

It's a Short! Safely Releasing Summer Flounder Unharmmed

By Matthew Heyl, Fisheries Biologist



Daniel Costa

“It’s a short!” says the mate on a party boat—or your buddy while fishing the jetty—a phrase heard by anglers too often these days. With summer flounder regulations changing constantly, undersized fish are being caught and released more than ever. What happens to all those released fish? Will they survive to be caught another day? Unfortunately, many will not, but there *are* ways to reduce catching shorts and to improve the survival of those you throw back.

Summer flounder (*Paralichthys dentatus*), also known as fluke, are common throughout New Jersey’s estuarine and coastal waters from late spring to late fall. They can grow to more than 30 inches long and weigh over 20 pounds. One- to 3-pound fish are most common, with an 8-pound fish considered large. The New Jersey state record was landed in 1953 weighing 19 pounds, 12 ounces.

Not all fluke are keepers. In fact, most caught fish are released. During the fishing season, the short-to-keeper ratio can reach as high as 40:1 in some locations. With various hooks and bait, plus new fishing approaches and release methods, New Jersey’s favorite flatfish *can be released safely*.

Hooks and Bait

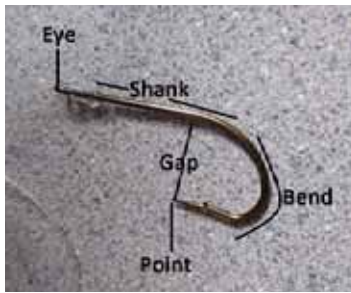
Hook technology has improved greatly in recent years with new styles and colors created annually. The five aspects that vary depending on the hook style include the eye, shank, bend, gap and point. There are dozens of hooks for targeting fluke with three common styles being the J hook, wide gap hook and circle hook.

The J hook is the most common style and can be used for almost every fish species. J hooks work well when fishing artificial lures or drifting, allowing the angler to feel the bite of the fish along with the excitement of setting the hook. The angler must pay attention, for there is an increased risk that fish will swallow the hook and become gut-hooked. Fluke have a large mouth and aggressive nature. *To increase your odds of catching a legal-size fluke—and to reduce the risk of gut-hooking—New Jersey Division of Fish and Wildlife recommends that anglers use only hook sizes 5/0 to 7/0.* A study conducted by Fairleigh Dickinson University shows that anglers fishing with these sized hooks catch larger fluke and minimize catching shorts.

Wide gap hooks, often called a fluke hook, are a favorite among summer flounder anglers. Similar to the J hook, the bend is longer, creating a wide gap between the shank and the point. This versatile hook works well when drift fishing with bait from a boat or when casting from shore. These hooks have good results when fished with artificial bait. Like the J hook, the angler feels the bite and hooks the fish, but due to the wider gap in the hook, gut-hooking is less common.

Circle hooks are increasing in popularity with anglers targeting summer flounder. This unique hook looks like a wide gap hook but the point bends back towards the shank. Many anglers prefer to use circle hooks because once a fish is hooked, it stays hooked. When using a circle hook, the angler does not need to set the hook because the fish hooks itself. This way of fishing can be frustrating to an angler new to this approach, but once mastered, some anglers only fish circle hooks. They work well when fished with bait from a boat or from shore.

Anatomy of a J hook



Wide gap hook (also known as fluke hook)



Circle hook



Properly Hooked Fluke Have High Survival Rate

Studies from the New York and Virginia Sea Grant program sampled 461 summer flounder by hook and line. The study used sproat hooks (a type of J hook), wide gap hooks and circle hooks to analyze fish that where hooked properly and those that where gut-hooked. Mortality rates were similar among fish caught using the various hooks. **Fluke that were hooked properly had an average mortality rate of only 7.5 percent.** When hooked internally, the sproat hook led to a fish mortality of 80 percent, wide gap hook mortality was 60 percent and circle hook mortality was 56.5 percent. Most fluke caught in this study where caught using circle hooks.

Match Tackle and Bait to Avoid Fish Exhaustion

Tackle that is heavy enough to quickly reel in your catch will benefit the fish. Exhausted fish can lead to increased mortality. One of the best parts of fishing is the fight, with the thrill of landing your quarry. Many fish are never landed. Anglers not using the correct line, terminal tackle or rod are guaranteed to lose more fish than they land. A typical summer flounder fishing outfit includes a 5- to 6-foot rod with either a conventional or spinning reel, filled with 10- to 20-pound-test line.

