

# Tagging News

News from the ORI Cooperative Fish Tagging Project

• Number 34 • Published July 2021 • Results from 2020



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Helping people to care for our ocean

# From the Tagging Officer...

Gareth Jordaan



**Welcome to the 34<sup>th</sup> edition of the Tagging News.** For nearly four decades the Tagging News has communicated the results of the cooperative efforts between fishery scientists and anglers, and has successfully promoted ethical angling, while tracking the movement patterns and growth rates of some of our common linefish species caught around the southern African coast.

In 2020 we had a remarkable 322 new members join the ORI – Cooperative Fish Tagging Project (ORI-CFTP), 59 more than the number that joined in 2019 and more than double the number that joined in 2018! This shows that more anglers are understanding the importance of tag and release and want to contribute to the research and conservation of our linefish. Despite the increase in new members, our total number of fish tagged (9 378) in 2020 was the lowest it has been in 12 years. However, our total recaptures (781) increased from last year, including a new time-at-liberty record for the ORI-CFTP (see page 19). These lower-than-usual tagging numbers were mainly due to the COVID-19 Pandemic, and much to the frustration of many anglers, the fishing restrictions implemented during the various Lockdown Levels. This also meant that we had a lower tagging effort by our scientific tagging groups that tag throughout the year in various Marine Protected Areas, and who contribute a large percentage of our tag release and recapture numbers each year (see table on page 12). Despite all this, the total number of fish tagged and recaptured for the ORI-CFTP to date is 350 742 and 21 558 respectively, a truly remarkable achievement!

Charles Lilford was our top tagger for 2020, with an impressive 232 fish tagged, and was followed closely by Mark Galpin with 228 fish tagged. As for recaptures, Charles has had four (2%) of the fish he tagged recaptured, while Mark has had 23 (10%) recaptured (see table on page 6). Remember, it's not always about the number of fish you tag but rather about the way in which you handle and tag them! We encourage all our members to watch our much-improved instructional tagging videos (thanks to SAAMBR and Ocean Planet Media) which can be viewed via our [ORI TAG Facebook page](#), our [SAAMBR website](#) and/or the [SAAMBR YouTube](#) channel (please also share them with your fishing buddies). Please remember to record the sex of any sharks or rays that you tag or recapture (the males have visible external claspers), by filling this out in

the comments section of your tag card and/or submission form, or by ticking the box on the new tag cards.

Retaining that number one spot, South Africa's national fish, the galjoen, was again the top tagged fish in 2020 (1 239) and overall. White steenbras continued to climb the ranks moving up two places from last year, a very encouraging result indeed! Bronze whaler/copper sharks and smoothhound sharks took back their places in the top 10 species tagged, kicking out elf/shad and raggedtooth sharks. Interestingly, only 149 shad were tagged in 2020, possibly raising some concerns about their abundance (see figure on page 4).

Our 38 Facebook posts in 2020 reached about 473 000 people. This means that our greater presence on social media (follow us on Facebook at ORI TAG and subscribe to the SAAMBR YouTube channel) and the new tagging website ([www.oritag.org.za](http://www.oritag.org.za)) has not only increased the number of anglers interested in joining the ORI-CFTP, but has also helped more people to understand the importance of our research.

This edition of the Tagging News has some great articles on discovering the secrets of cavebass (page 16), some interesting research done on juvenile Zambezi sharks in St Lucia Estuary (page 5), and impressions of the ORI Tagging Project by an avid tagger (page 3). Also in store for you is a selection of amazing recaptures and a bit more about the ORI Fish App. Our focus species this year is the white musselcracker/brusher, which I am sure many of you will enjoy reading about (page 21).

We sincerely hope that you enjoy this online version of the Tagging News, which allows us to include a lot more interactive content than our previous printed versions. We would like to say a big **THANK YOU** to all our tagging members for your ongoing support. The past year of the COVID-19 pandemic has been particularly difficult for everyone. We urge you all to try and stay happy, sanitise, wear your mask and social distance as much as possible. Stay safe out there and remember:

*"Be patient and calm - for no one can catch fish in anger".*  
Herbert Hoover.

***We wish you tight lines and happy tagging!***

**Acknowledgements:** Financial and administrative support from the South African Association for Marine Biological Research and the KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs is gratefully acknowledged. We also thank IFISH Tackle Wholesalers for their generous donation towards this year's edition of the Tagging News.



# Impressions of the ORI Tagging Project

## Jeff Asherwood an avid tagger



I moved to the little town of St Lucia in northern KZN in the year 2000. If my memory serves me correctly, I met up with Bruce Mann for the first time since we had left school at the 2001 South African Shore Angling Association Nationals in Zululand where he was busy tagging some of the fish that were caught, and I was guiding the Northern Transvaal team. Bruce explained to me what he was doing and the reasons why tagging fish was so important. I loved the concept and immediately asked how I could become a member and get a tagging kit. It was not long after that I had my kit and became a proud member of the ORI Tagging Project.

I had been tagging for about a year or so when I heard about Bruce's tagging project in the Marine Protected Area north of Cape Vidal. I asked how I could get involved and was told that I had to have tagged at least 100 fish or more to be considered. Well, I soon reached the target and have been part of Bruce's project for the past 19 years, which has been a fascinating and very educational experience!

I now run the Fat Bike Fishing concession based at St Lucia (follow us on Facebook) and we fish the area from Mapelane to Leven Point. For me, the best part of being involved with the ORI Tagging Project is the information I get from fish that we have tagged that are

later recaptured. At present the overall recapture rate for the Tagging Project is about 6% which is quite incredible when you think how a tagged fish could just disappear into that massive ocean.

One of my most memorable recaptures is a catface rockcod that I or my clients have now re-caught no less than five times! If I had not tagged and released that fish, I would never have known that it was the same one. Unbelievably, I've also caught that rockcod twice on the same day! Apart from the obvious resident behaviour, this tells me that we are handling our fish correctly and placing limited stress on the fish. Limiting time out the water is key, and I always try and keep my fish in a bucket of water or rock pool until I am ready to measure and tag it (and if a special catch take a photo of it). I also use barbless circle hooks as they are easy to remove and if swallowed, they can simply be cut off and will normally come out on their own.

So many of my clients are now very pro tag and release after they have been with me for a day's fishing. For any avid marine angler, the ORI Tagging Project is certainly something worth considering getting involved in. It is also a useful way of contributing to the conservation of our marine angling fish from which we anglers derive so much pleasure!



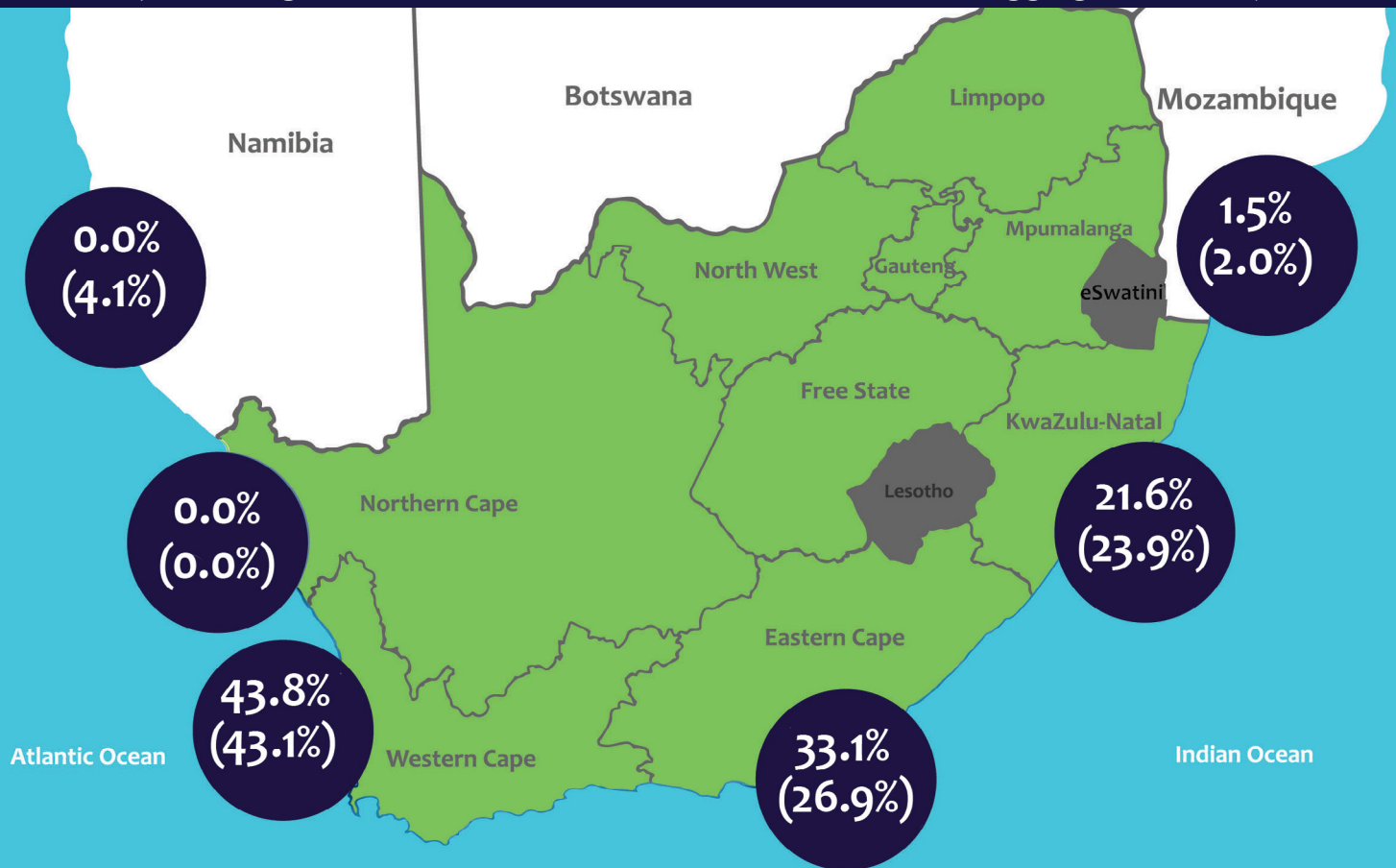
For more information contact Jeff on:

