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**Report of Japan's scientific observer program for tuna longline fishery
in the convention area of Inter-American Tropical Tuna Commission
in 2016 calendar year**

JAPAN

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Summary

In accordance with Resolution C-11-08, Japan commenced its scientific observer program for longline fishery in the convention area of Inter-American Tropical Tuna Commission (IATTC) from 1 January 2013. This document provides the scientific observers' information in 2016 calendar year. In 2016 calendar year, 13 observer trips were conducted on Japanese tuna longline vessels in the Convention Area.

Keywords

Longline, Japan, Scientific observer, Tuna fisheries

Introduction

In accordance with Resolution C-11-08, Japan commenced its scientific observer program for longline fishery in the convention area of Inter-American Tropical Tuna Commission (IATTC) from 1 January 2013. This document provides the scientific observers' information in 2016 calendar year.

Training of the scientific observer

In principal, all scientific observers attend a training class held by Overseas Fishery Cooperation Foundation of Japan (OFCF) and Japan NUS (JANUS) under Japan's observer program before their departure

for the cruise. The National Research Institute of Far Seas Fisheries (NRIFSF) provides an observer manual and supervises the training course. Under the course scientific observers are trained in skills necessary for conduct its part, including species identification, data recording protocols *etc.*

Results

i) Observer trip number, observed fishing operations and observer coverage

In 2016 calendar year, 13 observer trips were conducted on Japanese tuna longline vessels. Total number of observed fishing operations of 13 trips was 831 sets. Information of the trips is shown in Table 1. The observer coverage rate was calculated to be 7.18% by number of operations (831/11,572).

ii) Catch records, including bycatch data

Observers recorded every items taken on deck and identified the species by themselves. Observers also collected bycatch data. They took photo of bycatch species according to the procedures given in the observer manual made by NRIFSF scientists. Bycatch experts in NRIFSF identified species using these photos.

The list of species recorded by scientific observer on longline fishery in 2016 was shown in Table 2. In relation to paragraph 3 of Resolution C-11-10, sixteen interactions of oceanic whitetip shark were recorded by observers in 7 trips (Table 2). Seven oceanic whitetip sharks were dead discarded and others were released alive. In relation to paragraph 4 of Resolution C-15-04, eighteen interactions of Mobulid ray were recorded by observers in 5 trips (Table 2). In relation to paragraph 4.a of Resolution C-04-05, sixty-seven interactions of Sea turtles were recorded by observers in 6 trips (Table 2), and all of them were released.

Table 1. Information on the trip of the scientific observer for Japanese tuna longline in the convention areas of Inter-American Tropical Tuna Commission during 2016 calendar year.

Trip ID	Range of latitude	Range of longitude	Start date of operation	End date of operation	Number of operation	Number of hooks
Trip 1	14.4-14.7S	121.3-121.5W	2016/1/1	2016/1/3	3	8,010
Trip 2	6.3-13.9S	104.8-111.5W	2016/1/1	2016/2/29	54	149,974
Trip 3	6.3-15.8S	105.5-114.8W	2016/1/1	2016/4/22	94	236,976
Trip 4	9.1-30.5S	80.4-119.8W	2016/5/2	2016/11/8	157	408,027
Trip 5	4.9-12.8S	116.8-130.5W	2016/7/10	2016/10/30	107	344,466
Trip 6	7.0-11.8S	111.4-124.8W	2016/8/8	2016/10/19	68	161,840
Trip 7	11.3-19.6S	109.8-114.1W	2016/8/19	2016/10/20	61	158,389
Trip 8	9.5-15.1S	119.0-135.8W	2016/8/5	2016/11/3	78	202,800
Trip 9	11.5-14.3S	110.0-123.0W	2016/9/17	2016/10/16	26	62,080
Trip 10	18.4-18.9S	114.7-116.6W	2016/9/4	2016/9/21	18	45,832
Trip 11	12.0-13.4S	102.3-102.8W	2016/10/12	2016/10/24	13	33,150
Trip 12	9.7-13.5S	102.9-112.0W	2016/9/29	2016/12/31	82	194,500
Trip 13	9.8-13.4S	104.8-111.3W	2016/10/19	2016/12/31	70	183,920
Total	—	—	—	—	831	2,156,522

Table 2. List of species recorded by scientific observer on longline fishery in the Convention Area in 2016 calendar year (Unit: Number of individuals).

