THE TARPON

LOUIS L. BABCOCK

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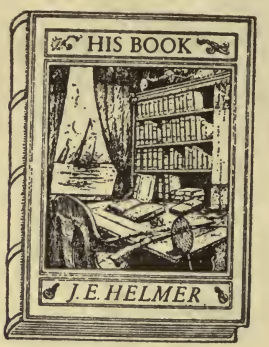

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To

Dr Henry R Borthwick

With the regards &

good wishes.

of.

Louis L. Babcock

Boca Grande. Fla

May 22/22.

THE TARPON

BY

LOUIS L. BABCOCK

"Allah counts not out of man's allotted span,
the time he spends in the chase"

SECOND EDITION

PRINTED FOR
PRIVATE DISTRIBUTION
1921

TO
G. W. B.

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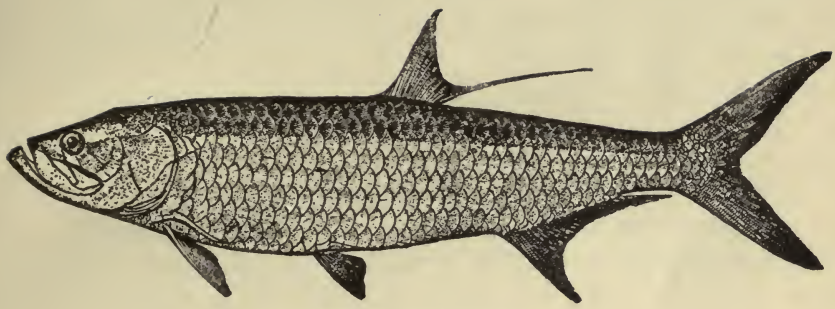


TARPON ATLANTICUS

PREFACE

MANY articles have been written relating to the tarpon, as the bibliography in the appendix will attest, but most of them describe isolated captures and are purely subjective. The enthusiastic angler catches a few fish and hastens to give the world the benefit of his experience. Little has been said on the scientific side and the life history of the fish is unknown.

This volume has been prepared in the hope that it will stimulate the study and protection of this noble fish and induce anglers to attempt its capture on light tackle in a sportsmanlike way.

The statements herein contained have been verified carefully, but it will be appreciated if the errors in the text are brought to the attention of the author so they may be corrected in a subsequent edition.

My acknowledgments are due to my friend Mr. Mack Mickle of Boca Grande, Florida, my guide on four trips, for his valuable assistance and advice. Mr. John R. Jack of the same place, a very experienced taxidermist and student of the tarpon, has answered my numerous questions with untiring patience and accuracy.

I am indebted to fellow sportsmen for valuable information most courteously and freely given.

726 Delaware Avenue, Buffalo, N. Y.

PREFACE TO THE SECOND EDITION

SINCE the preparation of the previous edition I have made three trips to Boca Grande, Florida, and much material has accumulated through personal observation and correspondence with fellow anglers and Ichthyologists. I also wished to correct several errors in the text. I hope this edition will meet with the kindly reception that was accorded its predecessor.

I have made no attempt to interest the general reader. This book has been prepared for the use of tarpon-anglers who are interested in the life history and habits of the fish; the methods employed in its capture; the record catches in weight and numbers, and similar data commonly discussed among anglers and guides whilst awaiting a strike.

The life history of the fish is unsolved. Its breeding habits are still a mystery. I shall be grateful to fellow anglers if they will advise me of any interesting facts relating to this fish which may come under their personal observation.

Buffalo, December, 1921.

CHAPTER I

DESCRIPTION AND HABITS

THE TARPON *(Tarpon atlanticus)* is a survival from another geological epoch, and few living fishes have a longer ancestry. The family of the *Elopids (Elopidae)* is decadent but the tarpon stands unrivalled as a game fish amongst the hundreds of species of fish inhabiting the salt waters of the eastern part of the Western Hemisphere.

The family of the *Elopids* was very numerous as far back as the *Cretaceous* period and as early as the *Eocene,* the existing type made its appearance. Allied genera have been found in the *Cretaceous* of Europe, Mount Lebanon and Brazil. The *Elopidae* have a bone between the branches of the lower jaw called a gular plate which I am informed occurs in no other living Teleostean fish.

It seems to be the rule that fishes having specialized structures like peculiar teeth or armor and those which are unsymmetrical have usually failed to survive marked changes in the physical history of the earth. The existence of the tarpon is a cogent argument in favor of the conclusion that the least extreme in type are best fitted to survive.

The tarpon has been assigned many scientific names:

Camaripuguacu. Marcgravs's History of Brazil. 1648.

Megalops atlanticus. Cuvier & Valenciennes.

Megalops elongatus. Girard Pro. Nat. Sci. Phil., 1858.

Megalops thrissoides. Günther.

The scientific name of our tarpon is *Tarpon atlanticus.* (Cuv. & Val.)

It has been known under many colloquial names. One of the earliest was Tarpum. G. Brown Goode in his Catalogue of the Fishes of Bermuda says this name may have some connection with the one current in Barbados, where it is called Caffum. It is more probable that it is of Indian origin. Captain William Dampier spoke of it in 1675 as the Tarpom and Roman in his Concise Natural History of Florida (1775) did the same. The name Tarpum is used sometimes by the Government in its publications. But that name is rapidly becoming obsolete. It was known by the Creoles of Louisiana as the Grande Ecaille (large scale); by the Georgians as Jew fish; at Pensacola as Silver fish; by the natives of Massachusetts as Big Scale; and it is called Sabalo, Savalo, Savalle and Savanilla by the Spanish-American peoples. The title Silver King has been frequently applied to this noble fish by admiring anglers. The name Tarpon is rapidly supplanting all others by the common consent and usage of the anglers who fish for it in steadily increasing numbers. A technical description is here set forth from Jordan & Evermann's standard work entitled "American Food and Game Fishes."

"The Tarpons

Family IX. Elopidae

"Body elongate, more or less compressed, covered with silvery cycloid scales; head naked; mouth broad, terminal, the lower jaw prominent; premaxillaries not protractile, short, the maxillaries forming the lateral margins of the upper jaw; an elongate, bony plate between the branches of the lower jaw; eye large with an adipose eyelid; bands of villiform teeth in each jaw and on vomer, palatines, pterygoids, tongue and base of skull; no large teeth; opercular bones, thin with expanded membranous borders; a scaly occipital collar; gill-membranes entirely separate, free from isthmus; branchiostegals numerous (25 to 35); gill rakers long and slender; belly not keeled nor serrated, rather broad and covered with ordinary scales; lateral line present; dorsal fin inserted over or slightly behind the ventrals; caudal fin forked; no adipose fin; dorsal and anal depressible into a sheath of scales; pectorals and ventrals each with a very long, accessory scale; pyloric caeca numerous.

"Genera, 3, species 4 or 5 forming two well marked subfamilies, both widely distributed in the tropical seas. The species are not much valued as food, the flesh being dry and bony, but they are among the greatest of game fishes. In our waters we have two genera, each represented by a single species.

"(a) Pseudobranchiae none; body oblong, covered with large scales; anal fin larger than the

dorsal; last ray of dorsal produced into a long filament.

.....*Tarpon*

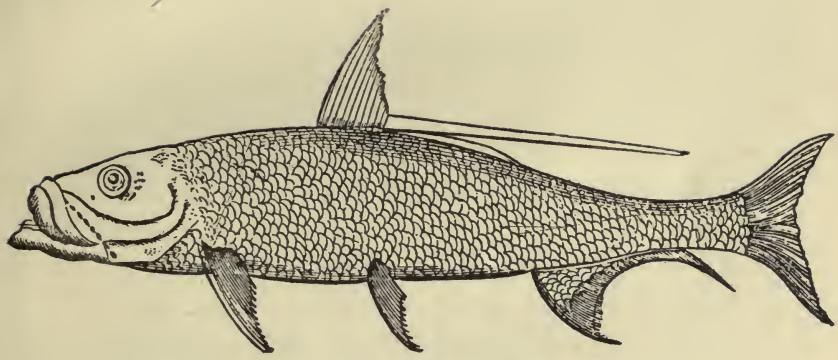
"(b) Pseudobranchiae large; body elongate, covered with small scales; anal fin smaller than the dorsal; last ray of dorsal not produced in a filament.

.....*Elops*

"Genus Tarpon, Jordan & Evermann.

"Body oblong, compressed, covered with very large thick silvery cycloid scales; belly narrow, but not carinated, its edge with ordinary scales; lateral line nearly straight, its tubes radiating widely over the surface of the scales; dorsal fin short and high, inserted behind the ventrals, the last ray long and filamentous; anal fin falcate, much longer than the dorsal, its last ray produced; caudal widely forked, and more or less scaly. Only one species known. * * *

"Head, 4; depth, 3⅖; eye, 4$\frac{9}{20}$; snout, 5; maxiliary, 1⅔ D. 12; A 20; scales 5-42-5; branchiostegals, 23; dorsal filament longer than the head; color uniform bright silvery, darkish on back. The proportional measurements in the young are somewhat different, in examples of 3 inches long being as follows: Head, 3⅓; depth, 4⅔; eye, 3⅓; snout, 4¾."



CAMARIPUGUACUS (1648

The osteological characteristics of the family have been treated by Dr. W. G. Ridewood in the Proceedings of the Zoological Society of London for 1904 (Vol. II, pp. 35-81).

The earliest scientific description of the tarpon or *camaripuguacus* as it is there named occurs in Georgius Marcgravius Historiae rerum naturalium Braziliae published at Leydon and Amsterdam in 1648. The book is written in Latin. A copy of the interesting drawing of the fish is here reproduced, and the latin text has been kindly translated by Mr. Philip Becker Goetz of the University of Buffalo. Diligent search has indicated that this is the earliest description and drawing of the tarpon, at least, in *Americana.* The translation follows:

> "Among common sea-fish is found the *Camaripuguacus,* which at maturity attains the bulk and size of a man and is exceedingly fat. It possesses a very large toothless mouth, its lower jaw fixed and its upper shorter. The eyes are large and silvery; its tail broad, somewhat forked; and to its dorsal fin when erect there is a long appendage attached like a thick rope running straight toward the tail. The entire fish is covered with scales which are closely placed upon it, and so beautifully diversified is the silver with the blue that it seems coated as if with pure silver. That it may be the more pleasing to the taste, it should be caught young and cooked rather long on account of its thick and solid flesh which is full of thick spines;

for when it is no longer young, its meat would prove tough and fit only for porters."

Dr. Theodore Gill, one of the great authorities on Ichthyology, in his article "The Tarpon and Lady Fish and their Relatives" published by the Smithsonian Institute in Vol. 48 of its Miscellaneous Collection says:

"The tarpon has an elongated fusiform shape; the forehead is slightly incurved (rather than straight) to the snout; the chin projects and is obliquely truncated; the dorsal (with twelve rays) is on the posterior half of the body nearly midway between the ventrals and anal; its free margin is very sloping and incurved and its long hind ray reaches nearly to the vertical of the anal; the anal (with twenty rays) is about twice as long as the dorsal and falciform; the caudal fin has a very wide V-shaped emargination. The scales are in about forty-two oblique rows."

The late Dr. Charles F. Holder, the noted angler, gave a more simple and colloquial description in his "Big Game Fishes of the United States" a book which should be in the library of every sea-angler. He says:

"In appearance the tarpon is long, slender and thin or compressed—the typical herring type. Its mouth is enormous and strikingly oblique and when open, the gill covers expanded, showing the blood red gills, as often seen when leaping, it presents an extraordinary grotesque, even cynical appearance. The lower jaw is very prominent, suggestive of a determination not to be caught; the

teeth are minute, like velvet or plush (villiform) and the interior of the cavernous mouth is hard and difficult to penetrate. The eye of the tarpon is large and striking and its glare has more than once given a novice a tremor, as the gigantic fish seemed to hang in the air dangerously near the boat. The dorsal fin is high, but short, shaped like a lateen sail, the last ray long and slender reaching backward halfway to the base of the tail.

"The latter is deeply forked, a powerful organ by which the tarpon leaps. The most remarkable feature is the scales, which are enormous, the largest being three inches and a half in length. One in my possession measures three inches and a half by three inches, almost one-half seemingly covered with molten silver. The upper portion of the back has a metallic blue cast, appearing green in the water; the rest of the body is pure silver."

The tarpon has few kinsmen. The *Megalops cyprinoides* is the type of the *genus* and is found in the Indian Ocean, Africa and Northern Australia, where it is known as the Ox Eye.

The posterior insertion of the dorsal fin distinguishes the tarpon from this fish, which carries its dorsal fin above the ventrals. (Jordan & Evermann). There are other distinguishing features not necessary to refer to here.

Elops saurus, commonly known as the "ten pounder" is a kinsman and it too has a blood brother in the Congo and in the waters of Western Africa bearing the scientific name of *Elops lacerta.* I am informed that this

completes the list of the survivors of *Elopidae,* once a great and numerous family. The tarpon ranges over a wide domain, for its deeply forked tail and symmetrical and muscular body fit it for swift and enduring action. It is found as far south as Argentina and is common along the coast of Brazil. It has been recorded twice as far north as Nova Scotia; once off Isaac's Harbor and once from Harrigan Cove, where it was speared in eel grass. The latter specimen was taken on September 6th, 1906, and is in the Provincial Museum at Halifax (Check list of fishes of the Dominion of Canada, 1913). These facts indicate that the tarpon can live in cold water if the temperature slowly declines. It frequently ranges as far north as the coast of Massachusetts, where it has been taken in fish traps and nets. The fish was described as occurring in Long Island Sound in the Proceedings of the Academy of Natural Science, Phil. 1858. The author is indebted to Dr. C. H. Townsend, Director of the New York Aquarium, for the following interesting information, contained in a recent letter:

> "The Aquarium (New York City) has had living tarpons at three different times, all of which were taken in summer in the southern part of New York Bay.
>
> "The tarpon is known to visit our coast as a late summer straggler. Two specimens were captured in a pound net in the lower bay on July 27, 1906. They were brought to the Aquarium and placed in a large pool, where they lived two months. They might have lived longer had the pool been supplied

with pure sea water, but the supply at that time was derived from the harbor, which is brackish and sewage laden. The other tarpons lived about as long.''

