Bleak Reports Coming from Waterfowl Breeding Grounds

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U.S. Department of the Interior

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Dear Mr. Steen:

Our latest monthly activity report is just off the press. I want to call your attention to the lead item which concerns an especially serious problem now confronting us -- a new duck depression.

As a result of two years of dry weather on the prairies where we get a substantial part of our waterfowl production, many of the potholes are now dry. Because of this lack of water in the best breeding territory, we're very likely to have a very poor duck crop this year.

We're making every effort to acquaint the public with the situation and to condition them for whatever future action is necessary. Using TV, press and radio, we also will carry on a campaign urging hunters to buy duck stamps even if they don't go hunting, so as to insure continuing revenues for the preservation of wetlands for waterfowl.

Sincerely yours,

Ross Leffler
Assistant Secretary

Mr. Malvin O. Steen
Director
Game, Forestation and Parks Commission
State Capitol Building
Lincoln 2, Nebraska
There is no optimism expressed in the reports from the Flyway Biologists and other observers making surveys on the waterfowl breeding grounds in Canada and the United States. The only bright spot is a report from Fairbanks, Alaska, that the Yukon Flats and other breeding areas in that vicinity are well populated with waterfowl. While this is a heartening sign, only in a small degree does it offset the prospects for poor production in the heart of the continental breeding grounds in the Prairie States and Provinces.

As one observer with many years of experience in the prairies has put it, the early and middle fifties were the "fat" years. Precipitation during these years was in excess of normal, and in 1955 particularly, there was an unprecedented amount of rainfall on the prairies. In 1956 precipitation remained high but in 1957 there was a noticeable decline in the number of water areas and even though the carry-over of surface and soil moisture provided means for production of a good duck crop, Bureau observers even then began to call attention to the possibility of a downward trend in the precipitation curve.

The year 1958 was the second consecutive year of subnormal precipitation. Water reserves had been dissipated in the grasslands, but the parklands remained in fair-to-good condition. The number of birds returning to the Prairies was still high in comparison with averages over a long period of years, but there was a genuine feeling of concern by all experienced observers from the Bureau that the production of waterfowl was going to be curtailed. Their forecasts obviously reflected their reaction to the possible continuing effects of the deterioration in water supply. They knew that the number of water areas had decreased as compared to the period from 1953 to 1956 but they countered their pessimism with the hope that enough birds had gone to the parklands and more northern production areas in the Mackenzie River drainage to offset the losses in the Prairies.

Even this weak show of optimism, however, did not carry over to canvasesbacks and redheads; there was every indication that these two species, along with other diving ducks, were hit hard by the conditions in the Prairies.
A careful study of surveys and reports during the 1958-59 fall and winter hunting season did nothing to dispel the feeling that waterfowl, particularly ducks, were declining population-wise in the Atlantic, Mississippi and Central Flyways. The degree to which this decline was felt varied by species in individual areas within flyways; there were only a few bright spots, one of which was with reference to redhead concentrations in Texas wintering grounds. Bureau officials, however, looking to the future, were deeply concerned with the accumulated data before them following the close of the 1958-59 hunting season.

This concern has mounted with every passing day as the reports from the observers on the breeding grounds have come into Washington. From the time they arrived in Canada, waterfowl biologists have indicated 1959 conditions were unfavorable for the production of waterfowl in the Prairie areas of Alberta, Saskatchewan and Manitoba. Last winter's snows were extremely light and spring rains have been few and did not contribute any runoff. The resulting dust storms are an indication that the experiences of the "Dirty Thirties" are being repeated. The water areas that were in existence last year have been further reduced as much as 30 percent over considerable areas of the Canadian Prairies. Similar reports have been received from observers in the prairie areas of the Dakotas and Minnesota.

This spring (1959), even the number of water areas in the parklands have decreased, and the water levels in the remaining areas are down measurably. A strip of mud flats is evident around almost every waterhole. This is particularly detrimental to nesting diving ducks, including canvasbacks and redheads, since those species nest in the vegetative cover in the water along the shorelines.

All in all, the 1959 picture in the heart of the North American waterfowl breeding grounds is not good. We will know more of what is to be expected about mid-June when the aerial survey crews tabulate their data and report the results of their surveys.

Refuge Managers' List

The 1959 address list of refuge managers has been compiled in the Branch of Wildlife Refuges as Leaflet WL 408. Permanent personnel are now assigned on 135 refuges. Copies of this directory, arranged by regions, may be obtained from the Regional or Central Offices.

Pocket Gopher Control

Recent tests by the Denver Wildlife Research Laboratory give much room for optimism that improvements in methods of controlling pocket gophers, particularly in light soils, are in sight. The "Burrow-Builder" which has been under study as a method of baiting the subterranean pocket gopher has given better than 90 percent control of these rodents in some initial tests. This machine, dispensing baits protected against deterioration in soils by special preservatives, may be one answer to the pocket gopher problem in agriculture.

Largemouth Bass For Argentina

While in this country recently, the Under-secretary of Agriculture of the Republic of Argentina conferred with Director Janzen of the Bureau of Sport Fisheries and Wildlife with regard to obtaining largemouth bass fingerlings from Federal hatcheries for stocking a two thousand-acre lake near Mar del Plata, Argentina. The Bureau has agreed to furnish some bass fingerling this year. The Atlanta, Georgia, Regional Office is arranging to ship via air transport a consignment of bass when the transport schedules have been worked out and the facilities in Argentina are ready to receive the bass upon arrival.

Refuge Men Meet Public

Reports from Regional Directors indicate an increasing participation of Bureau personnel in public relations activities. Talks before sportsmen's and conservation groups, slide and film presentations in schools, and the leading of tours over the refuges are being reported from most national wildlife refuges. Refuge managers and members of their staffs are averaging at least one public appearance a week in addition to their other duties of operating the refuge for wildlife. Talks are generally illustrated by slides supplied by the Refuge Branch, while films are borrowed from all available sources.
Crane Migration Watched

With the departure of the whooping cranes from the Aransas National Wildlife Refuge in Texas, personnel of the Denver Laboratory were alerted to checking sight reports along the migration lane. Spring whooping crane field work will consist of an attempt to track down the wandering whoopers which tarry in the prairies of Saskatchewan. It is thought that these birds, possibly yearlings, are subjected to unusual hazards, and this possibility will be investigated.