Fluke are aggressive, predatory fish readily consuming a variety of fish and crustaceans as well as artificial offerings. When fishing with a big bait, use a bigger hook. For example, fishing a peanut bunker or snapper bluefish with a mismatched smaller hook normally used with a clam or squid strip would worsen the odds of fluke being gut-hooked. If fishing with smaller bait like a silverside or mummichog, try using a circle hook to decrease short fish mortality. Better yet is to use only hooks sized 5/0–7/0 and matched with an appropriate bait to prevent catching smaller fish.

Techniques and Release Methods

The most exciting part of summer flounder fishing is anticipating—then getting—the first hit of the day. Being in contact with the fishing rod ensures the angler will feel that hit. Technological advances in fishing line sensitivity allow an angler with a finger on the line to feel every bump, crevasse or fish hit. Yet all too often anglers leave a rod unattended while

Hooks: Matt Hey/NJ Div. Fish and Wildlife

Art ... A poem Without Words.

Handcrafted Sealife inspired Stainless Steel art sculptures with spectacular colors

Sailfish

Tarpon

Hogfish

Sculptures available in 18", 25", 36", and 45" sizes. Custom sizes available upon request.

Metal Fish 66, Inc.
Stainless Steel Art Sculptures

321-277-8650 • Armando@metalfish66.com
Visit us at www.metalfish66.com

Check out our 7" vinyl stickers of the sculptures. Perfect for your vehicle or boat.

BUCK TAILS OUTFITTERS

All Your Hunting And Fishing Needs!

**GUNS • AMMO • APPAREL
BAIT • TACKLE • ARCHERY**

Gun Transfers **PRICE MATCH** NJ Hunting & Fishing Licenses








6390 Harding Highway 609-829-2229
Mays Landing, NJ

Find us on Facebook

fishing, a style known as dead-sticking. When a fish hits without an angler to set the hook, the fish may swallow it, becoming gut-hooked. Anglers who must step away should ask a friend to tend the rod—or simply reel up.

After feeling that hit and reeling in a short summer flounder, what next? The goal is to return the fish to the water as soon as possible, but *there is much more the angler can do to decrease mortality*. Most fish have a surface slime layer that forms a frontline protection from bacteria. A break in that slime is like a cut on human skin. The best way to protect the fish is the “less is more” approach: the less the fish is touched, the better the chance of survival.

At the water's surface, the fish should be netted. If not being kept, a rag or gloves dipped in saltwater should be used to handle the fish, preserving the slime layer. Have ready a pair of pliers, multi-tool or any other de-hooking device to release the hook from the fish. An avid angler will eventually encounter a fish that swallows the hook. For gut-hooked fish, cut the line as close to the hook as possible. Mortality increases when attempting to “rip” out the hook, damaging the internal organs and gills.

A hook that remains may eventually rust away, so **use plain steel hooks, not stainless**. Never let fluke touch the ground or deck unless the fish is going to be dinner. When taking photos, minimize its time out of the water. Hold the fish horizontally with both (wet) hands underneath to support the fish's weight, decreasing the chance of internal damage. Avoid holding the fish by the gills, eyes or tail.

Once the excitement is over and photos quickly taken, it's time to release that fish! If the fish doesn't swim away immediately, keep the fish upright underwater using one hand around the tail and the other supporting its belly. Allow it to recover for a few minutes by gently moving it forward below the water's surface in an “S” pattern to allow oxygen-rich water to flow over the gills. The fish will swim away once sufficiently recovered.

Which Tackle Worked Best?

This summer while fishing, try using a variety of hooks. For fluke, the Division of Fish and Wildlife recommends to use only hooks sized 5/0–7/0 to **increase your odds of catching a legal-sized fluke—and to reduce fish mortality**. Take the challenge and you might be surprised that new fish-friendly products can out-fish many older products. Keep a record your fishing trips. Write down what fishing outfit was used, the terminal tackle, bait, size of fish, whether fish were kept or released, if fish swallowed the hook, fish condition when released and any other information that could *increase your future success and decrease fish mortality*. Take the challenge and you might be surprised that new fish-friendly products can out-fish many older products.

To support the Division of Fish and Wildlife and our science-based fisheries management efforts, consider filling out a trip report through the Volunteer Angler's Survey here: <http://NJFishandWildlife.com/marinesurvey.htm>. Details can be found

IF YOU CAN'T KEEP IT,



REDUCE DISCARD MORTALITY

Top 8 Tips for Releasing Fish Unharmed

See page 15.

in the page 12 article. Your input provides valuable data for sound fisheries management decisions.

