

The Evolution of Patuxent as a Research Refuge and a Wildlife Research Center



MATTHEW C. PERRY

**USGS Patuxent Wildlife Research Center,
Laurel, Maryland 20708**

INTRODUCTION

In 1993, all biological research within the Department of the Interior was consolidated into one agency. This consolidation led to the separation of Patuxent Research Refuge (PRR) from Patuxent Wildlife Research Center (PWRC). This separation left the refuge program under the administration of the U.S. Fish and Wildlife Service and the research program, eventually under the administrative control of the U.S. Geological Survey. Over the years the land area and the research programs have been considered as one and the name "Patuxent" has been used interchangeably by staff and public to refer to both land and research.



Dignitaries at the Dedication of Patuxent Research Refuge June 3, 1939

The separation of land and research was a major change in policy and organizational structure for Patuxent. The change came at a time when Patuxent was grappling with its future role in wildlife research, management, and education. However, the change created increased opportunities and challenges for this renowned research institution, the largest wildlife research facility in the world, as well as increased opportunities and challenges for the refuge. The possibility existed that Patuxent, with proper planning, leadership, and partnerships, could increase its influence in all three areas.

It is appropriate to review the history and mission of Patuxent so that the wildlife and environmental communities fully understand the implications and potential results of the present management strategies at this historic and prestigious facility. When the

present mission is more fully understood, internally and externally, there might be increased support and funding for these important programs.

The following is a discussion of the evolution of Patuxent since its establishment in 1936 with emphasis on the leadership and policies that influence the wildlife programs and the land used by wildlife. The discussion is divided into three major periods: (1) Wildlife Conservation, (2) Environmental Movement, and (3) Public Outreach. The formation of Patuxent took place essentially during the birth of wildlife conservation in the United States. The original mission, to assist in the restoration of wildlife, led administrators and researchers to focus on land management research during the 1940s and 1950s. During the 1960-70s, Patuxent was influenced by the nationwide environmental movement and became renowned through studies to evaluate the effects of pesticides on birds and research on endangered species of wildlife. The 1980-90s saw a shift in emphasis



Dr. Leland C. Morley in front of cabin

from research studies to increasing activities with public use, environmental education, and refuge management. Highlights of this evolution are presented in the following discussion.

WILDLIFE CONSERVATION PERIOD

Although several conservation activities took place in the early 1900s, it was not until the 1930s

that federal and state agencies initiated scientific wildlife management and research to support it. The formation of Patuxent was one of many wildlife conservation activities taking place in the mid-1930s. On December 16, 1936, President Franklin D. Roosevelt signed Executive Order 7514, which transferred 2670 acres of land, that had been acquired (or would be acquired) by the United States, to the Department of Agriculture (USDA) as a wildlife experiment and research refuge. The area delineated in the Order was located in Anne Arundel and Prince George's Counties, Maryland, and was created "to effectuate further the purposes of the Migratory Bird Conservation Act." By order of the President the area was to be known as "the Patuxent Research Refuge."

Secretary of Agriculture Henry A. Wallace dedicated the Refuge on June 3, 1939, and stated, "the chief purpose of this refuge is to assist in the restoration of wildlife--one of our greatest natural resources."



John Snowden-the last resident of Snowden Hall



John Snowden with 4H Club members



Snowden Hall as it appeared in the 1920's



Snowden Hall as it appears in recent years

Secretary Wallace recognized "the vision and foresight of Dr. Ira N. Gabrielson, Chief of the Biological Survey", and "the leadership of Dr. Leland C. Morley, superintendent of the refuge." He further stated that the nation's first wildlife research station was "the manifestation of a national determination and a national ability to conserve and administer wisely the organic resources and products of the soil--a priceless heritage to the generations of Americans yet to come." Although Mr. Jay N. "Ding" Darling, former Chief of the Bureau of Biological Survey, was not mentioned in Secretary Wallace's address, many persons also credit his interest and support for the formation of the Patuxent Research Refuge. The dedication took place at Snowden Hall, the former residence of John Snowden.

The location of the Patuxent Research Refuge adjacent to the National Agriculture Research Center at Beltsville, Maryland, made it an appropriate area,

according to Wallace, upon which to conduct “long-time studies on the interrelationships of wildlife with agriculture and forestry.” Secretary Wallace and Dr. Gabrielson envisioned an area where wildlife could be studied in relation to the production of agricultural crops, and where lands poorly suited for agriculture could be turned back into forests, fields, and meadows, thus again becoming productive for wildlife.

