



# JOURNAL

BONEFISH & TARPON

STEWARDSHIP THROUGH SCIENCE

2010 EDITION



A publication of  
Bonefish &  
Tarpon Trust  
[www.tarbone.org](http://www.tarbone.org)

Lefty's CAN'T MISS  
Salt Flies pg 14

Cracking the  
Tarpon Code pg 26

SCIENCE OF  
ANGLING  
pg 10 & pg 26

3 EPIC FLATS  
GETAWAYS  
pg 24

BTT LAUNCHES  
NEW SERIES pg 6

Tracking the  
Mysterious  
Bonefish pg 30

NEW  
Permit Effort  
pg 32

**ESPN2** 'PIRATES' TV



Tom Brokaw, Thomas McGuane & Michael Keaton,  
between takes in Abaco, get another life lesson from Lefty Kreh



MASTERY COMES FROM EXPERIENCE  

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EXPERIENCE COMES FROM THE MASTERS



*Chico Fernandez*  
Author, Renown Fisherman, Hell's Bay Boat Owner



*Flip Pallot*  
Fisherman, Guide, Hell's Bay Boat Owner



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### BTT's MISSION

To support research to help understand, nurture, and enhance healthy bonefish, tarpon, and permit populations by: supporting research on bonefish, tarpon, and permit biology and fisheries; providing educational material to the public and fishermen, and working with government agencies to ensure healthy fish populations.

Pirates Cover Photo: R. Valentine Atkinson  
 Cover Photo: Yellow Dog Flyfishing Adventures

# BONEFISH & TARPON JOURNAL

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www.tarbone.org

### FEATURES

## page 6



BTT Goes Pirate

## page 10



Science of Fishing

## page 20



Fishing: Then & Now

## page 24



Favorite Fishing Places

## page 30



The Bonefish Journey

## page 34



Who is More Stressed?

### ARTICLES

Membership Sweepstakes	13	Permit Tagging	32
My Favorite Salt Flies	14	Tarpon DNA	37
Everglades Economics Study	18	Currents	38
Artist of the Year	19	Bahamas Initiative	40
Keaton Tapes PSA for BTT	23	BTT Seminar on Abaco	41
Cracking the Tarpon Code	26	Premium Galley	43
BTT Traveling Angler Program	27	Bonefish Research Program	56
Angling and Science Converge	28	Perfecting the Flats Boat	57
Conservation Partner: Abaco Lodge	29	New Membership Categories	58
Art Donation Program	32	Instinctive Conservation	59

BTT is proud to announce the  
 2010 Artist of the Year:

## John Swan

Read more on page 14



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# Setting the Hook

## GIVING COMES IN MANY FORMS

Like many not-for-profit organizations in 2009, Bonefish and Tarpon Trust was challenged in a variety of new ways as nearly everyone is reevaluating their priorities, their discretionary income spending, and their time. It is against this global backdrop of economic uncertainty that Bonefish & Tarpon Trust finds itself uniquely blessed with a board, membership and stakeholders who continue to be deeply committed to the resource. The traditional three legged stool of non-profit giving includes time, talent & treasure. ESPN's stunning new television series *Pirates of the Flats* is a remarkable example of how the generous convergence of these founding charitable attributes can lead to extraordinary results.

*Pirates of the Flats* is a child of the collaborative ingenuity and shared commitment of BTT board members: Chris Dorsey of Orion Multimedia, the show's outstanding production company; Bill Klyn, of Patagonia, Bill is the show's executive producer; Mike Cassidy, of BASS/ESPN the show's network; & Chris Peterson, of Hells Bay Boatworks as its founding sponsor. They joined together to transform a dream into a reality. Their good work was lifted by the efforts of BTT Director of Operations Aaron Adams, news anchor Tom Brokaw, author Tom McGuane, actor Michael Keaton, Patagonia founder Yvon Chounaird, angling legend Lefty Kreh, and outdoor photographer Val Atkinson—all joining Bill Klyn as pirates, anglers, conservationists and comedians! The innovative quality of the show attracted top level sponsors such as Chevy, takemefishing.org, and Costa del Mar in addition to Hells Bay Boatworks, headed by Chris Peterson.



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However, Peterson didn't stop at sponsorship. To capitalize on the marketing opportunity presented by the *Pirates* series, he and Mike Cassidy have crafted a unique fund raising program for BTT through Chris' amazing gift of a cutting edge Hells Bay flats boat and trailer along with some outstanding items from ESPN/Disney. Please monitor [www.tarbone.org](http://www.tarbone.org) closely to learn more about this exciting sweepstakes program.

While these truly epic examples of giving to BTT will further enable us to successfully carry out research, education and conservation advocacy programs, please keep in mind that your individual support through membership contributions and annual donations are critically important to BTT, as they remain the very heart and soul of our conservation initiatives. If you haven't made your membership contribution this year, please do so as soon as you can; and if you have, thank you ever so much!

Companies are stepping up in other ways as well. For membership incentives, Patagonia is generously providing significant discounts on product purchases for a full year for some membership levels. And in addition to providing cash donations, Orvis is including BTT membership materials with all saltwater rods. And Orvis (rods and reels), Temple Fork Outfitters (rods), and Buff (sun protection masks) will be providing new incentives as well for new members.

Please consider making a supplemental donation this year, as it can make a profoundly positive difference for the resource, and we are certain you will be astonished at the generous incentives made possible by our partners this year. It is our hope that you will enjoy and learn from your Bonefish & Tarpon Journal 2010, as it is chock full of interesting articles that provide insight into our excellent strategic investments in research, education and conservation advocacy, as well as your angling success. We are deeply appreciative of your support, whether you choose to give of your wealth, your wisdom or your work—or indeed of all three forms of giving!



# ESPN OUTDOORS Saltwater

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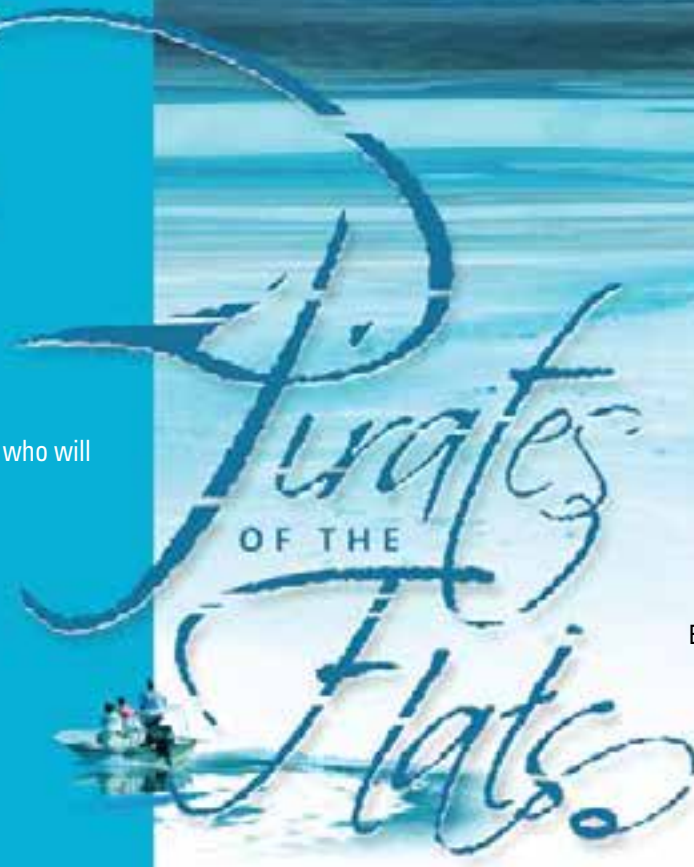
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spectacular.

**ESPN2**



Bill Klyn  
Vice President of Marketing

**W**hat does BTT get when you assemble good friends TV journalist Tom Brokaw, actor Michael

Keaton, Wallace Stegner Award winning writer Tom McGuane, fly fishing legend Lefty Kreh, Patagonia founder Yvon Chouinard, world class photographer Val Atkinson and me in the wondrously colorful, salt and primordial ooze scented flats in the Bahamas? A very innovative, 6 Episode TV Series for ESPN2 called *Pirates of the Flats*. You hear the word innovative quite often, but thanks to Board Member Chris Dorsey, President and brilliant creative director of Orion Multimedia, he gathered the best outdoor videographers, 32 cases of hi-tech HD, Red, pole, underwater, lipstick and hat cameras with the mandate to be as creative as possible in filming 250+ hours and an additional historical footage of the Bahamas incredulous beauty, bonefish in their habitat, flat out (pun intended) fishing action, a few how to's, story telling research in animation, tagging some 32 fish and capturing the unique camaraderie that only fishing elicits.

Adding bonefish research experts and fanatic anglers and authors Dr. Aaron Adams, Director of Operations for BTT and Dr. Andy Danylchuk formerly Research Director of Cape Eleuthera Institute and now Researcher/Professor at University of Massachusetts Amherst, the unique scientific story of bonefish research is explained on water, rather under the water. The true stars are the fish in their underwater environment along with the Bahamas' famous Marls. Closely followed by the daily epic outings of this band of

[www.tarbone.org](http://www.tarbone.org)

BTT GOES  
PIRATE





1. Thomas McGuane,  
2. Lefty Kreh,  
3. Michael Keaton,  
4. R. Valentine Atkinson,  
5. Bill Klyn,  
6. Yvon Chouinard,  
7. Tom Brokaw

Pirates' experiences from the fishing to the story telling. Check out the film trailer on [www.tarbone.org](http://www.tarbone.org) as well as my story.

True commitment to conservation of bonefish and passion for fishing is clearly seen with the talent. Not to mention the clever barbs aimed each other as well as with their flies. Because most of the talent has fished together in locations all over the world, their enjoyment with each other's company and adding a dose of Lefty created an immediate humorous and entertaining dynamic of camaraderie. Plus their vast expertise in what had made them legends actually comes out during the series.

Am I prejudiced about this show? Absolutely! Having had the privilege to experience every aspect of this show from initial creative direction to the end of production, I see how this truly will define fishing shows for the future. Weaving the conservation message that actually helps make you a better angler into an experientially entertaining fishing series sets the bar for a much higher standard. And most important to us all, is Bonefish and Tarpon Trust is the force behind the

show, highlighting our efforts to 20+ million viewers. The Board sees this as an avenue to spread the message of the important work we do. And will increase our membership and revenue streams that will go back into our important research and habitat efforts, helping to assure sustainability of our fish.

I have to admit that spending a few weeks in the Bahamas, participating in research, trying to cast for 3 days in 35+ knot winds during the spawning season where you could not find a fish with a Geiger counter and enjoying friends together on the flats and drinks and dinners at excellent new Abaco Lodge was truly a blast and lifetime memory. An unexpected surprise and great pleasure was meeting and gaining new respect for the behind the scenes efforts by some incredible people. Watching these incredible cameramen ply their Herculean strengths and talent to their craft lugging heavy cameras across uneven and shoe ripping sandy flats, 8 hours of focused daily filming on foot and from skiffs, creative directing us for what they felt was a unique sequence (and they were right) plus the 4 extra hours planning shoots, cleaning gear and watching the daily film and still smiling, loving what

*continued on next page*



Photos from left to right: R. Valentine Atkinson, Chris Peterson, Andy Danylchuk, IStock, R. Valentine Atkinson, R. Valentine Atkinson, R. Valentine Atkinson,

# Pirates OF THE Flats

gear and watching the daily film and still smiling, loving what they were doing, had me awed by their commitment. Even Tom Brokaw and Michael Keaton added high praise when they said we spend a lot of time in front of cameras and these guys were incredible.

And my huge respect also goes to the high-energy focus of Orion's Producer Kevin Fay whose non-stop energy, incredible attention to detail and organization made a hummingbird seem like a sloth.

Please tune in to Pirates of the Flats on ESPN2 during the first three months of 2010. See for yourself the future of fishing TV programming and entertaining results of this effort. And remember that you were a part of making this happen with your support of Bonefish and Tarpon Trust. 🐟



**1** A pirate's treasure—cast and crew aboard Abaco Lodge **2** Roll tide—McGuane and Brokaw play osprey on the flats **3** Salts of the Sea—Chouinard and McGuane prepare for sundowners **4** Capturing the moment—Klyn and Danylchuk audition the bones **5** Lights, camera, action—preparing to record the fish tales **6** Friends of BTT—discussing strategies to save the flats **7** Taking a powder—Klyn readies for his debut **8** Hidden treasures—enroute to a secret flat **9** Breast implants?—a bonefish is enhanced with a transmitter.

All photos: R. Valentine Atkinson

Pirates of the Flats airs December through March 2010 on ESPN2. Check your local listings for airing in your time zone.



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A global leader in customized content, Orion Multimedia partners with leading companies to develop the highest rated branded series on television... but we don't stop there, for we help visionary companies harness the unequalled power of the video medium in all platforms from cable TV and video-on-demand services to WebTV and point-of-purchase promotional films.

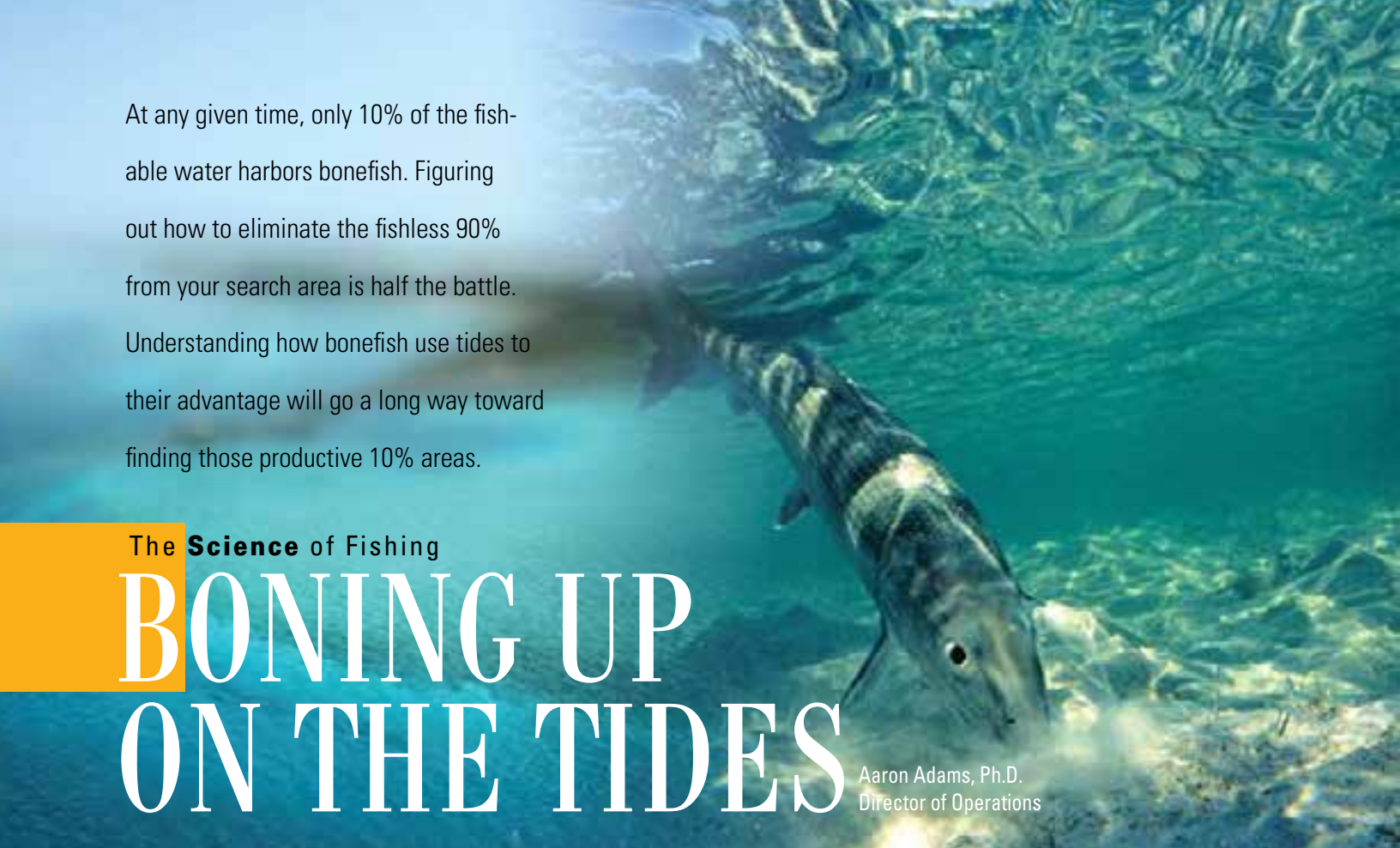
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At any given time, only 10% of the fishable water harbors bonefish. Figuring out how to eliminate the fishless 90% from your search area is half the battle. Understanding how bonefish use tides to their advantage will go a long way toward finding those productive 10% areas.