Trip	1	2	3	4	5	6	7
Species							
Albacore	1	1	51	834	337	281	452
Yellowfin tuna	10	78	95	95	558	503	93
Bigeye tuna	24	592	469	1218	1492	1123	954
Skipjack tuna	1	8	26	13	81	49	11
Sailfish	0	2	0	0	2	0	0
Black marlin	0	0	1	4	0	1	1
Blue marlin	0	43	79	11	26	12	6
Spearfishes	1	35	78	165	111	52	268
Striped marlin	0	13	18	111	18	7	84
Sword fish	4	386	265	358	417	211	94
Other teleosts	4	295	177	3147	2342	1271	955
Thresher sharks	1	29	15	20	52	27	8
Shortfin mako	0	0	1	8	7	7	10
Blue shark	12	225	131	194	240	132	78
Oceanic whitetip shark	0	1	1	0	6	2	1
Other Sharks	0	309	55	101	655	530	62
Sting ray	7	318	108	379	246	138	133
Mobulid Raya	0	3	0	0	4	0	0
Other Rays	0	0	2	0	0	0	0
Sea Birds	0	0	0	2	0	0	1
Sea Turtles	0	34	25	1	3	0	0
Mammals	0	0	0	0	4	0	0
Unidentified	0	0	0	0	0	0	0
Total	65	2372	1597	6661	6601	4346	3211

Table 2. Continued.

Trip	8	9	10	11	12	13	Total
Species							
Albacore	261	102	191	0	28	13	2552
Yellowfin tuna	152	47	33	55	239	98	2056
Bigeye tuna	727	310	333	232	680	865	9019
Skipjack tuna	8	4	0	1	15	25	242
Sailfish	0	0	0	0	0	1	5
Black marlin	1	0	1	0	2	1	12
Blue marlin	14	6	2	3	21	23	246
Spearfishes	53	58	85	26	229	161	1322
Striped marlin	40	7	33	17	45	21	414
Sword fish	277	35	24	51	122	444	2688
Other teleosts	597	182	187	279	326	803	10565
Thresher sharks	38	13	1	45	26	88	363
Shortfin mako	14	13	9	10	5	3	87
Blue shark	145	40	24	61	94	253	1629
Oceanic whitetip shark	4	0	0	0	0	1	16
Other Sharks	74	90	0	33	93	893	2895
Sting ray	166	193	4	39	137	334	2202
Mobulid Raya	3	0	0	1	0	7	18
Other Rays	0	0	0	0	0	0	2
Sea Birds	0	0	0	0	0	0	3
Sea Turtles	0	0	1	0	3	0	67
Mammals	0	0	0	0	0	1	5
Unidentified	1	0	0	0	0	0	1
Total	2575	1100	928	853	2065	4035	36409

