

VIRGINIA RECREATIONAL FISHING DEVELOPMENT FUND
PROJECT APPLICATION

NAME AND ADDRESS OF APPLICANT Virginia Institute of Marine Science P.O. Box 1346 Gloucester Point, VA 23062-1346	PRINCIPAL INVESTIGATORS Jon Lucy, VIMS Marine Adv. Services Lewis Gillingham, VA Saltwater Fishing Tournament., VMRC
PRIORITY AREA OF CONCERN Recreational Fisheries Research and Education	PROJECT LOCATION VIMS and VSFT-Virginia Beach; lower Chesapeake Bay and VA offshore waters
DESCRIPTIVE TITLE OF PROJECT Virginia Game Fish Tagging Program 2010	
PROJECT SUMMARY <p>Initiated in 1995, primarily funded by Saltwater Recreational Fishing License Funds and matching VIMS funds, this project is a cooperative program of the Virginia Saltwater Fishing Tournament (Marine Resources Commission) and VIMS Sea Grant Marine Advisory Program. Annually training anglers via a series of coastal workshops, the program enables a corps of 100-200 experienced anglers to direct tagging effort on select target species important to VA's marine recreational fisheries, (a value of over one billion dollars annually). As of 2008 database records (used by researchers, fishery managers, anglers, etc.) include 151,000 tagged fish records and over 14,000 fish recapture records (an overall 9.6% recapture rate through 2008). Target species are: black and red drum, black sea bass, cobia, flounder, gray triggerfish, sheepshead, spadefish, speckled trout, and tautog. During 2008 trained anglers tagged and released approximately 19,700 with 1,800 recaptures occurring during the period. Tagging continues at two power plant areas during fall-winter-early spring in cooperation with Dominion Power as the plant areas serve as "warm-water havens" in particular for red drum and speckled trout. The program database is regularly used by staff and fishery technical committees with VMRC, the ASMFC, and MAFMC. Tag-recapture data is shared between VA and NC, and researchers from each state co-author presentations at scientific meetings. Program results are documenting both expected, and unexpected, movement and habitat use patterns of target species. Target species either spawn in the lower Bay, or in offshore-nearshore waters of VA-NC, using Virginia waters as nursery/feeding grounds. Tag-recapture data for cobia show sexually mature fish return consistently returning to the bay over periods of 1-5 years after tagged in the bay. Tagging results on sub-legal flounder regularly maintain close association with structure-based habitats in the bay (fishing piers, artificial reefs, bridge-tunnel areas, etc.).</p>	
EXPECTED BENEFITS <p>Provide data on local fish movement and seasonal migrations, data previously unavailable on tagging program target species all of which are important to VA's marine recreational fisheries. Tagged fish length data document fish year classes supporting VA fisheries, data collected by anglers on the fishing grounds, including species not readily sampled by VIMS monitoring surveys. Tag-recapture data demonstrate surprisingly rapid seasonal movements of some species between VA and NC waters. Data document over wintering of large numbers of speckled trout and red drum in at least two power plant areas, and possible retention of these</p>	

species in Rudee Inlet during mild winters. The heavy boat-traffic areas of Rudee are being documented as major habitat and forage areas over multiple years for flounder, speckled trout, and red drum. Tag-recapture data enhance other data sources regarding numbers and sizes of finfish released under fishery regulations in the VA fishery. Results are made available to the angling community through talks to fishing clubs and VIMS web site, but more importantly through trained angler taggers spreading results across the angling community. The program also provides the angling community with hands-on participation in a fisheries research and conservation project directly benefiting Virginia's marine recreational fisheries. Program results demonstrate to the angling community that significant numbers of released, sub-legal fish survive, as well as becoming available again to anglers to enhance their fishing experience.

COSTS

VMRC Funding: \$ 62,142 (VIMS portion) + **\$ 25,658 (VMRC Portion) = \$ 87,800**

VIMS Funding: \$ 22,234

Total Cost : \$ 84,376 (VIMS portion) + **\$25,658 = Total Cost \$ 110,034**

Detailed budget included with proposal

Virginia Game Fish Tagging Program
Virginia Institute of Marine Science
Proposed Budget for January 1, 2010 to December 31, 2010

<u>BUDGET CATEGORY</u>	<u>DIRECT</u>	<u>MATCH</u>
I. Salaries		
a. Jon Lucy, Co-PI 1.5 mm/1 mm	\$ 9,954	\$ 6,636
\$79,631 Per Year		
\$6,636 Per Month		
b. Data Technician, TBN 2.5 mm	\$ 7,188	\$ -
\$34,503 Per Year		
\$2,875 Per Month		
Subtotal	\$ 17,142	\$ 6,636
II. Fringe Benefits (40%)	<u>\$ 6,857</u>	<u>\$ 2,654</u>
Total Salaries and Fringe Benefits	\$ 23,999	\$ 9,290
III. Publications (Annual Report, Website/Recapture Updates)	\$ 2,000	
IV. Travel (Local travel for field work, Tagging work group meetings, presentations at scientific meetings and association clubs.)	\$ 4,000	
V. Supplies	\$ 19,715	
25,000 T-Bar Tags @\$600/1,000*	\$ 15,000	
1,000 Plastic Dart Tags @0.77	\$ 770	
1,000 Steel Dart Tags @\$1.98	\$ 1,980	
15 Steel Tagging Needles @\$10	\$ 150	
50 Tagging Guns @\$30	\$ 1,500	
35 Tagging Needles @\$3	\$ 105	
35 Measuring Boards @\$6	\$ 210	
Subtotal	<u>\$ 19,715</u>	
VI. Total Direct Costs	\$ 49,714	\$ 9,290
VII. Indirect Costs - 25% VMRC	\$ 12,428	
Indirect Costs - 43% on Match		\$ 3,995
Indirect Costs - 18% from Direct		8,948
VIII. TOTAL PROJECT COSTS	\$ 62,142	\$ 22,234

Virginia Game Fish Tagging Program

Budget – 2010

VMRC Portion

The VMRC portion of the budget is broken down into tagging awards (53.6%), postage and shipping (36.9%), shipping supplies (3.8%) and travel (5.7 %).

Tagging awards consist primarily of rewards sent to the general public for reporting tag recapture information but also include costs for data sheets, Conservation Certificates and Plaques that are provided to the volunteer taggers. The number of reported recaptured fish in any given year correlates to the number of fish tagged in that year but is also influenced by the number of fish tagged in recent prior years. The years of 2006, 2007 and 2008 were all record-setting years; both in terms of numbers of fish tagged and the reported number of recaptured fish (**refer the attached pdf file, particularly the last column titled “total”**). For the first time in any year, the number of active volunteer taggers exceeded 200 in 2008 and remained slightly above 200 in 2009. To cover the expected increase in recaptures, the number of each reward item was increased by 20% for the 2009 budget. Likewise postage and shipping costs plus the related mailing supplies were increased 20% due to the projected additional number of awards shipped.

We believe the funding amount in the 2009 budget is sufficient for 2010. Therefore our request for funding in 2010 includes no increases from the 2009 budget of \$25,658. Below is the breakdown by category and item.

Tagging Awards

720 Hats @ \$6.50 each	4680
720 T-Shirts @ \$6.50 each	4680
180 Pewter Fish Pins @3.00 each	540
1200 Decals @ .85 each	1020
600 Digital Stickers @ 1.75 each	1050
360 Tackle Organizers @ 2.50 each	900
12 Tag Plaques @ \$14 each	168
Conservation Certificates	500
Data Sheets and Cards	<u>600</u>
	14138

Postage and Shipping

U. S. Postage	1560
UPS Shipping	<u>7800</u>
	9360

<u>Supplies (Paper, Envelopes, Mailers, Tape, Bubble Wrap etc.)</u>	960	
<u>Travel</u>	1200	
<u>Total</u>		\$25,658

Game Fish Tagging Program

Virginia Marine Resources Commission

Virginia Institute of Marine Sciences

Recaptures / Tagged by Year and Species Report

Based on Number of Tags

Print Date: April 14, 2009, 10:16 am



Year	Black Drum	Black Sea Bass	Cobia	Flounder	Grey Trout	Red Drum	Sheeps Head	Spade Fish	Speckled Trout	Striped Bass	Tautog	Trigger Fish	Total
2009	1 / 5	2 / 34	0 / 0	5 / 76	0 / 0	58 / 569	0 / 2	0 / 0	39 / 497	0 / 0	24 / 132	0 / 0	129 / 1315
2008	6 / 191	332 / 2662	8 / 66	867 / 7844	0 / 35	510 / 4895	2 / 40	41 / 275	215 / 3492	0 / 0	145 / 745	76 / 212	2202 / 20457
2007	36 / 546	292 / 1875	13 / 71	1060 / 8616	0 / 7	511 / 3365	41 / 229	73 / 433	60 / 2929	0 / 0	238 / 964	47 / 262	2371 / 19298
2006	28 / 288	260 / 1268	26 / 187	792 / 6218	1 / 1	361 / 4153	0 / 176	28 / 221	51 / 1953	0 / 1	309 / 2081	32 / 79	1926 / 16629
2005	4 / 205	107 / 686	4 / 98	621 / 6123	0 / 0	42 / 794	3 / 185	21 / 173	29 / 1149	1 / 2	133 / 822	4 / 23	974 / 10260
2004	5 / 232	70 / 1012	5 / 184	648 / 7286	0 / 0	23 / 503	27 / 274	43 / 299	26 / 990	0 / 1	119 / 1221	41 / 193	1016 / 12195
2003	5 / 176	88 / 922	11 / 14	397 / 3704	1 / 0	339 / 2270	0 / 6	26 / 236	8 / 361	0 / 0	59 / 497	12 / 31	964 / 8219
2002	15 / 188	231 / 1732	15 / 63	317 / 3566	0 / 0	193 / 2752	1 / 10	55 / 470	23 / 1247	0 / 0	129 / 653	23 / 56	1053 / 10741
2001	4 / 395	280 / 1913	19 / 87	636 / 6880	0 / 0	27 / 295	1 / 7	49 / 553	13 / 486	0 / 6	149 / 951	2 / 14	1215 / 11605
2000	5 / 109	294 / 2008	10 / 65	161 / 2603	0 / 6	173 / 1124	1 / 12	60 / 523	11 / 362	1 / 3	156 / 713	0 / 0	913 / 7528
1999	7 / 90	384 / 2139	16 / 59	4 / 4	25 / 1512	135 / 1073	0 / 0	25 / 233	16 / 521	2 / 11	356 / 1923	0 / 0	1000 / 7572
1998	8 / 196	455 / 2655	13 / 73	3 / 28	26 / 2937	92 / 551	0 / 0	38 / 476	29 / 495	0 / 2	226 / 1347	0 / 0	907 / 8763
1997	2 / 72	48 / 592	9 / 108	2 / 38	17 / 2503	44 / 438	0 / 0	36 / 547	12 / 440	0 / 12	77 / 914	0 / 0	250 / 5665
1996	3 / 85	0 / 0	9 / 75	0 / 6	4 / 2194	4 / 92	0 / 0	8 / 189	4 / 409	0 / 1	74 / 543	0 / 0	106 / 3595
1995	37 / 200	0 / 0	2 / 50	0 / 3	0 / 0	2 / 66	0 / 0	25 / 193	14 / 601	0 / 1	30 / 260	0 / 0	110 / 1375

This report counts the total number of tags per species.

For recaptures, this report counts the number recaptures including recaptures of the same fish.

