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# **New Jersey** *Outdoors*



VOL. 13, NO. 12

DIVISION OF FISH AND GAME

JUNE, 1963



# The Private Ownership Of Firearms In The United States

By LOWELL E. KRIEG, *Vice President and General Manager*  
Winchester-Western Division Olin Mathieson Chemical Corporation

From the Bill of Rights of the United States of America

## ARTICLE II

(Right to Keep and Bear Arms)

A well-regulated militia being necessary to the security of a free State, the right of the people to keep and bear arms shall not be infringed.

Two points concerning the private ownership of firearms need to be established right now.

One, no responsible person—in or out of the firearms industry, sportsman or not — wants firearms to be freely used by criminals or other maladjusted members of our society.

Two, by the same token, no responsible person should desire or attempt to limit the free use of sporting firearms by other responsible members of that same society.

Considering these two statements, certain factors in gun ownership should be recognized.

A gun never killed anyone, robbed a bank, threatened or molested a defenseless individual. It is an inanimate object that is as harmless as a lump of metal until the moment a human being provides the energy to give it action.

Seeking to prevent crime by outlawing inanimate objects sometimes used in the commission of crime has never deterred the criminal. Witness the ineffectiveness of "anti-gun" laws where they exist; their only effect is to disarm the honest citizen and leave him at the mercy of the criminal who pays no attention to the law in question.

It is nothing short of ridiculous to assume that the criminal intent on armed robbery will register his gun before he commits the crime.

Our position on this matter, incidentally, is supported by a recent resolution passed by the National Police Officers Association of America.

Penalties should fit the crime — and the criminal. A criminal — or

*(Continued on page 28)*

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Cover—"YOUNG ONE"—*Charles F. Pitman*

During the month of June a great many of our wildlife young—game species, songbirds, and lesser mammals—make their entrance into the world of wonder. In this day and age the widespread use of chemical pesticides could make the future of the young ones quite uncertain.

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An Abstract—

# Chemical Pesticides— *A National Problem*

*Prepared for the National Wildlife Federation*

By CLARENCE COTTAM, *Director*

Welder Wildlife Foundation

LIFE ON EARTH is curtailed or handicapped to the extent that any of the four basic ingredients—soil, water, air and sunshine—are made unusable or unavailable. An unobtrusive, insidiously dangerous hazard to man and his resources is rapidly developing in America through: (1) the unrestrained, widespread broadcasting of highly toxic, often broad spectrum and very stable chemical pesticides in homes, gardens, farms, orchards, ranches, range lands, and forests; (2) the rather promiscuous dumping of industrial, agricultural and domestic pollutants into streams, water courses, lakes, bays, and on the land; and probably also (3) the intrusion of atomic wastes into the air, water and on the land.

When man in his frenzy to make a quick dollar depletes the productive soil, encourages its erosion or adds poisons to it that, directly or indirectly, endanger plant and animal life, he is jeopardizing his own security and future.

Beyond the point of producing

insecticides and getting them accepted as effective pest killers, relatively little research has been conducted on either the direct or indirect effects these poisons may have on wildlife or related organisms. Moreover, relatively little research has been aimed at determining if there are any side effects of the control programs adversely affecting man or his domestic livestock. In the absence of undisputable facts to the contrary, it would seem wise to conclude that society has everything to gain and nothing to lose by being conservative and following a safe course in using chemical poisons. Few people outside the chemical industry, or those benefiting from or connected with control programs, would maintain that we have been particularly conservative or cautious.

Disturbing facts are now showing up which indicate this entire program needs an objective new look. Cancer is on the increase among all age groups, as are a number of serious systemic and nutritional diseases or disorders.

## . . . Chemical Pesticides

Many secondary effects of necessity will come as delayed reactions and, for a time at least, the causes will be obscured.

Dr. M. M. Hargraves, hematologist of the Mayo Clinic and the University of Minnesota, referred to some 200 case histories of cancer and blood diseases which he is convinced show a direct cause and effect relation to chlorinated hydrocarbons, including various pesticides and their carriers. There are instances when persons exposed to organo-phosphorus insecticides develop schizophrenic and depressive reactions, with impairment of memory and difficulty in concentration.

When we consider the tremendous tonnage of pesticides broadcast over our country, we should be concerned and insistent that these poisons be used with understanding of their potentialities for harm as well as benefit. The total production or consumption of all pesticides is not known. The U. S. Department of Agriculture Stabilization Service shows that some 753,177,000 pounds of only 15 major chemical pesticides were produced in the U. S. in 1960, representing material increases over the two previous years. In addition, there are significant imports of compounds for pesticide use. More than 150,000,000 pounds of herbicides and many other millions of pounds of rodenticides and other control materials are manufactured and used annually throughout

America. Most chemical solvents for pesticide formulations are poisonous.

### **Need of Controls**

In any consideration of this complex and ever-expanding problem, it is necessary to balance objectively the need of control with damage done and hazards involved. Neither side of this problem should be considered alone—each must be properly balanced in the public interest. This has not been well done. With enlightened and skilled leadership, and a will to serve the broadest public interest, legitimate control operations need not be seriously incompatible with the best wildlife interests.

Cooperation cannot be a one-way street. Wildlife interests are not opposed to legitimate control against destructive pest insects or other damaging organisms. We merely insist they be based on a genuine public need and not on the proliferating irresponsible bureaucracy that at times seems to be attempting to govern by the law of decree. Pesticides are needed and were developed in response to public need and demand. Controls wisely and skillfully used are in the public interest, and here to stay. Wisely and skillfully applied, under responsible and enlightened leadership, they have done much to improve agriculture, effect better health, and generally improve the American way of life. Improperly and extravagantly used, they are doing much unnecessary damage, especially to wildlife, including

fishery resources. Only time can tell what injury may befall the citizenry because of their misuse and overuse.

### Value of Wildlife Resources

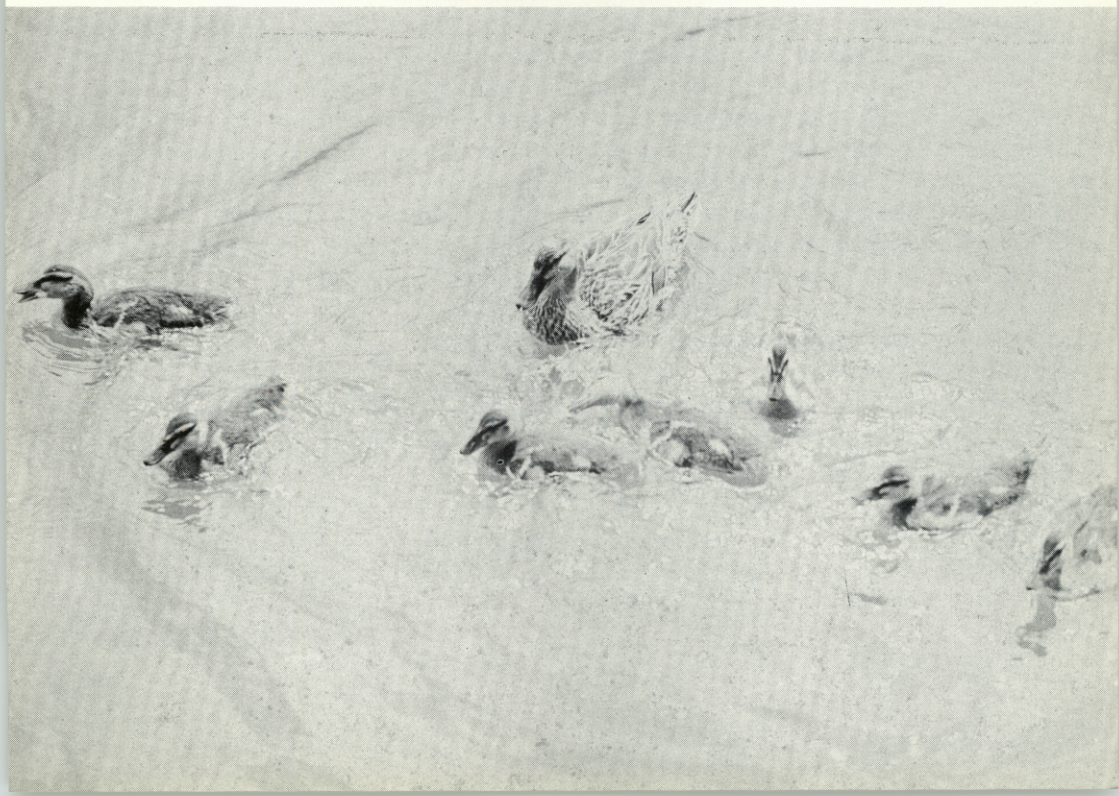
Great leaders of all ages and of all great powers have recognized the importance of natural resources. Wildlife, including fisheries, comprise one of these great public values that must be wisely used and conserved, yet they cannot be successfully managed in the public interest apart from the soil, water, forests, farms, and ranches. In this respect, the effects of pest control programs upon natural resources tie in firmly with effects upon crops and livestock, good or bad.

