

GAME FISHING PROSPECTS IN
NORTHERN TERRITORY WATERS
- A DISCUSSION PAPER -

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* Cover illustration courtesy of Charles O.Mather, author of "Billfish".

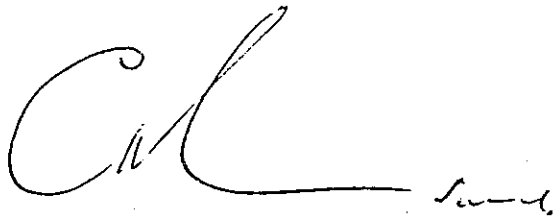
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FOREWORD

There appears to be a sound basis for the long held, but unproven view, that there exists good big game fishing grounds in waters adjacent to the Northern Territory.

This discussion paper is not a technical or scientific report, but has been prepared to provide a comprehensive statement of available information supporting the development of a big game fishery in Northern Territory waters.

Big game fishing enthusiasts and members of the tourist industry must make their own assessment of the potential benefits of developing this fishery. While it is not envisaged that the Northern Territory's big game fishing grounds would rival those off Cairns, worth an estimated \$ 20 million annually, there is no doubt that the development of this resource would generate a new and exciting fishery for the Territory.

A handwritten signature in cursive script, appearing to read 'C.H. Gurd', written in black ink.

C.H. GURD,
Secretary,
Department of Primary Production

GAME FISHING PROSPECTS IN
NORTHERN TERRITORY WATERS

INTRODUCTION

Game fishing in the Northern Territory is at present confined to ultra light and light tackle classes. However, two recorded captures of sailfish and reported sightings of large black marlin, and some commercial catches off the Perron Islands, Cootamundra Shoal, near Bathurst and Melville Islands, Cape Wessel, off Nhulunbuy (Gove) and Groote Eylandt have revived interest in medium tackle game fishing classes (refer Figures 1 and 2).

The game fishing potential of the Northern Territory has been inhibited to some extent by a lack of data on the game fish resource of the Northern Territory. Accordingly, this report is based on information collected by the Fisheries Division during a preliminary survey, in late 1981 off Cape Wessel and Truant Island, near Nhulunbuy.

This report, because of the diversity of game fishing techniques and range of species currently recognised as game fish, concentrates on the light and medium/heavy tackle classes.

A BRIEF HISTORY OF GAME FISHING IN AUSTRALIA

In 1936, the New South Wales Government commissioned the well known angler and author, Zane Grey, to conduct a survey of the game fishing potential of waters adjacent to Bermagui, N.S.W.

Grey recorded significant captures of marlin, shark and tuna and determined that a viable fishery was present.

In 1938, the Game Fishing Association of Australia was founded and subsequent catches put Australia on the game fishing map. Significant captures of sharks, exceeding 680 kg in weight, taken generally near Disaster Reef in South Australia and Tangalooma in Queensland, enhanced the reputation of Australian game fishing.

Australian big game fishing was bolstered in the late 1960's by the confirmation of large black marlin in the Northern Barrier Reef waters. The capture, in 1969, of Australia's first black marlin weighing more than 1,000 pounds (454 kg) quickly spread around the world. Australian game fishermen, recognising the potential of other Australian grounds and armed with the techniques developed in Cairns opened new game fishing grounds. Superb game fishing grounds now exist in most States as a result and captures cover a wide range of game fish species.

LIGHT GAME FISHING IN THE NORTHERN TERRITORY

The Northern Territory Game Fishing Association was formed in the mid 1960's, with three Darwin clubs and another club at Nhulunbuy (Gove). In 1976 a club was formed on Groote Eylandt.

The achievements of Territory anglers are well recognised and include several world and national records, but are exclusively related to ultra light and light tackle classes (3 kilograms to 15 kilograms). Until recently, perhaps due to bad luck, these records did not include any of the species of Billfish (sailfish and marlin). A list of these records are detailed in Table 1.

Generally, Northern Territory game fishing activities have been confined to areas in close proximity to the population centres. As a result, achievements have been scant. However, a steady increase in game fishing club membership and the capture of two pacific sailfish along with reports of larger game fish, particularly black marlin, have renewed interest in Territory game fishing.

