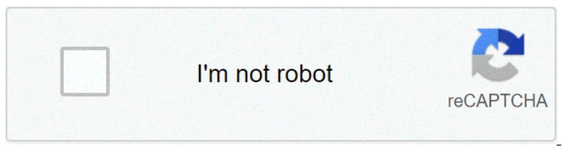

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Aspect of the history that covers the study of ecology ecology is a new science and considered as an important branch of the biological science, and only if prominent during the second half of the system 20. [1] ecological thinking is derived from established currents In philosophy, in particular of an ethical and political. [2] Your story runs all the way back to the season 4. One of the first ecologists whose writings survive may have been Aristoteles or maybe his student, Theophrastus, both of those who had an interest in many animals and plants . Theophrastus described interrelations between animals and their environment as early as the 4 BC. [3] Ecology developed substantially in the century 18 and 19. Everything started with Carl Linnaeus and his work with the economy of nature. [4] Soon afterwards Alexander von Humboldt came and his work with Botanical Geography. [5] Alexander von Humboldt and Karl MÃƒÂ¶bius followed with the nation of biocoenosis. Work Eugenius WarmingÃ ¢ s With the geography of the ecological plant led to the foundation of ecology as a discipline. [6] Work Charles DarwinÃ ¢ s also contributed to the science of ecology, and Darwin is often attributed with progressing discipline more than nobody in his young history. Echological thinking expanded even more at the beginning of the 20th. [7] The main contributions were:. Eduard Seessá ¢ and Vladimir VernadskyÃ ¢ s with Biosphere, Ecosystem Arthur TansleyÃ ¢ S, Animal Ecology of Charles Elton, and Henry Cowles Ecological Succession [8] Ecology influenced social and human sciences. Human ecology began at the beginning of the 20th century and is recognized human beings as an ecological factor. Later, James Lovelock advanced views on Earth as a macro-organism with Gaia hypothesis. [9] [10] conservation resulted from the science of ecology. Important figures and movements include Shelford and ESA, National Law of Environmental Politics, George Perkins Marsh, Theodore Roosevelt, Stephen A. Forbes, and Conservation Dust Basin. Later, the world's world governments 20 collaborated with mana S effects on the biosphere and the Eartha s environment. The history of ecology is intertwined with the history of conservation efforts, in particular the Nature Conservancy Foundation. [11] 18 and ecological murmurs of the 19 arcadian and imperial article Main ecology: Arcadian ecology at the beginning of the century XVIII, former Carl Linnaeus, two rival schools of thought dominated the growing scientific discipline of ecology. First, Gilbert White a parson-naturalist is attributed to development and supporting the point of view of Arcádia ecology. Arcádia Ecology defenders for a simple, humble life of mana and a harmonious relationship with human beings and nature. [12] Opposing Arcadian view is the ideology of Francis Bacon, Ã ¢ EcologyÃ ¢ Imperial. Imperialist work one to establish, through the exercise of reason and for hard work, dominance manan ¢ s about naturea. [12] Imperial ecologists also believe that man must become a dominant figure on nature and all other organisms as one once enjoyed in the Garden of Edena. [12] Both visions continued their rivalry with the beginning of the century XVIII to the support of Carl Linnaeus imperialism; And in a short time due to the popularity of Linnaeus, imperial ecology became the dominant vision in the scope of discipline. Carl Linnaeus and SYSTEMA Naturae Main articles: Carl Linnaeus and Systema Naturae Carl Linnaeus, a Swedish naturalist, is well known for his work with taxonomy but his ideas helped to throw the bases for modern ecology. He has developed a two-part nomenclature system for the classification of plants and animals. Binomial nomenclature was used to sort, describe, and quote different breeds and sports. Systeme Naturae compiled editions developed and popularized the naming system for plants and in modern biology. Reid suggests "linnaeus can reasonably be considered as the creator of systematic and ecological studies in biodiversity" biodiversity " For your behalf and classification of thousands of sports of plants and animals. Linnaeus also influenced the foundations of Darwinian evolution, he believed that there could be changing in or between different species within fixed gains. Linnaeus also was one of the first naturalists to put men in the same category as primates. [4] Botanical geography and Alexander von Humboldt in the 18th and innence of the XIX Series, the great marry powers, such as Grand -Brotanha, Spain and Portugal launched many worldwide explosions to develop the I commence marble with other countries and discover new natural resources as well as cataloging them. At the beginning of the century XVIII, about twenty thousand sports of plants were known, versus forty thousand at the beginning of the century XIX, and about 300,000 today. These expeditions were united by many scientists, including bazors, such as Alexander Von Humboldt German Explorer. Humboldt is often considered father of ecology. He was the first to take on the study of the relationship between organisms and his environment. It exposes the relationships between species of observed plants and climate, and described vegetation zones using latitude and altitude, a discipline now known as geobotany. Von Humboldt was accompanied by his expedition by Bonpland © Bonpland © Bonpland. In 1856, the park's grass experiment was established in the Rothamsted experimental station to test the effect of fertilizer and maintenance in hay income. This is the longest field experiment in the world. [5] The nation of biocoenosis: Wallace and Mother Alfred Russel Wallace, contemporary and Darwin's colleague, was the first to propose a "geography" of animals. Various authors recognized at the time the species were not independent of each other, and grouped them into plants, animals, and later in living creatures or biocoenoses . The first use of this term is usually assigned to Karl Monga in 1877, but in 1825, the French naturalist Adolphe Dureau de la Malle used the term societary about a meeting of plants from different spies. Heating and foundation of ecology as discipline While Darwin concentrated exclusively in competition as a selective force, Eugen heating invented a new discipline that took abiptical factors, which is dry, fire, salt, cold etc. , so seriously how much biopic factors in the Biological Communities Assembly. Biogeography prior to heating was largely in the descriptive - faunstical or flowering nature. The objective of heating was, through the study of the morphology and anatomy of the organism (plant), this is, adaptation, to explain why a specification occurred under a certain set of environmental conditions . In addition, the goal of the new discipline was to explain why spaces occupying similar habitats, experiencing similar risks, would solve problems in a similar way, despite the frequency of widely different phylogenic descendancy. Based on his personal observations in the Brazilian Cerrado, Denmark, Norwegian Finnmark and Groenlândia, heating gave the first university course in the ecological geography of the plant. Based on his lectures, he wrote the book Ã ¢ â, ¬ Å "plantsamfundan â € â € â € ¢ â € ¢ â € ¢ â € ƒâ € ƒâ € ƒâ € ƒâ € œAr € Å "Plants Aecology â € ¢" ¢. Through your German edition, the book had an immense effect on British and North American scientists such as Arthur Tansley, Henry Chandler Cowles and Frederic Clements. [6] Malthusian Influence Main article: Thomas Robert Malthus Thomas Robert Malthus was an influential writer on the subject of population and population boundaries at the beginning of the XIX. His works were very important in shaping the ways in which Darwin saw the world worked. Malthus wrote: that the increase in the population is necessarily limited by the means of that the population invariably increases when the means of increasing subsistence, and that the superior power of the population is repressed, and Population kept equal for the means of life, for suffering and vice [13]. In the essay on the principle of Malthus population