

**REPORT ON THE
THIRD AND FOURTH WHALE SHARK
TAGGING AND SURVEY PROGRAMS**

For the Period: May 1, 1995 to April 30, 1997

BY:

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REPORT ON THE THIRD AND FOURTH WHALE SHARK TAGGING AND SURVEY PROGRAMS

A. INTRODUCTION

The period covered by this report commenced on May 1, 1995 and ended on April 30, 1997.

During this two-year time frame significant progress was made and the project continued to develop along the lines prescribed by the management plan that was formulated at the time of its inception in 1993.

B. MANAGEMENT STRUCTURE

1. Unfortunately Mr. Pieter Gent has withdrawn from the original project management team because of alternative business commitments but his unstinting contribution towards the ongoing success of this program will always be appreciated.
2. Linda Levendag has joined the management team and her primary function is to maintain a viable administration. Using her own initiative and artistic skills she has developed the "Friends of the Whale Shark Certificate" and also the South African version of the "Adopt a Whale Shark Certificate" both of which are of a world class standard.

3. Cuane and Linda Hall have also come aboard as the project surface and underwater videographers and their responsibility is to record on tape the various facets of the operation.

C. AERIAL SURVEYS

1. On October 17, 1994 we acquired our own microlight and this enabled us to increase the number of aerial surveys that were conducted over the coastline of KwaZulu/Natal on a very cost effective basis.

These surveys served the dual function of providing us with data and Rob Allen with the required number of flying hours to enable him to qualify as a flight instructor.

i) Aerial Survey Flight Analysis Using Durban as the Base Station

No of Flights	Direction South	Direction North	Total Number of Flying Hours
78	19	59	178 hrs. 28 mins.

Survey Sightings (a) Elasmobranchs, (b) Mammals and (c) Reptiles.)

(a) Whale Sharks	Other Shark Species	(b) Schools of Dolphin	Whales	(c) Turtles
172	46	36	8 plus 2 Calves	127

ii) Aerial Survey Flight Analysis – Southern Mozambique

No of Flights	Areas	Total Number of Flying Hours
34	Kosi Bay to Inhaca	130 hrs. 40 mins.

Survey Sightings (a) Elasmobranchs, (b) Mammals and (c) Reptiles)

(a) Whale Sharks	Other Shark Species	(b) Schools of Dolphin	Whales	(c) Turtles
286	82	1	2	70

iii) Supplementary Aerial Surveys:

Date	Area Covered	No. of Sightings	Observed by
Jan. 2, 1996	Scottburgh to Sezela (N to S)	7	NSB
Jan. 13, 1996	Durban to Port Edward (N to S)	47	ORI
Nov. 4, 1996	Cape Vidal to Sodwana	28	NPB
Nov. 16, 1996	Tugela to Kosi Bay (S to N)	+ 100	Craig Cousins Microlight Club
Jan. 26, 1997	Bluff to Warner Beach (N to S) Park Rynie to Hibberdene (N to S)	4 8	Mark Addison

D. TAGGING PROGRAM

The slightly luminous light green colour of the tags has not been changed.

During the period under review a further 125 Whale Sharks were tagged, of these 109 (87%) were tagged off the coastline of southern Mozambique and 16 (13%) off the coastline of northern KwaZulu/Natal.

The area of operation extended from Ponta Malangane (Mozambique) in the north to Cape Vidal (KwaZulu/Natal) in the south.

2. Sex Ratios:

Male	Female	Unsexed
69	45	11

3. Tagging Summary

Period	No. of Sharks Tagged	%
1993 / 1994	12	7,5%
1994 / 1995	21	13%
1995 / 1996	45	28,5%
1996 / 1997	80	51%
Total to Date:	158	100%

4. Re-sightings

Tag No.	Date Tagged	Location	Date of Re-sighting	Location
WS 0050	Nov. 4, 1995	Ponta Malangane	Nov. 4, 1995	Ponta Malangane
WS 0055	Nov. 4, 1995	Ponta do Ouro	Nov. 4, 1995	2km North of Ponta do Ouro
WS 0053	Dec. 21, 1995	3km North of Malangane	Jan. 23, 1996	20km North of Ponta do Ouro
WS 0088	Dec. 28, 1995	7km North of Malangane	Jan. 2, 1996	Ponta Dabela
WS 0183	Jan. 19, 1997	Ponta Malangane	Jan. 20, 1997	Ponta do Ouro
WS 0111	Feb. 23, 1996	Ponta Malangane	Feb. 23, 1996	Ponta Malangane
WS 0172	Feb. 23, 1997	Ponta do Ouro	Mar. 23, 1997	2km North of Ponta do Ouro
WS 0256	Apr. 19, 1997	2km North of Malangane	Apr. 19, 1997	Ponta Malangane
WS 0256	Apr. 19, 1997	2km North of Malangane	Apr. 20, 1997	1km South of Ponta do Ouro