Like the values of pure air, clean water, and majestic scenery, benefits from wildlife far transcend

those appraised by the dollar sign. Spiritual and health benefits derived from a day afield enjoying wildlife and God's great out-of-doors help build a stronger, happier, and better-balanced citizenry.

Wildlife resources, however, are of high economic value—as revealed by statistics compiled relative to the number of persons who hunt and fish and the money they spend in pursuit of these recreations each year. Aside from nearly \$4 billion expended by 45 million fishermen and 20 million hunters in 1960 to pursue these recreations, wildlife helps to sustain an extremely important tourist trade. Bird watchers, sightseers and travelers, as well as hunters and fishermen, add immeasurably to the economic security and well-being of our people. Tourism is an important re-

*Wildlife comprises a great public asset and must be conserved*



## . . . Chemical Pesticides

source in all states and a major economic resource in many. The remnant flock of wild whooping cranes which winters on or near the Aransas National Refuge in Texas probably stimulates an annual tourist trade approaching \$1 million. It is significant to note that, in 1960, some 72,288,000 Americans visited national parks, 92,500,000 visited national forests and 11,000,000 visited national wildlife refuges. In addition, some 259,000,000 visits were recorded to state parks during the same period.

These recreational and wildlife values must not be ignored or endangered, or needlessly impaired by a short-sighted and bureaucratic program of pesticidal controls!

### **Criticism of Some Programs**

Poisonous toxicants have been so effectively promoted by some leading chemical manufacturers, spray contractors, dealers, and high officials of government that a public feeling has developed that few or no risks are involved in use of the "magic" formulations. Too frequently, the programs have proceeded on the theory that if a little is good, more must be better! Excessive use of pesticides has been much too common.

Most control programs directed by the Federal Government have been well-handled. Some have not. During the past few years there has been a growing tendency on the part of some control groups

and administrators to arrogantly proceed with control programs without reasonable consideration for other interests.

The fire ant "eradication" program has been so extreme and poorly directed that it was compared to the drastic action of scalping a patient to cure dandruff! Such extremes damage legitimate programs. Spraying of extensive areas where there were few or no fire ants, and at a time when birds were near the peak of nesting, understandably caused resentment. Perhaps an even more serious criticism centered upon a widespread conviction that a mammoth operational program was launched with too little research to guide it. Furthermore, the fire ant is a pest species which had been established for nearly 40 years and is not of major economic importance. There was no emergency that called for such drastic action, yet the program is continuing. Unreasonable amounts of stable, highly toxic, broad spectrum poisons are used and wildlife workers believe they have caused and are causing unnecessary destruction to the wildlife resource. Cooperation with other or affected interests has not been on a high plane.

Many, and perhaps most, control programs have been conducted without causing significant or long-lasting adverse effects upon wildlife when a minimum of poison has been used. Many other extensive projects, less skillfully or less wisely directed, have proven highly destructive to wildlife resources,

especially where large quantities of toxic, broad spectrum, stable poisons were broadcast. Many severe and significant losses are well documented.

During the first summer of the fire ant program in east Texas, a reduction of 85 to 97 per cent in bird populations was found. Nesting success was reduced 89 per cent. Some chlorinated hydrocarbons remain for long periods in the soil, causing excessive and delayed damage. A series of well-planned cage experiments conducted by technicians of the Bureau of Sport Fisheries and Wildlife, U. S. Department of the Interior, revealed that highly toxic chlorinated hydrocarbon pesticides not only are extremely lethal even in minute quantities but also are accumulative. Young birds hatched from parents which had ingested minute sublethal doses of poison showed a much higher mortality after hatching. Furthermore, sterility or partial sterility may follow in those young that do survive. DDT applied at the rate of one pound or even a half-pound per acre has caused major fish kills.

Some effects following plant control have been highly beneficial to valuable wildlife resources because of habitat improvement. Some plant hormones (herbicides) have a profound effect on different groups or species of plants. Relatively few studies of the direct effects herbicides have on terrestrial wildlife or livestock have been conducted. Some damage, however is known to occur where large doses

of toxic herbicides are blanketed over extensive areas, especially in aquatic environments.

Obviously the indirect effects of pesticides are serious—and may be long-lasting. Why should the indirect effects of these highly dangerous poisons in quantities now so commonly applied be less damaging to man or his domestic livestock?

### **Pesticides and Water**

When large amounts of stable poisons are broadcast over extensive acreages, it is virtually certain that some get into streams and public water supplies. Poisons are not readily detected in water, yet they have been found near the mouths of major U. S. rivers. Heavy rains wash agricultural poisons into streams.

In 1956, one-half pound of DDT per acre was used to control the destructive spruce budworm on the Meramichi River of New Brunswick. This resulted in a 91 per cent kill of young salmon. During the four months of the summer of 1961, 36 states reported 286 fish kills to the U. S. Public Health Service.

While many chlorinated hydrocarbon pesticides were listed as the cause of fish kills, endrin seemed to be the most common. It is perhaps the most lethal pesticide to fish yet developed, and also is commonly used as a rodenticide and as an insecticide on vegetables! The infinitesimal amount of 0.6 parts per billion will kill 50 per cent of test bluegills in 96 hours.

Pollution of the underground

## . . . Chemical Pesticides

water supply near Henderson, Colorado, due to the seepage of dangerous chemicals into the ground and ultimately into an aquifer, illustrates additional dangers and complexities inherent in the widespread use of poisons. Farm crops in this area first were affected in 1951. Then, from seven to eight years were required for the contaminated water to travel approximately three miles. By 1958, contaminated water extended in an area of several square miles and seriously affected crop production, industry and the people who relied on this supply for their own culinary purposes and for livestock. The area within this aquifer basin, more of which can be affected, is said to cover some 60 square miles. There are other examples of serious, long-time effects of water contamination.

### **Residues**

The problem of residues of pesticides on vegetation, soil, and in the milk and flesh of meat animals is a serious problem of increasing concern. Analyses of deer and elk carcasses taken during hunting seasons from forests sprayed with DDT revealed insecticide residues in their fat, meat, or other tissues. It is important to note that some of the residues in these wild forest animals exceeded established tolerance permitted by the U. S. Food and Drug Administration. Results of studies of milk from cows grazing in areas treated with hepta-

chlor show appreciable amounts of heptachlor epoxide through four three-day intervals after application and traces 57 days after application. There is a zero tolerance for heptachlor and its epoxide in milk. Residues of aldrin, heptachlor, dieldrin, and toxaphene were found in cattle and sheep. The government of Great Britain is prohibiting the use of heptachlor, dieldrin, and aldrin in spraying fields, farms, or forests.

There is considerable evidence that many chlorinated hydrocarbons may seriously affect reproduction and survival of young. Furthermore, these toxicants are fat soluble and may be absorbed through the skin as well as in food and water.

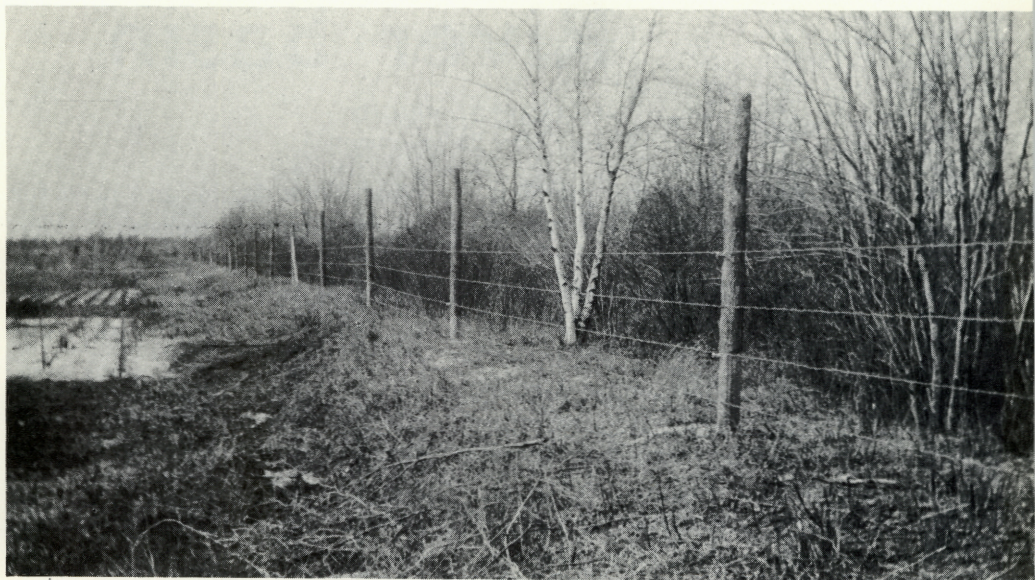
### **Problems Associated With Agricultural Sprays**

A major problem in the ever-growing widespread use of chemical controls has been the increasing resistance of most damaging insect species to one or more groups of families of toxicants. Upwards of 140 species of arthropods have developed resistance against control compounds. The widespread use of extremely lethal, broad spectrum toxicants has killed off predator arthropods, along with the pest species, so we have become more and more dependent upon chemical control. If this trend to rely solely upon chemicals continues, there can be no end in sight. Spraying costs are exceedingly high and going higher. There is

much entomological history to suggest we cannot, over an appreciable period, obtain necessary control by relying solely upon chemical pesticides. In case of enemy

study should be directed toward propagating beneficial insects that prey on destructive species.

