



# Species Summaries

## Macquarie Perch

## 23 Analysis and Summary of Historical Information on Native Fish

During the course of this project a large amount of historical information was collected on the native fish of the Murray-Darling Basin. Most of this has been reviewed on a catchment by catchment basis in the previous sections. The primary aim of the project was to collect historical information and identify the original distribution and habitat preferences of Trout cod and, secondarily, the other large native fish species within the southern half of the Basin. This section provides an analysis and summary of all the information collected.

The summary is presented on an individual species basis and for each the information is discussed under the following headings:

1. **European Discovery:** A description of the earliest European encounters with each species;
2. **Aboriginal Names:** A collation of names reported for each species in the writings of early Europeans attributed to aboriginal people. The list is certain to be very limited in scope as until comparatively recently few publications documented aboriginal language;
3. **European Names:** Briefly outlined is a history of the changes and synonyms of the scientific names used for each species, followed by the common names in general use from the past up to the present. In an earlier section a lengthy review was presented, covering the history of the taxonomic argument over Trout cod that continued for nearly 150 years. While previously discussed, a brief summary of the key changes in the scientific name of the Trout cod along with the basic reasons for these changes, has been provided;
4. **Distribution and Habitat:** All of the collected information on distribution and habitat associations is evaluated to highlight general trends and provide an overall description for each species. To aid in the analysis, the rarity scores assigned to each habitat zone, as defined previously in the summaries for each catchment, were averaged on a state and basin wide basis (in the area investigated in this project). Records originating from the Australian Capital Territory were included in determining the scores for NSW. Where the author assigned an upper or lower value to a rarity score the value was increased or decreased by 0.5 to improve the accuracy of the analysis; e.g., a L3 = 2.5 while a U3 = 3.5. As the focus of the project was to resolve the debate over the original distribution and habitat associations of Trout cod, there is a discussion on the differing views on the species former distribution and a consideration of the strength of the historical data which leads to a conclusion on this issue. For the other species there is a brief discussion, comparing the historical records reported in Lintermans (2007) to those recorded in this project to reach an overall conclusion on the range and habitat associations of each species;
5. **Translocations:** Historical accounts of translocations, that took place prior to the commencement of the stocking of hatchery produced fish in the 1970s, are summarised which may aid those undertaking research into the genetics of fish populations and help explain the presence of species in some waters;
6. **Size:** For each species information is provided on the maximum recorded size or weight which is known to be of interest to anglers;
7. In the case of Trout cod historical accounts relating to general aspects of its biology are presented. For the other species miscellaneous accounts or information identified in the historical material which to date have not been widely known are presented;
8. **Community Value:** A brief summary of the historical value of each species to the community including their popularity as angling and table fish and importance in commercial fisheries;
9. **Current Status:** The current conservation status of each species is stated, along with a brief summary of the major changes to distribution and abundance based on the historical evidence collected and recent angler reports;
10. A map using the information collected during this project presents the likely former historical distribution and abundance in the southern Murray-Darling Basin of each species.

**Table 23.1**      **Definitions of Rarity Scores used in the Project**

<b>Abundance</b>	<b>Rarity Score</b>	<b>Criteria</b>
Absent	0	No credible account reporting the species former presence
Rare	1	A few individual fish could be expected to be taken by a resident angler each year
Common	3	Regularly taken by a resident angler in small numbers: a typical expected catch would be less than 5 fish per day. The species may have been patchily distributed preferring specific reaches or habitats
Abundant	5	Frequently taken by a resident angler in good numbers: a typical catch would exceed 5 fish per day. Generally found along the length of the main channel though may have exhibited some local variations in abundance.

## AFTER MACQUARIE PERCH.

A GOULBURN MORNING.

By DONALD MACDONALD.

From midnight on Thursday the perch of the Goulburn River were no longer given sanctuary or the right of way. It was the opening morning of the fishing season at the great Nagambie weir on the Goulburn, and while it was yet dark some two hundred fishermen from all over the Valley, and some carloads of enthusiasts from the city, were waiting their opportunity for first go at the Macquarie perch—with an occasional cod or catfish to vary the bag. The opening day at the weir—which is so fine a memorial to its builder, the late Mr. Stuart Murray, the keystone also of all the irrigation of the north—is the means for a fisherman's festival, which grows greater, more zestful, less resistible year by year. There will be fishing there aplenty all through the summer; the opening day is being celebrated all along the river, but Nagambie weir is the early door. The rush for it recalls the ardour and excitement of the first morning of the duck season, with rather less of its explosiveness, for the night camps by the river are quiet, if keen, patient and expectant. By the twinkling of lanterns groups of fishermen are fitting and fixing rods and tackle hours before there is light enough to use them.