**Virginia Game Fish Tagging Program
Year 16 Proposal (2010)**

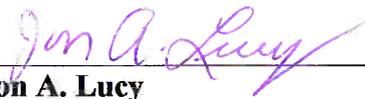
January 1, 2010 to December 31, 2010

Proposal Submitted to:

**Virginia Recreational Fishing Development Fund
Virginia Marine Resources Commission
2600 Washington Avenue, Third Floor
Newport News, Virginia 23607**

Proposal Submitted by:

**Virginia Sea Grant Marine Advisory Program
Virginia Institute of Marine Science
College of William and Mary
Gloucester Point, Virginia 23062**



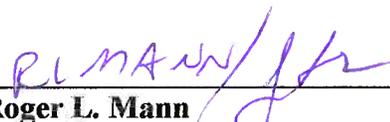
Jon A. Lucy
Principal Investigator
804-684-7166



Thomas J. Murray
Associate Director for Advisory Services
804-684-7190



Jane A. Lopez
Director of Sponsored Programs
804-684-7029



Roger L. Mann
Director for Research and Advisory Services
804-684-7108

April 13, 2009

Virginia Game Fish Tagging Program (VGFTP) Proposal (2010)

Overview

Initiated in 1995, the Virginia Game Fish Tagging Program (VGFTP) coordinates a fish tagging and fish tag-recapture database generated through contributed efforts of a dedicated corps of trained marine anglers. The program was conducted cooperatively from 1995 through September 2007 between Claude Bain, now retired Director of the Virginia Saltwater Fishing Tournament (VSFT) under VMRC, and Jon Lucy of VIMS Marine Advisory Program. Since the latter part of 2007, the joint effort continues under the direction of Mr. Lucy and Lewis Gillingham, the new VSFT Director.

This proposal seeks to continue funding for the project during 2010 (Year 16). In addition to the VMRC funds requested in the proposal, matching funds are provided by the Virginia Institute of Marine Science of the College of William and Mary. There is also additional administrative support provided by the Virginia Sea Grant Program, a federal funding source (National Oceanic and Atmospheric Administration-NOAA) of major significance to VIMS as part of the broader Virginia Sea Grant Marine Advisory Program.

Program responsibilities are shared, taking advantage of the respective organizations' communication links with the marine recreational angling community and strengths in data handling-analysis and graphics-publication production. For example, the VSFT's Virginia Beach location and its regular contact with marinas, tackle shops, and anglers through the citation program makes it the natural partner for receiving and keying tagged and recaptured fish data. And at VIMS, the resulting data are organized and analyzed for a mix of needs, i.e., updated graphs and tables for tagging training workshops, annual reports, data requirements for researchers/fishery managers, presentations to angling and civic groups, presentations at scientific meetings, etc.

Program Concern: Maintaining Easily Accessible, Widely Publicized Telephone Link

Since its inception, the tagging program has used the telephone number of the VSFT office in Virginia Beach as the means for anglers, seafood dealers, commercial fishermen, etc. to call in recapture reports of tagged fish. The office's phone number continues to be on every fish tag. In addition to being on all tags, the phone number is also displayed on tagging program posters displayed in many tackle shops and at select fishing piers and boat ramps (both in Virginia as well as in North Carolina).

Serious consideration is being given to moving the VSFT office to the Peninsula. If such a move occurs, it is imperative that the tagging program's telephone link be initially maintained long term while a smooth telephone transition is explored for the new office location. It is the feeling of program coordinators that something like having a voice mail message maintained on the line for 6-8 weeks directing callers to call a "new telephone number" would frustrate callers and reduce the reporting rate of recaptured fish.

The critical telephone communication link for the tagging program to continue receiving reports of tagged fish at the current level needs to be carefully examined. A good number of important (and often

unique) fish recaptures are called in for fish having been at large as long as 1-2 years post tagging. Particularly significant recaptures of fish have also occurred 2 to 3 years after the fish were tagged (adult red drum, flounder, and tautog). Cobia recaptures have been reported for adult fish at large 4 and 5 years after being tagged. The program cannot afford to lose such valuable, long-term recapture data on tagged fish.

Overall Program Objectives

Basic objectives guide program activities. There are five main objectives:

- (1) Develop and maintain a quality tagging program using a corps of trained angler taggers; direct tagging effort of such anglers to select target species, especially where one can take advantage of significant numbers of non-legal fish anglers are readily discarding alive while complying with recreational fishing regulations.
- (2) Where and when appropriate, direct program tagging effort toward opportunistic occurrences of strong year classes of fish in Virginia's Bay and nearshore-offshore waters, especially species not traditionally subject to scientific tagging studies in such waters, i.e., red drum, black drum, speckled trout, tautog, sheepshead, spadefish, etc. Do not target species currently monitored and/or targeted in state waters by research-based tagging studies coordinated by fishery research agencies and institutions, i.e., striped bass.
- (3) Maintain a database of tagged and recaptured fish records of interest (and accessible) not only to the angling community, but also of use to fishery researchers and managers as the database matures. Make summaries and reports of such data available to the angling community through annual reports, web sites, presentations to angling clubs, kids fishing clinics, etc. and provide requested data to researchers and fishery managers.
- (4) Use the tagging program to enhance education of marine anglers about the importance of reporting tagged fish to appropriate organizations, agencies, and research institutions.
- (5) Use program results to further educate the angling community about fisheries' conservation and management benefits directly connected with proper handling and releasing of non-legal fish. Tag-recapture data prove beyond a doubt that anglers consistently using proper catch and release fishing practices makes for better angling catches both short-term and long-term.

Given the above objectives, the program maintains a corps of experienced, trained angler-taggers who can capitalize on opportunities to focus significant tagging effort on key species which often suddenly exhibit high levels of abundance during any given fishing season. While contributing significantly to the rebuilding and sustaining of specific fisheries comprising Virginia's one billion dollar marine recreational fishery, such events take on greater value when tagging documents sizes and relative numbers of recreationally-targeted fish occurring in state waters, and the habitats such fish utilize year to year.

Current Program Structure

To keep the program manageable as well as to promote quality tagging and data acquisition, participation during any one year is limited to approximately 200 trained taggers. Communication and follow-up where needed with taggers, especially for those new to the program, can be managed with capping participation at the indicated level. This number of active taggers has also proven to work well regarding producing useful data on the number and size distribution of fish tagged, as well as a valuable time series of tag-recapture data for the species targeted. Due to increasing angler interest in the program, during February-March 2008 the series of five annual tagging training workshops (two on the Eastern Shore) resulted in training something over 60 new taggers. These taggers brought the number of active participants to just over 200 people.

On an annual basis, usually in December, taggers are requested to re-new their active status in the program for the coming year. Because of a range of circumstances (moving out of the area, selling their boat, not fishing as much as expected, etc.) something on the order of 25-30% of participants may drop from active status at the end of the year. This change in participation opens up new “slots” for anglers wanting to join the program. Organizing winter-spring tagging training workshops, the method for new taggers to enter the program, fills such positions.

Because the program was at its highest level of participation during 2008, in 2009 program coordinators scheduled only one tagging training workshop in Hampton. This worked well for anglers currently maintained on the waiting list to join the program. Convened in late March at Bass Pro Shops (Hampton Store) the workshop resulted in just over 20 new taggers being trained. The two hour session focused on program objectives, data recording needs, fish handling and tagging techniques, and finally hands-on tagging practice on freshly iced fish. New taggers were then provided tags and tagging equipment, including fish measuring boards. Bass Pro has cooperated in this way with the tagging program for several years.

Sharing of Program Responsibilities

In addition to handling the bulk of data entry, the Virginia Beach office keeps program participants in tags, tagging needles, etc. These items are regularly mailed to taggers and records maintained regarding tag-number series assigned to individuals, information important in tracking down late tagged fish data reports for recently reported recaptures of tagged fish. Likewise, Recapture Reports (1-2 pages) generated for tagged fish recaptures are sent by the office to both the tagger responsible for marking the fish, and also the individual reporting the fish recapture. Completing this “feedback loop” in a timely matter is critical to the success and integrity of any tagging program.

On every tag is clearly stated that a “REWARD” is offered for reporting recaptures of tagged fish. Therefore, appropriate reward items (program caps, sun visors, T-shirts, fish pins, etc.,) are also mailed out with fish Recapture Reports to all persons interested in receiving such items. The highly prized program T-shirt can only be printed in limited numbers each year. Accordingly, late in the fishing year substitutions of other items can only be offered if this is the preferred reward for making the recapture report. In most such cases, people are understanding of budget limitations impacting such issues.

The majority of data for both tagged and recaptured fish are entered into the database at the Virginia Beach office, the data going directly to the database maintained on a server at VMRC's office in Newport News (by Mr. Todd Sperling). Regular communication occur among Mr. Sperling, Lewis Gillingham and Ann Burnett (VSFT office), and Jon Lucy (VIMS) on database issues. Mr. Sperling is extremely gracious, and timely, in making suggested changes aimed at reducing potential errors and inconsistencies which can occur when tagged fish and recaptured fish data records are merged to produce Recapture Reports as well as periodically updates of tag-recapture data files.

In 2008 VIMS became a remote site for entering tagged fish and recaptured fish data into the database for select taggers. To take some work load off of the Virginia Beach office, VIMS (Ms. D. Roberts) now enters all data for the program's most productive tagger, Mr. Ed Shepherd of Yorktown. During 2007 and 2008, Mr. Shepherd tagged over 4,000 fish resulting in nearly 740 800 recapture reports for the two years from fish he alone had tagged (Table 1A). Ms. Roberts also provides critical expertise to the program regarding organizing data, producing handout materials for tagging training workshops, and producing data graphs and tables for a mix of needs.

At VIMS, tagged fish data and tag-recapture data records are also checked for possible inconsistencies or errors, then summarized and analyzed for production of annual reports (hard copies and web-based formats). Graphics illustrating fish movement and habitat use patterns are developed for a variety of educational programming (VIMS Marine Science Day, "Kids Fishing Clinics," science teachers' courses, and public presentations, i.e. to angling clubs and civic groups, etc.). Data and graphics also are organized and displayed (with assistance of Ms. D. Roberts and VIMS Publications Center) in appropriate formats for various programming needs, i.e., Web site pages, annual tagging training workshops (previously referenced), posters alerting anglers how to report tagged fish, annual reports, and presentations at regional-national scientific conferences. Ordering of tags and tagging equipment, and construction of measuring boards, is handled by VIMS.

The Institute also periodically conducts tag retention field trials to evaluate whether changes might be warranted regarding the type of tag used for specific species. Also depending upon the range in size of fish, certain tags are more appropriate for "small" fish specimens (like the 2.5 inch/63 mm T-bar tag used with "tagging gun" applicators) versus large "adult" fish. For example, the T-bar tag is appropriate for juvenile black and red drum, and juvenile cobia, up to about 26-28 inches total length (660-711 mm TL). However, as these fish grow up to 50+ inches TL (1,270 mm TL), once over about 28 inches TL the smaller T-bar tag is not the most effective nor visible tag for larger specimens of these species. Therefore, the program uses a 6.25 inch (159 mm) long stainless steel dart tag (with wire core sheath) in such specimens (see Appendix, photo of tags currently used in the tagging program).

During 2007-2008, J. Lucy (VIMS) coordinated tagging efforts of three taggers to assist him with field trials in which both "dogleg dart" tags (DD tags) and "wide barb dart" tags (DW tags) were paired with T-bar tags for double tagging speckled trout and sub-adult red drum. Again, see the Appendix for a photo of program tags (only the DW tag with a flattened, spade shape barb is not shown).

The need to test T-bar tag retention in sub-adult red drum is based upon research done in South Carolina with small, hatchery reared drum comparing loss rates of T-bar tags and internal anchor tags (the type of tag widely used in striped bass). Held and regularly fed in outdoor ponds over a 14 month period, groups of red drum tagged with T-bar tags exhibited a mean loss of 83% of their tags compared to no

losses of internal anchor tags in comparable groups of drum (T. Smith, W. Jenkins, M. Denson.1997. Bull Natl. Res. Inst. Aquacult., Suppl. 3: 109-113). Unfortunately, the internal anchor tag is not preferred for angler taggers as it must be anchored in a fish's abdominal muscle wall by making a small incision with scalpel. Speckled trout also known to exhibit problem of significant losses of various types of tags anchored in the fish's muscle at the base of the dorsal fin (Robert Wiggers, SC Mar. Resources Div., personal communication).

