Macquarie perch, Murray cod, river blackfish, silver perch and trout cod) in 10 priority Victorian streams (Figure 1). The report cards combine and summarise results for one to four rivers for each species (Table 2). *Native Fishery Report Cards* have been published annually since 2019 (Ingram *et al.* 2019, Ingram and Lieschke 2021, Ingram and Lieschke 2022, Ingram and Lieschke 2023, Ingram *et al.* 2023). DEECA also provides native fish report cards for fish communities in selected rivers (https://www.ari.vic.gov.au/research/field-techniques-and-monitoring/native-fish-report-card-program).

Although small-bodied native fish are regularly collected as part of fishery surveys to assess species of commercial and/or recreational value, their status is rarely included in fishery assessment reports. There has been considerable declines in the distribution and abundance of many small-bodied native fish (Lintermans *et al.* 2020) and some are considered threatened under the Victorian *Flora and Fauna Guarantee Act (1988)* (https://www.environment.vic.gov.au/conserving-threatened-species/threatened-list) (Appendix I). Fishery surveys conducted for preparation of the *Native Fishery Report Cards* have also be used to assess the status of small-bodied native fish populations in selected Victorian streams, which have been included in the *Native Fishery Report Cards* since the 2021 report.

Objectives

To provide fishers and managers a better understanding of the past and current health of Victorian fish species by assessing health of nine large-bodied native fish in 10 streams and produce *Native Fishery Report Cards* for these species. This report also assesses the status of 24 small-bodied native fish species in 10 streams.

Table 1. Priority stream and large-bodied species surveyed for the *Native Fishery Report Cards*.

Priority river	Region	Recreational species	Threatened non-recreational species
Gellibrand River system	Corangamite CMA	River blackfish†	
Glenelg River	Glenelg Hopkins CMA	Estuary perch	
Lower Goulburn River	Goulburn Broken CMA	Golden perch Murray cod†	Silver perch† Trout cod†
Gunbower Creek	North Central CMA	Golden perch Murray cod†	Silver perch† Trout cod†
Lindsay River & Mullaroo Creek	Mallee CMA	Golden perch Murray cod†	Silver perch†
Mitchell River	East Gippsland CMA	Australian bass	
Ovens River	North East CMA	Golden perch Murray cod†	Macquarie perch† Trout cod†
Thomson & Macalister rivers	West Gippsland CMA	Australian bass	
Wimmera River	Wimmera CMA	Freshwater catfish† Golden perch	Silver perch†
Yarra River	Melbourne Water	Macquarie perch† Murray cod†	

† (blue text) Listed as threatened under the the *Flora and Fauna Guarantee Act (1988)* (https://www.environment.vic.gov.au/conserving-threatened-species/threatened-list)

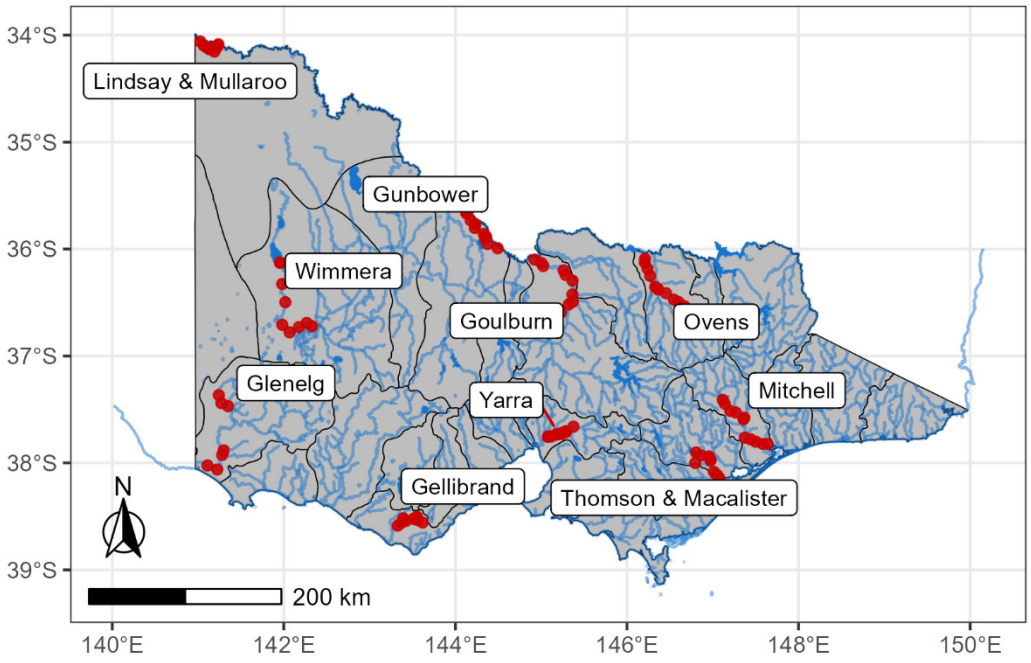

Figure 1. Location of streams surveyed for native fishery report cards in this report.

Table 2. Large-bodied species and rivers assessed for each species that are presented in a fishery report card format in this report.

Species	Mitchell	Thomson & Macalister	Gellibrand	Glenelg	Ovens	Goulburn	Gunbower	Lindsay & Mullaroo	Wimmera	Yarra
Australian bass	■	■								
River blackfish†			■							
Estuary perch				■						
Macquarie perch†					■					■
Trout cod†					■	■				
Murray cod†					■	■	■	■		
Golden perch						■	■	■	■	
Silver perch†							■		■	
Freshwater catfish†								■	■	

† (blue text) Listed as threatened under the the *Flora and Fauna Guarantee Act (1988)* (https://www.environment.vic.gov.au/conserving-threatened-species/threatened-list)

Materials and Methods

Species, species distribution and conservation status

Scientific names for species described in this report, and their conservation status under the *Flora and Fauna Guarantee Act (1988)* (*FFG Act*) (https://www.environment.vic.gov.au/conserving-threatened-species/threatened-list, are provided in Appendix I. Species distribution descriptions in Cadwallader and Backhouse (1983), McDowall (1996) and Lintermans (2007) were used to identify rivers to be assessed for each species.

Contemporary survey data (2017 to present)

Contemporary survey data has been collected since 2017 by sampling fish from priority rivers in autumn to avoid the spring periods of peak migration when some native fish undertake long distance movements into or out of the rivers. Surveys conducted at the same time of the year also allows for a more precise comparison between survey years.

Fish were sampled from multiple sites in each priority river, predominantly using electrofishing. Smaller, shallower, wadable streams, such as the Gellibrand River system, were surveyed with a backpack electrofisher for approximately 90 minutes, while larger, deep, non-wadable streams were surveyed with an electrofishing boat for 60 to 90 minutes. Fyke netting was also used in two rivers where target species that live on the bottom of the river are difficult to catch using electrofishing. These are river blackfish (Gellibrand River system - all years) and freshwater catfish (Wimmera River – prior to 2020).

Electrofishing and fyke netting are effective sampling tools for providing a snapshot of the presence and abundance of fish present at the time of sampling. But they do not catch all the fish present and often fish are observed but cannot be caught. Therefore, the numbers of fish presented in the *Native Fishery Report Cards* should be considered a sample only. There are likely to be many more fish in the waterways than just those recorded. Fish may also move about and populations will fluctuate due to natural variations over time.

Each year, 8-12 sites were surveyed in each stream, and 90 – 3,000 m (typically up to 2,000 m) of stream was surveyed at each site. The length of fish caught were measured and their abundance (number of fish caught per length of stream) was estimated.

Historic survey data (pre-2017)

The contemporary survey data were combined with historic electrofishing survey data that were collected within the same river reaches using similar methods to the current surveys to assess long term trends in abundance (fish per 100 m). These historic data were sourced from:

- VFA fish surveys records (Kaiela Fisheries Station – 1982 to1993 and Snobs Creek – 1989 to 2011). Goulburn River (1996-2011), Gunbower Creek (1993-2007), Lindsay and Mullaroo (1994-1998), Mitchell River (1990-2001), Ovens River (1992-2011), Thomson and Macalister (1989-1999) and Wimmera River (1994-1999).
- The Living Murray Program (Murray-Darling Basin Authority) (https://www.mdba.gov.au/publications/brochure/living-murray-program). Gunbower Creek (2008-2017)
- The project, *Integrating fisher-derived and fishery-independent survey data to better understand and manage the Murray Cod fishery in the Murray-Darling Basin* (Fisheries Research and Development Corporation - FRDC Project 2013/022) (Ingram and Raymond 2018). Goulburn and Ovens rivers (2015-2017)
- Monitoring fish stockings in Victoria: 2014 native fish surveys (Ingram *et al.* 2015). Goulburn River and Gunbower Creek (2014).
- Yarra River surveys conducted by DELWP on behalf of Melbourne Water (Tonkin *et al.* 2017). Yarra River (2007-2015)
- Victorian Environmental Flows Monitoring and Assessment Program (VEFMAP) (DELWP 2017a, DELWP 2017b). Glenelg River (2009-2018), Goulburn River (2004-2019), Thomson and Macalister rivers (2005-2016), Wimmera River (2005-2016), Yarra River (2007-2012)
- Sustainable Rivers Audit (SRA) Program (Murray–Darling Basin Authority) and Southern Basins (SB) Program. Data supplied by DELWP (Lieschke *et al.* 2013a, Lieschke *et al.* 2013b).

Only historic data collected from locations within the same reach of river where contemporary surveys occurred were used in the analyses.

Angler diary records for the Glenelg River estuary perch

In addition, angler catch rate information from the *Angler Fishing Diary Program* (*AFDP*) was presented for estuary perch in the Glenelg River. The *AFDP*, which commenced in 1997, is the principal means that the VFA uses to monitor recreational fisheries in Victorian estuaries for assessment purposes (Conron *et al.* 2010, Conron and Oliveiro 2016). The *AFDP* provides time-series data on catch rates (as fish per angler hour), catch length-frequency, and catch age-frequency composition for key target species in selected Victorian recreational fisheries, including estuary perch in the Glenelg River which was previously assessed in 2016 (Ingram *et al.* 2016) and 2021 (Ingram *et al.* 2022). Angler catch rate is not intended to be compared directly against electrofishing catch rate but rather provides an additional line-of-evidence for change in abundance over time.

How to read the *Native Fishery Report Cards*

This section provides a brief description of the information presented in the report cards. A more detailed description of the performance measures, how scores were assigned and how the overall rating for each species was determined is provided in Appendix II.

Each report card is broken into several sections. These are:

Overall rating

Overall rating of the health of the species in the selected rivers assessed as part of the report card, which is a synthesis of the fish population performance measures (health indicators). The Overall ratings are:

Fish population performance measures (health indicators)

Information about the abundance (catch rate) of fish and their sizes (length) provide performance measures used to indicate the health of the population. These performance measures are summarised to determine the overall rating for the species. The performance measures are.

Fish abundance

Trend (change) in fish abundance over last five years and last 10 years as indicated by average annual catch rate. Data may be from various sources including electrofishing surveys and the *Angler Fishing Diary Program* (*AFDP*).

Scores: ⇧ Increasing ⇩ Decreasing. ⇔ Stable or variable (up and down)
? Insufficient information to assess.

Fish size (length/age)

Fish size performance measures are based on measurement (fish length) of fish caught in surveys over the last three years. Assessment is conducted only when 60 or more fish are measured in the three years combined, otherwise information to assess fish size is considered insufficient. Fish size categories are:

- Multiple size classes: A wide range of fish sizes present indicates regular successful spawning events and recruitment is occurring in the stream.

  Scores: ✓ Wide range of fish size classes present
  Some A few fish size classes present
  ✘ No fish caught or very few fish size classes present
  ? Insufficient fish measured to assess

- Mature size classes: Mature fish capable of spawning are present in the stream.

  Scores: ✓ Good numbers of mature fish present
  Some A few mature fish present
  ✘ No mature fish present
  ? Insufficient fish measured to assess

- Recent recruitment: Small fish (recruits presumed to be less than one year old) (<10 cm) are present indicates that fish have spawned recently (in last 12 months) in the stream. This may also indicate recent stocking of hatchery-bred fish.

  Scores: ✓ Good numbers of small fish present
  Some A few small fish present
  ✘ No small fish present
  ? Insufficient fish measured to assess

- Maximum size: The presence of fish approaching maximum size indicates sustainable fishing pressure (see Appendix II for maximum size of species).

  Scores: ✓ Good numbers of fish approaching maximum size present
  Some A few fish approaching maximum size present
  ✘ No fish approaching maximum size present
  ? Insufficient fish measured to assess

Assessment statement

Provides a summary health assessment for the species in the selected rivers assessed.

Map

Map showing locations of selected rivers assessed for the species.

Monitoring Results

Monitoring results on the second page of the report card include the following information.

- Average annual catch rate of species in selected rivers based on all available data, and long-term average catch rate. This information was used to assess stock abundance performance measure, i.e. 5-year abundance trend and 10-year abundance trend.
- Size of fish caught in 2024 surveys, including size range of fish measured, percent of fish that were legal size, percent of fish that were mature and percent of fish that were recent recruits.
- Years that the selected rivers have been stocked with hatchery-bred fish.
- Number of hatchery-bred fish stocked into the selected rivers in the last four seasons.

- Length frequency distribution of fish caught during electrofishing surveys of the selected rivers over last three years and number of fish caught each year in the selected rivers. This information was used to inform fish size performance measures, e.g. presence of recruits, mature fish and fish approaching maximum size.

Results and discussion

Sites surveyed

In 2024, all sites were surveyed as in the previous year.

Species present

Forty-nine fish species were reported during surveys conducted in 2024, with 9-21 species observed in each river (Table 3). The most common and abundant species was Australian smelt (47% of fish), which was recorded in all 10 rivers and was the most common in five rivers.

The most common and abundant large-bodied fish species was common carp, which represented 57% of large-bodied fish present. The species was observed in nine rivers (except the Gellibrand River system) and was the most common large-bodied fish present in eight rivers (Table 3). Further details on the more common species present in each river are provided in Appendix III.

Table 3. Species present in rivers surveyed in 2024.

River	Number of species caught	Most common species (% of total)	Most common large-bodied species (% of total large-bodied species)
Gellibrand River system (including two sites in tributaries, one in Loves Creek and one in Boggy Creek)	11	Common galaxias (29)	Shortfin eel (44)
Glenelg River	21	Flathead gudgeon (43)	Common carp* (40)
Lower Goulburn River	13	Common carp* (42)	Common carp* (74)
Gunbower Creek	11	Unspecked hardyhead (53)	Common carp* (89)
Lindsay River & Mullaroo Creek	10	Bony bream (91)	Common carp* (85)
Mitchell River (including lower Clifton Creek and Wonnangatta River)	18	Australian smelt (53)	Common carp (34)
Ovens River	12	Australian smelt (70)	Murray cod (37)
Thomson & Macalister rivers	12	Australian smelt (48)	Common carp* (73)
Wimmera River	9	Common carp* (73)	Common carp* (78)
Yarra River	17	Australian smelt (58)	Common carp* (38)
All rivers	**49**	**Australian smelt (30)**	**Common carp* (57)**

* Introduced species

Native fish stockings

The number of native fish stocked over the last 5 seasons into the reaches of waters surveyed is provided in Table 4. Five inland waters and three coastal waters were stocked whereas four waters were not stocked. Species stocked included Australian bass (3 coastal rivers), estuary perch (1 coastal river), golden perch (5 inland rivers), Macquarie perch (1 inland river), Murray cod (4 inland rivers) and silver perch (2 inland river). In 2023/24, 981,500 fish were stocked into the streams.

Table 4. Number of native fish stocked into the reaches of waters surveyed over the last 5 seasons.

River/creek	Species	2019/20	2020/21	2021/22	2022/23	2023/24	Total
Gellibrand River	Not stocked						
Glenelg River	Not stocked						
Goulburn River	Golden perch	61,000	60,000	9,000	55,800	100,000	285,800
	Murray cod	40,000	128,000	124,400	61,400	94,100	447,900
Gunbower Creek	Golden perch	70,000	70,000	65,000		70,000	275,000
	Murray cod	50,690	65,000	60,000	60,000	51,300	286,990
	Silver perch					59,600	59,600
Lindsay River	Golden perch					36,000	36,000
	Murray cod		27,000	50,000		56,000	133,000
Macalister River	Australian bass	7,000	22,000	23,000	24,000	22,000	98,000
Mitchell River	Australian bass	44,000	60,000	100,000	67,000	100,000	371,000
	Estuary perch		50,000				50,000
Mullaroo Creek	Not stocked						
Ovens River	Golden perch	54,000	50,000	54,000	50,000	31,900	239,900
	Macquarie perch	700	32,000	40,000	10,500	10,000	93,200
Thomson River	Australian bass	1,000	1,000	1,000	1,000	1,000	5,000
Wimmera River	Golden perch	80,000	100,000	167,000	169,000	289,600	805,600
	Murray cod			10,000	10,000	10,000	30,000
	Silver perch	50,000	50,000	100,000	161,000	50,000	411,000
Yarra River	Not stocked						

Fish abundance

Abundance records (fish/min) for nine native fish species from 10 river systems (Table 2), recorded in electrofishing surveys conducted between 1982 and 2024, were used to assign five levels of fish abundance (see Appendix IV), which were nominally:

Abundance level	Low	Moderate	High	Very high	Exceptional
Electrofishing catch rate (fish/ min)	< 0.05	0.06-0.24	0.25-0.49	0.5 – 0.99	> 1

Historically, abundance has ranged from low (nil to 0.05 fish/min) (46% of records) to exceptional (>1 fish/min) (1% of records) (Appendix IV), the greatest being 1.37 fish/min recorded for Australian bass in the Mitchell River in 2019 followed by 1.35 fish/min for Murray cod in the Ovens River in 2019. Throughout the 1990s and 2000s abundances were generally low to moderate, however, since the mid-2010s high, very high and exceptional abundances have been recorded for some species in some rivers (Appendix IV).

In 2024, abundance was highest for Murray cod in the Ovens River (0.86 fish/min), followed by Australian bass in the Mitchell River (0.69 fish/min) and golden perch in the Wimmera River (0.68 fish/min) (Appendix IV, Figure IV.3). Silver perch (Gunbower Greek), freshwater catfish (Lindsay-Mullaroo and Wimmera River) and Macquarie perch (Yarra River) had the lowest abundances in 2024 (< 0.05 fish/min).

Fish sizes

The length – weight relationships for nine native fish are presented in Appendix V. A summary of size ranges of nine native fish species recorded in selected rivers surveyed in 2024 is also provided in Appendix V. The largest fish caught during surveys for each species in 2024, and the river it was caught in, is presented in Figure 2.