To review a list of references and source materials, see the expanded online version of this article at NJFishandWildlife.com/artflukerelease.htm.

Fin-Ominal SportFishing

**Welcome To
Fin-Ominal Fishing Charters!**

**The New Fin-Ominal is a
Custom-Built State-Of-The-Art
50 Foot Sport Fisherman with
speeds up to 30 knots. We can now
comfortably accommodate up to
15 fisherman for a fishing charter.
We can also host any pleasure or
business cruise for up to
23 passengers!**



INSHORE AND OFFSHORE FISHING AT ITS FINEST!

**Belmar NJ Fishing Charters ~ Captain Jared
732-489-1463**

**Located in Belmar Marina • Booking Year Round!
finominalcharters.com**





Beach Creek Oyster Bar & Grille
500 West Hand Avenue
Lake Road, On the Water
609-522-1062



EXPERIENCE OUR AWARD-WINNING CONTEMPORARY COASTAL CUISINE.

Intimately served inside amidst copper & wooden decor, or outside on our waterfront deck. Starry lights, moonlit nights, candle lit sunsets with botanical teak, palm trees & tropical flowers. And we've got the best entertainment anywhere in Southern New Jersey - directly on the water ~ with the perfection of service, cuisine & cocktails.



Happy Hour 3 ~ 5 Dinner 4 ~ 10 First Seating 4 ~ 6
3 Course menu \$25 Entertainment Nightly
www.beachcreek.net



Governor's Surf Fishing Tournament

GET OUTSIDE & ENJOY A DAY OF FISHING WITH FAMILY AND FRIENDS

By Karen Byrne, Senior Biologist

The 25th annual tournament was a fun day of family fishing. A west wind kept the day chilly, but bluefish blitzes made for a great day as fishing with 245 fish entered into the bluefish category. In addition to the bluefish entered, three striped bass were entered into the tournament as well. At tournament headquarters NJ 101.5 radio station had music and games for participants who were visiting partnering organization tables or grabbing a bite to eat.

New Jersey Lieutenant Governor Kim Guadagno couldn't participate in the tournament as in previous years, but made sure to stop by to wish

participants good luck. Once fishing had ended DEP Commissioner Bob Martin along with DEP Natural and Historic Resources Assistant Commissioner Rich Boornazian assisted with the awards ceremony. Dakota Hahn of Toms River took the grand prize and NJ Governor's Cup by catching a 43.5" striped bass. Mr. Hahn received two-rod and reel combination, one of which was a 2016 TICA rod; a pair of Costa Del Mar sunglasses; a plaque; and will have his name engraved on the Governor's Cup, which is permanently on display at Island Beach State Park.

Also during the awards ceremony two additional plaques were awarded to two men who have been a great support to IBSP and the Tournament. First Paul Smith, former Governor's Surf Fishing Tournament treasurer, was presented with a plaque by the Tournament Committee to recognize his dedicated service to the Tournament and to the sport of surf fishing. Paul had been involved with the Tournament since its inception, and only this past year has stepped down. Also NJ Beach Buggy Association (NJBBA) took the time to recognize NJ DEP Compliance and Enforcement Assistant Commissioner Ray Bukowski, who had previously been the manager at IBSP. NJBBA recognized his support and hard work in restoring IBSP after Sandy. Ray was awarded with a plaque and Honorary NJBBA Lifetime Member.




Marc Henchek/N.J. Fish and Wildlife

Thank you!

New Jersey Division of Fish and Wildlife, along with our co-sponsors—the NJ State Park Service, NJ State Federation of Sportsmen's Clubs, Jersey Coast Anglers Association and NJ Beach Buggy Association—would like to thank the following organizations for contributing to the success of the 25th Annual Governor's Surf Fishing Tournament in 2016:

- Bass Pro Shops
- Costa Del Mar Inc.
- Chestnut Neck Boat Yard
- Coastline Surf Systems
- Legal Limits Company
- Mann's Bait & Tackle
- NJ Division of Fish and Wildlife's Hooked on Fishing - Not on Drugs Program
- Silver Horde
- Stanley Jigs

In addition to the grand prize, 19 anglers received rod and reel combinations for their prize-winning fish in the striped bass and bluefish categories. There were categories for children, teen and adult anglers, including sub-categories for male and female anglers. Early tournament registrants were also entered into an early entry raffle for a Coastline Surf System. 

