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VIRGINIA GAME FISH TAGGING PROGRAM ANNUAL REPORT 1996

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Jon A. Lucy

Virginia Institute of Marine Science
Sea Grant Marine Advisory Program
College of William and Mary

Virginia Marine Resource Report Number 97-7

Thanks to:

Those anglers who took the time and effort to attend tag training workshops, then put their fishing skills to work to tag, release and record tagging data.

Those individuals out on the water in the recreational and commercial fisheries, and those working onshore in seafood businesses, who took enough interest and effort to report tags in recaptured fish.

The Virginia Game Fish Tagging Program, on behalf of the co-directors and the Virginia Recreational Fishing Advisory Board, greatly appreciates the dedication of those contributing to this effort to expand understanding of the fish stocks on which we all depend.

Virginia Game Fish Tagging Program Annual Report 1996

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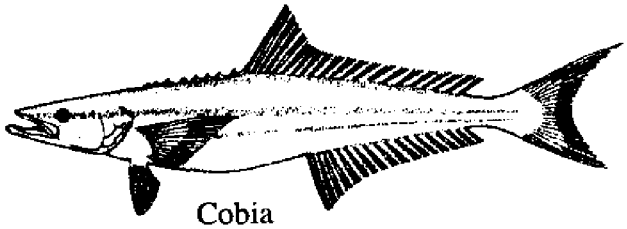
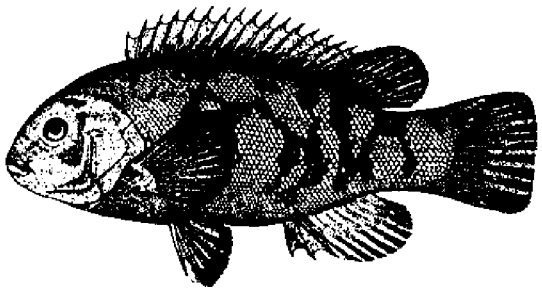
1997

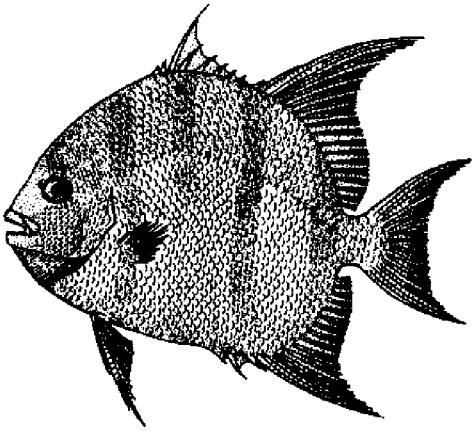
Target Species for Tagging



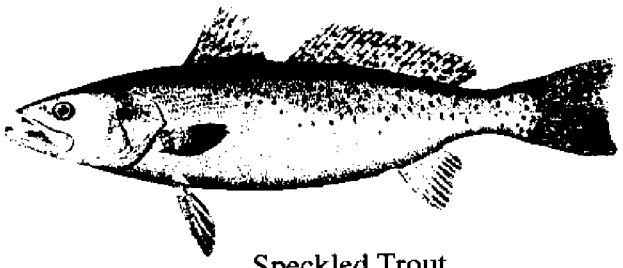
Cobia



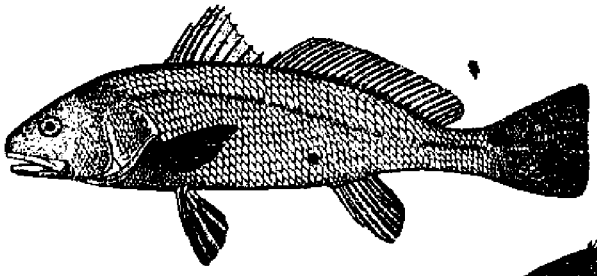
Tautog



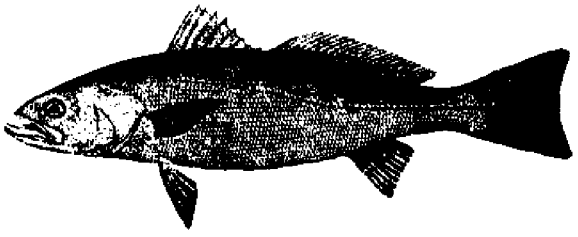
Spadefish



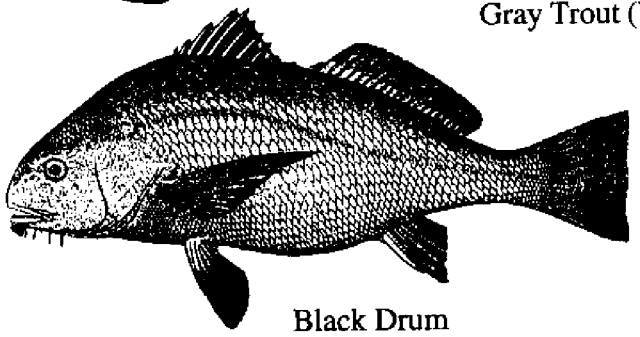
Speckled Trout



Red Drum



Gray Trout (Weakfish)



Black Drum

Virginia Game Fish Tagging Program

Program Overview

The Virginia Game Fish Tagging Program (VGFTP), a cooperative project of the Virginia Marine Resources Commission and the Virginia Institute of Marine Science (VIMS), enjoyed its second full year of operation in 1996. Participation in the project, which is funded with revenues generated by Virginia's saltwater recreational fishing license, nearly doubled with 127 anglers volunteering as taggers compared to 64 in 1995.