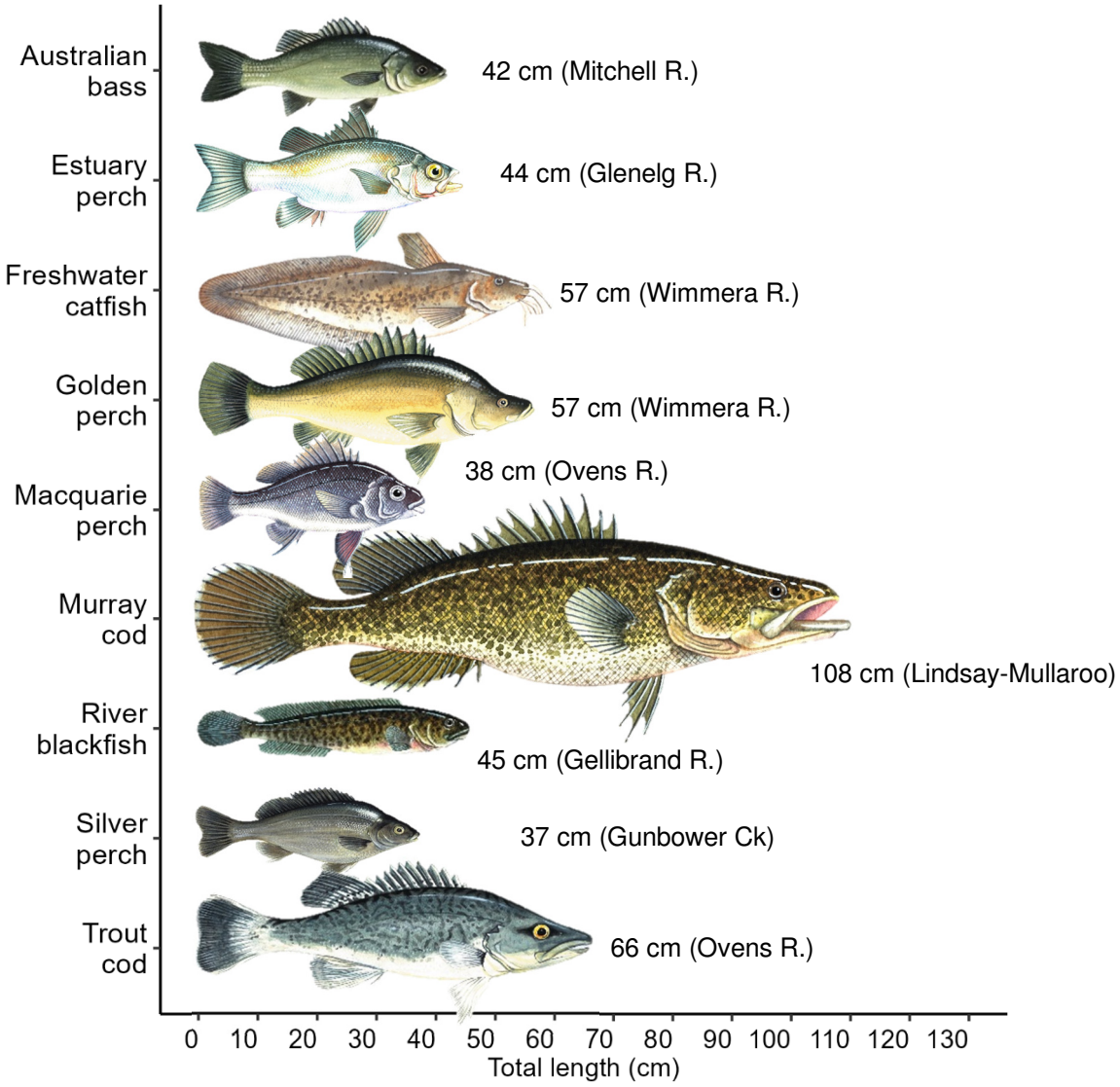

Figure 2. Largest fish caught during electrofishing surveys of native fish populations conducted in 2024.

Native fishery Report Card results

Information for nine native fish species and 10 rivers is presented in the report cards and a summary of the key health indicators for the species assessed are provided in Table 5 and Table 6. An overall rating of Very Good was assigned to three species (Australian bass, golden perch and Macquarie perch), Good for four species (estuary perch, Murray cod, river blackfish and trout cod) and Low for two species (freshwater catfish and silver perch).

Since the previous assessment in 2023 (Ingram *et al.* 2023), the health assessment for three species has changed (see Appendix VI):

- Estuary perch has improved from Moderate to Good
- Golden perch has improved from Good to Very Good
- Macquarie perch has improved from Good to Very Good

Further information regarding these assessments is provided in the report cards below.

Table 5. Summary of key health indicators for nine native fish species.

Species	Rivers	2024 Results						
		5-year abundance	10-year abundance	Multiple year classes	Mature fish	Recent recruitment	Maximum size	Overall rating
Australian bass	Mitchell R., and Thomson R. & Macalister R.	⇧	⇔	✓	✓	✓*	Some	Very Good
Estuary perch	Glenelg R.	⇧	⇔	✓	✓	✘	Some	Good
Freshwater catfish†	Lindsay R. & Mullaroo Ck, and Wimmera R.	⇔	⇔	?	?	?	?	Low
Golden perch	Goulburn R., Gunbower Ck, Lindsay R. & Mullaroo Ck, and Wimmera R.	⇔	⇔	✓	✓	Some*	Some	Very Good
Macquarie perch†	Ovens R. and Yarra R.	⇔	⇔	✓	✓	Some*	✓	Very Good
Murray cod†	Goulburn R., Gunbower Ck, Ovens R., Lindsay R. & Mullaroo Ck	⇔	⇔	✓	✓	Some*	Some	Good
River blackfish†	Gellibrand R. system	⇔	⇔	✓	✓	Some	Some	Good
Silver perch†	Gunbower Ck and Wimmera R.	⇔	⇔	?	?	?*	?	Low
Trout cod†	Goulburn R. and Ovens R.	⇔	⇔	✓	✓	Some	Some	Good

⇧ = Increasing, ⇩ = Decreasing, ⇔ = Stable or variable (up and down), ✓ = Good numbers, **Some** = A small number, ✘ = None. ? = Insufficient information. * May include stocked fish.

† (blue text) Listed as threatened under the the *Flora and Fauna Guarantee Act (1988)* (https://www.environment.vic.gov.au/conserving-threatened-species/threatened-list)

Table 6. Health ratings for species in each river assessed in this report, and overall rating.

Species	Mitchell	Thomson & Macalister	Glenelg	Ovens	Goulburn	Gunbower	Lindsay & Mullaroo	Wimmera	Yarra	Gellibrand	OVERALL
Australian bass	Very good	Very good									Very Good
Estuary perch			Good								Good
Macquarie perch†				Very Good					Very good		Very Good
Trout cod				Very Good	Good						Good
Murray cod†				Good	Good	Good	Good				Good
Golden perch					Very Good	Very good	Good	Very Good			Very good
Silver perch†						Low		Low			Low
Freshwater catfish†							Low	Low			Low
River blackfish†										Good	Good

† (blue text) Listed as threatened under the the *Flora and Fauna Guarantee Act (1988)* (https://www.environment.vic.gov.au/conserving-threatened-species/threatened-list)

Small-bodied native fish

The status of 24 species of small-bodied native fish were assessed (Appendix VII). In the streams surveyed over the last five years (data collected since 2017), eight species (including five galaxias) had a detection rating of rare or absent, two occasionally detected, four regularly detected and 10 commonly detected.

Table 7. Detection ratings for small-bodied native fish in the rivers assessed in this report (ratings based on presence/absence in selected streams over the last five years).

Rare or absent	Occasionally detected	Regularly detected	Commonly detected
Galaxias, climbing	Lamprey, shortheaded	Blackfish, two-spined	Bream, bony
Galaxias, flatheaded†	Pygmy perch, southern†	Gudgeon, Cox's†	Galaxias, common
Galaxias, mountain		Lamprey, pouched	Galaxias, ornate
Galaxias, spotted		Gudgeon, carp	Grayling, Australian†
Gudgeon, striped			Gudgeon, flathead
Pygmy perch, Yarra†			Hardyhead, unspecked
Gudgeon, dwarf flathead			Pygmy perch, Ewen†
Galaxias, obscure			Rainbowfish, Murray-Darling†
			Smelt, Australian
			Tupong

† (blue text) Listed as threatened under the the *Flora and Fauna Guarantee Act (1988)* (https://www.environment.vic.gov.au/conserving-threatened-species/threatened-list)

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Native Fishery Report Card – 2024: Australian bass

This report card describes the status of Australian bass in two stream systems, Mitchell River (Mit) (including lower Clifton Creek and Wonnangatta River) and Thomson & Macalister rivers (T-M), in 2024 and trends in population key performance measures that are based on scientific data provided by scientific fishery surveys.

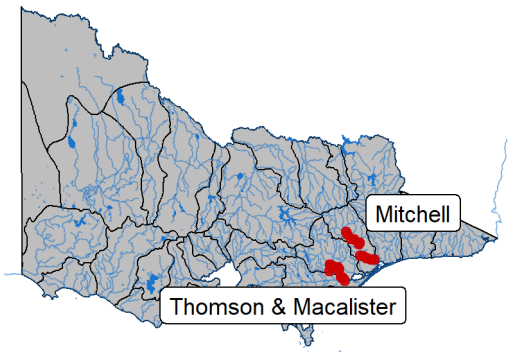
OVERALL RATING - 2024:	Very Good

Performance measures (health indictors)	Stream		Status
	Mit	T-M	
Stock abundance			
Trend in abundance over the last 5 years as indicated by trend in average annual catch rate from electrofishing surveys.	⇧	⇧	⇧
Trend in abundance over the last 10 years as indicated by trend in average annual catch rate from electrofishing surveys.	⇔	⇔	⇔
Fish size (length/age)			
Wide range of fish size classes present in recent 3 years, indicating regular successful spawning events and recruitment to the population.	✓	✓	✓
Mature fish capable of spawning present, as indicated by the presence of fish from 27 cm in the catch in recent 3 years.	✓	✓	✓
Signs of recent recruitment, as indicated by the presence of fish under 10 cm in recent 3 years.	✓*	✓*	✓*
Signs of sustainable fishing pressure as indicated by the presence of fish approaching maximum size (≥ 43 cm) in recent 3 years.	✘	**Some**	**Some**
Rating	**Very Good**	**Very Good**	**Very Good**

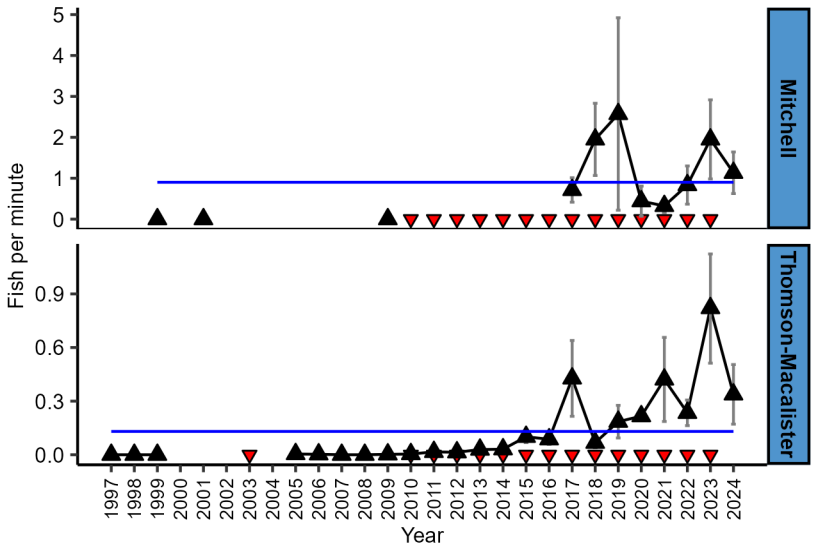
⇧ = Increasing, yes and positive. ⇩ = Decreasing, no and negative. ⇔ = Stable. **?** = Insufficient information.
✓ = Good numbers present. **Some** = Some present. ✘ = Nil present. * May include stocked fish.

Assessment statement

Australian bass represented 29% (Mitchell) and 10% (Thomson & Macalister) of large-bodied fish caught and observed in 2024. Electrofishing catch rate in the Mitchell and Thomson & Macalister increased over the last 5 years and was stable in both streams over the last 10 years. Over the last 3 years a wide range of fish sizes, mature fish and recruits were observed in both streams. In 2024, the percentage of legal-size fish was higher in the Thomson & Macalister (28%) than the Mitchell (22%). The presence of many small fish may indicate either recent natural recruitment has occurred or presence of recently stocked fish. Large numbers of small fish were caught in the Mitchell over the last 4 years. Large numbers of small fish were observed in the Thomson & Macalister in some years only, suggesting recent recruitment and/or stocking success has been infrequent. Mature fish were present in both streams. Fish approaching maximum size (a sign of a sustainable fishery) were present in the Thomson & Macalister but not the Mitchell. On this basis the overall rating for Australian bass in 2024 was **Very Good**, which is the same as for the previous year.

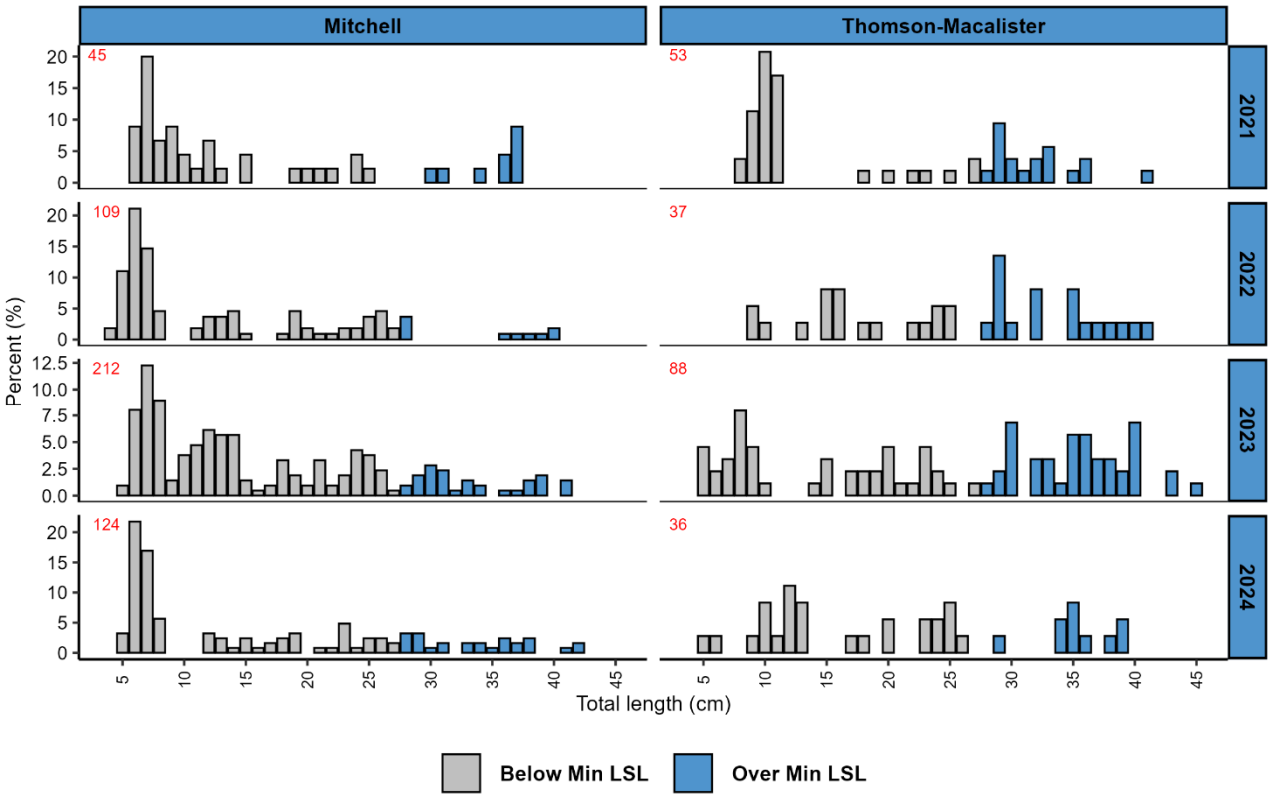


Australian bass captured and measured during electrofishing surveys in 2024	Mitchell	Thomson & Macalister
Size range (cm)	4.3-42	4.6-38
Percent (%) that are legal size (≥ 27 cm)	22	28
Percent (%) that are mature (≥ 27 cm)	22	28
Percent (%) that are recent recruits (< 10 cm)	48	17
Number of fish measured	124	36
Stockings of rivers in recent seasons (1,000s stocked)		
2021/22	100	24
2022/23	67	25
2023/24	100	23



Catch rate

Average catch rate (± s.e.) (black line) and long-term average catch rate (blue line) of Australian bass caught during electrofishing surveys of two streams. Red triangles = stocking years.



Size distribution

Length frequency distribution of Australian bass caught during electrofishing surveys of two streams (Red numbers = number fish measured. LSL = legal size limit).

Native Fishery Report Card – 2024: Estuary perch

This report card describes the status of the estuary perch in the Glenelg River in 2024 and trends in key population performance measures that are based on scientific data provided by scientific fishery surveys and recreational fishers (*Angler Fishing Diary Program*).

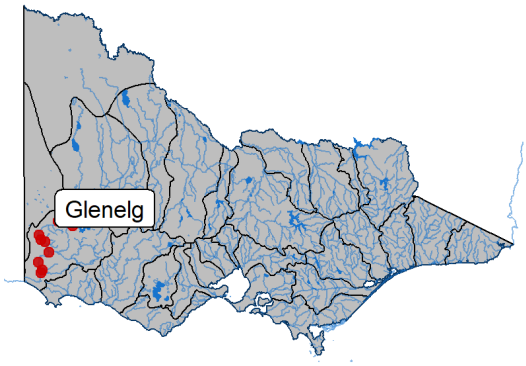
OVERALL RATING - 2024:	Good

Performance measures (health indictors)	Data source		Status
	Angler	Electro	
Stock abundance			
Trend in abundance the last 5 years as indicated by trend in average catch rate from electrofishing surveys and from *Angler Fishing Diary Program*	⇔	⇧	⇧
Trend in abundance the last 10 years as indicated by trend in average catch rate from electrofishing surveys and from *Angler Fishing Diary Program*	⇩	⇔	⇔
Fish size (length/age)			
Wide range of fish size classes present in recent 3 years, indicating regular successful spawning events and recruitment to the population.	✓	✓	✓
Mature fish capable of spawning present, as indicated by the presence of fish from 27 cm in the catch in recent 3 years.	✓	✓	✓
Signs of recent recruitment, as indicated by the presence of fish under 10 cm in recent 3 years.	✘	Some	✘
Signs of sustainable fishing pressure as indicated by the presence of fish approaching maximum size (≥ 55 cm) in recent 3 years.	Some	✘	Some
Rating	Good	Very Good	Good

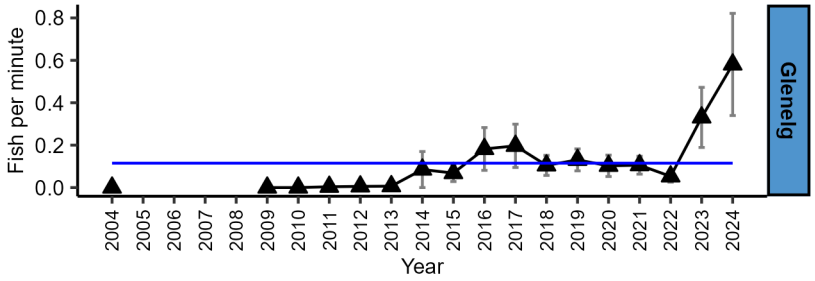
⇧ = Increasing, yes and positive. ⇩ = Decreasing, no and negative. ⇔ = Stable. **?** = Insufficient information.
✓ = Good numbers present. **Some** = Some present. ✘ = Nil present.

Assessment statement

Estuary perch represented 27% of large-bodied fish caught of fish in electrofishing surveys in 2024 and 72% of species angled in 2023. Electrofishing catch rates have increased over the last 5 years and been stable over the last 10 years, whereas angling catch rates have been stable over the last 5 years but declined over the last 10 years. A wide range of fish sizes, including mature fish, were observed in electrofishing surveys and angler catch over the last 3 years. Thirty-nine percent of fish caught by electrofishing in 2024 were legal size. Some small fish, indicating recent recruitment, were caught by electrofishing but not by anglers. Some fish approaching maximum size (a sign of a sustainable fishery) were caught by anglers but not by electrofishing. On this basis the overall rating for estuary perch in the Glenelg River in 2024 was **Good,** which is an improvement on the previous year when the rating was Moderate.

