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TAGGING NEWS

NEWS FROM THE ORI TAGGING PROJECT NUMBER 25

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Welcome to this the 25th edition of the Tagging News! What a year 2011 has proved to be. Not only did we nearly match the number of fish tagged in 2010, but we also broke several recapture records, one of them possibly even being a world record (see recapture highlights)! After more than 27 years the ORI Tagging Project continues to bring in valuable information on fish movement patterns, growth rates, mortality rates and population dynamics of our important linefish species. This information is extremely valuable and continues to be used by students, scientists and managers around the country for policy and decision-making on linefish management. At a recent scientific linefish symposium the question was asked whether ORI should continue with the project, particularly since funding has been an ongoing problem. The response from scientists and managers alike was unanimously positive and we have decided to do our best to try and keep this project going for as long as possible, come rain or shine! This is particularly important since despite the large quantity of important data being collected, the Tagging Project has also made a major contribution towards changing the ethic of anglers towards catch and release, which undoubtedly goes far beyond the scientific value of the data collected. Not only do anglers now have a reason to capture and release a fish, they are in actual fact contributing to a better understanding of the biology and ultimately conservation of that species. This added bonus goes a long way towards improving angler awareness about our marine linefish species as well as contributing towards sustainable fishing.

Overall, 2011 was another excellent year for the ORI Tagging Project - a further 155 new members joined the project, bringing the total number of participants to 5 130 anglers since the project's inception in 1984. A total of 10 262 fish (only 61 less than 2010) were tagged and a remarkable 697 (6.8%) recaptures were reported during 2011, which was slightly lower than the record breaking recapture rate (8.8%) achieved in 2010. Galjoen (15.6%), spotted grunter (7.1%), dusky kob (6.7%), garrick/leervis (5.5%) and white steenbras (4.7%) were the top five species tagged. Western Cape (23,2%), Eastern Cape (19,5%), Southern Cape (14.4%), Zululand (12.9%) and Transkei (10.1%), were the regions where the bulk of tagging took place during 2011.

The web-based tagging database is working well and the homepage was recently revamped as many of you will have already seen. The website continues to allow our members to keep track of their own tagging performance and has proved to be a very useful method for anglers to check and validate data entered onto the system by the Tagging Officer. So for those of you who have not already seen your tagging profile, please go to www.oritag.org.za (to login you need to enter

your tagging reference number as a six digit number, e.g. TA4218 and repeat this number as your password). The tagging instruction booklet was also upgraded to incorporate many of the changes that have taken place in the past four years. If you have not seen this updated version, it is available with this newsletter on our website as mentioned above.

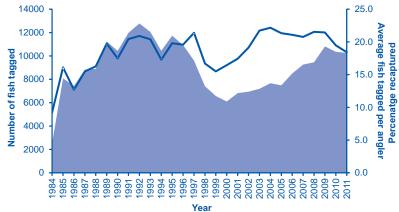
The Tagging Project acquired a dedicated cell phone number (079 5290711) in 2010, which has enabled taggers to sms recaptures to us immediately. This cell phone number and the dedicated email address (oritag@ori.org.za) were printed directly onto the streamers of all the new tags ordered from Hallprint© Australia in 2011. This is a positive step forward for the ORI Tagging Project and will hopefully increase the reporting of recaptures (and judging by the number of recaptures being reported, it already has!). These 'new' tags have already started to be issued so look out for them when you get your next batch of tags. Along with the new information on each tag, a new tag type for billfish, known as the M-tag, was also ordered for the first time. This tag has replaced the old B-tags for the tagging of billfish. The B-tags are now only issued out to specialised shark anglers, such as those from the Kwazulu-Natal Sharks Board. Over 500 of these new Mtags have already been issued and, along with the cell phone number and email address printed on the streamers, will hopefully increase the billfish recapture rate which is currently less than 1%. Please note that the M-tag also requires a different applicator, so you will need to purchase a new applicator when you are issued with M-tags.

We sincerely hope that you enjoy this exciting issue of the Tagging News. We would like to say a big thank you to all of our tagging members for their ongoing support as well as the numerous anglers who have assisted us in obtaining tag recaptures. The long-term success of this project is entirely thanks to your on-going contributions towards the wise use and conservation of our marine linefish species. We wish you tight lines and happy tagging - let's make 2012 another record year!

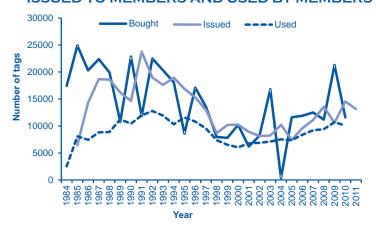


				Average	Cumulative						
	New	Active	Total no.	no. tagged	no.	Cumulative	Species	Recapture	Recapture	Max years	Max Km
Year	Members	members	tagged	per angler	members	no. tagged	tagged	no.	%	free	moved
1984	283	277	2553	9.2	283	2553	103	23	0.9	0.6	723
1985	441	502	8088	16.1	724	10641	153	237	2.9	1.1	804
1986	304	586	7434	12.7	1028	18075	170	217	2.9	2.8	1227
1987	271	569	8823	15.5	1299	26898	180	249	2.8	2.8	1374
1988	218	547	8894	16.3	1517	35792	176	384	4.3	4.1	1443
1989	232	569	11237	19.7	1749	47029	192	530	4.7	4.1	1016
1990	289	597	10435	17.5	2038	57464	162	515	4.9	4.0	1892
1991	208	586	11982	20.4	2246	69446	185	697	5.8	6.3	1625
1992	213	611	12777	20.9	2459	82223	188	689	5.4	7.2	1408
1993	299	591	12056	20.4	2758	94279	175	643	5.3	7.5	1606
1994	242	604	10442	17.3	3000	104721	181	501	4.8	8.1	1670
1995	249	593	11733	19.8	3249	116454	171	498	4.2	8.6	1676
1996	229	558	10930	19.6	3478	127384	175	350	3.2	7.8	1554
1997	141	449	9601	21.4	3619	136985	174	553	5.8	11.0	1897
1998	127	444	7412	16.7	3746	144397	152	443	6.0	8.4	1820
1999	123	424	6575	15.5	3869	150972	158	311	4.7	12.0	1186
2000	68	371	6101	16.4	3937	157073	148	227	3.7	10.6	1679
2001	65	391	6820	17.4	4002	163893	144	306	4.5	10.9	1273
2002	54	363	6944	19.1	4056	170837	160	290	4.2	12.8	1426
2003	55	331	7190	21.7	4111	178027	150	427	5.9	8.1	1751
2004	63	346	7668	22.2	4174	185695	154	506	6.6	9.8	1319
2005	60	351	7487	21.3	4234	193182	166	496	6.6	10.8	1577
2006	146	403	8500	21.1	4380	201682	170	449	5.3	10.9	1552
2007	164	446	9262	20.8	4544	210944	177	661	7.1	9.0	1405
2008	117	439	9460	21.5	4661	220404	166	666	7.0	15.0	1495
2009	162	504	10813	21.5	4823	231217	180	723	6.7	14.0	2966
2010	152	532	10354	19.5	4975	241571	171	904	8.7	20.7	1843
2011	155	557	10262	18.4	5130	251833	167	697	6.8	22.6	1438
Total	5130	3457	251833	18.6	5130	251833	368	13192	5.2	22.6	2966

