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## Preserving Delaware's Natural History the First Century

Delaware Division of Fish and Wildlife

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# *Preserving Delaware's Natural History...The First Century*

Dawn L. Webb  
Terry L. Higgins



Trout - Bowers Beach Dock 1935



The first regulations to restrict hunting were set in **1859**.

The Delaware Game Protective Association was authorized in **1879** by the General Assembly.

A Law was passed in **1891** to protect landowners against trespassers.

Seasons for all game animals were established in **1893**.

On **October 4, 1911** the Governor appointed the Fish and Game Commissioners.

Fred B. Murphy was hired on **October 25, 1911** as the first Game Warden in Delaware. His salary was \$60.00 per month. Four additional wardens were appointed with no pay.

In **1912** a resident hunting law was enacted making funds available for a permanent organization. A game farm was purchased and a game keeper was employed. (The game farm was sold to meet the mortgage in 1915)

In the hopes of establishing a deer park, the Board leased 400 acres on **October 24, 1912**. This was the first property secured by lease. Money was appropriated to place a 9-foot fence around the property.

**An excerpt from the Bi-Ennial Report of the Board of Game and Fish Commissioners of the State of Delaware for the period ending December 31, 1914:**

*"Many of our citizens are not awake to the importance of extending the fullest measure of protection to the fast disappearing wild life of our State, and by their expressed opinion show their ignorance of our duties as defined in our laws. Some seem to think we are to enforce only the Fish Laws, others that our only duty is to protect the Game. Many never consider that one of our most important duties is to protect the Birds. Some strenuously object to paying a license fee for the privilege of hunting, but can suggest no fairer method for securing the necessary revenue. Nearly every one agrees that, because of their great financial and food value, and because their presence is a lure to strenuous outdoor exercise that means better health and therefore better citizenship to those who hunt or fish, our Game and Fish should be conserved and increased, but because so few ever give a thought to the birds we cannot refrain from urging that the attention of all our people be called to the importance of more fully protecting our wild Birds, not only on account of their aesthetic value, and that is great indeed, but because of the vastness of their indispensable service in maintaining the balance of life in nature between the insects, and vegetation. For without the insects fertilization does not take place in the vegetable world and vegetation dies, and without enough Birds the insects increase too rapidly and destroy the vegetation. This upsets Nature's balance and man suffers through the losses to his crops by plagues of insects, as the army worm, locust, grasshopper, louse, &c."*

*"Ornithologists (sic) tell us that most young birds are fed upon insect life, and that each one daily consumes an amount of such food equal to its own weight. Say we have but ten birds to the acre and each one weighs but an ounce, then the birds of Delaware each day consume nearly 400 tons of insects, and besides find time to destroy an almost equal quantity of the seeds of noxious plants. Surely the work done by the birds mean something to all of us. Your Board most heartily recommends that the study of Bird life be added to the curriculum of our Public and State Schools."*

*"The Board has inaugurated a campaign of education, through the Press of the State and State Wardens, concerning the importance of conserving all the wild life of the State, and hopes to enlist the Public Schools and Boy Scouts in the same work."*

If you purchased a Resident Hunting License in **1915**, you paid \$1.00; a Non-Resident paid \$10.00. A Fishing License was \$3.00.

On **February 22<sup>nd</sup>, 1915**, a law was enacted abolishing the Resident Hunter's License. This went into effect in June of 1915. In **1922**, the Board recommended legislation of a Provision for a Resident Hunter's License. The Resident Hunter's License was reinstituted in 1923 and it was reported that \$1,357.00 was received from the sale of said licenses.

Heavy floods destroyed a number of dams during the year **1919** particularly in Kent and Sussex Counties. A special effort was made prior to the spawning season of **1920** to rescue the fish from the waters to which they had escaped and return them to the ponds of the State for propagation purposes. A total of 17,658 large fish were rescued and replaced in the following named waters: Duck Creek Pond, Lake Como, Moore's Pond, Coursey's Pond, McColley's Pond, Concord Lake, Silver Lake (Milford), Milton Pond, Record's Lake, Portsville Pond, Noxentown Pond, Massey's Mill and Silver Lake (Dover). Most of the fish were heavy with eggs at the time and this proved to be a valuable restocking service.

