FRANKLIN J. W. SCHMIDT

BY ALDO LEOPOLD

It is by now a truism that the American frontier did not cease to exist when the covered wagons halted on the shores of the Pacific. In its wake followed a scientific frontier, which opened up the resources of the new-found lands to human understanding in quite the same sense, and in no less degree, than the geographic frontier opened them to human occupancy.

It was quite a surprise to the gold-seeking Spaniards when James Ohio Pattie arrived in their midst, seeking not gold, but beavers. Just so is it now a surprise to biological scientists to discover as a fellow-explorer the conservation ecologist, seeking not new ways to squeeze wealth out of the soil, but ways to prevent the extraction of its wealth from destroying its wild life.

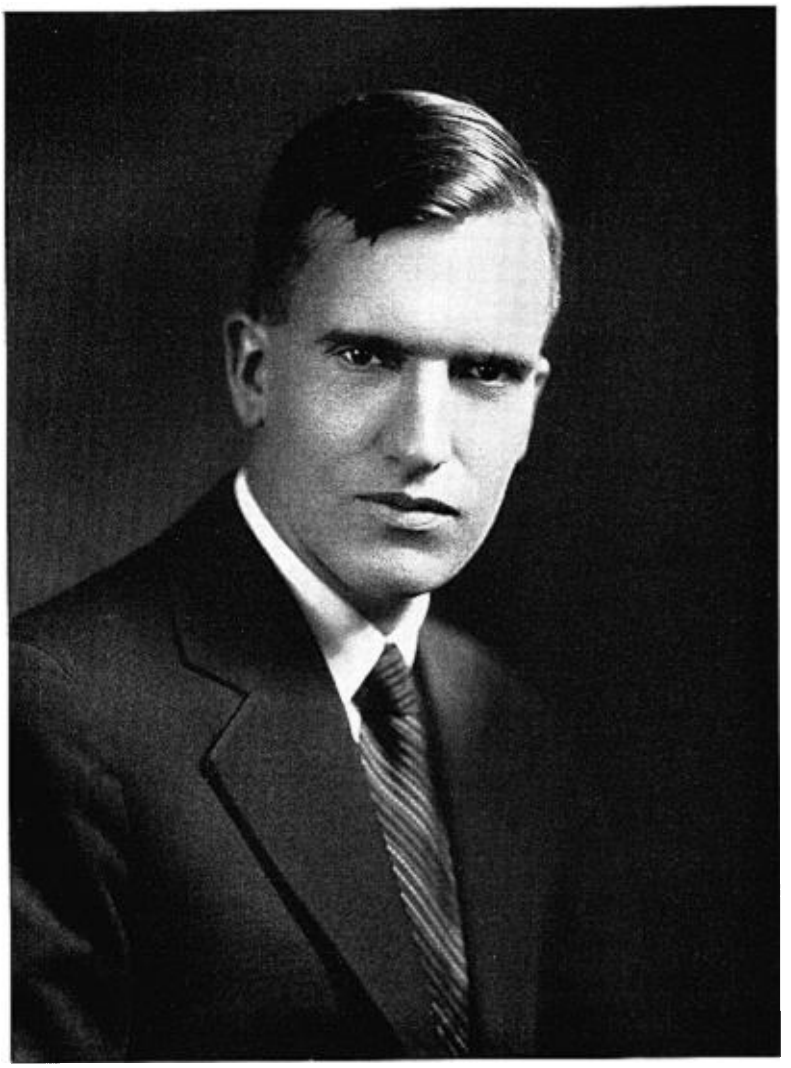
Society has not withheld its gratitude from the geographical adventurer who failed to come back, nor from the scientific explorer who dies in the course of an unfinished quest. It should, I think, at least know about important fatalities in that new argosy of the intellect which seeks not the conquest, but the preservation, of nature. Hence this biographical sketch of Franklin J. W. Schmidt, who, after five years' work in charge of the Wisconsin Prairie Chicken Investigation, died at Stanley, Wisconsin, August 7, 1935, in a midnight fire which also destroyed his accumulated notes, photographs, and manuscripts.

The philosophical questions involved in the death of a young explorer on the outbound trail are always of tragic interest. That Schmidt had seen virgin lands was well known to the more discerning of his research associates. That circumstances had unduly delayed publication of his findings is patent from the scarcity of his titles in the literature. (He spent his last evening on one of eight manuscripts to which, at the insistence of his friends, he had devoted the last months of his life). Whether he himself realized the full value of his findings, or whether their publication would have gained him widespread recognition, must remain forever among those questions which destiny thrusts unanswered into the stove. As his biographer I can only affirm the personal opinion, unsupported by those burned documents, and admittedly biased by the pain of a lost friendship, that Franklin Schmidt knew more about the life history and ecology of the prairie grouse than any living man, and as much as any living ecologist knows about any American game bird. Likewise that he had developed a deep understanding of the interactions of ecological forces, and the mechanisms of their integrated expression in the life and land-

scape of Wisconsin. It is no uncommon thing for a specialist to sound a record depth of knowledge in a single limited field, but it is a rare and inspiring thing to see one putting together a mental clock made of parts from the whole gamut of earth-sciences, and then listening for it to tick.