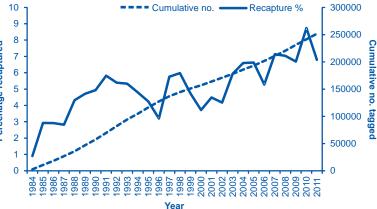
FISH TAGGED PER YEAR AND PER ANGLER



NUMBER OF TAGS BOUGHT FROM SUPPLIER, ISSUED TO MEMBERS AND USED BY MEMBERS



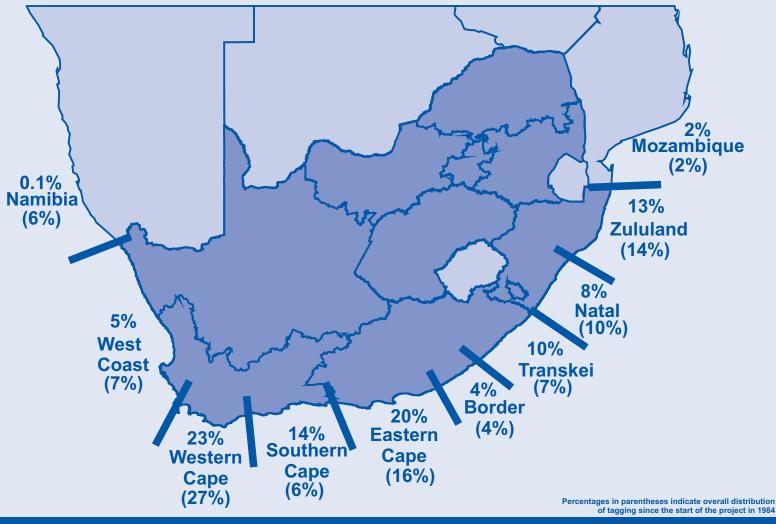
% FISH RECAPTURE PER YEAR AND CUMULATIVE NUMBER OF FISH TAGGED



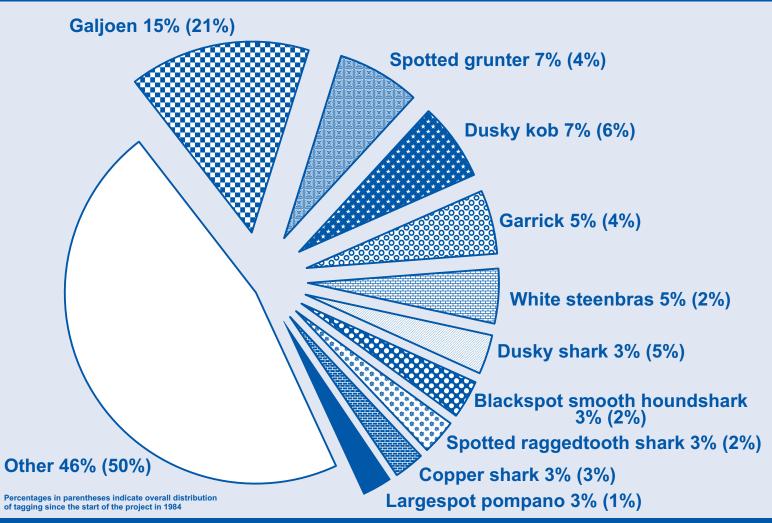
CAPE YELLOWTAIL Seriola lalandi

521 TAGGED
16 RECAPTURED = 3.07% RECAPTURE RATE
LONGEST DISTANCE TRAVELLED 1 746 KM
MAXIMUM DAYS FREE 1 287 (3.5 YEARS)

2011 was certainly a year of amazing recaptures! On the 20/08/2011 a small (775 mm FL) Cape yellowtail was tagged and released by Warwick Leslie off Dassen Island on the West Coast. Just 30 days later on the 19/11/2011, this fish was recaptured by Greg Defilippi offshore of Stiebel Rocks just south of Hibberdene on the KZN south coast (yes you read right!). In this short period this fish had swum an amazing 1 746 km, which amounts to a whopping 58 km per day. This was really quite remarkable for a small fish that only weighed in at 6.7kg.

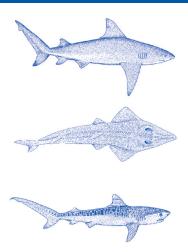


TOP 10 SPECIES TAGGED IN 2011

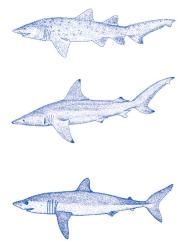


			2011	0	verall
Institute / Organisation	Area	Total	% Recapt.	Total	% Recapt.
Oceans and Coasts (DEA)	De Hoop Marine Reserve	1448	7.5	47336	6.6
Oceanographic Research Institute	Pondoland Marine Reserve	527	15.7	2704	25.3
Oceanographic Research institute	St Lucia Marine Reserve	467	9.2	5593	13.7
Ezemvelo KwaZulu-Natal Wildlife	Kosi Bay Estuary Reserve	241	8.6	2707	8.3
Eastern Cape Parks and Tourism Agency	Dwesa Marine Reserve	180	2.2	917	2.4
Port Elizabeth Museum	Coega/Ngqura Harbour	79	1.3	1422	5.4
Oceans Research and Shark Lab	Mosselbaai	70	7.1	94	5.3
KwaZulu-Natal Sharks Board	KwaZulu-Natal Coast	58	13.8	4067	6.4
White Shark Africa - Shark Warriors	Mosselbaai	42	0.0	142	0.7
uShaka Marine World Aquarium (Released Fish)	Durban	30	0.0	84	3.6
Rhodes University	Bird Island Marine Reserve	16	18.8	150	4.6
Two Oceans Aquarium (Released Fish)	Western Cape	13	0.0	57	5.3