Results to date from recaptures of double tagged fish have been mixed, with the data still being examined. A major problem is naturally anglers have no way of knowing if a fish they recapture might have been double tagged. Therefore, angler reports on such fish are not always clear as to whether one or two tags were observed in the fish. This is particularly the case for those reports left on voice mail during weekends in which phone numbers are not always provided for possible follow-up. Interactive recapture reports, called in during office hours, have shown that it's not unusual for anglers to only report one tag number for a fish although in fact two tags possibly were noticed in the fish (or only the one tag was seen).

The degree of ambiguity on this issue with recaptures of double tagged speckled trout and red drum has resulted in the program changing tactics for the two species in 2009. Rather than double tag, a group of select taggers will switch back and forth between the experimental tag types, e.g., single tagging 25 fish with DD tags, then single tagging the next 25 fish with DW tag. We then can compare recapture rates and times at large between fish carrying the different types of tags. Given that most taggers are using T-bar tags for sub-adult red drum and speckled trout of all sizes, we will then have that recapture data against which to compare outcomes with the two experimental tags.

Target Species: 2008-2010

Target species for 2010 are listed below. Summer flounder replaced weakfish in 2000 as significant tagging effort on the latter species never produced greater than a one percent recapture reporting rate (tank-based tag retention trials indicated high tag loss rates over 2-4 week periods). These target species have remained unchanged since 2000.

Black Drum	<i>Pogonias cromis</i>
Black Sea Bas	<i>Centropristis striata</i>
Cobia	<i>Rachycentron canadum</i>
Summer Flounder	<i>Paralichthys dentatus</i>
Gray Triggerfish	<i>Balistes capriscus</i>
Red Drum	<i>Sciaenops ocellatus</i>
Sheepshead	<i>Archosargus probatocephalus</i>
Spadefish	<i>Chaetodipterus faber</i>
Speckled Trout	<i>Cynoscion nebulosus</i>
Tautog	<i>Tautoga onitis</i>

Background and Overall Accomplishments-2008

The tagging program database helps to document within year, and year-to-year, habitat utilization and movement patterns of selected target species in Virginia waters. In addition, the program documents

significant coastwise migrations for certain species. Many of these species spawn in lower Bay or nearshore-offshore waters of Virginia-North Carolina as well as use Virginia estuary and coastal waters as nursery and feeding grounds.

The program's results are of interest both to the angling community as well as to fishery researchers and managers. The number and size distribution of target fish tagged each year are of special interest to fishery managers as such data compliment other research-based data sets. The size data for fish tagged in the program help supplement other data sources, thereby better defining the mixed sizes of fish released in the state's marine recreational fishery, key information to monitoring fish stocks under ever-changing size and bag limit management regulations.

Tagging effort for species such as flounder, red and black drum, speckled trout, cobia, spadefish, triggerfish, and sheepshead primarily occurs in Bay and nearshore coastal waters. However, tagging of tautog, black sea bass, spadefish, gray triggerfish occurs over much broader areas of Bay and inshore-offshore waters. For structure-oriented species, effective tagging focuses on structure sites, i.e., artificial reefs, the Chesapeake Bay Bridge Tunnel complex, shipwrecks sites, and other bottom "hangs" occurring from the lower bay to many miles offshore of Virginia.

Through the cooperation Virginia Dominion Power, special tagging continues to occur at two power plant warm-water discharge canals areas during fall, winter, and early spring months. Tagging results at both the Yorktown Power Station (lower York River) and the Center for Energy Conservation (CEC) Power Station (Southern Branch of the Elizabeth River) are documenting the dynamics of such areas as over-wintering sites for various species (primarily red drum and speckled trout, but occasionally juvenile sheepshead and cobia, as well as young black sea bass.

Special Database Uses by Researchers and Fishery Managers 2008-2009

Speckled Trout: A preliminary tagging study of spotted seatrout in North Carolina was initiated during 2008 in preparation for more in-depth tagging in subsequent years. This tagging is providing preliminary, then ultimately more detailed data, to be used by the state in developing a Fishery Management Plan for Speckled Trout. With initial meetings of the management plan group beginning in early 2009, updated results on Virginia tagged trout are being shared with people involved in the project.

Red Drum: With VMRC (Mr. J. Grist and others) taking the lead on an ASFMC Red Drum Working Group developing a benchmark assessment of red drum from Virginia through Florida, 13 years of drum tagging results (1995-2007) have been shared with this group. I believe this marks the first significant use of red drum tag-recapture data from Virginia waters for such purposes. The data have been reviewed and enhanced to include recapture results for fish tagged at various ages (ages 0, 1, 2, 3, and 4+). Another version of the data were recently provided VMRC detailing tag-recapture records for key Virginia fishing areas where both sub-adult and adult drum are targeted by anglers. This most recent data set is currently under review for use in population assessment models.

Flounder: A VIMS PhD student, Mark Henderson (advisor, Dr. Mary Fabrizio, VIMS Dept. of Fisheries Science), is planning to use the program's 2000-2008 flounder tag-recapture data as part of his broader study on dynamics of seasonal movement of the species between lower Chesapeake Bay and offshore waters. The data are currently under review by Mr. Henderson for evaluation in various models

aimed at possibly determining some useful stock parameters associated with the recreational fishery (the Game Fish Tagging Program flounder data set primarily includes sub-legal fish as it is this size fish mostly targeted for tagging). The program's 2009 flounder tagging results will also be useful for comparison with results from Mr. Henderson's planned release of flounder carrying archival data logging tags.

Program Tagging Awards-2008

The program annually presents award plaques to the year's "Top Taggers" (for the program overall as well as by target species). For the past several years, the presentation of the award plaques has been coordinated to occur on a weekend evening in early March at Bass Pro Shops Spring Fishing Classic (the Hampton store featuring conservation-oriented exhibitors and fishing seminars over period of several weekends). The Bass Pro store makes a nice setting for the short awards ceremony, while also providing tagging program winners and runners-up with some complimentary fishing-related merchandise.

As noted in Table 1A (tagging winners: 2006-2008) and Table 1B (winners and runners-up: 2007 and 2008), certain taggers remain among winners over several years. For example, Mr. Ed Shepherd of Yorktown continues to be a dominant tagger for the program, as well as a great program ambassador for the many anglers using the public Gloucester Point Fishing Pier (see Appendix, VIMS Sea Grant Marine Resource Bulletin article, Fall/Winter 2008 Issue, *Fish Stories*). Mr. Rob Collins of Norfolk is another highly productive and consistent tagger.

But there are also usually some "first-timers" among those receiving tagging awards, i.e., in 2008, as compared to 2006-2007, there were four new "top tagger" award winners (Doug Wehner-Virginia Beach, Susan Harrell-Chesapeake, James Johnson-Virginia Beach, and Kevin Whitley-Norfolk). The annual awards make for fun and friendly competition among program participants. But more importantly, the awards provide well-deserved recognition to individuals giving major contributions of time and effort to making the program work for the good of all involved. Presenting the awards in a public forum also helps promote the tagging program before a mixed group of anglers.

Tagging Effort and Recaptures-2008

In Tables 2A (taggers by "last name" and 2B (taggers by total fish tagged), taggers receiving "Tagging Conservation Certificates" are listed for 2008. Individuals tagging a total of 25 or more fish during a given year receive such certificates. During 2008, 87 trained anglers received the certificates. More impressive is they together tagged just over 19,000 fish during the year, accounting for about 97% of the year's total number of tagged fish (19,720 total fish across 10 target species).

Recognition is also given taggers having five or more fish recaptured during the year. The listing of these taggers (by "last name" and "total recaptures") for 2008 appears in Tables 3A and 3B). Those taggers who tagged the highest total numbers of fish during the year naturally also rank high in recaptures.

Through 2008, the program's database included over 151,000 tagged fish records and approximately 14,500 recapture records (Table 4; Figs. 1 and 2). During 2006-2008, there was consistency among top ranked species by number of fish tagged per year. Summer flounder accounted for the most tagged fish each year followed by red drum, speckled trout, black sea bass, and tautog,

respectfully. Cobia, black drum, spadefish, sheepshead, and gray triggerfish rounded out the tagging effort.

Compared to 2007, the number of flounder tagged during 2008 declined somewhat, while numbers of the other top tagged species all increased. While greater numbers of adult black drum were tagged than in prior years, overall numbers of tagged black drum declined in 2008, likewise the situation with sheepshead, spadefish, and tautog. While cobia tag numbers were comparable to 2007, the effort accounted for only about half the total cobia tagged during 2006.

Cumulative recapture rates (Fig. 3) were 10% to about 15% for spadefish, cobia, black sea bass, and tautog. Recapture rates held at 7-9% for sheepshead, flounder, and red drum. The lowest recapture rates (2.8-4.6%) occurred for speckled trout and black drum.

Key Program Accomplishments Supported by 2008 Results

- **Flounder:** Sub-legal flounder tagged in Chesapeake Bay and Chincoteague Inlet waters continue to show a strong pattern of recaptures typically occurring 2-8 weeks, sometimes longer, at the same general area where the fish were tagged. This is particularly the case for flounder tagged at fishing piers, rock jetties, and structure sites such as artificial reefs, shipwrecks, and bridge-tunnel complexes. In the winter-spring following being tagged in Virginia, flounder recaptures occur in offshore waters. Then recaptures show significant numbers of fish moving back into Virginia bay and barrier island waters. But also some bay-tagged flounder are recaptured during the following year (early summer-early fall) north of Virginia (Delaware Bay, along New Jersey-New York beaches, even to Rhode Island waters). A few bay-tagged flounder also move the year following tagging to North Carolina waters (and occasionally even as far as South Carolina). With considerably more recaptures than resulted from two earlier VIMS studies, the tagging program's flounder results generally support the conclusions of those studies. In comparison to the earlier studies, the latitudinal range of flounder recaptures from Virginia tagged fish has been expanded (see R. Kraus and J. Musick. 2001. A Brief Interpretation of Summer Flounder, *Paralichthys dentatus*, Movements and Stock Structure with New Tagging Data on Juveniles. Marine Fisheries Review 63 (3):1-6).
- **Cobia:** Adult cobia tagged inside the lower bay continue to be recaptured months to years post tagging, the majority of recaptures occurring again in the bay (also occasionally off the states ocean shoreline) 1-5 years later. But while fewer in number, from year to year some bay-tagged adult cobia are consistently recaptured along North Carolina's Outer Banks or either along Florida's east coast. Interestingly there have yet to be any Virginia tagged cobia recaptures reported from South Carolina or Georgia waters. While there were only six cobia recaptures reported during 2008, two recaptures were adult fish at large almost two years (tagged in the bay June-August 2006 and recaptured June 2008). One cobia had returned to the lower bay while the other was recaptured off Rodanthe, NC. Two 34 inch fish tagged in the lower bay in September 2007 were recaptured back in the lower bay in June-July 2008. A 37 inch cobia tagged in June 2008 off Back River was recaptured only eight days later off Cape Charles.