In **1920**, the Board of Commissioners stated: *"On account of the great economic, as well as aesthetic, value of all Birds to an agricultural and fruit-growing State, the Board earnestly recommends that the further study of Bird Life be added to the curriculum of our Public and State Schools. It is very important that the children of Delaware learn in their school days of the wonderfully important services the Birds render in maintaining the 'Balance of Nature' between the insects and vegetation, as well as to learn to know and love them for their beauty and charm"*



Muskrat Trappers at Woodland Beach

The first laws protecting muskrats were enacted in **1921**.

**1923** – A patrol boat was purchased for use in marine waters.

**An excerpt from the Bi-Ennial Report of the Board of Game and Fish Commissioners of the State of Delaware for the period ending December 31, 1924:**

*“The Delaware ponds are particularly noted for the excellence of our Large Mouth Bass fishing. This fact is becoming well known in our neighboring States. During the period covered by this report many more fishing licenses were sold to non-residents than heretofore.”*

Fishing license receipts in 1923 - \$2,553.00

Fishing license receipts in 1924 - \$5,031.00

The Dog License Law went into effect in the summer of **1925**. It applied to Kent and Sussex Counties only. Reports received from all parts of the state indicated that rabbit, quail and birds generally were more numerous in Delaware than for many years and much of this increase was attributed to the protection afforded by the new Dog Law.

**The Legislature of 1927 passed the following Acts:**

An Act increasing the non-resident fishing license fee from \$3.50 to \$5.00.

An Act requiring all non-resident fishermen to wear a button bearing the number of their license.

An Act requiring all non-resident hunters to display a license tag on their outer clothing.

An Act to provide protection for deer.

An Act to permit the periodic opening and closing of the mouth of Prime Hook Creek for the benefit of those interested in agriculture and the muskrat industry.

An Act providing a closed season on Trout from July first to June tenth.

An Act requiring all owners of dogs residing in New Castle County, outside of Wilmington, to license their dogs each year, the same as Kent and Sussex County.

The purchase and distribution of rabbits was a common practice each year. For instance, in **1924** more than 800 rabbits were procured from the state of Kansas and distributed throughout the state. The Board did not purchase any rabbits for distribution in **1928** due to the disease known as "Tularaemia" becoming wide-spread throughout the mid-West.



Manaen S. Robinson – Millville, Delaware

In the Spring of **1930** the Board purchased duck potato tubers, Sago pond weed, wild rice, duck corn and Widgeon grass which was planted in ponds in all three counties. The duck food was watched and it was found that the duck corn and Sago pond weed seemed best suited for all waters. The duck potato tubers grew in ponds where the water was not brackish. The wild rice has to be grown in fresh water.

Following a plan of getting children interested in game birds, and indirectly arousing the same interest in their parents, during the Spring of **1931**, 1,052 ring-necked pheasant eggs were purchased and distributed to the schools for children to hatch and raise. Complete instructions for hatching and brooding were furnished. The birds were collected at ten weeks and each child received \$1.00 for each bird. A total of 161 birds were raised by this method and released throughout the state.

**1932** – The first public bulletin was issued describing the work being done with articles on the conservation of game and fish.

By an Act of the Legislature of **1933**, a bounty of \$.05 was placed on each crow head and \$.50 was placed on each hawk head with the exclusion of sparrow and mouse hawks. 185 crow heads and 162 hawk heads were received. This Act was repealed in 1937.

A "moving picture camera" was purchased in **1933** offering opportunities to record some of the activities of sportsmen and wildlife. An educational reel of film entitled, "Hunting and Fishing, an Asset to Delaware" was completed. Talks were given at sportsmen's organizations, Service Clubs, the Grange, and at Boy's Clubs. Game, both living and mounted, were displayed at the Milford Poultry Show and Harrington Fair.