Since 1975 there have been numerous unsubstantiated sightings of sailfish and marlin in Northern Territory waters. These sightings have been partially confirmed by two recorded captures of sailfish on regulation tackle (R. Crookes and J. Sobles - Perron Islands 1979) and three black marlin captures on commercial trolling gear (C. Mellon - Groote Eylandt 1976, Ocean Reaper - New Year Island, 1980, and Fourcroy - Cumberland Straight 1982). R. Crookes fought a black marlin (estimated at about 180 kgs) near the Perron Islands in October, 1981. These captures and sightings are detailed in Figures 1 and 2.

Territory game fishermen have been recognised as leading exponents in the light tackle classes for many years. The areas generally frequented by Territory anglers are suited to the light tackle classes only (refer Figure 3). The existence of this fishery is potentially one of the best Australia has to offer. Species such as turrum, tuna, spanish mackerel, cobia, sharks and queenfish abound in Territory waters and are available to most anglers because of the relatively small financial outlay involved when compared to the heavy tackle fishery off Cairns.

The recent inclusion of barramundi to the game fish class is expected to draw anglers from interstate and overseas to compete in events organised by the Northern Territory Game Fishing Association.

At present there are no charter vessels rigged for game fishing available in Darwin. Of the two fishing charter vessels (rigged for bottom reef line fishing), only one could be considered suitable for conversion to off-shore game fishing, at relatively little expense. There are however, several private boats fitted for game fishing in Darwin.

MEDIUM/HEAVY GAME FISHING IN AUSTRALIA

The big game fishing industry of North Queensland is the only centre in the world where more than one hundred record breaking black marlin have weighed in excess of 1,000 pounds (454 kilograms). In fact more black marlin are taken in waters off Cairns than in any other part of the world.

BLACK MARLIN

The black marlin is often referred to as the "Bull" of the sea and recorded captures and sightings indicate that this fish exceeds 3,000 pounds (1,361 kgs) in weight. Fish of this size are females, generally heavy with roe, and are abundant in the Barrier Reef waters during the months September to November.

Black marlin are found in tropical and temperate waters ranging in temperature from 24°C to 28°C. Very little is known about spawning, apart from the fact that the water temperature is critical at this time. Black marlin prefer water temperatures between 27°C to 28°C when breeding and appear to migrate to cooler waters during the summer months.

Juvenile development appears to be similar to other billfish. Schools of juvenile black marlin shelter in reef areas and range in size from 7 to 36 kgs. Adult black marlin frequent inshore areas, close to land masses and reef grounds along the Continental Shelf where the water depth and temperature are altered by deep trenches and submerged canyons.

In open tropical waters, distribution is scattered, with larger concentrations near islands where the depth of water exceeds 27 metres and substantial quantities of food can be found. In general their feeding habits vary from area to area. Black marlin prefer mackerel and squid but are known to take baits of dorado, rainbow runner, scads, tuna and mullet.

Black marlin are generally caught by trolling rigged dead baits with hooks sewn into the head or stomach cavity. The diversity of fish in the marlin food chain indicates that they feed in shallow water, deep water and on the surface in coastal regions.

SAILFISH

Pacific sailfish are similar to their Atlantic cousin, but are generally larger. They are found in the same areas as marlin and breed in waters at the same temperatures. Available evidence suggests that in Northern Territory waters sailfish are more abundant than black marlin.

POTENTIAL GAME FISHING GROUNDS IN TERRITORY WATERS

It is thought that Territory waters have significant numbers of billfish. Catch data collected from off-shore fishing operations confirm that incidental catches of sailfish and black marlin occur throughout the year but more frequently between September and October. It should be emphasised that the target species of

these commercial off-shore operations is shark and fishing operations in areas where mackerel and billfish are abundant is restricted.

It would appear, from the limited information available, that billfish may be found in heavy concentrations in two distinct areas. These are:

- (a) the area to the west of Bathurst Island, near the Cootamundra Shoal; and more significantly,
- (b) the area about Cape Wessel and Truant Bank (near Nhulunbuy).

In late November/early December, 1981, a very modest survey was undertaken by the Fisheries Division in the Cape Wessel - Truant Bank area. A total of seven billfish were "raised" to the baits, five of which were sailfish and two black marlin. The weights of the marlin were conservatively estimated at 227 kgs and 318 kgs respectively. The fish demonstrated a reluctance to strike at the baits, which were mullet and small garfish.