The tarpon is a littoral fish but it has been found in the Northern Atlantic as far east as Bermuda, although it is extremely rare there. It is apparently fond of fresh water and is acclimated to it readily for it ascends fresh water rivers for a considerable distance—over one hundred miles in one case reported from Mexico. It can live in fresh water for a long time, if not permanently.

It has been observed far up the Apalachicola, Homosassa and other rivers in Florida and in various rivers in Texas and Mexico, as well as Nicaragua Lake, ''which has long been famous as the home of the species'' (Gill). The following statements are taken from ''The Nicaragua Canal,'' by W. E. Simmons (Harper & Bros., N. Y., 1900). The author is referring to Lake Nicaragua and its only outlet, the San Juan River, which flows into the Caribbean and is about one hundred ten miles long. He says:

''But the game fish *par excellence* of the fresh water is the 'Savalo-real' or tarpon, which fairly swarms in the river and lake. I am inclined to think that the San Juan River and Lake Nicaragua are the principal breeding places of this fish and that it is a mere migratory visitant to our coast. Wherever there is a shoal place in the river it is to be seen breaking by the hundreds and at the Toro Rapids above Castillo they are so numerous

that they frequently jump into the boats ascending or descending. As many as five measuring from 4′ to 6′ in length have been known to jump into a boat on one trip down the rapids, which are only fifteen miles long. They are apt to *bite* the occupants of the boat or injure them by floundering about and so a boatman usually stands ready armed with a machete to cut their heads off as soon as they strike the deck. They are not esteemed for eating and nobody attempts to catch them."

Lake Nicaragua is over one hundred feet above the Atlantic and its outlet has five sharp rapids. It is obvious that fine sport can be obtained in the river although Simmons' statements are possibly too highly colored.

The fish has been reported from all the States of the Atlantic seaboard, as well as Central America and all the West Indies. It abounds at the spillway of the Gatun Dam, where it can be caught on a fly; but it has not been reported from the Pacific. As it is a warm water fish it is natural that it should retire toward the tropics during cold weather; and therefore, it is not found at the northern and southern extremes of its range, save when it is warm. Few fishes seem to be able to withstand marked and sudden changes in temperature, and the tarpon is no exception. During a cold wave in Florida which occurred on January 26-27, 1905, the tarpon seemed benumbed by the cold and large numbers became so helpless that they were easily harpooned. (Mr. E. J. Brown in *Forest and Stream.*) It apparently cannot stand sudden changes in tempera-

ture; but it is indisputable that it has a range over 80 degrees of latitude.

Its breeding habits are unknown and so far no one has reported that he has seen the spawn of this fish. The facts which have been collated bearing upon its spawning will be here set forth. Some fish can be found at any time along the West Coast of Florida, but comparatively few large fish winter as far north as Charlotte Harbor. According to Dr. Holder there seems to be two streams of migration from Mexico. "One moves along the Gulf Coast from Mexico to Louisiana; and the other possibly passing up the Windward Islands so reaching Key West or vicinity following up the Keys to the Cape, some following the East and others the West Coast. I infer this from the fact that if the vast schools moved north in the center of the Gulf they would have been noticed at the Tortugas group, where, as stated, the fish are rare."

They begin to show along the West Coast of Florida in February, and from then on their numbers steadily increase up to July. They do not take the bait readily till April or May, or later, if the Spring be cool. The fishing here is at its best in June, July and August. Tarpon have been caught at Boca Grande in December and January and a few are found off the West Coast the year around. They ascend Floridian rivers for a considerable distance. On the East Coast of Florida they also can be caught at any season, but they are never so plenty as on the other coast. It feeds upon mullet, sardines, shrimp, needlefish, crabs and such like prey.

The very young of the tarpon were not observed for many years. A ten or eleven-pound fish was rarely caught, and until 1900 the smallest tarpon in the National Museum was nine inches long. Dimock recorded the capture of many tarpon weighing less than two pounds in the Harney River near the Everglades and stated that the Allen and Turner rivers on the West Coast are nurseries for them. He caught them on an eight ounce rod with a fly.

I am indebted to Mr. George E. Bruner of Kokomo, Indiana, for some very interesting facts. Mr. Bruner has a winter residence at Everglade, Florida. In a recent letter he says:

> "For ten years I have fished for and caught tarpon, the gamiest of all fish, among the Ten Thousand Islands that surround my winter camp, and farther down the Coast around the mouths of Chatham, Losmans, Rogers, Harvey and Shark Rivers. We get them to bite here long before they appear at Captiva and Boca Grande. I have caught them in every month from October to May. Last winter (20-21) in the upper Shark River during the month of February I found the water full of small tarpon from eight to twelve inches long. They were jumping and striking constantly, thousands of them, and had the water churned up and dirty from their activities. I had gone up there to fish for black bass, the water being fresh, but the small tarpon had evidently driven the bass away for I could not get a strike from a bass although a few weeks before we had had wonderful bass fish-

ing. I used my fly rod with dry fly, small spinner and small pieces of cut bait and succeeded in catching several but found them hard to hook. A few years ago while fishing for bass with artificial bait in the headwaters of North River which flows into White Water Bay a tarpon perhaps five feet long struck my bait and carried it with a goodly portion of my line away with him, which proves that at times they like fresh water."

Mr. Frank Gray Griswold, in his beautifully printed volumes entitled "Sport on Land and Water" (privately printed) calls attention to the fact that while tarpon are in rivers and not in motion they lie upon the bottom, coming to the surface at intervals for a mouthful of air which comes up in bubbles for some time after they have again retired to the bottom. A very small tarpon which he caught in a net and placed in a tub of water did the same thing. He has searched about twenty Cuban rivers for tarpon, finding them in only five, viz.:

Zaraguanacan (north coast),
Jatibonico (south coast),
Rio Negro " "
Damuji " "
Los Angeles (Isle of Pines).

He has observed that the fish move up and down with the tide in schools of twenty or more, and that small fish seem to remain for several years in brackish waters before going to sea. Fish of from three to five pounds are plentiful in these Cuban rivers. He makes the interesting observation that they do not

seem to go above the tide into fresh water. The natives eat them fresh and salted.

In a recent letter Mr. Griswold says:

> "If you want to find out about young tarpon you should go to the headwaters of streams where they spawn in brackish water. I saw 500 small tarpon at one time at the headwaters of the Jatibonico, Cuba, last Winter. You will find the small tarpon far up Shark, Harney, Broad and Turner Rivers on the West Coast of Florida. The fish do spawn on sand banks inside the Passes, I fancy, but not as a rule. I have taken fish under one pound in Cuba. There is a pond of brackish water back of St. James City, Florida, with no outlet, with many small tarpon in it (from one to four pounds). The spawn must have been dropped by birds or carried from the beach by alligators. The fish do not grow for they have but little food. It is my belief that the tarpon grow very slowly and that the large ones are of great age."

He also advises me that tarpon frequently remain in the deep holes of certain rivers in Florida during the entire Winter and show themselves on warm days when the water reaches 68° or upwards. He has taken several on live mullet in the St. Lucie River in January and February.

The late F. G. Aflalo, the author of that attractive book "Sunshine and Sport in Florida and the West Indies" records the fact that very small tarpon are found in land-locked waters of the West Indies. They are found in ponds in Westmoreland, Jamaica, and in

the Lakes of Antoine and Levera in Granada. They are caught in the Black and Milk Rivers of Jamaica and off Port Royal.

The mature fish begin to arrive in considerable numbers at Aransas Pass, Texas, about March, but they do not take the bait readily till May or June. They disappear from this locality about November 15th. The fishing here is at its best during June and October.

Mr. J. E. Cotter of Aransas Pass informs me that the females are full of roe in May and June and he is of the opinion that they spawn in the near-by Bays during these months. He has caught 3″ tarpon in a cast net in this locality.

The Panuco River at Tampico, Mexico, and its tributary streams are also supposed to be breeding places. They are found there in great numbers from November to April, which roughly corresponds to the months during which they are absent from our Southern Coasts.

Mr. William Markham of Cristobal, Canal Zone, has been on the Isthmus about thirteen years. He informs me that tarpon as small as 10″ have been caught there on a fly, but he has never seen smaller fish in these waters. Great quantities of small fish come down the spillway of the Gatun Dam and are greedily devoured by thousands of waiting tarpon. The tarpon are present perennially at this point. Mr. Markham has used small nets to obtain bait for mackerel for many years but he never caught a very small tarpon in any of the creeks or coves of this region. He has made inquiries of the natives at my request but they report they have

never seen the very small tarpon. The record in the Canal waters seems to be 118 pounds, the fish being 6′ 6″ in length. Mr. Markham has had the best success when fishing with a brown fly of his own construction.

In the Government publication entitled "Fishes of Porto Rico" (Evermann & Marsh, 1900), Mr. Barton W. Evermann reported that tarpon evidently spawn near that island. The Government report describes the specimens taken as follows:

> "The four examples are from Hucares, from 7.5 to 11.5 inches long, and were seined in a small brackish pool of dark-colored water not over five feet deep in the corner of a mangrove swamp and at that time (February) entirely separated from the Ocean by a narrow strip of land scarcely twenty-five feet wide. The thirteen others are nearly all very young of 2.25 to 3.25 inches collected at Fajardo. No large individuals were seen."

Fajardo is on a coast poorly protected against the northeast trade winds.

As these fish were obviously very young the evidence afforded by their capture at Porto Rico as bearing upon the breeding place of the fish is significant. Gill states that all of these fish were the young of the first year.

It is believed by some that the young pass through what naturalists call a leptocephalus stage before developing into perfect fish. Gill states:

"The very young or larvae will doubtless be found to be like those of *Elops* and *Albula* elongate ribbon-like animals of translucent and colorless texture with a very small head and small fins. They are probably so transparent that their eyes alone are apparent in the water unless a very close examination is made. The youngest of the specimens (2.25 inches long) observed by Evermann and Marsh were probably not long before developed from the larval condition. Such are the little fishes to be looked for as the very young of the great tarpon.

"Most of the large tarpons caught along the Coasts of Florida and the Southern States have attained full maturity * * * they are probably nearly or over three years old. Growth, however, is continued in some much above the average, one of three hundred and eighty-three pounds it is claimed having been harpooned."

It is not at all certain, however, that these fish breed in pools or in rivers. The consensus of scientific authority seems to be to the contrary, although Dr. Gill has expressed the following opinion:

"It apparently demands a temperature and conditions which the reef-forming coral animals require and sheltered brackish or fresh water for oviposition."

In some fishes there is a change in the young from a larva to a true fish. This is termed a metamorphosis. The first organisms are termed by naturalists, leptocephali, which are semi-translucent, ribbon shaped

and entirely different and larger than the fish that finally develop. If the tarpon develops into a true fish from this stage possibly the larva has been overlooked by observers.

Many fish deposit their eggs in the open sea and the tarpon may do the same, which accounts for the fact that the larval condition has not been noticed. The subject is worthy of patient investigation in the field and it is to be hoped that all sportsmen and guides will report to the author any facts which may come to their attention throwing light upon this obscure subject.

Dr. Alexander Meek, M. S., has lately (1916) published a book entitled "The Migrations of Fish" in which he considers the spawning habits of the *Elopidae.* Attention is invited to his statements bearing in mind that the term "Anadromous" is applied to a fish which migrates from the sea into fresh water like a salmon." "Contranatent" signifies swimming against and "denatent" swimming with the current.

> "The family *Elopidae* includes *Elops lacerta* of the West Coast of Africa where it enters rivers and *E. saurus,* which is generally distributed in tropical waters. The latter also enters rivers as in East Africa, where it is called Cape Salmon. But it is evident that spawning takes place at sea, since a leptocephalus stage is known. The tarpon (*Megalops atlanticus* of the Atlantic tropical and southern region and *M. cyprinoides* of the Indian Ocean and the seas of the East Indies) is well known in the open seas and periodically visits the coasts, even ascending the rivers in pursuit of

shoals of fish. At the period of its visits to the coast it attracts the angler, who, in search of adventure, essays with success to capture a giant fish with the rod. *Megalops* is represented in the marine Lower Eocene of Sheppey and probably *Elops* as well and allied genera have been obtained from the Cretaceous of Europe, Mount Lebanon and Brazil.

"It is probable that these more oceanic allies of the herring have pelagic eggs, and that spawning takes place out at sea, but this does not preclude an anadromous migration taking place.

"The spawning migrants appear to migrate towards the coast before spawning takes place, but the spawning region is sufficiently far from the Coast to demand a denatent drift of the eggs and larvae to the Coast where the early life is spent. After metamorphosis the young stages are passed in comparatively shallow water. The life history of these fish may be said to be, therefore, and it applies as well to the bathypelagic *Pterothrissus;* a denatent drift of the egg and larvae to or towards the shore; after a season spent in shallow water a short contranatent migration, a return denatent migration, a stronger contranatent movement into deep water and, finally, a spawning migration, which, as has been said, is probably a anadromous one from the oceanic region of dispersal."

An accomplished and sound authority, Mr. J. T. Nichols, of the Department of Ichthyology of the

Museum of National History of New York, to whom this matter was submitted, kindly wrote the following interpretative of Dr. Meek's text:

"I take it the theory is something as follows:

"When about to spawn, the fish migrate towards the coast but the eggs are actually deposited rather off-shore, though after or at about this time the adult fish enter the mouths of rivers. When the eggs hatch the young drift in-shore and are found near shore, presently moving off-shore again. They move in-shore for the second time when of fairly good size, but move well off-shore for the second time to attain their final growth before coming in as adults.

