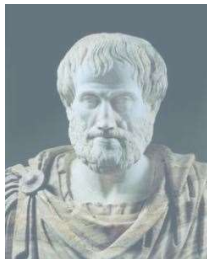


Aristotle
-385 to -323



Among Aristotle's many interests was the natural world. He wrote a 10- volume *History of Animals*. In this work, he refers to about 140 species of birds. Also, he knew the migration pattern of some large birds, such as Eurasian cranes. He described how other birds migrate from higher altitudes to lower altitudes. In addition, he observed that birds setting out on migration were fatter, and that those returning from migration were thinner.

Aristotle further noted that there are many bird forms within the bird kind – cranes, eagles, crows, bustards, sparrows, and so on, just as there are many forms of fishes within the fish kind. He sometimes called these *atoma eidē*, indivisible forms, which included humans.



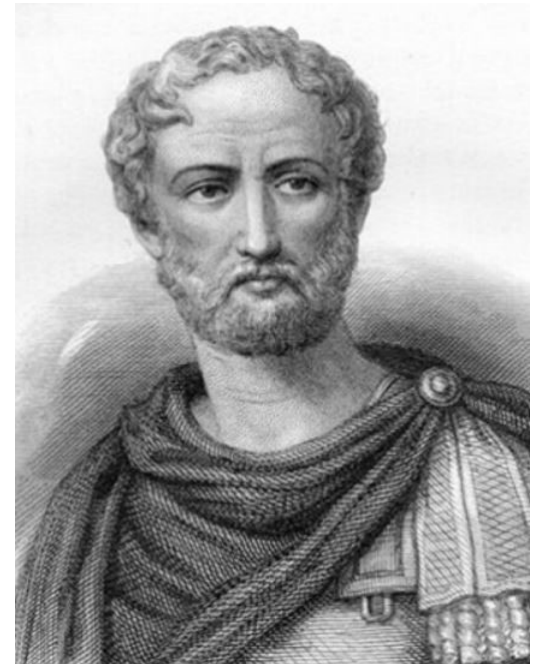
Pliny the Elder

24 - 79

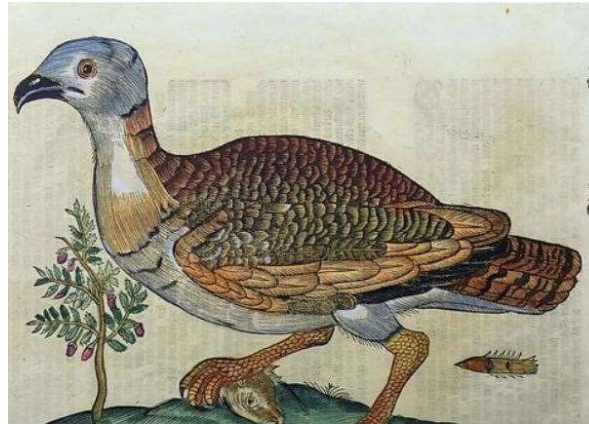
The *Natural History* is a work by Pliny the Elder. It is one of the largest single works to have survived from the Roman Empire to the modern day and purports to cover all ancient knowledge. The work is divided into 37 books, organized into ten volumes. These cover topics including astronomy, mathematics, geography, ethnography, anthropology, human physiology, zoology, botany, agriculture, horticulture, pharmacology, mining, mineralogy, sculpture, painting, and precious stones. He published the first 10 books in AD 77, but had not made a final revision of the remainder at the time of his death. The rest was published posthumously by Pliny's nephew, Pliny the Younger.

He was stationed at Misenum, at the time of the great eruption of Mount Vesuvius. He was observing the phenomenon when he apparently died of a heart attack.

Pliny's *Natural History* became a model for later encyclopedias and scholarly works as a result of its breadth of subject matter, its referencing of original authors, and its index.

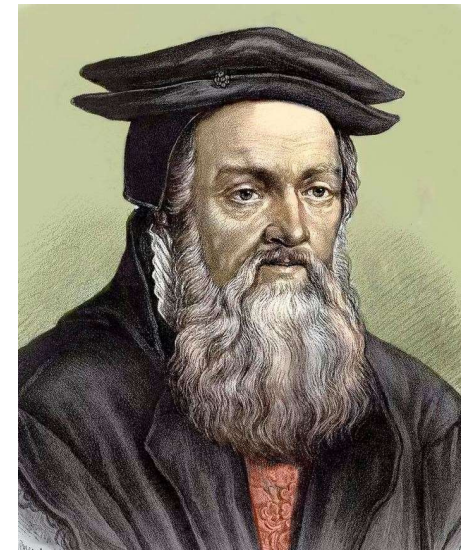


Conrad Gessner
1516 - 1565

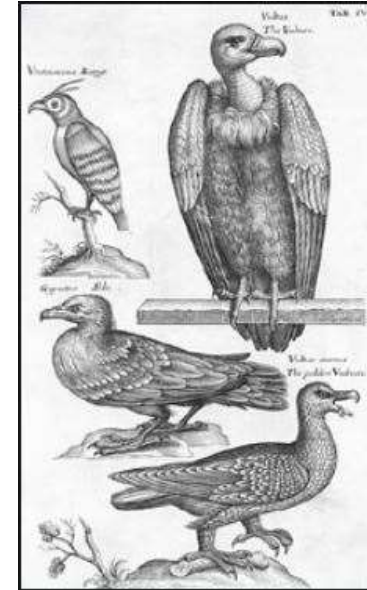
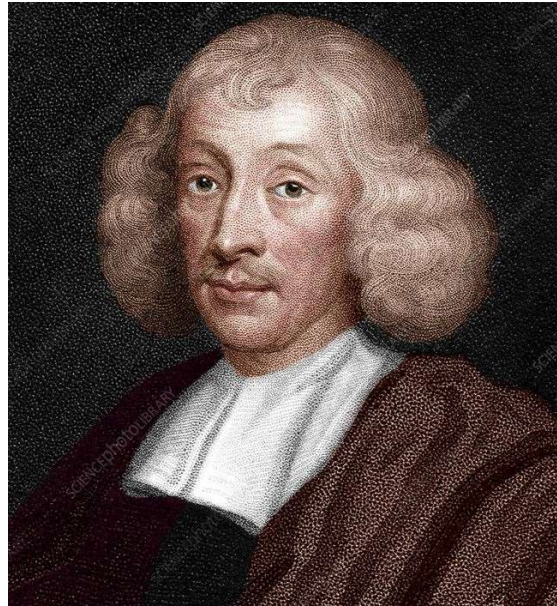


Conrad Gessner became Zürich's City Physician, but was able to spend much of his time on collecting, research and writing. Throughout his life Gessner was interested in natural history, and collected specimens and descriptions of wildlife through travel and extensive correspondence with other friends and scholars. His approach to research consisted of four main components: observation, dissection, travel to distant lands, and accurate description. This rising observational approach was new to Renaissance scholars because people usually relied completely upon Classical writers for their research.

Gessner compiled monumental works on bibliography (*Bibliotheca universalis* 1545–1549) and zoology (*Historia animalium* 1551–1558) and was working on a major botanical text at the time of his death from plague at the age of 49. His five-volume *Historia animalium* (1551–1558) is considered the beginning of modern zoology, and the flowering plant genus *Gesneria* and its family *Gesneriaceae* are named after him. He is regarded as the father of modern scientific bibliography, zoology and botany.



John Ray
1627 - 1705



John Ray was an English naturalist widely regarded as one of the earliest of the English parson-naturalists. He published important works on botany, zoology, and natural theology. His enduring legacy to botany was the establishment of species as the ultimate unit of taxonomy.

Ray is often referred to as the father of natural history in Britain. In the 17th century, Francis Willughby and Ray came up with the first major system of bird classification that was based on function and morphology rather than on form or behavior. Willughby's *Ornithologiae libri tres* (1676) completed by John Ray is considered to mark the beginning of scientific ornithology.

It is as a botanist that he is best remembered; his three-volume *Historia Plantarum* (1686–1704) and his *Synopsis Methodica Stirpium Britannicarum* (1690) remained standard botanical texts in Britain for much of the eighteenth century.

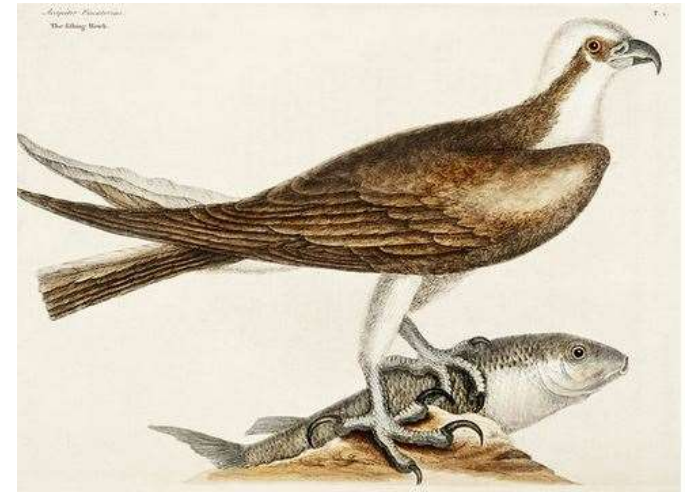


**Antonie van
Leeuwenhoek
1632-1723**

Antonie van Leeuwenhoek was a scientist from the Netherlands known as the first microbiologist and also “the Father of Microbiology” because he was the first to observe bacteria underneath a microscope. He made many other significant discoveries in the field of biology and also made important changes to the microscope.



Mark Catesby
1683 - 1749



Mark Catesby was an English naturalist who studied flora and fauna in the New World.