*Argus*, 3 December 1921

## **AFTER MACQUARIE PERCH**

### **A GOULBURN MORNING**

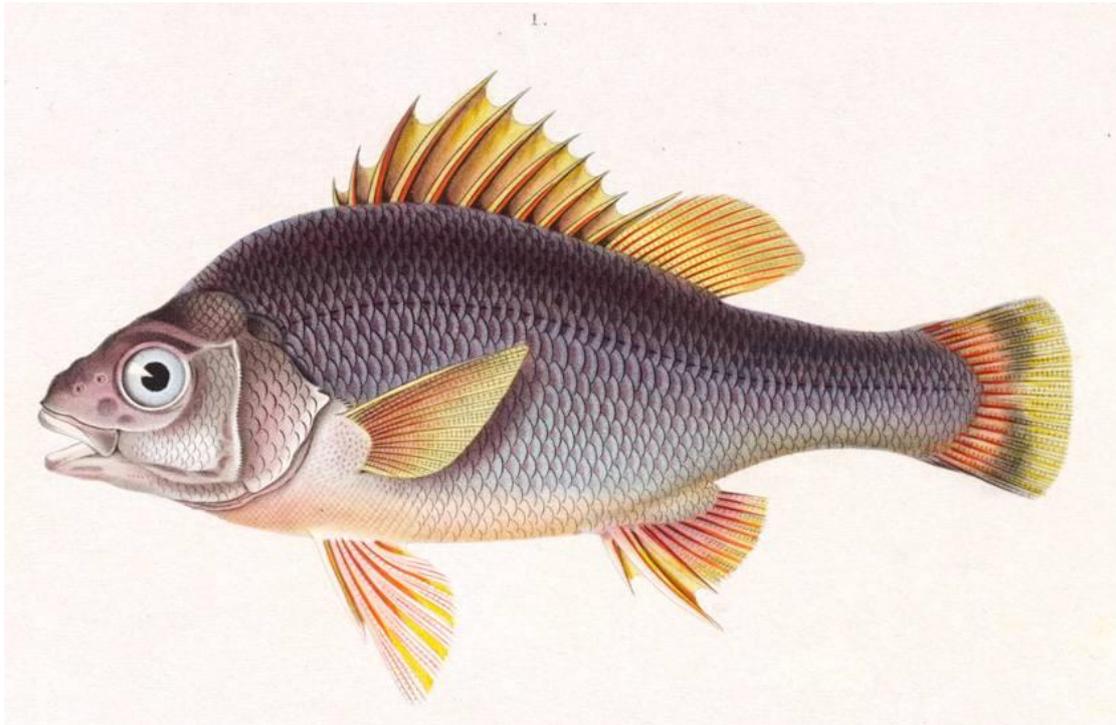
**By DONALD MACDONALD**

From midnight on Thursday the perch of the Goulburn River were no longer given sanctuary or the right of way. It was the opening morning of the fishing season at the great Nagambie weir on the Goulburn, and while it was yet dark some two hundred fishermen from all over the Valley, and some carloads of enthusiasts from the city, were waiting their opportunity for the first go at the Macquarie perch – with an occasional cod or catfish to vary the bag. The opening day at the weir – which is so fine a memorial to its builder, the late Mr. Stuart Murray, the keystone also of all the irrigation of the north – is the means for a fisherman's festival, which grows greater, more zestful, less resistible year by year. There will be fishing there aplenty all through the summer; the opening day is being celebrated all along the river, but Nagambie weir is the early door. The rush for it recalls the ardour and excitement of the first morning of the duck season, with rather less of its explosiveness, for the night camps by the river are quiet, if keen, patient and expectant. By the twinkling of lanterns groups of fishermen are fitting and fixing rods and tackle hours before there is light enough to use them.

