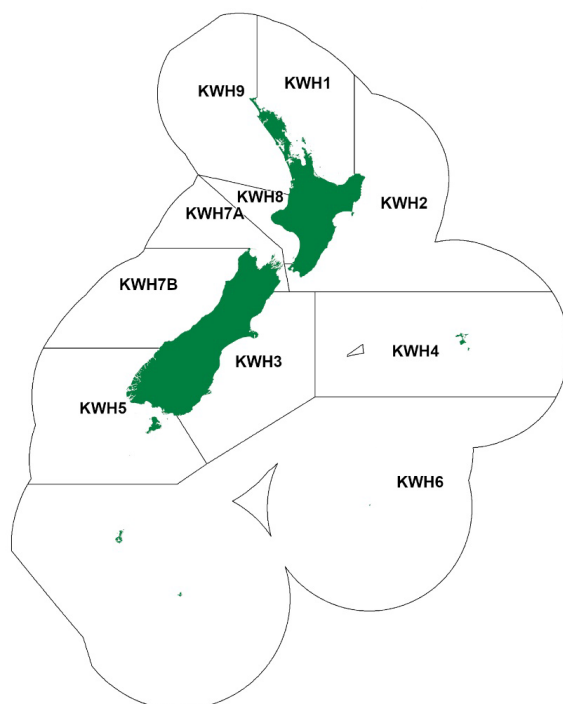


KNOBBED WHELK (KWH)*(Austrofusus glans)***1. FISHERY SUMMARY**

Knobbed whelks (*Austrofusus glans*) were introduced into the Quota Management System on 1 October 2006. The fishing year is from 1 October to 30 September and commercial catches are measured in greenweight. TACs have been allocated in 10 QMAs (Table 1). Commercial fishers may return knobbed whelk to the waters from which they were taken if the return takes place as soon as practical and they are likely to survive, as provided for in the Fisheries (Landing and Discard Exceptions) Notice.

Table 1: Recreational and Customary non-commercial allowances, other mortality, TACCs, and TACs (t) for knobbed whelk (*Austrofusus glans*) by Fishstock.

Fishstock	Description	Recreational allowance	Customary non-commercial allowance	Other sources of mortality	TACC	TAC
KWH1	Auckland	1	1	0	1	3
KWH 2	Central (East)	1	1	0	1	3
KWH 3	South East (Coast)	1	1	0	3	5
KWH 4	South East (Chatham Rise)	1	1	0	6	8
KWH 5	Southland	1	1	0	1	3
KWH 6	Sub Antarctic	1	1	0	2	4
KWH 7A	Nelson / Marlborough	1	1	1	50	53
KWH 7B	West coast	1	1	0	1	3
KWH 8	Central (West)	1	1	0	1	3
KWH 9	Auckland (West)	1	1	0	1	3

1.1 Commercial fisheries

Target fishing for knobbed whelks is by baited pots. Because economic returns for whelk fishing are poor, most of the historical catch is bycatch from oyster and scallop dredging and from bottom trawling. Due to the low value of this species it is likely that there is a high level of unreported discarded catch.

Landings shown in Table 2 for the period 1990–91 to 2005–06 were recorded under the generic code for whelks (WHE); however, the Ministry considers that in FMA 1, 2, 7, and 8 most reported landings were of the knobbed whelk *Austrofusus glans*. In FMA 3, 4, 5, and 6, the Ministry considers that about a third of reported landings were of the knobbed whelk, whereas the remainder were the large ostrich foot shell *Struthiolaria papulosa*. Landings have been recorded for KWH since 2006–07 (Table 3).

Table 2: Reported landings (t) of whelks (WHE) by FMA from 1990–91 to 2005–06 from landing returns. See section 1.1 for an explanation of the proportion of WHE that are considered to be knobbed whelks.

Fishing year	WHE 1	WHE 2	WHE 3	WHE 4	WHE 5	WHE 6	WHE 7	WHE 8	WHE 9	Total
1990–91	0	0	0	0	0	0	44.976	0	0	44.976
1991–92	0	0	0	0	0	0	26.935	0	0	26.935
1992–93	0.021	0	0.018	0	0	0	1.762	0	0	1.801
1993–94	0	0.135	0	0	0	0	49.278	0	0	49.413
1994–95	0	0.707	0.545	0	0	0	21.458	0.593	0	23.303
1995–96	0	0.089	0.178	0	0	0	27.596	0	0	27.863
1996–97	0.002	0.174	0.144	0	0.003	0	8.959	0	0	9.282
1997–98	0	0	0.102	0.150	0	0	0.884	0	0	1.136
1998–99	0	0	0.223	2.205	2.470	0.150	0.570	0	0	5.618
1999–00	0	0	2.286	7.953	3.250	0.790	0.080	0	0	14.359
2000–01	0	0	10.467	17.497	3.538	4.765	0.141	0	0	36.408
2001–02	0	0	1.474	3.995	0.515	1.755	0.002	0	0	7.741
2002–03	0	0	0.212	0.020	0.004	0.780	0.077	0	0	1.093
2003–04	0.035	0	0.491	0	0	0.335	4.217	0	0	5.078
2004–05	0.008	0	0.021	0	0	0.335	0.234	0	0.047	0.639
2005–06	0	0	0.163	0	0	0	0.032	0	0	0.195

Reported landings of knobbed whelk in FMA 1, FMA 2, and FMA 8 have been relatively low and variable since the 1990s and have been (largely or all) accounted for as bycatch. In FMA 7 in the early 1990s higher catches were reported as part of experimental fisheries in Golden Bay and Tasman Bay to provide stock assessment information in these areas (Tables 2 and 3). In the period 2011–12 to 2019–20 total reported landings averaged just 0.39 t, although landings have increased since 2020–21 with increasing landings in KWH 3 and 4. Landings are split into two tables (before and after the 2006 fishing year) because reporting requirements changed when knobbed whelks entered the QMS.

