

NOTES ON BILLFISHES CAUGHT DURING OBSERVER PROGRAM ON EUROPEAN PURSE SEINERS IN THE ATLANTIC OCEAN (2003-2012)

Chavance P.¹, Damiano A.¹, Delgado de Molina A.², Murua H.³, Ruiz J.³, Santana J. C.²

SUMMARY

This note presents data collected on billfishes during observer programme on european tropical tuna purse seine fishery since 2003. It presents: coverage of programme, catch by species, catch by type of sets and length frequencies. Detailed data by sets were provided to ICCAT secretary in numeric format for assesment purposes.

RÉSUMÉ

Ce document présente les données recueillies sur les istiophoridés pendant le programme d'observateurs mené au sein de la pêcherie de senneurs tropicaux européens depuis 2003. Il décrit la couverture du programme, la prise par espèce, la prise par type d'opérations et les fréquences des tailles. Des données détaillées par opération ont été fournies au Secrétariat de l'ICCAT sous format numérique à des fins d'évaluation.

RESUMEN

Esta nota presenta los datos sobre istiofóridos recopilados desde 2003 en el marco del programa de observadores en la pesquería tropical de cerco europea. Se presentan la cobertura del programa, la captura por especies, la captura por tipo de lance y las frecuencias de tallas. Los datos detallados por lance se facilitaron a la Secretaría de ICCAT en formato numérico para fines de evaluación.

KEYWORDS

Billfishes, Observer programme, data collections, by catch, tuna fisheries, purse seining

Introduction

Spain and France set up a regular observer programme on their tropical tuna purse seine fishery respectively in 2003 and 2005. These programmes seek a 10 % coverage of trips and are supported and cofinanced by the Data Collection Framework of European Union (Reg. 199/2008 and 1543/2000) and the respective national research institute: IRD for France, IEO and AZTI for Spain. These programmes use the same protocols for collection for observation and collection of data. Since 2003, a common database format (ObServe) has been set up facilitating exchange and common analysis. Protocols are described in Ariz *et al.* (2010).

¹Institut de Recherche pour le Développement (IRD), UMR 212 Ecosystèmes Marins Exploités, Sète, France (pierre.chavance@ird.fr, alain.damiano@ird.fr)

²Instituto Espanol de Oceanografía (IEO), C. O. de Canarias, Santa Cruz de Tenerife, Spain (alicia.delgado@ca.ieo.es, jcarlos.santana@ca.ieo.es)

³AZTI Tecnalia, Marine Research Division, Pasaia, Spain (hmurua@azti.es, jruiz@azti.es)

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Table 1. Annual effort coverage of European observer programme on tuna purse seine vessels by trips or sets.

Year	Fishery*					Observers				Coverage in %	
	Trips	Sets	FSC	FAD	Indet	Trips	Sets	FSC	FAD	Trips	Sets
2003	146	2720	1790	879	51	4	103	66	37	2.7	3.8
2004	136	2044	1174	772	98	4	74	45	29	2.9	3.6
2005	169	2997	1869	1090	38	5	132	72	60	3.0	4.4
2006	149	2003	1263	714	26	5	87	58	29	3.4	4.3
2007	142	2172	1295	867	10	8	216	132	84	5.6	9.9
2008	180	3204	1754	1435	15	12	347	197	150	6.7	10.8
2009	205	4571	2669	1891	11	16	453	286	167	7.8	9.9
2010	224	5249	2636	2597	16	24	747	419	328	10.7	14.2
2011	244	5254	2373	2868	13	29	750	484	266	11.9	14.3
2012	229	4774	1923	2841	10	25	818	371	447	10.9	17.1
Total	1824	34988	18746	15954	288	132	3727	2130	1597	7.2	10.7

*Including France, Spain and Belize

Table 2. Catch by species of billfishes (in numbers of individuals) and by type of sets for the European tuna purse seine fishery in the Atlantic Ocean for the period 2003-2012.

Species/Set type	FSC	FAD	Total	%
<i>Istiophoridae</i> (BIL)	21	59	80	3.0
<i>Istiophorus albicans</i> (SAI)	1557	144	1701	64.1
<i>Makaira nigricans</i> (BUM)	159	652	811	30.6
<i>Tetrapterus albidus</i> (WHM)	7	6	13	0.5
<i>Tetrapturus angustirostris</i> (SSP)		2	2	0.1
<i>Tetrapturus audax</i> (MLS)	1	6	7	0.3
<i>Tetrapturus pfluegeri</i> (SPF)	9	3	12	0.5
<i>Xiphias gladius</i> (SWO)	8	19	27	1.0
Total	1762	891	2653	100.0
%	66.4	33.6	100.0	