Helicopter Used in Chicken Survey

A helicopter survey of the lesser prairie chicken on the Morton County, Kansas, "LU" project area was carried out by the Oklahoma Cooperative Wildlife Research Unit. A report covering this activity has been prepared. The helicopter proved to be a practicable field aid in this instance. Approximately 121,000 acres were canvassed. From this, a total of 274 lesser chickens and about 24 display grounds were tallied. In addition, 71 to 90 pheasants, 4 coveys of scaled quail, 1 bobwhite, 5 deer, and 31 coyotes were tallied.

Manatee For Aquatic Vegetation Control?

The Food and Agricultural Organization of the United Nations and the Indo-Pacific Fisheries Council are exploring the possibility of introducing manatees (sea cows) into Ceylon and Thailand to control aquatic vegetation. In the United States manatees are most abundant in Florida waters, though their range is said to cover much of the Gulf of Mexico coast; they occur also on the northern coast of South America. Unfortunately, little is known of their age at maturity, maximum size, longevity, and tolerances for temperature variations and transportation over long distances. If successful, this would be true biological control of aquatic weeds, a problem in many parts of the world.

Mosquito Control-Wildlife Management Symposium Held: A symposium on the coordination of mosquito control and wildlife management was held recently in the Department of the Interior Building in Washington, D.C. This work group meeting, the first of its kind, was sponsored by the American Mosquito Control Association, the Bureau of Sport Fisheries and Wildlife, the Wildlife Society, the U. S. Department of Agriculture, and the U. S. Public Health Service. Its purpose was to provide a better understanding of mosquito control and wildlife management objectives and methods and to explore possibilities for a greater coordination of interests where conflicts exist. Attendance was limited to personnel in the eastern United States. The need for additional research and demonstration to develop effective mosquito control programs which do not harm fish and wildlife was expressed by most participants at the symposium. It was agreed that a joint committee should be formed to coordinate such efforts.

Mid-State Project Boosted

Department support for a bill to authorize Federal participation in the Mid-State project in Nebraska was expressed by a representative of the Bureau of Sport Fisheries and Wildlife at a Senate hearing on April 29. He told a subcommittee of the Senate Interior and Insular Affairs Committee that the Mid-State Project is one of the finest proposed developments from a fish and wildlife standpoint that the Fish and Wildlife Service has ever investigated. It was noted that there would be greatly increased fishing opportunities in the project area, and the proposed National wildlife refuge, which is part of the project plan, is located in an area where the Fish and Wildlife Service has long desired to establish a waterfowl refuge.

This is a privately sponsored and planned project. The Board of Directors of the Mid-State Reclamation District requested the Fish and Wildlife Service to study the plans and evaluate the effects of the project upon fish and wildlife resources in connection with the proposed bill to authorize Federal assistance in the construction of the project. Effects of the project on fish and wildlife were studied and evaluated in the same manner as they are in projects planned by Federal water-development agencies under the Fish and Wildlife Coordination Act.
Wildlife Man Heads Federal Aid

Samuel E. Jorgensen of Minneapolis, Minnesota, Chief of the Division of Wildlife, Region 3, Bureau of Sport Fisheries and Wildlife, has been named Chief of the Branch of Federal Aid of that Bureau. He will fill the vacancy caused by the promotion of Dr. Raymond E. Johnson to the position of Chief of the Division of Sport Fisheries. Mr. Jorgensen will assume his duties in Washington, D.C. late in June.

Mr. Allan T. Studholme, Chief of the Division of Wildlife in the Regional Office in Boston, Massachusetts, will be transferred in June to the Minneapolis office replacing Mr. Jorgensen.

Mr. Jorgensen is a native of Utah, born there in 1912. He received his Bachelor of Science degree in Forestry from the Utah State Agricultural College (now the Utah State University) in 1937. On March 4, 1940, he began his duties with the Biological Survey as an assistant biologist in the Branch of Predator and Rodent Control. In 1942, he transferred to the Branch of Wildlife Research as an assistant biologist. In August of that year, he entered the Army.

After leaving the Army in December 1945, he resumed his duties with the Fish and Wildlife Service at Albuquerque, New Mexico, but this time on river basin investigations. In 1946, he transferred to the Branch of Federal Aid and in 1948 he became Regional Federal Aid Supervisor with headquarters in Minneapolis. He was promoted to Regional Chief of the Division of Technical Services in 1954 and retained that position until he became Chief of the Division of Wildlife on February 2, 1958.

Mr. Studholme is a graduate of the University of Wisconsin and has an M.S. in zoology from Pennsylvania State University. He has worked in the Boston office of the Bureau of Sport Fisheries and Wildlife for 13 years, serving successively as Regional Inspector of the Branch of Federal Aid, Regional Federal Aid Supervisor, and Chief of the Division of Wildlife. He spent seven years in Wildlife working in Pennsylvania.

Activity In Southeast

Samples of bottom organisms from streams in the Chattahoochee National Forest, Georgia, were collected for pre-treatment data to help determine the effects of experimental application of 1/2 pound of DDT per acre for control of elm spanworm. Field work in the Southeast is well under­way for the 1959 season, with technical assistance in fishery management provided several military installations in Alabama, Georgia and Florida.

New England Stocking Studied

Management of warm-water fish ponds in the New England area has been handicapped by a lack of information on the best forage species and stocking procedures. A small project to test the results of stocking largemouth bass alone and in combination with crayfish, has been worked out with the Soil Conservation Service in New Hampshire. Ten ponds have been selected for the test stocking this year.

