JARED POTTER KIRTLAND

Pioneer Ornithologist of Ohio

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Harold Ford Mayfield was born in Minneapolis, Minnesota, on March 25, 1911. He received his Bachelor of Science degree at Shurtleff College, now a part of Southern Illinois University, and his Master of Arts in mathematics at the University of of Illinois. He is presently Director of Personnel Relations for Owens-Illinois, Inc., Toledo, Ohio, and resides at Waterville, Ohio.

Mr. Mayfield has served as President and Secretary of the Wilson Ornithological Society and Vice-president and Secretary of the American Ornithologists' Union. He is a Fellow of the American Ornithologists' Union, and in 1961 received the highest award of the organization, the Brewster Medal, for "the most important recent work on the birds of the Western Hemisphere." He earned this honor for his book-length monograph "The Kirtland's Warbler" (Cranbrook Institute of Science, 1960), which was cited as "the most complete account of any of the wood warblers . . . a milestone in field research . . . from which clear biological results emerge."

His bibliography in natural science includes more than 100 titles. He has written also in the field of personnel administration and has published about 25 articles in various business journals including the *Harvard Business Review*. He has lectured at the business schools of the University of Chicago and the University of Michigan.

COVER:

Jared Potter Kirtland at the height of his career.

Photo courtesy:
THE EXPLORER,
Natural Science Museum,
Cleveland, Ohio.

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The Kirtland's Warbler is reproduced here from the second published picture of the species. It appeared in 1856 in John Cassin's *Illustrations of the Birds of California, Texas, Oregon, British and Russian America.* In this colored lithograph by William E. Hitchcock the bird was shown perched against the red flowers of a *Penstemon* from Texas cultivated in Philadelphia. The only earlier picture of the bird was that with S. F. Baird's description of the species in 1852.

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The Kirtland's Warbler

The greatest of the early American ornithological explorers, Alexander Wilson and John James Audubon, visited Ohio, but they did not discover here any bird new to science. That distinction has come only once, and appropriately a key role in the discovery was played by the man who above anyone else deserves to be called Ohio's pioneer ornithologist, Jared Potter Kirtland.

Kirtland had his first glimpse of the birds of Ohio in 1810 as a boy not yet seventeen when the region was still mostly wilderness. Later, as a resident from 1830 onward, he traveled the state extensively. But many years were to pass, the original forests were to give way largely to agriculture, and Kirtland himself was to have put behind him the active pursuit of ornithology before he came upon his first new bird species. Then it happened right at home.

The memorable event occurred on May 13, 1851. A century ago as today, in mid-May the warbler migration was at its height on Lake Erie. At this season the late spring migrants, pushing northward into the zone of half-opened leaves, are in full song. It is a favorite time afield for the bird watcher, not only because of the year's richest display of birds but also because of the welcome sun and spring flowers. The birds are in brightest feather and not yet hidden by the budding foliage. If a rare migrant is to be noticed, this is a likely time.

For such a discovery to be made, however, someone has to be ready. In this instance the person was a certain Charles Pease, who would be unremembered by history except for interest and knowledge imparted to him by his father-in-law, Kirtland. Pease saw a strange bird, shot it, and took it to Kirtland.

At this very moment, we have reason to suspect, Spencer Fullerton Baird was a guest in Kirtland's home. They were close friends and field companions. Both men had attended the meeting of the American Association for the Advancement of Science on May 5 in Cincinnati, and Baird had left Cincinnati on May 10, returning to Washington by way of Cleveland[1]. Baird made up the specimen and Kirtland gave it to him[2]. In the following year Baird described it, with the name *Sylvicola kirtlandii* and the inscription, "This species, which was shot near Cleveland, Ohio, by Mr. Charles Pease, May 13, 1851, is appropriately dedicated to Dr. Jared P. Kirtland, of Cleveland, a gentleman to whom, more than anyone living, we are indebted for a knowledge of the Natural History of the Mississippi Valley."[3]

It would be at least of local interest to pinpoint the place where this type specimen was taken. Baird's original label simply says "Cleveland, Ohio." But since the day of the week was Tuesday and Pease was responsible for the care of Kirtland's farm and orchards, it is reasonable to suppose that Pease saw the bird in the course of his work on Kirtland's land. This property, bought initially in 1840 and expanded to 113 acres in 1841[4], lay in what is now the city of Lakewood. It extended from Michigan Avenue to Lake Erie, and included the grounds of the present high school. The Kirtland home, a stone structure first occupied in 1842, stood at 14013 Detroit Avenue on the southwest corner of the intersection with Bunts Road.