The **Science** of Fishing

# BONING UP ON THE TIDES

Aaron Adams, Ph.D.  
Director of Operations

Photo: Brian O'Keefe

## Tide Basics

A full description of tides is beyond the scope of this article, but it's important to know a few basics. Tides can be broken into spring and neap: Spring tides—not to be confused with “spring” the season—occur at the highest high and lowest low tides and therefore the difference between high and low tides is the greatest. Spring tides are associated with the full and new moons. In contrast, neap tides occur during quarter moons with the least difference between high and low tides. There tends to be less water moving during neap tides and some areas that are flooded during spring tides stay dry or barely get covered. Within the monthly tidal cycle, every two weeks a flat will experience spring tides and neap tides on the alternating weeks.

Because of interactions between land masses and the angle of the moon and sun, tidal range differs among locations. But even if the tidal range is small, bonefish are strongly keyed in to the tides. Water depth in portions of the Caribbean, for example, may change only a few inches during a neap tide, but bonefish will react to these tides in a similar fashion to bonefish in locations with a two-foot tidal range. In other words, local tides may look drastically different to you, but overall bonefish will react similarly to tidal changes.

Barometric pressure can affect water levels and cause tidal levels to be different than predicted by the tide charts. During periods of low pressure, there's less pressure from the atmosphere pressing down on the water, so overall water levels may be higher. Low barometric pressure is often associated with either a warm or cold front and a region may experience a weather change in association with a rise or fall in barometric pressure. When barometric pressure is high, water levels are suppressed and tides may not be as high as predicted. High pressure is typically associated with fair weather.

Wind can also have a dramatic effect on whether tides match the chart predictions. Strong onshore winds, for example, can make high tides higher than predicted and in extreme conditions can even prevent low tides from occurring—in effect creating a ghost tide. Offshore winds will have the opposite effect—both high and low tides will be lower than predicted. When wind and tide are moving in the same direction, the currents can be especially strong. Often the stronger currents from combined tide and wind attract bonefish to the edges of flats where the current dislodges prey. Strong winds often don't prevent a tide from occurring, but instead delay the onset of the ebb or flood. A strong onshore wind may lengthen the duration of high slack tide, but eventually the force of the

ebbing tide is too much and the water level drops quickly in the short amount of time remaining in the ebb. In these scenarios, it's often the case that the fish are still following the tides, just that everything is a couple hours behind the normal pattern.

If the wind is very strong from one direction for many days or weeks, the average water level may become higher (with an onshore wind) or lower (offshore wind) than normal, with high and low tide fluctuating around this average water level. For this to happen, however, there usually has to be some type of large land mass to allow the water to pile up or drain. This typically happens, for example, along continental shorelines, in large embayments or on larger islands. This effect is less pronounced on small islands because the water washes around the island instead of building up against the small landmass.

So, where do you look for bonefish during strong offshore winds that empty the flats? Think deeper: Focus on the edges of flats, deeper holes and troughs between flats, deeper grass beds and sand basins. Even the deeper water on the back sides of fringing coral reefs may provide good shots at feeding bonefish during these conditions.

In contrast, when a strong onshore wind or approaching strong low pressure creates higher-than-expected tides, bonefish may extend their time feeding on the flats and even venture into flooded mangrove areas that they can only occasionally access. This is because the extra water gives bonefish a wider selection of locations and, potentially, a longer time to forage. In these cases, adjust your search strategy by venturing farther up onto the flat.

## How Bonefish Use Tides

Bonefish are experts at using the tides to their advantage, which allows them to maximize their benefits in the trade-off between feeding and avoiding predators. I guess you'd expect this from bonefish as they've been perfecting their behavior for millions of years. To conserve energy, bonefish try to get away with as little travel as possible in their search for a meal. It makes no sense to swim long distances if there's no feeding need. This is why bonefish don't stray far when retreating from a flat during low tide. This was verified by acoustic tag-

ging research conducted by Robert Humston when he was a graduate student at the University of Miami. Even though their movements are often local, however, a few hundred feet in the wrong direction can make for a long, fishless day.

At low tide or the earliest stages of flood tide, you can often find a bonefish or two feeding slowly along a shallow edge of a flat. But these fish can be tough to catch because they are often skittish in the skinny water. These "early" fish are typically not feeding aggressively because the tide hasn't begun to move. In contrast, after the tide has been flooding you're likely to find more and larger fish on the flat. These fish should be more comfortable in the deeper water and with the tide moving more strongly they'll likely feed more aggressively.

Bonefish will often follow traditional routes onto and off the flats. Many of these access routes are nothing more than small troughs that cross a flat. (These access routes are different than the deeper, more obvious channels adjacent to flats that often hold bonefish at low tide.) Favorite bonefish avenues are the troughs only a few inches deeper than the surrounding flat that lead from deeper edges to the flat's interior. Often these access channels are hard to discern when the flat is covered in water, so visit a flat on a late dropping tide and make a note of where the fingers of water are draining. These troughs are also the first to fill on the rising tide and usually where bonefish make their first appearance. As you gain experience on particular flats you'll figure out which of these troughs are the traditional (most used) access routes. Of course it's not always that simple—the routes might vary depending on the tide height and the strength of the current, such as the differences you might find between spring and neap tides or on windy versus calm days.

## Spring Tides

When spring high tides flood the shallows, bonefish are quick to take advantage of the higher water to forage in areas they normally can't access. Being able to reach very shallow habitats coupled with the limited time they can remain there can result in bonefish grouping along the edges of flats in anticipation of the incoming tide. Early in the rising tide and late in the outgoing tide, find the bonefish travel avenues and you should have brief yet intense periods of casting to cruising

**A**ny good bonefish angler knows that bonefish move onto and off the flats with the tides. But many anglers don't know the subtle ways bonefish movements change with spring and neap tides



Photo: Andy Danylchuk

fish. As the tide rises, move onto the shallow sand and grass flats, shorelines, shallow mangrove flats and the shallow ridges of sand flats only accessible to bonefish during these spring high tides. Such habitats often hold a lot of prey and bonefish know this.

Much of the bonefish feeding during spring tides is concentrated from the mid-rising through early falling tide. Bonefish often feed so actively near high tide that they may actually take a break or leisurely nibble as they move off the flat and wait for another foraging opportunity during the next incoming tide.

During low tide, bonefish often rest in flat-side channels waiting for the next flooding tide. From their perspective, why expend energy unnecessarily? In the hour or so on either side of the low tide, stalk the edges of flats searching for bonefish laid up or cruising slowly in slightly deeper water. I've even landed some bonefish blind casting into these channels that are just a bit too deep to sight fish.

## Neap Tides

During neap tides, the skinny water where you found tailing fish at high tide just the week before might not be deep enough to hold fish. The shallow mangrove flats that attracted so many fish into their shadows may still hold water, but are probably empty of bonefish. Even areas that seem to have enough water may lack bonefish because during neaps tides they're too far to allow travel from deep water. This means you need to change where you search. Bonefish will still move from the edges of flats onto a flat as the tide rises, but won't venture as far onto the flat and there will be fewer large groups of fish along the edges of the flat. Perhaps because bonefish aren't traveling far to get to shallows accessible only during spring tides, they're more likely to feed throughout the tidal cycle during neap tides. Edges of flats are good places to search for cruising bonefish during weak neap tides. Bonefish may be actively feeding in deeper areas such as over grass beds, along channel edges and in depressions and troughs between flats, providing fishing opportunities throughout the tidal cycle.

Since the water level isn't rising as high on the flats and the tidal currents aren't as strong, the travel avenues used by bonefish may be different during neap tides than during spring tides. Shallow troughs that provided access to backwaters during spring tides may not be used during neap tides because those backwaters aren't feeding areas during low water. Instead, feeding may occur on different parts of the flats—adjust your search pattern accordingly.

## Final Thoughts

High tides during full moons can work against an angler due to lessened ability to sight fish. During full moon spring tides, bonefish sometimes venture into the shallows at night to feed. Conventional wisdom is that when bonefish (and other game fish) feed at night they eat less aggressively during the day. One way to combat this potential problem is to fish at dawn and dusk, when night-time bonefish may be ending or beginning their feeding. If bonefish seem to be dining less aggressively than usual, try working the fly more slowly to accommodate slower-moving fish.



The way bonefish adjust to tides is more complex than you think.

During warm times of year when water temperatures in the shallows rise above the bonefish comfort level, tidal currents carry cooler water from adjacent deeper areas onto the flats with the rising tide. As the tide rises, the cooler water

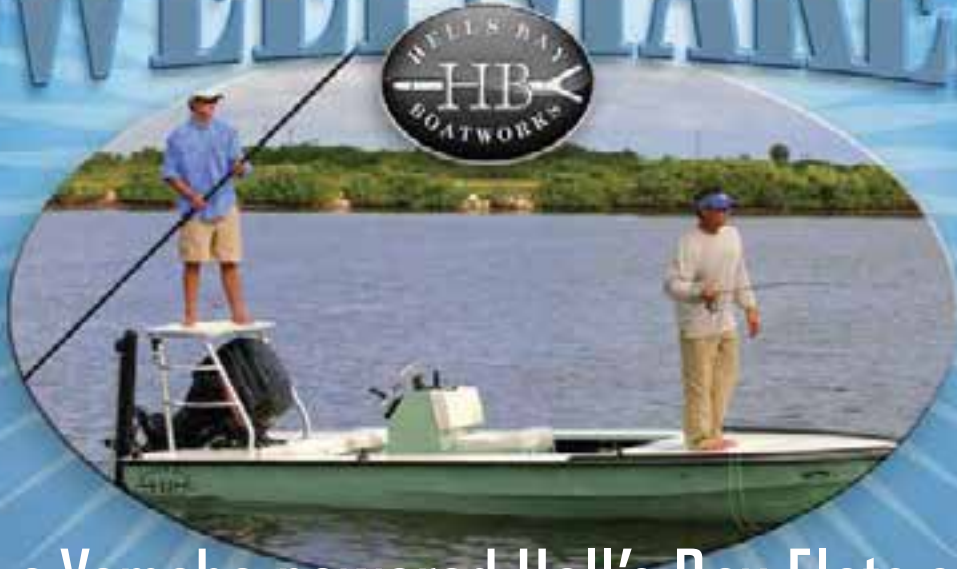
flows first along the edge and if the incoming tide is strong enough, the cooler water will also flood the flat. Under these conditions bonefish will initially remain along the edge of the flat, moving onto the flat only with the cool water of the rising tide. In other words, it may take a little longer for bonefish to move onto the flat during warm weather.

In contrast, during cold seasons the sunny days may warm the water in the shallows or water flooding onto a flat may absorb the warmth of the sun-baked bottom. This brings bonefish into the shallows as the water temperature rises. Although you might think of the temperature changes of the tropics to be minor, to bonefish (and other tropical species) a few degrees can make a big difference. As recent research by BTT-supported scientists has shown, bonefish definitely react to changes in temperature. 🐟

Mark Your Calendars

## 2010 BTT Membership

# SWEEPSTAKES



## WIN a Yamaha-powered Hell's Bay Flats skiff!

A great opportunity has been provided by Yamaha and BTT board member Chris Peterson, owner of Hell's Bay Boatworks. Chris donated the newest edition of the 18-foot Marquesas flats boat, widely praised as the "best of the best" and used by guides and anglers everywhere. It's to be powered with a 60-hp motor thanks to the generosity of Yamaha.

This boat-motor-trailer outfit is the Grand Prize in the 2010 BTT Membership Sweepstakes. The Sweepstakes begins on January 1, 2010 and runs to December 31, 2010. The final Grand Prize drawing will be held in January 2011.

There are also monthly prizes of rods and reels, so enter now. Go to [www.tarbone.org](http://www.tarbone.org) and click on the "Sweepstakes" tab for instructions on how to enter the drawing.

We again thank Chris Peterson of Hell's Bay Boatworks and Yamaha for their generous donations. Most importantly, the fish will thank you for the additional research dollars that go toward their benefit.



Go to  
[www.tarbone.org](http://www.tarbone.org)  
and enter now!



And be sure to watch the groundbreaking new show Pirates of the Flats on ESPN2 running through March 2010, for more chances and information.



poppers



crabs



clouser



bendback

After fishing in the salt over much of the planet since the early 1950s, I think it's possible to trim the list of my favorites to eight patterns. The flies can be altered in hook size, color, length, amount of flash. Flies are presented to saltwater species in many environments such as hook-grabbing mangrove roots, shallow flats filled with vegetation and coral, roiled waters like the tarpon rivers in Costa Rica and calm waters on flats. While varying situations call for different patterns, here's a selection that have served me well for most species in brackish, inshore and offshore waters.

### Poppers

Something struggling on the surface represents to a predatory fish an easy-to-capture meal. Except for fish that feed only on the bottom, most other species at one time or other cannot resist a properly presented popping bug.

The popper should not foul during casting or the retrieve and offer minimal air resistance so it's easy to cast; feathers, rubber bands and circling hackle around the hook increase resistance. On the back cast the fly needs to lift quietly from the water. While many anglers will disagree, I'm convinced that popping bug color is not important-I mke all mine in bright yellow or white merely so I can see them better.

Remember that a popper viewed by fish will be silhouetted against the sky. A cupped face on a bug creates little or no more surface disturbance than a tapered, flat face, but often the cup makes considerable fish-alerting noise when lifted from the water.

At the risk of immodesty, I use Lefty's Bug, a popper that took several decades to develop. If you look at the image, you'll note the bug's design is sleek and all materials

are light. Between the bug body and the material extending from the hook I've used Cactus Chenille to form a continuously tapered body. The bug's face is tapered and most importantly the hook eye is located at the base of the bug. The tapered flat face makes just the right disturbance needed.

Combined with the location of the hook eye the bug lifts silently from the water. The hook extends well behind the bug body and on the water angles downward for improved contact with the fish.

On flat-calm water a noisy popping bug will draw fish in channels and other deep-water environments. It's impossible to retrieve too fast when offering a fly to a barracuda, but a continuously worked popper is still one of the best flies to cast to them.

# Lefty's Favorite Flies

OF THE SALT





whistler

half & half

deceiver

bucktail

Perfect invitations for the next fish in your life.

Breaking fish inshore or offshore will slash a noisy, moving popper. A popper can be used in conjunction with a weighted fly. For spotted seatrout one of the most effective presentations is to attach about 10 inches of mono to the popper hook and then a weighted fly such as a Clouser Minnow. Trout are attracted to the noise made by the popper and see the dangling Clouser below and cannot resist it. This same technique works well when albacore are breaking. Cast in front of the marauding school of albies and allow the popper to sit still. The chop in the water causes the fly below the popper to dance and it's rarely ignored.

## Crabs

If I was limited to one pattern for bonefish, permit and redfish I'd select a crab fly. Crabs can be found in almost any saltwater environment and just about every species eats them. A bonefish we hooked in the Bahamas was fatally attacked by a shark. Examining the stomach contents we found nine crabs and no two were the same color; in most saltwater situations the color of the crab is not important. However, in areas where permit and bonefish are hard pressed such as in the Florida Keys, it's best to present patterns that resemble local crabs—the more realistic, the better the chance of getting a take.

