

# **Edith Force Kassing**

## **Scientist With a Gift for Teaching**

*By John S. Tomer\**

Edith Force Kassing was an Oklahoma science teacher who, during her forty years of work, made some outstanding contributions in the fields of science education and research. Throughout her years of teaching, she performed a considerable amount of research in the fields of ornithology and herpetology. She also was a pioneer student of bird and reptile distribution in Oklahoma and became a nationally recognized authority on the life histories of the snakes of the genera *Sonora* and *Tantilla*. She was a Fellow of the Oklahoma Academy of Science and a contributor to the journals of several scientific organizations. Most importantly, perhaps, she possessed that rare talent of inspiring, instructing, and guiding the most important people in her life—her students.

Edith was born in Chicago, October 26, 1890, the daughter of Estella and James Grant Force. She graduated from Oak Park High School in 1908 and during 1909 took a post graduate course there. She also enrolled that year in an eight-week course in jewelry design at the Handicraft Guild in Minneapolis where she received a certificate of graduation. In 1910 she entered Knox College in Galesburg, Illinois, where she completed two years of work. From 1912 to 1918 she was a teacher of English, history, and handcrafts in the Oak Park area elementary and intermediate schools and in other schools in Cook County, Illinois. During this period she persisted in continuing her education, taking courses at Knox College and at the University of Chicago during the summer. From 1918 to 1921 she taught manual training in a high school in Beatrice, Nebraska, and, again with a full

## THE CHRONICLES OF OKLAHOMA



time job, continued studies at the Lewis Institute (now the Illinois Institute of Technology) in Chicago where she received a Bachelor of Science degree in 1919. In 1921 she accepted a position as assistant professor at the Texas State College for Women in Denton, Texas, where she taught manual arts and education for two years.

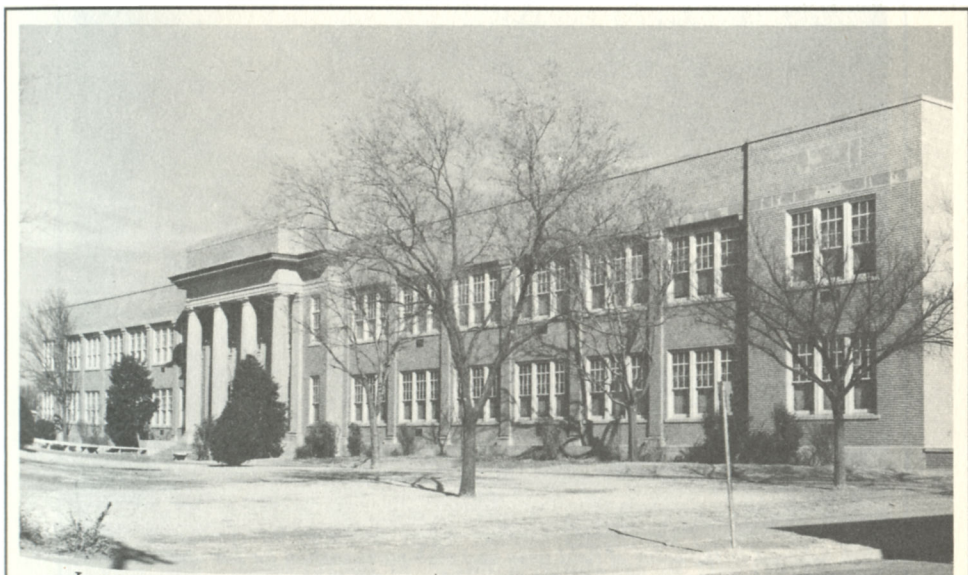
In 1923 Edith came to Oklahoma to teach industrial arts and nature study in the Okmulgee high school. At this point her professional interests changed from an emphasis on teaching manual arts to teaching science. She began a study of the local birds and reptiles, the first to be made in this part of the state. She made field trips, recorded observations, and collected specimens. Her collection of live snakes was often unpopular with her colleagues. In 1925 she published two papers on the reptiles and amphibians of Okmulgee County, and later published a list of bird specimens contained in her high school collection. Her students participated in field trips and specimen collection; she believed that these were effective teaching methods.<sup>1</sup>

The scientific research emphasis, a perspective that characterized her work for the rest of her life, was influenced by two people whom

