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Louis Agassiz

This article is about the Swiss-American biologist and geologist. For the American ornithologist, illustrator and artist, see [Louis Agassiz Fuertes](#).

Jean Louis Rodolphe Agassiz (/ˈæɡəsi/; French: [ʒaɡasi]; May 28, 1807 – December 14, 1873) was a Swiss-American [biologist](#) and [geologist](#) recognized as an innovative and prodigious scholar of Earth's [natural history](#). Agassiz grew up in Switzerland, and he received Doctor of Philosophy and medical degrees at Erlangen and Munich, respectively. After studying with [Cuvier](#) and [Humboldt](#) in Paris, Agassiz was appointed professor of [natural history](#) at the [University of Neuchâtel](#). After visiting [Harvard University](#) mid-career, he emigrated to the United States in 1847. He went on to become professor of zoology and geology at Harvard, to head its [Lawrence Scientific School](#), and to found its [Museum of Comparative Zoology](#).

Louis Agassiz

[ForMemRS](#)



Born	May 28, 1807 Haut-Vully , Switzerland
Died	December 14, 1873 (aged 66) Cambridge, Massachusetts
Citizenship	United States
Alma mater	University of Erlangen-Nuremberg
Known for	Polygenism
Spouse(s)	Cecilie Braun Elizabeth Cabot Cary
Children	Alexander , Ida, and Pauline
Awards	Wollaston Medal (1836)

Scientific career

Fields	<ul style="list-style-type: none"> Paleontology Glaciology Geology Natural history
Institutions	University of Neuchâtel Harvard University Cornell University
Doctoral advisor	Carl Friedrich Philipp von Martius

Other academic advisors [Ignaz Döllinger](#), [Georges Cuvier](#), [Alexander von Humboldt](#)^[1]

Notable students [William Stimpson](#), [William Healey Dall](#), [Karl Vogt](#)^[1]

Signature



Agassiz is known for his regimen of observational data gathering and analysis. He made vast institutional and scientific contributions to zoology, geology, and related areas, including writing multi-volume research books running to thousands of pages. He is particularly known for his contributions to [ichthyological](#) classification, including of extinct species, and to the study of [geological history](#), including to the founding of [glaciology](#). In the 20th and 21st centuries, Agassiz's resistance to [Darwinian evolution](#), and the [scientific racism](#) implicit in his writings on human [polygenism](#), have tarnished his reputation and led to controversies over his legacy.

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Early life [Edit](#)

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Louis Agassiz was born in Môtier (now part of [Haut-Vully](#)) in the [canton of Fribourg](#), Switzerland. The son of a pastor,^[2] Agassiz was educated first at home, he then spent four years of secondary school in [Bienne](#), entering in 1818 and completing his elementary studies in [Lausanne](#). Having adopted medicine as his profession, Agassiz studied successively at the universities of [Zürich](#), [Heidelberg](#), and [Munich](#); while there, he extended his knowledge of [natural history](#), especially of [botany](#). In 1829 he received the degree of [doctor of philosophy](#) at [Erlangen](#), and in 1830 that of [doctor of medicine](#) at Munich.^[3] Moving to Paris, he came under the tutelage of [Alexander von Humboldt](#) (and later his financial benevolence).^[4] Humboldt and [Georges Cuvier](#) launched him on his careers of geology and zoology respectively. Previously, he had not paid special attention to the study of [ichthyology](#), but it soon became the focus of his life's work.^[5]

Work [Edit](#)

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Agassiz in 1870

In 1819–1820, the German biologists [Johann Baptist von Spix](#) and [Carl Friedrich Philipp von Martius](#) undertook an expedition to [Brazil](#). They returned home to Europe with many natural objects, including an important collection of the [freshwater fish](#) of [Brazil](#), especially of the [Amazon River](#). Spix, who died in 1826, did not live long enough to work out the history of these fish, and Martius selected Agassiz for this project. Agassiz threw himself into the work with an enthusiasm that would go on to characterize the rest of life's work. The task of describing the Brazilian fish was completed and published in 1829. This was followed by research into the history of fish found in [Lake Neuchâtel](#). Enlarging his plans, in 1830 he issued a prospectus of *aHistory of the Freshwater Fish of Central Europe* It was only in 1839, however, that the first part of this publication appeared, and it was completed in 1842.^[3]

