

Kansas Ornithological Society

BULLETIN

PUBLISHED QUARTERLY

Vol. 15

June, 1964

No. 2

THE GOSS ORNITHOLOGICAL COLLECTION—A CENTENNIAL

DONALD W. JANES

One hundred years ago Col. Nathaniel S. Goss, of Neosho Falls, Kansas, began a collection of North American birds which today stands in Topeka as a tribute to scientific effort and as a monument to this pioneer naturalist. The Collection, which includes most of the birds of Kansas, was, and is, one of the most important made in the United States.

For the last 80 years the Collection has been on display to the public and has been a source of joy and stimulation to many thousands of people. Its history has been varied and serves as a backdrop before which several men have acted parts of their lives. The Collection has been moved five times, renovated twice, fought over by various groups, and ransacked by thieves. Today it is divided between two museums and some of the birds are showing their age. However, it is still a valuable collection for aesthetic, educational, and scientific reasons.

EARLY DAYS OF THE COLLECTION

From his boyhood Goss was interested in birds. He and his brother, Benjamin Franklin Goss, were life-long companions in gathering bird eggs and preparing skins. (The B. F. Goss collection of eggs is one of the largest in the country and is now in the Milwaukee Public Museum.) Goss' early collections were probably started in Kansas, for in January, 1861, he wrote from Neosho Falls to his sister, "The rest of the time (I spend) catching birds—have been trying to catch a cardinal grosbeak for the past month but weather is so warm won't bait—they are beautiful cage birds and great singers. I have caught 4 tree sparrows, 2 blue jays, and 2 horned larks." Goss also made observations on food habits, nesting, egg dates, clutch size, and migration dates. During the Civil War years Goss evidently did little with birds, but continued to make miscellaneous observations in his travels. During the 1860's Goss traveled about in Kansas acquiring land for the railroads; he carried a double-barrelled shotgun with him and would steal "away several times with my gun—you know I have a passion for hunting! but little game!" He kept some sort of field notebook to record his observations.

Goss began collecting in earnest in the 1870s, probably urged to do so by Spencer F. Baird or Robert Ridgway, with whom he corresponded. He preserved data for each bird, including measurements, locality, and date, and also prepared study skins, mounted specimens, and "embalmed" birds. His collecting was opportunistic through the 1870s, from localities along the railroads he traveled in his business; some birds were from Oklahoma and Colorado, but most were from Kansas. Friends sent him birds from Oregon, Wisconsin, Texas and Wyoming, and others began shooting birds in Neosho Falls and bringing them to him to prepare. Through the years 1875-1880, the number of birds in the collections grew, more being added each month. On April 14, 1876, Goss shot two Passenger Pigeons near Neosho Falls, Kansas.

Goss became so enthusiastic about bird studies that in 1880 he left on a grand collecting trip to the Gulf of St. Lawrence, Nova Scotia, New Brunswick, and the Bay of Fundy. He was gone six months—the longest of several trips he made. In the next year, trips were made to Texas, New Mexico, and Wisconsin; on some of these trips his brother accompanied him and collected bird eggs.

Col. Goss became famous in Kansas for his exploits, and notoriety was gained

through newspaper publicity and Goss' acquaintance with prominent men in state politics and railroading. The Collection, which was started because of a personal desire to learn more about the birds of Kansas, grew to include most of the species of North America and became the life's work of the collector. Goss realized that arrangements were needed to insure the permanence of his Collection after his death, and he wanted the State of Kansas to accept the birds as the Goss Ornithological Collection. He succeeded.

COLLECTION GIVEN TO THE STATE

In 1881, at the suggestion of Goss, Senator Kelley introduced a Bill entitled "An act to authorize the Executive Council of the State of Kansas to procure for the State the Goss Ornithological Collection." The Bill was passed March 5th and \$200.00 was appropriated to move the collection from Neosho Falls to Topeka. Goss spent the next year and a half enlarging the Collection by making extensive collecting trips to the Gulf of Mexico and the Pacific Northwest. At this time, too, he probably prepared the labels seen today on the wooden bases supporting the specimens: typewritten labels with common name, locality, date, and A.O.U. number.