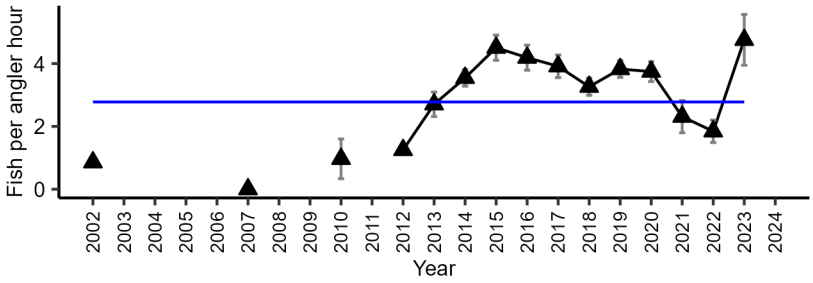


Estuary perch captured and measured during an electrofishing survey of the Glenelg River in 2024 and by angler diarists in 2023	Angler Diary	Electro-fishing
Size range (cm)	11-47	1.2-44
Percent (%) that are legal size (≥ 27 cm)	72	39
Percent (%) that are mature (≥ 27 cm)	72	39
Percent (%) that are recent recruits (< 10 cm)	0	0.5
Number of fish measured	78	209
Stockings of river in recent seasons (1,000s stocked): **NIL**		



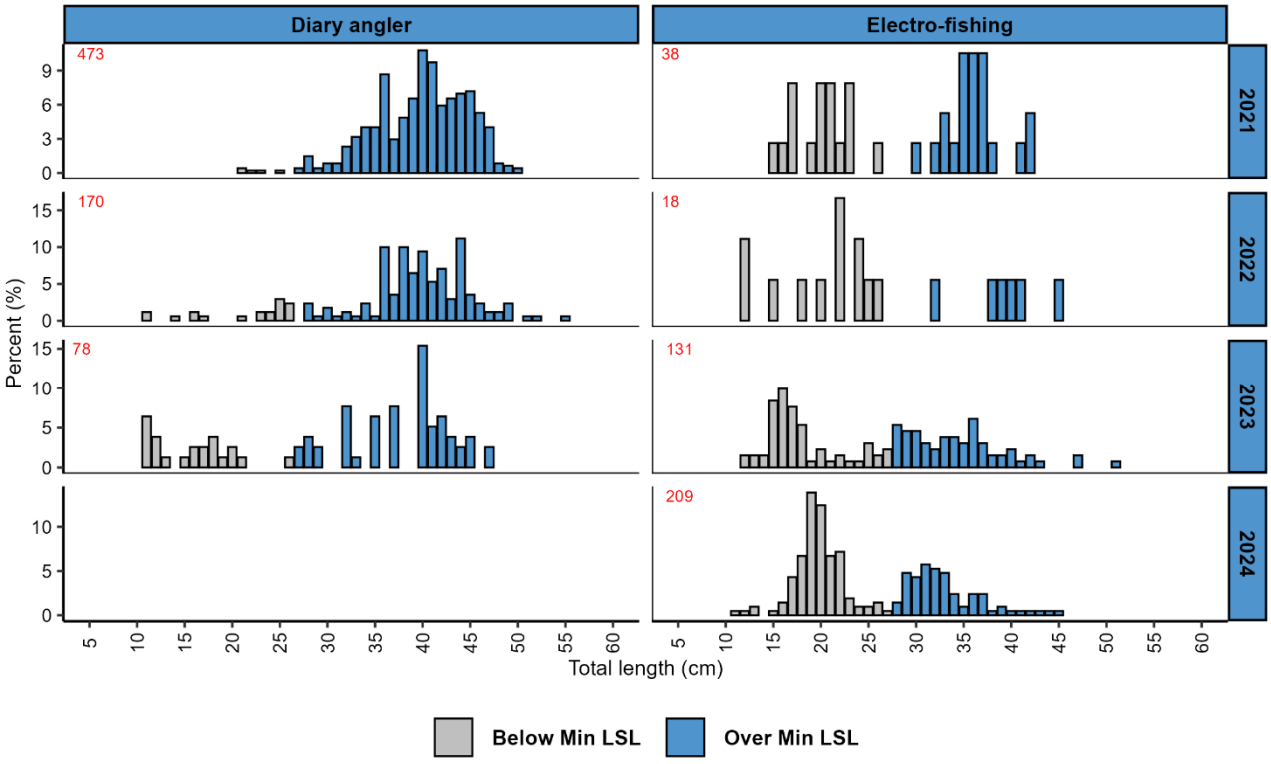
Electrofishing catch rate

Average catch rate (± s.e.) (black line) and long-term average catch rate (blue line) of estuary perch caught during electrofishing surveys of the Glenelg River.



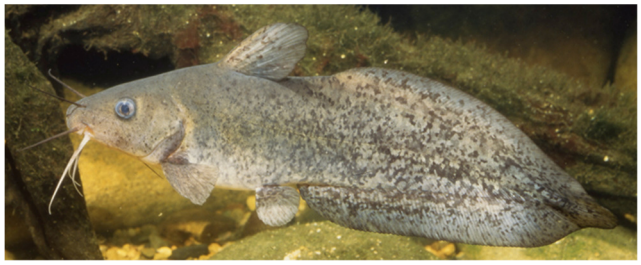
Angler catch rate

Average catch rate (± s.e.) (black line) and long-term average catch rate (blue line) of estuary perch caught by anglers in the Glenelg River (VFA Angler Diary Program).



Size distribution

Length frequency distribution of estuary perch in the Glenelg River caught by anglers and by electrofishing (Red numbers = number fish measured. LSL = legal size limit).



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Native Fishery Report Card – 2024: Freshwater catfish

This report card describes the status of the freshwater catfish in two streams, the Lindsay and Mullaroo rivers (L&M) and Wimmera River (Wim) in 2024 and trends in key population performance measures that are based on scientific data provided by scientific fishery surveys.

OVERALL RATING - 2024:	**Low**

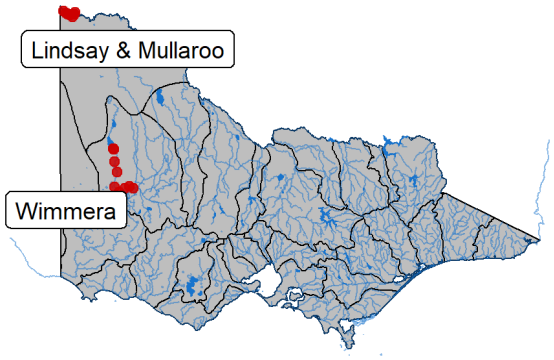
Performance measures (health indictors)	Stream		Status
	L&M	Wim	
Stock abundance			
Trend in abundance the last 5 years as indicated by trend in average annual catch rate from electrofishing surveys	⇔	⇔	⇔
Trend in abundance the last 10 years as indicated by trend in average annual catch rate from electrofishing surveys	⇔	⇔	⇔
Fish size (length/age)			
Wide range of fish size classes present in recent 3 years, indicating regular successful spawning events and recruitment to the population.	?	?	?
Mature fish capable of spawning present, as indicated by the presence of fish from 30 cm in the catch in recent 3 years.	?	?	?
Signs of recent recruitment, as indicated by the presence of fish under 10 cm in recent 3 years.	?	?	?
Signs of sustainable fishing pressure as indicated by the presence of fish approaching maximum size (≥ 36 cm) in recent 3 years.	?	?	?
Rating	**Low**	**Low**	**Low**

⇧ = Increasing, yes and positive. ⇩ = Decreasing, no and negative. ⇔ = Stable. **?** = Insufficient information.
✓ = Good numbers present. **Some** = Some present. ✖ = Nil present.

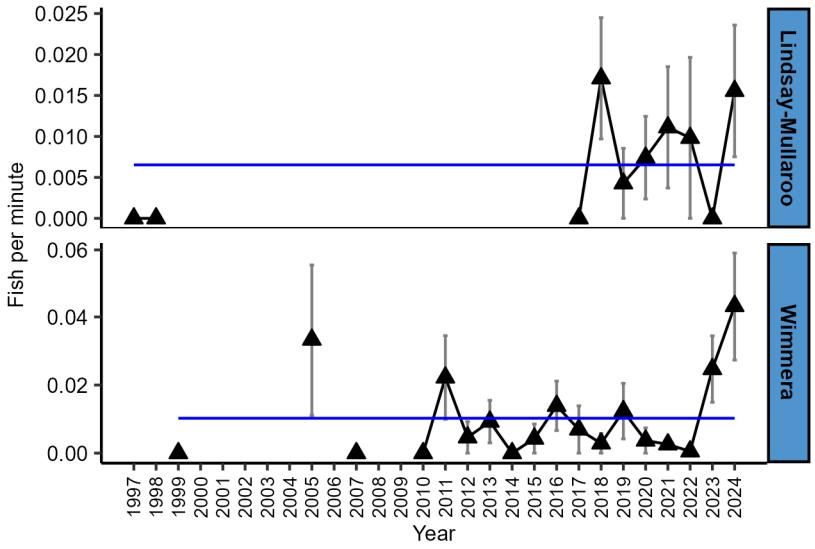
Assessment statement

Freshwater catfish represented <1% of large-bodied fish caught during electrofishing surveys in both the Lindsay-Mullaroo (L&M) and Wimmera River (Wim) in 2024. Ten fish were caught during the 2024 surveys, three from L&M and seven from the Wim. Electrofishing catch rates remain stable over the last 5 years and 10 years for both streams. However, catch rate has been above the long-term average in 2024 for both streams and in 2023 and 2024 for Wim. There were insufficient fish measured over the last 3 years to assess fish size (length frequency) performance measures. On this basis the overall rating for freshwater catfish in 2024 was **Low** due to the very low abundance of fish in the two streams surveyed and there being insufficient information available to assess size structure. Freshwater catfish were rated as **Low** in all previous report cards reports.

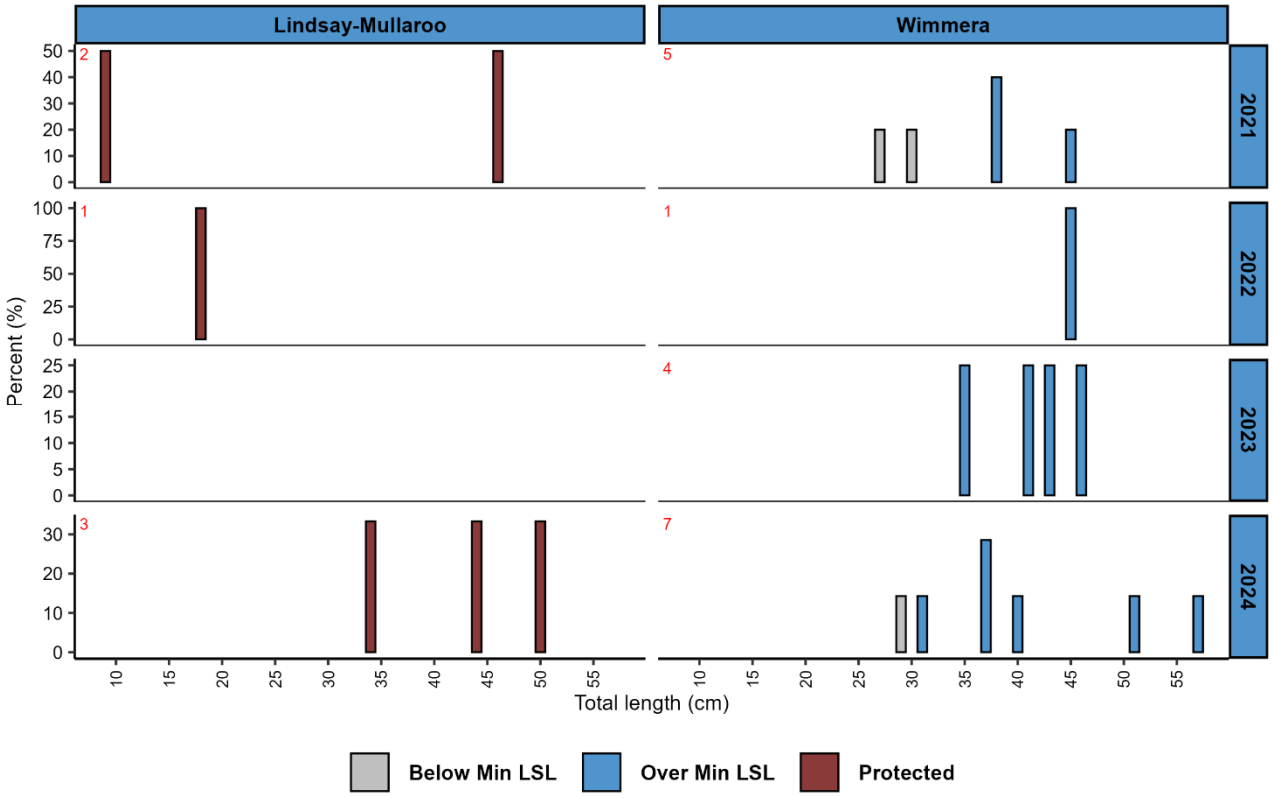
Freshwater catfish can be taken only from waters within the Wimmera Basin. Taking of freshwater catfish is prohibited in all other Victorian waters.



Freshwater catfish captured and measured during electrofishing surveys of the Wimmera River in 2024	Lindsay & Mullaroo	Wimmera
Size range (cm)	34-50	28-57
Percent (%) that are legal size (≥ 30 cm)	Protected	86
Percent (%) that are mature (≥ 30 cm)	0	86
Percent (%) that are recent recruits (< 10 cm)	0	0
Number of fish measured	3	7
Stockings of river in recent seasons (1,000s stocked): **NIL**		



Catch rate
Average catch rate (± s.e.) (black line) and long-term average catch rate (blue line) of freshwater catfish caught during electrofishing surveys of two streams.



Size distribution
Length frequency distribution of freshwater caught during electrofishing surveys of two streams (Red numbers = number fish measured. LSL = legal size limit).

Native Fishery Report Card – 2024: Golden perch

This report card describes the status of golden perch in four streams, the Goulburn River (Gou), Gunbower Creek (Gun), Lindsay and Mullaroo rivers (L&M) and Wimmera River (Wim), in 2024 and trends in key population performance measures that are based on scientific data provided by scientific fishery surveys.

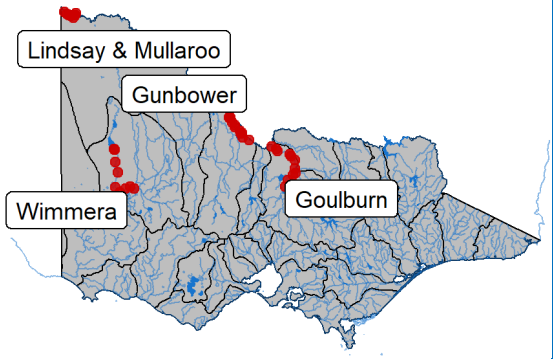
OVERALL RATING - 2024:	Very Good

Performance measures (health indictors)	Stream				Status
	Gou	Gun	L&M	Wim	
Stock abundance					
Trend in abundance the last 5 years as indicated by trend in average annual catch rate from electrofishing surveys	⇧	⇔	⇔	⇧	⇔
Trend in abundance the last 10 years as indicated by trend in average annual catch rate from electrofishing surveys	⇔	⇔	⇔	⇔	⇔
Fish size (length/age)					
Wide range of fish size classes present in recent 3 years, indicating regular successful spawning events and recruitment to the population.	✓	✓	✓	✓	✓
Mature fish capable of spawning present, as indicated by the presence of fish from 30 cm in the catch in recent 3 years.	✓	✓	✓	✓	✓
Signs of recent recruitment, as indicated by the presence of fish under 10 cm in recent 3 years.	✘	✘	Some*	Some*	Some*
Signs of sustainable fishing pressure as indicated by the presence of fish approaching maximum size (≥ 50 cm) in recent 3 years.	✓	✓	Some	✓	Some
Rating	Very Good	Very Good	Good	Very Good	Very Good

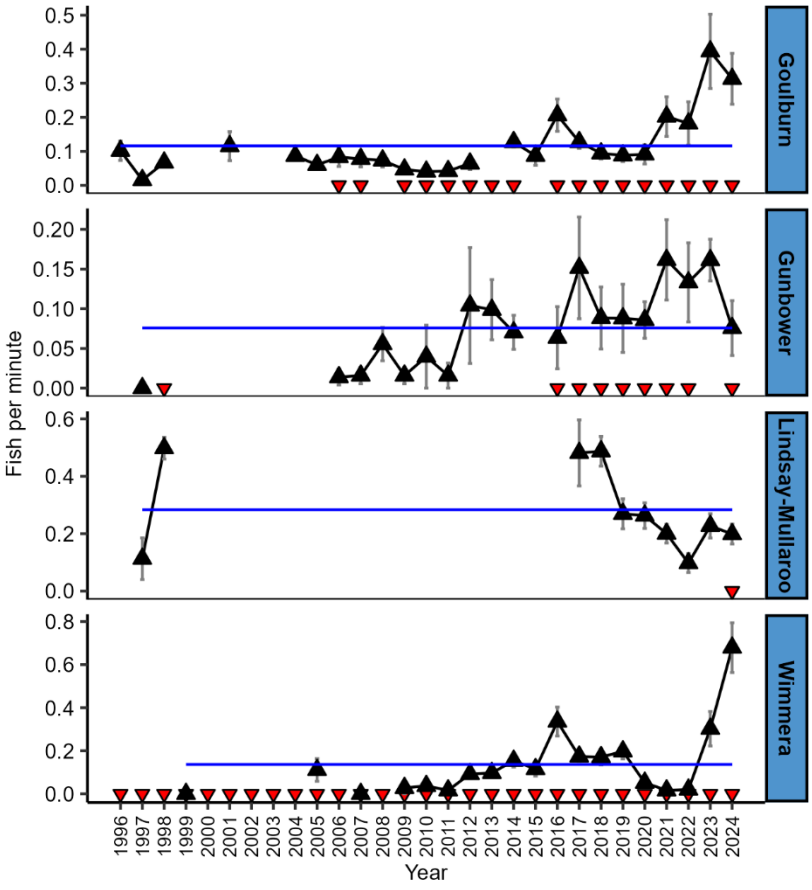
⇧ = Increasing, yes and positive. ⇩ = Decreasing, no and negative. ⇔ = Stable. **?** = Insufficient information.
✓ = Good numbers present. **Some** = Some present. ✘ = Nil present. * May include stocked fish.

Assessment statement

Golden perch represented 4-12% of large-bodied fish caught in the four streams surveyed, the Goulburn (Gou), Gunbower (Gun), Lindsay-Mullaroo (L&M) and Wimmera (Wim), in 2024. Electrofishing catch rate over the last 10 years has been stable in all streams. Electrofishing catch rate over the last 5 years increased in Gou and Wim and was stable in Gun and L&M. Catch rates in recent years are above the long-term average in three streams (Gou, Gun and Wim). A wide range of fish sizes, including mature fish, are present in all streams. A high percentage (77-93%) of fish caught were legal size. Stocking of hatchery-reared juveniles has occurred in all four streams. The presence of small fish (<10 cm) can indicate either recent natural recruitment has occurred, or recently stocked fish were caught. However, some small were caught in the L&M and Wim only in the last three years suggesting recent recruitment and/or stocking success has been infrequent. Fish approaching maximum size (a sign of a sustainable fishery) were present in all streams. On this basis the overall rating for golden perch in 2024 was **Very Good**. The rating for golden perch in the previous three years was Good.