In 1832, Agassiz was appointed professor of natural history at the [University of Neuchâtel](#). The [fossil fish](#) in the rock of the surrounding region, the [slates](#) of [Glarus](#) and the [limestones](#) of Monte [Bolca](#), soon attracted his attention. At the time, very little had been accomplished in their scientific study. Agassiz, as early as 1829, planned the publication of a work which, more than any other, laid the foundation of his worldwide fame. Five volumes of his *Recherches sur les poissons fossiles* ("Research on Fossil Fish") were published from 1833 to 1843. They were magnificently illustrated, chiefly by Joseph Dinkel.^[6] In gathering materials for this work Agassiz visited the principal museums in Europe, and, meeting Cuvier in Paris, he received much encouragement and assistance from him.^[3] They had known him for seven years at the time.

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With [Benjamin Peirce](#)

Agassiz found that his palaeontological analyses required a new ichthyological classification. The fossils he examined rarely showed any traces of the soft tissues of fish, but, instead, consisted chiefly of the teeth, scales, and fins, with the bones being perfectly preserved in comparatively few instances. He, therefore, adopted a classification that divided fish into four groups: Ganoids, Placoids, Cycloids and Ctenoids, based on the nature of the scales and other dermal appendages. This did much to improve fish [taxonomy](#), but Agassiz's classification has since been superseded.^[3]

Agassiz needed financial support to continue his work. The [British Association](#) and the [Earl of Ellesmere](#)—then [Lord Francis Egerton](#)—stepped in to help. The 1,290 original drawings made for the work were purchased by the Earl, and presented by him to the [Geological Society of London](#). In 1836, the [Wollaston Medal](#) was awarded to Agassiz by the council of that society for his work on fossil ichthyology;

and, in 1838, he was elected a foreign member of the [Royal Society](#). Meanwhile, [invertebrate](#) animals engaged his attention. In 1837, he issued the "Prodrome" of a monograph on the recent and fossil [Echinodermata](#), the first part of which appeared in 1838; in 1839–40, he published two quarto volumes on the fossil Echinoderms of Switzerland; and in 1840–45 he issued his *Études critiques sur les mollusques fossiles* ("Critical Studies on Fossil [Mollusks](#)").^[3]

Before Agassiz's first visit to England in 1834, [Hugh Miller](#) and other geologists had brought to light the remarkable fossil fish of the [Old Red Sandstone](#) of the northeast of Scotland. The strange forms of the [Pterichthys](#), the [Coccosteus](#) and other genera were then made known to geologists for the first time. They were of intense interest to Agassiz, and formed the subject of a monograph by him published in 1844–45: *Monographie des poissons fossiles du Vieux Grès Rouge, ou Système Dévonien (Old Red Sandstone) des Îles Britanniques et de Russie* ("Monograph on Fossil Fish of the Old Red Sandstone, or Devonian System of the British Isles and of Russia").^[3] In the early stages of his career in Neuchâtel, Agassiz also made a name for himself as a man who could run a scientific department well. Under his care, the University of Neuchâtel soon became a leading institution for scientific inquiry.^[citation needed]

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Portrait photograph by [John Adams Whipple](#), c. 1865

In 1842–1846, Agassiz issued his *Nomenclator Zoologicus*, a classification list, with references, of all names used in zoological genera and groups.

Ice age [Edit](#)

In 1837, Agassiz proposed that the Earth had been subjected to a past [ice age](#).^[7] He presented the theory to the [Helvetic Society](#) that ancient glaciers had not only flowed outward from the Alps, but that even larger glaciers had covered the plains and mountains of Europe, Asia, and North America, smothering the entire [northern hemisphere](#) in a prolonged ice age. In the same year, he was elected a foreign member of the [Royal Swedish Academy of Sciences](#). Prior to this proposal, [Goethe](#), [de Saussure](#), [Venetz](#), [Jean de Charpentier](#), [Karl Friedrich Schimper](#) and others had studied the [glaciers](#) of the Alps, and Goethe,^[8] Charpentier and Schimper^[7] had even concluded that the [erratic](#) blocks of alpine rocks scattered over the slopes and summits of the [Jura Mountains](#) had been moved there by glaciers. These ideas attracted the attention of Agassiz, and he discussed them with Charpentier and Schimper, whom he accompanied on successive trips to the Alps. Agassiz even had a hut constructed upon one of the [Aar Glaciers](#), which for a time he made his home, to investigate the structure and movements of the ice.^[3]