T: +27 66 238 8103. E: [fatbikefishing@gmail.com](mailto:fatbikefishing@gmail.com)



# Percentage of fish tagged along the Southern African coast in 2020

(Percentages in brackets indicate overall distribution of tagging since 1984)



## Top 10 species tagged in 2020

(percentages in brackets indicate overall composition of tagging since 1984)



# St Lucia Shark Tagging

Ryan Daly



St Lucia Estuary, located on the east coast of South Africa, is the largest estuarine lake system in Africa and has been part of a UNESCO World Heritage Site since 1999. Its surface area of approximately 300-350 km<sup>2</sup> makes up almost 80% of all estuarine area in KwaZulu-Natal, and is the largest nursery habitat for estuarine fish species in South Africa. However, since 2002 the mouth did not connect with the sea except for a short period in 2007 following a big sea event. On January 6<sup>th</sup> 2021, the beach berm separating the St Lucia Estuary from the sea was artificially breached allowing the system to reconnect with the sea for the first time in over a decade.



St Lucia has been a critical habitat for Zambezi sharks that use the system as a nursery area. However, since the mouth closure in 2002, Zambezi sharks have not pupped at St Lucia and this key nursery habitat was unavailable for these sharks. Thus, it came

as a surprise when adult Zambezi sharks were seen at the mouth on the day it was opened, as if they had been waiting for it. It came as even more of a surprise when pregnant sharks were seen entering the mouth within the first week of it being open and the first pups were found at the mouth only 10 days after it opened. Pupping at the mouth within 10 days of it opening is a remarkably rapid response by these sharks and highlights how important St Lucia is as a nursery for this species. As Zambezi sharks

are known to exhibit natal philopatry, it is also possible that adult sharks that pupped at St Lucia had used specific environmental cues to return to their ancestral pupping grounds.

To understand what would happen to the newly pupped Zambezi sharks at the mouth, we fitted 9 pups with small acoustic tags that transmit a unique code for over three years. To monitor the tagged sharks, we then placed underwater acoustic receivers in the St Lucia Estuary narrows upstream of the mouth. Remarkably, one shark swam over 2 km upstream into St Lucia on the same day we tagged it at the mouth. However, the remaining pups seemed to stay at the mouth for a few months before two sharks recruited into St Lucia in April. Finally, another shark swam up into St Lucia estuary in early June, just as the mouth closed after 149 days of being open to the sea.



Our study hopes to confirm that Zambezi shark pups ultimately recruit into St Lucia Estuary and survive. Survival for these newly pupped sharks is always a challenge and during this study we recorded a large Nile crocodile preying on a Zambezi shark pup at the mouth. Although there is evidence of sharks being eaten by crocodiles at St Lucia, this was one of the first records of a predation. St Lucia Estuary is home to one of the greatest concentrations of Nile crocodiles in South Africa and they have historically been recorded opportunistically preying on available food sources. The interaction between the crocodile and shark highlighted the unique interaction between these ocean and freshwater top predators that happens at the interface of these environments. St Lucia is certainly deserved of its World Heritage status conferred upon it for its natural beauty and biodiversity and we hope that such unique observations will further motivate the need to conserve and manage the system in a way that promotes its ecological functioning and protects its unique biodiversity.



# Top Taggers: 11 or more fish tagged in 2020

Member name	2020 tag releases	Total taggings	2020 tag recaptures	Total tag recaptures	% Recapt.	Member name	2020 tag releases	Total taggings	2020 tag recaptures	Total tag recaptures	% Recapt.
CHARLES LILFORD	232	3093	4	135	4%	SHALVIN NAIDOO	43	144	2	8	6%
MARK GALPIN	228	767	23	65	8%	VICTOR HOGAN	42	64	4	4	6%
SHAWN MEY	215	1410	5	67	5%	STEFAN OOSTHUIZEN	41	431	4	34	8%
JOHN LUEF	195	654	16	68	10%	DYLAN LEES	40	40	-	-	-
KEVIN HUMPHREYS	187	2374	11	113	5%	STEPHAN BRILL	39	77	2	2	3%
JACQUES DE LA HARPE	116	1226	5	90	7%	NIKOS NICOLAIDIS	38	38	1	1	3%
DONAVAN COLE	109	983	3	25	3%	PIETER MULLER	37	753	2	31	4%
DWAYNE BOSHOF	107	115	2	2	2%	MAARTEN MOLENAAR	36	674	3	39	6%
BRADLEY SPARG	101	2495	7	142	6%	BOB SHEPHERD	36	721	1	25	3%
NIEL MALAN	100	451	10	27	6%	DION GOVINDER	36	444	12	61	14%
STRINIVASEN ROLAND NAICKER	92	259	2	10	4%	JACQUES-PIERRE GELDENHUYS	35	461	4	33	7%
GARETH GOUGH	86	551	9	41	7%	AVASHIN NAIDOO	34	42	7	7	17%
MARCO WILDEMANN	84	136	2	3	2%	RUSSEL BERMAN	34	201	2	7	3%
CHARLES DE LA HARPE	84	485	6	52	11%	BRAD CARR	33	974	3	74	8%
JEFF ASHERWOOD	83	635	12	47	7%	BRYSON CHUNDER	32	45	7	8	18%
GRAHAM POLLARD	80	322	3	11	3%	DEON VAN EMMENIS	32	80	-	3	4%
ROGER DAVISON	78	220	8	23	10%	MELISSA LUCAS	31	41	1	2	5%
BERRIE FERREIRA	77	781	4	29	4%	KYLE HANSEN	30	400	4	30	8%
NIC DE KOCK	73	2029	5	132	7%	URSULA OTTO	29	131	-	4	3%
FRED CLARKE	67	73	1	1	1%	CHARL GROBLER	29	33	2	2	6%
DON MARX	66	238	1	15	6%	STEPHAN OLIVIER	29	64	-	1	2%
JASON BRINK	63	433	4	13	3%	STEFAN VAN HUYSSTEEN	28	210	2	7	3%
JAYSON JOOSTE	57	57	1	1	2%	JUNAID ISMAIL	28	280	6	42	15%
GERRIE GROBLER	56	693	1	32	5%	EDUARD STEYLS	28	210	2	6	3%
MARLIN KINSEY	53	134	2	6	4%	PATRICK MORRIS	28	887	1	57	6%
JACQUES MATTHYSEN	52	92	3	10	11%	RICHARD BOUCHER	27	35	-	-	-
MATHEW WEEDMAN	51	561	22	80	14%	FRANCOIS KLEYN	27	34	-	-	-
RUAN VAN DER WALT	51	258	1	13	5%	BARRY-JOHN CADLE	27	51	1	1	2%
WILLIAM FERREIRA	50	384	6	22	6%	CHRIS FALLOWS	27	1590	2	53	3%
STEPHAN MARX	49	80	1	3	4%	JACQUES MALHERBE	27	111	1	9	8%
JUANDRÉ GELDENHUYS	48	62	2	2	3%	ROBERT PACE	27	58	-	4	7%
KIRK WEBBER	46	360	1	19	5%	MORNE OLIVIER	26	51	-	-	-
FRANCOIS KEMP	46	135	6	9	7%	CRAIG NELSON	26	684	4	47	7%
BRETT HARRIS	45	182	-	4	2%	JJ STRYDOM	26	188	2	9	5%
DIVAN COETZER	44	62	1	1	2%	KEOLIN MOODLEY	26	101	1	4	4%
MATTHEW NOTHARD	44	107	-	-	-	JANNIE VAN BLERK	26	88	-	2	2%
RYAN TAYLOR	43	430	6	46	11%	PIETER DU TOIT	26	207	1	7	3%

# Top Taggers: 11 or more fish tagged in 2020

Member name	2020 tag releases	Total taggings	2020 tag recaptures	Total tag recaptures	% Recapt.
RON MAGGS	26	148	-	4	3%
STUART HAYNES	24	64	4	7	11%
LEON VAN DER MESCHT	24	81	2	3	4%
SHAUN VAN ZYL	23	324	2	12	4%
JONATHAN SCOTT	23	555	-	26	5%
LUAN ELS	23	56	3	3	5%
LYLE TAYLOR	22	270	7	13	5%
BRENDAN O'CONNELL	22	455	3	73	16%
DEVAN LAGENDYK	22	70	1	4	6%
RUAN VAN DEN HEEVER	22	22	-	-	-
JOHANN RADEMEYER	21	30	-	-	-
DILLAN CLAASSEN	21	39	2	5	13%
CHRIS KING	21	36	-	1	3%
NOAH KLOPPER	21	21	-	-	-
JAN GEORGE STEYTLER	20	20	-	-	-
JOSHUA TIMM	20	157	1	6	4%
CHENELLE MORAN	20	47	4	4	9%
CRAIG CARRUTHERS	20	125	1	7	6%
VAUGHN REILLY	19	224	2	28	13%
LOUIS ALLISON	19	508	3	45	9%
LISTON DAVIDOWITZ	19	257	1	18	7%
RUSSELL HAND	19	762	6	91	12%
PIET OOSTHUIZEN	19	650	5	135	21%
DONOVAN SOLOMON	19	271	1	52	19%
WALTER BRIAN MULLINS	19	172	2	10	6%
RIAAAN & THEA-MARI VAN DER SANDT	18	342	2	18	5%
YUSUF DHALECH	18	18	-	-	-
JUSTIN VON BONDE	18	176	-	2	1%
CHRISTIAN JACOBY	17	17	3	3	18%
GERHARD BRUWER	17	47	2	4	9%
CHRIS MULLER	16	427	-	18	4%
CORNE ERASMUS	16	165	1	9	5%
STEVEN HUMPHREYS	16	309	-	5	2%
ROB BILLIMORE	16	136	1	4	3%
JUSTIN MCCARTHY	15	526	2	35	7%
RAYMOND CAMPBELL	15	149	1	14	9%
KOBENDRAN PILLAY	15	20	-	-	-
CRAIG AYLIFFE	15	15	1	1	7%

