

REPORT ON U.S. COLLECTIONS FROM THE GULF OF MEXICO, 1994

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The Southeast Fisheries Science Center conducted ichthyoplankton surveys in the Gulf of Mexico in 1994 which followed a normal sampling protocol which has been followed since 1982 with minor variations. In 1994 the surveys were done cooperatively with a Japanese research vessel and Japanese sampling protocols were followed on the U. S. vessel OREGON II in addition to the normal U. S. protocol. The resulting samples were sent to the Polish Plankton Sorting and Identification Center (ZSIOP), Szczecin, Poland for sorting and identification and the identified material was returned to me for verification of the identification. From OREGON II Cruise 209 the following samples were sorted and identified: left and right 60cm bongo samples following U. S. protocol (tows to 200m or to 5m above the bottom in depths less than 200m using 333 micron mesh apertures - samples designated R6B3 and L6B3, respectively). The Japanese protocol used 60cm bongos with 505 micron mesh apertures and tows to 100m depth - samples designated JR6B5 and JL6B5, respectively. In addition an additional U. S. ship CHAPMAN covered the grid at a later time and only used the U.S. protocol. A portion of that leg was sampled by the R/V Hernan Cortez II, a State of Florida research vessel and it followed the U. S. protocol.

The catches of Thunnus thynnus larvae and Thunnus sp. larvae are given in the attached tables. All of the thynnus larvae and a representative sample of the Thunnus sp. larvae were provided to the workshop attendees for inspection. The identity of the Thunnus sp. larvae are presumed to be mostly atlanticus (usually ca. 80%) and albacares (usually 10%) or based on an earlier study (W. J. Richards et al. 1990. Problems identifying tuna larvae species (Pisces: Scombridae: Thunnus) from the Gulf of Mexico. Fish. Bull. U. S. 88:607-609).

The positive bluefin stations from the OREGON II are plotted on the attached graph. Preliminary inspection reveals similar distribution patterns to past cruises and no apparent difference between Japanese and U.S. sampling protocols. Once the Japanese results can be compared with the U. S. results after specimen identification verification by all parties, a more definitive study can be completed.

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T. thynnus - 1994 sorted by station