In 1712, Catesby embarked on a series of expeditions to the southern colonies of British North America. Catesby was enthralled by the wildlife of the New World, and he spent years traveling by foot through parts of present-day Virginia, Georgia, the Carolinas and the Bahamas. Over the course of his journeys, he encountered and documented uncountable varieties of animal and plant life that were entirely unknown to Europeans. His drawings and written observations were the raw material for an unprecedented project: a scientific account of previously uninvestigated wildlife, with illustrations taken from life.

Catesby spent twenty years preparing and publishing his *Natural History of Carolina, Florida and the Bahama Islands*. It includes 220 plates of *birds*, reptiles, amphibians, fish, insects, mammals and plants.

Georges-Louis Leclerc, Comte de Buffon 1707 - 1788



A French mathematician who was considered one of the leading naturalists of the Enlightenment. He worked as Keeper at the Jardin du Roi from 1739, and this inspired him to research and publish a vast encyclopedia and survey of natural history, the ground-breaking *Histoire Naturelle*, which he published in forty-four volumes between 1749 and 1804. These volumes contain Buffon's survey and descriptions of birds from the *Histoire Naturelle*. Based on recorded observations of birds both in France and in other countries, these volumes provide detailed descriptions of various bird species, their habitats and behaviors and were the first publications to present a comprehensive account of eighteenth-century ornithology. Volume 1 covers birds of prey and flightless birds.

Carl Linnaeus
1707 - 1778



Carl Linnaeus was a Swedish botanist, zoologist, and physician.

He received most of his higher education at Uppsala University and began giving lectures in botany there in 1730. He lived abroad between 1735 and 1738, where he studied and also published the first edition of his *Systema Naturae* in the Netherlands. In *Systema Naturae*, the unwieldy descriptions used previously - *physalis amno ramosissime ramis angulosis glabris foliis dentoserratis* - were replaced by the concise and now familiar genus-species names - *Physalis angulata* - and higher taxa were constructed in a simple and orderly manner.

In the 1740s, he was sent on several journeys through Sweden to find and classify plants and animals. In the 1750s and 1760s, he continued to collect and classify animals, plants, and minerals, while publishing several volumes. He is also considered as one of the founders of modern ecology. He was one of the most acclaimed scientists in Europe at the time of his death.



Gilbert White

1720 - 1793

Gilbert White is considered by many to be the **father of ecology** and **field ornithology**. He is one of those who shaped the modern attitude of respect for nature.

Gilbert White is well-known for his exceptional skills of observation as well as his talent for writing. Over a 20-year period, White wrote his observations into the “*Natural History and Antiquities of Selbourne*” which has remained in print ever since it was first published.

Many of Gilbert White’s observations related to birds, hence his great regard amongst Ornithologists. He was a firm believer in observing birds in the field rather than the collection of specimens for study in a laboratory. By following that technique, White was able to dispel up a number of misunderstandings about birds. For example, White was able to identify the Wood Warbler, Chiffchaff and Willow Warbler as three separate bird species through their songs. This application of his observational techniques as part of ornithology introduced the discipline of distinguishing birds by means of their distinctive calls and not just physical appearance. As an ornithologist Gilbert White also discovered that birds make use of camouflage after he studied the coloration and pattern of plumage on stone curlews. White is also credited with marking out the lineage of the domestic pigeon back to the rock dove.

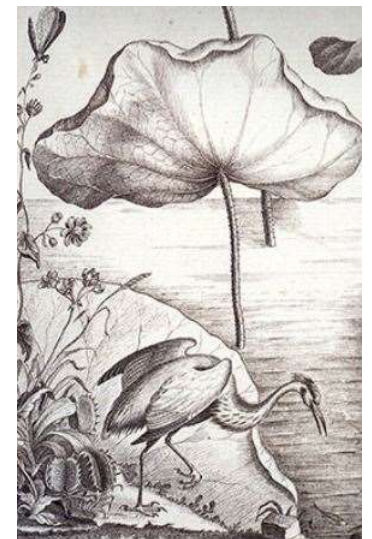


William Bartram
1739 - 1823



William Bartram was an American naturalist. The son of Ann (*née* Mendenhall) and the naturalist John Bartram. As a boy, he accompanied his father on many of his travels. From his mid-teens, Bartram was noted for the quality of his botanic and ornithological drawings. He also had an increasing role in the maintenance of his father's botanic garden, and added many rare species to it.

In 1773, he embarked upon a four-year journey through eight southern colonies. Bartram made many drawings and took notes on the native flora and fauna, and the native American Indians. William Bartram wrote of his experiences exploring the Southeast in his book *Travels through North & South Carolina, East & West Florida, the Cherokee Country, the Extensive Territories of the Muscogulges, or Creek Confederacy, and the Country of the Chactaws, Containing an Account of the Soil and Natural Productions of Those Regions, Together with Observations on the Manners of the Indians*, published in 1791 and which is today simply known as *Bartram's Travels*.



Louis Pierre Vieillot

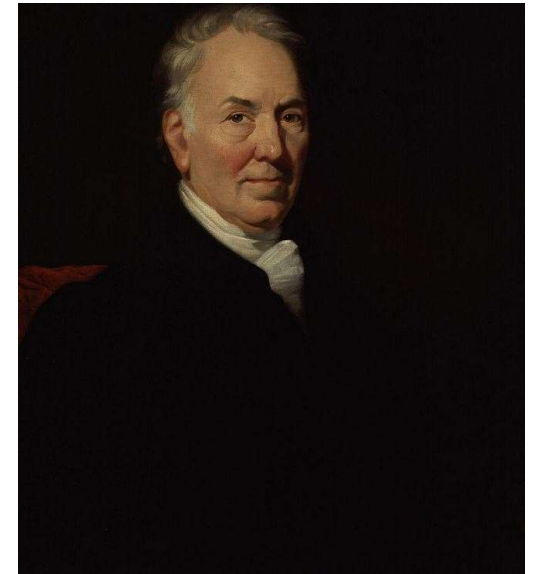
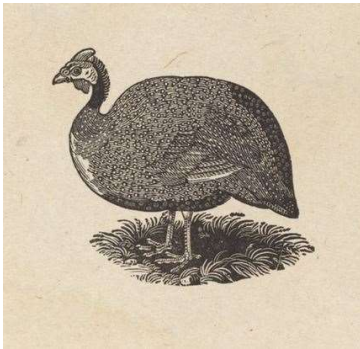
1748 – 1830



A French taxonomist & ornithologist, Vieillot is the author of the first scientific descriptions and Linnaean names of a number of birds, including species he collected himself in the West Indies and North America and South American species discovered by others. At least 26 of the genera erected by Vieillot are still in use. He was among the first ornithologists to study changes in plumage and one of the first to study live birds.



Thomas Bewick
1753 - 1828



English wood-engraver and natural history author. Early in his career he took on all kinds of work such as engraving cutlery, making the wood blocks for advertisements, and illustrating children's books.

Bewick is best known for his *A History of British Birds*, which is admired today mainly for its wood engravings, especially the small, sharply observed, and often humorous vignettes known as tail-pieces. The book was the forerunner of all modern field guides.



Alexander Wilson
1766 - 1813



Alexander Wilson was a Scottish-American poet, ornithologist, naturalist, and illustrator. Identified by George Ord as the "Father of American Ornithology", Wilson is regarded as the greatest American ornithologist prior to John Audubon.

Wilson wrote and illustrated *American Ornithology*, a nine-volume work published in 1814 that illustrated 268 bird species and kindled America's insatiable appetite for bird knowledge, 30 years before Audubon's *Birds of America*. Today, he has five North American birds named in his honor: Wilson's Warbler, Wilson's Snipe, Wilson's Storm-Petrel, Wilson's Phalarope and Wilson's Plover.

In 1808 Wilson set off on foot, "in search of birds, and subscribers." That expedition reads like an ornithological Indiana Jones adventure. Traveling over 12,000 miles in seven years, from New England to Florida to western Tennessee, Wilson illustrated more than 230 bird species, highlighting important field marks with crisp colors, in a two-dimensional style mirrored in field guides today. Many of the western birds in his book he never saw alive; he sketched the Wilson's Phalarope from a specimen collected by Lewis and Clark.

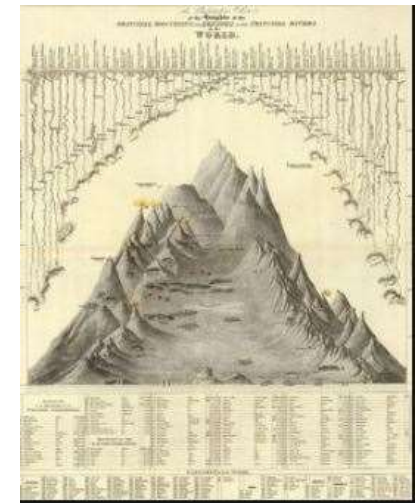
Alexander von Humboldt 1769 - 1859



A Prussian polymath, geographer, naturalist, explorer, and proponent of Romantic philosophy and science, Humboldt's quantitative work on botanical geography laid the foundation for the field of biogeography. His advocacy of long-term systematic geophysical measurement laid the foundation for modern geomagnetic and meteorological monitoring.

Between 1799 and 1804, Humboldt travelled extensively in the Americas, exploring and describing them for the first time from a modern scientific point of view. His description of the journey was written up and published in an enormous set of volumes over 21 years. Humboldt was one of the first people to propose that the lands bordering the Atlantic Ocean were once joined (South America and Africa in particular).

