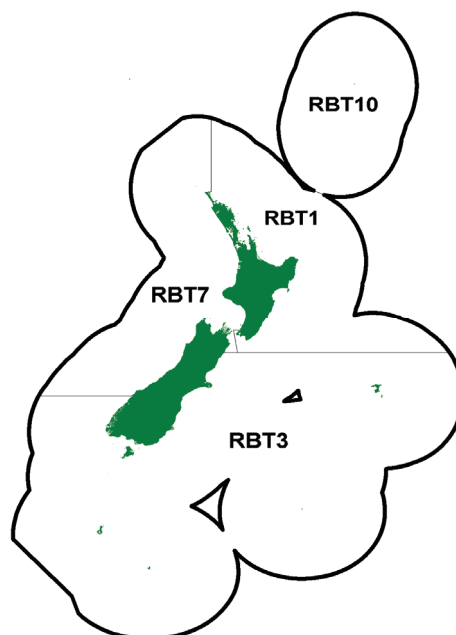


## REDBAIT (RBT)

*(Emmelichthys nitidus)*

## 1. FISHERY SUMMARY

## 1.1 Commercial fisheries

Redbait (*Emmelichthys nitidus*) was introduced to the Quota Management System on 1 October 2009, with a combined TAC of 5316 t and TACC of 5050 t. There are no allowances for customary non-commercial or recreational fisheries, and 266 t was allowed for other sources of mortality. RBT is mainly taken as bycatch of the jack mackerel target trawl fishery, with some taken in the squid and barracouta fisheries. In the last 7 years, 3.1% of the catch of redbait has been taken in a target fishery, although this is increasing and 11% of the 2007-08 catch was targeted. Reported total catches have ranged from 2185 to 4308 tonnes since 2001-02. TACs, allowances and TACCs as of 1 October 2009 are reported in Table 1. Landings from 2001-02 to 2008-09 are reported in Table 2. Landings are reported by newly defined QMAs.

Table 1: TACs, allowances and TACCs of redbait

Fishstock	Other mortality	Customary non-commercial and recreational	TACC	TAC
RBT 1	1	0	19	20
RBT 3	115	0	2 190	2 305
RBT 7	150	0	2 841	2 991
RBT 10	0	0	0	0

Table 2: Reported landings (t) of redbait by Fishstock from 2001-02 to 2008-09 from MHR data. QMAs are shown as defined for 2009-10.

FMA	RBT 1		RBT 3		RBT 7		RBT 10		Total	
	Landings	TACC	Landings	TACC	Landings	TACC	Landings	TACC	Landings	TACC
2001-02	1	-	1 638	-	1 669	-	0	-	3 308	-
2002-03	1	-	1 219	-	2 113	-	0	-	3 333	-
2003-04	1	-	1 535	-	2 771	-	0	-	4 307	-
2004-05	1	-	676	-	1 507	-	0	-	2 184	-
2005-06	3	-	2 016	-	1 936	-	0	-	3 955	-
2006-07	3	-	1 098	-	1 506	-	0	-	2 607	-
2007-08	5	-	560	-	2 376	-	0	-	2 941	-
2008-09	10	-	1 808	-	1 649	-	0	-	3 467	-

## 1.2 Recreational fisheries

There is no known non-commercial fishery for redbait.

### 1.3 Customary non-commercial fisheries

There is no known customary non-commercial fishery for redbait.

### 1.4 Illegal catch

No quantitative information is available on the level of illegal catch of redbait.

### 1.5 Other sources of mortality

There is no quantitative information on other sources of mortality.

## 2. BIOLOGY

*Emmelichthys nitidus* is a schooling, bathypelagic species that is closely related to rubyfish. It is widely distributed around New Zealand in depths from 85 to 500m. Juveniles are found at the surface and adults near the bottom in deeper waters, including seamounts.

There is not much information about growth and development of redbait although they reach a maximum length of 50 cm and a maximum age of 10 years. Spawning is thought to last 2-3 months during spring, with 50% mature at 24 cm FL and 2-3 years. Table 3 shows estimated biological parameters for redbait.

**Table 3: Estimates of biological parameters for redbait**

1. von Bertalanffy growth parameters

Combined sexes		
$L_{\infty}$	$k$	$t_0$
28.7	0.56	-0.36

Taylor (2009)

## 3. STOCKS AND AREAS

There is no information about stock structure, recruitment patterns, or other biological characteristics that would indicate stock boundaries. As the catch of redbait has been mainly (66%) from bycatch in the jack mackerel trawl fisheries, management boundaries have been set the same as those used for jack mackerel.

## 4. STOCK ASSESSMENT

### 4.1 Estimates of fishery parameters and abundance

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

### 4.2 Biomass estimates

There are no biomass estimates for any redbait fishstock.

### 4.3 Estimation of Maximum Constant Yield (MCY)

There are no estimates of MCY for any redbait fishstock.

### 4.4 Estimation of Current Annual Yield (CAY)

There are no estimates of CAY for any redbait fishstock.

## 6. STATUS OF THE STOCKS

There are no estimates of reference or current biomass for any redbait fishstock. It is not known whether redbait stocks are at, above, or below a level that can produce MSY.

## 7. FOR FURTHER INFORMATION

Taylor, P.R. 2009. A summary of information on redbait *Emmelichthys nitidus*. Draft Final Research Report for Ministry of Fisheries Project SAP2008-18.