



## BURNETT RIVER 2011-2020

### 2020 REVIEW

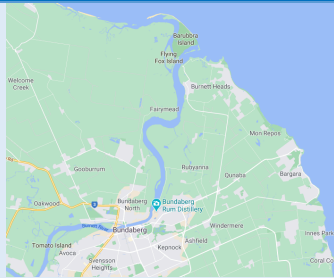



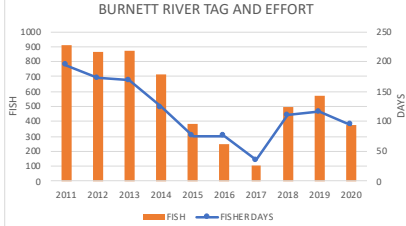
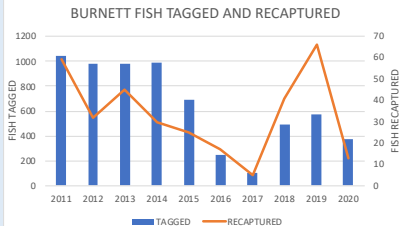
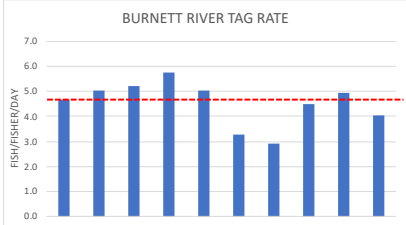
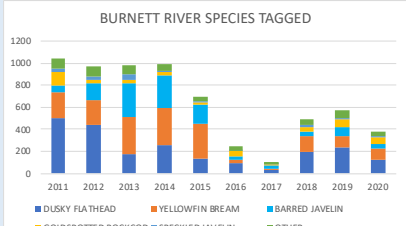
AVAILABLE		AVAILABLE	
Tagged fish	✓	Recaptures	✓
Postcodes	✓	Competitions	
Species		Dusky Flathead	
Tag rates	✓	Fish sizes	✓
Growth	✓	Tag locations	✓
Fish movement	✓		
Species		Yellowfin Bream	
Tag rates	✓	Fish sizes	✓
Growth		Tag locations	
Fish movement	✓		
Species		Barred Javelin	
Tag rates	✓	Fish sizes	✓
Growth		Tag locations	✓
Fish movement	✓		

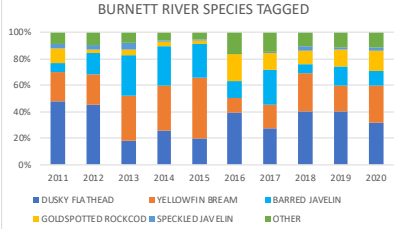
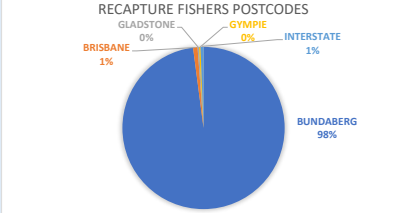
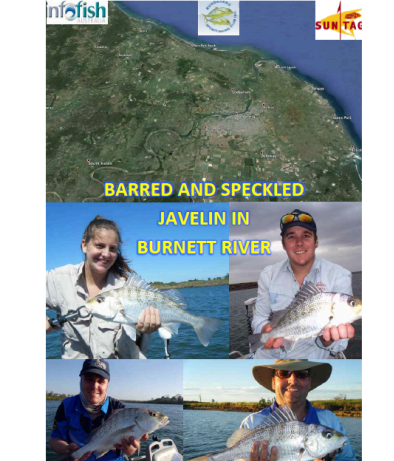



### Summary


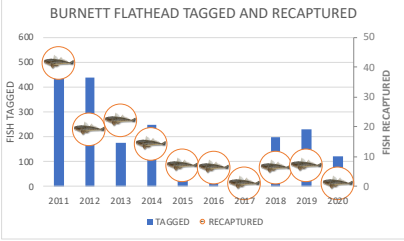
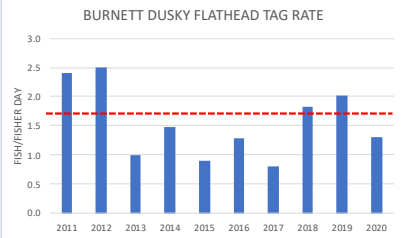
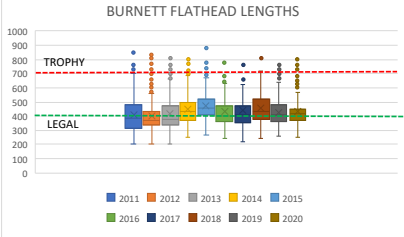
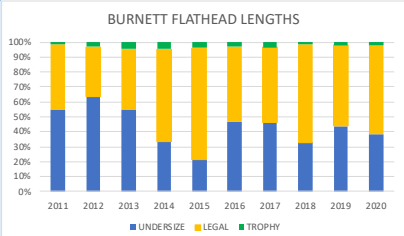
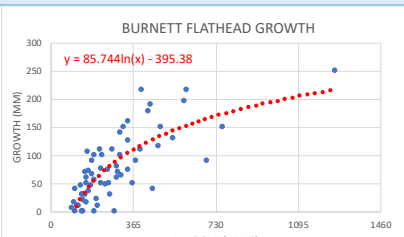