defends the population increase through 2 verifications: positive and preventive verification. The first death rates decreases the subsequent delivery fees. [14] Malthus also brings the idea that the world population will move past the sustainable number of people. [15] This way of thought continues to influence debates on birth and marriage rates for this theory brought by Malthus. [16] The essay had a great influence on Charles Darwin and helped him the theories his theory of natural selection. [17] This fight proposed by Malthusiana thought it was not only influenced the ecological work of Charles Darwin, but helped to bring an economic theory of the world of ecology. [18] Darwinism and the Science of Portrait Ecology Julia Margaret CameronÃ ¢ S de Darwin is often considered that the roots of scientific ecology can be traced up to Darwin. [19] This statement may seem, at first convincing view in the extent that at the origin of the species is full of proposed observations and mechanisms that fit clearly within the limits of modern ecology (for example, The cat-to-clover chain is an ecological cascade) and because the term ECOLOGY was coined in 1866 by a strong defender of Darwinism, Ernst Haeckel. However, Darwin never used the word in his writings after this year, not even in his more "ecological" writings as the prefaccium of the English edition of Hermann MÃƒÂLerÃ ¢ s the adubation of the Flowers (1883), or in their own treated of earthworms and mull formation in forestles (the formation of vegetable mold through the action of worms, 1881). In addition, the pioneers founding ecology as a scientific discipline, such as Eugen heating, AFW Schimper, Gaston Bonnier, F Forel, SA Forbes and Karl MÃƒÂ¶bius, made almost no reference to Darwin ¢ s ideas in their works . [7] This was clearly not for ignorance or because Darwin's works were not widespread. Some, like S.A.forbes studying complex food chains yet not answered on the instability of food chains that can persist if dominant competitors were not adapted to have self-restriction. [20] Others aimed at the dominant themes in the beginning, the concern with the relationship between the morphology organism and physiology on one side and the environment, by another environment, mainly abiethic, of the selection the environmental. Natural selection concept, on the other side DarwinÃ ¢ s focused mainly on the competition. [21] The others than the competition mechanisms he described, mainly the divergence of character who can reduce the competition and his assertion that "the fight," as he used was metaphorrect and therefore included Environmental selection, received less omsnfase at the origin than competition. [12] Despite most Darwin portraits transmitting it as a non-aggressive recluse that let others fight their battles, Darwin remained all his life a man almost obsessed with the ideas of competition, fight and conquers it with all forms of human contact as a confrontation. [12] [22] Though there is nothing wrong in the details presented in the paragraph above, the fact that Darwinism used a particularly ecological vision of adaptation and use of HAECKEL and Definitions of the term were plunged into Darwinism should not be ignored. According to the ecologist and historian Robert P. McIntosh, "The relationship of ecology for Darwinian evolution is explained in the title of the work in which Ecology appeared for the first time." [23] [24] A definition more elaborated by HAECKEL in 1870 is translated into the frontispine of the influential ecology text known as 'large monkeys' as "an ecology is the study of all these interrelations Complex measures referred to by Darwin as the conditions of the struggle for existence. " [25] [26] The questions brought in Above are covered in more detail in the primary section under that of history at Wikipedia Wikipedia in ecology. Expansion of Biosphere Ecological Thought Biosphere - Eduard Suer and Vladimir Vernadsky until the XIX SERE, ECOLOGY Flowered due to new discoveries in chemistry by Lavoisier and Saussure, namely the nitrogen cycle. After observing the fact that life is developed only within rigorous limits of each compartment that compose the atmosphere, hydrosphere and lithosphere, the Austrian Eduard Suer Geólogo proposed for a term Biosphere in 1875. Suer propose biosphere of name For conditions that promote life, like those found on Earth, which include flora, fauna, minerals, cycles of Matêcia, et cetera. In the dance of 1920, Vladimir I. Vernadsky, a Russian geometer that had undone for the franchise, detailed the idea of the biosphere in his work "the biosphere" (1926) and described the fundamental principles of biogeochemical cycles. He thus redefined the biosphere as the sum of all ecosystems. The first ecological damage were reported in the century XVIII, since the multiplication of colonias caused deforestation. From the century XIX, with the industrial revolution, more and more urgent concerns grew upon the impact of human activity in the environment. The term ecologist is in use since the end of the XIX season. The ecosystem: Arthur Tansley along the XIX, Botanical Geography and combined zoogeography to form the base of biogeography. This science, which deals with sports habitats, seeks to explain the reasons for the presence of certain species at a particular location. It was in 1935 that Arthur Tansley, the British ecologist, coined the term ecosystem, the interactive system established between biocoenosis (the group of living creatures), and its biotope, the environment in which they live. Ecology thus became the science of ecosystems. The concept of tansley of the ecosystem was adopted by the energetic and influential Educator of Eugene Odum Biology. Along with his brother, Howard T. Odum, Eugene P. Odum wrote a book that (from 1953) he educated more of a generation of biemologists and ecologists at North America. The ecological succession "Henry Chandler falls Indiana's dunes on Lake Michigan, which Caue refers to his development of his theories of ecological succession. Main article: Ecological succession at the turn of the XX Século, Henry Chandler Cowles was one of the founders of the emerging study of "Dynamic Ecology", through his study of ecological succession in the Dunes of Indiana, sand dunes at the southern end of Lake Michigan. Here Cowles found evidence of succession. Ecological in the vegetation and the soil with age. Cowles was very aware of the roots of the concept and his predecessors (primordial). [8] So he attributes the first use of the word to the French naturalist Adolphe Dureau de la Malle, who described the development of vegetation after forest fruits, and the first comprehensive study of successful processes for the Finnish Botanist Ragnar Hult (1881). Animal Ecology - Charles Elton 20th Eyenland Zoo Ecologist Charle S Elton, is commonly credited as Ã ¢ â, "the father of animal ecology. [27] Elton Influenced by the Animal Communities of Victor Shelford in Temperate Amenities started his research on animal ecology as his colleague's assistant, Julian Huxley, in an ecological survey of fauna in Spitsbergen in 1921. Elton's most famous studies Performed during your time as a biological consultant of Hudson Bay Company to help you understand the floats in the company's crops. Elton studied the floats of the population and the dynamics of the snowshift hare, canadian lynx and other region mammals. Elton is also considered the first the currency the terms, food chain and food cycle in its famous animal ecology. [28] Elton is also allocated to contribute to disciplines of: invasion ecology, Community ecology and ecology of wildlife disease. [29] G. Evelyn Hutchinson - Father of ECOLOGY Main article: G. Evelyn Hutchinson George "Evelyn Hutchinson was an ecologist of the XX system that is commonly recognized as the Ã â € ¬ ¬" Father of modern ecology â € ¬. Hutchinson is English descent , but spent most of the professional career studying in New Haven, Connecticut at Yale University. Throughout his career, more than six days, Hutchinson contributed to the sciences of Limnology, Entomology, Genestic, Biogeochemical, Theory