A total of 3,503 fish were tagged in 1996, which was an increase of 157% over the 1,361 tagged in the program's first year.

Program Goals

The VGFTP is designed to accomplish three specific goals:

1. To develop a quality-oriented tagging program utilizing recreational anglers to enhance data collection efforts for specific species of fish;

2. To reinforce and continue efforts to educate anglers about the benefits and proper techniques for catching, handling, and releasing fish; and,

3. To educate recreational anglers about the need, benefits, operation and limitations of tagging programs and other information gathering efforts directed toward saltwater finfish, including the proper methods for reporting the recapture of tagged fish.

The Second Year

In order to develop a quality-oriented tagging program, the VGFTP places annual limits on participation and requires all volunteers to attend at least one training session. Registration for the 1996 program began on December 7, 1995, with participation limited to the first 140 anglers to register. When the registration period ended on January 12, 1996, a total of 138 recreational fishermen had enrolled with the program.

Training workshops, which featured instruction on fish tagging, proper fish handling techniques, the goals and philosophy of the VGFTP, and procedures for efficient and accurate reporting of tag events, were held in February and March. Anglers who had participated in the program during the prior year and had attended a training session at that time were not required to attend a second session. However, attendance by all new participants was required. A total of 127 "trained" anglers participated as VGFTP volunteers in 1996.

In addition, the program's directors, Claude Bain and Jon Lucy, were directly involved in tagging fish during 1996. Their efforts are included in the data tables detailing the program results for 1996.

Targeted Species

black drum	(*Pogonias cromis*)
red drum	(*Sciaenops ocellatus*)
gray trout (weakfish)	(*Cynoscion regalis*)
speckled trout	(*Cynoscion nebulosus*)
spadefish	(*Chaetodipterus faber*)
cobia	(*Rachycentron canadum*)
tautog	(*Tautoga onitis*)

Seven species of fish were targeted for the tagging efforts of the VGFTP. They were chosen for four main reasons: 1) they contribute significantly to Virginia's recreational fisheries; 2) there are gaps or voids in the scientific knowledge about how "Virginia's " populations of these species interact with and impact upon the overall populations of which they are a component; 3) these species are not subject to extensive tagging efforts in local waters by the scientific community ; and, 4) tagging studies are likely to provide at least some of the missing information.

In addition, tagging programs can help answer questions about hooking mortality in fish which are captured recreationally and released. Since this is an important component in overall mortality estimates for species of fish, it is vital to understand the effects of catch and release fishing.

Finally, tagging programs like the VGFTP may be most valuable in the questions they raise rather than the answers they provide. Quite often the information provided by tag and recapture events points toward inconsistencies in accepted theories regarding fish behavior, which may suggest the need for and help to define the parameters of additional research.

1996 Tagging Awards

Anglers participating in the VGFTP have the opportunity to earn recognition for their conservation efforts. Participants tagging a minimum of 25 fish are awarded conservation certificates. During 1996, 32 participants qualified for conservation awards (Table 1), compared to 16 anglers in 1995. Eleven anglers earned conservation awards for both years. The angler tagging the most fish for the VGFTP in 1996 was Ken Neill, III, who tagged a total of 434 fish.

Most Fish Tagged

Ken Neill, III (Grafton) 434 Fish

Special recognition is given to the anglers tagging the most fish in each of the species targeted by the VGFTP. (See top taggers below)

Top Taggers By Species

Black Drum	Craig Paige (Chesapeake) - 18
Cobia	David Arris (Virginia Beach) - 19
Gray Trout	Tommy Heinz (Nassawadox) - 333
Red Drum	John L. Miller IV (Aylett) - 28
Spadefish	Ken Neill, III (Grafton) - 113
Speckled Trout	Al Paschall (Virginia Beach) - 59
Tautog	Ken Neill, III (Grafton) - 146

Table 1. Anglers awarded Conservation Certificates for tagging 25 or more fish during 1996.

Tagger	Cobia	Black Drum	Red Drum	Gray Trout	Speckled Trout	Tautog	Spadefish	Total
Arris, D.	19	4	1	3	0	0	0	27
Bieri, D.	0	0	0	20	6	0	0	26
Cahoon, R.	0	0	1	25	5	0	0	31
Clements, M.	0	0	0	3	22	0	0	25
Dewitt, E.	0	0	0	71	0	0	0	71
Dobbins, D.	0	8	0	0	0	19	0	27
Drumheller, N	0	0	0	21	11	0	0	32
Falls, R.	0	0	2	43	0	80	0	125
Firestone, M.	1	0	1	11	16	1	0	30
Hall, B.	9	14	5	19	2	1	2	52
Harrison, C.	0	2	0	62	0	0	1	65
Heinz, T.	0	0	0	333	2	0	0	335
House, T.	0	0	0	13	40	0	0	53
Hron, D.	0	0	0	78	21	0	2	101
Kerr, B.	0	0	0	190	17	1	0	208
Lewis, M.	3	0	0	33	4	0	0	40
Marshall, C.	0	0	0	96	0	0	0	96
Miles, A.	4	6	1	4	2	3	12	32
Miller, J.	2	3	28	7	0	0	2	42
Neill, K.	7	12	4	142	10	146	113	434
Nuttall, K.	0	2	0	27	12	0	0	41
Paige, C.	1	16	18	5	2	6	4	52
Paschall, A.	0	3	6	0	59	0	0	68
Payne, J.	0	0	0	125	0	0	0	125
Regal, J.	0	0	0	70	4	0	0	74
Richardson, G.	1	0	2	78	24	0	3	108
Robbins, J.	0	0	0	53	0	8	0	61
Simmerman, S.	1	0	0	25	0	1	0	27
Smith, Donald	0	0	0	13	24	0	0	37
Thompson, A.	1	1	0	321	50	0	3	376
Wray, S.	2	4	6	12	0	0	18	42
Wright, J.	0	0	0	0	0	25	0	25
Wroten, B.	0	0	0	35	16	0	0	51

Finally, the VGFTP recognizes the participant, from the current year or a prior year, who has the most tag returns from fish that he/she originally tagged. For 1996 Ken Neill, III, had 52 fish recaptured which he had originally tagged.