- From 2011-2020 there were 6,481 fish tagged for 333 recaptures (5.1%) in the Burnett River
- Key species tagged were Dusky Flathead 2,162 (33.4%) for 124 (5.7%) recaptures, Yellowfin Bream 1,860 (28.7%) for 50 (2.7%) recaptures and Barred Javelin 1,208 (18.6%) for 25 (2.1%) recaptures accounting for 81.0% of all fish tagged
- The tag rate was calculated as the number of fish tagged/fisher day and the rate in 2020 was 4.0 which was below the 10 year average historic catch rate of 4.8 fish/fisher day
- The tag rate in 2020 for Flathead was 1.3 fish/fisher day compared to the 10 year average of 1.7, for Bream it was 1.1 fish/fisher compared to the 10 year average of 1.0 and for Javelin it was 0.4 fish/fish day compared to the 10 year average of 1.0
- Of 338 recaptures with the postcode of the fisher recorded 330 (97.6%) were local from 4670 (Bundaberg) and from 4674 (Avondale area) just north of the city suggesting that the river was mostly fished by locals with few visiting fishers
- The average length of Dusky Flathead in 2020 was 430mm with 58.8% over legal size and 2.5% trophy fish
- The average length of Yellowfin Bream in 2020 was 283mm with most Bream legal size and 1 trophy fish over 400mm
- Most of the Barred Javelin tagged were undersized suggesting that the river is mainly used by juvenile fish and/or taggers are keeping a proportion of legal fish
- There were 124 recaptures of Flathead, 50 of Bream and 25 of Javelin however only 1 Flathead was caught outside the Burnett River at Hervey Bay 105km south along the coast

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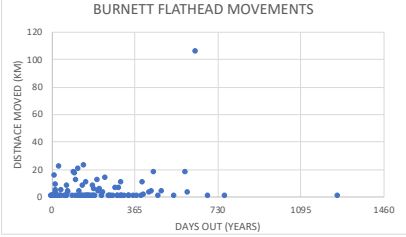
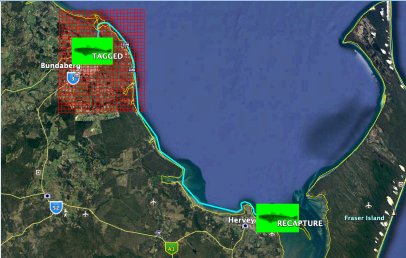
March 2021


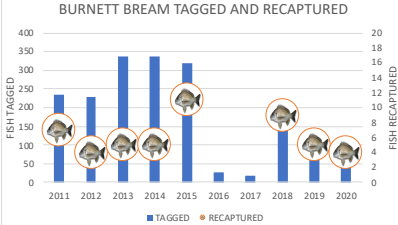
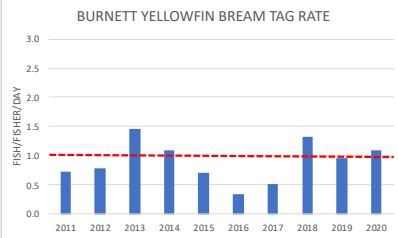
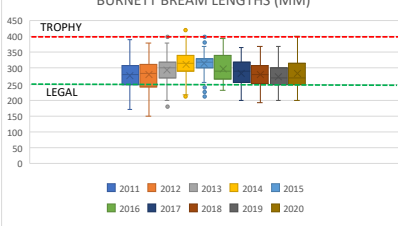
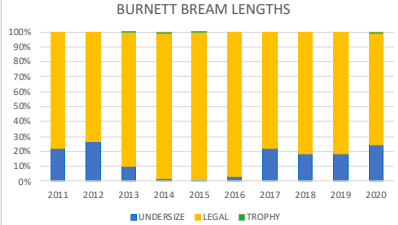
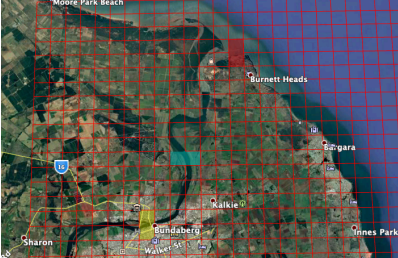
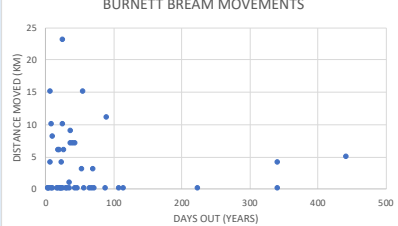
BURNETT RIVER		DUSKY FLATHEAD YELLOWFIN BREEM		BARRED JAVELIN																																																																														
																																																																																		