"'The data of what is actually known that I have to go on is no more than that with which you are already familiar. The smallest fish that I have seen taken were on the west coast of Florida, some of them up Shark River in fresh water. The very smallest I should say was about 20 inches in length. Really small fish are rare in collections, practically unknown except those taken at Porto Rico and recorded in the 'Fishes of Porto Rico' by Evermann and Marsh, Bull. U. S. Fish Commission, 1900. One of these I may say is deposited in this Museum. It was taken at the northeastern corner of Porto Rico, February 17th, and measures about 2½ inches in total length. * * * One of the small herrings (*Opisthonema oglinum*), which has an elongate ray in the back fin, could

readily be mistaken for a young tarpon by anyone without scientific training.

"These facts fit rather well with Meek's hypothesis and I accept it as probably about correct. Supposing the tarpon to spawn off-shore in the Central Atlantic area, north of the Equatorial drift and southeast of the gulf stream, sometime in the late summer or fall, after leaving the west coast of Florida; the young in their first shoreward drift might well be carried to Porto Rico by the northeast trade winds. The fact that the very small Porto Rican fish were found at the northeast corner of the Island which projects into the trade winds, is perhaps significant. Also, in leaving the west coast of Florida for such an Atlantic spawning ground, the fish would cross the Gulf Stream, and it is in summer and fall that stragglers occur northward along the coast, doubtless carried by the Gulf Stream. There are records in the vicinity of New York and further north.

"Leaving Porto Rico on the outward migration, it would be natural for young fish to enter the Caribbean and from thence with the Gulf Stream, enter the Gulf of Mexico, and the comparatively small specimens found up the rivers of the west coast of Florida may well be fishes of the second shoreward migration."

I have examined the tarpon Mr. Nichols refers to, which is the smallest yet recorded. It is perfectly developed and like the larger fish.

I submit that one is safe in concluding that the tarpon breed in many places widely remote, for the facts disclose that very young fish are found in Florida, Porto Rico, Cuba, Aransas Pass and Lake Nicaragua.

Although I have written scores of letters to officials, societies and anglers at many places I have not been able to gather more than the data here set forth.

While fishing at Boca Grande on June 5th, 1921, I captured a female tarpon which weighed 142 pounds and was 6′ 8″ long. The ovaries were full of immature eggs and were carefully dissected out of the fish after being measured. They were 28″ in length and about 3″ in diameter in the thickest parts. I enclosed them in two glass jars partially filled with the formalin solution and sent them to Mr. Nichols of the American Museum of Natural History for his examination and deductions. Mr. Nichols found that the gross weight of these eggs, including the membranes enclosing them, was 82¾ ounces. He caused a portion of an ounce of eggs to be counted and found that there were 163,840 eggs per ounce. After deducting 10% for the weight of the membranes in the mass it is evident that this fish contained approximately 12,201,984 eggs. While the estimation was not exact it is safe to say that a large female carries over ten million eggs. If each egg had developed into a fish as large as the parent the sea would have been enriched with 866,340 tons of tarpon. Such is the prodigality of nature!

In my trip of 1920 to the same locality I examined the eggs from nine females taken from June 5th to

June 22nd, 1920. One female was spent, having very few eggs left in the ovaries and these contained minute specks of blood. She was bright and healthy looking, having the appearance of being fresh from the sea. It is not uncommon to see a tarpon which has a distinct yellowish color, which to my mind denotes a comparatively long sojourn either in fresh or shallow water. The eggs from this fish were not perceptibly larger than the others examined. In several cases eggs were ejected by slight pressure along the belly of the fish. I also saw a male eject milt while in the act of leaping while on the hook, and heard of another case where this was observed by a fellow angler. The evidence seemed to point to the conclusion that some of these fish were ready to spawn. I experimented to see if the eggs would float in sea water but they invariably sank to the bottom. The small fry greedily devoured them.

I arranged with my guide, Mr. Mack Mickle of Boca Grande, to examine fish after I left. He took ten or fifteen samples of eggs from June 22nd to about August 5th, 1920. He also found several spent females and sent me samples of the eggs he took. The last eggs taken show no noticeable increase in size over those taken a month earlier. Mr. Nichols kindly measured these eggs. They ran from 0.6 to 0.75 mm. in diameter. As I am quite sure that some of these specimens were taken from spent fish I am reasonably certain they were fully developed. It, therefore, seems to be fairly well established that the eggs of the tarpon are exceedingly small and remarkably numerous.

Mr. Nichols in a recent letter says:

"Anadromous fishes as a rule, have large and few eggs as compared to fishes spawning in the sea. Trout and salmon eggs are large and few. The eggs of the sea herring are much smaller than those of the related shad, and about equally numerous, though the shad is a larger fish. The rule is not absolute, for the alewife (anadromous) has eggs somewhat more numerous and only somewhat larger than the sea herring. But the eggs being exceedingly small and exceedingly numerous, the probability is that the tarpon spawns in the sea. If your results, that the tarpon egg is heavy, not buoyant, are correct, and I see no reason why they should not be, it would naturally follow that the fish spawn in shore waters or on banks, not in the deep sea."

After personal conference with Mr. Nichols it seems to me the following deductions may be safely drawn:

(1) As the mature eggs of this fish are very small and exceedingly numerous the tarpon is probably a salt water spawner.

(2) As the eggs sink in sea water the fish probably spawn somewhere off shore in shallow water.

(3) The indications are that the time of spawning on the West Coast of Florida is from late June to August.

(4) That the tarpon spawns over a large area for the small fish so widely reported are evidently very young.

These deductions are partially borne out by the observations of Captain W. V. Heusted of Fort Myers, a very intelligent and experienced fisherman, who on March 29, 1920, wrote me as follows:

> "I have seen the tarpon spawning in Charlotte Harbor along the Cape Haze shore from the Cape up to the Miakka River. They are always in pairs along in July and August, in white sand holes along the shoals. My brother and I have watched them three different seasons and we have also killed them to see the roe and have watched them deposit the spawn."

Captain Heusted, whom I saw later, impressed me as a reliable observer.

I visited the locality he refers to about the middle of June, 1920. The water is somewhat brackish. The bottom is covered with marine vegetation with here and there sand pits or holes of various areas. The water as a rule is from five to seven feet deep. I regret I could not verify Captain Heusted's observations. My guide visited the locality several times in July and, although he reported he saw hundreds of fish rolling over this spot, he could not observe any fish in the act of spawning.

A word as to the leaping powers of this fish. The tarpon is a most prodigious and consistent jumper. It throws itself into the air by the aid of its caudal fin assisted by a powerful sweep of its lithe and muscular body. Its clean and athletic form is well adapted for high jumping. Cool observers have estimated the leaps at from twelve to fifteen or even eighteen feet verti-

cally and thirty feet horizontally. I have observed a fish make a horizontal leap of about twenty-two feet. Sometimes a fish will go into the air ten or twelve times, dependent upon the way the angler plays it or the depth of the water, but so many successive jumps are rare. When a strain is placed on the fish it frequently will leap and while in the air shake itself violently to dislodge the hook. It falls back into the water just as it happens, and whether free or line bound it makes no particular effort to make a clean dive. Males are more active than the females as they are usually lighter and more lithe. The tarpon has been known to jump upon a man sitting in a chair on the deck of a steamboat. One knocked a negro guide out of a boat at the mouth of the Brazos River. The man was stunned and drowned. In Galveston Bay a tarpon leaped and broke a boatman's neck. At Avery's Island, La., a man fishing in a skiff was hit and died from his injuries. "Net fishermen dread to see him in their nets for they have known of men being injured by their attempts to leap out" (Stearns). Many people have suffered injuries from its wonderful leaps. One must have the experience of welcoming an active and vigorous tarpon into a small boat to obtain a just appreciation of its liveliness and strength. A fairly large fish will scale six feet in length and if it jumps straight out of the water so that its tail is six feet above it, its snout will be twelve feet in the air. Such a jump will be frequently observed. But to say that a tarpon can leap clear of the water for twelve feet is another matter. A clean vertical jump of ten or

at most twelve feet would seem to be the limit, but it is destructive to one's judgment to see a mass of molten silver suddenly shoot from an azure sea with a great flurry of water and project itself into the air to a towering height close by the boat. One's estimate on such a performance is apt to be distorted and untrustworthy.

The tarpon leaps from fear, if a fish can be said to have fear, to escape an enemy, to throw off remoras or sucking fish, and also for pure enjoyment. It will habitually come to the surface and blow and roll, as the phrase is, without attempting a leap. When in this mood it is usually hard to induce it to take the bait. It leaps to avoid the shark—its ancient enemy since the Mesozoic. It steals or dashes upon schools of mullet and other small fish, usually seizing them by the tail (Gill). It will follow these schools up fresh water rivers and along shallow places near shore. Dr. Townsend reports that the captive tarpon in the N. Y. Aquarium took the fish fed them "with a sidewise snap." Its hard mouth is well adapted to feed on crabs which in season is a favorite bait.

The indiscriminate capture of its principal food, the mullet, by net fisherman all along its range in the semi-tropic seas, will surely have a serious effect upon its future welfare and numbers. Many other fish love to feed upon the mullet and their netting during the spawning season should be stopped both in the interest of sport and also to conserve the rapidly decreasing schools of mullet, a very important food fish for the South.

The large ones at least are not edible. According to Schomburgk (1848), they are considered delicate eating in the Barbados. Mr. W. H. Barrall writing in 1874 to *Forest and Stream* said they are very palatable. Dimock cured and dried the meat and speaks very enthusiastically of the fishballs his guide made out of it. Several years ago they were sold in the public markets at New Bedford, Mass., but the people did not like them owing to the toughness of the flesh. They are eaten in the West Indies and are sold in the Havana fish markets under the name of Sabalo. The Mexicans eat them after they are salted. Dr. Jordan is authority for the statement that people who relish raw fish meat like the Hawaiians and Japanese, prefer the meat of the *Elopidae* to a more close fibered and tender fish. The very small fish *may* be good; but the old ones are unpalatable. The *Megalops cyprinoides* of the Indian Ocean is kept in fresh water tanks for consumption by the natives and is highly relished. Mr. T. Saville Kent in an article in Badminton Magazine for 1895 describing the so-called Ox Eye herring around Australia says it is there considered most excellent eating.

The tarpon probably attains a weight of four hundred pounds and a length of over eight feet. One was captured on a hand line which was eight feet three inches in length, but this immense fish weighed net 209½ pounds. It is reported that the largest tarpon ever captured weighed 383 pounds. I could not verify this record. The following schedule will show the records at various places:

N. M. George, at Bahia Honda, April 8, 1901; length, 7′ 2″; girth, 46″; weight, 213.

Edward Vom Hofe, at Captiva Pass, Fla., Apr. 30, 1898; length, 6′ 11″; girth, 45″; weight, 210.

Dr. Howe, at Tampico, Mexico; length, 6′ 8″; weight, 223.

C. W. McCawley, at Aransas Pass; length, 7′ 10″; girth, 46″; not weighed.

W. A. McLaren, at Panuco, Mexico, March 27, 1911; length, 7′ 8″; girth, 47″; weight, 232.

W. L. Dawley, at Aransas Pass, 1906; length, 7′ 10½″; not weighed.

W. G. Oliver, at Coden, Ala.; length, 6′ 11″; girth, 43″; weight, 215.

The McLaren fish is the World's record; and I think that the Oliver fish is the U. S. record. The light tackle record for the World is apparently held by Mr. L. G. Murphy of Converse, Indiana, who in June, 1916, caught a tarpon 6′ 9¾″ long at Aransas Pass, Texas (Information furnished by Mr. J. E. Cotter of Aransas). The woman's record is held by Mrs. W. Ashby Jones, who in 1916 landed a fish 7′ 5″ long, 43½″ in girth and weighing 210 pounds. Mrs. Jones took the *Field and Stream* first prize for that year.

There have been some great catches with rod and reel. Mr. O. A. Mygatt of New York City took 22 at Boca Grande in one day, and on June 9th, 1916, at the same place, Mr. Benjamin W. Crowninshield of Boston took 25 large tarpon in a day between sunrise and sunset, which I believe is the World's record. Mr. L. G.

Murphy of Converse, Indiana, once took 24, at Aransas Pass, Texas.

Mr. Joseph W. Stray of Brooklyn caught a fish weighing 115 pounds at Captiva Pass in 1918, on standard light tackle, which I believe is the record for that locality on this class of tackle.

The first prize winner in the *Field and Stream* contest for 1919 was Mr. F. H. Schauffler of New York City, whose fish was 7′ long with a 40″ girth. The 1920 prize was won by Mr. W. Ashby Jones, who captured a fish 7′ 4″ long with a girth of 43″. It was caught in the Caloosahatchee River, Florida.

Mr. John T. Nichols and Mr. Van Campen Heilner have compiled the records for fish of various species which will be found in *Field and Stream* for July, 1920.

This compilation is my authority for stating that the largest tarpon ever caught was netted by fishermen at Hillsboro River Inlet, Florida, on August 6th, 1912. Its weight was *estimated* at 350 pounds. Its length was 8′ 2″.

Aside from the angler the tarpon has no enemy worth considering save the sharks with which it has occupied the same waters for hundreds of thousands of years. This indicates that it is very difficult for a shark to kill a tarpon in normal condition. Every angler of experience has observed a shark attack a tarpon while it is struggling against the angler's efforts to capture it. Even if the tarpon is tired and somewhat logy from its exertions it will usually outrun the shark if given a free line. It, therefore, seems

clear that sharks do not destroy many healthy and vigorous fish.

