

ASTRONOMY IN "SERBSKIJ NARODNIJ LIST"
/"SERBIAN NATIONAL WEEKLY"/
(FIRST HALF OF THE 19th CENTURY)

B. D. JOVANOVIĆ

*53, Radnicka YU 21000 Novi Sad, Serbia and Montenegro
E-mail jobzd@polj.ns.ac.yu*

Abstract. The Editor in Chief of the cited weekly was our famous writer and journalist Teodor Pavlovic (1804-1854), founder of the Gallery of Matica Srpska, and the Editor in chief of the oldest monthly in Europe - "Letopis Matice Srpske" /"Annals of Matica Srpska"/. Reviewed, in this paper, are 21+2 articles dealing with Astronomy. The majority of them had no author undersigned, so that one may suspect them having been written by Pavlovic himself. Starting by explaining the appearance of comets and their characteristics, on the occasion of Halley's comet return, the eclipses of the Sun and the Moon, they included also the discussion of the origins of the Universe and the formation of stars and nebulae. It is interesting that the Serbs, of those times, had the opportunity to read such articles. Certainly the editor was asked to answer questions addressed by the subscribers. It is a great pity and a loss that his correspondence has not been saved.

The present paper has first been, prepared in Serbian, but then it was demanded that all articles should be written in English. So, I had to omit all citations. Therewith much of the flavour of those times was lost!

"SERBSKIJ NARODNIJ LIST" has been published starting on 1st July 1835 to the 12th May 1848, in Budim, approximately weekly. The contents was very miscellaneous: literary articles, reports, up to scientific essays. We will dedicate our attention solely to those with astronomical contents.

The Editor in Chief was Teodor Pavlovic, writer and publicist (Karlovo-Dragutinovo, Banat, 14th February 1804 - Karlovo-Dragutinovo, 12th August 1854). He attended school in different towns, and graduated in law in Pozhun (Bratislava). When the authorities prohibited the printing of "Letopis Matice Srpske", he started his own weekly "Srbskij Narodnij List". He published numerous articles thus introducing the Serbian society into the more contemporary activity, organization and mode of living.

Because of the variety of astronomical texts we will use the chronological sequence. Thereby we will cite only the titles translated into English.

The first article is "Reports From Science And Astronomy" /1/. It starts with horizon, and its positions resulting from the rising of the observe. Interpreted are the consequences of the Earth' rotation and revolution.

Very interesting is the extensive article "Comets" /2/ where one finds:

a detailed description of their orbits, appearance of their tails, their revolutions, numerousness etc. There is a prediction that the Halley's comet would appear on the 4th November 1835, and that it would be visible till 15th November 1835. There are two large drawings. The author condemned superstition connected with the astronomical phenomena! Some historical data are mentioned too.

Already in the next issue we find a thorough description "The Moon" /3/ - with an extensive drawing of its surface. There are data on its size, duration of different revolutions, duration and causes of its phases, lack of water. Attached the figure are Riccioli's names of formations on its surface. It is indicated that it causes the tides.

"Further Views And Thoughts Concerning the Universe" /4/ describes the origins of Astronomy, and lists the famous astronomers who were devoted to investigations of the divine system. He mentions the benefits of the use of telescopes, and the existence of multiple stars. The author asks himself what will be visible by means of the sixty-fold Barlow's telescope.

"Discoveries In the Moon" /5/ is a chatting about what has the young Hershel seen by means of a "Hydrooxygenmicroscope" (???). That was surely an April the first joke which appeared in foreign reviews, according to my remembrance, in Vienna.

The article "Nikolaj Kopernik" /6/ contains a complete biography of the famous scientist and his contributions. A picture of his tomb is added. The author proposes, to the Serbs to erect a monument dedicated to this important Slav personality.

"Eclipses Of the Sun And the Moon" /7/, illustrated with two drawings, interprets these two phenomena. The first figure presents the eclipse of the Moon, which was visible in December 1823 in Asia, Africa, larger parts of Australia and Europe. The second is devoted to the annular eclipse of the Sun which was visible in England on 3rd / 15th May 1836.

The essay "Daylight" /8/ explains the sunrise, how the atmosphere influences the light phenomena, why the bodies have their colour, and the cause why the skies are blue.

Petar Teodosijevic (Zemun, 1808-?, writer, translator, lawyer) translated the "Galileo's Dream" /9/ from the "Engel's Philosophy Of the Universe". The footnote explains that Galileo spent his last days in the company of his pupil Viviani. This apprentice led out his teacher into the vicinity of Arcetri. Drunk by the spring fragrance the scientist dreamed all that he has done in his life for the science. It is interesting that in the year 1838, one mentions the notion of ATOM!

The lawyer Konstantin Bogdanovic (Ruma, ? 1810, 1811 - Novi Sad, 28th April 1854, publicist, politician) published a detailed biography "Atanasij Stojkovic, Russian-Emperor's Governemental Counselor" /10/.

In the article "On the Size of Nature" /11/ there is a description on the connections between the Nature, Universe, motions, distances, matter and God. "The Nature is a visible throne of the God's omnipotence..."

A note "Immensity of the Space" /12/ relates that there are 75 millions of stars like our Sun. The nearest of them is Sirius at the distance of 1 390 million kilometers from us.