Matematics of the population and much more. [30] Hutchinson is also attributed to the first to infuse the science with the theory within the discipline of ecology. [31] Hutchinson was also one of the first with the combination of ecology with mathematica. Another great contribution from Hutchinson was its development of the current definition of a "Dish" organism, as he recognized the role of a organism within your community. Finally, along with its great impact of The discipline of ecology throughout his professional years, Hutchinson also left a lasting impact on ecology through his many students he inspired. First between them, Robert H. Macarthur, who received his doctorate under Hutchinson, and Raymond L. Lindemann, who finished his doctoral dissertation during a communion under him. MacArthur became the leader of the technological ecology and, with E. O. Wilson, developed theory of the island's biography. Raymond Lindemann was fundamental in the development of the modern science of the ecosystem. [32] XX Seal Transition for Modern Ecology Ã ¢ â € "What is Ecology?" It was questioned that it was asked in almost all sést Culo XX. [33] Unfortunately, the response most frequently was that it was mainly a point of view to be used in other biology areas and also Ã â € œ¬ Â € ‡ € "as sociology, for example , instead of Ã â € ™ ¬ "hard Ã â €" as physics. Although autecology (essentially physiological ecology) can progress through the typical scientific method of observation and test of hypotheses, synonym (study of communities of animals and plants) and genecology (evolutionary ecology), for the What experiment was as limited as for, say, geology, continued with much the same inductive meeting of data, as studies of natural history. [34] Most of the time, patterns, gifts and histories, were used â € - to develop theories with explanatory power, but that had small real data in support. Darwin Theory, as much as a modern biology base, is a great example. GE Hutchinson, identified above as the â € ™ Father of modern ecology Ã ¢ â € "through its influence elevated the status of great ecology to a rigorous science. By grazing Raymond Lindemann in the Three-dynamic concept of ecosystems through the Publication Process After the premature death of Lindemann, [35] Hutchinson defined the basis for what has become the modern science of the ecosystem. With its two papers Celebrities at the end1950, Ã â € ‡ ‡ Closing observes, Ã â € ™ [36] and Ã â € ‡ š "Homage to Santa Rosalia Ã ¢ â € ™ [37] As are now known, Hutchinson He launched the technical ecology that Robert MacArthur defended. The science of the ecosystem has become quickly and sensibly associated with Ã â € ¬ Å "Big Science Ã ¢ €" and obviously â € € "hard ¬ ¬ ¬ â € "Science at â € œ¬" of atochemical tests and nuclear energy. Was brought by Stanley Auerbach, which established the division of environmental sciences in Oak Ridge National Laboratory, [38] for TraÃ As a result of the radionic acids through the environment, and by the Brothers Odum, Howard and Eugene, a lot of whose initial work was supported by the commission of at Ágémica. [39] The teaching book of Eugene Odum, essentials of ecology, has become something from a Bible today. When, at every of 1960, the International Biological Program (IBP) assumed an ecosystem character, [40] Ecology, with his foundation in the systems science, forever entered the Kingdom of Great Science, with With large scopes and big budgets. Just two years after the publication of Silent Spring in 1962, ecosystem ecology was exchanged as the environmental science in a series of articles in a Bioscience's edition. [41] Teeter ecology took a different path to established its legitimacy, especially in Eastern universities and certain campuses of the West Coast. [42] was the path of Robert Macarthur, who used simple mathematics in his three influential papers, [43] [44] [45] also published at the end of 1950, on population and ecology communities. Although the simple equations of the temóticric ecology at the time, they were supported by the data, they were still still considered a heuristic.Ã ¢ They were resisted by a number of traditional ecologists, but whose complaints of intellectuals of a censorship ¢ studies that do not fit into the hypotheic-deductive structure of the new ecology can be seen as proof of the stature to which the Hutchinson-MacArthur approach had risen in the DÃ © 1970. [46] The premature death of MacArthur In 1972 it was also about the time that the moderism and the Warsa science came to ecology. Kuhn's names, Wittgenstein, Popper, Lakatos, and Feyerbrend began to enter discussions in the ecological literature. Theory of adaptation through Darwin's natural selection was accused of being tautológico. [47] Questions were raised about whether ecosystems were cyberly [48] and if the ecosystem theory was of some utility in the application to environmental management. [49] Most Vituperative of all was the debate that emerged about Macarthur style ecology. The problems came to the head after a sympathy organized by MacArthur acums in honor of him and a second sympathy organized by what was depreciatively called Tallahassee Mafiaa in Wakulla Springs, in Florida. [51] The tribute volume, [51], published in 1975, had an extensive chapter written by Jared Diamond, which in the Poca taught renal physiology at UCLA School of Medicine, who presented a series of a rulesÃ ¢ Explain the patterns of birds from birds that occur in ArchipÃ © Lagos, [52], as famous Darwin's finals in the Galropagos Islands. The Wakulla conference was organized by a group of dissidents led by Daniel Simberloff and Donald Strong Jr., who were described by David Quammen in his book as argued that these patterns â € ¢ may be nothing more than the faces we see on the moon, in Clouds, in Rorschach inkblots.á ¢ [53] Your point was that the work of Diamond (and the others) are not inserted in the criteria of falseability, predicted for the science by the Philosopho Karl Popper. A collaborator of the exchanges between the two fields on a question of Synthese found a body-to-body combat images or a Brawlan bar that comes to mind. [54] Florida State Group suggested a method that they have developed, nulla models a, [55] to be used much in the way that all scientists use null hipotes to verify if their results could not have been obtained by mere chance [56]. It was more markedly reprimanded by Diamond and Michel Gilpin at the Simposio Volume [57] and Jonathan Roughgarden at American Naturalist. [58] There was a parallel controversy heat addition above, which became known in conservation circles such as sloss (large or various single and small reserves). Diamond also had proposed that, according to the theory of island geography developed by MacArthur and E. O. Wilson, [59] preserves nature should be designed to be as great as possible and maintained as a unified entity. Even the cut of a road through a natural area, in the diamond interpretation of Macarthur and Wilson theory, would take to loss of sports, due to smaller areas of the the remaining. [60] Simberloff, however, that there were defaunious mangrove islands on the flourish coast in his award-winning experimental study under and Wilson and tested the adjustment of the byogeography theory of the Biogeography of Espa-area for the fauna they returned, [61] They gathered data that showed much by the contrary. that many smaller fragments, sometimes together held more species than Original set [62] He led considerable vituperation on Science's pages. [33] In the end, in one Kuhnian fashion, the arguments probably serÃ¡ finally resolved (or not £ o) by the passage of the participants. However, ecology continues apace ciÃªncia a rigorous, even experimental. null models, admittedly difficult to sharpen, is the £ in use, and although a scientist important of £ conservaÃ§Ã recently praised biogeography theory of islands as one of the most elegant and important theories in ecology CONTEMPORA ¢ nea, raising -If up thousands of smaller and concept ideas, one he nevertheless finds that a space curve © cie-Ã¡rea Ã © a blunt tool in many contextsÃ ¢ and now seems simplistic to the point of cartoonish.