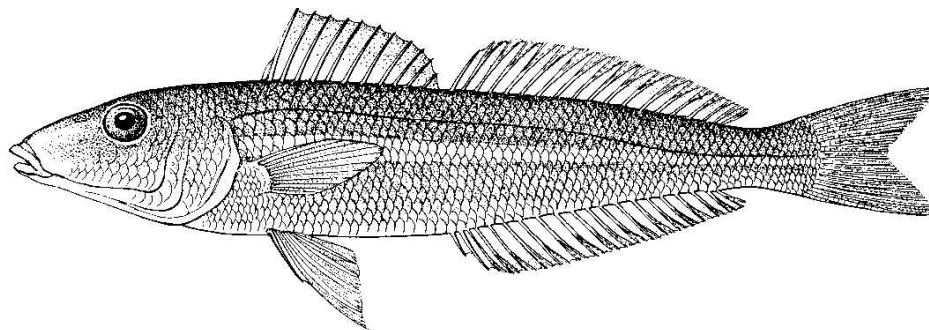


# Fisheries Long Term Monitoring Program Sampling Protocol

## Stout Whiting: (1991 onwards)

Section 1 (Version 2)

Updated - July 2007





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**Cover diagram:**

*Sillago robusta* Figure 126 in: McKay, R.J. 1992 FAO species catalogue. Vol.14. Sillaginid fishes of the world (Family Sillaginidae). An Annotated and Illustrated Catalogue of the Sillago, Smelt or Indo-Pacific Whiting Species Known to Date. *FAO Fisheries Synopses No. 125, Vol. 14. 87pp.*

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# Contents

## Section 1

<b>Acronyms</b>	<b>iv</b>
<b>Rationale</b>	<b>1</b>
<b>Objectives</b>	<b>1</b>
<b>Sites</b>	<b>2</b>
<b>Times</b>	<b>2</b>
<b>Monitoring procedures</b>	<b>3</b>
Sample collection	3
Laboratory procedures	3
<b>Permits and approvals</b>	<b>3</b>
Permits and permissions	3
Notifications	4
<b>Data access</b>	<b>4</b>
<b>References</b>	<b>4</b>

## Section 2 - Operational protocols

Section 2 of this sampling protocol can be obtained by contacting the Fisheries Data Coordinator:

Telephone +61 7 3405 6822, Fax +61 7 3224 2805 or Email  
<FishDataCoordinator@dpi.qld.gov.au>

## Acronyms

CFISH	Commercial Fisheries Information System
DPI&F	Department of Primary Industries and Fisheries
LTMP	Long Term Monitoring Program
TACC	Total Allowable Commercial Catch
T4	Fishery Symbol—Trawl Fishery (Fin Fish)

## Rationale

Stout whiting (*Sillago robusta*) is endemic to Australia. Western and eastern populations exist for this species. This species extends from Fremantle (Western Australia) northward to Shark Bay (Western Australia) and from Bustard Head (Southern Queensland) to Coffs Harbour (New South Wales). Stout whiting is principally an oceanic species, attaining a maximum length of 280 mm (Burchmore *et al.* 1988). This species has a protracted spawning period from October to February (O'Neill *et al.* 2002).

The stout whiting fishery began in 1981 off the south coast of Queensland. Rapid expansions occurred in the fishery between 1989 and 1990. In 1991 restructuring occurred, changing it to a limited entry fishery. A market collapse in 1991 also led to a reduction in fishing effort. The licensing structure was refined further under The *Fisheries Regulation (1995)* including a specific stout whiting license (T4) and definition of a managed fishery area. This managed area is located between Caloundra and Sandy Cape, Fraser Island in waters between 20 and 50 fathoms (37–91 m). Five boats are licensed to operate in the stout whiting fishery, which is open from 1 April to 31 December every year (*Fisheries Regulation 1995*). The five operators voluntarily cease fishing during the East Coast Trawl Fishery, southern trawl closure for 6 weeks ending 31 October each year. A voluntary industry-agreed Total Allowable Commercial Catch (TACC) is agreed based on a stock assessment and divided equally among the five licensed vessels (QFMA, 2000).

Stout whiting are sold principally for processing in Thailand, China, Vietnam, Japan or Taiwan for the Japanese Kisu-Hiraki style (butterfly) fillet market for use as finger-food. Some product is re-exported to local Australian markets (O'Neill *et al.* 2002). In 2004, the annual gross value for stout whiting in Queensland was \$3.5 million, with landings of 956 tonnes within the managed area (DPI&F CFISH database, May 2005).

The monitoring regime collects representative samples from all trips by all stout whiting fishery boats every year. This ensures a comprehensive coverage of the entire fishery.

## Objectives

The Department of Primary Industries and Fisheries (DPI&F) Long Term Monitoring Program (LTMP) aims to collect data that are representative of the stout whiting fishery. The data collected from the commercial catch are:

- Length structure
- Weight of individual fish
- Age structure.

These data are used for stock assessments that are carried out to set a TACC.

## Sites

The sampling method is fishery dependant with the fishers providing stout whiting from the commercial T4 trawls (Figure 1).

