Ocean Trawl Squid (Teuthida)

**EXPLOITATION STATUS**  
**UNDEFINED**

Status of Gould’s or arrow squid (*Nototodarus gouldi*) has not been assessed in NSW. The main fishery is in Commonwealth waters - although a formal assessment has not been conducted the stock is considered to be ‘not overfished’ due to relatively low recent annual landings of this species which is considered to be an annual stock.

### Scientific Name  
### Common Name  
### Comment

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Comment</th>
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</thead>
<tbody>
<tr>
<td><em>Nototodarus gouldi</em></td>
<td>Gould’s squid</td>
<td>Also known as arrow squid and seine-boat squid. Important component of fish trawl catch off southern and central NSW.</td>
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<tr>
<td><em>Uroteuthis (Photololigo) spp.</em></td>
<td>slender squid</td>
<td>Also known as pencil squid. Important incidental catch of prawn trawling off northern NSW.</td>
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<tr>
<td><em>Uroteuthis (Photololigo) etheridgei</em></td>
<td>broad squid</td>
<td>Minor component of ocean prawn trawl catch.</td>
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<tr>
<td><em>Uroteuthis (Loliolus) noctiluca</em></td>
<td>bottle squid</td>
<td>Only a very minor component of landings from ocean waters near estuaries.</td>
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**Background**

New South Wales ocean trawlers catch several species of squid which, apart from southern calamari, have not been clearly defined in monthly catch returns. Landings mainly comprise Gould’s squid (*Nototodarus gouldi*) and an undescribed species, slender squid (*Uroteuthis* sp.). Broad squid (*U. etheridgei*) is sometimes present in catches from ocean waters and small quantities of the small bottle squid (*U. noctiluca*) may also be landed from school prawn grounds adjacent to estuaries. Gould’s squid has relatively low market acceptance (< $3 per kg) but broad squid and slender squid are more valuable ($5 - $10 per kg) and are often included with southern calamari landings.

Gould’s squid is distributed around the south of Australia from southern Queensland to about Geraldton in WA, and also occurs around the northern half of New Zealand, where the species supports a large fishery (approximately 10 thousand tonnes per year). They range in depth from shallow coastal bays to depths of over 500 m on the upper continental slope, but are most abundant between about 50 and 400 m. Gould’s squid have a typical cephalopod life cycle, living for about one year before breeding and dying. In southern waters, most males are mature at 20-25 cm mantle length (ML) and females around 30 cm, although males can attain 35 cm (1.2 kg) and females 40 cm (1.6 kg). North of about Montague Island, maturity of Gould’s squid occurs at smaller sizes than off southern Australia, and few are caught larger than about 25 cm ML.
Small quantities of Gould’s squid are landed by the NSW Ocean Trawl Fishery, mainly off the central coast. Much larger quantities of Gould’s squid are taken by trawlers and squid jig vessels operating in Commonwealth fisheries around southern Australia. These fisheries land one to two thousand tonnes per year, and although there is no formal stock assessment available, the status of these fisheries is considered to be ‘not overfished’ (Wilson et al. 2009).

Slender squid is a tropical shallow water species with distribution extending down Australia’s east coast to about Sydney in depths to about 100 m. Broad squid mainly inhabit estuaries and bays but, along with the slender squid, small numbers are also caught regularly on inshore ocean prawn grounds. Biological information is available for the broad squid but there is no detailed information available for the slender squid. However, data from Fisheries Research Vessel Kapala inshore trawl surveys showed that most slender squid were between 15 and 30 cm ML with some larger specimens almost 40 cm ML. Most slender squid off NSW matured at sizes greater than 20 cm ML.

The NSW catch of ‘arrow’ and ‘unspecified’ squid reported by the Ocean Fish Trawl sector (5-10 t per annum) probably consists mainly of Gould’s squid. The ‘squid’ landings reported by Ocean Prawn Trawlers (10-20 t) mainly comprise a mix of pencil squid and southern calamari. Onboard observer studies and fishermen’s co-op monitoring are needed to better quantify the species composition of ocean trawl squid catches.

**Additional Notes**

- Trawl landings off southern and central NSW are dominated by Gould’s squid, but small proportions of morphologically similar species are likely to be present in catches including pencil or slender squid and bottle squid.
- Gould’s squid is a fast growing species, which lives for a maximum of about 1 year.
- Small catches of Gould’s squid are sometimes discarded because of low market price.
- Since 2000, landings have declined with declining trawling effort, but catch rates have remained reasonably stable.
- There is a combined recreational bag limit of 20 squid and cuttlefish.
Further Reading


Please visit the CSIRO website, [http://www.marine.csiro.au/caab/](http://www.marine.csiro.au/caab/) and search for the species code (CAAB) 23 636004, 23 617901 and 23 617010, common name or scientific name to find further information.