By August of 1882 the Goss Collection was packed in large wooden boxes, ready to ship from Neosho Falls to Topeka. When the birds arrived in Topeka they were taken to a room in the east wing of the State House which had been designated as the new home of the Collection. We have the vivid description by "Pick" Smith, (first Supreme Court Stenographer) who saw through the open door of the room "a large number of various-sized wooden boxes in different parts of the room with a lot of stuffed birds standing on top of them . . . and . . . a rather tall gentleman, somewhat along in years, in his shirt sleeves, wearing whiskers and spectacles and carefully taking specimens of birds out of a large box." Goss apparently was bothered by the unauthorized entrance of Smith into the room, but "when I said I loved birds his whole aspect changed, and he again straightened up, smiled, and with the bird in his hand came from behind that box with the other hand extended and took mine in a cordial grasp . . ."

Two months later the Collection was opened to the public amid much fanfare by the Topeka press. By this time 930 birds of 440 species were neatly mounted, labeled, and locked in glass display cases. Goss was on hand to answer questions about the birds and his now famous collecting trips. At that time the Collection was estimated to be worth \$20,000, although this figure was probably that of a newspaper man.

When the Collection was moved to Topeka, Goss had retired from the railroad business to devote his full time to the study of birds. The next ten years saw furious activity; Goss made trip after trip to all parts of North America and brought back hundreds of specimens. Birds were sent by friends from many states, the press recorded his comings and goings and printed colorful interviews, and people marched through the aisles of bird cases in the State House, looking at birds never seen before in Kansas.

Three months after the Collection was opened to the public, Goss was off for Guatemala. Later the same year he visited Washington Territory and collected in western Kansas. By the end of the year he was in Mexico. Half of 1884 was spent in southern California and western Kansas; the other half was split between Cape Cod, Massachusetts, and the southwestern United States. In 1885 he collected in Guatemala, finishing in Kansas. The winter of 1887 found Goss in Spanish and British Honduras, the next winter in Mexico and Baja California. The last two winters of his life Goss again made trips to Mexico. By March, 1891, when Goss died, the Collection totaled almost 2000 birds with 529 specimens of 343 species from Kansas.

Sometime during the year of Col. Goss' death the Collection was moved from the room in the east wing of the 1st floor of the State House to a room in the south wing of the basement. The next year it was moved to two rooms in the east wing of the basement where it remained until 1915.

From 1891 until 1893 the Collection was curated by Goss' nephew, Charles W. Waterman, whom Goss thought "feels a strong personal interest in the collection."

Unfortunately, Waterman's interest was not as strong as Goss had hoped, for two years later he walked off the job with the key to the bird cases in his pocket. It is known that he went to California, but without announcing his departure, for we find a letter from F. G. Adams addressed to him two years after his departure from Topeka: "The janitor having charge of the part of the State House in which is the Goss Collection, informs me that some of the birds in one of the cases seems to require a little attention. It is the impression here at the State House that only some member of Col. Goss' family has access to the cases or a key to open them. I am told you can probably give information about this. Will you kindly inform me how this may be . . .?" Apparently Adams received no answer because a month later he wrote the widow of Goss' friend Issac T. Goodnow, "there is no one in the State House who has a key or any means of access to the birds . . ."

The broken case, referred to in Adam's letter, was entered by thieves and several birds were stolen. It is possible that the thieves actually broke the case. Since the birds that are missing were some of the most valuable in the Collection, it is likely that the thieves were after rare birds.

The next year, 1895, the Collection was turned over to the Kansas Academy of Science, an organization partly supported by the State. The librarian and curator of the K.A.S. at that time was the ambitious Bernard B. Smyth, who was living in the basement of the State House among collections of insects, plants, and geology specimens on a yearly stipend of \$800.00. It probably was B. B. Smyth who obtained custody of the Goss Collection for the Academy, although other members were not enthusiastic about it. At an annual meeting of the Academy in Topeka, Professor Williston of The University of Kansas spoke "of the uselessness of collections at the State House and . . . the . . . uselessness of adding to them," and Professor Bailey, also of The University of Kansas, discouraged "the collection of specimens other than those having industrial value."