Crab flies are most effective where little or no retrieve is used. For permit, redfish and bonefish, the fly is dropped either in front or well ahead of the cruising fish and allowed to sit. Only enough movement is given so the fish sees it.

In rare situations a floating crab fly works best, but most of the time the crab pattern needs to be at or near bottom. The fly should dive quickly on the presentation. The depth of the water often determines how much weight is used to get the fly deep. When it's deep, patterns with a tapered front portion will get down faster than a round one.

## Clouser Minnow

The Clouser Minnow is one of the most popular flies fished around the world in saltwater for good reason: It casts remarkably well and depending on the weight of the eyes will get down in the water column.

When Bob Clouser first gave me one of his patterns to try it appeared to be so ugly (I thought) that I didn't fish it until late in the day. After using it, I considered it beautiful. Bob and his son Bob Jr. and I worked on developing various patterns of Clouser's. I've never kept fishing records, but Bob asked me to just note how many species I caught on a Clouser. When I stopped counting it was almost a hundred in fresh and saltwater.

Clousers can be tied as small as an inch in length or as long as the available materials. They work well on bonefish flats to offshore. They come in an array of color combinations as well as a wing of natural hair or synthetic. It's quite simply an essential pattern for every fly fisherman.

## Bendback

I'm astonished at how few saltwater fly fishermen use bendback flies. These patterns get the job done even when many others will not. This fly was developed in the 1800s when bass fishermen in the mid-South were plagued with snagged patterns in the lily pads and other vegetation.

Bendback flies swim on the retrieve with the hook point up and the wing partially protecting the point. Properly tied and fished, bendback patterns can be thrown into grassy shoreline, among coral and even far into the mangroves roots and, if slowly retrieved, will almost always come free. When bonefish swim with their backs jutting out of the shallow water on a coral-infested flat, a bendback fly will cruise smoothly on the retrieve; same through dense turtle grass.

*continued on next page*

In floating grass with a knotless leader in use, a bendback will not tangle in the floating vegetation. Bendbacks are tied in many conventional patterns and 2x long hooks should always be used. A regular shank-length hook riding with the point up often is too short to impale a fish on the strike. The hook is bent about one-fourth to five-sixth of an inch back from the hook eye. The wing is tied on the portion that's not bent. The bend should be only enough so the wing covers most of the hook bend and point. If bent too far it becomes weedless on the retrieve but reduces hook-ups. If the fly is to be weighted so it runs deeper, make a number of wraps of leader wire on the bare hook and cover with epoxy to resist oysters, coral and other rough bottom. Allow the epoxy to harden and then install the wing.

## Whistler

Outdoor writer Dan Blanton and fellow Californians fishing the roiled rivers of northeast Costa Rica for tarpon decades ago developed the whistler, a fly that gives off vibrations fish can sense. While the whistler was originally used with large bead chain eyes, it can also be tied with smaller ones. This is one of the best patterns to fish for a great number of species in freshwater and saltwater. Dan now recommends using a jig-style hook rather than a conventional style.

## Lefty's Deceiver

This fly resembles a baitfish shape. It was designed to be as short or as long as materials available. It can be any color combination and appear as a bait shape. It should have little air resistance and when casting the wing should not foul. Having tried scores of pattern variations I confess that by far the most effective color combination for me is yellow or white under wing, a bit of flash with a topping of chartreuse.

The pattern has caught fish across the planet and is popular inshore and offshore. Many have made a minor change to the basic style and renamed it, but that doesn't offend me—I'm delighted they're using the Deceiver.

## Bucktail Deceiver

Bob Popovics, who I consider to be the most innovative fly tier today, developed the buck tail deceiver. In many fishing situations it has become my favorite pattern. To tie it Bob uses only buck tail, a little flash and a hook to build the pattern. It's nearly weightless and has a round baitfish shape. It can be tied to imitate local baitfish or with attractor colors—both work well. Only the length of buck tail available

limits how long the pattern can be. Tie it sparse to imitate a sand eel or dress it with more buck tail so it'll almost suspend in the water column.

For very spooky fish and in calm water, the fly can be dropped to the surface like a thistle so it rarely frightens the quarry. It's superb for laid-up tarpon on a calm day when the fly can be dropped silently to the surface. If a poor cast is made with most tarpon flies and a pick up is required the disturbance will often alert the fish; the buck tail deceiver can be lifted quietly. Because it's made from just buck tail, flash and a hook, it's very light and easy to cast.

## Half & Half

This is a pattern combining portions of a Clouser Minnow and a Lefty's Deceiver. The back section (perhaps called the lower or back wing) resembles the rear of a Deceiver and is almost always of feathers. The upper forward section is like the front or top of a Clouser Minnow of buck tail. The head is usually epoxy.

I use this fly for mainly two purposes: To get a fly deep with large 1/24 or 1/8 ounce lead eyes preferred and the large fly appeals to bigger fish such as those around wrecks, offshore and especially for striped bass. Again, the most effective color combination has been a white or yellow under-wing and a chartreuse topping. More than a normal amount of flash is frequently used.

Concerning all patterns, where weed guards are needed I long ago abandoned stiff mono (it's damaged after just a few fish are caught) for plastic-coated braided wire in 40-pound test. This



Lefty Kreh  
BTT Founding Member

is not the ultra-new thin stuff, but the older larger diameter wire such as Sevenstrand. Unlike mono, if this wire is firmly secured with epoxy it can be re-shaped many times.

With those eight patterns in different sizes and color combinations, I've been able to entice fish into taking my offerings in most situations. 🐟





GRAY GHOST, MY ASS.



\$991,000,000

Tony Fedler, Ph.D.  
Fisheries Economist

## BTT Learns the economic impact in the Everglades

The Florida Everglades encompasses a vast network of waterways and lakes that are not only important spawning and rearing habitats for a large array of freshwater and saltwater fish species, but also home to resident and migratory fish targeted by recreational anglers. Statewide economic studies conducted by the U.S. Fish and Wildlife Service (USFWS 2007) indicate that freshwater and saltwater fishing in Florida generates many billions of dollars. A significant portion of this saltwater and freshwater fishing activity occurs in the waters in and around the Everglades, but there's been no effort to date to quantify the value of this fishery to local economies and the state.

BTT partnered with the Everglades Foundation to conduct a study of the economic impact of recreational fishing within the Everglades Region ranging from the northern watershed of Lake Okechobee to Florida Bay and the Florida Keys. The study included both freshwater and saltwater fishing activity and focused on angling for bonefish, tarpon and other species over a 12-month period.

Because no comprehensive data was available for estimating the economic impact of fishing activity in the Everglades Region, multiple data sources were used to create the information needed for estimates of fishing days and angler expenditures. A critical piece of data for calculating the economic estimates was determining the number of days of fishing in the Everglades Region. This data was obtained from over 1,200 anglers who completed an online fishing survey. Ratios of Everglades fishing days to total fishing days from the online survey were calculated for both freshwater and saltwater fishing. These ratios were applied to the number of days fishing by resident and non-resident anglers in South Florida identified from the 2006 National Survey of Fishing, Hunt-

ing and Wildlife Associated Recreation (USFWS 2007). These ratios were 46% of Florida saltwater days occurring in South Florida, with 33% of these within the Everglades Region. Similarly, 49% of Florida freshwater fishing days occurred in South Florida with 35% of these within the Everglades Region.

Fishing trip and equipment expenditure data from the 2006 National Survey were compared to the same data collected in the online survey to establish daily fishing expenditure levels for freshwater and saltwater anglers. Expenditures from both surveys coincided closely and daily expenditure rates of \$46.18 for freshwater and \$105.90 for saltwater angling were established.

Anglers were estimated to spend slightly more than four million days fishing for freshwater species and 4.5 million days fishing for saltwater species in the Everglades Region. Everglades freshwater fishing generated \$85 million in angler trip expenditures and \$87 million in equipment expenditures on an annual basis. Saltwater fishing in the Everglades Region accounted for \$246 million in trip expenditures and \$161 million in equipment related expenditures. Total retail sales made by anglers fishing in the Everglades Region were estimated at \$579 million.

Retail sales also generate additional economic activity generally known as multiplier effects. These effects account for the spending made by retailers for the goods and services they make in operating their businesses and the personal spending of wages earned by employees of these businesses. Multiplier effects associated with the \$579 million in retail sales associated with fishing in the Everglades Region generated another

\$412 million in expenditures which brings the total economic impact of recreational fishing in the Everglades Region to \$991 million.

This segment of Florida's recreational fishing industry supported 9,830 full-time jobs and \$305 million in wages, salaries and business-owner income. Fishing activity in the Everglades Region also generated \$72 million in federal tax revenues and \$54 million in state and local tax revenues. Clearly, there are substantial benefits to local economies in and around the Everglades Region as well as substantial tax benefits for federal, state and local governments.

Anglers in the online survey also reported dedicating a substantial proportion of their fishing days targeting bonefish (18%) and tarpon (20%) in the Everglades Region. This fishing activity resulted in retail sales of \$71 million associated

with bonefish and \$80 million for tarpon angling.

Recreational fishing activity in the Everglades Region accounted for 15% of all freshwater fishing days and 17% of all saltwater fishing days in Florida. The economic benefits of this fishing activity are substantial and support thousands of businesses in local communities across South Florida. These benefits also underscore the importance of maintaining healthy terrestrial and aquatic ecosystems throughout the region. Waters within the Everglades Region provide essential spawning and rearing habitat for not only many sport-fishing species but for hundreds of other species as well. They also provide habitat for resident and migratory species which further underscores the importance of maintaining high water quality and protecting habitats that are vital to the recreational fishing economy of South Florida. 🐟

## ARTIST OF THE YEAR John Swan

The competition that artist John Swan seeks out doesn't require a panel of judges. Although he has won prestigious prizes such as the Ducks Unlimited International Artist of the Year Award in 1987, and Atlantic Salmon Federation Artist of the Year in 1991, 1999, and 2004, Swan has entered his work in few judged exhibitions. He prefers contests on streams or sea as an avid fly fisherman.



"Hooked Up"

About twenty years ago, one of his fly fishing scenes landed on the cover of Gray's Sporting Journal, catapulting him to national recognition as a sporting artist. Since then, Swan's work has appeared regularly in publications such as *The Atlantic Salmon Journal*, *Esquire Sportsman*, *Sporting Classics*, and *Wildlife Art*. He has also illustrated numerous books including Joseph Bate's classic *Atlantic Salmon Fishing* and Thomas McGuane's anthology *Live Water*.

Now widely considered one of America's more important and successful living artists, Swan is equally adept in both watercolors and oils. His paintings bring to life fishing and hunting trips to places as far afield as the bonefishing mecca of the Bahamas to Canada's Gaspé Peninsula, also a favorite sporting haunt of renowned impressionist Frank W. Benson (1862-1951). "I paint wherever I can fish," he admits. The result is spectacularly immediate works set in some of the world's most beautiful and pristine destinations.

Based on firsthand experience, and often-created en plein air, Swan's paintings are imbued with freshness: the energy of a tarpon struggling against the line or the quietude of a hunter's early dawn preparations. Swan's close observations of nature are executed with fluid brushwork and a palette of highly contrasting lights and darks.

Passionate about preserving the natural world, Swan's works have raised hundreds of thousands of dollars for conservation. This enthusiasm for nature serves to enhance his oeuvre. From scenes of idyllic Bahamian beach days to autumnal north woods canoeing, capturing a sense of place is integral to Swan's paintings. 🐟

# Fly Fishing

## THEN AND NOW

Stu Apte, BTT Board member



Fishing was my early obsession. I gave every spare minute to my flies and click reels—Pflueger Medalists, mostly. With that early type of gear the fish would really tear up my fingers. Then, as now, I'd fight fish with the line running between my fingers to gauge the exact amount of drag I wanted.

One day I used a plug called the Leaping Lena to try and catch a 30-pound barracuda I knew was lurking nearby. I worked the plug with the Florida whip, better known as "walking the dog" with a zigzag retrieve. Something huge crashed the lure and what I thought was a big barracuda burned almost all of the 150 yards of 15-pound black nylon line. I waded out deeper and finally landed a 9-pound, 14-ounce bonefish that won the plug-casting division that year in the South Florida Metropolitan Fishing Tournament (MET). But who'd ever heard of a bonefish crashing a top-water plug?

Tarpon fishing became popular back in the 1800s. In a book published after the turn of the last century by A.W. Dimock called "The Book of the Tarpon," he used feathers to troll for tarpon with a heavy-duty salmon fly rod.

In about 1960 I did a couple of films with Lee Wulff called "Catching Big Tarpon on Fly" and in 1962 appeared on ABC's Wide World of Sports. In the latter, it involved fly fishing for big tarpon in a face-off between Joe Brooks and Al McClane. With a flip of a coin I became Joe's guide and Jimmie Albright was Al's guide. The year before this event, Joe Brooks set the tarpon record of 148 1/2 pounds in exactly the same area we were tournament fishing, using exactly the same equipment.

It seemed that tarpon were more plentiful and more susceptible to taking a fly back then. Our tackle was certainly better than Dimock's, but even so we were using very soft 10-weight fiberglass rods, a Fin Nor No. 3 Wedding Cake reel, 12-pound-test tippet with only 200 yards of 30-pound-test Dacron backing. By 1967 our fly rods were improved but we still used the same fly reels. Luckily for me, tarpon remained very friendly—I took a friend from Palm Beach named Guy de la Valdene fly fishing for his first tarpon ever, about a 65-pounder.

**S**ome years ago I was asked to write a short history of saltwater fly fishing and it seemed pretty simple—just start at the beginning and tell who did what and when. But, like most history, very little of this occurred with hotshot writers standing around to take notes.

The first bonefish and tarpon anglers didn't bother to notify the major magazines at that time of their accomplishments and of course it was way before the advent of television. So the fly fisher just went ahead and tied a glob of deer hair and feathers onto a hook and tried to fool a wild tarpon into thinking it was something good to eat.

Back in the late 1940s when I started fly fishing as a teenager, Jimmie Albright and his wife Frankee, Cecil Keith, Bill Smith, Rollie and Holly Hollenbeck were among the few guides who fished with fly. Things were more primitive back then too. I can still remember driving to the Keys from Miami with Joe Brooks and parking along a narrow, two-lane US 1 on upper Key Largo at Garden Cove. A few hundred yards from the ocean a pathway ran through a dense overgrown jungle of gumbo-limbo and buttonwood trees. After stumbling along this dank and dark jungle path, running all the way and still covered with mosquitoes, we finally arrived at the mangroves and shoreline.

A quick glance told us they were there: tailing bonefish that had never seen a fly. Wading out to cast, I knew that running through that awful hardwood hammock had been worthwhile. We caught and released bonefish for hours.

Tarpon photo: Aaron Adams

Afterwards he wanted to see me in action. I took the fly rod in hand, hoping to catch a much larger tarpon than Guy's. I didn't have long to wait. The boat drifted very slowly for a short distance when I spotted a school of about 50 tarpon cruising just out of casting range. The water was calm and I knew they would be spooky so I crouched down to lessen my silhouette against the sky. From that position I waited for them to reach a reasonable casting distance of around 70 feet. The fish leading the school was a large one, but there was a much bigger fish near the center of the school. Still, I decided to make my presentation to the lead fish rather than risk my line falling across other tarpon and spooking them all.

I cast my yellow-and-orange streamer fly into the path of the pack, allowing it to settle for a moment; as the poons approached I started a slow retrieve. The big lead fish accelerated toward the fly and when it appeared as though it was about to turn away, I stopped stripping the fly. With butterflies in my stomach, I saw the tarpon turn back as I gently twitched the fly. In the blink of an eye it engulfed it. I set the hook instinctively and felt the tarpon react all the way down to my heels. The first run was short, interrupted by two magnificent jumps. I figured the fish between 120 and 130 pounds—good trophy size, but not the record fish I was hoping for. After that initial run I turned to Guy and suggested that he take the rod and fight the fish just for practice. After all, I was supposed to be teaching him how to tarpon fish. “No thanks,” he answered, “I'll just relax and watch the pro.”