Ã ¢ [63] Timeline of ecologists the list of founders, innovators and their significant contribuiÃ§Ãµes for ecology, Romanticism on. Figure notÃ¡vel life greater it useful Contribution £ the £ & citaÃ§Ã the Antonie van Leeuwenhoek 1632â ¢ 1723 The first to develop the concept of food chains Carl Linnaeus 1707Ã ¢ 1778 Influential naturalists, inventor of ciÃªncia on the economy of nature [64] [65] Alexander 1859 Humboldt 1769Ã ¢ first describe ecolÃ³gico gradient of increased biodiversity latitude for trÃ³picos [66] in 1807, Charles Darwin 1882 1809Ã ¢ founder hipÃ³tese of £ evoluÃ§Ã through the selecÃ§ Ã £ natural, founder of ecolÃ³gicos studies of soils [67] Catherine Elizabeth Thomas Beef 1817 1873 geÃ³logo, mineralogist and philosopher noted that rural vs urban, spatial and cultural life, finding the life of the country the best attack in divisions choking class, a more healthy life and better access Ã £ Education natural. [68] [69] Herbert Spencer 1820Ã ¢ 1,903 early founder of the social ecology, coined the phrase 'sobrevivÃªncia of the fittest' [64] [70] Karl MÃ ¢ Â¶bius 1825Ã 1908 The first to develop the concept of community ecolÃ³gica , biocenosis or community living [71] [72] [73] Ernst Haeckel 1834Ã ¢ 1919 coined the term ecology of popularized research links between ecology and evoluÃ§Ã £ Victor Hensen 1835Ã ¢ ¢ 1924 plast ncton invented term, developed measures quantitative and Statistics productivity seas Eugenius Warming 1841Ã ¢ 1.924 early founder ecolÃ³gica Geography Plant [6] Ellen Swallow Richards 1842Ã ¢ 1911 Pioneer and educator linked to urban ecology to human health [74] Stephen Forbes 1844Ã ¢ 1,930 early founder entomology and ecolÃ³gicos concepts in 1887 [20] [75] Vito Volterra 1860Ã ¢ 1940 models Regardless pioneers matemÃ¡ticos populaÃ§Ãµes around the same time as Alfred J. Lotka. [76] [77] Vladimir Vernadsky ¢ 1869Ã 1939 Established the concept of biosphere Henry C. Cowles ¢ 1869Ã 1939 pioneering development and conceptual studies Studies in the ecolÃ³gica sucessÃ £ [78] Christiaan Smuts Jan 1950 1870Ã ¢ coined the term in a wholism 1926 book Holism and the £ EvoluÃ§Ã. [79] Arthur G. Tansley 1871Ã ¢ 1955 first to coin the term ecosystem in 1936 and notÃ¡vel researcher [72] [80] [81] Charles Christopher Adams 1873Ã ¢ 1955 Animal ecologist, biogeographer, author of the first American book on animal ecology in 1913, Energa © tica ecolÃ³gica founded [82] [83] Friedrich Ratzel 1844Ã ¢ 1904 £ geÃ³grafo German comes first coined the term in 1891. biogeography Frederic Clements 1874Ã ¢ 1945 author of the first book influential American ecology in 1905 [84] Victor Ernest Shelford 1877Ã ¢ 1968 founded fisiolÃ³gica ecology, was biome food-web pioneer and concepts, founded the Nature Conservancy [85] [86] Alfred J. Lotka 1880Ã ¢ 1949 first to pioneer populaÃ§Ãµes matemÃ¡ticos models that explain trÃ³fica (predator-prey) interaÃ§Ãµes using the logistic equaÃ§Ã £ [87] Henry Gleason 1882a 1975 ecology early pioneer quantitative teÃ³rico, author, and founder individualist ecology concept [84] [88] Charles S. 1900a Elton 1991 'Father' eco Animal ogy, pioneered food-web & niche concepts and au Thored influential text Ecology Animal [85] [89] G. Evelyn Hutchinson 1903Ã ¢ 1991 Limnologist and conceptually avanÃ§ado the concept Niche [90] [91] [92] Eugene P. Odum 1913A 2002 Co-founder of ecology ecology and ecological thermodynamic concepts [81] [85] [93] [94] Howard Odum 1924Â ¢ 2002 ecosystem ecosystem and ecological thermodynamic concepts [81] [85] [93] [94] [95] [95] [95] Robert Macarthur 1930Ã ¢ 1972 Co-founder About Biogeography and Innovative Island Theory Ecological Statings [97] Ecological Influence In the Social Science and Humanities Human Ecology Main article: Human ecology human ecology began in the DÃ © 1920, through the study of changes in the vegetable succession in the city of Chicago. It became a distinct field of study at the DÃ © 1970. This marked the first recognition that human beings, which colonized all continents of the earth, were a large ecological factor. Humans very modify the environment through the development of habitat (in particular urban planning), by intensive exploitation activities, such as wood and fishing, and as collateral effects of agriculture, and Industry Mineração. In addition to ecology and biology, this discipline involved many other natural and social sciences such as anthropology and ethnology, economy, demographics, architecture and urbanism, medicine and psychology, and many more. The development of human ecology led to the growing role of the ecological science in the conception and management of cities. In the last few years human ecology has been a theme that has interested organizational researchers. Hannan and Freeman (population ecology of organizations (1977), American Journal of Sociology) argue that organizations that are not adapted to an environment. Instead, it is also the environment that selects or rejects populations of organizations. In any environment (in equilibrium) there will be only one form of organization (isomorphism). Organizational ecology has been a prominent theory in the accounting of diversity of organizations and its composition changing over time. James Lovelock and the Gaia article Main hypothesis: Theory The Gaia Gaia Hipotesis, proposed by James Lovelock, in his Gaia work: The New Look At Life on Earth, advanced the idea that the Earth should be considered as a single macro- body. In particular, it has argued that the set of living organisms has evolved together a capacity to control a global environment, influencing major physical parameters such as the composition of the atmosphere, the evaporation rate, the chemistry From soils and oceans one thus to keep favorable conditions â € â € â € â € ™ s. The idea has been supported by Lynn Margulis, who extended the endoscopic theory that suggests that cellular organs originated from free living organisms for the idea that individual organisms of many species could be considered as symbiotes within a larger metaphartment "Super-organism". [98] This vision was largely a sign of times, in particular, the growing perception after World War II than human activities, such as nuclear energy, industrialization, pollution And excessive exploitation of natural resources, driven by the exponential growth of the population, were threatening to create planetary-scale catamps, and has influenced many in the environmental movement since then. History and relationship between ecology and conservation and environmental environmental movements and other conservatives have used ecology and other cities (eg climatology) to withstand their defense positions. environmental views are often controversial for political or economy reasons. As a result, some scientific work in ecology directly influences polic and political debate; These, in turn, often direct ecological surveys. The history of ecology, however, should not be confused with environmental thinking. Ecology as a modern tracing science only from Darwin's publication of the origin of the Spies and subsequent nomination of the science needed to study the Darwin Theory of Haeckel. Awareness of the effect of mankind in its environment has been attributed to Gilbert White in the Século 18 Selborne, [12] The conscience of nature and its interactions can be traced until far in time. [9] [10] Ecology before Darwin, however, is an analysis of medicine before Pasteur of infectious nature of disease. The story is there, but it is only partially relevant. Neither Darwin nor Haeckel, is true, self-declared ecological studies. The same can be said for researchers in several fields that contributed to ecological thought well in the DÃ © Each of 1940 without observing to be ecologists. [1] [99] Population studies of Raymond Pearl are a case in question. [100] Ecology in Matêcia and Techniques arose from studies by Botanicals and Plant Geoshards at the end of the XIX and Beginance of the XX Series that paradoxically lacked Darwinist evolutionary perspectives. Even if Mendel's studies with peas were rediscovered and fused in modern synthesis, [101] Darwinism suffered