SHARKS TAGGED & RELEASED FROM NETS/DRUMLINES IN 2011 BY KWAZULU-NATAL SHARKS BOARD



			Total (Numbers)		
Species	Scientific Name	Tagged	Injected	Recaptured	
Blacktip	Carcharhinus limbatus	2	0	0	
Copper	Carcharhinus brachyurus	1	0	0	
Dusky	Carcharhinus obscurus	6	4	1	
Giant guitarfish/sandshark	Rhynchobatus djiddensis	6	0	1	
Great white	Carcharodon carcharias	5	5	0	
Raggedtooth	Carcharius taurus	5	2	6	
Smooth houndshark	Mustelus mustelus	1	0	0	
Spinner	Carcharhinus brevipinna	2	0	0	
Tiger	Galeocerdo cuvier	20	6	0	
Zambezi	Carcharhinus leucas	2	2	0	
TOTAL		44	19	7	



COMMERCIAL CHARTER GROUPS

					2011	C	verall
Name	Group	Area	Facet	Total	% Recapt.	Total	% Recapt.
Adrian Westraadt	Linene Island Resort	Linene Island, Mozambique	DS RS FLY	51	0	442	1.13
Duarte M. Rato	Rani Resorts- Indigo Bay	Bazaruto Island, Mozambique	DS BF	57	1.8	739	0.54
Guy Ferguson	Azura Lodge	Benguerua Island, Mozambique	DS BF FLY	46	2.2	548	1.46
Graham Pollard	Benguera Lodge	Benguerua Island, Mozambique	DS BF	27	3.7	127	0.79
Ryan Williamson	Citation Gamefish Boat Charters	Richards Bay	DS BF	6	0	13	0
Sean Amor	Hooked on Africa	Cape Town, Western Cape	DS	3	0	48	8.33

We would like to express our sincere gratitude for the financial support received from the South African Association for Marine Biological Research (SAAMBR) and the KZN Department of Agriculture and Environmental Affairs, without which we would have been unable to continue this important project.

PECIAL HANKS

Most of all, we would like to thank all of our active tagging members for their on-going contributions towards linefish research and conservation.

In particular we would like to acknowledge the following taggers for monetary donations in 2011: Dawid van der Merwe, Garth McGee, John Dale and Walter Smith.

A special word of thanks must also go to the previous Tagging Officer, Elinor Bullen. Elinor put a great deal of her working life into the Tagging Project and made a huge contribution to its long-term success.

David Hall (Hallprint© Australia) is thanked for his excellent service and on-going supply of high quality tags and applicators.

Roelf Venter is thanked for his assistance in fitting handles to the tag applicators.

Lastly, we thank all of the other sponsors who have contributed in some way over the past 27 years, there are simply too many to mention.