Although I didn't know it at that time, Guy's response was the second biggest break of the whole trip for me—his earlier suggestion that I take the rod being the first. The second run was longer and included two more jumps. I worked the tarpon in close to the boat where it made a head-shaking, half-lurch out of the water. Mentally I revised its weight upwards to at least 135 pounds. I'll not go into all of the nitty-gritty of the 18-minute, action-packed fight, but once in the boat the fish looked bigger than it appeared in the water.

“It'll probably go as much as 140 pounds,” I remarked. But to tell the truth, it didn't look as big to me as some of the other tarpon I've previously had aboard my boat Mom's Worry.

So instead of having it weighed immediately, I told Guy we'd go looking for a bigger one for him.

During the rest of the afternoon with me on the push pole, Guy hooked three more tarpon and landed one around 80 pounds that we promptly released in good condition. It was about four hours later that we pulled into a dock at Big Pine Key. We hoisted the tarpon onto the official MET tournament scale and for a minute I couldn't believe my eyes when the scale went to an even 151 pounds.



All at once I was being pounded on the back and being congratulated. Then it slowly sank in that I had just set a new fly rod world record, beating Joe Brooks' record by 2 1/2 pounds.

In the 1960s, saltwater fly fishing went through an evolution, starting with gear intended for other kinds of fishing. We had to grope our way through a maze of tackle, figure out the most effective knots, how to use it all, then agree on a set of rules to tell us how well we were doing.

Hence the founding of an organization called the Salt Water Fly Rodders of America, headquartered in Toms River, New Jersey. It established rules for submitting a fly-caught fish for a world record. Their advisory board included luminaries of the fly-fishing world at that time like Frank Woolner and Hal Lyman from Salt Water Sportsman magazine, Joe Brooks, A.J. McClane, Charlie Waterman, Lee Wulff, Mark Sosin, Lefty Kreh, myself and others. We discussed and studied the needs of saltwater fly fishing and set the rules. Later, the International Game Fish Association became the governing body and still is today.

During the past 50 years, our sport of saltwater fly fishing has evolved into a more precise manner of fishing with extremely better equipment. The first tarpon exceeding the magical 200-pound mark took place May 11, 2001 (my birthday) by friend and protégé James Holland, Jr.

In this strange and wonderful confrontation between man and fish, the sky is still the limit. All it takes is a bit of sporting grace and a touch of ancient art. 🐟



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# & Support BTT your company

With the ongoing media barrage about the many threats facing our fisheries and natural resources, it would be a relief to hear of a simple call to action that begins to address issues that are close to our hearts. Well, there is an innovative idea that not only benefits grassroots groups like BTT, but also benefits your business.

One-percent For The Planet exists to build and support an alliance of businesses financially committed to creating a healthy planet while embracing the notion that the sustainability of the natural environment is fundamental to the sustainability of business.



Altruism aside, why else should a business become a 1% FTP member? Let's start with opportunities. Membership creates opportunities for companies to network, conduct business and simply associate themselves with over 1,200 companies that have made the same noble commitment. From a consumer standpoint, member companies re-enforce a positive perception of their brand, adding value that can result in greater customer loyalty and an increased customer base, especially among the growing number of people who recognize and appreciate the importance of environmental responsibility.

Member companies also benefit from marketing efforts and promotion of the 1% FTP brand. The more that the 1% logo becomes ubiquitous, the more effectively it will equate environmental stewardship with 1% membership. And this is already starting to happen, so now is the time to get on board. Their web site and other informational materials regularly highlight members, creating a unique opportunity to distinguish your business to your clients and customers, as well as to the general public. Members will also receive regular newsletters and updates on the current happenings at 1% FTP.

What a win-win situation by joining 1% for the Planet. You support your passion to fish by helping BTT's efforts for working towards the sustainability of fish populations and habitat while building your business brand.

Bill Klyn  
Vice President of Marketing

## Keaton Serves as BTT Spokesman

Celebrated film star and avid fly fisherman Michael Keaton has agreed to appear in public service announcements for BTT. Keaton has starred in numerous blockbuster films including *Batman*, *Beetlejuice*, *Night Shift*, *Multiplicity*, and many others.



Actor Michael Keaton

Calling out the urgent need to support BTT's critical research on flats species, Keaton's message will be heard throughout coastal U.S. communities and beyond as the PSA campaign helps intensify BTT's efforts to heighten awareness of science based coastal conservation.

Keaton also joined a luminary ensemble cast to help create BTT's widely acclaimed *Pirates of the Flats* TV series airing on ESPN2.

"Having a spokesperson of the caliber and notoriety of Michael Keaton is an enormous boost to BTT," says Chris Dorsey, BTT vice president of communications. "Michael's willingness to step up and support the urgent need for critical conservation efforts speaks volumes about him--all flats anglers owe him a debt of gratitude."



# My Favorite Fishing Places

## WHERE IS YOUR FAVORITE PLACE TO FISH?

If you could only fish one more place before you die, where would it be?

Since BTT receives support from a number of outstanding travel groups, we decided to put three experts on the spot by asking them, "Where is your favorite place to fish for bonefish, tarpon or permit?"

Joe Codd, Ian Davis and Jason Elkins represent travel companies that plan trips benefiting BTT, help distribute our information and sign up new members, and donate trips to help raise funds at auctions. Herewith are their responses to our question and their contact info follows each of their answers for inquiries and further details.

### *The Venezuelan Jewel*

When Aaron Adams asked me to write about a favorite destination, my mind immediately went to Los Roques off the coast of Venezuela. Eighty miles from the mainland and just shy of an eternity from how most Americans perceive the country, this little archipelago is the jewel of bonefishing in the Caribbean. Once you're on the island, any fears of Chavez and his feisty rhetoric disappear as fast as a five o'clock cerveza. Laid back yet lively, the island is as friendly as any place I've visited in the world.

The bonefish here average four pounds and maybe slightly larger, and they'll eat with gusto any crab or baitfish imitation tossed their way. They're plentiful as well, which makes Los Roques a favorite for beginners and trophy hunters alike. I've often marveled at the duality of this fishery, because finding a consistent blend of big and abundant bonefish, at least in my experience, is anything but typical.

My background as an avid whitetail deer hunter helped me figure out how a fishery like Los Roques came to be. Who would have made that connection, deer and bonefish? Hear me out. In order for deer to become both plentiful and big, especially in an area where humans are the top predator and users of the resource, there's a vital yet frequently overlooked component that has to be implemented and managed. There needs to be a haven, a sanctuary if you will, where these animals can live an unbothered life free from human interference, where they can grow to trophy proportions and allow for their kind to spread out and thrive.

The government of Venezuela set aside Los Roques as a National Park in 1972. As part of their mandate they closed approximately half of the archipelago to human interference of any kind, be it boating, fishing, wading, snorkeling, diving or commercial harvest of conch and lobster. So there's my theory, that providing sanctuaries benefits the resource and its users. I guess it doesn't matter much if I'm right or wrong, what matters is that there's a place to go to catch big bonefish and lots of them.

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Photo: Aaron Adams



## Andros Oddysey

I just kept seeing bonefish in the road. We were driving a beat-up, brakeless, rusted-out CJ-7 on Andros in The Bahamas after our first week of bonefishing with Andy Smith and Charlie Neymour. Seven days of wading the white-sand flats of Andros' North Bight resulted in overstrained and bloodshot eyes that simply could not stop searching for bonefish. Even as we drove along the hot Androsian blacktop, every dark pothole and puddle of stagnant water drew my attention as I subconsciously continued to scan for the empty shadows of bonefish.

It was probably that moment, midway through the drive from Behring Point to Fresh Creek, when it finally dawned on me that I was trying too hard to see these fish. After all, the local guides found them as easy to spot as clouds in the sky.

This took place in the early 1990s at a point in my fishing life where I'd been bitten hard by the flats bug and looked to engulf myself in the world of saltwater fishing. With my regular gang of traveling fishing buddies I decided that, one way or another, I was going to make bonefishing and the places that bonefish call home a major part of my life.

The easy-going Bahamian guides with whom we fished in those years were the sons of the sport-fishing pioneers throughout The Bahamas. Like us, they were growing up in the world of fly fishing and had decided early on that bonefish and other flats species would define and shape their lives. We learned and fished with the "royal families" of bonefishing, guides with names like Smith, Neymour, Leadon and Rolle. Man, did we luck out.

Since those days, we have all grown up and changed in so many ways. Some of the original gang eventually left the world of fly fishing and moved on. Most of us, however, continued to work in the fly-fishing industry as reps, shop owners, travel agents or guides. With this lifestyle choice have come dozens of subsequent trips to flats and saltwater destinations throughout the world, and I finally learned not to scan quite so intensely. Even so, my days on the flats of Andros then and now will always be dear to me.

*Ian Davis, Co-owner,  
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## An Atoll Paradise

Although many locations offer a wide range of experiences, for anglers interested in variety and well-run fishing programs, Belize's Turneffe Atoll is pretty hard to beat.

The Turneffe Atoll, 30 miles off mainland Belize, is the largest atoll in the Western Hemisphere, encompassing almost 300 square miles of shallow water. Two small resorts—both namesakes of the atoll itself—offer fishing packages. Turneffe Flats is a true fishing lodge, providing numerous activities for non-anglers, while Turneffe Island Resort caters primarily to divers.

It's the wade fishing, variety of habitat, incredible numbers of bonefish, abundant permit and good numbers of seasonal tarpon that make Turneffe unique. The combination of quality fishing, ease of travel and friendly staff members make Turneffe one of my all-time favorite destinations.

In 2009 the government of Belize passed catch-and-release legislation protecting bonefish, tarpon and permit. Several of the lodges in Belize, led by Turneffe Flats, El Pescador and Belize River Lodge, spearheaded the efforts. Anglers should encourage this type of environmental stewardship by supporting the lodges and agents working to protect the fisheries. 🐟

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***BTT thanks Bass Pro for  
their continued support.***



After months attached to the Tarpon, the PAT detaches, floats to the surface and sends it's data via satellite.

It's quite a memorable sight to behold legendary fly fisher Billy Pate as he sets out on a tarpon trip. His eyes glow like twin laser beams, his gait quickens as each step gets closer to the dock and that big Southern smile bisects his face. All that pep and energy rubs off on everyone around him.

Such was the case a few years back in Homosassa, Florida. A small group assembled to discuss the evolving techniques to implant Pop-up Archival Transmitting (PAT) tags into tarpon and maybe to do the trick during our five-day outing. Among those present besides Billy and myself: Homosassa guides Mike Locklear, Jim Long and Earl Waters, marina owner Gator MacRae, University of Miami grad student Michael Larkin and Dr. Jon Shenker of the Florida Institute of Technology.

Our first night proved to be a near miss—or a near hit, if you prefer. Yours truly managed to bring to boat side about a 90-pound silver king while we slow-trolled lures in the moonlight of the Crystal River. Unfortunately the feisty fish caught a second wind and lurched mightily, breaking our grasp. We could've employed a lip-gaff or dragged it onto the deck, but we didn't want to stress the fish. While that one beat us, we did get the job done on other days and nights, and furthered our knowledge just that much more about the process of tagging poons.

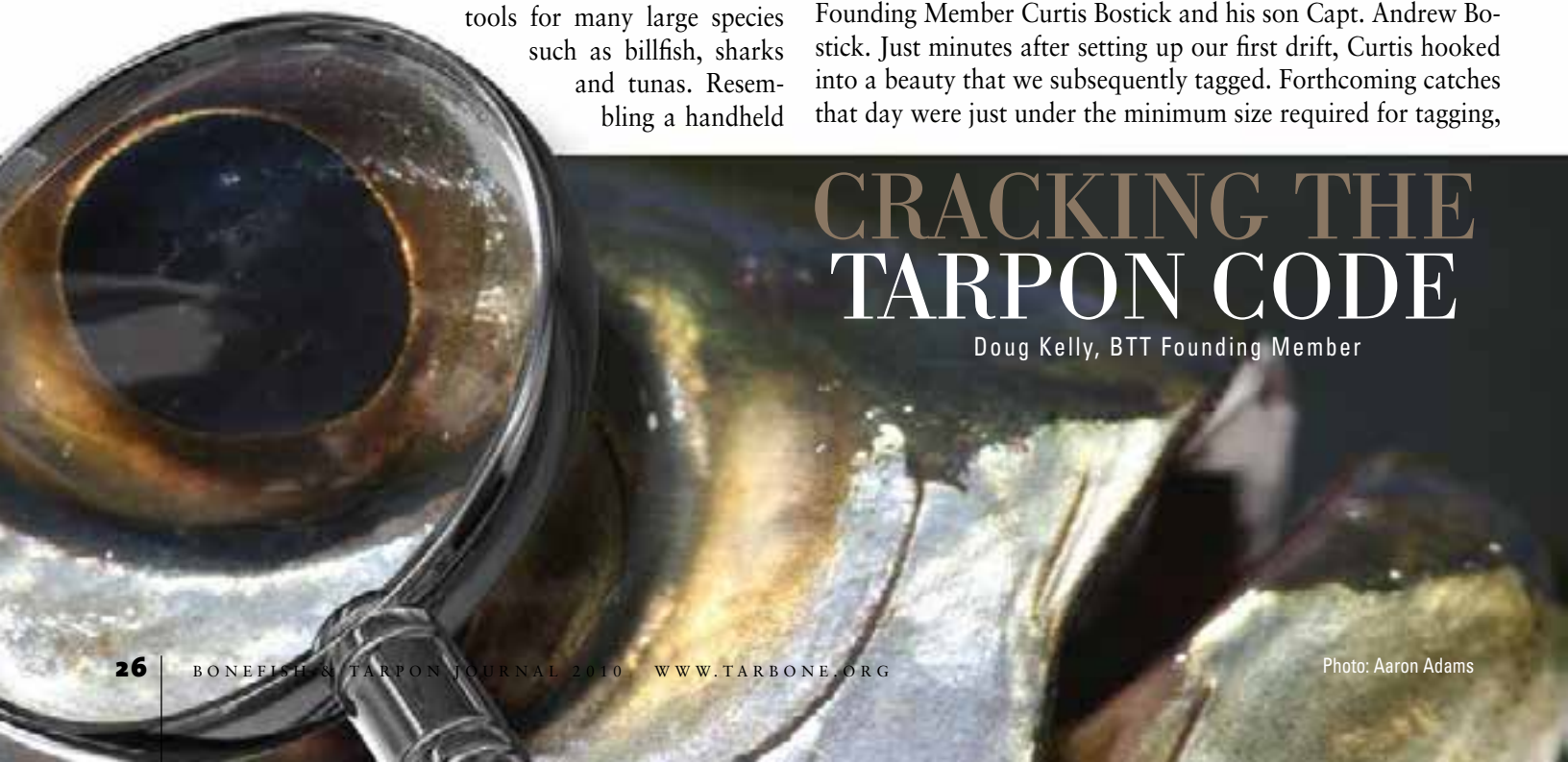
**A Tagging We Will Go** BTT became one of the most aggressive organizations at deploying PAT tags on tarpon beginning in the early part of this decade. The PATs serve as the main tagging tools for many large species such as billfish, sharks and tunas. Resembling a handheld

microphone, PATs feature a cylindrical body that encompasses a lithium battery, a clock and tiny sensors that frequently measure the tarpon's depth, water temperature, light levels and salinity. A transmitter sits above the body with an antenna to beam data to satellites. The tag "pops up" via a timer that detaches it from the titanium dart secured in the animal's body.

It's been a wild ride indeed over the years and a huge learning curve. Successful tagging requires precise methods that include stabilizing tarpon alongside a boat and implanting the tag in the optimum location and tissue depth so as it stays put without causing fatal injury or the fish becoming shark fodder. Tarpon over 90 pounds are required because they're more likely to migrate long distances. Also evolving are anchor darts, the tags themselves and improvements in satellite technology.