### 23.5.1 European Discovery

Macquarie perch are likely to have been one of the first species encountered by Europeans when they crossed the Great Dividing Range, with Taylor (1823) writing the first account. He recorded the presence of a perch-like fish in the upper Macquarie Catchment. Cunningham (1825) used the term 'bream' to describe the fish, but the first unambiguous account is that of Lesson (1825) who captured the species at Bathurst in February 1824, and whose illustration confirms that the fish were Macquarie perch.

**Photograph 23.8 The First Macquarie Perch**



French naturalist Rene Lesson of the *Coquille* expedition provided the first definitive account of Macquarie perch, catching and eating specimens from the Macquarie River at Bathurst in February 1824. Lesson named the species *Macquaria australasiae* (Lesson, 1825), illustrated it in the zoological atlas of the expedition (Lesson, 1826) and returned a preserved specimen to France. Lesson never published a detailed description of the fish and it was ultimately Georges Cuvier who did so in 1830 based on Lesson's specimen and two forwarded to him by Thomas Hobbes Scott (Cuvier & Valenciennes, 1830). Image reproduced from Figure 1, Plate 14, *Voyage autour du monde execute par ordre du roi sur la corvette de La Majesté La Coquille, pendant les années 1822, 1823, 1824 et 1825. Histoire naturelle. Zoologie, Atlas* from the collection of the *National Library of Australia*.

### 23.5.2 Aboriginal Names

Many aboriginal names have been documented for 'perch' or 'bream' but the failure to provide sufficient detail to identify the species makes it unclear which applied to Macquarie perch. Baylis recorded the indigenous word for 'bream' in the Wagga Wagga area (Wiradjuri language) as being 'Nooraderri'. A different term, 'Kubery' or 'Kooberry', was used for grunter (Silver perch), the other candidate for 'bream' in the area

(Wesson, 2001; Tenison-Woods, 1882), suggesting that 'Nooraderri' may have referred to Macquarie perch. Mathews (1904) reported that the term 'Gubir' was used for 'black bream' in the Wiradjuri language, which may also have been a name for Macquarie perch. Matthews (1909) recorded the name 'Wunnumberu' for 'black bream' in the language of the Dhudhuroa who lived along the upper Murray River and the lower Kiewa and Mitta Mitta Rivers. As the only other candidate for 'black bream' in these rivers was Silver perch which were comparatively scarce, it is almost certain that 'Wunnumberu' (pronounced 'Wanambiyu') referred to Macquarie perch.

### **23.5.3 European Names**

Lesson (1825) created the name *Macquaria australasiae* for the specimen he collected in 1824, but failed to publish a formal description for the species. Cuvier published a detailed anatomical description of the species. He based it on the specimen returned to France by Lesson, and on two forwarded to him by Thomas Hobbes Scott, naming it *Macquaria australasica* (Cuvier & Valenciennes, 1830). Over the years a number of naturalists described several different species of Macquarie perch separated by minor anatomical differences. These species included *Dules viverrinus*, *Dules christyi*, *Murrayia guentheri*, *Murrayia cyprinoides*, *Murrayia bramoides*, *Riverina fluviatilis*, *Murrayia riverina* and *Murrayia jenkinsi* (Boulenger, 1895), but none of these gained widespread recognition. Throughout the twentieth century only one species of Macquarie perch was recognised as *Macquaria australasica*.

Genetic research has indicated that populations of Macquarie perch present in the coastal Shoalhaven and Hawkesbury-Nepean Basins in NSW may be distinct species or sub-species. It also indicates that Macquarie perch originated in the Shoalhaven system and gained access to the Hawkesbury watershed via headwater swamps. About six hundred thousand years ago they crossed the Great Dividing Range to colonise the Murray-Darling Basin via either the Lachlan or Macquarie catchments. Three distinct genetic stocks of Macquarie perch in the Shoalhaven, Hawkesbury and Murray-Darling Basins are now recognised, with the suggestion the Shoalhaven fish should be recognised as a separate species (Dufty, 1986; Faulks *et al*, 2009).