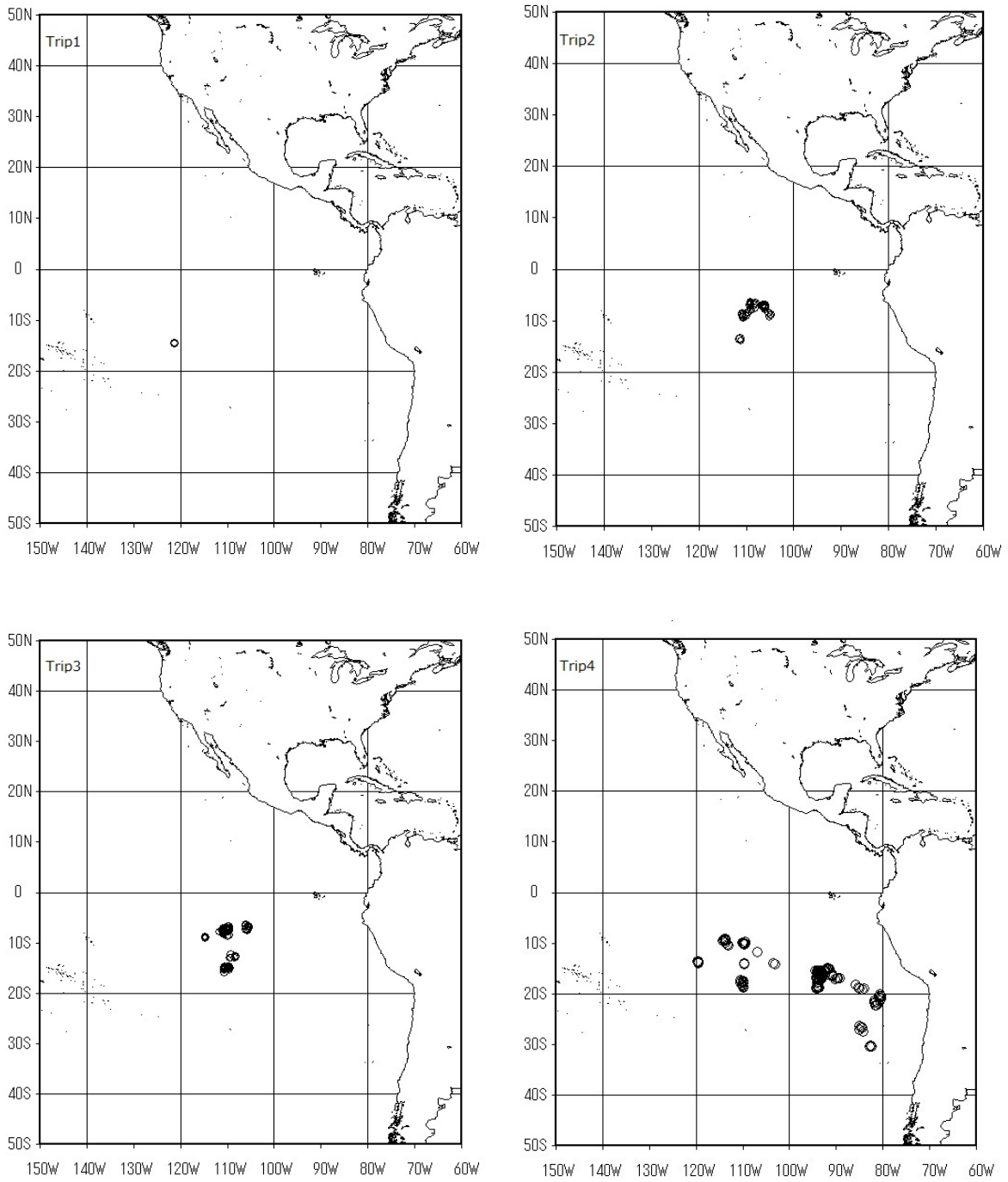


Fig 1. Line setting locations of Japanese tuna longline for the trips with the scientific observer onboard in the convention areas of Inter-American Tropical Tuna Commission during 2016 calendar year (Trip 1 to 13).