Table 3: Landings of Knobbed whelk (KWH) by QMA from 2006–07 to present from monthly harvest returns (MHR).

QMA	KWH 1		KWH 2		KWH 3		KWH 4		KWH 5	
	Landing	TACC	Landing	TACC	Landing	TACC	Landing	TACC	Landing	TACC
2006–07	0.080	1	0	1	0.010	3	0	6	0	1
2007–08	0.077	1	0	1	0.006	3	0	6	0	1
2008–09	0.103	1	0	1	0.121	3	0	6	0	1
2009–10	0.088	1	0	1	0.053	3	0	6	0	1
2010–11	0.473	1	0.036	1	0	3	0	6	0	1
2011–12	0.721	1	0.070	1	0.088	3	0	6	0	1
2012–13	0.551	1	0	1	0.003	3	0	6	0.001	1
2013–14	0.116	1	0	1	0.159	3	0	6	0.002	1
2014–15	0.039	1	0	1	0.020	3	0	6	0	1
2015–16	0.011	1	0	1	0.031	3	0	6	0	1
2016–17	0	1	0	1	0.210	3	0	6	0	1
2017–18	0	1	0	1	0.140	3	0.020	6	0	1
2018–19	0	1	0	1	0.375	3	0.001	6	0.001	1
2019–20	0	1	0	1	0.871	3	0	6	0	1
2020–21	0	1	0	1	0.255	3	1.443	6	0.082	1
2021–22	0	1	0	1	1.775	3	1.05	6	0.006	1
2022–23	0	1	0	1	3.415	3	1.99	6	0.001	1
2023–24	0	1	0	1	1.678	3	1.98	6	0.001	1

QMA	KWH 6		KWH 7A		KWH 7B		KWH 8		Total	
	Landing	TACC	Landing	TACC	Landing	TACC	Landing	TACC	Landing	TACC
2006–07	0	2	0.046	50	0	1	0	1	0.136	67
2007–08	0	2	9.174	50	0.104	1	0	1	9.361	67
2008–09	0.001	2	0.226	50	0.008	1	0	1	0.459	67
2009–10	0	2	18.500	50	0	1	0	1	18.614	67
2010–11	0	2	16.033	50	0	1	0	1	16.542	67
2011–12	0	2	0	50	0.008	1	0	1	0.887	67
2012–13	0	2	0	50	0.014	1	0	1	0.569	67
2013–14	0	2	0	50	0	1	0	1	0.277	67
2014–15	0	2	0	50	0	1	0.108	1	0.167	67
2015–16	0	2	0	50	0	1	0	1	0.032	67
2016–17	0	2	0	50	0	1	0	1	0.210	67
2017–18	0	2	0	50	0	1	0.010	1	0.170	67
2018–19	0	2	0	50	0	1	0	1	0.377	67
2019–20	0	2	0	50	0	1	0	1	0.871	67
2020–21	0	2	0.002	50	0	1	0	1	1.782	67
2021–22	0	2	0	50	0	1	0	1	2.831	67
2022–23	0	2	0	50	0	1	0	1	5.402	67
2023–24	0	2	0	50	0.078	1	0	1	3.739	67

1.2 Recreational fisheries

There are no estimates of recreational catch.

1.3 Customary non-commercial fisheries

There are no estimates of current customary catch.

1.4 Illegal catch

There is no known illegal catch of this whelk.

1.5 Other sources of mortality

There is no information on other sources of mortality for this whelk.

2. BIOLOGY

The knobbed whelk, *A. glans*, is a widely distributed gastropod found from low tide to about 600 m (Powell 1979). This carnivorous whelk grows up to 5 cm long and occurs throughout New Zealand where it is found on sandy/silt/mud substrate. There is very little published about the biology of this species; most references are identification notes or records of occurrence. It is a scavenger that buries in the substrate when not feeding. A wide variety of invertebrates including polychaetes, gastropods, and bivalves occur within the wide depth range of the knobbed whelk, but no interdependent relationships are documented with *A. glans*.

The Intrinsic Productivity Level is categorised as Low for this species. A comparison with similar species that are better known from other parts of the world may provide some insight into the knobbed whelk, although similarities are conjectural. The Knobbed Whelk *Busycon carica* in the South Carolina Subtidal Waters appears to have a lifespan of at least 30 years.

3. STOCKS AND AREAS

For management purposes stock boundaries are based on FMAs. There is no biological information on stock structure, recruitment patterns, or other biological characteristics which might indicate alternative stock boundaries.

4. STOCK ASSESSMENT

4.1 Estimates of fishery parameters and abundance

There are no estimates of fishery parameters or abundance for any knobbed whelk fishstock.

4.2 Biomass estimates

There are no biomass estimates for any knobbed whelk fishstock.

4.3 Yield estimates and projections

There are no estimates of *MCY* for any knobbed whelk fishstock.

There are no estimates of *CAY* for any knobbed whelk fishstock.

5. STATUS OF THE STOCKS

For all KWH fishstocks there is insufficient information to estimate current stock status.

6. FOR FURTHER INFORMATION

Morton, J; Miller, M (1968) *The New Zealand sea shore*. Collins, Auckland. 638 p.

Powell, A W B (1979) *New Zealand Mollusca*. Marine, land and freshwater shells. Collins, Auckland. 500 p.