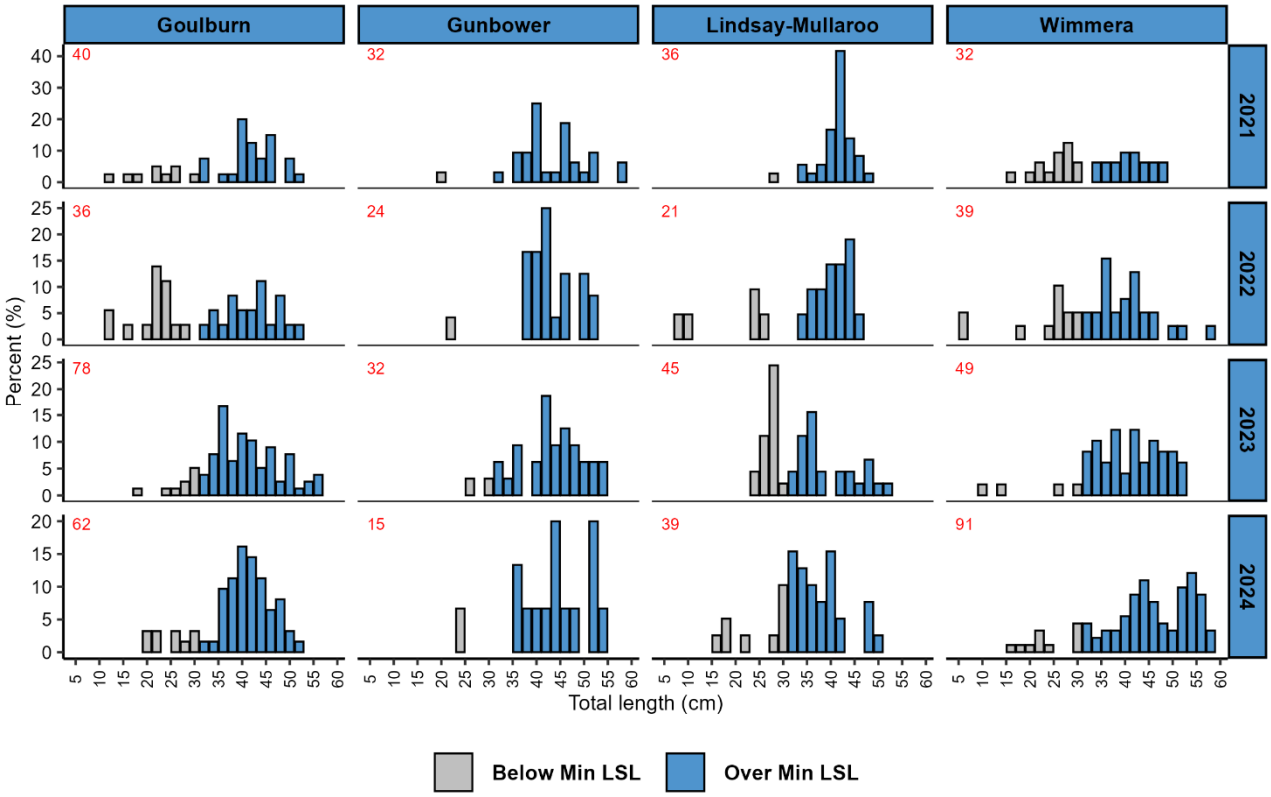


Golden perch captured and measured during electrofishing surveys in 2024	Goulburn	Gunbower	Lindsay & Mullaroo	Wimmera
Size range (cm)	18-50	24-52	16-49	15-57
Percent (%) that are legal size (≥ 30 cm)	85	93	77	88
Percent (%) that are mature (≥ 30 cm)	85	93	77	88
Percent (%) that are recent recruits (< 10 cm)	0	0	0	0
Number of fish measured	62	15	39	91
Stockings of rivers in recent seasons (1,000s stocked)				
2020/21	9	65	-	167
2021/22	55.8	0	-	169
2022/23	100	70	36	289.6



Catch rate

Average catch rate (± s.e.) (black line) and long-term average catch rate (blue line) of golden perch caught during electrofishing surveys of four streams. Red triangles = stocking years.



Size distribution

Length frequency distribution of golden perch caught during electrofishing surveys of four streams (Red numbers = number fish measured. LSL = legal size limit).

Native Fishery Report Card – 2024: Macquarie perch

This report card describes the status of Macquarie perch in two streams, the Ovens River (Ove) and Yarra River (Yar), in 2024 and trends in key population performance measures that are based on scientific data provided by scientific fishery surveys.

OVERALL RATING - 2024:	Very good

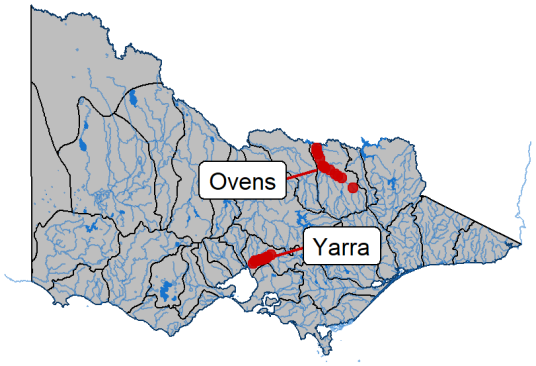
Performance measures (health indictors)	Stream		Status
	Ove	Yar	
Stock abundance			
Trend in abundance the last 5 years as indicated by trend in average annual catch rate from electrofishing surveys	⇔	⇔	⇔
Trend in abundance the last 10 years as indicated by trend in average annual catch rate from electrofishing surveys	⇔	⇔	⇔
Fish size (length/age)			
Wide range of fish size classes present in recent 3 years, indicating regular successful spawning events and recruitment to the population.	✓	✓	✓
Mature fish capable of spawning present, as indicated by the presence of fish from 30 cm in the catch in recent 3 years.	✓	✓	✓
Signs of recent recruitment, as indicated by the presence of fish under 10 cm in recent 3 years.	✓*	✗	Some*
Signs of sustainable fishing pressure as indicated by the presence of fish approaching maximum size (≥ 36 cm) in recent 3 years.	Some	✓	✓
Rating	Very good	Very good	Very good

⇧ = Increasing, yes and positive. ⇩ = Decreasing, no and negative. ⇔ = Stable. **?** = Insufficient information.
✓ = Good numbers present. **Some** = Some present. ✗ = Nil present. * May include stocked fish.

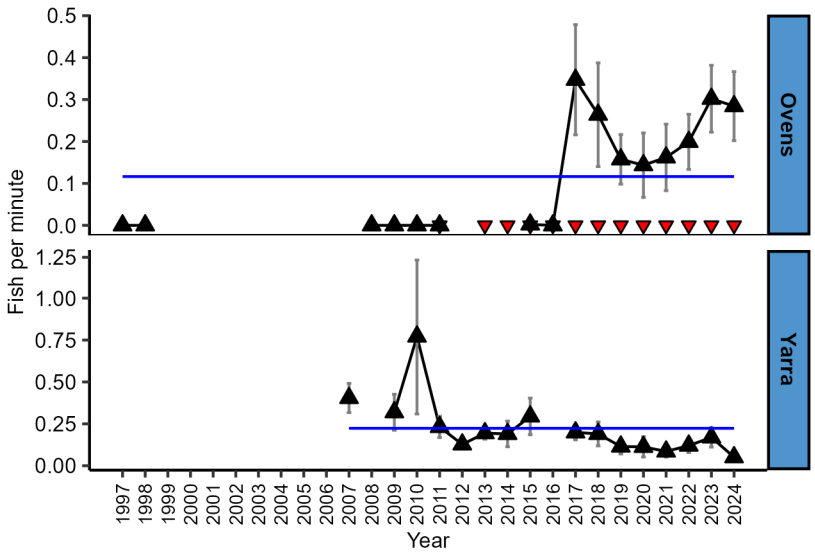
Assessment statement

Macquarie perch represented 13-22% of large-bodied fish caught in the two streams surveyed, the Ovens (Ove) and Yarra (Yar) in 2024. Electrofishing catch rates over the last 5 and 10 years have been stable in both streams. The catch rate in the Yarra remains below the long-term average whereas the catch rate in the Ovens is well above the long-term average, which may be due to on-going stocking of hatchery-bred fish and translocation of fish from Lake Dartmouth since 2013. A wide range of fish sizes, including mature fish and fish approaching maximum size (a sign of a sustainable fishery), were observed in both streams over the last 3 years. Small fish were caught in the Ovens over the last 3 years, which may be from either recent natural spawnings or recent stocking of hatchery-bred fish, or both. No small fish were caught in the Yarra in the last 3 years. On this basis the overall rating for Macquarie perch in 2024 was **Very Good**, which is an improvement on last year (Good), and all previous ratings (Moderate).

Effective 20 December 2023, the take of Macquarie perch is prohibited in all Victorian waters.

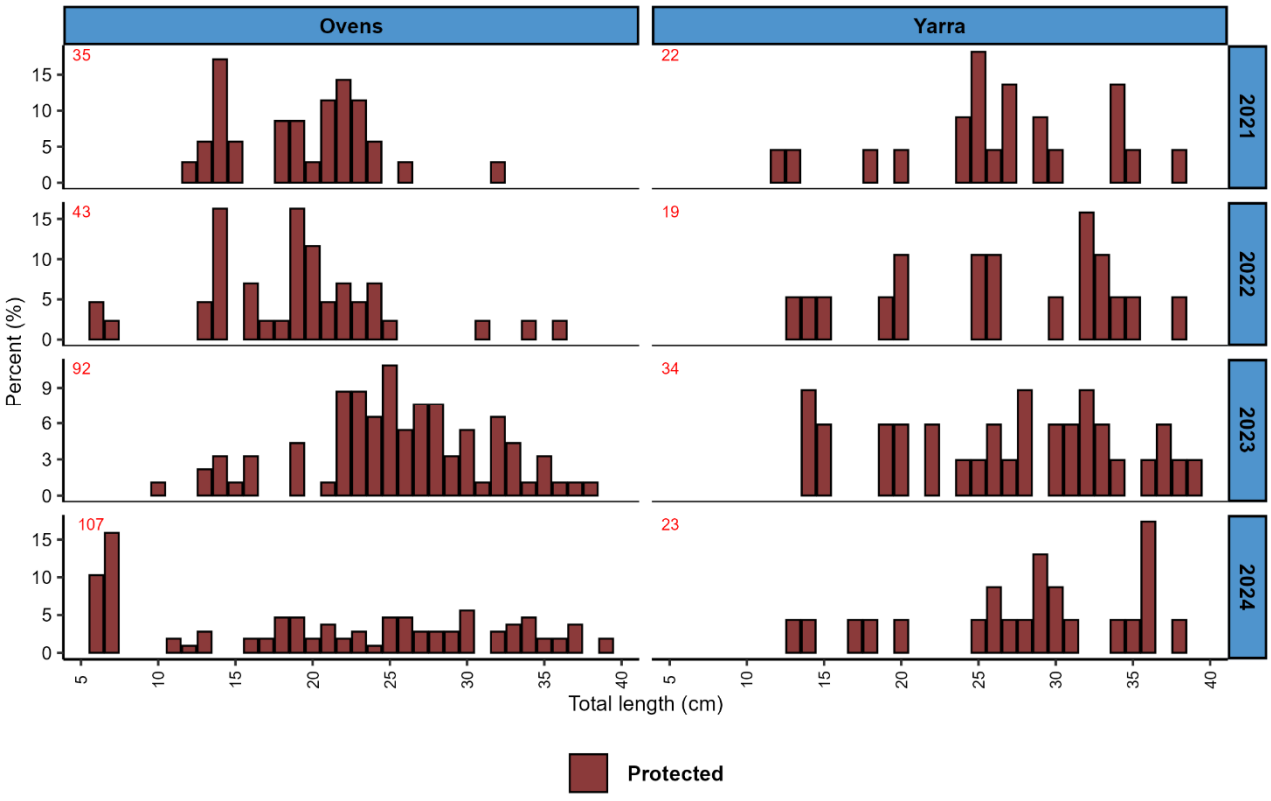


Macquarie perch captured and measured during electrofishing surveys in 2024	Ovens	Yarra
Size range (cm)	5-38	13-37
Percent (%) that are legal size (≥ 35 cm)	Protected	Protected
Percent (%) that are mature (≥ 30 cm)	22	39
Percent (%) that are recent recruits (< 10 cm)	26	0
Number of fish measured	107	23
Stockings of rivers in recent seasons (1,000s stocked)		
2020/21	40	
2021/22	10.5	
2022/23	10	



Catch rate

Average catch rate (± s.e.) (black line) and long-term average catch rate (blue line) of Macquarie perch caught during electrofishing surveys of two streams. Red triangles = stocking years.



Size distribution

Length frequency distribution of Macquarie perch caught during electrofishing surveys of two streams (Red numbers = number fish measured. LSL = legal size limit).

VICTORIA State Government | Energy, Environment and Climate Action

Victorian Fisheries AUTHORITY

Native Fishery Report Card – 2024: Murray cod

This report card describes the status of Murray cod in four streams, the Goulburn River (Gou), Gunbower Creek (Gun), Lindsay and Mullaroo rivers (L&M) and Ovens River (Ove), in 2024 and trends in key population performance measures that are based on scientific data provided by scientific fishery surveys.

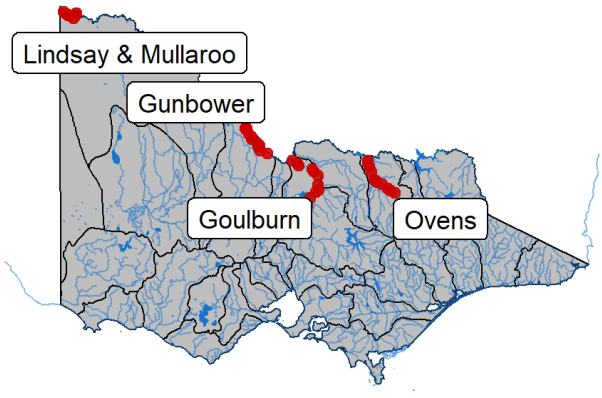
OVERALL RATING - 2024: Good

Performance measures (health indictors)	Stream				Status
	Gou	Gun	L&M	Ove	
Stock abundance					
Trend in abundance the last 5 years as indicated by trend in average annual catch rate from electrofishing surveys	⇔	⇩	⇩	⇔	⇔
Trend in abundance the last 10 years as indicated by trend in average annual catch rate from electrofishing surveys	⇔	⇔	⇔	⇔	⇔
Fish size (length/age)					
Wide range of fish size classes present in recent 3 years, indicating regular successful spawning events and recruitment to the population.	✓	✓	✓	✓	✓
Mature fish capable of spawning present, as indicated by the presence of fish from 55 cm in the catch in recent 3 years.	✓	✓	✓	✓	✓
Signs of recent recruitment, as indicated by the presence of fish under 10 cm in recent 3 years.	Some*	Some*	Some*	Some	Some*
Signs of sustainable fishing pressure as indicated by the presence of fish approaching maximum size (≥ 110 cm) in recent 3 years.	Some	✘	Some	✘	Some
Rating	Good	Good	Good	Good	Good

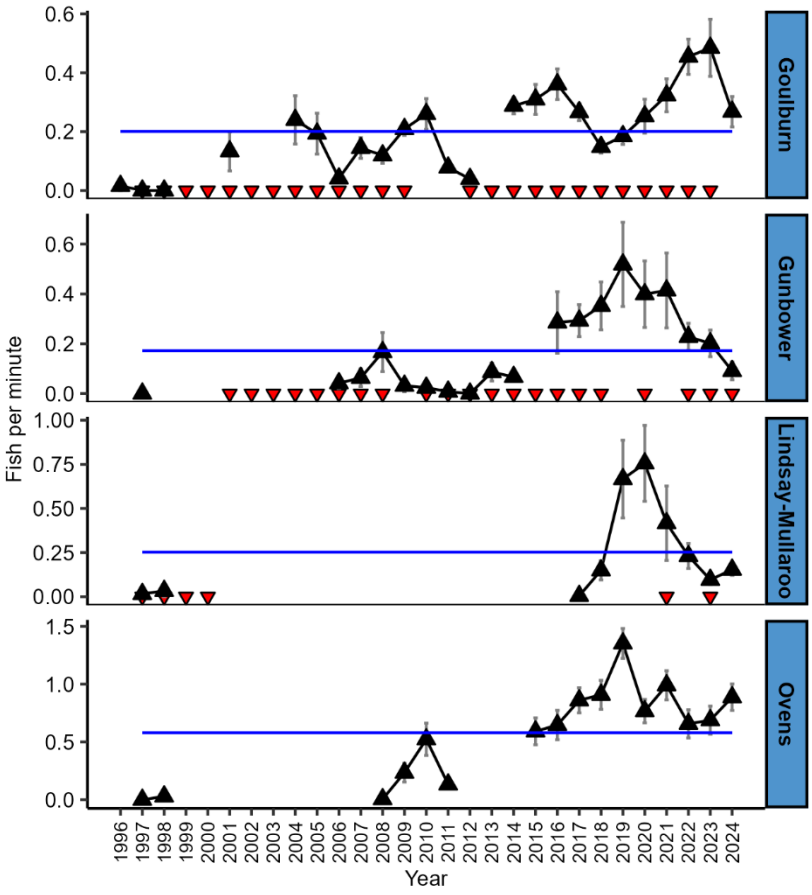
⇧ = Increasing, yes and positive. ⇩ = Decreasing, no and negative. ⇔ = Stable. **?** = Insufficient information.
✓ = Good numbers present. **Some** = Some present. ✘ = Nil present. * = May include stocked fish.

Assessment statement

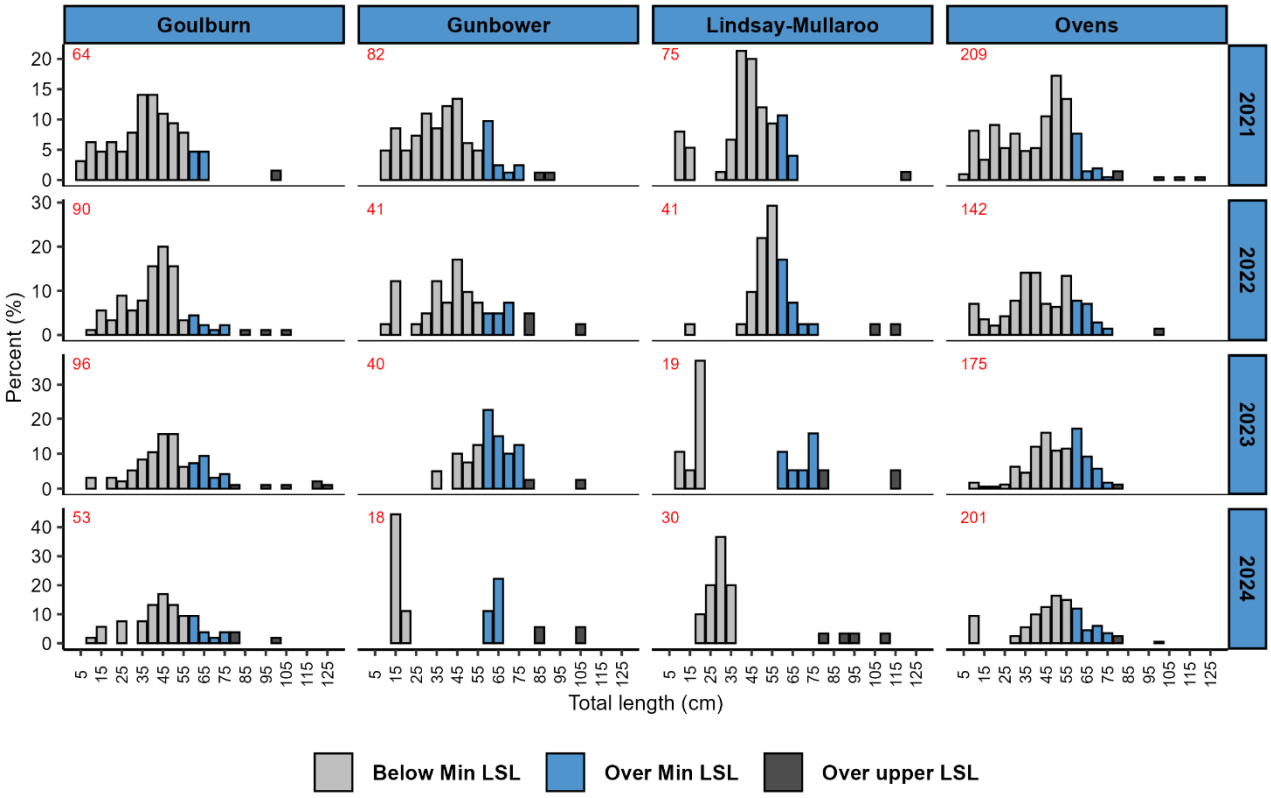
Murray cod represented 6% to 37% of large-bodied fish caught in the four streams surveyed in 2024. Over the last 5 years electrofishing catch rate has stable in two streams (Gou and Ove) but decreased in two streams (Gun and L&M). However, over the last 10 years catch rate was stable in all four streams. A wide range of fish size, including mature fish capable of spawning, were observed in all streams. The percent of fish that were legal size (between 55 & 75 cm) in 2024 ranged from 0% (L&M) to 33% (Gun). Some small fish were present in all streams indicating either recent natural recruitment or recent stocking of hatchery-bred fish (Gou, Gun and L&M). Some fish approaching the maximum size (>110 cm) (a sign of a sustainable fishery) were present in three streams (Gou, L&M and Ove) over the last 3 years. On this basis the overall rating for Murray cod in 2024 was **Good**, which is the same as the previous four years.



