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Estuary News

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Philadelphia, PA 19107

Address Correction Requested

DELAWARE ESTUARY PROGRAM

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The Estuary News encourages reprinting of its articles in other publications. Estuary News is published quarterly by the Partnership for the Delaware Estuary, Inc., under an assistance agreement (X-993483-02-0) with the U.S. Environmental Protection Agency (EPA). The purpose of this newsletter is to provide an open, informative dialogue on issues related to the Delaware Estuary Program. The viewpoints expressed here do not necessarily represent the views of the Partnership or EPA, nor does mention of names, commercial products or causes constitute endorsement or recommendation for use. For information about the Delaware Estuary Program, call 1-800-445-4935.

PARTNERSHIP PARTNERS

Thanks and Welcome to the Partnership's Newest Members

The Partnership for the Delaware Estuary sends a sincere thank you and welcome to its newest Founding Partners, listed below. To find out how you can become a member, call Kathy Klein at 1-800-445-4935.

Partnership Promotional Products Now Available

The Partnership has in stock a variety of promotional products with our logo that are for sale. These products include adult and children's T-Shirts, baseball hats, and coffee mugs. For price and ordering information, call the Partnership at 1-800-445-4935.





estuary news

Newsletter of the Delaware Estuary Program

Volume 9 / Issue 1
Summer 1998

Message from the Director

(Text)

*Bud Watson, Executive Director
Partnership for the Delaware Estuary*

Editor's Note

(11 lin

*Kathy Klein, Editor
Estuary News*

ESTUARY Events

Gloucester County Water Fest
Sunday, June 28, 1998, 11 am - 4 pm
Scotland Run Park
Clayton, New Jersey

Help celebrate and preserve the Upper Maurice River through awareness and action. The Fest, sponsored by the Upper Maurice River Watershed Group and Gloucester County Parks and Recreation, will feature a live animal show, music, a "Casting Kid's Contest," food demonstrations and much more. For information, call (609) 881-0845.

Third Annual Philly "Dock" Party
Independence Seaport Museum
Thursday, July 2, 1998, 10 am - 5 pm
Philadelphia, Pennsylvania

Celebrate Independence Seaport Museum's 3rd birthday with arts and crafts for kids, food, prizes, and more. Part of Sunoco's Welcome America!, all special activities on this day are free to the public. For more information about this and other Seaport Museum events, call (215) 413-8621 or on the web at www.libertynet.org/seaport.

Stroud Water Research Center Stream Walk
Saturday, July 11, 1998, 9 am - 11 am
Avondale, Pennsylvania

Explore the banks of the White Clay Creek and its stream vegetation, native plants, and the design of ecosystems including their trees, shrubs and wildflowers. For more information about this and other Stroud programs, call (610) 268-2153.