Member Name	2011 T	Total Recapt.	. % Recapture	Member Name	2011 Total	al Recapt.	. % Recapture	Member Name	2011	Total Recapt.	% Recapture
щ	260	,	12 4.51	S. HUMPHRE	30 1		0 0	MR. P. GERVAIS	15		1.85
MR. B. FERREIRA	157			MR. S. OOSTHUIZEN	8 8	65	3 4.62	MR. R. BILLIMORE	15	79 2	2.53
MR. R. POLGIETER		7		MR. DC. MACE	OS 6		0 0	MR. M. DOHLHOFF	15		
MR. CD. CILPORD	103	1069 136	12 72	MR. S. WEY	0 C	35	2 5 71	MR ANDREW PARSONS	0 4	1631 67	3.20
MR. C. COETZEE				MR. M. TYLDESLEY	29 2			MR. BM. GILBERT	4		
KYLE	66	1248 236	18.91	Ξ̈́		43 18		MR. A. DU PLESSIS	14	149 2	1.34
J.	66	669		MR. A. KRUGER		540 3		MR. DM. IRVINE	14	100	
MR. P. MC DONALD				MR. G. GROBLER				MR. J. LE ROUX	14		4
MR. S. WALKER		(F)	2	MR. S. BURTON		373 17		MR. G. ORDING	4	58 0	
mi :	88			기:			5.17	MR. J. ACKHURST	4 ;		
MR. M. WHITE				MR. J. BISHOP		64	_	MR. AT. CANESTRA	4 :	68	13.24
MR. C. HART		14		MR. PC. OOSTHUIZEN				MR. M. MAWBY	44		
MR. RF. RAUBENHEIMER	74		1.83	MR. S. SAGRILLO				MR. MJ. PAUTZ	13	∞	
MK. F. ELS				MR. G. POLLARD			5	MK. I. BEUKES	7.3	5/ 3	
MR. D. DRENNAN				MK. PH. VAN NIMWEGEN				MK. K. SPENCEK	7.3		
MR. CK. DE CLERCO	/9		3.47	MR. CA. HAMLE I		186 13		MK. J. OOSTHUIZEN	2 0	151 30	19.
NA. O. AM.	00	406	2 7 7 5 2	MP P OCONNELL	07 90	7 4	0/.4	MP - POWES	5 5		1.0.1
MR GP BEALMONT	000			MR BD CARR		ď	7 7 7 0	MR M DOLIGIAS	5 4		
MR. D. HUMPHREY	09			MR. W. LESLIE				MR. C. VAN TONDER	13		2.56
MR. A. BOTHA	59	2		MR. A. KANTHAPERSAD	52		0	MR. D. VAN DER MERWE	13	36 0	
MR. N. DE KOCK	28	733 31	1 4.23	MR. HP. VOSLOO	24		2 2.9	MR. J. BRINK	13	47 1	2.13
MR. O. VON HASSELN	28		2 2.11	MR. R. KRUGER	24		3 3.57	MR. C. BUITENDACH	13	29 0	0
MR. S. DUNLOP	53		8 7.41	MR. B. STEYN				MR. T. BEUKES	13	32 0	0
Mr. A. WESTRAADT	51			MR. H. CROUS		N		-i	13		
피	20		4 4.76	MR. C. CAINE				Щ	13		
	49	106		MR. CH. DE LA HARPE		228 34	14.91	MR. JC. RANCE SNR.	12	229 13	5.68
MR. AG. LOURENS	48			MR. RF. BURGER				MR. J. STRAUSS	12		
MR. G. SAVILLE	47			MR. PC. VAN ROOYEN			1.74	MR. A. MANNING	12	170 4	
MR. G. MARCHAND	47	159 14	∞	MR. J. COATES			4	MR. R. SCHIETEKAT	12		2.08
ان	47			MK. K. PKINSLOO		132	5.3	-11	7.7	41 0	0
MR. G. FERGUSON	46	•		MK. K. VAN DEK SANDI		179	3.91		7,		0
MR. G. MARSHBAINN	40	466		ME I EBOST	7 6	13	1.37	MR. C. LE RICHE	7 5	1000	
MR R SWART	4 45	121	5 79	MR M.I RADEMEYER	22 62		7.0	MR GC MIDDI FTON	1 1		0 74
MR RA KOEKEMOER	44		3 2.61	MR. K. HANSEN	22		3.77	MR. R. THOMPSON	7	553 21	
MR. RA. SHEPHERD	43			MR. RM. HAND		۵	_	MNR. G. BREEDT	-		
MR. BF. VAN WYK	43	389	16 4.11	MR. GB. MC GEE	21	64		MR. L. LORENZEN	1	123 5	4.07
MR. D. BEZUIDENHOUT	43			MR. P. VAN DER WESTHUIZEN			3 4.84	MR. W. COLEMAN	1		
MR. T. EGERSDORFER	41		_	MR. R. HOLMES				MR. P. WEINGARTZ	11		
MR. CP. OLIVIER	41			MR. C. RANGE				MR. P. NORTJE	7	57 3	5.26
MR. P. MORRIS	40	4		MR. Q. CATHERINE			5 2.76	ιίo	7	17 0	
MR. DJ. PRETORIUS	40	45	4.44	MR. J. ORMSHAW		166	0.6	MR. L. SMITH		207	4.35
MR. CS. MOLLER MP. B. HYMAN	30			MR. B. NOCACI			2 7 7 8	⊳ا⊳		7 7	13.73
MR H I FWIS	30			MR H ROFI OFFZE				MR M DE LA HEY		94	2.13
MR. PD. MULLER JNR	38	_		MR. G. BOUCHER				MR. F. BOTHA	7	41	7.32
MISS. K. KYLE	38		4 3.74	MR. F. FRONEMAN	20		3.13	MR. C. VEUGELERS	11	90	5
MR. D. TEN VELDEN	38		7	MR. J. LORD			0		7	16 0	0
MR. A. JOHNSTONE	37			MR. DM. SCHENCK				MR. J. ABRAHAM	7	11 0	
MR. N. WILLEMSE	30		3.36	MR. K. WEBBEK		119	2.52	MK. J. LIMM	2 5	7 24	4.17
MR. J. LOEF	35	316		MP W VON DEP MARWITZ			7 3 18	MP C STIBB	2 5	7	~
MR S DIYARI ALI	35	90	0.44		ο α	928	ο ο σ	MR D SWART	2 5	83 14	
MR K HIMPHREYS	34	795		MR B BROWN		06		MR C NIFIWOLIDT	2 6	42	2.38
MR A CAMPHER	34			MR. I. SMITH				MR B DAVIDS	2 0	70	
MR. C. WILKINSON	34		1.67	MR. RK. VON DER MARWITZ	17		4 4.82	MR. C. BEZUIDENHOUT	10		10
MR. G. GRAY	33		1.83	MR. R. MARSHALL	17 1			MR. R. PERUMAL	10	14 1	7.14
MR. WS. VAN DER MERWE	33			MR. M. DAMES	17		4	MR. D. DUNCAN	10	25 0	
MR. G. GIMINGHAM	33	29	3 4.48	MR. JD. LENTZ	16 2	72 1:	3 4.78	MR. D. BICKELL	10	20 0	0
MR. D. DELANEY	33		0 0	MR. F. ZONDAGH	16			MR. J. DU TOIT	10	38 1	2.63
MR. A. VAN DER POEL	32			MR. M. OOSTHUIZEN	16	24	0 0	MR. R. MAGGS	10	23	8.7
MR. CF. MARAIS	31	N		MR. D. SOLOMON	٦. ع ۲		0 0	zlo	10	14 1	7.14
MR T ELVIN-JENSEN	. e	201	4.08	MR. JP. RHEEDER	2 6	20		MR S ATKINSON	2 6	- 0	22.5
)				2		,	il :	2	· -	,