TACKLEDIRECT
World's Premier Fishing Outfitter.™



REQUEST OUR CURRENT CATALOG
AT TACKLEDIRECT.COM/CATALOG

FISH, SNAP 📱 & TAG #HookedOnTD



MOJO JIG RODS
PRICED \$200⁰⁰

- Kigan hook-keeper and a premium EVA handle
- Two coats of Flex Coat slow-cure finish
- Advanced Reinforcing Technology (ART)
- Designed specifically for saltwater vertical jigging applications
- Premium-quality SCII graphite with FRS for unparalleled strength and durability
- Sea Guide guides with rust-resistant SS304 frames and aluminum-oxide rings

KEEP AMERICA
FISHING



IGFA
Corporate Member



Shop Online: TackleDirect.com Order Toll-Free: 888.354.7335 Retail Location: 6825 Tilton Road, Bldg C, Egg Harbor Twp, NJ 08234-4426

American Airboat Corp.

HOME OF THE AIRRANGER



GSA Advantage!

18'x8' AirRanger Law Enforcement Edition

Over 54 Years of Airboat Experience!

American Airboat Corp. builds the highest quality Fire and Rescue airboats in the world. These airboats save lives.

Actual headlines taken from news sites:

"Ice Boats Help Rescuers Save Lives" - "Airboat To The Rescue"
"Water Rescue Thursday On Delaware River" - "Douglas County Helps Boat Crash Victims" - "Coast Guard Assists Two In Lake Erie"

We also have boats for:

Hunting • Bow Fishing • Law Enforcement • Fishing Boats • Pleasure
Duck Hunting • Extreme Terrain

Call for a Quote Today. You DREAM it - we BUILD it.

WORLD'S FINEST AND SAFEST AIRBOATS

www.americanairboats.com

800.241.6390 fax:409.883.0100 108 E. Lutchter Drive Orange, TX

Perspectives & Prospects



Recreational anglers fishing along the Manasquan Inlet bulkhead.

Photo by Ray Ringen

Frustration abounds over the collection and interpretation of marine recreational fisheries data and the management actions that result. As fisheries biologists with over a century of combined experience, we have witnessed at least one angler express concern over recreational harvest estimates or management measures at nearly every state, federal and inter-jurisdictional fisheries management meeting that we've attended. Truth be told, fishery scientists and managers have some of the same concerns as anglers about recreational fisheries data. This is why New Jersey Division of Fish and Wildlife's Marine Fisheries Administration has taken action to improve the information collected and used for recreational fishery management.

Collecting Fisheries Data

The main source of information is the Marine Recreational Information Program (MRIP), a survey of recreational anglers created by the National Marine Fisheries Service (NMFS) in 1981 then revamped in 2012. The survey occurs in two parts: an in-person angler intercept survey at fishing locations to determine the species and numbers of fish that are caught, kept and discarded plus a telephone or mail survey to estimate the proportion of the angling population that took a fishing trip. Results from the two parts are then combined in such a way that scientists can estimate the number of each species that recreational anglers harvested or released.

How is the Data Applied?

While this survey methodology is actually straightforward and not the main issue with the data, concern does arise in how we use the data. The MRIP wasn't specifically designed to answer small-scale (state-specific or season-specific) management issues, but that is often how the data is used. For some species, sampling coverage may be adequate for local management; for other species, the most reliable estimates come from aggregating data over large regions and all seasons.

The Importance of Sample Size

The primary cause for concern with recreational fisheries data is the number of anglers that MRIP interviewing staff, the samplers, can interact with—whether in person, on the phone or via mail. For perspective, New Jersey has an estimated 1 million marine recreational anglers who fish from approximately 250 known public access fishing areas (piers, beaches, boat ramps, marinas, etc.), plus the countless private access sites that cannot be sampled. It is not possible to increase sampling coverage in a cost-effective manner, so the number of intercepts (angler interviews) conducted each year remains a very small proportion of the total number of fishing trips.

For example, in 2016, approximately 4,100 angler intercepts were conducted out of an estimated 4,402,000 total fishing trips, a 0.09 percent sample size. The telephone survey has similar issues with limited sample size and will be replaced by 2018 with a mail survey. Accuracy and precision of both the in-person intercept and telephone portions of the survey are affected by sampling only a fraction of the total number of fishing trips.