## EDITH FORCE KASSING

she met during this period. In 1925 she took graduate courses in zoology and botany by correspondence at the University of Oklahoma, and soon became acquainted with the ornithologist Margaret Morse Nice who had just published, with her husband Dr. Leonard Blaine Nice, *The Birds of Oklahoma* (Nice and Nice, 1924). She greatly admired Margaret Nice, and they continued to be lifelong correspondents. During the summers from 1925 to 1931, Edith took several graduate courses at the University of Michigan under Dr. Frank N. Blanchard, the prominent herpetologist. This began an association that lasted until his death in 1937. Blanchard was her teacher and mentor, and she published a paper jointly with him in 1930.<sup>2</sup>

Leaving Okmulgee, Edith moved to Tulsa in 1926 to accept a job as science teacher in the new Woodrow Wilson Junior High School. She was assigned to room 201 and continued to teach in that same room until she retired in 1956. She immediately initiated studies of the birds and reptiles of the Tulsa area and began a collection of bird and snake specimens. The cabinets in her classroom were soon filled with



*In 1923 a young Edith Rhoda Force (facing page) took a job teaching at Okmulgee High School. In 1926 she moved to Tulsa, where she would teach for the next thirty years at Woodrow Wilson Junior High (above) (Courtesy James G. Force and Tulsa Public Schools).*

## THE CHRONICLES OF OKLAHOMA

cages of live snakes and preserved reptiles. Drawers of bird skins accumulated, as students were encouraged to bring in any bird found dead. Again these collections became a major focus for her teaching and stimulated numerous students, many of whom took top honors with their studies and exhibits of the material in state scholastic meets.

During 1928 and 1929 she worked on an extensive report of the birds and reptiles of Tulsa County. "The wildlife of Tulsa County, Oklahoma and vicinity," Volume 1 Birds, and Volume 2 Amphibians and Reptiles, were completed in 1929 as the first summaries of ornithological and herpetological work done in the area.<sup>3</sup> The original manuscripts, containing many interesting photographs, were placed in the Teachers Library of the Tulsa Public Schools where they subsequently disappeared. Copies of Volumes 1 and 2, without photo-



*Edith believed in the value of field trips and club participation for her students. The results of her labors included the Junior Academy of Science, seen here at a meeting in 1938 (above), and her Field and Stream Club, seen on an outing in the Tulsa area in 1940 (facing page) (Courtesy Hugh Davis Collection and William G. Brownfield).*

## EDITH FORCE KASSING

graphs, were successfully preserved in the Tulsa Central Library, Oklahoma Collection. The manuscripts were never published, but she summarized their contents in two papers, "The birds of Tulsa County and vicinity," and "The amphibians and reptiles of Tulsa County and vicinity," the first published lists of birds and reptiles of the Tulsa area in Oklahoma.<sup>4</sup> She continued her education through extension and summer courses at Cornell University and the University of Michigan and received a masters degree from the University of Michigan in 1931.



Throughout her teaching career Edith organized and led several extracurricular science organizations. She sponsored a Field and Stream Club at Okmulgee High School and Woodrow Wilson Jr. High School in Tulsa during the 1920s and 1930s, where students participated in field trips and nature projects. In 1936 she initiated the first statewide student science organization. In this effort she attempted to bring students into contact with the professional scientific community as an educational experience. She became chairman of the Oklahoma Academy of Science High School Relations Committee and formed the "Association of Science Students of the Oklahoma Academy of Sciences." She made arrangements for students to attend the professional meetings, but those gatherings were sometimes disruptive. After two years of uneasy relationship with the OAS leadership the association was discontinued.<sup>5</sup> In 1937 she organized the

## THE CHRONICLES OF OKLAHOMA

Oklahoma Junior Academy of Science as part of the national junior academy movement. In 1939 Edith was selected to participate in the English Speaking Union's exchange teacher program and spent a year in Liverpool, England. Without her leadership the Junior Academy did not function and, as World War II approached, other priorities prevailed and the organization was not revived.<sup>6</sup> In the 1940s she initiated a series of summer field biology courses at Woodrow Wilson Junior High School where students engaged in science projects. All of these organizations were well attended and served, in many cases, to stimulate interest in science.