4. Much greater use can be made of cultural methods in pre-



*Since crops and wildlife live side by side, care is necessary*

attack and biological warfare we become dangerously vulnerable.

### **Conclusion**

1. More emphasis must be placed on the development of selective chemical pesticides which will control specific pests without damage to valuable resources.

2. Minimum dosages required to control pests must not be exceeded.

3. It is imperative that more emphasis be given to biological control methods. Success in elimination of the highly destructive screw worm in the Southeast through sterilization of the male fly by radioactive cobalt-60 offers an important example. Intensified

venting losses from pests. Healthy, vigorous crops growing with essential soil nutrients in balanced proportions are much less subject to disease and insect attack than are plants deficient in nutrients.

5. Accelerated research in the development of insect-resistant crop varieties offers great promise.

A major problem in the pesticide controversy is for administrators and operators of all interests concerned to demonstrate a greater degree of maturity of judgment, concern and objectivity for an integrated and coordinated program that recognizes all public values and resources. #

*the Comprehensive Plan for the*

# Delaware River Basin

By JAMES F. WRIGHT  
Delaware River Basin Commission

Many river systems stretch wider and reach longer. But when it comes to natural resource endowment, few can surpass the Delaware River Basin.

The Delaware and its tributaries cover a 12,000 square-mile region that penetrates deeply into the four important eastern seaboard states of New York, Pennsylvania, Delaware, and New Jersey.

It extends nearly 300 miles from the Catskill Mountains south through the Poconos and Kittatinyns and across the coastal plain into the Atlantic Ocean.

The combined basin and larger service area, extending east to Bridgeport, Conn., and west to within a stone's throw of Scranton, Pa., is home to more than 21 million Americans. It would fit into the rest of the nation's land area 100 times, yet it earns 17 per cent of the national personal income.

Unlike many arid rivers systems in the West, the Delaware has an abundance of water.

James F. Wright, Executive Director, joined the Commission in May 1962. He came from California where, as Chief Deputy Director of the Water Resources Department, he was a top official in the development of that State's \$1.75 billion water program.

What, then, is the dire need for the new federal-interstate Delaware River Basin Commission, which was established by a 100-year compact between the four



*Author James F. Wright*

states and the Federal Government in 1961 to develop and manage the basin's water resources.

The problem here isn't finding

more water. It is making sensible use of what we have.

As it has done everywhere, water-hungry civilization in the Delaware Basin has moved as close as possible to the river and its tributaries. Villages, towns, cities, and even a great metropolis have grown up at water's edge.

In parts of the Delaware Basin, heavy concentrations of people and industry have seriously polluted the rivers and streams. Dirty water is expensive to purify for home use. It is unsafe for swimming. Occasionally, it results in massive fish kills, as it did in the Delaware estuary last summer.

In heavy storm and thaw periods, floods bring misery and destruction. The torrents from Hurricanes Connie and Diane took more than 100 human lives and heaped \$124 million in property damage in the Delaware Basin in the flood of August 19 and 20, 1955. The basin's average annual flood damage toll is nearly \$8 million.

Even in the water-rich Delaware, the drought periods that come every few years seriously threaten the supply of water for a modern industrial region whose water demands are growing faster than its population.

Resulting low flows compound pollution problems.

At the same time, they sharply curtail the river's use by the basin's recreation-hungry citizens, especially since droughts invariably occur in warm weather months.

Conservationists need more help

than ever in their losing battle to prevent loss of fine forests and agricultural land to modern civilization's needs. Timberland and other good land cover are essential to a healthy surface water system. They hold back flood water peaks naturally, they prevent soil erosion and resulting siltation, they increase low flows of streams and they recharge ground water stores.

All these things—and a few more—add up to the reasons the four states and Federal Government entered a compact to establish the nation's first interstate river development agency in which Washington is an equal operating partner.

Within weeks after the compact signing ceremonies in the White House, the Commission held its first meeting in December of 1961.

The executive Director was hired just over a year ago, and the Commission moved from its temporary quarters in Philadelphia to Trenton last September.

At one of its initial meetings, the Commission adopted the first phase of the continuing Comprehensive Plan it is charged with maintaining. It comprises, in addition to anti-pollution standards, 20 projects ranging in size from two quarter-million dollar flood control programs on South Jersey Streams to the dramatic \$122 million Tocks Island dam just north of the Water Gap, which in a decade or less will start backing up a 37 mile-long lake to Port Jervis, N.Y.

Many of the projects in the Com-

## . . . Delaware

mission's plan, including Tocks Island, are borrowed from the 1960 recommendations of the U. S. Army Engineer Corps, which went to work on a Delaware study after the 1955 flood.

The Comprehensive Plan is multi-purpose, aimed at developing the basin for water supply, recreation, soil conservation, anti-pollution, increased flows in dry periods, improving fish and wildlife, and generating hydro-power as well as flood control.

The plan's top eight priority

projects already have been authorized for construction by Congress. Design and engineering funds have been appropriated in Washington for Beltzville Reservoir in the Lehigh River Valley. This project, slated for completion in 1968, and Tocks Island are expected to receive more design money from Congress this year.

All eight of the authorized projects are to be completed within 25 years. Actually, two of these big reservoirs and a third that is not part of the Commission's plan, have been built already by the Army Engineers and are now giv-

*Flood damage in Delaware Basin during August 1955 flood*



ing protection not enjoyed in 1955. The two in the plan are to be enlarged for other benefits.

This also could be the year for Congressional approval of one of—the most popular features of the Commission's whole plan, a \$60 million recreation area to be developed around the Tocks Island Reservoir. This first facility of its kind in the Eastern United States is expected to attract some 7 million recreation seekers a year.

The cost of all the projects now in the Comprehensive Plan, toward which Washington will pay nearly half, will be \$340 million. Flood control is an all-federal cost, while water supply, most recreation, and some other features will have to be paid for by non-federal sources unless Congress decides to expand its financial responsibility to include other river development aspects.

Working out financing arrangements for the \$181 million non-federal share, of course, is a knotty problem. But it is one which the governors of the Compact's signatory states have indicated a firm intention to solve. The governors are the states' members on the Basin Commission, with the Federal Government represented by Interior Secretary Stewart L. Udall.

Here is a rundown of the major multi-purpose projects in the Commission's plan:

**Beltzville**—A \$15 million project which will combine with Trexler and Aquashicola Reservoirs to provide flood protection in the Lehigh Valley which, for instance, would

cut two feet from the 1955 crest at Bethlehem, Pa.