Whitesbog Village Full Moon Hike
July 11, 1998, 7 pm
Browns Mill, New Jersey

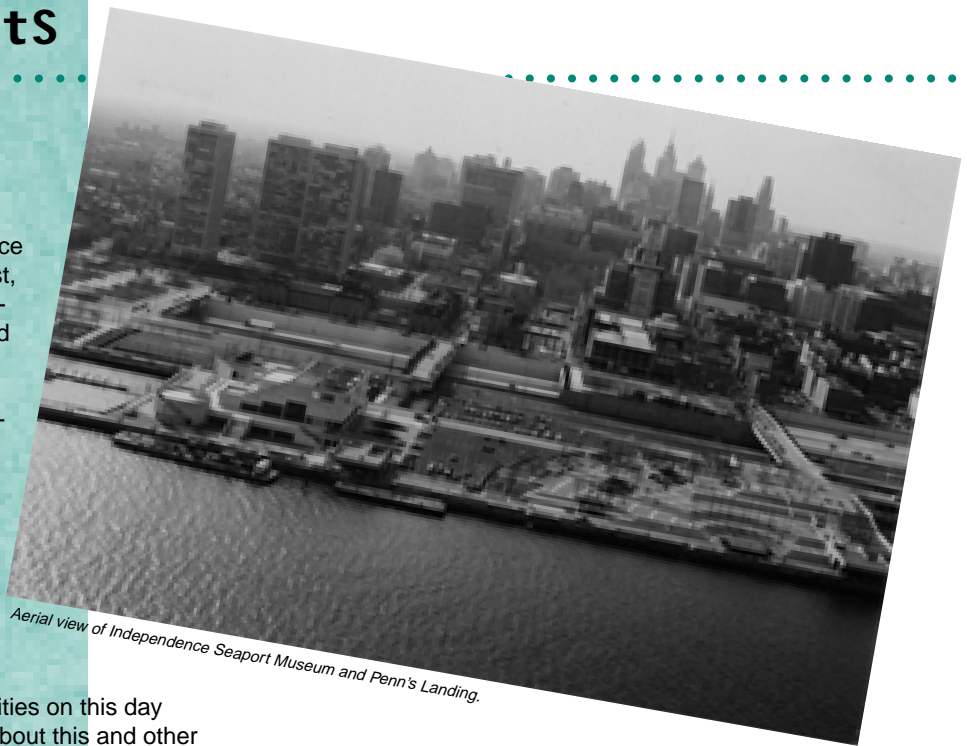
Take a 4-6 mile hike on sand roads. Preregistration is required. For more information about this and other scheduled summer events, call (609) 893-4646.

Wildflowers and Wildlife of the Pinelands Hike
July 18, Aug. 15, Sept. 19 & Oct. 17, 1998, 10 am
Batsto Nature Center, Wharton State Forest
Hammonton, New Jersey

Explore the beauty of the pinelands with the Batsto Nature Center. Insect and tick repellent are recommended. To preregister, call (609) 567-4559.

Sharkmania!
New Jersey State Aquarium
Saturday, August 8, 1998
Camden, New Jersey

Bite into a full day of fun celebrating the aquariums most popular aquatic predators. For more information about this and other events, call 1-800-616-(XXXX) JAWS or on the web at www.njaquarium.org.



Aerial view of Independence Seaport Museum and Penn's Landing.

8th Annual Delmarva Coastal Cleanup

Saturday, September 19, 1998, 9 am - 1 pm

Residents of the Delmarva Peninsula will join forces again this fall in the 8th annual Delmarva Coastal Cleanup. This event's goal is to remove debris from the shores of the Delaware and Chesapeake Bays, their tributaries, and the Atlantic beaches. Cleanups will be held at approximately 60 sites. For more information, call DNREC at (302) 739-4506.

University of Delaware's Coast Day
Sunday, October 4, 1998, 11 am - 5 pm
Lewes, Delaware

Chart your course for Coast Day '98. Discover the fascinating world of marine science through hands-on exhibits, lectures, ship tours, marine life touch tanks, children's activities, delicious food and much more. For information about this free event, call (302) 831-8083 or visit www.mast.udel.edu/coastday.html.

Second International Conference on Shellfish Restoration
November 18-21, 1998

Hilton Head Island, South Carolina

This four-day conference will concentrate on shellfish habitat assessment, restoration and remediation through watershed management and pollution abatement. For more information, call Rick DeVoe at (843) 727-2078, or email: devoemr@musc.edu.

Seawatch
September 1, 1998 - November 30, 1998
Cape May Point State Park
Cape May, New Jersey

For information about how you can help count migrating hawks, call (609) 884-2736 or (609) 861-0700.

Hawk Banding Demonstration
September 19, 20, 26 & 27, 10 am
Cape May Point State Park
Cape May, New Jersey

Take advantage of a great opportunity to see how migrating hawks are banded. For information, call (609) 861-0700.

