

PROFESSOR GREGORIU ȘTEFĂNESCU AND “SCIENTIFIC REVUE” (1870–1882)

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Abstract. Gregoriu Ștefănescu, Petre S. Aurelian and C. F. Robescu, a geologist, founder of Romanian geology and paleontology, and two agronomists, all of them returned from European academies, revolutionized the scientific vulgarisation with their “Scientific Review”.

Gregoriu Ștefănescu (1838?–1911), first professor of geology and paleontology at the Faculty of Sciences, University from Bucharest in 1864, third director of the Museum of Natural History (1867–1893) (the museum was housed at that time, between 1864–1894, in the left side of the building of the University, former Academy), remained in the memory of all Romanians as the one who discovered the huge, unique, skeleton of disappeared elephant, *Deinotherium gigantissimum* (Filipescu, 1956, Murariu, 2006, Tiță, 2006).

Prof. Ștefănescu published the first manual of zoology in Romania in 1865, he was one of the founders of the Scientific Department of the Romanian Academy in 1867. After a Ph.D. thesis prepared in France at Sorbone University he was appointed as director of the museum in 1867 after the Italian Carlo Ferreratti from Turin (1860–1867).

Petre S. Aurelian, Grigore Ștefănescu and C. F. Robescu founded in 1870 the revue „Revista Științifică” (Scientific Revue) (Aurelian, Robescu and Ștefănescu, 1870–1882).

Petre S. Aurelian (1833–1909), made his higher studies at the Superior School of Agronomy of Grignon, France (1856–1860), ministry of Public Works (1877–1878 and 1887–1888), of Agriculture and education (1882–1884), prime minister of Romania (1896–1897), director of Agriculture School from Herăstrău, professor at the Agriculture School of Pantelimon, member of the Romanian Academy in 1871 and was its president between 1896 and 1897.

Constantin F. Robescu (1839–1920), Romanian agronomic engineer, he graduated the Normal School for Waters and Woods, he took the university degree at the Faculty of Natural Sciences from Paris, corresponding member of Romanian Academy since 1871. In 1883 he was one of the founders of the “Special School of Silviculture” from Bucharest. He was twice mayor of Bucharest between January 1896 – April 1899 and November 1902 – December 1904, senator during the First World War, corresponding member of Romanian Academy since 1871.

“Scientific Revue” was not the first Romanian vulgarisation magazine. The first one, less scientific one, “Museul National” (National Museum) published in 1836–1838 (53 issues), edited by the National Museum (Pop mentioned Petrache

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Poenaru as being editor) (1933), mainly written by Museum's director, Carol Valștain (Wallenstein de Vella) (Museul National, 1836–1838). It appeared as a continuation, between 1857–1860, edited by Alexe Marin, professor of physics from St. Sava Colledge (National College) (nine issues) (Marin, 1858–1869), "Universul" (Universe) (1845–1848) issued by Iosif Genilie, professor of geography at National College (St. Sava) (Genilie, 1845–1848), "Ilustrațiunea" (Illustration) (edited by Carol Pop de Sathmari, 1860–March 1861 and by I. Wahlstein = Iosif Wahlstein, son of Carol Valștain, March 1861) (Sathmari, 1860–1861) and "Isis sau Natura" (Isis or Nature) edited by dr. Iuliu Barasch (Baraș), professor of natural sciences at National Colledge. The journal appeared with this title between 1856–1859 (Barasch, 1856–1859), then as "Natura" in 1862 (I. Barasch and D. Ananescu, professor at the St. Sava Colledge and at the School of Medicine, as editors) (Barasch and Ananescu, 1862) and in 1865 (C. Essarcu, Ph. D. in medicine, professor at the Faculty of Sciences and D. Ananescu as editors, Barasch being dead in 1863) (Essarcu & Ananescu, 1865).

The journal started as a vulgarisation one, dedicated to different domains of natural sciences (botany, zoology, mineralogy), physics, chemistry, agriculture, medicine, rural economy, etc. Aurelian, Ștefănescu and Robescu were the main authors of all articles from 1870–1871 (first two authors continued without Robescu until to 1882).

First articles were mainly of vulgarization, like in previous appeared magazines of Valștain, Marin and Barasch (there even articles having a common subject), written in a savourous language, for the people of their time, end of XIXth century.

With time, the journal evolved, having more authors, some of them well-known, like Șt. Hepites, A. Fătu, Emanoil Bacaloglu, Ștefan St. Sihleanu, Dr. Felix, Dr. George Polizu, Petru Poni, Sabba Ștefănescu, Dimitrie Brândză, etc. Last number, (2nd series, year II, no. 23) of journal appeared on January 15 1882.

Along time, most of the articles dedicated to natural history were written by Gregoriu (Grigore) Ștefănescu (48 articles).



Fig. 1 – "Revista Sciintifica" (Scientific Revue).