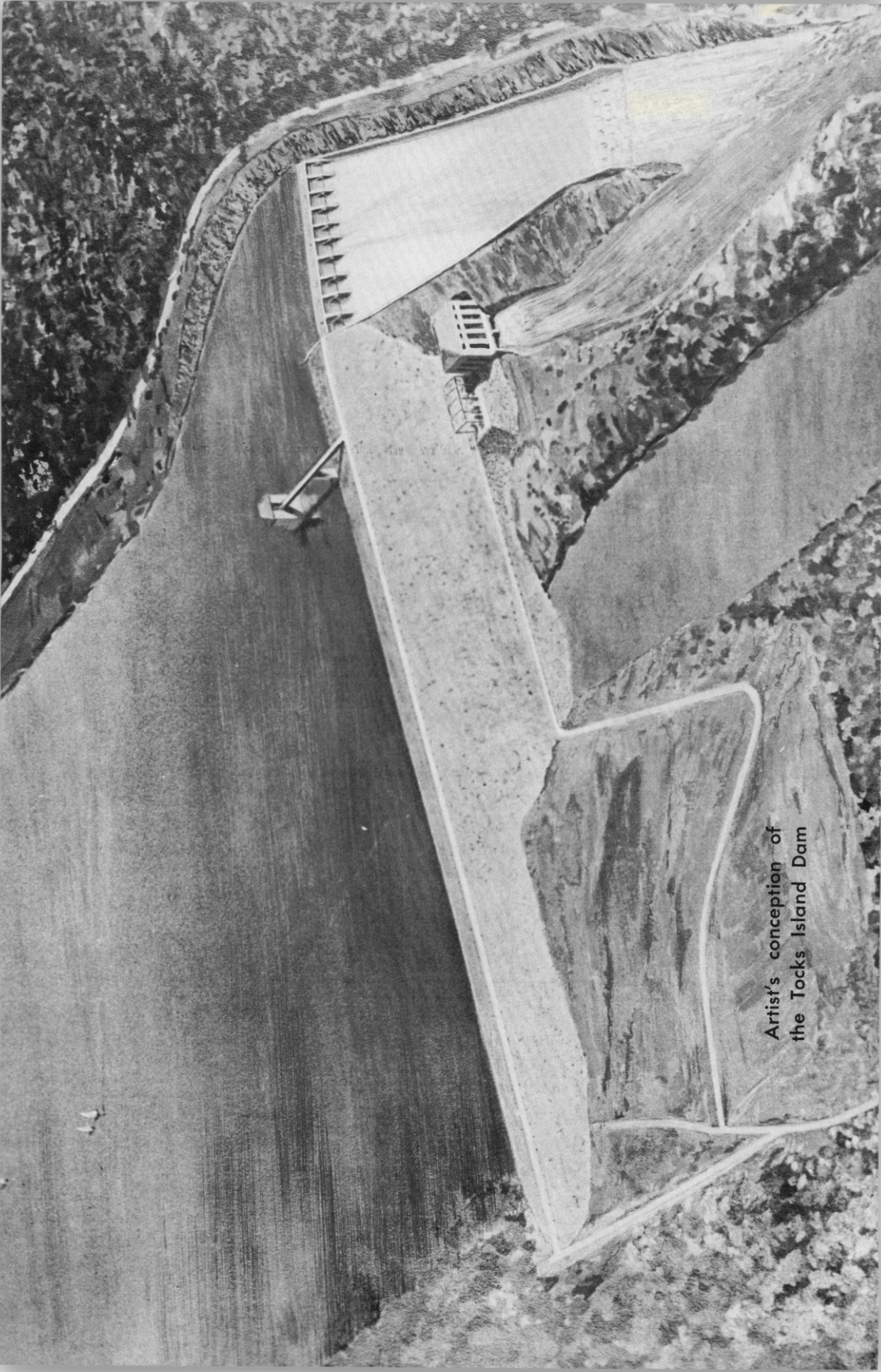
**Blue Marsh**—A \$15.5 million Schuylkill watershed facility near Reading, Pa., that will trim the equivalent of three feet from the 1955 flood peak at Pottstown. It is scheduled for 1969 completion.

**Trexler**—To be built eight miles from Allentown in a Pennsylvania game preserve, this Lehigh Valley reservoir will cost \$11.2 million and be ready in 1972.

**Prompton**—One of two existing flood control dams to be enlarged for recreation and water supply at a cost of \$5.3 million. Completion is set for 1974. This reservoir already is protecting the Honesdale and Hawly, Pa., regions from frequent flooding.

**Tocks Island**—Had this dam been built in 1955, the flood crest at Trenton would have been six feet lower, leaving only minor damage. The \$122 million cost figure here includes an on-river hydro-power project but not \$55 million for a pumped storage hydroelectric facility. The Commission has pledged that fish and wildlife needs will be taken into serious and detailed consideration in the planning for this and other projects.

**Aquashicola**—A 1981 priority facility to cost \$19.5 million, it will join with Beltzville and Trexler in protecting Bethlehem, Allentown, Easton



Artist's conception of  
the Tocks Island Dam

## . . . Delaware

and other Lehigh Valley communities from high waters.

Maiden Creek—Reading, Pa. would have enjoyed 4½ feet of flood crest safety which it needed in 1955 had this \$30.8 million reservoir, to be completed in 1982, been in existence eight years ago.

Bear Creek—Completed in 1961 for the flood protection of upper Lehigh River communities, this dam near Wilkes-Barre, Pa., will be expanded by 1989 for water supply and recreation at a cost of \$14.3 million.

Four other major reservoir jobs are contemplated for construction by 2010 in the Comprehensive Plan. These are to be built near Hackettstown on the Musconetcong River in New Jersey, on White Clay Creek near Newark, Del., on Tohickon Creek near Newtown, Pa., and at Evansburg, Pa.,

Also part of the Plan are eight small watershed programs, two of them well under way in the Brodhead Creek and Greene-Dreher regions of the Pocono Mountains, where scores of lives were claimed by the 1955 flood. Three New Jersey small watershed programs are nearing completion—on the Paulins Kill in Warren County and at Silver Lake and Maurice Cove, both in Salem County. Other watershed op-

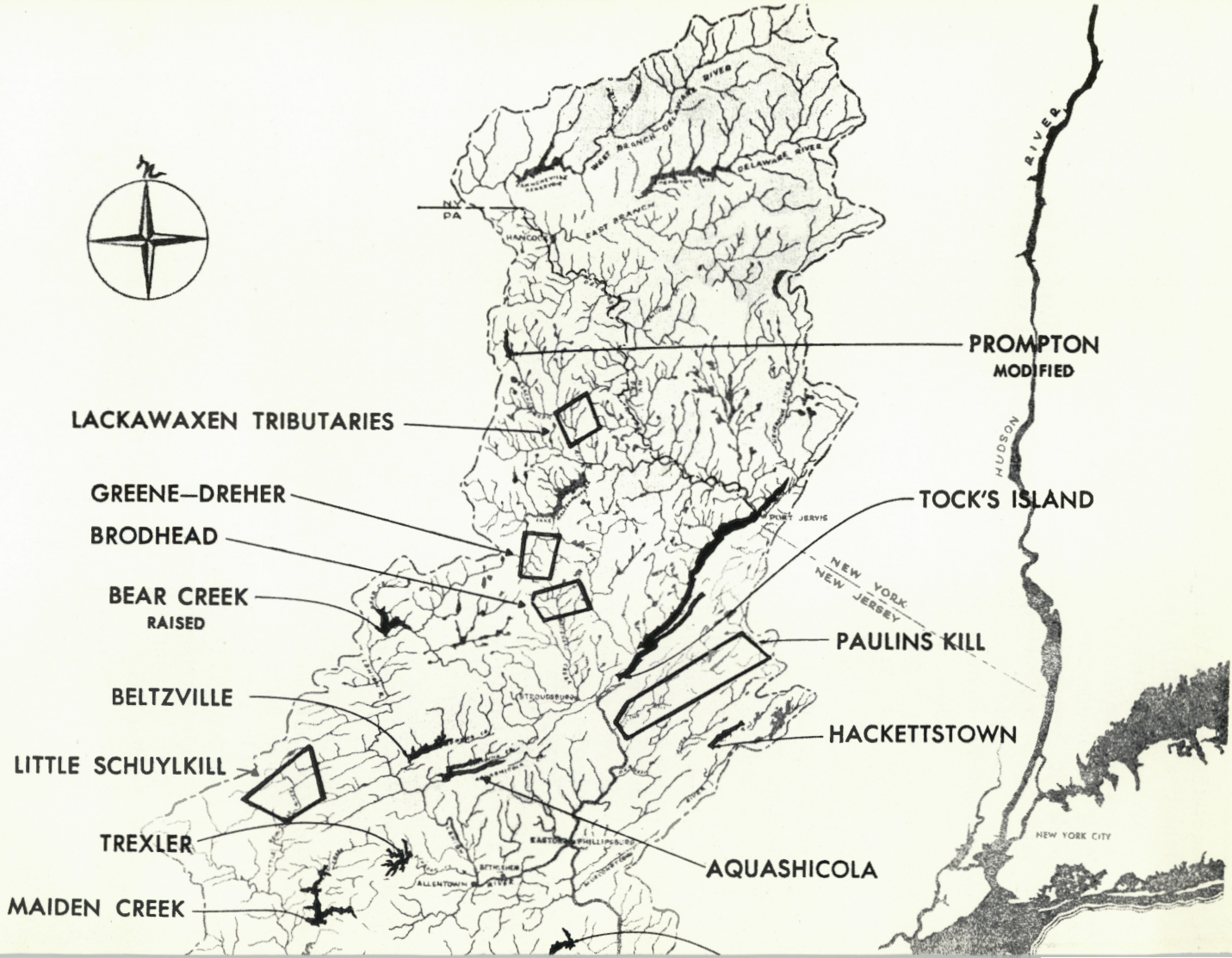
erations in the Plan—and also in progress—are on the Brandywine Creek, which flows into Delaware from Pennsylvania, and on the Little Schuylkill and Lackawaxen Rivers in Pennsylvania.