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Catch and effort number of tagged fish fisher tag days Taggers 2011-2020		HIGHEST 2011 907 EFFORT 2011 194	LOWEST 2017 102 2017 35	NOW 2020 378 2020 94	 <table><caption>BURNETT RIVER TAG AND EFFORT</caption><thead><tr><th>Year</th><th>FISH</th><th>FISHER DAYS</th></tr></thead><tbody><tr><td>2011</td><td>907</td><td>194</td></tr><tr><td>2012</td><td>850</td><td>180</td></tr><tr><td>2013</td><td>850</td><td>170</td></tr><tr><td>2014</td><td>700</td><td>150</td></tr><tr><td>2015</td><td>400</td><td>100</td></tr><tr><td>2016</td><td>250</td><td>80</td></tr><tr><td>2017</td><td>102</td><td>35</td></tr><tr><td>2018</td><td>450</td><td>120</td></tr><tr><td>2019</td><td>500</td><td>130</td></tr><tr><td>2020</td><td>378</td><td>94</td></tr></tbody></table>	Year	FISH	FISHER DAYS	2011	907	194	2012	850	180	2013	850	170	2014	700	150	2015	400	100	2016	250	80	2017	102	35	2018	450	120	2019	500	130	2020	378	94																																												
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Tag rate All tagged fish Fish/fisher day 2011-2020		HIGHEST 2014 5.8	LOWEST 2017 2.9	NOW 2020 4.0	 <table><caption>BURNETT RIVER TAG RATE</caption><thead><tr><th>Year</th><th>FISH/FISHER/DAY</th></tr></thead><tbody><tr><td>2011</td><td>4.8</td></tr><tr><td>2012</td><td>5.0</td></tr><tr><td>2013</td><td>5.2</td></tr><tr><td>2014</td><td>5.8</td></tr><tr><td>2015</td><td>5.0</td></tr><tr><td>2016</td><td>3.5</td></tr><tr><td>2017</td><td>3.2</td></tr><tr><td>2018</td><td>4.5</td></tr><tr><td>2019</td><td>5.0</td></tr><tr><td>2020</td><td>4.0</td></tr></tbody></table>	Year	FISH/FISHER/DAY	2011	4.8	2012	5.0	2013	5.2	2014	5.8	2015	5.0	2016	3.5	2017	3.2	2018	4.5	2019	5.0	2020	4.0																																																							
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Species composition Numbers tagged 2011-2020		DUSKY FLATHEAD 2,162 YELLOWFIN BREEM 1,860 BARRED JAVELIN 1,208		 <table><caption>BURNETT RIVER SPECIES TAGGED</caption><thead><tr><th>Year</th><th>DUSKY FLATHEAD</th><th>YELLOWFIN BREEM</th><th>BARRED JAVELIN</th><th>GOLDSPOTTED ROCKCOD</th><th>SPECKLED JAVELIN</th><th>OTHER</th></tr></thead><tbody><tr><td>2011</td><td>400</td><td>200</td><td>100</td><td>100</td><td>100</td><td>100</td></tr><tr><td>2012</td><td>400</td><td>200</td><td>100</td><td>100</td><td>100</td><td>100</td></tr><tr><td>2013</td><td>400</td><td>200</td><td>100</td><td>100</td><td>100</td><td>100</td></tr><tr><td>2014</td><td>400</td><td>200</td><td>100</td><td>100</td><td>100</td><td>100</td></tr><tr><td>2015</td><td>400</td><td>200</td><td>100</td><td>100</td><td>100</td><td>100</td></tr><tr><td>2016</td><td>400</td><td>200</td><td>100</td><td>100</td><td>100</td><td>100</td></tr><tr><td>2017</td><td>400</td><td>200</td><td>100</td><td>100</td><td>100</td><td>100</td></tr><tr><td>2018</td><td>400</td><td>200</td><td>100</td><td>100</td><td>100</td><td>100</td></tr><tr><td>2019</td><td>400</td><td>200</td><td>100</td><td>100</td><td>100</td><td>100</td></tr><tr><td>2020</td><td>400</td><td>200</td><td>100</td><td>100</td><td>100</td><td>100</td></tr></tbody></table>		Year	DUSKY FLATHEAD	YELLOWFIN BREEM	BARRED JAVELIN	GOLDSPOTTED ROCKCOD	SPECKLED JAVELIN	OTHER	2011	400	200	100	100	100	100	2012	400	200	100	100	100	100	2013	400	200	100	100	100	100	2014	400	200	100	100	100	100	2015	400	200	100	100	100	100	2016	400	200	100	100	100	100	2017	400	200	100	100	100	100	2018	400	200	100	100	100	100	2019	400	200	100	100	100	100	2020	400	200	100	100	100	100
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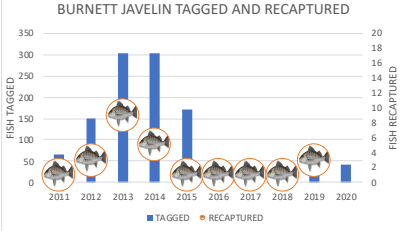
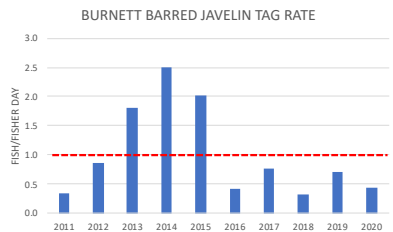
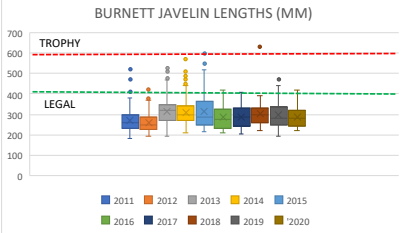
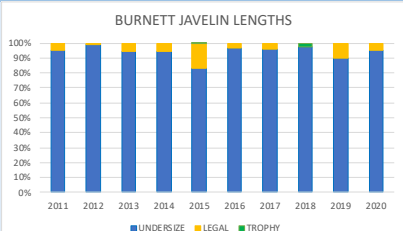