Smyth, however, won the Collection for the Academy and by 1899 was busily constructing an empire. He asked the State Executive Council to give the Academy of Science the Board of Pardons room adjoining the room in which the Goss Collection was displayed so that "all loafing and vandalism in the bird room could be prevented."

The record does not show whether or not the Board of Pardons room was obtained by Smyth for the Kansas Academy of Science, but 1899 was a year of additional struggle for him. Professor Snow of The University of Kansas had a resolution introduced in the Kansas legislature (by Mr. Wright of Lyons County), stating that there was "no proper place in the Capitol for housing the Goss Ornithological Collection" and that "if said collection remains in its present quarters for two years longer many of the specimens will become worthless . . ." Professor Snow wanted the Collection at the University. Mr. Smyth went to work with characteristic alacrity and sent a mimeographed letter to every legislator; by the next day the resolution was withdrawn, "on the plea that the introducer had been misinformed as to the condition of the collection". The resolution was never printed or listed in the House index.

Smyth's problems, however, were not ended. In 1902 the Academy of Science abolished Smyth's job as curator, affectively dumping Smyth and the Goss Collection back on the State. Smyth went to work and wrote to the Governor, the legislators, and others, urging that the collections be kept by the State as a State Museum. One can judge the success of Smyth's campaign by reading, three years later on a printed letterhead, that the "Kansas State Museum, East Wing of the State House" had collections including "2000 Goss birds, 800 other birds and mammals, 950 species of insects (Smyth Collection), 1500 species of flowering plants (Smyth Collection), 250 species of shells, 99 preserved reptiles, and 50 preserved fish".

More remarkably, only four years later, in 1909, Smyth had moved into two new rooms on the fourth floor of the State House, had re-christened the Museum "The Kansas State Museum of Natural History", had put in a telephone, and had given the Goss birds additional company in the form of thousands more insects and flowering plants.

At the culmination of his career, B. B. Smyth was made curator of the insect collection of Professor F. H. Snow of Kansas University, the man who 10 years earlier was

after the Goss birds. In addition, Smyth acquired an assistant curator and wife, Mrs. Lumina C. R. Smyth, Ph.D. At this time Smyth was still working for \$800.00 per year, but was asking for \$1200.00. The State finally compromised with \$1000.00 and probably got the best bargain in its history.

The dynasty of B. B. Smyth was doomed, however, when, in 1911, the State passed "an act to place the Goss collection under the custody of the Secretary of the State Historical Society . . . to abolish the job of curator . . . and to make an appropriation of \$125.00 to get the birds cleaned". Another act was passed in 1911 which permitted the movement of the Goss Collection to the Memorial Building (of the State Historical Society), when completed. Perhaps it made no difference; Smyth died two years later.

Mrs. Smyth took charge of the collection after her husband's death and waged a fight to be retained as curator. She was successful only temporarily; on May 15, 1915, the State passed an act again placing the birds under the custody of the State Historical Society, abolishing the position of curator, and approving funds for cleaning and remounting the specimens. For rebuilding the bird cases, \$425.00 was appropriated and for the expenses and board of some University of Kansas faculty member to recondition the Collection, \$75.00 was appropriated.

THE STATE HISTORICAL SOCIETY AS CUSTODIAN

When, in May or June, 1915, the time came to move the Collection from the State House, it became apparent that there were no funds to do this. William McConnell, Secretary of the State Historical Society, solved that problem by awarding a contract to rebuild the cases to W. E. Stickel, who took the cases from the State House to his shop and returned them to the new Memorial Building. Stickel was paid \$530.00 for his services, \$105.00 in excess of the original appropriation. O. W. Bronson cleaned and moved the birds at his own expense and was later reimbursed \$125.00 when the Society put him on the payroll in place of a clerk.