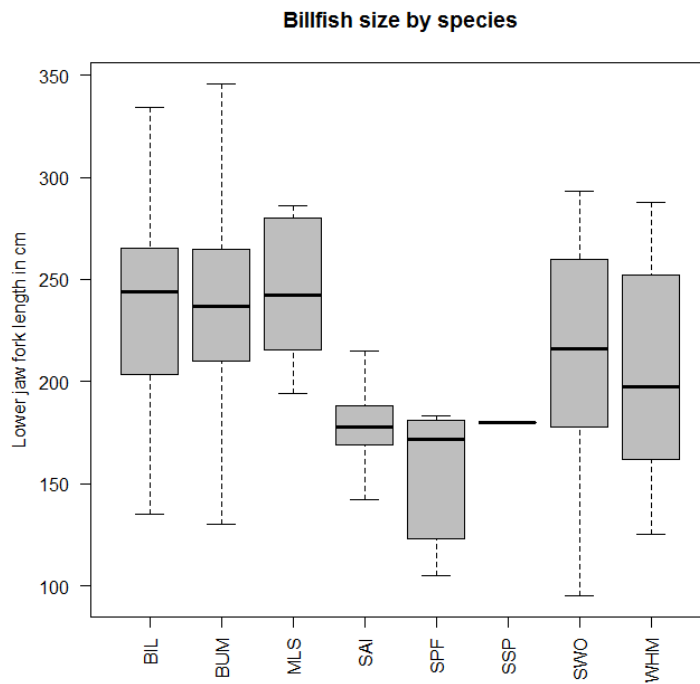


Figure 1. Box plot of size of billfishes caught during the European observer programme in the Atlantic Ocean (2003-2012). See **Table 2** for FAO species codes.

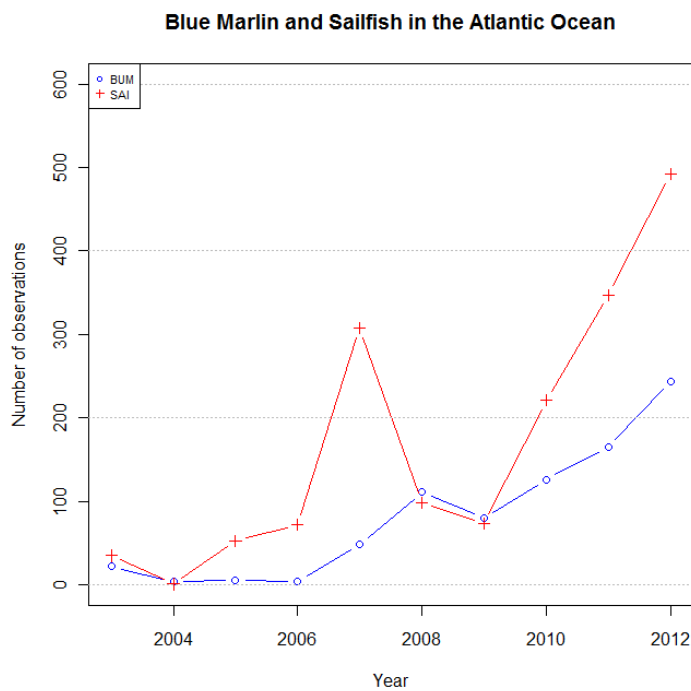


Figure 2. Number of individuals of *Makaira nigricans* (BUM) and *Istiophorus albicans* (SAI) caught annually during the European observer program in the Atlantic Ocean. These numbers are not extrapolated to the fishery and are dependant of the observer programme coverage (**Table 1**).

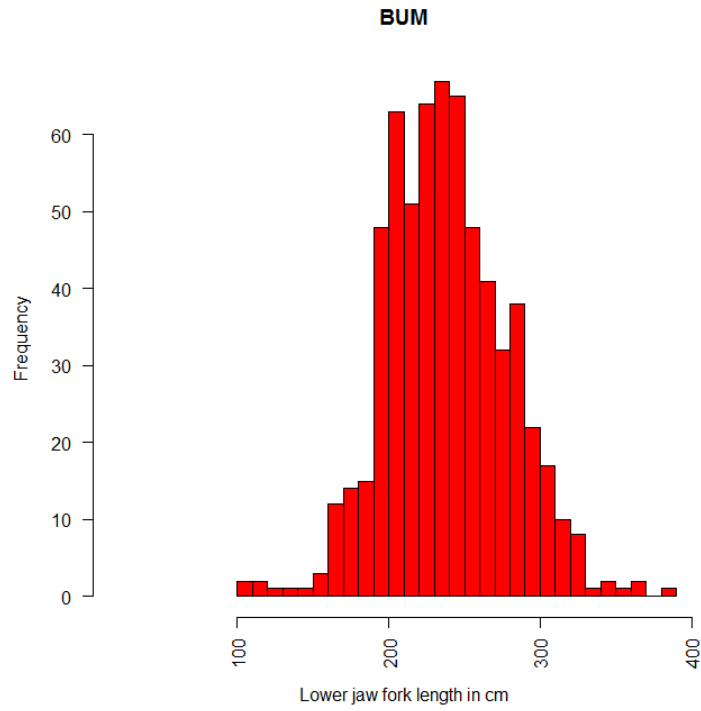


Figure 3. Total length frequency of *Makaira nigricans* (BUM) caught during the European observer program in the Atlantic Ocean.