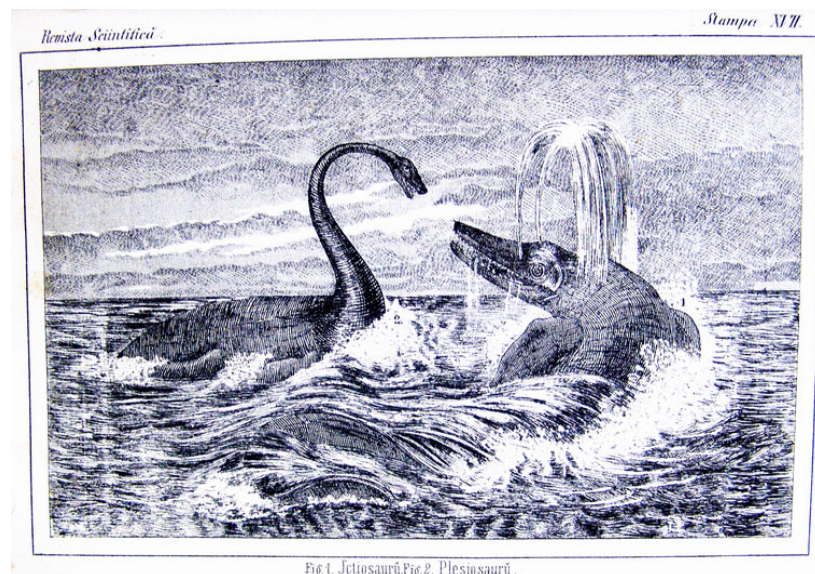


Fig. 2 – Scientific Revue, plate XVII.

Most of the articles on vulgarization zoology (12) are made based on materials read in different foreign journals, probably mainly French, like those about the hunting of the elephant, Arctic bear (with comments on dental formula), beaver, basilisc, hummingbirds (with large comments, quotations from Buffon) (an article on same subject was published by Barasch in “Isis” from 1856), ermine (he mentioned an ancient Romanian name of *Mustela erminea*, now disappeared, “cacom”), a specimen of this species he mentioned that was donated to the museum of natural history from Bucharest, mărgăritare (pearls) (he describes the forming of artificial ones, mentioning also an old, out of use Romanian name, “urmuze”), about glow-worm, condor (also a subject from an older article of Barasch) and about the history of silk. Most of Ștefănescu’s articles are based on what he read in different scientific magazines. In contrast with Valștain and Barasch (Ph. D. in Germany), Ștefănescu had the advantage to be a real man of science, he graduated University, in France and prepared his Ph. D. thesis in Paris, at Sorbone and published scientific papers based on his own researches. One of such an article is “Descoperirea unui noui amfibiu, genul *Ceratodus*” (“Discovery of a new amphibian, genus *Ceratodus*”), about the discovery of a new genus of actual lung fish in Australia, even that in title erroneously appeared the word amphibian genus, in the text he is referring to a fish genus and species (species described in 1870 by Krefft from Australia).

But there other, few, articles based by personal observations, like *Spalax typhlus*, a species of small rodent mammal, mentioned for the first time from Romania; the specimen where caught around Bucharest, he described the species of

mole, but not so rigorously scientific, so it couldn't be identified; it was a public lecture of Gregoriu Ștefănescu.

The largest section of articles (21) is dedicated to geology and paleontology, his occupation as first professor at the new opened University (since 1864).

There are also articles entirely dedicated to a single subject, major fossil discoveries of that time, *Archaeopteryx* and *Odontopteryx*. Being professor of geology and paleontology at the Faculty of Sciences from the University, he is more familiar to such domain than with zoology. Those articles contain different considerations on evolution (consecutive transformation) of life (as one of the first sustainers of Darwin's theory in Romania), descriptions of the fossils and mentioning the study of Owen on this fossil (in a foot note). The vulgarization papers of Ștefănescu contain also copies of original illustration from the scientific journal that inspired it. Regarding the fossil of *Archaeopteryx* from the Natural History Museum from London he made a remark, still valuable in our days "This piece of stone with the animal, with an exceptional scientific value, was bought by the British government with 5000 talers (18,850 new lei). Lucky beggar of those countries of whose governments could do such a sacrifice for science, buying with such prices objects that could be named as luxury science, meantime in our country, they offer money not even for strictly necessary". He wished to see them in cupboards of a museum full of present species and all its ancestors.

"Ictiosaurul și plesiosaurul" (Ichtyosaurus and plesiosaurus) was a remake of one of his older paper, from 1867 (in fact it contains an older public lecture from 1866 on the same subject) (Ștefănescu, 1867).