Member name	2020 tag releases	Total taggings	2020 tag recaptures	Total tag recaptures	% Recapt.
BEVAN MORRIS	15	19	-	-	-
ISAIAH EMMANUEL VARATHAN	15	49	2	7	14%
MICHAEL PARRIS	15	82	1	5	6%
JOHN MONG	15	30	-	-	-
MATTHEW MCIVER	14	143	4	13	9%
ROBERT KYLE	14	1779	2	200	11%
GUY NICHOLSON	14	86	1	2	2%
FREEK STANDER	14	20	2	2	10%
JULIAN PYBUS	14	596	3	30	5%
PETRUS MEY	14	96	-	1	1%
BARRY TEDDER	14	227	4	8	4%
NICHOLAS PIENAAR	14	63	1	3	5%
CHRIS VAN DER WALT	13	15	1	1	7%
ANDRE VAN NIEKERK	13	13	-	-	-
JASON HAXTON	13	54	-	2	4%
FRANCOIS VAN ZYL	13	363	-	23	6%
JUANDRE LOTRIET	13	13	-	-	-
ZANE HUMAN	13	13	-	-	-
CHRISTO VAN TONDER	12	67	-	3	4%
GARY BOUCHER	12	120	-	2	2%
RIEKERT VAN HEERDEN	12	564	-	19	3%
EMILE VAN TONDER	12	15	1	1	7%
DAVE HUMAN	12	369	-	24	7%
MICHAEL FARQUHAR	12	110	-	8	7%
NICOLAS SWART	12	28	-	-	-
MARK CUNNINGHAM	11	11	-	-	-
BERTUS PRETORIUS	11	25	-	-	-
LAWRENCE SMITH	11	452	1	23	5%
JEAN LOUW	11	96	-	1	1%
MJ HILLHOUSE	11	33	-	-	-
HARRY FLIGHT	11	11	-	-	-
TREVOR HANSEN	11	92	1	2	2%
MATT SNYMAN	11	43	8	11	26%
BRUCE MANN	11	470	-	40	9%
CHRIS QUAYLE	11	128	-	4	3%
BRANDEN KARP	11	60	-	-	-
FRANS GERBER	11	16	-	-	-





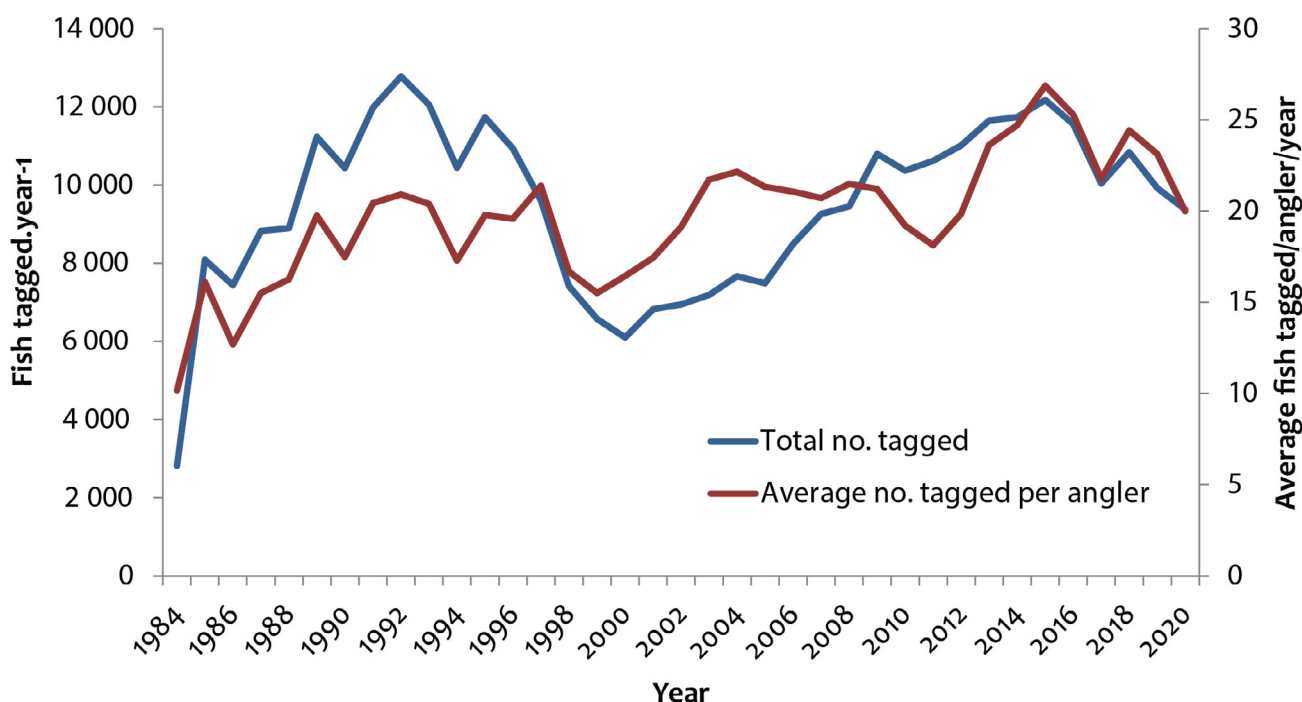




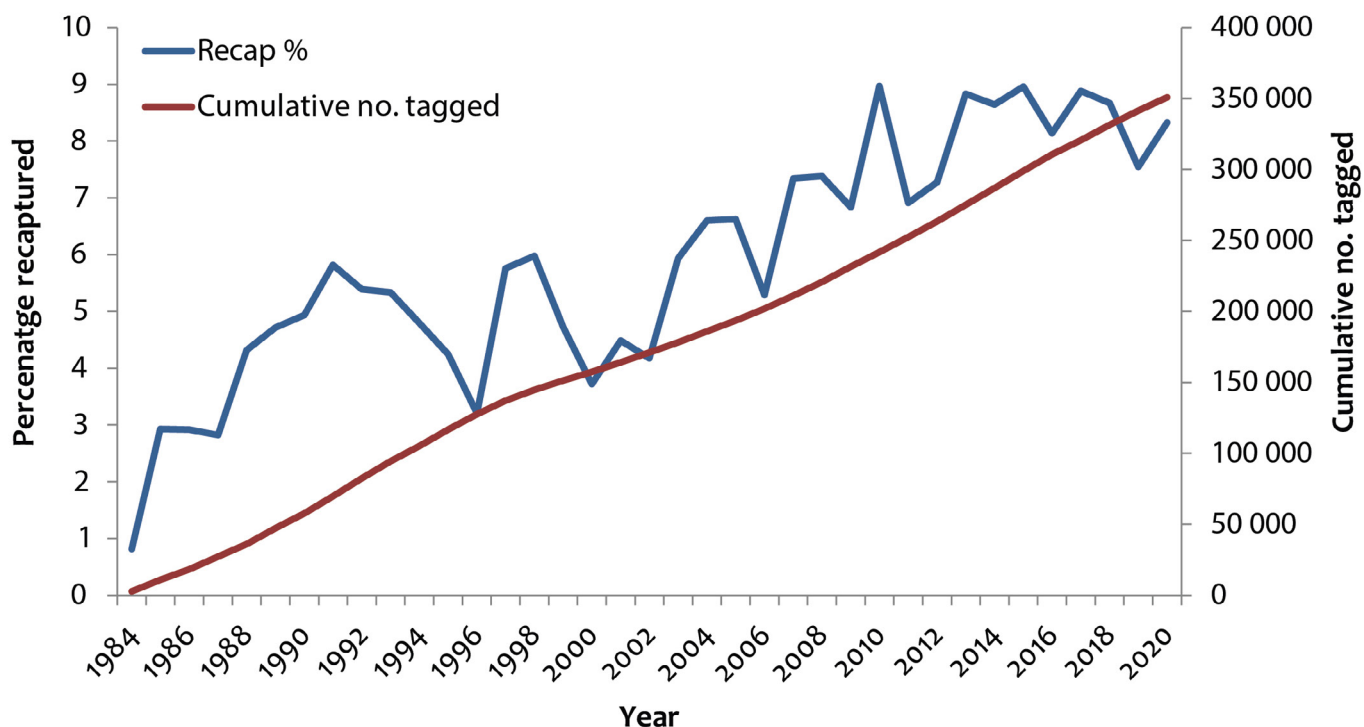


# ORI Cooperative Fish Tagging Project Statistics

## Fish tagged per year and per angler



## % fish recaptured per year and cumulative number of fish tagged



## Research Tagging in Marine Protected Areas

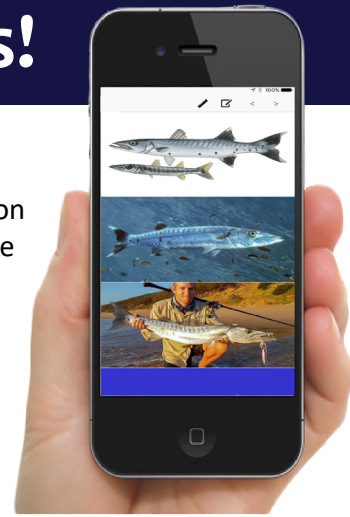
Marine Protected Areas (MPAs)	Period	2020		Overall	
		Total	# Recapt.	Total	# Recapt.
De Hoop Marine Protected Area (Western Cape)	1985 - current	1247	120	61475	4539
Dwesa-Cwebe Marine Protected Area (Eastern Cape)	2009 - current	451	11	4371	143
Goukamma Marine Protected Area (Western Cape)	2001 - current	102	3	974	34
iSimangaliso Marine Protected Area (KwaZulu-Natal)	2001 - current	313	19	10787	1388
Pondoland Marine Protected Area (Eastern Cape)	2006 - current	209	68	5002	1285