Wolves and Caribou

Wolf numbers in the Steese-Fortymile caribou range in Alaska are much reduced from the high occurring in 1956-57. Tabulations for the work conducted out of Fairbanks on the Steese-Fortymile caribou range show a wolf sighting frequency of 1.06 per hour in the winter of 1956-57. In June of 1957 the survival of the preceding spring's caribou calf population (yearlings) was 6%. In 1957-58 the wolf sighting frequency was .543 per hour flown and the June yearling survival was 8%. This winter, 1958-59, the wolf sighting frequency has dropped to .199 per flying hour and current calf survival figures are up to 33%.

Eighty wolves were seen in this area in 1956-57 and 52 killed. Thirty-six were seen in 1957-58 and 26 killed.

Grandfather Gets Degree

Mr. Clarence E. "Ed" Dunbar, fishery aid at the Eastern Fish Disease Laboratory of the Branch of Fishery Research, Leetown, West Virginia, received his Bachelor of Science degree from Shepherd College on June 1. Mr. Dunbar, a grandfather, has worked at Leetown for nearly 9 years. On his own time he has completed his secondary school and college work as well as performed increasingly difficult and technical work in the laboratory.

Walleyes in Elephant Butte

The Elephant Butte Reservoir near Truth or Consequences, New Mexico, was stocked with 968,000 walleye fry in May 1958 from the Federal hatchery at Hot Springs, New Mexico. As a result of this stocking, wal­eyes ranging from 9 to 11 inches in length were caught by fishermen during September and October 1958.
Tests Find Few Trout

Field tests undertaken to evaluate the results of stocking marked fingerling trout in streams at Mount Rainier National Park, were carried out during April by Fishery Management Biologists stationed at the Bureau's Portland office. Even though the latest and best electric shocking equipment was used, very few of the trout were recovered. It is hoped that final results will help establish a sound stocking policy for the Rainier streams.

Sixth Indian Tribe Signs

A Cooperative Agreement for fishery management work has been signed with the Mescalero-Apache Tribe of New Mexico making the sixth Indian tribe in the Southwest to enter into such an agreement during the past several months. Our cooperative work with the tribes and the Bureau of Indian Affairs is rapidly taxing our ability to meet their requests for assistance.

Cooperative fishery management work at the Tulalip Indian Reservation, Washington, has recently been resumed, with the stocking of salmon in Reservation waters. Records on the success of the undertaking and the catch of fish by the Indians will be maintained.

Colorado River Data Sought

A Fisheries Technical Committee, to serve as an arm of the Colorado River Wildlife Management Committee, was recently organized with representatives from the fisheries staffs of Arizona, Nevada, Utah, California, and the Bureau of Sport Fisheries and Wildlife. The Committee, which will begin functioning immediately, has the responsibility of assembling biological information on the fishery resources of the Lower Colorado River, and the preparation of fishery management recommendations. Fulfillment of this program will require extensive assistance and cooperation from our Bureau's Division of Sport Fisheries.

Inspect Animal Damage

Staff members attended the Forest Wildlife Problems Committee field trip in the vicinity of Olympia, Washington, to inspect animal damage, particularly that of rodents, to reforestation in the Northwest. Research projects of the Denver Laboratory were highlighted and explained to the group of approximately 50 foresters and public officials. The following are examples of the damage observed:

1. A 90-acre field was planted to Douglas fir in 1957 -- 30 acres uncultivated and 60 acres cultivated. Most of the uncultivated portion was destroyed by meadow mice during the first year and much of the cultivated plantation suffered heavily from drought. Due to the losses from mice and drought, 70 acres were replanted in 1958 and much of this again is being damaged by mice. The Soil Bank share in this venture has already been $43 per acre.

2. The Hell Creek plot of 100 acres was successfully sown with repellent-treated seed (developed in the Denver Laboratory) in 1951 with an estimated 1,966 seedlings germinating per acre. By 1956, there were only 830 live seedlings per acre, 76 percent of which showed evidence of animal damage. Most of this damage was from deer browsing.

(3) Seedling damage by the varying hare is a major reforestation problem. In an over-winter test, 44 percent of untreated Douglas fir seedlings were clipped by hares, compared to only 14 percent that were protected, respectively, by a contact repellent and a toxic systemic. The repellent and systemic treatments are being studied and developed by the Denver Laboratory.

Stocking of Black Hills Streams

The Bureau of Sport Fisheries and Wildlife's McNenny Hatchery at Spearfish, South Dakota, expects to stock about 150,000 legal-size trout in Black Hills streams this summer.

Successive plants of trout will be made in the better streams throughout the summer. The present stocking rate calls for 860 legal-size trout per mile of stream during the stocking season.

Recovery of planted fish is expected to be about 75 percent and the rate of fisherman harvest of these trout is estimated at one fish per two hours per fisherman.
Kirwin Refuge Problem

The fencing of boundaries and interior units on the Kirwin National Wildlife Refuge in Kansas to protect the slopes of the reservoir against erosion, provoked many letters during the past month. In addition to the removal of fences, demands were submitted for unlimited boating, numerous access points, and a road system practically around the shore of the reservoir.

A meeting was held on April 24 presided over by representatives of our Albuquerque, New Mexico, Regional office. The manner in which the recreation plan for Kirwin Reservoir was jointly developed with the National Park Service and the Bureau of Reclamation was outlined at the meeting. It was generally agreed that portions of the reservoir need to be reserved for wildlife feeding and protection. It was also agreed that boating activities need to be regulated by satisfactory safeguards.

The meeting was followed by a tour of the refuge to resolve in the field certain questions on road locations and access.

Unit Area on Kenai

The Geological Survey has designated approximately 93,000 acres on the Kenai Peninsula as a logical unit area for exploration and development under the provisions of the Mineral Leasing Act. The application for this designation was filed by the Union Oil Company of California.

Since the approved area involves the Kenai National Moose Range leases will be subject to such stipulations as are necessary to protect the wildlife resources of the area. The proposed unit area borders Cook Inlet for some 12 miles and includes the towns of Kenai and Soldotna as well as the lower end of Kenai River.

