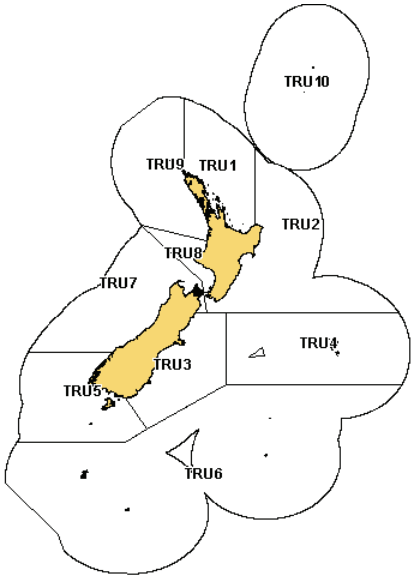
TRUMPETER (TRU)

(*Latris lineata*)
Kohikohi



1. FISHERY SUMMARY

1.1 Commercial fisheries

Total reported landings of trumpeter were generally less than 10 t until the early 1980s, when they increased steadily to reach 162 t in 1995–96 (Tables 1 & 2). Since 1995–96 landings continued to decrease, reaching 25 t in 2000–01 and remaining at that level in 2001–02. Over recent years landings have increased, with over 100t reported in the 2007–08 fishing year. Historic under-reporting is probable (Paul 1999).

Most landings of trumpeter have come from the east coast between the eastern Bay of Plenty and Southland. There have been changes over time in contributions from different parts of the east coast, but the reason for this is not known. Until the early 1950s most landings were made in QMA 3. From the mid 1950s until the mid 1980s most landings were in QMA 2. The rapid increase in landings since the mid 1980s has come predominantly from QMAs 3 and 4, reportedly from an increase in line fishing on the outer shelf and in the Mernoo Bank region. Landings in QMA 3 and 4 have declined in the last few years, falling well below TACC. Figure 1 shows the historical landings and TACC values for the main TRU stocks.

Most trumpeter is taken as bycatch in line-fisheries; a small amount is trawled, and from the 1970s it has also been taken by setnet. Only a small proportion of trumpeter is targeted. Catches are irregular with no seasonal trend and are likely to be driven by fishing activities for other species. No information on changes in fishing effort is available.

Table 1: Reported total landings (t) of trumpeter from 1931 to 1982. Values for 1931 through 1944 are April-March years, listed against the April year. Fisheries Annual Report (1931 to 1974) or FSU data (Paul 1999).

Year	Landings	Year	Landings	Year	Landings	Year	Landings	Year	Landings
1936	20	1946	16	1956	5	1965	4	1974	5
1937	41	1947	13	1957	5	1966	5	1975	4
1938	30	1948	19	1958	3	1967	7	1976	3
1939	37	1949	6	1959	3	1968	5	1977	3
1940	17	1950	6	1960	3	1969	5	1978	6
1941	11	1951	11	1961	3	1970	7	1979	17
1942	5	1952	11	1962	4	1971	10	1980	10
1943	5	1953	5	1963	3	1972	4	1981	12
1944	11	1954	5	1964	3	1973	5	1982	37
1945	11	1955	6						

Table 2: Reported landings (t) of trumpeter by QMA and fishing year, 1983–84 to 2007–08*.