# Get the NEW Fish App for Anglers!

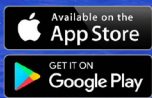
**Bruce Mann**

In October 2020, the long-awaited **ORI Fish App** (Marine Fish Guide for Southern Africa) became available for download on cell phone (both Android and iPhone). This app was produced specifically for marine recreational anglers to help improve fish identification and to increase awareness about South Africa's marine linefish species.

sources. A useful compare function in the app allows you to compare photos (or text) of similar species. Generalised line drawings of fish families can be used to identify fish in that family. Simple maps are available for the **southern African distribution** of each species. The fish identification smart search is simple to use and works well at narrowing down the species you are looking for. **The length/weight calculator** was compiled for each species using the most accurate information available and is very quick and easy to use. This is useful when you measure and release your fish but want to know what its weight was. The **linefish regulations have been summarised** for each individual species based on the current gazetted legislation and can be quickly located at the touch of a button. Finally, there is a useful catch log where you can log your own catches and other interesting observations.



## Marine Fish Guide for Southern Africa App



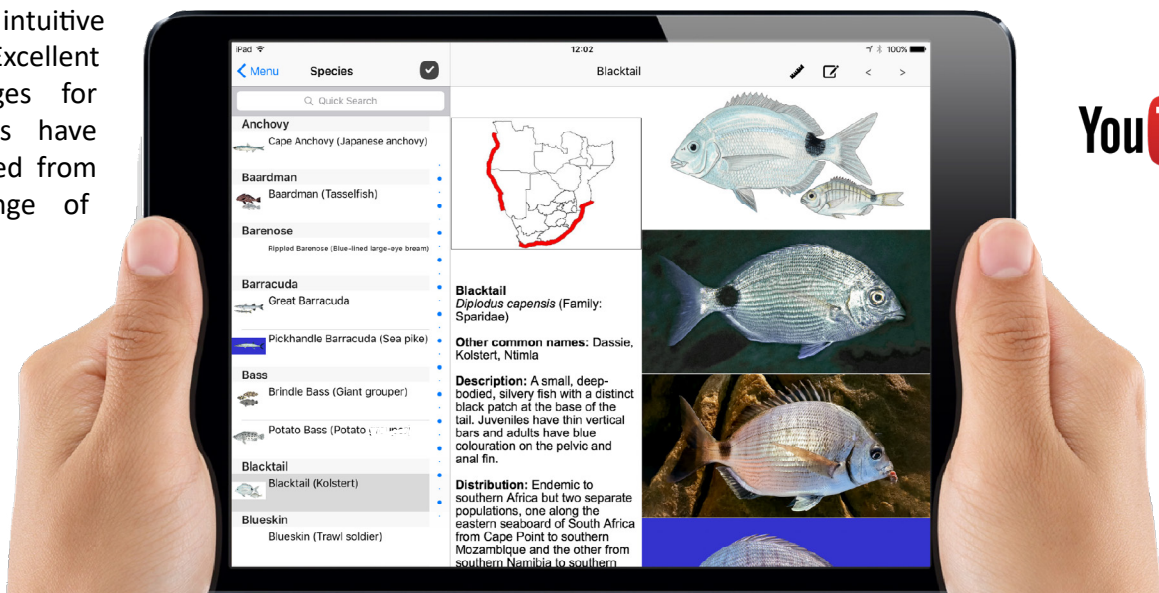
All profits from the sale of the App are split between the app developer (PDA Solutions) and ORI. Importantly, funds received by ORI go directly into helping to finance the **ORI-Cooperative Fish Tagging Project (ORI-CFTP)**.

The basic structure of the Fish App includes a detailed fish guide (photographs and text), a distribution map for each species, a fish identification tool (smart search), identification guide using fish families, a length/weight calculator, the current fishing regulations for each species and a personal catch log.

The app contains detailed species profiles for **249 common linefish species** from 77 families caught in South African waters, using simple, easy to understand text. The app is very simple and intuitive to use. Excellent colour images for each species have been obtained from a wide range of

Although initial sales have been slow, we hope that the Fish App will become increasingly popular as anglers discover **its usefulness** and spread the word. The app will be regularly updated to include any changes in the fishing regulations and to incorporate any new information on the individual species (**updates take place automatically on your phone with no added cost**).

To purchase the ORI Fish App, please go to Google Play Store (Android phones) or App Store (iPhones) and search for **"Marine Fish Guide for Southern Africa"**. The app only costs **R200** to download (less than you spend when you go to the tackle store) so please get yourself a copy now, **enjoy it and tell others about it!**



# Main fish species tagged up to 31 December 2020

Priority species for tagging are highlighted in blue

Species	No. Tagged since 1984	Recaptured since 1984		Km travelled		Days free		Species	No. Tagged since 1984	Recaptured since 1984		Km travelled		Days free	
		No.	%	Avg.	Max.	Avg.	Max.			No.	%	Avg.	Max.	Avg.	Max.
Galjoen	68332	4741	7%	42	1892	435	5815	King mackerel / Cuda	1406	60	4%	372	1552	543	2604
Dusky kob	22861	1641	7%	27	1625	347	5997	Scotsman	1394	384	28%	24	1211	462	2839
Leervis / Garrick	18254	1325	7%	222	2060	324	3208	Grey grunter	1348	81	6%	1	21	232	1099
Dusky shark	15500	1389	9%	59	1374	105	2772	Westcoast steenbras	1306	78	6%	61	280	253	1449
Spotted grunter	15075	405	3%	12	823	285	2950	Cape stumpnose	1286	8	1%	9	56	188	732
Copper / Bronze whaler shark	10444	342	3%	162	1790	439	3981	Silver kob	1240	52	4%	34	548	275	839
Spotted gullyshark	9790	674	7%	30	911	543	6332	Duckbill ray	1230	12	1%	15	123	575	1427
Elf / Shad	9383	371	4%	282	1676	175	1437	Blacktip shark	1152	41	4%	88	1288	211	1148
Blacktail / Dassie	9205	222	2%	6	358	273	2715	Soupin shark / Vaalhaai	1148	29	3%	127	1034	737	3586
White steenbras	8345	410	5%	37	804	286	2262	Scalloped hammerhead shark	1082	18	2%	121	629	329	2943
Blackspotted smoothhound shark	7759	227	3%	43	582	577	4405	Giant / Cape yellowtail	1044	44	4%	174	1746	325	1380
Raggedtooth shark	6778	1018	15%	192	2966	744	8256	Skipjack tuna	1034	1	0%	1061	1061	464	464
Lesser guitarfish / Sandshark	6596	73	1%	44	726	344	2572	Stonebreem	1027	9	1%	75	524	242	563
Giant guitarfish / Sandshark	5427	435	8%	37	1702	375	2639	Yellowfin tuna	1000	14	1%	804	5645	319	1314
Slinger	5223	211	4%	33	1110	229	2814	Leopard catshark	970	137	14%	11	722	342	4431
Roman	5216	337	6%	4	294	378	7301	Milk shark	954	25	3%	90	363	187	772
Bronze bream	4705	148	3%	20	799	195	1465	Squairetail kob	932	67	7%	57	1628	149	2043
Largespotted pompano	4238	77	2%	12	270	246	1372	Geelbek / Cape salmon	906	11	1%	105	904	335	2569
Black musselcracker / Poenskop	4183	318	8%	25	528	582	6809	Bigeye kingfish	886	39	4%	12	163	246	2751
Yellowbelly rockcod	3983	694	17%	9	425	375	3309	Honeycomb stingray	865	18	2%	1	8	313	2543
Giant kingfish	3865	157	4%	16	419	364	2226	Blacktip kingfish	862	29	3%	4	54	147	545
Diamond / Butterfly ray	3862	30	1%	198	1756	488	2184	Black marlin	846	3	0%	1382	3633	163	240
Broadnose sevengill shark	3853	248	6%	71	1154	496	4332	Eagleray	732	6	1%	10	49	495	1582
Catface rockcod	3757	888	24%	6	525	172	2867	Spinner / Longnosed blacktip shark	728	24	3%	92	1055	195	1295
Sailfish	3582	29	1%	61	1060	150	727	Dark shyshark	725	152	21%	4	86	125	1097
Blue stingray	3492	12	0%	32	234	290	1085	Seventy-four	713	25	4%	51	521	489	2845
Zebra / Wildeperd	3436	75	2%	2	52	236	1399	Potato bass	608	30	5%	2	22	329	2639
White mussel-cracker / brusher	2970	90	3%	60	843	558	3499	Hardnosed smoothhound shark	603	9	1%	87	340	344	870
Speckled snapper	2650	991	37%	3	200	287	2465	Natal seacatfish	595	233	39%	0	22	378	2586
Carpenter / Silverfish	2601	24	1%	46	290	932	4766	Tiger shark	591	27	5%	272	4067	390	1823
Baardman / Belman / Tasslefish	2531	38	2%	2	17	436	4870	Janbruin / John Brown	571	15	3%	1	12	102	279
Santer / Soldier	2312	166	7%	18	490	235	1683	Striped marlin	561	2	0%	805	848	202	379
Striped catshark	2010	162	8%	6	381	361	2597	Halfmoon rockcod	529	97	18%	1	49	514	3189
Sharpnose stingray	1928	7	0%	7	24	167	465	Bonefish	516	4	1%	10	34	122	354
Red / Copper steenbras	1814	189	10%	119	923	849	8080	Great white shark	511	17	3%	290	1543	346	959
Smooth hammerhead shark	1782	22	1%	133	384	555	3075	Bull / Zambezi shark	502	32	6%	76	539	328	2599
Ladyfish / Springer	1776	34	2%	22	412	337	1426	Queen mackerel / Natal snoek	462	3	1%	4	12	376	1044
Natal stumpnose / Yellowfin bream	1751	51	3%	13	230	237	1451	Blue marlin	446	0	0%	0	0	0	0
Perch / River bream	1598	221	14%	4	700	365	1583	Southern pompano	432	26	6%	62	464	151	848
Albacore / Longfin tuna	1522	36	2%	304	1008	412	2585	Brown shyshark	427	31	7%	13	102	295	997
River snapper / Rock salmon	1507	288	19%	3	391	315	2403	Pickhandle barracuda	399	57	14%	2	44	273	1856
Brassy / Greenspot kingfish	1429	78	5%	11	757	293	1441	Red stumpnose	396	9	2%	13	107	834	1998
Dageraad	1426	108	8%	24	592	394	1968	Talang / Largemouth queenfish	390	16	4%	1	10	193	630
Cavebass / Lampfish	1424	214	15%	10	514	336	2284	White stumpnose	386	5	1%	3	7	245	463