Making Waves

FAIRMOUNT PARK'S MASSIVE RESTORATION AND EDUCATION PROGRAM MOVES FORWARD

By Gina Lynne Blyther, Environmental Education Manager,
Natural Lands Restoration & Environmental Education Program

During the fall of 1996, to commemorate its 50th anniversary, the William Penn Foundation gave a five year, \$26.6 million grant, to Philadelphia's Fairmount Park Commission to help restore the natural areas in seven watershed and estuary parks located throughout the city. This unprecedented endeavor represents a giant step forward in preserving the future of Fairmount Park and in doing so will serve as a model for urban parks nationwide. The grant, which established the Park's Natural Lands Restoration and Environmental Education Program (NLREEP), will also help to build a constituency for the park's protection through environmental education and community involvement.

Philadelphia contains 8,900 acres of parkland - one tenth of the land in America's fifth most populous city. Approximately 5,400 acres (61%) are natural areas consisting of forests, woodlands, meadows and wetlands. The grant from the William Penn Foundation will help to reduce the effects of stormwater runoff through Best Management Practices, including stream bank revitalization projects. It will also help to revitalize the most vulnerable areas of many forested areas, starting with the soil and including the replanting of native species. Trail surfaces will be repaired to reduce the adverse effects to the woodlands and to improve visitors' experiences. The challenge of invasive exotic plant species will also be tackled.

In order to carry out this ambitious initiative, the Fairmount Park Commission has retained a team of scientists from the Academy of Natural Sciences to inventory and assess the existing conditions of the natural areas and to develop master plans to help guide the improvements made in selected natural areas.

Another important component of the grant is the relocation, expansion or in some cases the construction of 6 environmental education centers in watersheds throughout the city. The centers will offer nature walks, educational programs, workshops, and activities that will be tailored to address features unique to each of the watersheds. Envisioned are formal and informal hands-on educational programs that will reach pre-k to senior citizen

visitors. Environmental education curricula will be developed that align with the School District of Philadelphia's Academic Standards. In addition to working with the public schools, partnerships will be developed with the parochial and private schools in the area. After-school and summer programs will also be provided to extend and reinforce classroom lessons in fun and creative ways.

Although several of the centers will not actually be constructed for a few years, children will still have an opportunity for hands-on nature instruction and exploration in the park beginning this summer. The park's 1998 free outdoor environmental programming will take place in FDR Park, Fairmount Park and Fox Chase Farms/Pennypack Park and will run from Monday, July 6 through Friday, August 14. There will be one morning and one afternoon lesson in each of these three watersheds led by a trained nature instructor, with each lesson running approximately 90 minutes.

Integral to the success to the NLREEP initiative is its Community Volunteer Maintenance effort. Volunteers will be recruited from throughout the region to assist at the environmental education centers and to undertake restoration projects in each watershed area. They will also be trained to help monitor and evaluate the improvements undertaken in the targeted natural land areas.

For additional information, about the NLREEP contact the Fairmount Park Natural Lands and Environmental Education Program at (215) 685-0274.



FAIRMOUNT
P • A • R • K
COMMISSION

UPDATES FROM THE DELEP IMPLEMENTATION TEAMS

DELAWARE ESTUARY PROGRAM IDENTIFIES PRIORITIES FOR 1999

By Catherine A. Libertz, Environmental Protection Specialist, U.S. EPA Region III

Through a facilitated process of the Delaware Estuary Program's implementation teams, program priorities have been developed for Federal Fiscal Year 1999 and beyond. The following issue areas have been established as priorities and will be used to drive the budget process and program activities. These priority issues are consistent with the goals established in the *Management Plan for the Delaware Estuary*.

GOAL #1: Reduce and control point and nonpoint sources, particularly toxic pollution and nutrient enrichment, to attain the water quality conditions necessary to support abundant and diverse living resources in the Delaware Estuary by:

- Supporting the efforts of the DRBC Toxics Advisory Committee and Water Quality Advisory Committee; and
- Identifying and providing support to ongoing and planned nonpoint source initiatives in Estuary watersheds.