Considering that we all know the difficulty of catching and releasing a tarpon on any given day, it's easier to sense the enormous challenge of doing so with the added purpose of successfully implanting PAT tags. Returning to the dock without even catching a large enough fish was quite typical in the early days, necessitating the scheduling of multiple days of hunting to up the odds of getting the job done. It requires the arduous task of organizing guides, scientists and anglers at numerous locations in a timeframe that favors tarpon fishing.

Lady Luck does sometime smile, however. Such occurred on a summer day in 2005 at Boca Grande Pass when I joined BTT Founding Member Curtis Bostick and his son Capt. Andrew Bostick. Just minutes after setting up our first drift, Curtis hooked into a beauty that we subsequently tagged. Forthcoming catches that day were just under the minimum size required for tagging,



# CRACKING THE TARPON CODE

Doug Kelly, BTT Founding Member



Animation sequence: Orion Multimedia

but two brutes just over the 100-pound class were worked to Andrew's boat and tagged in the next few days. The single-day tagging record stands at six fish and five on several days.

Spotlight on Science Research led by Dr. Jerry Ault, Dr. Jiangang Luo and Michael Larkin from the University of Miami's famed RS-MAS has been the backbone of BTT's PAT effort. Tags implanted in tarpon off Veracruz, Mexico, for example, have popped up off Louisiana and the Mississippi River (the latter nearly a 1,200-mile trek). Same with tags originating from the Florida Keys that surfaced off the Carolinas, Virginia and Chesapeake Bay. More recently, a 98-pound tarpon tagged March 17, 2009, in Everglades National Park's Whitewater Bay resulted in the tag popping up a few hundred miles east of Cape Cod after a six-month ride.

This PAT feedback proves the theory that some tarpon indeed migrate long distances. The ramifications involve fisheries managers realizing that any tarpon-kill activities off one area can have major repercussions in populations elsewhere. It's therefore not enough to employ sound conservation ethics in one region if the same fish released end up harpooned or netted where catch-and-release isn't the norm.

Research by Dr. Jon Shenker of the Florida Institute of Technology has shown that many "marshes of muck" and coastal backwaters are essential nursery habitats for juvenile tarpon and many other species and have incalculable value for these species, so should not be mindlessly destroyed. His work on the biology and ecology of juvenile tarpon in these marshes continue to contribute in a big way to the burgeoning knowledge about tarpon lifecycles and behavior. Speaking of tarpon DNA, note the article elsewhere in this journal by Kathy Guindon about the Tarpon Genetic Recapture Study and the technique of "fin printing."

While obtaining good science remains the central charge of BTT, the collaboration by the group's expert anglers, guides and industry leaders gives the effort the extra oomph needed to make a difference. Take away those special ingredients and the cake has no icing. BTT will continue to seek answers to a lot of questions about silver kings. Considering the starting point of the organization in 1998, I'm taken aback at how the variety of tagging and DNA studies has filled in so many blanks. Other mysteries continue to remain just out of reach, but persistence will pay off. One day in the not-too-distant future BTT will help close the knowledge gap. Doing so will give resource managers a grasp of just what makes those magnificent tarpon tick and provide a clearer picture of what we can do to enhance their populations. 🐟

## The BTT Traveling Angler Program

Whether they admit it or not, many (if not most) of the anglers I meet are science nerds at heart. When I start talking about the science of bonefish, tarpon, permit or another coastal game fish, I usually get anglers' full attention. Colleagues who are also scientists who fish say the same thing. There's a real thirst for information about the fish we chase with a rod and reel. Granted, some of this interest is not in the science and is more of along the lines of "help me catch more and bigger fish." But a lot of legitimately interested anglers are out there too.

It is for the anglers addicted to fishing who also want to learn more about the worlds of the fish they pursue that BTT started the Traveling Angler program. The most fun level of the Traveling Angler program is when a group of anglers go to a lodge and take along with a scientist. The lodge covers the scientist's stay; the scientist is able to conduct research right along with the help of the anglers; anglers can either plan their own trips or work through one of the travel groups that helps plan trips for BTT (you can find some of their contact info in the Journal's "My Favorite Fishing Places" article).

You can also participate in the do-it-yourself level of the program. An angler going on a trip for bonefish or tarpon simply contacts BTT and asks to take part in the Traveling Angler program. We'll send the angler a sampling kit to take fin clips from the fish they catch. BTT-supported scientists will use the tissue samples for genetic analysis to determine which species of bonefish are being caught and to track tarpon.

In 2009 we had some great trips to Belize River Lodge, Los Roques, Grand Bahama Island and South Andros. You can read the full trip reports under the Angler Participation tab at [www.tarbone.org](http://www.tarbone.org).

In 2010 we already have two trips scheduled, one in March to Belize River Lodge to tag tarpon and bonefish and in April to El Pescador Lodge to tag bonefish, with more in the works. Check out the Angler Participation tab at [www.tarbone.org](http://www.tarbone.org) for how to join a trip. You can also contact one of our travel partners to plan and host your own trip. 🐟

Aaron Adams, Ph.D., Director of Operations



Photo: Brian O'Keefe

# When Angling and Science Converge

**A**s I sit here in the Nassau airport waiting for my flight to Eleuthera, it's pretty easy to pick out the tourists here because of bonefish. Their presence definitely stands out against those coming here to simply enjoy the sun, read a book on a lounge chair or absorb some of the local culture and cuisine.

The crisp vented flats shirts yet to be faded by the tropical rays, the anxious poses at the luggage carousel wondering if the bag with the wading boots and other essentials will ever show up, the rod tubes clutched close to the body as if a life-saving device—all traits rather typical of the angler making a transition from a mainland drone of industry to slave of the sand and seagrass flats. Rarely are they alone, and if they are there is a pretty good chance they will soon be meeting up with long-time friends or colleagues as part of an annual pilgrimage to bond with like-minds.

Before long the anglers transition from the international arrivals terminal (and yet another anxious wait in the immigration line) to the check-in counter for Bahamas Air or other domestic carriers that serve as essential connections to the family islands where bonefish roam. For those in the know, some may take a chance at targeting bonefish in secret spots on Nassau, but the allure of the more remote islands such as Andros or Crooked Island provides many with that true sense of adventure.

As they wait for their flight to board many will have a bottle of Kalik in hand, the beer of The Bahamas, and their loud voices and laughter will begin to reveal that the tightly wound spring inside known as stress is starting to let go.


I too am here because of bonefish. I'm an angler at heart and feel very fortunate to have been able to regularly sweep the flats in search of bonefish for nearly 10 years. The first fish I ever caught using a fly rod was a bonefish and it just so hap-

pened to be on a pattern I tied myself. Wearing the hat of an angler, I'm familiar with everything other anglers traveling to The Bahamas feel, and eventually I unwind in pretty much the same way. However, even though my fishing side unwinds, I quickly catch my mind running rampant with thoughts about whether I've packed everything necessary to do my work as a fisheries scientist and if the weather will allow me to get to the "office", otherwise known as the flats.

Shortly after catching my first bonefish, I dug into the popular books and magazines to learn as much as I could. The popular fishing magazines had the usual articles telling anglers what flies and tactics to use to catch more fish. A quick look at the scientific journals didn't reveal much either. This puzzled me because bonefish are at the core of a rather lucrative recreational fishery that spans from the Florida Keys throughout the Caribbean and Pacific.

But I was also interested in the importance of bonefish to the ecology of the flats habitats. This is when my two worlds collided and I began to direct my research toward understanding more about the elusive gray ghost. Part of my motivation is that I realized if I didn't take up the calling, it could unfold like many other recreational fisheries when we learn too late that some of our actions can compromise our ability to care for the fish populations. We need to ensure our ability and those of generations to come to enjoy the thrills of stalking the flats.

From my base at The Island School and Cape Eleuthera Institute in The Bahamas, I collaborated with long-time colleagues and fellow anglers to conduct research on bonefish ecology and conservation. For the past five years our research has focused on the ecology of bonefish, including how fast they grow, how often they move among flats, and where, when and how bonefish reproduce. All of this information is crucial for conservation and management.



Dr. Andy J. Danylchuk, Ph.D.  
Department of Natural Resources Conservation  
University of Massachusetts Amherst  
Amherst, Massachusetts

One of the significant aspects of our research addresses the changes recreational anglers can make to their behavior to ensure that bonefish survive after being caught and released. Recreational anglers targeting bonefish are somewhat unique in that most voluntarily practice catch-and-release fishing. Until our research began, however, the best practices related to properly handling and releasing bonefish were based on anecdotes rather than tested by the rigors of science. With the help of key organizations such as Bonefish and Tarpon Trust, the Cape Eleuthera Foundation and the Fisheries Conservation Foundation, the results of our studies have been making a difference. This new knowledge now forms the basis of scientifically tested catch-and-release practices for bonefish being distributed to anglers and guides throughout The Bahamas, Florida Keys and various locations in the Caribbean.

But as a scientist interested in communicating with anglers, I frequently ask myself whether the anglers I pass in airports know the extent that their actions, like minimizing how long their prized bonefish is exposed to air, can make a difference. I'm sure that most of these anglers feel a sense of responsibility for the care of bonefish they are so anxious to chase, and I hope they can learn from our science to be good stewards of the flats. I also hope that these anglers think about the experiences their sons and daughters, or grandchildren, will have in the future if the resource is treated well.


As a scientist and fellow angler, I hope that others stalking bonefish work hard at being responsible anglers, so that we can ensure the long-term sustainability of bonefish populations, and the economy and joyful experiences they support. 🐟

## FEATURED CONSERVATION PARTNER:

### Abaco Lodge

Nervous Waters, the owner of Abaco Lodge, has been in the lodge business for more than 25 years. When we open a new location we do so with the intention of being there for the duration. Part of this commitment is investing in conservation and education to ensure that the fisheries and their habitats are healthy into the future. No one wants to protect the fishery more than us, not only because it is our livelihood but it is also something we, like all anglers, are truly passionate about. We strive to educate ourselves, our staff, and the local community on the importance of protecting this valuable and fragile world that brings people from around the world in search of their next adventure.

Our newest venture is located on Abaco Island, home of one of the most prolific bonefish populations in the Bahamas. While we have watched bonefish stocks decline only 100 miles away in Florida, they appear to be thriving in the Marls of Abaco. That is what brought us here and now we hope to help ensure that it will be here for our children's children. Education is the best arrow in the quiver, and the science and research done by BTT helps us adjust our own policies to ensure minimal impact on the fishery and the fish, and to learn enough to support effective conservation.



Oliver White  
Abaco Lodge

# ABACO LODGE



Abaco Lodge was the host site of  
*Pirates of the Flats* television on ESPN2

# The JOURNEY

## TO SPAWNING GROUNDS

Although the exact spawning locations still remain somewhat of a mystery, spawning may indeed take place at offshore reef locations, but can we save them in time?



Vanessa Haley  
Florida International University  
and Bahamas National Trust

Although anglers may commonly find bonefish (*Albula* spp.) on shallow flats adjacent to tidal creeks, the life history patterns of bonefish are far more complex. Bonefish migrate among different habitats throughout their lives, following a classic fish-life history pattern:

- 1.) the planktonic movement of eggs and larvae in oceanic currents
- 2.) juvenile and sub-adult use of shallow habitats
- 3.) seasonal offshore movements for spawning

These varying habitats are essential in supporting spawning, nursery, feeding and predator avoidance functions.

Scientists and anglers alike have made important observations on the seasonal movement patterns of bonefish. As important as this process is to ensuring a sustainable fishery through the protection of essential spawning migration corridors and spawning sites, only recently have scientists sought to examine the anecdotal reports on bonefish movements by anglers and guides.

In October 2008, we took on the challenge to work with guides to take a closer look at the large-scale movement patterns of bonefish around Andros Island, Bahamas. Information gathered during conversations with guides and lodge owners of North and the West sides of Andros suggested that bonefish undergo seasonal migrations southward along the West Side to a spawning site located near the east side of North Bight.

The trick was how to follow bonefish movements over such a large scale. We used the same method employed on Eleuthera to study bonefish movements—acoustic telemetry. Acoustic telemetry is a technique scientists use to remotely monitor activity patterns and movements of marine organisms. The methodology is based on ultrasonic transmitters (a.k.a. sonic tags) surgically implanted in bonefish. The sonic tags emit pings that are detected by underwater devices called receivers anchored at strategic locations. We have to retrieve the receivers, download the data and analyze that data to determine the time and date when a tagged bonefish passed. In this study, after analyzing thousands of detections, we were able to answer two important questions: Do bonefish migrate to

offshore reefs during the proposed spawning season (and if so, what's the frequency of these large-scale movements) and are these movements related to lunar cycles?

Data from our tagged bonefish agree with data collected from a similar bonefish movement study on Eleuthera, The Bahamas. It's clear that seasonal differences occur in the large-scale movement patterns of bonefish. Our use of sonic tags and a network of receivers allowed us to document long-distance movements of bonefish. Bonefish

were recorded traveling from the shallow flats on the west side of Andros through North Bight to deeper reef environments on the east side starting in October and continuing through late January. This is a one-way distance of approximately 60 miles.



Photo: R. Valentine Atkinson

The majority of the fish that made these large-scale movements were noticeably mature during surgery.

the island travel to await the right conditions before possibly heading offshore to spawn.

Although the exact spawning locations still remain somewhat of a mystery, we think that spawning may indeed take place at offshore reef locations. This is because after tagged fish were detected on the east side of Andros, our offshore receivers (located in water 60 feet deep) also detected the tagged bonefish. This movement occurred one to three days before or after the new and full moons and usually observed during dusk with a return to shallower waters during dawn of the following

morning. This is the same pattern that was observed on Eleuthera. Since coordinating spawning events with moon phase is common for tropical marine species, we believe that these are the spawning times for bonefish.

From this study we confirmed anecdotal reports that the large-scale movements of bonefish are seasonal and the offshore

Acoustic telemetry tracks the movement of bonefish from the tagging location on the west side of Andros, The Bahamas, through the North Bight, to a pre-spawning location on the east side. Offshore movement to deeper reef areas (18 meters depth) are observed around the new and full moons between October and January.

Abaco Island



Several tagged fish made multiple trips through North Bight during this period, which is a round-trip of more than 120 miles. The majority of the fish that made these large-scale movements were noticeably mature during surgery (i.e., contained eggs and milt) and hence may indicate that the large-scale movements observed are related to spawning migrations.

In addition to these movements that appeared to be related to spawning migrations, we observed large schools (300 to 500) of bonefish at specific sites on the east side of Andros. Local residents told us that it is common to find these large schools of bonefish on the east side during October through January, the peak bonefish spawning season. These locations where large schools of bonefish are observed may be pre-spawning aggregation sites where bonefish from around

movement to deeper reef locations follows lunar patterns. In addition, important habitats (e.g., migration corridors and pre-spawning aggregation sites) have been identified. This information is critical for the protection of bonefish and identifies important habitats on Andros that warrant protection from coastal degradation or fishing pressure.

This study would not have been possible without support from the following. Thank you to Kerzner Marine Foundation, Perry Institute for Marine Science, Bonefish & Tarpon Trust and Florida International University for their continued support along with Andros Island Bonefish Club for their expert guiding. 🐟

# Tagging Permit for Conservation

Thanks to the generosity and conservation concern of Costa Del Mar Sunglasses, BTT will initiate the Permit Tagging Program in 2010. Costa has agreed to fund and support a multi-year, statewide tagging study of Permit in Florida. A donation of \$15,000 in the first year will allow us to purchase thousands of tags and materials for tagging kits, and will go a long way toward researching permit movements and the fishery. This project will allow BTT to work with Florida Fish and Wildlife Conservation Commission to capture some of the information that is currently missing from state fisheries data, including data on movements, spawning, and habitat use. “The research findings from this project will help influence fishing policy and regulations in Florida,” said Al Perkinson, vice president of marketing for Costa, sponsor of the permit tagging program. “We need to better understand how to protect the stock now so anglers can enjoy the recreational sport of permit fishing for generations to come.” Costa Del Mar will be working hard with BTT to promote the program, get guides and anglers involved, and get the word out about what we’re doing. If you would like to be on the list of guides and anglers who receive a tagging kit, please contact us through [www.tarbone.org](http://www.tarbone.org).