Edith was one of a small group of people who met in 1935 at the home of James H. Gardner in Tulsa to found the Tulsa Audubon Society, the oldest bird study organization in Oklahoma. She served as recorder of the Society from 1935 through 1938, establishing a procedure for recording bird observations that has remained a traditional function of the Society. This activity has continued to the present (with the exception of the World War II years, 1940–42) and the files now contain forty-eight years of bird observation data, a resource unparalleled anywhere in the state. From 1935 through 1948 she also served as leader of the annual Christmas bird counts. She compiled and published the results of the counts in *Bird-Lore*, *Audubon*, and the *Audubon Field Notes*. In 1954 she summarized the data in a paper entitled "An analysis of Christmas bird counts in northeastern Oklahoma, 1930–1953." Later she brought the summary up to date with another paper "Eleven Years of Christmas bird counts in northeastern Oklahoma, 1954–1965." During the summer of 1936, she spent six weeks in Washington, D.C., investigating the records and literature of early naturalists and ornithologists who had worked in Oklahoma. She searched the files of the National Museum of Natural History, the Library of Congress, and the U.S. Department of Agriculture where she uncovered several new sources of information about Oklahoma bird life. In 1937 she published the results of this investigation in a paper "Bibliography of Oklahoma Ornithology."<sup>7</sup>

After publishing the early summaries of Tulsa area birds, Edith continued to collect bird specimens and to gather bird records. She also published three other papers of ornithological interest to the area.<sup>8</sup> The Woodrow Wilson Junior High School bird skin collection was never fully documented. A list, made in 1927, showed 73 specimens, and she wrote of having specimens of 156 species in 1929.<sup>9</sup> More were added prior to her retirement in 1956. In 1965 she wrote



that some were given to the National Museum of Natural History (NMNH), Oklahoma State University Museum, the University of Oklahoma Museum of Zoology, and the University of Tulsa collection. A few were left at the Junior High School.<sup>10</sup> In 1985 a search uncovered 63 of these specimens in the NMNH, 36 at Oklahoma State University, 15 at the University of Oklahoma, and 11 at the University of Tulsa.

These specimens were an important part of Edith's studies. During the 1920s and 1930s much ornithological work was devoted to the study of subspecies. At that time the A.O.U. Checklist used common names for subspecies, and it was customary in serious work to attempt subspecies identification when compiling a local list. This could only be done by specimen collection and identification, and Edith's collections were made for this purpose. Her specimens were sent to the United States Biological Survey in Washington, D.C., where Dr. H. C. Oberholtser identified them, using the extensive comparative material in their museum. Almost all of her specimen tags have pencilled subspecific names signed "H.C.O." This process

## THE CHRONICLES OF OKLAHOMA



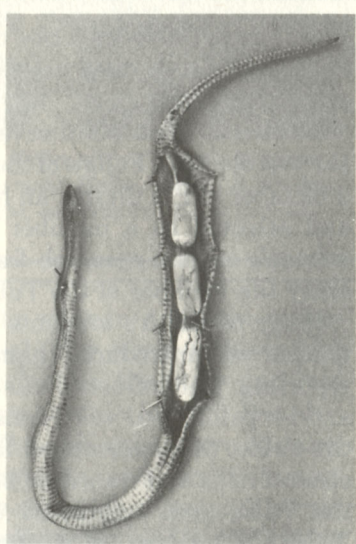
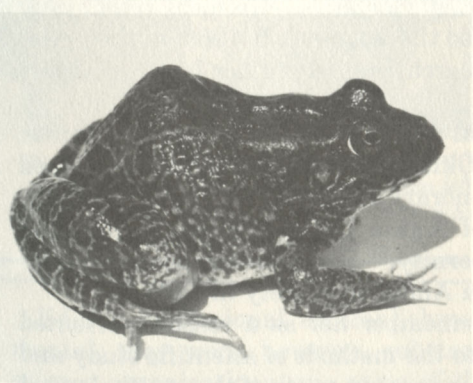
was the basis of the subspecific forms that appear in her published lists. It also was the method used by students who published works on Tulsa area birds under her guidance during this period.<sup>11</sup> Edith also collected plant specimens of the area as part of her natural history studies. She donated 300 specimens to the University of Oklahoma and several to the University of Tulsa Herbarium.<sup>12</sup>

Margaret Morse Nice, writing in "Birds of Oklahoma," included Edith in her account of the "itineraries and reports of field workers in the state," and acknowledged the use of her 1929 manuscript report on Tulsa area birds.<sup>13</sup> Nice also wrote in *Research is a Passion With Me* that during 1926 "Tulsa became a focus of [bird study] activity, the leader being Miss Edith R. Force, dynamic teacher of Science at Woodrow Wilson Junior High School."<sup>14</sup>

During her years in Oklahoma (1923–66) Edith carried on extensive herpetological research. She accumulated a large collection of reptiles, and kept many live snakes to study their mating habits, noting details of their behavior as part of her life history studies. She collected mainly the Lined Snake *Tropidoclonion* and the Ground