In October and November, 1916, many thousands of dead fish of all kinds were cast ashore on the West Coast of Florida between Boca Grande and Marco. It was estimated by Government observers that these fish would have been sufficient to have kept the entire State of Florida supplied for a year. Among them were many tarpon. The Government made a careful investigation as to what caused this mortality and the results were published in the Bureau of Fisheries Document No. 848 under the title "Mortality of Fishes on the West Coast of Florida." Mr. Harden F. Taylor, the investigator, was unable to reach any definite conclusion. Such catastrophies are not unusual. In 1894, millions of tile fish were killed by a sudden change in the temperature and the dead fish covered an area of about 7,500 square miles of water. It was estimated that about one billion fish perished. A slight change in the balance of nature works havoc among fish precisely as it does among birds. It is, after all, catastrophic changes in natural conditions which have caused the destruction of many species formerly inhabiting the earth.

For some time past I have been endeavoring to ascertain the age of the mature tarpon, but up to this time the results have been negative.

The age of many fish like the herring, cod, hake or salmon can be determined, at least approximately, by an inspection of the scales. If a scale from one of these fish is examined it will be found to be made up

of numerous concentric rings, the distance between which varies in a definite manner. The Summer growth is represented by well separated rings, while the narrow compressed rings indicate the Winter growth. Each band of Summer and Winter growth, therefore, represent a year of the fish's life and its age can be determined by counting the number of Winter rings on the scale.

There is probably a checking of the growth during the spawning season and the rings may also indicate the cessation of growth due to that condition.

I have carefully collected the scales from various tarpon and submitted them to Ichthyologists for examination. The tarpon is a warm water predacious fish, living in the midst of plenty. It does not hibernate and may grow steadily throughout the year. Apparently, its scales show no Winter or Summer areas similar to the fishes living in colder waters. If there is any cessation of growth during the spawning period the rings do not appear to reflect it. In any event I have found no one able to read the scales. It is not necessary to weary the reader with a recital of the investigations which have been made to determine the age of the fish by other methods, for so far they have led to nothing.

Fish of the same species differ greatly in their rate of growth, dependent upon the nature and abundance of the food they eat and the waters they inhabit. Gill is of the opinion that the tarpon first spawns in the third or fourth year. After an examination of the rate of growth of many different fishes I can perceive

no reason why the tarpon should not mature by that time although it probably grows till its death, if the conditions are favorable. If one could read the story of its growth from the scales the problem of the tarpon's age would be a simple one.

When the tarpon leaps the angler may observe it dislodge a slender, dark fish possibly eight or ten inches long. This is the interesting remora or sucking fish which has a sucking disc upon the top of its head by which it adheres to its host. The tarpon probably leaps even when free of the hook in order to rid itself of this parasite. If the angler will look sharp when his fish is being released he may see a small remora four or five inches long clinging to the tarpon. If he tries to capture the remora with a hand net it will disappear instantly, but when the tarpon is rolled over the remora usually will be found clinging to the other flank. They change their position with great rapidity. Those which I have observed range from 4″ to 14″ in length. They use the host as a conveyance. A large remora supported a pail of water weighing 24.25 pounds when tested in the New York Aquarium. They are used by the natives in the East to capture fish and turtles. A string is attached to the remora's body near the tail and the remora permitted to swim till it follows its habit and attaches itself to some other fish, which is then pulled in and captured. These remoras detach themselves when the tarpon is pulled out of the water.

CHAPTER II

THE HISTORY OF ITS CAPTURE BY ROD AND REEL

CAPTAIN WILLIAM DAMPIER, the English buccaneer, has written of his exploits as a sacker of towns and ships and as an explorer. He had as keen an eye for natural history as he had for prizes and loot. His travels read like a romance. In the course of his journeys to the Bay of Campeche, just west of Yucatan (1675), he gave a description of the tarpon which is one of the first recorded. It deserves inclusion here. He is describing conditions near the Bay:

> "A little to the East of the River is a Fish-Range and a small Indian Hutt or two within the Woods; where the Indian Fishers who are subject to the Spaniards lye in the Fishing-Seasons, their Habitations and Families being further up in the Country. Here are Poles to hang their nets on and Barbacues to dry their fish. When they go off to Sea they fish with Hook and Line about four or five Leagues from the shore for Snappers and Gropers which I have already described in my Voyage around the World.
>
> "Since the Privateers and Logwood-ships have sailed this way these Fisher-men are very shy, having been often *snapp'd* by them. So that now when they are out at Sea, if they see a Sail they presently sink their Canoas even with the edge of the Water; for the Canoas when they are full of water will sink no lower and they themselves lye just with their heads above Water till the Ship

which they saw is passed by or comes nigh. I have seen them under Sail and they have thus vanished on a Sudden. The Fish which they take near the Shore with their Nets are Snooks, Dog fish and sometimes Tarpoms. The Tarpom is a large scaly Fish shaped much like a Salmon but somewhat flatter. 'Tis of a dull Silver Colour with Scales as big as a Half Crown. A large Tarpom will weigh 25 or 50 Pound. 'Tis good sweet wholesome Meat and the Flesh is solid and firm. In its Belly you shall find two large Scolops of Fat weighing two or three Pound each; I never knew any taken with Hook and Line; but are either with Nets or by striking them with Harpoons at which the Moskito-Men are very expert. The Nets for this Purpose are made with strong double Twine the meshes five or six inches square. For if they are too small so that the Fish be not entangled therein he presently draws himself a little backward and then springs over the Net; Yet I have seen them taken in a Sain made with small Meshes in this manner. After we had enclosed a great number, whilst the two ends of the net were drawing ashore ten or twelve naked men have followed; when a Fish struck against the net the next Man to it grasped both Net and Fish in his Arms and held all fast till others came to his Assistance. Besides these we had three Men in a Canoa in which they mov'd Side-ways after the Net; and many of the Fish in springing over the Net would fall into the Canoa. And by these means we

should take two or three at every draught. These Fish are found plentifully along that shore from Cape Catoch to Trist especially in clear Water near sandy Bays; but no where in muddy or rocky Ground. They are also about Jamaica and all the Coast of the Main; especially near Carthagena."

Thousands of anglers since Dampier's day have felt a sudden strike and been amazed to see a huge silvery fish suddenly break water and go bounding away with their tackle, while they gazed upon it with envious eyes. But, apparently, its capture by rod and reel was never considered a possibility. It was taken by harpoon or on hand lines precisely as the big shark is now captured.

In an article written in 1876 on the Game Fish of Florida, S. C. Clarke, the noted fisherman, said:

"The tarpum I have not seen. It also is rare and is described to belong to the mackerel family, growing to the weight of 80 to 100 pounds. A surface fish, very active and strong, with brilliant silvery scales the size of a dollar. It is rarely taken with hook and line, as it generally carries away the tackle, however strong. It goes in schools and leaps from the water when struck, either with hook or spear. The only successful way of killing the tarpum, I am told, is to strike it with a harpoon, to which is attached, by a strong line, a small empty cask; the fish by struggling with this buoy, exhausts itself so that it may be approached in a boat and killed with a lance."

In an article on fishes written in 1884, it is said:

"Imagine a herring-shaped fish, five or six feet long, with brilliant silvery scales the size of half a dollar, in schools of a dozen or twenty, leaping from the blue surface of a summer sea. This is all that the angler usually sees of the tarpon. Sometimes one of these glittering, rushing monsters takes the hook. What follows? The line runs out with great speed till it has all left the reel, when it parts at its weakest point, and the fish goes off leaping seaward. When hooked on a handline similar results follow. No man is strong enough to hold a large tarpon unless he is provided with a drag or buoy in the shape of an empty keg attached to the line which may retard or even stop the fish after a while. The tarpon is sometimes taken with a harpoon or seines."

Just before anglers began to take these fish with a rod and reel that celebrated angler, Dr. James A. Henshall, the authority on black bass, thus described their capture:

"The boat being poled quietly along the fringe of mangrove bushes at the edge of the channels, the man standing in the bow with the grains ready, at length spies a great tarpum some six feet long, like a giant fish of burnished silver, poised motionless in the shade. When within striking distance, he hurls the grains by its long handle with a skillful and dexterous thrust and unerring aim, born of long experience, which strikes home with an enormous thud, when the monster tears away with a tremendous spurt, leaps clear of the surface,

and, falling back, makes the water fairly boil and seethe in his desperate efforts to escape. But the barbed grains hold fast, and the long stout line is as tense as a bowstring. The great fish tows the boat around like a cockle-shell until his fierce struggles and grand leaps begin to tell on him, and at length he is towed ashore completely exhausted. Sometimes the boat is capsized or swamped by an unusually large and powerful fish."

It apparently never entered Dr. Henshall's mind, cool and experienced angler that he was and is, that it would be feasible to attempt the capture of a large tarpon with a rod and reel. The methods of capture he described were the same as those employed when Captain William Dampier, the buccaneer, tried his hand off the coast of Yucatan, two hundred and nine years before.

In the issue of the *Forest and Stream* for April 9, 1885, the following item from a local correspondent appeared, bearing the date of April 2, 1885:

"A Mr. Wood of New York took at Punta Rassa last week a tarpon measuring five feet eight inches and weighing sixty-eight pounds; tackle rod and reel."

In the issue of the 23d of that month Mr. W. H. Wood stated that his first fish was caught in Tarpon Bay, Fla., on March 25, 1885. It was 5 feet 9 inches and weighed 93 pounds. It was taken in 26½ minutes. He caught another the same day in 21½ minutes weighing 81 pounds, which was 5 feet 7 inches long.

Mr. John Smith, who at that time was living at Fisherman's Key near Punta Gorda, was his guide. In a recent letter now in the author's possession, Mr. Smith states that Mr. Wood's fish was the first one caught by rod and reel. Mr. Wood caught three more near the mouth of the Caloosahatchee River on March 31, 1885. All these fish were taken with rod and reel and for some time it was believed that the record of capturing the first good-sized tarpon by rod and reel was held by Mr. Wood. In May, 1885, Mr. S. C. Clarke wrote to the same journal:

> "Mr. Wood's capture is, however, not the first of that kind. A tarpon was killed in the Indian River, East Florida, with rod and reel by S. H. Jones of Philadelphia, some years ago, I think about 1878. This specimen measured over seven feet in length, 32½ inches in circumference at the dorsal fin and weighed 174 pounds. The contest lasted more than three hours and was carried on from a boat which was towed some distance by the fish. I heard of this affair in Florida the year after it happened and got the dimensions of the fish from the boatman who waited on Mr. Jones, who himself gave an account of the capture to an angling friend of mine; so I have no doubt as to the correctness of the story."

As Mr. Wood's exploit was widely published and as Mr. Clark's communication was disregarded, it apparently was generally believed that the record for the first capture should go to Mr. Wood.

The news crossed the Atlantic and the *London Observer* of August 26, 1886, had this to say:

> "Here, at last, there is a rival to the black bass of North America, to the *Siluris glanis* of the Danube, to our own European salmon, and possibly even to the sturgeon, were that monster capable of taking a hook and holding it in its leech-like sucker of a mouth. Sportsmen may go to Florida for the tarpon, as they now go to the Arctic Zone for the reindeer, walrus and musk-ox."

In the *Forest and Stream* of January 9, 1890, Dr. Henshall, in the course of an article descriptive of Floridian fishes says:

> "The tarpon has achieved notoriety as a game fish within the past five or six years, principally through the writings of Dr. C. J. Kenworthy; and Mr. W. H. Wood has received credit generally of killing the first tarpon of over 100 pounds with rod and reel in March, 1885; but justice compels me to state that the first event of this kind occurred in the winter of 1880-81 when Samuel H. Jones of Philadelphia killed a tarpon of 170 pounds on ordinary heavy striped bass tackle in the Fort Pierce channel of Indian River Inlet on the East Coast of Florida. I was in this locality the winter following this feat and learned the full particulars of this extraordinary performance from Mr. Thomas Paine (son of Judge Paine of Fort Capron), who was Mr. Jones' boatman on the occasion referred to. Afterwards I received

a full account of it from a son of Mr. Jones, who was also with him and witnessed the capture of this immense fish with striped bass rod and tackle and trolling spoon for bait. Mr. Jones was two hours in securing the fish. Honor to whom honor is due. Mr. Wood has glory enough in being the champion tarpon slayer of 1885, and he has an enviable record. He was the first to make known through the sporting press how the thing could be done."

Dr. Holder in another of his articles stated that Mr. Jones took the first tarpon with rod and line and that it weighed about one hundred and thirty pounds. He says it took over two hours to land it and that Mr. John Weier of New Smyrna was the lucky guide.

Mr. W. H. Gregg in his "Where, When and How to Catch Fish on the East Coast of Florida," published in 1902, gives credit to Mr. Jones and locates the capture at the same place. But he says the capture occurred in the winter of 1884, and that Captain John Gardner was the guide. He says this tarpon was taken on a large Buel spoon; that its length was 7 feet 4 inches, and that it weighed 172½ pounds. It will be observed that these accounts differ in essential particulars and the subject merits further investigation. It may well be that some native fisherman caught a tarpon on rod and reel long before either of these gentlemen.

Soon after Mr. Wood's exploit became known anglers turned their attention to the tarpon and attempted its capture with various kinds of tackle. Mr.

Wood took a fish on May 6, 1886, 6 feet 5 inches long and weighing 140 pounds on a 15 thread line and a No. 10 O'Shaugnessy hook rigged onto a three-foot link chain. He used a five-foot bamboo rod and a Silver King reel. Dr. Henshall and Mr. A. W. Dimock very early took tarpon in both brackish and fresh waters with a fly on a heavy fly rod. The fish so taken weighed from ten to forty pounds.

All the sporting periodicals were filled with accounts of tarpon being caught with tackle suited to the individual tastes of the particular angler. Gradually, makers of tackle evolved reels, rods and lines suited to the battle. Fishing began at Texas points and, finally, Tampico became noted for its tarpon fishing. Panama is now coming into its own. In all probability the best place to fish is not yet known. Central America may prove to be the Mecca for the lovers of this splendid sport.

It is unnecessary to recount the progress made by anglers during the years between 1884 and the present, save to say, that the indiscriminate slaughter of the fish so that photographs of the catch may be exhibited is rapidly passing away. They were taken on light tackle many years ago; but up to the present time the tackle used by most fishermen has not given the fish a fair chance.