In 1840, Agassiz published a two-volume work entitled *Études sur les glaciers* ("Studies on Glaciers").^[9] In this, he discussed the movements of the glaciers, their [moraines](#), their influence in grooving and rounding the rocks, and in producing the striations and *androches moutonnees* seen in Alpine-style landscapes. He accepted Charpentier's and Schimper's idea that some of the alpine glaciers had extended across the wide plains and valleys of the [Aar](#) and [Rhône](#). But he went further, concluding that, in the recent past, Switzerland had been covered with one vast sheet of ice, originating in the higher Alps and extending over the valley of northwestern Switzerland to southern slopes of the Jura. The publication of this work gave fresh impetus to the study of glacial phenomena in all parts of the world.^[10]

Familiar, then, with recent glaciation, Agassiz and the English geologist [William Buckland](#) visited the mountains of Scotland in 1840. There they found clear evidence in different locations of glacial action. The discovery was announced to the Geological Society of London in successive communications. The mountainous districts of England, Wales, and Ireland were understood to have been centres for the dispersion of glacial debris. Agassiz remarked "that great sheets of ice, resembling those now existing in Greenland, once covered all the countries in which unstratified gravel (boulder drift) is found; that this gravel was in general produced by the [trituration](#) of the sheets of ice upon the subjacent surface, etc."^[11]

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The man-sized iron [auger](#) used by Agassiz to drill up to 7.5 metres deep into the [Unteraar Glacier](#) to take its temperature.

United States [Edit](#)

With the aid of a grant of money from the [King of Prussia](#), Agassiz crossed the [Atlantic](#) in the autumn of 1846 to investigate the natural history and geology of North America and to deliver a course of lectures on "The Plan of Creation as shown in the Animal Kingdom,"^[12]

by invitation from [J. A. Lowell](#), at the [Lowell Institute](#) in [Boston, Massachusetts](#). The financial offers presented to him in the United States induced him to settle there, where he remained to the end of his life.^[11] He was elected a Foreign Honorary Member of the [American Academy of Arts and Sciences](#) in 1846.^[13] Agassiz had a cordial relationship with Harvard botanist [Asa Gray](#), but they disagreed on some scientific issues.^[14] For example, Agassiz was a member of the [Scientific Lazzaroni](#), a group of mostly physical scientists who wanted American academia to mimic the autocratic academic structures of European universities, whereas Gray was a staunch opponent of that group. Agassiz also felt each human race had different origins, but Gray believed in the unity of all humans.^[15]

Agassiz's engagement for the Lowell Institute lectures precipitated the establishment, in 1847, of the [Lawrence Scientific School](#) at [Harvard University](#), with Agassiz as its head.^[16] Harvard appointed him professor of zoology and geology, and he founded the [Museum of Comparative Zoology](#) there in 1859, serving as the museum's first director until his death in 1873. During his tenure at Harvard, Agassiz studied the effect of the last ice age on North America.^[citation needed]

Agassiz continued his lectures for the Lowell Institute. In succeeding years, he gave lectures on "Ichthyology" (1847–48 season), "Comparative Embryology" (1848–49), "Functions of Life in Lower Animals" (1850–51), "Natural History" (1853–54), "Methods of Study in Natural History" (1861–62), "Glaciers and the Ice Period" (1864–65), "Brazil" (1866–67) and "Deep Sea Dredging" (1869–70).^[17] In 1850, he married an American college teacher, [Elizabeth Cabot Cary](#), who later wrote introductory books about natural history and a lengthy biography of her husband after he died.^[citation needed]

Agassiz served as a non-resident lecturer at [Cornell University](#) while also being on faculty at Harvard.^[18] In 1852, he accepted a medical professorship of [comparative anatomy](#) at [Charlestown, Massachusetts](#), but he resigned in two years.^[11] From this time, Agassiz's, scientific studies dropped off, but he became one of the best-known scientists in the world. By 1857, Agassiz was so well-loved that his friend [Henry Wadsworth Longfellow](#) wrote "The fiftieth birthday of Agassiz" in his honor, and read it at a dinner given for Agassiz by the [Saturday Club](#) in [Cambridge](#).^[11] His own writing continued with four (of a planned ten) volumes of *Natural History of the United States* published from 1857 to 1862. He also published a catalog of papers in his field, *Bibliographia Zoologiae et Geologiae*, in four volumes between 1848 and 1854.^[citation needed]