Macquarie perch were commonly known as 'black bream' or 'perch' but other more specific names were utilised by anglers. Originally known in old references as Macquarie's perch and ultimately Macquarie perch, Ogilby (1913) recorded one name as being 'snubnose perch' while Stead (1913) used the alternative name of 'Mountain perch' for the species. Perhaps the most widely used specific name was 'white eyes' or 'white eyed bream' with old anglers from the Macquarie catchment south into Victoria employing it. It was a commonly used name in the oral history collected by Rhodes (1999) in north eastern Victoria, and was reported also by Lake (1959). Their prominent eyes also gave rise to the name 'goggle eyes' which was recalled by anglers from Hill End on the Macquarie to the Central Murray and Goulburn Rivers, and by one newspaper correspondent (*Argus*, 23 January 1923). Commercial fishermen along the Central Murray River marketed the species locally as 'butterfish'.

### **23.5.4 Distribution and Habitat**

Within the Murray-Darling Basin, Lintermans (2007) reported Macquarie perch as being historically found from the Lachlan Catchment south, and typically found in the cool, upper reaches of the Murray-Darling Basin. The records he provided were concentrated in the slopes and upland zones with fewer records from the lowlands. Lake (1967b, 1971) described Macquarie perch as being found principally in the upper reaches, though not at the sources, of the rivers of the Murray-Darling Basin which has been repeated in most subsequent publications.

During this project 356 locations were identified as the source of probable or certain historical accounts of captures of Macquarie perch, and the collected evidence on the species abundance was used to develop rarity scores. More records were obtained for Macquarie perch than for any other individual species due to the extensive oral history collected in north eastern Victoria, and the numerous newspaper records in the Melbourne *Argus*. The following table provides averages for the rarity scores created in each habitat zone in each catchment for Macquarie perch using historical evidence in this investigation:

**Table 23.6 Macquarie perch Average Rarity Scores**

Area	Zones			
	Lowland	Slopes	Upland	Montane
NSW & ACT	2.5	4.1	4.6	4.1
VIC	3.9	4.9	2.4	0.9
SA	0.7			
Basin	2.6	4.6	3.2	2.5

The average rarity scores suggest that in NSW Macquarie perch were fairly common in the lowland zone (2.5), were moderately abundant in the slopes zone (4.1), abundant in the upland zone (4.6) and moderately abundant in the montane zone (4.1). The lowland score has been strongly influenced by the fact that while Macquarie perch were common to abundant in some lowland rivers such as the Murray and Murrumbidgee, they were rare or absent in others such as the lower Lachlan and Macquarie Rivers. Similarly the species was considered to be abundant in the slopes zone of all catchments except the Macquarie and Lachlan, with the latter two having a negative influence on the score in this zone. Most records in the montane zone originated from the lower reaches, though it is likely that in the Lachlan and Murrumbidgee Rivers that they were present close to the sources of these rivers. There is also some uncertainty in the score given to Macquarie perch in the montane zone of the Upper Murray Catchment, inferred from a newspaper account, and the species abundance in similar habitat in the adjacent Mitta Mitta Catchment. Overall the scores suggest that in NSW the species was strongly associated with the upland and slopes zones, had a significant presence in the lower montane zone, and in the lowlands progressively increased in abundance southwards.

In Victoria the average rarity scores suggest that Macquarie perch were moderately abundant in the lowland zone (4.1), abundant in the slopes zone (4.9), moderately common in the upland zone (2.4) and rare, but regularly taken, in the montane zone (0.9). The scores for the upland and montane zones have been influenced to some degree by the presence of waterfall barriers preventing access to these zones in some catchments such as the Campaspe. There are a number of catchments in Victoria where Macquarie perch were recorded as being very common to abundant in the upland zone including the Mitta Mitta and Goulburn. The records in the montane zone in Victoria originated from only the lower reaches, and the rarity scores should not be used to infer that they were generally present in this zone. Many good records exist describing Macquarie perch as being one of the most commonly captured species in lagoons in the slopes and lowland zones, and in some lowland rivers such as the Ovens and Goulburn they were abundant. It can be concluded that Macquarie perch was a widespread and common species in Victoria in most habitats below the montane zone, but was most strongly associated with the slopes zone. The average rarity score of 0.7 in South Australia reflects the limited records of Macquarie perch in that state. The available evidence suggests that the species was present in small numbers in the upper reaches of the Murray in South Australia, but further downstream was present only as vagrants.