**An excerpt from the Bi-Ennial Report of the Board of Game and Fish Commissioners of the State of Delaware for the period ending June 30, 1934:**

*“During this biennium, 4,001 stray dogs were picked up by the regular Wardens. 58 dogs suspected of having rabies were examined by the State Board of Health and 31 positive cases were found. Treatment provided by the State Board of Health was furnished to 8 indigent persons who were bitten or scratched by rabid dogs. Treatment provided by the State Board of Agriculture was given to 3 dogs, 20 swine and 3 calves which were bitten by rabid dogs. A close quarantine was maintained by Game Wardens in the territory where these dogs were found or known to have traversed. The last quarantine was removed June 5, 1934, and it is felt that this disease has been kept well under control by this method of quarantine.”*

With the hopes of re-establishing an important fur-bearer, three beavers were obtained from Maine in **1935** and released in a protected area in Sussex County. \$15.83 was paid for the three animals. Arrangements were made to procure several more.

Commencing **July 1, 1935**, 25% of all revenue received by the Board of Commissioners was to be spent on restocking the State with game birds, animals and fish.

The winter of **1936** was severe. Feeding stations were set up and 2,075 pounds of cracked grain and 57 bushels of cob corn was used for feeding birds. Heavy rainfall in the summer resulted in the breaking of dams at Coursey's, Killen's, Andrew's, Wilson's, Voshell's, Mud Hill (sic), Hearn's, McGinnis', Collins', Waples', Silver (Rehoboth), and Concord.

**Reported Game Take of 1936:**

Rabbits -----	63,820
Squirrels -----	27,186
Quail -----	16,202
Ducks -----	6,504
Geese and Brant -----	75
Woodcock -----	1,075
Muskrats -----	50,763
Raccoons -----	1,146
Rails -----	1,446
Snipe -----	527
Opossums -----	2,771

An early Settler named Peter Bayard bought what is now known as Bombay Hook National Wildlife Refuge. He purchased the land from Chief Kahansink of the Mechacsett in 1679 for the total sum of 1 gun, 4 handfuls of powder, 3 waistcoats, 1 anchor of liquor and 1 kettle. Bombay Hook was established by the Federal Government as a National Refuge in **1937**. The 15,978 acres of tidal flats and marshes would be administered by the Bureau of Biological Survey. During that fall and winter, nineteen different species of waterfowl, with individual flocks numbering 50 to 8,000 ducks were seen at the height of the migration. It was reported that flocks of snow geese, which at one time numbered 15,000 were observed.

During the winter of **1936-1937** the Commission put a plan into operation for the conservation of game. Agreements were made with 22 farm tenants or owners to set all or a large portion of their farm aside as a game refuge for a period of two years. Hunting would not be permitted by anyone, not even the farm's residents. The Board furnished and erected boundary signs reading "State Game Management Refuge. No Trespassing. Board of Game and Fish Commissioners." Feed strips totaling one acre or more were sown adjacent to good winter cover. The strips consisted of a mixture of buckwheat, millet, sorghum, proso, Kaffir corn, sudan grass, soybeans, cow peas, rape, hemp, flax, and vetch. Twenty-five pounds of this mixture with an ample supply of fertilizer was furnished by the Board to each refuge. The farmer prepared the ground, sowed the seed and applied the fertilizer. Each refuge was stocked with a supply of rabbits, quail, and pheasants. Each farmer was commissioned as a Deputy Game Warden and was paid \$20.00 annually for his work. Ten of the refuges were located in New Castle County, five in Kent County, and seven in Sussex County. The acreage totaled about 4,600.

**1937** – To further the interests of the conservation of our wildlife resources and to acquaint the public with the work of the Board, exhibits of mounted specimens of native birds, animals and fish were displayed at the Harrington Fair.

Through the generosity of the Board of Fish and Game Commissioners of New Jersey, a consignment of 175 brown and rainbow trout was delivered on **November 3, 1937** to New Castle County. For experimental purposes, they were released in the upper part of Christina Creek, Pike Creek, Mill Creek, Shellpot Creek and at two locations within McComb's Creek (as listed). It was noted they survived the winter in good shape and reported that fish were caught in the Spring of **1938**.



