The 2002 Delaware River American Shad Spawning Run

American shad spawning run began on March 18, 2002 and continued through May 31, 2002. Using the hydroacoustic technique called echointegration, American shad upstream passage in the Delaware River at Lambertville, New Jersey was monitored from the Route 202 toll bridge piers. American shad schools were visually distinguished from other large fish targets by their distinct echo pattern, school size and unique behavioral characteristics at the site. The timing of the upstream spawning migration has always occurred in the months of April and May and this year it followed the same general pattern as it was estimated that approximately 91% of the run occurred during these two months.

This year was the second year in which the sampling was initiated in March, and in both the 2001 and 2002 monitoring years some shad were detected prior to April. In 2001, it was estimated that 14% of the shad run occurred in the month of March. In 2002, only about 9% of the yearly run occurred in March; it should be noted that monitoring in 2002 began almost a full week earlier than the 2001 startup of sampling. Delaware River water temperatures rose to over 50 degrees F by April 1, dipping below this level for a few days, and then climbed steadily to over 68 degrees F by April 20. A large percentage of the run occurred

during this major river warm-up, as an estimated 293,000 shad (approximately 73% of the total run) passed the sampling site through April 21.

Water temperatures decreased back to near 50 degrees F by the beginning of May and then increased to about 63 degrees F by May 8, holding at that level through May 12. No really large shad schools were detected passing the sampling site after this second period of elevated water temperatures which ended with a correspondingly large river discharge increase.

The major shad passage events generally occurred at times of relatively low discharge, which followed periods of elevated water levels. The result of this was that the main period of shad passage occurred over a relatively short period, primarily over the middle two weeks of April. Discharge declined and remained low, and water temperatures increased rapidly after the first week

of April, and this was when the majority of the 2002 shad run took place. The bulk of 2002 Delaware River American shad run took place during eight large fish passage events (>15,000 fish per day). These shad passage days were during periods of relatively low discharge that occurred after short periods of elevated flows. Estimated shad passage was the highest on April 6, 7, 10, 12, 17, 20, 21, and 27 when approximately 70.8% of the 2002 American shad run passed the sampling site in just these eight days. Shad passage was the greatest in bridge span 4 which is closer to the New Jersey shore.

Total American shad passage was estimated to be 399,200 fish. This is comparable to the last two years' estimates of 417,300 and 382,200 fish.

By Mark Boriek, Principal Fisheries Biologist

Operation Game Thief—Report Wildlife Violators

The Operation Game Thief (OGT) hotline provides a toll-free phone line to report violations of laws protecting wildlife. If you know of incidents involving wildlife including the dumping of hazardous, toxic or solid waste; illegal harvesting of small lobsters; poisoning of birds; and violations of deer, wild turkey and endangered species laws, call 1-800-222-0456. If the information you anonymously provide leads to the issuance of a summons, you may be eligible for a cash reward. The OGT program is sponsored jointly by the Division and the New Jersey Federation of Sportsmen's Clubs.





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Evan F. Nappen, Esq. "the gun law guru" ADVERTISEMENT Gun Law copies. I informate have been

Evan F. Nappen, Esq.,
"the gun law guru," is an
attorney dedicated to
defending constitutional

liberties. His extensive technical knowledge of guns, knives, weapons and an in-depth comprehension of NJ law allows him to advise honest citizens of their rights, how to save their possessions and stay out of jail.

Mr. Nappen's website at www.evannappen.com features daily gun news with new headlines and article links continuously updated. From his office in Eatontown, NJ, he provides legal assistance to gun owners from Sussex to Cape May. In addition to being a member of the NJ and PA Bar, Mr. Nappen is admitted to the United States Supreme Court.

Mr. Nappen is a well-known author for his books on New Jersey Gun, Knife and Weapon Law. His current book, *Nappen II: New Jersey Gun, Knife and Weapon Law*, is available at most gun stores (for a dealer listing—check the website). This book explains over 150 topics in an easy-to-read question and answer format with special comments from Mr. Nappen's 15 years of experience handling firearm and weapon cases. His recent articles have appeared in *Blade* magazine concerning knife law and in *Knives 2002* and *Sporting Knives 2003*, published by Krause Publications. His first book, *Nappen on New Jersey*

Gun Law, sold out the first printing of over 5,000 copies. Many honest citizens have contacted, confided to and thanked Mr. Nappen that the information helped to save them from what could have been a disaster in their lives and liberty.

The NJ Courts have declared: "When dealing with guns, the citizen acts at his peril." Because of this, law-abiding gun, knife and weapon owners must know and exercise their rights. To protect oneself, Mr. Nappen has created a system in which your basic constitutional protections are summed up as three simple rules. These three rules are explained thoroughly in NAPPEN II. It's a must read for any gun, knife or weapon owner in NJ.