Most Tag Returns

Ken Neill, III (Grafton)	52 Returns

Anglers returning tags from fish they have captured are awarded caps and decals featuring the VGFTP logo.

Tag and Return Statistics

A total of 3,503 fish were tagged and released by VGFTP participants in 1996. The top species tagged was gray trout (2,183 fish), followed by tautog (457 fish), speckled trout (397 fish), spadefish (190 fish), red drum (90 fish), black drum (84 fish), and cobia (74 fish) [Figure 1].

Tag returns totaled 105, which is slightly below the 108 tag returns of 1995. However, tag returns in 1995 were boosted substantially by the tagging efforts of program directors Claude Bain and Jon Lucy with a peeler crab fisherman using a peeler pound net on the Eastern Shore. These efforts resulted in the tagging of more than 100 juvenile black drum during a three week period, while also yielding 35 recapture events for the same black drum tagged only days previously. This undertaking in Onancock and Pungoteague Creeks, which would appear to be juvenile black drum nursery areas, resulted in an extraordinarily high number of tag returns in a very short period of time.

Tautog yielded the highest number of tag returns during 1996 with 73, followed by cobia with 9 returns and spadefish with 8 returns [Figure 2]. Red drum, speckled trout, and gray trout produced 4 tag returns each, while the fewest returns were reported for black drum--3.

When the tagging data for each species is compared to the tag return data, it is clearly evident the number of fish tagged does not provide any indication of the number of tagged fish which will be recaptured. For example, only 4 gray trout have been recaptured despite the tagging of 2,183 fish, which yields a recapture rate of 0.2%. The greatest return rate has been in tautog, where there have been 101 tautog recaptures with only 704 fish tagged during the two-year life of the VGFTP, a recapture rate of 14%.

There are no clear trends or conclusions that can be drawn from the tag return data regarding any particular species of fish, which is not unusual for a tagging program which has been in existence for less than two full years. However, there were several notable tag returns during 1996, which include:

1. A juvenile black drum measuring 9 inches in length (tag DS16408) was tagged in Rudee Inlet in Virginia Beach, VA on October 1, 1996 and recaptured on October 11, 1996 at the Fort Macon Jetty in Atlantic Beach, NC. This journey of approximately 200 miles took only 10 days [Figure 3].

2. A juvenile red drum measuring 16.5 inches in length (tag DS13358) was tagged at the Monitor Merrimac Bridge-Tunnel in the James River on October 1, 1995. It was recaptured in the surf near Oregon Inlet, NC on November 20, 1995, where it was released again, and was subsequently recaptured on January 1, 1996 near Little River Inlet, SC [Figure 3].

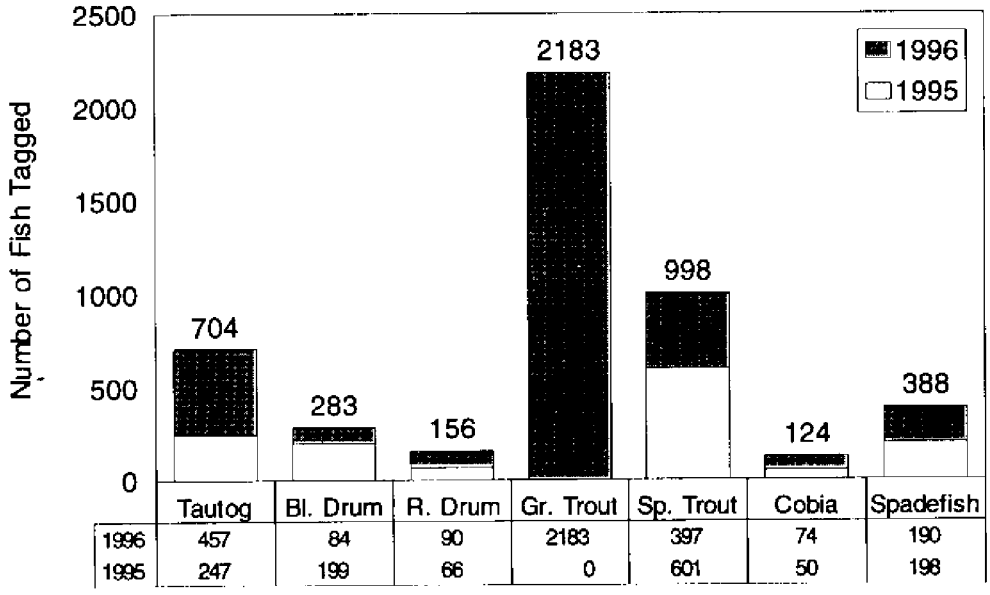


Figure 1. Number of Fish Tagged and released by species, 1995 and 1996.