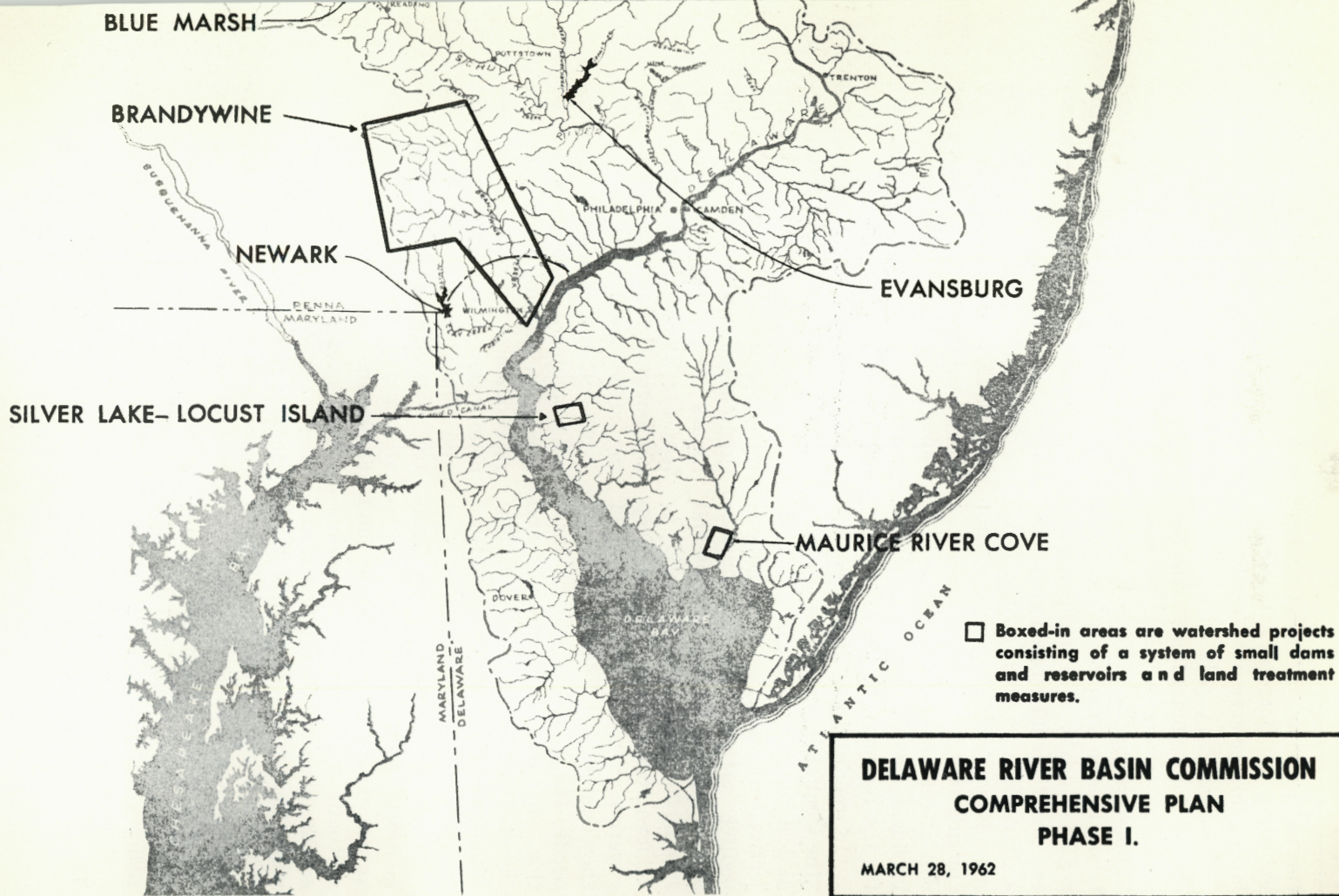
The first year of the Commission's actual operation has been devoted largely to engaging hard-to-find specialists in the various phases of water system management. The staff now has reached 30 persons in size, and will likely not greatly exceed that number for several years unless the Commission gets involved in actual construction. At least in the immediate future, construction activities on the big projects are slated to be handled by the Corps of Engineers.

Despite its concentration on recruiting, the skeleton staff on hand at the time developed last September a nine-point planning program for this and next year. Progress has been made already in seven of the nine categories and work will begin soon on the others.

For example, our studies in the fields of water supply inventory, fish-wildlife and recreation planning, hydro-power potential, water quality and reviewing water-connected projects of others in the basin are producing valuable information that is helping the Commission develop its permanent operations.

The extent and direction of the Commission's activities in the future can best be indicated by the vital policy declarations made at





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the agency's annual meeting last February by Secretary Udall following his selection as chairman.

The Secretary pointed up really one of the Commission's main reasons for existence when he said, "This Commission will be a major force in the shaping of broader regional goals. No single agency can direct the integrated growth of a dynamic area such as the Delaware Basin," adding however, that administration of water resources will affect and be affected by the broadest possible goals designed for the region.

"In regard to water," he said, "the Commission must be a leader in designing regional goals and objectives. It must be a major expeditor, instigator and coordinator of state and federal programs and standards and physical works to achieve those goals. It must keep government and other leaders of the community informed as to the needs, the consequences of inaction, the costs of alternatives, and the engineering and economic feasibilities of proposed programs and projects."

"It will be the policy of the Commission," said the Secretary, "to assure that the economic and aesthetic gains that can be achieved through water development and management are enjoyed by the region's people in the most timely and efficient manner possible."

He said the Commission's concern for social goals will include a policy of encouraging and support-

ing hard-to-measure intangibles such as open space preservation, clean streams and wildlife development which, in the past, often have come off second best in competition with dramatic structural features of river management.

"The Commission will study and consider all conceivable alternative means of meeting water problems to the end that the most economically advantageous solutions may be pursued," the Secretary declared. "Thus, nonstructural measures will be considered as well as great dams, and the conservation of water use as well as providing new supplies."

He pledged this Commission's willingness to be an innovator, declaring its unique administrative form is well suited to this role. The Commission will employ new techniques that come from research laboratories and from university campuses, thus adding to the existing knowledge in the field.

"The Commission will serve as an instrument through which we can begin learning more about the relationship between water resource development and economic and demographic change in a relatively mature and heavily industrial urban complex," said the new chairman.

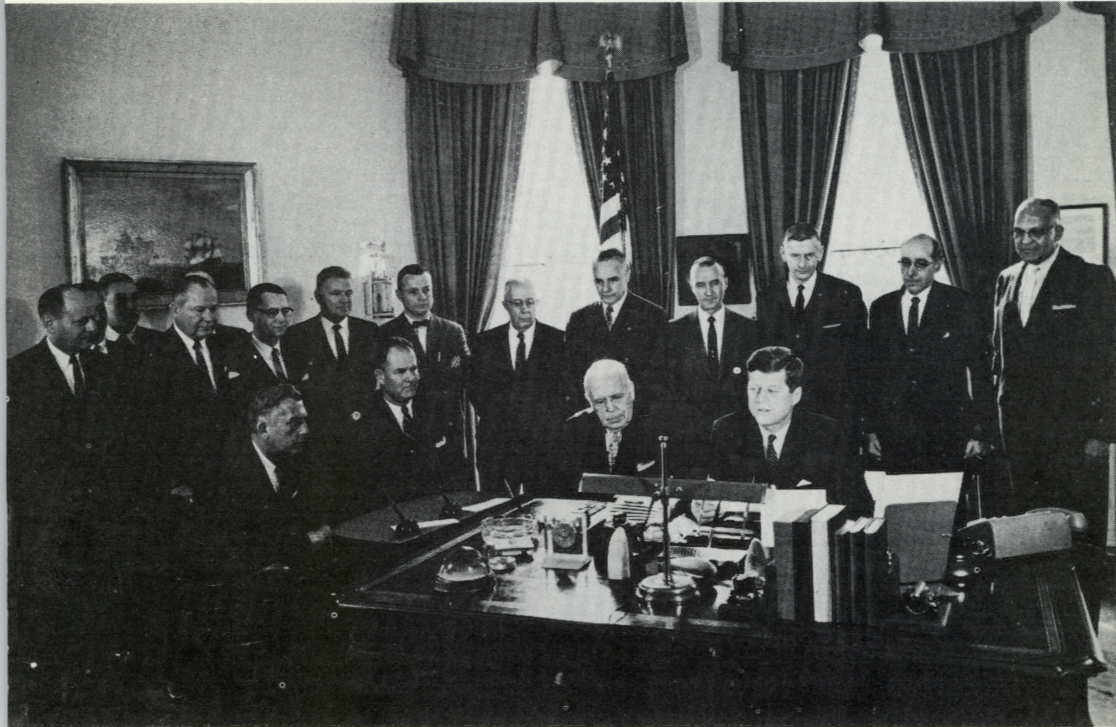
Employment of the Commission's unusual federal-interstate composition as an effective instrument for reconciling intergovernmental differences before they mushroom into major disputes was assured.

The Secretary promised that the

Commission will not lose sight of its responsibilities for direct action as provided for in the Compact. Though it will work through other agencies to the maximum extent, there will be times and situations

projects and facilities, as well as the strengthening of regulatory programs.