This chapter cannot be closed in a more fitting way than by quoting from Mr. McLaren's article in *Field and Stream* of July, 1912, describing his capture of the world's record tarpon.

"FIRST GRAND PRIZE—TARPON.
Awarded to W. A. McLaren, Mexico City.
Weight—232 pounds.
Length—7 feet, 8 inches.
Girth—47 inches.
Where Caught—Panuco River, Mexico.
Rod—Vom Hofe 7 foot.
Reel—Vom Hofe.
Line—27 thread Linen.
Lure—Small Fish.

THE WORLD'S RECORD TARPON.

How the Fish was Caught and Then Nearly Deprived of Its Laurels.

By W. A. McLaren.

"March 27, 1911, was the date and the Panuco River, Mexico, was the place. The fish, a female, weighed two hundred and thirty-two pounds, and measured, as it lay dead, from tip of longest tail fin to end of jaw *open,* seven feet and eight inches, with a girth of forty-seven inches. Tackle used was a seven foot rod, Vom Hofe reel, two hundred yards of Linen line and regulation hook and leader.

"At Tampico, the favorite fishing grounds are upstream at Caracol, or along the sedge near the Tamesi Bridge, or in the bayou called Pubelo Viego. Not so with us. It may have been love of tidewater or an unsportsmanlike desire to catch something, whether or not the tarpon were biting, or an unconscious presentment of trouble—we had always preferred to go downstream from the

town landing, and invariably our longing pointed to the mouth of the Tuxpam canal. There, at ebb tide, the water from the narrow canal forms a pretty rip with the river's mighty current, and indeed, it is a bit of ideal fishing ground. Hardly can one fail to get a strike if the line is properly trolled through the ripples and eddies only a few yards in extent. The water constantly dances and flashes and small fish are flying and leaping away from the frequent 'chook' of the big jaws that pursue. Here are sharks, jewfish, yellow-tail and here was the record tarpon.

"On the morning in question, we made no pretence of hiding our preference, and, having the use of the trim little launch, Tal Vez, we towed our small boat straight to our favorite spot. Alas, we had miscalculated the tide, which was just on the flood. We waited not, however, for time or tide, but cast our lines and soon came a fierce strike, stronger even than the kind one feels when dreamily thinking about tarpon fishing. Out ran my line, the fish heading up the canal, and my spasm of excitement and joy soon subsided for no tarpon leaped into the air. My boatman, Apolonio, expressed my disappointment: "A shark, senor, it is a shark; have a care for your line!" I had a vision of broken tackle, even of loss of rod and reel, and all the time I was fighting against the mammoth tugs and runs, in grim determination to die hard, yet without hope of victory. Up the canal we were carried, hauling, heaving, pump-

ing, rowing and backing, the fish always playing us. Presently, for sport's sake, we were permitted to reel in a while, and then a huge head, a tarpon head, emerged from the water, as if to say 'I show you your mistake; I am not a shark.'

"Instantly, my craving to escape became a mad passion to capture. Placing the rod's butt under the cushion on my boat seat, I grasped it well forward and pumped, throwing my whole body weight onto the leverage; pumped myself breathless, straining arms and back to the utmost. And every now and then the fish would make a far reach up or down the canal, just to put my efforts to ridicule. Once it leaped, not a fair, free jump, but a lunge sideways, half out of water. The boatman was again the spokesman: 'Es grande, grande!' he exclaimed. I was getting past the period of calculation. I saw men on the shore watching us with interest; I saw the two oil tanks that stand on either bank, yet I realized nothing but the tense struggle for supremacy between one end of my line over the other. The fight lasted over an hour and seemed interminable. At length there was evidence of weakening on my adversary's part, and I finally was able to get the fish up to the double line and lift its head to the water's surface. Then the fish gradually lost its aggressiveness and became a dead weight. We turned to the river so as to land on the sandy beach around the point. One last run it made as we struck the river, then gave up the struggle.

We beached the boat and the fish. Our only implement of measurement was an oar, said to be eight feet long, which proved to be somewhat longer than my catch. Some bystanders said it was the largest tarpon of the season. Though glowing with my victory, I—ignorant of figures as to any record—did not have a thought that the fish was exceptional. So I ordered the fish turned back into the river and only when I saw that it was bleeding from a cut in the gills which would mean death by the sharks, did I resolve to keep it. The body was carried to the Southern Hotel and exhibited to the fishing throng. Soon the word went forth that the Tampico record was beaten, and I was the most surprised fisherman of all when Mr. Wilson, British Consul, and holder of the former Tampico record, courteously, but emphatically, insisted that my fish had won over his. It remained for *Field and Stream* to inform me that the fish had taken the world's record, so now the records of Tampico and of the world are one, tarponwise, and the fish hangs at Tampico, its own witness.

"Besides the prizes from *Field and Stream,* I was presented with a magnificent Leonard No. 6½ Tarpon rod, by Mr. N. M. George, of Danbury, Conn., for my good fortune in exceeding his tarpon record. This generosity and good sportsmanship of Mr. George is greatly appreciated by me, and I am as proud of the rod as I am of the record cup."

CHAPTER III

TACKLE AND EQUIPMENT

IN view of the fact that the angler may buy high-class tackle from many different manufacturers, especially adapted to the capture of the tarpon, it is not necessary to enter into a technical description of the rods, reels, lines and other equipment required in this fishing. Only a few general suggestions seem to be called for. *All tackle should be subjected to a moderate test before it is used.* This rule applies to all fishing. The angler will find it more satisfactory to provide himself with the necessary tackle before he starts on the trip.

Rods—The rules of the Tuna Club will be found in the appendix to which the reader is referred. It will be observed that three types of rod are there recognized. The following specifications govern the standard rod for heavy tackle. It is the heaviest that may be used to establish a record for the capture of the Tuna:

> "Rod to be of wood consisting of butt and tip, and to be not shorter than six feet nine inches over all. Tip to be not less than five feet in length, and to weigh not more than sixteen ounces. * * * By tip is meant that portion of rod from outer end thereof to point where same is assembled at butt with tip fully seated."

It is permissible to use any size line up to 24 thread with such a rod. This tackle is amply heavy to capture any tarpon that swims and is recommended for

beginners. The rod should be built preferably of bamboo, although bethabara, dagama, hickory, noibwood, greenhart or lancewood are used and are cheaper. No tarpon caught on heavier tackle should be deemed eligible for record. Tarpon rods of the heavier grade usually have double guides placed opposite to each other. The heavy sinker and the resistance of the fish at the end of a long line will surely give any rod a pronounced "set" and the double guides enable the angler to turn the tip over and thereby to straighten it during the fishing. But the line is apt to be caught in the empty guides of a rod so constructed and many anglers prefer a single line of guides. A rod can be easily straightened by suspending it with a weight attached to the lower end. The reel should be lashed to the rod notwihstanding any patent attachment device the rod may have. Adhesive tape or fish line is easily applied as a lashing. This applies to a rod of any weight.

In the *light tackle class* of the Tuna Club the rod specifications are as follows:

> "Rod to be of wood consisting of butt and tip and to be not shorter than six feet over all. Butt not to exceed 14 inches in length. Tip to be not less than five feet in length, and to weigh not more than six ounces."

The line used with this rod is standard nine thread. At the Aransas Pass Tarpon Club it is permissible to use a butt eighteen inches in length.

Mr. L. P. Streeter of the Tuna Club first caught a tarpon (5 feet 9 inches in length) on this tackle at

Aransas Pass on June 25, 1907, and on that evening he organized the Aransas Pass Tarpon Club, which adopted the rule that to qualify members must catch a tarpon not less than 4 feet 6 inches in length on a rod of this character and on a nine thread line. Since that time thousands of fish have been so caught and this tackle is sufficient to capture any tarpon in the hands of a cool and experienced angler if luck favors him.

There is another and lighter rod recognized by the Tuna Club, which is the one used in the *Three-Six Class,* viz:

> "Rod to be of wood consisting of a butt and tip and to be not shorter than six feet over all. Weight of entire rod not to exceed six ounces.

The line used with this rod is standard six thread. The six ounce six foot rod, and the six thread line gives this class the name Three-Six. The rod for this class should be constructed of bamboo—usually of six strips. The tip is about 61½ inches over all and the butt 12 inches over all, making the rod when the tip is seated exactly six feet in length. It should have five or six guides and an agate tip and be wrapped with silk at close intervals. As has been stated, any one of a dozen different manufacturers put up rods of all sizes and kinds which answer every purpose. The beginner should use the larger size and the 24 thread line at the outset until he has confidence in himself and becomes accustomed to the maneuvers of the fish. Many anglers desire to repair or construct their own rods. The reader is referred to Frazer's "The Anglers

Workshop'' (*Forest and Stream* Pub. Co. N. Y.) for an interesting and practical text book. The author there gives specifications for a home made tarpon rod and describes clearly how to varnish and wind them.

The angler should carry two rods for accidents frequently happen, usually to the tips, and rods may fail under the best of care. It is well to purchase extra tips (shaped in the rough) fitting the butt joint and to finish mount, wrap and varnish them during the winter. The invisible knot is easily learned and Frazer clearly describes precisely how to perform every stage of the process. The so-called Sarasota bamboo rods are serviceable and cheap. They are made out of one piece of raw bamboo, carefully wound, shellaced and varnished. They are light, resilient and durable.

Reels—This part of the angler's equipment plays the most important part in the capture of the fish. The reel made by Edward Vom Hofe and catalogued as the ''Universal Star'' is the one most generally used by tarpon anglers. The one used with 24 thread line should hold comfortably 600 feet of line when *wet,* bearing in mind that laid lines swell in the wetting. It is built like a watch and costs nearly as much as the remainder of the tackle, or about $70.00 at the present time (1921). It has a light drag upon the left side, and an adjustable drag upon the other. It is so constructed that the handle does not revolve backward when line is being taken by the fish, thus avoiding injury to the hand from the action of the handle. Its use enables almost anyone to capture a large fish if its mechanism is un-

derstood and it is manipulated skillfully. The Pflueger Avalon reel is an excellent one and there are several others well adapted to this fishing. Lighter reels are used with smaller lines. Any large well-made salt water or fresh water reel may be converted into a fairly suitable one for this fishing by the application of one of the patent drag handles now on the market like the Williams or the Rabbeth. All reels should be fitted with a thumb pad, which in the hands of a skillful angler, answers the purpose of a drag, if the angler has a muscular thumb. A reel should be sent to its maker and overhauled every year. It must be well oiled during the fishing so it will not "freeze."

Butt Rests—Heavy fish are usually played with the butt of the rod inserted in a leather butt rest secured to the upper side of the angler's pivoting chair seat. With light tackle the angler may find it convenient to wear a leather butt rest strapped around the waist. This is carried by all the outfitters. It is also well to equip the butt of the rod with a rubber pad having a flat rim. This acts as a fulcrum when the rod is pressed against the body.

Lines—Linen lines are either laid (twisted) or braided. The former is the stronger, but it kinks easier than the braided line. A silk line does not stand salt water well, as it rots; but it is stronger than the linen line. The first-class linen tarpon line is guaranteed by dealers to be twisted out of from six to thirty-six threads or strands of yarn having a tensile strength of two pounds per strand. It should be made from the

grade of linen yarn known amongst the trade as No. 50. (See Tuna Club Rules.))

Under the Tackle Specifications of the Tuna Club the 24 thread line shall have a maximum breaking strain of not to exceed 65 pounds; the 9 thread line a breaking strain of not to exceed 25 pounds; and the 6 thread line to have a like strain of not to exceed 16 pounds; and lines must be tested either before using or after the fish is weighed in.

The laid line referred to gets its number from the number of threads or strands it contains.

The following schedule explains itself:

No.	Adapted For	Length Recommended
6	Regulation 3–6 tackle.....	900 feet
9	Regulation light tackle.....	900 feet
18–24	General fishing for tarpon...	600 feet
27–30	Tarpon trolling and fishing in cramped quarters; or where sharks are very bothersome and the fish must be captured as soon as possible. Their use is not recommended. Four hundred feet is amply long.	

Before use, a new line should be thoroughly wetted in fresh water, stretched and dried in the shade. This sets the lay of the line, prevents kinking and evens its strength. Holder says that no one was able to capture a tuna till both the reel pad and the line were wetted just before beginning fishing, which prevents the burning of the line, on long runs of the fish, through the friction of the pad on the line. A wet is stronger than a dry line, so soak the line before fishing is started. Anglers should buy the best lines the dealers carry.

The best is none too good. In steady fishing it should be reversed on the reel and examined carefully for flaws. The line is the most vulnerable part of the tackle.

I wrote to several manufacturers of linen lines to ascertain how to care for a line after its use in salt water. In the opinion of one the line should be rinsed in fresh water each day after use and then dried in a large coil around some article where metal will not come in contact with it. Another suggested a more elaborate plan. He advised that the line be taken off the reel and rinsed in fresh water. An extra twist should then be put into it by rolling it between the hands whilst the line is wet. It should then be dried out and stretched. The line should not be kept in too dry a place and before it is again used it should be wetted. He concludes by saying:

> "The idea of putting an extra twist into the line while it is wet is to get kink into the fiber, for then if it is kept from drying out too much before using it will stay in fairly good condition. Care must be taken not to leave any moisture in the line as it mildews and this rots the line very fast."

The third manufacturer made no suggestion worth quoting, except to urge the use of a swivel so as to preserve the normal twist in the line.

Mr. F. Gray Griswold is an angler of great experience and ripe judgment. He writes me that a line should never be dried in sun or wind for this induces rot. He never dries his salt water lines during a trip, but simply runs them off the reel after the day's fish-

ing and reels them back again. He waits till he has finished fishing before rinsing and drying his lines, and he says they never break. At the Tuna Club the wet line is reeled off upon a wooden spool after the day's fishing and re-reeled the next day.