Many more years elapsed before Charles B. Cory discovered the wintering ground of the Kirtland's Warbler in the Bahama Islands in 1879 and before Norman A. Wood found the nesting ground in northern Lower Michigan in 1903.

Yet this first specimen and all but one of the dozen or so specimens taken in Ohio subsequently were found within 60 miles of Cleveland and west of it, exactly in the airline path from the winter to the summer home of the warbler.

Although the lake region west of Cleveland has produced more specimens of migrant Kirtland's Warblers than any other area, Columbus, Ohio, has without doubt produced the greatest number of sight records of the bird. This city also lies within the direct migration route, but it is debatable whether the records here are a result of a particularly favorable aspect of the locality or the result of sustained attention over many years by a succession of alert observers. The bird is so rare in migration that few people anywhere in Ohio will see it once in a lifetime.

Kirtland, the Zoologist

"There were giants in those days!" we are moved to exclaim as we consider the scope of Kirtland's work. He ranged widely and yet, as men of talent are prone to do, he illuminated each subject he touched. Specialists in several fields may justly lay claim to Kirtland as their own.

In ornithology Kirtland's greatest contribution was the first check list of the birds of Ohio. It was a part of his "Report on the Zoology of Ohio" in the *Second Annual Report on the Geological Survey of Ohio* in 1838. The list of birds contained 222 entries (by error in numbering shown as 223), of which 166 species were attributed to Ohio for the first time (omitting 4 synonyms but including 7 species mentioned by Kirtland in the First Annual Report published earlier in the same year). It was more than a mere enumeration; it gave brief comments about the occurrence and habits of most of them. For its day it was remarkably complete and accurate, and it served as a model for other state catalogs to follow.

With the completion of this report, Kirtland's serious work on birds ended, although he lived for almost 40 years more, and his two volumes of Nuttall's *Manual of Ornithology* (1832–1834) continued to receive marginal notations in script as late as 1869[5]. His other publications in this field consisted of scattered notes and reminscences.

He added 10 more species to the Ohio list, not counting the Kirtland's Warbler (which was reported by Baird). His total of 176 additions to the state list is far greater than that of any other person, according to the compilation of J. M. Wheaton in his classic "Report on the Birds of Ohio" in 1882[6]. Dr. Wheaton of Columbus, the greatest name in Ohio's ornithological history, was a founder of the American Ornithologists' Union and, like Kirtland, a physician.

Kirtland's judgments of his contemporaries were penetrating and forthright. In a letter to his friend Samuel Prescott Hildreth of Marietta, Ohio, on May 22, 1837, he wrote, "I am surprised that the merits of Nuttall's *Manual of Ornithology* have been so completely overlooked. As a scientific and a practical work it far surpasses in my estimation either Wilson or Audubon's works. I have the descriptions of both these latter authors as well as the plates of Wilson but never think of referring to them to decide the characters of a bird. Nuttall's descriptions are concise and so plain as not to admit of a doubt."[7]

Again, he wrote to Hildreth on May 23, 1840, about Audubon's *Birds of America* (1827–1838), "I am upon the whole pleased with the work, though I think the author has fallen far short of what he assumes to have done, that of giving *a full and correct history of the birds of America*. I am daily observing facts in regard to the habits of many species that he has failed to notice, or which run counter to his statements."[8]

In the middle of the nineteenth century Cleveland was a long way from the principal centers of learning in the eastern states, but the leading natural scientists of the country were aware of Kirtland. In addition to Baird, who eventually became Secretary of the Smithsonian Institution and founder of the U. S. National Museum, Kirtland was a friend of Louis Agassiz, founder of the Museum

of Comparative Zoology at Harvard. When Charles Lyell, the great English geologist, visited America in 1846, he was a guest in Kirtland's home. Among his correspondents were the ornithologists John Bachman, Titian Peale, and John Cassin, and the entomologist John L. Le Conte[9].

Kirtland died six years before the establishment of the American Ornithologists' Union in 1883, but the regard of the founders of it is revealed by his election as Corresponding Member in the first year of existence of the predecessor organization, the Nuttall Ornithological Club of Cambridge, in 1876[10].