Humboldt resurrected the use of the word *cosmos* from the ancient Greek and assigned it to his multivolume treatise, "*Kosmos*", in which he sought to unify diverse branches of scientific knowledge and culture. This important work also motivated a holistic perception of the universe as one interacting entity. He was the first person to describe the phenomenon and cause of human-induced climate change, in 1800 and again in 1831, based on observations generated during his travels.



John James Audubon 1785 - 1857



John James Audubon (born **Jean-Jacques Rabin**) was an American ornithologist, naturalist, and painter. He was notable for his extensive studies documenting all types of American birds and for his detailed illustrations that depicted the birds in their natural habitats. His major work, a color-plate book entitled "*The Birds of America*" (1827–1839), is considered one of the finest ornithological works ever completed. Audubon is also known for having identified 25 new species.

Audubon attempted to paint one page each day. Painting with newly discovered technique, he decided his earlier works were inferior and re-did them. He hired hunters to gather specimens for him. Audubon realized the ambitious project would take him away from his family for months at a time.

He is remembered as one of the most important naturalists of his era, and his respect and concern for the natural world clearly marks him as one of the forefathers of the modern conservationism and environmentalism movements. In 1886, the first bird-preservation society was named in his honor, which led to the establishment of the National Audubon Society in 1905.



Thomas Nuttall
1786 - 1859



An English botanist and zoologist who lived and worked in America from 1808 until 1841.

In 1810 he travelled to the Great Lakes and in 1811 travelled on the Astor Expedition led by William Price Hunt on behalf of John Jacob Astor up the Missouri River. Although Lewis and Clark had travelled this way previously, many of their specimens had been lost. Therefore, many of the plants collected by Nuttall on this trip were unknown to science. The imminent war between Britain and America caused him to return to London via New Orleans. He published the first field guide for North American birds, *Manual of the Ornithology of the United States and of Canada* (1832).

Various birds were named after Nuttall, including Nuttall's woodpecker *Dryobates nuttallii* by his friend William Gambel, and yellow-billed magpie *Pica nuttalli* and common poorwill *Phalaenoptilus nuttallii* by John James Audubon.

Thomas Say
1787 - 1834

American entomologist, conchologist, and herpetologist. His definitive studies of insects and shells, numerous contributions to scientific journals, and scientific expeditions to Florida, Georgia, the Rocky Mountains, Mexico, and elsewhere made him an internationally known naturalist. Say has been called the father of American descriptive entomology and American conchology.

In 1819–20, Major Stephen Harriman Long led an exploration to the Rocky Mountains and the tributaries of the Missouri River, with Say as zoologist. Their official account of this expedition included the first descriptions of the western kingbird, band-tailed pigeon, rock wren, Say's phoebe, lesser goldfinch, lark sparrow, lazuli bunting, orange-crowned warbler and many other mammals and reptiles.



Rev. John Bachman
1790 - 1874



An American Lutheran minister, social activist and naturalist who collaborated with John James Audubon to produce *Viviparous Quadrupeds of North America* and whose writings, particularly *Unity of the Human Race*, were influential in the development of the theory of evolution. Bachman's sparrow and Bachman's warbler are named in his honor.

Rev. John S. Henslow **1796 - 1861**

A British priest, botanist and geologist. He is best remembered as friend and mentor to his pupil Charles Darwin, and for inspiring him with a passion for natural history.

From 1821 Henslow had begun organizing a herbarium of British flora, supplementing his own collecting with a network which expanded over time to include his friends and family, and the botanists William Jackson Hooker and John Hutton Balfour, as well as about 30 of his students. He followed the understanding of the time that species were fixed as created but could vary within limits, and hoped to analyze these limits of variation. His *A Catalogue of British Plants* was first published in October 1829, and became a set book for his lecture course.

In 1830 Henslow experimented on varying the conditions of garden grown wild plants to produce various forms of the plant. In 1835 Henslow published *Principles of Descriptive and Physiological Botany* as a textbook based on this lecture course.

In the summer of 1831 Henslow was offered a place as naturalist to sail aboard the survey ship *HMS Beagle* on a two-year voyage to survey South America, but his wife dissuaded him from accepting. Seeing a perfect opportunity for his protégé, Henslow wrote to the ship's captain Robert Fitzroy telling him that Darwin was the ideal man to join the expedition team.



Ed Harris
1799 - 1863



A farmer, horse breeder, philanthropist, naturalist, and ornithologist who accompanied John James Audubon on two of his expeditions in the spring of 1837 in the Gulf of Mexico, and in 1843 along the Missouri River to observe birds and mammals of America. Harris was commemorated by Audubon in the common names of the Harris's hawk and the Harris's sparrow, and by John Cassin in the binomial of the buff-fronted owl, *Aegolius harrisii*.

Charles Lucien Bonaparte

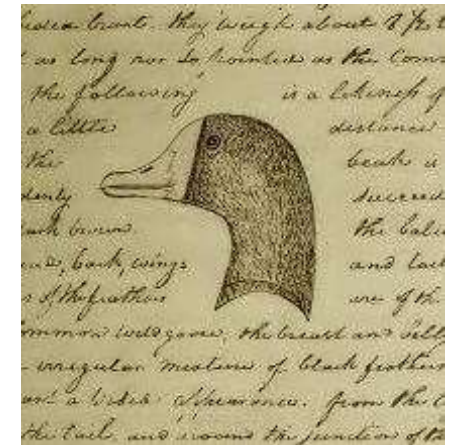
1803 – 1857

A French biologist and ornithologist. Nephew of Emperor Napoleon. Born in Paris, raised in Italy, he studied the ornithology of the United States and updated Wilson's *History of the Birds of the United States*. The revised edition was published between 1825 and 1833. His other publications included *American Ornithology*, or, *The Natural History of Birds Inhabiting the United States*, not given by Wilson.

In 1824, Bonaparte tried to get the then unknown Audubon accepted by the Academy of Natural Sciences, but this was opposed by the ornithologist George Ord.



Lewis & Clark expedition 1804 - 1806

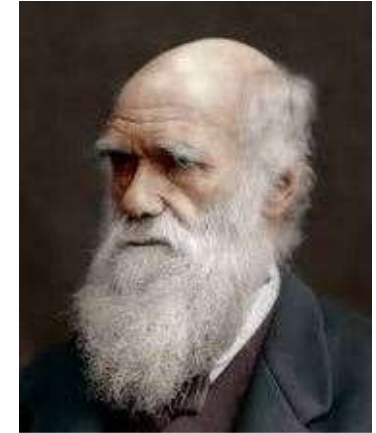
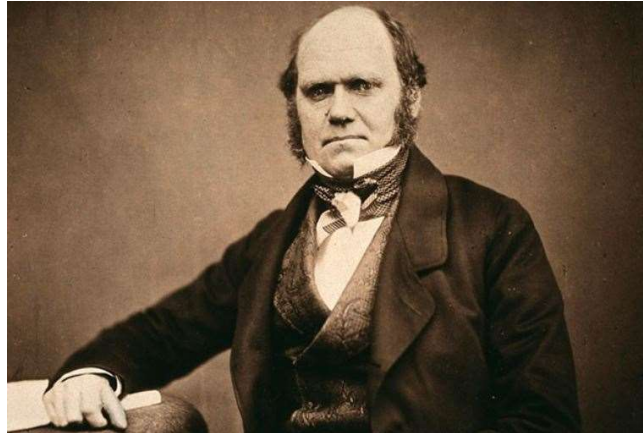


The **Lewis and Clark Expedition** began in 1804, when President Thomas Jefferson tasked Meriwether **Lewis** with exploring lands west of the Mississippi River that comprised the Louisiana Purchase. **Lewis** chose William **Clark** as his co-leader for the mission.

The Expedition encountered and described 62 bird species. Five of those species were discovered for the first time by European Americans. They were the Clark's Nutcracker, Common Poorwill, Greater Sage-grouse, Interior Least Tern and Lewis' Woodpecker.



Charles Darwin
1809 - 1882

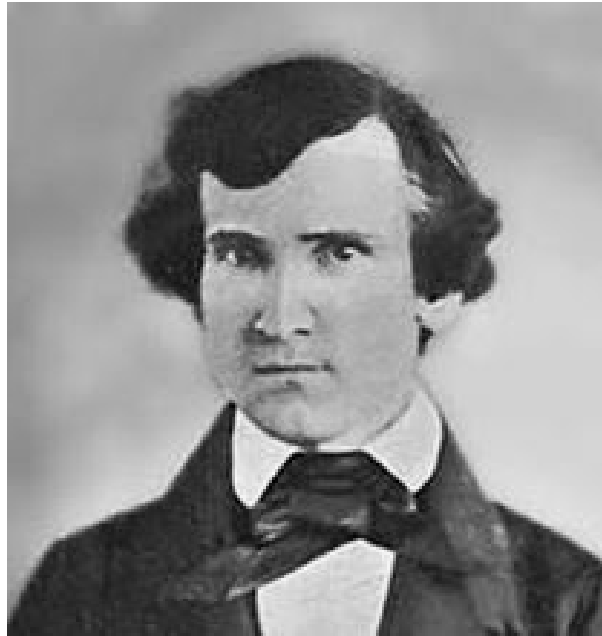


Charles Darwin is known as the father of evolution. When he was a young man, Darwin set out on a voyage on the HMS Beagle. The ship sailed from England in late December of 1831 with Charles Darwin aboard as the crew's naturalist. The was to take the ship around South America with many stops along the way.