Mr. Nappen is a Life Member of the National Rifle Association and is a certified instructor in Rifle, Pistol, Shotgun and Home Safety. An avid hunter and fisherman, he and his family have spent many weekends target shooting, boating, fishing and hunting. His oldest son, Ethan, earned his New Jersey Hunting License for both shotgun and bow at the age of 10. His 6-year-old son, Nathanael, loves to catch lunker bass and outfishes everybody in the family.

The Law Firm of Evan F. Nappen, Attorney at Law is a professional corporation, which is dedicated to helping their clients in all aspects of gun, knife and weapon law, including legal representation for any and all crimes in any and all courts. Professional services are also offered for issues concerning Fish and Game law, Domestic Violence, gun seizures and forfeitures, licenses and permits, NICS purchase denials and expungements (clear your record).

Delaware River Creel Survey Mid-Term Report March 15, 2002 through June 30, 2002

oastal states that are members of the Atlantic States Marine Fisheries Commission and that support runs of anadromous shad and river herring are required by Amendment I of the Interstate Fishery Management Plan for Shad and River Herring to monitor the recreational fishery catch, harvest and effort every five years. The Delaware River Basin Fish and Wildlife Cooperative, of which New Jersey is a member, along with Pennsylvania, Delaware and New York, contracted Versar Inc. to conduct this study. In addition to shad and river herring, this creel survey is also designed to provide recreational catch and harvest estimates for striped bass and other species caught by anglers fishing the entire Delaware River, from the tidal waters between the I-95 Delaware Memorial Bridge and the fall line upstream to Downsville, N.Y., on the East Branch.

Previous surveys conducted in 1986 and 1995, although not as rigorous and comprehensive as this present survey, provide benchmarks against which this preliminary data can be evaluated. Total effort in the non-tidal section of the Delaware River (142,903 angler hours) from March 17 through June is less than half the estimated effort for the months of April and May in the 1986 and 1995 surveys (299,597, and 337,571 angler hours, respectively). The mode of fishing was similar in all three surveys. In 1986 and 1995, shore angling accounted for 23% of the total effort in the non-tidal river in both years. In this survey, shore-angler hours accounted for 18% of the effort in the non-tidal section. The mean length of an

angler trip in 2002 was about 3.5 hours, as compared to 4.5 hours and 4.9 hours in 1986 and 1995, respectively. The lower effort and shorter trips in 2002 compared to 1986 and 1995 are most likely a result in differences in river flow patterns during those years. In 1995, fishing effort was the highest of the three years in which the surveys were conducted as the river flow remained at a constant low level. In 1986, very high river flows occurred in mid-March, but declined into mid-April. The river rose again and then dropped and remained at low levels during mid-May. In 2002, flows were low through most of April, but then rose to and remained at relatively high levels through the month of May. Access to the river by both shore and boat anglers is constrained by high flows, which could have contributed to the lower fishing effort.

Total catch of American shad in the non-tidal river from March 17th through June 2002 was estimated to be 28,135 shad. This number represents only 34% of the estimated catch for 1995 (83,141), and 50% of the estimated catch for 1986 (56,320). The lower catch in 2002 appears to be a result of the lower effort and not catch rates as the catch rates for all three years were very similar: 2002 (0.20 fish/hour), 1995 (0.25 fish/hour), 1986 (0.19 fish/hour).

There were, however, differences in the harvest rates among the three years: 2002 (21%), 1995 (20%), 1986 (49%). The reduction in harvest rate by almost half for 1995 and 2002 may reflect an increase in the number of anglers that practice

catch and release.

The previous creel surveys, 1986 and 1995, focused only on the American shad fishery in the non-tidal river and did not cover the estuary. Therefore there is no comparison to other years for the other targeted species: striped bass, river herring and hickory shad. This mid-term report estimates that a total of 17,199 striped bass were caught with the estuary accounting for 62% of the catch. The catch rate for striped bass was 0.05 fish/hour in the non-tidal river, and 0.14 in the estuary. Virtually no striped bass were harvested during the survey. A total of 5,628 river herring were caught, and 3,445 fish (61%) were kept (harvested). These fishermen had elaborate means of keeping the river herring alive (eg., re-circulating water tanks on the backs of pickup trucks) and used or sold the herring as live bait for striped bass. The average catch rate for this species was low, 0.03 fish/hour. The survey indicates that very few hickory shad were caught and none harvested.

The information presented here is preliminary, as the survey will continue through October 2002.