The esteem for Kirtland by ornithologists of his day was also expressed in the name of another bird, although the name did not endure. The Kirtland's Owl, *Nyctale kirtlandii*, was described in 1852 by Dr. Philo Romayne Hoy, pioneer naturalist of Racine, Wisconsin, and a former student of Kirtland at the Ohio Medical College in Cincinnati, but the bird later proved to be the immature of the Saw-whet Owl, *Aegolius acadicus*[11].

Kirtland's 1838 "Report on the Zoology of Ohio" also contained the first catalog of mammals, reptiles, fishes, testacea (shells), and crustacea of the state. In all of these fields his sound work, along with his personal influence, provided a base and inspiration to the next generation of naturalists in the Midwest.

Kirtland showed talent early. At ten years of age he was attempting to improve fruit trees by budding and grafting on his grandfather's farm in Wallingford, Connecticut. At eleven he was studying the honey bee and its natural enemies. At twelve he had proved to his satisfaction that the silkworm moth can reproduce without fertilization by the male; this was 50 years before the researches of Karl von Siebold on parthenogenesis in insects. At seventeen he projected a study of the fauna and flora in the region of his father's home at Poland, Ohio[12].

His name first become known to the zoologists of the world, however, when he announced in 1834 that the fresh-water mussels consisted of males and females of different appearance instead of uniform hermaphroditic individuals as had been taught up to that time[13]. This report created a particular stir, because the males and females had been classified as separate species and Kirtland's discovery demolished a considerable part of the nomenclature of the family. Some scientists were slow to accept this revolutionary finding by an unknown writer in the backwoods of Ohio, and the question remained a matter of controversy for several years. It was not until the meeting of the American Association for the Advancement of Science in Cincinnati on May 5, 1851, that Kirtland's position was fully vindicated. There he presented a convincing display of shells with males and females arranged according to age. Agassiz stepped forward to state that he and the leading German scientists in this field were entirely of Kirtland's view[14].

A few years later, in 1840, Kirtland described the byssus by which young mussels attach themselves to the floor of streams.[15]

Kirtland had had a deep interest in fishes since boyhood and intended to give this group particularly thorough treatment in his 1838 Report on the Zoology of Ohio. He illustrated each of the 72 species with a drawing and commented on its form and habits. In order to make satisfactory pictures, he found it necessary (to his amusement) to take up drawing in middle years, more properly a study for girls in his day. The legislature, however, declined to go to the expense of publishing the full report, and Kirtland brought it out piecemeal at later times in the *Boston Journal of Natural Sciences* and in the *Family Visitor*, a short-lived biweekly paper in Cleveland of which Kirtland was one of the founding editors.

Quite aside from his published work, Kirtland exercised great influence among contemporaries with an interest in natural science. He was one of the founders of the American Association for the advancement of Science in 1845. In the same year he was named by Congress to the board of managers of the Smithsonian Institution. He organized the Cleveland Academy of Natural Sciences and served as its president for 25 years until feebleness of age prevented his serving any longer. In his honor its name was eventually changed to the Kirtland Society

of Natural History, which was one of the roots from which the Cleveland Museum of Natural History grew. Williams College conferred upon him the degree of doctor of laws in 1861. Later he was elected to the American Academy of Science and the American Philosophical Society, the highest honor then accorded to a scientist in the New World[16].

He was honored further in the names of the following animals and plants: Kirtland's Water Snake, *Regina kirtlandii* (Kennicott, 1856)[17], now *Natrix kirtlandi*; a fresh-water mussel, *Unio kirtlandianus* (Lea, 1834)[18], now *Fusconaia subrotunda kirtlandiana*; a snail, *Limnaea kirtlandiana* (Lea, 1841)[19]; and a fossil plant, *Syringodendron kirtlandius* (Hildreth, 1837)[20].

Kirtland, the Physician and Teacher

Up to this point we have spoken of Kirtland only as a zoologist. It is startling to be reminded that in medical circles he was renowned as a physican and teacher.