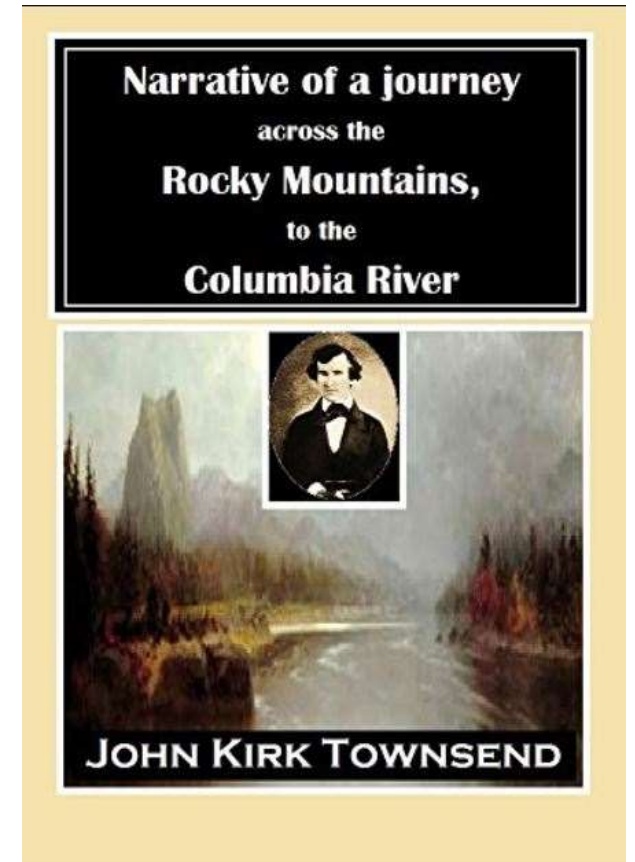
Perhaps the best known of Darwin's species he collected while on the Galapagos Islands were what are now called "Darwin's Finches". Darwin's finches (also known as the Galápagos finches) are a group of about 26 species of passerine birds. They are well known for their remarkable diversity in beak form and function. In reality, these birds are not really part of the finch family and are thought to probably actually be some sort of blackbird or mockingbird. However, Darwin was not very familiar with birds, so he collected and preserved the specimens to take back to England.

Charles Darwin did not come up with the Theory of Evolution on this voyage. However, the Galapagos finches helped Darwin solidify his idea of natural selection. The favorable adaptations of Darwin's Finches' beaks were selected for over generations until they all branched out to make new species.

**John Kirk
Townsend
1809 - 1851**



An American naturalist, ornithologist and collector, in 1834, Philadelphia naturalist Thomas Nuttall invited Townsend to join Nathaniel Wyeth's expedition to Oregon as an ornithologist. He later sold 93 birds to Audubon who described them in his *Birds of America*. Of the 508 species Audubon discussed, 74 came from Townsend.



Isaac Sprague
1811 - 1895



A self-taught landscape, botanical, and ornithological painter. He was America's best known botanical illustrator of his day.

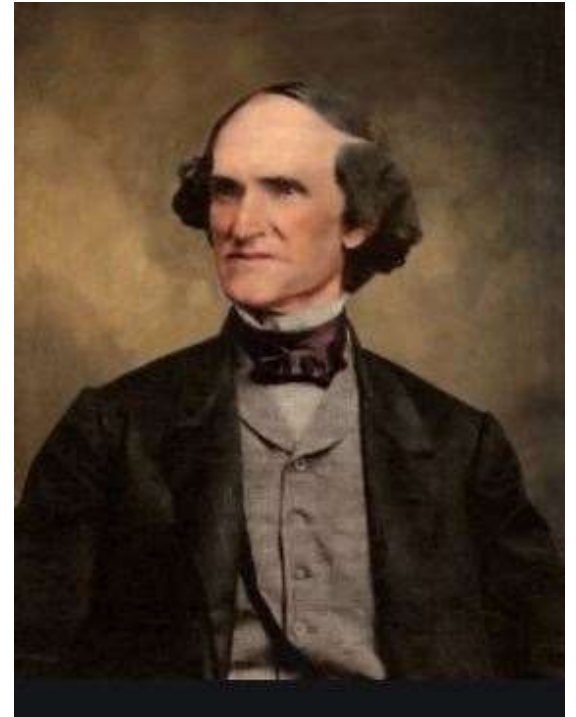
In 1843, Sprague served as an assistant to Audubon on an ornithological expedition up the Missouri River, taking measurements and making sketches. Sprague's pipit (*Anthus spragueii*), an uncommon and inconspicuous bird, was discovered on that expedition and named for Sprague. Some of Sprague's fine drawings were incorporated into Audubon's later publications, without credit. Sprague's diary of this expedition is in the Boston Athenaeum.



John Bell
1812 - 1899

An American taxidermist and collector. He traveled with John James Audubon up the Missouri River in 1843. He also taught taxidermy to Theodore Roosevelt.

Bell's sparrow (*Artemisiospiza belli*) and Bell's vireo (*Vireo bellii*) are named after him.



John Cassin 1813 - 1869



An American ornithologist. He took up an unpaid position as curator of the Philadelphia Academy of Natural Sciences and published several books, and described numerous species of bird.

A careful and talented taxonomist, Cassin named 198 birds not described in the works of his predecessors Alexander Wilson and John James Audubon. He is commemorated in the names of a number of birds from western North America, including the Cassin's auklet, Cassin's kingbird, Cassin's vireo, Cassin's sparrow, and Cassin's finch. Samuel Washington Woodhouse, for example, named Cassin's Sparrow (*Peucaea cassinii*) for John Cassin. The periodic cicada *Magicicada cassinii* is also named for him.

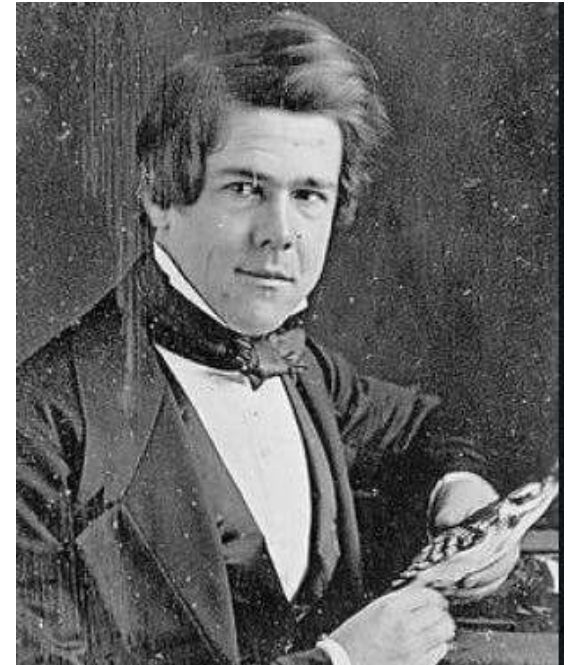
Henry David Thoreau
1817 - 1862



Henry David Thoreau was an American essayist, poet, and philosopher. A leading transcendentalist, he is best known for his book *Walden*, a reflection upon simple living in natural surroundings.

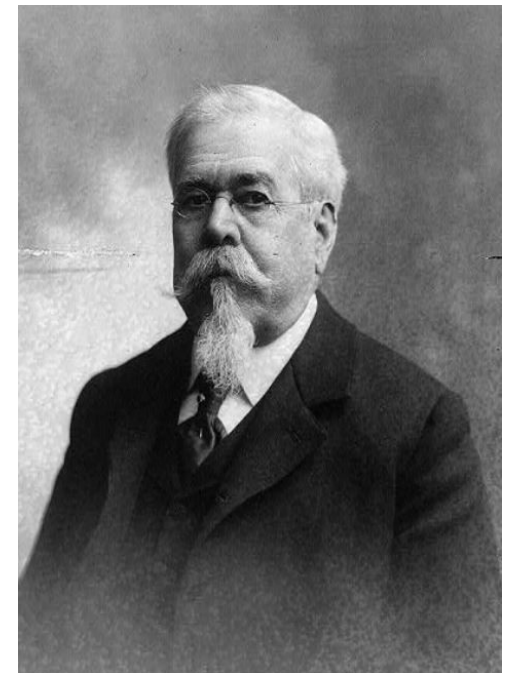


**Samuel Washington
Woodhouse
1821 - 1904**



An American surgeon, explorer and naturalist. Woodhouse was doctor and naturalist on the Sitgreaves Expedition led by Captain Lorenzo Sitgreaves from San Antonio to San Diego which explored the possibility of a route from the Zuni River to the Pacific.

Woodhouse's scrub jay (*Aphelocoma woodhouseii*) were named in his honor. The first Cassin's Sparrow was described in 1852 by Samuel W. Woodhouse from a specimen collected near San Antonio, Texas.



Adolphus Heerman
1821 - 1865



An American doctor, naturalist, ornithologist, and explorer. He travelled throughout the U.S. collecting samples and cataloging various species of birds, fish, reptiles, and plants. Heermann's Gull is named for him.