# Main fish species tagged up to 31 December 2020

Priority species for tagging are highlighted in blue

Species	No. Tagged since 1984	Recaptured since 1984		Km travelled		Days free		Species	No. Tagged since 1984	Recaptured since 1984		Km travelled		Days free	
		No.	%	Avg.	Max.	Avg.	Max.			No.	%	Avg.	Max.	Avg.	Max.
Hottentot	385	15	4%	1	10	267	1078	Oxeye tarpon	83	0	0%	0	0	0	0
Puffadder shyshark	384	36	9%	1	20	225	1363	Spotted spiny dogfish	82	1	1%	36	36	120	120
Lemonfish	378	17	4%	4	64	230	749	Swordfish	79	1	1%	9	9	1263	1263
Flapnose houndshark	344	49	14%	1	43	740	3013	Greater yellowtail / Amberjack	76	1	1%	77	77	27	27
Sandbar shark	334	6	2%	166	345	250	536	Bigeye stumpnose	76	3	4%	8	21	42	59
Banded galjoen	322	8	2%	70	562	232	507	Yellowspotted kingfish	73	0	0%	0	0	0	0
Eastern little tuna / Kawakawa	318	0	0%	0	0	0	0	Longfin kingfish	73	1	1%	12	12	453	453
Bartail flathead	317	8	3%	2	18	501	1947	Banded catshark	68	8	12%	16	55	423	1155
Bluefin kingfish	306	11	4%	15	94	131	260	Striped mullet	66	1	2%	1	1	230	230
Blackspot shark	297	9	3%	31	192	296	945	Blue kingfish	65	0	0%	0	0	0	0
Spearnose skate	293	11	4%	0	3	223	553	Java shark	65	2	3%	14	18	67	76
St. Joseph / Elephant fish	280	1	0%	1342	1342	218	218	Round ribbontailray	65	2	3%	4	8	45	74
Bluntnose spiny dogfish	274	4	1%	189	669	615	1476	Sailfin rubberlip	59	0	0%	0	0	0	0
Blue emperor	267	18	7%	32	307	318	975	Sand steenbras	58	2	3%	0	0	40	79
Snapper kob	260	10	4%	20	132	170	378	Cape moony	56	0	0%	0	0	0	0
Blue hottentot	246	7	3%	0	0	108	199	Doublespotted queenfish	56	0	0%	0	0	0	0
Malabar rockcod	230	32	14%	1	8	213	1540	Dusky rubberlip	55	2	4%	92	183	1495	2345
Englishman	217	9	4%	1	6	281	640	Minstrel rubberlip	55	2	4%	19	37	484	679
White seacatfish	207	4	2%	14	21	595	1895	Needlescaled queenfish	55	1	2%	0	0	227	227
Whitespotted smoothhound	200	5	3%	6	15	678	1627	Yellowtail scad	51	0	0%	0	0	0	0
Greyspot guitarfish / Sandshark	187	1	1%	6	6	51	51	Prodigal son / Cobia	49	1	2%	36	36	479	479
Snoek	181	1	1%	136	136	491	491	Concertina fish	48	0	0%	0	0	0	0
Javelin grunter	178	16	9%	9	70	378	2940	Marbled electric ray	48	0	0%	0	0	0	0
Green jobfish	169	6	4%	0	0	229	373	Thintail thresher	47	0	0%	0	0	0	0
Dorado / Dolphinfish	161	2	1%	55	64	39	66	Spadefish	47	1	2%	118	118	2724	2724
Shorttail stingray	158	5	3%	48	231	508	2412	Shortfin mako	47	5	11%	24	69	253	786
Spotted eagleray	153	3	2%	205	597	518	850	Panga	45	0	0%	0	0	0	0
Striped threadfin	141	2	1%	5	9	51	63	German	44	0	0%	0	0	0	0
Smallspotted pompano	129	4	3%	3	13	211	439	False thornback skate	44	2	5%	0	0	194	340
Tomato rockcod	126	20	16%	2	22	200	574	Swallowtail rockcod	44	4	9%	0	0	7	11
Grey reef shark	118	2	2%	0	0	357	697	Yellowfin emperor	44	4	9%	0	0	441	1187
Cock grunter	113	5	4%	14	65	144	490	Shortbill spearfish	41	0	0%	0	0	0	0
Moustache rockcod	108	38	35%	34	1200	437	2990	Wreckfish	39	2	5%	4	7	231	388
Thorntail stingray	106	2	2%	0	0	295	357	Koester	39	1	3%	0	0	1176	1176
Great barracuda	105	23	22%	0	1	170	467	Blue shark	38	0	0%	0	0	0	0
Flathead mullet	102	1	1%	738	738	738	738	Steentjie	37	0	0%	0	0	0	0
Russell's snapper	102	3	3%	0	1	328	896	Captain Fine / Whitespotted rockcod	35	0	0%	0	0	0	0
Whitebarred rubberlip	99	1	1%	1	1	176	176	Indian goatfish	35	0	0%	0	0	0	0
Eel catfish	97	1	1%	1	1	47	47	Manta	35	1	3%	6	6	39	39
Cape gurnard	97	3	3%	0	0	456	953	Bludger kingfish	34	0	0%	0	0	0	0
Atlantic bonito	91	0	0%	0	0	0	0	Tripletail	33	0	0%	0	0	0	0
Maasbanker	88	0	0%	0	0	0	0	Surge wrasse	32	1	3%	0	0	34	34
Sliteye shark	88	2	2%	291	565	1334	2652	Milkfish	31	0	0%	0	0	0	0
Longfin / Tropical yellowtail	84	0	0%	0	0	0	0	Wahoo	31	1	3%	0	0	18	18
								Mackerel	30	0	0%	0	0	0	0
								Threadfin mirrorfish	30	0	0%	0	0	0	0
								Twinspot snapper	30	5	17%	2	4	139	363

# Discovering the Secrets of Cavebass

Bruce Mann




Cavebass, *Dinoperca petersi*, also known as lampfish or lantern fish, is a relatively common fish species caught in the line-fishery along the KZN and Transkei coasts. It is caught both by shore anglers and ski-boat anglers fishing on offshore reefs and is also occasionally speared. Surprisingly, relatively little is known about the biology and ecology of this species. Movement patterns and growth rate of this species were studied based on data obtained from a long-term tag-recapture study conducted in the iSimangaliso Marine Protected Area in northern KZN between 2001-2019 by Bruce Mann and his team of volunteer anglers. For the study, a total of 775 cavebass  $\geq 300$  mm total length (TL) was tagged and released and 111 (14.3%) were recaptured at least once.

Results showed that cave bass is a highly resident species with a linear home-range size of 290-405 m. Fish appear to remain in caves or under ledges during the day and move out to forage at night. While most fish showed high site fidelity, 8.8% of the tagged fish showed wider ranging movements covering distances of 2.4-90 km. Like many other reef fish species, these larger movements appeared to be restricted to a few individuals in the population that are born with a “wandering gene”. This appears to be an evolutionary strategy which prevents genetic isolation of sub-populations. Interestingly, only five fish showed movements out of no-take zones into adjacent exploited areas, suggesting limited adult spillover. However, spawning in no-take areas will provide a supply of eggs and larvae which

drift in the current and settle in adjacent exploited areas.