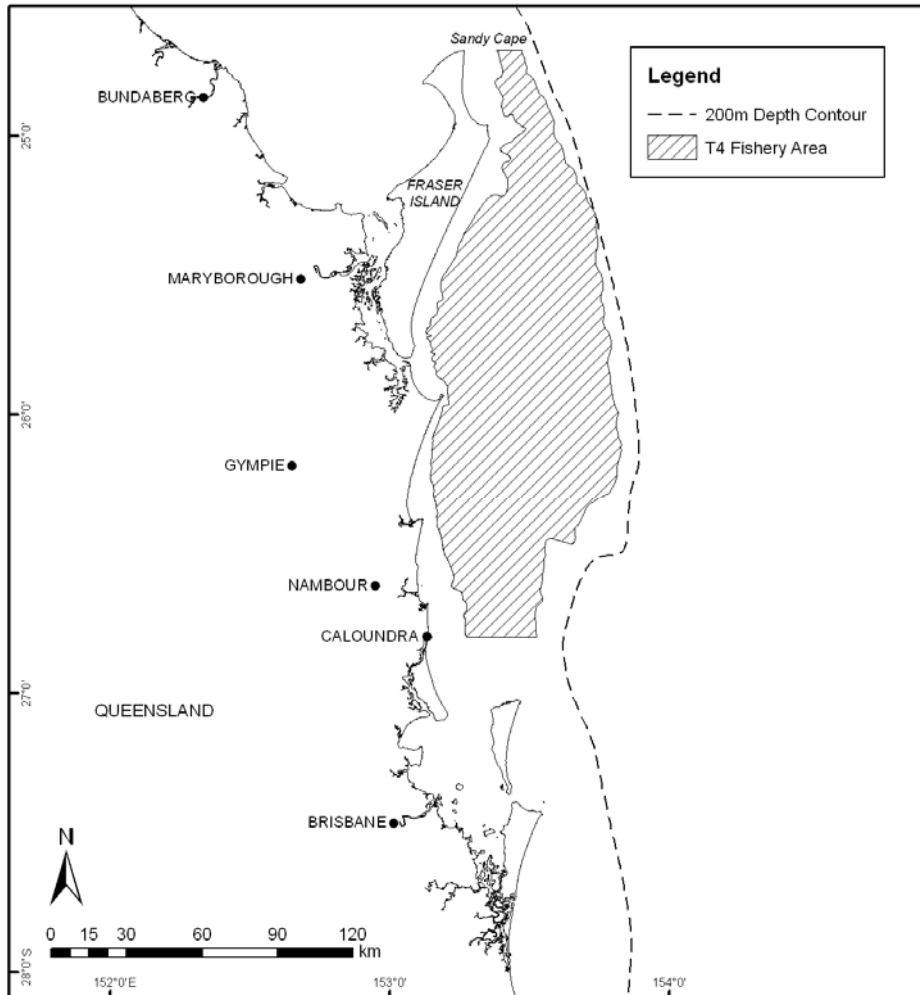


Figure 1. Managed area for stout whiting fishery.

## Times

The fishery is open from 1 April to 31 December each year, excluding the period of the southern trawl closure. All vessels provide two 5 kg boxes of ungraded fish from each trip. One box is from a night-time trawl shot and one box is from a daylight trawl shot.



## Monitoring procedures

### Sample collection

All samples are from ungraded catches to eliminate sampling bias. These samples are collected from processors by LTMP staff. Trip information is provided by the fishers including:

- Vessel name
- Date of catch
- Start and end locations and times of the trawl shot
- Total number of standard-sized cartons in the trawl shot.

### Laboratory procedures

Once in the laboratory all fish are identified to species and measured (fork length) to the nearest 5 mm. A subsample from each box is retained for length, weight and age information. This subsample contains:

- All fish 120 mm or smaller
- All fish 190 mm or larger and
- For fish between 125 mm and 185 mm
  - 1991–2005—first 3 fish in each 5 mm length class
  - 2006 onwards—first fish in each 5 mm length class.

Each of these fish:

- Is measured (fork length to the nearest 5 mm) as per LTMP Data Protocol (DPI&F In Prep. a.)
- Is weighed (wet weight to the nearest 0.01 g) as per LTMP Data Protocol (DPI&F In Prep. a.)
- Has otoliths removed. Otoliths are mounted in resin blocks, then sectioned prior to age estimation. LTMP follows a standardised approach to routine age estimation, which is documented in the LTMP Sampling Protocol: Fish Ageing (DPI&F In Prep. b.).

From 1991 to 2005, sex and gonads weight (to the nearest 0.01 g) were also recorded.

More detailed methods are described in Section 2.

## Permits and approvals

### Permits and permissions

This project does not require permits or animal ethics approval as all samples are taken by commercial fishers as part of normal fishing practice and provided to DPI&F for monitoring and assessment purposes.

## Notifications

No notifications are required as all samples are caught by commercial fishers as part of normal fishing practice.

## Data access

Access to LTMP survey data is subject to a formal application process. The Fisheries Data Coordinator is to be contacted for all applications: Telephone +61 7 3405 6822, Fax +61 7 3224 2805 or Email <FishDataCoordinator@dpi.qld.gov.au>.

All use of DPI&F data is subject to a data agreement between the Department and the party requesting the data. The data agreement covers how data must be acknowledged in publications and other restrictions that may be placed on data use. If the publication is based substantially on LTMP data and on LTMP survey design then co-authorship may be requested or advised. All documents that utilise LTMP data must be sent to the Fisheries Data Coordinator as drafts for perusal before they are published. Copies of final documents utilising LTMP data must be provided to the Fisheries Data Coordinator free of charge for lodgement in the DPI&F library.

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