Gregor Mendel

1822-1884



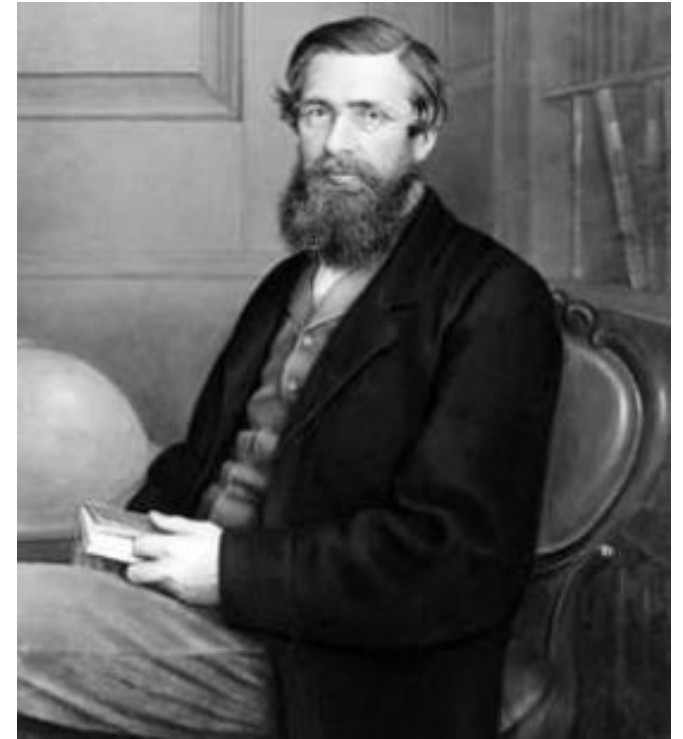
Johann Gregor Mendel was a Moravian scientist born in 1822. He was the son of a peasant and the grandson of a gardener who was initially taught to be a local priest before being admitted into an institute of philosophy. Due to financial shortcomings, however, he was forced to terminate his studies in 1843 and go back to a monastery in Brunn.

Mendel felt the monastery was the ideal place to pursue his studies without being troubled by lack of finances. He was placed in charge of the garden at the monastery. He enrolled at the University of Vienna where he studied physics, botany, and chemistry. After the completion of his studies, he returned to the monastery to teach natural sciences.

Mendel worked with seven characteristics of pea plants: plant height, pod shape and color, seed shape and color, and flower position and color demonstrating the characteristics of genetics.

The profound significance of Mendel's work was not recognized until more than three decades after his studies when scientists verified several of his experimental findings, ushering in the modern age of genetics.

**Alfred Russel
Wallace
1823 - 1913**



Alfred Russel Wallace is best known for independently conceiving the theory of evolution through natural selection; his paper on the subject was jointly published with some of Charles Darwin's writings in 1858. Wallace was considered the 19th century's leading expert on the geographical distribution of animal species and is sometimes called the "father of biogeography". He collected more than 100,000 specimens, mainly **birds**, beetles and butterflies, which resulted in a huge contribution to scientific knowledge and also to the collections of the Natural History Museum. His interest in natural history resulted in his being one of the first prominent scientists to raise concerns over the environmental impact of human activity.

William Gambel
1823 - 1849



An American naturalist, ornithologist, and botanist from Philadelphia. As a young man he worked closely with the renowned naturalist Thomas Nuttall.

In 1838 he travelled with Nuttall on a collecting trip to North Carolina. In March 1841 he set off alone to collect plants for Nuttall. He travelled west, taking a more southerly route to that taken previously by Nuttall and Townsend. The new birds he collected included Gambel's quail (*Callipepla gambelii*), mountain chickadee (*Parus gambeli*) and Nuttall's woodpecker (*Picoides nuttallii*).



**Spencer Fullerton
Baird
1823 - 1887**



An American naturalist, ornithologist, ichthyologist, herpetologist, and museum curator. Baird was the first curator to be named at the Smithsonian Institution. He would eventually serve as assistant Secretary of the Smithsonian from 1850 to 1878, and as Secretary from 1878 until 1887. He was dedicated to expanding the natural history collections of the Smithsonian which he increased from 6,000 specimens in 1850 to over 2 million by the time of his death. He published over 1,000 works during his lifetime.

Birds named for him are: Baird's sparrow, *Ammodramus bairdii* ; Baird's sandpiper, *Calidris bairdii*; Baird's flycatcher *Myiodynastes bairdii*; Baird's trogon, *Trogon bairdii*; The Cuban ivory-billed woodpecker, *Campephilus bairdii* (now *C. principalis bairdii*)



Baird's Bunting

John Xantus
1825 - 1894



A Hungarian exile and zoologist. He collected and named many previously unrecognized animals and plants in the southwestern U.S. and Mexico.

He authored 10 field books. The field books consist of specimen catalogs which contain bird, egg, nest, fish, insect, reptile, eel, mammal, mollusk, and crustacean specimens. These catalogs range in date from 1857-1864 and include localities within Mexico and California. Entries may be dated and may include such information as species or common name, sex, physical measurements, coloring, numbers of eggs and nests, and notes on collecting conditions and location. Field numbers are present, as well as some sketches.



William Hammond
1828 - 1900

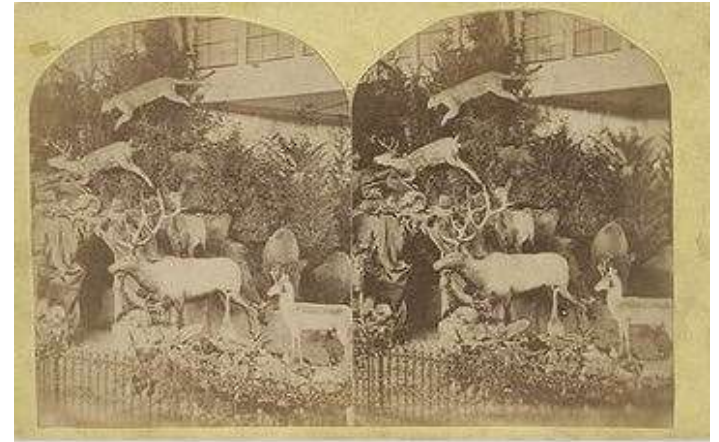


An American military physician and neurologist. During the American Civil War he was the eleventh Surgeon General of the United States Army (1862–1864) and the founder of the Army Medical Museum (now the National Museum of Health and Medicine).

Hammond's Flycatcher commemorates William Alexander Hammond who was the surgeon general of the US Army. Hammond collected bird specimens for Spencer Fullerton Baird.



Martha Maxwell
1831 - 1881



An American naturalist, artist and taxidermist. She helped found modern taxidermy. Maxwell's pioneering diorama displays are said to have influenced major figures in taxidermy history who entered the field later, such as William Temple Hornaday and Carl Akeley (the father of modern taxidermy).

Among her many accomplishments, she is credited with being the first woman field naturalist to obtain and prepare her own specimens. Ornithologist Robert Ridgway of the Smithsonian Institution named the Maxwell Owl, *Otus asio maxwelliae*, (Old World scops owls) in her honor.



**Charles
Bendire
1836 - 1897**

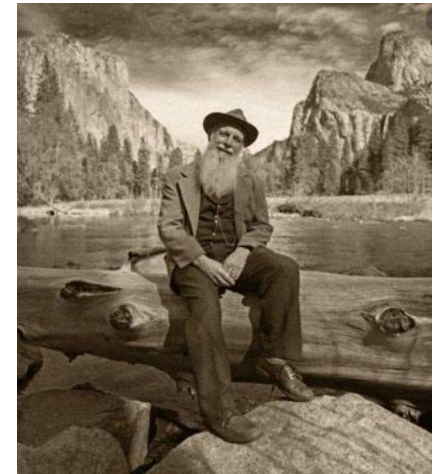


Major Charles Emil Bendire was a United States Army soldier and noted ornithologist and oologist. The Bendire's thrasher is named for him.

Bendire's private collection of 8,000 eggs formed the basis of the egg collection at the Smithsonian Institution, then known as the U.S. National Museum, in Washington, D.C.. He made new discoveries about the migration habits of various birds and discovered several new species, including the Bendire's thrasher, *Toxostoma bendirei*.



John Muir **1838 - 1914**

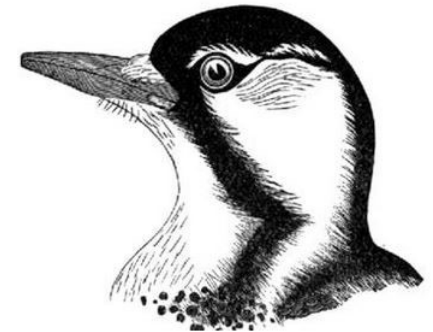


John Muir was an influential Scottish-American naturalist, author, environmental philosopher, botanist, zoologist, glaciologist, and early advocate for the preservation of wilderness in the United States of America.

His letters, essays, and books describing his adventures in nature, especially in the Sierra Nevada, have been read by millions. His activism helped to preserve the Yosemite Valley and Sequoia National Park, and his example has served as an inspiration for the preservation of many other wilderness areas. The Sierra Club, which he co-founded, is a prominent American conservation organization. In his later life, Muir devoted most of his time to the preservation of the Western forests. As part of the campaign to make Yosemite a national park, Muir published two landmark articles on wilderness preservation in *The Century Magazine*, "The Treasures of the Yosemite" and "Features of the Proposed Yosemite National Park"; this helped support the push for U.S. Congress to pass a bill in 1890 establishing Yosemite National Park. The spiritual quality and enthusiasm toward nature expressed in his writings has inspired readers, including presidents and congressmen, to take action to help preserve large nature areas.



Elliot Coues
1842 - 1899

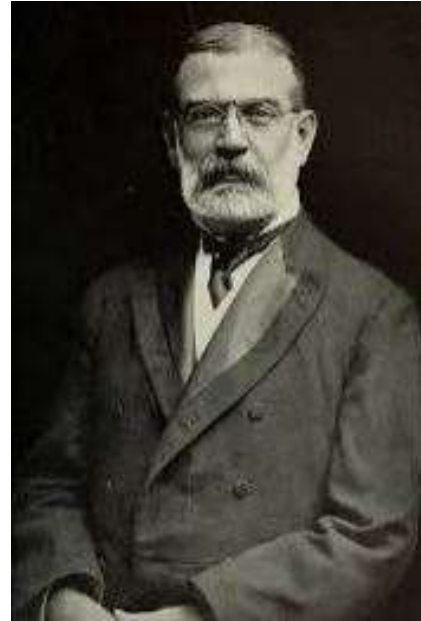


An American army surgeon, historian, ornithologist, and author. In 1872 he published his *Key to North American Birds*, which, revised and rewritten in 1884 and 1901, did much to promote the systematic study of ornithology in America. He was a founding member of the American Ornithologists' Union in 1883. His work was instrumental in establishing the currently accepted standards of trinomial nomenclature – the taxonomic classification of subspecies – in ornithology, and ultimately the whole of zoology. During 1873–1876 Coues was attached as surgeon and naturalist to the US Northern Boundary Commission, and from 1876 to 1880 he was secretary and naturalist to the US Geological and Geographical Survey of the Territories, the publications of which he edited. He was lecturer on anatomy in the medical school of the Columbian University from 1877 to 1882, and professor of anatomy there from 1882 to 1887.