PAGE 6



Species Number tagged September Se								
Saylon								
Dussly Nob				_				
Dussly shark				_				
Sported gunter								
Capperfrommes shark				_				
Blacktari								
Spented guileyshank								
Lesser guitarfish/sandshark Fig. 10								
White steenbras		7253	272	3.75	235	1676	129	1106
Blackspot smooth hound shark S466 151 2.77 45 582 574 2561 Singner 4613 157 3.4 8 1059 313 800 Spotted ragged-tooth shark 4442 429 9.66 232 2986 7.54 2586 3540 Shark 486 33 380 317 1945 Shark 486 381 380 340 317 1945 Shark 486 381 380 340 317 1945 Shark 3429 280 82 63 1060 154 727 345 3428 Shark 3429 280 82 63 1060 154 727 345 3428 Shark 3429 280 324 342 3432 342 342 3432 342 342 3432 342 342 3432 342 342 3432 342 342 3432 3432 344 3432 3432 344 3432 344 3432 344 3432 344 3432 344 3432 344								
Singer				_		_		
Sometic ragged-hooft shark					-			
Roman								
Sailfish 3429 28 0.82 6.3 1660 154 727				_		_		
Sevengil Cow shark				_				
Gant kingrish				_		_		
Largespot pompano				_				
Black musselcracker/poenskop								
Zabrafak-wideperd 2600 61 2.35 3 5.2 217 3985 Carpenter 2467 22 0.88 47 290 772 3885 Blue/marbled stingray 2502 6 0.24 61 234 492 1085 Bloer beram 2434 96 3.94 18 799 198 189 198 189 198 189 198 189 198 189 198 189 198 189 198 189 20 141 180 264 180 180 180 141 180 264 180 141 180 180 142 1286				_				
Separation				_				
Supermarbled stingray								
White musselcracker	Blue/marbled stingray	2502	6	0.24	61	234	492	1085
Carface rockcod 1946 412 21.17 6 411 189 2867				_				
Selender baardmantasselfish								
Yellowbelly rockood								
Ladyfish/springer						_		
Hammerhead sharks	Ladyfish/springer	1570	30	1.91	25	412	369	1426
Speckled snapper				_				
Perch/riverbream				_				
Smooth hammerhead shark				_				
King mackerel/couta						_		
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		Rec	aptured	Km Tra	velled	Days	Free
Species	Number tagged	No.	%	Mean	_	Mean	Max
Blue marlin White stumpnose	318 279	0 4	0 1.43	2	3	298	463
Bluntnose spiny dogfish	266	4	1.43	188	669	615	1476
Banded galjoen	246	6	2.44	94	562	254	507
Elephantfish/St Joseph	242	1	0.41	1342	1342	218	218
Blackspot shark	239	6	2.51	35	192	281	708
Red stumpnose Bartail flathead	255 234	6 5	2.35 2.14	20 4	107 18	561 273	1233 796
Pickhandle barracuda	235	48	20.43	1	44	229	1398
Flapnose shark	246	28	11.38	2	43	503	1367
Brown shyshark	216	7	3.24	1	10	487	933
Snapper kob/salmon	204	10	4.9	20	132	170	378
Silver kob Black seacatfish	247 200	91	3.24 45.5	32 0	134 1	256 213	
Spearnose skate	183	4	2.19	1	3	193	
Cape snoek	180	1	0.56	136	136	491	491
Malabar rockcod	180	26	14.44	0	7	178	762
Whitespotted smooth houndshark	172	4	2.33	5	15	478	1627
Bluefin kingfish Lemonfish	176 172	6 10	3.41 5.81	5 1	15 2	157 219	260 749
Blue hottentot	171	4	2.34	0	0	96	199
Greyspot guitarfish/sandshark	158	1	0.63	6	6	51	51
Javelin grunter	153	16	10.46	9	65	378	2940
Puffadder shyshark	154	12	7.79	2	20	132	483
Dolphinfishdorado	150	7	0.67	64	64	66	66
Smallspotted pompano Spotted eagleray	133 125	2	5.26 1.6	40 8	270 15	281 460	1218 850
Cock grunter	103	5	4.85	14	65	144	490
Flathead mullet	101	1	0.99	738	738	738	738
Blue emperor	112	6	5.36	0	0	253	341
Englishman	98	3	3.06	2	6	245	554
Maasbanker	88	0	2.33	0	0	207	0
Cape gurnard Sliteye/tope shark	86 86	2	2.33	0 290	565	207 1334	377 2652
Russell\s snapper	88	2	2.27	0	1	44	77
Thorntail stingray	78	2	2.56	0	0	295	357
Eeltail catfish	82	1	1.22	1	1	47	47
Great barracuda	77	21	27.27	0	1	167	467
Spotted spiny dogfish Blackfin reef shark	74 73	2	1.35 2.74	36 59	36 118	120 360	120 697
Oxeye tarpon	69	0	2.74	59	0	300	097
Banded catshark	65	8	12.31	16	55	423	1155
Striped mullet	65	1	1.54	1	1	230	230
Sailfin rubberlip	56	0	0		0		0
Java shark	57	2	3.51	14	18	67	76 77
Short-tail stingray Sand steenbras	62 51	1	3.23 1.96	0	0	39 79	79
Yellowtail scad	51	0	0	0	0	10	0
Cape moony/moonfish	51	0	0		0		0
Doublespotted queenfish	51	1	1.96	0	0	537	537
Green jobfish	50	1	2	0	0	31	31
Blue/ferdy kingfish	48 49	0	0		0		0
Yellowspotted kingfish Bigeye stumpnose	49	2	4.44	2	3	33	38
Longfin yellowtail	47	0	0	_	0	00	0
Brown catshark	44	1	2.27	0	0	34	34
Panga	44	0	0		0		0
Longfin kingfish	44	0	2.27	12	12	453	453
Greater yellowtail Whitebarred rubberlip	46 44	1	2.27	1	1	176	0 176
Moustache rockcod	45	7	15.56	175	1200	1024	2990
Shortfin mako shark	42	4	9.52	19	69	294	786
Thintail thresher shark	44	0	0		0		0
Marbled electric ray	42	0	0		0		0
Needlescaled queenfish	42	1	2.38	0	0	227	227
Concertina-fish Wreckfish	42 39	0	5.13	4	7	231	388
Yellow-edge lyretail	37	0	0.10		0	201	0
Atlantic bonito/sada-sada	36	0	0		0		0
Steentjie	34	0	0		0		0
Yellowfin emperor	33	4	12.12	0	0	441	1187
Manta ray	32	0	0		0		0
Milkfish Tomato rockcod	31 37	0	10.81	2	0 6	327	537
Chub mackerel	29	0	0		0	021	0
Shortbill spearfish	32	0	0		0		0
Tripletail/flasher	28	0	0		0		0
Blue shark	28	0	0		0		0
Koester Dusky rubborlin	28	1	3.57	0	0	1176	1176
Dusky rubberlip Thornfish	28 26	0	3.57 0	0	0	645	645 0
Bludger	26	0	0		0		0
Brindlebass	25	2	8	0	0	80	149
Round ribbontail ray	25	2	8	4	8	45	74
German	25	0	0		0		0

1 45 378 2511 German
Priority species for tagging are highlighted with colour.

The Dwesa-Cwebe Marine Protected Area (MPA) is located on the Wild Coast, approximately 120 km northeast of East London on the east coast of South Africa. The MPA incorporates approximately 16 km of mainly rocky shore coastline and extends six nautical miles out to sea. The MPA is located in a biogeographic transition zone between the Agulhas and Natal Bioregions. Because of its location within this region of transition, the MPA is considered to be in a sensitive area that is not replicated elsewhere on the coast of South Africa. The Mbashe Estuary, situated centrally within the MPA, ranks 28th in terms of the conservation importance of estuaries in South Africa. The surf-zone adjacent to the Mbashe mouth is also considered to be a key spawning aggregation site for white steenbras, the stock of which is considered to have collapsed. The Dwesa-Cwebe MPA was formally declared as a marine reserve in 1991 (Transkei Environmental Conservation Decree No. 9 of 1992), and re-proclaimed in terms of the Marine Living Resources Act (Act No. 18 of 1998) in 2000. The entire reserve is currently zoned as a no-take MPA, where no consumptive marine resource use (i.e. fishing) is permitted.

Little data existed on the surf-zone and estuarine line-fish stocks within the MPA, and thus a fish monitoring project was initiated by the Eastern Cape Parks and Tourism Agency at the beginning of 2009. The project was expanded in 2011 in order to facilitate a comparison between a nearby exploited area (Mazeppa Bay) and the MPA. Preliminary results revealed that the Dwesa-Cwebe MPA had a much higher catch rate (fish per angler per hour) compared to the un-protected Mazeppa Bay. This will however have to be verified with a larger sample size in future.

A total of 31 species was recorded during the study period. Five were cartilaginous fish and 26 were bony fish species. The most abundant fish species were blacktail, bronze bream, dusky kob and lesser sandshark. The 31 line-fish species recorded in this study include a significant number of nationally and even globally important species from a conservation perspective.