An interesting change in the relationship of humans and wildlife took place during the 1930s. Past emphasis of wildlife investigations in the USDA had focused on the adverse impact of wildlife on activities of humans. However, the long drought of the 1930s, coupled with decades of wetland drainage by humans, devastated North America’s waterfowl and other wildlife populations. Thus, Americans were becoming

more aware of the negative impact their activities were having on wildlife. It was appropriate, therefore, that in 1939 the Bureau of Biological Survey was transferred from the Department of Agriculture to the Department of the Interior. In 1940, the Bureau of Biological Survey was replaced with the Fish and Wildlife Service. It was not until 1956 that Congress re-designated this agency as the U.S. Fish and Wildlife Service (USFWS).



Dr. Leland C. Morley was Superintendent of the Refuge during the embryonic years of 1938-48. He was responsible for the construction and development of the facilities to be used for wildlife research. Under his administration, three major buildings (Merriam, Henshaw, and Nelson Laboratories), named for the first three Chiefs of the Bureau of Biological Survey,



Entrance to Patuxent in the 1940's



Construction of a water control structure for an impoundment in 1954



Three major research buildings in 1950



Creating an island in an impoundment basin



Early view of Patuxent with trees transplanted by the CCC

were constructed in 1939-41.

This construction was conducted through the efforts of the Works Progress Administration and the Public Works Administration headquartered in Washington,



Conscientious Objectors, Snowden Hall

D.C. Some of the early Patuxent biologists traveled between Patuxent and their homes in Washington in trucks used to transport construction workers. On-site quarters were constructed for some biologists in the early 1940s to allow researchers to remain closer to their work. The first wetland area, Cash Lake, was built by the Civilian Conservation Corps (CCC) and flooded in 1939 as a recreational area for fishing. The CCC was also responsible for transplanting many trees from the woods to landscape the new buildings. With the outbreak of World War II, many of the Patuxent men were called for military service. Older staff members and women continued the wildlife conservation work and, beginning in 1943, were assisted by the Civilian Public Service, which

established at Patuxent a group of conscientious objectors to the War. These men were credited with constructing Snowden Pond and several roads, and conducting surveys of wildlife and plants.



During 1942-48, Mr. Arnold L. Nelson supervised all research at Patuxent, and in 1948-59 he served as Patuxent's first official Director. His responsibilities included both land management and research. The farm game research, which compared



Director Arnold Nelson (rt) with Washington Administrator Gustav Swanson, at Cash Lake



Dr. Durward Allen inspecting flowering Bicolor lespedeza, 1949

the diversity and numbers of wildlife under various farming practices, began under Mr. Nelson and was lead by Dr. Durward Allen.

Long-term studies of certain forest wildlife species, including box turtles, black rat snakes, and red-shouldered hawks, also were initiated. The population



Completed impoundment showing water control structure

Most of the waterfowl impoundments that exist today at Patuxent were developed during Mr. Nelson's tenure, and studies also were begun to determine how best to manage those areas for wildlife. Techniques developed at Patuxent to help farm game and wetland species were widely adopted throughout the country.



Island Marsh Complex, now named Uhler Marshes



John Tautin examining wing of Northern bobwhite



First nesting by a pair of Canada geese at Patuxent, 1948



Good quail hunting can be provided by good habitat management research

study initiated by Dr. Lucille Stickel in the late-1940s is still an active study. Mr. Nelson was instrumental in continuing the development of the refuge for wildlife, while promoting research that would document habitat management techniques most beneficial for wildlife.

Patuxent's first field station was established in Alabama to evaluate the interrelationships between quail populations and habitat manipulations. Over the years, numerous other field stations have been located in many areas of the country including Hawaii and Puerto Rico.

The editorial office for the *Wildlife Review* was transferred from Chicago to Patuxent in 1948 following the retirement of Waldo McAtee, the editor since its inception in 1935. Neil Hotchkiss became the first editor at Patuxent. Major additions of books and periodicals to the library occurred in conjunction with the *Wildlife Review* activities, making the Patuxent library one of the most extensive libraries for wildlife literature in the world.