NOTE:

- i) The re-sightings tabled above were reported by divers other than those who were responsible for implanting the tags.
- ii) The distance between Ponta do Ouro and Ponta Malangane is approximately 7 kms (south to north).

- iii) The distance between Ponta Malangane and Ponta Dobela is approximately 40 kms (South to North).
- iv) On March 16, 1997 a diver reported seeing a tagged Whale Shark off Durban but omitted to record the tag number.

5. Batch Tagging

- i) During the 48 hour period from November 1, 1996 to November 2, 1996 a total of 28 Whale Sharks were tagged in the bay at Ponta do Ouro in southern Mozambique.
- ii) On December 10, 1996 a total of 6 Whale Sharks were tagged over a 1 hour, 25 minute work period at Cape Vidal on the north coast of KwaZulu/Natal.

E. EXPANSION OF THE TAGGING PROGRAM
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On November 16, 1996 Sue Smith, Jason Gifford and Cuane and Linda Hall flew to the Seychelles in order to assist in the setting-up of a viable tagging operation in association with David Rowat of the Underwater Centre, Seychelles. Rob Allen who formed the advance party, had arrived a week earlier to rig the SRI microlight and to acquaint himself with local flying conditions.

The operation was a complete success with a total of 23 Whale Sharks tagged over a 7 day work period. Of these 16 were male, 5 were female, 2 were not sexed and 4 were accidentally tagged twice.

Hopefully this will prove to be the forerunner of the global expansion of the program.

F. STRANDINGS

During the period under review the following strandings were reported to us:-

Date	Location	Size	Sex
Dec. 19, 1995	Between Cape Vidal & Sodwana	4m	Female
Dec. 19, 1995	Between Cape Vidal & Sodwana	5,5m	Unknown
Dec. 31, 1995	Ponta do Ouro, Mozambique	5m	Unknown
Dec. 31, 1995	Ponta do Ouro, Mozambique	7m	Unknown
Dec. 07, 1996	Richards Bay	Unknown	Male
Dec. 12, 1996	Scottburgh	9,8m	Male
Dec. 16, 1996	7km South of Cape Vidal	9m	Unknown
Dec. 23, 1996	2km South of Bira River, Ciskei Coast	6,9m	Female
Dec. 25, 1996	9km North of Leven Point, Cape Vidal	5m	Female
Jan. 03, 1997	Cape Vidal	5m	Male

G. EXPANSION OF THE PUBLIC AWARENESS AND EDUCATION PROGRAM

a) Whale Shark Weekends

In order to expose the diving community to the magic of a Whale Shark encounter in a controlled manner it was decided to develop specific Whale Shark weekends in association with recognised dive tour operators on an experimental basis.

- i) The first official weekend occurred on October 31, 1996 and extended through to November 3, 1996. We worked with African Watersports at Ponta do Ouro in southern Mozambique and the ± 90 members of the dive tour party were serviced by 5 semi-rigid inflatables and 3 microlights.

The operation was a complete success with 28 Whale Sharks tagged over a 3 day working period. The tour party were not only able to observe and participate first hand with the tagging of Whale Sharks but they were also exposed to the magnificent bio-diversity of the area as it was at that time, which included three different species of dolphin, a humpback whale and calf and three different species of shark (Zambezi, Hammerhead and one Great White).

ii) The second official Whale Shark weekend occurred on February 28, 1997 and extended through to March 2, 1997. This time we worked with Blue Wilderness Dive Expeditions at Ponta Malangane in southern Mozambique and the 12 member dive tour party were serviced by 1 semi-rigid inflatable and 1 microlight. Notwithstanding the adverse weather and water conditions that prevailed at the time, this operation was also very successful with 4 Whale Sharks tagged over an effective 1 day working period.

iii) Note:

The success of this type of excursion cannot be specifically equated with the number of Whale Sharks that are actually tagged but rather to the positive diver reactions when exposed, on a one on one basis, to these accommodating giants of the deep and being afforded the opportunity of participating in actual scientific fieldwork is an added long term educational bonus. Based on the enthusiasm and interest shown by the various dive groups, during their post-dive debriefing sessions, it is clear that weekends of this nature have a very definite potential to dramatically increase public awareness with regard to the importance of global marine conservation and in particular sharks of all species.