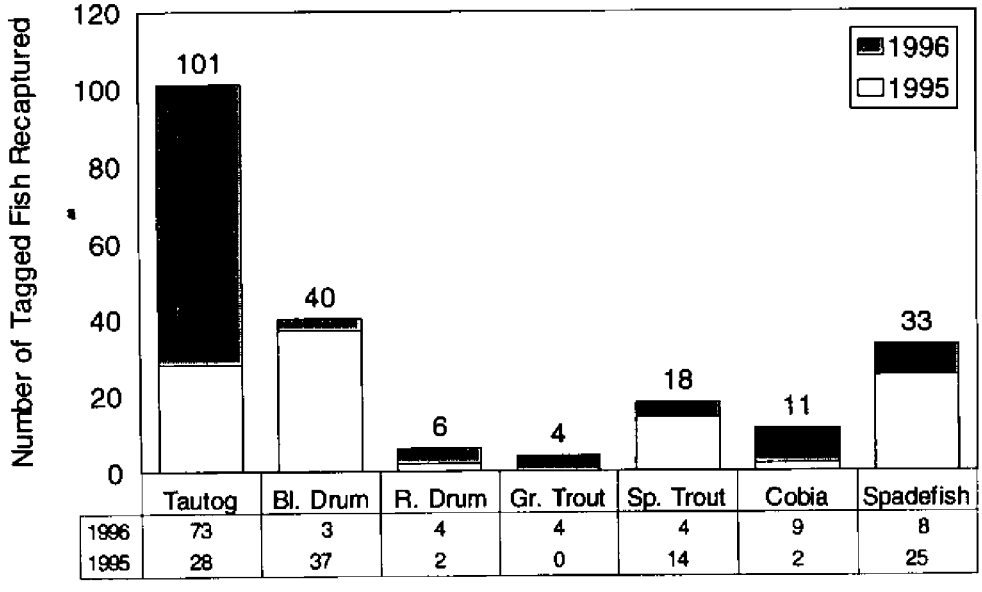


Figure 2. Number of tagged fish recaptured by species, 1995 and 1996.

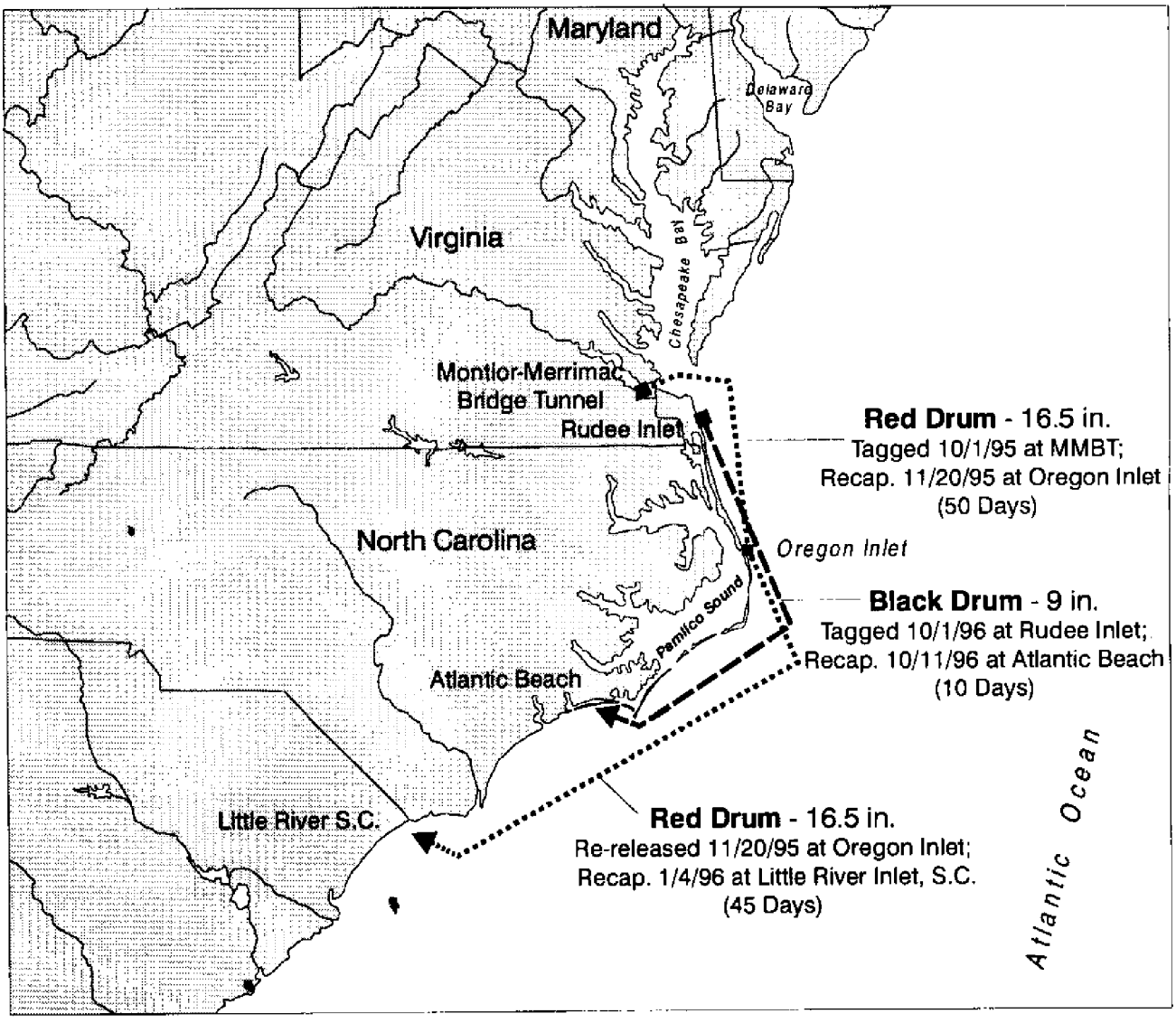


Figure 3. Documented fall migration of a juvenile red drum (fall 1995) and black drum (fall 1996) from Virginia waters to waters south of Cape Hatteras. The red drum was recaptured, then released again at Oregon Inlet before being caught off Little River Inlet, SC; the small black drum moved roughtly 200 miles in only 10 days.