Botulism Outbreak Subsides

A rather severe outbreak of botulism occurred early this month in the vicinity of Willard Spur on the Bear River Migratory Bird Refuge in Utah. Over 2,000 ducks were found dead. Investigations by Denver Laboratory personnel of the Bear River Research Station revealed high invertebrate populations were present at the time of the outbreak. The outbreak now appears to have run its course and only an occasional sick duck has been observed.

Issued as an administrative aid

Navy Provides Laboratory Space

Arrangements have just been completed with the Department of the Navy for space for a fish disease laboratory at the Sand Point Naval Air Station in Seattle, Washington. Laboratory personnel have occupied facilities of the Fisheries Center, College of Fisheries, University of Washington for several years, but the University's increased faculty and expansion of fishery technological research has made it necessary to find new space for the Bureau's fish disease research. The air station is only a few minutes drive from the University so that contacts and collaboration may be continued without interruption. There will necessarily be some temporary disruption of research on fish pathology because of the necessity for making extensive alterations within the building at Sand Point and outfitting it to make a reasonably good research facility.

Lifted From Letters

According to Plan: The distribution of fish in New York from Federal hatcheries is currently conducted in accordance with a cooperative agreement between the Service's Bureau of Sport Fisheries and Wildlife and the New York Conservation Department. The simplified fish allotment procedure provides for closer coordination between agencies.

The State-Federal legal-size trout stocking schedule for 1959 for all waters in New York State, except farm ponds which receive only fingerling trout, was completed January 1 of this year. All legal-size trout to be distributed there have been allocated in conformity with the current agreements.

Trumpeter Swan: While the trumpeter swan is no longer in danger of extinction in the United States, the Bureau's program has not allowed favorable consideration of requests from individuals desiring to possess them. The number of these swans is still very low when their former population and range are considered, and the small numbers which can be spared annually have been used principally in attempts to establish other wild flocks.
Albino Trout by Parcel Post

Recently 36 albino trout were successfully sent by parcel post from the Washington National Aquarium to the Dallas Aquarium in Texas.

After extensive preliminary tests for survivability under simulated conditions, the fish were placed in double polyethylene bags with water, oxygen, and a small amount of Sodium Amytal. The plastic bags were placed in insulated corrugated boxes and enclosed in outer shipping boxes. The shipment was dispatched from Washington by special delivery on the evening of January 28, arriving in Dallas in good condition the morning of January 30. Cooperation from the Post Office Department was excellent.

Sioux Utilize Fishery

The success of our fishery management program, carried out in cooperation with Federal agencies and installations, depends largely on personal contact and following up the results of recommendations and management activities. Particular attention has recently been given to the Wildlife Refuges and Indian Reservations in South Dakota, where waters were reclaimed of rough fishes preparatory to restocking them with trout or warm-water game-fishes. In most instances, satisfactory results are being obtained.

There are indications that more of the Sioux Indians are utilizing the available fishery for sport and food than in previous years. After extensive field studies and discussions with the South Dakota fishery personnel, 700,000 rainbow trout fingerlings have been stocked in Shadehill Reservoir, a Bureau of Reclamation project in the Black Hills. Fish were provided from both State and Federal hatcheries. This 5,000-acre reservoir has heavy public use.

Police to Issue Minnow Permits

The Bureau of Sport Fisheries and Wildlife is no longer required to issue permits to take minnows as bait in the District of Columbia. This function was transferred to the office of the Metropolitan Chief of Police by the Fish and Wildlife Regulations approved March 12, 1959.

FROM FIELD REPORTS

Service Planes Seek Missing Hunters: Service aircraft were used in the unsuccessful search for Jim Falls, an independent wolf hunter, and a companion who departed from Bettles in a private airplane on April 3. The search covered the south slopes of the Brooks Range from Chandalar Lake to Stevens Village on the Yukon River. Falls had taken 109 wolves from this area this season (craft and bodies since found).

Grizzly Bear Doses: A demonstration of the use of "Succinyl Choline Chloride" as an anesthesia was conducted at the Arctic Health Research Center at Anchorage in April. BSFW personnel stationed at Anchorage and Kodiak participated. A dose of 4.5 cc or 90 m.g. of the drug was administered to a 495 pound captive grizzly bear. In two minutes the bear was helpless; then 80 cc of pentabarital sodium was injected, keeping the animal anesthetized for three hours. This drug has possibilities for use in tagging bear on Kodiak Island and for use in tagging wolves.

Moose Calf Crop: Aerial calf surveys in late April of the lower Susitna and Matanuska Valley moose herd indicated a good calf survival. The moose calf:cow ratio of 40 calves per 100 cows is not significantly different from that taken in November.

Too Many 'Gators: Trapping permits have been issued to private individuals to remove approximately 250 alligators over 4 feet in length on the Blackbeard Island Refuge. Animals are taken and retained alive waiting favorable market conditions. This removal is necessary to reduce the high population.
Elk Now "On Their Own": On the Elk Refuge at Jackson Hole, Wyoming, winter feeding was discontinued on April 7. The State Game and Fish Commission fixed a 2,000 maximum take on the elk harvest in Jackson Hole for the 1959 hunting season. The elk kill for 1958 was nearly 3,200.

Bobcat Pelt Brings $13: One of the highlights of the Branch of Predator and Rodent Control activity for the month was the sale of cooperative bobcat skins. Sales in Colorado, Utah, and Wyoming were especially successful. In each case the per-skin sale averaged over $10, with a few going as high as $13. Revenue from most of the sales goes back into the predator control program of the association, county, State or other group with whom the Bureau is cooperating and is a most welcome boost to sagging finances.

22 Fires (Incendiary) on Kentucky Woodlands: A total of 1,050 acres and one building have been burned on Kentucky Woodlands Refuge as a result of 22 fires of incendiary origin since March 16. Constant vigilance of refuge personnel and firewatchers has kept the total area burned to the above figure. Assistance is being given the Refuge Manager by Management and Enforcement personnel, and the FBI has been requested to cooperate also.