In 1956, the Patuxent Research Refuge was renamed the Patuxent Wildlife Research Center (PWRC) to standardize the name with the adjacent Agriculture Research Center and with another Service facility in Denver, Colorado. The name change was done by administrative memorandum and did not supersede the original Executive Order designation as a Research Refuge. The name change had no noticeable effect on the operation of the research on the land, which was under the supervision of the director of PWRC.

ENVIRONMENTAL MOVEMENT



Dr. John L. Buckley became the Director of Patuxent in 1959 and served until 1963. Under his leadership the pesticide research program, which began in the 1940s, was broadened to include other chemicals and became known as the Environmental Contaminants

Research Program. An increased emphasis on experimental design and statistically controlled studies developed during the period. There was an increasing belief at Patuxent that field studies should receive less emphasis, because of the difficulty in controlling environmental and habitat variables compared to standardized pen studies. Observations in the field could now be tested under "laboratory" conditions.

A new building for the environmental contaminants program was dedicated in 1963 by Secretary of the Interior Stewart Udall. The building was originally named the Biochemistry and Wildlife Pathology



Lucille and Bill Stickel while on vacation in Florida 1950.

Laboratory. Throughout his dedication speech, Mr. Udall referred to the work of Rachel Carson and her famous book *Silent Spring*, published in 1962. Ms. Carson never worked at Patuxent, but based much of her book on research done there. In 1989, the building was renamed Stickel Laboratory, for Lucille and William Stickel who had devoted a combined total of 78 years to research at Patuxent.

The bird damage control research program, which had been initiated by Mr. Nelson, was expanded during Dr. Buckley's tenure to the Section of Animal Damage Control Studies. Waterfowl habitat management research was conducted by the Wetland Ecology Section of Patuxent with major activities dealing with water level manipulation and artificial nesting structures taking place on the Patuxent grounds. Extensive studies of lead poisoning in waterfowl caused by the ingestion of spent lead shot pellets began at this time and continued through the 1960s. In 1961, other migratory bird research and management programs, including the Bird Banding Laboratory, were consolidated in a newly established Migratory Bird Populations Station at Patuxent, headed by Mr. Walter F. Crissey.



Dr. Eugene H. Dustman served as Patuxent Director from 1963-72. During his tenure Coburn Laboratory, the Service Building, and Gabrielson Laboratory were constructed. The Endangered Species Research program began in 1965 and was headed by Dr.

Ray C. Erickson, who also served as the first Assistant

Director of Patuxent. The first bald eagle and whooping crane arrived at Patuxent in 1965 and 1966, respectively, as the genesis of the captive propagation program that attained international prominence. Numerous bald eagles were raised at Patuxent and many hatchlings were transferred to nests in the wild



Adult bald eagle



Feeding young eaglets



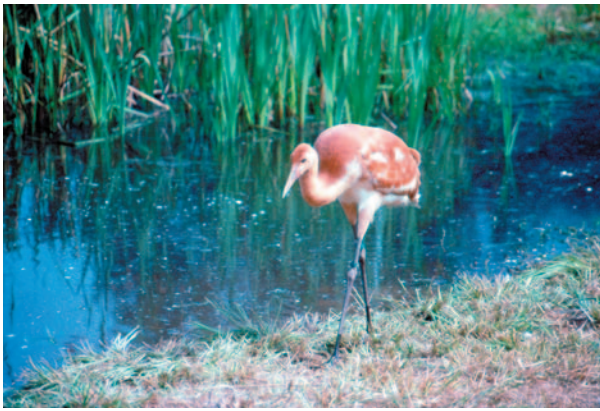
Feeding young eaglets



Biologist John Maistrelli with eagle



Bruce Williams with young crane



Young crane in acclimation pen



Dr. Ray Erickson with young crane



Whooping crane pen complex



Canus (for Canada and U.S.) was first whooping crane at Patuxent



Caretaker in white costume to avoid cranes imprinting on humans

to replace nonviable eggs. This program helped many states with their bald eagle restoration projects. The bald eagle program ended in 1988. The first whooping crane was a bird injured on migration south and was named Canus, to represent the close cooperation between Canada and the United States. Canus was a sperm donor during the long and successful artificial

insemination program at Patuxent. Canus died in 2001.

An additional 750 acres of land was purchased from the Shaefer family in 1970 as a buffer for the Endangered Species area, and several small support buildings, including a Veterinary Hospital, were constructed. A major endangered species laboratory was planned, but was never funded.

