

PŌRAE (POR)

(*Nemadactylus douglasii*)
Pōrae



1. FISHERY SUMMARY

Pōrae was introduced into the Quota Management System on 1 October 2004 with the following TACs, TACCs, and allowances (Table 1). These have not been changed.

Table 1: TACs (t), TACCs (t) and allowances (t) for pōrae.

Fishstock	Recreational Allowance	Customary non-commercial Allowance	Other sources of mortality	TACC	TAC
POR 1	6	3	4	62	75
POR 2	1	1	1	18	9
POR 3	1	1	1	2	5
POR 10	1	1	1	1	4
Total	9	6	7	83	93

1.1 Commercial fisheries

Commercial catches of pōrae throughout New Zealand are generally small. Landings were first reported in 1978 (Table 2). The proportion of vessels landing catch declined steadily during the 1990s; annual landings in FMA 1, where the majority of pōrae are caught, have approximately halved since the early 1990s when an average of 110 t were reported annually (Table 3). POR 1 landings have generally been lower than the TACC since its introduction in 2004, only slightly exceeding it in 2006–07, 2010–11, and 2016–17 (Figure 1, Table 4). Landings of POR 2 (FMAs 2, 8, and 9) have remained low and below the TACC (except for the fishing year 2016–17), averaging 14 t in 2013–14 to 2018–19. POR 3 landings have consistently remained below 1 t; no landings have been reported from FMAs 4, 5, or 6. POR 10 landings were last reported in 1994–95.

Pōrae is principally caught as a bycatch in inshore set net fisheries in northern New Zealand. It is generally taken in association with snapper and trevally off east Northland and Coromandel, and tarakihi and blue moki around Gisborne. Small quantities are taken by bottom longline and trawl fisheries targeting snapper off east Northland and Ninety Mile Beach.

Fishers may confuse the codes PAR (parore) and POR (pōrae) when reporting catches, but given that both species occur in shallow northern waters, misreporting is difficult to discern.

PŌRAE (POR)

Table 2: Reported landings (t) for the main QMAs from 1931 to 1982.

Year	POR 1	POR 2	POR 3	Year	POR 1	POR 2	POR 3
1931-32	0	0	0	1957	0	0	0
1932-33	0	0	0	1958	0	0	0
1933-34	0	0	0	1959	0	0	0
1934-35	0	0	0	1960	0	0	0
1935-36	0	0	0	1961	0	0	0
1936-37	0	0	0	1962	0	0	0
1937-38	0	0	0	1963	0	0	0
1938-39	0	0	0	1964	0	0	0
1939-40	0	0	0	1965	0	0	0
1940-41	0	0	0	1966	0	0	0
1941-42	0	0	0	1967	0	0	0
1942-43	0	0	0	1968	0	0	0
1943-44	0	0	0	1969	0	0	0
1944	0	0	0	1970	0	0	0
1945	0	0	0	1971	0	0	0
1946	0	0	0	1972	0	0	0
1947	0	0	0	1973	0	0	0
1948	0	0	0	1974	0	0	0
1949	0	0	0	1975	0	0	0
1950	0	0	0	1976	0	0	0
1951	0	0	0	1977	0	0	0
1952	0	0	0	1978	191	4	0
1953	0	0	0	1979	107	0	0
1954	0	0	0	1980	83	4	0
1955	0	0	0	1981	82	8	0
1956	0	0	0	1982	92	5	0

Notes:

1. The 1931–1943 years are April–March but from 1944 onwards are calendar years.
2. Data up to 1985 are from fishing returns: Data from 1986 to 1990 are from Quota Management Reports.
3. Data for the period 1931 to 1982 are based on reported landings by harbour and are likely to be underestimated as a result of under-reporting and discarding practices. Data includes both foreign and domestic landings.

Table 3: Reported landings (t) of pōrae by FMA, fishing years 1989–90 to 2003–04.