The "Swastika" brand natural color line, made by the Ashaway Line and Twine Co. of Ashaway, R. I., apparently is the line most favored by Tuna Club members. I have found it an excellent line for tarpon.

I wish to add one suggestion. The line must be kept away from all rusted metal. It is the habit of some anglers to secure the hook in the reel in such a way that the hook or the rusty leader can come in contact with the line when the rod is laid aside. This should never be done, for if the rusty hook or leader is allowed to touch the line the rust will corrode and destroy it. Many good lines unexpectedly fail for this reason.

From careful tests which I have made it is evident that an ordinary overhand knot tied in a line will weaken it to the extent of from 20 to 40%. So beware of knots!

A good plan to follow in all sea fishing is to rig the line on the rod to be used and experiment on lifting a dead weight from the floor. It will interest one to perceive how little can be lifted within the capacity of the rod. The rod will bend to a dangerous degree in lifting fifteen pounds although the 24-thread line used with it will have a tensile strength of forty-eight pounds or more. The line may be doubled back from the leader for a distance equal to the length of the leader. It is good practice to take from home at least

two new lines for accident may befall one at any time.

Nine and six thread lines should be purchased at home for the local dealers may not carry them. Indeed, it is wise to procure all tackle from reliable dealers prior to the trip.

Leaders—In still fishing many anglers employ a rawhide or moosehide snood or a heavy braided line, or a cod line as a leader. Sharks are usually abundant in this mode of fishing and as they can bite through such a leader, neither time nor line are lost before they regain their freedom. Then, too, most guides believe that a tarpon will reject the bait, on attempting to gorge it, when it feels the metallic leader. The piano wire leader is generally used in other methods of fishing. It consists of a single strand of piano string wire straightened and tinned. The rules of the Tuna Club provide:

> "Leaders must not be longer than six feet except for Tuna, Swordfish or Marlin Swordfish, in which case leaders must not exceed 15 feet in length and may be of such material as the angler may desire."

Six or eight feet of single piano string wire made up in two equal sections connected by a swivel with a swivel at the line end would seem to be appropriate for tarpon fishing. The swivels serve to prevent the leader from kinking. The tackle makers claim to treat the wire with a rust proof process which lengthens its life, but one generally loses leaders long before rust can affect their strength.

As it is impossible to lift twenty pounds with any rod likely to be employed it will be found if one cares to make a test, that such a leader will sustain many times the maximum weight it will ever be subjected to. A cod line will serve as a leader.

Sinkers—The weight and style of the sinker depend upon the waters where the fishing is done. They are usually of the "bank" type weighing from four to eight ounces. One may safely rely upon the guide for instructions on this point and upon the local market to produce the kind to be used. In using light tackle, light sinkers should be tied on with very easily broken twine so that they will be snapped off when the fish is struck or when it first jumps.

Hooks—We now approach the controversial subject of hooks. The hooks of reputable dealers are strong enough to withstand far more severe strains than the tackle to which they are attached. It is the style and size which occasion the controversies. Most anglers prefer Nos. 8 or 10 hooks for general fishing and the Van Vleck, Vom Hofe, Mills, Pflueger, Abbey and Imbrie, and many other tarpon hooks all have their adherents. The O'Shaugnessy type hooks from Nos. 6 to 10 are favorites. Usually tarpon hooks are mounted on a link chain about four or five inches long so as to give the hook free play on the leader. The point should be kept very sharp by filing, for the mouth of the fish is hard and difficult to penetrate. The same hooks should be used on light as on standard tackle.

Swivels—Common barrel swivels are usually employed on heavy tackle and the eyes should be well

made so they revolve freely and function properly. For use with nine and six-thread line Catalina swivels may be used for a knot seriously weakens a line.

Your guide will make a leather "swivel" so as to attach the reel line by a hitch and there are other expedients to avoid the fatal knot.

Gaff—There is no restriction on the size of this essential part of the equipment and the guide will furnish it. It should be heavy and mounted on a long handle so as to make its use effective. The guide will provide himself with a landing gaff, which is a barbless hook on a stout line, which he attaches to his wrist. This gaff or hook is inserted in the mouth of the tarpon and the line hook is released. He then withdraws the barbless gaff and the fish swims away unhurt, to be caught again some other day. Never gaff a tarpon which you do not intend to mount as a specimen unless it is likely a record fish.

Miscellaneous Tackle—Metallic articles should be rolled up in a piece of cloth to prevent rust. A cheap fiber suitcase or a bag of canvas, such as plumbers and plasterers carry their tools in, answers the same purpose as the expensive pig skin tackle box, and may contain the following articles:

> Extra lines, leaders, hooks, sinkers, swivels spoons (Wilson), flat and cutting pliers, emery paper, bottle vaseline for rods, screw driver, knife (Boy Scout), oiler, flat file, extra guides, spool of silk, tapes (adhesive and measuring), drinking cup, corkscrew, can opener, mosquito dope; stout cotton gloves, field glasses, sun goggles, wind

matches, compass, camera and films or plates, local almanac, pipe, cigars, tobacco, note book and pencil, revolver, electric flashlight, two thermos bottles (pint), harpoon head, book, Government map of vicinity, thong of leather, First Aid kit, spool of copper wire, carborundum stone, ball of wax, roll of mosquito netting.

Clothing—It is not necessary for the angler to provide himself with any special outfit in the way of wearing apparel. A year spent in the open has convinced me that it is well not to be dogmatic on the question of what clothing some one else should wear. But a pair of canvas shoes are essential from the view point of both safety and comfort. It is well to wear an old suit for you are sure to get wet. A coat is a great convenience on account of the pockets. Medical men are unanimously of the opinion that tropic and semi-tropic conditions made it essential that a hat should be worn to protect the head from the fierce rays of the sun.

If one is subject to sunburn the hot sun reflected by the water will work havoc with the face and hands. Be careful to avoid the burn at the first exposure by wearing gloves and covering your face and neck with some emollient, like mentholatum, and then applying talcum powder very plentifully. A few precautions at the outset will render your trip comfortable, but if you get well burned on the first day on the water you may suffer for a week.

Mosquitoes—In Florida fishing, especially during the late Spring and Summer, there is need for an efficient

safe-guard against mosquitoes both in quarters and in the open. Mosquitoes rarely bother one on the fishing grounds after sunrise. On a still evening protection is needed on the water as well as ashore. There is an insect powder known as the "Bee Brand" manufactured by McCormick & Co., Baltimore, Maryland. It is used as follows: First agitate the curtains and close the door and windows of the sleeping room. A spoonful of the powder is placed upon some metallic substance (the top of a tin can, for instance) and lighted. It gives off a thin smoke in burning which is efficient against flies and mosquitoes. If the windows and door are properly screened one is assured of a good night's rest after burning this powder for but a few minutes. It is not objectionable. It is convenient to have a small roll of mosquito net in your kit for use in the event your room has not been properly screened.

With some diffidence I submit the following mosquito remedy:

HAYES FLY DOPE.

Olive oil,	8 oz.
Carbolic acid,	½ oz.
Pennyroyal,	1 oz.
Sp. Camphor,	½ oz.
Acetic acid,	½ oz.
Oil of Cedar,	1 oz.

This is excellent as a repellant against all insect pests and it is soothing for sunburn and insect bites.

For daily consumption, have your druggist fit you out with a small rubber phial with a screw top, which

can be carried easily in the pocket. This dope has been used with complete success for nearly half a century, both in Canada and in this country, by Mr. George B. Hayes, the veteran angler of Buffalo. If the mosquitoes are very bad one will also need a pair of light leggins and gloves.

You will probably wish to fish the tides at night, for tarpon, like their cousins the herring, frequently bite the best at this time. It is then the mosquitoes are most active. An ordinary close fitting cloth helmet long enough to flow over the shoulders and be tucked under the outer garment is a convenience for the portion of your face exposed can be liberally covered with the remedy and immunity gained. With proper precautions and a little forethought the mosquitoes will not trouble you.

CHAPTER IV.

HINTS ON FISHING METHODS AND EXPEDIENTS

While certain general principles underlie the art of capturing a tarpon which are applicable everywhere, methods vary according to local conditions, the kind of bait used and the nature of the water fished. The following suggestions are made for the benefit of the novice or the angler who has taken but few fish. They are based, in part, upon considerable personal experience, but in setting them forth I have relied chiefly upon observation of the methods employed by fishermen of large and varied experience with whom I have fished for many years. Many anglers of experience never develop any particular aptitude for the sport precisely as a man may never become a good shot or billiard player, or a good horseman, no matter how much time he may devote to these sports. But tarpon fishing is a sociable sport and the boats are usually close together. It is easy to note the methods employed by anglers and the success which attends upon their practice. The guides with whom I have made it a practice to talk have given me much sound instruction and many hints which I am sure can be followed with success.

When the angler begins to fish the chances are that he has not had a rod in his hands for a year or more. He is unaccustomed to the boat, and being unused to the seaway, he is clumsy in all his movements. The rod feels heavy and strange to the hand. One cannot

get attuned to the surroundings and be able to do his best until several days of fishing have elapsed.

Viscount Grey in his book on "Fly Fishing" describes the qualities which a man must possess to become a good angler:

> "He must in the first place, have enough strength and aptitude of body to enable him to do a fairly hard day's work and manage both a rod and a fish cleverly, though he will not require the same exceeding quickness of limb, accuracy of eye and strength, which are necessary to the greatest success in the finest games. Quickness and delicacy of touch, and a certain power of managing a rod and line, akin to that individual cleverness or genius which men show in the use of tools or instruments with which they are experts, are necessary to success in angling."

Every word of this is true and applicable to tarpon fishing. One needs delicacy of touch to fish deep and yet keep off the bottom and to respond instantly to a strike. One should be in fair physical condition to withstand the severe exertions which a good day's fishing entails.

After these very general observations I should say a few words about the guide. He should be carefully selected and his instructions implicitly followed, for, in all probability, he is well versed in the best methods of fishing in local waters. His judgment has been educated by much personal experience and observation. So heed what he says and do not mistrust his ability because other boats may happen to capture the most

fish. If good judgment has been displayed in his selection he will be an experienced waterman and will own a good safe boat, capacious and roomy, with a seat in the stern mounted on a pivot, so one can face the fish during the battle. This is well nigh essential, at least for the novice.

Let us assume you have used care in the selection of your tackle and that it is in first class condition. Your line (you should have two) should first be wetted in sweet water, stretched and dried in the shade before use for this evens its strength by setting the lay of it and thereby prevents kinking. This should be done at home. Do not rely upon patent reel fastening devices but securely lash your reel to the rod, so that by no possibility it can come off in the heat of the battle. In my opinion more fish are lost by the breaking of the leader than by failure of any other part of the tackle. It is well to break the continuity of your six-foot wire leader by a swivel fastened midway its length. The leader is apt to kink and snap off, and while many anglers are sceptical over such use of a swivel I am inclined to believe it is useful to prevent this dire misfortune.

It is permissible to double the line back for a distance equal to the length of the leader. Before beginning to fish wet the reel pad and the line for a good distance. This prevents the line from burning under pressure and increases its strength. The line should be wound back evenly and smoothly, so it will render easily and it should be staggered slightly on the reel which facilitates its prompt flow under severe strain. The

careful and even winding of the line upon the reel is indispensable to success for if the line fails to render the fish usually breaks off. So watch your reel carefully. I cannot over-estimate the importance of this suggestion.

If it is necessary to wear gloves to protect the hands from blistering or sunburn, select the lightest pair possible for delicacy of touch is essential. Usually the bottom is fished, that is to say, the sinker is let down till it reaches the bottom and then the line is reeled up four or five feet. As the depth of water changes the line is given out or taken in accordingly. This requires promptness and alertness on the part of the angler. When the hook catches on the bottom as the boat drifts along three or four *instant* short sharp jerks will usually disengage it and save not only the time and patience of the angler and his guide but also the possible loss of the tackle. It is difficult to act with the desired promptness when thus entangled, or when the hook is struck by a fish unless the hands instantly telegraph the tidings to the brain and the muscular reaction is prompt. Heavy gloves are, therefore, a serious handicap.

It is a great convenience to have a mark placed upon the line to indicate roughly the amount which should be paid out. The guide will know the depth of the water to be fished and he will tie a piece of yarn or string onto the line to indicate approximately how much should be paid out. This is well-nigh essential for the beginner, especially in night fishing. It is a great convenience at all times both to the angler and

his guide. Unless great care is exercised in putting the line overboard the leader will become entangled in the sinker or in the line. When the line is put down while the boat is at rest use care to avoid the entangling of the leader by paying out the line slowly, bearing in mind that one might as well be on shore gathering shells as fishing with the tackle in a snarled condition. Therefore, before the boat is stopped and permitted to drift in the tideway the hook should be baited and the line slowly paid out so as to straighten out the leader.

You will probably be fishing in close proximity to several other boats. Watch the methods they employ and try to ascertain how deep they are fishing in the event they strike a fish as well as the bait used and the precise location of the fish when it took the bait. Your guide will be quick to adopt your methods to those employed by successful anglers near by.

The drag on the reel should be set at a moderate tension and you must understand how to adjust it to meet the attack of the fish while the fight is on. The guide will adjust the drag until you have gained sufficient experience to do it yourself. I usually keep it regulated for a moderate strain and apply the desired greater resistance by the use of the thumb pad, although some fish are found to be so powerful that the drag needs to be readjusted during the struggle. The application of the thumb pad when the drag is set is attended with danger for one is apt in times of excitement to press too strongly upon the pad, forgetting that the drag is functioning. The beginner should at first rely upon the drag.