At the conclusion of each Whale Shark weekend, all of the participants are given a "Friends of the Whale Shark" certificate as a keepsake of the experience (kindly refer to folio (1)). They are also afforded the opportunity of adopting any of the tagged animals at a cost of R 500.00 (Five Hundred Rand) each. In return they receive a "Certificate of Adoption" that reflects the shark's name, tag number, sex, size, date and place where it was tagged, as well as a resin model of a diver swimming with a Whale Shark that is mounted on a wooden plaque which records the shark's name and tag number on a small brass nameplate and in the event of a re-sighting they are advised of where and when the animal was seen. All monies derived from this source are used exclusively to finance further shark research.

iv) Operational Procedures and Suggested Protocols

Skipper / Divemaster / Diver Disciplines

- 1) Each dive party to be fully briefed by the skipper / divemaster prior to leaving the beach.
- 2) On locating a Whale Shark the semi-rigid will immediately tap-off as it approaches and positions itself either on one side or ahead of the animal.

- 3) One experienced diver then enters the water to tag, sex and size the animal and report the relevant details to the skipper who will also record the exact position of the event using the on-board GPS.
- 4) The dive party should then be allowed to enter the water in a controlled manner with a minimum of splashing so as not to alarm the shark. Physical contact with the animal should be kept to an absolute minimum and its dignity and tolerance of human intrusion into its environment must at all times be respected.
- 5) The primary objective behind the creation of the Whale Shark weekend is to expose as many people as possible to the unforgettable experience of making contact with one or more of these magnificent animals on their own terms. In this way it is hoped to facilitate and promote the conservation of the species.
- 6) Being able to swim or dive with a Whale Shark is a very special privilege that only a few people will ever experience in their respective lifetimes and each member of the dive party should be made aware of this fact.

b) Television Publicity

On the third anniversary of the tagging program it was decided to accommodate the requirements of a number of television producers.

- i) Ross Douglas produced a documentary that was screened on SABC-TV during the 50-50 program on June 23, 1996.
- ii) Nick Chevalier produced a similar documentary that was screened on M-Net during the Carte Blanche program on February 9, 1997. It was subsequently re-screened on Viewers Choice, February 12, 1997.
- iii) Catrin Hofstetter of Swiss Television documented the first official Whale Shark weekend (October 31, to November 3, 1996) for screening on their Science and Technology program.

The overall coverage provided by these documentaries was balanced and accurate.

- iv) Logistical support was provided to Mr. Peter Lamberti of Aqua Vision TV Productions c.c. to enable him to record on video the entire tagging operation with special emphasis on the use of the microlight.

This program is scheduled to be broadcast on the American Discovery Channel.

c) Magazine Coverage

A number of articles were written about the project and those we know of were published in the following magazines:

- | | |
|----------------------------------|---------------------|
| i) Africa Environment & Wildlife | Jan / Feb 1996 |
| ii) Espacio Profundo | No. 18 Vol. 11 1996 |
| iii) Out There | May 1996 |
| iv) Divestyle | May/June 1996 |
| v) Dive International | January 1997 |
| vi) The Wildlife Photographer | Spring 1997 |

The positive publicity generated, both locally and internationally by these publications was very much appreciated and the Whale Sharks will hopefully be the ultimate beneficiaries.

Logistical support was also provided to Mr. Paul Sutherland, a freelance photographic journalist based in Princeton U.S.A. The material obtained is scheduled for publication in several American magazines later this year.

H. BEHAVIOURAL AND OTHER OBSERVATIONS

MARK ADDISON

1) December 29, 1995 at 12h00:

Three Whale Sharks were observed close inshore directly off the Umkomaas river mouth on the south coast in silt discoloured water.

All of the animals were motionless and were possibly trying to rid themselves of parasites in the diluted seawater.