Stricken by ill health in the 1860s, Agassiz resolved to return to the field for relaxation and to resume his studies of Brazilian fish. In April 1865, he led a party to Brazil. Returning home in August 1866, an account of this expedition, entitled *A Journey in Brazil*, was published in 1868. In December 1871 he made a second eight-month excursion, known as the [Hassler](#) expedition under the command of Commander Philip Carrigan Johnson (brother of [Eastman Johnson](#)), visiting South America on its southern Atlantic and Pacific seaboard. The ship explored the [Magellan Strait](#), which drew the praise of [Charles Darwin](#).^[citation needed]

Elizabeth Agassiz wrote, at the Strait: ". . . the Hassler pursued her course, past a seemingly endless panorama of mountains and forests rising into the pale regions of snow and ice, where lay glaciers in which every rift and crevasse, as well as the many cascades flowing down to join the waters beneath, could be counted as she steamed by them. . . . These were weeks of exquisite delight to Agassiz. The vessel often skirted the shore so closely that its geology could be studied from the deck."^[citation needed]

LegacyEdit

Agassiz in middle age

From his first marriage to Cecilie Bruan, Agassiz had two daughters in addition to son Alexander.^[19] In 1863, Agassiz's daughter Ida married [Henry Lee Higginson](#), who later founded the [Boston Symphony Orchestra](#) and was a benefactor to [Harvard University](#) and other schools. On November 30, 1860, Agassiz's daughter Pauline was married to [Quincy Adams Shaw](#) (1825–1908), a wealthy Boston merchant and later benefactor to the Boston [Museum of Fine Arts](#).^[20]

In the last years of his life, Agassiz worked to establish a permanent school where zoological science could be pursued amid the living subjects of its study. In 1873, a private philanthropist (John Anderson) gave Agassiz the island of [Penikese](#), in [Buzzards Bay](#), Massachusetts (south of [New Bedford](#)), and presented him with \$50,000 to permanently endow it as a practical school of natural science, especially devoted to the study of marine zoology.^[11] The John Anderson school collapsed soon after Agassiz's death; it is considered a precursor of the Woods Hole [Marine Biological Laboratory](#), which is nearby.^[citation needed]

Agassiz had a profound influence on the American branches of his two fields, teaching many future scientists that would go on to prominence, including [Alpheus Hyatt](#), [David Starr Jordan](#), [Joel Asaph Allen](#), [Joseph Le Conte](#), [Ernest Ingersoll](#), [William James](#), [Nathaniel Shaler](#), [Samuel Hubbard Scudder](#), [Alpheus Packard](#), and his son [Alexander Emanuel Agassiz](#), among others. He had a profound impact on paleontologist [Charles Doolittle Walcott](#) and natural scientist [Edward S. Morse](#). Agassiz had a reputation for being a demanding teacher. He would allegedly "lock a student up in a room full of turtle-shells, or lobster-shells, or oyster-shells, without a book or a word to help him, and not let him out till he had discovered all the truths which the objects contained."^[21] Two of Agassiz's most prominent students detailed their personal experiences under his tutelage: Scudder, in a short magazine article for [Every Saturday](#),^[22] and [Shaler](#), in his *Autobiography*.^[23] These and other recollections were collected and published by Lane Cooper in 1917,^[24] which Ezra Pound was to draw on for his anecdote of [Agassiz and the sunfish](#).^[25]

In the early 1840s, Agassiz named two fossil fish species after [Mary Anning](#) —*Acrodus anningiae*, and *Belenostomus anningiae*— and another after her friend, [Elizabeth Philpot](#). Anning was a paleontologist known around the world for important finds, but, because of her

gender, she was often not formally recognized for her work. Agassiz was grateful for the help the women had given him in examining fossil fish specimens during his visit to Lyme Regis in 1834.^[26]

Agassiz died in [Cambridge, Massachusetts](#) in 1873 and was buried at [Mount Auburn Cemetery](#), joined later by his wife. His monument is a boulder from a glacial moraine of the Aar near the site of the old [Hôtel des Neuchâtelois](#), not far from the spot where his hut once stood; his grave is sheltered by pine trees from his old home in Switzerland.^[11]

The Cambridge elementary school north of Harvard University was named in his honor and the surrounding neighborhood became known as "[Agassiz](#)" as a result. The school's name was changed to the [Maria L. Baldwin School](#) on May 21, 2002, due to concerns about Agassiz's alleged racism, and to honor [Maria Louise Baldwin](#) the African-American principal of the school who served from 1889 until 1922.^{[27][28]} The neighborhood, however, continues to be known as Agassiz.^[29] An elementary school called the Agassiz Elementary School in Minneapolis, Minnesota existed from 1922–1981.^[30]

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Agassiz's grave, Mt
Auburn Cemetery,
Cambridge,
Massachusetts, is a
boulder from the
moraine of the Aar
Glaciers, near where he
once lived.