"The unusual scope and flexibility of the Commission's organization can provide it with a unique



*Compact signing ceremony in President Kennedy's office in the White House on November 2, 1961. In the previous eight months both legislative houses of the four signatory states, as well as the U.S. congress, adopted the Compact. Seated left to right are former Governor Meyner of New Jersey, Governor Elbert Carvel of Delaware, former Governor David Lawrence of Pennsylvania, and the President. Standing behind the signers was a group which included former Mayor Richardson Dillworth of Philadelphia, state alternate Commission members, and persons who worked on the Compact's preparation.*

when the Commission may feel that its assumption of direct responsibility would be very much in the public interest. He said such a role of direct action could include design, construction, operation and management of water resources

opportunity to experiment with the planning and programming of watershed management programs which represent the maximum participation of federal, state and local interests in these developments," Secretary Udall concluded.



# The Marine

a visit to  
the Division's  
**Marine Fisheries  
Laboratory**

at Island Beach

By EDGERTON GRANT

ENTERING Island Beach State Park, I was struck, as I had been last summer, by the openness of the white sand, patched with wild vegetation. The wonderful quiet presented a contrast with the bustling commerce that marked the rest of the ocean-front even at this off season.

Taking a deep breath of sea air, I noted a difference from the day last July when a group of us had enjoyed some of the best ocean swimming of our lives. Mine was now almost the only car on the road. Here and there highway trucks were grading in preparation for the summer onslaught of swimmers; parked vehicles marked the presence of lone fishermen.

Later, on my way out, I noticed more of the latter, including a station wagon with five poles sticking up from its front bumper like antennae. A panel truck bore testimony that the sport fishing on this cloudy Tuesday drew anglers from as far away as Somerville.

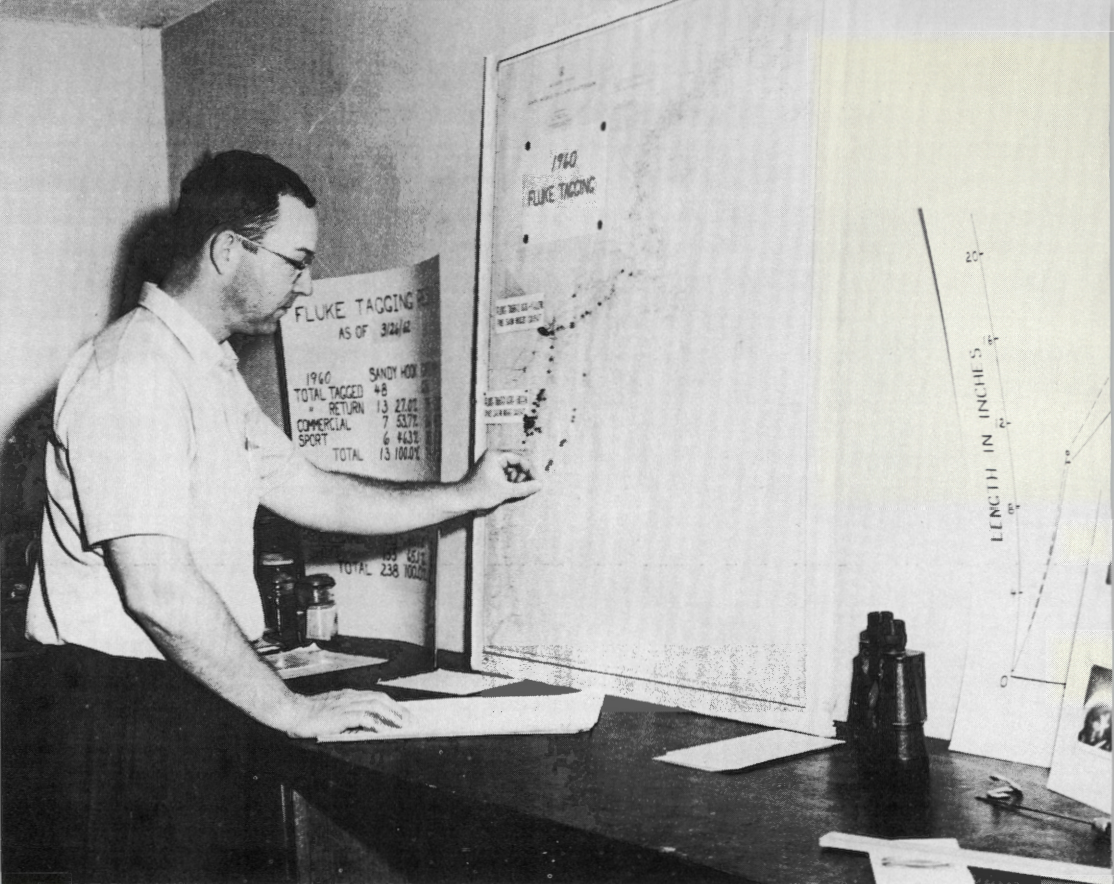
• My purpose, too, was different from last summer. I was here to see the Marine Fisheries Labora-



# Lab

JUNE, 1963

21



*Biologist Paul Hamer and the fluke tag returns chart*

### . . . Marine Lab

tory, and to learn about its general operation.

Biologist Paul Hamer and his family have lived here year round since early 1956. Seeing the isolation of the place, I admired his dedication to his task.

After Mrs. Hamer smilingly admitted me, I smelled the formaldehyde pervading the air and admired her dedication too. I looked around the lab as I waited for Mr. Hamer.

The first things that caught my

eye were a half dozen vicious-looking shark jaws. Two of them, that had belonged to a tiger and a dusky, looked big enough to put my head through. I did not attempt the experiment.

Moving along the wall, I saw photos of a trawler, the Rosie Beatrice, that had been scuttled in May, 1961. The pictures, taken in June of that year, showed growth of hydroids (whatever they are) and starfish on the boat. Seabass swam inside in one picture. I wondered about this exhibit.

Mr. Hamer returned and was

pleased to tell about his work. I listened, expecting to have many questions. He roused many, but answered most of them before I asked.

Marine studies began in the early fifties with a survey of sport fishing. Even fisheries personnel were amazed at the extent of the sport compared to commercial fishing. It has enjoyed considerable

There is much that is not known about fluke as well as much that the lab has learned.

For instance, no one is sure what fluke eggs look like, or what the young fluke goes through in its first year of life. Surveys, however, have located the spawning ground. It is a narrow strip of warmer water, seventy fathoms deep, about eighty miles offshore. Scientists

*Mr. Hamer was pleased to tell about his work and demonstrate his equipment and lab study facilities*



growth since then. A chart of fluke tags showed about half the returns were from sportsmen.

Fluke, the area's second most abundant food fish (next to porgie), is very important to both commercial and sport fishing.

thus know where to send a research boat if funds become available for this costly project.

Key areas for fluke study include its life history, its migrations, and its productivity and potential harvest. These were pinpointed by

## . . . Marine Lab

a recent meeting of mid-Atlantic Fisheries Biologists at Island Beach.

Effective studies must cover the area from Cape Cod to Cape Hatteras. Our fish population circulates over the entire Middle Atlantic Bight.

When he said "bight", I thought it an unusual use of the word for what anglers like fish to do. From one of his informative pamphlets I learned that it means an entire area like this indentation between the capes.

Much interstate research is coordinated by the Bureau of Commercial Fisheries of the U.S. Fish and Wildlife Service. Hamer described a two week research cruise from their Woods Hole, Mass., Laboratory in *New Jersey Outdoors*. Reprints of "A Big Bite" are available.

### **Porgies and Stripers**

Hamer also mentioned work on porgies and striped bass, particularly their southward migrations. He remarked on this year's exceptional striper fishing.

I asked about the sharks. They were caught last summer from a boat donated by the Smith Menhaden Industry for a three-week research cruise. The project was highly productive.

For instance, four tiger sharks had been previously recorded; the cruise caught seventeen. They also

obtained valuable information on the ocean environment—hydrography, he called it.

Sharks in this area are not prone to attack humans. The two much publicized attacks in 1960 were the first since 1916. People are not part of the New Jersey shark's diet, unlike South Africa and Australia.

### **Shark Jaws**

I glanced again at the huge jaws. Hamer told me they had come from a nine or ten foot fish. The largest shark caught on the cruise, was eleven feet, nine inches. I resolved not to give one the opportunity to vary his diet.

Hamer concluded his commentary by saying that no species of marine fish is in really critical condition. Problems lie in habitat management and pollution.

Looking around again I saw less fancy equipment than I had expected. I gathered that much of the work is done at sea. I also recalled comments about a small budget.

I glanced at charts of various tag studies. I saw specimens of fluke and porgie in prominent jars. I noticed the pictures of the Rosie Beatrice, but decided they could not be important.

