

= Histoire Naturelle =

The Histoire Naturelle , générale et particulière , avec la description du Cabinet du Roi (1749 ? 1804) is an encyclopaedic collection of 36 large (quarto) volumes written over much of his working life by the Comte de Buffon , and continued in eight more volumes after his death by his colleagues , led by Bernard Germain de Lacépède . The books cover what was known of the " natural sciences " at the time , including what would now be called material science , physics , chemistry and technology as well as the natural history of animals .

= = Histoire Naturelle , an encyclopaedic work = =

The Histoire Naturelle , générale et particulière , avec la description du Cabinet du Roi is the work that the Comte de Buffon (1707 ? 1788) is remembered for . He worked on it for some 50 years , initially at Montbard in his office in the Tour Saint @-@ Louis , then in his library at Petit Fontenet . 36 volumes came out between 1749 and 1789 , followed by 8 more after his death , thanks to Bernard Germain de Lacépède . It includes all the knowledge available in his time on the " natural sciences " , a broad term that includes disciplines which today would be called material science , physics , chemistry and technology . Buffon notes the morphological similarities between men and apes , although he considered apes completely devoid of the ability to think , differentiating them sharply from human beings . Buffon 's attention to internal anatomy made him an early comparative anatomist . " L ? intérieur , dans les êtres vivants , est le fond du dessin de la nature " , he wrote in his Quadrupèdes , " the interior , in living things , is the foundation of nature 's design . "

The Histoire Naturelle , which was meant to address the whole of natural history , actually covers only minerals , birds , and the quadrupeds among animals . It is accompanied by some discourses and a theory of the earth by way of introduction , and by supplements including an elegantly written account of the epochs of nature .

The Suppléments cover a wide range of topics ; for example , in (Suppléments IV) , there is a Discours sur le style (Discourse on Style) and an Essai d 'arithmétique morale (essay on Moral Arithmetic) .

Louis Jean @-@ Marie Daubenton assisted Buffon on the quadrupeds ; Philippe Guéneau de Montbeillard worked on the birds . They were joined , from 1767 , by Barthélemy Faujas de Saint @-@ Fond , the abbot Gabriel Bexon and Charles @-@ Nicolas @-@ Sigisbert Sonnini de Manoncourt . The whole descriptive and anatomical part of l ? Histoire des Quadrupèdes was the work of Daubenton and Jean @-@ Claude Mertrud .

Buffon attached much importance to the illustrations ; Jacques de Sève illustrated the quadrupeds and François @-@ Nicolas Martinet illustrated the birds . Nearly 2000 plates adorn the work , representing animals with care given both to aesthetics and anatomical accuracy , with dreamlike and mythological settings .

On minerals , Buffon collaborated with André Thouin . Barthélemy Faujas de Saint @-@ Fond and Louis Bernard Guyton de Morveau provided sources for the mineral volumes .

L ? Histoire Naturelle met immense success , almost as great as Encyclopédie by Diderot , which came out in the same period . The first three volumes of L ? Histoire Naturelle , générale et particulière , avec la description du cabinet du Roi were reprinted three times in six weeks .

The encyclopaedia appeared in 36 volumes :

3 volumes in 1749 : De la manière d ? étudier l ? histoire naturelle followed by Théorie de la Terre , Histoire Générale des animaux and Histoire Naturelle de l ? homme

12 volumes on quadrupeds (1753 to 1767)

9 volumes on birds (1770 to 1783])

5 volumes on minerals (1783 to 1788) , the last including Traité de l ? aimant , the last work published by Buffon in his lifetime

7 volumes of supplements (1774 to 1789) , including Époques de la nature (from 1778) .

L ? Histoire Naturelle was initially printed at the Imprimerie royale in 36 volumes (1749 ? 1789) . In 1764 Buffon bought back the rights to his work . It was continued by Bernard Germain de Lacépède

, who described the egg @-@ laying quadrupeds , snakes , fishes and cetaceans in 8 volumes (1788 ? 1804) .