Flip a Coin

Relying on data from such a small sample of angler intercepts results in *highly variable*—and sometimes unexpectedly high or low—harvest estimates from year to year. Let's use a coin-flip example to show how this works. Imagine flipping a coin 10 times and getting seven heads, then flipping it 10 more times and getting four heads. The proportion of heads changed from 70 percent to 40 percent, a 30-percentage point difference between the two samples. Now imagine doing the same exercise but each sample was 1,000 coin-flips. You might get 489 heads in the first sample and 525 heads in the second. This equates to only a 3.6-percentage point difference between the samples (48.9 percent vs 52.5 percent). Clearly, the larger sample size (number of coin flips) helps smooth out the difference between the samples (sets of coin flips). Also, the more coin flips you do, the closer you get to the "truth" of 50 percent heads and 50 percent tails.

These same principles hold true for sampling the recreational fishery. By sampling only 5,000 anglers every year, the *variability* in catch estimates is much greater than if, for example, 50,000 anglers were sampled annually. As with the coin flips, a *larger angler intercept sample size would produce a better estimate of the actual recreational angler harvest.*

Improved Data Collection

Fisheries management decisions based on a low intercept sample size have many consequences: disbelief about harvest estimates, frustration over ever-changing regulations and not being able to keep enough fish, discontent with managers and law enforcement, plus distrust in the fisheries management process. Research scientists and fisheries managers share with anglers many of these same frustrations.

Unfortunately, simply increasing the sample size in the recreational angler survey is not possible. Budgets are limited and sampling is expensive. However, the New Jersey Marine Fisheries Administration has been making other efforts to improve recreational data collection.

Many saltwater anglers are familiar with the Access Point Angler Intercept Survey (APAIS), the dockside interview component of the national Marine Recreational Information Program (MRIP). In the past, the APAIS was conducted by National Marine Fisheries Service contractors. Beginning in 2016, New Jersey began conducting the APAIS on behalf of the NMFS. Interviewers seen at the dock are state employees which gives us better control over their performance and data quality. In addition, our agency now has more influence on many aspects of the survey.

This Survey Could be a Game-changer for New Jersey

As a key data collection tool, New Jersey has developed our own survey to give anglers additional opportunity to provide data and get involved in the management process. A common remark heard from recreational anglers is, "They [APAIS] never interviewed me!" Since budget constraints prevent the expansion of APAIS sampling, our Marine Fisheries Administration created the New Jersey Volunteer Angler Survey (VAS), an online-only survey of marine recreational anglers. The VAS is open-access, allowing anyone to provide information on as many fishing trips as they choose at any time that is convenient.

A point to remember: the New Jersey VAS is entirely separate from the national MRIP; data from these two different surveys cannot be combined. However, the VAS has been used effectively to ground the truth or to refute the MRIP data. The New Jersey VAS has also been used to develop alternative fisheries management measures that may be more favorable (or at least less unfavorable) than those based on MRIP data.

Voluntary but Crucial

Our Volunteer Angler Survey is free, online and open-access. While it is voluntary, we strongly encourage you to participate. It takes only a few minutes and is an easy, effective way to be involved

in the saltwater fisheries management process. Trust in fisheries management practices may build as more anglers contribute information to the management process. Spread the word for anglers to check us out at www.NJFishandWildlife.com/marinesurvey.htm and tell us about your trips! **No need to report every fishing trip; just a handful from each angler every year is all it takes.**


Didn't Catch Fish? Report That Too!

An important note about the VAS: its success is linked to having *representative* coverage of recreational anglers and trips. Information from anglers of *all* skill levels is essential, including both your successful *and* unsuccessful fishing ventures—those trips where you catch no fish. To ensure representative reporting, you could consistently report on your first trip of the month, or you could flip a coin at the dock—heads you report, tails you don't. This type of *random selection* on which fishing trips to report ensures that the data is a representative sample.