The record provided by Lesson (1825), newspaper accounts and oral history, demonstrate conclusively that Macquarie perch were present in the Macquarie Catchment, extending their range northwards from that

generally reported. Anglers regularly report catching 'Macquarie perch' from the Darling River but these have always proved to be dark black specimens of Silver perch (Author's pers. obs.) and it is unlikely that Macquarie perch had more than a vagrant status in that river. There is no evidence to suggest the Macquarie perch were present north of the Macquarie catchment.

Macquarie perch extended well downstream into the lowlands from the Murrumbidgee Catchment south. In the Murray River near Burramine, Macquarie perch were the second most commonly taken species by Langtry in 1950 (Cadwallader, 1977), were regular captures in the Swan Hill area prior to the Second World War and many hundreds of fish passed annually through the Euston Weir fish ladder (Mallen-Cooper & Brand, 2007). Many tens of thousands of Macquarie perch were sourced from lowland habitat below the Goulburn Weir, and in the Broken River for translocation elsewhere (Cadwallader, 1981) and they were regularly captured from lagoons in the Bringagee area during the 'Natures Waste' translocation program, indicating a reasonable presence in the lower Murrumbidgee (NSW Fisheries Report, 1918). Recent publications have indicated that Macquarie perch spawn in upland streams, but the record of running ripe Macquarie perch being captured near Barmah by Tubb in 1937 (Cadwallader, 1977), along with oral history suggests that under some conditions the species can reproduce in lowland habitat. In the slopes zone historical sources record spawning aggregations in this type of habitat. Collectively the evidence points to Macquarie perch as being an adaptable species, at home in a diverse range of habitats from the mountain streams to the larger lowland rivers and lagoons.

In conclusion Macquarie perch were found from the Macquarie Catchment southwards and west into South Australia. The collective results for the Basin suggest that Macquarie perch, on average, were most abundant in the slopes zone (4.6), were common in the upland zone (3.2) and moderately common in the lowland (2.6) and montane (2.5) zones. The general trends from the rarity scores suggest that in the northern part of the species range, namely the Macquarie and Lachlan catchments, Macquarie perch were primarily an upland species, but that progressively south the favoured habitat shifted downstream into the slopes zone, though with a significant presence generally in the upland zone and eastern parts of the lowlands. The current altitude record for Macquarie perch is the Murrumbidgee River upstream of the present site of Tantagara Dam at around 1300 m ASL.

#### **23.5.5 Translocations**

The most famous translocation of Macquarie perch was from the upper King Parrot Creek into the Yarra catchment via the Plenty River in 1857 (Wilson, 1857). It was supplemented by further fish from the Murray, Goulburn and Broken catchments over nearly a hundred years. In the twentieth century alone over 21,000 Macquarie perch were released into the Yarra River (Cadwallader, 1981). Many other translocations took place to waters outside of the Murray-Darling Basin in Victoria including the Wimmera, Wannon, Avoca, Werribee, Barwon and Latrobe Catchments (Cadwallader, 1981). The result of the translocations was, in most cases, the creation of temporary populations which ultimately disappeared. A substantial population of Macquarie perch exists in the middle to lower Yarra River, a small population persists in the Wannon River and a recent capture by an angler suggests that they may still exist in the upper Barwon River.

In NSW Macquarie perch were translocated to Cataract Reservoir in the Nepean Catchment near Sydney from the Berembed Weir area in 1916 where they established a substantial population (NSW Fisheries Reports, 1914; 1923) which persists to the present day (Faulks *et al*, 2009). In the Shoalhaven catchment there appears to be two discrete populations of Macquarie perch, one in the lower reaches thought to be endemic, and another in the upper reaches, particularly in the Mongarlowe River, which was created by translocation from

the Queanbeyan area (Lintermans, 2008; *Sydney Morning Herald*, 26 May 1863; 15 October 1867; 22 February 1868). Attempts were made to introduce Macquarie perch to the Snowy River in NSW (Stead, 1913) but proved unsuccessful. Macquarie perch also appear to have been translocated to the upper reaches of the Belabula River in the Lachlan Catchment possibly as eggs sourced from the Bathurst area in the early 1880s (*Sydney Morning Herald*, 4 March 1886).