GOAL #2: Provide for the restoration of living resources of the Delaware Estuary and protect their habitats and ecological relationships for future generations by:

- Providing implementation support for habitat restoration and enhancement activities that support various components of Action H5 - *Target Habit Enhancement Opportunities for Present and Future Action*.

GOAL #3: Promote greater public understanding of the Delaware Estuary and the programs effecting the Estuary by:

- Developing educational components to support ongoing actions and promoting stewardship opportunities in the Estuary;
- Supporting the Regional Information Management Service (RIMS) through the RIMS Implementation Team as a cohesive mechanism to meet information and data coordination access needs on the Estuary; and
- Continuing to support the efforts to implement a regional cooperative environmental monitoring plan developed by the Delaware Estuary Program's ad hoc monitoring committee and implemented by the Monitoring Implementation Team.

For more information about these priorities, call your respective state coordinator listed on page 8 of this newsletter.

Regional Information Management Service (RIMS) Implementation Team

The RIMS Implementation Team has been coordinating the new Delaware Estuary web site located at <http://www.delep.org>. The web site includes many categories of information such as the vision of the Delaware Estuary Program, the Implementation Teams that actively pursue the goals and mission of the Estuary program, and links to other environmental or educational sites in and around the Delaware Estuary.

One of the items we would like to highlight is that the *Estuary News* is now on the web! In its present form, you can read the newsletter in the same format as you are reading now. In the near future we will make the newsletter more user friendly and enable users to download their own copy. Our purpose is to reach more people interested in the Estuary through the use of this service.

If you are looking for environmental data, we have you covered. The RIMS web site will take on a similar look to the DELEP site, and will retain the environmental data. As a convenience, there is a button on the DELEP site where you can download the most recent listing of environmental studies in the Estuary. This was assembled by the Monitoring Coordinator and will be incorporated into the Data Source Index located on the RIMS web site (<http://www.state.nj.us/drbc/rims.htm>) in the near future.

As always, we welcome your comments and any additions to either web site. Call or email Karl S. Heinicke at (609) 883-9500 ext. 241 or E-mail: heinicke@drbc.state.nj.us.

Habitat and Living Resources Implementation Team (HRLT)

The Habitat and Living Resources Implementation Team (HLRIT) is pleased to report that it has been successful in helping to obtain grant funding for several on-the-ground implementation projects.

The gambles Gut Marsh Rehabilitation Project will receive a \$12,859 grant from the National Estuary Program (NEP) to restore vegetation diversity to 77 acres of phragmites-dominated tidal freshwater wetlands, located 1.5 miles south of New Castle, Delaware. This freshwater tidal marsh has been identified as an important feeding area for resident wading birds from the nearby Pea Patch Island Heronry and for migrating black ducks within the Atlantic Coast Flyway. This project will be implemented under a regional non-regulatory program designed to restore more than 10,000 acres of highly degraded tidal freshwater and brackish wetlands along the Delaware and Christina Rivers.

The Cooper River Fishway Project, in Camden County, New Jersey will receive a \$25,000 NEP grant to help restore migratory fish access to historical spawning and rearing habitat on the Cooper River, a tributary of the Delaware River. Human development since Colonial times has eliminated migratory access to former spawning and rearing habitat in for several species in tributaries of the Delaware River. This project will install two fish ladders (Wallworth Lake and Evans Ponds) on the Cooper River to allow migratory fish to proceed unimpeded around two residential spillways (dams) to historic spawning and foraging areas upstream. In addition to this project, which will provide access to approximately four miles of river to migratory fish, PSE&G is installing a fishladder at a downstream tidal gate, opening up another 4 miles of river.