Environmental contaminant research expanded during the 1960s. A major breakthrough in DDT research occurred in 1969 when Patuxent researchers published results of research linking eggshell thinning with DDT in the food of birds. Research clearly indicated that DDT obtained in the food eaten by birds changed to

DDE and then physiologically affected the process of calcium deposition on the eggshell of the birds' eggs. Although initial eggshell thinning studies were conducted with mallards and black ducks, the findings had major implications with other species, especially fish-eating birds such as the brown pelican, osprey, and bald eagle.

Consequently, Patuxent researchers played influential roles by testifying during Congressional hearings on pesticides that eventually led to the 1972 nationwide ban of DDT and other organochlorine pesticides. Research was expanded on the very controversial subject of lead poisoning in waterfowl, and studies with captive ducks showed how ingested lead shot from shotgun shells of hunters could easily become lethal to ducks. In addition, extensive tests were conducted comparing the killing efficiencies of lead



Jerry Longcore checking nest of black ducks



Dove nesting in garage was part of a large population study



Brown pelican egg with greatly reduced eggshell resulting from pesticide poisoning



Researchers (Joe Artmann and Woody Martin) testing the role of lead shot in poisoning rails on the Patuxent River

and steel shot with ducks and other species. Results indicated that under most hunting situations steel shot was as effective in killing waterfowl as lead shot. Steel shot also reduced the crippling rate and was not toxic when eaten. These studies at Patuxent were the basis for the eventual ban of lead shot for waterfowl hunting which came in 1991.

Significant wetland management research was conducted during Dr. Dustman's era on approximately 300 acres of water impoundments that had been created at Patuxent. Improved nest boxes were designed for wood ducks, mallards, and black ducks, which greatly aided the nesting success of these species. Although wood ducks naturally accepted the artificial nest boxes, mallards and black ducks had to be conditioned to these structures with a technique utilizing the natural process of imprinting. By getting ducks to nest in artificial nest structures, productivity could be increased over nesting on the ground where ducks were vulnerable to fox and raccoon predators.

Drawdown techniques for impoundments were



Great egrets at Knowles Marsh drawdown

perfected to optimize moist-soil management for waterfowl. Seeds of annual plants such as umbrella sedges and smartweeds that were in the mud grew in great abundance during the summer to provide huge amounts of seeds to migrating ducks in the fall that were attracted to the reflooded impoundments. These techniques were then employed in many states throughout the United States and in other countries.

Patuxent's Wetland Ecology Section and part of

the Migratory Bird Populations Station (MBPS) were combined in 1972 into a new group called the Migratory Bird and Habitat Research Laboratory (MBHRL) under the direction of Dr. Robert I. Smith and later Dr. Fant Martin. The "population" activities of the MBPS involving surveys, regulations, and bird banding, became the Office of Migratory Bird Management. These organizations and staffs were co-located at Patuxent and shared administrative



Clark Webster checking an early wooden nest box



Fran Uhler installing a horizontal wood duck nest box that deters nesting starlings

relationships.

During the 1970s, all research and management activities with the wetlands of Patuxent were curtailed because of new National priorities. This was a major turning point in research and management of the lands of Patuxent. Biologists continued some activities with nest boxes and water level control of impoundments on their own time, but, in general, little on-site habitat research or management was conducted during this period at Patuxent.

Extensive research, however, was conducted by MBHRL personnel on species of concern in specific geographic areas including woodcock and black ducks in Maine, canvasbacks in Chesapeake Bay, and mourning doves in South Carolina. Woodcock productivity was studied at the Maine field station.

During the 1960s and early 1970s, Patuxent was extensively involved with studies dealing with problem bird species, especially red-winged blackbirds. These studies were conducted by researchers at field stations all over the country, but were supervised by Dr. John Seubert at Patuxent who headed the Section of Animal Damage Control Studies.



Technicians at Patuxent weighing ducklings



Dr. Dustman retired in early 1972 and for one year, Dr. Seubert and Dr. Stickel alternated as acting directors of Patuxent. Dr. Lucille F. Stickel became the Director of Patuxent in



Chris Grue checking starling nest box used in contaminant studies



American kestrel in nest box with young



Screech owl in nest box and used in contaminant studies



Wildlife research biologist, Matthew Perry, banding young kestrel

1973 and served in that capacity until her retirement in 1981. Under her leadership, environmental contaminants research expanded and attained national prominence. The expansion of this program is demonstrated by the average number of publications on contaminants per year, which increased from 4 per year in the 1950s, to 7 in the 1960s, to 30 in the 1970s. Migratory bird research continued by MBHRL during the 1970s, and was fairly evenly divided between off-site field studies and on-site analyses of banding and other wildlife population data.