Arrangements were made to introduce Macquarie perch to Tasmania, but it is not clear if any were actually released as their introduction was opposed by the Tasmanian Salmon Commissioners (*Hobart Mercury*, 18 November 1909; 12 October 1911; 30 November 1911). Macquarie perch were also translocated to southern Queensland but failed to establish (Merrick & Schmida, 1984). Several hundred were reported to have reached England while others were possibly sent to Western Australia by William Saville-Kent (*Hobart Mercury*, 30 November 1911).

### **23.5.6 Size**

Historical accounts indicate that any fish over two kg is a big Macquarie perch. In NSW fish up to 3 lb. (1.4 kg) were considered common with individuals up to 5 lb. (2.3 kg) being officially recorded (NSW Fisheries Report, 1910-13). Lake (1959) mentioned that an 8 lb. (3.6 kg) specimen had been seen, the same figure being subsequently quoted in many angling publications. Surveys of Macquarie perch in impoundments have reported the capture of fish over 3 kg (Cadwallader & Rogan, 1977). Harrison reported 8 lb. (3.6 kg) specimens to have been taken by commercial fishermen (Harrison, 1977) with fish of that size being captured near Barmah (Laddie Clifford, pers. com.). A newspaper account of an 18 lb. (8.2 kg) 'Macquarie perch' taken from the Merran Creek near Swan Hill (*Argus*, 18 July 1924) lacks detail to confirm the identity of the fish, which was more likely to have been a Silver perch. In 1939 a Macquarie perch weighing 7 lb. 15 oz. (3.6 kg) was caught in the railway reservoir at Coleraine, the species having been stocked into the reservoir by the Victorian Fisheries and Game Department (*Argus*, 25 February 1939), probably representing the largest accurately weighed specimen.

### **23.5.7 Migrations**

The mass migrations of Macquarie perch out of impoundments into inflowing rivers for spawning has been reported (Cadwallader & Rogan, 1977). Schooling and migration appears to be a general trait of the species having been described in the oral history in natural waters such as the Axe Creek in the Campaspe catchment, and Larsen Creek in the Mitta Mitta catchment. Don Briggs recalled that the Yorta Yorta people considered the Macquarie perch to be migratory and Laddie Clifford informed the author of old stories of drum nets being filled with the species when migrating upstream between Barmah and Talmalmo. A feature of note is a strong, but not unpleasant, odour produced by the species detected by many people though not by others. Over the years a number of anglers have informed the author that they literally could smell large aggregations of Macquarie perch in waterways and one suggested his dog could find the fish by smell. The author has experienced this attribute on Lake Dartmouth when a large school swam under his boat in shallow water. One practice, reported by anglers in north east Victoria, was the use of fire to attract Macquarie perch to the location they fished, the species reputedly responding to light, being readily angled and at times taken by net at the stream bank. Several anglers suggested that the light illuminated the eyes of shrimp and this attracted the perch to the area.

### 23.5.8 Community Value

Lake (1967a) described the Macquarie perch as a 'quiet, furtive species' and considered it to be possibly the best freshwater table fish in Australia. Pratt concluded that it was superb eating, considering it to be in the gourmet class (Pratt, 1979). Many anglers interviewed indicated that they considered Macquarie perch to be the best table fish found in the Basin. Macquarie perch were part of the commercial inland fishery in NSW but few records document the catch of this species and most date from a time when they had undergone a substantial decline. Ogilby (1893) reported that Macquarie perch were regularly sent to the Melbourne market. In 1965-66 1807 kg of Macquarie perch were officially recorded as landed by commercial fishermen in NSW, dropping to 693 kg in 1974-75 (Harrison, 1977). Possible confusion of the species with Silver perch makes the actual quantities taken uncertain. The oral history indicates that most of the commercial take originated from the Murrumbidgee River upstream of Narrandera, the upper Edward River and the Murray River upstream of Echuca, though fish were taken from the Murray downstream into South Australia. In the early years of the fishery between Yarrowonga and Barmah, the take of Macquarie perch rivalled, and at times exceeded, that of Golden perch (Laddie Clifford, pers. com.). Commercial fishermen along the Central Murray River marketed the species locally as 'butterfish' and as they were considered to be the best table fish, they often commanded the highest price per kg (Laddie Clifford, Henry Davies & Bill Ellis, pers. com.).