- Red Drum: During 1999, 2000, 2002, 2003, 2006, and 2007, and again in 2008, significant year-classes of juvenile and sub-adult red drum were documented to contribute significantly to Virginia's marine recreational fishery. From 2002-2008 good numbers of adult fish (200+ fish each year) were also tagged in the Virginia's fishery. During recent years characterized by milder winters, Rudee Inlet waters on the Virginia Beach oceanfront appear to have held over-wintering sub-adult drum. Such was the case during winter 2005/2006 and winter 2006/2007. Every winter since 1997/1998 good numbers of small drum (and some larger fish) have been tagged at the Elizabeth River (Southern Branch) Hot Ditch power plant area, documenting the species over-wintering at the location (this also includes winter 2009/2009). During winters 2005/2006 to 2008/2009, over-wintering small and some larger red drum has also been documented by taggers at the Yorktown Power Station (or York River Hot Ditch as it is known by anglers).
- Speckled Trout: The contribution of strong year classes of speckled trout to the recreational fishery has likewise been documented by tagging efforts during 1995, 1999, 2002, and 2004-2008. As with sub-adult red drum, speckled trout have also been documented to over-winter in the area of lower bay power plants during both cold and mild winters. As in recent past years, from November 2008 through March 2009, good numbers of 13-24+ inch speckled trout have been tagged at the Elizabeth River (Southern Branch) Hot Ditch area. Over-wintering of numbers of large speckled trout was documented for the first time by taggers in Rudee Inlet waters (slowly swimming fish from 18-28+ inches have been observed inside Rudee from late January through March 2009). Only a few of these fish have been tagged as cold water temperatures and handling-tagging stress proved too much for the fish. Only by carefully free-netting the fish and leaving them in the water (in the net) while tagging them prevented such fish from dying shortly after release.
- With Chesapeake Bay largely the northern range of significant angling fisheries for red drum and speckled trout, rather discrete, episodic fall migrations of Virginia-tagged fish occur to North Carolina waters with numerous fish moving distances of 30 to 200+ miles in 3-90 days post tagging, i.e., such fish therefore are covering estimated "straight-line distances" of 1-5 miles, even 6-15 miles per day. Tag-recaptures during 2008 again demonstrated similar seasonal migrations of red drum from lower bay waters to North Carolina waters. During 2008 just over 230 red drum recaptures were reported of which 15% came from North Carolina waters. Of just over 230 speckled trout recaptures during 2008, only 5 (2%) occurred in North Carolina waters. The majority of speck recaptures during 2008 occurred at the two power plant areas where tagging effort on the species was high.
- Through 2008 tagging effort on tautog in Virginia Bay and offshore waters has resulted in just over 14,500 fish being tagged. From this effort there have been over 2,100 recaptures reported. Tag-recapture results for tautog continue to document that the species in Virginia waters does not undergo consistent seasonal movements inshore in spring and offshore during fall-winter (the pattern in waters from New York to Rhode Island). More importantly, fish tagged in Virginia bay and offshore waters show no distinctive northward migration over time. Through 2008, only 0.1% of all tautog recaptures have

occurred in waters north of the Virginia-Maryland border (were the border to be extended eastward through nearshore and continental shelf waters).

Proposed Activities-2010

Proposed activities for 2010 will largely follow along the lines of the work done in recent years:

- (1) The program's taggers will be supported with tags and tagging equipment with a continued emphasis on quality data being logged on tagged fish and such data from taggers be submitted promptly for entering into the database.
- (2) The database will be maintained on the VMRC server and improvements, were warranted, addressed, i.e., how data can be sorted and retrieved more efficiently for compilations of selected results, automatic report options for outputting and assessing results throughout the year, making individual tagger's tagged fish and recaptured fish records accessible to taggers through a secure process, etc.
- (3) Continue working with select taggers to test usefulness of various types of dart tags in species such as speckled trout, sub-adult red drum, tautog (DS and DD tags), spadefish (maybe DS and DD tags), and sheepshead (if good numbers of fish are available during the year).
- (4) Produce updated materials and results for the program web site and produce the 2009 Tagging Program Annual Report.
- (5) Conduct one or more tagging training workshops for bringing interested new anglers into the tagging program (as space permits). Continue fine-tuning instructional handouts and illustrative material for power-point presentations to improve training of new taggers, as well as provide continuing education for existing taggers (where deemed necessary).

Expected Benefits

The database and resulting new tag-recapture data on species important to Virginia marine recreational fishery will hopefully provide researchers and fishery managers with new perspectives on recreational fishery issues and hopefully effective ways to better address such issues. The data may also sometimes indicate potential problems ongoing in certain fish stocks and possibly lead to additional research as well as help to evaluate the research and management regimes focused on the fishery.

The opportunity to tag large numbers of fish on short notice with an experienced group of trained taggers. This situation has occurred numerous times, especially with regard to juvenile and adult red drum, cobia, summer flounder, speckled trout, spadefish, sheepshead, and tautog.

Better communication, understanding and cooperation among scientists, managers, and anglers regarding tagging programs. Better and more relevant information made available to the angling community and the public about the importance of Virginia's marine recreational fisheries, including the benefits of proper fish handling techniques and effective practicing of catch and release fishing on fish resources.

An annual report summarizing the tag program results. Annual reports are available on VIMS website as well as through VIMS library

A long-term database, documenting through tagging and recaptures of tagged fish, changes in relative abundance of young and older year classes of recreationally targeted fish species, the size distribution of sub-legal fish being released in the state's marine recreational fishery, patterns of seasonal migrations and habitat use of key fish important to the fishery, where such species spend winter months when, for the most part, they leave Virginia waters (but also where unique over-wintering areas exist within bay and ocean inlet waters, including the cold-month dynamics of such areas), and providing tag-recapture data which may contribute to better understanding of species' population/stock dynamics as expressed in local waters.

Location

The project is located in Virginia and the taggers are Virginia recreational fishermen. All species of fish targeted by the VGFTP are recreationally important and are found seasonally in the Chesapeake Bay. Tagging efforts will occur in the Chesapeake Bay and adjacent offshore waters.

Annual Report

The annual report for year 2007 was completed in summer 2007 and a copy provided to the Recreational Fishing Advisory Board and VMRC staff. Program participants and others in the angling community are provided hard copies of such reports, if requested. Annual reports for all past program years have now been added to VIMS web site (www.vims.edu/adv/recreation/tag/index). A link to the VIMS site is provided on the VMRC web site as well.

Project Management

As the Co-Principal Investigator, Mr. Jon Lucy, is currently trying to plan for his retirement sometime in 2010, it seemed appropriate to indicate that his participation in this project, if funded, will continue well into that year. Mr. Lucy will remain involved in this project as the Co-PI, and will be employed at VIMS on an hourly appointment. The hourly appointment will complement the hiring of his full-time replacement (Marine Recreational Fisheries Specialist) in Marine Advisory Services at VIMS. The budgeted salary for the Co-PI will not exceed the cost of the new hire and the hourly appointment. Mr. Lucy's working on the project in concert with his replacement will especially help minimize potential disruptions in the tagging program's extremely busy winter-spring schedule (data analysis, preparing progress and annual reports, conducting tagging training workshops, etc.). The new hire will be identified as the Co-PI on the 2011 tagging proposal.

TABLES

**Table 1A - Virginia Game Fish Tagging Program Annual Tagging Awards
2006 - 2008**

Category	2006		2007		2008	
Most Recaptured Fish (total)	Ed Shepherd	348	Ed Shepherd	746	Ed Shepherd	794
Most Tagged Fish (total)	Ed Shepherd	3591	Ed Shepherd	4323	Ed Shepherd	4030
Most Tagged Black Drum	Dennis Cline	61	Ed Shepherd	267	Doug Wehner	12
Most Tagged Black Sea Bass	Tracy Boyd	243	Rob Collins	335	Susan Harrell	396
Most Tagged Cobia	Jim Jenrette	28	Jim Jenrette	21	James Johnson	12
Most Tagged Flounder	Ed Shepherd	1513	Ed Shepherd	2398	Ed Shepherd	1734
Most Tagged Gray Triggerfish	Robert W. Collins	38	Robert W. Collins	145	Robert Collins	96
Most Tagged Red Drum	Ed Shepherd	1608	Ed Shepherd	1061	Ed Shepherd	1448
Most Tagged Sheepshead	Robert W. Collins	28	Ed Shepherd	202	Kevin Whitley	16
Most Tagged Spadefish	Robert S. Holtz	42	Dan Peters	69	Kevin Whitley	150
Most Tagged Speckled Trout	Ed Shepherd	350	Ed Lawrence	392	Ed Shepherd	630
Most Tagged Tautog	Bill Knapp	314	Bill Knapp	174	Rob Collins	301

**Table 1B. Virginia Game Fish Tagging Program Annual Tagging Awards 2008
(Winner & Runner-Up)**

Award Category	Winner/Runner-Up 2007	Total 2007	Winner/Runner-Up 2008	Total 2008
Most Recaptured Fish	Ed Shepherd Scott Vinson	746 132	Ed Shepherd Rob Collins	794 109
Most Tagged Fish	Ed Shepherd Scott Vinson	4323 1288	Ed Shepherd Rob Collins	4030 936
Most Tagged Black Drum	Ed Shepherd James Johnson	267 53	Doug Wehner David Griffith	12 10
Most Tagged Black Sea Bass	Rob Collins Ed Shepherd	335 224	Susan Harrell Rob Collins	396 389
Most Tagged Cobia	Jim Jenrette Bill Knapp	21 11	James Johnson Brandon Poulter	9 7
Most Tagged Flounder	Ed Shepherd Scott Vinson	2398 1279	Ed Shepherd Scott Vinson	1734 634
Most Tagged Gray Triggerfish	Robert W. Collins David Cohn	145 62	Rob Collins David Barnhart	96 59
Most Tagged Red Drum	Ed Shepherd Ed Lawrence	1061 198	Ed Shepherd Kevin Whitley	1448 365
Most Tagged Sheepshead	Ed Shepherd Mike Perron	202 7	Kevin Whitley David Griffith	16 7
Most Tagged Spadefish	Dan Peters Brandon Bartlett	69 61	Kevin Whitley Gil Wilson	150 30
Most Tagged Speckled Trout	Ed Lawrence Kevin Whitley	392 183	Ed Shepherd Sheldon Arey	630 423
Most Tagged Tautog	Bill Knapp Rob Collins	174 124	Rob Collins Bill Knapp	301 81

Table 2A: Anglers Awarded Conservation Certificates for Tagging 25 or more Fish During 2008 (by last name)

Tagger		Black	Black Sea	Cobia	Flounder	Red	Sheeps	Spade-	Speckled	Tautog	Trigger-	Total
Last Name	First Name	Drum	Bass			Drum	head	fish	Trout		fish	
Agee	David	0	7	0	75	0	0	0	0	7	0	89
Arey	Sheldon	2	18	0	64	45	0	1	423	0	0	553
Backowski	Andy	0	1	0	13	11	0	0	0	0	0	25
Barnhart	David	3	4	5	8	11	0	0	58	6	59	154
Bartlett	Brandon	5	0	0	8	37	4	0	37	0	0	91
Berry	Lester	1	12	1	252	22	0	0	5	0	0	293
Bois	Bob	0	0	0	29	0	0	0	0	0	0	29
Boyd	Tracy	0	49	0	9	7	0	0	38	0	0	103
Brigantic	Anthony	0	0	0	45	0	0	0	0	0	0	45
Bunnell	Al	0	2	0	15	24	0	0	16	0	0	57
Cannon ^b	Tim	3	21	0	9	0	0	0	2	0	0	35
Capps	Ben	0	56	0	19	2	0	0	6	0	0	83
Casady	Doug	7	0	0	20	17	0	0	5	0	0	49
Cohn	David	9	22	0	14	7	0	19	5	45	10	131
Collins	Rob	1	389	0	98	42	1	1	7	301	96	936
Dabul	Jorge	0	3	0	27	6	0	0	0	0	0	36
Dameron ^b	Will	0	19	0	15	4	0	0	29	0	0	67
Davis	Jeff	0	0	0	35	0	0	0	0	0	0	35
Diggs	Elmer	7	29	0	9	10	0	0	0	6	6	67
Donnell	Charles	0	0	0	44	0	0	0	0	0	0	44
Duell	Jay	4	55	2	379	57	1	0	11	3	1	513
Duell	Jim	0	47	0	261	41	0	0	10	1	0	360
Duke	Ron	0	0	0	3	2	0	0	34	0	0	39
Elliott	Dorothy	0	0	0	140	0	0	0	0	0	0	140
Embry	Thomas	1	37	0	13	75	0	0	35	0	0	161
Freeman	Craig	0	0	0	62	57	0	0	3	4	0	126
Goggin	Mary	0	37	0	76	1	0	0	1	0	0	115
Goggin	Rory	0	42	0	63	1	0	1	1	0	0	108
Green	Hugh	0	23	0	43	17	0	0	16	0	0	99
Grenier	Bryan	0	26	0	0	0	0	0	0	0	0	26
Griffith	David	10	39	0	109	58	7	0	55	1	0	279
Guyot	Rick	2	26	1	77	43	1	2	65	12	1	230
Hampton	Brian	0	5	0	65	1	0	0	0	0	0	71