V. translated the speech of Thomas Macaulay (?), held at an opening of a reading room in England, under the title "The Importance of the Science" /13/. Some verses of the poet Pope are cited.

"Condamine, the Famous Traveller" /14/ has been mentioned too, with his biography added. There are the names and merits of Marco Polo, Vartolomeus Diaz, Cristobal Colon, etc.

"What Language Should Be Used In Teaching" /15/ is a treatise on the cited matter.

"Interesting Items On Tides In Eutipus" /16/ describes normal and exceptional phenomena occurring in the bay Eutipus, in Greece. During the last two quarters of Moon phases, there may be 10 to 12, exceptional 18 to 20, changes of high tides resp. ebbs. The first, who tried to explain these phenomena, was Aristoteles, but with no result.

There are also anecdotes with astronomical contents /17/. The Russian Great Duke visited, in Peterburg, the famous astronomer Struve. The scientist was a bit confused. A member of the Court pointed that fact to the prince. "It is not strange, Struve is amazed seeing so many stars, but not at their proper places," said the dignitary pointing to the uniforms of the present people.

"Who Was the First To Establish Hours" /18/ returns us to the ancient Egypt. Horus was their name for the Sun. The Serapis was their sacred animal, and it urinated 12 times during a day. So, Hermes Trismegistus divided the whole day into 12 hours. Later this has been changed to 24. This was a note written by Venijamin (Vasilije) Borocki (Kulpin, ? 1810, 1811 - Mala Remeta, 1st October 1848 or 12th November 1883, monk, writer of historical and didactic treatises).

In the nineteenth chapter of "Scholastic Constitutions..." /19/ two paragraphs concern Geography. The second mentions "The Mathematical Geography".

"The Survey Of the Universe" /20/, written by Dr. Johann Elert Bode, translated by Stefan Novakovic (Sid, 1820-?, priest, writer and translator), is the most extensive article: 3 continuations with 11 pages. It starts by the assumption that there are inhabitants on other planets. Describes the Moon (in details), the comets (their orbits, revolution, appearance of tails, and possibilities of life on them). The Sun is "an electrical, cold, and by aerial condensed mass wrapped ball." Further mentions the distances to the stars which, according to him, must be very great. They have their proper motions which may be noticed in the course several years. The telescopes help us to see distant bodies. The most remarkable phenomena is the Milky Way. He talked also about novae. There are included some interesting observations.

Ognjeslav Utjeshanovich Ostrozhinski (Ostrozhin, 1817 - Zagreb, 1890, head of the containing province Srem, border guard officer, writer) wrote a poem "To A Stargazer" /21/ of three strophes.

"On Characteristics Of the Year 1837" /22/: the unknown author mentions, in the introduction, Eudoxus, who four years B.C. informed the Greeks on the Egyptian science, on five ancient planets. He adds that afterwards five more were discovered: Uranus, Ceres, Pallas, Iunona and Vesta (some planetoids have been included among major planets). The "governing" planet for that year was Mercury.

"The Key For Weather Forecast" /23/ reminds how John Frederick William Hershel conceived the basis for this kind of prediction.

In the conclusion we may say that there were 21 + 2 articles concerning, mainly, Astronomy. Some of them, consider the Creator as a promoter of everything. The science prevails through them, but also there is a slight note of naivety. But it does not weaken the interest of the Serbs, in those times, in this oldest science. Judging to

translations we may conclude that in those times this was the case all over the world. One must emphasize that to any other science there was not paid such an attention, and that there are not so numerous articles, devoted to other branches. One may say that the Editor did not later publish so many essays with astronomical contents. Surely, the readers and subscribers animated him. Let us express gratitude to him!!!

It must be mentioned that in the Library of Matica Srpska, in Novi Sad, the 1836 volume is missing. Who knows what may have been published then relating the Astronomy? I hope that I shall once compensate for the "gap".

References

- /1/ No. 5, 05.08.1835, pp. 39-40
- /2/ " 12, 02.10.1835, " 92-96
- /3/ " 13, 09.10.1835, " 97-100
- /4/ " 18, 01.11.1835, " 139
- /5/ " 21, 30.11.1835, " 163-165
- /6/ " 9, 27.02.1837, " 67-69
- /7/ " 13, 28.03.1837, " 101-102
- /8/ " 50, 08.12.1837, " 394-395
- /9/ " 11, 08.03.1838, " 86-87
- /10/ " 35, 27.08.1838, " 268-269
- /11/ " 41, 16.10.1838, " 323-327
- /12/ " 49, 07.12.1839, " 388 (printing mistake, it should be 374!)
- /13/ " 25, 20.06.1840, " 196-198
- /14/ " 31, 02.08.1840, " 245-246
- /15/ " 27, 02.07.1841, " 214-216
- /16/ " 40, 07.10.1843, " 320
- /17/ " 2, 13.01.1844, " 16
- /18/ " 3, 27.01.1844, " 24
- /19/ " 30, 27.07.1844, " 234-235
- /20/ " 46, 19.11.1844, " 365-367 | No. 47, 23.11.1844, pp. 374-376 | No. 48, 02.12.1844, 380-384
- /21/ " 47, 23.11.1844, " 376
- /22/ " 1, 01.01.1837, " 6-8
- /23/ " 15, 11.04.1840, " 119-120