2) March 31, 1997 at 10h30:

"A 5,5 metre female was "accompanied" by a pod of dolphins for most of the duration of the snorkeling opportunity north of Malangane Point in Mozambique. When the boat approached the shark, the dolphins dived to entirely envelope it only separating after the divers were dropped into the water. The shark appeared curious and did not exhibit any avoidance behavior."

3) April 5, 1997 at 13h00:

"A nine metre male tagged at Malangane Point (Tag No. WS0175) had no dorsal fin and much scarring was evident at the point of dorsal fin attachment."

NIGEL DOWSETT

- 1) January 26, 1996 at 04h30:

“Three Whale Sharks were observed swimming in circles off Hibberdene on the south coast.”

DAVID KOSTANOVICH

- 1) September 2, 1996:

“A 9,5 metre Whale Shark was netted by local fishermen off Inhaca Island in Mozambique and despite being offered R 2 000.00 by the tourists from the local hotel to release it, the unfortunate animal was eventually killed, cut-up and eaten over a 36 hour period.”

CUANE HALL

- 1) December 7, 1996 at 11h30:

“A large sexually mature male was observed in murky water on the backline off Port Shepstone on the south coast and its claspers were badly chafed – possibly caused during mating. The water temperature was 22.4°C.”

ROB ALLEN

1) January 20, 1997:

“Whale sharks, early morning, appear to be more off shore than close in shore. This was noticed when looking for them all day, such as for the Whale Shark week-end. The closer to mid-day, the closer they swim to back line. The flight back from Ponta to Umhlanga on January 20, 1997, saw all the sharks on back line, literally within 10m, and some in the surf. The surf also does not seem to bother them too much either, two sharks off Ponta Point, kept swimming in the surf to such a degree it appeared they enjoyed it. The surf was 1½ to 2m. With waves crashing on their backs, they may find it helps to remove parasites. Dolphins were also seen the previous day rubbing themselves on a Whale Shark’s back, possibly also to remove parasites.”

ACKNOWLEDGEMENTS

(In alphabetical order)

We would like to express our appreciation and thanks to:-

1. African Watersports for their positive input and infrastructural support which ensured that the first official Whale Shark weekend was a complete success.
2. Blue Wilderness Dive Expeditions: Mark & Michele Addison for their ongoing assistance in the promotion of the project both locally and in southern Mozambique and Barry Skinstad for his consistent and accurate tagging of Whale Sharks.
3. Cable & Wireless (Seychelles) Ltd., Coral Strand Hotel and the Underwater Centre Seychelles for their sponsorship, which enabled the project to successfully expand to the Seychelles.
4. Natal Parks Board for their co-operation and continued assistance whilst we worked in those areas that are under their control and Senior Ranger Steve Hoseck for tagging 11 Whale Sharks, assisting the SABC with the production of the television program that was screened on 50/50 and for collecting tissue samples from stranded animals in the Cape Vidal area.
5. PADI Foundation for providing funds that enabled us to offset some of the direct costs involved in running the South African and Mozambican aspects of the project.
6. PADI – PROJECT A.W.A.R.E. for providing some of the funding that was required to extend the tagging program to the Seychelles.
7. Peter Levendag for his assistance in the production of the Whale Shark plaques.
8. The Director, Instituto de Investigacao Pescuaria, Mocambique.

WHALE SHARK RESEARCH PROJECT SIGHTING CARD



WHALE SHARK RESEARCH PROJECT SIGHTING CARD

DATE: _____ TIME: _____

LOCALITY: (GPS) _____

SIZE: (METRES): _____

TAGGED: YES / NO _____ SEX: _____

TAG COLOUR: _____ TAG NUMBER: _____

TAGGED BY: _____

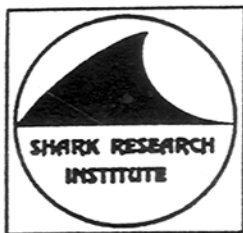
OBSERVED HOW? Diving / Boat / Plane / Shore / Other

NAME OF OBSERVER: _____

ADDRESS: _____

COMMENTS: _____

DESIGNED BY: I.S.S. (031) 701-9842



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***PLEASE MAIL OR FAX COMPLETED FORM TO THE ADDRESS ABOVE.
YOU WILL BE NOTIFIED WHEN AND WHERE THE SHARK IS RESIGHTED.***