Growth rate of tagged fish was found to be reasonably slow compared to other similar predatory reef fish with an average growth rate of 62 mm per year for smaller fish ( $\sim 300$  mm) and 10 mm per year for larger mature fish (550 mm). With this growth rate, fish are likely reach ages of more than 20 years (assuming there is minimal impact of tagging on the calculated growth rate). Cavebass is not currently listed in the suite of fish species regulated by species-specific minimum size and bag limits in South African fisheries legislation. As such, and based on the results of this study, a minimum size limit of 300 mm TL (based on their estimated size-at-maturity) and a daily bag limit of five fish per person per day is recommended as a precautionary approach for the future management of this species in South African waters.

For more information on this study please see the following reference:

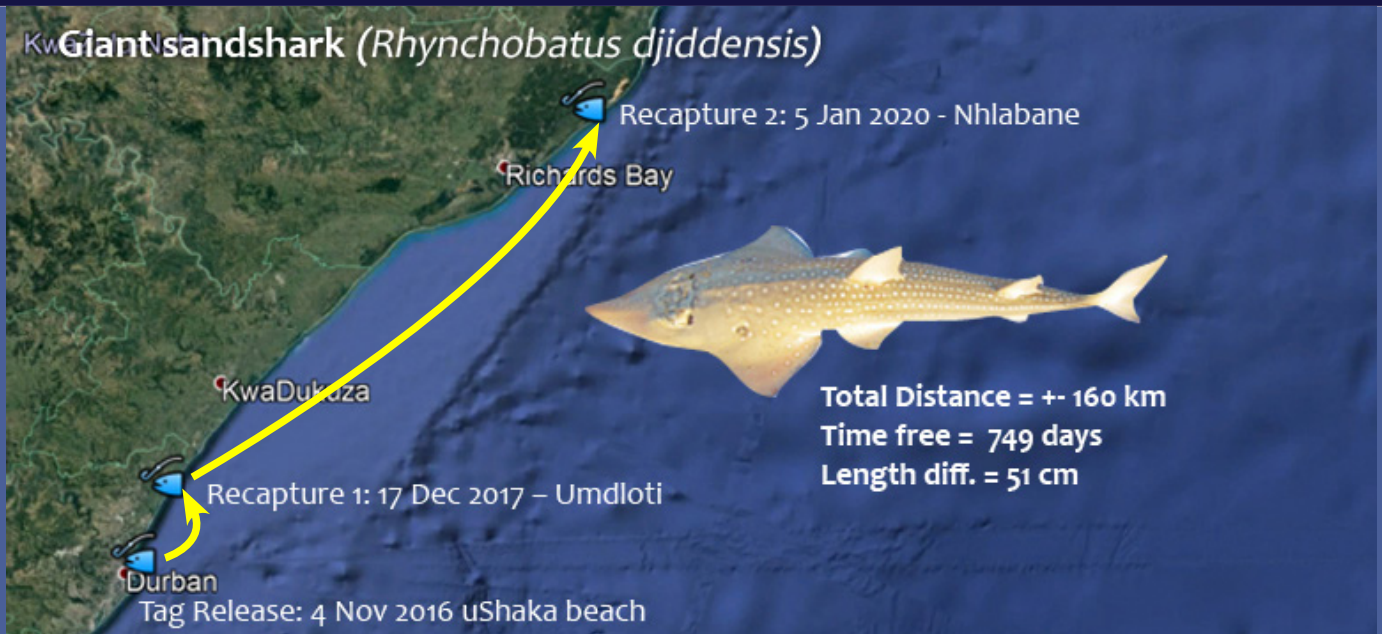
Mann BQ, Jordaan G, Daly R. 2020. Movement patterns and growth rate of cavebass *Dinoperca petersi* (Pisces: Dinopercidae) in the iSimangaliso Marine Protected Area, South Africa. *Western Indian Ocean Journal of Marine Science* 19(2): 45-59. 

Below: A large recaptured cavebass. Note how little biofouling is on the tag – this is because they spend most of the day in caves where there is insufficient light for the algae to photosynthesize.

