



Atlantic Ocean Tropical Tuna Tagging Programme

Applications of data resulting from tagging experiments in regional stock assessments

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ICCAT CICTA CICA



AOTTP – Assessment needs

- Age and growth
- Natural mortality
- Movement/stock structure
- Impact of FADs (selectivity, catchability, etc.)
- Effectiveness of the FAD moratorium

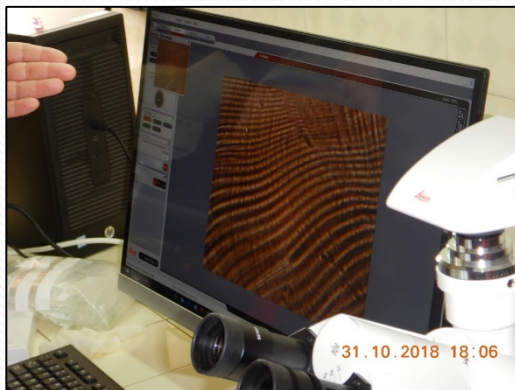
“These uncertainties in stock structure, natural mortality, and growth could have important implications for the stock assessment. The ongoing Atlantic Ocean Tropical tuna Tagging Programme (AOTTP) will contribute to reduce these uncertainties.”





AOTTP – Assessment needs

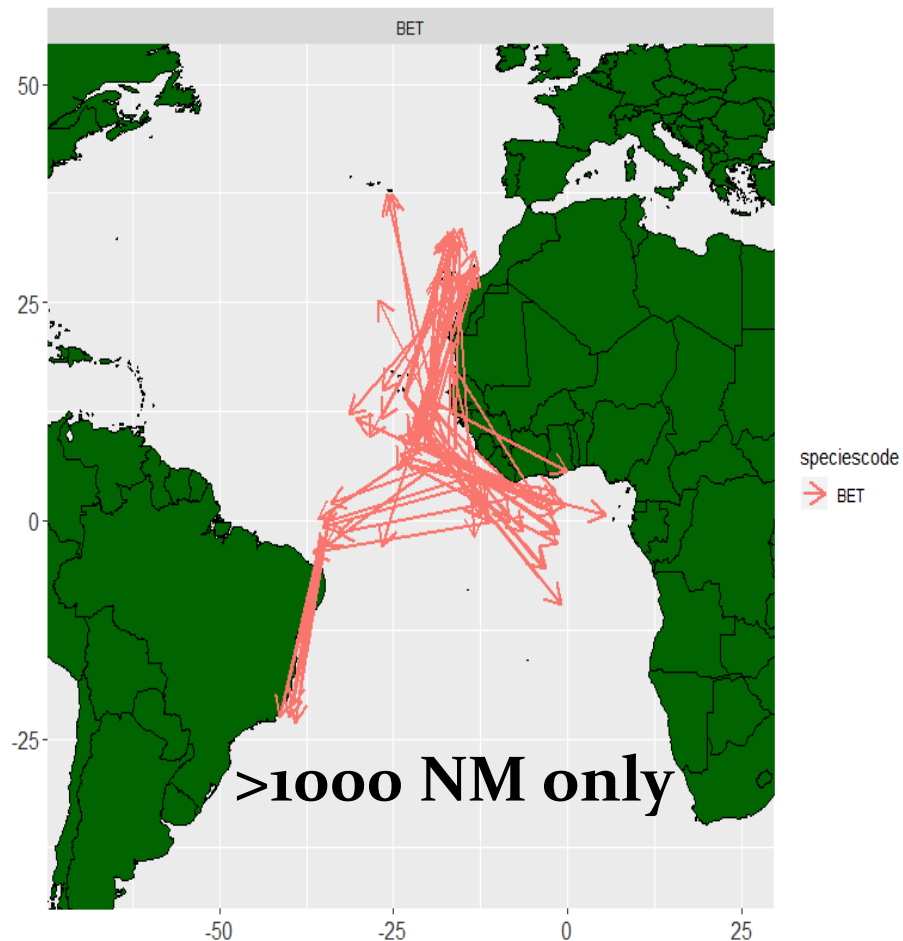
- Age and growth
 - YFT maximum age (review M and age vector)
 - YFT growth (1 or 2 stanza), BET growth and max size
 - SKJ age readings (Vertebrae? Spines?) & variability in growth
 - SS3