Photo: Brian O'Keefe

## How You Can Help BTT

As with any conservation organization, passionate supporters become the fuel that keeps the engine running. Perhaps more important is the energy our collective passion brings to BTT that keeps us moving forward with momentum.

At BTT we're blessed with a large following of dedicated and heartfelt supporters of the cause. We're fortunate that many of you are able to provide financial support as well. Another dollar today is extremely valuable, but just as you would with an investment, contributing a dollar a year for three years makes even more long-term sense. Such commitments from members make it possible for BTT to likewise commit to the research and conservation work that will bring us another day closer to significantly improved fishing.

Any donation is important and helpful. And as we do with all membership levels through our incentive program, we thank those able to contribute to BTT. If you can join our inner circle of Tarbone donors for \$1,000 per year and up, you will be invited to attend our spectacular “Tarbone Thank You” dinner that features a private research presentation. In 2010 this event will be held April 22—future annual dates will appear when scheduled on [www.tarbone.org](http://www.tarbone.org).

You can also help BTT in other ways. In February of each year BTT sponsors a much-anticipated fundraising event that raises a large portion of our annual budget. Included is a major auction where BTT supporters provide donations such as fine marine artwork, spectacular trips to popular fishing lodges and many other valuable items. The benefit to you is that your products are exposed to a large number of potential future clients no matter who wins the bid on your auction item.

You can also help BTT by helping to get the word out. Scientific Anglers, for example, is placing BTT's Tarpon Weight Calculator cards in all of its tarpon fly line boxes. Anglers can use these cards to scientifically estimate a tarpon's weight within 3%, simply by measuring weight and girth. Thanks to Scientific Anglers for exposing BTT to thousands who purchase their fly lines.

We're very appreciative and proud of the support we've received since our inception in 1998. We've come a long way on that support and made tremendous progress—we hope to move even farther forward with your continued support.

Tom Davidson  
Chairman





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We're proud to partner with Bonefish and Tarpon Trust for the sustainability of our fish and habitat.  
📷 Jason Lozano working a single. BILL KLYN © 2009 Patagonia, Inc.

# Who Gets More Stressed?

## The Tarpon or the Angler?

Kathy Guindon  
Assistant Research Scientist  
Florida Fish and Wildlife Conservation  
Commission

It's just after daybreak and the school's been spotted. It's coming your way and a rod is rigged and ready. You have to carefully cast so the bait lands just in front of that one fish that might eat. Whether casting, drifting, soaking, or fly fishing, waiting for the eat becomes agony. The clock ticks. The silence is deadly. Fish are everywhere and yet nothing is happening.

All of a sudden it's pandemonium. Fish on. The reel screams as the tarpon has a fit of acrobatic leaps that compare to an Olympic gymnast's. A 150-pound silver king clears the water in a vertical jump. Next a back flip. Just when you think you're gaining ground the fish takes line again. The back-and-forth battle between angler and giant tarpon goes on for literally hours. Do you think the tarpon was stressed by the end of the fight? Most anglers certainly are.

Anglers and scientists do not yet know the answer to this question, so Bonefish Tarpon and Trust is supporting research that evaluates the non-lethal stress effects of tarpon catch and release. In other words, we already know that catch-and-release mortality of tarpon is very low, but just how stressed do tarpon get from being caught and released? Are there any tips we can give to anglers so they can be more effective at safely releasing their catch?

Since we catch fish of so many sizes, the study is also looking at size differences from mature adults to smaller, immature sub-adults. Data from other species suggest that catch and release is more stressful to larger fish, but this type of research has never been done on tarpon. Knowledge of catch-and-release stress effects on sub-adults and adults is critical to management decisions

and the conservation of tarpon to ensure that anglers do not inadvertently put the future of the fishery at risk.

### How We Did It

For this three-year study, we collected blood samples from tarpon of two size classes of adults: tarpon greater than 70 pounds and sub-adults less than 10 pounds. Within each group, we tested two sub-samples of fish - kept one group in tanks as a control to represent resting fish, and the other sub-group were caught with hook and line to represent stressed fish. We collected blood samples from all fish and analyzed the blood to determine the level of physiological stress to the fish.

The control fish were collected from the Tampa Bay area and held in large tanks. Adult tarpon were angled (stressed) from Boca Grande Pass and Tampa Bay. Sub-adult tarpon were angled (stressed) from a saltwater detention pond in the Tampa Bay area.

We also took advantage of abundant small tarpon to examine a second question: What are the effects of air exposure and handling? Research on bonefish showed that reduced handling and air exposure was better for bonefish

# All of a sudden it's

# The question for conservationists is: Will the fish live to fight another day?

after release and we wanted to test this same question for tarpon. So for a subset of small tarpon caught, some were held horizontally for 60 seconds of air exposure, some were vertically dangled from the hook for 60 seconds of air exposure and some were immediately sampled for blood with no air exposure. From each tarpon used in this study we drew blood, measured and weighed the fish, tagged it and released it. The blood parameters we measured are typical of studies examining stress in animals. Using blood plasma we measured the hormone cortisol, metabolites glucose and lactate, and electrolytes sodium, potassium, chloride, calcium, magnesium and phosphorus. Whole blood was used to measure hematocrit (HCT) and hemoglobin concentrations.

## What We Found

Although these results preliminary (data analysis continues), we're seeing some trends. One of the trends appears to be that large tarpon had more of a stress response than did small tarpon, perhaps because the fights are more intense and last longer. The one exception was cortisol. The release of cortisol is a primary stress response, so one would expect levels of cortisol to increase with increasing stressors or duration of angling events. It was quite surprising to find cortisol in significantly lower concentrations in adult tarpon than in sub-adults that were angled, given that large tarpon typically put up longer fights than small tarpon.

Small tarpon seem to be quite resilient and able to withstand various bouts of handling and exposure to air. Only three of the measured blood parameters varied significantly among handling treatments. Subsequent recaptures of nine of the angled small tarpon released to the pond indicated the fish were able to recover and feed again. One tarpon was recaptured five times.

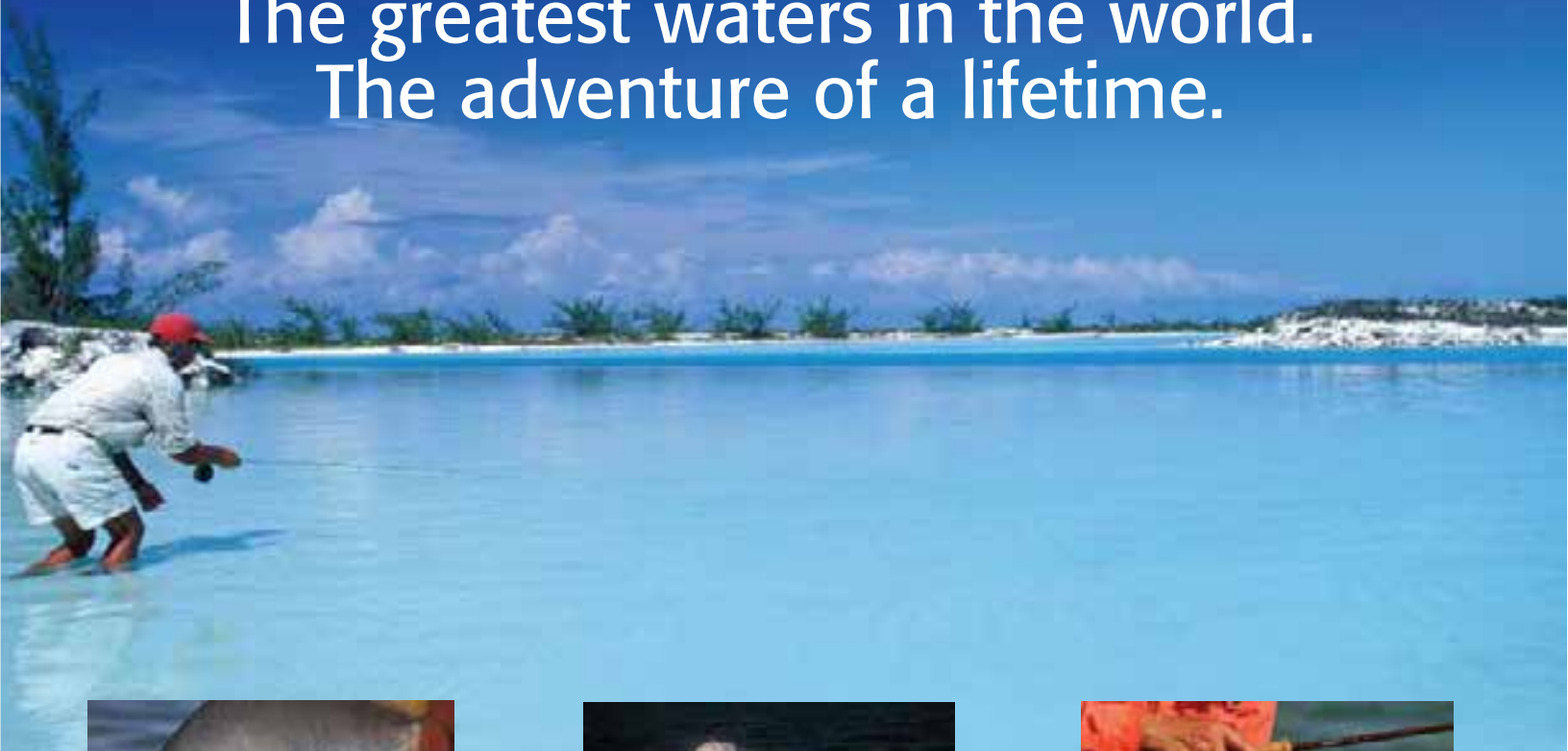
Within both the adult and sub-adult groups, the whole blood parameters (HCT and HB) were elevated in angled fish. Hematocrit, the ratio of red blood cells to plasma, often increases when new blood cells are released in response to a stressor. This result may indicate that tarpon are releasing new red blood cells in response to angling events. An alternative explanation is that the red blood cells themselves are swelling from the internal salt imbalance created by the fish ingesting excessive amounts of salt water as a response to the fight. This is similar to a human's response of breathing harder and faster after a long run. Hemoglobin is the red blood cell pigment that carries oxygen to tissues and is known to increase as a physiological response to exhaustive exercise or stress. So as you might expect, extreme fights during angling events can be considered exhaustive exercise for tarpon, but there high survival after release indicates that they recover well. The next step will be to determine how long it takes these tarpon to recover. We're continuing to analyze the data, so stay tuned to the BTT web site at [www.tarbone.org](http://www.tarbone.org) for further updates. 🐟

# pandemonium! Fish on!

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**T**hanks to Bonefish Tarpon and Trust and its members, the Tarpon Genetic Recapture Study had many more samples and participants in 2009 than in 2008.

Individual tarpon are being identified using DNA fingerprinting, or “fin printing,” techniques. Fish that are genetically sampled by the angling public can be used to determine recapture rates, and with recaptures comes new knowledge of the more local movements and migrations of individual fish within the fishery. By evaluating these factors on recaptured fish over time, biologists at the Florida Fish and Wildlife Conservation Commission’s Fish and Wildlife Research Institute and our partners at Mote Marine Laboratory can assess the success of the tarpon fishery and the connectivity of tarpon between different bodies of waters in Florida and elsewhere.

DNA is the new and natural way to tag tarpon. Any tarpon angler can volunteer to take a DNA sample from any tarpon (large or small) they catch anywhere. As long as the tarpon lives, its DNA will stay a viable way to keep track of that animal if it’s captured and sampled again.

Sampling the DNA from a tarpon is relatively quick and easy.

A few skin cells scraped from the outside of the tarpon are all that’s needed to extract the DNA that “tags” that fish. These areas of the tarpon can be reached while the fish remains in the water, so no \$50 tarpon permit is required to genetically sample a tarpon. Tarpon are typically handled in this manner to remove a hook from the fish or for taking a photo prior to release. Taking a skin scrape with a small piece of abrasive sponge is also less costly and less invasive than other conventional tagging techniques that require an angler to insert tags into the muscle of the tarpon

Anglers are notified when they have a recapture. A letter will arrive containing all the information about that tarpon’s his-

tory in the program, including a computer link to a map so they can see the minimum straight-line distance it traveled to

where it was recaptured. Annual newsletters also update participants on the program’s progress through the year. To date, 19 tarpon recaptures have been what we consider genetically verified through 2008. The 2009 recapture totals will be available soon, so please check the BTT web site at [www.tarbone.org](http://www.tarbone.org) for links to updates.

Kathy Guindon, Research Scientist  
Florida Fish and Wildlife Conservation Commission’s Fish and Wildlife Research Institute

## The Tarpon DNA Program Revealing Keys to Future Movements

# Keep on Scrapin’

To become a volunteer and carry a DNA kit, call 800-367-4461 or email [TarponGenetics@MyFWC.com](mailto:TarponGenetics@MyFWC.com) or pick up a kit at one of our shops: [http://research.myfwc.com/features/view\\_article.asp?id=32093](http://research.myfwc.com/features/view_article.asp?id=32093)



Aaron Adams, Ph.D.  
Director of Operations

## The Bonefish Initiative

In 2008, Bonefish & Tarpon Trust launched two initiatives to improve the conservation outlook for bonefish and permit in Florida. BTT sent letters to the Florida Fish and Wildlife Commission (FWC) and received considerable support from BTT members, recreational anglers, guides and the fishing industry.

The Bonefish Initiative was designed to elevate the status of bonefish in Florida to provide more leverage for appropriate conservation measures (such as habitat protections). The initiative called for the following new regulations:

- Make bonefish strictly a catch-and-release species.
- Remove all mention of “possession” from the new law; bonefish may be briefly and carefully handled for photos, biological measuring, etc., but then are required to be released unharmed.
- Establish a “Bonefish Trophy Tag” to be used only in cases where a bonefish is to be harvested. Harvest will be defined strictly as moribund fish in the cooler (permanently kept for biological records) or one that is temporarily held in the live-well of a fishing vessel for transport to a tournament weigh-station prior to its subsequent release.
- Funds generated by trophy tag sales should be allocated to bonefish research.

Unfortunately, FWC staff determined that the FWC interpretation was that “catch and release” was equivalent to “prohibited species.” This means that even touching the fish (e.g., holding a bonefish to take a photo, remove a hook or to measure) constitutes “possession” and a fine/ticket if witnessed by an FWC enforcement officer. This interpretation was counter to the intent of BTT’s Bonefish Initiative and differs from regulations in states such as Colorado and Alaska that rely on recreational catch-and-release regulations to manage their fisheries.

Catch and release is used as a fisheries management tool throughout the United States and in many places in the world. In these locations, catch and release is interpreted as releasing the fish alive soon after capture. Responsibly pho-

tographing, measuring and weighing of the fish are permitted in these states. As catch-and-release fishing becomes more prominent as a proactive conservation tool by anglers as well as more common as a fisheries management tool—especially as pressure on coastal fisheries increases—BTT advocates a more progressive interpretation of “catch and release” to be adopted in Florida. At press time, BTT was working with FWC staff to evaluate their regulations and to work toward a more progressive use of catch and release as a management tool. Stay tuned to the website for updates and please contact FWC ([www.MyFWC.com](http://www.MyFWC.com)) to support the Bonefish Initiative.