Extensive banding data for mallards was the basis for a series of reports, which discussed the role of additive and compensatory mortality with waterfowl.



Bob Stewart samples for submerged aquatic vegetation in Bay

The expertise to analyze population data especially from banding during this period gained international prominence under the scientific expertise of Dr. Dave Anderson and others. With increased computer modeling capabilities, this work continued into the future with the guidance and leadership of Dr. James Nichols. Ecological studies on the Patuxent lands were done mostly by researchers not in the Service, while Patuxent researchers emphasized studies of penned birds.

In 1975, 1250 acres of surplus land were transferred from USDA to Patuxent, giving greater protection to Patuxent wetlands by ensuring control of most of the watershed.

Three major Patuxent programs were transferred to other locations in 1975. The Section of Disease and Parasite Studies was transferred to the new National Wildlife Health (formerly “Disease”) Research Center in Madison, Wisconsin; the Section of Animal Damage Control Studies was transferred to the Denver Wildlife Research Center in Denver, Colorado; and the *Wildlife Review* and editorial office were transferred to Fort Collins, Colorado. At the same time, the environmental contaminants program of the Denver Wildlife Research Center was transferred to Patuxent. Several western field stations transferred to Patuxent remained active and new field stations were established for research on migratory birds, contaminants, and endangered species.



Pilots Jim Goldsberry and Al Novara during waterfowl surveys



Michael Haramis trapping diving ducks in Chesapeake Bay



Elizabeth Bell banding canvasbacks



Kathy Klimkiewicz and others banded thousands of song birds captured in mist nets at Patuxent



Chan Robbins leads research on forest fragmentation

The Migratory Bird and Habitat Research Laboratory was disbanded in 1981 and migratory bird research was returned to the Patuxent Wildlife Research Center. Much of the migratory bird research continued to be species-oriented (especially with ducks) and little habitat research was conducted on lands at Patuxent during the 1980s, although habitat research was conducted at other areas. Extensive research was conducted on waterfowl in the Chesapeake Bay ecosystem especially with a focus on the canvasback. Patuxent lands and other forestland in Maryland were used for studies on forest fragmentation under the leadership of Chandler Robbins. Population modeling and new statistical methodology development were major migratory birds research thrusts in the 1980s.

Patuxent's first master plan was prepared in 1980. The research mission statement was: "The professional staff is engaged in research and management activities that are directed at accomplishing the principal missions of the Center: evaluation of the effects of environmental contaminants on wildlife and the environment; endangered species research and propagation; and migratory bird research (including urban wildlife) and management." The Master Plan was written by a private consulting firm (Sasaki Associates, Inc.).

TRANSITION TO PUBLIC OUTREACH

In 1982-83, Patuxent was managed by two acting directors, Drs. Russell J. Hall and John G. Rogers Jr., who had been serving as Assistant Directors at the time of Dr. Stickel's retirement. During this period

of time, the Reagan administration was searching for federal land that could be sold as surplus to government needs. Agencies were asked to identify land that could be considered surplus and Patuxent complied by offering about 50 acres. However, because Patuxent was officially part of the National Wildlife Refuge System and because of help from the Honorable Steny Hoyer, Congressman from Maryland, loss of Patuxent land was forestalled. This threat to the land and pressures from an increasing human population around the land, (including housing development, road construction, and siting of a landfill), made administrators reassess how the lands at Patuxent were being used.



Dr. David L. Trauger was appointed Patuxent director in 1983, following a four-year stint as Chief, Division of Wildlife Research in Washington, D.C. Several research activities at field stations were consolidated and support activities (information transfer, technical assistance) were

expanded. The major challenge at this time was to consolidate the disparate sections (endangered species, environmental contaminants, and migratory birds) into a functional Center. Prior to this time, they had been managed separately. The “Center” concept was fostered and the “Branch” management structure was established. Center-wide procedures were initiated for developing study plans, preparing Annual Work Plans, reviewing manuscripts, documenting standard operating procedures, and the compliance with the Animal Welfare Act and Good Laboratory Practices.