Schmidt's particular hobby was the marsh region of central Wisconsin—that waif of the slums of exploitation, long since cast out as an economic ne'er-do-well, but now the object of uplift by many conservation bureaus. If and when the intrinsic loveliness of those vast wastes is duly appreciated and restored, the mechanism of restoration will be set upon foundations of ecological understanding built in large part by Schmidt.

I vividly recall my first visit to the camp which each summer served as a base for his field studies in the central marsh region. In town or office Schmidt was ordinarily laconic, even taciturn. But as we roamed his beloved marsh, each bird and flower drew out of him new rivers of speech—the pent-up accumulation of years of lonely observation, speculation, and study. The sandhill cranes, their habits, personality, and probable history since the retreating glacier first left behind it the moss-meadows which are their habitat. His discovery that "red" cranes, like rusty snow geese, can be washed to their normal color, and hence represent no particular sex, age, or genetic strain. The burr oaks—how, why, and where they are an indicator of prairie, and the history revealed in their rings. The prairie chickens, how he had spied upon their mating dance, how his bandings reestablished Cook's assertion that only the hens migrate—how squeamish chickens are about roosts, and how by improving roosts we might help raise population levels. The dried-up hay marsh which once in the 1880's and again in 1913-16, was a lake from which the settlers trapped muskrats, how the existence of the former lake is indicated by the ice-ridge outlining its shore, and dated by the age of the trees growing out of that ridge. How in the intervening drouths this lake had been a hay-meadow, the present drouth representing simply the dry phase of a recurrent cycle. In short, no observed phenomenon was interpreted by Schmidt in terms of a short time or of a single scientific field. Its historical origin and its ramifications into a wide variety of fields were habitually followed out. In this difficult task Schmidt's woodsmanship, i. e., his ability to detect and interpret evidence invisible to ordinary men, played an outstanding part. He knew more than his fellow-workers because he saw more keenly and thought more deeply. I have seen few field naturalists of comparable skill and acumen.



FRANKLIN J. W. SCHMIDT, 1901-1935

We who teach how to use science for the ends of conservation are interested in the origins and education of such men, for there is always the remote hope of finding a clue to the puzzle of how to build them to order.

Franklin James White Schmidt was born at Lake Forest, Illinois, July 25, 1901. His parents were George W. Schmidt, Professor of German at Lake Forest College, and Margaret Patterson Schmidt. In 1907, when he was six years old, the family established a farm in Worden Township, Clark County, Wisconsin. There he grew up in an environment of forest and meadow well populated with wild things. His mother had a good knowledge of botany. His older brother, Karl P. Schmidt, had been imbued with an active interest in biology in the course of his studies under Dr. James G. Needham at Lake Forest College. His father had a deep and abiding interest in all wild things. With this guidance the boy developed an ever-widening proficiency in natural history. He trapped muskrats and mink. He raised ferrets, and his first published "research" was a letter on their habits embodied in Mrs. Anna Botsford Comstock's "Pet Book", in 1914.

Schmidt entered the University of Wisconsin in 1927. By this time he had decided on a career as field naturalist. He had been employed by the Field Museum in 1924, 1925, and 1926, and found congenial friends in Dr. W. H. Osgood and Mr. Colin Campbell Sanborn, and through them focused his interest on mammalogy. During his university years he spent the summers in collecting mammals, reptiles, and amphibians in his home county, publishing his notes on the mammals in the *Journal of Mammalogy* in 1931. Upon graduation from the University of Wisconsin in 1930, he was recommended by Prof. George Wagner as field assistant to Dr. Alfred O. Gross, who during that year initiated a study of the prairie chicken and the sharp-tailed grouse in Wisconsin. This field study now became his primary interest. After Dr. Gross returned to his duties in the East, the Conservation Commission placed Schmidt in charge.

In 1933 the project was discontinued for lack of funds. The newly established Chair of Game Management at the University of Wisconsin immediately offered Schmidt a fellowship for its continuation under university auspices. Schmidt had, however, already engaged to accompany the Mandel Expedition of the Field Museum to Guatemala. The fellowship was held open for him until his return.