By Mark Boriek, Principal Fisheries Biologist

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When you carry the Partnership for Wildlife Volunteerism Platinum Visa card, you'll carry more than just another credit card. This is the only Visa card program that helps support important volunteer activities conducted by the New Jersey Division of Fish and Wildlifeat no additional cost to you. It's an easy way to show your support, because each time you use your card to make a purchase—a contribution will automatically be made to supporting Division programs such as "Becoming an Outdoors-Woman" and "Take a Kid Hunting".

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New Jersey's Accessible Fishing Sites for People With Disabilities

Visit www.njfishandwildlife.com/ sites.htm

An Accessible Fishing Sites list is available to assist anglers whose mobility is impaired. All sites are wheelchair-accessible except for the Musconetcong River in Morris County, where vehicle access is to the shoreline.



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Fish Release and Relocation: Serious Issues in New Jersey

Pisheries management is a science where biologists monitor fish populations and provide management recommendations. Stocking fish in order to enhance a current population or create increased species diversity is common practice. Fisheries biologists recommend size and creel limits as tools to further enhance fish populations. These management techniques and decisions must be determined by biologists.

Anglers and pond owners often attempt to enhance the population of lakes without consulting a fisheries biologist, resulting in mismanaged lakes. A lake has a specific carrying capacity, a maximum amount of fish that a water body can accommodate, influenced by size, available habitat, water quality, fish species and forage base. Altering these variables poses potential consequences

The New Jersey Division of Fish and Wildlife manages three lakes as Lunker Bass Lakes. These lakes have size and creel regulations intended to promote the growth of largemouth bass and provide anglers with the opportunity to catch quality-sized fish. Because these lakes have a higher percentage of quality fish than other lakes, anglers target these waters more frequently. Fish are often transported from these public waters to private waters. Here is where the trouble begins.

For example, an angler who owns a private pond catches a four pound largemouth bass at a Lunker Bass Lake. This proud angler wants to show friends and elects to take the fish home in an aerated livewell. Upon showing friends and taking pictures the anglers decides to put the fish back in the water since it is still alive. The fish is released in the angler's private pond where only a handful of anglers are permitted to fish. This practice is common, however illegal, in New Jersey.

The Division of Fish and Wildlife requires a stocking permit for the stocking of any fish or fish eggs in all waters of the state, both public and private. This permit allows the Division of Fish and Wildlife to review applications to determine whether stocking is necessary, prevent the spread of fish pathogens and introduction of fishes from contaminated waters. Besides being illegal, it is poor practice to add fish to an existing fishery without a biologist's recommendation.

Recently, the introduction of non-native invasive species has become a concern. The discovery of snakehead fish in a Maryland pond encouraged biologists to look closer at the negative influences that non-native species can have on a fishery. All non-native fish should be considered as having a

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On these two days residents and nonresidents may fish the public waters of New Jersey without a license or trout stamp. All other regulations apply.



potential impact on native populations. For this reason they are illegal to stock in New Jersey. Additionally, Title 23:5-30 prohibits the stocking of "any kind of carp" in any of the public or private waters of the state." Carp are considered a non-native introduced species, which can have detrimental effects on existing fisheries.

Anglers must consider the effects of stocking fish, whether indigenous or foreign. What may appear to be an act of kindness may in fact be an act of consequence. Transporting a gamefish from a public lake to a private lake affects not only the fishery but also the angler. Fish are the property of the state of New Jersey. Relocation of fish is illegal without a stocking permit and deprives other anglers of public access to the fisheries resource.

By Christopher Smith, Assistant Fisheries Biologist



Zebra Mussels have already cost millions to boaters, industries, towns and cities in the Great Lakes and along the Mississippi.

- ➤ **DRAIN** all water from bait buckets and live wells
- ➤ **REMOVE** all weeds from boats and trailers
- ➤ CHECK boats and motors for zebra mussels
- ➤ **DRY** boats and trailers completely between launches

DON'T HELP THEM SPREAD!

How to Identify It

- Zebra mussels look like small clams with a yellowish or brownish "D" – shaped shell, usually with alternating dark and light colored stripes.
- They can be up to 2 inches long, but most are under an inch. Zebra mussels usually grow in clusters containing numerous individuals and are generally found in shallow, nutrient rich water.
- Zebra mussels are the ONLY freshwater mollusk that can firmly attach itself to solid objects rocks, dock pilings, boat hulls, water intake pipes, etc.
- Note the date and precise location where the mussel or its shell was found.