Over 1500 fish have been caught up to May 2012 of which 1004 were tagged. The initial recapture rate was low (2.5%) but is expected to increase in future. The dominant species recaptured included catface rockcod (52%), followed by dusky kob (28%) and bronze bream (8%). The majority of recaptured fish showed highly resident behaviour with most fish being recaptured within 50 m of where they were originally tagged (i.e. mainly catface and yellowbelly rockcod and bronze bream). Other species, particularly dusky kob, did show greater mobility with some fish moving more than 8 km and being recaptured outside the MPA.

DUSKY SHARK

Carcharhinus obscurus

11 394 TAGGED
737 RECAPTURED = 6.5% RECAPTURE RATE
LONGEST DISTANCE TRAVELLED 1 374 KM
MAXIMUM DAYS FREE 2 773 (7.6 YEARS)

Over the years we have reported on numerous outstanding tag recaptures for juvenile dusky sharks, and 2011 was no different with four notable recaptures to report on. On the 16/01/2011 Alan Botha tagged a dusky shark with a precaudal length of 790 mm at Scottburgh Point. This fish was recaptured only six days later off Splash Rocks (Port Edward) an astonishing 104 km (17.8 km per day) away. Similarly, Alan tagged another dusky off Scottburgh Point on the 20/05/2011. It was recaptured 217 days later off Port Elizabeth by a commercial shark longliner some 697 km away (3.2km per day). Whilst fishing at New Brighton beach just north of Port Elizabeth in September 2011, Francois van Zyl tagged and released a juvenile dusky shark with a precaudal length of 710 mm. Only 102 days later this fish was recaught 510 km away off Jongensfontein just north of the Breede River. Lastly, a dusky tagged by John Frost at Sunrise on Sea of 1130 mm PCL was recaptured 149 km north at Hole-in-thewall some 31 days later (4.8 km per day) by Wayne Adendorff. This was a larger shark compared to those mentioned above and was the only notable recapture to have moved in a north-easterly direction in 2011. These recaptures confirm the known southerly migration of juvenile dusky sharks into the Eastern and Western Cape during winter-spring and provide further evidence for the possibility of a return migration of larger individuals during late summer/autumn.

Within the MPA, localized differences were detected in species diversity, size frequency and catch rate between unexploited and illegally exploited areas. These differences were more prominent in slow growing, long-lived species. It thus appears that illegal exploitation is negatively affecting fish populations within the MPA, which counteract and potentially could eliminate the benefits of fish protection typically associated with no-take MPAs.

The study revealed that Dwesa-Cwebe MPA is an important MPA for linefish conservation at a regional as well as a national scale. It further showed that illegal exploitation as well as pressure for local community access to marine resources poses a significant biodiversity risk to the MPA.

For further reading please consult:

VENTER, J. A. & MANN, B. Q. In press. A preliminary assessment of the surf-zone and estuarine line-fish species of the Dwesa-Cwebe Marine Protected Area, Eastern Cape, South Africa. *Koedoe*.

Article by Mr Jan Venter (Eastern Cape Parks and Tourism Agency)



Jan Venter tagging a small dusky kob in the Dwesa-Cwebe MPA

RED STEENBRAS

Petrus rupestris

1 071 TAGGED 77 RECAPTURED = 7.2% RECAPTURE RATE LONGEST DISTANCE TRAVELLED 923 KM MAXIMUM DAYS FREE 8 080 (22.14 YEARS)

After we thought it couldn't get any better with regards to the quality of the recaptures received in 2011, there was one more still to come, and what a record it turned out to be! On the 28 December 2011 Andrew Gericke was fishing approximately 6 miles off Kei Mouth when he hooked a red steenbras or 'copper' as they are commonly known in the Eastern Cape. After successfully landing the fish he noticed there was a tag with a lot of algae growth sticking out the fish. After taking down the relevant recapture information, he reported the tag recapture to the Border Deep Sea Angling Association who contacted ORI with the information. To our surprise, this individual fish had been tagged by Bruce Mann (ORI Senior Scientist) from the shore in the Tsitsikamma National Park in 1989. This meant it had been at liberty for 22.1 years! In all that time free it had not only escaped capture from commercial and recreational fishermen, but had also moved 532 km north and grown 17.9 kgs (370 mm). This recapture is not only the longest time at liberty for a red steenbras in South Africa, but is also a new record for any teleost (bony fish) tagged in South Africa and possibly the world! Yet again this recapture proves the exceptional longevity of red steenbras and the durability of the tags we are using supplied by Hallprint© Australia.

The poenskop or black musselcracker is one of South Africa's most sought-after recreational angling species. It is endemic to our coastline, being distributed from south of Saldanha to Cape Vidal. This dogged fighter is predominantly caught by members of the recreational shore angling and skiboat fishing sectors and is also targeted by spearfishers, but is of relatively low commercial importance due to its low abundance. Although aspects of the biology of this species have been documented, little is known about the movement behaviour of poenskop.

Data for the assessment of poenskop movement patterns were obtained from three ongoing, long-term coastal fish-monitoring projects, conducted at different spatial scales. The first, providing large-scale, low resolution data, covered the entire South African coastline (i.e. the ORI Tagging Project), and two, providing small-scale, high resolution data, were research-based projects conducted in marine protected areas (i.e. the Tsitsikamma National Park (TNP) and Pondoland MPA (PLD) linefish tagging projects). Together, these data sets provided a good platform on which to base an analysis of poenskop movement patterns.

The ORI tagging data

By the end of 2010, 2 704 poenskop had been tagged through the ORI Tagging Project, of which 189 were recaptured (6.9% recapture rate). Of the 52 juvenile fish (< 300 mm FL) recaptured, the average distance moved was only 0.7 km, with the majority (69.2%) of recaptures being made at the tagging locality. Of the 109 sub-adult fish (300 – 530 mm FL) recaptured, the average distance moved was 1.8 km, with 42.2% recaptured at their tagging locality. Interestingly, the average distance moved by the 28 adult fish (> 530 mm FL) was 54.7 km, but with 53.6% still being recaptured at their initial tagging site. These results show a high level of juvenile and sub-adult residency, and provide evidence that larger individuals (predominantly adult fish) have the capability of undertaking larger-scale movements (Figure 1). One of the most interesting poenskop recaptures reported to ORI was in 2010. An adult fish (578 mm FL) was tagged off Alexander Bay/Cape Padrone in the Eastern Cape and was recaptured 1 034 days (2.8 years) later off Mnyameni River, having travelled a remarkable distance of 483 km! The maximum days at liberty for an individual poenskop in the ORI dataset, was a fish tagged at Port Alfred on 27 December 1997. It was finally recaptured on 04 January 2007 after having been at liberty for 3 295 days (9 years), during this time it grew only 190 mm and was recaptured at exactly the same locality where it was originally tagged.