We will now assume that the boat is drifting with the tide at the fishing grounds. The left hand lightly grasps the rod above the reel and the right hand holds the grip below it with the thumb gently pressing the pad which engages the line on the reel. It is advisable to keep the point of the rod *low* and at an angle to the rail of the boat. The rod, however, must be so held that a sharp strike will not break it over the rail of the boat or release it from the grasp. A little practice is essential before proper form in this respect is attained. While it is not necessary to hold the rod stiffly, alertness must be maintained, for when the strike does come the angler should be in position to make an immediate and adequate response. The tarpon is not bound by any fixed habit in taking the bait. It may strike gently, or it may take the bait with a rush which nearly unseats the angler. What response should the angler make? There is a wide divergence of opinion among anglers of great experience and observation as to whether or not the fish should be struck at the outset. Some favor striking back hard and often; others equally skilled argue that the fish by striking at the bait has hooked itself if it is to be hooked at all and that no amount of exertion on the angler's part will affect the desired result.

Mr. B. Kemp Littlepage, in a very interesting article in *Field and Stream* for March, 1920, makes a strong argument in support of the theory that a tarpon hooks itself when it seizes the crab. I submitted the question to Mr. B. W. Crowninshield for his opinion. Mr. Crowninshield has had great experience in sea-fishing

and his opinion on any question relating to the tarpon is well nigh final. He thinks that many tarpon do hook themselves, especially when the crab is used for bait; but that when cut bait is used the fish usually take it easily and are liable to let go if not struck very quickly. I have tried to drive a hook into the jaw of a freshly caught tarpon by striking the fish with standard tackle, but I have never succeeded in doing so. After experimenting, I think the angler will conclude that the fish usually forces the hook into its jaw by the snap it makes when the bait is taken.

In any event it cannot do harm to strike several times by pressing the thumb firmly upon the reel pad and swaying the rod backward with energy *and without giving line.* If the fish has hooked itself this method cannot injure the chances of capture; on the other hand, if the fish should be struck this has been done. The next act will depend upon circumstances and the tarpon can be depended upon to waste no time in making the next move. It lays out a plan of attack at once and the next few moments are ones of great anxiety. Usually, the fish will come directly to the surface to leap and to endeavor to shake out the hook. Sometimes this jump is at the conclusion of a short run. More rarely the tarpon seems to scorn to practice such a trick upon the angler and he may never jump. It is fairly safe to act upon the assumption that the fish will jump, and that at once, so every attempt should be made to reel in any slack which can be gained. The tarpon will usually, but not always, run up tide and the angler should therefore fish with his rod pointing into the tide—

upstream, so to speak. When the tide is slack it is good practice to fish over the stern. The tarpon may jump close to the boat on either side, or it may make a short run toward either side and then jump, or it may not do either of these things but may make a long run in any direction, but usually up-tide. It is extremely difficult to give any categorical advice to cover one's action at this uncertain stage of the contest. The tarpon will make the next move without any delay and one can only meet the attack by trying to keep a reasonably taut line, so that when the first jump does come the fish will be held on a moderate strain. If the fish makes a run for some distance from the boat, the task is easier for the slanting line coming to the surface will indicate when the fish is coming up to leap. It is essential to get in all the slack line possible and to hold the fish on a fairly tight line whilst it is in the air. Many times it will be out of the question to do this. The operation is helped by reeling in any slack line which can be gained and lowering the point of the rod so that it may be lifted when the fish appears. The fish may disappear and the line may feel dead and lifeless. Don't despair but reel hard for the fish may still be there. The angler will utilize the first opportunity that presents itself to insert the butt of the rod into the socket which will be found on the upper side of his seat. The use of this device helps enormously in the capture of the fish. In tarpon fishing line cannot usually be gained by the mere reeling in of the fish but this must be done by the operation known as "pumping." The angler lifts the line till the rod is at an angle

of say 70° or 80° and then lowers the tip toward the water, quickly reeling in meanwhile. Several feet of line is gained by each operation. This is repeated whenever opportunity offers for it is an axiom among anglers that the fish should be fought without respite till the issue of the battle. But the fish should not be hurried by too heavy pumping. There is no occasion to be alarmed over the temporary loss of a bit of line for the tarpon will not run far under a moderate strain. But be prompt to gain line when opportunity offers, bearing in mind that one should keep a constant but moderate strain on the fish till the end. *Always try to face the fish.* If the presence of a shark is perceived give your fish all the line it needs and you may save it. The fish is usually lost by hurrying its capture. There is almost an irresistible impulse to reduce any fish to possession and in obeying it the angler pumps and pulls till something gives way or the hook pulls out. Many women are successful tarpon-anglers because they handle the fish gently and have quick wit to foresee its actions. I have referred to the record of Mrs. Ashby Jones. Mrs. Keith Spalding, who caught the 1920 record Tuna, on October 13, 1921, at Catalina, Calif., caught the second largest broadbill swordfish ever captured. It weighed 426 pounds. Many fish, when skillfully captured, are found to have the hook insecurely imbedded and clumsiness or haste would surely have lost them. Too heavy pulling tends to make the hook work a large hole where it pierces the fish's jaw and to render it apt to drop out when the fish gets a little slack line. A tarpon rarely temporizes. It is direct and forceful in

all its actions, and like a prudent general, frequently changes its plan of attack. It fights every battle out to a finish and when you feel like resting, it, too, is snatching a few moments needed rest. So keep at it. When a strain is put on the line the fish is apt to jump and every jump draws heavily on its strength. But be careful to gain a moderate strain on the line when you see it coming to the surface; for that betokens a jump and every jump is a crisis in the struggle, for when the tarpon is in the air it shakes itself convulsively and it is then that it most frequently breaks loose. It will sometimes jump ten or twelve times; but, on the other hand, it may not leave the water at all. If you can hold fast for three or four jumps very likely the fish is yours. If the fish draws too liberally upon your line the boat should follow and the line should be retrieved by pumping or reeling as soon as that is possible. An attempt should be made to keep the fish reasonably near but not too close to the boat and it should not be worked up on a short line until it is weak and about ready to give up the fight. It is awkward to have the fish run under the boat, especially when it is fresh and full of fight. When this occurs be quick to insert the point of the rod in the water aft the stern so that the line will not get entangled in the wheel.

When a tarpon is hooked in shallow water it leaps more frequently and is altogether livelier on the hook than when the water is deep. The males, while shorter as a rule, are more active. A female heavy with roe or a very large fish is more apt to sulk and make fewer jumps. The upper jaw is mobile and when the fish is

hooked through it the mouth is held open and this weakens the fish. A fish hooked through the lower jaw puts up a stout resistance for it then can keep its jaws in their normal position. All of these things have a bearing on the apparent gameness of the fish.

There is no necessity to gaff the fish unless it is exceptionally large or conditions are abnormal. Your guide will be provided with a release hook, which is a large barbless hook mounted on a line which he usually wraps around his left wrist. When the fish is led up to the side of the boat and the fight is out of him the guide will grasp your leader with his right hand, lift the fish up and insert the release hook in the fish's jaw by a strong, quick motion. Prior to this being done your drag should be on and the thumb should press strongly upon the reel pad so that you may assist the guide by elevating the rod and thus partially lifting the fish into position where he may insert the release hook. The fish should be held on a very short line—in fact, on the leader only. When the release hook is inserted the head of the fish will be pulled onto the rail of the boat by the guide, so that he may disengage your hook with his right hand. As soon as the release hook is secure release the drag and the pressure of your thumb upon the pad so that the guide may be unhampered in the strenuous and somewhat dangerous business of releasing the hooks from the struggling fish. This operation leaves the fish uninjured. It should be performed with coolness and deliberation on the part of both the guide and the angler. The angler should assist the guide and the guide should be careful to keep clear of

the rod, for otherwise, it may whip over his body and snap off as the fish struggles. Conditions may be such that it is advisable to tow the fish to the beach and to release the hook after the fish is slid up onto the shore. When a fish is struck the guide usually starts his engine at once and moves clear of the fish or other boats near by. It is a good plan to apprise the guide that such action may be necessary by saying "strike" when the fish is felt.

When two anglers are fishing from the same boat and one of them gets a strike the other immediately reels in, and, if in the stern seat vacates it at once for the occupation of the man with the fish. When a boat nearby has a fish it is the custom to move away as soon as possible unless it is clear there is no interference. Above all things, be cool and refrain from hurrying; be sportsmanlike and courteous to other anglers and insist that your guide be equally so; release the fish unharmed after the battle is over, save in exceptional cases. The tarpon, fortunately, has no commercial value and no amount of rod fishing can have any effect upon its numbers. If the fish is evidently a very heavy one or is desired for mounting or it is one's first fish, there is no reason why it should not be killed.

Finally, and again, engage a good guide and follow his advice, remembering that he will be an expert and has doubtless captured hundreds of fish to your one.

The favorite bait on the west coast of Florida in late May and June is the blue crab. The crab does not live long if exposed to the direct rays of the sun. There-

fore, when the boat is changing position it is well to have a bucket of water near the angler in which the crab may be placed while upon the hook. This will keep it in good condition for an indefinite period.

In this fishing one is apt to hook many other species of fish and sea bass, groupers, sharks, rays and other kinds take the same bait the tarpon uses. Sometimes one strikes a turtle. The only safe rule to follow is to strike at anything on the theory that it is a tarpon and to assume you are fast to that fish until this is clearly disproved.

The late Dr. Charles F. Holder was the dean of American Anglers and he spent his life in the study and pursuit of fish of all description. I refer the reader to the chapter from his book "Big Game at Sea," entitled "The taking of big game fishes," which embodies his long experience and which gives many valuable hints.

I have not had sufficient experience in the use of very light tackle to lay down any hard-and-fast rules governing this fishing, but the following hints may be of some value to the novice.

The hook used with both light and 3-6 tackle should be the same size as that used in the heavy tackle fishing. One cannot expect to strike the fish hard enough with a light rod to drive the hook through the heavy jaw of the fish. Mr. B. Kemp Littlepage, in the article I have referred to, has observed that the fish hooks itself in striking the bait, and the observation of many anglers bear him out. Hence, the ordinary sized hook is not too large. The same leader should be used but

the line should be attached to it by a Catalina swivel or by a slender bit of stout leather about two inches long with a hole punched in each end. The leather is passed half way through the swivel ring at the line end of the leader and doubled back. The line is then run through the holes and tied to the leather by half hitches. This avoids the tying of a knot which materially weakens the line. The line (and the reel pad) should be wetted and the line evenly reeled back so it will render freely when the fish runs. An ordinary multiplying reel large enough to hold about 900 feet of six thread or 600 feet of nine thread line will give better service than the heavier and more complicated drag reel used with the heavy tackle. In my opinion it is best not to use any drag whatever save the thumb pad, for the pressure of the thumb upon the line is better than a mechanical drag when fishing with a light line.

Use as light a sinker as possible and tie it on with a piece of rotten or very small twine so it will snap off on the first jump of the fish. The fish must be obliging enough to strike itself, for with light tackle there is little to be done save to accept the fortunes of war. When the fish is on, the strain must be constant and the fish should be fought up to the limit of the strength of the tackle.

The angler should ascertain how much strain he can put upon his tackle by lifting weights with his rod and line, thereby ridding himself of the constant anxiety of breaking the tackle while the fish is being played. The tackle will stand a far heavier strain than one

would think. The rod should be kept nearly at right angles to the line of resistance and when the strain on the rod approaches the danger point the line should be released by lessening the pressure of the thumb upon the reel pad.

A little practice gives confidence and soon one learns to put up a stout resistance to the fish. A rubber butt-pad is very convenient, for the butt should be pressed against the body. A butt rest, either on the upper-side of the angler's chair-seat or strapped around his body, is not essential. Patience and coolness will finally conquer any fish if he can be kept on but numerous accidents befall one and many fish are lost. It is not the kind of tackle to employ when fish are scarce or reluctant to come to hook. The angler will need plenty of sea room for he must follow the fish to keep his line. In crowded waters an angler using very light line is a first-class nuisance to his fellow anglers.

One word more. If the fish can be induced to make the fight over a sandy bottom the chances of its capture are much better, for many are lost by the line being chafed off by rocks when the fish changes direction and pulls the line over the bottom. As a rule, the shorter the line the fish is played on the better the chances of its capture. A quiet sea simplifies the task.

As I write these lines I am reminded of a remark made by that veteran angler, Viscount Gray, in his classic book on Fly-Fishing:

> "There is only one theory about angling in which I have perfect confidence, and that is that the two words, least appropriate to any statement

about it, are the words "Always" and "Never." Theories, rules, creeds and hypotheses are constantly forming in the angler's mind. Trout seem to make it their object to suggest these only to upset and destroy them."

This is equally true of the tarpon.

The same general principles apply in still fishing. The boat is anchored near a likely spot. Twenty or thirty feet of line is unreeled and neatly coiled after the bait, usually a part of a mullet, is cast into the chosen water. If good fortune attends upon you the line will likely run out two or three feet, stop a few seconds and then run out again. It may go with a rush. You take up your rod, being careful not to interfere with the coiled line. When this is all rendered strike several times to set the hook. The guide will up anchor and man the oars or the engine, so as to keep the stern toward the fish or to follow it. When the fish is hooked it is played as has been described. Tarpon are also caught by trolling a Wilson spoon or other lure upon a long line. This fishing requires no particular comment.

In still fishing crabs are very apt to wound the line so it must be frequently examined, and sharks and other vermin give you much trouble.

It is unprofitable to dwell upon the disasters which may befall the angler during the struggle. The rod or reel may fail; the line may get entangled on the reel, or elsewhere, and snap off; the line may part; the leader may fail by breaking off through kinking; the fish may throw out the hook, or the hook may break or

spread so it will not hold; a shark may take your fish away, in whole or in part; and finally, you may lose your fish at the gaff. A bad run of luck may persist till the guide views the angler with profound disgust and disapprobation, a feeling which is warmly reciprocated by the angler. A fish is counted as struck when it jumps, and as hooked when it is fast for two or more jumps. I have known skilled fishermen to lose nine successive fish after striking them. So the novice should not despair over the loss of a few fish. Every precaution should be taken with the tackle and the angler must be alert to foresee what maneuvre the fish is attempting. The tarpon is so rapid in his movements that slack line is unavoidable at times; but the number of such crises should be held to the minimum. You may catch four or five in succession and then lose the next six or eight.