Busy Hatcheries: The Valley City (N.D.), Guttenberg (Iowa), and New London (Minn.) hatcheries have been engaged almost full time in trapping and spawning northern pike, and collected approximately 50 million eggs with Valley City leading with 35 million. Most of these eggs had hatched by the end of the month and the fry stocked in selected lakes or hatchery ponds.

Federal Aid Scans Fire Ant Work: The first Federal Aid Fire Ant Control Investigation Project in the Southeast Region has been approved. It was submitted by the Georgia Game and Fish Commission.

OFFICE OF THE COMMISSIONER

Safety Report

Fish and Wildlife Service accidents for the first three months of Calendar Year 1959 had an estimated direct cost of $25,111.00. Of this amount the Office of the Commissioner was responsible for $18.00; the Bureau of Commercial Fisheries $2,260.91; and the Bureau of Sport Fisheries and Wildlife $22,832.09. This represents a decrease of $3,452.95 for the Bureau of Commercial Fisheries from the like period of 1958 and an increase of $12,793.58 for the Bureau of Sport Fisheries and Wildlife. Included in these cost figures are accidents resulting in personal injuries to employees, damage to Government motor vehicles, fire losses, property damage and tort claims against the Government. One tort claim arising from a motor vehicle accident accounted for $8,000.00.

The disabling injury frequency rate (number of lost time injuries per million man-hours of work performed) compared with the first quarter of 1958, rose from 12.5 to 12.7 for the Service; fell from 14.3 to 4.9 for the Bureau of Commercial Fisheries; and rose from 12.7 to 17.3 for the Bureau of Sport Fisheries and Wildlife.

Motor vehicle accident direct costs compared with the same 1958 period decreased $1,007.08 for the Bureau of Commercial Fisheries; and increased $3,045.90 for the Bureau of Sport Fisheries and Wildlife.

Days lost from work through disabling injuries increased from 333 in the 1958 first quarter to 335 for the 1959 period. The Bureau of Sport Fisheries and Wildlife accounted for 313 of the days lost.

The Bureau of Commercial Fisheries is the first Service Bureau to equal its disabling injury frequency rate goal of 5 for a quarterly reporting period. Only the Seattle and Juneau Regions reported disabling injuries for the period. All Bureau of Sport Fisheries and Wildlife Regions except Region 5 exceeded both their 1958 first quarter disabling injury frequency rate and the Service's five year average rate of 14.6. The Branches of Wildlife Refuges, Predator and Rodent Control and Fish
Packeries suffered most with 237,740 and 29.5 days lost and $8,357.64, $10,193.00 and $1,784.00 estimated direct costs respectively.

Handling materials and equipment, and falls continue to account for the largest percentage of disabling injuries.

It is hoped through greater emphasis on training, work planning, good housekeeping, and use of personal protective equipment to stem the rising trend of accidents indicated by the first quarter reports.

Foreign Fishery Students

On May 29, Lt. Irshad K. Lodhi left Washington enroute to Pakistan following eight months of training in this country. His field of interest is fishing gear and methods, and his varied experience aboard exploratory and commercial vessels has qualified him to participate actively in the further development of the fisheries of Pakistan.

BUREAU OF COMMERCIAL FISHERIES

Imports of Fishery Products Up

Although 1958 imports of frozen groundfish fillets, shrimp, and tuna were far larger than in any previous year, indications are that these records will be broken in 1959. During the first three months of this year, imports of groundfish fillets were 30 percent greater than in the same period in 1958. Those of shrimp were up 60 percent, and those of tuna 95 percent. Imports of fish meal, which totaled 55,900 tons during the first three months of 1959, were 114 percent greater than in the first quarter of 1958.

1959 Catch Running Lower

The domestic catch of shrimp in the South Atlantic and Gulf States during the first three months of the year was 27 percent less than in the corresponding 1958 period. In New England, fish landings at Boston during the first four months of 1959 were 10 million pounds less than for the same period in 1958. On the Pacific Coast, the catch of tuna has been at a considerably higher level than in 1958. However, since most of the fleet has been forced to tie up because of the lack of a market the production may soon fall below the corresponding period the previous year.

Great Lakes Motion Picture

The Outboard Marine Corporation (Evinrude and Johnson) has notified the Bureau that they are prepared to enter into agreement with the Bureau of Commercial Fisheries immediately to make a Great Lakes motion picture. Outboard Marine feels this film has all the prospects of becoming one of the greatest documentaries in which they have had a chance to take part. This motion picture is expected to go a long way toward cementing the present strained relations between commercial and sport fishermen. A letter of agreement is now being drafted and work on this film is expected to start in the near future.

Super Market Institute Convention

The Bureau of Commercial Fisheries has the distinction of being the first and only Government agency to ever receive an invitation to exhibit at the Super Market Institute Convention, the biggest annual food trade show in the country. The Bureau exhibit, at this year’s Convention in Atlantic City, New Jersey, May 24-27, featured market development and standards and inspection.

Outdoor Fish Cookery Bulletin

The Bureau has scheduled for June release a special marketing bulletin on Outdoor Fish Cookery. This bulletin is designed to focus consumer attention on fish as an outdoor barbecue item.
Alaska Transfer Discussed

Discussions have been conducted within recent days between Bureau and Alaska Department of Fisheries personnel in Washington, D.C., concerning matters of mutual interest in effecting the transfer of jurisdiction over the fisheries from the Department to the State agency.

An agreement has been completed whereby State fishery personnel will be assigned to work under Bureau field supervisors in the major fishery districts this season on a reimbursable basis. This will facilitate the gradual reassignment of regular Bureau fishery management personnel to other Bureau activities, and at the same time provide valuable experience for State employees who will shortly assume responsibility for the Alaska fishery management program.

Fishery Attache Pact Signed

On May 5, 1959, Assistant Secretary Scott of the Department of State and Assistant Secretary Leffler of this Department signed a document establishing a fisheries and minerals attaché program.