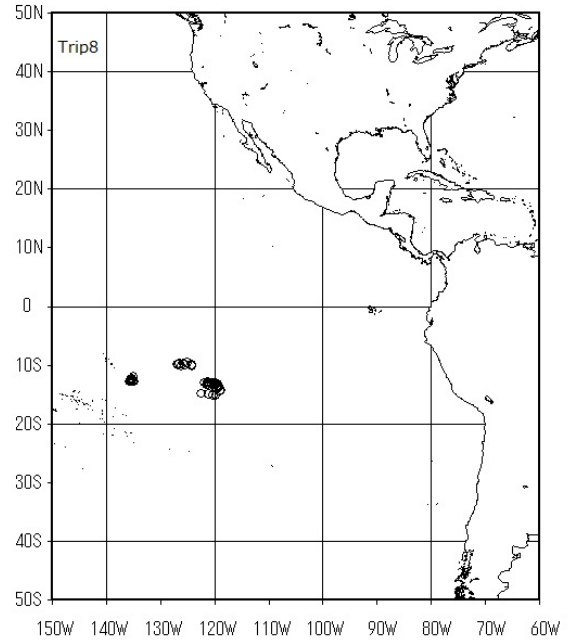
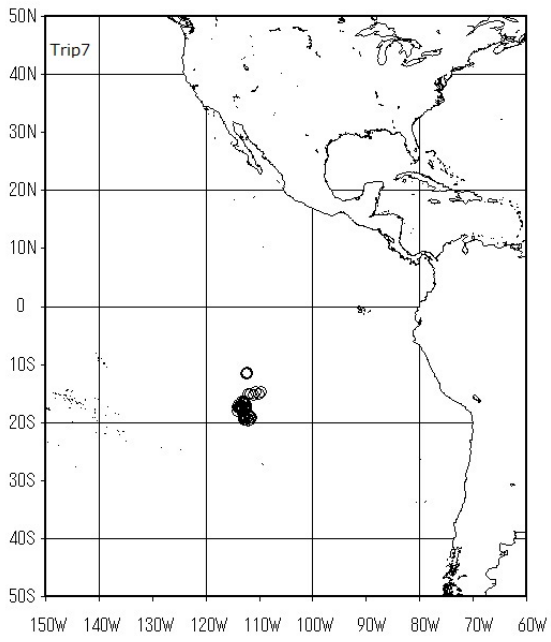
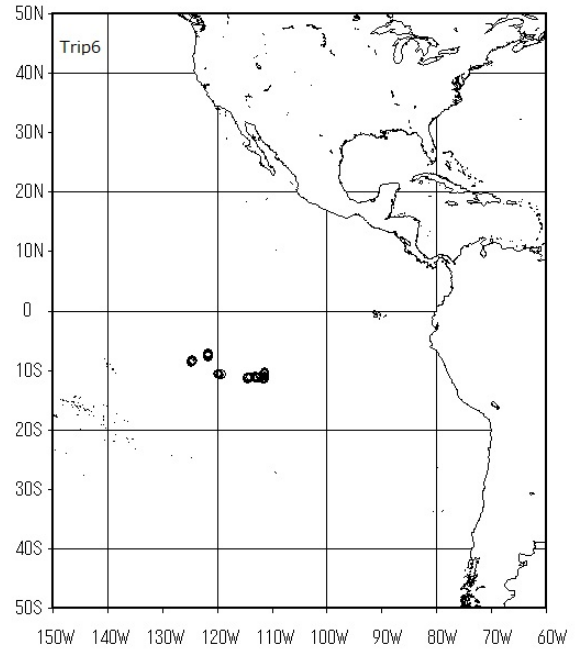
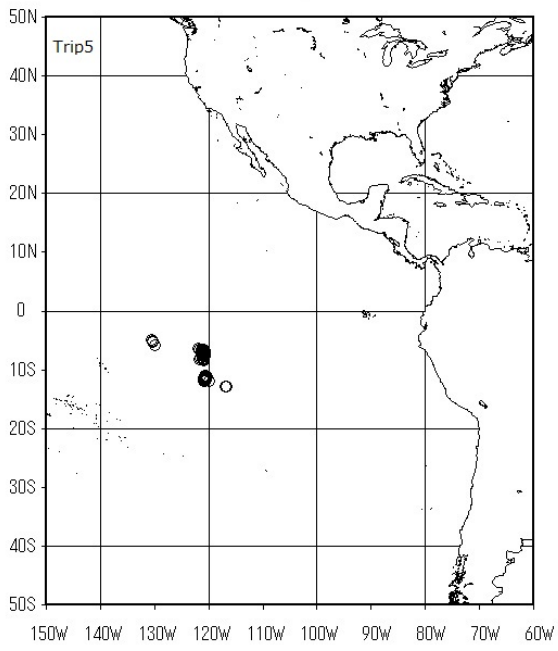