A partnership between the New Castle Conservation District; HLRT; the Partnership for the Delaware Estuary; and the Wildlife Habitat Council has been awarded a \$152,288 EPA Wetlands Protection State Development Program grant. This project has been designed to promote corporate, business, and industry participation in the restoration, enhancement, and/or conservation of wetlands and associated wildlife and native plant habitats and corridors on their lands and in similar community environmental initiatives in the Delaware Estuary. This will be a three-year project which will include contacting and informing corporations, businesses, and industry to solicit their participation in the Delaware Estuary Program through the use of corporate quality briefing packages and educational workshops. This project will also include three wetlands and associated habitat restoration projects totaling approximately 150 acres. Wildlife Habitat Council is a non-profit group dedicated to assisting corporations to enhance and manage their lands for wildlife. They and facilitate cooperation between corporations, conservation agencies, and government organization for wildlife habitat enhancement on public and private lands.

In addition to the grant described above, the HLRIT is developing a project directory which will include natural habitat projects that counties, conservation districts, nature conservancies and land trusts are planning and implementing. The directory will provide a ready list of projects that HLRIT can use to coordinate funding opportunities. To date, we have had 4 private groups, 12 county agencies, and 3 state agencies respond with 47 potential projects. If you are interested in submitting a project, contact Wendell Scheib, Team Leader, or Peggy Emslie, Committee Chair, at the numbers provided below.

Remember that the HLRIT meets on a quarterly basis (March, June, September, December). Meetings are open to anyone who would like to attend or participate. For information on times and locations, contact Wendell Scheib.

Team Leader:

Wendell Scheib (610) 793-3698, E-mail: wscheib@bellatlantic.net.

Natural Habitat Projects and Programs Committee:

Peggy Emslie, DNREC, DE, (302) 739-4691, E-mail: pemsle@dnrec.state.de.us;

Funding Sources Committee :

Dorina Frizzera, NJDEP, NJ, (609) 777-3251, E-mail: Dfrizzera@dep.state.nj.us;

Natural Habitat Focus Area Committee:

Greg Breese, US FWS, Bombay Hook Reserve, DE, (302) 653-9152, E-mail: gregory_breese@mail.fws.gov.

Public Participation Implementation Team (PPIT)

The Public Participation Implementation Team and the Partnership for the Delaware Estuary are continuing to work with the eleven organizations that received minigrants last fall. These projects will serve as pilot projects for similar efforts across the estuary in other Partnership-funded programs.

The PPIT has decided, based on feedback it has received in regards to the updated newsletter format, to use different colors of ink for the four issues of *Estuary News* that are published annually. We hope that this will make it easier for our readers to keep track of which issue corresponds to which season.

If you have an event where you would like to have the estuary display exhibited, call the Partnership at the number provided below.

For more information about other PPIT activities, call Kathy Klein at 1-800-445-4935.

Monitoring Implementation Team Update (MIT)

For information about the MIT's activities, please call one of the contacts listed below.

MIT Chair:

Jonathan Sharp, University of DE, (302) 645-4259 or at jsharp@udel.edu

Monitoring Coordinator:

Ed Santoro, DRBC, (609) 883-9500, ext. 268 or at esantoro@drbc.state.nj.us

Mapping Subcommittee:

Barry Seymour, DVRPC, (215) 592-1800 or at bseymour@juno.com

Living Resources Subcommittee:

Steve Grabowski, USFWS, (717) 894-1275 or at Steve_Grabowski@fws.gov

Volunteer Monitoring Subcommittee:

Fred Stine, Delaware Riverkeeper Network, (215) 369-1188 or at drkn@libertynet.org

To get information about the other Delaware Estuary Implementation Team's activities, please call the following people:

Water Conservation Implementation Team:

Jeff Featherstone (609) 883-9500

Water Quality Advisory Committee:

Paul Webber (609) 883-9500

Toxics Advisory Committee (TAC):

Tom Fikslin (609) 883-9500 ext. 253

Local Government Resource Teams (LGRT):

In PA call Lou Guerra at (610) 832-6100, in DE call William Brierly, Jr. at (302) 739-5726, and in NJ call Anne Witt at (609) 633-1166

TIDINGS: News from around the region

New Delaware Bay Shorebird Guide Available

If you can't tell a red knor from a ruddy turnstone, the Delaware Division of Fish and Wildlife's newly published Delaware Bay Shorebird Guide is just what you need for your next birding expedition. This free guide features drawings of Delaware's 10 predominant migratory species and provides directions to prime viewing sites on both the Delaware and New Jersey sides of the Delaware Bay.