Fishstock	TRU 1		TRU 2		TRU 3		TRU 4		TRU 5	
FMA	1		2		3		4		5	
	Landings	TAC	Landings	TAC	Landings	TAC	Landings	TAC	Landings	TAC
1982–83	0	-	5	-	3	-	0	-	0	-
1983–84	1	-	17	-	2	-	0	-	1	-
1984–85	0	-	15	-	3	-	0	-	4	-
1985–86	0	-	4	-	6	-	0	-	1	-
1986–87	0	-	4	-	5	-	0	-	5	-
1987–88	0	-	4	-	4	-	0	-	0	-
1988–89	0	-	7	-	1	-	0	-	0	-
1989–90	0	-	8	-	5	-	0	-	0	-
1990–91	3	-	16	-	13	-	5	-	0	-
1991–92	1	-	16	-	25	-	19	-	1	-
1992–93	3	-	21	-	21	-	4	-	1	-
1993–94	3	-	17	-	26	-	24	-	2	-
1994–95	2	-	20	-	27	-	65	-	5	-
1995–96	2	-	19	-	29	-	69	-	37	-
1996–97	2	-	16	-	35	-	33	-	42	-
1997–98	1	-	11	-	28	-	23	-	6	-
1998–99	< 1	1	11	9	15	28	16	42	4	18
1999–00	< 1	1	6	9	11	28	8	42	5	18
2000–01	< 1	1	6	9	7	28	6	42	3	18
2001–02	< 1	3	6	20	5	33	9	59	<1	22
2002–03	< 1	3	7	20	7	33	32	59	1	22
2003–04	1	3	6	20	7	33	24	59	4	22
2004–05	< 1	3	5	20	8	33	70	59	3	22
2005–06	< 1	3	7	20	8	33	65	59	3	22
2006–07	0	3	8	20	16	33	66	59	3	22
2007–08	1	3	9	20	22	33	63	59	4	22

Fishstock	TRU 6		TRU 7		TRU 8		TRU 9			
FMA	6		7		8		9		Total	
	Landings	TAC	Landings	TAC	Landings	TAC	Landings	TAC	Landings	TAC
1982–83	0	-	0	-	0	-	0	-	8	-
1983–84	0	-	0	-	0	-	0	-	21	-
1984–85	0	-	0	-	0	-	0	-	22	-
1985–86	0	-	0	-	0	-	0	-	11	-
1986–87	0	-	2	-	0	-	0	-	16	-
1987–88	0	-	0	-	0	-	0	-	8	-
1988–89	0	-	1	-	0	-	0	-	9	-
1989–90	0	-	0	-	1	-	0	-	14	-
1990–91	0	-	7	-	0	-	0	-	44	-
1991–92	0	-	4	-	0	-	0	-	69	-
1992–93	0	-	4	-	2	-	0	-	56	-
1993–94	0	-	6	-	0	-	0	-	78	-
1994–95	0	-	4	-	0	-	0	-	123	-
1995–96	0	-	6	-	0	-	0	-	162	-
1996–97	2	-	3	-	< 1	-	< 1	-	133	-
1997–98	< 1	-	3	-	< 1	-	0	-	72	-
1998–99	0	0	3	2	< 1	0	0	0	50	100
1999–00	0	0	2	2	< 1	0	0	0	33	100
2000–01	0	0	3	2	< 1	0	< 1	0	25	100
2001–02	0	0	5	6	< 1	1	0	0	25	144
2002–03	0	0	3	6	< 1	1	< 1	0	51	144
2003–04	0	0	2	6	< 1	1	< 1	0	44	144
2004–05	0	0	4	6	< 1	1	0	0	90	144
2005–06	0	0	4	6	< 1	1	0	0	88	144
2006–07	0	0	4	6	0	1	0	0	99	144
2007–08	< 1	0	2	6	< 1	1	< 1	0	101	144

*The data in this table have been updated from those published in previous Plenary Reports by using the data through 1996–97 in table 41 on p. 288 of the "Review of Sustainability Measures and Other Management Controls for the 1998–99 Fishing Year – Final Advice Paper" dated 6 August 1998. There are no landings reported from TRU 10, which has a TAC of 0.