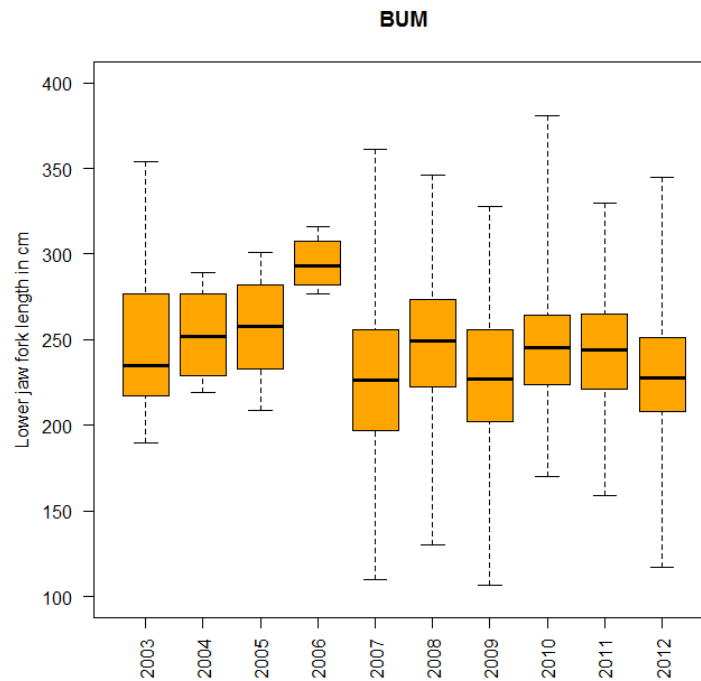


Figure 4. Annual length frequency of *Makaira nigricans* (BUM) caught during the European observer program in the Atlantic Ocean.

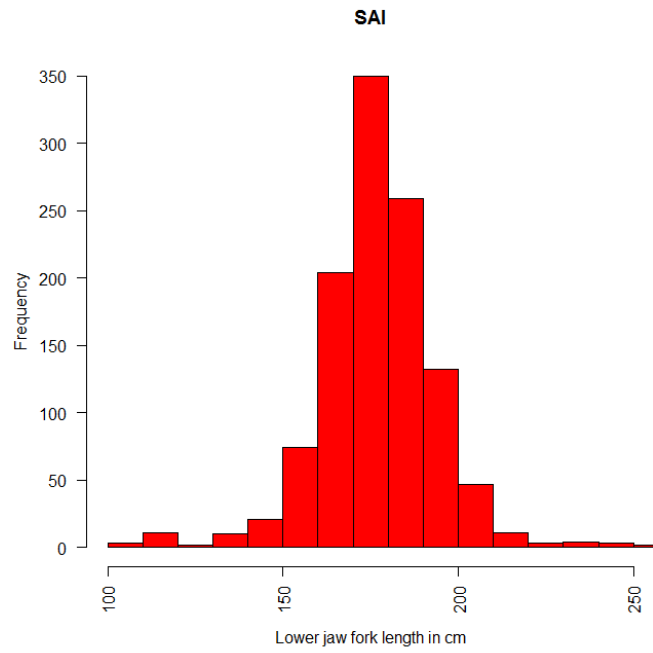


Figure 5. Annual length frequency of *Istiophorus albicans* (SAI) caught during the European observer program in the Atlantic Ocean.

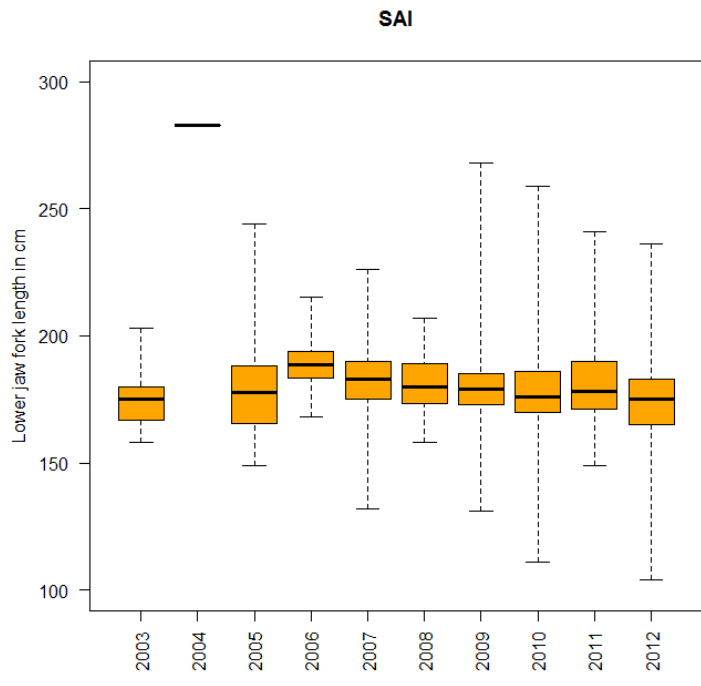


Figure 6. Total length frequency of *Istiophorus albicans* (SAI) caught during the European observer program in the Atlantic Ocean.