An ancient [glacial lake](#) that formed in the Great Lakes region of North America, [Lake Agassiz](#), is named after him, as are [Mount Agassiz](#) in [California's Palisades](#), [Mount Agassiz](#), in the [Uinta Mountains](#), [Agassiz Peak](#) in Arizona and in his native Switzerland, the [Agassizhorn](#) in the Bernese Alps. [Agassiz Glacier \(Montana\)](#) and Agassiz Creek in [Glacier National Park](#) and [Agassiz Glacier \(Alaska\)](#) in [Saint Elias Mountains](#), Mount Agassiz in Bethlehem, New Hampshire in the White Mountains also bear his name. A [crater](#) on [Mars Crater Agassiz](#) and a promontorium on the [Moon](#) are also named in his honour. A headland situated in [Palmer Land, Antarctica](#) is named in his honor, [Cape Agassiz](#). A [main-belt asteroid](#) named [2267 Agassiz](#) is also named in association with Louis Agassiz.

Several animal species are named in honor of Louis Agassiz, including [Apistogramma agassizii Steindachner](#), 1875 (Agassiz's dwarf cichlid); [Isocapnia agassizi](#) Ricker, 1943 (a [stonefly](#)); [Publius agassizi \(Kaup, 1871\)](#) (a [passalid beetle](#)); [Xylocrius agassizi \(LeConte, 1861\)](#) (a [longhorn beetle](#)); [Exoprosopa agassizi](#) Loew, 1869 (a [bee fly](#)); [Chelonia agassizii Bocourt, 1868](#) (Galápagos green turtle);^[31] [Philodryas agassizii \(Jan, 1863\)](#) (a South American snake);^[31] and the most well-known, [Gopherus agassizii \(Cooper, 1863\)](#) (the desert tortoise).^[31]

In 2005 the [EGU](#) Division on Cryospheric Sciences established the Louis Agassiz Medal, awarded to individuals in recognition of their outstanding scientific contribution to the study of the [cryosphere](#) on Earth or elsewhere in the solar system.^[32]

Agassiz took part in a monthly gathering called the [Saturday Club](#) at the [Parker House](#), a meeting of Boston writers and intellectuals. He was therefore mentioned in a stanza of the [Oliver Wendell Holmes Sr.](#) poem "[At the Saturday Club](#)":

There, at the table's further end I see
In his old place our Poet's vis-à-vis,
The great PROFESSOR, strong, broad-shouldered, square,
In life's rich noontide, joyous, debonair
...

How will her realm be darkened, losing thee,
Her darling, whom we call our AGASSIZ!

Polygenism [Edit](#)

After Agassiz came to the United States, he wrote prolifically on [polygenism](#), which holds that animals, plants and humans were all created in "special provinces" with distinct populations of species created in and for each province, and that these populations were endowed with unequal attributes.^[33] Agassiz denied that [migration](#) and [adaptation](#) could account for the geographical age or any of the past. Adaptation takes time; in an example, Agassiz questioned how plants or animals could migrate through regions they were not equipped to handle.^[34] According to Agassiz the conditions in which particular creatures live "are the conditions necessary to their maintenance, and what among organized beings is essential to their temporal existence must be at least one of the conditions under which they were created".^[34] Agassiz was opposed to [monogenism](#) and evolution, believing that the theory of evolution reduced the wisdom of God to an impersonal materialism.^[34]

Agassiz was influenced by philosophical [idealism](#) and the scientific work of [Georges Cuvier](#). Agassiz believed there is one species of humans but many different creations of races.^[34] These ideas are now included under the rubric of [scientific racism](#). According to Agassiz, genera and species were ideas in the mind of God; their existence in God's mind prior to their physical creation meant that God

could create humans as one species yet in several distinct and geographically separate acts of creation. Agassiz was in modern terms a [creationist](#) who believed nature had order because God created it directly. Agassiz viewed his career in science as a search for ideas in the mind of the creator expressed in creation.