The agreement spells out the responsibilities of each Department in selecting attaches, the duties of the attaches, and the methods for instructing attaches as to the types of reporting required from abroad on developments that affect the United States fishing and minerals industries.

At present, there are two fishery attaches -- one in Mexico City as Regional Fisheries Officer for Latin America, and one in Tokyo as Fisheries Attaché for Japan. The Bureau has requested that the Department of State establish four additional regional posts to cover other strategic fishing areas of the world. The posts recommended will be at the Oslo, London, Lisbon, and Bangkok Embassies.

Bristol Bay Reopened

Following a review of the Bristol Bay situation in the light of recent discussions with the Japanese regarding their high seas fishery, amendments to the Alaska commercial fishing regulations were prepared which will permit a limited commercial fishery for red salmon in each of the major districts of Bristol Bay. Both drift nets and set nets will be permitted to operate for weekly fishing periods determined on the basis of the amount of fishing gear registered for fishing.

It is anticipated that 4 or 5 salmon canneries will operate in the area under a consolidated arrangement as compared with 7 in 1958 and 10 or 12 in other recent years. Since fishing and canning operations in the area will be considerably less in scope than in prior years, it is anticipated that the reopening of the Bristol Bay area will provide only a partial solution to the economic problems facing the residents of the area and that other measures may still be necessary to forestall the threat of economic hardship to the people who are almost entirely dependent upon large-scale fishing operations.

Columbia Program Reviewed

In response to a request from the Bureau of the Budget, a review report has been completed for the Columbia River Fisheries Development Program. The report is primarily a review of activities since inception of the program in 1949, an appraisal of various activities, and contains recommendations as to the future direction of the program. The major recommendations consist of the following: (1) Expansion of the program in the upper-river area above McNary Dam insofar as stream improvement activities are concerned, (2) deferment for the present of further hatchery construction until disease and nutrition problems are brought under control and until a careful appraisal has been made of the effectiveness of the hatchery program, and (3) increased emphasis on research, particularly in regard to fish disease, nutrition, and appraisal of program results.

Transportation Study

The Bureau of the Census has conducted a survey of canned fish distribution in the United States for the period July 1, 1958, through December 31, 1958. Arrangements have been made to obtain information on
transportation aspects of the distribution of these products.

The Bureau is financing an analysis of the data obtained so as to provide information on the average length of haul, freight rates and volume shipped to the various rail freight rate territories by processors of canned tuna, salmon and sardines.

Separate tabulations will be made for each one of these canned fishery products. A supplementary tabulation will show percentage distribution of the number of shipments by size of sales invoice and by type of carrier for all the larger establishments canning each one of these products.

The study is expected to be completed late this summer. Subsequently an analysis for the first six months of 1959 may be undertaken.

Blue Crab Data Sought

Current Bureau research seeks the cause of the annual fluctuations in size of the Atlantic blue crab stocks, more knowledge on the distribution of the stocks and methods for predicting the annual abundance of crabs.

To find these answers, the Bureau is tagging crabs in South Carolina and North Carolina. Results of tagging 1,642 mature crabs (over 5 inches in width) in January 1958 in the estuary of the North Edisto River, South Carolina, indicated no substantial movement of tagged crabs away from this area. To substantiate these findings and to determine if crab movement in other estuarine areas is similar, 2,088 tagged crabs were released in the North Edisto River, Charleston Harbor and Bull Bay during the January-March 1959 period. As in 1958, these studies are in cooperation with the Bears Bluff Laboratories, Wadmalaw Island, South Carolina.

Of the 6,250 commercial size crabs (over 5 inches in width) tagged in the Neuse River and Pamlico Sound, North Carolina, in 1958, 29.3 percent of the Neuse River tagged crabs and 16.4 percent of the Pamlico Sound tagged crabs have been recaptured.

Striped Bass Yield At Albemarle

From 1955 through 1958, the fall fishery (September, October, November and December) in Albemarle Sound yielded 1,117,000 pounds of striped bass. Of this figure 20 percent was landed in 1955, 20 percent in 1956, 14 percent in 1957 and 46 percent in 1958.

The Roanoke River is the most prominent striped bass production tributary to Albemarle Sound. The Fish and Wildlife Service began active participation in the Roanoke River dam and pollution problems in 1955. A report of the Steering Committee summarizing the results of some of the cooperative efforts is now being prepared.

State organizations with limited help from the Fish and Wildlife Service are continuing Roanoke River striped bass population studies to evaluate on a long-term basis the annual abundance of fish in the spawning runs in relation to water discharge from power dams and industrial mill-waste loadings. For the fourth consecutive year, a tag-recovery study was begun in March 1959 to estimate population size, spawning escapement and fishing rate.
U.S.S.R Operations Observed

Bureau field personnel in Alaska have been participating in periodic serial surveys by the Navy of Soviet fishing fleet activities in the eastern waters of the Bering Sea. As of April 27, a substantial portion of the Soviet fleet, including about 40 vessels, was operating approximately 100 miles north of Unimak Island. By mid-May, much of the Soviet fleet had moved northward to the area between Unimak and St. Matthew Islands.

The Soviet fleet has been operating in waters along the Arctic ice flow and has been moving northward as the ice field gradually recedes. Apparently the fleet depends upon this ice field as a source of ice for preserving the catch, at least until it can be transferred from the fishing vessels to the large mother ships.

In observations of the Soviet fleet, including photographic surveys, there has been no evidence that the Soviets are using salmon fishing gear, nor is there evidence that the fleet is particularly interested in halibut. For the most part, the Soviet fleet appears to be operating entirely on bottom fish, paralleling very closely the operations of Japanese vessels in this area of Bering Sea.

Japan Expanding Its Fisheries

The Bureau of Commercial Fisheries has released Fishery Leaflet 485, entitled "Japanese Fisheries Based in Overseas Areas".

The report describes the growth and magnitude of overseas-based fishing operations that have been established on a basis of (1) joint Japanese-foreign companies to conduct fishing and processing operations, (2) contracts or concessions to supply fishery products to local foreign markets or to processing plants for export, (3) technical assistance, (4) exploratory fishing, (5) refueling or transshipment bases, or (6) selling directly in a foreign country fish taken by Japanese high-seas operations.