3. A tautog (tag DL10948) was tagged at the 4th Island of the Chesapeake Bay Bridge-Tunnel on May 21, 1995 and recaptured on the Page Wreck off Wachapreague, VA on April 18, 1996. This was the farthest distance traveled by a tautog from the place it was originally tagged.

4. Of eleven cobia recaptured in 1996, four of these fish had been "guthooked" (hooked deeply in the esophagus or stomach). The taggers cut the fishing line, leaving the hooks in the fish before tagging and releasing them. The anglers recapturing the fish reported the fish to be healthy with no evidence of an embedded hook. Two of the fish had been at large for over 11 months.

Detailed tag return data for all species of fish appear in Tables 2-6.

Tag Evaluation

Input on tag condition from tautog recaptures in 1996 indicated possible problems with the program's small dart tags. Some anglers calling in tag returns for tautog indicated that some tags were loose (not well anchored) in the fish. To determine whether there might be a problem with tag retention rates, program coordinators conducted an experiment in which double tagged tautog were observed for up to 48 days in a large holding tank.

Fish were caught on hook and line at the Chesapeake Bay Bridge Tunnel Islands in mid-fall (Oct. 24-Nov. 7; water depth approximately 19-28 ft.; water temperature 58-65°F) and transported to the VIMS Wachapreague Lab in aerated coolers. A total of 55 fish (9.5-14.5 in. total length) were double tagged in two groups using T-Bar and small dart tags. The fish were held for observation in a 20 ft. diameter fiberglass tank with filtered, recirculating water. The fish were regularly fed freshly frozen chunks of hard crab. Tank water temperatures ranged from 59°F down to 44°F, with fish held until December 17, 1997.

Five clusters of structure (stacked cinder block and chimney liner sections) were placed 10-15 feet apart adjacent to the tank wall to provide cover for the fish. The block clusters also simulated natural habitat situations whereby tags in fish can come in contact with structure surfaces, possibly becoming abraided or even pulled out of the fish. In the tank, tautog were typically observed either resting against structure or inside holes or crevices in the materials. Significant fish movement primarily consisted of the tautog darting rapidly between structure clusters or moving quickly out of, and back into, a crevice when taking food. It was not unusual for more than one fish to occupy the same open space in the cinder blocks.

The majority of tagged fish exhibited loose dart tags at the end of the trial, the fish's tissue having not healed completely around the tag barb. For the two fish groups, dart tags were loose in 73% and 90% of the fish, respectfully, compared to only 5%-6% of the T-Bar tags. Rejection rates of dart tags varied in the two fish groups while T-Bar tags demonstrated no tag loss. Fish tagged October 30 (22 fish) had a 33% loss rate of dart tags (7 tags), but no loss of T-Bar tags (fish held 48 days). Fish tagged November 7 (33 fish) exhibited a dart tag loss rate of 6.1% (2 tags) and no loss of T-Bar tags (fish held 40 days).

Six of nine rejected dart tags were found on the bottom of the tank 5-19 days after fish were tagged with the remaining three tags found when the trial ended. At completion of the trial, all fish were transported in aerated coolers to Kiptopeke State Park and released with tags in place.

The tag retention experiment confirmed that dart tags implanted in tautog muscle tissue below the dorsal fin were not as securely anchored as T-Bar tags. In the case of loose dart tags, approximately half were found not anchored in the bony fin ray supports of the dorsal fin. Accordingly, taggers will receive more detailed training in 1997 regarding implanting and anchoring dart tags. In addition, selected taggers will be double tagging tautog in the field with both types of tags to gather more data on tag performance.

The tag retention experiment also provided additional insight into whether stress associated either with catch and release of tautog or the tagging process causes significant mortalities in released fish. Much like smaller scale tag retention trials with tautog in 1995, mortality associated with catching-transporting the fish was low, being 1.8 % (1 of 56 fish). No mortality resulted from tagging the fish.

The fish which died was one of four caught in deep water (45-48 ft.), with all four fish initially exhibiting swim bladder expansion problems (floating to the surface in the live well). The dying fish never recovered normal swimming behavior, even after placed in a lab holding tank, and was dead in less than 24 hours of capture. The low mortality rate is noteworthy given that the fish were held for 2-4 hours in a boat live well, transferred at the dock into aerated coolers, then transported by truck a distance of about 55 miles before being placed in laboratory tanks.

The performance of dart tags was also of concern in the trout species. As mentioned previously, the extremely low tag return rate for gray trout (0.2%), and relatively low rates for speckled trout may indicate dart tag compatibility problems with these species. Double tagging of gray and speckled trout with dart and T-Bar tags will also be field tested by selected taggers in 1997. Efforts will also be made to observe double-tagged trout in laboratory holding tanks to evaluate tag retention and the fishes' response to tags.