Buffon was assisted in the work by Jacques @-@ François Artur (1708 ? 1779) , Gabriel Léopold Charles Amé Bexon (1748 ? 1785) , Louis Jean @-@ Marie Daubenton (1716 ? 1799) , Edme @-@ Louis Daubenton (1732 ? 1786) , Jacques de Sève (actif 1742 ? 1788) , Barthélemy Faujas de Saint @-@ Fond (1741 ? 1819) , Philippe Guéneau de Montbeillard (1720 ? 1785) , Louis @-@ Bernard Guyton @-@ Morveau (1737 ? 1816) , Bernard Germain de Lacépède (1756 ? 1825) , François @-@ Nicolas Martinet (1731 ? 1800) , the anatomist Jean @-@ Claude Mertrud (1728 ? 1802) , Charles @-@ Nicolas @-@ Sigisbert Sonnini de Manoncourt (1751 ? 1812) , and André Thouin (1747 ? 1823) .

= = Approach = =

Each group is introduced with a general essay . This is followed by an article , sometimes of many pages , on each animal (or other item) . The article on the wolf begins with the claim that it is one of the animals with a specially strong appetite for flesh ; it asserts that the animal is naturally coarse and cowardly (grossier et poltron) , but becoming crafty at need , and hardy by necessity , driven by hunger . The language , as in this instance , is elegant and elaborate , even " flowery and ornate " . Buffon was roundly criticised by his fellow academics for writing a " purely popularizing work , empty and puffed up , with little real scientific value " .

The species is named in Greek , Latin , Italian , Spanish , German , English , Swedish , and Polish . The zoological descriptions of the species by Gessner , Ray , Linnaeus , Klein and Buffon himself (" Canis ex griseo flavescens . Lupus vulgaris . Buffon . Reg. animal. pag . 235 ") are cited .

The text is written as a continuous essay , without the sections on identification , distribution and behaviour that might have been expected from other natural histories . Parts concern human responses rather than the animal itself , as for example that the wolf likes human flesh , and the strongest wolves sometimes eat nothing else . Measurements may be included ; in the case of the wolf , 41 separate measurements are tabulated , in pre @-@ revolutionary French feet and inches starting with the " Length of the whole body measured in a straight line from the end of the muzzle to the anus 3 feet . 7 inches . " (1 @-@ 2 m) ; the " Length of the largest claws " is given as " 10 lines " (2 @-@ 2 cm) .

The wolf is illustrated standing in farmland , and as a complete skeleton standing on a stone plinth in a landscape . The account of the species occupies 32 pages including illustrations .

= = Editions = =

= = = Buffon 's original edition continued by Lacépède = = =

The original edition of the Histoire Naturelle by Buffon comprised 36 volumes in quarto , divided into the following series : Histoire de la Terre et de l 'Homme , Quadrupèdes , Oiseaux , Minéraux , Suppléments . Buffon edited 35 volumes in his lifetime . Soon after his death , the fifth and final volume of l ' Histoire des minéraux appeared in 1788 at the Imprimerie des Bâtiments du Roi . The seventh and final volume of Suppléments by Buffon was published posthumously in 1789 through Lacépède 's hands . Lacépède continued the part of the Histoire Naturelle which dealt with animals . A few months before Buffon 's death , en 1788 , Lacépède published , as a continuation , the first volume of his Histoire des Reptiles , on egg @-@ laying quadrupeds . The next year , he wrote a second volume on snakes , published during the French Revolution . Between 1798 and 1803 , he brought out the volume Histoire des Poissons . Lacépède made use of the notes and collections left by Philibert Commerson (1727 ? 1773) . He wrote Histoire des Cétacés which was printed in 1804 . At that point , the Histoire Naturelle , by Buffon and Lacépède , thus contained 44 quarto volumes forming the definitive edition .

== Variations in the editions by Buffon and Lacépède ==

Another edition in quarto format was printed by the Imprimerie royale in 36 volumes (1774 ? 1804) . It consisted of 28 volumes par Buffon , and 8 volumes by Lacépède . The part containing anatomical articles by Louis Jean @-@ Marie Daubenton was dropped . The supplements were merged into the relevant articles in the main volumes .