Vessel	SEAMAP #	Net	#Larvae	Sizes ZSIOP from log	Comments	Sta. Number	Number under 10 sq. meters	Volume Filtered	Maximum depth	Time	Date 1996	Latitude deg-min	Longitude deg-min
ORII 209	18010	JR6B5	1	4.4		85	20.41	49	100		39 05/02	28-00	086-00
ORII 209	18068	JR6B5	1	4.1		100	22.73	44	100		1007 05/05	28-00	088-00
ORII 209	18084	R6B3	2	3.1, 3		104	13.65	293	200		322 05/06	28-30	089-00
ORII 209	18085	L6B3	2	3.7, 2.9		104	13.89	288	200		322 05/06	28-30	089-00
ORII 209	18088	JR6B5	2	8.2, 8.5		104	45.45	44	100		322 05/06	28-30	089-00
ORII 209	18089	JL6B5	3	3		104	49.18	61	100		322 05/06	28-30	089-00
ORII 209	18090	R6B3	1	3.1		105	7.35	272	200		449 05/06	28-30	089-00
ORII 209	18091	L6B3	3	3.1, 7.5, 8.8		105	22.22	270	200		449 05/06	28-30	089-00
ORII 209	18092	JR6B5	2	3.1, 7.2	7.2 c&s, v.	105	44.44	45	100		449 05/06	28-30	089-00
ORII 209	18093	JL6B5	4	7, 7, 7.6, 8.3		105	78.43	51	100		449 05/06	28-30	089-00
ORII 209	18094	R6B3	1	3		106	7.12	281	200		548 05/06	28-30	089-00
ORII 209	18097	JL6B5	2	3.8, not measured		106	41.67	48	100		548 05/06	28-30	089-00
ORII 209	18100	JR6B5	1	2.6		107	23.81	42	100		941 05/06	28-00	089-00
ORII 209	18134	JR6B5	2	4.5, 6.4		115	44.19	43	95		1834 05/07	27-00	090-00
ORII 209	18164	R6B3	1	6.5		123	6.94	294	204		2256 05/08	27-00	091-00
ORII 209	18168	JR6B5	1	7		123	22.73	44	100		2256 05/08	27-00	091-00
ORII 209	18174	R6B3	1	2.7		125	6.67	300	200		154 05/09	26-10	091-00
ORII 209	18186	R6B3	2	2.8 + fragment (trunk)		128	13.99	286	200		1149 05/09	26-00	092-00
ORII 209	18190	JR6B5	1	3.2		128	22.44	45	101		1149 05/09	26-00	092-00
ORII 209	18191	JL6B5	2	4, 3.5		128	36.07	56	101		1149 05/09	26-00	092-00
ORII 209	18192	R6B3	1	2.5		129	6.89	296	204		1614 05/09	26-30	092-00
ORII 209	18201	JR6B5	1	3		130	27.03	37	100		2048 05/09	27-00	092-00
ORII 209	18203	R6B3	1	9.2	C&S confirm	131	6.45	310	200		113 05/09	27-30	092-00
ORII 209	18209	R6B3	1	8	C&S 18+21, H	132	6.04	182	110		519 05/10	28-00	092-00
ORII 209	18210	L6B3	1	6.2		132	5.91	186	110		519 05/10	28-00	092-00
ORII 209	18231	R6B3	1	6		137	6.54	306	200		2342 05/10	26-40	093-00
ORII 209	18232	L6B3	1	7.2		137	6.51	307	200		2342 05/10	26-40	093-00
ORII 209	18254	L6B3	1	5.5		142	6.15	325	200		1350 05/11	26-00	094-00
ORII 209	18273	JR6B5	3	2.8, 2.8, 2.9	2 larvae in	146	60.75	40	81		856 05/12	28-00	094-00
ORII 209	18274	JL6B5	2	3, not measured		146	40.50	40	81		856 05/12	28-00	094-00
ORII 209	18287	JR6B5	1	2.5		150	19.61	51	100		1113 05/12	27-00	095-00
ORII 209	18379	R6B3	1	2.5		297	6.99	286	200		522 06/09	27-20	089-23
CH 9404	17778	R6B3	7	4.2, 4.3, 9.4, 4.3, 3.8		28025	52.88	274	207		953 05/25	27-00	088-00
CH 9404	17806	R6B3	9	4.4, 4.1, 3.5, 3.2, 3.3, 4.4, 4.4		28035	62.94	286	200		458 05/27	27-00	089-00
CH 9404	17872	R6B3	1	6		28057	4.83	178	86		345 05/31	28-00	093-00
CH 9404	17860	R6B3	2	4.6, 4.		28053	14.79	284	210		1225 05/30	27-00	092-00

