

SHRINKAGE

CONSERVATIVELY MEASURE FISH TO ACCOUNT FOR SHRINKAGE WHEN PLACED ON ICE

By Tony Murray

Once a legal-size fish is caught, what can you do if the act of placing it on ice causes it to shrink below the legal limits? If the fish was exactly at the legal limit when caught, two hours later (after being placed on ice), the fish would be then under the legal limit, and might possibly put you at risk for penalties if an FWC officer stops to review your catch.

The solution: account for shrinkage when the fish is caught at the legally acceptable limit.

The main variables that have to be taken into account when examining shrinkage are 1) various minimum size limits for the listed species in Florida and 2) how the amount of time fish are placed on ice will affect the amount of shrinkage.

In examining these variables the question was posed to Florida's Fish and Wildlife Conservation Commission (FWC) on how much shrinkage an angler should anticipate. FWC responded that about one percent shrinkage would be a reasonable assumption to begin with for basing calculations. I assumed this would be for a fish placed on ice for about two hours.

Accurately measuring a fish while on a pitching and rolling boat is more easily said than done. The fish is slippery and wiggling. You've got hooks or lures dangling about you. You are attempting to gently unhook the fish, measure it and get it back in the water unhurt if it doesn't meet the limit. And, you are trying to do all this while the bite is still on. Remember, the officer reviewing your catch will be dealing with a dead fish with no time restraints and may not be attempting to get that extra $\frac{1}{8}$ -inch in your best interest on a specific measurement.

Proper measuring techniques for a fish involve laying the fish flat and measuring from the forward most point on the head to the rear center edge of the relaxed tail. Note this is for **saltwater** species.*

Proper measuring techniques for **freshwater** fishes are different. For freshwater species the mouth is closed

and the tail fin pinched together to obtain measurements. (Note: tails are only pinched for measurement on freshwater species). The FWC website** presents the best way to obtain this length is to push the fish's snout up against a vertical surface with the mouth closed and the fish laying along a tape measure, then pinch the tail fin closed and determine the total length. Do not pull a flexible tape measure along the curve of the fish.

So, what is this safe rule of thumb when making those close calls? **For every 10 inches of fish allow for $\frac{1}{8}$ " shrinkage** (which is 1.25%). To further extrapolate this will be $\frac{1}{4}$ " for 20 inches of fish and $\frac{3}{8}$ " for 30 inches of fish, and so forth. I used this 1.25 percent shrinkage for this rule of thumb for two reasons. First it conservatively rounds up the one percent FWC referenced and, secondly the .125 decimal form is conveniently equivalent to $\frac{1}{8}$ of an inch. A $\frac{1}{8}$ of an inch is a reasonable minimum length increment to discern while measuring a fish. As such, $\frac{1}{8}$ -of-an-inch is the smallest unit of measurement presented in this article and associated table and all measurements are rounded accordingly.

So, what does this mean for a 15" iced down trout? Mathematically, it means that fish should be 15.15" (which is $15 \frac{5}{32}$ ") when it hits the cooler; practically it means $15 \frac{1}{8}$ ".

What about for an 18" iced down redfish? Mathematically, it means 18.18" ($18 \frac{1}{64}$ ") live; practically it means $18 \frac{1}{4}$ ". As in any type of estimating, some numbers will be rolled up and some will be rolled down.

So what does this mean to fish that have an upper slot limit like redfish and snook? "No person shall land, possess, unnecessarily destroy, purchase, exchange, sell or offer for sale ...", which means you cannot possess a fish over the slot limit at any time. Icing down a fish in anticipation of it to fit within the slot violates the possession at any time clause.

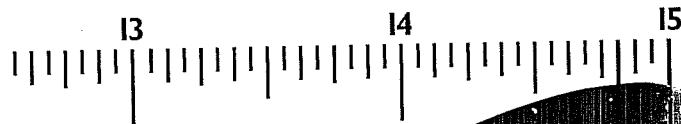
A California guidance document entitled, *To Increase The Chances of a Released Fish Surviving, Anglers Should Use the Following Procedures*: circuitously addresses the

*Accurate for fish that have a fork length requirement; however, many marine fish species are regulated by total length. Billfish and tunas (federally regulated) are measured by lower jaw fork length and curved fork length, respectively.