Murray cod captured and measured during electrofishing surveys in 2024	Goulburn	Gunbower	Lindsay & Mullaroo	Ovens
Size range (cm)	9-98	11-100	19-108	5-98
Percent (%) that are legal size (between 55 & 75 cm)	19	33	0	26
Percent (%) that are mature (≥ 55 cm)	24	44	13	29
Percent (%) that are recent recruits (< 10 cm)	2	0	0	0
Number of fish measured	53	18	30	201
Stockings of rivers in recent seasons (1,000s stocked)				
2020/21	124.4	60	50	
2021/22	61.4	60	0	
2022/23	94.1	51.3	26	

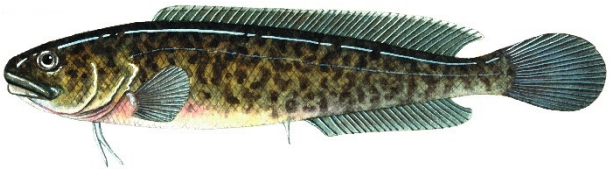


Catch rate
Average catch rate (± s.e.) (black line) and long-term average catch rate (blue line) of Murray cod caught during electrofishing surveys of four streams. Red triangles = stocking years.



Size distribution

Length frequency distribution of Murray cod caught during electrofishing surveys of four streams (Red numbers = number fish measured. LSL = legal size limit).



Native Fishery Report Card – 2024: River blackfish

This report card describes the status of the river blackfish in the Gellibrand River system (Gel) (including two sites in tributaries, one in Loves Creek and one in Boggy Creek) in 2024 and trends in key population performance measures that are based on scientific data provided by scientific fishery surveys.

OVERALL RATING - 2024:	Good

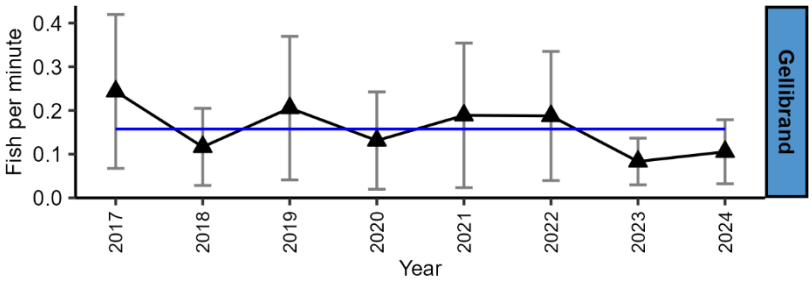
Performance measures (health indictors)	Gellibrand
Stock abundance	
Trend in abundance the last 5 years as indicated by trend in average annual catch rate from electrofishing surveys	⇔
Trend in abundance the last 10 years as indicated by trend in average annual catch rate from electrofishing surveys	⇔
Fish size (length/age)	
Wide range of fish size classes present in recent three years, indicating regular successful spawning events and recruitment to the population.	✓
Mature fish capable of spawning present, as indicated by the presence of fish from 12 cm in the catch in recent three years.	✓
Signs of recent recruitment, as indicated by the presence of fish under 10 cm in recent three years.	**Some**
Signs of sustainable fishing pressure as indicated by the presence of fish approaching maximum size (≥ 45 cm) in recent three years.	**Some**
Rating	**Good**

⇧ = Increasing, yes and positive. ⇩ = Decreasing, no and negative. ⇔ = Stable. **?** = Insufficient information.
✓ = Good numbers present. **Some** = Some present. ✗ = Nil present.

Assessment statement

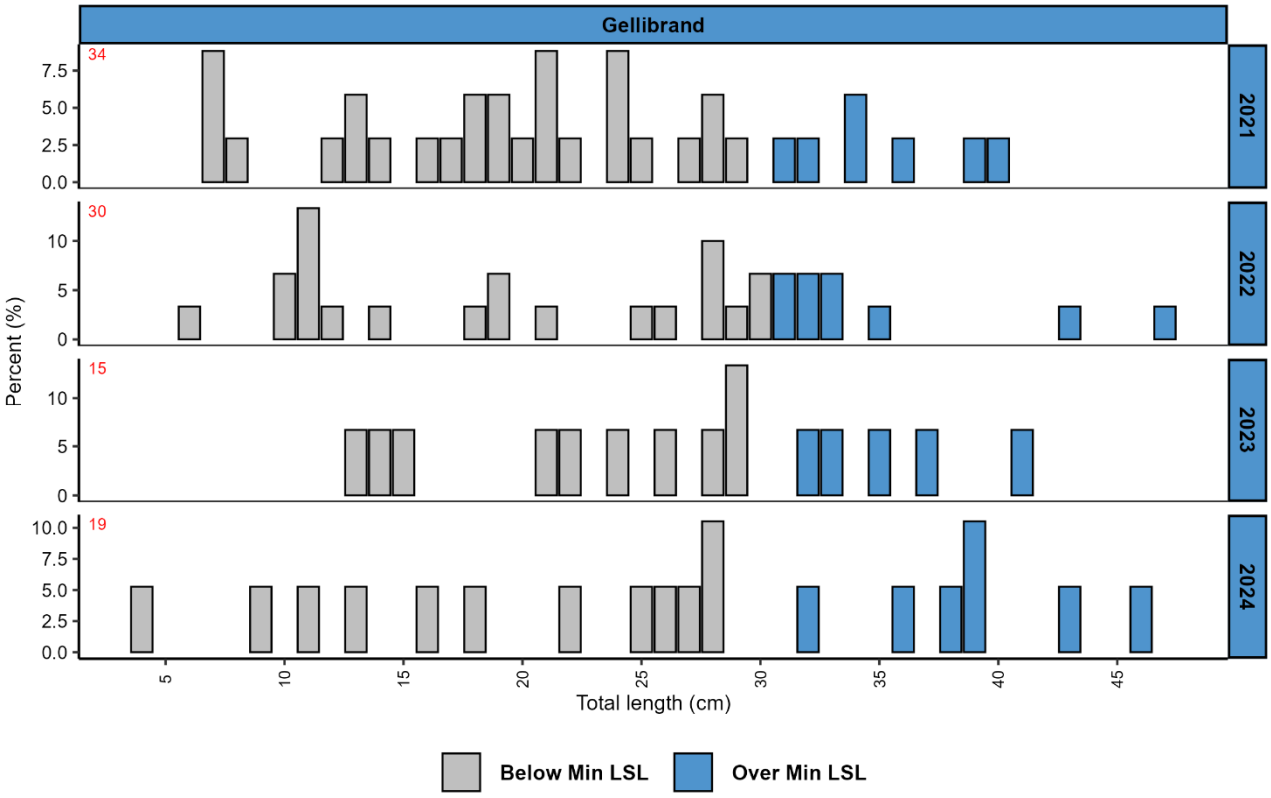
River blackfish represented 24% of large-bodied fish caught in the Gellibrand River system in 2024. River blackfish were more abundant in upstream Gellibrand River sites and particularly the tributary sites in Boggy Creek and Loves Creek. Electrofishing catch rate over the last 5 years and 10 years was stable. However, this trend is strongly influenced by the two tributary sites which grossly inflate the catch rate (0.05-1.5 fish/min over last 5 years) compared to sites in Gellibrand River proper (0-0.1 fish/min over last 5 years). A wide range of fish size, including fish that are mature, were present over the last three years. Thirty-seven percent of fish caught in 2024 were of legal size (≥ 30 cm). Some small fish were collected over the last three years, indicating recent natural recruitment. Some fish approaching the maximum size (>45 cm) (a sign of a sustainable fishery) were also present. On this basis the overall rating for river blackfish in the Gellibrand River system in 2024 was **Good**, which is the same rating as for 2023.

River blackfish captured and measured during electrofishing surveys in 2024	Gellibrand
Size range (cm)	4-45
Percent (%) that are legal size (≥ 30 cm)	37
Percent (%) that are mature (≥ 23 cm)	63
Percent (%) that are recent recruits (< 10 cm)	10
Number of fish measured	19
Stockings of rivers in recent seasons (1,000s stocked):	**NIL**



Catch rate

Average catch rate (± s.e.) (black line) and long-term average catch rate (blue line) of river blackfish caught during electrofishing surveys of the Gellibrand River system.



Size distribution

Length frequency distribution of river blackfish caught during electrofishing surveys of the Gellibrand River system (Red numbers = number fish measured. LSL = legal size limit).

Native Fishery Report Card – 2024: Silver perch

This report card describes the status of the silver perch in two streams, the Gunbower Creek (Gun) and Wimmera River (Wim) in 2024 and trends in key population performance measures that are based on scientific data provided by scientific fishery surveys.

OVERALL RATING - 2024:	Low

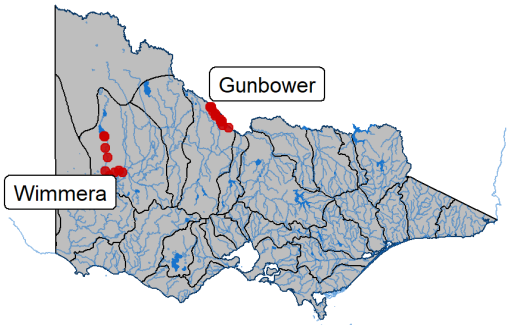
Performance measures (health indictors)	Stream		Status
	Gun	Wim	
Stock abundance			
Trend in abundance the last 5 years as indicated by trend in average annual catch rate from electrofishing surveys	⇔	⇔	⇔
Trend in abundance the last 10 years as indicated by trend in average annual catch rate from electrofishing surveys	⇔	⇔	⇔
Fish size (length/age)			
Wide range of fish size classes present in recent three years, indicating regular successful spawning events and recruitment to the population.	?	?	?
Mature fish capable of spawning present, as indicated by the presence of fish from 30 cm in the catch in recent three years.	?	?	?
Signs of recent recruitment, as indicated by the presence of fish under 10 cm in recent three years.	?	?*	?*
Signs of sustainable fishing pressure as indicated by the presence of fish approaching maximum size (≥ 36 cm) in recent three years.	?	?	?
Rating	Low	Low	Low

⇧ = Increasing, yes and positive. ⇩ = Decreasing, no and negative. ⇔ = Stable. **?** = Insufficient information.
✓ = Good numbers present. **Some** = Some present. ✗ = Nil present.

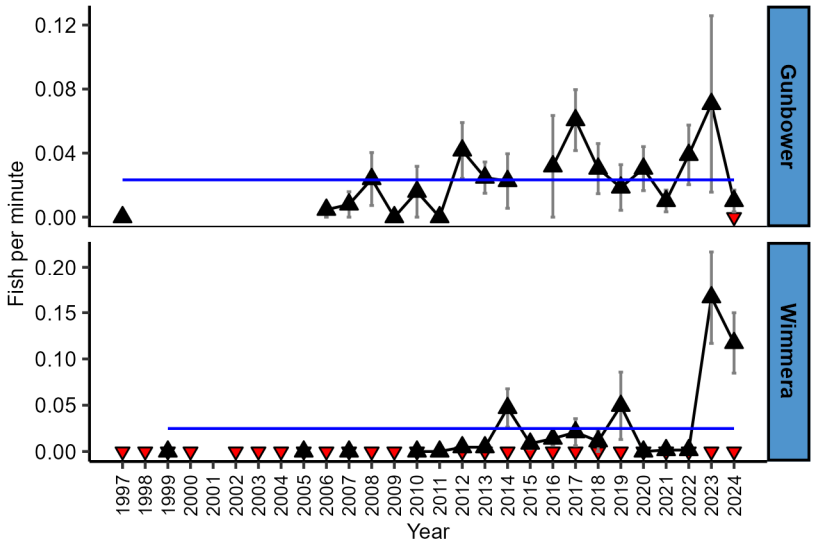
Assessment statement

During 2024 electrofishing surveys two silver perch were caught in Gunbower Creek and 19 in the Wimmera River. Silver perch represented <2% of large-bodied fish caught in these streams. Electrofishing catch rate has been stable over the last 5 years and 10 years for both streams surveyed. Silver perch abundance in the Wimmera River remains low despite regular (annual) stockings of fingerlings. There were insufficient fish measured over the last 3 years to assess fish size (length frequency) performance measures. On this basis the overall rating for silver perch in 2024 was **Low** due to the very low abundance of fish in the two streams surveyed and there being insufficient information available to assess size structure. Silver perch were rated as Low in all previous report cards reports.

The taking of silver perch is prohibited in rivers north of the Great Dividing Range (excluding those in the Wimmera Basin). Silver perch inadvertently caught in these waters must be returned to the water alive and with the least possible injury.

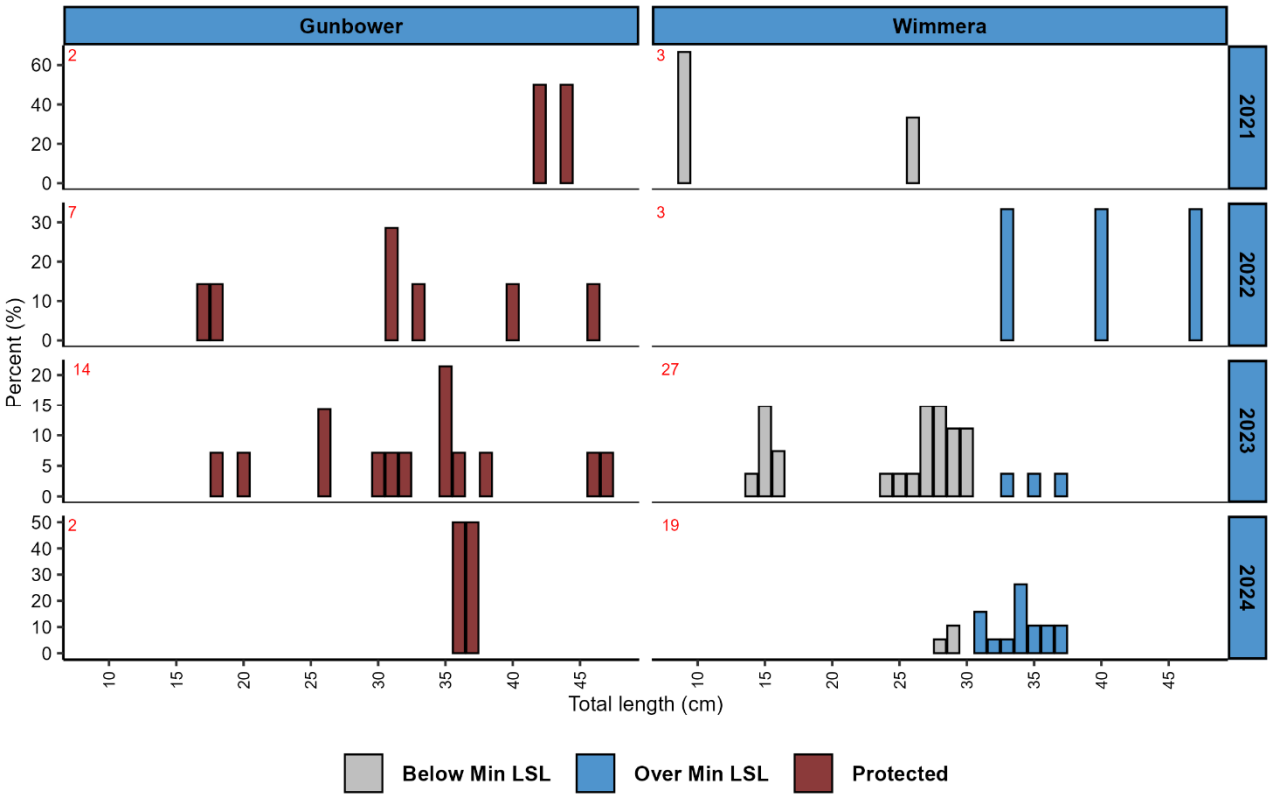


Silver perch captured and measured during electrofishing surveys in 2024	Gunbower	Wimmera
Size range (cm)	36-37	28-36
Percent (%) that are legal size (≥ 30 cm)	Protected	84
Percent (%) that are mature (≥ 30 cm)	100	84
Percent (%) that are recent recruits (< 10 cm)	0	0
Number of fish measured	2	19
Stockings of rivers in recent seasons (1,000s stocked)		
2020/21		100
2021/22		161
2022/23		50



Catch rate

Average catch rate (± s.e.) (black line) and long-term average catch rate (blue line) of silver perch caught during electrofishing surveys of two streams. Red triangles = stocking years.



Size distribution

Length frequency distribution of silver perch caught during electrofishing surveys of two streams (Red numbers = number fish measured. LSL = legal size limit).

Native Fishery Report Card – 2024: Trout cod

This report card describes the status of trout cod in two streams, the Goulburn River (Gou) and Ovens River (Ove) in 2024 and trends in key population performance measures that are based on scientific data provided by scientific fishery surveys.

OVERALL RATING - 2024:	Good

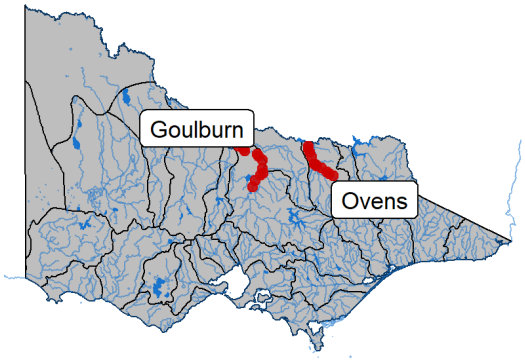
Performance measures (health indictors)	Stream		Status
	Gou	Ove	
Stock abundance			
Trend in abundance the last 5 years as indicated by trend in average annual catch rate from electrofishing surveys	⇔	⇧	⇔
Trend in abundance the last 10 years as indicated by trend in average annual catch rate from electrofishing surveys	⇔	⇔	⇔
Fish size (length/age)			
Wide range of fish size classes present in recent three years, indicating regular successful spawning events and recruitment to the population.	✓	✓	✓
Mature fish capable of spawning present, as indicated by the presence of fish from 30 cm in the catch in recent three years.	✓	✓	✓
Signs of recent recruitment, as indicated by the presence of fish under 10 cm in recent three years.	✘	**Some**	**Some**
Signs of sustainable fishing pressure as indicated by the presence of fish approaching maximum size (≥ 60 cm) in recent three years.	✘	**Some**	**Some**
Rating	Good	Very good	Good

⇧ = Increasing, yes and positive. ⇩ = Decreasing, no and negative. ⇔ = Stable. **?** = Insufficient information.
✓ = Good numbers present. **Some** = Some present. ✘ = Nil present.

