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Dear Pam,

I have always felt that "tagging programs" should include two basic goals:

**A. TAG RESPONSIBLY TO ENSURE MAXIMUM SURVIVAL:** This includes all of the techniques and thought processes we all go through, which culminates in a fish being successfully tagged and released.

**B. LEARN FROM TAGGING, AND RECOVERY DATA COLLECTION:** If you are not trying to learn from "tag and release" then you should not be tagging fish. "Catch and release" would be much more appropriate. However, if you yearn to know more about specific fish, e.g. where they go, how they grow, and how they interrelate with other components of their environment, then a tagging program, properly administered, makes sense.

With fish tags, every precaution must be taken, every step which will increase the likelihood of survival must be considered. While tagging is fun, and educational, it is also quite serious, and involves considerable responsibility. Tagging has to be taken seriously, or it is just an exercise in killing fish.

**AN "ALS TAGGER" HAS TO BE A CUT ABOVE THE REST.**

I've come up with 18 objectives that relate to these two goals, and they are attached. Somewhere within these 18 certainly ought to be a few of the tagging 'secrets' that you have asked for. Feel free to use these as you see appropriate. I would not want anyone to believe that I am an authority on fish tagging. These objectives are simply things that work for me, and possibly would work for others.

#### GOALS OF FISH-TAGGING:

- A. TAG RESPONSIBLY TO ENSURE MAXIMUM SURVIVAL
- B. LEARN FROM TAGGING AND RECOVERY DATA COLLECTION

#### OBJECTIVES:

**1-A: ADEQUATE PREPARATION - SURVIVAL** Survival of your fish is directly proportional to your level of preparedness to tag. To the extent of which you can minimize your fish's out-of-water time, the probability of survival increases.

**2-A: AVOID DAYTIME TAGGING WHEN WATER TEMPERATURES ARE AT PEAK** As water temperatures increase in summer, the potential for adequate dissolved oxygen decreases. The stress inherent from tagging increases as water temperature increases. When you factor in daytime/summertime air temperatures, the stress balance is tipped drastically away from survival. If possible, make tagging a "dusk 'til dawn" effort during summer months.

**3-A: IMMEDIATE SURVIVAL ASSESSMENT** - Once the fish is landed, an immediate SURVIVAL ASSESSMENT must be made. If the fish has taken an excessive length of time to land, if it is a 'sensitive' species, (e.g. mackerels, herrings, trout) which tend to fare poorly with handling, then the additional stress of tagging might not be conducive to survival.

**4-A: USE A SOAKING WET CLOTH TO HANDLE FISH WHILE TAGGING** - A wet tagging cloth produces many advantages: • Draped over head and eyes, it tends to quiet the fish down (a real PLUS with bluefish!), • a wet cloth helps retain natural protective slime on fish, • a wet cloth provides some traction while applying the tag, and • all of these increase the fish's chances of surviving.

With larger fish (e.g. Atlantic sturgeon, adult striped bass) more than one cloth is necessary. In these instances, I place one over the head, and use another in the area where the tag is being applied. My cloths are about 18" square, 'napkin' size, usually cotton, and are kept in a bucket of water if not in use. I avoid large 'towel-size' cloths, as they tend to cover more of the fish than is necessary.

**5-A: A FISH'S MASS IS MUCH MORE IMPORTANT THAN LENGTH** - Don't get locked into total length as a measure of "Tag-ability". There are twelve-inch striped bass that are very thin, and will not carry a tag well. Conversely, I've handled stocky nine and ten-inch striped bass that probably would do quite well.

**6-A: AVOID TAGGING FISH THAT ARE CAUGHT ON LIVE OR CUT BAIT** - This is a pretty obvious rule to follow, especially if fish are swallowing the hook. Hook removal, including artificial lures, can cause considerable damage. My rule of thumb: If I see any blood at all, or if the hook goes into the throat, I will return the fish without tagging. Snipping the barbs off your hooks can help the situation, while not overly reducing your catch.

**7-A: IF POSSIBLE, WORK ON YOUR FISH OUT OF BRIGHT SUNLIGHT** - In warmer weather, create an area on board your boat, under a tree along the shore, down between rocks on a jetty, etc ... where you can tag your fish out of the bright sunlight. The stress of bright sunshine will only diminish your fish's chance of survival.

**8-A: AVOID TAGGING ON DRY, HOT, OR EVEN WARM SURFACES** These are simply more unnecessary sources of stress for your fish. Keeping the fish wet is of prime importance.

**9-A: USE AN AERATOR TO HELP REDUCE STRESS** - When more than one fish is available for tagging, use a small ice-chest with an aerator, or a live well if available. Battery operated aerators are very inexpensive, and can be the difference between life and death, especially on hot days. To augment the aerator, I sometimes also add a few ice cubes.

**10-A: USE ANTISEPTIC ON THE WOUND PRODUCED BY THE TAGGING NEEDLE** I use a squeeze bottle with a tincture antiseptic (0.1% Thimerosal), which is commonly sold in pharmacies as Merthiolate. Following application of a tag, I flood the area at the base of the tag to help sterilize the wound, before returning the fish to the water.

**11-A: GIVE YOUR FISH CPR (TAGGING UNDER STRESSFUL CONDITIONS)** - Even tagging from dusk 'til dawn is often not enough. There are some species that do not tag well, unless enormous care is taken to ensure their survival. Even then, it might take considerable "working" to get them fully recovered. There are times when a tagged fish must be gently worked, moving water over their gills, for extended periods of time, before they recover enough to swim off. I've had large Hudson River striped bass take 30-35 minutes to recover to the point where I could release them.