Snakes *Sonora* and *Tantilla*; however, she preserved many other species as records of occurrence in the area. Her collections of the Lined Snake were used in a study of age at sexual maturity, the results of which were published jointly with Blanchard, and in her study of the relation of the knobbed anal keels to age and sex in the species.<sup>15</sup> During the years 1934 through 1944 she concentrated on a large collection (approximately 1000 of each) of *Sonora episcopa* and *Tantilla gracilis*, mainly from the Tulsa area but supplemented by about 200 specimens from Palo Pinto County, Texas, contributed by Philip Harter. "A local study of the opisthoglyph snake *Tantilla gracilis* Baird and Girard" was published in the *Papers of the Michigan Academy of Science, Arts and Letters*.<sup>16</sup> "A life history study of the great plains ground snake, *Sonora episcopa episcopa* was published when she was 71 years of age, many years after her research work was done.<sup>17</sup> It was completed with a great amount of assistance from her former student, Harold E. Laughlin, whom she acknowledged. Her reptile work in northeastern Oklahoma is recognized as a pioneer effort in the field. Albert and Anna Wright referenced her work often in their handbooks of amphibians and snakes.<sup>18</sup> Robert Webb quotes her widely in "Reptiles of Oklahoma" and refers to the period in which she worked as the "Force-Ortenburger period" of herpetological study in Oklahoma.<sup>19</sup>



The author (facing page) examines a portion of Edith's reptile collection at the National Museum of Natural History, Smithsonian. Other specimens include the Gopher frog (above) and a dissected snake (right) (Courtesy the author and the Hugh Davis Collection).

## THE CHRONICLES OF OKLAHOMA

In 1947 and 1948 Force sent her large collections of *Sonora* and *Tantilla* to the Smithsonian Institution, National Museum of Natural History. After they had accessioned the collections they issued the following news release:

"Washington D.C. March 2, 1949. An Oklahoma school teacher has just presented the Smithsonian Institution the largest collection ever made of some of this country's most secretive and least known animals—the earthwormlike burrowing snakes of the Southwest. . . . Study of these obscure reptiles, the *Sonora* and *Tantilla* has been the life hobby of Miss Edith R. Force of Tulsa, she has become a world authority on them. Her collections contain more than 2000 specimens . . ."<sup>20</sup>

She distributed parts of her herpetological collections to several other museums. Specimens are currently in the Museum of Zoology, University of Michigan, Field Museum, University of Chicago, University of Illinois Museum of Natural History, University of Oklahoma Museum of Zoology, and Oklahoma State University Museum.<sup>21</sup>

Edith spent many years of her life caring for her mother, who lived with her until she died in 1949. On December 23, 1949, she married David Oscar Kassing, a widower and retired U.S. Postal Service employee from Beatrice, Nebraska. She had known the Kassings since her teaching days in Beatrice (1918–1921). Edith and David Kassing lived in Tulsa and Sperry, Oklahoma, until 1961, when they moved to the Oklahoma Christian Homes, a retirement community in Edmond, Oklahoma. She died there August 8, 1966, at the age of 75. She had continued her research, publishing her last two papers after retirement.

Edith was honored in several different ways during her lifetime: she was elected a Fellow of the Oklahoma Academy of Science, named a member of Phi Sigma, an honorary biological research fraternity, and selected as a member of Sigma Delta Epsilon, a graduate women's science research fraternity.<sup>22</sup> She also was made an honorary life member of the Tulsa Audubon Society in 1965.<sup>23</sup>

Many of Edith's students remember her as a research-oriented teacher who introduced them to the methods of scientific study and reporting. Her influence was apparent in much of the ornithological and herpetological work done in Tulsa from the mid 1920s through the 1940s. She encouraged Robert L. Luckhardt's studies, from his observations and records of birds in 1931, to his study of sparrows of the Tulsa area conducted while a student at the University of Tulsa.<sup>24</sup> I became acquainted with her in 1930 as a member of her Field and Stream Club at Woodrow Wilson Junior High School, and

## EDITH FORCE KASSING

was encouraged by her later, as a high school student, in several projects. I have always considered her my mentor in the science and natural history interests that have continued throughout my life. A number of her other ex-students share this feeling. Dr. Harold E. Laughlin, Herpetologist and Director of the Heard Natural Science Museum and Wildlife Sanctuary, McKinney, Texas, her student assistant in 1947, attributes her influence as the deciding factor in his decision to study science. Dr. C. A. Levengood of the University of Tulsa wrote in a memoriam: "Her enthusiasm for science proved contagious as evidenced by the large number of students who entered science-oriented professions subsequently."<sup>25</sup>