Table 2A: Anglers Awarded Conservation Certificates for Tagging 25 or more Fish During 2008 (by last name)

Tagger		Black	Black Sea	Cobia	Flounder	Red	Sheeps	Spade-	Speckled	Tautog	Trigger-	Total
Last Name	First Name	Drum	Bass			Drum	head	fish	Trout		fish	
Handforth	Mike	0	3	0	96	0	0	0	0	0	0	99
Hardisty ^b	Marvin	0	0	1	7	19	0	0	63	0	0	90
Harrell	Susan	0	396	0	57	0	0	0	4	0	0	457
Harrell	Frank	0	72	0	11	0	0	0	0	0	0	83
Harris	Dick	0	55	0	6	1	0	0	0	0	0	62
Head	Gerald	0	0	0	3	32	0	0	5	0	0	40
Heinz	Tommy	0	0	0	24	0	0	0	3	0	0	27
Holtz	Rob	8	0	1	64	45	0	0	0	37	1	156
Honeycutt	Brandon	6	3	0	2	4	0	3	16	17	0	51
Hughes	Lee	0	4	0	44	1	0	0	1	0	0	50
Irwin	Lee	0	0	0	88	0	0	0	0	0	0	88
Johnson	James	3	237	9	387	57	4	18	2	0	2	719
Jordan	Trafton	1	0	0	3	98	0	0	31	0	0	133
Knapp	Bill	9	95	3	40	211	0	4	23	81	2	468
Kumjian	Andrew	0	1	0	64	51	2	0	7	0	0	125
Lawrence	Ed	1	7	0	89	160	0	0	244	0	0	500
Lee	Bob	0	8	0	16	8	0	0	0	0	0	32
Leiffer	James	0	0	1	166	6	0	0	0	13	0	186
Lucy ^b	Jon	12	6	16	28	109	0	0	372	0	0	542
Marquedant	Matthew	0	3	0	42	23	0	1	14	0	0	83
McCausey	Roy	0	1	0	44	0	0	0	12	2	0	59
Meredith	Scott	0	15	0	31	38	0	0	11	1	0	96
Miller	Don	0	0	0	3	44	0	0	20	0	0	67
Neill	Ken	9	1	0	0	1	0	0	0	33	0	44
Osborne	Kendall	0	0	0	0	32	0	0	40	0	0	72
Ottarson	Mark	0	0	0	0	0	0	0	29	0	0	29
Perron	Mike	1	161	0	116	1	0	0	0	41	21	341
Peters	Dan	2	0	0	0	2	0	4	32	0	0	40
Poulter	Brandon	3	0	7	19	77	0	0	5	0	0	111
Purcell	Doug	1	1	0	22	43	0	2	18	0	0	87
Ringer	Karl	0	0	0	72	1	0	0	0	15	0	88
Robinson ^b	Jim	2	42	0	77	51	0	12	59	2	0	245
Rosenbaum	Ben	0	0	0	33	1	0	0	6	0	0	40

Table 2A: Anglers Awarded Conservation Certificates for Tagging 25 or more Fish During 2008 (by last name)

Tagger		Black	Black Sea	Cobia	Flounder	Red	Sheeps	Spade-	Speckled	Tautog	Trigger-	Total
Last Name	First Name	Drum	Bass			Drum	head	fish	Trout		fish	
Routh	Corey	0	0	0	11	32	0	0	2	0	0	45
Russ	Mike	0	167	1	76	71	0	0	21	0	0	336
Sebra	Marshall	0	0	0	9	6	0	4	9	0	0	28
Seeloff	Jared	0	2	0	23	6	0	0	2	0	0	33
Shepherd	Ed	9	176	3	1734	1448	0	0	660	0	0	4030
Simons, Jr.	Joe	1	4	0	22	3	0	0	39	0	0	69
Smith ^b	Donnie	0	0	1	6	63	0	0	217	0	0	287
Spruill ^b	William	0	0	0	145	0	0	0	4	0	0	149
Stitcher	Lance	0	1	0	50	0	0	0	0	10	0	61
Stumphauzer	Ed	0	3	0	32	0	0	0	25	0	0	60
Taylor	John	0	28	0	249	152	3	11	82	0	1	526
Taylor	Danny	0	3	0	186	1	0	2	0	5	0	197
Vinson	Scott	2	3	0	634	45	1	0	32	0	0	717
Walker	Steve	7	13	2	116	144	0	0	4	0	0	286
Waters	Timothy	0	23	0	73	18	0	0	16	0	0	130
Watkins	Brian	0	1	0	16	14	0	0	6	0	0	37
Wehner	Doug	12	0	0	21	4	0	0	4	0	0	41
Whitley	Kevin	8	29	1	214	365	16	150	55	55	5	898
Wilson	Gil	0	0	0	0	0	0	30	25	0	0	55
Winn	Michael	0	38	0	14	2	0	0	7	0	0	61
Wojcik	George	0	8	0	137	261	0	0	78	0	0	484
Yavner	Rick	0	16	0	120	5	0	0	21	0	0	162

^a Species and "total" counts represent actual numbers of fish tagged (i.e., any "double tagged fish" counts only as "one" fish).

^b Total counts do not include a few gray trout tagged "experimentally" by select anglers.

Table 2B: Anglers Awarded Conservation Certificates for Tagging 25 or more Fish During 2008 (by total fish tagged)^a

Tagger		Black	Black Sea	Cobia	Flounder	Red	Sheeps	Spade-	Speckled	Tautog	Trigger-	Total
Last Name	First Name	Drum	Bass			Drum	head	fish	Trout		fish	
Shepherd	Ed	9	176	3	1734	1448	0	0	660	0	0	4030
Collins	Rob	1	389	0	98	42	1	1	7	301	96	936
Whitley	Kevin	8	29	1	214	365	16	150	55	55	5	898
Johnson	James	3	237	9	387	57	4	18	2	0	2	719
Vinson	Scott	2	3	0	634	45	1	0	32	0	0	717
Arey	Sheldon	2	18	0	64	45	0	1	423	0	0	553
Lucy ^b	Jon	12	6	16	28	109	0	0	372	0	0	542
Taylor	John	0	28	0	249	152	3	11	82	0	1	526
Duell	Jay	4	55	2	379	57	1	0	11	3	1	513
Lawrence	Ed	1	7	0	89	160	0	0	244	0	0	500
Wojcik	George	0	8	0	137	261	0	0	78	0	0	484
Knapp	Bill	9	95	3	40	211	0	4	23	81	2	468
Harrell	Susan	0	396	0	57	0	0	0	4	0	0	457
Duell	Jim	0	47	0	261	41	0	0	10	1	0	360
Perron	Mike	1	161	0	116	1	0	0	0	41	21	341
Russ	Mike	0	167	1	76	71	0	0	21	0	0	336
Berry	Lester	1	12	1	252	22	0	0	5	0	0	293
Smith ^b	Donnie	0	0	1	6	63	0	0	217	0	0	287
Walker	Steve	7	13	2	116	144	0	0	4	0	0	286
Griffith	David	10	39	0	109	58	7	0	55	1	0	279
Robinson ^b	Jim	2	42	0	77	51	0	12	59	2	0	245
Guyot	Rick	2	26	1	77	43	1	2	65	12	1	230
Taylor	Danny	0	3	0	186	1	0	2	0	5	0	197
Leiffer	James	0	0	1	166	6	0	0	0	13	0	186
Yavner	Rick	0	16	0	120	5	0	0	21	0	0	162
Embry	Thomas	1	37	0	13	75	0	0	35	0	0	161
Holtz	Rob	8	0	1	64	45	0	0	0	37	1	156
Barnhart	David	3	4	5	8	11	0	0	58	6	59	154
Spruill ^b	William	0	0	0	145	0	0	0	4	0	0	149
Elliott	Dorothy	0	0	0	140	0	0	0	0	0	0	140
Jordan	Trafton	1	0	0	3	98	0	0	31	0	0	133
Cohn	David	9	22	0	14	7	0	19	5	45	10	131

Table 2B: Anglers Awarded Conservation Certificates for Tagging 25 or more Fish During 2008 (by total fish tagged)^a

Tagger		Black	Black Sea	Cobia	Flounder	Red	Sheeps	Spade-	Speckled	Tautog	Trigger-	Total
Last Name	First Name	Drum	Bass			Drum	head	fish	Trout		fish	
Waters	Timothy	0	23	0	73	18	0	0	16	0	0	130
Freeman	Craig	0	0	0	62	57	0	0	3	4	0	126
Kumjian	Andrew	0	1	0	64	51	2	0	7	0	0	125
Goggin	Mary	0	37	0	76	1	0	0	1	0	0	115
Poulter	Brandon	3	0	7	19	77	0	0	5	0	0	111
Goggin	Rory	0	42	0	63	1	0	1	1	0	0	108
Boyd	Tracy	0	49	0	9	7	0	0	38	0	0	103
Green	Hugh	0	23	0	43	17	0	0	16	0	0	99
Handforth	Mike	0	3	0	96	0	0	0	0	0	0	99
Meredith	Scott	0	15	0	31	38	0	0	11	1	0	96
Bartlett	Brandon	5	0	0	8	37	4	0	37	0	0	91
Hardisty ^b	Marvin	0	0	1	7	19	0	0	63	0	0	90
Agee	David	0	7	0	75	0	0	0	0	7	0	89
Ringer	Karl	0	0	0	72	1	0	0	0	15	0	88
Irwin	Lee	0	0	0	88	0	0	0	0	0	0	88
Purcell	Doug	1	1	0	22	43	0	2	18	0	0	87
Capps	Ben	0	56	0	19	2	0	0	6	0	0	83
Harrell	Frank	0	72	0	11	0	0	0	0	0	0	83
Marquedant	Matthew	0	3	0	42	23	0	1	14	0	0	83
Osborne	Kendall	0	0	0	0	32	0	0	40	0	0	72
Hampton	Brian	0	5	0	65	1	0	0	0	0	0	71
Simons, Jr.	Joe	1	4	0	22	3	0	0	39	0	0	69
Dameron ^b	Will	0	19	0	15	4	0	0	29	0	0	67
Diggs	Elmer	7	29	0	9	10	0	0	0	6	6	67
Miller	Don	0	0	0	3	44	0	0	20	0	0	67
Harris	Dick	0	55	0	6	1	0	0	0	0	0	62
Stitcher	Lance	0	1	0	50	0	0	0	0	10	0	61
Winn	Michael	0	38	0	14	2	0	0	7	0	0	61
Stumphauzer	Ed	0	3	0	32	0	0	0	25	0	0	60
McCausey	Roy	0	1	0	44	0	0	0	12	2	0	59
Bunnell	Al	0	2	0	15	24	0	0	16	0	0	57
Wilson	Gil	0	0	0	0	0	0	30	25	0	0	55
Honeycutt	Brandon	6	3	0	2	4	0	3	16	17	0	51