Assessment needs

- Movement
 - SS3 can use tag recapture data to estimate movement rates and abundance
 - Brownie type models to estimate parameters outside the assessment





Workshop 2 Brownie Models BET

Capture Histories	0010	0011	1000	1100
Frequency	5032	1390	6795	1616

If you have an estimate of tag reporting rate you can estimate exploitation rate (u), fishing mortality (F), total mortality (Z), and natural mortality (M)

$$F = 0.349 [-\log(u)]$$

Assuming **Type 1 Fishery**
(pulse fishery, M occurs after F)

$$Z = 1.051$$

$$M = 0.742 [M = Z - F]$$

<https://docs.google.com/document/d/1CpcF33-ZaSmDF48kL9XMNMUolBRsPRHe86kQ4nM-j4A/edit?usp=sharing>



AOTTP – Assessment needs

- Effectiveness of the FAD moratorium
 - Recapture rates in and out of the FAD moratorium and of fish released in and out of the FAD moratorium
 - Need to conduct more in depth analyses (time at liberty of fish released in FAD moratorium vs. out)





AOTTP – Data accessibility

- Facilitating and promoting collaborative research and stock assessments
 - Making most up to date QAQC data available to SCRS (ICCAT's scientific body)
 - Promoting the data in ICCAT meetings
 - Creating a system for data request (data policy)
 - Encouraging collaboration between analysts, ICCAT staff and tagging/tag recovery teams
 - Making data available to MSE



- Extensions
- Foreign Data Wrappers
- Languages
- Schemas (3)
 - gis
 - iccat
 - public
 - Collations
 - Domains
 - FTS Configurations
 - FTS Dictionaries
 - FTS Parsers
 - FTS Templates
 - Foreign Tables
 - Functions
 - Materialized Views
 - 1.3 Sequences
 - Tables
 - Trigger Functions
 - Types
 - Views
- aottp2
- aottp2016

- Domains
- FTS Configurations
- FTS Dictionaries
- FTS Parsers
- FTS Templates
- Foreign Tables
- Functions
- Materialized Views
- 1.3 Sequences
- Tables
- Trigger Functions
- Types
- Views (96)
 - agevalidation
 - Columns
 - Rules
 - Triggers
 - bet_releases_distinct_recoveries
 - biologic_recoveries
 - biologic_sendingid
 - e07_08
 - e15_16_17_18_20_21_brasil_fase1
 - e15_16_17_18_20_21_brasil_fase2
 - e23
 - e26
 - e28

aottp on aottp@aottp

```
1 SELECT * FROM public.ageval
2 LIMIT 100
3
```

Data Output Explain Messages Notifc

	specimenid integer	taggrpid integer	rcstageid smallint
1	44285	53557	
2	44625	53909	
3	49814	59119	
4	26138	28571	
5	26049	28482	
6	26124	28557	
7	26041	28474	
8	44531	53810	
9	26257	28690	
10	44616	53900	
11	44174	53446	
12	30603	40888	
13	49810	59115	

INTERNAL

Search

Releases control

Releases stats

Recoveries control

Recoveries stats

Auxiliary tables

Statistics tags

Electronic tags

Persons form

Biologic

Biologic Stats

Tag seeding

Help

Help

Documents description database.

[Structure data base. Tables and Views \(GOOGLE DOC\)](#)

[SchemaSpy Analysis of aottp.public \(INTERNAL SERVER\)](#)

[Summary tagging-recovery \(GOOGLE DOC\)](#)

[Surveys \(GOOGLE DOC\)](#)

[Layer description into schema GIS of postgresql \(GOOGLE DOC\)](#)

Others documents.

[Biologic. \(INTERNAL HTML\)](#)

General dataset - Password protected

EXTERNAL



Thank you!

...questions?

Photos courtesy of our tagging and recovery teams.

2016/10/28