What to Do

- Take the mussel with you (several if possible) and store in rubbing alcohol. DO NOT THROW IT BACK IN THE WATER
- IMMEDIATELY call Dr. Michael Weinstein, New Jersey Sea Grant Headquarters, (732) 872-1300 extension 21

Courtesy of University of Wisconsin Sea Grant Institute

2003 Health Advisories For Eating Fish And Crabs Caught In New Jersey Waters

Important Health Information

Fishing provides enjoyable and relaxing recreation. Many people enjoy cooking and eating their own catch. Fish are an excellent source of protein, minerals and vitamins, and play a role in maintaining a healthy, well-balanced diet.

However, since 1982, when research demonstrated elevated levels of potentially harmful contaminants in certain fish and crabs in some New Jersey waters, advisories were adopted to guide citizens on safe consumption practices. Fish consumption advisories are developed through a scientific process that includes collecting samples of fish from waters throughout the state and analyzing them for various chemical contaminants, such as dioxin, polychlorinated biphenyls (PCBs), chlordane and mercury. The contaminant levels in the fish are then evaluated using federal guidelines for protecting human health. Chemical contaminants, such as dioxin, PCBs and chlordane are classified by the U.S. Environmental Protection Agency as probable cancer-causing substances in humans, while elevated levels of mercury can pose health risks to the human nervous system, particularly to a developing fetus. Recently, the New Jersey Department of Environmental Protection completed a new round of sampling and analysis

which indicated state fish consumption advisories needed to be updated and expanded.

Over the past several years, the Fish and Wildlife Digest has highlighted the state's fish consumption advisories. These consumption advisories consist of statewide, regional and water-body-specific warnings for a variety of fish species and fish consumers. Because of the large volume of information included in the updated advisories, a separate, more detailed brochure has been developed to help you make informed choices on fish consumption to reduce your exposure to harmful contaminants. The 2003 Fish Advisory brochure includes contaminant information, advisory charts, and preparation and cooking methods to reduce contaminant levels in the fish you catch. The brochure contains guidelines, advisories and prohibitions that are in effect for 2003. It also contains charts and information about consumption advisories issued by the states of Pennsylvania, Delaware and New York that cover shared waters.

We encourage you to consult the 2003 Fish Advisory Brochure when making decisions about eating recreationally caught fish and crabs. It is important to follow this information when preparing and eating the species taken from waters listed.

Copies of the 2003 **Fish Advisory Brochure are** available by contacting the following:

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION:

Public Access Center—609-777-DEP3 or www.state.nj.us/dep

DIVISION OF SCIENCE, RESEARCH AND TECHNOLOGY:

609-984-6070 or www.state.nj.us/dep/dsr/

DIVISION OF FISH AND WILDLIFE:

609-748-2020 or www.njfishandwildlife.com

NEW JERSEY DEPARTMENT OF HEALTH AND SENIOR SERVICES. **CONSUMER AND ENVIRONMENTAL HEALTH:**

609-588-3123 or 609-777-3373 or http://www.state.nj.us/health/eoh/foodweb/ fishguid.htm

Attention Anglers!

The cooperation of anglers, by the return of tags I from harvested fish, is crucial to our successful evaluation of these waters. Trout have been tagged with a metal, lower jaw tag. These tags are distinguished from the Division's Hook-A-Winner Program and other sportsmen groups or hatchery tags in that the return address on the tags reads "Lebanon, NJ". Tag collection boxes, with reporting envelopes, are located at various sites around



Photo: NJ Division of Fish and Wildlife

these waterbodies. If you catch a tagged fish and plan to release it, please do NOT remove the tag. Release the fish with the tag intact. However, if you plan to keep the fish, carefully remove the metal tag

The Division of Fish and Wildlife's Bureau of Freshwater Fisheries is currently using tagged or finclipped trout to evaluate the trout fisheries in the following waterbodies:

Waterbody	County	Marking
Aeroflex Lake	Sussex	Tag
Manasquan River	Monmouth	Finclip
Monksville Reservoir	Passaic	Tag
Round Valley Reservoir	Hunterdon	Tag
White Lake	Warren	Tag

from the fish's jaw. Complete all information on the outside of the reporting envelope. This information is important to the success of these studies. Place the tag in the envelope and drop it through the slotted box located on the bottom of the pole. If there are no envelopes within the receptacle, the tag can be placed in an envelope and mailed to the Lebanon Fisheries Laboratory, Box 394, Lebanon, NJ 08833. The tag must be FLATTENED prior to mailing. Be sure to include relevant information such as the tag number, waterbody, date captured, length of fish and your name, address and phone numbers in the event additional information is required.

