Acanthopagrus australis, Yellowfin Bream

Assessment by: Iwatsuki, Y., Russell, B., Pollard, D. & Carpenter, K.E.

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**Taxonomy**

<table>
<thead>
<tr>
<th>Kingdom</th>
<th>Phylum</th>
<th>Class</th>
<th>Order</th>
<th>Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animalia</td>
<td>Chordata</td>
<td>Actinopterygii</td>
<td>Perciformes</td>
<td>Sparidae</td>
</tr>
</tbody>
</table>

**Taxon Name**: *Acanthopagrus australis* (Günther, 1859)

**Synonym(s)**:
- *Chrysophrys australis* Günther, 1859
- *Roughleyia australis* (Günther, 1859)

**Common Name(s)**:
- English: Yellowfin Bream, Australian Seabream, Australian Sea Bream, Black Bream, Bream, Common Bream, Eastern Black Bream, Sea Bream, Silver Bream, Surf Bream

**Assessment Information**

**Red List Category & Criteria**: Least Concern ver 3.1

**Year Published**: 2014

**Date Assessed**: December 4, 2009

**Justification**:
*Acanthopagrus australis* is an eastern Australian endemic that inhabits estuarine, inshore coastal and mangrove habitats. This species is a major component of recreational and commercial fisheries in throughout its range. Commercial catch figures and average sizes at capture of this species have shown remarkable stability over a very long period of time, and there is no evidence of any significant population declines, probably due to this species’ ubiquity in a very wide variety of inshore coastal habitats throughout its range. It is found in marine protected areas in parts of its range and minimum size and bag limits are in place for this species. It is therefore listed as Least Concern.

**Geographic Range**

**Range Description**:
*Acanthopagrus australis* is endemic to the east coast of Australia, from Townsville in northern Queensland in the north, throughout the coastal waters of New South Wales, and to the Gippsland Lakes in eastern Victoria in the south (Munro 1949, Pollock 1982, Roberts and Ayre 2010). This species occurs to 35 m depth (Yearsley *et al.* 1999).

Records of this species from the northwestern coastline of Western Australia probably refer to *A. palmaris*. Both *A. palmaris* and *A. australis* are replaced around much of the southern coastline of Australia by *A. butcheri*, with which *A. australis* hybridizes in southern New South Wales (Rowland 1984). Its occurrence in Japan and the Ryukyu Islands (Masuda *et al.* 1984) and Taiwan (Shen 1993) are misidentifications most likely of *A. chinshira*.

http://dx.doi.org/10.2305/IUCN.UK.2014-3.RLTS.T170257A1303135.en
Native: Australia (New South Wales, Queensland, Victoria)

FAO Marine Fishing Areas:
Native: Indian Ocean - eastern, Pacific - southwest, Pacific - western central
Acanthopagrus australis

Range
- Extant (resident)

Compiled by:
International Union for Conservation of Nature
Population

Reported commercial catches and fishing effort for *Acanthopagrus australis* in estuaries declined during the 1990s (Industry and Investment NSW 2010). Most of the commercial catch is taken in northern New South Wales and southern Queensland. The recreational catch has been estimated at c. 1,000 tonnes (Henry and Lyle 2003), which is much greater than the commercial catch. The exploitation status of the species is currently “fully fished” in New South Wales waters (Scandol *et al.* 2008). The stocks have remained apparently healthy despite the degradation of nursery habitats and estuaries in New South Wales (Kearney 2009). Catch landings and CPUE from 1985 to 2005 have remained steady as well as the average fish size from 1939 to 2006 (Scandol *et al.* 2008).

Current Population Trend: Stable

Habitat and Ecology (see Appendix for additional information)

*Acanthopagrus australis* is most commonly found in estuaries, and also occurs on rocky reefs, off headlands, and off surf beaches but can also occur within the lower freshwater reaches of coastal rivers. This species can occur in large schools over rocky reefs, and over sandy areas at reef margins (Kuiter 1996). Within estuaries, this species is associated with seagrass beds, mangroves, bare substrates and rocky reefs (Industry and Investment NSW 2010). Postlarvae and juveniles mainly inhabit seagrass beds in shallow estuarine areas (Dredge 1976), and recruits can remain within a single seagrass bed for at least three to four months (Worthington *et al.* 1992). Food items include crustaceans, molluscs, worms and small fishes. Juveniles may consume algae. The maximum size recorded is 65 cm TL (Kuiter 1996), and c. 4.5 kg (Kailola *et al.* 1993), though it is more commonly found to lengths of around 30 cm TL. Females are the oldest and largest, attaining at least 12 years and 39 cm (FL). Males can attain 10 years and 30 cm FL (Henry 1983). The maximum recorded age for this species is 22+ years (Gray *et al.* 2000).

Reproduction

*Acanthopagrus australis* is a protandrous hermaphrodite (Pollock 1985). Spawning takes place in the surf zone off estuary mouths from as early as February in southern New South Wales, May-June in northern New South Wales, and July-August in Queensland (Grant 1991). This species undertakes a pre-spawning migration from estuarine to coastal waters along the New South Wales coast from April to July (Gray *et al.* 2000). Adults migrate from their feeding grounds to the spawning site. All mature males undertake the spawning migration but the proportion of mature females migrating to spawn increases with age (Pollock 1984). *Acanthopagrus australis* forms spawning aggregations generally in the surf zone off ocean beaches near the mouths of estuaries on the east coast (D. Pollard pers. comm. 2014). Most juveniles become functional males by the age of two years but a small proportion of them will develop directly into females (Pollock 1985). Other fish remain functional males throughout their life, while others develop directly to females at the age of four years (Dredge 1976, Pollock 1984).