For his day his medical training was exceptional. It began with the influence of his grandfather, Dr. Jared Potter, a distinguished physician in Wallingford, Connecticut. Kirtland was born in this town on November 10, 1793, and lived in his grandfather's home from the ages of 10 to 16. At Dr. Potter's death, Kirtland inherited his library and the means for a medical education. His grandfather considered Edinburgh the best medical school in the world and had planned that Kirtland study there, but the War of 1812 intervened. So Kirtland attended the University of Pennsylvania, where again he demonstrated his naturalist bent by writing a thesis, "Our Indigenous Vegetable Materia Medica." Subsequently he received his medical degree from Yale in 1815. He practiced medicine in Connecticut for eight years before moving in 1823 to Poland, Ohio, a few miles south of the present city of Youngstown.

Rapidly he acquired a reputation as the best and most learned physician in northern Ohio. Like many another early doctor, doubtless his interest in natural science was nourished by his long drives in the country visiting patients. The esteem he had earned in medical circles is revealed by his invitation in 1837, while still a country doctor, to join the faculty of the Ohio Medical College in Cincinnati, the leading medical school of the West. He taught here during the school term and returned each summer to his home in northern Ohio, which was in Poland until 1839 when he moved to Cleveland. In 1842 he transferred to the faculty of the Willoughby Medical School near Cleveland. The following year he and several associates at Willoughby withdrew to form what has become the Medical School of Western Reserve University. He continued to teach here until his retirement in 1864. While teaching, he still treated patients but for many years limited his practice to consultation.

His medical papers were not numerous, but they show clear observation and deep insight. Here, as in so many other ways, he was often ahead of his time. He wrote a paper expressing the view that typhoid fever comes from drinking water; this was in 1851, thirty years before we knew of bacteria. At this time before sanitation was understood, he advised that the intake for the Cleveland water supply be placed in Lake Erie at a point where the inflowing streams and lake currents would carry a minimum of pollution to it. A notebook of a student in the 1856–57 term shows Kirtland was already teaching that tuberculosis was contagious. If he had a particular interest in medicine, it was hygiene[21].

At different times he served as president of the Ohio Medical Convention and the Ohio Medical Association.

Kirtland, the Horticulturist

In the eyes of the broad public Kirtland was best known as a horticulturist. None of his other avocations, from boyhood to old age, claimed so large a share of his attention.

Very early he recognized that the shore of Lake Erie was a favorable location

for fruit-growing because of the moderating effect of the water on unseasonal frosts. His farm was a showplace for its fruit and flowers, and an example that encouraged the growth of an extensive fruit industry in northern Ohio. Kirtland, the scientist, was intensely interested in the development of improved varieties. He was so successful with cherries particularly, with more than 30 new varieties credited to him, that he was sometimes called the "cherry king." His reputation was international, and visitors came from the eastern states and from Europe to see his orchards and consult with him.

He had a wide audience for his views on agriculture through the pages of the *Ohio Farmer*, a magazine founded in Cleveland in 1851 and featuring Kirtland's articles for many years. His name was familiar in nearly every farmer's home in northern Ohio. His subjects varied widely and ranged from some observation about the life of a bird to the physics of water pumping by windmills. More than a hundred of these articles were devoted to horticulture. Although his advice was always practical he was not oblivious to beauty. He believed the attractiveness of the home affected the character of the people within and urged that farmers cultivate flowers and other natural adornment about their dwellings.

He maintained that farming should be a science and that farmers should give their sons an education equal to that of any other technical occupation. For many years, as a member of a committee of the Ohio Agricultural Society, he advocated the establishment of a college of agriculture. This effort was finally successful when, in 1874, instruction began in what has now become The Ohio State University.

He gave leadership in a number of societies, boards, and committees; and served as president of an astonishing number of them, with such diverse purposes as farming, fruit growing, flower raising, and bee keeping. It was on his farm that he died on December 10, 1877, at the age of 84.

Kirtland, the Citizen

Kirtland was a man of independent views, often stated pungently. "I have not much faith," he said, "in the intelligence of a majority of our population." He was outspoken against quackery of all kinds, describing homeopathy as "absurdity fostered by credulity."[22] At a time when church membership was the norm of conduct in polite society, he remained aloof from any church affiliation. He believed in the equal education of women, and allowed girls to attend his medical lectures while this was still a radical step. He was a firm opponent of slavery when the issue was controversial.

It is difficult to picture a man openly holding such views in public office. Yet Kirtland's standing in the eyes of his neighbors was so high that he could not escape public responsibility. As a young doctor in Connecticut he served as probate judge. In Ohio he served three terms in the state legislature from 1829 to 1835. Here he left a mark with a program of prison reform, substituting useful labor for solitary confinement in the penitentiary.