Grace's warbler was discovered by Elliott Coues in the Rocky Mountains in 1864. He requested that the new species be named after his 18-year-old sister, Grace Darling Coues, and his request was honored when Spencer Fullerton Baird described the species scientifically in 1865.

Key to North American Birds – Full title "Key to North American birds. Containing a concise account of every species of living and fossil bird at present known from the continent north of the Mexican and United States boundary, inclusive of Greenland and lower California, with which are incorporated General ornithology: an outline of the structure and classification of birds; and Field ornithology, a manual of collecting, preparing, and preserving birds. "

William Dutcher
1846 - 1899



William Dutcher was an American businessman, amateur bird photographer, ornithologist and a keen proponent of bird conservation.

He became a member of the newly founded AOU. In 1887 he served as Treasurer for the AOU and held this position for sixteen years. He also chaired the committee on bird protection.

George Bird Grinnell
1849 - 1938



An American anthropologist, historian, naturalist, and writer. Originally specializing in zoology, he became a prominent early conservationist and student of Native American life. As a boy, he attended school in Audubon's mansion near the Grinnell family home.

Grinnell was also editor of *Forest and Stream*, the leading natural history magazine in North America, the founder of the Audubon Society and the Boone and Crockett Club, and an advisor to Theodore Roosevelt. Glacier National Park came about largely through his efforts.

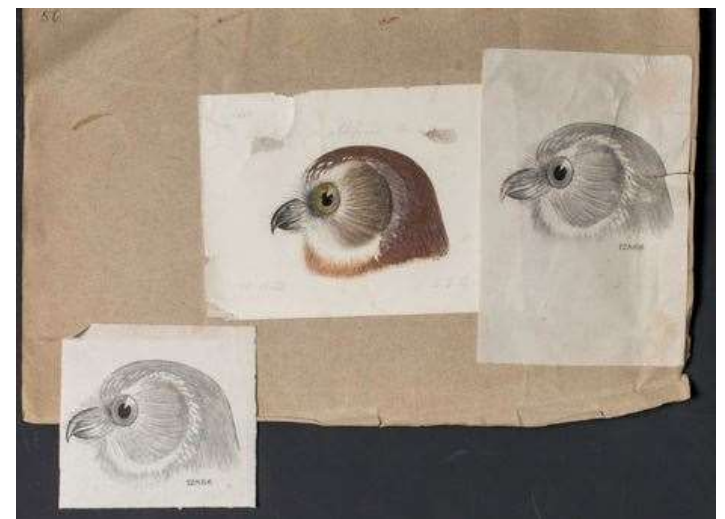
In 1875 he began his fight to save the wildlife of the West, and his report on a survey trip to the Yellowstone region in that year stood as a classic of its kind. He worked to establish conservation clubs, and published voluminously to support preservation of Yellowstone Park and other areas as fish and game preserves.



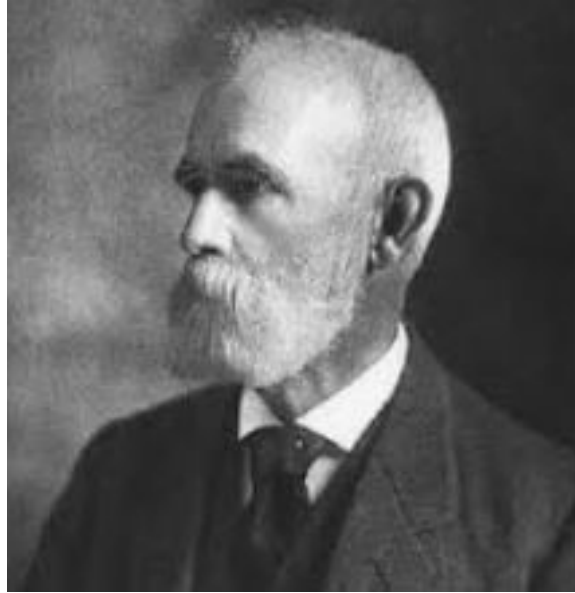
Robert Ridgway
1850 - 1929



Robert Ridgway was an American ornithologist specializing in systematics. He was appointed secretary of the Smithsonian Institution in 1880 by Baird to be the first full-time curator of birds at the United States National Museum, a title he held until his death.



**William
Brewster
1851 - 1919**



An American ornithologist, naturalist and conservationist who co-founded the AOU.

In 1880, he became assistant in charge of the collection of birds and mammals in the Boston Society of Natural History, and in 1885 became curator of mammals and birds at the Museum of Comparative Zoology at Harvard University.

Teddy Roosevelt **1858 - 1919**



Theodore Roosevelt Jr. was an American statesman, conservationist, naturalist, historian and writer, who served as the 26th president of the United States from 1901 to 1909.

Of all Roosevelt's achievements, he was proudest of his work in conservation of natural resources and extending federal protection to land and wildlife. Roosevelt worked closely with Interior Secretary James Rudolph Garfield and Chief of the United States Forest Service Gifford Pinchot to enact a series of conservation programs that often met with resistance from Western members of Congress, such as Charles William Fulton. Nonetheless, Roosevelt established the United States Forest Service, signed into law the creation of five National Parks, and signed the 1906 Antiquities Act, under which he proclaimed 18 new U.S. National Monuments. He also established the first 51 bird reserves, four game preserves, and 150 National Forests. The area of the United States that he placed under public protection totals approximately 230 million acres (930,000 square kilometers). His face is depicted on Mount Rushmore alongside George Washington, Thomas Jefferson, and Abraham Lincoln.

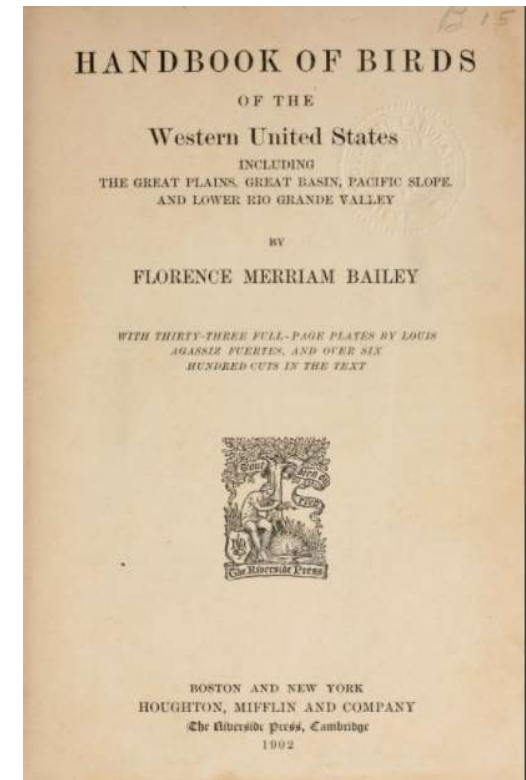
Florence Mirriam Bailey 1863 - 1948



An American ornithologist and nature writer. She organized early Audubon Society chapters and was an activist for bird protection. At age 26, she wrote what is considered the first bird field guide in the modern tradition, *Birds Through an Opera-Glass*, published in 1890. Her extensive field work in the American West was documented in several books, chief among them *Handbook of Birds of the Western United States* and *The Birds of New Mexico*.

The Mountain Chickadee was named Bailey's Chickadee in 1908 by Joseph Grinnell in honor of Bailey, but the name didn't catch. Florence acquired her interest in natural history, and particularly ornithology, early from her father and her brother Clinton Hart Merriam who later became the first chief of the U.S. Biological Survey, the predecessor of the U.S. Fish and Wildlife Service.

Appearing in *The Condor* (scientific journal of the AOU) in 1916, She wrote extensively of her travels through Texas and Mexico in 1900. Starting in Texarkana and traveling by rail through Central Texas; thence to Corpus Christi, and then on to Brownsville and Northern Mexico, she wrote in detail of her observations of bird species and habitat she observed. There is a short but wonderful description of her observations in Austin and the University of Texas campus.



Frank M. Chapman
1864 - 1945

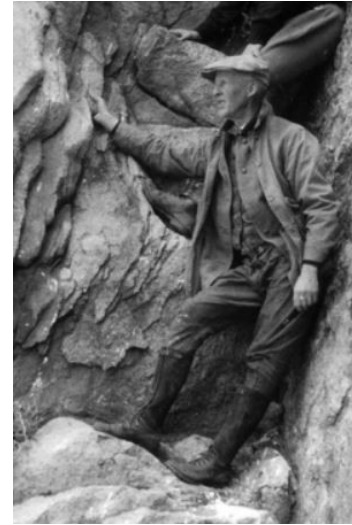


An American ornithologist famous for his extensive and detailed studies of the life histories, geographic distribution, and systematic relationships of North and South American birds.