When the Kansas State Museum was disbanded in 1915, and the Goss Collection was moved to the Memorial Building, some birds and mammals, not a part of the Goss Collection, were taken also. Four cases of birds and mammals, not a part of the Goss Collection were left on the 4th floor of the State House. No trace of any of these specimens remains. The Snow Insect Collection was returned to The University of Kansas, but the disposition of the other collections is unknown.

Since finding their home in the Memorial Building of the Kansas State Historical Society in 1915, the birds have led a relatively quiet life. Many thousands of persons have marveled at the size and variety of the Collection, although few have known who collected the birds or why it was done. The Collection ranks high in aesthetic, scientific, and historic value, and is a true asset to the State. Colonel Goss would probably be unhappy over the disappearance of a pair of Ocellated Turkeys, a Carolina Parakeet, several Passenger Pigeons, and other birds, but the Collection is still reasonably complete and in good condition.

In 1949 almost 200 of the Goss birds were given to Washburn University of Topeka, and are now in the Washburn University Museum of Natural History. The remainder of the Collection is still housed at the Memorial Building in Topeka, in attractive new cases, and identified as the "Goss Bird Collection". The cases built by W. E. Stickel in 1915 were given to Washburn University in 1949, along with the birds, but were too large to take into the Museum, so are in the halls of Rice Building, on the campus.

It is hoped that the Collection will again some day be reunited; the Kansas State Historical Society and the Museum of Washburn University are no longer acquiring natural history specimens.

The author wishes to thank the staff at the Kansas State Historical Society, the Kansas State Library, and the Smithsonian Institution for their assistance and encouragement. I especially wish to thank Mrs. Martha Swan Drake, of Winnetka, Illinois, for permission to use letters, diaries, and other materials belonging to the Goss family.

Contribution No. 1, Department of Biology, Southern Colorado State College, Pueblo, Colorado, April 2, 1964.

DISTRIBUTIONAL HISTORY OF KNOTS IN KANSAS

BY MERRIL G. MCHENRY

Although a rare visitor to Kansas, the Knot (*Calidris canutus*) has a long history in the ornithological literature of our State. It begins with Frank H. Snow's (1872) "Catalogue of Birds of Kansas," published simultaneously in two journals, the *Transactions of the Kansas Academy of Science* and the *Kansas Educational Journal*. In 1873, the same list of birds was published in the *Transactions of the Kansas Board of Agriculture*. His list was based upon his personal observations during a residence of six years in Kansas. His entry on the Knot stated: "*Tringa canutus*. Knot, Robin Snipe. Common." No doubt this was a mistake, for Knots never have been known to be "common" in the State. Apparently no correction was made, and it was not until 1886 that a reliable record appeared in the literature. Goss (1886) commented on the status of the Knot in Kansas with no mention of Snow's (1872-73) catalogue. With respect to the species, Goss wrote: "Migratory; rare. Two specimens shot in the spring of the year at Neosho Falls, by Col. W. L. Parsons, are the only ones, to my knowledge, captured or seen in the state."

Lantz (1897-98) in his review of Kansas ornithology characterized Snow's (1872) catalogue as "a defective list of 239 species." In his historical list of Kansas birds, Lantz (1897-98) quoted Goss' (1886) record concerning the Knot. Following this entry, Lantz wrote: "Snow, 1872. (?)." This recognized the fact that Snow had published a record on this species but Lantz apparently questioned its validity. Snow (1901-02) published his revised catalogue of Kansas birds in the *Transactions of the Kansas Academy of Science*. Defending his former catalogue (1872) and referring to Lantz (1897-98), Snow stated: "Professor Lantz places an interrogation point after the citation of *Tringa canutus*, (No. 82) as given in my catalogue of 1872. There can be no question about the authenticity of this record, as I have in my collection of skins a specimen of this species taken by my student, Wm. E. Moore, at the Lawrence lake, April 17, 1871." Snow (1901-02) made no mention of the apparent mistake in his former catalogue—listing Knots as "common"—but the entry had been revised to read, "migratory; rare."

Arthur Cleveland Bent (1927) in his account on Knots reported: "Casual records—Kansas, Hamilton, September 19, 1911, and Lawrence, April 17, 1871." The 1871 record was not new since it has been reported previously by Snow (1901-02). However, this was the first publication of the Hamilton record, so far as known. Long (1940) reported: "One specimen taken at Hamilton, Greenwood County, on September 19, 1911, and one or two other indefinite records."