in credibility. Many ecologists of primitive plants had a Lamarcia de Heritian vision as well as Darwin, sometimes. Ecological studies of animals and plants, preferably live and in the field, they remain above however. [102] Environmental conservation and movements - 20th. When the ecological society of Amany (ESA) was chartered in 1915, he had a conservation perspective. [103] Victor E. Shelford, Leader in the formation of society, had as one of his goals the preservation of the natural areas that were then objects of study of ecologists, but were in danger to be degraded by human raiding. [104] Human ecology had also been a visible part of ESA in his creation, as evident by publications such as: "The control of pneumonia and flu by the climate", "a neglected of the relationship Dust for humanity "" "" The ecological relations of the Polar Eskimo, "and" street dust of the city and infectious diseases "in the first pages of ecology and ecological monographs. The second president of ESA, Ellsworth Huntington, was a human ecologist. Stephen Forbes, another precivil precessor, asked for "humanization" ecology in 1921, since man was clearly the dominant species on earth. [105] This auspicious inneger, in fact, was the first of a series of progressions and inversions suitable for the new science in relation to the conservation. Human ecology necessarily focused on man-influenced environments and their practical problems. Ecologists in general, however, were trying to establish ecology as a basic science, one with enough prestigious to make raids in the Ivy League colleges. Disturbed environments, thought, would not reveal the secrets of nature. The interest in the environment created by the US Bowl produced a flurry of calls in 1935 for ecology to take a look at practical issues. The pioneering ecologist C. C. Adams wanted to return human ecology to science. [106] Frederic E. Clements, the dominant plant ecologist of the day, revised land use questions that lead to the bowl of dust in terms of their ideas about plants and climax. [107] Paul Sears reached a wide audience with his book, deserts in March. [108] World War II, perhaps, caused the question to be set aside. The tension between pure ecology, seeking to understand and explain and apply ecology, seeking to describe and repair, came to a head after World War II. Adams again attempted to push ESA into applied areas, having to raise an appropriation to promote ecology. He predicted that "a great expansion of ecology" was imminent "because of his integral tendency." [109] Ecologists, however, were sensitive to the perception that ecology was not yet considered a rigorous and quantitative science. Those who pushed applied studies and active involvement in the conservation were once again discreetly rejected. Human ecology became subsumed by sociology. It was Sociólogo Lewis Mumford that brought the Ideas of George Perkins Marsh to modern attention at the 1955 conference, "the role of man in changing the face of the earth." This prestigious concave was dominated by social scientists. In it, ecology was "Lack of experimental" and neglecting "man as ecological agent". One participant rejected ecology as "archaic and estimal". [110] inside the ESA, a frustrated frustrated shelford The union of the ecclubs when their preservation commission of the natural conditions stopped working due to the policy inflation on ESA's posture in the conservation. [103] In 1950, the corporate organization was renamed and incorporated as the conservation of nature, a borrowed name of the British government agency for the same purpose. Two events, however, brought the course of ecology back to the problems applied. One was the Manhattan project. It became the nuclear energy commission after the war. It is now the Energy Department (DOE). Its extensive budget included studies on the impacts of the use and production of nuclear weapons. Who brought ecology to the issue, and made a "great science" of that. [12] [111] The science of the ecosystem, both basic and applied, began to compete with the technical ecology (then called evolutionary ecology and also mathematic ecology). Eugene Odum, who published a very popular ecology book in 1953, became the champion of the ecosystem. In its publications, the ODO requested ecology to have an ecosystem and focus applied. [112] The second event was the publication of the silent spring. Rachel Carson's book brought ecology as a word and concept to the public. His influence was instantaneous. A study committee, poked by the publication of the book, informed the ESA that his science was not ready to take responsibility to be given to her. [113] Carson's ecology concept was much of the odum gene. As a result, the science of the ecosystem dominated the international biological program of the 1960s and 1970s, bringing money and prestige to ecology. [115] [116] Silent Spring was also the impulse for environmental protection programs that were initiated in Kennedy and Johnson administrations and transmitted in law just before the first day of Earth. The entrance of ecologists was welcome. The former President of ESA Stanley Cain, for example, was named an assistant secretary in the interior department. The environmental assessment requirement of the 1969 National Environmental Policy Law (NEPA), "legitimized ecology" in the words of an environmental lawyer. [117] A President of ESA called "an Ecological Charter" "[118] A prominent Canadian ecologist declared a" Boondoggle ". [119] NEPA and similar statutes, if nothing else, provided a lot of employment for ecologists. It was the question. Neither ecology nor ecologists were ready for the task. There are not enough ecologists to work in the impact assessment, outside the doe's laboratories, leading to the rise of "instant ecologists ¢ "[120] with dubious credentials and capacities. Calls began to emerge for ecology professional. Maverick Scientist Frank Egler, in particular, dedicated his sharp prose to the task. [121] Once again, A scientific between basic and applied scientists in ESA has emerged, this time exacerbated by the issue of environmental advocacy. The controversy, whose history has not yet received proper treatment, lasted the DÃ © 1970 and 1980, ending with a process of voluntary certification by ESA, together Mind with lobby arm in Washington. [122] Land's Day, in addition to advocacy and professionalism issues, ecology also had to deal with questions having to do with their basic principles. Many of the technical and medical principles of the ecosystem and evolutionary ecology began to show little value in the analysis and environmental evaluation. [123] Ecologist, in general, began to question the Method and the Logic of his science under the pressure of his new notoriety. [84] [125] [125] Meanwhile, personnel with government agency and environmental defense groups were charged. [126] Management of Owl populations stained in danger brought the controversy for a head. [127] The conservation for ecologists has created parallel parallel operations of those nuclear Ex-scientists from the Manhattan project. In each case, the science had to be reconciled with Religious crispers and world visions, a difficult process. Some ecologists have managed to maintain their science separate from their defense; Others impensently became environmentalists. [128] Roosevelt & American Conservation Theodore Roosevelt was interested in the nature of a young age. He carried his passion for nature in his political policies. Roosevelt felt that it was necessary to preserve the resources of the nation and his environment. In 1902, he created the federal reclaming service, which recovered land for agriculture. He also created the Bureau of Forestry. This organization, led by Gifford Pinchot, was formed to manage and keep the timberlands nations. [129] Roosevelt signed the act for the preservation of American antiques in 1906. This act allowed him to "declare by historical landmarks of public proclamation, historical structures and proprietoric and other objects of historic interest and scientific that are situated in land belonging or controlled by the United States