Chapman came up with the original idea for the Audubon Christmas Bird Count. Chapman promoted the integration of photography into ornithology, especially in his book *Bird Studies With a Camera*, in which he discussed the practicability of the photographic blind and in 1901 invented his own more portable version of a blind using an umbrella with a large 'skirt' to conceal the photographer that could be bundled into a small pack for transport along with the other, at the time very bulky, paraphernalia of the camera gear.

A self-taught ornithologist, Chapman was appointed assistant curator of ornithology and mammalogy (1888–1908) and curator of ornithology (1908–42) at the American Museum of Natural History, where he developed the habitat and seasonal bird exhibits. Beginning in 1887, he traveled widely, collecting and photographing birds. He was associate editor of *The Auk*, the leading U.S. ornithology journal of his day, and founded and edited the magazine *Bird-Lore*. His most important works include *Handbook of Birds of Eastern North America* (1895), *The Distribution of Bird-Life in Colombia* (1917), *The Distribution of Birds of the Urubamba Valley, Peru* (1921), and *The Distribution of Bird-Life in Ecuador* (1926).

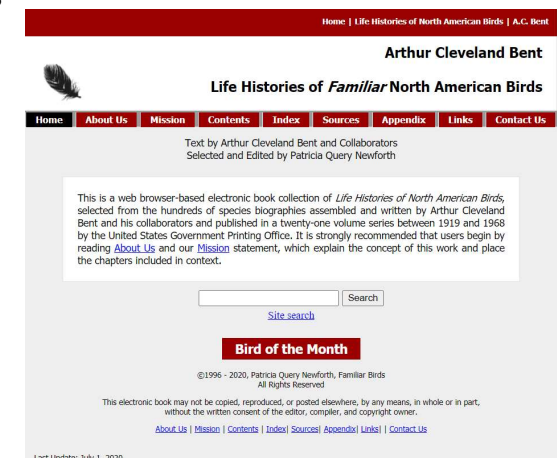
Arthur Cleveland Bent 1866 - 1954



An American ornithologist notable for his encyclopedic 21-volume work, *Life Histories of North American Birds*, published 1919-1968 and completed posthumously.

In 1910, at the request of the Smithsonian Institution, he devoted the remaining forty-four years of his life to the project, gathering information from, and supplementing his own observations with the published literature and unpublished notes of volunteer contributors and collaborating authors throughout North America. (All told, he acknowledged contributions and help from over 800 individuals.)

His extraordinary *Life Histories of North American Birds* provided behavioral information not available in the standard field guides. These pioneering studies are the durable foundation on which almost all other compilations of North American bird biology (including the contemporary *Birds of North America*) rest. In them Bent and his collaborators present, in enthusiastic, readable prose, comprehensive information about courtship, nesting, eggs, young, plumages, food, behavior, voice, enemies, and more.



Harry Church Oberholser
1870 - 1963

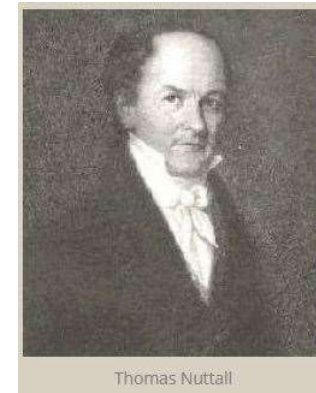


An ornithologist who worked in the Fish and Wildlife Service of the U.S. Dept. of the Interior and was curator of ornithology at the Cleveland Museum of Natural History.

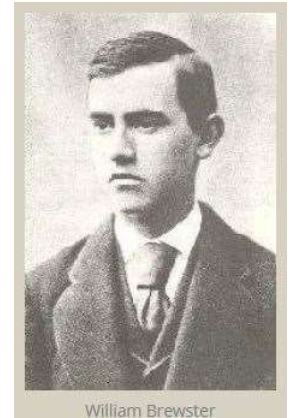
In 1900, when he was sent to the Big Bend by the United States Bureau of Biological Survey to conduct field investigations on the distribution of birds and mammals, he began collecting material that resulted in the monumental two-volume work published by the University of Texas Press in 1974, eleven years after his death. The work, entitled *The Bird Life of Texas*, contains 1,108 pages and includes thirty-six watercolors and thirty-six black-and-white drawings of Texas birds by wildlife artist Louis Agassiz Fuertes, who accompanied Oberholser and Vernon Bailey, a mammalogist, to the Big Bend. The book also contains thirty-eight photographs and numerous distribution maps. Oberholser died in 1963, leaving 12,000 pages of manuscript encompassing fifty years of findings on North American birds related to Texas.

Nuttall Ornithological Club 1873 -

The Nuttall Ornithological Club, founded in 1873, was the first organization in North America devoted to ornithology. During the Club's more than a century of existence, its members have been remarkably influential in the field of ornithology. A glance through the membership list reveals a virtual Who's Who in North American Ornithology.



Thomas Nuttall



William Brewster

The club initially was a small informal group of William Brewster's childhood friends, all of whom shared his interest in ornithology. These friends included Daniel Chester French, Ruthven Deane and Henry Henshaw. In 1872, Henshaw suggested that the group meet on a regular weekly schedule at Brewster's house in Cambridge, Massachusetts. On November 17, 1873 the group, which had expanded to include Henry Augustus Purdie, William Earl Dodge Scott, Francis P. Atkinson, Harry Balch Bailey, Ernest Ingersoll, and Walter Woodman, met to formally establish the first American ornithological club. They named their club after the botanist and zoologist Thomas Nuttall who published the first field guide for North American birds, *Manual of the Ornithology of the United States and of Canada* (1832).

Perhaps the most important contribution of the Club to ornithology has been its publications, which it has sponsored since its early history. From 1876 to 1883 the Club published the first journal in North America devoted to ornithology, the *Bulletin of the Nuttall Ornithological Club*. In 1883 the Club "donated" the Bulletin to the newly formed American Ornithologists' Union (AOU), along with its editor J. A. Allen, and the Bulletin became the Auk. Between 1886 and 1951 the Club published ten monographs in its Memoirs series and since 1957 there have appeared 20 monographs in its Publications series.

Louis Agassiz Fuertes

1874 - 1927

American ornithologist, illustrator and artist who set the rigorous and current-day standards for ornithological art and naturalist depiction and is considered as one of the most prolific American bird artists, second only to his predecessor John James Audubon. Named after the Swiss-born American biologist Louis Agassiz.

As a child, he had been influenced by Audubon's *The Birds of America*. At the age of fourteen, he made his first painting of a bird, a male red crossbill, from life. He learned to keep careful records of the appearance, habits and voices of birds.

Fuertes's parrot of Columbia, or *Hapalopsittaca fuertesi*, was rediscovered in 2002 after 91 years of presumed extinction.

Fuertes influenced many later wildlife artists including Roger Tory Peterson, Jörg Kühn and Conrad Roland. The Wilson Ornithological Society established the Louis Agassiz Fuertes Award in 1947.

He provided the illustrations for Oberholser's *Bird Life of Texas*.



Fuertes's parrot, named after Louis Agassiz Fuertes

Roy Bedichek 1878 - 1959



Roy Bedichek was one of three men who became legends, dominating the history of Texas letters. J. Frank Dobie, Walter Prescott Webb and Bedichek sometimes grandly called “the triumvirate”, were intellectuals and writers who asserted the values of the life of the mind at a time when Texans, living in a still-close-to-the-frontier society, were more concerned with: agriculture, oil, mercantilism, and football. Friends as well as educators and colleagues, they were colorful personalities, as different from one another as possible, and countless stories are told about them, from regular swims at Barton Springs to long evenings spent in bourbon-inspired discussions at Dobie's Paisano Ranch outside Austin. Together, their writings and public personas helped define Texas and establish its literature. They wrote of the state's folklore, history, and natural wonders, and in so doing, led the way for future generations.

Writer and folklorist born in Cass County, Illinois, Bedichek moved with his family to Texas in 1884. He attended rural schools and the Bedichek Academy, established by his father. In 1898 he entered the University of Texas receiving BS and MA degrees.

In visiting schools over the state he formed the habit of camping out because suitable lodging was often unavailable. Camping stimulated his interest in wildlife, especially in birds. Urged by his close friends, J. Frank Dobie and Walter Prescott Webb, he took a leave of absence for a year beginning in 1946 and went into seclusion at Friday Mountain Ranch, Webb's retreat southwest of Austin, to write *Adventures with a Texas Naturalist* (1947), which is included in John H. Jenkins's Basic Texas Books. *Karánkaway Country* (1950) won the Carr P. Collins Award for the best Texas book of the year, as did Educational Competition: *The Story of the University Interscholastic League of Texas* (1956). A fourth book, *The Sense of Smell* (1960), appeared posthumously.

Franklin D. Roosevelt 1882 - 1945

FDR, was an American politician who served as the 32nd president of the United States from 1933 until his death in 1945. He had a lifelong interest in the environment and conservation starting with his youthful interest in forestry on his family estate. He was active in expanding, funding, and promoting the National Park and National Forest systems. Under Roosevelt, their popularity soared, from 3 million to 15.5 million in 1939. The Civilian Conservation Corps enrolled 3.4 million young men and built 13,000 miles of trails, planted two billion trees, and upgraded 125,000 miles of dirt roads.