For information on shorebird viewing and to order a copy of the Delaware Bay Shorebird Guide, call (302) 653-2882 or (302) 739-4506. In addition, the New Jersey Department of Environmental Protection also has a shorebird viewing guide that is available free of charge by calling (609) 292-9400.

A. J. Meerwald Designated New Jersey's Official Tall Ship

The *A.J. Meerwald*, a 115-foot oyster schooner built in 1928 and listed on the National Register of Historic Places, was designated by the New Jersey Legislature as the State's Tall Ship. Governor Whitman signed the legislation on April 21, 1998, in Burlington City at Riverfront Park before joining the Girl Scouts of Delran Troop 6088 for an educational sail. Also present on the sail were the Delaware River Basin's Commissioners representing the states of New Jersey, Pennsylvania, Delaware and New York. Built in Cumberland County, the ship was donated in 1989 to the Delaware Bay Schooner Project, a non-profit organization that provides educational programs about the Delaware Estuary. The schooner was restored through the efforts of the Schooner Project staff and many dedicated volunteers. Meghan Wren, Executive Director of the Schooner Project, is a former member of the Delaware Estuary Program Management Committee and a current Partnership board member. The Schooner project is active in implementation of the Delaware Estuary Plan, particularly action E-13, *Support Floating Classrooms*. The *Meerwald* is used as a floating classroom to teach students and the public about the Estuary.

For more information about the Meerwald and to request a copy of the ship's summer sailing schedule, call (609) 785-2060.

Schuylkill River Watershed Grants Announced

On May 13, 1998, the Conservation Fund administered \$26,447 in grants to 16 grassroots organizations and public agencies working to conserve natural resources in the Schuylkill River Watershed. Grants will be used for the planning and implementing of Greenways, park projects and watershed conservation efforts as well as building the capacity of local organizations to communicate via the Internet. The grants were made as part of the Schuylkill River Watershed Initiative; the combined effort of 22 local organizations to protect, restore and educate the public about southeastern Pennsylvania's largest watershed.

For more information on these projects, how to apply for grants in 1999 or about the Schuylkill River Watershed in general, contact Nick Dilks at Dilks@msn.com or visit our web site at www.srv.org

Four Nests of the Threatened Piping Plover Found in Delaware

Four piping plovers' nests were discovered this spring in Cape Henlopen State Park, Delaware, prompting officials to close sections of the beach to pedestrian and vehicular traffic. Three of the nests were found along the beach near Gordon's Pond and the fourth nest was found on the Point of Cape Henlopen. To protect the nests, several areas of the park were closed late May and will remain closed until the chicks are able to fly. This typically takes nearly a month after the eggs have hatched.

The piping plover is a threatened species along the Atlantic Coast. Populations of the plover have declined as habitat has been lost

and human disturbance has curtailed breeding success. Foot and vehicular traffic can crush nests, which are little more than a small depression in the sand.

For more information, contact David Small (302) 739-4506 or Stephen Schilly (302) 739-4405.

Video On Horseshoe Crabs Illustrates Global Interdependency

Ritual of the Spring Tide, a 17-minute video, documents the ancient spawning migration of horseshoe crabs to the Delaware Bay. The spring arrival of these living fossils marks the appearance of millions of migratory shorebirds many of which have flown non-stop from the southern-most reaches of South America. People also eagerly anticipate the crabs' arrival in an attempt to unlock new life saving biomedical discoveries from the unique physiology of this primitive organism. Thus, a ritual that has persisted for eons sets the stage for this story about a remarkable ancient organism and its modern beneficiaries.