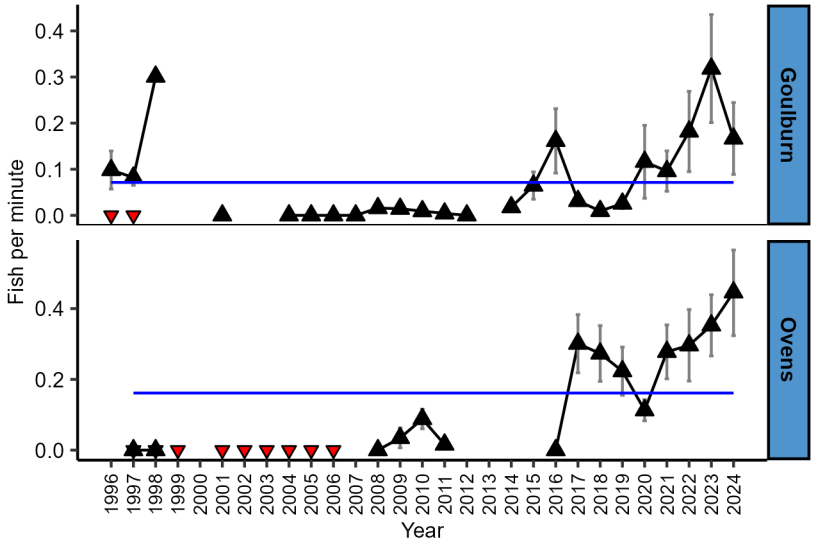
Assessment statement

In 2024 surveys trout cod represented 5% and 12% of the large-bodied fish caught in the Goulburn River and Ovens River, respectively. Electrofishing catch rates over the last 5 years and last 10 years have been stable. A wide range of fish sizes and mature fish were observed in both streams. Over the last three years some fish approaching the maximum size (>60 cm) (a sign of a sustainable fishery) were present in the Ovens River only. Some small fish (recruits) were caught in the Ovens River only, indicating natural spawning in this stream has occurred in recent years. No stockings of hatchery-bred trout cod fingerlings have occurred in these streams in recent years (Goulburn River not stocked in survey area since 1997, Ovens River not stocked since 2006). On this basis the overall rating for trout cod in 2024 was **Good**, which is the same as previous four years.

Trout cod is a protected species. Taking or possessing trout cod is prohibited, except in Lake Sambell and Lake Kerferd where size and bag limits apply.

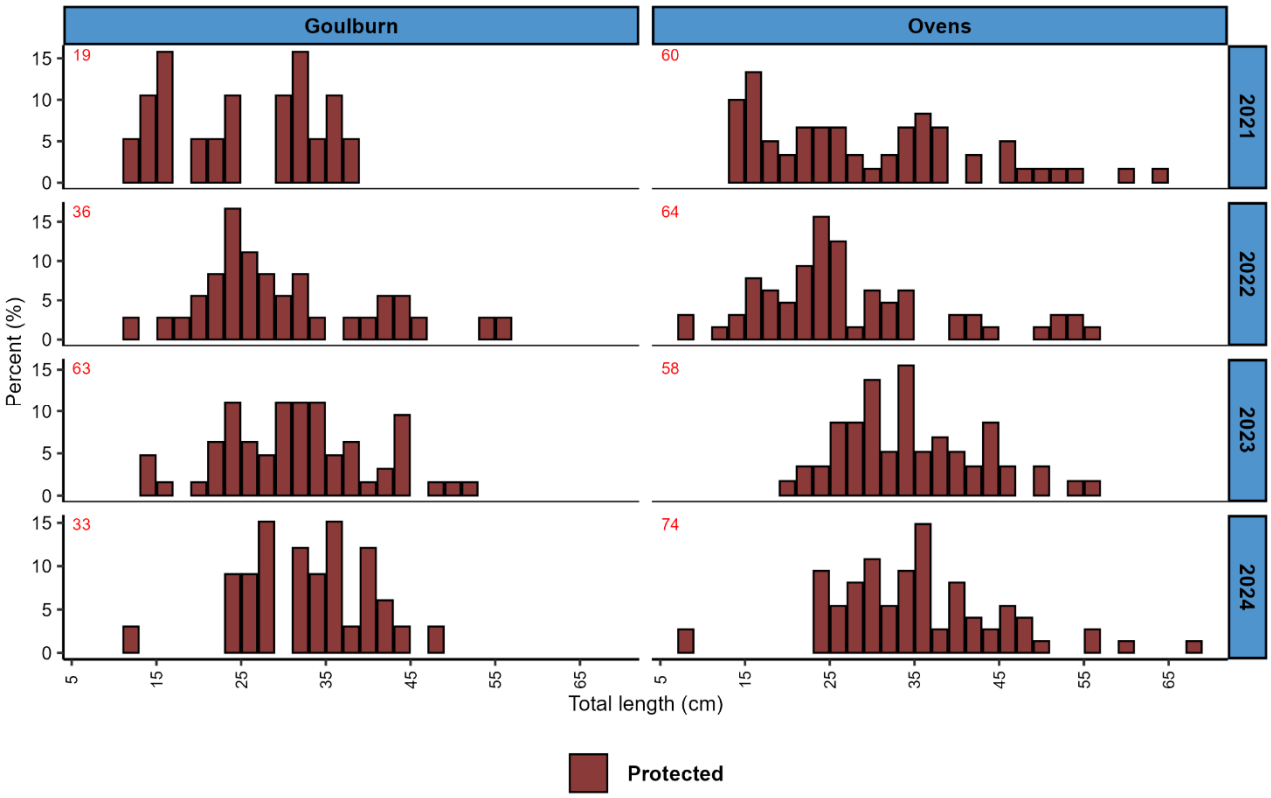


Trout cod captured and measured during electrofishing surveys in 2024	Goulburn	Ovens
Size range (cm)	12 - 48	7 - 66
Percent (%) that are legal size	Protected species	
Percent (%) that are mature (≥ 35 cm)	64	66
Percent (%) that are recent recruits (< 10 cm)	0	3
Number of fish measured	33	74
Stockings of rivers in recent seasons (1,000s stocked):	**NIL**	



Catch rate

Average catch rate (± s.e.) (black line) and long-term average catch rate (blue line) of trout cod caught during electrofishing surveys of two streams. Red triangles = stocking years.



Size distribution

Length frequency distribution of trout cod caught during electrofishing surveys of two streams (Red numbers = number fish measured. LSL = legal size limit).

Appendix I: Common and scientific names of fish

Family	Common name	Scientific name	Comments	FFG status†
Mordaciidae	Shortheaded lamprey	*Mordacia mordax*		
Geotriidae	Pouched lamprey	*Geotria australis*		
Anguillidae	Longfin eel	*Anguilla reinhardtii*		
	Shortfin eel	*Anguilla australis australis*		
Clupeidae	Bony bream	*Nematalosa erebi*		
Plotosidae	Freshwater catfish	*Tandanus tandanus*		Endangered
Prototroctidae	Australian grayling	*Prototroctes maraena*		Endangered
Retropinnidae	Australian smelt	*Retropinna semoni*		
Galaxiidae	Climbing galaxias	*Galaxias brevipinnis*	Broad-finned galaxias	
	Common galaxias	*Galaxias maculatus*		
	Flatheaded galaxias	*Galaxias rostratus*		Vulnerable
	Mountain galaxias	*Galaxias olidus*	Part of *olidus* species complex	
	Obscure galaxias	*Galaxias oliros*		
	Ornate galaxias	*Galaxias ornatus*		
	Spotted galaxias	*Galaxias truttaceus*		
Artherinidae	Unspecked hardyhead	*Craterocephalus stercusmuscarum*		
Malanotaeniidae	Murray-Darling rainbowfish	*Melanotaenia fluviatilis*		Endangered
Percichthyidae	Australian bass	*Percalates novemaculeata*		
	Estuary perch	*Percalates colonorum*		
	Golden perch	*Macquaria ambigua*		
	Macquarie perch	*Macquaria australasica*		Endangered
	Murray cod	*Maccullochella peelii*		Endangered
	Trout cod	*Maccullochella macquariensis*		Endangered
Gadopsidae	River blackfish	*Gadopsis marmoratus*		Critically Endangered (upper Wannon River form)
	Two-spined blackfish	*Gadopsis binspinosus*		
Nannopercidae	Ewen pygmy perch	*Nannoperca variegata*	variegated pygmy perch	Endangered
	Southern pygmy perch	*Nannoperca australis*		Vulnerable (Murray-Darling lineage)
	Yarra pygmy perch	*Nannoperca obscura*		Vulnerable
Terapontidae	Silver perch	*Bidyanus bidyanus*		Endangered
Bovichtidae	Tupong (Congolli)	*Pseudaphritis urvillii*		
Eleotridae	Carp gudgeon	*Hypseleotris* Spp	Including western carp gudgeon (*H. klunzingeri*), Midgley's carp gudgeon (*H. sp1*) and Lake's carp gudgeon (*H. sp2*)	

Family	Common name	Scientific name	Comments	FFG status†
	Cox's gudgeon	*Gobiomorphus coxii*		Endangered
	Dwarf flathead gudgeon	*Philypnodon macrostomus*		
	Flathead gudgeon	*Philypnodon grandiceps*		
	Striped gudgeon	*Gobiomorphus australis*		
Cyprinidae	Common carp	*Cyprinus carpio*	Introduced species	
Percidae	Redfin perch (English perch)	*Perca fluviatilis*	Introduced species	
Poeciliidae	Gambusia (mosquitofish)	*Gambusia holbrooki*	Introduced species	
Salmonidae	Brown trout	*Salmo trutta*	Introduced species	
	Rainbow trout	*Oncorhynchus mykiss*	Introduced species	

† Species listed as threatened under the the *Flora and Fauna Guarantee Act (1988)* (https://www.environment.vic.gov.au/conserving-threatened-species/threatened-list)

Appendix II: Performance measures rules and scoring

The following section describes:

- the performance measures used to assess fish species in each river and the rules applied to each performance measure to assign a score.
- How scores for each performance measure are summarized across multiple rivers for each species
- How scores for each performance measure are combined to obtain an overall rating for each species.

Assigning scores to performance measures and summation of scores to determine an overall rating for each species are intended to be objective and based on the available information.

Performance measures

Fish abundance

Trend (change) in fish abundance over time as indicated by average annual catch rate. Data may be from various sources including historic and contemporary electrofishing surveys (as fish collected per electrofishing machine minute – fish/min) and the *Angler Fishing Diary Program* (*AFDP*) (as fish caught per angler per hour). Periods of assessment may include the last five years, last 10 years and long-term (all available records for all years). It is noted that fish abundance can be strongly influenced by a number of variables including timing of surveys around recruitment (and stocking) events and environmental conditions that affect catching efficiency, such as stream flow velocity and turbidity.

Scoring rules:	• 5-year trend is assessed only when records are available for least 4 of the past 5 years (≥ 80% of years). • 10-year trend is assessed only when records are available for at least 8 of the past 10 years (≥ 80% years). • Long-term trend - assessed only when records are available for ≥ 70 % of years from earliest to latest record.
Scores:	⇧ Increasing (slope of linear regression line > 0.05) ⇩ Decreasing. (slope of linear regression < -0.05) ⇔ Stable or variable (up and down) (slope of linear trend between -0.05 and 0.05) ? Insufficient information to assess (as per scoring rules).

Fish size (length/age)

Fish size performance measures are based on measurement (fish length) of fish caught in surveys over the last three years. Assessment is conducted only when 60 or more fish are measured across all three years combined, otherwise information to assess fish size is considered insufficient. Fish size categories are:

Multiple size classes

A wide range of fish sizes present indicates regular successful spawning events and recruitment is occurring in the stream over the last three years. The minimum and maximum recorded length for the target species is identified from all available fishery survey records for that species. The range between these values is then divided into 10 size slots and the proportion of sampled fish in each slot is estimated. Scores are then determined based on the number of slots with fish present.

Scoring rules:	• Minimum of 60 fish measured over 3 years.	
Scores:	✓	Wide range of fish size classes present (fish in at least 5 of 10 size slots).
	Some	A few fish size classes present (fish present in 2 to 4 of 10 size slots)
	✘	No fish caught or very few fish size classes present (fish present in 1 of 10 size slots).
	?	Insufficient fish measured to assess (< 60 fish measured).

Mature size classes

Mature fish capable of spawning are present in the stream. Size at maturity is indicative only as this may vary between streams, years and sex of fish for each species. Scores are determined based on the proportion of fish sampled that are mature.

Scoring rules:	• Minimum of 60 fish measured over 3 years. • Size at maturity: Australian bass (≥ 27 cm), estuary perch (≥ 27 cm), freshwater catfish (≥ 30 cm), golden perch (≥ 30 cm), Macquarie perch (≥ 30 cm), Murray cod (≥ 55 cm), silver perch (≥ 30 cm) and trout cod (≥ 30 cm).	
Scores:	✓	Good numbers of mature fish present (10% or more of fish measured are over mature size).
	Some	A few mature fish present (up to 10% of fish measured are over mature size).
	✘	No mature fish present (No fish measured are over mature size).
	?	Insufficient fish measured to assess (< 60 fish measured).

Recent recruitment

Small fish (recruits presumed to be less than one year old) (<10 cm) present indicates that fish have spawned recently (in last 12 months) in the stream. This may also indicate recent stocking of hatchery-bred fish. Size is indicative only as growth of juveniles may vary between species, streams, time of year sampled and from one year to the next. Note that detection of small fish by electrofishing can be difficult for some species (notably golden perch). Scores are determined based on the proportion of fish sampled that are small (<10 cm).

Scoring rules:	• Minimum of 60 fish measured over 3 years. • Fish with of length of < 10 cm	
Scores:	✓	Good numbers of small fish present (10% or more of fish measured are recruits).
	Some	A few small fish present (<10% of fish measured are recruits).
	✘	No small fish present (no recruits measured).
	?	Insufficient fish measured to assess (< 60 fish measured).

Maximum size

The presence of fish approaching maximum size indicates sustainable fishing pressure. Maximum size is indicative only as this may vary between streams and sex of fish for each species. Scores are determined based on the proportion of fish sampled that exceed the maximum.

Scoring rules:	• Minimum of 60 fish measured 3 years. • Maximum size: Australian bass (≥ 43 cm), estuary perch (≥ 55 cm), freshwater catfish (≥ 55 cm), golden perch (≥ 50 cm), Macquarie perch (≥ 36 cm), Murray cod (≥ 110 cm), silver perch (≥ 40 cm) and trout cod (≥ 60 cm).	
Scores:	✓	Good numbers fish approaching maximum size present (5% or more of fish measured are over maximum size).
	Some	A few fish approaching maximum size present (greater than zero, but <5% of fish measured are over maximum size).
	✘	No fish approaching maximum size present (No fish measured are over maximum size).
	?	Insufficient fish measured to assess (< 60 fish measured).

Summation of preformation measures and overall score determination

Estimating a summarised score for a species for which multiple rivers are assessed uses the median value for each performance measure for each river assessed. For example,

Performance measure		River1	River2	River3	Summary
Trend in abundance over the last 5 years:	Slope	-0.073	0.04	0.558	Median = 0.04
	Score	⇩	⇔	⇧	⇔
Mature fish present	Proportion of fish measured	0.04	0.076	0.132	Median = 0.076
	Score	**Some**	**Some**	✓	**Some**

To obtain an overall score, a numerical value is assigned to each performance measure according to the score;

3 for ⇧ and ✓

1 for ⇔ and **Some**

0 for ⇩ and ✘ and ?

The maximum numerical score that can be obtained for either a river or summary of rivers is the number of performance measures assessed multiplied by the maximum value of 3. For example,

6 performance measures multiplied by 3 = Maximum numerical score of 18.

The numerical score for each river assessed for a species is determined by adding the scores for each performance measure together and then dividing the value by the maximum numerical score. For example,

Performance measure	Numerical score	Overall score
Trend in abundance over the last 5 years = ⇧	3	**10** / **18** (0.556)
Trend in abundance over the last 10 years = ?	0	
Wide range of fish size classes present = ✓	3	
Mature fish present = **Some**	1	
Small fish under 10 cm present ✓	3	
of fish approaching maximum size present = ✘	0	

The following scale is then applied to assign an overall rating for the species (for either a river or summary of rivers):

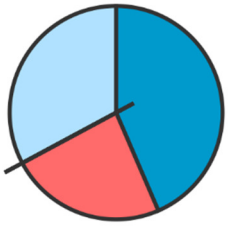
Overall score	< 0.1	0.1 to < 0.4	0.4 to < 0.6	0.6 to < 0.9	≥ 0.9
Overall rating	LOW	MODERATE	GOOD	VERY GOOD	EXCELLENT

Appendix III: Common species present in 2024 surveys

The most common species present in each river during 2024 electrofishing surveys, as a percentage of total number of all species present. The most common large-bodied fish species caught and observed in each river during 2024 electrofishing surveys, as a percentage of total number of large-bodied species present (excluding small-bodied species).

All Species	Large-bodied species

Gellibrand
- Brown trout - 12%
- Common galaxias - 18%
- Other - 19%
- Shortfin eel - 16%
- Spiny crayfish - 36%

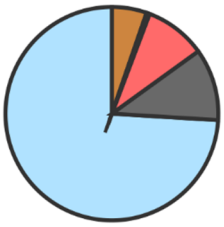


Gellibrand
- Brown trout - 33%
- Other - 0%
- River blackfish - 24%
- Shortfin eel - 44%

Glenelg
- Black bream - 7%
- Common carp - 13%
- Estuary perch - 9%
- Flathead gudgeon - 42%
- Other - 28%

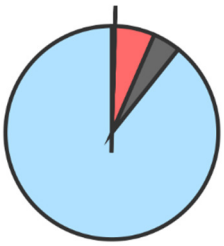
Glenelg
- Black bream - 22%
- Common carp - 40%
- Estuary perch - 27%
- Other - 6%
- Redfin - 6%

Goulburn
- Australian smelt - 38%
- Common carp - 42%
- Golden perch - 6%
- Murray cod - 5%
- Other - 8%



Goulburn
- Common carp - 74%
- Golden perch - 11%
- Murray cod - 9%
- Other - 0%
- Trout cod - 5%

Gunbower
- Australian smelt - 36%
- Bony bream - 1%
- Common carp - 8%
- Other - 1%
- Unspecked hardyhead - 53%



Gunbower
- Common carp - 89%
- Golden perch - 4%
- Murray cod - 6%
- Other - 0%
- Silver perch - 0%

Lindsay-Mullaroo

- Australian smelt - 0%
- Bony bream - 91%
- Common carp - 7%
- Golden perch - 1%
- Murray cod - 0%
- Other - 0%

Lindsay-Mullaroo

- Common carp - 85%
- Freshwater catfish - 1%
- Golden perch - 8%
- Murray cod - 6%
- Other - 0%

Mitchell

- Australian bass - 5%
- Australian smelt - 53%
- Common carp - 6%
- Flathead gudgeon - 23%
- Other - 13%

Mitchell

- Australian bass - 29%
- Common carp - 34%
- Longfin eel - 23%
- Other - 8%
- Shortfin eel - 7%

Ovens

- Australian smelt - 66%
- Common carp - 8%
- Macquarie perch - 6%
- Murray cod - 11%
- Other - 8%

Ovens

- Common carp - 27%
- Macquarie perch - 20%
- Murray cod - 34%
- Other - 7%
- Trout cod - 12%

Thomson-Macalister

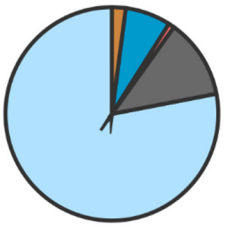
- Australian bass - 1%
- Australian smelt - 48%
- Common carp - 8%
- Freshwater shrimp - 40%
- Other - 3%

Thomson-Macalister

- Australian bass - 10%
- Common carp - 73%
- Estuary perch - 8%
- Longfin eel - 5%
- Other - 5%

Wimmera

- Common carp - 73%
- Golden perch - 11%
- Goldfish - 3%
- Other - 6%
- Redfin - 7%



Wimmera

- Common carp - 78%
- Golden perch - 12%
- Other - 1%
- Redfin - 7%
- Silver perch - 2%

Yarra

- Australian smelt - 58%
- Common carp - 11%
- Common galaxias - 6%
- Other - 15%
- Shortfin eel - 11%

Yarra

- Common carp - 38%
- Macquarie perch - 13%
- Murray cod - 6%
- Other - 5%
- Shortfin eel - 38%

Appendix IV: Abundance of native fish populations

Abundance records (as fish/min) for nine native fish species recorded in electrofishing surveys conducted between 1982 and 2024 for 10 river systems is presented in Figure IV.1. Frequency distribution of these abundancies is provided in Figure IV.1. Abundance levels, quantile ranges and associated fish abundances are provided in Table IV.1.