*In June of 1936 George M. Sutton and Karl W. Haller of the Carnegie Museum visited Edith in Tulsa. Pictured are, from left to right: Haller, Marion B. Borden, Edith, Sutton, Wallace O. Hughes, John Schwabe, and Hugh S. Davis in front (Courtesy Hugh Davis Collection).*

Edith's professional accomplishments were in no sense monumental; they were, however, substantial. Her work with student science organizations was some of the first in the state and laid important groundwork for later efforts of this kind.<sup>26</sup> Her distributional studies of the birds and reptiles of Northeastern Oklahoma are historically the basic work of the area, and her life-history studies of various snakes still receive the attention of research herpetologists today. She was very dynamic and took the lead in everything she did. She was openly outspoken in voicing her opinions, sometimes

## THE CHRONICLES OF OKLAHOMA

to the point of embarrassment. For this reason she did not always get along well with her colleagues; some considered her "odd." Her superiors sometimes shared these feelings, which may account for her not being advanced to the high school instructor level during her thirty years as a teacher in Tulsa.<sup>27</sup> Happily, her research activities filled her life and gave her a feeling of accomplishment that few people enjoy in their work.

### ENDNOTES

\* John S. Tomer is a resident of Tulsa who knew Edith Rhoda Kassing both as a friend and as a teacher. Currently he is a Research Associate at the Stovall Museum, Norman, Oklahoma. The author wishes to acknowledge the help of Dr. James R. Stewart of the University of Tulsa, who urged the completion of this manuscript and then read it with a critical eye. Thanks also goes to Dr. Harold E. Laughlin, student of Edith Force in the 1940s who was later responsible for the publication of her *Sonora* life history paper; Hugh S. Davis, who knew and worked with Edith during the 1930s and 1940s; and Dr. Harriet G. Barclay and Dr. J. Teague Self, who provided information about their professional relationships with Edith during the 1930s and 1940s. Before her death, Edith gave much of her herpetological files to Dr. Harold E. Laughlin and her ornithological files to the author. All are presently being processed for the archives at the University of Tulsa's McFarland Library.

<sup>1</sup> Edith R. Force, "Notes on Reptiles and Amphibians of Okmulgee County, Oklahoma," *Copeia*, Number 141 (1925), pp. 25-27; Edith R. Force, "Notes on Reptiles and Amphibians of Okmulgee County, Oklahoma," *Proceedings of the Oklahoma Academy of Science*, Vol. 5 (1925), pp. 80-83; Edith R. Force, "The Bird Collection of Okmulgee High School," *Proceedings of the Oklahoma Academy of Science*, Vol. 7 (1928), pp. 57-71.

<sup>2</sup> Frank N. Blanchard and Edith R. Force, "The Age of Attainment of Sexual Maturity in the Lined Snake, *Tropidoclonion lineatum* (Hallowell)," *Bulletin of the Antivenin Institute of America*, Vol. 3 (1930), pp. 96-98.

<sup>3</sup> Edith R. Force, "The Wildlife of Tulsa County, Oklahoma and Vicinity, Vol. 1, Birds" (Unpublished manuscript, Oklahoma Collection, Central Library, Tulsa, Oklahoma); Edith R. Force, "The Wildlife of Tulsa County, Oklahoma and Vicinity, Vol. 2, Amphibians and Reptiles" (Unpublished manuscript, Oklahoma Collection, Central Library, Tulsa, Oklahoma).

<sup>4</sup> Edith R. Force, "The Birds of Tulsa County, Oklahoma and Vicinity," *Proceedings of the Oklahoma Academy of Science*, Vol. 9 (1929), pp. 67-72; Edith R. Force, "The Amphibians and Reptiles of Tulsa County, Oklahoma and Vicinity," *Copeia*, Number 2, pp. 51-53.

<sup>5</sup> Memorandum from Duane Roller to members of the Oklahoma Academy of Science, April 4, 1936.

<sup>6</sup> J. T. Self, "A History of the Oklahoma Academy of Science," *Proceedings of the Oklahoma Academy of Science*, Vol. 61 (1981), pp. 90-102.