Macquarie perch were highly regarded as an angling fish, considered to provide excellent sport and suitable for being taken on artificial flies (Hungerford, 1971). Many accounts recorded intense angling activity directed at Macquarie perch in Victoria including the capture of three quarters of a tonne of fish in a single day in a single pool below the Goulburn Weir in 1921 (*Argus*, 3 December 1921). Large captures of migrating Macquarie perch in the tributary rivers of Lake Eildon were legendary; at times they resulted in phenomenal harvests measured in tonnes per week (Cadwallader & Rogan, 1977) with anglers forming queues at favoured holes. In NSW Macquarie perch received far less publicity than in Victoria, but the historical evidence indicates that in the upland rivers they were also the focus of considerable angling activity, comprising a substantial part of the catch. Overall, in non-lowland habitats in the southern half of the Murray-Darling Basin Macquarie perch were once probably the most important angling species after cod. The enthusiasm that anglers had for Macquarie perch is exemplified by the atmosphere captured by journalist Donald Macdonald one morning in 1921:

It was the opening morning of the fishing season at the great Nagambie weir on the Goulburn, and while it was yet dark some two hundred fishermen from all over the Valley, and some carloads of enthusiasts from the city were waiting for first go at the Macquarie perch / it was a fine scene in eagerness and activity, this midnight to morning rush down all the red roads of the famous valley for Macquarie perch (*Argus*, 3 December 1921).

### 23.5.9 Decline & Current Status

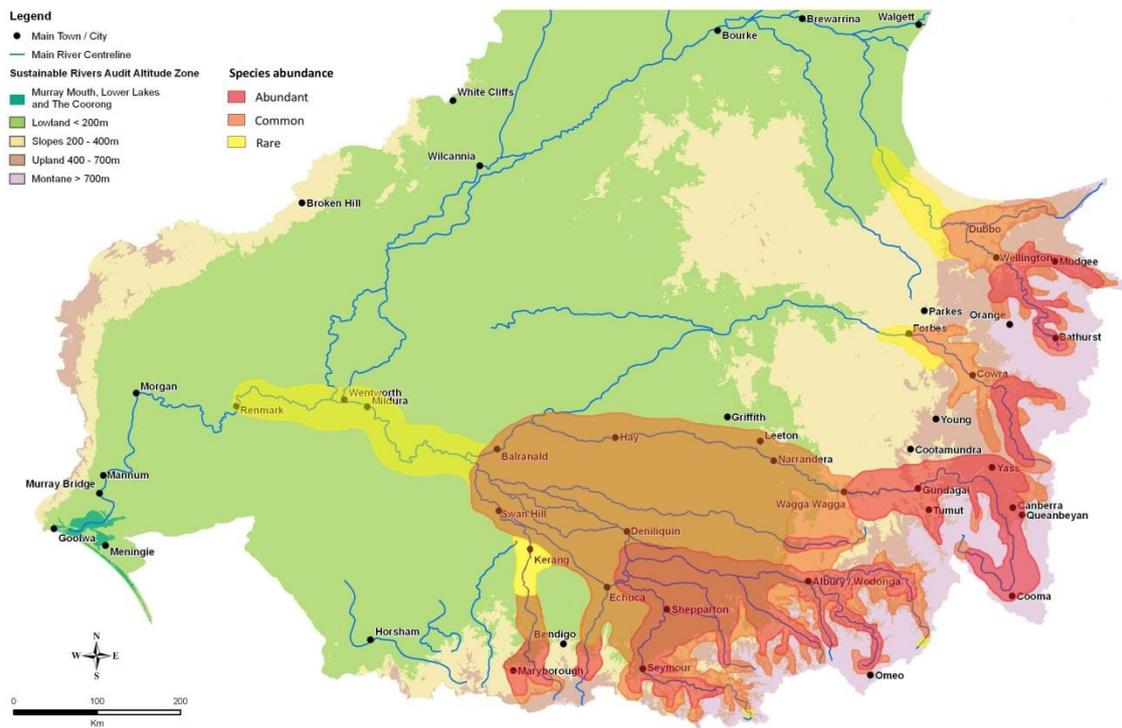
For such a once prolific species Macquarie perch has undergone a dramatic decline in its distribution and abundance. The historical evidence suggests that significant reductions in populations in some areas were evident by the early twentieth century with widespread population extinctions occurring from 1920-60. Macquarie perch had virtually disappeared in some of the higher altitude habitats, such the upper Macquarie, Mitta Mitta, Murray, King and Loddon Rivers by the end of the First World War. A further decrease was evident in the slopes zone by the late 1930s including the Macquarie, Murray, Kiewa, Ovens and Goulburn Rivers. By the end of the 1960s the endemic populations were largely restricted to the upper Lachlan and upper Murrumbidgee Catchments in NSW and the ACT, with limited numbers present elsewhere in the Murray-Darling Basin in that state, and relic populations in the slopes and upland zones of the Mitta Mitta,

