

SUBSTITUTION AND RAISING DONE BY THE SECRETARIAT FOR BLUEFIN TUNA FOR THE 1989 SCRS

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AREA COUNTRY	C A T C H			TASKI MT		R.F.	SIZE DATA SUBSTITUTIONS			SAMPLE MT #	REMARKS
	GEAR	YEAR	TIME	OLD	NEW		COUNTRY	GEAR	YEAR		
EAST ATLANTIC											
1NORWAY	PS	86	8	24	31	1.291667					
1SPAIN	TRAP	86		799	891	1.000000					RE-RAISED
1PORT-AZOR	BB	87	7		58	22.385179	1PORT-MADR	HAND	87	17	2.591
1SPAIN-CANAR	BB	87	M		25	19.705721					12
1PANAMA	LL	87	Q		4	0.004444	1JAPAN	LL	87	Q	2.3352
1PORT-MADR	HAND	87	M		3	1.000000					10
1FRANCE	BB	87	M		533	0.352513	1SPAIN	BB	97	M	2.591
1SPAIN	BB	87	M		1512	1.000000					2412
1JAPAN	LL	87	Q		900	1.000000					
1PORTUGAL	SURF	87	M		102	0.067460	1SPAIN	BB	87	M	
1MOROCCO	TRAP	87	M		123	0.037500	1SPAIN-ATL	TRAP	86+8	M	
1SPAIN	TRAP	87	M		939	0.285290	1SPAIN-ATL	TRAP	86+8	M	
1MOROCCO	SURF	88	M		202	0.171915	1FRANCE-MED	PSM	88	M	1175.0
1MOROCCO	TRAP	88	M		35	0.014650	1SPAIN-ATL	TRAP	88	M	
1POLAND	UNCL	88	8		2	0.004131	1SPAIN	BB	88	8	494.179
1PORTUGAL	SURF	88	M		16	0.007685	1SPAIN	BB	88	M	
1PORT-MADR	BB	88	5		29	393.510638					30
1PORT-MADR	HAND	88	M		1	1.000000					6
1SPAIN	BB	88	M		2082	1.000000					5609
1SPAIN	TRAP	88	M		2339	1.000000					
1SPAIN-CANAR	BB	88	M		92	1.000000					275
1FRANCE	BB	88	M		479	0.230057	1SPAIN	BB	98	M	
1JAPAN	LL	88	Q		800	0.383839	1JAPAN	LL	87	Q	
1FRANCE	GILL	88	M		145	0.069645	1SPAIN	BB	88	M	
1FRANCE	MWD	88	M		100	0.048031	1SPAIN	BB	88	M	
WEST ATLANTIC											
2CAN-JPN	LL	87		31	33	1.000000					
2CANADA	HAND	87		33	32	1.000000					
2CANADA	TRAP	87		18	17	1.000000					
2CANADA	LL	88	M		104	1.000000				103.702	1526
51CANADA	HAND	88	8			1.065532					100% SAMPLING
51CANADA	HAND	88	9			1.093335					
2CANADA	HAND	88	M		263	1.000000					1170
2CANADA	RR	88	M		7	1.000000					7
2CANADA	TRAP	88	M		14	1.000000					43
2URUGUAY	LL	88	M		2	0.012579	1USA	HAND	88	M	
2USA	HAND	88	M		159	1.000000					
2USA	HARP	88	M		151	1.000000					
2USA	LL	88	M		15	1.000000					
2USA	LLD	88	M		0	1.000000			215		

AREA COUNTRY	C A T C H				TASKI	MT	R.F.	SIZE DATA SUBSTITUTIONS				SAMPLE	REMARKS
	GEAR	YEAR	TIME	MT				COUNTRY	GEAR	YEAR	TIME		
			OLD	NEW									
2USA	PS	88	M	333	1.000000							BY NATIONAL SCIENTISTS	
2USA	RR	98	M	432	1.000000							BY NATIONAL SCIENTISTS	
2USA	UNCL	98	M	6	1.000000							INCLUDED IN HAND	