COOTAMUNDRA SHOAL AREA

Cootamundra Shoal lies 130 nautical miles north west of Darwin or 60 nautical miles west of Cape Van Diemen (refer Figures 1 and 2). The topography of the area is suitable to marlin and sailfish during appropriate seasonal conditions. This theory has been supported by a Japanese longline vessel which entered Darwin in mid 1979 (prior to the declaration of the Australian Fishing Zone) with significant catches of black marlin taken near Cootamundra Shoal. In a total catch of 164 tonnes there was an equal distribution of large tuna (average weight about 32 kgs) and large black marlin (average weight about 180 kgs).

Very little, if any, game fishing activity has occurred in this area due to the distance from Darwin and lack of adjacent shorebased support facilities.

CAPE WESSEL - TRUANT BANK

The potential of this area has been the subject of considerable local speculation over the past five years. Nhulunbuy residents fishing in the vicinity have reported numerous sightings and hookups of billfish that result in blistering runs and busted tackle. As with the area to the west of Bathurst Island the Truant/Wessel area would appear to be an excellent habitat for billfish .

Cape Wessel lies about 60 nautical miles north of Nhulunbuy and offers superb light tackle fishing all year. It also offers excellent shelter on both sides of Marchinbar Island with picturesque scenery. Prevailing winds, occurring from the North West during November to March and from the South East from June to September, facilitate year round fishing. Large mackerel, turum, tuna and to a lesser degree, billfish have been taken in these waters.

Truant Island lies about halfway between Nhulunbuy and Cape Wessel (refer Figures 1 and 2) and is surrounded by shoals and reef and is regularly frequented by recreational fishermen.

EXISTING RESOURCES AND SUPPORT FACILITIES

The amateur barramundi fishery in the Territory supports several retail outlets which provide a good range of tackle. One of Darwin's established outlets provides sophisticated high quality reels and hand crafted rods for the game fisherman. A small range of the same equipment can also be found in other tackle shops.

As mentioned previously, the only suitable vessel for game fishing charter is located in Nhulunbuy. Darwin's ship building facilities are not geared for game fishing vessels but provide excellent repair and maintenance facilities.

At Bathurst Island, the closest population centre to the Cootamundra Shoal area, there are no support facilities and vessels operating in the area would need to travel about 60 miles for shelter near Bathurst Island.

Nhulunbuy offers excellent accommodation and support facilities and the fishing grounds are close to shelter.

PROSPECTS OF GAME FISHING IN THE TERRITORY

The publicity given to the unparalleled success of game fishing in Australian waters has drawn increasing numbers of overseas fishermen to Australia. The tourist industry has flourished in tandem with the growth of the game fishing industry and while it is extremely unlikely that the development of game fishing grounds in Territory waters will rival that of Cairns, there could be very substantial spin-offs for the Northern Territory. The value of game fishing out of Cairns is estimated to be worth about \$ 20 million annually.

Other game fishing grounds have been developed at Port Stephens, Narooma and Bermagui in New South Wales, at Dunk Island and Moreton Bay in Queensland and at Rottneest Canyon and in the Exmouth Gulf off Western Australia.

The development of a game fishery in the Northern Territory would have a significant impact on the Australian game fishing circuit as well as providing an exciting adjunct to the existing Territory tourist industry.

Parcival Copes, in his report to the Forestry Fisheries Wildlife Environment and National Parks Section of the Department of Northern Australia, in 1974 recommended:

"At present, barramundi is the main species sought in the sport fishery. The catch takes place mostly in river estuaries and billabongs. There is however, a very good potential for a salt water game fishery. It is unlikely that the spectacular marlin

fishery off Cairns can be rivalled. Off the Northern Territory marlin are not within convenient reach of boats operating out of Darwin. Marlin are potentially available, however, to vessels with a longer range. There are many other game fish available the merits of which are internationally recognised. They include sailfish, spanish mackerel, bone fish, lady fish, trevally, tarpon, tuna and cobia".