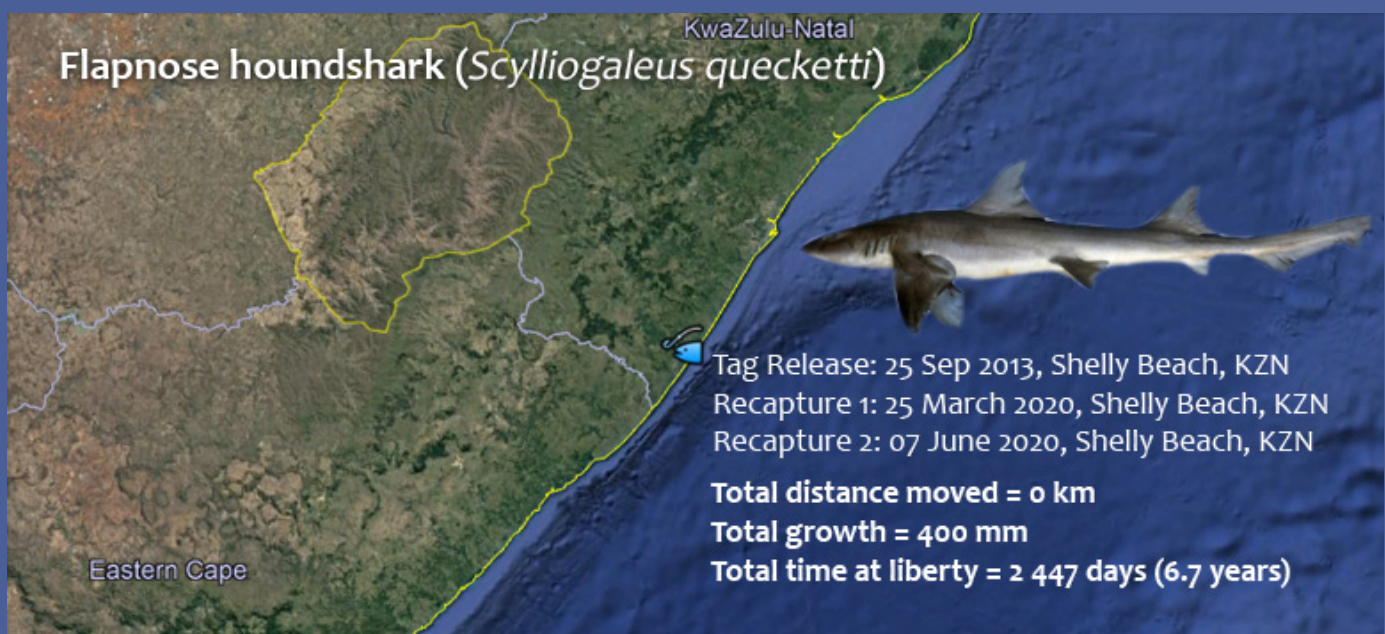




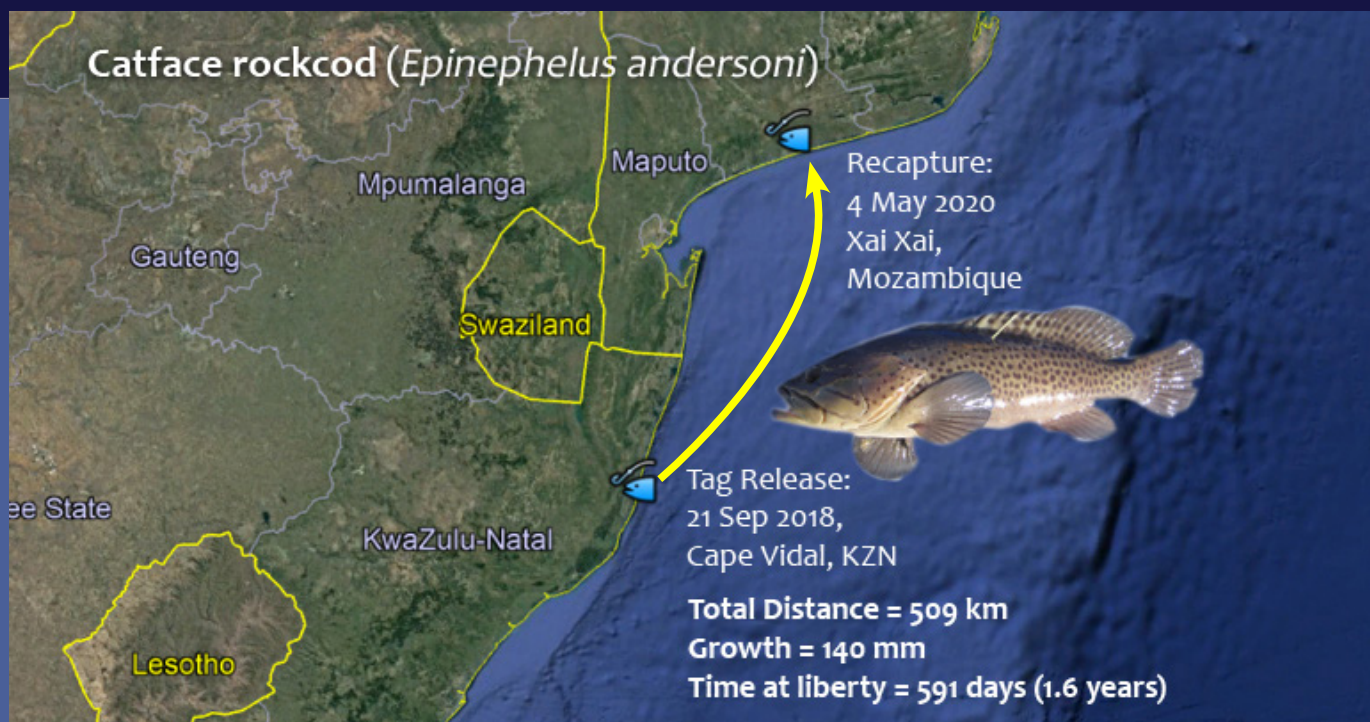
# Exciting Recaptures From 2020



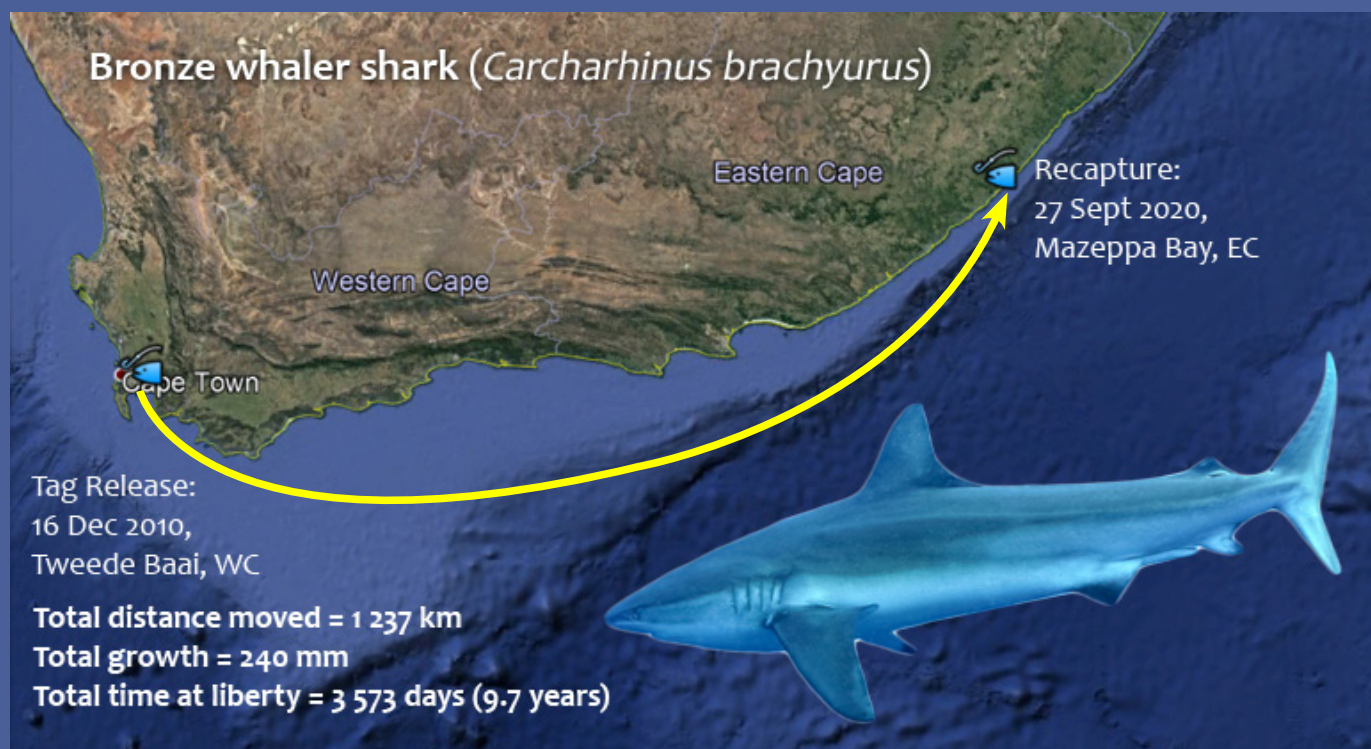
On the 5<sup>th</sup> January 2020 we had our 442<sup>nd</sup> giant sandshark (hereafter sandy) tag recapture. This sandy was originally tagged by Dave Irvine on the 4<sup>th</sup> November 2016 at uShaka/Vetch's Beach measuring 163 cm total length (TL), before later being recaptured twice. It was first recaptured 408 days later by Wesley Peens at Umdloti/Newsel Beach measuring 185 cm TL, with the second recapture occurring another 341 days later by Dean Reddy at Nhlabane, with the sandy now measuring 214 cm TL. This sandy grew about 51 cm in just over two years and showed a northward movement of about 160 km. This species has received a lot of attention recently due to their conservation status (i.e. Critically Endangered on the IUCN Red List) largely because of the threat they face from overfishing for their fins. ORI scientists have recently produced two peer-reviewed publications on this species in South African waters which have greatly added to our knowledge about its status, movement patterns and growth rate.



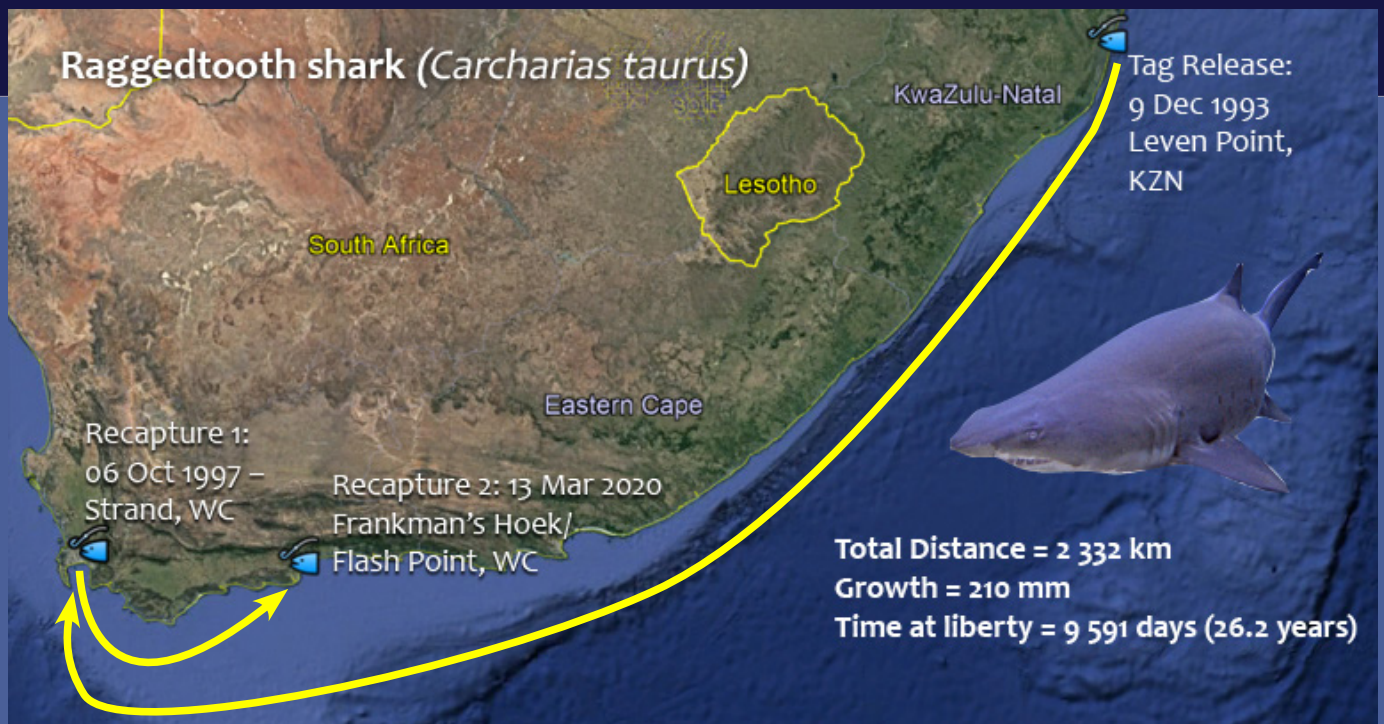
On the 7<sup>th</sup> June 2020 we had our 47<sup>th</sup> flapnose houndshark tag recapture. This recapture story is quite unique in that this shark was tagged and recaptured (twice) by the same angler in the same fishing spot. Louis Allison originally tagged this flapnose houndshark on the 25<sup>th</sup> September 2013 at Shelly Beach, KwaZulu-Natal (KZN), measuring 680 mm total length (TL). Remarkably, he recaptured the same shark 2 375 days (6.5 years) later in the exact same spot, measuring 1080 mm TL before recapturing the shark a second time, again in the exact same spot, 75 days after that! Flapnose houndsharks, as seen with this recapture, are highly resident species. They are endemic to South African waters only occurring off the east coast of South Africa (from East London to northern KZN). Little is known about flapnose houndsharks but because of their limited distribution they have been listed as Vulnerable on the IUCN Red List. Fortunately, they are relatively common in the Pondoland MPA which provides an important refuge for this and other vulnerable species.