To report the capture of sea run brown trout in the Manasquan River, contact the Lebanon

Fisheries Lab at (908) 236-2118 or the Pequest Trout Hatchery at (908) 637-4173. Pertinent information includes the date, location, length, weight (if measured), time, tide condition and angling method used when the fish was captured. Sea run brown trout will appear more silvery in coloration and are lacking an adipose fin. This is the small tab like fin located on the top of the fish just before the tail. Angler reports of the capture of sea run brown trout is critical to the continuation of this project.



Children's Fishing Derby Program

In the 1970s, the Division of Fish and Wildlife started the Children's Fishing Derby Program aimed at introducing New Jersey's youth to the sport of fishing. Hatchery and Office of Information



& Education (I & E) staff ran the program from the Charles O. Hayford State Fish Hatchery in Hackettstown. In the 70s and through the 80s, the program consisted of hatchery personnel stocking 100-200 catchable size sunfish during the week prior to the derby. The children

would then have the opportunity to catch the fish at the derby, which took place on the weekend.

In the 90s, hatchery and I & E personnel began stocking the fish the day of the derby. The hatchery stocking truck would pull up to the edge of the lake or pond to be stocked. An aquarium and a small display would be set up on the side of the truck. About 30 minutes before the fishing began, a representative of each fish species in the truck was netted out of the tank and placed into the aquarium for the young anglers to view. These species included bluegill sunfish, pumpkinseed sunfish, largemouth bass, black crappie, channel catfish and the brown bullhead. These are the most common species found in New Jersey's lakes and ponds. The hatchery employee would then remove each species from the aquarium and give a brief lesson on how to handle these fish. This would show the young anglers how to take a fish off the hook and properly release the fish back into the water without harming themselves or the fish. All six of the above species have sharp fins and spines that the children needed to be aware of when handling. An I & E person would then give a short



talk about the program and its goals and fishing ethics. The children concluded the program by actually helping to stock the lake or pond with hopes of landing a great first catch!

Hatchery records date back to 1979 when the children's fishing derby program only stocked 10 ponds with a total of 1,750 sunfish and bullheads. From 1979 to 1989, the hatchery stocked between 10 and 20 derbies per year. About 50 derbies a year were stocked from 1990 to 1999. The past two years the program has grown from 60 derbies in 2000 to 71 derbies in 2001. In 2002, the hatchery provided 80 derbies with 16,000 adult sunfish and a mix of 1,000 bass, crappies and catfish.

The derbies are generally held during the months of May through September, with June and July being the most popular. The majority of the derbies take place in county and municipal parks in urban areas. Groups such as county park commissions, town recreation departments, police associations and fishing clubs organize the derbies. The Fairton Correctional Institute has supported the program by raising and stocking fish for eight of the south Jersey events.

Derby sizes range from 25 to 300 children, with almost the same amount of parents/adults in attendance. Derby coordinators are asked to return a small report after each event containing some basic information. Data compiled in 2001 showed 6,500 young anglers and 3500 adults participated in the derby program. The numbers for 2002 show that 9,000 youngsters and over 5,000 adults participated in the 78 derby events held throughout the

state this year.

I have worked at the Hackettstown Hatchery since 1987 and until this summer had never attended one of our fishing derbies. This summer I presented the derby program at ten different locations. Witnessing the turnout and enthusiasm of the kids and parents has really opened my eyes to this program's success. Whether it's dads, moms, sons, daughters, grandparents, boy scouts, girl scouts, disabled individuals, park rangers, police officers or anyone who happened to be at the pond that day, everyone has a great time! Many of these young anglers will catch their first fish at these derbies. With the cooperation of the Division's hatchery and

I & E staff, plus our Conservation Officers, the

program improves and reaches new heights each year. The Division of Fish and Wildlife plans to continue this program, providing many youngsters with an opportunity to catch their first fish and get them hooked on fishing-and the great outdoors.



in the Children's Fishing Derby program, please mail a request after January 1, 2003 to: Pequest Trout Hatchery, 605 Pequest Road, Oxford, NJ 07863 Attn: Rosemarie Greg. The request should include the date of the derby, location (county and town), pond or lake name, organization, contact person and daytime phone number. For further information regarding the program, please call 908-637-4173 (ask for Rosemarie) or 908-852-4950 (ask for Craig).



By Craig Lemon, Hackettstown Hatchery Supervisor





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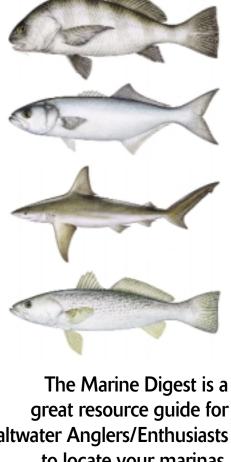
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