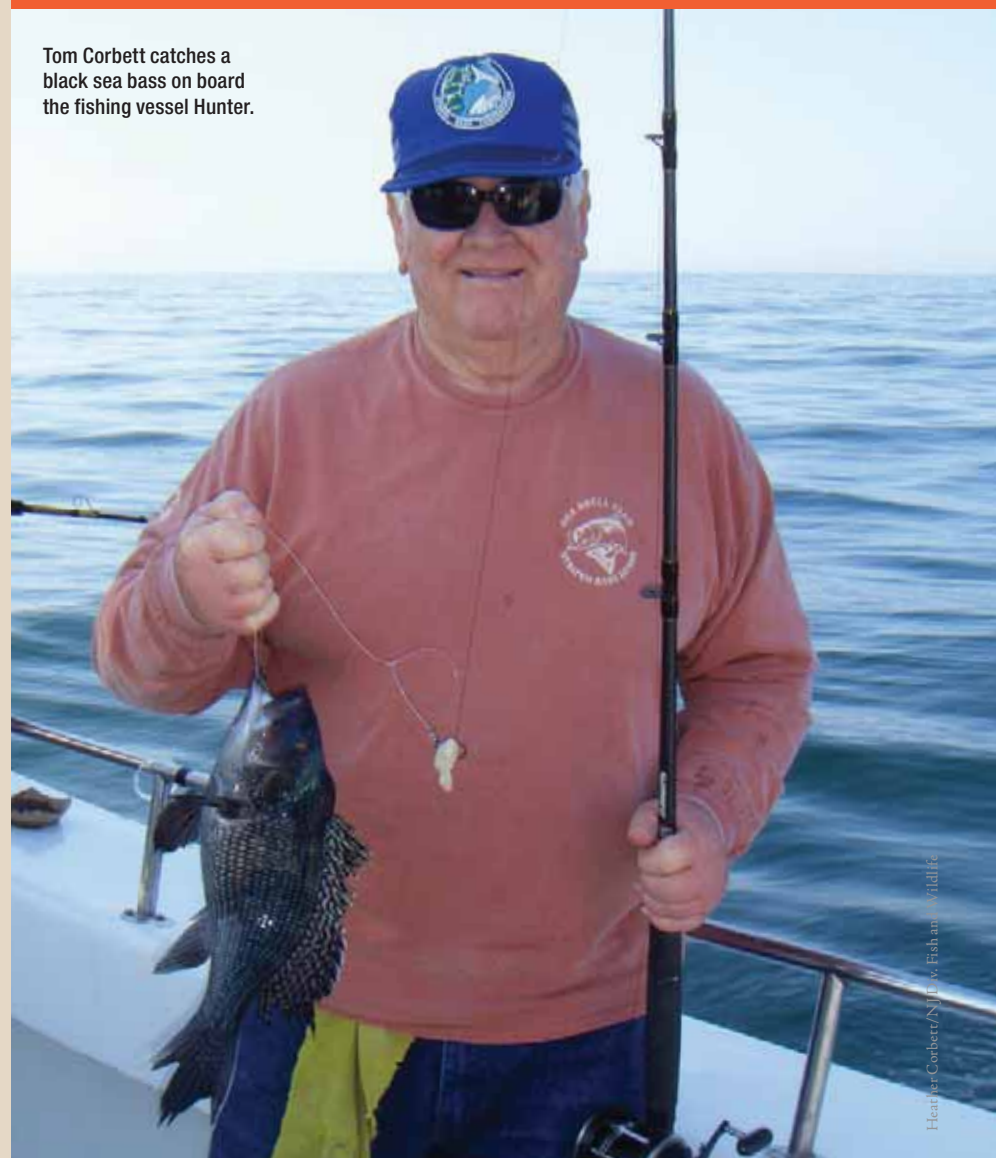
You Can Make a Difference

Whether you are approached for an APAIS interview, receive an MRIP survey in the mail or support the effort by submitting your fishing trip data through the Volunteer Angler Survey, your cooperation is *crucial* to ensure that New Jersey has the *largest* sample size possible to achieve the *best* estimate of fishing catch rates. Management decisions are only as good as the data on which they are founded, and the data comes from you—our marine recreational anglers.

Working together to improve New Jersey's recreational data collection strategies, anglers and fisheries managers can have confidence in the data being used to make sound recreational management decisions. Be part of the solution: flip a coin before every fishing trip. Did your coin come up heads? Visit the New Jersey Volunteer Angler Survey www.NJFishandWildlife.com/marinesurvey.htm to report your fishing trip results.

For more information on any of these programs, contact New Jersey Division of Fish and Wildlife's Bureau of Marine Fisheries at (609) 748-2020. 

Tom Corbett catches a black sea bass on board the fishing vessel Hunter.



Heather Corbett/NJ Dept. of Fish and Wildlife