"The development of game fishing on a significant scale in the Northern Territory will take time. There is a chicken and egg problem in determining the extent to which facilities should await pressure of actual increase in the tourist trade. In the main the two will have to go hand in hand. The onus should be on the Government service responsible for tourist development to stimulate and co-ordinate the expansion of tourist flow and dependant facilities. In co-operation with the Fisheries Section, a modest effort should be made to identify the game fishing grounds".

CONCLUSION

1. More data is required to prove that potential game fishing grounds in Territory waters are capable of supporting sustained exploitation.
2. The Cootamundra Shoal area appears capable of supporting big game fishing operations and would almost certainly become a popular destination for fishermen if distance involved could be overcome.
3. The Cape Wessel and Truant Bank fishing grounds out of Nhulunbuy appear to have the most potential for immediate development because of the existence of support facilities, tourist accommodation and safe shelter during rough weather.

TABLE 1

<u>WORLD RECORD</u>				
	<u>NAME</u>	<u>SPECIES</u>	<u>WEIGHT</u>	<u>LINE CLASS</u>
1.	Hilton Selvey	Tanguigue	46 lb	
2.	Graham Copely	Tanguigue	54 lb	6 lb
3.	Lindsay Young	Hammerhead Shark	137.51 lb	12 lb
4.	Judy Jenkins	Tanguigue	36 lb	6 lb
5.	Brian Cutler	Turrum	8.5 kg	6 lb
6.	Hilton Selvey	Turrum	8.5 kg	6 lb

AUSTRALIAN RECORDS

1.	Brian Cutler	Turrum	8.5 kg	6 lb
2.	Hilton Selvey	Turrum	8.5 kg	6 lb
3.	Enid Selvey	Turrum	7.92 kg	6 lb
4.	Judy Jenkins	Tuna	5.75 kg	6 lb
5.	Graham Copely	Tanguigue	54 lb	6 lb
6.	Judy Jenkins	Queenfish	8.4 kg	6 lb
7.	Judy Jenkins	Queenfish	10 kg	6 lb
8.	Ken Veal	Queenfish	9.29 kg	12 lb
9.	Enid Selvey	Queenfish	10.08 kg	12 lb
10.	Lindsay Young	Whaler Shark	119 kg	12 lb
11.	Heinz Zimmer	Baracuda	17.9 kg	12 lb

N.T. RECORDS (ALSO INCLUDES ALL ABOVE RECORDS)

1.	Richard Crookes	Sailfish	14.2 kg	6 lb
2.	Jim Sobles	Sailfish	18.00 kg	12 lb
3.	Jil Delvendiep	Barracuda	17.9 kb	6 lb
4.	Heinz Zimmer	Barracuda	17.9 kg	12 lb

OTHER FISHERIES PUBLICATIONS

- | | | |
|---|---|---|
| Fishery Report No. 1
March 1979 | - | A Review of the Northern Territory Barramundi Fishery |
| Fishery Report No. 2
July 1979 | - | The Fog Bay Banana Prawn Fishery 1978. |
| Fishery Report No. 3
August 1979 | - | A Review of the Northern Territory Mackerel and Reef Fisheries. |
| Fishery Report No. 4
July 1981 | - | Northern Territory Mackerel Fishing Programme 1980/81. |
| Fishery Report No. 5
1981 | - | Barramundi Review - limited August edition reprint of Technical Bulletin No. 49. |
| Fishery Report No. 6
October 1981 | - | Report on a Dropline Fishing Operation of the "Takuryo Maru" No. 11 during Feasibility Fishing Operations in the Australian Fishing Zone. |
| Fishery Report No. 7
November 1981 | - | Report of Public Meeting to discuss future Management of the Northern Territory Barramundi Fishery. |
| Fishery Report No. 8
March 1982 | - | Report on a Gill-Net/Bottom Trawl Survey. Observations of the "Hai Kung" during a Fishing Survey and Research work in the Arafura Sea. |
| Fishery Report No. 9
April 1982 | - | Game Fishing Prospects in Northern Territory Waters
- A Discussion Paper |
| Technical Report No. 1
October 1979 | - | Barramundi - <i>Lates calcarifer</i> |
| Technical Bulletin No.49
August 1981 | - | Northern Territory Barramundi Fishery Review of Management - Situation Paper. |

FIGURE 3

AREAS REGULARLY FISHED BY LIGHT GAME FISHERMEN