government to be national monuments. " Under this act, he created up to 18 national monuments. During his president, Roosevelt established 51 federal reserves of birds, 4 preserves of the national game, 150 national forests and 5 national parks. Overall, he protected more than 200 million acres. [130] Ecology and global policist of politics has become a central part of the world's policy in 1971, UNESCO has launched a research program called man and biosphere, with the aim of increasing knowledge about the relationship Between humans and nature. A few years later, he defined the biosphere reserve concept. In 1972, the United Nations carried out the first international conference on the human environment in Stockholm, prepared by Rene Dubos and other experts. This conference was the origin of the phrase "thinking globally, acting locally". The next major events in ecology were the development of the concept of biosphere and the appearance of terms "biological diversity" "or now more commonly biodiversity - in the dance of 1980. These terms have been developed during the earth's culpula in Rio de Janeiro, In 1992, where the concept of the biosphere was recognized by the main international organizations, and the risks associated with biodiversity reductions were publicly recognized publicly. Then, in 1997, the dangers that the biosphere was facing were recognized in The whole world at the conference leading to the Kyoto Protocol. In particular, this conference highlighted the growing hazards of the greenhouse effect - related to the growing concentration of greenhouse gases in the atmosphere, leading to global changes in the climate. In Kyoto, most nations of the world recognized the importance of looking at the ecology from a global point of view, on a worldwide scale, and take into account the Impac of human beings in the Earth environment.

See also references of ciency Humboldtiense ^ a B McIntosh, R. P. (1985). The background of ecology: concept and theory. New York: Cambridge University Press. ^ Eric LaFerriÃƒâ ére; Peter J. Stoetto (2 September 2003). Theory of International Relations and Echological Thinking: For a synthesis. Routledge. pp. 25 Ã ¢ â € ". ISBN 978-1-134-71068-3. ^ Ramalay, F. (1940)." The growth of a science. "University of Studies of Colorado. 26: 3 - 14. ^ AB Reid, Gordon McGregor (February 2009). "Carolus Linnaeus (1707-1778): his life, philosophy and science and his relationship with modern biology and medicine." Taxon. 58 (1): 18 Ã ¢ "31. Doi: 10,1002 / Tax.581005. ^ A B Silvertown, J.; Poulton, p.; Johnston, and.; Edwards, G.; Heard, m.; Biss, P. M. (2006). "The grass experiment of the Park 1856" 2006: His contribution to ecology. "Journal of ecology. 94 (4): 801 Ã ¢ € 814. Doi: 10.1111 / J.1365-2745.2006.01145.x. ^ a B C Coleman, W. (1986). "Evolution in ecology? The geography strategies of the ecological plant of the heating". Jornal da History 19 (2): 181 - 196. Two: 10.1007 / BF00138875. PMID 11611989. S2CID Â ° 36359864. ^ a b acot, P. (1997). "A Berã§o Lamarckian of Ecology. "Acta Biotheoretics. 45 (3/4): 185 - 193. Doi: 10.1023 / A: 1000631103244. S2CID 83288244. ^ AB Cowles, HC (1911)." The causes of vegetation cycles. "Annals of the Association of American Geographies. 1 (1): 3 Ã ¢ € 20. Doi: 10.2307 / 2560843. JSTOR 2560843. ^ AB Egerton, Fn (1973). "Changing concepts of the balance of nature". Quarterly biology revision. 48 (2): 322 - 50. Doi: 10.1086 / 407594. S2CID 85279189. ^ AB Egerton, Fn (2001). "A historia of ecological sciences, Part 1: early Greek origins" (PDF). Bulletin of the ecological society of America. 82: 93 Â € 97. ^ Smith, S. Hi, Marcos, S. (2009). " The historical roots of nature of nature in the northwest of Indiana / Chicagoland Region: From the concrete of the preservation ".. 3: 1 - 10. Filled from the original on January 1, 2016. ^ ABCDEFG WORSTER, D. (1994). The Economy of Nature: a history of ecological ideas. Cambridge University Press. ISBN 97-0-521-46834-3. Malthus TR 1798. An essay in the TH and principle of the population, in the reimpression The Classic of Oxford World. P 61, final of the chapter VII ^ Geoffrey Gilbert, Introduction Malthus TR 1798. An essay on the principle of the population. Reimpression of Cláásicos de Oxford World . VIII in the Classical Reimpression of the World of Oxford. ^ Malthus TR 1798. An essay on the principle of the population. Chapter 1, P 13 in the Classical Reimpression of the World of Oxford. ^ Geoffrey Gilbert, Introducing Malthus TR 1798. An essay on the principle of the population. Reimpression of Classics of Oxford World. XVIII ^ Van Wyhe, John (2008b). Darwin: The History of Man and your teo rivers of evolution. London: Andre deutsch Ltd (published on September 1, 2008). ISBN 0-233-00251-0. ^ The Malthusian metaphor of Darwin and Russian evolutionary thought, 1859-1917Author, Daniel P. All, p. 537-540 ^ Stauffer, R. C. (1957). "Haeckel, Darwin and Ecology." Quarterly biology revision. 32 (2): 138 Ã ¢ € "144. Doi: 10.1086 / 401754. S2CID 84079279. ^ A B Forbes, SA (1887)." The lake as microcosm "(PDF). Bulletin of association Scientific: 77 - 87. Filed from the original (PDF) on September 27, 2011. Recovered on January 19, 2010. ^ Paterson, H. (2005). "The Darwin competitive." Paleobiology 31 (2): 56 Â € 76. Doi: 10.1666 / 0094-8373 (2005) 031 [0056: TCD] 2.0.Co; 2. ^ Kormondy, E. J. (1978). "Ecology / Economy of Nature" synonyms? "Ecology. 59 (6): 1292 Â ¬" 4. Doi: 10.2307 / 1938247. Jstor 1938247. ^ McIntosh, Robert P. (1985). The background of ecology: concept and theory. Cambridge University Press. ^ Haeckel, E. (1866). Generelle Morfologie der Or Organismen: Allgemeine GrundzÃ¼ge Der Organischen Formen-Wissenschaft, Mechanisch BegrÃ¼ndet Durch Dring von Charles Darwin Reformirte Descendenz-Theorie. 2 vols. Reimer, Berlin. ^ Allede W. C., Emerson, A. E., Park, O., Park T., and Schmidt, K. P. (1949). Principles of animal ecology. Saunders, FiladÃ © Lfia. ^ McIntosh, Robert P. (1985). The background of ecology: concept and theory. Cambridge University Press. South South, R.; Clarke, J. R. (1999). "Charles Sutherland Elton. March 29, 1900 - May 1: elected f.r.s. 1953". ^ Elton, Reimpression C.S. 1968. Animal ecology. Grand -rawn: William Clowes and Sons Ltd. ^ Wilson, Ken. 2011. Animal Ecology - Legacy of Charles S elton.http: //www.journalofanimalecology.org/viewquatho/virtualiselegacyofcharlesselton.html Ed.Journal of animal ecology. ^ Slobodkin, L.B. (1993). "An appreciation: George Evelyn Hutchinson". Animal ecology newspaper. 62 (2): 394 â € "394. Doi: 10.2307 / 5370. JSTOR 5370. ^ LOVEJOY, T. E. (2011)." George Evelyn Hutchinson. January 13, 1903 - May 17, 1991. "Biogrammic memories of Fellows of the Royal Society. 57: 167 â €" 177. Doi: 10.1098 / rsbm.2010.0016. S2CID 70848446. ^ McIntosh, R. P. (1985). The background of ecology. Cambridge University Press. ^ a b dritschyl, W. (2008). Â € "Running Method Statums for community and evolutionary ecology. In Harman, O. Dietrich, M. R. (Eds) Rebels, Mavericks and Herthics in New Haven, Yale University Press. pp. 356-371. ^ McIntosh, R. P. P. The background of ecology. Cambridge University Press. ^ Cook, R. E. (1977). "Raymond Lindeman and trÃ³fico-dina ¢ mico concept in ecology." Science. 198 (4312): 22 ¢ ¬ "26. bibcode: 1977sci ... 198 ... 22C doi:. 10.1126 / Science.198.4312.22 S2CID PMID 17741875. ^ Â ° 30340899. Hutchinson, GE (1957. .) "Observations concluÃdas" Symposia of the cold spring harbor on quantitative biology 22:.. 415 â ¬ "427. Doi: 10.1101 / sqb.1957.022.01.039. ^ Hutchinson, E. G. (1959). "Homage to Santa Rosalia; Or, for that there are so many kinds of animals?". American naturalist. 93 (870): 145 ¬ Ã ¢ "159. doi: 10.1086 / 282070. S2CID I ^ 26401739. Bocking, S. (1997) environmentalists and environmental polÃticas:. An ecology of story CONTEMPORA ¢ n and New Haven, Yale. University Press ^ Craige, BJ (2001) Eugene Odum:.. ecosystem and aging environmentalist Athens, GeÃ³rgia, University GeÃ³rgia ^ Golley, BF (1993) a story of the ecosystem concept in ecology New Haven, Yale University Press.... . ^ BiociÃªncia. (1964). 