Arthur A. Allan
1885 - 1964

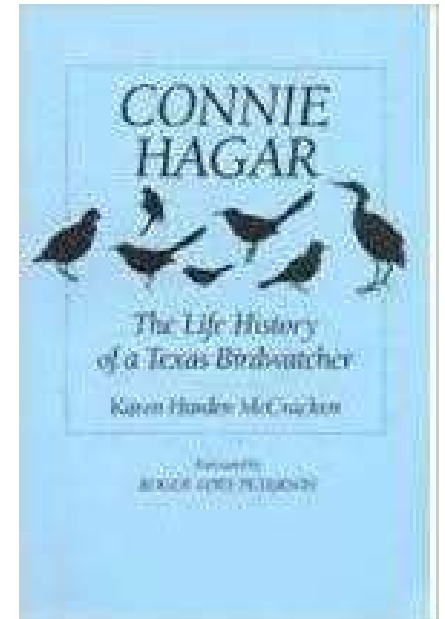


Professor of ornithology at Cornell University from 1912 until his retirement in 1953. It has been estimated that over 10,000 students took his courses, including over 100 doctoral students, at a time when Cornell was the only institution to offer advanced degrees in ornithology. Through his work, Allen introduced the field of ornithology to generations of professionals and amateurs.

Allen published an ornithological history in 1933 under the title *Fifty Years' Progress of American Ornithology, 1883–1933*. He was dedicated to promoting the study of birds to a wide audience, in his books, films and public lectures. His *Book of Bird Life* (1930) was a well-written introduction to ornithology.

He was also a pioneer of bird song recording and was instrumental in the first record on the phonograph of bird songs in 1932. He worked on what eventually became the independent Cornell Lab of Ornithology in 1955, and founded the Wildlife Society in 1936, leading the organization from 1938 to 1939.

Connie Hagar 1886 - 1973



Conger (Connie) Neblett Hagar, the "Texas bird lady," was born in Corsicana, Texas, in 1886. She graduated from Corsicana High School in 1903, studied voice and piano at Forest Park College in Saint Louis, and took postgraduate music training at the University of Chicago and the American Conservatory. Although offered employment as a professional singer, she declined, believing such a pursuit improper. After World War I she became a bird bander for the United States Biological Survey. She was married briefly to a naval officer, but the marriage was dissolved in 1921. In April 1926 she married Jack Hagar, a Bostonian who had come to Texas because of his interests in oil and real estate. The couple had no children. In 1935 the Hagars moved to Rockport.

She spent the rest of her life as an amateur bird-watcher in Rockport and gained the respect of professional ornithologists in Europe and the United States. She added over twenty new species to the avifauna list of the state and was the first to report numerous species of migratory birds, including several that were thought to be extinct. In addition to the snowy plover, buff-breasted sandpiper, ash-throated flycatcher, and mountain plover, she identified nine different species of hummingbird; the annual movement of these birds down the Texas coast had been unobserved until she discovered it. She reported more than 500 bird species in the Aransas Bay area, nearly three-fourths of all the bird species known between Canada and Mexico.



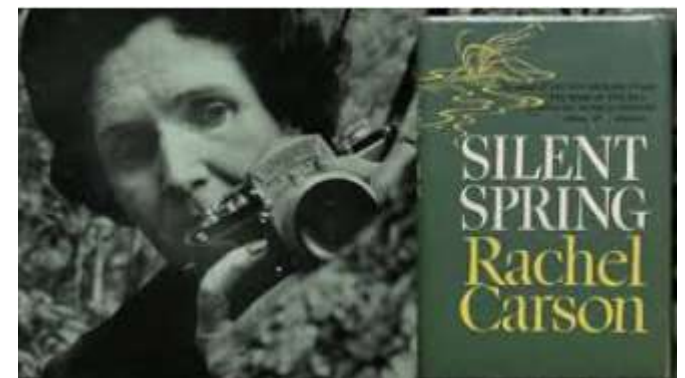
<https://texashighways.com/travel-news/the-bird-lady-of-rockport/>

Rachel Carson 1907 - 1964



One of the finest nature writers of the Twentieth Century, she is remembered more today as the woman who challenged the notion that humans could obtain mastery over nature by chemicals, bombs and space travel than for her studies of ocean life. Her book *Silent Spring* (1962) warned of the dangers to all natural systems from the misuse of chemical pesticides such as DDT, and questioned the scope and direction of modern science, initiated the contemporary environmental movement.

Carson was a student of nature, a born ecologist and a writer who found that the natural world gave her something to write about. Born in Springdale, Pennsylvania, upstream from the industrial behemoth of Pittsburgh, she became a marine scientist working for the U.S. Fish and Wildlife Service in Washington, DC, primarily as a writer and editor. She was always aware of the impact that humans had on the natural world.



Roger Tory Peterson
1908 - 1996



An American ornithologist, author, conservationist, and wildlife artist whose field books on birds did much in the United States and Europe to stimulate public interest in bird study.

In 1934 he published his seminal *Guide to the Birds*, the first modern field guide. He co-wrote *Wild America* with James Fisher based on their epic tour of the US looking for birds, and edited or wrote many of the volumes in the Peterson Field Guide series, on topics ranging from rocks and minerals to beetles to reptiles. He developed the Peterson Identification System, and is known for the clarity of both his illustrations and his delineation of relevant field marks.

Peterson started drawing birds while in high school. He studied at the Art Students League, New York, and the National Academy of Design, New York. In painting for the field guides, he stressed those features of each species that would aid the reader in identifying it in the field.

Peterson was an officer of many ornithological and conservation organizations, including the American Ornithologists' Union, National Audubon Society, and International Committee for Bird Preservation.

Chandler S. Robbins **1918 - 2017**



An American ornithologist whose contributions to the field include co-authorship of an influential field guide to birds, as well as organizing the North American Breeding Bird Survey.

As an alternative to active duty military service during World War II, he joined the Civilian Public Service. In 1943, he transferred to at what is now the Patuxent Wildlife Research Center in Maryland. Robbins joined the U.S. Fish and Wildlife Service (USFWS) full-time in 1945 as a junior biologist at Patuxent. In his early career, he co-authored journal publications on the effects of the pesticide DDT on breeding bird populations; this work, and that of other researchers, led to Rachel Carson's publication of the book *Silent Spring*.

One of the most important accomplishments by Robbins is the methodology of the North American Breeding Bird Survey. The data collection and population estimation scheme employed the strategy of point count samples taken along the roadside by skilled observers; it thereby made the practice of continent-wide bird monitoring efficient for the first time, and placed it on a sound statistical footing. First tested in Maryland and Delaware in 1965, the BBS was rolled out nationwide in the next few years.

From his position as a public servant, Chandler Robbins matched the rising need for information on bird distribution and population trends with a newly developed cohort of citizen scientists. Equipped with song identification skills, a modern field guide, and the BBS's data collection protocol, these observers provided the raw data for Robbins's initiatives. His "superhuman tolerance for the bookkeeping aspects of bird counting" enabled him to transform that mass of data into knowledge, thereby forming the research backbone of North American bird conservation.

Edgar Kincaid Jr.

1921 - 1985

Edgar Bryan Kincaid, Jr., ornithologist, was born in San Antonio, Texas. He was the quirky and beloved father of 20th-century birding in Texas. He was raised on the family's ranch in Uvalde County and moved to Austin in 1939 to live with his aunt and uncle, Bertha McKee and J. Frank Dobie.

Kincaid studied zoology, botany, and history at the University of Texas and graduated in 1943. His intensive study of birds and his prodigious memory made him an expert in ornithology. The income he received from family ranching and oil interests exempted him from working for a living. Instead he spent most of his time reading or making field trips around Texas or to Mexico. In 1963, after the death of Harry C. Oberholser, Kincaid began to edit Oberholser's *The Bird Life of Texas*; he spent more than ten years doing research and editing, cutting the three-million-word manuscript by two-thirds and reducing a 572-page bibliography to thirty pages. The finished version was finally published as a two-volume set in 1974.

Kincaid was deeply distressed by the increased urbanization of Texas and the subsequent decrease of natural habitats. In his later years he became more and more reclusive, not wanting to see the highways and houses that intruded upon previously wild areas, and afraid that someone would break into his home while he was gone. One of his idiosyncrasies was to give his close friends bird names. He called himself Cassowary, the name of a large, flightless bird native to Australia and New Guinea, that has the ability to kill men with its dagger-like claws. His friends thought he chose the name because he liked the idea of at least one bird being able to fight back. Kincaid was a charter member of the Travis Audubon Society and was active in the Texas Ornithological Society.

Without Kincaid's herculean effort editing Oberholser's *The Bird Life of Texas* the tome would never have seen the light of day. Edgar kept meticulous records of species expansions and retractions and continually expressed concern over the future of his feathered friends. As an early editor of the TOS Newsletter and *The Bird life of Texas* it is fitting that the TOS honored Kincaid by naming The EDGAR B. KINCAID, JR. award after him. The award is given to individuals or organizations that have made a significant contribution to the documentation and conservation of birdlife in Texas.



James Franklin Clements
1927 - 2005



An American ornithologist and author. His thesis became the first edition of his *Birds of the World, A Check List*, which has since sold five editions and is used by tens of thousands of bird watchers internationally. The Smithsonian Institute recently contacted Dr. Clements to use his list in their plan to classify each of the 9800 birds in the world. The Iquitos gnatcatcher, *Polioptila clements*, is named after him.

REPRESENTATIVE CONTEMPORARY AUTHORS, BIRDERS, NATURALISTS

Pete Dunne



Theodore A. Parker (Ted)
1953 - 1993



Jonathan Alderfer



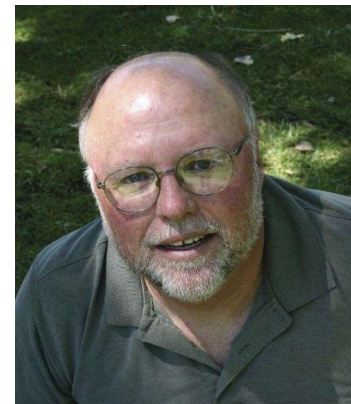
Kenn Kaufman



Kevin J. Zimmer



David A. Sibley



Jon L. Dunn