TAG NUMBER: _____	DATE TAGGED: ____ / ____ / ____
SIZE OF WHALE SHARK: _____ METRES	SEX OF WHALE SHARK: _____
LOCATION: _____	GPS (if possible): _____
LOCATION OF TAG ON THE SHARK: _____	

a)	Did the shark have any distinct markings that would serve for reidentification? (eg. Scars)	_____
b)	Was the shark solitary, or were other Whale Sharks nearby?	_____
c)	Water temperature (specify measured / estimated)	_____
d)	Water clarity _____	Time of day _____
e)	Environment (reef, open sea, etc.)	_____
f)	Distance from shore	_____
g)	Depth of water	_____
h)	Was the shark feeding? _____	If so, on what was it feeding? _____
i)	What was the shark's reaction to tagging?	_____

<u>PERSONAL DETAILS OF TAGGER</u>	
Name: _____	Surname: _____
Address: _____	
Contact telephone number / fax / e-mail: _____	

* Thank you for your support.



1. The SRI microlight parked on the beach outside of the Coral Strand Hotel, Seychelles. (November 1996) Photo: J. Gifford



2. One of the banners that welcomed the South African SRI Tagging Team on their arrival in the Seychelles. Photo: J. Gifford



3. Rob Allen with the SRI microlight on a sand bank at the Tugela River mouth on the KwaZulu/Natal coastline.



4. African Watersports launching their semi-rigid inflatable during the inaugural Whale Shark weekend held at Ponta do Ouro in southern Mozambique on October 31, 1996. Photo: A. Gifford