Table 2. Tautog tag returns during 1996 - Virginia Gamefish Tagging Program

Species	Date Tagged	Release Location	Length (in.)	Date Recaptured	Recapture Location	Length (in.)	Days At-Large
Tautog	05/15/95	CBBT, 4th Island	13.25	04/06/96*	CBBT, 4th Island	15.0	327
Tautog	05/21/95	CBBT, 4th Island	14.5	04/14/96	CBBT, 4th Island	16.0	329
Tautog	05/21/95	CBBT, 4th Island	20.0	04/18/96	Page Wreck	18[e]	333
Tautog	04/14/96	CBBT, 4th Island	17.25	04/18/96	CBBT, 4th Island	17.0	4
Tautog	04/06/96	CBBT, 4th Island	16.5	04/21/96*	CBBT, 4th Island	20[e]	15
Tautog	03/31/96	CBBT, 4th Island	18.0	04/21/96	CBBT, 4th Island	17.75	21
Tautog	04/15/96	CBBT, 4th Island	14.5	04/22/96	CBBT, 4th Island	14.5	7
Tautog	04/21/96	Cape Henry Wreck	12.75	04/28/96	Cape Henry Wreck	13[e]	7
Tautog	04/21/96	Cape Henry Wreck	11.125	04/28/96*	Cape Henry Wreck	9[e]	7
Tautog	04/27/96	CBBT, 4th Island	16.0	04/28/96	CBBT, 4th Island	16.0	1
Tautog	04/28/96	Cape Henry Wreck	10.0	04/28/96	Cape Henry Wreck	14[e]	0
Tautog	10/01/95	Monitor-Merrimac B.T.	14.5	05/01/96	CBBT, 4th Island	16.0	213
Tautog	04/27/96	CBBT, 4th Island	14.25	05/01/96	CBBT, 4th Island	N/A	4
Tautog	04/08/96	CBBT, 4th Island	16.5	05/02/96	CBBT, 4th Island	17.25	24
Tautog	11/20/95	New Point Comfort	15.0	05/02/96	Off Cape Charles**	15.75	164
Tautog	04/13/96	CBBT, 4th Island	15.75	05/02/96	CBBT, 4th Island	12[e]	19
Tautog	04/14/96	CBBT, 4th Island	18.0	05/02/96	CBBT, 4th Island	17.5	18
Tautog	04/21/96	CBBT, 4th Island	15.25	05/02/96	CBBT, 4th Island	15.5	11
Tautog	04/21/96	CBBT, 4th Island	17.5	05/02/96	CBBT, 3rd Island	16[e]	11
Tautog	04/21/96	CBBT, 4th Island	16.25	05/04/96	CBBT, 4th Island	16.5	13
Tautog	04/21/96	CBBT, 4th Island	17.25	05/04/96	CBBT, 4th Island	16[e]	13
Tautog	04/27/96	CBBT, 4th Island	13.0	05/04/96	CBBT, 4th Island	N/A	7
Tautog	05/13/95	CBBT, 3rd Island	12.0	05/08/96	CBBT, 1st Island	15.0	361
Tautog	04/06/96	CBBT, 4th Island	16.5	05/08/96	CBBT, 4th Island	16[e]	32
Tautog	04/22/96	CBBT, 4th Island	15.5	05/09/96	CBBT, 4th Island	16[e]	17
Tautog	04/22/96	CBBT, 4th Island	15.25	05/09/96	CBBT, 4th Island	14[e]	17
Tautog	04/28/96	CBBT, 4th Island	14.25	05/09/96	CBBT, 4th Island	14[e]	11
Tautog	04/21/96	CBBT, 4th Island	14.75	05/10/96	CBBT, 4th Island	15.0	19
Tautog	04/28/96	CBBT, 4th Island	15.0	05/10/96	CBBT, 4th Island	14.5	12

(continued)

Table 2. Tautog tag returns during 1996 - Virginia Gamefish Tagging Program

Species	Date Tagged	Release Location	Length (in.)	Date Recaptured	Recapture Location	Length (in.)	Days At-Large
Tautog	04/28/96	CBBT, 4th Island	14.75	05/10/96	CBBT, 4th Island	14.5	12
Tautog	04/21/96	CBBT, 4th Island	15.0	05/12/96	CBBT, 4th Island	14[e]	21
Tautog	04/13/96	CBBT, 4th Island	18.5	05/15/96	CBBT, 4th Island	19.0	32
Tautog	04/22/96	CBBT, 4th Island	14.5	05/18/96	CBBT, 4th Island	14[e]	26
Tautog	04/21/96	CBBT, 4th Island	14.0	05/18/96	CBBT, 4th Island	18[e]	27
Tautog	04/28/96	CBBT, 4th Island	15.0	05/18/96	CBBT, 4th Island	14[e]	20
Tautog	04/22/96	Cape Henry Wreck	9.75	05/19/96	Cape Henry Wreck	10.0	27
Tautog	05/01/96	CBBT, 4th Island	11.5	05/19/96	CBBT, 4th Island	12[e]	18
Tautog	04/22/96	CBBT, 4th Island	14.25	05/20/96	CBBT, 4th Island	14.0	28
Tautog	04/27/96	CBBT, 4th Island	15.75	05/22/96	CBBT, 4th Island	16.0	25
Tautog	04/22/96	Cape Henry Wreck	10.5	05/24/96	Cape Henry Wreck	10.75	32
Tautog	05/05/96	CBBT, 4th Island	11.5	05/26/96	CBBT, 4th Island	14[e]	21
Tautog	05/06/96	CBBT, 4th Island	10.5	05/30/96	CBBT, 4th Island	14[e]	24
Tautog	04/28/96	CBBT, 4th Island	12.0	05/30/96	CBBT, 4th Island	12.0	32
Tautog	05/25/96	The Cell, WT-2 Buoy	12.5	05/31/96	The Cell, WT-2 Buoy	12.5	6
Tautog	04/22/96	CBBT, 4th Island	17.25	06/01/96	CBBT, 4th Island	14[e]	40
Tautog	04/14/96	CBBT, 4th Island	14.5	06/01/96	CBBT, 4th Island	14.5	48
Tautog	04/28/96	CBBT, 4th Island	14.0	06/01/96	CBBT, 4th Island	14.0	34
Tautog	05/25/96	The Cell, WT-2 Buoy	10.0	06/05/96	The Cell, WT-2 Buoy	10.25	11
Tautog	06/02/96	The Cell, WT-2 Buoy	11.0	06/05/96	The Cell, WT-2 Buoy	10.5	3
Tautog	05/06/96	CBBT, 4th Island	10.5	06/17/96	CBBT, 4th Island	13[e]	42
Tautog	06/07/96	Triangle Wreck	12.0	06/23/96	Triangle Wreck	12.0	16
Tautog	06/07/96	Triangle Wreck	16.0	06/23/96	Triangle Wreck	16.0	16
Tautog	04/28/96	CBBT, 4th Island	13.0	06/28/96	CBBT, 4th Island	13.0	61
Tautog	04/28/96	CBBT, 4th Island	11.5	06/28/96	CBBT, 4th Island	14.0	61
Tautog	04/27/96	CBBT, 4th Island	14.25	06/28/96	CBBT, 4th Island	14.0	62
Tautog	04/28/96	CBBT, 4th Island	10.5	06/28/96	CBBT, 4th Island	12.0	61
Tautog	06/04/96	The Cell, WT-2 Buoy	8.75	06/30/96	The Cell, WT-2 Buoy	11[e]	26
Tautog	06/23/96	The Cell, WT-2 Buoy	10.25	07/07/96	The Cell, WT-2 Buoy	11.0	14