	FMA 1	FMA 2	FMA 3	FMA 7	FMA 8	FMA 9	FMA 10
1989–90	98	4	<1	<1	<1	0	0
1990–91	115	2	0	0	<1	4	0
1991–92	121	5	<1	0	0	3	0
1992–93	121	8	0	1	<1	<1	0
1993–94	77	12	2	0	<1	1	<1
1994–95	109	5	0	0	<1	1	<1
1995–96	94	8	<1	<1	<1	4	0
1996–97	80	7	<1	1	<1	2	0
1997–98	75	4	<1	<1	<1	3	0
1998–99	58	3	3	<1	<1	1	0
1999–00	55	4	<1	2	<1	1	0
2000–01	64	2	1	<1	<1	2	0
2001–02	55	3	1	<1	<1	<1	0
2002–03	62	2	<1	0	<1	2	0
2003–04	32	2	<1	<1	<1	2	0

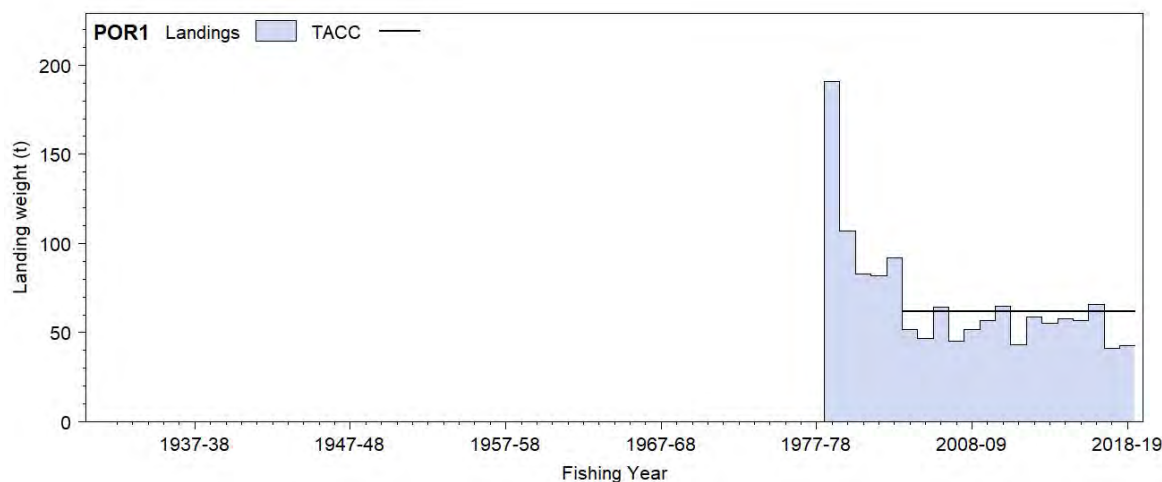


Figure 1: Reported commercial landings and TACC for POR 1 (Auckland East).

Table 4: Reported domestic landings (t) and TACC (t) by pōrae Fishstock, fishing years 2004–05 to 2018–19.

Fishstock FMA	POR 1		POR 2		POR 3		POR 10		Total	
	Landings	TACC	Landings	TACC	Landings	TACC	Landings	TACC	Landings	TACC
2004–05	52	62	5	6	< 1	2	0	1	57	71
2005–06	47	62	2	6	< 1	2	0	1	49	71
2006–07	64	62	9	6	0	2	0	1	73	71
2007–08	45	62	7	6	< 1	2	0	1	53	71
2008–09	52	62	5	6	0	2	0	1	57	71
2009–10	57	62	11	6	< 1	2	0	1	68	71
2010–11	65	62	7	6	< 1	2	0	1	72	71
2011–12	43	62	7	6	< 1	2	0	1	51	71
2012–13	58	62	9	18	0	2	0	1	67	83
2013–14	55	62	10	18	< 1	2	0	1	66	83
2014–15	58	62	14	18	< 1	2	0	1	72	83
2015–16	57	62	9	18	< 1	2	0	1	66	83
2016–17	66	62	24	18	< 1	2	0	1	90	83
2017–18	41	62	13	18	< 1	2	0	1	55	83
2018–19	43	62	12	18	< 1	2	0	1	55	83

1.2 Recreational fisheries

A National Panel Survey of recreational fishers was conducted for the first time throughout the 2011–12 fishing year. The panel survey used face-to-face interviews of a random sample of 30 390 New Zealand households to recruit a panel of fishers and non-fishers for a full year (Wynne-Jones et al 2014). The panel members were contacted regularly about their fishing activities and harvest information collected in standardised phone interviews. The national panel survey was repeated during the 2017–18 fishing year using very similar methods to produce directly comparable results (Wynne-Jones et al 2019). Recreational catch estimates from the two national panel surveys are given in Table 5. Note that national panel survey estimates do not include recreational harvest taken under s111 general approvals.

