

# Climate and Oceanographic Summary, Great Australian Bight 2014 - 7

Kirsten Rough – 18<sup>th</sup> November 2013

This is the seventh 2014-season update of sea surface temperature, ocean currents and chlorophyll distribution in the Great Australian Bight (GAB). If anyone has any questions or further suggestions please call or email (details appear at the end of this document).

## Summary:

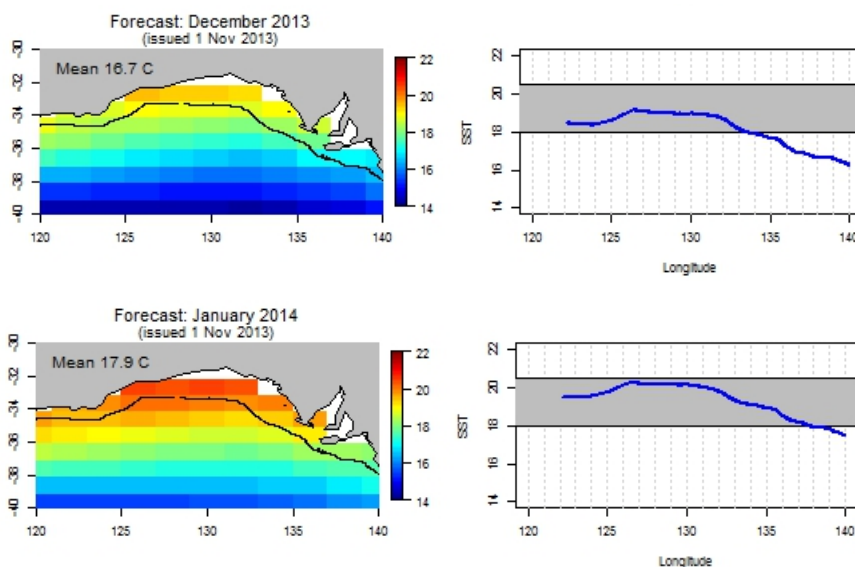
DEAD Mutton-birds are washing up on local Eyre Peninsula beaches. Investigations show they have starved after their long migration. It is thought this is a result of low productivity in the tropical Pacific Ocean and around Alaska where they have come from NOT a problem with local waters. While it does look like there are a lot of them, with 1 bird every 5m or so, it is only a very minor proportion of the estimated 20 million migrating individuals. However if anyone does see anything unusual, please ring or email on the contact details below.

The general GAB sea temperatures range from 15°C in upwelling areas, to 19°C along the coastal fringe, and 17 to 18°C through the main fishing area.

Unable to access the actual SST at the moment, this document will be updated and re-issued once these links are re-established .

The warmth of the Leeuwin Current (LC) continues around the southwest corner of WA, and the current speed remains similar to this time last year.

As mentioned last week, the major influence of GAB temperatures through 2014 will be from the sub-tropical source in the Indian Ocean, a similar situation to what occurred in 2013. This is reflected in the latest run of the ASBTIA-CSIRO Forecasting model. This suggests conditions will be suitable for SBT to longitude 134°E through December, and to longitude 137°E through January.



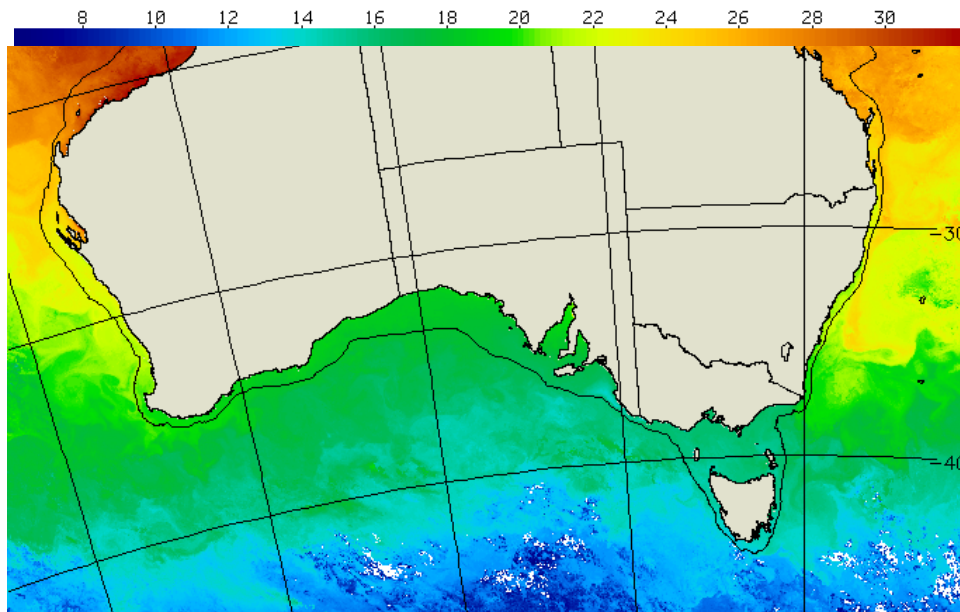
The blue line shows the temperature along the shelf break. The shaded area shows the temperature range preferred by SBT. When the blue line is within the shaded area, this corresponds to longitudes that most SBT will be found.

## GAB Sea Surface Temperature (SST):

An update of the most recent water temperatures around Australia and through the GAB fishing grounds to the 17<sup>th</sup> November 2013 can be seen in Figure 1 and Figure 2. The temperature through the GAB ranges between

15 to 19°C. The area to 132°E is now quite suitable sea temperature for SBT, with small individuals being landed from Fowlers Bay, Scaeles Bay and even towards Neptune Islands (by Calypso Star).

Having trouble accessing the actual sea surface temperatures at the time of preparing this update, will revise this document and resend once this link is re-established.



Mean SST from 12/11/2013 to 17/11/2013  
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Figure 1: Sea Surface Temperature around Australia for the 5 days to 17<sup>th</sup> November 2013 (source: CSIRO 2013 <http://www.marine.csiro.au>).

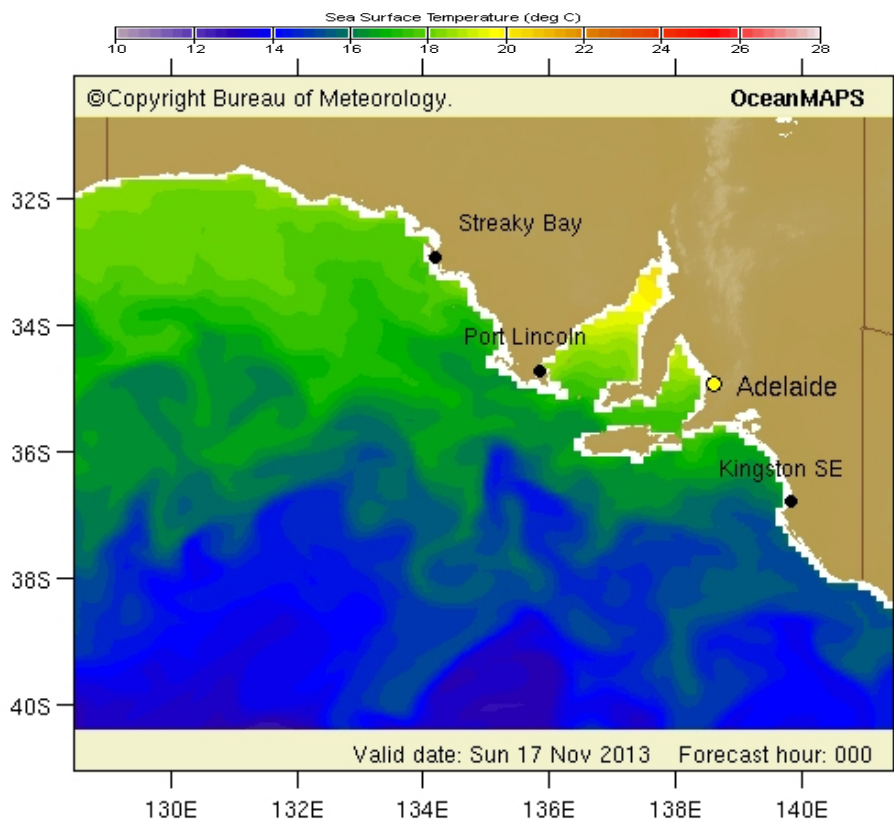


Figure 2: South Australian sea surface temperature from the Bureau of Meteorology website for the 3 days to the 17<sup>th</sup> November 2013 (source: Bureau of Meteorology 2013; <http://www.bom.gov.au>).

**Leeuwin Current Temperature:**

Sea surface temperatures and ocean currents around the Western Australian coastline for the 11<sup>th</sup> November 2012 and 2013 are shown below (Figure 3). As above, unable to access the actual SST at the moment, this document will be updated and re-issued once links are re-established.

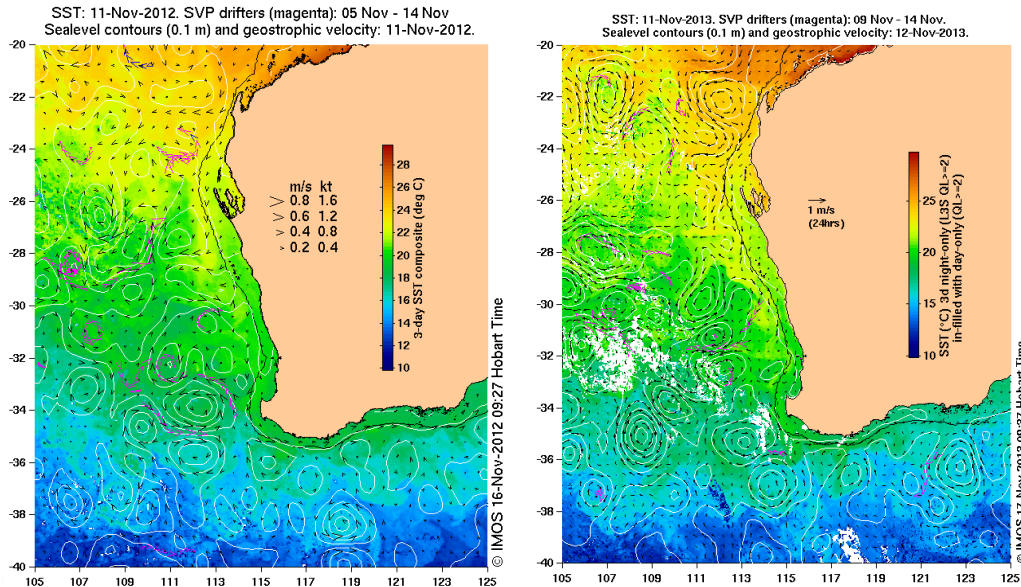


Figure 3: A comparison of the Leeuwin Current sea surface temperature and current speed and direction for the 11<sup>th</sup> 2012 (left) and 2013 (right) (Source: IMOS 2013; <http://www.oceancurrent.imos.org.au>).

**Chlorophyll / Productivity:**

The latest satellite image showing where productivity is concentrated is shown below, the grey areas appear where cloud cover is too thick to obtain an image. Chlorophyll is becoming concentrated along the west coast and below Eyre Peninsula; this is associated with the upwelling system that normally works along this location throughout the summer.

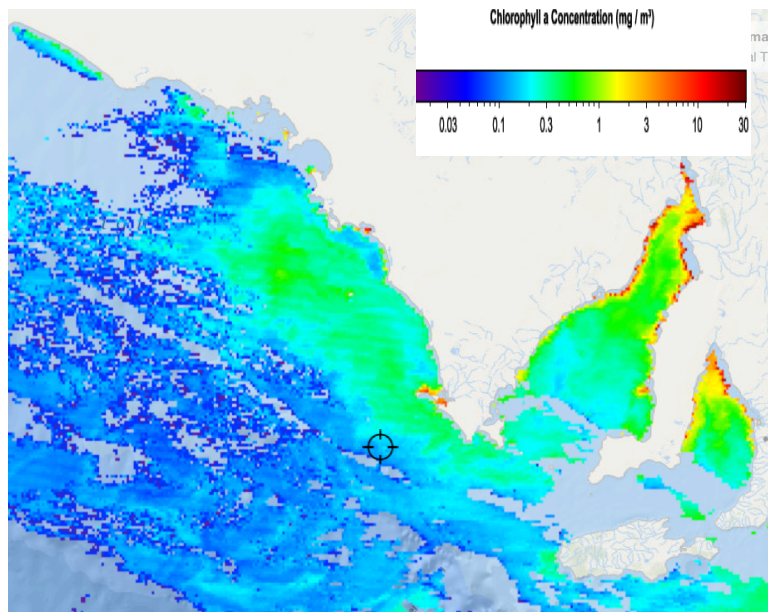


Figure 4: Areas of productivity within the GAB on the 16th November 2013 (source: <http://www.Fishtrack.com> )

**Useful Websites:**

- <http://www.bom.gov.au>
- <http://www.csiro.au>
- <http://www.fishtrack.com>
- <http://www.oceancurrent.imos.org.au>

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