14 (7). DRITSCHILO ^, W, (2019). suppressed earth days. Page 161. Amazon.com. ^ MacArthur, RH (1955). "FlutuaÃ§Ãµes of populaÃ§Ãµes animals and a measure of stability "Ecology 36:.. 533 ¬ Ã ¢" 536. Doi: 10.2307 / JSTOR 1929601. 1929601. ^ MacArthur, R.H. (1957). "In abounds ¢ relative INSTANCE of space © bird cies". Coming from the National Academy of CiÃªncias, USA. 45 (3): 293 - 295. bibcode: 1957pnas ... 43..293m. Doi: 10.1073 / pnas.43.3.293. PMC 528435. PMID 16590018. ^ MacArthur, R.H. (1958). "Ecology £ populaÃ§Ã the augeristas some of northeast conÃferas forests." Ecology. 39 (4): 599 ¬ "619. doi: 10.2307 / Jstor 1931600. 1931600. ^ Van Valen, L .; Pitelka, F. (1974)." Commentary:. Intellectual censorship ecology "Ecology 55. : 925 ¬ Ã ¢ "926. Doi: 10.2307 / Jstor 1940345. 1940345. ^ Peters, R. H. (1976). "Tautology in the £ evoluÃ§Ã and ecology." American naturalist. 110 (971): 1 ¬ Ã ¢ "12. doi:. 10.1086 / 283045. S2cid 84636015. ^ Engleberg, J .; Boysky, LL (1979)" Nature in the-ca © £ logic ecosystem ". naturalistic American 114: 317-324 ^ SUTER, GW (1981) "Theory and Evaluation ecosystem £ the NEPA" Bulletin of the Society of AMA EcolÃ³gica rich © 62:.... 186 - 192. ^ Lewin, R . (1983) "Santa Rosalia was a goat" CiÃªncia 221 (4611):.. 636 ¬ Ã ¢ "639. Bibcode: 1983sci ... 221..636L. Doi: 10.1126 / Science.221.4611.636. PMID 17787727. ^ Cody, M. L., and Diamond, J.M. (1975) Editors, Ecology and the EvoluÃ§Ã £ Communities. Cambridge, Massachusetts, Harvard University Press. ^ Diamond, J. M. (1975). ¬ Ã ¢ "Assembly space communities caries © Ã ¢ ¬ â" 342-444 Cody, M. L .; and Diamond, J. M. Ecology and £ evoluÃ§Ã the communities of Cambridge, Massachusetts, Harvard University Press. ^ Quammen, D. (1996). The mÃºsica DODO: Island Biogeography in an era of the £ extinÃ§Ã. New York, Simon & Schuster. ^ Allen, T. F. H. (1981). "The noble art of filosÃ³fica ecology." Ecology. 62 (3): 870 ¬ Ã ¢ "871 doi: 10.2307 / Jstor 1937754. 1937754. ^ Gotelli, NJ; Graves, GR (1996), null models in ecology Washington, DC Smithsonian Institution Press Strong ^,.. DR JR; Simberloff, d .; Abele, LG, thistle, AB (1984) Editors, ecolÃ³gicas communities:.... conceptual and evidÃªncias questÃµes Princeton University Press ^ Gilpin, ME; Diamond, JM (1984) Ã ¢ ¬ "Co-ocorrÃªncias of space © cies on islands in the £ aleatÃ³rias? ¬ Ã ¢ "Pages 297-315 in strong, et al ecolÃ³gicas communities ^ Roughgarden, J (1983).." ConcorrÃªncia theory and community ecology "naturalistic American 122 (5):.. 583 â ¬ "601. Doi: 10.1086 / 284160. S2CID 85383433. ^ MacArthur, R. H .; Wilson, E. O. (1967). The theory of biogeography of the island. Princeton University Press. ^ Diamond, J. M. (1975). "The dilemma of the island: Modern biogeogrÃ¡ficos studies lessons for the design of nature reserves". Biologic conservation. 7 (2): 129 ¬ Ã ¢ "146. DOI: 10.1016 / 0006-3207 (75) 90052-X ^ Simberloff, DS; Wilson, EO (1969).." Islands experimental Zoogeography: a colonizaÃ§Ã £ the empty islands "Ecology 50 (2)..: Ã¢ â¬ "296. Doi: 10.2307 / 1934856. Jstor 1934856. ^ Simberloff, D. S.; Abele, L. G. G. "Theory of Biogeography of the Island and Protection of Conservation". Science. 191 (4224): 285 - 286. Bibcode: 1976sci ... 191..285S. Doi: 10.1126 / Science.191.4224.285. PMID 17832147. S2CID 12912668. ^ Laurance, W. F. (2008). "Theory finds reality: how Habitat's fragmentation survey transcended the biogeographic theory of the island." Biologic conservation. 141 (7): 1731 â € 1744. Doi: 10.1016 / J.biocon.2008.05.011. ^ A B Kormandy, E. J. (1978). "Ecology / Economy of Nature" Sinema? " Ecology. 59 (6): 1292 Â ± 1294. Doi: 10.2307 / 1938247. JSTOR 1938247. ^ egerton, Fn (2007). "A history of ecological sciences, part 23: Linneaus and the economy of nature." Bulletin of society Ecological Amancia. 88 (1): 72 Â € 88. Doi: 10.1890 / 0012-9623 (2007) 88 [72: ahots] 2.0.Co; 2. ^ [1] [Dead Link] ^ Darwin, C. (1859). On the origin of the Spies (1º Ed.). London: John Murray. ISBN 97-0-8014-1319-3. ^ Cities of the country and the place they fill the modern civilization. Covent Garden: Bell & Daldy. 1868. ^ Hardie-Budden, M. (2014). "Elizabeth Catherine Thomas Meat: a hypotheic of the XIX and your circle." Transactions of the Royal Geological Society of Cornwall. 23 (1): 16 â € "39. ISSN 0372-1108. ^ Futuyma, DJ (2005)." The nature of the natural selection ". In Cracraft, J.; Bybee, RW (EDS .). Science and Evolutionary Society: Educate a new generation. American Institute of Biological Sciences. PP. 93 Ã ¢ € 98. ^ Glaubrecht, M. (2008). "Homage to Karl August Monga (1825 Ã â €" 1908) and their contributions to biology: Zo álogo, ecologist and director of the Museum Fan¼r Naturkunde in Berlin. "Zoosystemics and Evolution. 84 (1): 9 Â € 30. Doi: 10,1002 / zoos.200700010. ^ a B Baker, H. G. (1966). "Raciocanium on adaptations in ecosystems". Biocience. 16 (1): 35 Ã ¢ â € "37. Doi: 10.2307 / 1293551. JSTOR 1293551. ^ NYHART, LK (1998)." CVICA AND ECONOMY ZOOLOGY IN BEABLE XIX COMPANY: The "living communities "From Karl Mobius." Isis. 89 (4): 605 â € 630. DOI: 10.1086 / 384157. JSTOR I 236735. S2CID R $ 144650169. ^ Palamar, C. R. (2008). "The justice of the ecological restoration: environmental history, health, ecology and justice in the United States" (PDF). Revision of human ecology. 15 (1): 82 Â € "94. Forbes, SA (1915)." The ecological fundamentals of the applied entomology "(PDF). Annals of the Entomolian Society of America. 8 (1): Â € 19. Doi: 10,1093 / AESA / 8.1.1. Filed of the original (PDF) on September 27, 2011. Recovered on January 19, 2010. ^ Cohen, J. E. (1987). "Lotka, Alfred James (1880, 1949)" (PDF). In Eatwell, J.; Newman, P. (Eds.). The new dictionary palgrave of economy. New York: Stockton Press. pp. 245 Ã ¢ â € 247. Filed by the original (PDF) on June 26, 2009. ^ Volterra, V. (1926). "Floats in the abundance of a spy considered mathematically." Nature. 118 (2972): 558 Ã ¢ € 560. BIBCODE: 1926NATUR.118..558V. Doi: 10.1038 / 118558A0. S2cid 4007591. ^ ADAMS, C. C.; Fuller, G. D. (1940). "Henry Chandler Cowles, Ecologist's physiografica". Annals of the association of American geographies. 31 (1): 39 Â ± "43. Doi: 10.1080 / 00045604009357195. JSTOR 2561130. ^ Smuts, Jan Christiaan (1926)." Holism and Evolution ". Nature. 119 (2991): 307 Ã ¢ "309. BIBCODE: 1927NATUR.119..307K. Doi: 10.1038 / 119307A0. S2CID ° 33107208. ^ Cooper, W. S. (1957). "Sir Arthur Tansley and the science of ecology." Ecology. 38 (4): 658 Ã ¢ â € 659. Doi: 10.2307 / 1943136. JSTOR 1943136. ^ ABC Kingsland, if (1994). "Revision: The History of Ecology". Journal of the history of biology. 27 (2): 349 Ã ¢ € "357. Doi: 10.1007 / BF01062566. PMID 11639332. S2CID 6125993. ^ Ilerbaig, J. (1999). "Allied Sciences and Fundamental Problems: c.c. Adams and the search for the all in the initial American ecology". Journal of the history of biology. 32 (3): 439 Ã £ 463. Doi: 10.1023 / A: 1004737021541. JSTOR 431545. S2CID 82928157. ^ RAUP, HM (1959). "Charles C. Adams, 1873 - 1955". Of American geographies. 49 (2): 164 â € 167. Doi: 10,1111 J.1467-8306.1959.tb01607.x. JSTOR 2561526. ^ a B C Simberloff, D. (1980). "One" one paradigms of ecology essentialism and materialism probalism "Synthese 43: 39. doi :. .. 3A 10.1007 / BF00413854 S2CIDÃ 46962930. ^ ABCD Ellison, AM (2006)." What Makes an icon EcolÃ³gica "Bulletin . ecological the Society of America 87 (4): 380 386 doi: 10.1890 / 0012-9623 (2006) 87 [380: WMAEI] 2.0.CO ..., 2 ^ S2CIDÃ 84751493. Kendeigh, SC (1968) "Victor Ernest Shelford, environmentalist eminent 1968". Society Bulletin ecolÃ³gica AMA rich © 49 (3) :. 97 20165761. 100. JSTORÃ ^ Berryman, AA (1992). "Origins and £ EvoluÃ§Ã the predator-prey Theory "(PDF) Ecology 73 (5): .. 1530Ã ¢ :. 1535. doi 10.2307 / JSTORÃ 1940005. 1940005 filed document (PDF) on 31 May 2010. ^ McIntosh, RP (1975) "h. A. Gleason- "individualistic Ecologist" 1882a 1975 His contribuiÃ§Ãµes to ecolÃ³gica theory "Club Bulletin Torrey ¢ single button 105 (5): 253a .. 278. :. doi 10.2307 / 2484142 2484142 JSTORÃ . ^ Southwood, R. Clarke, JR (1999) "Elton .. Charles Sutherland 29 marÃ§o 1900-1Ã May 1991" Biographical Memoirs of Fellows of the Royal Society 45 :. 131a :. 