Table 2B: Anglers Awarded Conservation Certificates for Tagging 25 or more Fish During 2008 (by total fish tagged)^a

Tagger		Black Drum	Black Sea Bass	Cobia	Flounder	Red Drum	Sheeps head	Spade-fish	Speckled Trout	Tautog	Trigger-fish	Total
Last Name	First Name											
Hughes	Lee	0	4	0	44	1	0	0	1	0	0	50
Casady	Doug	7	0	0	20	17	0	0	5	0	0	49
Brigantic	Anthony	0	0	0	45	0	0	0	0	0	0	45
Routh	Corey	0	0	0	11	32	0	0	2	0	0	45
Donnell	Charles	0	0	0	44	0	0	0	0	0	0	44
Neill	Ken	9	1	0	0	1	0	0	0	33	0	44
Wehner	Doug	12	0	0	21	4	0	0	4	0	0	41
Head	Gerald	0	0	0	3	32	0	0	5	0	0	40
Peters	Dan	2	0	0	0	2	0	4	32	0	0	40
Rosenbaum	Ben	0	0	0	33	1	0	0	6	0	0	40
Duke	Ron	0	0	0	3	2	0	0	34	0	0	39
Watkins	Brian	0	1	0	16	14	0	0	6	0	0	37
Dabul	Jorge	0	3	0	27	6	0	0	0	0	0	36
Cannon ^b	Tim	3	21	0	9	0	0	0	2	0	0	35
Davis	Jeff	0	0	0	35	0	0	0	0	0	0	35
Seeloff	Jared	0	2	0	23	6	0	0	2	0	0	33
Lee	Bob	0	8	0	16	8	0	0	0	0	0	32
Bois	Bob	0	0	0	29	0	0	0	0	0	0	29
Ottarson	Mark	0	0	0	0	0	0	0	29	0	0	29
Sebra	Marshall	0	0	0	9	6	0	4	9	0	0	28
Heinz	Tommy	0	0	0	24	0	0	0	3	0	0	27
Grenier	Bryan	0	26	0	0	0	0	0	0	0	0	26
Backowski	Andy	0	1	0	13	11	0	0	0	0	0	25

^a Species and "total" counts represent actual numbers of fish tagged (i.e., any "double tagged fish" counts only as "one" fish).

^b Total counts do not include a few gray trout tagged "experimentally" by select anglers.

Table 3A: Anglers Having 5 or More Fish Recaptured During 2008 (by last name)

Tagger		Black	Black Sea	Cobia	Flounder	Red	Sheeps-	Spade-	Speckled	Tautog	Trigger-	Total
Last Name	First Name	Drum	Bass			Drum	head	fish	Trout	fish		
Agee	David	0	1	0	2	0	0	0	0	7	0	10
Arey	Sheldon	0	6	0	0	2	0	0	4	0	0	12
Arnold	Bret	0	4	0	0	0	0	0	0	2	0	6
Barnhart	David	0	5	0	1	2	0	0	3	1	30	42
Bartlett	Brandon	1	0	0	1	10	0	1	4	0	0	17
Berry	Lester	0	1	0	17	1	0	0	0	0	0	19
Boyd	Tracy	0	5	0	2	1	0	0	0	0	0	8
Braddy	Ken	0	0	0	0	4	0	0	1	0	0	5
Brigantic	Anthony	0	0	0	5	0	0	0	0	0	0	5
Bunnell	Al	0	1	0	0	4	0	0	0	0	0	5
Cohn	David	0	2	0	0	0	0	1	0	16	5	24
Collins	Rob	0	37	0	12	3	0	1	0	32	24	109
Diggs	Elmer	0	4	0	0	1	0	0	0	1	2	8
Duell	Jay	0	5	0	37	4	0	0	1	1	0	48
Duell	Jim	0	4	0	26	2	0	0	0	0	0	32
Elliott	Dorothy	0	0	0	6	0	0	0	0	0	0	6
Embry	Thomas	0	1	0	0	4	0	0	1	0	0	6
Freeman	Craig	0	0	0	3	4	0	0	0	0	0	7
Goggin	Rory	0	1	0	7	0	0	0	0	0	0	8
Goggin	Mary	0	1	0	6	0	0	0	0	0	0	7
Green	Hugh	0	1	0	6	3	0	0	3	0	0	13
Griffith	David	0	5	0	2	1	0	0	0	0	0	8
Guyot	Rick	0	3	0	9	3	0	0	0	1	1	17
Handforth	Mike	0	2	0	6	0	0	0	0	0	0	8
Hardisty	Marvin	0	0	0	0	3	0	0	3	0	0	6
Harrell	Susan	0	21	0	5	0	0	0	1	0	0	27
Harrell	Frank	0	6	0	0	0	0	0	0	6	0	12
Henderson	Brian	0	0	0	6	0	0	0	0	0	0	6
Holtz	Rob	0	0	0	4	0	0	0	0	3	0	7
Honeycutt	Brandon	0	1	0	0	0	0	1	2	3	0	7
Hughes	Lee	0	0	0	5	0	0	0	0	0	0	5
Johnson	James	0	14	0	57	1	0	0	0	0	0	72
Jordan	Trafton	0	0	0	0	4	0	0	2	0	0	6

Table 3A: Anglers Having 5 or More Fish Recaptured During 2008 (by last name)

Tagger		Black	Black Sea	Cobia	Flounder	Red	Sheeps-	Spade-	Speckled	Tautog	Trigger-	Total
Last Name	First Name	Drum	Bass			Drum	head	fish	Trout		fish	
Knapp	Bill	0	15	1	1	4	0	0	2	17	1	41
Kumjian	Andrew	0	0	0	15	5	0	0	0	0	0	20
Lawrence	Ed	0	0	0	11	17	0	0	20	0	0	48
Leiffer	James	0	0	0	6	0	0	0	0	0	0	6
Lowry	Terry	0	0	0	0	0	0	0	0	5	0	5
Lucy	Jon	1	0	2	4	26	0	0	32	0	0	65
Marquedant	Matthew	0	5	0	11	2	0	0	0	0	0	18
Meredith	Scott	0	2	0	2	2	0	0	1	0	0	7
Miller	Don	0	0	0	2	2	0	0	1	0	0	5
Neill	Ken	0	0	0	0	0	0	0	0	12	0	12
Perron	Mike	0	20	0	6	0	0	0	0	8	9	43
Poulter	Brandon	0	0	0	6	9	0	0	0	0	0	15
Purcell	Doug	0	0	0	1	3	0	0	1	0	0	5
Ringer	Karl	0	0	0	6	0	0	0	0	0	0	6
Robinson	Jim	0	5	0	4	4	0	5	6	4	0	28
Russ	Mike	0	50	0	18	4	0	0	1	0	0	73
Seeloff	Jared	0	0	0	5	1	0	0	0	0	0	6
Shepherd	Ed	1	71	0	335	289	0	0	98	0	0	794
Simons, Jr.	Joe	0	1	0	3	0	0	0	2	0	0	6
Smith	Donnie	0	0	0	1	8	0	0	6	0	0	15
Spurill	William	0	0	0	43	1	0	0	0	0	0	44
Stumphauzer	Ed	0	0	0	4	0	0	0	2	0	0	6
Taylor	John	0	1	0	8	12	1	4	14	0	0	40
Vinson	Scott	0	0	0	42	6	0	0	0	0	0	48
Walker	Steve	0	2	0	10	7	0	0	0	0	0	19
Waters	Timothy	0	4	0	3	0	0	0	0	0	0	7
Whitley	Kevin	0	8	0	34	23	1	9	2	7	1	85
Wilson	Gil	0	0	0	0	0	0	18	0	0	0	18
Wojcik	George	0	1	0	11	25	0	0	0	0	0	37
Yavner	Rick	0	0	0	6	0	0	0	0	0	0	6

Table 3B: Anglers Having 5 or More Fish Recaptured During 2008 (by total fish tagged)

Tagger		Black Drum	Black Sea Bass	Cobia	Flounder	Red Drum	Sheeps-head	Spade-fish	Speckled Trout	Tautog	Trigger-fish	Total
Last Name	First Name											
Shepherd	Ed	1	71	0	335	289	0	0	98	0	0	794
Collins	Rob	0	37	0	12	3	0	1	0	32	24	109
Whitley	Kevin	0	8	0	34	23	1	9	2	7	1	85
Russ	Mike	0	50	0	18	4	0	0	1	0	0	73
Johnson	James	0	14	0	57	1	0	0	0	0	0	72
Lucy	Jon	1	0	2	4	26	0	0	32	0	0	65
Duell	Jay	0	5	0	37	4	0	0	1	1	0	48
Lawrence	Ed	0	0	0	11	17	0	0	20	0	0	48
Vinson	Scott	0	0	0	42	6	0	0	0	0	0	48
Spruill	William	0	0	0	43	1	0	0	0	0	0	44
Perron	Mike	0	20	0	6	0	0	0	0	8	9	43
Barnhart	David	0	5	0	1	2	0	0	3	1	30	42
Knapp	Bill	0	15	1	1	4	0	0	2	17	1	41
Taylor	John	0	1	0	8	12	1	4	14	0	0	40
Wojcik	George	0	1	0	11	25	0	0	0	0	0	37
Duell	Jim	0	4	0	26	2	0	0	0	0	0	32
Robinson	Jim	0	5	0	4	4	0	5	6	4	0	28
Harrell	Susan	0	21	0	5	0	0	0	1	0	0	27
Cohn	David	0	2	0	0	0	0	1	0	16	5	24
Kumjian	Andrew	0	0	0	15	5	0	0	0	0	0	20
Berry	Lester	0	1	0	17	1	0	0	0	0	0	19
Walker	Steve	0	2	0	10	7	0	0	0	0	0	19
Marquedant	Matthew	0	5	0	11	2	0	0	0	0	0	18
Wilson	Gil	0	0	0	0	0	0	18	0	0	0	18
Bartlett	Brandon	1	0	0	1	10	0	1	4	0	0	17
Guyot	Rick	0	3	0	9	3	0	0	0	1	1	17
Poulter	Brandon	0	0	0	6	9	0	0	0	0	0	15
Smith	Donnie	0	0	0	1	8	0	0	6	0	0	15
Green	Hugh	0	1	0	6	3	0	0	3	0	0	13
Arey	Sheldon	0	6	0	0	2	0	0	4	0	0	12
Harrell	Frank	0	6	0	0	0	0	0	0	6	0	12
Neill	Ken	0	0	0	0	0	0	0	0	12	0	12
Agee	David	0	1	0	2	0	0	0	0	7	0	10

Table 3B: Anglers Having 5 or More Fish Recaptured During 2008 (by total fish tagged)