Fig 1. *Continued.*

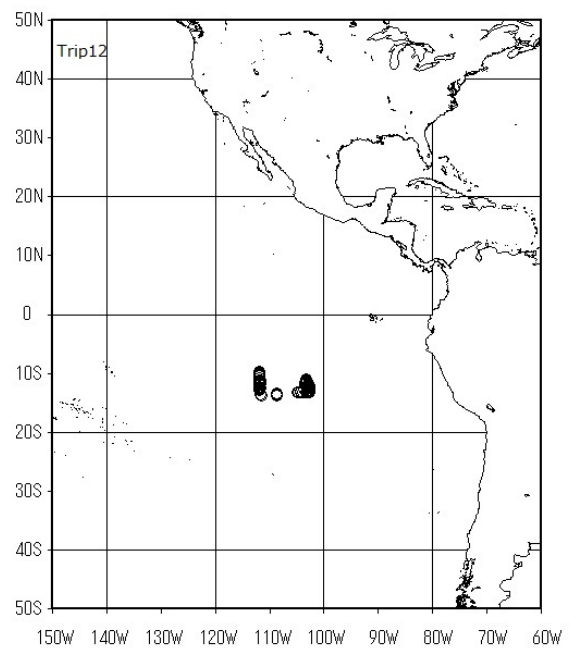
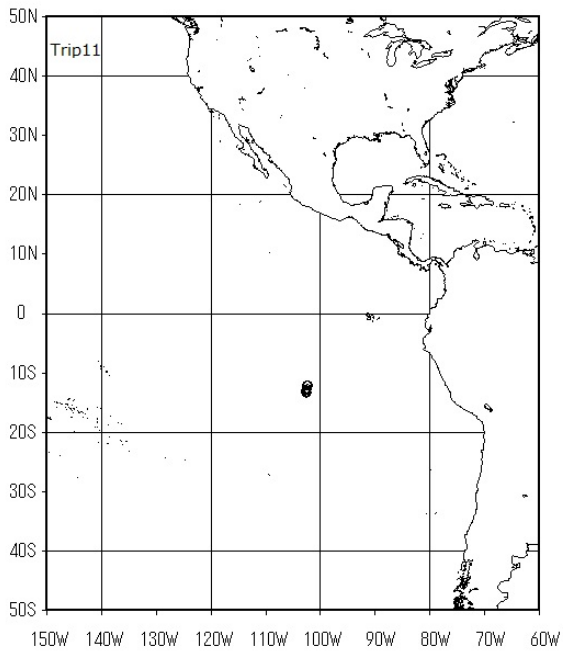
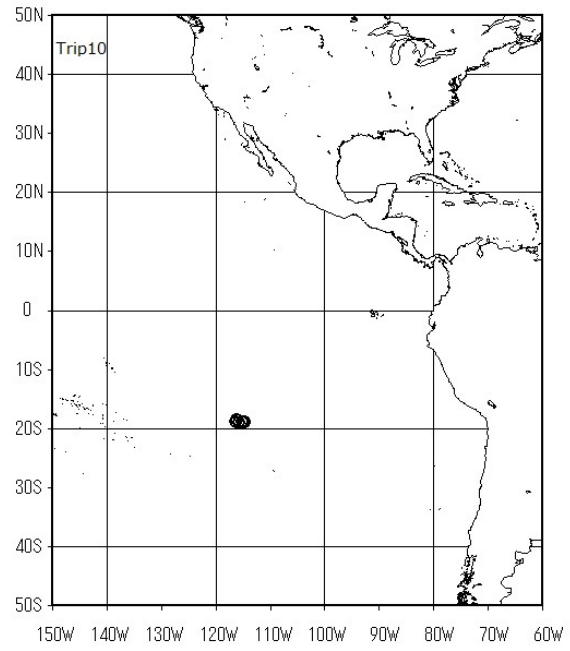
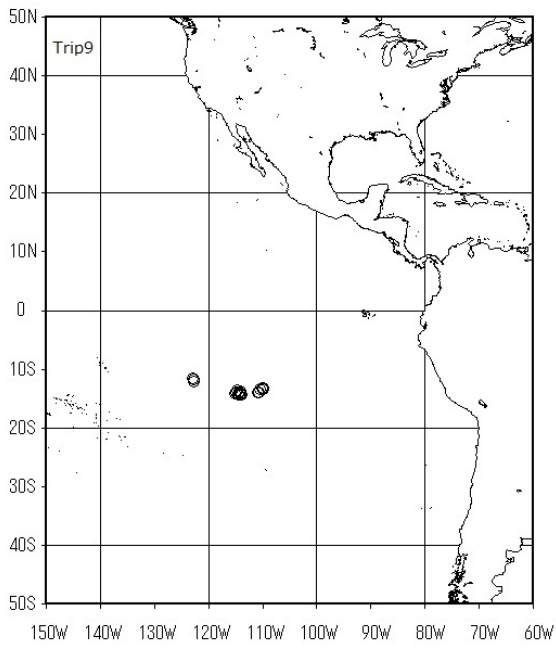


Fig 1. *Continued.*

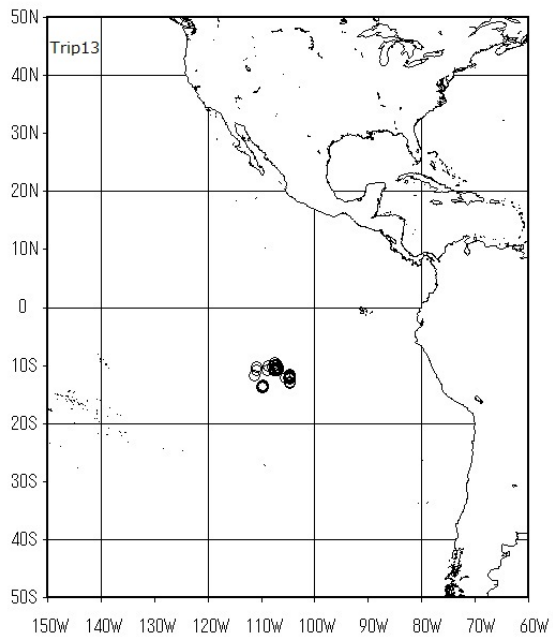


Fig 1. *Continued.*

Acknowledgement

We greatly appreciate all scientific observers for their efforts in order to collect valuable data and samples on the Japanese longline vessels. We would also like to express special thanks to all crews of the longline vessels for their understanding and cooperation to the observer program.