The Board developed and put into practice a new plan for releasing game on farmer's properties in **1938**. A letter was delivered to each farm explaining that they were the real custodians of wildlife and the crops of the wildlife. If properly regulated, their profits would be as real as the profits received from other crops. They were given an application and asked to return said application if interested in co-operating with the plan. They had to state the location of their farm, Representative District number, total number of acres, amount of cover and kind of crops raised, and list preference of game desired. A great number of applications were received. About 2,000 farms, one-fifth of the total farms within the State, were accepted and stocked.



First Noted Landowner Relations – 1938 (Property not known)

The pond at the Zoo in Brandywine Park was stocked with fish so children could fish under the direction of Game Wardens. Bamboo fishing rods were furnished for the children to use. Started during the Spring vacation of **1938**, the rush was so great there was not room for every one. Fishing was limited to one-hour each. The catching of large catfish provided thrills to the children and to the adult spectators. Large-mouth bass were also caught but returned to the pond.

To increase the interest in fresh and salt water hook and line fishing, the Board of Commissioners arranged a fishing contest for fish taken in Delaware waters. Sworn affidavits giving descriptive information and a photograph of the fish was required with each entry. The contest closed midnight, **November 30, 1938**. The cash prizes listed were:

*Salt water class: -*

Largest sea trout (weak fish) -----	\$25.00
Captain on boat on which above fish was caught -----	10.00
Largest croaker (hard head) -----	25.00
Captain on boat on which above fish was caught -----	10.00
Largest channel bass (red drum) surf fishing -----	25.00
Largest blue fish -----	10.00
Largest fish of any kind (not turtles) -----	25.00

*Fresh water class: -*

Largest large mouth bass -----	\$25.00
Largest pike -----	25.00
Largest crappie -----	10.00



Bowers Beach Dock – 40 pound Black Drum

The Board of Education was established by the Commission in **October of 1938**. Mr. Edwin M. Barry was hired as the Director of Education and devoted much of his time with the 4-H Clubs and Boy Scouts. He gave lectures and showed moving pictures of wild life in Delaware and the advantages of Game Conservation. Educational leaflets were distributed to all Delaware clubs and schools. A library was established for exhibits, newspapers, motion pictures, books and other conservation materials. A publication, "Game and Fish News" reached a large number of Delawareans interested in outdoor subjects and activities. "Our Animals, Birds and Fish of Delaware" was published and 5,000 copies were distributed to the schools.

An Act was passed by the Legislature in **1938** enabling Delaware to participate under Federal funds granted through the Pittman-Robertson Act. A representative of the Board was sent to Boston to confer with officials on the program for Delaware. A schedule was effected and the appropriation of \$1,365.60 was made under the project agreement dated **March 21, 1939** and approved by the Secretary of Agriculture. Of this amount \$455.17 was appropriated by the Board to complete their 25% requirement for the research project totaling \$1,820.67 as of June 30, 1939.

The Board of Game & Fish Commissioners' **Annual Report of 1939** shows a breakdown of "Divisions": The Division of Finance, Law Enforcement, Game Management, Fish Management, and Education.

Emergency feeding of wild game during January and February of **1940** greatly intensified as a result of severe climatic conditions during heavy snows in Sussex County. Hunters, Boy Scouts, 4-H and FFA Clubs, and other agencies were solicited to help save game from the deep snows and cold weather. Special feeding devices and bird shelters were constructed by a number of schools. Food was supplied by the Board.

The 4-H game bird raising project was appropriated \$300.00 from the Board in **1940**. The Division of Education reported that 10-day old quail chicks were distributed between five projects in Sussex County and one project in New Castle County. Each club received 16 birds. Six pheasant raising projects were undertaken in Kent County and four projects were undertaken in New Castle County. Farm boys and girls received eggs and were expected to raise the chicks for 12 weeks. At the end of the project raising period, quail were purchased for \$1.25 each and pheasants for \$1.50 each. The birds were then released on game refuges in September.