## Permit Initiative

Anecdotal reports from some long-time Florida Keys anglers and guides suggest a possible decline in the abundance of large permit, especially in the aggregations that collect over artificial reefs in summer to spawn. After research by BTT staff, it became apparent that FWC had little or no data on permit such as a stock assessment that’s necessary for effective management. This spurred BTT’s Permit Initiative, designed to improve regulations of the permit fishery and to initiate the collection of data necessary for a stock assessment. The permit initiative’s foremost request was to make permit a game fish and for the FWC to consider making permit strictly a catch-and-release species. The initiative called for:

Permit are part of a recreational fishery worth more than \$8 billion per year in Florida and are especially important to the Florida Keys recreational fishery. The economic contribution of recreational fishing for permit certainly far exceeds its value as a commercial fish and photos of recreationally caught permit from the Florida Keys regularly appear in national fishing magazines. Much of the commercial harvest is composed of juvenile permit far too small to reproduce or to be part of the recreational fishery. This begs the question of why permit do not already have game fish status. Making permit a catch-and-release fishery would go a long way toward ensuring the value of the recreational fishery into the future.

At press time, FWC had recommended against all of BTT’s initiative points and had even suggested allowing spearfishing

*If people concentrated on the really important things in life,  
there'd be a shortage of fishing poles. -Doug Larson*

in federal waters, which is where the spawning aggregations occur. BTT is very concerned about the future of the permit fishery in Florida. Contact the FWC ([www.MyFWC.com](http://www.MyFWC.com)) to express your support for the BTT Permit Initiative. 🐟

## The Federal Tarpon Initiative

In 2008, BTT launched the Federal Tarpon Initiative with the goal of designating tarpon as a federal game fish. Why does BTT think that tarpon deserve federal game fish status? Tarpon are under sufficient long-term threats that a proactive designation as a federal game fish will allow the creation of a good regional management strategy that will ensure strong tarpon populations for the future.

The recreational fishery for tarpon contributes more than \$6 billion annually to coastal economies from Virginia to Texas. Although primarily a catch-and-release fishery, sustainable tarpon populations are under threat from numerous sources, including critical nursery habitat losses, harvest by hook and line and even spears in some states, and directed commercial and subsistence harvests by long-lines and gill nets in Mexico, Cuba and the broader Caribbean. We already know that the once-famous tarpon fishery at Port Aransas, Texas, is all but gone. We want to prevent a similar fate for other locations.

BTT-supported satellite-based tagging research shows that tarpon undergo extensive long-range migrations throughout the Gulf of Mexico, southeastern Atlantic US coast and Caribbean Sea. In other words, “your” tarpon are also “their” tarpon. This means that we need a single, regional conservation plan for tarpon.

Listing tarpon as a federal game fish would spur states to collaborate on regulations to protect the tarpon fisheries and their habitats. It would also allow the United States to begin negotiations with other national entities (especially Mexico) to ensure tarpon receive sufficient regional protection.

BTT is now working to introduce legislation in Washington, DC, to make tarpon a federal game fish. When this legislation is formally introduced and considered, BTT will need your letters of support to ensure its passage. Please stay tuned to

the Conservation tab at site at [www.tarbone.org](http://www.tarbone.org) and to the e-newsletters for updates. 🐟

## Take Me Fishing

The Recreational Boating & Fishing foundation has created an exceptional on-line tool which makes it easy to find great angling - a site that every BTT member should explore.

Takemefishing.org provides all the information needed for the avid boater and angler to get out on the water. The site offers valuable tools for all levels of fisherman, from how to get your fishing license, to finding fishable ‘secret spots’ close to home, to tricks that veteran anglers can add to their arsenal. Takemefishing.org also benefits the boating community by providing tips on maintenance and operation, as well as price comparisons and product reviews saving time and money for those purchasing a boat or boating equipment. And for anyone who wants to share their advice and their fish tales the site offers Fishington – an on-line chat room which serves as the fishing and boating capital of the internet.

The forward-thinking website also provides information for freshwater and saltwater enthusiasts who want to protect these valuable resources for future generations, and supports non-profit organizations such as Bonefish & Tarpon Trust and environmentally conscious programming such as Pirates of the Flats. Takemefishing.org is the ultimate on-line boating and fishing resource.



Vanessa Haley  
Florida International University and  
Bahamas National Trust

## The Bahamas Initiative: The Future of Flats Fishing in The Bahamas

The future of the bonefish industry in The Bahamas is a promising one. Many new initiatives regarding this economically important fishery have taken off within the past year on many different levels. The advent of bonefish as a recreational fishery in The Bahamas has made the clear, relatively pristine shallow flats of the islands a primary fly-fishing destination for anglers worldwide. What was once an important species for local consumption has now been transformed into a multi-million dollar tourism industry.

Undoubtedly, most would agree that the bonefish industry is economically important for many coastal communities. However, the growing popularity of the industry and concerns about rapid human population growth may threaten bonefish populations, their habitats, and the fishery. Such negative impacts include an increase in fishing pressures and concomitant increase in incidental mortality, local shoreline development, habitat degradation, and the loss of important spawning and nursery areas. Without sufficient information on bonefish biology, effective management and conservation of the fisheries are not possible.

As part of their commitment to conserve these fisheries, BTT teamed with Fisheries Conservation Foundation and the Bahamas National Trust to form the Bahamas Flats Fishing Alliance (BFFA) in 2009. This team was established to promote the conservation of critical bonefish habitats and the valuable fisheries they support. In particular, this alliance seeks to:

- 1.) Support research and education projects addressing the conservation and management of The Bahamian Flats environment.
- 2.) Develop an effective campaign to communicate scientific findings to policy-makers, resource managers, and the general public.
- 3.) Assist decision-makers in developing scientifically sound strategies to address relevant fisheries and coastal resources issues.
- 4.) Encourage public support for such strategies.

Since its inception, the Bahamas Flats Fishing Alliance has launched two projects within The Bahamas. The first project launched was a study to determine economic value of the bonefish fishery, information which is critical for demonstrating the need for and value of establishing a long-term flats conservation strategy.

The second project launched a program called The Bahamas Initiative, which is a multi-year effort to conduct research on bonefish populations, the fishery and culture, economics of the fishery, and conservation and education, all toward the goal of effective long-term management. For details on The Bahamas Initiative, click on the Conservation Initiatives tab at [www.tarbone.org](http://www.tarbone.org).

The future of the bonefish industry in The Bahamas is a promising one. Many new initiatives regarding this economically important fishery have taken off within the past year on many different levels. The Bahamas Ministry of Tourism is in the process of developing a bonefish guide certification program to further encourage the sustainable use of bonefish resources.



*The charm of fishing is that it is the pursuit of what is elusive but attainable, a perpetual series of occasions for hope. -John Buchan*

The future of the bonefish industry will ultimately lie in the hands of the guides, anglers and resource managers. By working together through co-coordinated efforts we will move the industry forward and promote a sustainable fishery. Whether you're a guide, angler or resource manager, participating in the following ways will help:

#### Guides and lodge owners:

- Support the goals of BFFA and the Bahamas Initiative by participating in collecting bonefish data in the field.
- Sponsor a research scientist to visit your lodge to collect pertinent research data.
- Encourage the use of The Bahamas Bonefish webpage (coming soon to [www.tarbone.org](http://www.tarbone.org)) to facilitate communication between scientists, anglers and guides.

#### Anglers:

- Choose lodges and guides that participate in the BFFA.
- When you fill out Bahamas Tourism questionnaires, ask them to fund and support the BFFA.
- If the lodge you frequent is not a BFFA participant, suggest that they join.
- Help to fund the work of the BFFA.

#### Resource managers:

- Develop outreach and educational material that support the goals of BFFA and the Bahamas Initiative.
- Make recommendations to government officials to implement policies based on research findings under BFFA and the Bahamas Initiative.
- Consult local guides to determine issues that affect the fishery.
- Actively seek funding to support research and educational programs under BFFA.

We all need to work together now to ensure a healthy fishery for the future. Please take the extra steps to help this important work. 🐟

## BTT Guides Team Up

I've given presentations about research, fishing and conservation to all kinds of clubs, guide associations and government panels. The reaction can be surprising at times and tough to predict, so I typically go into each presentation with a blank slate of expectations. But even with this approach, I was surprised after my presentation to the Abaco Fly Fishing Guides Association in May 2009.



Abaco has a well-known bonefish fishery with a lengthy history. Many Abaco bonefish guides have been plying their craft for decades and know their quarry extremely well.

I'd been in frequent touch with Buddy and Cindy Pinder before my arrival in Abaco. They're active in the Abaco Fly Fishing Guides Association and filled me in about habitat conservation challenges they face and ongoing issues with fisheries management. From this background info I knew the Association was proactive and conservation oriented.

As always, I went into the presentation from the perspective of a fish biologist who's addicted to fly fishing. As Director of Operations of BTT, I have the great advantage of being privy to the best and most recent research on bonefish. My background as a fish biologist and fly angler also provides a broad perspective about what aspects of fish science apply to—and appeal to—recreational anglers and guides. So in my presentation I addressed topics I thought most useful to the guides' daily fishing and conservation concerns.

I was pleasantly surprised by the forward-thinking manner of the guides about conservation. Their quickness to relate information from my presentation to their conservation efforts and fishing really impressed me. Many guides already envisioned ways they would change their fishing and fish-handling behaviors to increase survival of bonefish. I received so many requests for tagging and fin-clip kits that I quickly ran out.

It's very rewarding to meet such a large collection of concerned and conscientious guides, and I look forward to going back to Abaco with another presentation. 🐟

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The Premium Galley is a way for us to thank those that have donated to BTT's work to understand and protect bonefish, tarpon, and permit. Please make a point to support BTT sponsors. And if you are not yet a sponsor, please consider joining those who are investing in the future of the bonefish, tarpon, and permit fisheries.



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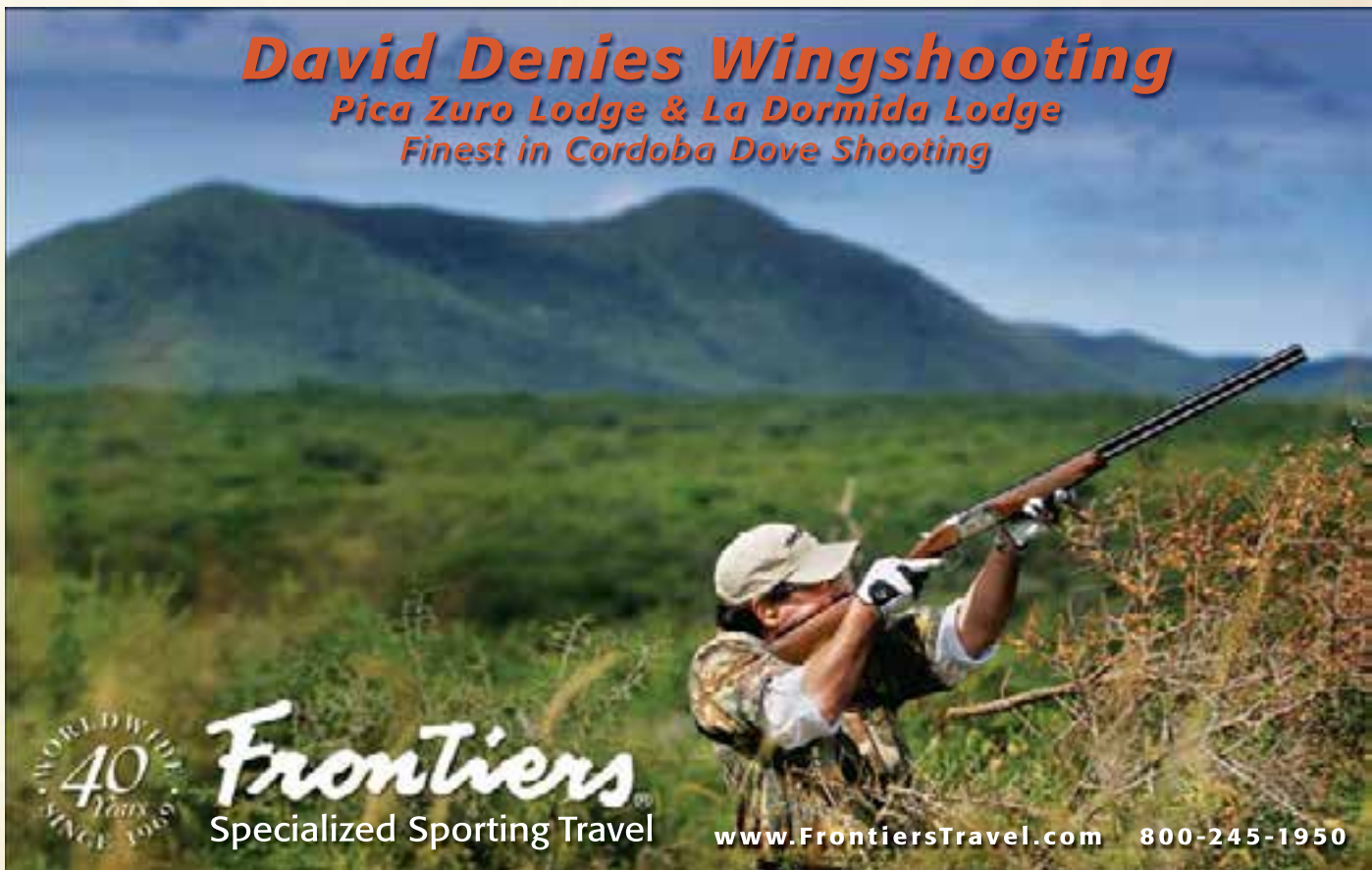
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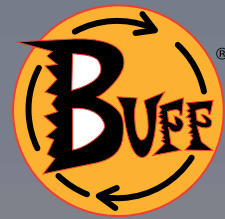


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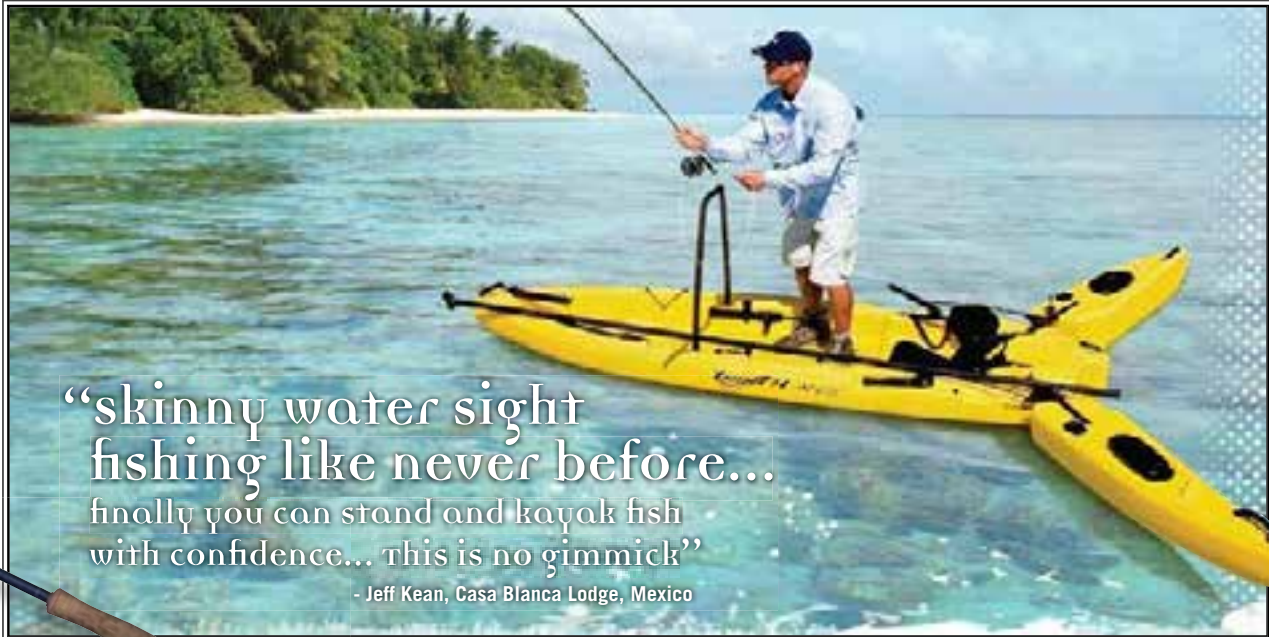
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Bonefish & Tarpon Trust is pleased to announce that it will be participating in Copley Fine Art Auction's Non-Profit Sporting Initiative. Copley will devote a special section in their upcoming July 2010 Sporting Sale where donated items will be sold to benefit different non profit organizations, including specific works that will be sold to benefit BTT. Of this initiative, Copley CEO Stephen O'Brien, Jr. states "We are excited to be apart of

and help an organization like Bonefish & Tarpon Trust, the work and research that BTT is conducting is vital to preserving flats fishing worldwide. Many of our clients are anglers and this program provides a new way to way to support our fisheries and give something back that will benefit them, their children, and their grandchildren." Copley Fine Art Auction's Sporting Sale will be held on July 21 and 22, 2010 in Plymouth, Massachusetts.