In 1984, planning began on a visitor center at Patuxent, which had been discussed initially in the 1960s. In 1985, the Patuxent Analytical Control Facility was established at Patuxent to provide chemical analyses of environmental contaminants for the Service. The Section of Buildings and Grounds began a major reorganization to accommodate increased planning and land management responsibilities and the first facility manager with a college degree, John Stasko, was hired in 1986.



In August 1987, Mr. Harold J. O'Connor became Director of Patuxent. Mr. O'Connor was the first Director of Patuxent with experience in the management of National wildlife refuges and was also a member of the Senior Executive Service. One of Mr. O'Connor's

first efforts was to obtain funding for the Visitor Center to tell the Patuxent story, which was being planned by his predecessor, Dr. Trauger. Fifteen million dollars were obtained from Congress for this project, which evolved into a National Wildlife Visitor Center covering, not just Patuxent research, but all wildlife research of the U.S. Fish and Wildlife Service. The building was officially dedicated and opened to the public in October 1994 and has extensive exhibits depicting wildlife research of the Service throughout the world. Many of these research activities are still being conducted by researchers



National Wildlife Visitor Center as viewed from Lake Redington

within several government agencies. A support group was established to help in fund raising and volunteer staffing of both the Refuge and the Visitor Center. This is now known as the Friends of Patuxent Wildlife Research Center and the Patuxent Research Refuge, Inc. (“Friends of Patuxent”).

In 1988, Patuxent staff prepared a second Master Plan. The new plan stated that the mission of Patuxent “has remained unchanged since the submission of the original Master Plan report. It is essentially the same as for the overall U.S. Fish and Wildlife Service.” However, a later mission statement for Patuxent

the “lungs of the Baltimore/ Washington region.”



Dedication of the Fishing Pier. Director O’Connor introducing County Executive Glendenning and Congressman Hoyer

During the tenure of Mr. O’Connor, Patuxent conducted increased research with foreign countries especially with Russia (formerly USSR). Several major joint US/USSR oceanic cruises were conducted to the South Pacific and the Bering Sea. To accommodate the increased involvement with foreign scientists, several Patuxent residences were converted to furnished quarters for visiting scientists. Full-time volunteers and interns also used the quarters.

Management of the wetlands and meadows became a formal activity with the implementation of impoundment and meadow management plans in 1989. A public fishing program in Cash Lake from June to October each year was initiated in 1991. A refuge biologist was hired to oversee all resource management activities and the facility manager (John Stasko) was reclassified in 1992 as Patuxent’s first refuge manager. These activities reflected the increased emphasis being placed on refuge management functions.



The Patuxent Veterinary Hospital used for care and rehabilitation of research animals

In 1991, a special 26-member blue-ribbon panel was assembled to review the research program at Patuxent. The Chairman of this panel was Dr. Laurence R. Jahn, President of the Wildlife Management Institute. After extensive discussions with research staff members, the panel concluded that funding for overhead to support custodial maintenance, administration, and operations was a major concern of Patuxent researchers. Many of the overhead issues were controlled by administrators in Washington, D. C., but Patuxent did make attempts to respond to many other issues in the report including communications with staff. However, the overhead funding remained a contentious issue between researchers and administrators at Patuxent. Under the leadership of Deputy Director Trauger, Patuxent implemented several new management philosophies and operating procedures. The Quality Council, consisting of the Director, Deputy Director, and Branch Chiefs, was established and a Strategic Planning process was initiated.

prepared in 1992 specifically included education and public use as important activities. This statement was a major change in the mission of Patuxent, but was responsive to directives of the Service “Vision” document and other outreach directives being promulgated from Washington.

Several major rehabilitation projects involving impoundment control structures were undertaken under Mr. O’Connor’s direction. New experimental pens and ponds were constructed and the appearance of the grounds around the buildings was improved. Many dignitaries, including U.S. Senator Paul Sarbanes and U.S. Representative Steny Hoyer, attended a major celebration of Patuxent’s 50th anniversary on June 3, 1989. Senator Sarbanes, during his address, referred to the green forests of Patuxent as

In 1991, 7600 acres of land in Anne Arundel County that were previously part of Fort George G. Meade, immediately adjacent to Patuxent to the north, were transferred to Patuxent as a result of the Military Construction Appropriations Act (U.S. Public Law

101-519). The land had been declared excess by the U.S. Army under the Base Closure and Realignment Act (U.S. Public Law 100-526). The transfer was based on the recommendations of a broad-based Fort Meade Coordination Council that had extensively studied the options and voted unanimously for the transfer. The transfer document specified that the intended uses of the property, now called North Tract, in priority order established by law, were preservation of the land, wildlife research, and compatible public use. In addition, the transfer document stated that the Secretary of Interior “shall provide for the continued use of the property by Federal agencies to the extent such agencies are using it on the date of the enactment of this act.” An additional 500 acres, including three baseball fields, were transferred to Patuxent in 1992.