(continued)

Table 2. Tautog tag returns during 1996 - Virginia Gamefish Tagging Program

Species	Date Tagged	Release Location	Length (in.)	Date Recaptured	Recapture Location	Length (in.)	Days At-Large
Tautog	05/02/96	CBBT, Big D Wreck	11.0	08/09/96	CBBT, 1st Island	N/A	99
Tautog	06/04/96	The Cell, WT-2 Buoy	10.25	08/17/96	The Cell, WT-2 Buoy	11.5	74
Tautog	05/19/96	Nandua Creek	14.25	08/20/96	Nandua Creek	14[e]	93
Tautog	05/18/96	The Cell, WT-2 Buoy	9.25	09/11/96	The Cell, WT-2 Buoy	10[e]	116
Tautog	04/13/96	The Cell, WT-2 Buoy	10.5	10/09/96	The Cell, WT-2 Buoy	11.0	179
Tautog	04/28/96	CBBT, 4th Island	12.0	10/14/96	CBBT, 4th Island	14.75	169
Tautog	04/27/96	CBBT, 4th Island	12.75	10/21/96	CBBT, 4th Island	15.5	177
Tautog	04/27/96	CBBT, 4th Island	12.625	10/27/96	CBBT, 4th Island	13.0	183
Tautog	04/21/96	CBBT, 4th Island	15.75	11/10/96	CBBT, 4th Island	18.0	203
Tautog	04/22/96	CBBT, 4th Island	15.5	11/13/96	CBBT, 4th Island	16[e]	205
Tautog	04/21/96	CBBT, 4th Island	15.25	11/29/96	CBBT, 4th Island	18[e]	222
Tautog	04/04/96	Cape Henry Wreck	10.0	11/30/96	Cape Henry Wreck	13[e]✞	240
Tautog	04/04/96	Cape Henry Wreck	10.0	11/30/96	Cape Henry Wreck	13[e]✞	240
Tautog	10/13/96	Salty Sea Wreck	12.25	12/13/96	Salty Sea Wreck	12[e]	61
Tautog	03/30/95	Santore Wreck	10.25	12/21/96	Santore Wreck	14.75	632

[e] Length estimated.
* Released again with tag.
**Recaptured in a crab pot.
✞ Fish had been double-tagged (T-Bar and small dart tags); both tags retained by fish.

Table 3. Spadefish and cobia tag returns during 1996 - Virginia Gamefish Tagging Program.

Species	Date Tagged	Release Location	Length (in.)	Date Recaptured	Recapture Location	Length (in.)	Days At-Large
Spadefish	06/24/96	Chesapeake Light Tower	12.0	07/28/96	Chesapeake Light Tower	16[e]	34
Spadefish	06/30/96	Chesapeake Light Tower	10.0	07/28/96	Chesapeake Light Tower	11.0	28
Spadefish	06/30/96	Chesapeake Light Tower	12.0	07/28/96	Chesapeake Light Tower	11.5	28
Spadefish	06/30/96	Chesapeake Light Tower	12.0	07/28/96	Chesapeake Light Tower	14[e]	28
Spadefish	07/14/96	Chesapeake Light Tower	14.5	08/02/96	Chesapeake Light Tower	14[e]	19
Spadefish	08/04/96	Chesapeake Light Tower	16.5	08/08/96	Chesapeake Light Tower	16.0	4
Spadefish	08/06/96	Anglo-American Wreck	18.0	08/11/96	Anglo-American Wreck	18[e]	5
Spadefish	06/24/96	Chesapeake Light Tower	14.5	08/18/96	Chesapeake Light Tower	14	55
Cobia	07/06/95	CBBT, 3rd Is.	53.0	06/08/96	Bluefish Rock	57.75*	338
Cobia	07/23/95	Off Silver Beach	32.0	07/05/96	Latimer Shoal	39.5	348
Cobia	06/06/96	Latimer Shoal	43.0	07/06/96	Latimer Shoal	42.0	30
Cobia	06/30/96	In. Mid. Ground Shoal	48.0	07/21/96	Bluefish Rock	45.5	21
Cobia	08/26/95	Off Back River	34.0	07/21/96	Off Back River	38.0*	330
Cobia	06/08/96	Latimer Shoal	44.75	08/03/96	Latimer Shoal	N/A	56
Cobia	08/03/96	Bluefish Rock	54.0	08/16/96	Bluefish Rock	54.0*	13
Cobia	09/10/96	In. Mid. Ground Shoal	39.5	10/18/96	Off Hatteras Village	37[e]*†	38
Cobia	09/08/96	CBBT, 12 Mi. Post	39.0	10/25/96	C.H. Pier, Frisco, NC	N/A	47