Japanese overseas fisheries are now in operation or planned in more than 35 foreign countries. Approximately 200 Japanese fishing vessels are reported engaged in such operations.

A representative of the INPFC reported on the work being done by Canada and Japan. Canada has two vessels operating in the Gulf of Alaska out to about 160°W. Japan will have two vessels on salmon fishing, two on tagging and one vessel on oceanography. Canada will add, in addition to its other programs, an oceanographic cruise in the eastern North Pacific which is not confined entirely to the INPFC program.

Fur Seal Research

On April 29, the Bureau of Commercial Fisheries ended its pelagic fur seal research for 1959. On that date, the last of the three vessels chartered to take fur seals at sea was returned to its owners. During the 301 ship-days spent since mid-January collecting seals off California, Oregon and Washington, a total of 1,546 fur seals were killed. Studies are now being made of stomach contents, age, sexual development, and other characteristics of the animals. Under the Interim Convention on Conservation of North Pacific Fur Seals, the United States is obligated to take from 1,250 to 1,750 seals at sea annually for research purposes. The other parties to the Convention—Canada, Japan, and the U.S.S.R.—are also obligated to carry on pelagic research.

New England Bluefin Tuna

The Delaware's exploratory fishing operations for tuna, utilizing long-line gear, have revealed that bluefin tuna are present in commercial concentrations in the general area of the Gulf Stream south of George's Bank during the winter and spring seasons.

In order to gain additional information necessary to adequately assess the commercial potential of this resource, the first of a series of tuna long line "production-type" cruises commenced in the latter part of May.

Initial fishing has been promising and reports from the Delaware indicate that approximately 12,000 pounds of bluefin tuna were taken on a single set of 60 baskets (600 hooks) of long-line gear, approximately 125 miles south of Nantucket Shoals Lightship. Twenty of these fish were tagged and released by cooperators from the Woods Hole Oceanographic Institution in the hope of obtaining information on the migration habits of this species.
Water Pollution Seminar

Bureau scientists took an active part in the second seminar on biological problems in water pollution at Cincinnati, Ohio, on April 20-24, 1959. Panel discussions covered the following topics:
1. Effects of discharge of radioactive materials on aquatic life.
2. Effects of pesticides on aquatic life.
3. Environmental requirements for aquatic life.
4. Practical applications of biological findings in pollution abatement.
5. Marine and estuarine pollution problems.
6. Future research needs.

One Bureau scientist gave a paper entitled "Accumulation of radioactive pollutants by marine organisms and its relation to fisheries". Another described "Some effects of pesticides on marine arthropods and mollusks". A third discussed "Materials used for the control of lamprey larvae and their toxicity to fishes and other aquatic organisms". Another talked on "Pollution and environmental requirements of oysters".

Two other Bureau scientists were among the 350 scientists who attended this seminar.

From Field Reports

Shrimp Fishery Expansion: Recent reports indicate that at least 17 U.S. shrimp vessels have headed southward to work out of British Guiana and Trinidad on the Atlantic continental shelf of South America. With the catch of shrimp per vessel in many instances reaching a marginal point in the Gulf of Mexico and an increase taking place in the number of vessels fishing, some relief is being sought by extending operations to newer grounds. This activity has been spearheaded by the exploration of the area by the Oregon, and it will be very interesting to observe the trend which may develop from the initial operations mentioned above.

Changing Fisheries: April is a month of changing fisheries, particularly in the southern section of Region 3. Oystering is over and crabbing and fishing are getting started. The Delaware oyster fishery ended what is perhaps the worst season on record -- only an estimated 10 percent of the planted crop harvested. The pound net fisheries of New Jersey are starting up, and it appears that a fair year may be in the offing. The Virginia alewife run was heavier than last year, and packers had sufficient fish to meet their needs.

The finfisheries of Chesapeake saw the advent of the croaker in April. First commercial catches from pound nets were reported April 13. Biologists predict that croaker will be less abundant this season.

Oyster Raft Study: In a Woods Hole experiment only five out of 135 strings with live oysters were lost during the winter months. Over 50 percent of Virginia oysters suspended from the raft died during the winter, while little or no mortality was observed among the oysters from Mill Creek and Wareham River, Massachusetts, and Long Island Sound, which were kept on the same raft.

Lifted From Letters

Pickerel Studies: Our staff of scientists on the Great Lakes, in cooperation with the fish and wildlife agencies of the States bordering the Lakes, have been considering the serious problem of drastic fluctuations in the occurrence of pickerel and other important species of Great Lakes fish. These scientists at the present time can find no evidence to support the view that commercial fishermen have caused the decline of pickerel in Lake Erie. Their studies thus far show that the important species of fish in Lake Erie, including the pickerel, fluctuate naturally because of uncertainties in the Lake itself.

At times a complete loss of the reproduction of these important species leaves a dearth of the fish in the Lake for a period of years. Sometimes these same conditions which cause drastic declines in the abundance of one species act favorably upon the reproductive processes of other species and the result is that there is a natural waxing and waning of many of the fish population in Lake Erie. Studies on Lake Erie over the past 50 years have shown substantially the same picture. These fluctuations in abundance appear to be caused by the shallow nature of Lake Erie and its position with respect to the prevailing winds which affect the temperature and lake strati-
Lobster's Protective System: If a lobster is seized by the claws, it can throw off the arms bearing the claws at a point between the second and third segments of the arms. If the shell on some part of an arm is crushed and the lobster is bleeding, it will often cast off its claw at this point. At the joint between the second and third segments of the arm the claw breaks off easily and there is a special arrangement for preventing bleeding. However, if the arm is broken in some other spot much bleeding occurs. After the old claw is thrown off a soft bud grows out from the second joint of the arm, and when the lobster molts the new claw increases greatly in size and becomes covered by a shell. It takes three or four molts, however, for a new or regenerating claw to reach its normal size again.