In another room was the library and more specimens. Lack of funds and reading time had curtailed the book supply.

There were specimens of almost every fish found in New Jersey

*The huge shark jaws came from a nine or ten foot shark* ➡



## . . . Marine Lab

waters. They ran the gamut from a round, flat Orange flatfish to a long, narrow Sting Ray. Hamer assured me that stepping on the latter is not a pleasant experience. Happily, sting rays are not common in this area.

In the hall, bulletins offered rewards for returning fish tags in Woods Hole. One dollar is paid for each tag sent in with the name of the vessel and finder, as well as the location, date, type of gear, and depth of the catch.

Many anglers mean well, Hamer said, but forget to send in tags without this incentive.

Almost as an afterthought, he remarked, "There's one other interesting project. We are looking into the feasibility of creating fishing grounds."

It seems that most of our ocean has a flat sandy bottom. This provides little food or cover, causing fish to wander.

The best sport fishing is near shipwrecks. Mussels and hydroids—plant-like animals—cling to the wrecks. They provide fish food in themselves as well as shelter for smaller edible organisms.

Some Cape May sea captains, in cooperation with the fisheries bureau, are experimenting with sinking an old boat. Hamer pointed to the picture of my old friend the Rosie Beatrice.

There was the bottom picture swarming with sea bass. The exhibit I had shrugged off might be the most significant of all.

The Japanese have created fishing grounds for years, sinking concrete cubes about three feet square. Biologists don't know if such grounds increase the number of fish or simply concentrate them. They do know that better fishing results.

### The Fishing

I glanced out the window at the surf, and remembered one more question "how's the fishing?"

"Lot's of it," Hamer replied. "Usually you can see some from here."

He told me that striped bass as heavy as forty pounds have been landed in the surf. Boats have been known to catch sixty pounders. Fluke and mackerel will arrive in the summer; stripers return in the fall, migrating south.

It was time for me to go. Mrs. Hamer was waiting to go over some notes, and young Mr. Hamer made periodic requests for "daddy".

As I drove away, a mass of newly-learned facts swam in my head. Passing some fishermen with newfound envy, I wondered if they realized how much their enjoyment was enhanced by the multitude of research emanating from this lonely house by the sea. #

*The collection of fish includes almost all local species* ➤➤➤



## . . . Ownership of Firearms

*Continued from Inside Front Cover*

mentally disturbed person — can inflict damage with any number of objects. As a matter of fact, a gun is used in a minority of cases involving violence.

Outlawing the sale of firearms will not prevent their use by criminals. Most firearms used in crime are stolen — a great many from military and police arsenals — or smuggled into the country. The prohibition of the sale of firearms to private citizens in the United States would again accomplish only one thing — the disarming of honest men.

It is the criminal himself who provides the secret to prevention of crime. Society is misleading itself when it tries to punish a knife, rope, gun or the proverbial "blunt object."

There is only one way to restrict the use of firearms by criminals: make the penalty for the use of guns or any deadly weapon in the commission of a crime so severe that criminals will be afraid to use them. In other words, the deterrent penalty will far outweigh any possible criminal gain. The criminal is penalized and not the honest citizen.

### *Low Accident Ratio*

Now, let's take up the question of accidents. In the first place — just how many firearms accidents are there in the United States?

According to an editorial ap-

pearing in the Saturday Evening Post on Feb. 13, 1960, the fatality rate for all forms of accidents was 56 per 100,000 persons in 1957. Motor vehicles caused 22.7 of these deaths, falls accounted for 12.1, fires and explosions for 3.7 and drowning for 3.1. The rate for fatal firearms accidents was only 1.4, scarcely above the 1.2 rate from suffocating or choking on food!

### *Common Sense*

Granted a firearm is an inanimate object that cannot kill of its own volition, what about its abuse and misuse by children and the incompetent? Again, common sense should dictate the answer. A person in authority — parent, teacher, coach, counselor or other responsible person — should exercise just as much preventive care as the individual situation demands.

All deaths by accident — regardless of cause — are tragic. Many could be prevented. But how? By the abolition of the objects that were the agents of death in the hands of man? I think not.

No one has ever suggested that household materials or medicinals containing poison should be outlawed. No one has crusaded to outlaw kitchen knives or tire irons. Certainly no one hazards the automobile should be consigned to oblivion because of accidental deaths and injuries.

Education, proper supervision and preventive safeguards are the



### *Education and proper supervision foster gun safety*

answer to safety problems concerning household objects that hold a potential danger for any member of the family. If the family is properly educated regarding both the positive and negative aspects of firearms and that household's firearms are kept under proper supervision, the accident ratio would drop to nil.

#### *Vast Recreational Activity*

Sporting firearms — and there are literally tens of millions of them in the United States — hold a huge potential for recreation, pleasure, sport and applied skill. They hold a very small potential

for danger relative to their use, numbers and in comparison to other sports.

Hunting has always been an important factor in many good “father-son” relationships. With the recent great increased interest in trap and skeet — and, indeed, all participant outdoor sports — shooting is becoming an important family recreational activity. Example: the number of women hunters increased over 100 per cent between 1955 and 1960. Over 1,000,000 women will take to the hunting fields in 1963.

It seems a pity that some of our

## . . . Ownership of Firearms

national magazines seem to prefer sensationalism to responsible and educational journalism. While we will defend any man's right to his opinion in print, we feel that this same freedom should be extended to an expression of the positive side of sporting firearms and the shooting sports.

The national press could do much to further the cause of safe gun handling, the reduction of accidents and the healthy promotion of a historic American sport. Sensationalism — often based upon twisted and misquoted facts — for sensationalism's sake ultimately is a disservice to the community as a whole.

### *Basic American Freedom*

In closing, I would like to point out that Article Two of the Bill of Rights of the United States of America states, “. . . the right of the people to keep and bear arms shall not be infringed.” These are not idle words. They were not half-heartedly inserted as some sort of ill-conceived after-thought on the part of the Founding Fathers.

Since the Bill of Rights guarantees such basic rights as freedom of speech, worship and press as

well as the right to bear arms, it is strikingly peculiar that certain segments of our national press appear intent on abridging any of those freedoms. One would think that members of the Fourth Estate — considering their long battle to preserve their freedom from censorship and government control — would realize that any restriction imposed on any of the articles of the Bill of Rights is a two-edged sword that also might be applied to others.

Our liberties are interdependent upon each other and perhaps one liberty — for example, freedom of the press — cannot long survive free from jeopardy without the healthy maintenance of all the other liberties outlined in our Bill of Rights.

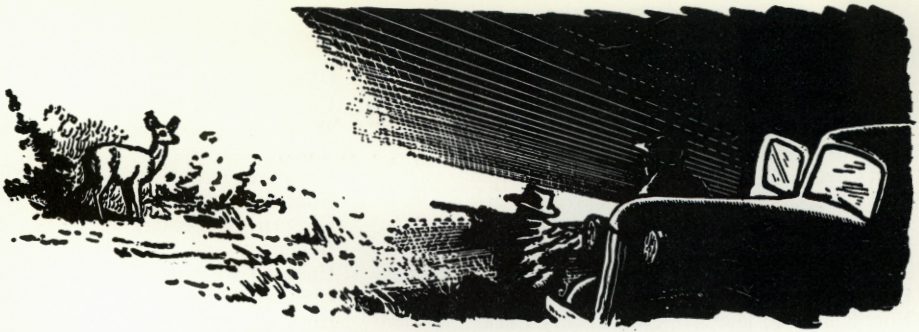
History indicates that the Bill of Rights was conceived as a separate entity from the Constitution to underline the vast importance of the individual rights of man in our Republic. I would hate to think any of us — regardless of our personal prejudices concerning hunting, the shooting sports and firearms — would casually throw away any of these personal liberties so dearly won and preserved by our fellow citizens in the last 186 years. #

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## COUNCIL HIGHLIGHTS

The regular monthly meeting of the Fish and Game Council was held at the Charles O. Hayford Fish Hatchery in Hackettstown on March 12. Since the Council members and those present wished to inspect the Hatchery, the Council dispensed with the usual open session.