The Knot is apparently a rare visitor to both the eastern and western parts of Kansas. John Bishop (1953) reported seeing two Knots at Cheyenne Bottoms on September 5, 1953. Ben King (1953), with Wayne Maddux and Esther O'Conner, reported observing one Knot at Sugar Lake (Kansas City area) on September 13, 1953. Harrison B. Tordoff (1956) listed the Knot as a "Rare transient. Sight records from eastern and western Kansas." Tordoff also included the Hamilton, Greenwood County record (1911) and identified the collector as G. C. Rinker.

Orville O. Rice (1957) stated that he saw one Knot at the salt marshes north of Stafford on June 1, 1957. Richard F. Johnston (1960) reported the Knot as "a rare transient, on sandy banks near water."

From the above information it seems clear that the Knot always has been a rare transient in Kansas. On August 28, 1963, H. A. Stephens and I observed one solitary Knot feeding on a mud flat in Pool 2 at Cheyenne Bottoms, Barton County, Kansas. This specimen, collected by Mr. Stephens, was in gray plumage. About twenty minutes later, a second Knot was seen two miles west of where the first one had been. It, too, was feeding alone in Pool 2 on mud flats beside the dike road. I collected this bird and found the plumage to be quite buffy on the breast. Although we drove the dike roads several times searching through the small scattered flocks of various sandpipers, notably Least, Semipalmated, and Stilt sandpipers, Lesser Yellowlegs and Long-billed Dowitchers, no more Knots were seen that day. However,

on September 5, 1963, we again saw one solitary Knot, this time in Pool 3; I collected this bird, which was in gray plumage.

All three specimens were birds-of-the-year. Their plumages closely resemble the description of the Knot's juvenal plumage as given in Bent (1927). The overall appearance of the plumage is light gray above with white or light buff below. The black and buff feather edgings produce a scaly appearance. The feathers of the back and scapulars have an outer border of light buff, then a black border, and another buffy area inside the black fading into gray. The wing coverts have a terminal buff and a subterminal black border; the tail feathers, too, are edged with buff. The rump and tail appear lighter than the rest of the upper parts. The under parts are suffused with pale buff. The specimens have gray speckles across the breast suggestive of young birds.

Specimen data are as follows: first specimen (wt. 108.2 g.; ♂), collected by H. A. Stephens on August 28, 1963; second specimen (wt. 111.7 g.; ♀), collected by M. G. McHenry on August 28, 1963; third specimen (wt. 95.5 g.; ♂), collected by M. G. McHenry on September 5, 1963. These specimens (catalogued T-855, B-1135, and T-858, respectively) are in the Kansas State Teachers College collection at Emporia.

These observations and collections were made under joint research studies being conducted by the University of Oklahoma and Kansas State Teachers College and financed by the National Institute of Health (AI 05232-01).