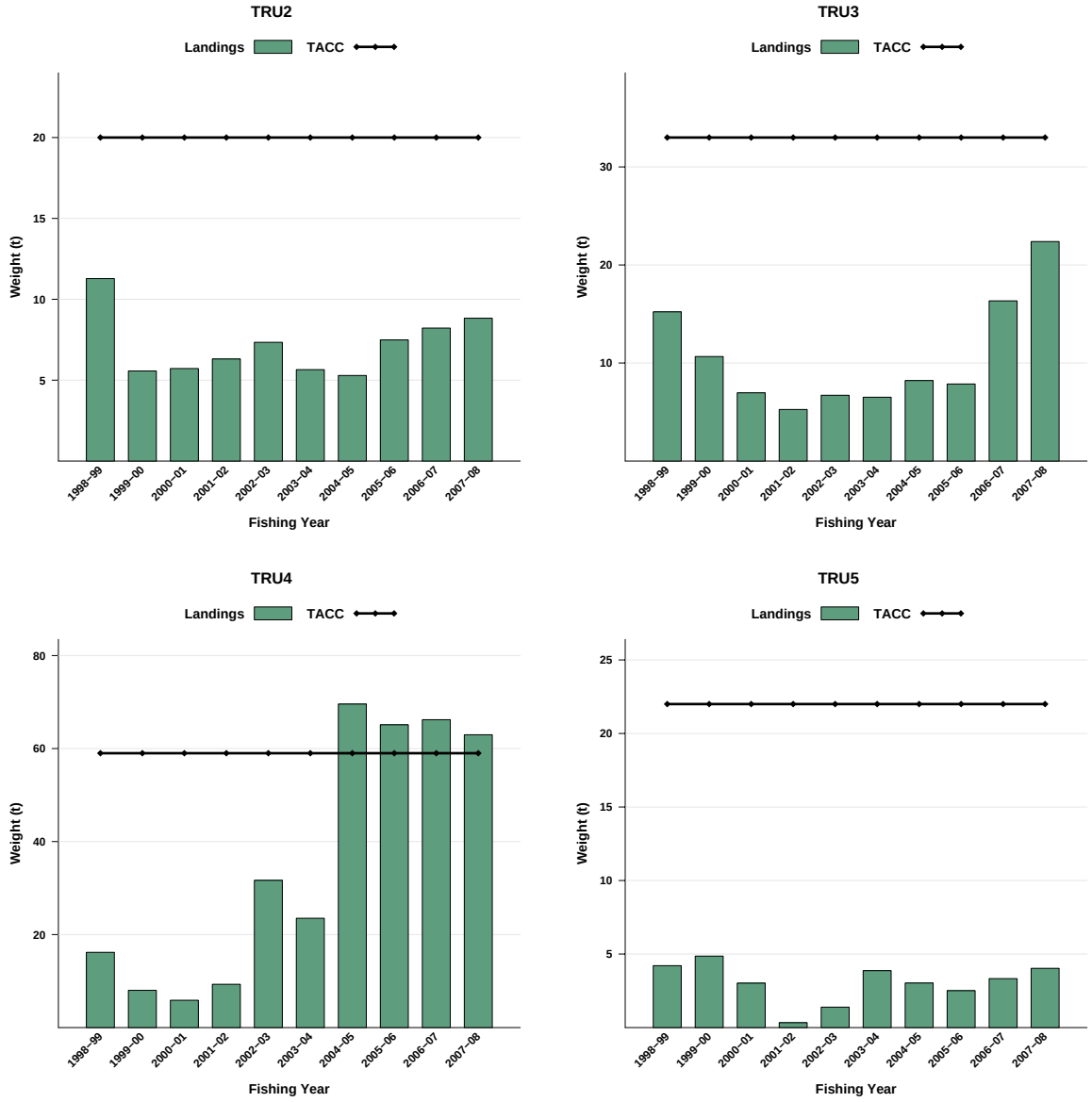


Figure 1: Historical landings and TACC for the four main TRU stocks. From top left to bottom right: TRU2 (Central East), TRU3 (South East Coast), TRU4 (South East Chatham Rise), and TRU5 (Southland). Note that these figures do not show data prior to entry into the QMS.

1.2 Recreational fisheries

Results from two separate recreational fishing surveys undertaken in the 1990s are shown in Table 3. Most of the recreational catch was taken in QMAs 3, 5 and 7, with a marked increase in catch reported in QMA 5 in 1996 compared to the early 1990s. Provisional estimates of the tonnage of the recreational catch can be derived by multiplying the total number of fish by a mean weight of 1 kg. Note, however, this mean weight was derived from a sample of mainly small fish and is possibly unrepresentative, so an estimate of the recreational catch by weight may have been underestimated. The Recreational Technical Working Group concluded that the harvest estimates from the diary surveys should be used only with the following qualifications: a) they may be very inaccurate; b) the 1996 and earlier surveys contain a methodological error; and, c) the 2000 and 2001 estimates are implausibly high for many important fisheries.