There are numerous other methods of capture. Mr. Fred A. Bishop has taken tarpon on a plug and has written of his methods in the July, 1919, *American Angler*. He states that Mr. T. N. Burket of Lincoln, Nebraska, took a 112-pound tarpon at Chrystal River, Florida, on a light bamboo rod, a 15-thread linen line, and a No. 2 Hedden minnow. Mr. Burket states in a letter there published, dated February 23, 1919, that he now uses a No. 2/0 Vom Hofe reel, 400 feet of Kingfisher No. 33 silk line and a plug known as a white Tango with a red head and extra heavy No. 2/0 Pflueger hooks.

Dimock, in his charming book entitled "The Book of the Tarpon" Outing Publication Co., N. Y., relates

how he has caught many tarpon on a fly rod with flies. They are caught with flies at the Gatun Dam in the Canal.

Mr. Joseph W. Stray of Brooklyn has written recently of his methods of harpooning these fish. He uses the smallest size harpoon, equipped with one fluke, attached to a 3-foot bronze wire leader with a spliced-in eye swivel at the far end. The reel line is attached to this and the rod is placed where it may be readily grasped after the harpoon is fast to the fish. About 25 feet of reel line is coiled in the boat. The harpoon which has a handle 6 feet long and ½-inch in diameter is thrown as a javelin. Every fish so harpooned, is, in fact, foul hooked and fights its best because it is not partially drowned in the struggle and impelled by the strain on the line to swim toward the boat. This method of capture must require great skill and a quick eye.

In the event the angler is fortunate enough to capture a heavy fish and wishes to authenticate the catch he should take the length and greatest girth together with the exact weight. In order to measure the fish it should be laid on a level surface and the mouth firmly closed. The length for record is the distance from the extreme end of the snout to a point midway between the tips of the caudal fin. If one tip of the caudal fin is longer than the other, which sometimes happens, the angler is entitled to record the longer tip in the measurement. A naturalist records the length of the fish by taking the distance from the end of the snout to the last caudal vertebra excluding the caudal fin from the

reckoning; but the sportsman has a different system. It is good practice to mark the extreme points on the board upon which the fish is laid and then measure between them. The girth measurement is taken where it is greatest. The weight should be duly witnessed and, if possible, a photograph should be taken showing the fish on the scales, the angler with his guide and the tackle used. The reader is referred to the form of affidavit in the appendix which sets forth the essential facts necessary to authenticate a catch.

When the fish is normal in form and is not heavy with roe the following formula will give the approximate weight nearly as accurately as the ordinary fish scales:

$$\frac{\text{Girth}^2 \text{ (inches)} \times \text{length (inches)}}{800} = \text{weight.}$$

In June, 1921, I weighed and measured several fish with care.

The following table shows a comparison of the actual weight with that given by the formula:

	Weight by scale.	Weight by formula.
(1)	142 pounds	137 pounds
(2)	120 "	116 "
(3)	92 "	91 "
(4)	76 "	79 "
(5)	72 "	72 "

This table shows the ordinary working of the formula; but I have found cases where there were ten pounds difference in the result, due, no doubt, to the presence of ripe roe in the fish, or abnormal development. The formula, however, does not seem to work

out with even approximate accuracy in the cases of some very heavy fish. There is either something the matter with the scales or the measurements of record fish, or the formula, as the reader will note from the records of such fish set forth elsewhere in this book. When a fish is caught one day and weighed the next, it is a mooted point among anglers and guides as to the loss of weight through evaporation. Sometimes one hears extravagant claims made in this regard. I have conducted a series of tests to ascertain the amount of this loss. The result seems to be that during hot sunshiny weather, common on the West Coast of Florida in June, a fish caught about noon and weighed and then re-weighed the next morning will suffer a shrinkage in weight of approximately 4% to 6%. I am of the opinion that this is the limit of the shrinkage during the first twelve hours after capture.

The average tarpon caught will weigh about eighty pounds. Unless it is the first fish one has caught there is no excuse for gaffing it merely to get its picture. Only those of exceptionable size intended for mounting should be killed; all others should be released after their length has been estimated and their weight thus roughly determined.

When captured upon reasonably light tackle the tarpon is the peer of any fish that swims. It can always be found in its chosen haunts at its proper season and in this respect far excels the tuna as a game fish, for the latter is uncertain in its whereabouts. It is a sturdy fighter and the words of Job find full application:

"When he raiseth himself up the mighty are afraid. He maketh the deep to boil like a pot."

One may go to any good place like Boca Grande in June, July or August and be sure of plenty of fish. The sport has its ever-to-be-remembered incidental enjoyments. The changing colors of the sea and sky and the movement of the water; the presence and actions of myriads of birds; the marine life and the serene aspects of Nature—all these gladden the heart of the Nature lover and make an impression as deep as the capture of the fish.

As you journey northward your thoughts will revert to the incredulous friends who await your return, and you must consider the form of report you will render when you are asked the question put to Job thousands of years ago:

"Canst thou draw out leviathan with an hook?"

The angler is cautioned that this question will be put by friends whose ideas of a large fish go back to a certain three-pound bass they captured over a decade before. So if they wag their heads sagely when you tell them of your exploits don't be crestfallen. True genius is rarely appreciated in this world. The art of telling a plausible story to your friends at home is sometimes harder than it is to lay its foundation by the capture of the fish. When your simple and truthful tale is derided as a clumsy and ill-constructed story false upon its face, you may find solace in reading these eloquent words of a famous angler and great man—Grover Cleveland:

"It is sometimes said that there is such close relationship between mendacity and fishing that in

matters connected with their craft all fishermen are untruthful. It must, of course, be admitted that large stories of fishing adventure are sometimes told by fishermen—and why should this not be so? Beyond all question, there is no sphere of human activity so full of strange and wonderful incidents as theirs. Fish are constantly doing the most mysterious and startling things; and no one has yet been wise enough to explain their ways or account for their conduct. The best fishermen do not attempt it; they move and strive in an atmosphere of mystery and uncertainty constantly aiming to reach results without a clue and through the cultivation of faculties non-existent or inoperative in the common mind. In these circumstances fishermen necessarily see and do wonderful things. If those not members of the brotherhood are unable to assimilate the recital of these wonders it is because their believing apparatus has not been properly regulated and stimulated. Such disability falls very far short of justifying doubt as to the truth of the narration."

APPENDIX

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NOTE

The student will find scores of articles in the pages of Forest & Stream, Field and Stream, American Angler and other sporting magazines. I have to thank Mr. George Hibbard of the Grosvenor Library of Buffalo for his kind assistance in the preparation of the above bibliography.

SUGGESTED RULES TO GOVERN THE CAPTURE OF TARPON

Most of these rules have been taken bodily from those of the Tuna Club of Avalon, Cal.

Suggested Rules

First—An angler must bring the fish to gaff by use of rod and reel only, unaided. Handlining in any case, or a broken rod disqualifies the catch. The fish may be gaffed or released. It shall be regarded as captured when it is brought by the angler, unaided, into a position where the guide may grasp the leader and release the fish by detaching the hook. If the fish be gaffed the guide must not touch any part of the tackle save the leader.

Second—An angler must fish with but one rod at a time.

Third—All catches for record must be weighed.

Fourth—Tackle must be exhibited with the fish at time of weighing all record fish.

Fifth—Leaders must not be longer than six feet.

Sixth—Double line the length of the leader only will be permitted. No substitute for double line.

Seventh—Handlining the double line or the use of a boatman's handline snapped on, or in any way attached to the leader, will not be permitted.

Eighth—Leaders may be of any material.

Ninth—Notice to the angler: Do not permit your boatman to touch your tackle when you have a fish on, except as above provided.

Tenth—No tarpon shall be eligible for record in any class unless captured on a wood rod not heavier or shorter than those specified below under the respective classes, viz.:

Heavy Tackle.

(a) Consisting of butt and tip and to be not shorter than 6′ 9″ over all. Tip to be not less than 5′ in length and to weigh not more than sixteen ounces; or

Light Tackle.

(b) Consisting of butt and tip and to be not shorter than 6′ over all. Butt not to exceed 14″ in length. Tip to be not less than 5′ in length and to weigh not more than 6 ounces; or

3-6 Tackle.

(c) Consisting of a butt and tip and to be not shorter than six feet over all. Weight of entire rod not to exceed 6 ounces.

NOTE.—By tip is meant that portion of rod from outer end thereof to point where same is assembled at butt with tip fully seated.

Elventh—Lines used in any class to be manufactured from the grade of linen yarn known to the trade as No. 50. To establish a record for the capture of a tarpon in any class the largest size line that can be used is as follows:

For Heavy Tackle—24 thread line having a breaking strain of not to exceed 65 pounds.

For Light Tackle—9 thread line having a breaking strain of not to exceed 25 pounds.

For 3-6 Tackle—6 thread line having a breaking strain of not to exceed 16 pounds.

NOTE.—Lighter lines than those above specified may be used in any class.

FORM OF AFFIDAVIT TO PROVE CAPTURE

STATE OF.....
COUNTY OF.....
ss.

I,.....residing in the.....of.....State of....., being duly sworn, do depose and say:

That on the.....day of....., 192....., at.....in the State of....., I caught a tarpon actually weighing.....pounds, being.....feet.....inches in length and having a girth of.....inches, upon the following described tackle: (a) A wood rod.....feet in length, weighing .....ounces, consisting of a butt.....inches long, and a tip.....feet in length, the latter weighing..... ounces, known as a.....rod; (b) A reel known as a.....; (c) a.....line having.....threads; (d) A leader of..... .....feet in length; and (e).....(Bait or lure).

That said capture was witnessed by the following disinterested persons:

.....of.....
.....of.....

That said fish was weighed upon certain scales situate at.....in the presence of the following named persons:

Name *Address*

.....
.....

I verily believe that said scales were accurate and that said capture was in all respects fair and sportsmanlike.

The name and address of my guide at the time of said capture was as follows:

.....

I do further depose and say that I was unassisted by any person in the capture of said fish save that my said guide without touching any part of the tackle save the leader gaffed the same.

(Sign here)

Sworn to before me this.....
day of.....192.....

.....

Notary Public,
in and for.....

We, the undersigned, do hereby certify that we caused the above described tarpon mentioned in the above affidavit to be duly weighed and measured as therein set forth and certify that the above affidavit is true as to the weight and measurements of said tarpon and the tackle used in the capture thereof.

Dated at.....this.....day of.....
192.....

TUNA CLUB TACKLE SPECIFICATIONS

Angling at the Tuna Club, Catalina Island, California, has been conducted so long and on such a high plane that its rules may be of interest to tarpon-anglers. I, therefore, set them forth.

"TACKLE

Heavy Tackle—Rod to be of wood, consisting of butt and tip and to be not shorter than 6 feet 9 inches over all. Tip to be not less than 5 feet in length and to weigh not more than 16 ounces. Line to be standard 24 thread linen line manufactured from the grade of linen yarn known in the trade as 'No. 50.' Line shall have a maximum breaking strain of not to exceed 65 pounds.

Light Tackle—Rod to be of wood, consisting of butt and tip, and to be not shorter than 6 feet over all. Butt not to exceed 14 inches in length. Tip to be not less than 5 feet in length and to weigh not more than 6 ounces. Line to be standard 9-thread linen line manufactured from the grade of linen yarn known in the trade as 'No. 50.' Line shall have a maximum breaking strain of not to exceed 25 pounds.

Three Six—Rod to be of wood, consisting of a butt and tip and to be not shorter than 6 feet over all. Weight of entire rod not to exceed 6 ounces. Line to be standard 6-thread linen manufactured from the grade of linen yarn known in the trade as 'No. 50.' Line to have a maximum breaking strain of not to exceed 16 pounds.

NOTE.—By tip is meant that portion of rod from outer end thereof to point where same is assembled at butt with tip fully seated.

NOTE.—An angler using Three Six Tackle is given a handicap of 20 per cent in his favor in competing for Light Tackle Club buttons only.

NOTE.—In attaching kite to fish line the Tuna Club recommends the loop method. The Assistant Secretary of the Club will be glad to explain same to anyone unfamiliar therewith.

NOTE.—All lines must be tested either before using or after fish is weighed in, and before period for protest has expired, by a member of the Board of Directors, the Secretary or Assistant Secretary of the Tuna Club if the fish is to be entered for competition for Tuna Club prizes.

Rules

First—The angler must bring the fish to gaff by use of rod and reel only, unaided. A broken rod disqualifies the catch.

Second—An angler must fish with but one rod at a time.

Third—All fish entered for competition for Club prizes must be officially weighed and recorded, also tackle must be exhibited when weighed. Any protest in regard to weight of fish must be made before fish leaves wharf. Any protest in regard to tackle or manner of killing fish must be filed in writing with the Secretary of the Tuna Club within 24 hours after fish has been weighed.

Fourth—Leaders must not be longer than six feet except for Tuna, Swordfish or Marlin Swordfish in which case leaders must not exceed 15 feet in length and may be of such material as the angler may desire.

Fifth—Not more than two hooks may be attached to any leader at the same time. Clusters of hooks fastened together in any way will disqualify the catch.

Sixth—Double line, the length of the leader only will be permitted, except in the case of Tuna, Swordfish and Marlin Swordfish, in which case double line, not to exceed 15 feet in length will be permitted.

Seventh—Handlining the double line or the use of a boatman's handline snapped on or in any way attached to the leader will disqualify the catch. The boatman or any other person, other than the angler touching any part of the tackle, except the leader, while the angler is fighting the fish disqualifies the catch.

Eighth—A fish shall not be gaffed unless leader is within reach of boatman. Throwing gaff, harpoon or lilly iron at fish when leader is not within boatman's reach will disqualify the catch."

MEMORANDA

MEMORANDA

MEMORANDA

MEMORANDA