2USA(GULF)	LL	38	M	143	1.000000							BY NATIONAL SCIENTISTS	
2ST LUCIA	HAND	88	8	3	0.020979	USA(GULF)	LL	88	8			RAISED BY TASKI (US LL MONTH=8)	
2JAPAN	LL	88	M	1100	1.000000							BY NATIONAL SCIENTISTS	
2DOMIN. REP	SURF	88	M	199	1.251572	USA	HAND	88	M			RAISED BY TASKI	
2CANADA	SPHL	88	8	0	0.581223	CANADA (51)	HAND	88	8		312	FISH RAISED FROM SAMPLE FISH	
2CANADA	SPHL	88	9	0	0.599444	CANADA (51)	HAND	88	9		359	FISH RAISED FROM SAMPLE FISH	
MEDITERRANEAN													
3ITALY	UNCL	84	6	0	1250	0.504847	ITALY-TYRR	PSFB	84	6	2476.000	RAISED BY TASKI	
3ITALY	GILL	84		47	190	2.127660						RE-RAISED	
3ITALY-LIG	PSFS	84		2906	993	0.341707						RE-RAISED	
3ITALY-ADR	PSFS	84		1015	1912	1.384729						RE-RAISED	
3ITALY	UNCL	85	6	0	2100	1.445236	ITALY-TYRR	PSFB	85	6	1453.000	RAISED BY TASKI	
3ITALY	GILL	85		37	100	1.149425						RE-RAISED	
3ITALY-LIG	PSFS	85		3069	2329	0.758879						RE-RAISED	
3ITALY-ADR	PSFS	85		1277	740	0.579483						RE-RAISED	
3ITALY	LL	86		62	1	0.016129						RE-RAISED	
3ITALY	TRAP	86		295	293	0.993220						RE-RAISED	
3ITALY	UNCL	86	6		2338	8.253639	ITALY-TYRR	PSFB	86	17		ITALY - PSFB ACTUAL SIZE RAISED	
3ITALY-ADR	PSFS	86		1424	1500	1.000000						LEFT AS WAS DONE IN 1983	
3ITALY-TYRR	PSFB	86	6	1032	1032	3.322005				17	293.098	1513 RE-ONE	
3ITALY	GILL	86	6		45	0.158956	ITALY	PSFB	86	17		ITALY - PSFB ACTUAL SIZE RAISED	
3ALGERIE	UNCL	86		280	556	2.021429						RE-RAISED	
3GREECE	UNCL	86		500	125	0.250000						RE-RAISED	
3ALGERIE	UNCL	87	M		420	7.619877	SPAIN-MED	LL	87	M		RAISED FROM SAMPLE, MONTH KEPT	
3FRANCE	PSM	87	M		4500	1.000000						BY NATIONAL SCIENTISTS	
3FRANCE	SPCR	87	M		30	0.006977	FRANCE	PSM	87	M		RAISED BY TASKI	
3GREECE	UNCL	87	M		100	1.314256	SPAIN-MED	LL	87	M		RAISED FROM SAMPLE, MONTH KEPT	
3ITALY	LL	87	M		65	1.179267	SPAIN-MED	LL	87	M		RAISED FROM SAMPLE, MONTH KEPT	
3ITALY-TYRR	PSFB	87	6		557	5.417181				17	102.821	851 SAMPLE WAS RAISED	
3ITALY-LIG	PSFS	87	M		522	0.121395	FRANCE	PSM	87	M		RAISED BY TASKI	
3ITALY-ADR	PSFS	87	M		1530	0.543675	FRANCE	PSM	87	M		2759 ONLY FISH LESS THAN 102 CM	
3ITALY	TRAP	87	6		310	3.014943	ITALY-TYRR	PSFB	87	17		RAISED FROM SAMPLE	
3ITALY	SPOR	87	M		53	0.939566	SPAIN-MED	HAND	87	M		RAISED FROM SAMPLE	
3ITALY	UNCL	87	6		1495	14.539821	ITALY-TYRR	PSFB	87	17		RAISED FROM SAMPLE	
3JAPAN	LL	87	Q		280	1.000000						RAISED WEIGHT = 435 MT	
3LIBYA	UNCL	87	6		300	2.917692	ITALY-TYRR	PSFB	87	17		RAISED FROM SAMPLE	