The acquisition of these lands added the responsibilities of a major deer-hunting program (bow, gun, and muzzle loader) and increased public use and education. Other existing natural resource programs including fishing and game hunting were continued. Approximately half of the existing firing ranges continue to be used by defense and law enforcement personnel for training under a special-use permit with the National Security Agency. The U.S. Army, under a special use permit, continues to operate a large, modern stable. A visitor contact station was constructed on the new land to control public use activities. This building was funded in part by the Prince George’s County Parks and Recreation Foundation. FWS staff and volunteer assistants operate the contact station.



Vole being weighed by Rob Hinz as part of a population modeling study

The extensive hunting program conducted at the North Tract of Patuxent was initially conducted with the help of a hunting club through a special use permit issued to the Department of Defense. Within a couple of years a FWS Cooperating Association (the Meade Natural Heritage Association, MNHA) was established to assist the Service with the day-to-day details of program administration. MNHA charges a permit fee for all hunters, which is used to pay several employees who manage daily hunting from the Hunting Check Station, and to pay for their Workmen’s Compensation Insurance. Remaining funds have thus far been put back into the Patuxent North Tract to purchase seeds and fertilizer for erosion control, wildlife management projects, and other activities.

The increased activities concerning the Visitor Center and new lands for public use at Patuxent in the early 1990s presented new challenges dealing with staffing and overhead expenses. Funding for all research, management, and education programs conducted at Patuxent came from the research and development administrative group, located in Washington, D.C. that coordinated all Service research and administered funding through the federal budget process. Although Patuxent is located in one of the Service’s geographic regions (Region 5) it historically received only loose oversight from that Region and never received funding through the refuge program, as did other refuges. However, minor funding for volunteer programs and the Youth Conservation Corps came from the Service’s Washington office.

Because of the increasing land management and education activities conducted at Patuxent, a decision was made by the Service Director to transfer the new 8100 acres of the Fort Meade lands (North Tract) and the 2000 acres of the Visitor Center lands (South Tract) from USFWS Region 8 (Research) to USFWS Region 5 (Refuges) in October 1993 to be run by Refuges. Patuxent research staff would maintain control of the Central Tract (2700 acres), where traditionally the researchers have been located and most of the on-site research has been conducted. Patuxent refuge staff would still be responsible for management and public use on Central Tract lands.

In March 1993, however, the Department of the Interior headed by Secretary Bruce Babbitt, announced

plans to form a new National Biological Survey that would combine all biological research and monitoring within Interior into one agency, separate from existing management agencies. Preliminary discussions were divided on whether lands associated with Patuxent would be staying with the Service and remain managed by the Division of Refuges or are transferred to the new National Biological Survey.

In November 1993, the staff of Patuxent Wildlife Research Center and several sections of the Office of Migratory Bird Management and the staff of the Visitor Center were transferred to the National Biological Survey. The new Survey organization also resulted in the transfer to Patuxent of one research unit of the National Park Service and all USFWS staff assigned to the Smithsonian Museum of Natural History. Although Patuxent administered 10 field stations in late 1993, realignment in the new Survey reduced field stations to 4 in late 1994.

All lands and buildings of Patuxent continued to be officially controlled by the U.S. Fish and Wildlife Service and within the Region 5 refuge organization. The actual maintenance of the buildings and management of the lands remained under the control of the Director of Patuxent and his staff. This arrangement, in principle, provided protection of the land under all regulations and policies of the U.S. Refuge System, but gave maximum flexibility for use of the land for research purposes. This arrangement between the Service and the Survey was approved by Under-secretary of Interior George Frampton, Jr. and was commonly called the "Frampton Agreement."

On October 5, 1993, Patuxent Director O'Connor announced a new strategic plan, which was to guide Patuxent's research activities in the National Biological Survey. The plan was the beginning of the process to align Patuxent's organization more closely with the structure of the Survey, which included major initiatives in survey and monitoring of habitats and populations and in the transfer of information and technology.