Table 5: Recreational harvest estimates for pōrae stocks (Wynne-Jones et al 2014, 2019). Mean fish weights were obtained from boat ramp surveys (Hartill & Davey 2015, Davey et al 2019).

Stock	Year	Method	Number of fish	Total weight (t)	CV
POR 1	2011/12	Panel survey	12 371	15.4	0.25
	2017/18	Panel survey	5 397	6.7	0.36
POR 2	2011/12	Panel survey	695	0.9	0.62
	2017/18	Panel survey	1 604	2.0	0.53
POR 3	2011/12	Panel survey	1 938	2.4	0.90
	2017/18	Panel survey	0	0	-

1.3 Customary non-commercial fisheries

There is no quantitative information on customary non-commercial harvest levels of pōrae. Customary non-commercial fishers are likely to catch small quantities of pōrae when targeting other species such as snapper, tarakihi and trevally.

2. BIOLOGY

Pōrae (*Nemadactylus douglasii*) is a common inshore species of northern New Zealand (Kermadec Islands, west Auckland and Northland, east Northland, Hauraki Gulf, and the Bay of Plenty). It is also found at some localities as far south as Kapiti Island, Cook Strait, and Kaikoura over the summer months, but has not been recorded around the Chatham Islands. Pōrae also occurs in southeast Australia (New South Wales to Tasmania), where it is known as the grey or rubberlip morwong.

Pōrae are generally found on reef/sand interfaces in 10–60 m depths, but have been recorded at 100 m. This diurnal species tends to aggregate to form small to large groups over sandy areas. Adults are thought to occupy distinctive home ranges, with individuals residing in the same area for many years. A study along the east coast of Northland recorded an average of 200 pōrae for each kilometre of rocky coastline.

PŌRAE (POR)

Very little is known about the biology of this species. Pōrae spawn in late summer and autumn, and have an extended planktonic post-larval stage. Juveniles settle to the seafloor when 8–10 cm long. Although they attain a maximum length of at least 70 cm, the average size is 40–60 cm. They live to at least 30 years and growth is believed to slow substantially at maturity (Ayling & Cox 1984, Francis 2001).

3. STOCKS AND AREAS

There is no biological information to suggest separate stocks around New Zealand. However, evidence of residential behaviour and the fact that they are long-lived, suggests that localised depletion is likely to occur.

4. STOCK ASSESSMENT

There is no fishery independent stock assessment information to determine the stock status of pōrae. Biomass estimates have not been determined for pōrae.

5. STATUS OF THE STOCK

Estimates of current and reference biomass are not available. It is not known if recent catch levels or TACs are sustainable. The status of POR 1, 2 and 3 relative to B_{MSY} is unknown.

TACCs and reported landings for the 2017–18 fishing year are summarised in Table 6.

Table 6: Summary of TACCs (t) and reported landings (t) of pōrae for the 2018–19 fishing year.

Fishstock		FMA	2018–19 Actual TACC	2018–19 Reported landings
POR 1	Auckland (East)	1	62	43
POR 2	Central (East)	2	18	12
POR 3	South east, Southland, sub-Antarctic, Challenger	3,4,5,6,7, 8 &9	2	<1
POR 10	Kermadec	10	1	0
Total			83	55

6. FOR FURTHER INFORMATION

- Ayling, T; Cox, G J (1984) *Collins guide to the sea fishes of New Zealand*. Collins, Auckland. 343 p.
- Davey, N; Hartill, B; Carter, M (2019) Mean weight estimates for recreational fisheries in 2017–18. *New Zealand Fisheries Assessment Report 2019/25*. 32 p.
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- Stewart, P (1993) Morwong, *Nemadactylus* species. In Kailola *et al.* (Eds), *Australian fisheries resources*. pp. 324–326. Bureau of Resource Sciences, Canberra. 422 p.
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