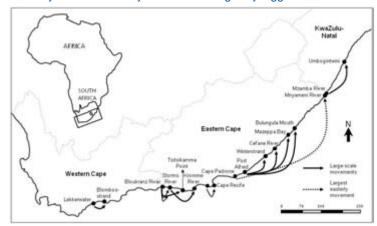


Figure 1: Long-distance movements (> 15 km) of recaptured poenskop along the South African coastline recorded by the ORI Tagging Project. Arrows connect tagging and recapture locations.

High resolution tagging data

High resolution movement data for poenskop have been collected by researchers and trained shore anglers in the Tsitsikamma MPA (inshore) and by researchers and trained skiboat anglers in the Pondoland MPA (offshore). A total of 73 and 42 recaptures have been made from the TNP and PLD, respectively. The recapture rate in both MPAs was extremely high with the TNP having a 13.1% recapture rate and the PLD having a 19.7% recapture rate. One hundred percent of recaptures in the TNP and 88% of recaptures in PLD were made within 250 m of the tagging site, confirming high levels of residency, both inshore and offshore for extended periods. The maximum days at liberty were 2 407 and 1 390 for the TNP and PLD, respectively, with each fish having only moved 200 m and 70 m from their original tagging localities respectively.



Figure 2: A poenskop being released after being tagged in the Pondoland MPA.

For larger poenskop that did move away from where they were originally tagged, more moved in a north-easterly direction, with the rate of movement being very slow (i.e. 0.17 km/day – even slower than that recorded for red steenbras i.e. 0.28 km/day). This suggests that on reaching maturity, adults begin moving in a north-easterly direction towards Transkei and KwaZulu-Natal waters. This appears to be a unidirectional movement with the large adult poenskop staying in these waters for the remainder of their lives.

The poenskop's life-history characteristics (slow-growing, long-lived, sex-changing, late-maturing) combined with their extreme residency as juveniles and sub-adults, makes them vulnerable to overfishing. In order to ensure that this iconic angling species will still be swimming in our waters in the future, good fisheries management is required. Although conventional fisheries regulations such as size and bag limits are essential, MPAs are undoubtedly one of the most useful and important management tools available for the conservation of this species. The mean annual CPUE for poenskop has increased between 1998 and 2009 within the TNP, similarly the average size of poenskop in the notake restricted area of the PLD MPA are significantly bigger than those in the adjacent exploited area. This evidence shows that our MPAs are working in terms of increasing poenskop numbers and mean size. Fortunately South Africa already has a fairly well-established network of MPAs and it is essential that these areas are well managed to ensure the future of poenskop and many of our other endemic linefish species.

Article by Ms Taryn Murray (Rhodes University)

SPOTTED GULLYSHARK

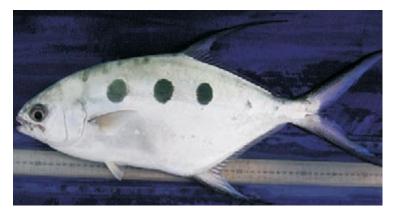
Triakis megalopterus

7 771 TAGGED
419 RECAPTURED = 5.4% RECAPTURE RATE
LONGEST DISTANCE TRAVELLED 911 KM
MAXIMUM DAYS FREE 6 632 (18.2 YEARS)

During 2011 the record for the longest time at liberty by a spotted gullyshark was broken. On the 30/10/1993 Mr JJ Crous tagged and released a spotted gullyshark of 1 020 mm total length from the shore at Cape Agulhas Light House. On the 02/03/2011 this individual was recaptured at Stuisbaai having been at liberty for 6 332 days (i.e. 18.2 years). This smashes the old record by 844 days! This fish had grown 580 mm in its 18 years at liberty and had only moved 7 km. This recapture again proves the importance of long-term tagging projects. It is only after many years that vital information on the growth rate and movement patterns of these long-lived species can be obtained.

The largespot pompano or wave garrick, is one of the four pompano species found along the coast of South Africa. It is an important recreational shore angling species that has been shown to account for up to 30% of the catch composition in northern KwaZulu-Natal, where they are most abundant. This aggressive predator has become renowned for "punching above its weight class", and in recent years has become a favourite target amongst light-tackle anglers such as flyfishermen and "dropshot" anglers. The perceived increase in recreational angling pressure and the lack of information on the biology of this species provided an incentive to conduct a detailed study on the largespot pompano. The primary objectives of this study were to provide a holistic overview of its biology, movement patterns and stock status. Tag and recapture data was essential for gaining a greater insight into the movement patterns exhibited by this species and analysis of data from the St Lucia Marine Reserve Tagging Project and the ORI Tagging Project made for some interesting results, some of which are briefly presented here.

A total of 2 391 largespot pompano have been tagged along the South African coastline, of which only 46 (1.9%) have subsequently been recaptured. The low recapture rate indicates two important traits of the largespot pompano. Firstly, their population size is likely to be very large and therefore the chance of recapturing a tagged fish is very small. Secondly, it also suggests that the species may suffer from high tagging mortality and/or tag shedding. Knowing that it is a popular prey fish species for predators such as giant kingfish and blacktip sharks, it is likely that predation on tagged fish is high, especially for fish that have been poorly handled during the tagging process.



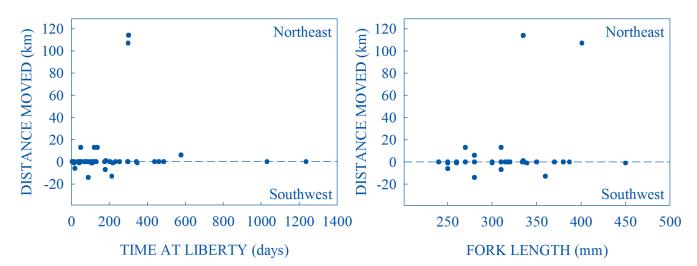
A largespot pompano caught in the St Lucia Marine Reserve about to be measured and tagged.