Schmidt's field work in Guatemala was unusually successful. He collected and studied several new species of bats and rodents, and took

specimens of such rarieties as the bat *Centurio senex* and the Guatemalan flying squirrel.

Upon his return in 1934, he resumed work on the Prairie Chicken Investigation, focusing his efforts not only on the prospective completion of his doctorate thesis in about 1936, but also on the ultimate production of a monograph covering the life history and management of the prairie grouse in a manner similar to Stoddard's "Bobwhite". The plan was to center the work on Wisconsin until Schmidt's doctorate was completed, and then to set up a consulting service through which he would aid other states to get started in prairie grouse management, and at the same time have the opportunity to collect life history information from the whole continental range of the species. The first move to these ends was the completion of a series of eight papers summarizing the Wisconsin work to date. One of these papers had been completed at the time of Schmidt's death in 1935, and accompanies this biography. The other seven, in various stages of completion, together with most of the field notes on which they were based, were destroyed by the fire in which Schmidt met his death on August 7, 1935.

Other valuable unpublished material met the same fate. Schmidt had, for example, conducted annually for four or five years a rodent census on several sample areas. The population of rodents was accurately determined each year by trapping, marking, and releasing the animals until no unmarked individuals appeared at the traps. Schmidt hoped by this means to get accurate data on population cycles. The data from all areas save one were burned. The census on this one area has been continued by my students.

Few Wisconsin conservationists are aware that the first actual work in reflooding the drained marshes of central counties—a project on which the Resettlement Administration has since spent $150,000—was initiated by Schmidt. It came about in this manner: Schmidt was attending a somewhat convivial meeting of Milwaukee sportsmen. He asked the group to subscribe $100 to build one dam as a test or demonstration of the potential waterfowl breeding capacity of the drained marshes. They banteringly replied that they would give the money if Schmidt would drink a glass of whiskey. Knowing his abstemious habits, they thought this a safe reply. But Schmidt promptly gulped the whiskey, and within a few weeks the dam was built and had ducks in it.

Schmidt's death is the first fatality in that young profession known as wildlife management. He has set for that profession a high stand-

ard of devotion, modesty, skill, and thoroughness. It will be no small task for those who survive him to live even partially up to his mark.

PUBLISHED PAPERS OF F. J. W. SCHMIDT

1926. Reptiles and amphibians of Worden Township, Clark County, Wisconsin. Copeia, 154, pp. 131-132.
1927. Pitymys pinetorum scalopsoides in Wisconsin. Jour. Mammal., 8, p. 248.
1931. The mammals of western Clark County, Wisconsin. Idem, 12, pp. 99-117, 1 map.
1936. The winter food of Sharp-tailed Grouse and Pinnated Grouse in Wisconsin. WILSON BULLETIN, XLVIII, Sept., 1936, pp. 186-203.

BISHOP, SHERMAN C., AND F. J. W. SCHMIDT

1931. The painted turtles of the genus Chrysemys. Publ. Field Mus., Zool. Ser., 18, pp. 121-139, figs. 1-27.

SCHMIDT, KARL P., AND F. J. W. SCHMIDT

1925. New coral snakes from South America. Idem, 12, pp. 127-134, pl. 11-12.

UNIVERSITY OF WISCONSIN,
MADISON, WIS.

WINTER FOOD OF THE SHARP-TAILED GROUSE AND PINNATED GROUSE IN WISCONSIN

BY F. J. W. SCHMIDT

INTRODUCTION

The present paper is the first of a series summarizing the findings of the Wisconsin Grouse Investigation since 1930.

A research bureau of the Wisconsin Conservation Department was organized in 1928 by Wallace B. Grange and Dr. Merritt L. Jones to begin a study of the Prairie Chicken and the Sharp-tailed Grouse. Its findings up to 1930 were published in the "Progress Report of the Wisconsin Prairie Chicken Investigation" by Dr. Alfred O. Gross.

I took over the study during the winter of 1930-1931, which was spent observing the feeding habits of grouse at grain food patches and feeding stations. In March 131 sharptails were banded. Since then 550 Sharp-tailed Grouse and 275 Prairie Chickens have been banded. Studies of nests were made during the springs of 1931, 1932, 1933, and 1934. Moving pictures were made of Sharp-tailed Grouse and Prairie Chickens on their dance grounds. Dance ground flocks were counted through a series of successive years. During the summer of 1932 Prairie Chickens were raised at the state game farm. During the summer of 1934 the food habits of Marsh Hawks and Cooper's Hawks were studied in their relation to grouse. During open seasons grouse crops and stomachs were collected and sex counts were made from hunters' bags. The investigation was discontinued in January, 1933, and resumed in May, 1934, as a game management project at the University of Wisconsin under the direction of Aldo Leopold.