**<http://www.floridafisheries.com/Fishes/anatomy.html>

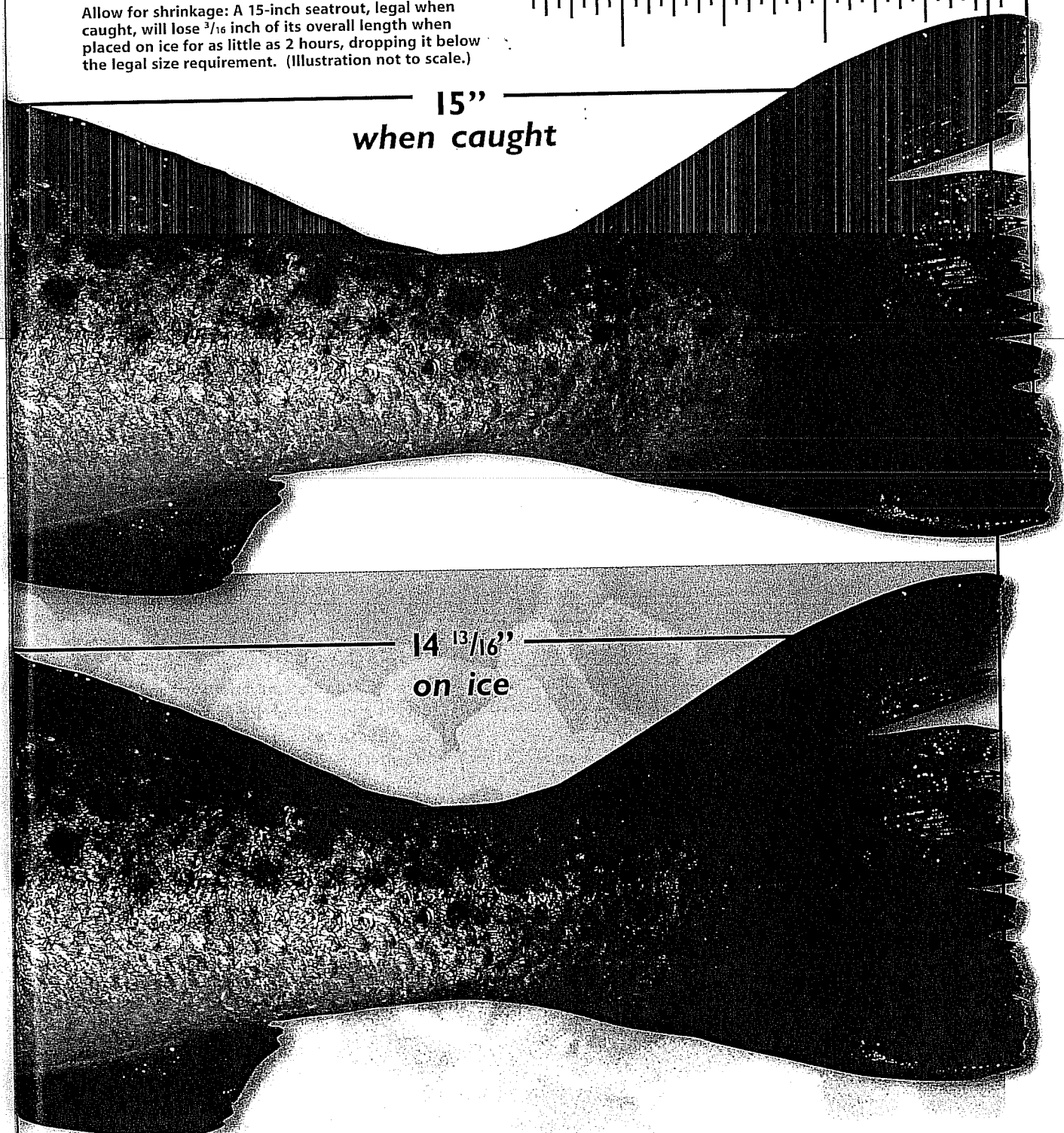
It's a fact, fish shrink when placed on ice. Florida Law states that a person shall not be in possession of a fish under the legal size limit; however there is no specific guidance given in Florida regulations to take into account shrinkage of fish when placed on ice. Until now.

Allow for shrinkage: A 15-inch seatrout, legal when caught, will lose $\frac{3}{16}$ inch of its overall length when placed on ice for as little as 2 hours, dropping it below the legal size requirement. (Illustration not to scale.)



**15''
when caught**

**14 $\frac{13}{16}$ ''
on ice**



Properly measure fish near the limit and take into account expected shrinkage before you decide to keep a fish.