Average abundance of native fish species recorded in selected rivers surveyed in 2024 is provided in Figure IV.3.

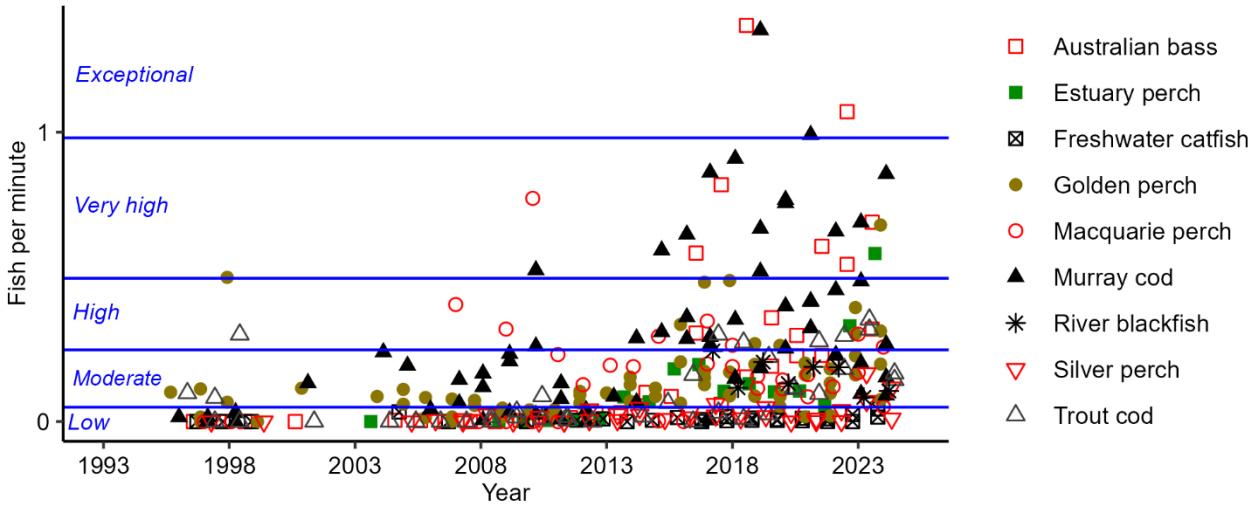


Figure IV.1. Average abundance records for nine native fish species estimated from historic and contemporary catch electrofishing catch records and associated abundance levels.

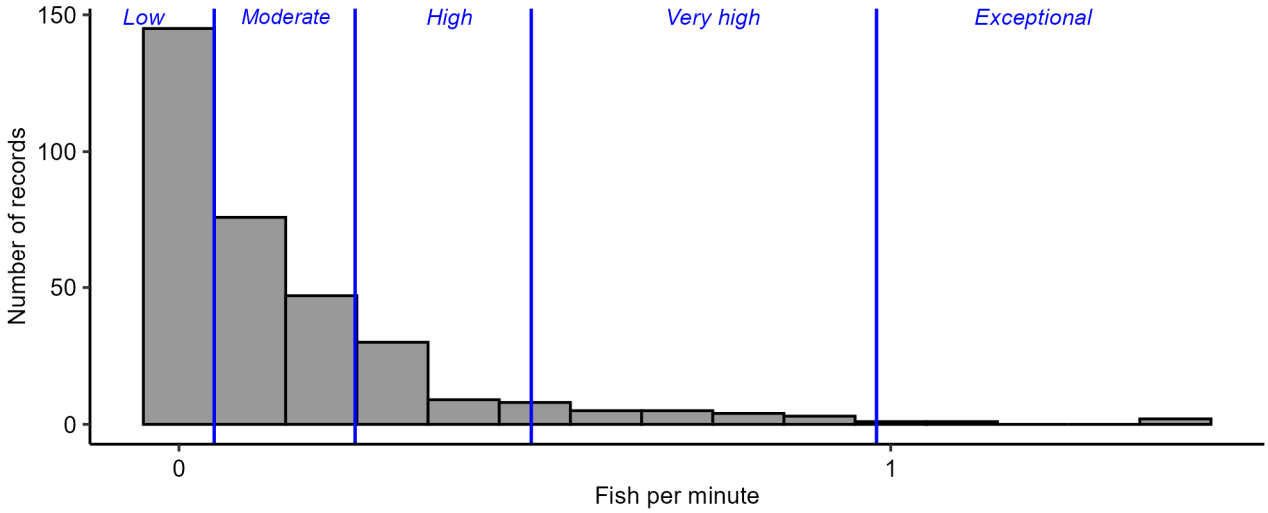


Figure IV.2. Frequency distribution native fish abundance (fish/min) for different abundance levels (based on average of all sites within each river each year recorded for electrofishing surveys conducted between 1994 and 2024).

Table IV.1. Abundance levels of native fish and associated quantile ranges, abundance ranges (fish/min) and number of observations (based on average of all sites within each river each year recorded for electrofishing surveys conducted between 1994 and 2024).

Abundance level	Quantile range	Average abundance range (fish/min)	Number of observations	Percent of observations (%)
Low	< 0.05	0 – 0.05	162	46
Moderate	0.05 to < 0.25	0.06 – 0.24	123	35
High	0.25 to < 0.5	0.25 – 0.49	44	12
Very high	0.5 to < 0.99	0.54 – 0.91	21	6
Exceptional	≥ 0.99	0.99 – 1.37	4	1

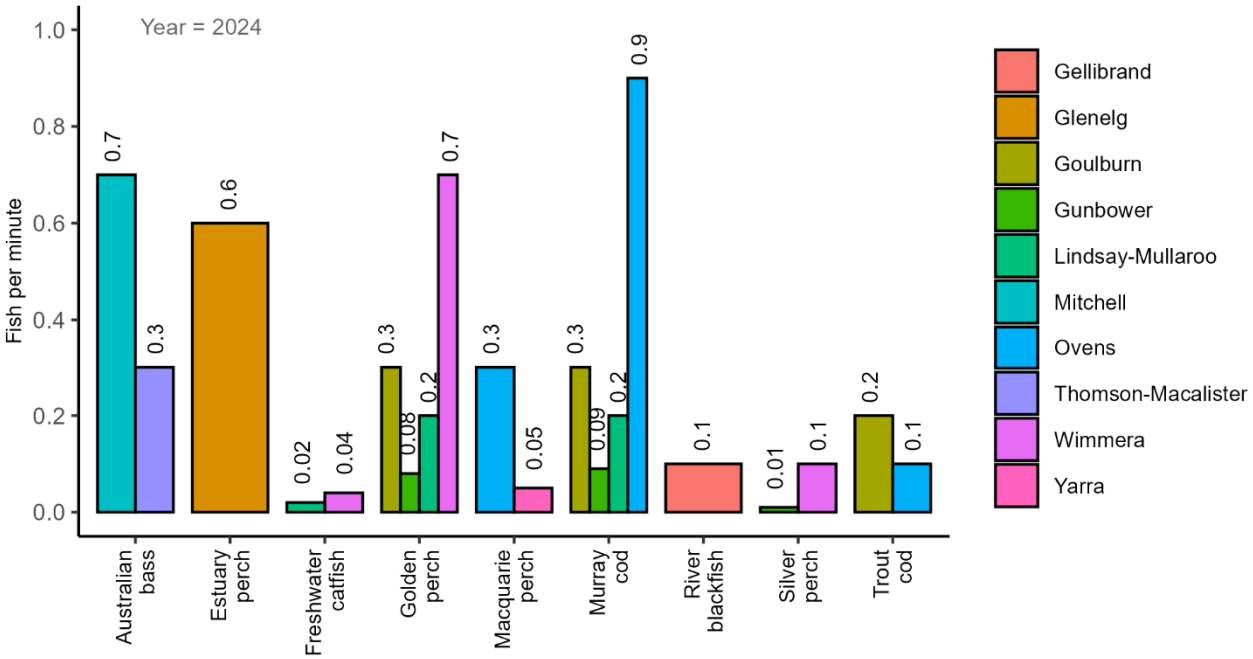
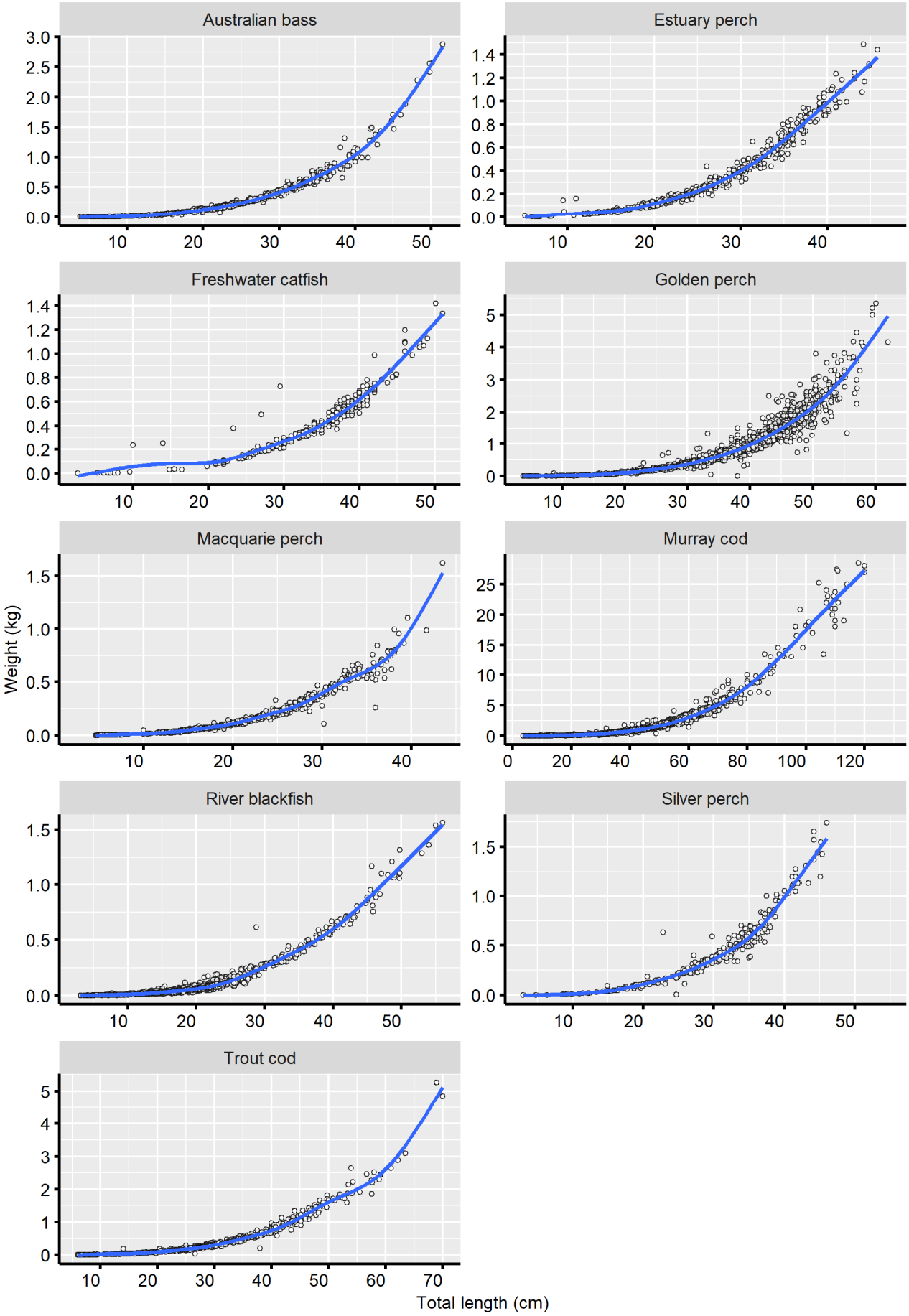
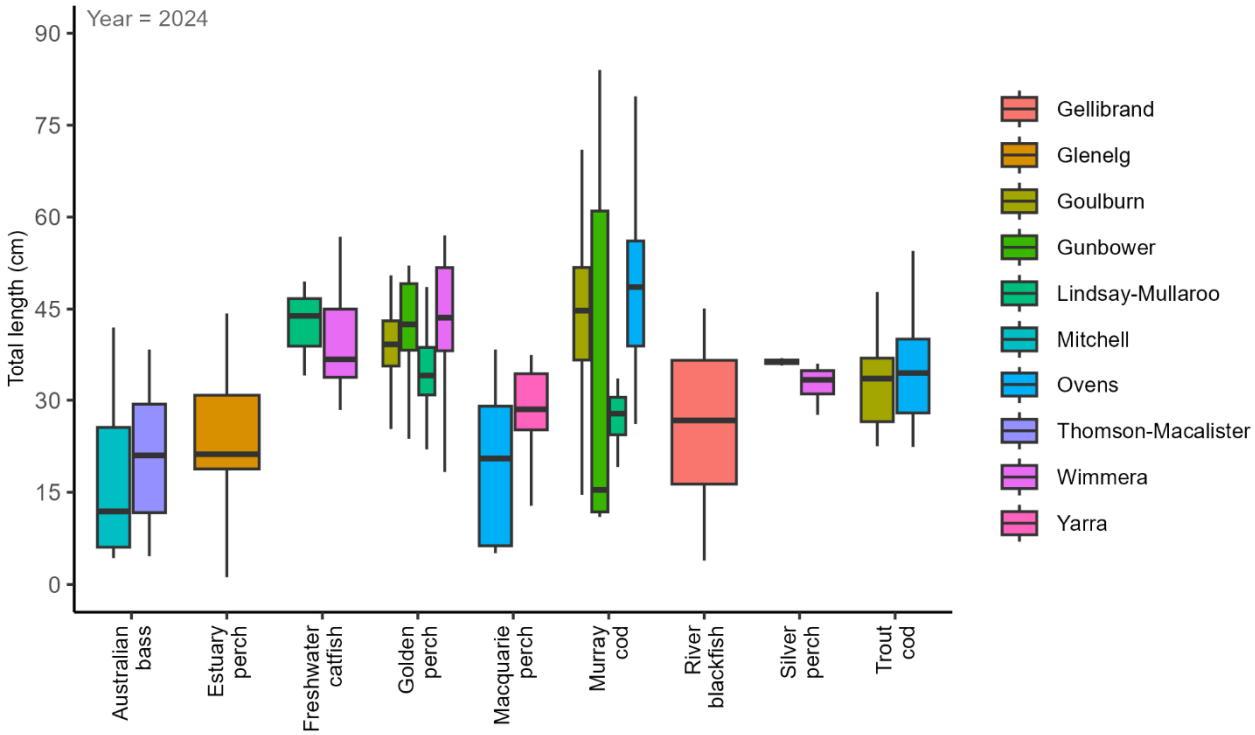


Figure IV.3. Average abundance of native fish species recorded in selected rivers surveyed in 2024.

Appendix V: Native fish length – weight relationships





Size range (total length) of nine native fish species recorded in selected rivers surveyed in 2024 (Box = interquartile range with 25th, 50th (median) and 75th percentiles. Whisker = largest and smallest value within 1.5 times interquartile range)

Appendix VI: Summary of key health indicators for native fish species since 2019

A summary of key health indicators for nine large-bodied native fish in 10 streams assessed over four years.

Species	Rivers	Results					
		2019	2020	2021	2022	2023	2024
Australian bass	Mitchell R.	Moderate*	Good	Good	Good	Good	Very Good
	Thomson R. & Macalister R.	Good*	Good	Good	Very good	Very Good	Very Good
	Overall	Good	Good	Good	Good	Very Good	Very Good
Estuary perch	Glenelg R.	Good	Good	Good	Moderate	Moderate	Good
Freshwater catfish	Lindsay R. & Mullaroo Ck	Low*	Low	Low	Low	Low	Moderate
	Wimmera R.	Low*	Low	Low	Low	Moderate	Moderate
	Overall	Low	Low	Low	Low	Low	Low
Golden perch	Goulburn R.	Very good*	Good	Good	Good	Very good	Very good
	Gunbower Ck	Very good	Moderate	Very good	Very good	Very good	Very good
	Lindsay R. & Mullaroo Ck	Moderate*	Moderate	Moderate	Moderate	Good	Good
	Wimmera R.	Good*	Good	Good	Good	Good	Very good
	Overall	Good	Moderate	Good	Good	Good	Very Good
Macquarie perch	Ovens R.	Moderate*	Moderate	Moderate	Moderate	Good	Very Good
	Yarra R.	Good*	Moderate	Moderate	Moderate	Very Good	Very Good
	Overall	Moderate	Moderate	Moderate	Moderate	Good	Very Good
Murray cod	Goulburn R.	Good*	Moderate	Moderate	Good	Very Good	Good
	Gunbower Ck	Very good*	Very good	Very good	Good	Good	Good
	Ovens R	Good*	Good	Good	Good	Good	Good
	Lindsay R. & Mullaroo Ck	Very good*	Very good	Good	Good	Good	Good
	Overall	Very Good	Good	Good	Good	Good	Good
River blackfish	Gellibrand R. system	Low*	Low*	Good	Very Good	Good	Good
Silver perch	Gunbower Ck	Low*	Low	Low	Low	Low	Low
	Wimmera R.	Low*	Low	Low	Low	Low	Low
	Overall	Low	Low	Low	Low	Low	Low
Trout cod	Goulburn R.	Very good*	Good	Good	Good	Good	Good
	Ovens R.	Good*	Good	Good	Good	Good	Very Good
	Overall	Very Good	Good	Good	Good	Good	Good

* Results not presented in report for the year, instead health indicators are based on retrospective assessment.

References

2019: Ingram *et al.* (2019)
2020: Ingram and Lieschke (2021)
2021: Ingram and Lieschke (2022)
2022: Ingram and Lieschke (2023)
2023: Ingram *et al.* (2023)
2024: This report

Appendix VII: Status of small-bodied native fish in 2024

Status ratings were determined for 24 small-bodied native fish species recorded in the rivers assessed for the *Native Fishery Report Cards* (Table VII.1). River selection for each species was based on the historical distribution of each species as described in Cadwallader and Backhouse (1983), McDowall (1996) and Lintermans (2007). In the mid-2010s the mountain galaxias was recognized as a group of species (species complex) and was consequently separated into a number of new species, including obscure galaxias and ornate galaxias (Raadik 2014) (see Appendix I for scientific species names).

Since the NFRC Program was not designed to target either smaller-bodied species or their habitats, absence of a small-bodied native fish species in surveys of a river does not necessarily mean the species is absent from that river but instead may reflect the ability to detect their presence. Small-bodied native fish were likely to be either under-represented or absent from surveys described in this report for the following reasons:

- Sampling methods, such as electrofishing, targets larger-bodied species
- Habitats where some small-bodied native fish species are more abundant, such as smaller river tributaries, billabongs and shallow backwaters, were not sampled.

Some species of small-bodied native fish are threatened, are less often recorded, have either patchy or restricted distributions and/or occur in small numbers. Consequently, ratings for small-bodied species used presence-absence data only.