Although his knowledge in a dozen fields was far above that of nearly all those around him and his achievements were prodigious in many directions, his simplicity and lack of egotism were proverbial. He knew the loneliness of the independent mind and sometimes worried about losing the precious friendship of correspondents whose opinions he valued. He bewailed the lack of grace in his writing style. More than once his despondency pushed him to the brink of abandoning his career and to the contemplation of suicide.

He was outspoken on issues, but kindly and tolerant with individuals. His students remembered him with affection, and his neighbors with admiration, calling him in later years the "Sage of Rockport."

An episode from his later life illustrates his unpretentious manner and lively sense of humor. A prominent horticulturist had traveled from the East to consult with Dr. Kirtland. He stopped his carriage at the Kirtland home and, see-

ing an old man in torn straw hat and overalls hoeing among the flower beds, asked, "Is this the home of Professor Kirtland?"

The man replied, "It is."
"Is Professor Kirtland at home?"
"He is."
"Well, my man, come and hold my horse."

The old man advanced and held the stranger's horse while the visitor smoothed his coat and went to the door. His knock was answered by Dr. Kirtland's daughter. The visitor inquired, "Where can I find the renowned Professor Kirtland?"

The daughter answered, "He's out there in the street holding some man's horse."[22]

REFERENCES

1. **Dall, W. H.** 1915. Spencer Fullerton Baird. J. B. Lippincott, Philadelphia. P. 260.
2. **Deignan, H. G.** 1961. Type specimens of birds in the United States National Museum. U.S.N.M. Bulletin 221. P. 539.
3. **Baird, S. F.** 1852. Description of a new species of *Sylvicola*. Annals Lyc. Nat. Hist. New York, 5: 217–218.
4. **Christy, B. H.** 1939. The sage of Rockport. *Cardinal*, 5: 11.
5. **Christy, B. H.** 1936. Kirtland marginalia. *Cardinal*, 4: 80.
6. **Wheaton, J. M.** 1882. Report on the birds of Ohio. Report of the Geological Survey of Ohio. Vol. 4, Zoology and Botany. Pp. 596–602.
7. **Christy, B. H.** 1936. P. 80.
8. **Gehr, Agnes R.** 1952. Jared Potter Kirtland. *The Explorer*. Cleveland Mus. Nat. Hist. 2(7): 1–33. P. 23.
9. **Gehr, Agnes R.** 1952. Pp. 25–28.
10. **Kirtland, J. P.** 1883. [Posthumously] Letter from an old-time ornithologist. Bull. Nuttall Ornith. Club, 8: 126–127.
11. **Hoy, P. R.** 1852. Description of two species of owls, etc. *Proc. Acad. Nat. Sci. Philadelphia*. 6: 210–211.
12. **Gehr, Agnes R.** 1952. Pp. 4–5.
13. **Kirtland, J. P.** 1834. Observations on the sexual characters of the animals belonging to Lamarck's family of Naiades. American Journal Sci. and Arts 26: 117–120.
14. **Gehr, Agnes R.** 1952. P. 23.
15. **Gehr, Agnes R.** 1952. P. 23.
16. **Waite, F. C.** 1930. Jared Potter Kirtland, physician, teacher, horticulturist, and eminent naturalist. *Ohio Jour. Sci.*, 30(3): 153–168. P. 160.
17. **Kennicott, Robert.** 1856. Description of a new snake from Illinois, *Regina kirtlandii*. *Proc. Acad. Nat. Sci. Philadelphia*, 8: 95–96.
18. **Lea, Isaac.** 1837. Observations on the Naiades etc. *Trans. American Philos. Soc.*, 5: 98–99.
19. **Lea, Isaac.** 1841. Stated meeting, March 5. *Proc. American Philos. Soc.*, 2: 33.
20. **Hildreth, S. P.** 1837. Miscellaneous observations made during a tour in May, 1835, to the falls of the Cuyahoga near Lake Erie. *Am. Jour. Sci.*, 31: 29–30.
21. **Curtis, G. M.** 1941. Jared Potter Kirtland, pioneer naturalist of the Western Reserve. *Ohio State Medical Journal.*, 37(10): 975.
22. **Gehr, Agnes R.** 1952. Pp. 11, 19.
23. **Waite, F. C.** 1930. Pp. 165–166.