There are several articles dedicated to geology, one to floods, explaining their causes, about the marble for statues from Valea Domnii, to mineralogy and geology exhibited in Vienna to an universal exhibition, he criticized the way of exhibiting, without any classification system, he mentioned that Romania was present at this exhibition with a piece of black amber offered by Marghiloman and an article about the measurement of Bucharest altitude in 1874 by Ștefănescu and Emil Bacaloglu. Other articles are dedicated to international geological congress from Paris from 1878 and from Bologna in 1881 where Ștefănescu took part, others to famous French scientist Isidore-Geofroy de Saint-Hilaire, to the English expedition to the North Pole with the ships Alert and Discovery from 1875, a translation from W. de Fonville. Other subjects: fossil man (Cro-Magnon) discovered at Menton, France, human place in nature, a public lecture from Focșani in 1876 with the occasion of opening of the library of the highschool, an interesting article about division of life, with discussions about a proposed 4th rank dedicated to human species, an ecological theme, about the results of deforestation on soil erosion. In three consecutive years Ștefănescu published his public lectures dedicated to biology from the University from years 1875–1877, in which he discussed physiology, anatomy of living invertebrates and vertebrates, according to the level of knowledge of that time.

In 1878 and 1879 he published two articles about the Biological Society from Paris (the speech of Paul Bert, its president, translation of a French article) and the Association for Sciences Advancement from London (in fact an article about the animal intelligence, with empiric observations especially on dog behavior, as against behavior of different archaic human tribes), translations from unknown foreign articles.

Most interesting part of his articles is dedicated to his own researches on paleontology, first ever made in Romania.

First contribution is dedicated to his researches on Quaternary fauna of Romania, a Romanian shorter version of his paper on the same subject published in “Bulletin de la Societ e G eologique de France”, 1873. He inventoried *Elephas meridionalis* from Mavrodin, mandibles of *Mastodon arvensis* and *M. borsoni* and *Elephas primigenius* from B aneasa village, close to Bucure ti, horns of *Bos primigenius* discovered at H rboca, Buz u county, an ecvid, a small bison, smaller than *Bison priscus*, a *Cervus* of great dimensions, the species could not be established because of fewer fossils discovered up to that time. The second article, from 1879, is dedicated to discovery of fossil remains of *Elephas meridionalis* at Vadulu Sorestilor (Buz u county, Valea C ln ului), from the end of Pliocene. The third one is dedicated to the discovery of a molar of *Dinotherium giganteum* from Miocene at G iceni, Valea Berheciului, Tecuci county, after a long history of knowledge of this genus and species of fossil elephant, he described the molar (a complete description of it was published by  tef nescu in Annals of Romanian Academic Society from the same year).



Fig. 3 – Fossil bones of *Elephas meridionalis* from Mavrodin exhibited in the Museum of Natural History from Bucharest, 1872, plate XIV.

Finally, Ștefănescu published in 1880 an article on discovery of first fossil camel from Romania, found near Slatina, in a Quaternary deposit near Milcov. He gave the description of the mandible of this animal (mandible found in 1874). He mentioned that he made laborious comparative studies in different museums' collections from Paris, Munchen and Pesta. But only in 1895 Gregoriu Ștefănescu published the final description and established its name as *Camelus alutensis* as we know up to present (Ștefănescu, 1895).

Ștefănescu also gave the details of elaboration of geological map of Romania (without Transylvania), as a part of the European one, established in Paris in 1881.

Beside Ștefănescu's articles, there are other interesting ones signed by Maria Ștefănescu about the scientific results of the famous oceanographic expedition around the world with the ship "Challenger" (the first mention in Romania of these highly important results, we conclude that she read these results, that means that could exist a set of this extremely rare book even before Grigore Antipa, his successor at directory of museum of natural history, obtained the single one that exist up to our days in this museum).

In the last years other geologists and paleontologists were encouraged to publish in this review, like Sabba Ștefănescu (translation of paper of R. C. Porumbaru about the fossil mollusks around Craiova, Bucovăț-Crețești Valley, with numerous species of bivalves and gastropods, some of them described as new to science, like *Unio stefanescoi*, "Thunderbolt from Brăila from 8 of July"). There are also some articles on botany, like that of Dimitrie Brândză ("About the Romanian vegetation", speech at his entrance in Romanian Academy, answer by Gr. Ștefănescu), others on evolution theory, Ștefan St. Sihleanu ("Haeckel and Virchow, a scientific polemic"), Haeckel and theory of evolution in Germany, translation by Cher. de Lupodly.

Comparing with previous appeared scientific reviews from Țara Românească, "Scientific Review" constitutes a real progress. This review is more diversified, different subjects from different domains of science, written by several authorized specialists, most of them return from studies made in France or Germany, with a new vision on how the science has to be made, how could be revealed to ordinary people. Reading these articles you may feel the atmosphere in which were written, you feel the effervescence of those years, the happiness they lived knowing that they could revealed to their fellows all the knowledge they received. There also some original contributions based on personal researches, missing from previous journals. People are more interested in different discoveries from different parts of the world, on Edison's gramophone, on *Filoxera*, on *Archaeopteryx*, most of the major domains were due to Gregoriu Ștefănescu. The evolution of Romanian society was very much reflected in this "Scientific Review".

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