The Imprimerie royale also published two editions of the Histoire Naturelle in duodecimo format (1752 ? 1805) , occupying 90 or 71 volumes , depending on whether or not they included the part on anatomy . In this print format , the original work by Buffon occupied 73 volumes with the part on anatomy , or 54 volumes without the part on anatomy . The continuation by Lacépède took up 17 duodecimo volumes .

A de luxe edition of Histoire Naturelle des Oiseaux (Birds) (1771 ? 1786) was produced by the Imprimerie royale in 10 folio and quarto volumes , with 1008 engraved and hand @-@ coloured plates , executed under Buffon 's personal supervision by Edme @-@ Louis Daubenton , cousin and brother @-@ in @-@ law of Buffon 's principal collaborator .

== Translations ==

The Histoire Naturelle was translated into languages including English , German , Swedish , Russian and Italian . Many translations , often partial (single volumes , or all volumes to a certain date) , abridged , reprinted in the same translation by different printers , or with additional text (for example on insects) and new illustrations , were made at the end of the eighteenth century and the start of the nineteenth century , presenting a complicated publication history . Early translations were necessarily only of the earlier volumes . Given the complexity , all catalogue dates other than of single volumes should be taken as approximate .

R. Griffith published an early translation of the volume on The Horse in London in 1762 . T. Bell published a translation of the first six volumes in London between 1775 and 1776 . William Creech published an edition in Edinburgh between 1780 and 1785 . T. Cadell and W. Davies published another edition in London in 1812 . An abridged edition was published by Wogan , Byrne et al. in Dublin in 1791 ; that same year R. Morison and Son of Perth , J. and J. Fairbairn of Edinburgh and T. Kay and C. Forster of London published their edition . W. Strahan and T. Cadell published a translation with notes by the encyclopaedist William Smellie in London around 1785 . Barr 's Buffon in ten volumes was published in London between 1797 and 1807 . W. Davidson published an abridged version including the natural history of insects taken from Swammerdam , Brookes , Goldsmith et al . , with " elegant engravings on wood " ; its four volumes appeared in Alnwick in 1814 .

German translations include those published by Joseph Georg Trassler 1784 ? 1785 ; by Pauli , 1772 ? 1829 ; Grund and Holle , 1750 ? 1775 ; and Johann Samuel Heinsius , 1756 ? 1782 .

Italian translations include those published by Fratelle Bassaglia around 1788 and Boringherieri in 1959 .

Per Olof Gravander translated an 1802 ? 1803 French abridgement into Swedish , publishing it in Örebro in 1806 ? 1807 .

A Russian version (The General and Particular Natural History by Count Buffon ; " ???????? ? ?????? ?????????????? ??????? ?????? ??????? ") was brought out by The Imperial Academy of Sciences (?????????????????? ?????????? ?????) in St. Petersburg between 1789 and 1808 .

== Children 's ==

An abridged edition for children was published by Frederick Warne in London and Scribner , Welford and Co. c . 1870 .

== Contents by volume ==

The original edition was arranged as follows :

Natural history , and description of the king 's cabinet of curiosities

Volume I : Premier Discours - De la manière d ? étudier et de traiter l ? histoire naturelle , Second Discours - Histoire et théorie de la Terre , Preuves de la théorie de la Terre , 1749

Volume II : Histoire générale des Animaux , Histoire Naturelle de l 'Homme , 1749

Volume III : Description du cabinet du Roi , Histoire Naturelle de l 'Homme , 1749

Quadrupèdes (Quadrupeds)

Volume IV (Quadrupèdes I) : Discours sur la nature des Animaux , Les Animaux domestiques , 1753