The primary mission of Patuxent as stated in the Strategic Plan was "to conduct biological studies in response to programs and priorities of the National Biological Survey (NBS) to support land and resource managers within the Department of the Interior.

The center would operate a National Biological Research area as an outdoor laboratory and operate the NBS National Wildlife Visitors (sic) Center for the advancement of environmental education and biological science." A major change in the new mission of Patuxent in NBS was a reduced geographic responsibility to only the Eastern Ecoregion and a shift away from National and International initiatives. In May 1994, the name of Patuxent Wildlife Research Center was changed to Patuxent Environmental Science Center. In late 1994, the name of the National Biological Survey was changed to the National Biological Service, to accommodate concerns that new research was not supporting historic "customers", and that the agency should be more of a "service" than a "survey."



In March 1995, Patuxent Director Mr. O'Connor retired from federal service after 35 years. Dr. James A. Kushlan became Director in late 1995 and because of numerous

funding problems within the federal government, research budgets were cut and 26 personnel were officially relieved of their services (reduction in force). The Branch concept was abandoned and all research was placed under the control of Chief Scientist, Dr. Richard Jachowski. In the spring of 1996, the name of Patuxent Wildlife Research Center was restored with encouragement from U.S. Senator Sarbanes. In October 1996, the National Biological Service was terminated and all research staff became part of the Biological Resources Division of the U.S. Geological Survey (USGS) and Visitor Center staff and operations returned to the Fish and Wildlife Service.

A Comprehensive Science Planning Process was developed under Dr. Kushlan's leadership, which included five themes that overlapped the scientific activity areas chosen by the Biological Resources Division. The new mission for Patuxent was "to excel in wildlife and natural resource science, providing the information needed to better manage the nation's biological resources." Under Dr. Kushlan's leadership the monitoring program at Patuxent was greatly expanded with increased staff and programs. The Breeding Bird Survey, which began in the late 1960s, continued, but several new national monitoring programs with amphibians were initiated also. During

Dr. Kushlan's tenure, Patuxent scientists increased their involvement with Joint Venture programs supported by the USFWS, especially with the Black Duck Joint Venture, the Sea Duck Joint Venture, and the Atlantic Coast Joint Venture. Dr. Kushlan resigned as Director in 2001 to pursue other endeavors.

In 2000, a Memorandum of Agreement (MOA) was signed between the USFWS (Region 5) and USGS (Eastern Region) that clearly defined the roles and responsibilities of the two agencies located at Patuxent. The USFWS had ownership and control of all lands and buildings and USGS researchers could occupy the buildings and conduct research on the lands through "special use permits," which were commonly issued on other refuges. The MOA designated maintenance responsibility for buildings and facilities based upon which agency principally occupied or utilized the structure. Several deteriorating buildings were closed due to safety and health concerns and research staff was consolidated into other buildings including one building in the Agriculture Research Center in Beltsville.



Cowbird parasitism is studied by Patuxent scientists



Tree planting as part of forested wetland creation

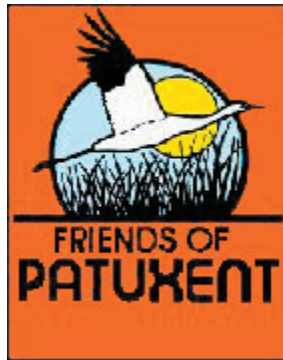


Alicia Wells weighing common eider at captive colony

In 2001, the Refuge hunting program that was initiated on North Tract was expanded to South and Central portions of the Refuge to help control an over-abundant deer population. Refuge staff worked closely with research staff to avoid potential conflicts between the hunting program and the research program.



Dr. Judd Howell became director of Patuxent Wildlife Research Center in 2002 and worked closely with Refuge Manager Mr. Brad Knudsen to develop a plan to rehabilitate the old buildings and construct new ones. The goal of Dr. Howell and Mr. Knudsen is to prepare Patuxent for future research and management functions with a modern facility where both USGS and USFWS staff are collocated. All staff and administrators continue to work hard to maintain the aging facility, as well as the outstanding management and research programs that have made Patuxent internationally famous.



For more information about:

Patuxent Research Refuge

www.Patuxent.fws.gov

(301) 497-5580

Patuxent Wildlife Research Center

www.pwrc.usgs.gov

(301) 497-5500

Friends of Patuxent

www.friendspwrc.org

(301) 497-5789