3MALTA	UNCL	87	M		36	0.553132	SPAIN-MED	LL	87	M		RAISED FROM SAMPLE	
3SPAIN	LL	87	M		116	2.104537					55.119	398 SAMPLE WAS RAISED	
3SPAIN	HAND	87	M		177	3.137797					56.409	411 SAMPLE WAS RAISED	
3SPAIN	SURF	87	M		404	7.161978	SPAIN-MED	HAND	87	M		RAISED FROM SAMPLE	
3SPAIN	TRAP	87	9		219	1.000000						332 RAISED BY NATIONAL SCIENTISTS	
3TUNISIA	TRAP	87	6		93	0.307228	ITALY-TYRR	PSFB	87	17		RAISED FROM SAMPLE	
3TURKEY	PS	87	M		910	501.975138	TURKEY	PS	88	M		RAISED FROM SAMPLE	
3YUGSLAVIA	PS	87	M		641	0.232331	FRANCE	PSM	87	M		2759 ONLY FISH LESS THAN 102 CM	
3MOROCCO	TRAP	87	9		337	1.539813	SPAIN-MED	TRAP	87	17		RAISED BY TASKI	

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	GEAR	YEAR	TIME				COUNTRY	GEAR	YEAR	TIME		
3ALGERIE	UNCL	88	M	677	9.529609	SPAIN-MED	LL	88	M			RAISED FROM SAMPLE
3MOROCCO	SURF	88	M	44	0.037447	FRANCE	PSM	88	M	1175		ONLY FISH LESS THAN 72 CM
3YUGOSLAVIA	PS	88	M	1512	0.543689	FRANCE	PSM	88	M	2781		ONLY FISH LESS THAN 102 CM
3MALTA	UNCL	88	M	25	0.355599	SPAIN-MED	LL	88	M			RAISED FROM SAMPLE
3SPAIN	HAND	88	M	553	1.000000						1458	SAMPLE WAS RAISED
3SPAIN	LL	88	M	136	1.934456					70.304	761	SAMPLE WAS RAISED
3SPAIN	TRAP	88	9	201	1.000000						333	RAISED BY NATIONAL SCIENTISTS
3ITALY-TYRR	PSFB	88	6	334	1.862893	ITALY-TYRR	PSFB	87+8	17	179.292	1246	COMBINED SAMPLE RAISED
3ITALY	LL	88	M	63	0.896108	SPAIN-MED	LL	88	M			RAISED FROM SAMPLE
3ITALY-LIG	PSFS	88	M	395	0.068696	FRANCE	PSM	88	M			RAISED BY TASKI
3ITALY-ADR	PSFS	88	M	1500	0.539374	FRANCE	PSM	88	M	2731		ONLY FISH LESS THAN 102 CM
3MOROCCO	TRAP	88	9	96	0.477612	SPAIN-MED	TRAP	88	17			RAISED BY TASKI
3ITALY	TRAP	88	M	301	0.125994	SPAIN-ATL	TRAP	88	M			RAISED BY TASKI
3ITALY	SPOR	88	M	51	0.021348	SPAIN-ATL	TRAP	88	M			RAISED BY TASKI
3ITALY	UNCL	88	M	1452	20.653163	SPAIN-MED	LL	88	M			RAISED FROM SAMPLE
3TURKEY	PS	88	M	910	501.875138					1.813	86	RAISED FROM SAMPLE
3FRANCE	PSM	88	M	5750	1.000000							BY NATIONAL SCIENTISTS
3GREECE	UNCL	88	M	100	1.422394	SPAIN-MED	LL	88	M			RAISED FROM SAMPLE
3JAPAN	LL	88	Q	250	0.392857	JAPAN	LL	87	Q			RAISED BY TASKI
3LIBYA	UNCL	88	M	300	0.125576	SPAIN-ATL	TRAP	88	M			RAISED BY TASKI
3TUNISIE	TRAP	88	M	93	0.024743	SPAIN-ATL	TRAP	88	M			RAISED BY TASKI
3FRANCE	SPOR	88	M	30	0.005217	FRANCE	PSM	88	M			RAISED BY TASKI
3SPAIN	SURF	88	M	225	0.405872	SPAIN-MED	HAND	88	M			RAISED BY TASKI