Volume V (Quadrupèdes II) : 1755

Volume VI (Quadrupèdes III) : Les Animaux sauvages , 1756

Volume VII (Quadrupèdes IV) : Les Animaux carnassiers , 1758

Volume VIII (Quadrupèdes V) : 1760

Volume IX (Quadrupèdes VI) : 1761

Volume X (Quadrupèdes VII) : 1763

Volume XI (Quadrupèdes VIII) : 1764

Volume XII (Quadrupèdes IX) : 1764

Volume XIII (Quadrupèdes X) : 1765

Volume XIV (Quadrupèdes XI) : Nomenclature des Singes , De la dégénération des Animaux , 1766

Volume XV (Quadrupèdes XII) : 1767

Histoire Naturelle des Oiseaux (Birds) (1770 ? 1783)

Volume XVI (Oiseaux I) : 1770

Volume XVII (Oiseaux II) : 1771

Volume XVIII (Oiseaux III) : 1774

Volume XIX (Oiseaux IV) : 1778

Volume XX (Oiseaux V) : 1778

Volume XXI (Oiseaux VI) : 1779

Volume XXII (Oiseaux VII) : 1780

Volume XXIII (Oiseaux VIII) : 1781

Volume XXIV (Oiseaux IX) : 1783

Histoire Naturelle des Minéraux (Minerals) (1783 ? 1788)

Volume XXV (Minéraux I) : 1783

Volume XXVI (Minéraux II) : 1783

Volume XXVII (Minéraux III) : 1785

Volume XXVIII (Minéraux IV) : 1786

Volume XXIX (Minéraux V) : Traité de l 'Aimant et de ses usages , 1788

Suppléments à l ? Histoire Naturelle , générale et particulière (Supplements) (1774 ? 1789)

Volume XXX (Suppléments I) : Servant de suite à la Théorie de la Terre , et d ? introduction à l ? Histoire des Minéraux , 1774

Volume XXXI (Suppléments II) : Servant de suite à la Théorie de la Terre , et de préliminaire à l ? Histoire des Végétaux - Parties Expérimentale & Hypothétique , 1775

Volume XXXII (Suppléments III) : Servant de suite à l 'Histoire des Animaux quadrupèdes , 1776

Volume XXXIII (Suppléments IV) : Servant de suite à l 'Histoire Naturelle de l 'Homme , 1777

Volume XXXIV (Suppléments V) : Des Époques de la nature , 1779

Volume XXXV (Suppléments VI) : Servant de suite à l 'Histoire des Animaux quadrupèdes , 1782

Volume XXXVI (Suppléments VII) : Servant de suite à l 'Histoire des Animaux quadrupèdes , 1789

Histoire Naturelle des Quadrupèdes ovipares et des Serpents (Egg @-@ laying Quadrupeds and Snakes) (1788 ? 1789)

Volume XXXVII (Reptiles I) : Histoire générale et particulière des Quadrupèdes ovipares , 1788

Volume XXXVIII (Reptiles II) : Histoire des Serpents , 1789

Histoire Naturelle des Poissons (Fish) (1798 ? 1803)

Volume XXXIX (Poissons I) : 1798
Volume XXXX (Poissons II) : 1800
Volume XXXXI (Poissons III) : 1802
Volume XXXXII (Poissons IV) : 1802
Volume XXXXIII (Poissons V) : 1803
Histoire Naturelle des Cétacés (Cetaceans) (1804)
Volume XXXXIV (Cétacés) : 1804

= = Reception = =

= = = Contemporary = = =

The Histoire Naturelle had a distinctly mixed reception in the eighteenth century . Wealthy homes in both England and France purchased copies , and the first edition was sold out within six weeks . But Buffon was criticised by priests for suggesting (in the essay Les Epoques de Nature , Volume XXXIV) that the earth was more than 6 @, @ 000 years old and that mountains had arisen in geological time . Buffon cites as evidence that fossil sea @-@ shells had been found at the tops of mountains ; but the claim was seen as contradicting the biblical account in the Book of Genesis . Buffon also disagreed with Linnaeus 's system of classifying plants as described in Systema Naturae (1735) . In Buffon 's view , expounded in the " Premier Discours " of the Histoire Naturelle (1749) , the concept of species was entirely artificial , the only real entity in nature being the individual ; as for a taxonomy based on the number of stamens or pistils in a flower , mere counting (despite Buffon 's own training in mathematics) had no bearing on nature .