<sup>7</sup> Edith Force Kassing, "An Analysis of Christmas Bird Counts in Northeastern Oklahoma, 1930-1953," *Proceedings of the Oklahoma Academy of Science*, Vol. 35 (1954), pp. 77-83; Edith Force Kassing, "Eleven Years of Christmas Bird Counts in Northeastern Oklahoma, 1954-1964," *Proceedings of the Oklahoma Academy of Science*, Vol. 46 (1965), pp. 46-49; Edith R. Force, "Bibliography of Oklahoma Ornithology

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- <sup>8</sup> Edith R. Force and W. H. Koons, "Some New Birds for Oklahoma from Okmulgee and Tulsa Counties," *Wilson Bulletin*, Vol. 42 (1930), pp. 118–121; Edith R. Force, "Additional Records of Birds of Tulsa County and Vicinity," *Proceedings of the Oklahoma Academy of Science*, Vol. 15 (1934), pp. 61–62; Kassing, "An Analysis of Christmas Bird Counts in Northeastern Oklahoma, 1930–1953."
- <sup>9</sup> Force, "The Birds of Tulsa County, Oklahoma and Vicinity."
- <sup>10</sup> Personal letter of Edith Force Kassing, March 2, 1965.
- <sup>11</sup> Wallace O. Hughes and John S. Tomer, "Some Birds for Tulsa County, Oklahoma and Vicinity," *Proceedings of the Oklahoma Academy of Science*, Vol. 16 (1935), pp. 26–28; Robert L. Luckhardt, "The Sparrows in the Vicinity of Tulsa, Oklahoma: Species and General Occurrence," *Proceedings of the Oklahoma Academy of Science*, Vol. 17 (1967), pp. 43–44.
- <sup>12</sup> Personal correspondence from Dr. Harriet Barclay and Dr. Paul Buck, in the files of the author.
- <sup>13</sup> Margaret Morse Nice, *The Birds of Oklahoma* (Norman: University of Oklahoma Biological Survey, 1931), pp. 1–244.
- <sup>14</sup> Margaret Morse Nice, *Research is a Passion With Me*, edited by Doris Huestic Speirs (Toronto: Consolidated Amethyst Communications, Inc., 1979).
- <sup>15</sup> Blanchard and Force, "The Age of Attainment of Sexual Maturity in the Lined Snake, *Tropidoclonion lineatum* (Hallowell)," pp. 96–98; Edith R. Force, "The Relation of the Knobbed Anal Keels to Age and Sex in the Lined Snake, *Tropidoclonion lineatus* (Hallowell)," *Papers of the Michigan Academy of Science, Arts and Letters*, Vol. 21 (1936), pp. 613–617.
- <sup>16</sup> Edith R. Force, "A Local Study of the Opisthoglyph Snake *Tantilla gracilis* Baird and Girard," *Papers of the Michigan Academy of Science, Arts and Letters*, Vol. 20 (1935), pp. 645–65.
- <sup>17</sup> Edith Force Kassing, "A Life History Study of the Great Plains Ground Snake, *Sonora episcopa episcopa* (Kennicott)," *Texas Journal of Science*, Vol. 13 (1961), pp. 185–203.
- <sup>18</sup> Albert Hazen Wright and Anna Allen Wright, *Handbook of Snakes of the United States and Canada* (Ithica: Comstock Publishing Co., 1957); Anna Allen Wright and Albert Hazen Wright, *The Frogs and Toads of the United States and Canada* (Ithica: Comstock Publishing Co., 1942).
- <sup>19</sup> Robert G. Webb, *Reptiles of Oklahoma* (Norman: University of Oklahoma Press, 1970).
- <sup>20</sup> News Release from the Smithsonian Institute, Washington, D.C., March 2, 1949.
- <sup>21</sup> Webb, *Reptiles of Oklahoma*.
- <sup>22</sup> Biographical form completed by Edith Kassing, 1950, in the Files of Newspaper Printing Corporation, Tulsa, Oklahoma.
- <sup>23</sup> *Tulsa World*, January 24, 1965, p. 9.
- <sup>24</sup> Luckhardt, "The Sparrows in the Vicinity of Tulsa, Oklahoma: Species and General Occurrence."
- <sup>25</sup> C. A. Levensood, "Edith Force Kassing, 1890–1966," *Proceedings of the Oklahoma Academy of Science*, Vol. 47 (1967), p. 486.
- <sup>26</sup> Claude F. Jones, "The Effectiveness of the Oklahoma Junior Academy of Science in Early Identification of Scholars," *Proceedings of the Oklahoma Academy of Science*, Vol. 44 (1964), pp. 181–183.
- <sup>27</sup> Bill Sampson, "The Lady Had a Bull Snake for a Pet," *Tulsa Tribune*, March 5, 1975, Sec. B, p. 3.

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