Tagger		Black	Black Sea	Cobia	Flounder	Red	Sheeps-	Spade-	Speckled	Tautog	Trigger-	Total
Last Name	First Name	Drum	Bass			Drum	head	fish	Trout		fish	
Boyd	Tracy	0	5	0	2	1	0	0	0	0	0	8
Diggs	Elmer	0	4	0	0	1	0	0	0	1	2	8
Goggin	Rory	0	1	0	7	0	0	0	0	0	0	8
Griffith	David	0	5	0	2	1	0	0	0	0	0	8
Handforth	Mike	0	2	0	6	0	0	0	0	0	0	8
Freeman	Craig	0	0	0	3	4	0	0	0	0	0	7
Goggin	Mary	0	1	0	6	0	0	0	0	0	0	7
Holtz	Rob	0	0	0	4	0	0	0	0	3	0	7
Honeycutt	Brandon	0	1	0	0	0	0	1	2	3	0	7
Meredith	Scott	0	2	0	2	2	0	0	1	0	0	7
Waters	Timothy	0	4	0	3	0	0	0	0	0	0	7
Arnold	Bret	0	4	0	0	0	0	0	0	2	0	6
Elliott	Dorothy	0	0	0	6	0	0	0	0	0	0	6
Embry	Thomas	0	1	0	0	4	0	0	1	0	0	6
Hardisty	Marvin	0	0	0	0	3	0	0	3	0	0	6
Henderson	Brian	0	0	0	6	0	0	0	0	0	0	6
Jordan	Trafton	0	0	0	0	4	0	0	2	0	0	6
Leiffer	James	0	0	0	6	0	0	0	0	0	0	6
Ringer	Karl	0	0	0	6	0	0	0	0	0	0	6
Seeloff	Jared	0	0	0	5	1	0	0	0	0	0	6
Simons, Jr.	Joe	0	1	0	3	0	0	0	2	0	0	6
Stumphauzer	Ed	0	0	0	4	0	0	0	2	0	0	6
Yavner	Rick	0	0	0	6	0	0	0	0	0	0	6
Braddy	Ken	0	0	0	0	4	0	0	1	0	0	5
Brigantic	Anthony	0	0	0	5	0	0	0	0	0	0	5
Bunnell	Al	0	1	0	0	4	0	0	0	0	0	5
Hughes	Lee	0	0	0	5	0	0	0	0	0	0	5
Lowry	Terry	0	0	0	0	0	0	0	0	5	0	5
Miller	Don	0	0	0	2	2	0	0	1	0	0	5
Purcell	Doug	0	0	0	1	3	0	0	1	0	0	5

Table 4. Tagged and Recaptured Fish by Year and Overall Recapture Rates by Species (2006-2008)

Species	No. Tagged				No. Recaptured ¹				Overall Recapture Rate		
	2006	2007	2008	1995-2008	2006	2007	2008	1995-2008	2006	2007	2008
Black Drum	289	542	187	3,512	29	37	4	162	5.4%	4.8%	4.6%
Black Sea Bass	1,264	1,865	2,654	21,334	267	286	318	2,881	15.2%	13.7%	13.5%
Cobia²	134	59	60	1,190	22	12	6	152	13.2%	12.9%	12.8%
Flounder	6,210	8,582	7,834	61,463	797	1,030	782	5,446	10.0%	8.7%	8.9%
Gray Triggerfish	79	262	212	1,134	32	47	74	237	29.1%	17.7%	20.9%
Red Drum³	4,057	3,026	4,477	24,536	348	513	387	2,345	10.3%	9.8%	9.6%
Sheepshead	153	227	40	1,136	0	41	2	76	5.1%	6.8%	6.7%
Spadefish	219	433	275	5,259	28	71	39	548	10.6%	10.2%	10.4%
Speckled Trout⁴	1,830	2,527	3,238	17,191	47	68	175	485	2.7%	2.2%	2.8%
Tautog	2,068	951	743	14,567	318	233	41	2,157	15.8%	15.3%	14.8%
Grand Total	16,303	18,474	19,720	151,322	1,888	2,338	1,828	14,489	9.6%	9.0%	9.6%

¹ - Recapture counts include multiple recaptures of individual fish, events of some significance particularly for black sea bass, flounder and spadefish.

² - 2006 totals do not include 155 and 186 tagged juvenile cobia, respectively, released from VIMS Finfish Aquaculture Facility.

³ - 2007 totals include 294 double tagged and 11 triple tagged sub-adult red drum and 2008 totals include 396 double tagged drum for tag retention field trials.

⁴ - 2007 totals include 320 double tagged and 19 triple tagged trout and 2008 totals include 236 double tagged trout for tag retention field trials.

FIGURES

Figure 1. Number of Tagged Fish 2000-2008

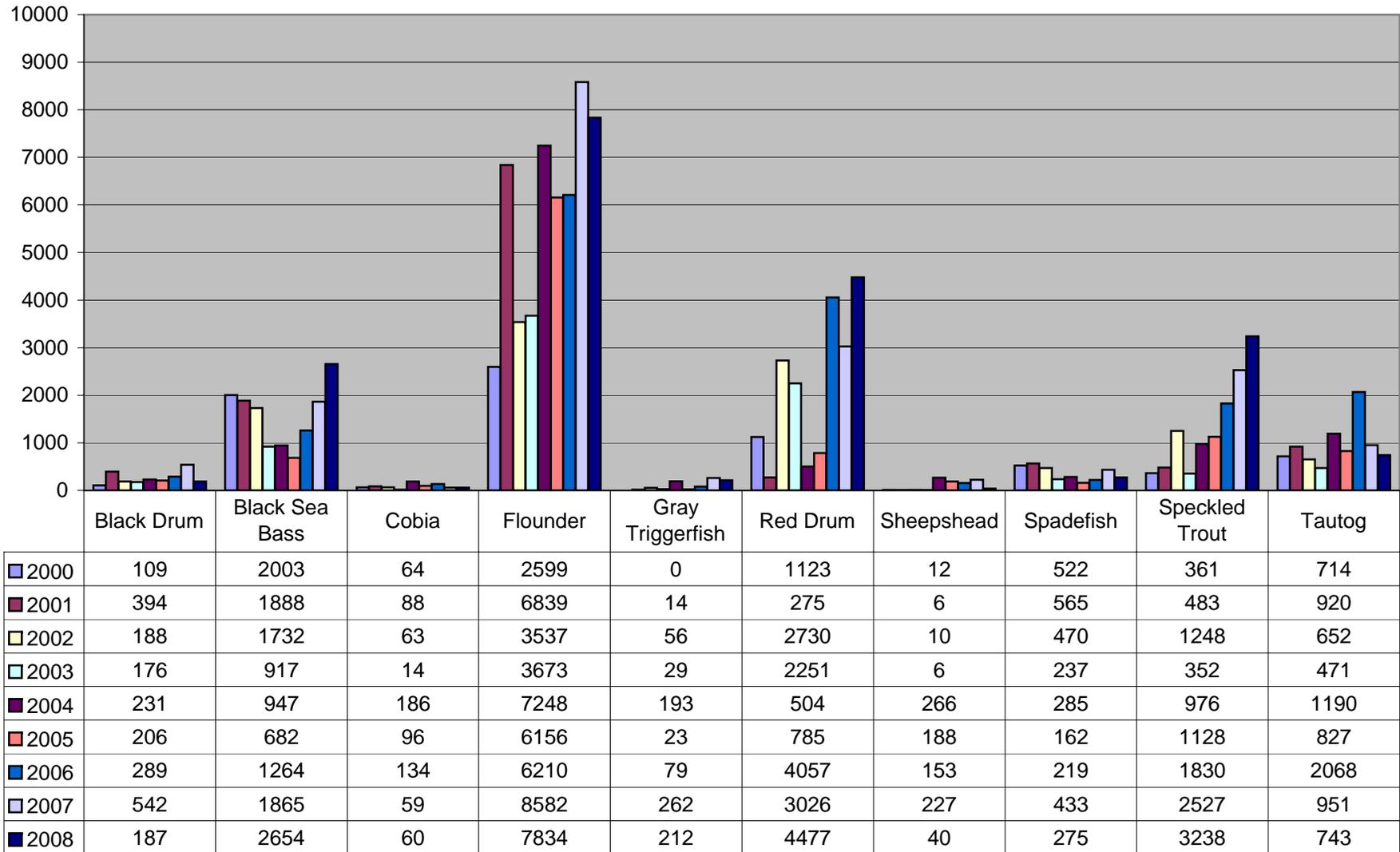


Figure 2. Number of Recaptured Fish 2000-2008

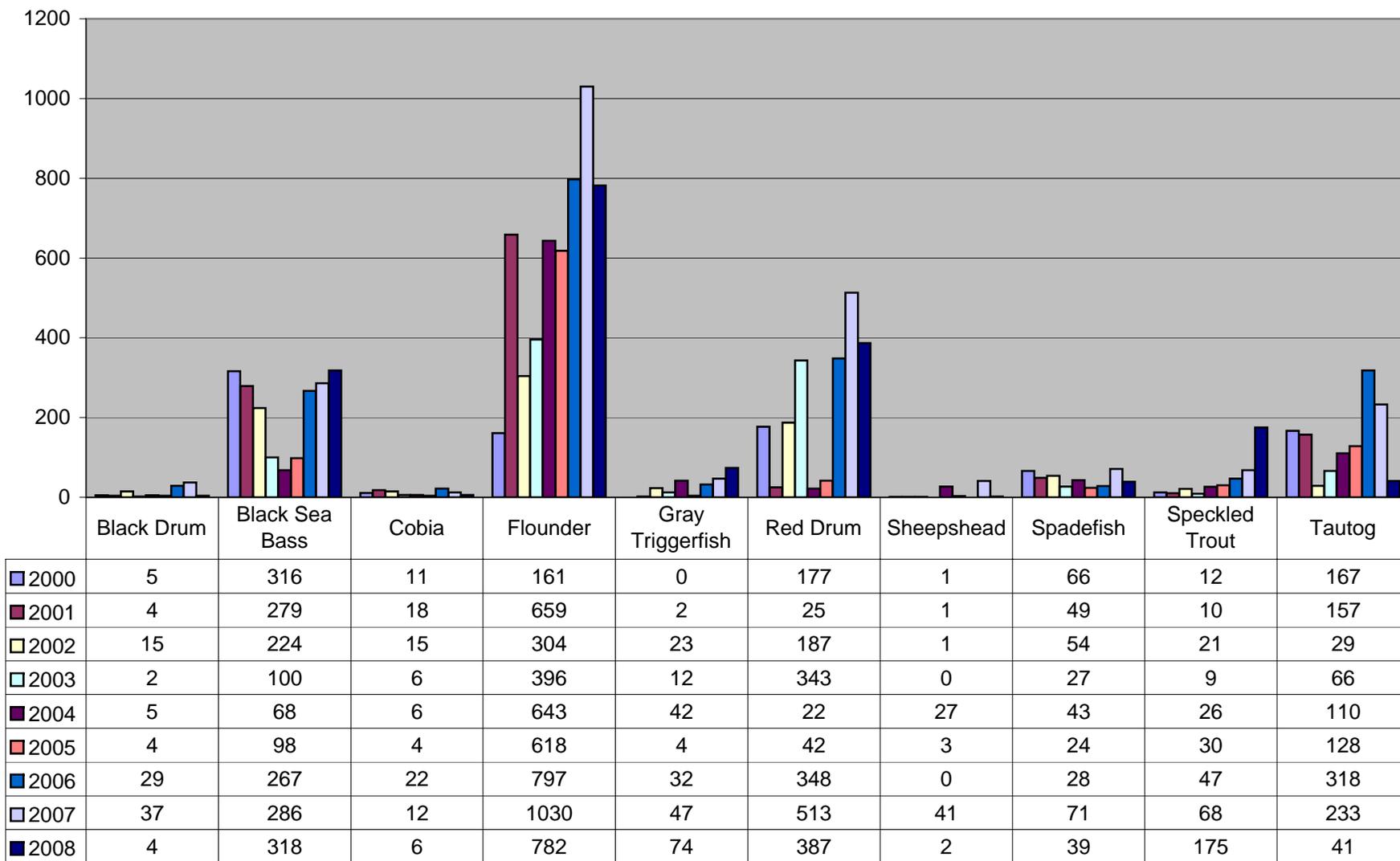
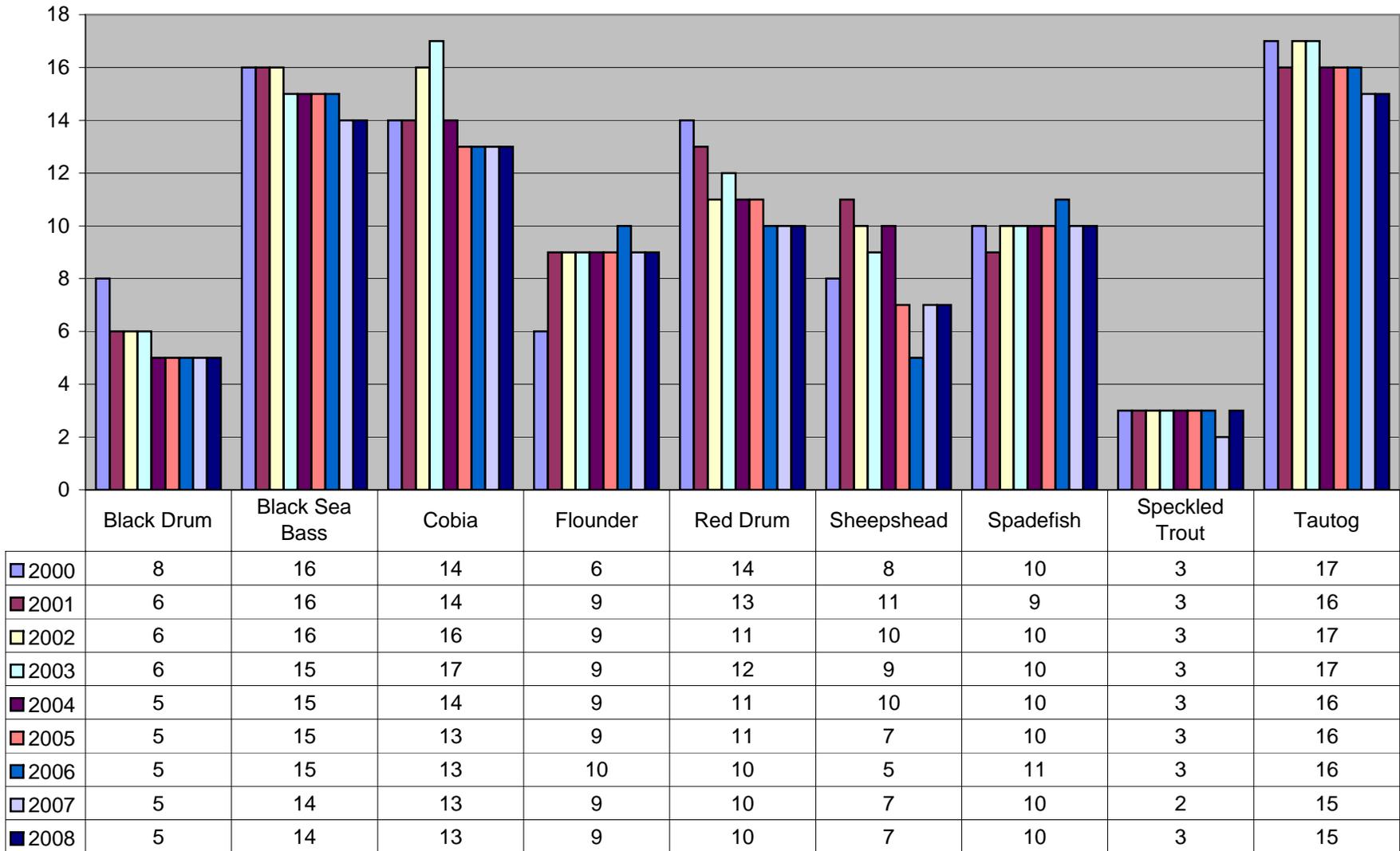