After the [1906 San Francisco earthquake](#), toppled [Agassiz's statue](#) from the façade of [Stanford's](#) zoology building, Stanford President [David Starr Jordan](#) wrote that "Somebody —[Dr. Angell](#), perhaps— remarked that 'Agassiz was great in the abstract but not in the concrete.'" ^[35]

Agassiz, like other polygenists, believed the [Book of Genesis](#) recounted the origin of the white race only and that the animals and plants in the Bible refer only to those species proximate and familiar to [Adam and Eve](#). Agassiz believed that the writers of the Bible only knew of local events, for example [Noah's flood](#) was a local event only known to the regions that were populated by ancient Hebrews. Agassiz also believed that the writers of the Bible did not know about any events other than what was going on in their own region and their intermediate neighbors. ^[34]

[Stephen Jay Gould](#) asserted that Agassiz's observations sprang from racist bias, in particular from his revulsion on first encountering African-Americans in the United States. ^[36] However, others have asserted that, despite favoring polygenism, Agassiz rejected racism and believed in a spiritualized human unity. ^[34] Agassiz believed God made all men equal, and that intellectualism and morality, as developed in civilization, make men equal before God. ^[34] Agassiz never supported [slavery](#), and claimed his views on polygenism had nothing to do with politics. ^[37]

Accusations of racism against Agassiz have prompted the renaming of landmarks, schoolhouses, and other institutions (which abound in Massachusetts) that bear his name. ^[38] Opinions on these events are often mixed, given his extensive scientific legacy in other areas. ^[39] In 2007, the [Swiss government](#) acknowledged the "racist thinking" of Agassiz but declined to rename the Agassizhorn summit. ^[40] In 2017, the [Swiss Alpine Club](#) declined to revoke Agassiz's status as a member of honor, which he received in 1865 for his scientific work, because the club considered this status to have lapsed on Agassiz's death. ^[41]

WorksEdit

- *Recherches sur les poissons fossiles* (1833–1843)
- *History of the Freshwater Fishes of Central Europe* (1839–1842)
- *Études sur les glaciers* (1840)
- *Études critiques sur les mollusques fossiles* (1840–1845)
- *Nomenclator Zoologicus* (1842–1846)
- *Monographie des poissons fossiles du Vieux Gres Rouge, ou Systeme Devonien (Old Red Sandstone) des Iles Britanniques et de Russie* (1844–1845)
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See alsoEdit

[Biography portal](#)
[Geology portal](#)

- [List of geologists](#)

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Louis Agassiz (1807-1873). I have devoted my whole life to the study of Nature, and yet a single sentence may express all that I have done. I have shown that there is a correspondence between the succession of Fishes in geological times and the different stages of their growth in the egg — that is all. It chanced to be a result that was found to apply to other groups and has led to other conclusions of a like nature. Louis Agassiz, 1869. Jean Louis Rodolphe Agassiz (/ˈæɡəsi/; French: [aɡasi]; May 28, 1807 – December 14, 1873) was a Swiss-American biologist and geologist recognized as an innovative and prodigious scholar of Earth's natural history. Agassiz grew up in Switzerland, and he received Doctor of Philosophy and medical degrees at Erlangen and Munich, respectively. After studying with Cuvier and Humboldt in Paris, Agassiz was appointed professor of natural history at the University of Neuchâtel. After visiting Harvard

Louis Agassiz, the son of Rodolphe and Rose Mayor Agassiz, grew to manhood enjoying the prosperity and status of his family and the natural beauty of the Swiss cantons of Fribourg, Vaud, and Neuchâtel. He never identified with a sectarian religious persuasion. He did embrace the Protestant pietism of his minister father, but was more fundamentally devoted to an idealistic romanticism that saw the power of the Creator exemplified in all flora and fauna. Louis Agassiz Fuertes (February 7, 1874 Ithaca, New York – August 22, 1927 Unadilla, New York) was an 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 guiding professional predecessor John James Audubon. Louis Agassiz (1807-1873). I have devoted my whole life to the study of Nature, and yet a single sentence may express all that I have done. I have shown that there is a correspondence between the succession of Fishes in geological times and the different stages of their growth in the egg – that is all. It chanced to be a result that was found to apply to other groups and has led to other conclusions of a like nature. Louis Agassiz, 1869.