SPECIES	FWC SPECIFIED SIZE LIMIT	CONSERVATIVE MINIMUM SIZE TO ACCOUNT FOR SHRINKAGE ON ICE
Greater Amberjack	28" fork	28 3/8"
Lesser Amberjack Banded Rudderfish	Not less than 14" or more than 22"	14 1/8"
Billfish	Sailfish 63" Blue Marlin 99" White Marlin 66"	63 3/4" 100 1/4" 66 7/8"
Black Drum	Not less than 14" or more than 24"	14 1/8"
Blue Fish	12" fork	12 1/8"
Bone Fish	18"	18 1/4"
Cobia (Ling)	33" fork	33 3/8"
Dolphin	None listed	
Flounder	12"	12 1/8"
Grouper - Black & Gag	24" Atlantic & Monroe County 22" Gulf (excluding Monroe County)	24 1/4" Atlantic & Monroe 22 1/4" Gulf
Grouper - Red Yellowfin Yellowmouth	20"	20 1/4"
Grouper - Scamp	20"	20 1/4"
Grouper - Warsaw Speckled Hind	None listed	
Grouper - all others	None listed	
Hogfish	12" fork	12 1/8"
Mackerel - King	24" fork	24 1/4"
Mackerel - Spanish	12" fork	12 1/8"
Mullet - Striped or Black	None listed	
Permit & Pompano	Not less 10" or more than 20" fork	10 1/8"
Pompano - African	Not less than 24" fork	24 1/4"
Red Drum (Redfish)	Not less than 18" or more than 27"	18 1/4"
Red Porgy	14" Atlantic	14 1/8"
Sea Bass - Black	10"	10 1/8"
Shad	None listed	
Shark	None listed	
Sheepshead	12"	12 1/8"
Snapper - Cubera	Not less 12" or more than 30"	12 1/8"
Snapper Gray (Mangrove)	10"	10 1/8"
Snapper - Lane	8"	8 1/8"
Snapper - Mutton	16"	16 1/4"
Snapper - Red	20" Atlantic, 16" Gulf	20 1/4" Atlantic 16 1/4" Gulf
Snapper - Schoolmaster	10"	10 1/8"
Snapper - Vermillion	10"	10 1/8"
Snapper - all other	12"	12 1/8"
Snook (All species)	Not less than 26" or more than 34"	26 3/8"
Spotted Seatrout	Not less than 15" or more than 20" (statewide) except one fish over 20" per person	15 1/8"
Swordfish	47" lower jaw fork length	47 5/8"
Tarpon	None listed	
Triggerfish (Gray)	12"	12 1/8"
Tripletail	15"	15 1/8"
Weakfish	12"	12 1/8"

fish shrinkage issue (<http://www.dfg.ca.gov/mrd/releasing.pdf>):

If the length is close to the mark (made on your fishing pole for that species of fish), unhook the fish and compare it to an accurate measuring device. Be advised however, that a prudent angler keeps only fish that are clearly legal as fish can shrink slightly after death. There are no provisions in the regulations that allow for "shrinkage".

Perhaps Florida regulations should actively address this issue, also.

A complete listing of saltwater regulated species with recommended allotment for shrinkage is presented in the adjoining table. This guidance of 1/8-inch shrinkage for each 10 inches of fish and also applies to freshwater species though no chart has been presented because of the extensive area-specific regulations. This rule of thumb also applies in other states and countries in warm water fishery areas though there may be less shrinkage for cold water fish.

Carefully measure your catch when that fish is near the minimum legal limit. Know your size limits and allow for shrinkage of your fish when placed on ice. *The rule of thumb: 1/8 of an inch for every 10 inches of fish* can be easily remembered on the water.

You are making review of your catch by FWC officers straightforward and quickly and easily performed.

Release those fish that are right on the size limits for catches on future days. You are conservatively protecting your own resources. ———)

Tony Murray is a scientist by trade and an avid saltwater angler. To contact him or request additional information, bibliography, documentation or to discuss topics related to fishing, email murray@fishshrink.com. An electronic version of this article is available at www.fishshrink.com, where, incidentally, readers can post comments or share stories. EDITOR'S NOTE: Regulators and University research personnel are actively addressing fish shrinkage (due to ice) and a follow-up will be forthcoming in GAFF.

* Calculations were based on .125 (1/8") shrinkage per 10 inches of fish and rounded to the nearest 1/8"