For ordering information, call 1-800-523-0118.

New Environmental Resources from the Terrene Institute

A new brochure published by the Terrene Institute features several interesting environmental resources including a video for wetlands conservation and a poster that illustrates watershed management and pollution prevention tips for golf courses.

To request a copy of this brochure, call (703) 661-1500.

PA Department of Agriculture Sponsors ChemSWEEP

An innovative, multi-year, program called ChemSWEEP was established by Pennsylvania Department of Agriculture to provide growers of agricultural products and commercial applicators with a free means to dispose of canceled, suspended or deteriorated pesticide products. The pesticides collected through this program will be burned in EPA approved incinerators, thereby preventing the potential for these products to spill or leak, causing environmental contamination. During 1998, the counties of Delaware, Philadelphia and Chester are included in the Program.

For information about who is eligible, what products are being accepted, how the chemicals will be collected, and how to participate, call Howard Walker (610) 489-1003 or John Pari at (717) 772-5210.

Christina River Clean-up Results

In celebration of Earth Week '98, more than 850 volunteers participated in the 7th annual Christina River Clean-up project on April 25th. The volunteers worked at 20 sites and collected 17 tons of trash and 500 tires, which are being sent to Virginia to be used as fuel. Thanks to everyone who helped to make this event such a success.

Pennsylvania's 21st Century Environment Commission

The Pennsylvania 21st Century Environment Commission was formed in July 1997 by Governor Thomas Ridge to define the environmental priorities for the Commonwealth as it enters the next century. The Commission must also recommend methods to achieve the selected priorities or goals to determine appropriate indicators of our progress toward those goals. Most importantly, the Commission is to include the public in its work.

The Commission released its draft report in early June for public comment. Throughout the month, the Commission will host eleven regional open houses across the Commonwealth.

For more information about the Commission and its report, call them toll free at 1-888-PADEP-21 or visit them on the web at www.21st.century.env.commission@a1.dep.state.pa.us

SPECIES SPECIFIC

NEW JERSEY WILDLIFE VIEWING GUIDE AVAILABLE

By Robert Nyman, DELEP Coordinator,
U. S. EPA Region III

In the true spirit of interagency cooperation fostered by the Delaware Estuary Program, the New Jersey Department of Environmental Protection's Division of Fish, Game, and Wildlife has just released the New Jersey Wildlife Viewing Guide. This full-color, 160-page guide showcases 87 sites throughout New Jersey where people can observe and learn about an incredible array of wildlife and the habitats that support them. The project has been funded through grants from the U.S. Environmental Protection Agency, the National Park Service, U.S. Fish and Wildlife Service, the federal Partnerships for Wildlife program and proceeds from the New Jersey's 'Conserve Wildlife' license plate.

Wildlife viewing sites consist of wildlife management areas, state parks and forests, national wildlife refuges and recreation areas, county and municipal parks, and conservation organization lands. Sites are organized by region in the Guide and for each site there is an ecological description, directions, wildlife viewing opportunities, and site facility/amenity information.

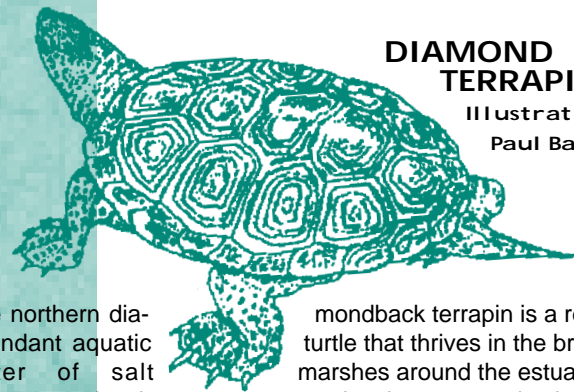
The potential benefits of the Watchable Wildlife project for wildlife, people, and the environment are significant. The public is provided with a meaningful recreational activity and, at the same time, are being educated about the needs of wildlife and our responsibilities as stewards of our natural resources. The project also has the potential to bolster local economies through natural resource related tourism. The inspiration for EPA to co-sponsor this project was to support Action E10 of the Delaware Estuary Program's CCMP - *Promote Ecotourism in the Estuarine Region*.