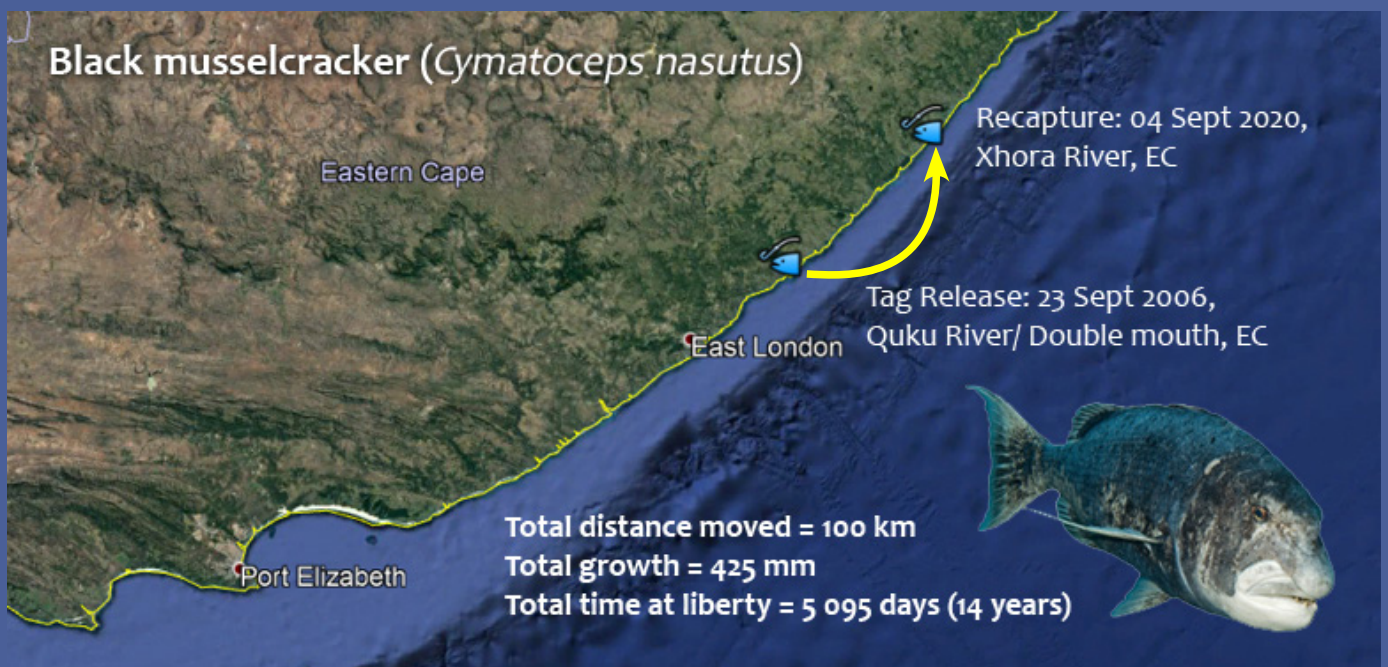
On the 4<sup>th</sup> May 2020 we had our 833<sup>rd</sup> catface rockcod tag recapture! This rockcod was originally tagged by Julian Pybus on the 21<sup>st</sup> September 2018 near the Cape Vidal Lighthouse, KwaZulu-Natal (KZN), measuring 550 mm total length (TL), before being recaptured 591 days (1.6 years) later by a commercial fisherman in Xai Xai, Mozambique, measuring 690 mm TL. This fish moved a total distance of 509 km and grew about 140 mm during its time at liberty. Catface rockcod were originally thought to be a fairly resident species, but over the years some tagged individuals have been reported undertaking extensive movements of more than 500 km. There have also been anecdotal reports that this may be a “pioneer species” capable of occupying new or vacated niche spaces. More in-depth movement studies are currently being conducted on this species using acoustic telemetry to try and understand more about its movement behaviour.



On the 27<sup>th</sup> September 2020 we had our 405<sup>th</sup> Bronze whaler/Copper shark (hereafter bronzies) tag recapture. This shark was originally tagged on the 16<sup>th</sup> December 2010 by Dirk Swart at Tweede Baai, Western Cape (WC), measuring 188 cm precaudal length (PCL). It was recaptured 3 573 days (9.7 years) later by Marco Wildemann at Mazeppa Bay, Eastern Cape (EC), measuring 212 cm PCL having moved 1 237 km up the coast! Bronzies are often confused with dusky sharks but can be told apart by not having an inter-dorsal ridge between their two dorsal fins. This species is found in warm-temperate waters worldwide and is highly migratory. In South Africa, bronzies are mainly caught along the Western and Eastern Cape coasts, however, they move into KwaZulu-Natal waters in winter during the annual sardine run.



History was made on 13<sup>th</sup> March 2020, for the ORI-CFTP. Our 1 014<sup>th</sup> raggedtooth shark (raggie) was recaptured after spending 9 591 days (26.2 years) at liberty with the same tag inserted. A new record for the longest time at liberty for a tagged fish with the same tag in an animal in the ORI-CFTP. This female was originally tagged by Jeremy Cliff, from the KwaZulu-Natal Sharks Board, on the 9<sup>th</sup> December 1993 at Leven Point, 22 km north of Cape Vidal, KZN, measuring +/- 180 cm precaudal length (PCL). After being free for 1 397 days (3.8 years) she was first recaptured by Dr Vincent Taylor at the Strand, Western Cape (WC), on the 6<sup>th</sup> October 1997 (no length was recorded), having moved 1 897 km south. She was released again, and recaptured 8194 days (22.4 years) later (with the original tag) on the 13<sup>th</sup> March by Shawn Mey at Frankman's Hoek, WC, measuring 201 cm PCL, 435 km north of the first recapture locality. She only grew 21 cm in under 26 years showing the slow growth rate of raggies. Her recapture at various localities along the coast shows the typical migration pattern of raggies.



On the 4<sup>th</sup> September 2020 we had our 316<sup>th</sup> Black musselcracker/Poenskop tag recapture. This fish was originally tagged on the 23<sup>rd</sup> September 2006 by Jay Kruise at the Quku River/Double Mouth area, Eastern Cape (EC), measuring 415 mm FL. It was recaptured 5 095 days (14 years) later by Andre Farr off the Xhora River, EC, measuring 840 mm FL and had moved 100 km up the coast! Both juveniles and adults of this species are known to be highly resident, however, some adults are known to move distances of over 100 km, often in an eastward direction. This species has an extremely slow growth rate and changes sex from female to male (protogynous hermaphrodite) at about 18 years of age. They can reach a maximum size of up to 37.8 kg and an age of 45.5 years. Slow growth and late maturity make black musselcracker extremely prone to over-exploitation and marine protected areas (MPAs) are vital in protecting this vulnerable species.




# New ORI Tagging Videos

The Oceanographic Research Institute's Cooperative Fish Tagging Project (ORI-CFTP) has recently released 15 new instructional tagging videos for our new tagging members, current members and members of the angling public. These videos will provide you with the background to the ORI-CFTP and what we need from anglers, as well as give you some important tips on how to be a more aware and responsible angler.

These tagging videos cover all aspects of the ORI-CFTP including: why tag and release a fish; your tagging kit contents; priority species we would like tagged; different hook types and preparation; how to measure different species; handling, landing and tagging various species from the shore and on a boat; recording and sending in tag release information; and most importantly reporting

a recapture and filling in a tag recapture form. Viewers can also see how to handle a fish that may be suffering from barotrauma, a common occurrence in some species caught off a boat.

Included are videos on various hook types, knots and de-barring hooks that ensure quick and safe hook removal from your fish. For new and existing members there are tips on kit maintenance. We encourage all our tagging members to watch and share these useful videos widely.

We thank the South African Association for Marine Biological Research (SAAMBR) for funding, and Billi-Jean Parker and Lynton Richards from Ocean Planet Media, for editing and creating these fantastic videos. 

Videos can be found here: [ORI Tag website](#)

[SAAMBR website](#)

[SAAMBR YouTube Channel](#)

## How to report the recapture of a tagged fish

This video below provides all the information that you need to correctly report tag recapture information. Tag recaptures are one of the most important and exciting aspects of the Oceanographic Research Institute's Cooperative Fish Tagging Project (ORI-CFTP). Recaptured fish allow us to investigate movement patterns, growth rates and population dynamics of the fish species tagged along the southern African coastline and ultimately contribute towards their conservation. What makes the ORI-CFTP so interesting and exciting is seeing where a recaptured fish was originally tagged; how far it has travelled; who originally tagged it and how much it has grown. As anyone who is fishing in the sea stands a chance of catching a tagged fish, it is very important to know exactly what information to record and how to send it to ORI.



# Focus species

## White musselcracker/Brusher (*Sparodon durbanensis*)

<b>Movement:</b>	Juveniles and sub-adults (less than 60 cm Fork Length [FL]) are resident in surf-zone reefs, while a proportion of the adult population are thought to undertake a seasonal eastward spawning migration to the Transkei and southern KwaZulu-Natal (KZN).
<b>Total number tagged:</b>	2 970
<b>Number recaptured:</b>	90 (3%)
<b>Longest time free:</b>	3 499 days or 9.6 years (2010 to 2019)
<b>Longest distance moved:</b>	843 km (from St Francis Bay, Eastern Cape to Isipingo, KZN)
<b>Growth:</b>	Relatively slow growth rate. They reach maturity at 35 cm FL and an age of about 5 years.
<b>Max size:</b>	22.2 kg; 103 cm FL
<b>Max age:</b>	31 years
<b>Breeding season:</b>	August – January (Spring and Summer).
<b>Breeding location:</b>	Transkei and southern KZN where adults are known to form spawning aggregations in shallow water at night.
<b>Feeding:</b>	They take a range of different baits and feed on gastropod molluscs, crabs, red bait, sea urchins and polychaete worms.
<b>Distribution:</b>	They are endemic and found from Cape Point in the Western Cape, to the Thukela River in KZN.



# Stay Connected

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Resources for Anglers

## Oceanographic Research Institute (ORI)

Cell: +27 79 529 0711. Tel: +27 31 328 8159. Fax: +27 31328 8188

E-mail: [oritag@ori.org.za](mailto:oritag@ori.org.za)

Postal address: PO Box 736. Durban. 4000

The Tagging News is edited by Gareth Jordaan,  
Bruce Mann and Di Martin



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