



Title: Keppel Bay Sportfishing Club - Corio Bay King and Blue Threadfin Monitoring

Q1: What do you intend to monitor?

Threadfin (King), *Polydactylus macrochir*, <http://fishesofaustralia.net.au/home/species/634>

Threadfin (Blue), *Eleutheronema tetradactylum*, <http://fishesofaustralia.net.au/home/species/632>

Other species identified by Fisheries Queensland or third party researchers

Q2: Where will you monitor?

Primarily in Corio Bay, central Queensland (Grid R29, Sites 12, 17 & 23)

Secondarily in the surrounding Fitzroy Recreational Fishing Haven (Grids R28, R29 & R30) and in the area to the north of Corio Bay when possible.

Other areas identified by Fisheries Queensland or third party researchers.

Q3: Why is this species and area a priority for monitoring?

Both king and blue threadfin were classified as *Highly Vulnerable* by the Great Barrier Reef Marine Park Authority in 2012, due to commercial and recreational fishing pressure, poor water quality, and a lack of information to enable assessment of the stock status (GBRMPA 2013). Life history traits of both species contribute to this vulnerability, particularly:

- Both reach sexual maturity at significant age, particularly king threadfin. Both are also protandrous (changing sex from male to female) at large sizes, meaning there is high potential for capture before reaching maturity as a female, and;
- Both appear to have genetic stock structures within defined and limited geographic areas. That is, there appears to be little to no movement between localised populations with home ranges as small as 50km (Welch et al. 2007). This finding is supported by tag and recapture data where the majority of recaptures occur within 10-30km of initial tagging.

The introduction of a net free zone (NFZ) in the Fitzroy Delta and Keppel Bay in 2015 greatly reduced commercial fishing pressure on both species (average reported commercial take in recent years was approx. 50t/year of king threadfin and 30t/year of blue threadfin).

KBSFC is interested in monitoring these species in Corio Bay because:

- Both species are highly sought after recreational species and KBSFC members would like to contribute to improved knowledge (population, growth, movement, and possibly age and sex) in the hope that it continues to improve confidence in their management;
- Approximately 3000 king threadfin and 1500 blue threadfin have been tagged by members of ANSA and Suntag between 1985 and the present. However, virtually all of these fish were tagged within the Fitzroy River system. KBSFC tagging within the Corio Bay area will complement ongoing focused tagging in the Fitzroy Delta.
- The relative importance of the Corio Bay system (70km north of the Fitzroy Delta, and also within the NFZ) to both species is unknown. Is there a localised population at Corio Bay? To what extent do Corio Bay fish mix with fish from the Fitzroy Delta or areas to the north? KBSFC members will target threadfin within Corio Bay and the ocean beaches adjacent to it.

Recreational Fishery Monitoring Plan



Q4: Who will use your data?

1. Keppel Bay Sportfishing Club
2. ANSA QLD
3. Wider community
4. Third Party Researchers

Q5: How will the data be used?

Data will be quality checked, collated and archived to be available for ANSA members and third parties upon request.

On a regular basis KBSFC will use the activity and data to promote sustainable fishing and best practice fishing methods for threadfin.

Q6: What data quality do you require?

The primary objective of this project is to allow anglers opportunity to collect fishery data as a means of citizen science participation. The idea is to value add to the fishing experience and in doing so, create greater awareness of the study species (population, growth & movement patterns)

Although the primary focus of the program is citizen science based, data collection methods will be as robust as possible to ensure data quality is as high as possible to allow for as many potential end uses as possible. Data Quality will be set at a level where the complexity of collection and data entry methods does not greatly inhibit participation.

The quality of data is likely to be of indicative quality (better than demonstrative but not analytical)

Q7: What is the proposed period of monitoring? When and how often will you monitor?

The intent is to commence monitoring in the Corio Bay area in the spring of 2016, when both species are known to aggregate. Monitoring from then will be ongoing with no end date specified at this time.

KBSFC will review the effort and results of the monitoring program on an annual basis with a view to learning and improvement, and assessment of whether resources could be better allocated to another priority.

Monitoring will primarily be opportunistic in nature (when members are fishing) noting that the club fishes at least once a month as part of routine club activities. Club activities usually occur on the weekend.

Members will be encouraged to participate in monitoring outside of scheduled club activities. Members fish a great deal more often than the average recreational angler, and usually with greater effectiveness. One could anticipate monitoring to occur fortnightly or even more frequently in the study area.

Q8: What methods will you use?