146. doi 10.1098 / RSBM. .1999.0043 JSTORÃ 770268. ^ Flannery, MC (2003) "Evelyn Hutchinson. The Wonderful. Mind "The American teacher Biology 65 (6): 467. 462a doi: 10.1662 / 0002-7685 (2003) 065 [0462: EHAWM] .. 2.0.CO; 2 ^ JSTORÃ 4451536. Edmondson, YH (1991) . "In Memory: Evelyn G. Hutchinson, 1991 1903Ã ¢" Limnology and Oceanography 36 (3): .. 618. doi: 10.4319 .. / lo.1991.36.3.0618 JSTORÃ 2837527. ^ Patrick, R. (1994). " G. Evelyn Hutchinson (30 January 1903Ã ¢ 17A May 1991) "Proceedings of the American Philosophical Society 138 (4) :. 535. JSTORÃ 531A 986851. ^ ab Gunderson, L;. Folke, C,. Lee, M. ; Holling, CS (2002) "in memory rebels" £ ConservaÃ§Ã the Ecology 6 (2): 19 DOI: 10.5751 / ES-00423-060219 ^ ab Rotabi, KS (2007) "Theory ecolÃ³gica Source .. ... Natural Social CiÃªncias or vice versa? A brief history for Social up Service Concept "up Service advancements in Social 8 (1): 113a .. 129. doi :. 10.18060 / 135 ^ Patten, BC (1993)." For a more Holistic ciÃªncia and ecology: Contribution to the HT Odum £ "Oecologia 93 (4): 597A .. 602. bibcode: 1993Oecol..93..597P doi: 10.1007 .. / BF00328970 28313830 PMIDÃ . ^ S2CIDÃ 230601. Ewel, JJ (2003). " Howard Thomas Odum (1924Ã ¢ 2002) "Bulletin ecolÃ³gico of AmÃ © rich Society 84 (1): 13A 15. doi: 10.1890 / 0012-9623 (2003) 84 ... [13: HTO] 2.0.CO; 2 ^ Brown, JH (1999) "legacy Robert MacArthur: from geogrÃ¡fica Ecology to Macroecology" Journal of Mammalogy 80 (2):. .. 333A :. 344. doi 10.2307 / 1383283 1383283 JSTORÃ . ^ Levin, R. Simon (1998) "ecosystems and the biosphere as a complex adaptive systems" ecosystems 1 (5): 436. 431a doi: 10.1007 .... / s100219900037 S2CIDÃ 29793247. ^ Allee WC, Emerson , EA; park the; Park, T; Schmidt, KP (1949) Animal Ecology PrincÃpios Philadelphia:.. ^ ... WB Saunders Company Kingsland, SE (1985) Modeling :. Nature episÃ³dios Chicago Ecology story :. . University of Chicago Press ^ Huxley, JS (1942) EvoluÃ§Ã £ o: .. modern SÃntese London: Allen & Unwin ^ Kingsland, SE (2005) a .. £ EvoluÃ§Ã the American Ecology: 1890th in 2000. . Baltimore: Johns Hopkins University Press ^ ab Coker, RA (1991) Pioneer Ecologist.: The life and work of Victor Ernest Shelford, 1877Ã ¢ 1968 WASHINGTON: Smithsonian Institution Press. ^ Shelford, E. V. (1917). "Society ideals and goals of The EcolÃ³gica AmÃ © rich". Bulletin of the ecological society of Amany. 1: 1 to 2 ^ Forbes S. A. (1922). "The £ HumanizaÃ§Ã the Ecology". Ecology. 3 (2): 89A 92. doi: 10.2307 / JSTORÃ 1929143. 1929143. ^ Adams, C. C. (1935). "The Interface £ the General Ecology Human Ecology". Ecology. 16 (3): 335. 316a doi: 10.2307 / JSTORÃ 1930072. 1930072. ^ Clements, F. E. (1935). "Experimental Ecology at up Service público". Ecology. 16 (3): 342A 63. doi: 10.2307 / JSTORÃ 1930074. 1930074. ^ Sears, P. B. (1935). Deserts on the march. Norman: University of Oklahoma Press. ^ Adams, C. C. (1947). "First RelatÃ³rio of the £ COMMISSION AMEMENT SOCIETY FOR A POLICY AND DETAIL PROGRAM. "Eco-friendly society. Cite magazine requires | Journal = (Help) ^ Thomas, WL Jr., Ed. (1956). The role of Man in changing the face of the earth. Chicago: University of Chicago Press. ^ Hagen, JB (1992). A tangled bank, the origins of ecosystem ecology. New Brunswick, NJ: Rutgers University Press. ^ DRITSCHILO, W. (2004). Day days, ecology comes from age as a science. Iuniverso. ^ Miller, rs (1965). "Summarized report from the ecological study committee with recommendations for the future of ecology and the ecological society of Amenia ". Bulletin of the ecological society of Amany. 46: 61 â €" 81. ^ DRITSCHILO, W. (2006). "Rachel Carson and Ecology of the XX Series". Bulletin of the ecological society of Amany. 87 (4): 357 - 367. Doi: 10.1890 / 0012-9623 (2006) 87 357: RCAMCE] 2.0.CO; 2. ^ Blair, WF (1977). Big Biology: US / IBP. Stroudsburg, PA: Hutchinson & Ross. ^ KWA, C. (1987). "Representations of the mediation of nature between ecology and scientific policies: the case of the international biological program". Social Studies of Science. 17 (3): 413 Ã ¢ â € "442. Doi: 10.1177 / 030631287017003002. S2CID 143156381. ^ Curlin, JW (1972)." Courts, Ecology and Environmental Planning ". Ecology. 53 (3): 373 - 374 . DOI: 10.2307 / 1934222. JSTOR 1934222. ^ AERBACH, SI (1972). "Ecology, ecologists and ESA". Ecology. 53 (2): 204 Ã ¢ € "207. Doi: 10.2307 / 1934073. Jstor 1934073. ^ Schindler, D. W. (1976). "The Boendoggle Impact Declaration." Science. 192 (4239): 506. Bibcode: 1976sci ... 192..509S. Doi: 10.1126 / Science.192.4239.509. PMID 17745634. ^ DRITSCHILO, W. (2016) Magnificent failure: Frank Egler and the green ecology green, an epistolary biography. SAMIZDAT 2016 (available at Amazon.com) P 360. ^ DritSchilo, W. (2016) Magnificent Failure: Frank Egler and the green of American ecology, an epistolary biography. Samizdat 2016 (available at Amazon.com) PP 358-368. ^ Dale, V. H.; Barrett, G. W.; Carpenter, A. t; Hinkle, C. R.; Mitsch, W. J.; Pitelka, L. F. (2000). "ESA Professional Certification Program: Let's make it work." Bulletin of the ecological society of Amany. 81 (4): 255 Ã ¢ â € "257. Doi: 10.1890 / 0012-9623 (2000) 081 [0255: C] 2.0.Co; 2. ^ SUuter, GW (1981)." NEPA ". Bulletin of the Ecological Society of America. 62: 186 - 192. ^ Peters, HR (1976)." Ecology Evolution Tautology. : 1 Ã ¢ â € 12. Doi: 10.1086/283045. S2CID 84636015. ^ PETERS, R. H. (1991). A chromic for ecology. Cambridge: Cambridge University Press. ^ Simberloff, D. S.; Abele, L. G. (1976). "Theory of Biogeography of the Island and Protection of Conservation". Science. 191 (4224): 285 Ã ¢ â € "6. Bibcode: 1976sci ... 191..285s. Doi: 10.1126 / Science.191.4224.285. PMID 17832147. S2CID 12912668. ^ Chase, A. (1995). In a dark wood: the fight on the forests and the growing tyranny of ecology. New York: Houghton Mifflin company. ^ TAKACS, D. (1996). The idea of biodiversity: parais philosophies. Baltimore: Johns Hopkins University Press. ^ "Theodore Roosevelt and the environment". PBS. Recovered on April 7, 2014. ^ "Theodore Roosevelt and Conservation". National Park Service. Recovered on April 7, 2014. Additional Reading See also: Bibliography of Ecology Acot, P. (1998). The European origins of scientific ecology (1800 - 1901). Gordon and violate publishers. ISBN 978-9056991036. DritSchilo, W. (2016). Magnificent failure: Frank Egler and Ecology Green American, an epistolar biography. ISBN 978-1530868568. Egerton, Fn (1977). History of American ecology. New York: Arno Press. Egerton, Fn (1983). "The History of Ecolog IA: realizations and opportunities; Part One. "Journal of the History of Biology. 16 (2): 259 â €" 310. Doi: 10,1007 / BF00124700. PMID 11611238. S2CID Â ° 29841753. Egerton, F. N. (2001-2016). A story of the ecological sciences. Bulletin of the Ecological Society of Amany, 57 Connection. Hagen, J. B. (1992). A tangled bank: o ecology of the ecosystem. New Brunswick, NJ: Rutgers University Press. Kingsland, S. E. (1995). Nature modeling: episÃ³dios in the history of population ecology (2Âº ed.). Chicago: University of Chicago Press. McIntosh, R.P. (1985). The background of ecology: concept and theory. Cambridge: Cambridge University Press. Mitman, G. (1992). The state of nature: ecology, community and American social thought, 1900 - 1950. Real, L. a .; Brown, J.H., eds. (1991). ecology FundaÃ§Ãµes: © supported paper is classics to add comment. Chicago: University of Chicago Press. Simberloff, D. (1980). "A £ sucessÃ the paradigms in ecology: essentialism and materialism probabilism". Synthese. .. 43 (1): 3 ¬ Ã ¢ "39. DOI: 10.1007 / bf00413854 S2CID 46962930. Tobey, RC (1981) Saving prairies: the life cycle of the molten School American Plant Ecology, 1895-1955. Berkeley: University Press CalifÃ³rnia von humboldt, A. (1805) Essai Sur La GÃ © graphie des Plants, ACPOPAGNÃ OS DESPERAÃ Ã BY tHE TABLOAU TABLOAUS SUR Â © Quinoxiales, Fonda © Sur Les MÃ Â ©.. © CUTA, Depuis Le Dixia AME DegixiÃ Â © Degra £ Latitude Borve jusquÃ ¢ ne dixiÃ¨me DegixiÃ Â¶me Degra £ Latitude Austritude, Pendant Les ANNA £ ES 1799, 1800, 1801, 1802, and 1903 by A. A. et Humboldt Bonpland Paris. Chez Levrault, Schoelle et Cie Frossimile the background Sherborn No.1 von Humboldt, A. 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