The Paris faculty of theology , acting as the official censor , wrote to Buffon with a list of statements in the Histoire Naturelle that were contradictory to Roman Catholic Church teaching . Hypocritically , Buffon replied that he believed firmly in the biblical account of creation , and was able to continue printing his book , and remain in position as the leader of the ' old school ' , complete with his job as director of the royal botanical garden . On Buffon 's death , the 19 @-@ year @-@ old Georges Cuvier celebrated with the words " This time , the Comte de Buffon is dead and buried " . Soon afterwards , the French revolution went much further in sweeping away old attitudes to natural history , along with much else .

= = = Modern = = =

= = = = Philosophy = = = =

The Stanford Encyclopedia of Philosophy calls the Histoire Naturelle " Buffon 's major work " , observing that " In addressing the history of the earth , Buffon also broke with the ' counter @-@ factual ' tradition of Descartes , and presented a secular and realist account of the origins of the earth and its life forms . " In its view , the work created an " age of Buffon " , defining what natural history itself was , while Buffon 's " Discourse on Method " (unlike that of Descartes) at the start of the work argued that repeated observation could lead to a greater certainty of knowledge even than " mathematical analysis of nature " . Buffon also led natural history away from the natural theology of British parson @-@ naturalists such as John Ray . He thus offered both a new methodology and an empirical style of enquiry . Buffon 's position on evolution is complex ; he noted in Volume 4 from Daubenton 's comparative anatomy of the horse and the donkey that species might " transform " , but initially (1753) rejected the possibility . However , in doing so he changed the definition of a species from a fixed or universal class (which could not change , by definition) to " the historical succession of ancestor and descendant linked by material connection through generation " , identified by the ability to mate and produce fertile offspring . Thus the horse and donkey , which produce only sterile hybrids , are seen empirically not to be the same species , even though they

have similar anatomy . That empirical fact leaves open the possibility of evolution .

=== Style ===

The botanist Sandra Knapp writes that " Buffon 's prose was so purple that the ideas themselves are almost hidden " , observing that this was also the contemporary academic opinion . She notes that some quite radical ideas are to be found in his work , but they are almost invisible , given the language they are cloaked in . She quotes Buffon 's dramatic description of the lion , which along with the engraving in her view " emphasized both the lion 's regal bearing and personality not only in his text but also in the illustration ... A reader was left in no doubt as to the importance and character of the animal . " She concludes " No wonder the cultured aristocratic public lapped it up ? the text reads more like a romantic novel than a dry scientific treatise " .

=== Evolutionary thought ===

The evolutionary biologist Ernst Mayr comments that " In this monumental and fascinating *Histoire naturelle* , Buffon dealt in a stimulating manner with almost all the problems that would subsequently be raised by evolutionists . Written in a brilliant style , this work was read in French or in one of the numerous translations by every educated person in Europe " . Mayr argued that " virtually all the well @-@ known writers of the Enlightenment " were " Buffonians " , and calls Buffon " the father of all thought in natural history in the second half of the eighteenth century " .

Mayr notes that Buffon was not an " evolutionist " , but was certainly responsible for creating the great amount of interest in natural history in France . He agrees that Buffon 's thought is hard to classify and even self @-@ contradictory , and that the theologians forced him to avoid writing some of his opinions openly . Mayr argues however that Buffon was " fully aware of the possibility of ' common descent ' , and was perhaps the first author ever to articulate it clearly " , quoting Buffon at length , starting with " Not only the ass and the horse , but also man , the apes , the quadrupeds , and all the animals might be regarded as constituting but a single family " , and later " that man and ape have a common origin " , and that " the power of nature ... with sufficient time , she has been able from a single being to derive all the other organized beings " . Mayr notes , however , that Buffon immediately rejects the suggestion and offers three arguments against it , namely that no new species have arisen in historical times ; that hybrid infertility firmly separates species ; and that animals intermediate between , say , the horse and the donkey are not seen (in the fossil record) .