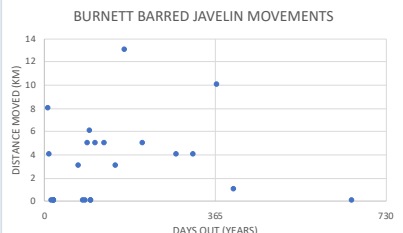
<b>Species composition</b> <b>Percentage tagged</b> <b>2011-2020</b>	DUSKY FLATHEAD 33.4% YELLOWFIN BREAM 28.7% BARRED JAVELIN 18.6%	
<b>Postcodes of recapture</b> <b>fishers</b> <b>2011-2020</b>	Fishers with postcodes 338 Region Fishers Bundaberg 98% 4674 1 LOCAL 330 (97.6%) No code 9	
<b>Previous report</b>	Barred and Speckled Javelin in Burnett River 1995-2014 available at <a href="http://infofishaustralia.com.au/burnett-river/">http://infofishaustralia.com.au/burnett-river/</a>	
  Product of Infofish Australia		 Supported by Suntag

MEASURE	ACTUAL	GRAPH or MAP
Dusky Flathead		
Flathead tagged and recaptured 2011-2020	TAGGED 2162 RECAPTURED 124 RECAPTURE RATE 5.7%	
Tag rate Flathead Fish/fisher day 2011-2020	HIGHEST TAG RATE 2012 2.5 LOWEST TAG RATE 2017 0.8 NOW TAG RATE 2020 1.3  10 YEAR AVERAGE 1.7	
Average length (mm) Bars show smallest to largest fish Dots show outliers 2011-2020	HIGHEST AVERAGE LENGTH 2015 474 LOWEST AVERAGE LENGTH 2012 401 NOW AVERAGE LENGTH 2020 430  LARGEST 2015 880 LOWEST 2017 760 NOW 2020 800	
Fish lengths percentage Undersize <400mm Legal 400-700mm Trophy 700+mm 2011-2020	HIGHEST LEGAL 2015 74.8 LOWEST LEGAL 2012 33.2 NOW LEGAL 2020 58.8  TROPHY 2014 4.8 LOWEST TROPHY 2018 1.5 NOW TROPHY 2020 2.5	
Flathead growth at the end of each year Based on all recaptures since 2011	Recaptures 64 Growth YEAR 1 111mm YEAR 2 170mm YEAR 3 205mm YEAR 4 229mm YEAR 5 249mm	
Grid locations of tagged fish (map BND) 2011-2020	Grids where most fish caught GRID FISH N4/N5 649 F16/F17 175 L6 148 K2 127	