Females generally mature at around three years of age, at c. 17 cm TL, and males mature a year later at four years. Growth is slow, with most fish reaching c. 23 cm FL after five years (Scandol *et al.* 2008). Monthly changes in the gonosomatic index indicate that the yellowfin bream population in Moreton Bay has a seasonal spawning period with a peak from July to August (Pollock 1982).

Systems: Marine
Use and Trade (see Appendix for additional information)

*Acanthopagrus australis* is one of the most valuable recreational and commercial sparids in eastern Australian fisheries (Hughes *et al.* 2008) and is also one of the most common fishes caught by anglers. The recreational catch is estimated to be about double the commercial catch. The highest commercial catch is taken in autumn and winter. This species is a very popular food fish in Australia, where it is caught mostly by hook and line by anglers, but also by spearfishing, and commercially using seine nets, gill nets and traps, and to a lesser extent as a bycatch in trawl fisheries (Scandol *et al.* 2008, Industry and Investment NSW 2010).

Threats (see Appendix for additional information)

There are no major threats to this species. Although threats to the species might be thought to include long term and continuous intensive fishing pressures, it seems to be remarkably resilient to such fishing activity, as average catches and fish sizes do not appear to have been greatly affected by this level of fishing over a very long period of time (at least since the 1950s). This resilience may in part be due to its ubiquity in a very wide range of estuarine and inshore coastal habitats. It can, however, be affected in some areas by habitat destruction and degradation, especially of seagrass and mangrove habitats, in southeastern Australia, and by water pollution. The stocks have, however, remained apparently healthy despite the degradation of nursery habitats and estuaries in New South Wales (Kearney 2009). Catch landings and CPUE from 1985 to 2005 have remained steady, as has the average fish size from 1939 to 2006 (Scandol *et al.* 2008). There may be some localized threats in southeastern Australia due to degradation and destruction of seagrass and mangrove habitats from anthropogenic activities and climate change (Walker and McComb 1992, Gilman *et al.* 2008). Skeletal deformities, specifically saddleback syndrome (SBS), have been observed more frequently in recent years in *A. australis* individuals in southeast Queensland. SBS reduces the survival rate of individuals during early life history stages and may thus have harmful impacts. The mechanisms of this deformity are not yet defined but have been linked to environmental contamination (Diggles 2013).

Conservation Actions (see Appendix for additional information)

The minimum landing size for *A. australis* is 25 cm TL with a bag limit of 20 fish in New South Wales waters (Accessed through NSW Government portal, www.trade.nsw.gov, accessed 3 March 2014). Restrictions on commercial fishing methods are also in place in New South Wales, and *A. australis* is also protected by a number of estuarine and marine protected areas throughout much of its range (World Database of Protected Areas, accessed February 2014).

Credits

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Reviewer(s): Tishler, M.
Facilitators(s) and Compiler(s): Gorman, C. & Comeros-Raynal, M.
Bibliography


Pollock, B.R. 1984. Relations between migration, reproduction and nutrition in yellowfin bream,


Scandol, J., Rowling, K. and Graham, K. 2008. Status of the Fisheries Resources in NSW 2006/7. NSW Department of Primary Industries, Cronulla, NSW.

Shen, S.C. 1993. *Fishes of Taiwan*. Department of Zoology, National Taiwan University, Taipei, Taiwan.


**Citation**


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**External Resources**

For [Images and External Links to Additional Information](http://dx.doi.org/10.2305/IUCN.UK.2014-3.RLTS.T170257A1303135.en), please see the Red List website.
Appendix

Habitats
(http://www.iucnredlist.org/technical-documents/classification-schemes)

<table>
<thead>
<tr>
<th>Habitat</th>
<th>Season</th>
<th>Suitability</th>
<th>Major Importance?</th>
</tr>
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</table>

Use and Trade
(http://www.iucnredlist.org/technical-documents/classification-schemes)

<table>
<thead>
<tr>
<th>End Use</th>
<th>Local</th>
<th>National</th>
<th>International</th>
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<tr>
<td>Food - human</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Sport hunting/specimen collecting</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
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Threats
(http://www.iucnredlist.org/technical-documents/classification-schemes)

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<th>Threat</th>
<th>Timing</th>
<th>Scope</th>
<th>Severity</th>
<th>Impact Score</th>
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</thead>
<tbody>
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<td>6. Human intrusions &amp; disturbance -&gt; 6.1. Recreational activities</td>
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<td>Unknown</td>
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<tr>
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<tr>
<td>1. Ecosystem stresses -&gt; 1.2. Ecosystem degradation</td>
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<tr>
<td>7. Natural system modifications -&gt; 7.3. Other ecosystem modifications</td>
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<td>1. Ecosystem stresses -&gt; 1.2. Ecosystem degradation</td>
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<tr>
<td>11. Climate change &amp; severe weather -&gt; 11.1. Habitat shifting &amp; alteration</td>
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<tr>
<td>Stress:</td>
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<tr>
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<tr>
<td>1. Ecosystem stresses -&gt; 1.2. Ecosystem degradation</td>
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<td>2. Species Stresses -&gt; 2.2. Species disturbance</td>
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</table>
11. Climate change & severe weather -> 11.4. Storms & flooding

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Conservation Actions in Place

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Conservation Actions in Place

In-Place Land/Water Protection and Management

Conservation sites identified: Yes, over entire range
Occur in at least one PA: Yes

In-Place Species Management

Harvest management plan: Yes

Research Needed

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Research Needed

1. Research -> 1.2. Population size, distribution & trends
3. Monitoring -> 3.2. Harvest level trends

Additional Data Fields

Distribution

Lower depth limit (m): 35
Upper depth limit (m): 1

Population

Population severely fragmented: No
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