LITERATURE CITED

- BENT, ARTHUR CLEVELAND
1927. Life histories of North American shore birds. Bull. U. S. Nat. Mus., 1:145.
- BISHOP, JOHN
1953. Notes from Cheyenne Bottoms. Bull. Kansas Ornith. Soc., 4:26.
- Goss, NATHANIEL S.
1886. History of the birds of Kansas. G. W. Crane & Co., Topeka, Kansas. p. 15.
- JOHNSTON, RICHARD F.
1960. Directory to the bird-life of Kansas. Univ. Kansas Publs. Mus. Nat. Hist., Misl. Publ., 23:24.
- KING, BEN
1953. Notes from Kansas City. Bull. Kansas Ornith. Soc., 4:27.
- LANTZ, D. E.
1897-98. A review of Kansas ornithology. Part I. The Bibliography of Kansas Birds. Trans. Kansas Acad. Sci., 16:230.
- LANTZ, D. E.
1897-98. A review of Kansas ornithology. Part II. An Historical List of Kansas Birds. Trans. Kansas Acad. Sci., 16:251.
- LONG, W. S.
1940. Check list of Kansas birds. Trans. Kansas Acad. Sci., 43:442.
- RICE, ORVILLE O.
1957. Notes on summer birds of deciduous forest and salt marsh habitats in Kansas. Bull. Kansas Ornith. Soc., 8:9.
- SNOW, FRANCIS (FRANK) H.
1901-02. Notes on the Birds of Kansas, and a Revised Catalogue. Trans. Kansas Acad. Sci., 18:159.
- SNOW, FRANK H.
1872. A catalogue of the birds of Kansas. Kansas Educational Journal, 8:381.
- SNOW, FRANK H.
1872. Catalogue of the birds of Kansas. Trans. Kansas Acad. Sci., 1:27.
- SNOW, FRANK H.
1873. Catalogue of the birds of Kansas. Trans. Kansas Board Agric., 1873, p. 384.
- TORDOFF, HARRISON B.
1956. Check-list of the birds of Kansas. Univ. Kansas Publs. Mus. Nat. Hist., 8:325.
902 Market, Emporia, Kansas, December 20, 1963.

Breeding Record of the Rufous-sided Towhee from Northwestern Kansas.—

On July 27, 1963, while collecting along Sappa Creek, two miles east and one mile north of Oberlin, Decatur County, Kansas, we took a male Rufous-sided Towhee (*Pipilo erythrophthalmus*). The bird was shot in a riparian thicket of cottonwood (*Populus* sp.) and ash (*Fraxinus* sp.) with rank deciduous understory, and was feeding a fledged young. The testes were enlarged (13 × 8 mm), and the bird weighed 41.5 g. It was deposited in The University of Kansas Museum of Natural History, and bears the catalogue number 41508. It is intermediate in plumage between *P. e. erythrophthalmus* and *P. e. arcticus*.—JAMES D. RISING AND TED R. ANDERSON, *Museum of Natural History, The University of Kansas, Lawrence, Kansas, February 22, 1964.*

NOTES AND NEWS

Those of us who have stressed potential overall ecologic damage resulting from indiscriminate or broadcast use of toxic chemical pesticides were not wholly unprepared for the United States Public Health Service bulletin on massive mortality to fishes in the Mississippi River. It was a bit startling, however, to find that the pesticides that caused the fish kills were applied chiefly as a result of "normal" agricultural practice—that is, reasonably small amounts of chemicals had been used at any one time. This disruption of fish populations, of the limnic ecology of the lower Mississippi River, and of the economy of the State of Louisiana deserves special attention; the following material was written by Elinor Langer and appeared on pages 35 and 36 of the April 3 issue of *Science* (journal of the American Association for the Advancement of Science):

"The case for government attention to the pesticides problem was dramatized last week with the Public Health Service's announcement that the massive fish kills of the past 4 years on the lower Mississippi River have been traced to incredibly minute concentrations of these useful, but highly toxic, chemical agents.

"The Public Health Service, which has spent several years trying to detect the cause of the Mississippi slaughters among the more conventional scourges of fish life—accidental poison spillage, changes in water temperature, excess sewage, unusual bacterial diseases—appears rather surprised by its own discovery. PHS officials have asserted that the concentrations of the pesticides are so minute that 3 years ago the techniques for isolating them did not even exist. And the PHS appears to be further stunned by the realization that the deadly amounts accumulated not from any excessive or unusual use of pesticides, or from any monstrous accident, but, as Senator Abraham Ribicoff (D-Conn.) pointed out in a speech last week, simply from 'business as usual' along the Mississippi.

"Actually the surprise is a bit puzzling: the toxic potential of extremely small quantities of pesticides, and their wide use on crop lands abutting the Mississippi, is no news; the extreme vulnerability of fish was stressed in a well-publicized report by the President's Science Advisory Committee (PSAC) last spring; and one of the substances found in the dead fish—endrin—had been reported by the PHS as the cause of at least one major fish kill as long ago as 1961, albeit in somewhat more obvious circumstances. Much of what passes for surprise, however, is probably really alarm: now that damage to the fish has been proved, the PHS knows that it may have a serious problem on its hands, for the pesticides involved are in very common use.