<b>Flathead movement</b> <b>Distance moved (km)</b> <b>2011-2020</b>	Recaptures 95 Recaptured same area 58 (61.1%) Longest movement in river 22km	
<b>Flathead recaptured outside river</b> <b>2011-2020</b>	Outside river 1 (1.1%) South to Hervey Bay 105km	

MEASURE	ACTUAL	GRAPH or MAP
<b>Yellowfin Bream</b>		
<b>Bream tagged and recaptured 2011-2020</b>	TAGGED 1860 RECAPTURED 50 RECAPTURE RATE 2.7%	
<b>Tag rate Bream Fish/fisher day 2011-2020</b>	HIGHEST TAG RATE 2013 1.5 LOWEST TAG RATE 2016 1.3 NOW TAG RATE 2020 1.1  10 YEAR AVERAGE 1.0	
<b>Average length (mm) Bars show smallest to largest fish Dots show outliers 2011-2020</b>	HIGHEST AVERAGE LENGTH 2015 315 LOWEST AVERAGE LENGTH 2019 274 NOW AVERAGE LENGTH 2020 283  LARGEST 2014 420 2017 365 2020 400	
<b>Fish lengths percentage Undersize &lt;250mm Legal 250-400mm Trophy 400+mm 2011-2020</b>	HIGHEST LEGAL 2015 98.1 LOWEST LEGAL 2012 73.4 NOW LEGAL 2020 74.7  TROPHY 2014 0.9 2019 0 2020 1.1	
<b>Grid locations of tagged fish (map BND) 2011-2020</b>	Grids where most fish caught GRID FISH N4/N5 983 H16/H17 237 J11/J12 115	
<b>Bream movement Distance moved (km) 2011-2020</b>	Recaptures 47 Recaptured same area 26 (55.3%) Longest movement in river 23km Outside river 0	

MEASURE	ACTUAL	GRAPH or MAP
Barred Javelin		
Javelin tagged and recaptured 2011-2020	TAGGED 1208 RECAPTURED 25 RECAPTURE RATE 2.1%	
Tag rate Javelin Fish/fisher day 2011-2020	HIGHEST TAG RATE 2014 2.5 LOWEST TAG RATE 2018 0.3 NOW TAG RATE 2020 0.4  10 YEAR AVERAGE 1.0	
Average length (mm) Bars show smallest to largest fish Dots show outliers 2011-2020	HIGHEST AVERAGE LENGTH 2015 315 LOWEST AVERAGE LENGTH 2012 260 NOW AVERAGE LENGTH 2020 287  LARGEST 2018 635 LOWEST 2017 410 NOW 2020 420	
Fish lengths percentage Undersize <400mm Legal 400-600mm Trophy 600+mm 2011-2020	HIGHEST LEGAL 2015 16.7 LOWEST LEGAL 2012 1.3 NOW LEGAL 2020 5.0  TROPHY 2015 0.6 2019 0 2020 0	
Grid locations of tagged fish (map BND) 2011-2020	Grids where most fish caught GRID FISH J11/J12 188 J14/K14 165 L6 152	
Javelin movement Distance moved (km) 2011-2020	Recaptures 23 Recaptured same area 8 (34.8%) Longest movement in river 13km Outside river 0	

## Data sources

Data used in the Burnett River Crystal Bowl are:

- Tag records and recapture records for the river at <http://crystalbowl.infofishaustralia.com.au/>

## Basis for analysis

- Catch rates calculated as number of fish tagged/fisher day for taggers with a minimum of 12 fisher days (at least 1 per month) to provide an acceptable catch rate
- For Dusky Flathead undersized fish are <400mm, legal fish are  $\geq 400$  and <700mm and trophy fish are  $\geq 700$ mm
- For Yellowfin Bream undersized fish are <250mm, legal fish are  $\geq 250$ mm and <400mm and trophy fish are  $\geq 400$ mm
- For Barred Javelin undersized fish are <400mm, legal fish are  $\geq 400$ mm and <600 and trophy fish are  $\geq 600$ mm
- Growth calculated using logarithmic curve from recaptures where fish were out for 90 days or more and had positive growth
- Locations based on Infofish grid map BND for the impoundment and other grid maps where fish were recaptured outside the river
- Movement distance calculated as the shortest distance by water from the tag to the recapture location