OTHER Thunnus sp

Vessel	SEAMAP #	Net	#Larvae	Sizes from log	Comments	Number	10 sq. meters	Volume Filtered	depth	1996	deg-min	deg-min	
ORII	17896	R6B3	5	3.2, 2.2, 3.1, 3.6, 2.1		51	31.95	313	200		231 04/29	27-00	085-00
ORII	17908	R6B3	2	4.0, 4.5		55	13.66	205	140		1848 04/29	26-00	084-00
ORII	17930	R6B3	2	4.0, 17.0	C&S v. 19+20	69	12.27	326	200		2105 04/30	24-16	084-35
ORII	17940	R6B3	1	3.0		71	5.83	343	200		58 05/01	24-20	084-45
ORII	17964	R6B3	1	6.0		75	5.90	339	200		735 05/01	24-25	085-00
ORII	17982	R6B3	5	5.0, 5.7, 4.0, 3.2, 2.9		79	30.03	333	200		2314 05/01	25-00	086-00
ORII	17990	R6B3	1	5.7		81	7.72	281	217		818 05/02	26-00	086-00
ORII	17998	R6B3	3	4.8, 3.1, 4.0		83	18.53	319	197		1724 05/02	27-00	086-00
ORII	18016	R6B3	1	2.3		88	6.18	335	207		1238 05/03	29-00	087-00
ORII	18032	R6B3	6	2.2, 2.5, 2.5, 2.0, 2.2, 2.0, 2.6, 2.3		92	42.21	290	204		443 05/04	27-00	087-00
ORII	18040	R6B3	3	3.6, 5.0, 3.6		94	20.00	300	200		1122 05/04	26-16	087-00
ORII	18056	R6B3	2	4.0, 2.1		98	12.99	308	200		234 05/05	27-00	088-00
ORII	18084	R6B3	2	2.4, 4.0		104	13.65	293	200		322 05/06	28-30	089-00
ORII	18090	R6B3	1	4.6		105	7.35	272	200		449 05/06	28-30	089-00
ORII	18094	R6B3	1	2.7		106	7.12	281	200		548 05/06	28-30	089-00
ORII	18106	R6B3	2	4.2, 4.8		109	13.94	287	200		1836 05/06	27-00	089-00
ORII	18130	R6B3	3	3.0, 4.0, 2.5		115	20.47	299	204		1834 05/07	27-00	090-00
ORII	18138	R6B3	1	2.2		117	6.76	296	200		216 05/08	28-00	090-00
ORII	18154	R6B3	2	2.9, 2.1		121	13.84	289	200		1724 05/08	27-00	091-00
ORII	18160	R6B3	1	2.4		122	7.52	266	200		2044 05/08	26-40	091-00
ORII	18164	R6B3	2	6.5, 3.8		123	13.88	294	204		2256 05/08	27-00	091-00
ORII	18170	R6B3	1	6.0		124	6.92	289	200		25 05/09	26-20	091-00
ORII	18174	R6B3	1	4.2		125	6.67	300	200		154 05/09	26-10	091-00
ORII	18186	R6B3	3	3.2, 2.2, 4.1		128	20.98	286	200		1149 05/09	26-00	092-00
ORII	18192	R6B3	5	6.7, 4.6, 3.9, 4.2, 2.1		129	34.46	296	204		1614 05/09	26-30	092-00
ORII	18197	R6B3	6	2.5, 2.2, 3.0, 2.2, 2.1, 2.0		130	42.25	284	200		2048 05/09	27-00	092-00
ORII	18209	R6B3	1	5.5		132	6.04	182	110		519 05/10	28-00	092-00
ORII	18217	R6B3	1	5.5		134	12.05	166	200		1209 05/10	28-00	093-00
ORII	18231	R6B3	1	4.2		137	6.54	306	200		2342 05/10	26-40	093-00
ORII	18253	R6B3	3	3.2, 3.1, 3.0		142	18.81	319	200		1350 05/10	26-00	094-00
ORII	18371	R6B3	1	2.0		295	6.80	294	200		2111 06/08	27-41	088-30
ORII	18379	R6B3	2	2.0, 2.2		297	13.99	286	200		522 06/09	27-20	089-23
ORII	17897	L6B3	6	3.8, 3.2, 3.1, 2.4, 2.6		51	38.34	313	200		231 04/29	27-00	085-00
ORII	17909	L6B3	1	6.5		55	6.76	207	140		1848 04/29	26-00	084-00
ORII	17915	L6B3	1	3.2		57	6.99	176	123		302 04/30	25-00	084-00
ORII	17971	L6B3	1	5.0		76	5.92	338	200		943 05/01	25-00	085-00
ORII	17975	L6B3	1	6.7		77	6.33	316	200		1432 05/01	25-00	085-00
ORII	17999	L6B3	1	not measured		83	6.21	317	197		1724 05/02	27-00	086-00
ORII	18073	L6B3	1	4.0		102	7.38	271	200		1735 05/05	29-00	088-00
ORII	18085	L6B3	2	3.6, 3.4		104	13.89	288	200		322 05/06	28-30	089-00
ORII	18091	L6B3	1	8.0		105	7.41	270	200		449 05/06	28-30	089-00
ORII	18099	L6B3	1	4.2		107	6.76	296	200		941 05/06	28-00	089-00
ORII	18115	L6B3	1	3.0		111	6.67	300	200		238 05/07	26-00	089-00
ORII	18131	L6B3	2	2.5, 4.2		115	13.38	305	204		1834 05/07	27-00	090-00
ORII	18147	L6B3	1	2.5		119	6.73	223	150		904 05/08	28-00	091-00
ORII	18155	L6B3	2	2.8, 3.2		121	13.51	296	200		1724 05/08	27-00	091-00
ORII	18165	L6B3	1	3.5		123	6.92	295	204		2256 05/08	26-30	091-00
ORII	18179	L6B3	1	3.4		126	7.21	287	207		417 05/09	26-00	091-00
ORII	18187	L6B3	2	6.3, 5.9		128	14.18	282	200		1149 05/09	26-00	092-00
ORII	18198	L6B3	4	2.3, 2.3, 2.3, 2.3		130	27.78	288	200		2048 05/09	27-00	092-00
ORII	18204	L6B3	3	4.1, 3.2, 4.3		131	19.29	311	200		113 05/09	27-30	092-00
ORII	18218	L6B3	1	4.2		134	12.12	165	200		1209 05/10	28-00	093-00
ORII	18254	L6B3	1	3.2, 3.9		142	6.15	325	200		1350 05/11	26-00	094-00