The smaller legs also may be cast off but not so readily as the large claws. These small legs and other appendages such as the feelers and the swimmerets also can be regenerated.

Albino Seals: In all species of fish and game animals, albinos occasionally are found. The Bureau of Commercial Fisheries estimates that in the Pribilof Islands fur seals about one seal in 100,000 is light-colored and has pink eyes. In general, the albino individuals do not survive long in the wild as they are more easily seen by the larger animals that rely on the same species for food. Thus, a white fur seal can be more easily seen than normal seals when a group of such animals is approached by killer whales.

What Attracts Fish? The sense of smell plays a fairly important part in the lives of all fish, but it is not the only sense upon which they rely to obtain food. They rely also upon the organs of sight and hearing; however, if these should fail, they could probably locate food by smell alone.

In some fishes the sense of smell is extremely acute. The smell of blood or of decaying fish, for instance, attracts sharks from great distances. The extent to which the sense of smell is employed for locating food varies not only with the species of fish but also with circumstances.

We have conducted some research on the effects of sound on fish and from our work we feel that, except for the initial "start" when sound is first perceived, there is little effect either as an attracting force or as a repelling one.

In summary, it appears from research done on stimuli which attract fish that the sense of sight is probably the most important sense to the fish in terms of recognizing danger, food, etc. Consequently, it would seem that attractants designed to stimulate the sense of sight would be the most effective. This applies to fishes in both the fresh water and the marine environments.

NON-SERVICE ACTIVITIES OF INTEREST TO FISHERIES

Australians Have 'Copter Pick-up: Helicopters may soon be used as delivery vans for shrimp from the Rockhampton grounds off Queensland, Australia. Plans indicate that a helicopter will be sent to the shrimp fleet in Keppel Bay to pick up catches from the boats for immediate delivery to markets. The helicopter would also be used to take supplies out to the shrimp boats to enable them to stay at sea for weeks at a time.

U.S.S.R. Fishes Carolina Islands Tuna: According to a report from a Japanese tuna fishing vessel, a Russian fishing vessel was sighted fishing for tuna in the Caroline Islands area on February 17, 1959. At the time of the sighting, tuna was being hauled aboard the Russian vessel. The crew appeared to consist of about 20 persons, including some women. Another Russian vessel was reported to be nearby.
Japanese Plan First Atomic-Powered Fishing Vessel: Japanese plans for building the first atomic-powered fishing vessel for experimental purposes were announced at the second World Fishing Boat Congress, Food and Agriculture Organization Headquarters, Rome, Italy.

The vessel will have a displacement of 3,000-4,000 tons and will be powered with an American-type reactor. It will have a complement of 100, of which 50 would be sailors and 50 research experimenters. Of the research crew, 20 will act as observers and 30 will be responsible for handling the reactor.

The reactor will be installed in a container and will use 29 percent condensed dioxidized uranium as fuel. For emergency use, a 120 h.p. diesel will be installed so that the boat can be navigated if the reactor should be put out of use.

It was announced that the trial design will be as economical as possible, but it is up to the Japanese Government whether or not the necessary funds are appropriated for construction of the vessel.

Japanese Use Ultrasonics: A transmitter and a receiver, which the Japanese suspended over the side of a vessel at a depth of 1.5 meters, recorded the movement and the density of fish schools and the depths in the sea at which they occurred. During daylight the fish were usually at depths between 30 and 50 meters, but toward dusk they rose to shallow depths.

Fish schools concentrated on the deep scattering layer. (Pelagic organisms concentrate in layers throughout all oceans at varying depths and rise toward the surface at night.) The fish captured in this layer were satiated with Euphausia, small shrimplike crustaceans. When the scattering layer was near the surface, the fish catches improved and the water became less transparent. The large abundance of plankton, the passively floating or weakly swimming animal and plant life, caused the decline in transparency.

The Japanese believe this equipment, which they are trying to improve, will lead to improved fishing methods. If they can use this technique on a large scale, they will improve materially their salmon catch, without increasing the present expenditure of effort.

Korean Fishing Boats Land at Samoa: The first Korean tuna long-line vessel to fish for the tuna cannery in American Samoa arrived early in 1958, and a second vessel arrived in September 1958. Six additional Korean vessels were reported to be scheduled to enter this fishery under contract to the tuna cannery which is operated by a United States west coast canning company.

Label Country of Origin: A new Bureau of Customs regulation requires that imported frozen trout packed in an envelope or other closed wrapper in which it will reach the ultimate purchaser shall be marked with the name of the country of origin by means of legible and conspicuous marking on the wrapper unless the name of the country of origin can be clearly seen through such wrapper. In addition to the statement of country of origin on the wrapper or envelope, it is recommended that imported frozen trout also be marked: "To be weighed at the time of sale". The regulation became effective on March 1, 1959.
July 1 ~ D.S. (Duck Stamp) DAY ~ July 1

JANZEN DECLARES DUCK STAMPS INSURANCE FOR FUTURE DUCK HUNTING

A call to the duck hunter to "have enough faith in the future of the sport to contribute his $3 for a duck stamp even though the hunting prospects for this fall look pretty grim", was made yesterday by D.H. Janzen, Director of the Bureau of Sport Fisheries and Wildlife, Fish and Wildlife Service.

Director Janzen's appeal was made at the annual meeting of the Outdoor Writers Association of America at Hot Springs, Arkansas.

He then declared that the duck hunter should consider "this $3 investment as an insurance payment against the permanent retiring of his duck hunting equipment and his dreams of future duck hunting trips for himself and for those who come after him". Janzen asked the Outdoor Writers to point out that thought to their readers.

During the course of his talk, Janzen indicated that not only was the drought taking a terrific toll in the 1959 crop of young birds but that it could also contribute to the loss of a race which the Bureau of Sport Fisheries and Wildlife is making against time in the acquisition of habitat for duck wintering and nesting.

The $3 Duck Stamp Money is earmarked for selection and acquisition of waterfowl habitat.

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