Table 3: Estimated number of trumpeter caught by recreational fishers by QMA and survey. Surveys were carried out in different years in Ministry of Fisheries regions: South in 1991–92, Central in 1992–93, North in 1993–94 and National in 1996 (Bradford 1998).

		Total	
FMA	Survey	Number	CV (%)
1991–92			
FMA 3	South	6 000	29
FMA 5	South	6 000	33
FMA 7	South	8 000	–
1992–93			
FMA 2	Central	1 000	–
FMA 3	Central	3 000	–
FMA 5	Central	1 000	–
FMA 7	Central	0	–
FMA 8	Central	0	–
1993–94			
FMA 1+9	North	0	–
FMA 2	North	1 000	–
FMA 8	North	0	–
1996			
FMA 1	National	< 500	–
FMA 2	National	1 000	–
FMA 3	National	13 000	19
FMA 5	National	21 000	19
FMA 7	National	3 000	–

1.3 Customary non-commercial fisheries

The customary non-commercial take has not been quantified.

1.4 Illegal catch

There is no quantitative information on illegal fishing activity or catch.

1.5 Other sources of mortality

No quantitative estimates are available regarding the impact of other sources of mortality on trumpeter stocks. Trumpeter principally occur on deep coastal reefs, where they are taken in net and line fisheries targeted at other species.

2. BIOLOGY

Trumpeter occur at several localities around the cool temperate Southern Hemisphere, including south Indian Ocean Islands, southern Australia, New Zealand and South America. In New Zealand trumpeter occur mainly from the Bay of Plenty southwards, reaching the Auckland Islands, but are seldom common. As in Australia, they are restricted to offshore reefs and rough ground to about 300 m, with juveniles (30–40 cm) in shallower coastal waters. Adults reach about 1 m in length and 25 kg in weight, but their growth rate is unknown. There is little information on sex ratios and reproduction. Trumpeter feed on a wide range of molluscs, crustaceans, and fish.

There are no estimates of biological parameters relevant to stock assessment.

3. STOCKS AND AREAS

There are no data relevant to stock boundaries. Although trumpeter are potentially wide-ranging, their restriction to regions of rough seafloor suggests that there may be localised populations in suitable areas.

4. STOCK ASSESSMENT

4.1 Estimates of fishery parameters and abundance

No estimates are available.

4.2 Biomass estimates

No estimates are available.

4.3 Estimation of Maximum Constant Yield (MCY)

No estimate of MCY is available.

The level of risk to the stock by harvesting trumpeter at recent catch levels cannot be determined.

4.4 Estimation of Current Annual Yield (CAY)

No estimates of current biomass, fishing mortality, or other information are available which would permit the estimation of CAY.

4.5 Other Factors

There is anecdotal information from Australia and New Zealand that localised populations of trumpeter can be quickly depleted.

5. STATUS OF THE STOCKS

No estimates of current and reference biomass are available.

It is not known if recent catch levels are sustainable.

TACCs and reported landings of trumpeter, for the 2007–08 fishing year, are summarised in Table 4.

Table 4: Summary of TACCs (t), and reported landings (t) of trumpeter for the most recent fishing year.

Fishstock		FMA	2007–08 Actual TACC	2007–08 Reported landings
TRU 1	Auckland (East)	1	3	1
TRU 2	Central (East)	2	20	9
TRU 3	South-east (Coast)	3	33	22
TRU 4	South-east (Chatham)	4	59	63
TRU 5	Southland	5	22	4
TRU 6	Sub-Antarctic	6	0	< 1
TRU 7	Challenger	7	6	2
TRU 8	Central (West)	8	1	< 1
TRU 9	Auckland (West)	9	0	< 1
TRU 10	Kermadec	10	0	0
Total			144	101

6. FOR FURTHER INFORMATION

Bradford E. 1998. Harvest estimates from the 1996 national recreational fishing surveys. New Zealand Fisheries Assessment Research Document 1998/16. 27p.

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