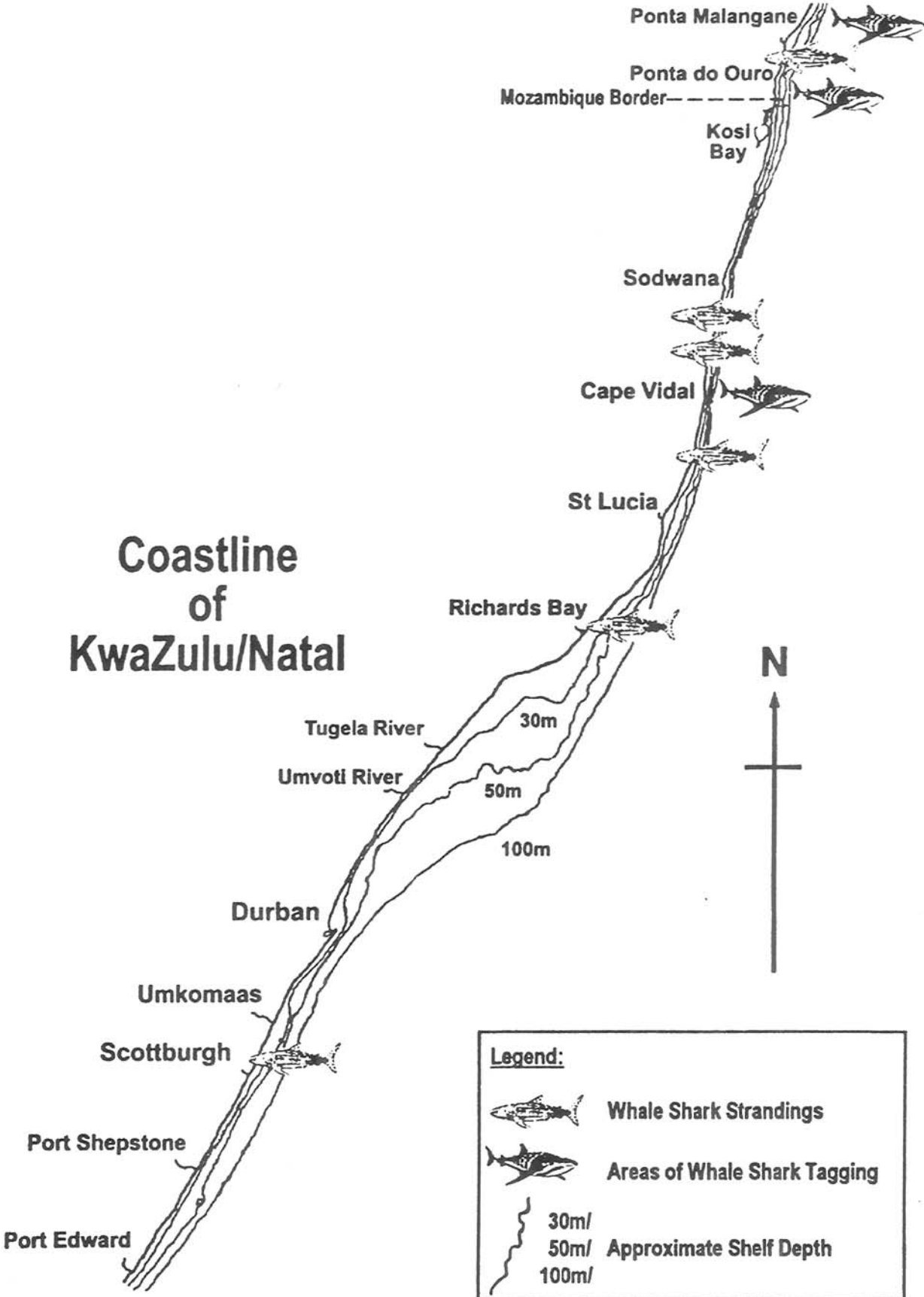


5. A Whale Shark that was accidentally caught in the fisherman's nets off Inhaca Island in southern Mozambique (September 2, 1996).
Photo: D. Kostanovich






6. The Whale Shark in the process of being cut-up and consumed by the local population on what was clearly an experimental basis.
Photo: D. Kostanovich

Coastline of KwaZulu/Natal



Legend:

-  Whale Shark Strandings
-  Areas of Whale Shark Tagging
-  30m/
50m/
100m/ Approximate Shelf Depth

FRIENDS OF THE WHALE SHARK



(*Rhinodon typus*)

This is to certify that

has dived with a Whale Shark,
the world's largest known fish,

at _____

on _____

and this gentle giant of the deep
was a male / female with an estimated

length of ~~XXXXXX~~ metres

Witnessed by: _____



DIVERMASTER

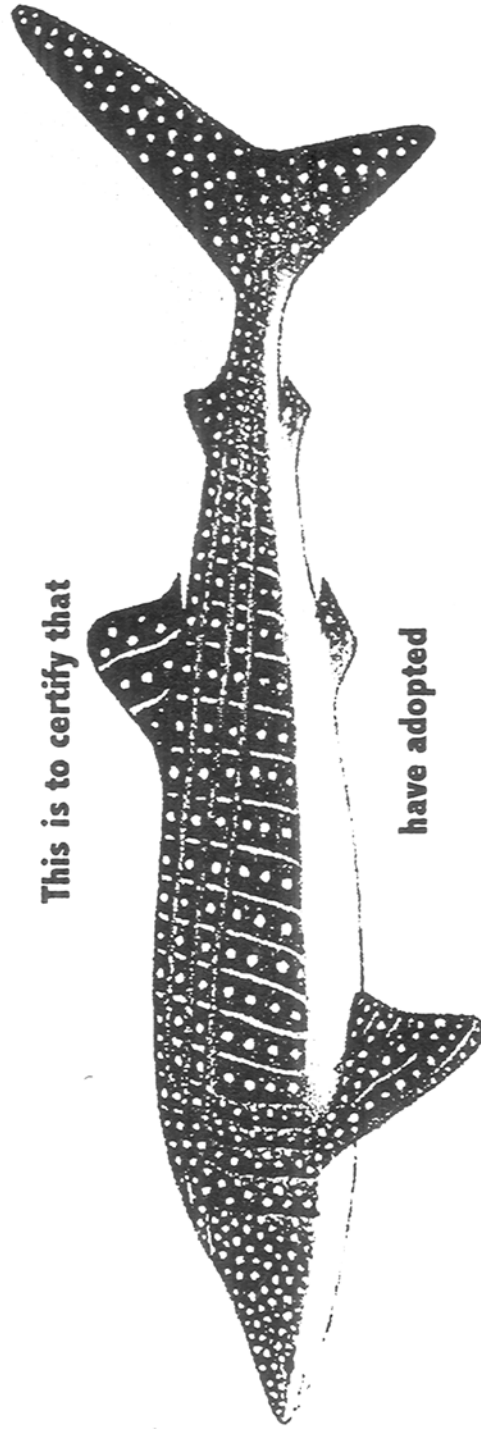
DATE ISSUED:

SKIPPER

1997

Certificates of Adoption

This is to certify that



have adopted

Tag Number:

Sex:

Size:

Tagged By:

Date:

Tagging Location:

DIRECTOR, SHARK RESEARCH INSTITUTE S.A.

Date Issued: