Acknowledgements

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Background - Seagrass
Background – Black Bream

Jeremy Hindell

Joel Williams

Greg Jenkins
Current Project Rationale

A. Flow-salinity interactions
   - Larval dispersal
   - Phytoplankton
   - Biogeochemistry
   - Settlement
   - Seagrass habitat

B. Phytoplankton community
   - Nutrient dynamics
   - Sediment exchange
   - Groundwater

C. Dispersal
   - Settlement
   - Flow/stratification
   - Source microchemistry

D. Environmental gradients
   - Seagrass attributes
   - Juveniles: sources, abundance, ecology
Questions

1. Extent and condition of seagrass in the GL
2. Abundances and distributions of juvenile bream
3. Relationships between seagrass and juvenile bream
Seagrass Mapping in the Lakes

**Previous Mapping of Gippsland Lakes Seagrass**

Ralph Roob and David Ball 1997
- Examining changes in seagrass
- Mapping distribution of seagrass
  Aerial photography and manual delineation

**2015 Mapping of Gippsland Lakes Seagrass**

- Seagrass extents for areas covered by aerial imagery
  Manual delineation
- Ground truthing via field sampling
- Using Roob and Ball classifications:

<table>
<thead>
<tr>
<th>Classifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zostera, Ruppia or Mix</td>
</tr>
<tr>
<td>Dense, Medium or Sparse coverage</td>
</tr>
<tr>
<td>Epiphytic algae coverage or not</td>
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</tbody>
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Field sampling

- Site coordinates are collected and images and/or video are taken using a pole mounted GoPro
- 181 sites sampled
Field sample mapping

Field footage is post-processed to produce a KML file for GoogleEarth
Aerial imagery

Loch Sport area not mapped this round due to sunglint
Mapping so far

East of Metung

- Seagrass
- Aerial Imagery Extents
Mapping so far

Jones Bay

![Map of Jones Bay showing Seagrass and Aerial Imagery Extents]
Mapping vs rapid assessment

April 2012

Legend

0
1
2
3
4
5

Datums: WGS 84
Produced: ARI 23.05.2012

Paynesville

Seagrass

Aerial Imagery Extents

Kilometres

0 2.5 5
Next steps

• Link classified field data to mapped seagrass
• Recapture aerial imagery over areas unable to be mapped
• Further field sampling in February
• Refining/correcting mapped seagrass
Juvenile Bream Distributions

March 2015
Total bream caught = 45

Legend
Net Locations
March_BB
0.000000
0.000001 - 1.000000
1.000001 - 5.000000
5.000001 - 10.000000
10.000001 - 28.000000

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