[e] Length estimated.
* Deep hooked so hook left in fish when tagged-released; fish in good condition when recaptured.
†Fish recaptured in commercial gill net.

Table 4. Gray trout, speckled trout, red drum, and black drum tag returns during 1996 - Virginia Gamefish Tagging Program.

Species	Date Tagged	Release Location	Length (in.)	Date Recaptured	Recapture Location	Length (in.)	Days At-Large
Gray Trout	05/23/96	CBBT, 1st Island	15.5	05/27/96	CBBT, Seagull Fishing Pier	14[e]	4
Gray Trout	05/26/96	CBBT, 1st Island	12.5	06/01/96	James River Bridge	13.0	6
Gray Trout	06/21/96	CBBT, 1st Sm.Boat Ch.	12.0	06/21/96*	CBBT, 1st Sm.Boat Ch.	12.0	0
Gray Trout	09/26/96	Concrete Ships at Kiptopeake	13.25	10/02/96	Concrete Ships at Kiptopeake	18[e]	6
Sp. Trout	08/28/96	Poquoson Flats	14.5	09/14/96	Smith's Beach (The Gulf Area)	15.0	17
Sp. Trout	10/09/96	Rudee Inlet	11.0	10/10/96*	Rudee Inlet	11.0	1
Sp. Trout	10/09/96	Rudee Inlet	12.75	10/11/96*	Rudee Inlet	12.75	2
Sp. Trout	10/14/96	Lynnhaven Inlet	11.0	10/15/96*	Broad Bay	11.0	1
Red Drum	11/20/95	Oregon Inlet, NC	16.5	01/04/96	Little Riv. In. SC**	18.0	45
Red Drum	02/19/96	Elizabeth River	17.75	03/24/96	Elizabeth River	18.0	34
Red Drum	06/13/96	In. Mid. Ground Shoal	44.0	06/16/96	In. Mid. Ground Shoal	42.0	3
Red Drum	10/09/96	Cape Pt., NC	15.0	10/15/96	Pamlico Sound	16.0	6
Black Drum	10/01/96	Rudee Inlet	9.0	10/11/96	Ft. Macon Jetty, Atl. Beach, NC	9.0	10
Black Drum	10/10/96	Cape Pt., NC	9.5	10/20/96	Pamlico Sound	9.875	10
Black Drum	11/07/96	Avon, NC	9.5	11/10/96	Cape Pt., NC	9.75	3

[e] Length estimated.

* Released again with tag.

**Tagged fish found by fish dealer in shipment of fish from Little River, SC; fish first tagged at Monitor-Merrimac Bridge Tunnel (James R.) on 10/01/95, then captured and re-released at Oregon Inlet, NC (see Fig. 3 chart).

What to Do When You Catch a Tagged Fish

1. The **most important information on a tag is the tag number**. This is the key to identifying the fish. It is critical to record the exact tag number.

2. **If you plan on releasing the fish, quickly write down the tag number, measure or estimate the fish's length, then gently release the fish with the tag in place.** Multiple recaptures of a tagged fish are particularly valuable to the tagging program. If you keep the fish, remove the tag for reporting purposes. In either case, **contact the tagging office with the tag information (757-491-5160).**

3. **Measure and record** both the **total length** and **fork length** of the fish, or **estimate** the **length** if you do not have a measuring device. Provide an estimated weight for the fish.

4. **Record** the **species** of fish, **date** of the catch, and exact **location** where the fish was caught.

5. **Record** any information about the fish which could be useful; for example, any **unusual markings or wounds.**

6. When you report the recapture of a tagged fish, you will be provided with information about the fish (when and where it was tagged; size when tagged) and **you will be given a logo award from the Virginia Gamefish Tagging Program.**

Handling and Releasing Fish

1. **Plan ahead.** Minimize stress and exhaustion by using tackle strong enough to land fish quickly. Set hooks quickly to minimize the opportunity for fish to swallow hooks and avoid the use of treble hooks. When practical, bend down the barbs on hooks or use barbless hooks.

2. **Minimize the handling of fish, and do not touch the eyes or gills.** Large fish-are best released by leaving them in the water and removing the hooks. Small fish should be brought on board and handled with a damp towel or damp cotton gloves, which will minimize damage to the skin and protective slime of fish. Control the fish, gently but firmly, sO it cannot "flop" around and cause itself any further injury. Do not use a gaff.

3. **Use the right tools to remove the hooks.** Needlenose pliers work well for fish hooked in the mouth, while a deep-throat dehooker or disgorger should be used for deeply hooked fish. Cut the leader close to the fish's mouth if hook removal is not possible. Never pull or jerk on the-leader to remove a hook.

4. **Release fish gently, and if the fish is stressed or exhausted, revive it** by gently moving it forward through the water until it is able to swim off.

In the interest of good sportsmanship and good conservation...keep only what you need...release the rest.