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do you know why Bonefish & Tarpon Trust is a rare organization? It's because BTT's science-based framework works proactively toward the long-term conservation and restoration of bonefish, tarpon and permit fisheries. This priority and reliance on science better focuses our research and conservation needs. It's unquestionably one of BTT's greatest strengths and the top reason we're widely respected after only 10 years of existence. Along with invaluable feedback and support from our Founding Members list (a "who's who" of flats fishing) and industry Partners, few organizations with the same (and even greater) resources can compare with our efficiency.

I shine the spotlight on our science-based approach because it's what helped BTT formulate a number of partnerships and alliances such as the Caribbean Bonefish Research Program. For the past few years, BTT's Research Committee has wrestled with how to fund the large number of Level 1 Priorities for bonefish research and conservation. Some of these priorities include: which species of bonefish support the fishery; do bonefish growth rates differ everywhere or just in some locations; do bonefish regularly move long distances or only by the more adventurous individuals?

Answers to all of these questions have important conservation implications. In 2008 we initiated a single program that encompassed many of the most pressing questions about bonefish biology and conservation—hence the Caribbean Bonefish Research Program.

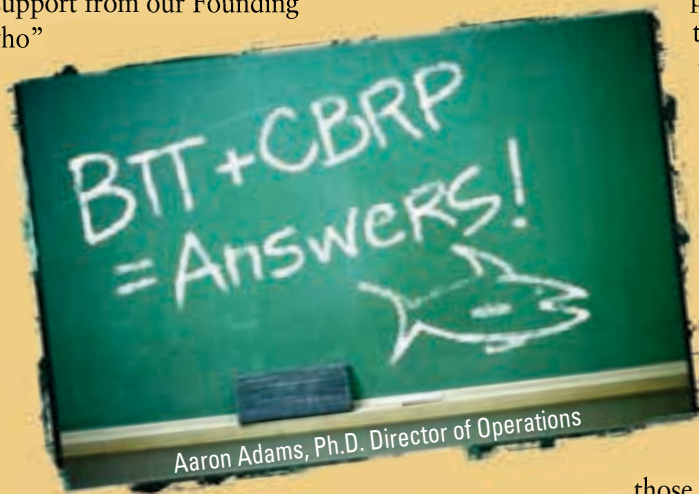
Why should we care about this information? It's all about getting the right information for fisheries conservation and management. For example, imagine fishing a trout stream that harbors three or four species of trout. Now realize that the fisheries agency doesn't differentiate these species and just manages them all as "trout." You can harvest a certain number of trout, regardless of species, even though each species probably has different requirements for habitat, spawning and growth. With our present knowledge about bonefish, that's presently the dilemma facing bonefish in the Caribbean.

Some fisheries agencies are considering establishing zones that would allow catch-and-release recreational fishing and protect habitats. But if that should be the case, how big should they make the protected areas to be sure they adequately protect the bonefish fishery? Knowing bonefish movement patterns can help answer that question.

It may be that bonefish are bigger in the Florida Keys, but preliminary information indicates that this is because they grow faster than in many Caribbean locations. A 23-inch (fork length) bonefish in the Florida Keys, for example, is approximately six years old; a bonefish of the same length caught in the British Virgin Islands turned out to be 16 years old. If growth rates really are so different, then fisheries managers need to incorporate this into their management plans. Doing so would prevent, for example, those deciding fishery regulations in Caribbean locations from emulating the Florida Keys (big bonefish) and ending up mismanaging the resource.

The only way this program is working stems from the generous support and participation of lodges. They're as concerned with bonefish conservation as BTT. These lodges have agreed to take on a rather challenging task: Tag 2,000 bonefish, take fin clips from 100 of them and save any gray ghosts that don't survive catch and release for our growth studies. One of the inhibiting factors is that tagging and obtaining fin clips from bonefish requires more time and effort than many guides and anglers are willing to give. Therefore, the lodges and guides taking on this challenge are a testament to their conservation commitment. To view the list of participating lodges, visit the "Research" tab at [www.tarbone.org](http://www.tarbone.org) and keep them in mind when booking your next Bahamas outing.

The Caribbean Bonefish Research Program is a three- to five-year effort. If you're a lodge owner or member of a guide association who can step up to the plate and commit to this extremely critical support, please contact us. And, if you or someone you know with conservation credibility is willing to help fund this groundbreaking program, send him or her our way. We're all interested in making sure we have healthy bonefish fisheries for the future and getting to that point requires many shoulders behind the effort. 🐟





The saltwater flat is a magical spot, but by definition these are shallow areas. The sport of fishing these shallow flats has become increasingly popular. And why not, the scenery is spectacular, the wildlife abundant and to stalk the flat and sight fish a great thrill. But these flats are diverse and very fragile ecosystems. Often the only way to access these remote areas is in a boat and if the boat is not operated in an environmentally concense manner these shallow water ecosystems begin to deteriorate.

The inhabitants of the flats are very wary and react to the slightest foreign noise, so a poling skiff that will silently slip through these waters is often the preferred method of gliding across this watery landscape. But as the skiffs have become lighter and more technologically advanced now anglers can now reach areas that they had dreamed of before. But anglers need to be the stewards of these resources and be aware of the damage that can be imposed by the prop of the outboard engine. The flats should be poled across, not run across. Long term stewards of these flats are Captain Rick Ruoff and Flip Pallot and they both agree on the conduct of boat operators. Captain Rick Ruoff has seen the changes in the condition of the flats and what the effect of careless boat operators can do. "When I started guiding, forty years ago, skiffs were not capable of running a flat in extremely shallow water. It was float in 10" and run in 18" at best. Also, everyone's lower unit was devoid of paint as we would often "blow out" of shallow spots that we had poled into a long distance. There were prop tracks all over the backcountry, most made by guides. Turtle grass is like arctic tundra in that it takes at least seven years to heal a prop scar; some last for decades." According to Capt. Ruoff "The advent of the new, light, ul-

tra-shallow boats brings about possibilities of running and poling much shallower-just a few inches – and the ability to scar grass beds is increased dramatically. This is the shallow sanctuary for many fish and crustaceans, and we must not abuse the ability of these new skiffs to run shallow. Running across a flat to "wake" a school of fish will damage both the bottom and the fishes' patterns. Doing this repeatedly is driving through the fishes' house, and nothing good will come of this in the long term, not to mention the bottom.

Flip has spent a lifetime studying the flats and their inhabitants. "Skiffs have been my primary fishing tool since 1954. In all the intervening years I've learned a bunch about how they can be used and how they should be used. In the end, it's pretty easily boiled down...the single best test for skiff use is how, as a tool, it impacts the fishes house ! The next best test is how it impacts other users of the resource...like folks, birds, marine mammals and the marine environment. We are capable of building wonderful skiffs these days and forums exist, as never they did, which teach us how to use tackle and electronics to find and catch fish. As more and ever more anglers are drawn to our lifestyle, the need to use our tools wisely and with great consideration becomes more critical.

Treat the fishes house as if it were your living room (it is). Give other users more space than you would want for yourself! Don't be bashful about insisting that others do the same for you!" 🐟

Chris Peterson  
President, Hell's Bay Boats

Photo: Aaron Adams

# Keep Off the Grass

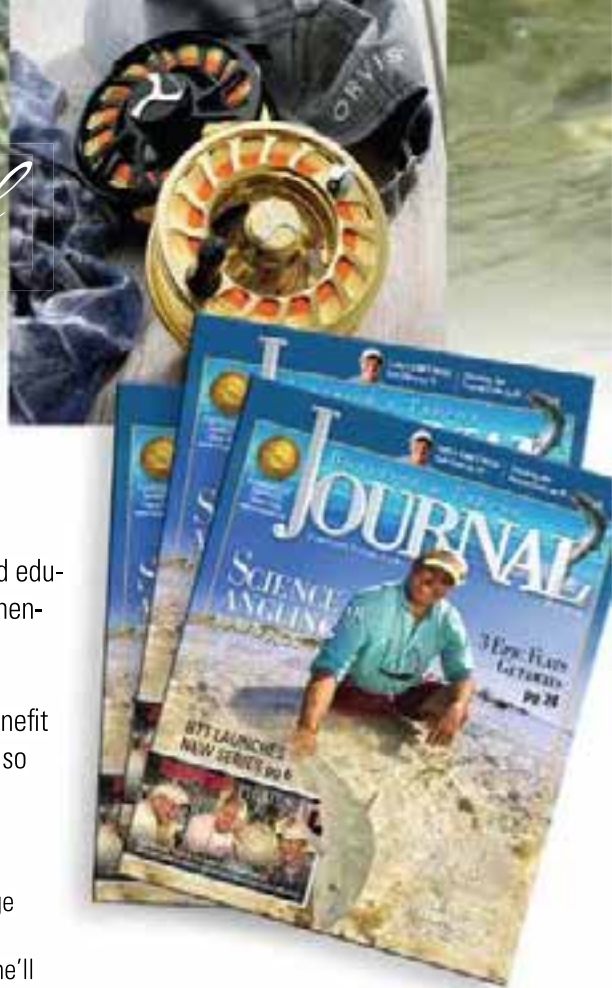
# Proudly Spread the BTT Gospel

Membership is our lifeblood. To help attract additional caring anglers to join the cause and better serve our current supporters, we've revamped our member benefits package. Depending on the level selected, members will receive new BTT items that include a T-shirt with custom Tim Borski artwork, new BTT hats, rods and reels, plus big discounts ranging from 25% to 60% off orders from Patagonia. Other valuable discounts from more BTT Partners are also in the works—check the Join BTT tab at [www.tarbone.org](http://www.tarbone.org) to view the latest offerings.

Nearly 90 cents out of every dollar goes directly to our mission: research, outreach and education. To show your pride in supporting BTT even more, wear your BTT shirt or cap whenever possible. They attract attention and at times even serve as conversation starters.

A stronger membership base equates to added research dollars and more voices to benefit bonefish, tarpon and permit. You know at least three people who should be members, so take action:

- Send an email with a link to our website; better yet, call him or her and talk us up.
- Obtain membership brochures you can leave on the table at a doctor's waiting room or lodge table; perhaps a fly or tackle shop you visit will put our brochures near the register counter.
- Give a membership yourself in a friend's name as a birthday or holiday gift. It's a good bet he'll renew and become an ongoing member—see the benefits chart below.



*For our present members, thanks again for your valuable support; for our members-to-be, stand with us in behalf of bonefish, tarpon and permit.*

Mike Cassidy , BTT Vice President of Membership

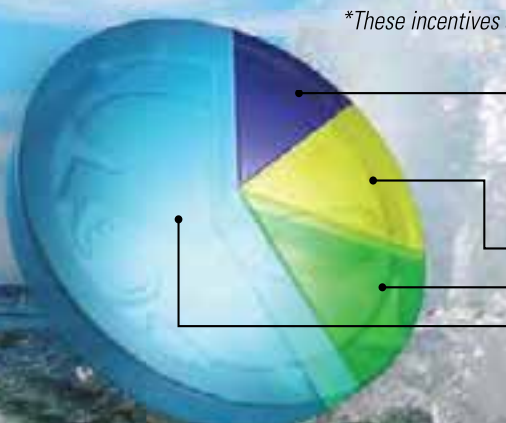
## BTT MEMBERSHIP INCENTIVES

Level	Amount	Incentives
Associate	\$50	sticker, e-newsletter, journal, fly
Member	\$100	All above, plus t-shirt
Conservation Sponsor	\$500	All above, plus hat
Gray Ghost Sponsor	\$1,000	All above, plus 25% off Patagonia for one year
Gray Ghost Premium	\$1,500	All above, plus rod or reel*
Silver King Sponsor	\$2,500	All above, plus rod and reel* and 50% off Patagonia for one year
Tarbone Chairman's Circle	\$10,000	All above, plus 60% off Patagonia for one year

*\*These incentives are awarded the first year in which a member reaches each level.*

### How our donations are used:

- 11 % Administration
- 13% Education
- 13% Outreach
- 53% Research



Tell one and all to tune in to "Pirates of the Flats" and learn more about BTT. Visit [tarbone.org](http://tarbone.org) for additional details.

## Instinctive Conservation

### Sometimes saving bonefish starts with one.

Flip Pallot, BTT Founding Member

**J**uly mornings along the ocean side of the upper Florida Keys are spectacular in a still, hot, humid way. At low tide, it's the distinct smell of bonefish—you've been there, you know exactly what bonefish smell like.

As the golden tops of towering cumulous clouds built upward over the nearby Gulf Stream, my oldest friend, Chico Fernandez, waded toward the tailing bonefish. Light reflected from cloud tops and lit the dripping tail like a beacon, leading the stork-like angler into position for the cast.

I held the skiff far enough offshore to watch a scene that I had witnessed a hundred times before: tailing bonefish, Chico with a fly rod in hand, the outcome predictable. Or so I thought.

The cast was perfect as I knew it would be. The snapping shrimp fly landed 24 inches ahead of the fish as it paralleled the shoreline in six inches of rising water. As the bonefish approached the fly, Chico made a series of very short strips or bumps and the fish shot ahead and tailed on the fly.

I harbored no doubt that Chico would, in an instant, be tight on the fish. I got ready to pick him up in the skiff for the fish fight that would surely follow.

Chico nudged the fly into the soft mouth of the bonefish and

I saw the water explode. For the first time in the fish's life, it was exposed to a form of restraint. I poled the skiff as quickly as I could toward Chico and, to our complete amazement, this wild creature headed at warp speed toward the beach. The fish covered the short distance in scant seconds and launched itself three yards onto the sand.

After trimming the motor down to hold the skiff, I waded over to Chico. The two of us, stunned, knelt by the stranded bonefish and stared at a sight more amazing than the episode we'd just witnessed: Before us on the sand lay a mature bonefish encircled by six strands of stainless-steel wire leader. At closer inspection we could see that the fish was not actually wrapped in the leader material. Evidently in its younger days the bonefish swam into the coils, become entrapped and over time it grew around the coils like an oak around a cable. The coils of the leader actually passed through the animal's body.

We placed the fish back into the water so it could breathe as we decided on a first-aid plan. Chico held the fish just above water level as I snapped off the strands of wire with the side cutters of my fishing pliers. I grabbed the end of each embedded strand and pulled it free as if removing stitches from a wound. Luckily no blood escaped.

Chico removed the hook and slowly revived the bonefish, restraining it in order to regain sufficient strength to better avoid predators. As the bonefish paddled off to deeper water, I realized that Chico and I hadn't spoken since he stepped out of the skiff to begin his stalk. We'd both silently taken part in an event that became a building block in the fishing wall of our lives. Our fates crossed at a moment when the bonefish really needed us.

As I look back on that long-ago moment, I can't help but admire the new spin that event meant to us with the term "catch and release." 🐟

*Chico & The Man: Surveying a lifetime of conservation effort*



TOM BROKAW 🐟 MICHAEL KEATON  
LEFTY KREH 🐟 THOMAS MCGUANE 🐟 BILL KLYN  
YVON CHOUINARD 🐟 R. VALENTINE ATKINSON



# Pirates OF THE Flats.

See what happens when a legendary news anchor, famous actor, angling legend, acclaimed author, visionary industry leader, a celebrated photographer and a Bonefish & Tarpon board member all share an island for one week.

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