It is envisaged that the majority of fish will be captured with as little stress as possible, before careful measurement, tagging, and quick release.

- As part of normal recreational fishing activities, fish capture information as outlined in field of form: <http://www.ansaql.com.au/awards/entry-form/> will be collected for captured King



and Blue Threadfin and other species identified by Fisheries Queensland or third party researchers.

- Members will fish according to the ANSA QLD code of Ethics (<http://www.ansaqld.com.au/code-of-ethics/>) and the National Code of Practice (http://www.ansaqld.com.au/wp-content/uploads/2014/06/recfish_australia_ncop_brochure.pdf) adopted by ANSA QLD.
- Fish destined for release will be released according to the ANSA Code of Practice for Releasing Fish (<http://www.ansaqld.com.au/code-of-practice-for-releasing-fish/>)
- Tagging will be conducted according to the AUSTAG Manual (<http://www.ansaqld.com.au/wp-content/uploads/2016/07/Austag-Manual-Complete-with-Work-Instructions.pdf>) noting that the manual will be updated during 2016-17. Tagging data is added directly by members who tag a part of the fish capture form. Any field sheets used reflect fields in this web-form.
- Location of fish will be recorded using Queensland Government Logbook Maps (<https://www.business.qld.gov.au/industry/fisheries/commercial-fishing/monitoring-and-reporting/reporting-commercial-fishers/queensland-logbook-maps>)
- Fishes of Australia (<http://fishesofaustralia.net.au/>) is used to identify fish species

Pending advice and request from third party researchers (eg DAF and/or JCU) members may also be trained in the retrieval of otoliths. If required members will retain the large specimens to enable determination of both age and sex (identified as a key information gap).

Q9: Who will be involved and how?

Monitoring will be conducted by Keppel Bay Sportfishing Club members and other ANSA QLD members who visit the area of interest. Reporting of recaptures will be open to the general public.

ANSA QLD will provide fish capture database facility, tags and support to Keppel Bay Sportfishing Club members

Fisheries Queensland or third party researchers will be involved as interested or required to achieve the other objectives of the monitoring program.

Q10: How will the data be managed and reported?

- Data is added directly by members into the fish capture form.
- When submitted this is logged in the ANSA QLD MySQL database.
- Results will be reported online using a series of codes that query the database and then visualise this data. Data will also be provided to Fisheries Queensland and third party researchers to report
- Records are maintained on ANSA QLD server using MySQL database. Database is regularly backed up.
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Version

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Recreational Fishery Monitoring Plan



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Background

Why do we need a plan like this?

ANSA Qld and our members have limited resources (money and time) to contribute to monitoring, so we need to make sure we are doing it for good reasons.

The plan is simply to help you think about why and where you want to direct your efforts. We should make sure that we are contributing to highest priority issues, not just tagging as many fish as we can. For this reason the ANSA Qld executive committee will seek input from Fisheries Queensland and other research institutions into highest priority species and locations to help refine monitoring effort.

It also demonstrates to others that we are professional in our approach to monitoring.

How is the revised ANSA Qld tagging program different to what we have previously done under Suntag?

Tagging will be conducted according to the AUSTAG Manual (<http://www.ansaqld.com.au/wp-content/uploads/2016/07/Austag-Manual-Complete-with-Work-Instructions.pdf>) noting that the manual will be updated during 2016-17. Specific revisions include:

- ANSA QLD Tagging is now the name of our state program for Queensland
- Tagging data is added directly by members who tag as part of the fish capture form. Any field sheets used reflect fields in this web-form.
- Tags use the web address www.ansaqld.org.au instead of a phone number for submission of recaptured fish information.
- Tag and recapture information is generated online at www.ansaqld.org.au and replaces letters and certificates. Recapture certificates will be emailed to anglers in the future when an automated facility for this function is developed
- Records are maintained on ANSA QLD server using MySQL database. Database is regularly backed up.
- Recreational Fishery Monitoring Plans are required for all ANSA QLD Research and Tagging projects. These documents provide detail on target species and other project related matters
- Tag purchase is currently through Floytag. ANSA QLD reserves the right to select any supplier based on access, price and customer service.
- Tag Register and Audit will be maintained on ANSA QLD server using MySQL database. Database is regularly backed up.
- Location of fish will be recorded using Queensland Government Logbook Maps (<https://www.business.qld.gov.au/industry/fisheries/commercial-fishing/monitoring-and-reporting/reporting-commercial-fishers/queensland-logbook-maps>)
- Fishes of Australia (<http://fishesofaustralia.net.au/>) is used to identify fish species