Figure 3. Cumulative Recapture Rates (%) 2000-2008



NOTE: Gray Triggerfish - For 2006, 2007 and 2008 cumulative recapture rates were 29%, 18%, and 21% respectively.

APPENDIX

Current Types of Tags Used in Tagging Program

(From the top: T-bar, Dogleg Dart, Small Dart, and Stainless Steel Dart tags)





Fish Stories

By Mail

by Phil Marsosudiro

Bill Knapp has heard a lot of fish stories, but this one beat them all. Last fall he got news that a black sea bass that he'd caught in 2006 at Lynnhaven Inlet Bridge had spent the following year growing a half inch and swimming 500 miles to Jones Inlet, New York, before being caught by another angler.

Every day, Knapp makes an expectant trip to his mailbox in Virginia Beach. He's looking for news about "his" fish—the ones he's caught, tagged, logged, and released over the last four years. On a typical news day, he might read that a triggerfish he caught in May grew a quarter of an inch before it got picked up by another angler in June. On other days, there's no fish report, and he'll toss his pile of regular mail—magazines, bills, and anything else—on the table to look at later. They're just not that important, and meanwhile, he's got a day's worth of fishing to log: a dozen

or so fish newly tagged or recaptured and ready to go into the data files at the Virginia Game Fish Tagging Program.

Last year, Knapp captured and tagged more than 650 fish. As far as he's concerned, these are his fish from now on, and he'll want to know what happens to them. And thanks to the Game Fish Tagging Program, he will. In 2007, 108 fish Knapp had tagged, that year or in previous years, were caught and reported by other anglers—or by Knapp himself.

Virginia Game Fish Tagging Program

The dedication of anglers like Knapp makes the tagging program a serious force in fisheries conservation. Since the program's start in 1995, its citizen scientists have caught, tagged, and logged more than 140,000 fish, with nearly 14,000 of those fish recaptured and reported at least once.

Jon Lucy is the program's co-administrator and co-founder at Virginia Sea Grant and VIMS. According to Lucy, "Data from this program are of direct interest to anglers and are providing new information about fish movement and habitat use patterns."

Lucy recalls that when the Virginia Marine Resources Commission and VIMS created the program, "There were no guarantees that there would be enough support from the fishing public. We knew that success would depend on the avidity and hard work of experienced anglers. But we had no idea just how enthusiastic some of these people would prove to be."

What Drives the Dedication?

Nearly two hundred anglers are actively tagging fish for the program each year. Many of these volunteers devote hundreds of hours per year to the program, painstakingly measuring and recording their catches with the care that's required for good science. Why are they so dedicated? According to Lucy, one big reason is that they feel the program belongs to them just as much as it belongs to the Commonwealth.

Knapp joined the program four years ago when he noticed that the unregulated sheepshead fishery that he and his friends had been enjoying for years was suddenly taking a hit from overzealous new anglers. "Until three or four years ago, I was consistently catching ten-pound sheepshead, on average," says Knapp. "But then the cat got out of the bag, and we started seeing boats coming through with twenty or thirty world-class sheepshead in their coolers, and the population started shrinking quickly." When Knapp asked Virginia officials why there weren't any protective regulations for sheepshead, they told him, "Well, we don't yet know enough about them." In the course of these conversations, Knapp also learned about the tagging program and its recent inclusion of the sheepshead as a target species, so he signed on.

"Eventually we got some sheepshead rules, and, hopefully, they won't be too little too late," says Knapp. "I know my data assisted," he says, "but even more it was the lobbying, as friends and I went to more of these meetings, and as we stood up and said 'we've got to do something.' Com-

mercial guys said we don't know enough about the sheepshead and whether the population could sustain an open fishery. But we supported our lobbying with tagging data and showed regulators how serious we were. That opened their eyes and got them to move."

Putting the Data to Work

Knapp also happens to be the state's leading tautog tagger, and his data are being used in the current Atlantic Coast debate about that fishery. "The federal government is setting new rules as a result of tautog overfishing in the north, from New York to Rhode Island. But we know we have a localized species, because out of more than 14,000 tautog tagged, only two have been captured outside of our waters," says Knapp.

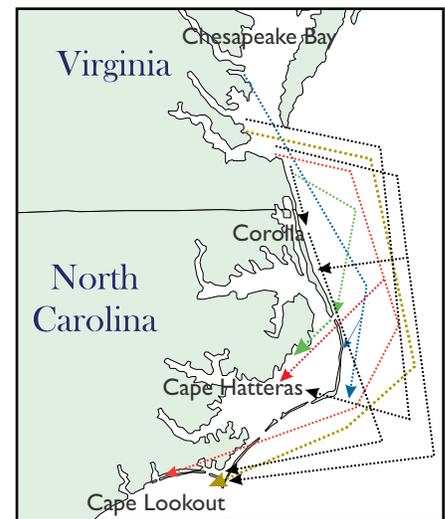
Lucy explains, "Putting tighter limits on tautog in Virginia won't do anything to help overfishing in northern waters where the problems are. Their fish aren't the same as our fish."

In contrast to the tautog fisheries, the program has identified some fisheries that are clearly shared across state lines, and that, therefore, need a cooperative management plan. "Our data show that approximately 15% of speckled trout tagged in Virginia waters were recaptured in North Carolina waters," says Lucy. "Because of our hard data on trout migration back and forth between our waters, North Carolina is starting a tagging program for this important species and will ultimately include Virginia in its fishery management plan for trout."

Like Knapp, York County tagger Ed Shepherd also appreciates how his efforts support science, recreation, and conservation in Virginia. Now retired from the Air Force, Shepherd spends four or five hours a day, seven days a week, fishing,

Facing Page: Bill Knapp holds a citation-sized speckled trout, which he immediately tagged and released. Photo © Bill Knapp.

Below: Interstate travel of speckled trout, 2004–2007. Twenty-eight Virginia-tagged fish traveled to North Carolina.



Top: Records for flounder tagged at Gloucester Point fishing pier in 2007 and recaptured multiple times, demonstrating that many fish survive the catch-and-release process.

Bottom: A tautog tagged by veteran tagger “Kayak Kevin” Whitley.

tagging, logging data, and telling others about the program. He’s held the program’s tagging record for the last several years, logging more than 4,300 fish in 2007. But as Shepherd will be the first to say, the record isn’t what’s important. “I’m interested in fish, and how they survive, and where they travel to. And I like making a difference.”

Shepherd notes that people used to argue that catch-and-release regulations weren’t legitimate because fish wouldn’t survive after handling, especially if they were injured during the catch. “We’ve proven that false time and time again. Many times I’ll land a flounder with its guts up in his throat, pulled there by my fishing hook. Following Virginia’s catch-and-release guidance, I’ll undo the hook, push the guts down with my pliers’ handle, and let him go. Months later, I’ll see in the program reports that the same fish got caught again. I’ve always thought that flounder could go to the bottom and just sit there and convalesce.” Now he’s proven it’s true.

Fisheries for the Future

Virginia taggers are citizens-scientists who want to preserve fisheries not only for themselves, but also for future generations. Knapp, a father in his early 30s, says, “I’ve been fishing in the Bay area since I was five years old. I’ve got a four-year-old boy who I want to have the same opportunities I had when my father started taking me fishing.”

Shepherd shares the same connection with kids when he fishes from his favorite piers on the York River. “I explain what I’m doing and why, and the kids seem to appreciate this. If a kid is nearby when I need to tag a fish, I’ll put the gun in their hands and they pull the trigger. Some kids have told me, ‘I wanna be a marine biologist when I grow up!’ Well I’m not a marine biologist, but I’m glad to help them on their way.”

The biologists who founded the program in 1995 certainly hoped their one-year experiment would grow into a long-term resource for fisheries science and management. Thirteen years later, they might be surprised to realize that their program has grown into a fine promoter of Virginia citizenship, as anglers like Shepherd get to enjoy their days fishing in public waters while they also contribute to the Commonwealth as scientists, teachers, and conservationists. And even, sometimes, as the public conscience. As Shepherd observes, “When the taggers are out, people say, ‘well, since you’re here, I guess I have to throw these undersized ones back in.’ We don’t tell them otherwise.”