## VIOLATORS ROUNDUP

FEBRUARY 1963

<i>Defendant</i>	<i>Offense</i>	<i>Penalty</i>
Dominick Mazacola, 14 Roosevelt Ave., Clifton	Loaded gun in auto	20
Salvatore Tumminello, 32 Byran Pl., Clifton	Loaded gun in auto	20
Salvatore Tumminello, 32 Byran Pl., Clifton	Mallard over limit	20
Paul Antonini, 129 Dobbs Ave., Bellmawr	Hunt before hours	20
Richard A. Gordon, Berkeley Heights	Fish no license	20
Hess Oil Co., State Street, Perth Amboy	Pollution	500
Frank Cacio, 302 E. Buttercup Rd., Wildwood Crest	Illegal possession deer	100
Louis E. White, 306 E. 20th St., N. Wildwood	Illegal possession deer	100
Charles E. Hamilton, Box 368 Jackson Rd., Williamstown	Loaded gun in auto	20
Samuel S. Miletta, 310 South Avenue, Bridgeton	Uncased firearm	100
Jeff Corners, 27 Dwight Dr., West Deal	Loaded gun in auto	20
Charles Matejka, 728 Pacific Ave., Beachwood	Loaded gun in auto	20
John G. Flavin, Co. I USASCS, Ft. Monmouth	Loaded gun in auto	20
Walter Retzinear, 2615 Church St., Cherry Hill	Kill 2 pheasants closed season	40
Walter Retzinear, 2615 Church St., Cherry Hill	Discharge firearm near dwelling	20
Walter Retzinear, 2615 Church St., Cherry Hill	Loaded gun in auto	20
Robert Walter, Briarcliffe Rd., Atco	Fail to report deer kill	100
Dennis Marshall, 130 Dolbow Ave., Pennsville	Firearm on Sunday	20
Gerard Carlucci, 821 Penn. Ave., Lyndhurst	Hunt no license	20
Gerard Carlucci, 821 Penn. Ave., Lyndhurst	Hunt on Sunday	20
Gerard Carlucci, 821 Penn. Ave., Lyndhurst	Poss. duck closed season	20
Thomas Sabatini, 2153 Bank St., Camden	Loaded gun in auto	20
Charles R. Koch, 828 Drexel St., Riverside	Loaded gun in auto	20
Charles R. Koch, 828 Drexel St., Riverside	Hunt closed season	20
Charles R. Koch, 828 Drexel St., Riverside	Illegal firearm	20
Michael Di Benedetto, R. D. No. 3, Bridgeton	Hunt no license	20
Richard Alliger, Charlottesburg Rd., Boonton	False information	20
Ivo Bacchetta, Taylortown Rd., Montville	Loaded gun in auto	20
Clinton Woodstrom, Sparta Lake, Sparta	Loaded gun in auto	20
Iris E. Cline, Box 63, Birmingham	Fail to report deer kill	100
Marvin L. Wilson, 212 Prince St., Bordentown	Hunt no license	20
Raymon Seeley, 402 Leech St., Riverside	Loaded gun in auto	20
Philip Covick, 34 Sears Pl., Clifton	Tipups during closed season	20
Linwood Errickson, 612 Jefferson Ave., Woodbine	Tag not displayed	5
Lawrence Zbikowski, 782 S. 16th St., Newark	Hunt closed season	20
Richard Zbikowski, 782 S. 16th St., Newark	Hunt before hours	20
Robert Lamont, 3rd, Charlestown Rd., Hampton	Loaded gun in auto	20
Melton C. Stevenson, 384 Avon Avenue, Newark	Loaded gun in auto	20
George Dely, 14 Thompson St., Raritan	Hunt closed season	20
Joseph Sasdell, Central Ave., Minotola	Illegal missile	100

## . . . Violators Roundup

<i>Defendant</i>	<i>Offense</i>	<i>Penalty</i>
Joseph Sasdell, Central Ave., Minotola	Uncased rifle	100
Joseph Sasdell, Central Ave., Minotola	Hunt deer closed season	100
Carl Carano, 27 Nixon St., Landisville	Illegal weapons	10
Carl Carano, 27 Nixon St., Landisville	Uncased rifle	100
Carl Carano, 27 Nixon St., Landisville	Hunt deer closed season	100
Kurt Schabbel, 1109 3rd Ave., Asbury Park	Firearm on Sunday	20
Michael Homiak, Rt. 23, Newfoundland	Illegal missile	100
Michael Homiak, Rt. 23, Newfoundland	Uncased weapon	100
Paul Barta, Highland Lakes	Uncased weapon	100
Kurt Schabbel, 1109 3rd Ave., Asbury Park	Hunt closed season	20
Anthony Bencivenga, 414 Monroe St., Hoboken	Discharge firearm near dwelling	20
Roy Hooey, Jr., R.D. 3 Box 44, Newton	Hunt no license	20
Clarence Clevenger, 4 Main St., Lumberton	Poss. deer closed season	100
John Smith, Palermo Ave., Vineland	Illegal rearm	20
Harold W. Jones, Jr., 72 Warner Ave., Springfield	Gun on Sunday	20
Robert W. Smith, 23 Colfax Rd., Springfield	Gun on Sunday	20
Ernest M. Daniels, 528 West St., Camden	Fish no license	20
John E. Green, Hillside Ave., Glen Gardner	Loaded gun in auto	20
John E. Green, Hillside Ave., Glen Gardner	Uncased firearm	100
John H. Stein, Jr., 706 N. Main St., Clayton	Hunt deer closed season	100
Jack F. Rudolph, 102 E. Linden St., Clayton	Hunt deer closed season	100
Sylvester Sandelier, N. Delsea Dr., Clayton	Hunt deer closed season	100
Gary Jay, 477 S. Pine Ave., South Amboy	Loaded gun in auto	20
Albert Lowe, 173 Hiawatha Rd., Oakland	Hunt before hours	20
Henry Loder, 800 Shore Road, Somers Point	Loaded gun in auto	20
Richard A. Nelson, 2 Dell Rd., Stanhope	Hunt before hours	20
Samuel F. Hillyer, 135 Snowhill St., Spotswood	Hunt aid of lights	20
Samuel F. Hillyer, 135 Snowhill St., Spotswood	Loaded gun in auto	20
Harry Jacobs, 606 Passmore Ave., Hammonton	Illegal poss. deer	100
Primo Zucconi, N. Egg Harbor Rd., Rosedale	Hunt deer closed season	100
Allegheny Industrial Chem., Ace Road, Butler	Pollution	1000
Raymond Young, 201 N. Chelsea Ave., Atlantic City	Hunt no license	20
Carle Young, Rinehust Rd., New Egypt	Uncased gun	100
Carl Crispen, 82 S. Broadway, Pennsville	Hunt closed season	20
Harold Perkins, Jr., Pancoast Mill Rd., Buena	Hunt no license	20
Stanley H. Horton, 204 W. Wilmont Ave., Somers Point	Pursue deer with dogs	100
Stanley H. Horton, 204 W. Wilmont Ave., Somers Point	Illegal poss. buckshot	100
Pete Dore, 102 Elm St., Kearny	Illegal firearm	20
Clarence Sutton, 3rd, Millville Rd., Bridgeton	Fail to exhibit license	20

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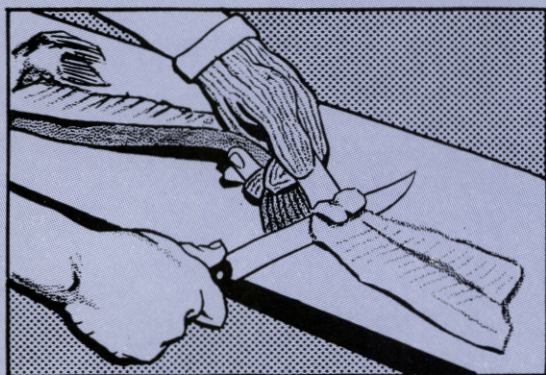
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# Fur, Fin <sup>and</sup> Campfire

By JACK SHERIDAN

## CARP

A PROLIFIC FISH, THEY'RE CALLED "SEWER TROUT" BY SOME FISHERMEN WHO LIKE TO CATCH, BUT NOT EAT THEM, BECAUSE OF BONES.

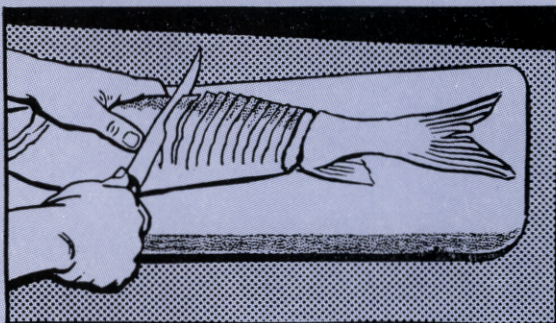


**BEST** WAY TO EAT THEM IS TO SKIN THEM, NOT SCALE THEM. USE A METAL MESH GLOVE WHEN YOU DO THE SKINNING (AS SHOWN).

A 20-POUND FEMALE CARP WILL LAY AROUND 2,000,000 EGGS IN A SINGLE SEASON.

**AFTER** SKINNING, THEN "SCORE" THEM, SLICING THE MEAT TO THE BONE BEFORE COOKING, THIN AS YOU POSSIBLY CAN.

WHEN DEEP FRIED THE BONES WILL THEN "DISAPPEAR."



Carp may be taken with hook and line at all times of the year in all waters of the state except in waters stocked with trout, as stipulated in the New Jersey Fish Laws. Carp may also be taken by the popular use of a long bow and arrow with line attached.

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