The game bird raising project was offered to the Future Farmers of America organization also. One pheasant project was undertaken at the Greenwood School, two projects at the Caesar Rodney School and one pheasant and one quail project at the Dover School.



**1941** – the average price of a muskrat was \$1.50.

The Petersburg Game Management Refuge was established (**1941**) as an experimental area for the observation of upland game trends through banding. Different types of food strips were to be investigated also.

**An excerpt from the 1942 Annual Report of the Board of Game and Fish Commissioners, State of Delaware:**

*“The deer management work in connection with this program (Pittman-Robertson Federal Aid in Wildlife Act) was terminated sometime ago, due to two factors: 1<sup>st</sup>. The network of first class roads covering the State which created hazards both for the deer and the traveling public. 2<sup>nd</sup>. The abundance of dogs throughout the State, which kept the deer on the move in many localities.”*

The first Natural Science Camp for Teachers was held in the summer of **1942**. Eighteen teachers participated in the 3-day camp held at Camp Otonka, on Indian River, near Dagsboro. The State Forestry Department, U.S. Fish and Wildlife Service, U.S. Soil Conservation Service, the University of Delaware and the National Wildlife Federation sent representatives to teach natural science subjects at the camp.

Because of the war effort, the educational and technical work of the Commission was eliminated in **1943**.

The Petersburg Game Refuge consisting of 2,872 acres was leased from the Federal Government for a period of 99 years. The lease was signed in **1944**.

**Reported Game Take For 1945:**

Rabbits -----	44,257
Squirrels -----	20,067
Pheasants -----	1,002
Quail -----	8,218
Ducks -----	10,888
Doves -----	1,405
Geese -----	233
Woodcock -----	117
Musk rats -----	12,578
Raccoons -----	607
Rails -----	124
Snipe -----	40

The lands of Assawoman Bay were obtained from the Federal Government in **1945**.

Game and Fish Wardens released 7,000 rabbits, 1,548 pheasant, and 1,910 quail throughout the state in **1947**. The Wardens also caught 18,000 fish, consisting of bass, pike, crappies, and perch from the Gate holes of the ponds throughout the state and released them in ponds state-wide for the pleasure of the fresh water fishermen.

Norman G. Wilder was employed by the Commission in **October of 1948**. He was put in charge of the Conservation Division with the title of Director of Conservation.

The Cooperative Farm-Game Project was inaugurated in **November of 1948**. Its objective was to improve food and cover conditions throughout the state and to improve general conditions for small game. Through a mutual agreement with the U.S. Soil Conservation Service, work was conducted on private farms. The following plants were distributed to 62 farmers and landowners and planted under the supervision of a wildlife technician:

Multiflora rose -----	51,100
Tartarian honeysuckle -----	2,300
Filbert -----	100
Highbush Cranberry -----	100
Silky Cornel -----	2,000
Lespedeza bicolor (seedlings) -----	4,000
Black Locust -----	2,000
Loblolly Pine -----	23,800
White Pine -----	18,000
Tulip Poplar -----	9,000

On **June 16<sup>th</sup>, 1950**, four technicians were appointed to work on the Biological survey of fresh water ponds in Delaware. Their objective was to determine chemical and physical characteristics of our fresh water ponds as it affects fish. They would also determine the species, age, size, relative proportion, parasites, and diseases of existing populations.

The Annual Report of **1950** listed extensive work being done on the following Federal Aid Projects:

- The Petersburg Development Project
- The Cooperative Farm-Game Program
- The Petersburg Research Project
- The Marsh Survey
- Coordination
- The Muskrat Investigation
- The Development of State Lands

The **1950** Northeast Wildlife Conference was held in Wilmington, Delaware.

Captive goose flocks were introduced during **1950** in an attempt to build up Delaware's population.

Through a license with the U.S. Army, the Canal Wildlife Area was created in **1950**.

Many ponds in Delaware like Lake Como have had too many of the wrong kind of fish which have crowded out those fish desired by our fishermen. A publication in **1951**, "Fresh Water Fisheries Survey" reported on over-population of undesirable fish such as carp.