Ovens, Broken and Goulburn Catchments in Victoria. Since that time most of the remaining populations, while persisting, have been further impacted by a range of factors including river regulation, bush fire events, the introduction of exotic fish species and possibly EHN Virus. The construction and filling of Lake Dartmouth on the Mitta Mitta River during the 1970s resulted in the proliferation of Macquarie perch in that water and the creation of a major fishery. In subsequent years the population in Lake Dartmouth has progressively diminished and while still present, the species is no longer abundant in that water. The most secure population is probably the one translocated to the Yarra River in the nineteenth century.

While still present in areas of the Hawkesbury, the endemic form of Macquarie perch appear to have recently become extinct in the Shoalhaven Catchment (Faulks *et al*, 2009), though the translocated population of the Murray-Darling form still exists in the upper reaches. If the endemic Shoalhaven form of Macquarie perch is ultimately determined to be a distinct species its loss may represent the first extinction of an Australian native fish, for it has not been detected in the wild since 1998, and none are known to be held in captivity with the last known specimen dying in 2008 (Faulks *et al*, 2009). Although almost disappearing from the Yarra River by the 1970s (Author's pers. obs.) the translocated population of Macquarie perch has undergone a remarkable recovery and today the Yarra River contains the best remaining riverine population of the species.

In NSW Macquarie perch are listed as endangered under the *Fisheries Management Act 1994*; in the ACT it is classified as endangered under the *Nature Conservation Act 1980*; in Victoria are listed as endangered under the *Flora and Fauna Guarantee Act 1988*. In South Australia Macquarie perch are considered extinct, and are protected by regulations under the *Fisheries Act 2007*. The only waters in which Macquarie perch can be taken by angling are in Victoria, namely the Yarra River and Lake Dartmouth and its tributaries. Until recently Macquarie perch have proved very difficult to breed in captivity but in 2010 the Narrandera Fisheries Centre successfully produced several hundred fingerlings which were liberated into a tributary of the Abercrombie River. In the same year in Victoria breakthroughs were also made at the DPI Snobs Creek Hatchery resulting in the production of several thousand fish. In Victoria the intention is to create recreational fisheries and improve the conservation status of the species with the primary stocking sites being Expedition Pass and William Hovel Reservoirs, the Ovens and Buffalo Rivers and the Goulburn River between Yea and Seymour.

**Figure 23.5 A Reconstruction of the Historical Distribution & Abundance of Macquarie Perch in the Southern Murray-Darling Basin**



**Table 23.9 ASFB Conservation Status of Murray-Darling Basin Fishes**

The following table presents the most recent (2011) assessment of the conservation status of Murray-Darling Basin Fishes by the Threatened Fishes Committee of the Australian Society for Fish Biology courtesy of the Convenor, Mark Lintermans ([Mark.Lintermans@canberra.edu.au](mailto:Mark.Lintermans@canberra.edu.au)). It utilises IUCN conservation categories and criteria.

<b>Category</b>	<b>Scientific Name</b>	<b>Common Name</b>
CRITICALLY ENDANGERED	<i>Craterocephalus fluviatilis</i>	Murray hardyhead
	<i>Galaxias fuscus</i>	Barred galaxias
	<i>Maccullochella macquariensis</i>	Trout cod
ENDANGERED	<i>Macquaria australasica</i>	Macquarie perch
VULNERABLE	<i>Craterocephalus amniculus</i>	Darling River hardyhead
	<i>Edelia obscura</i>	Yarra pygmy perch
	<i>Galaxias rostratus</i>	Flat-headed galaxias
	<i>Maccullochella peelii</i>	Murray cod
LOWER RISK – LEAST CONCERN	<i>Mogurnda adspersa</i>	Southern purple-spotted gudgeon