"The evidence that pesticides had been responsible for the killings of tens of millions of fish since 1960 was reported last week, but no one is sure what the mechanism of the poisoning is or what can be done to stop it. According to a letter from a Louisiana state health officer . . . endrin was found in the fish in concentrations up to 7 parts per million, and in the water in concentrations ranging from 0.054 to 0.134 parts per billion. Another chemical, dieldrin, was also found in minute quantities in the treated drinking water of the city of New Orleans. In addition, endrin, dieldrin, heptachlor, DDE, and DDT have all been found in shrimp from the Gulf of Mexico. The affected fish were in an area centering around Baton Rouge but extending as far up the Mississippi as St. Louis and Memphis."

"(The use in England of two of the pesticides involved in the Mississippi problem, dieldrin and heptachlor, and of a third, aldrin, was severely restricted last week by the British Ministry of Agriculture, Fisheries, and Food, acting on the recommendation of an advisory committee. Minister of Agriculture Christopher Soames stated that the committee found no evidence of serious immediate hazards but was concerned that traces of the chemicals appeared in so many situations, and believed that 'accumulative contamination of the environment by the more persistent organochlorine pesticides should be curtailed.' . . .)

"In this country, also, the Public Health Service has stressed that 'no immediate health problem exists.' This is probably true, but it does not dispose of other potential difficulties. On the health side, the fact is that the pesticides are being ingested

by humans—not only through the river fish but through the apparently irreducible quantities remaining in drinking water—and the level of human tolerance to them is not known. On the economic side, the fact that the pesticides are now thought to have affected shrimp in the Gulf threatens that area with commercial devastation, for its dependence on its fishing industries is extremely heavy. Most worrisome, however, is the probability that the Mississippi case is only an omen of more to come.

“The Mississippi disclosures, in fact, constitute . . . notice that pesticides threaten the public welfare in a variety of ways that require remedial action. . . . The Public Health Service will move in to help Louisiana—the state most severely affected—in a variety of ways. PHS personnel will try to determine the specific source of the pesticides and establish their toxic level in human beings, and they will begin analyzing the river water itself, and evaluating the provisions for treating it, in order to provide maximum removal of pesticides from city water supplies.

“These researches will undoubtedly develop a body of knowledge essential for taking corrective action in the Mississippi and future cases, but even after the knowledge is attained the authority for taking such action may still be lacking. From the overall point of view it appears that nearly a year after PSAC issued its comprehensive study on the use of pesticides (*Science*, 24 May 1963) and more than 2 years after Rachel Carson stirred public concern with her prophecies of a silent spring, the role of government in regulating these dangerous substances is still a weak and confused one.”

Since the dangers of contamination of watersheds and rivers bring the matter clearly within the bounds of interstate considerations, it is not comforting to see the hands-off attitude of the Federal government. Doubtless there are strong economic pressures being brought to bear in Washington, and doubtless also no one wants to see a significant sector of the national economy depressed, as indeed would happen if pesticides were to be restricted in use to the extent that present considerations imply. However, just some such restriction may well have to be applied eventually, if we are to avoid more extensive poisoning of the environment. It is not too soon to write a letter of opinion to your congressmen; you may rest assured that the manufacturers of toxic chemicals have already been speaking to them and intend to continue doing so.

OFFICERS

President J. C. Johnson, Kansas State College, Pittsburg, Kansas
Secretary Carl S. Holmes, 1728 N Sheridan, Wichita 12, Kansas
Membership Secretary Amelia Betts, Baldwin, Kansas
Treasurer L. B. Carson, 1306 Lincoln, Topeka, Kansas
Editor . . . Richard F. Johnston, University of Kansas, Lawrence, Kansas
Assistant Editors J. C. Barlow, E. E. Klaas, M. C. Thompson

Regular Membership, \$2.00 Student Membership, \$1.00 Sustaining Membership, \$5.00

Dues payable January 1 to the Treasurer

Subscription to the Bulletin is included in any class of membership

Published June 1, 1964