An important objective of the Watchable Wildlife Project is to demonstrate that in some areas, visitors to conservation lands may generate more dollars to a local economy than large taxable developments. The Wildlife Diversity Tours featured in the Guide were developed to help meet this objective and have been designed to be two-day, self-interpretive driving/hiking tours.

Improvements at wildlife viewing sites vary greatly from site to site. Some offer natural resources interpretive centers, while

others simply have a parking area and interpretive signs. The continual improvement of all the wildlife viewing sites will be an important factor in attracting new and repeat visitors. Recognizing this, financial assistance for the development of trails, blinds, observation platforms, literature and interpretive panels at the viewing sites is being provided by the Division of Fish, Game and Wildlife through a grant program.

The New Jersey Wildlife Viewing Guide can be ordered by calling (609) 292-9400, writing to the Division of Fish, Game, and Wildlife, Endangered and Nongame Species Program, P.O. box 400, Trenton, NJ 08625, or by contacting their website at www.state.nj.us/dep/fgw. The cost is \$10.95 plus \$3.95 for shipping and handling.



DIAMOND TERRAPIN

Illustration By
Paul Bayer

The northern diamondback terrapin is a relatively abundant aquatic turtle that thrives in the brackish water of salt marshes around the estuary. They are a hardy species that can survive in relatively polluted waters, but they prefer the shelter of sinuous creeks as opposed to the more open waters of the bay. Terrapins are at the top of the food web in the estuary and as such, are strict carnivores. They consume everything from mussels to crabs to snails to fish.

mondback terrapin is a relatively turtle that thrives in the brackish marshes around the estuary.

Historically, the terrapins were economically important. Beginning the late 1800s and continuing until the 1930s, terrapins were an essential ingredient of an enormously popular gourmet dish known as terrapin stew. Prolonged and intensive hunting drastically reduced terrapin populations which in turn led to the eventual piecemeal enactment of protection laws by individual states. At present, terrapins are of relatively minor economic importance and they are no longer hunted on a large commercial scale.

Terrapins frequently nest at the upper slope of beaches or on the landward side of salt marshes, along the margins of upland forests and even open farmland. Interestingly, temperature affects the sex of the developing terrapins, with higher temperatures producing more females and lower temperatures producing more males. During the winter, terrapins have been known to hibernate in the mud of creek banks, on the bottom of deep creeks, or beneath undercut creek banks.

While there is not currently a large directed harvest of terrapins, they do face several human induced threats in the estuary, including: being struck by boats, run over by cars as they cross roads from marshes to uplands to nest, drowning in crab traps, and habitat degradation such as bulkheading that restricts their access to nesting sites.

This article was adapted from a chapter by Roger Wood in the book, "Living Resources of the Delaware Estuary," which is available free of charge from the Partnership for the Delaware Estuary, Inc., by calling 1-800-445-4935.

Name That Crab!



Thanks to all of you who participated in the contest to name the Delaware Estuary Program's official horseshoe crab mascot. The Public Participation Implementation Team (PPIT) had quite a time selecting the winning entry. In the end, the PPIT came to agree upon **HORSE-SHOE HARRY** as the mascot's name. This name was submitted by Keith Gentzler from Harrisburg, PA. Congratulations Keith!

During the coming months all of our readers can look forward to learning more about HORSESHOE HARRY and his estuary adventures.