The number of fish collected and observed for all types of fishing gear used were combined for each species to indicate presence. Surveys of each river in each year surveyed where each species was not detected indicated absence. A health rating was assigned to each small-bodied native fish species based on the number of streams their presence was detected and the number of years their presence was detected over the last 5 years (data collected since 2017) (Table VII.2).

Table VII.1. Small-bodied native fish and rivers assessed for each species (see Appendix I for scientific species names).

Species	Mitchell	Thomson & Macalister	Gellibrand	Glenelg	Ovens	Goulburn	Gunbower	Lindsay & Mullaroo	Wimmera	Yarra
Gudgeon, Cox's†	■	■								
Gudgeon, striped	■	■								
Grayling, Australian†	■	■	■							■
Galaxias, common	■	■	■	■					■	■
Galaxias, climbing	■	■	■	■						■
Galaxias, spotted	■	■	■	■						■
Tupong	■	■	■	■						■
Lamprey, pouched	■	■	■	■						■
Lamprey, shortheaded	■	■	■	■		■	■	■		■
Galaxias, mountain (pre-2014)	■	■	■	■	■	■	■		■	■
Galaxias, mountain (post-2014)	■				■	■	■			
Pygmy perch, Yarra†			■	■						
Galaxias, ornate			■							■
Pygmy perch, Ewen†				■						
Galaxias, obscure				■	■	■			■	
Blackfish, two-spined					■	■				
Gudgeon, carp					■	■	■	■	■	

Species	Mitchell	Thomson & Macalister	Gellibrand	Glenelg	Ovens	Goulburn	Gunbower	Lindsay & Mullaroo	Wimmera	Yarra
Galaxias, flatheaded†										
Hardyhead, unspecked										
Rainbowfish, Murray-Darling†										
Bream, bony										
Gudgeon, dwarf flathead										
Gudgeon, flatheaded										
Pygmy perch, southern†										
Smelt, Australian										

† (blue text) Listed as threatened under the the *Flora and Fauna Guarantee Act (1988)* (https://www.environment.vic.gov.au/conserving-threatened-species/threatened-list)

Table VII.2. Detection ratings for small-bodied native fish based on presence/absence in selected in the previous 5 years (streams surveyed for each species described in Table VII.1).

Detection rating	Description
RARE OR ABSENT	Present in one stream assessed for the species in < 15% of years, or absent in all streams assessed for the species and absent in the previous 5 years
OCCASIONALLY DETECTED	Present in some streams (< 50%) in some years (< 50%) in those streams assessed for the species in the previous 5 years
REGULARLY DETECTED	Present in most streams (≥ 50%) in some years (< 50%) in those streams assessed for the species in the previous 5 years
COMMONLY DETECTED	Present in most streams (≥ 50%) in most years (≥ 50%) in those streams assessed for the species in the previous 5 years

Detection ratings for small-bodied native fish

Detection ratings for 2024 for these species is presented in Table VII.3. In the streams surveyed, eight species (mostly galaxias) had a detection rating of rare or absent, two occasionally detected, four regularly detected and 10 commonly detected. Since 2023, the detection rating declined from commonly detected to regularly, for one species (carp gudgeon galaxias) (Figure VII.1). The presence and absence of 24 small-bodied native fish in surveyed streams since 1980 are presented in Figure VII.2.

Galaxiids

Climbing galaxias, common galaxias and spotted galaxias occur in coastal drainages of Victoria. Common galaxias is widespread and commonly detected in all coastal rivers during surveys and was the most common species recorded in the Gellibrand River system in 2024 (Table 3). Common galaxias recorded in the Wimmera River represent an introduced (translocated) population outside the species natural distribution. Climbing galaxias was rarely detected in surveys and was only recorded in the Gellibrand River system in 2019 and the Yarra River in 2024. Despite having a wide distribution, spotted galaxias was rare and only recorded in the Gellibrand River system in 2018.

Flatheaded galaxias, which is listed as Vulnerable under the *FFG Act*, occurs in rivers north of the Great Dividing Range that are connected to the Murray River but was rare having not been detected in the rivers surveyed since 1984 (Ovens River) and 1986 (Goulburn River).

Mountain galaxias was rare and not recorded in surveys since 2014. Mountain galaxias has been reported from the Ovens and Wimmera rivers only.

Obscure galaxias was detected in both the Ovens and Glenelg rivers but not the Wimmera River while ornate galaxias was regularly detected in the Gellibrand River system and was detected in the Yarra River for the first time since 2014.

Gudgeons

Species of carp gudgeon (incorporating western carp gudgeon, Midgley's carp gudgeon and Lake's carp gudgeon) were commonly detected in all five inland rivers in most years.

Flathead gudgeon and dwarf flathead gudgeon are reported to occur in all rivers surveyed for this report. Flathead gudgeon were commonly detected in most years for all rivers except the Gellibrand River system where it was absent in all years. Dwarf flathead gudgeon are rare and not been reported in the last four years. Previously dwarf flathead gudgeon were occasionally detected in the Thomson, Macalister and Mitchell rivers in some years only.

Cox's gudgeon, which is listed as Endangered under the *FFG Act*, and striped gudgeon occur in coastal rivers of east Victoria. Both species were recorded in the Mitchell River in some years but were absent in surveys of the Thomson & Macalister rivers. Striped gudgeon is rare and has not been recorded since 2018. However, it is noted that distinguishing the two species can be difficult and that striped gudgeon in the Mitchell in 2017 and 2018 were likely Cox's gudgeon.

Other species

Australian grayling, which occurs in coastal drainages of Victoria, was commonly recorded in four streams in most years since 2017.

Australian smelt is one of the more widespread and common fish species in Victorian inland waters. The species was recorded in all rivers and in all years since 2017, and was the most common species recorded in four rivers (Mitchell, Ovens, Thomson & Macalister and Yarra rivers) in 2024 (Table 3).

Bony bream is common in the Lindsay River and Mullaroo Creek system, being recorded in every year that the streams were surveyed, and was recorded in most years in Gunbower Creek.

Two-spined blackfish occur in rivers in inland north-east Victoria. The species was present in the Ovens Rivers in the last six out of eight years but was absent in the sites surveyed on the lower Goulburn River, which is not unexpected since two-spined blackfish are not thought to occur downstream of Goulburn Weir where the survey sites are located.

Two species of lamprey occur in Victoria. Pouched lampreys are rarely to regularly detected, and in 2024 was recorded from two out of five rivers. Shortheaded lampreys are occasionally recorded in some years, and in 2024 was recorded in three coastal rivers (Mitchell, Thomson-Macalister and Gellibrand rivers).

Unspecked hardyhead were commonly detected in four inland rivers in most years and was the most common species observed in Gunbower Creek in 2024 (Table 3).

Ewen (variegated) pygmy perch occurs in the Glenelg River and, although listed as Endangered under the *FFG Act*, was recorded in surveys every year since 2009 except for 2024.

Southern pygmy perch occurs throughout Victorian coastal and inland waters. However, the species was only recorded from three coastal rivers (Thomson & Macalister, Gellibrand and Glenelg rivers) in recent years. The Murray-Darling lineage of southern pygmy perch is listed as Vulnerable under the *FFG Act*. No Southern pygmy perch were detected in surveys of inland rivers.

Yarra pygmy perch occurs in coastal rivers west of Melbourne and is listed as Endangered under the *FFG Act*. The species has not been recorded since 2017 (Glenelg River only).

Murray-Darling rainbowfish occurs in rivers that flow into the Murray River (Ovens River, Goulburn River, Gunbower Creek and Lindsay-Mullaroo rivers). Murray-Darling rainbowfish are commonly detected in several inland rivers except for the Ovens River where it was last recorded in 2007. The species is listed as Endangered under the *FFG Act*.

Tupong, which occurs in coastal drainages of Victoria was present in most streams surveyed in most years.

Further information on small-bodied native fish is provided by DEECA in native fish report cards for fish communities in selected rivers (https://www.ari.vic.gov.au/research/field-techniques-and-monitoring/native-fish-report-card-program).

Table VII.3. Detection ratings for small-bodied native fish in the rivers assessed in this report (ratings based on presence/absence in the previous 5 years, 2020-2024).

Rare or absent	Occasionally detected	Regularly detected	Commonly detected
Galaxias, climbing	Lamprey, shortheaded	Blackfish, two-spined	Bream, bony
Galaxias, flatheaded†	Pygmy perch, southern†	Gudgeon, Cox's†	Galaxias, common
Galaxias, mountain		Lamprey, pouched	Galaxias, ornate
Galaxias, spotted		Gudgeon, carp	Grayling, Australian†
Gudgeon, striped			Gudgeon, flathead
Pygmy perch, Yarra†			Hardyhead, unspecked
Gudgeon, dwarf flathead			Pygmy perch, Ewen†
Galaxias, obscure			Rainbowfish, Murray-Darling†
			Smelt, Australian
			Tupong

† (blue text) Listed as threatened under the the *Flora and Fauna Guarantee Act (1988)* (https://www.environment.vic.gov.au/conserving-threatened-species/threatened-list)

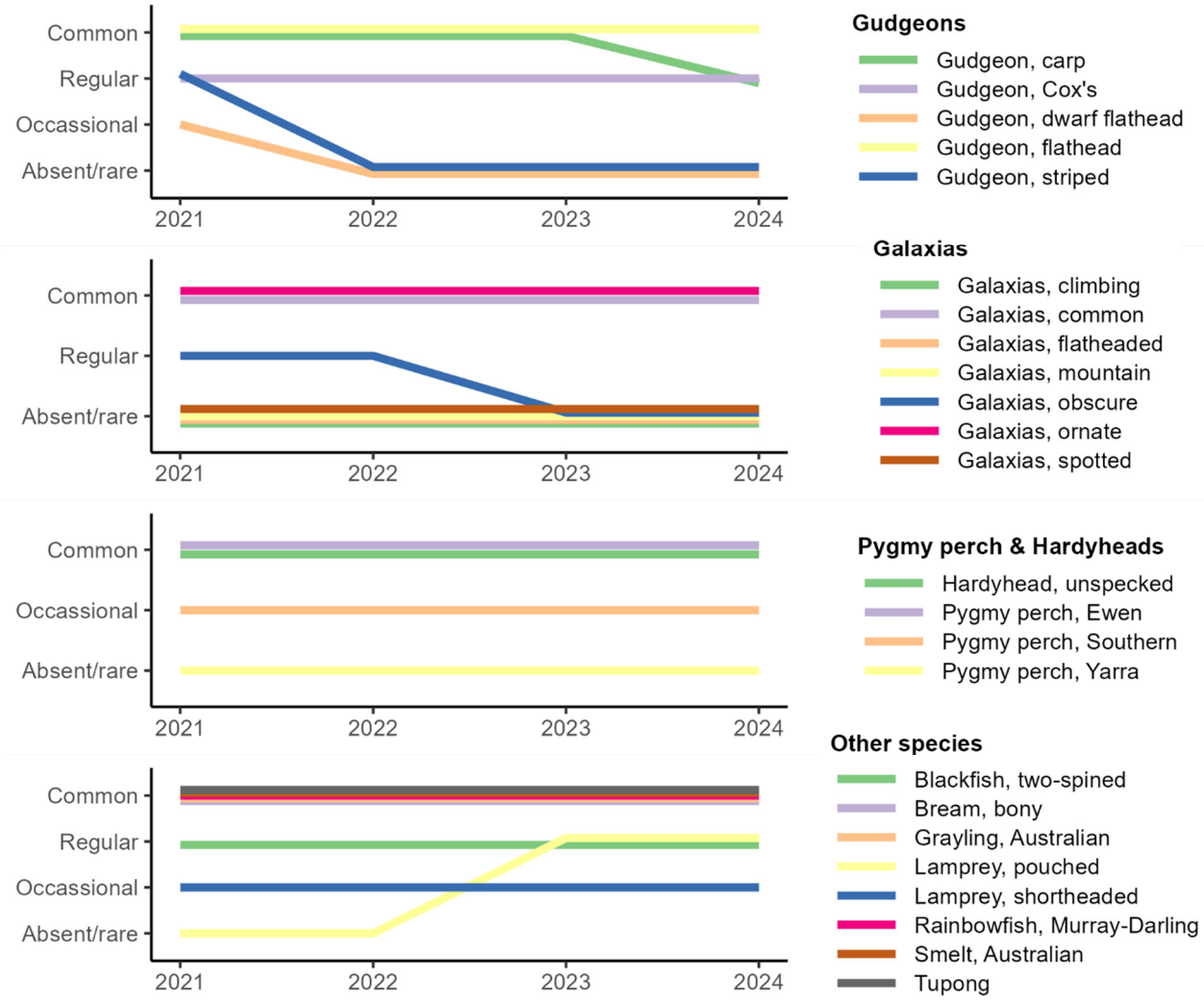


Figure VII.1. Change in detection ratings for small-bodied native fish from 2021-2024 (ratings based on presence/absence in selected streams for previous 5 years)

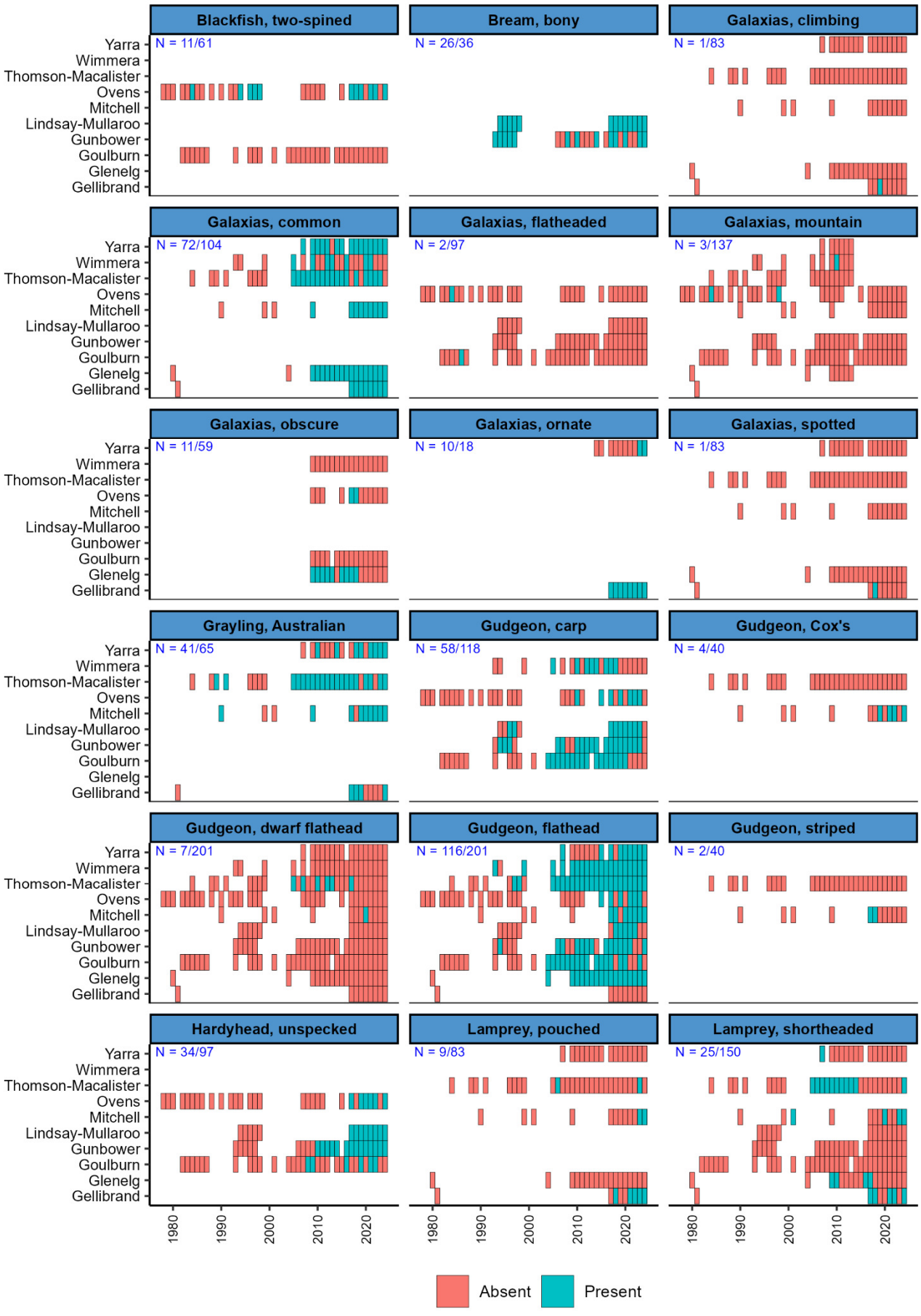


Figure VII.2. Presence and absence of small-bodied native fish in surveyed streams since 1980 (Each tile represents a year that each stream was surveyed. N = Number of years present / number of years surveyed for all streams).

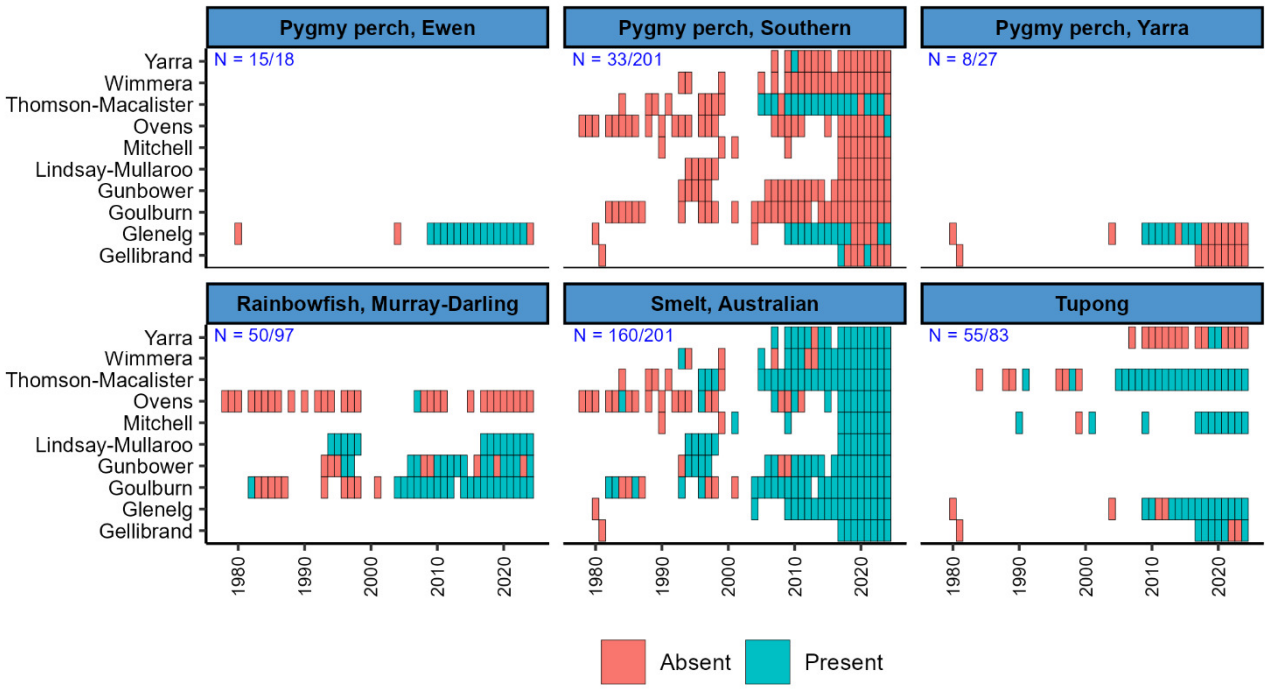


Figure VII.2. Continued. Presence and absence of small-bodied native fish in surveyed streams since 1980 (Each tile represents a year that each stream was surveyed. N = Number of years present / number of years surveyed for all streams).

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