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The primary objective of the referenced work was to document possible tag retention and tagging mortality problems with tautog, one of five species being tagged by trained recreational fishermen under the Virginia Game Fish Tagging Program. Collection of fish for tag retention trials and releasing tagged fish at capture sites was done in cooperation with Mr. Claude Bain, Director, Virginia Salt Water Fishing Tournament, VMRC, and Dr. Jim Wright, who volunteered use of his vessel. In addition to tagging information, the collection and holding of tautog provided some insight into potential hook and release mortality rates in the recreational fishery.

Three small groups of tautog, *Tautoga onitus*, were captured on hook-and-line from early January to late March 1995 at surface water temperatures of 42-52°F. The fish were captured at wreck locations at the mouth of Chesapeake Bay and a few miles off Cape Henry/Virginia Beach, held in an onboard, flow-through live well, then transported in 120 quart coolers with aerated seawater from Lynnhaven Inlet to VIMS Wachapreague Lab. All tautog were hooked in the lip using clam or crab bait, removed from the hook, then placed in a live well. At Wachapreague the tautog were held for 7-40 days in outside flow-through tanks.

Only one trial (Trial 1) demonstrated any tautog mortality (1 of 13 fish). When landed, this fish exhibited upside-down swimming behavior at the water surface both in the live well and during transport in a cooler due to swim bladder expansion. The "inflated"bladder caused extrusion of organ tissue from the vent. In handling the fish, the tissue was accidentally ruptured. Normal swimming behavior never resumed and the fish died about ten hours after transport to the lab tank. Rapidly dropping temperatures caused the tank to ice over February 8-9, 1995, killing most of the tautog and thereby terminating Trials 1 and 2. The data follow :

	Trial 1	Trial 2	Trial 3
Catch Date	1-12-95	2-2-95	3-30-95
Location	Santore Wreck	Cape Henry Wreck	Winthrop Wreck
Water Temp.	43-33 °F	42-43°F	50-52°F
Fish Length	11-15"TL	11.6-13.6"TL	9.5-13"TL
No. Fish	13	11	12
Days Held	27 days	7 days	40 days
End Temp.	34°F	34 °F	61 °F
#/% Died	1/7.7%	0/0%	0/0%

These limited data indicate very low, if any, release mortality for tautog captured by hook-and-line at surface water temperatures of 42-52°F, salinities of about 28-32 ppt, and water depths of 40-70 feet. Handling and transporting the fish using live wells and aerated coolers naturally placed the fish under different, and likely more stressful conditions compared to releasing them directly overboard. It is not known what effect retaining tautog in shallow water , i.e., the live well, coolers and lab holding tanks, had on swim bladder expansion problems compared to releasing the fish overboard. In the latter case, tautog immediately unhooked, measured, tagged and released appeared to return quickly to the bottom structure and water depth from which they had been captured Tag return data (17 returns from 209 tautog tagged since December 1994) document reasonable survival of tagged fish and their tendency to remain on the initial capture site for up to six months (source: Virginia Game Fish Tagging Program).

Water temperature has been demonstrated to significantly affect hooking mortality in most saltwater species studied to date, as noted at the "Release Mortality in Marine Recreational Fisheries" conference (May 8-10, 1995, Virginia Beach; summary proceedings document in progress). While tautog was not specifically addressed at the conference, field experience of Mr. Geoff White, a VIMS graduate student working on the reproductive cycle of tautog, indicates the potential impact water temperature may have on release mortality.

Tautog captured by Mr. White May 9, 1995 on hook and line at the Triangle Wrecks (surface water temperature of 60° F; depth about 100 feet) and transported in a cooler on ice, survived in VIMS Aquarium tanks. Tautog captured on hook and line June 1, 1995 at the Chesapeake Light Tower (surface water temperature of 68° F; depth about 65-70 feet) and transported in a cooler with aerated seawater did not survive in Aquarium tanks. Cooler surface water and transport temperatures were a major difference between the two incidents.

While captured further offshore and at deeper depth, "May 9th" tautog may have survived at VIMS in large part due to the cooler temperature regime at capture and during transport. While in no way definitive, the incidents suggest that water temperatures above 60 °F may contribute to increased release mortality rates in hooked tautog, assuming that other catch-release stress factors are relatively constant, i.e., hooking damage, hook removal trauma, trauma associated with expanded swim bladders, etc.

In light of the referenced field experience, as well as information shared at the "Release Mortality Conference", members of the tautog working group should consider only as tentative any recreational fishery release mortality rate used in the draft management plan. Other possible field data sources should be explored, i.e. Rhode Island Fisheries and Wildlife tautog tagging studies (Mr. Tim Lynch, 401/294-4524). If not already underway, research should be initiated promptly to document the effects on tautog hook-and-release mortality rates of the following factors, including possible factor interactions:

*Water temperatures representative of major fishing periods for tautog in New England and Mid-Atlantic waters

*Capture depth and associated swim bladder expansion problems, including anglers' well-intentioned "deflation" of fish before release (if a frequent practice)

*Size of captured fish (presently most released tautog are "smaller"fish, but regulations could change this)

*Hook location in the mouth/gill areas (while often lip-hooked, tautog can be difficult to unhook with possible unknown handling trauma resulting)

*Salinity levels at capture (a possible problem for released tautog in estuarine fishing areas?)

The field data provided and associated discussion of factors potentially affecting actual release mortality rates in hook-caught tautog hopefully help define the framework necessary for establishing realistic release mortality rates for the tautog management plan. Interaction with participants in the "Release Mortality Conference" and the author's efforts to document release mortality in summer flounder strongly indicate that such mortality is far more complex and variable than once thought.