The movement of largespot pompano individuals was generally limited to relatively short distances and 78% of all recaptured fish were caught

within 1 km of their original tagging site. This suggests that the species displays a certain degree of resident behaviour, which is quite surprising. Resident behaviour is common amongst reef-associated fish, particularly seabreams and rockcods, yet the largespot pompano is predominantly found in the surf-zone, normally in shallow water off sandy beaches. These environments are dynamic and can be completely altered over a short period of time if there is bad weather and rough sea conditions. Without constant visual cues, such as permanent reef structures, to locate and define their home range, how do these fish know where "home" is? This is still largely unknown, but it is thought that the movement of largespot pompano is primarily determined by food availability. It is likely that the fish roam along relatively small (± 1 km), definitive stretches of coastline and may only move further along the coast when food becomes scarce within this area. This explains their seemingly random, short distance movements and semi-resident behaviour. If we were to explain the "home range" of these fish in human terms it could be said that we would be unable to assign a specific address to a fish, but we could assign it a postal code!

Two tagged fish did make significant movements of 114 km and 107 km respectively. Both of these fish were sexually mature (335 and 401 mm FL) but there was no evidence that these movements were linked to some form of spawning migration. This type of movement behaviour is relatively common in many marine fish, and a number of studies have shown that a small proportion of the population of a largely "resident" species move over large distances; the so-called nomads of the population. This may be nature's way of preventing inbreeding and perpetuating the spread of genetic diversity amongst populations separated by large distances. Interestingly, the average distance of fish moving up the coast in a north-easterly direction was 44.3 km, whereas the average distance moved by individuals in the opposite direction was only 4.7 km. This displays the largespot pompano's preference for warm tropical waters, and fish moving up the coast towards Mozambique may have been seeking warmer waters.

This study has provided important information regarding the conservation of the largespot pompano. The movement patterns (semi-resident) of the species make them vulnerable to localised overfishing in areas of high fishing activity. For example, largespot pompano catches have decreased dramatically at Sodwana Bay in recent years as the area has been subjected to increased recreational fishing pressure. In fact, a 5 km walk north or south of Jesser Point produces far better catches as these areas are not adjacent to the beach access point and therefore receive considerably less fishing pressure. A further 20 km south of Sodwana Bay the largespot pompano population is thriving within the sanctuary area of the St Lucia Marine Reserve. Information like this highlights the importance of marine protected areas not only in the localised conservation of fish species, but also in the replenishment of adjacent exploited areas through the "spillover" effect.



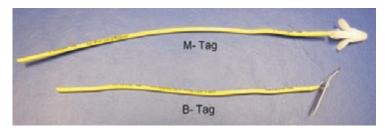
Movement patterns of largespot pompano described as the distance from the tagging site to the recapture site, as either a function of time or fish length. Positive values depict movements in a northeast direction, while negative values depict movements in a southwest direction.

The Oceanographic Research Institute (ORI) initiated tagging of billfish in South Africa in the 1970s. To date, after nearly 30 years of tagging, there have been surprisingly few recaptures.

Species	Number tagged	Number recaptured	% recaptured
Sailfish	3419	28	0.82
Black marlin	684	1	0.15
Striped marlin	436	1	0.23
Blue marlin	299	0	0
Broadbill swordfish	78	1	1.28
Shortbill spearfish	32	0	0

The question is why is the recapture rate so low? Well, these results are not unique to South Africa and conventional billfish tagging programmes around the world have generally reported extremely low recapture results. There are a number of possible reasons for this including tagging mortality (fish die after being caught and tagged), tag shedding (tags fall out), non-reporting of recaptured fish (accidental or deliberate), highly nomadic/migratory movement behaviour, large population size dispersed over a huge area, etc. It is likely that all of these reasons are playing a role to some extent. As a consequence, there is relatively little new information/knowledge being generated about billfish movement and growth from tag and release studies using conventional tags. In some countries this has resulted in the stopping of conventional billfish tagging programmes and instead recreational billfish anglers are simply encouraged to "tip and release" hooked billfish in order to improve their chances of survival.

In order to address this issue here in South Africa, ORI undertook a review of our billfish tagging efforts and decided to implement a few changes. The first of these was to change our billfish tag from the old steel head B-tag, to a new double-barbed nylon M-tag.



This decision was based on communication with our tag supplier in Australia (Hallprint®) and because of better reported retention rates for this type of tag, both in Australia and the USA. Additionally, to further increase the reporting of recaptures, a dedicated cellphone number (079 529 0711) and email address (oritag@ori.org.za) have been

printed directly onto the new M-tags. Our tagging members who have not already done so and who would like to change their old marlin tags for new ones (which includes a new applicator) are welcome to contact the ORI Tagging Officer. The second change was to request the South African Deap Sea Angling Association (SADSAA) not to promote tagging of billfish in their competitions by not offering extra points for tagging. While this may seem strange or even counterintuitive, experience has taught us that when anglers are fishing for points, they need to comply with the IGFA rules for line class strength and as a consequence the fight is often of extended duration, especially on lighter tackle. In such competitive situations we believe that it is far better to adopt the "tip and release" approach as this will ultimately maximise the fish's chance of survival and minimize the tagging of 'dead/weak fish'. We also advocate using this approach in bonanza type competitions where anglers are fishing for prizes. For those anglers with a genuine interest in tagging billfish, we suggest that they approach ORI and become individual members of the Tagging Project. In this manner we can supply them with detailed instructions, tags, applicators and certificates in recognition of their achievements and more importantly they can focus their efforts on the effective tag and release of billfish. In this way they are tagging the fish in the interests of research and conservation and not merely as a way to get points or win prizes.

It is certainly not our intention to discourage the tagging of billfish, however, we do believe that we should be taking a more responsible approach. By using better tags and better methods of tagging billfish, it is hoped that we will get better survival rates and ultimately more recaptures, which will help us learn more about these remarkable gamefish species. We would like to make a special request to all billfish anglers to be on the lookout for tagged fish. If you do happen to catch or see a tagged billfish (yellow spaghetti tag in the left or right "shoulder" of the fish under the dorsal fin), please make a concerted effort to try and get the number of the tag, even if it means pulling it out of the fish. The tag number, species, approximate length or weight of the fish, date, locality, angler, skipper and boat name should be reported to the ORI Tagging Officer.

ORI has been in touch with the Billfish Foundation (TBF) and we are aware of their billfish tagging programme worldwide. It is the prerogative of South African billfish anglers to use TBF tags if they wish and ORI will collaborate with TBF in the reporting of recaptured billfish. However, we do encourage South African anglers to stick to using ORI tags when tagging billfish in South African waters purely to avoid confusion (and perhaps for a touch of patriotism).

The proposed IGFA/SADSAA billfish telemetry tagging programme being conducted in association with Stanford University, USA, is supported by ORI and we believe that this new, innovative approach holds great promise in enabling us to learn more about our billfish.

BILLFISH TAGGED OVER THE PERIOD 1978 TO 2011