**1951** – The Marine Fisheries Department was established at the University of Delaware.

The Pollution Control Commission was authorized in **1951**.

A Marine patrol boat was acquired in **1952** for enforcement work in tidal waters. It was later noted the boat was sold a few years later because it was unseaworthy.

The Fresh Water Fisheries Division was established in **1952**. Restoration of ponds began.

Trout fishing was introduced on the Christiana watershed in **1953**.

**1953** - The first regulatory powers were granted to the Commission on resident game and fresh water fish. Annual public hearings began on the regulations.

The Game and Fish Commission of **1954** stated that their function was to hold for all the people the sacred trust of doing all in its power to preserve fish and wildlife for the recreational and economic benefits to the people both now and in the future.

This fiscal year beginning **July 1, 1953 and ending June 30, 1954** was one of the busiest in history. The Petersburg Conservation Center was given to the Commission. The Woodland Beach Tract comprising of 1,900 acres of marshland and upland was purchased. Garrison Pond (95 acres) was also purchased.

The first open season on deer in Delaware was held on **January 1<sup>st</sup>, 2<sup>nd</sup>, and 4<sup>th</sup>, 1954**. A total of 505 deer were taken and that number exceeded expectation. The heaviest deer taken was a 1 ½ year old buck weighing 225 pounds. An equal number of bucks and does were taken, and 41% were fawns.

**An excerpt from the 1954-1955 Annual Report of the Board of Game and Fish Commissioners, State of Delaware:**

*"Wildlife management is the art of making land produce sustained annual crops of wildlife. The manager in our state specializes in maintaining food and cover. Together with the warden and the landowner, he makes up the wildlife conservation team."*

Anthony Florio, assisted by Robert Beck gave technical assistance on wildlife matters and actually established what they preached as time permitted. Their management area was Milford, north.

Many changes were seen for the better in **1955**:

- The Biological survey of fresh water ponds was completed.
- The Delaware Trout Stamp was introduced.
- Grants received by the University of Delaware enabled the start of the Wildlife-Mosquito Control Division.
- The Delaware "Conservationist" began its quarterly publication.
- An intensive training for staff began.
- Money from the General Fund was allocated for pond restorations.
- The first new pond, Griffith, was constructed.



Commission and Administrative Personnel of the Delaware Board of Game and Fish Commissioners. Left to right: Norman G. Wilder, Director of Conservation; Mrs. Mollie H. Harbordt, Secretary to Chief Warden; Thomas N. Stayton, Chief Warden; Paul E. Wilson, Secretary; Austin D. Smith, President; C. Parker Wheatey, Vice-President.

The position of "Director" was created in **1957**. Norman G. Wilder filled the position. The Divisions of Enforcement, Management and Research, and Information and Education were formally announced.

Taylor's Gut sluice was installed in **1957**.

**1958** – Salaries were upgraded throughout the Commission to equal the national averages. A long-term plan, through 1980 was undertaken.

Director Wilder received the "Nash Conservation Award" in **1958**.

In **1959** the Department of Natural Resources is proposed by the Governor. The Commission's emphasis on wildlife management shifted from private lands to public lands. This was due to the U.S. Department of Agriculture increasing its assistance to private land owners.

Construction on the South Little Creek impoundment began in **1959**.

*Thus ends the first century of wildlife conservation practices in our wonderful state of Delaware. Work is currently underway to complete the final years. If you have any information and/or photographs you would like to donate to this project, please contact:*

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*The information for this publication was compiled from the Board of Game and Fish Commissioners of the State of Delaware Bi-Ennial and Annual Reports which were obtained from Delaware Public Archives.*

*Thanks to Laura Madara for donating photographs from her family's album. Additional photos were courtesy of Delaware Public Archives.*



Bowers Beach Dock - William B. Dewitt, 1928

## **The Delaware Division of Fish and Wildlife**



*Protecting Fish, Wildlife and Habitat-  
Then, Now and for the Future*