**12-A: AVOID TAG & RELEASE IN VICINITY OF PREDATORS** - In the Hudson River, I have witnessed the tag & release of small striped bass into near-shore waters being patrolled by 5-7 pound bluefish. In Rhode Island, I once made the mistake of returning a two-pound scup (for which I was very proud of having had out of the water for only 30 seconds), and noticing too late that several large bluefish were cruising close by. In Florida, one particularly bad morning, I had a brown pelican "recapture" a tagged ladyfish, and a small bluefish. Subsequent releases were made with considerably more attention to predators, both in the water, and above. PELICANS, GULLS, BLUEFISH, SHARKS, etc. are elements which must be factored into the survival of your tagged fish. Successful tag & release not only includes preparedness, care and attention, and stress reduction, but also an assessment of recovery time, and the likelihood of predator intervention

**13-B: TAG FISH THAT HAVE A STORY TO TELL** - Avoid sedentary species. The most interesting returns seem to come from diadromous fish, which tend to travel long distances during spawning season, and marine species, which undertake seasonal migration.

**14-B: FOR MEASURING: A METER STICK - NYLON SEINE TWINE** - Unless you're into bull sharks or bluefin tuna, a METER STICK will handle the job of measuring your fish. I used to use collapsible/retractable tape measures, but quickly discovered that measuring was often a one-handed operation. Tape measures that can be 'locked' will make your tagging procedure more compact, but salt water will rust most of them up pretty quickly. For the larger individuals that I occasionally tag (e.g. Atlantic sturgeon, sharks, 10 YO+ striped bass), I use nylon seine twine. I cut a length equal to the TL of the fish, and then measure it once the fish has been released.

**15-B: AVOID TAKING YOUR DATA CARDS INTO THE FIELD** - Establish a "tagging notebook" - Use pencil, since they tend to fare better under damp conditions. Record all useful information of your tag & release.

- TAG NUMBER
- DATE
- TIME + TIDE
- LOCATION (RIVER MILE, CITY, TOWN, BAY, INLET, OR MILES OFFSHORE)
- TOTAL LENGTH (or FORK LENGTH, STANDARD LENGTH)
- ESTIMATED WEIGHT
- CONDITION OF FISH/ANOMALIES
- AIR/WATER TEMPERATURE
- SALINITY (if known and applicable)
- WEATHER
- METHOD OF CAPTURE
- COMMENTS (anything pertinent, yet not included above)

Record information LEGIBLY when transferring to data cards (typing is best, printing essential). Data which is unreadable, or mis-read, can greatly alter the significance of a tag return. Data cards that go to sea often end up there. Information recorded is often done hastily, and inaccurately

**16-B: KEEP TAG + RELEASE, AND RECAPTURE RECORDS** - If possible, make copies of your tagging data cards. Minimally, record the data in a notebook. This information can be compared with recovery data to create a profile of your fish, or even a particular species, with enough tag returns. This is the goal of tagging programs. When fish are recaptured, a story unfolds, and we learn a little more about our world, and how it works.

**17-B: MAKE TAG & RELEASE MEMORABLE** - Tagging should be fun as well as educational. Make tag & release a part of family vacations, group outings, and even business trips. I remember places I've visited through taggings I've made, or would liked to have made -

-SAN FRANCISCO was a three-foot striped bass, brown smoothhound, stripefin ronquil, and promises of large halibut that never happened.

-BERMUDA was palometa, and a million fish too small to tag.

-DALLAS was white bass, hybrid striped bass, and a six-foot alligator gar that I wish I could have tagged.

-MIAMI was bowfin, Florida gar, blue tilapia, and hundreds of striped mullet being chased by the largest tarpon live ever seen.

-PORT ORANGE (FLA) was more crevalle jacks than I wanted, and a very large snook, that I would have loved to have landed, but the pilings interceded.

-TUPPER LAKE (NY) was walleye after walleye, with a few northern pike tossed in, but none as impressive as the 18-inch brook trout that took my spinner.

-FREEPORT (NY) was skipjack tuna, which we called 'oceanic bonito' at that time, and aching arms from dolphin, the most beautiful fish live ever seen.

-RED BANK (NJ) was supposed to be a shark-tagging trip, but because of 12-ft seas, the chum slick kept breaking up. As everyone else took a nap, I may have become the first "pilotfish" tagger in history!

-CAPE HATTERAS will always be the blacknose shark that opened up a couple of my fingers, as I was tagging him, as well as a larger-than-life hammerhead shark, who broke my piano-wire leader. It is also the largest red drum live ever hooked into, pulling the surf rod out of the sand spike and rendering the drag inoperable. As I stood there trying to free the spool, it pulled apart my fish-finder rig. Cape Hatteras had its ups and downs.

**18-B: THE "MAKEUP" OF A SUCCESSFUL FISH-TAGGER** - Tagging is not for everyone, and should not be promoted as such. With tagging comes significant responsibility, which must be accepted. There is no substitute for experience, and genuine willingness to accept responsibility.

For the serious tagger, these measures, designed to increase the potential for survival, do not seem like too much trouble. If a tagged fish does not recover, the serious tagger feels a personal loss, and will learn from it.