

Ukraine Celebrates Vernadsky Anniversary

by William Jones

March 15—The Embassy of Ukraine in Washington held a seminar on March 12 in honor of the 150th anniversary of the birth of Russian-Ukrainian scientist Vladimir Ivanovich Vernadsky. Vernadsky was born on March 12, 1863, and his sesquicentennial birthday has been proclaimed a day of celebration and remembrance in both Russia and Ukraine, in addition to seminars and ceremonies being arranged throughout the year.

The Washington event was the initiative of Ukrainian Ambassador Olexander Motsyk, to bring this celebration to the Ukrainian-American community in the nation's capital. The audience consisted of a number of Ukrainian-Americans who were engaged in a variety of scientific fields. Among the guests were the chairperson of the Ukrainian State Nuclear Regulatory Inspectorate, Mrs. Olena Mykolaichuk, and Helga Zepp-LaRouche, the chairwoman of the Schiller Institute. Benjamin Deniston of *21st Cen-*



Embassy of Ukraine

Benjamin Deniston (far right) of 21st Century Science & Technology addresses the Vernadsky seminar; Andriy Novikov, Embassy Science Counselor, is seated at opposite end of the table.

21st Century Science and Technology, was a speaker at the gathering.

The forum was opened up by Andriy Nikitov, the science counselor at the Ukrainian Embassy. Nikitov read a written statement from Ambassador Motsyk, who was away on travel. Motsyk underlined the broad influence which Vernadsky has had on science in both Ukraine and Russia, founding three separate disciplines, geochemistry, biogeochemistry, and radiology. In his work, Motsyk said, Vernadsky introduced new concepts in the study of the biosphere, and was an organizer and popularizer of science, establishing the National Library in Kiev, which bears his name, as well as both universities in Crimea. Two minerals bear Vernadsky's name, as does a scientific research base in Antarctica.

'If Rocks Could Fly'

The second presentation was by Dr. Mark McMenemy, a professor of geology at Mount Holyoke College, who had annotated the first complete English-language edition of Vernadsky's famous work, *The Biosphere*. Professor McMenemy presented four basic ideas in the thought of Vernadsky, beginning with a concept which McMenemy humorously called, "If rocks could fly." Vernadsky's understanding of the role of life in the process of the Earth's development was

sparked by a report in 1889 by Dr. G. Carruthers, McMenemy related.

Carruthers was investigating the annual flight of locusts, which stretched from the coast of North Africa to Arabia, over the Red Sea. Carruthers estimated that the space which the swarm covered was equal to 5,967 square kilometers, and had a weight of 4.4 billion tons! This sparked in Vernadsky a sudden realization of the magnitude of life in the universe, and helped lay the foundations for his development of the notion of the biosphere.

McMenemy then talked about Vernadsky's notion of life as a cosmic phenomenon, his insistence on the fact that life is as fun-

damental as matter and energy in the universe at large, a concept, McMenemy noted, which infuriated some scientists, and inspired others.

Thirdly, he touched on Vernadsky's belief that "chance" in the universe does not exist, but that the universe is governed by discrete laws. Lastly, he touched upon Vernadsky's revolutionary concept that human thought in the universe had become a geological force, his concept of the Noösphere. He quoted from the 12th-Century Benedictine abbess and poet, Hildegard of Bingen, on the wonders of the universe, and from Pope-emeritus Benedict XVI, on man as an "oasis of creation," noting that human thought, as the most powerful force in the universe, must again unite peoples, East and West, in developing that universe.

The 'Biogenic Migration of Atoms'

The third presentation was by Benjamin Deniston, who took up the notion of energy-flux density. He underlined the essential identity between Vernadsky's use of the concept of the increase of the "biogenic migration of atoms" in the development of the universe, and Lyndon LaRouche's understanding of the notion of increasing energy-flux density as a metric of economic progress. Deniston presented a number of graphs to show how species developed in a negen-

tropic or anti-entropic manner in the Biosphere. This, he indicated, represents a fundamental law of the universe, as well as a law of development of human society in the new state of the Biosphere, the Noösphere.

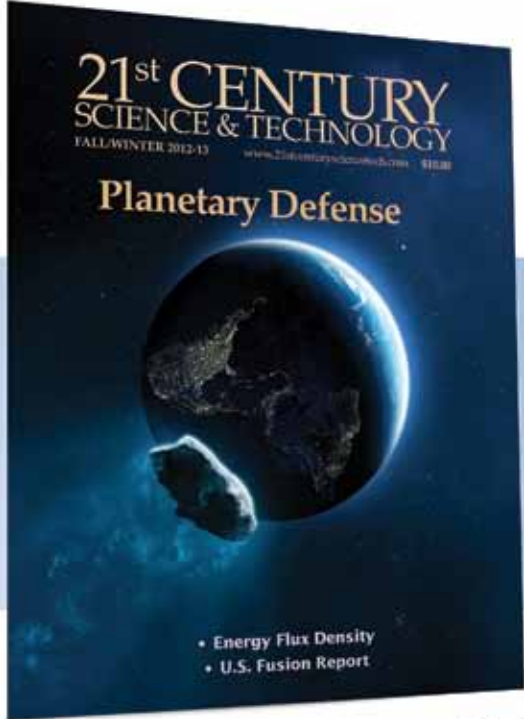
William Jones, from the Washington bureau of *EIR*, then outlined some of the points of Vernadsky's political and social views, noting that the building in which the Ukrainian Embassy was located, and in which they were gathered, was also the site where George Washington had negotiated with the local landowners in 1788 to get the land needed for building the nation's capital. Vernadsky, Jones said, revered both Washington and Lincoln, the latter of whom Vernadsky characterized as a "hero for all times."

The Vernadsky family always had a portrait of George Washington hanging in Vladimir's boyhood home. He later transferred the portrait to his laboratory office. Washington was revered by the family for his political significance, but also because he was said to resemble in appearance Vernadsky's grandfather, Vasilii Ivanovich Vernadsky, a Russian medical officer who had served in the wars against Napoleon, but of whom the family had no portrait; the portrait of Washington

served in its stead. Jones noted the importance of Vernadsky's enduring optimism about the future, even during the darkest days of World War II, pointing to this as a quality much needed today by humanity to overcome the tremendous economic and strategic crises now facing it.

A lively discussion followed the presentations. Nikitov lauded the efforts of *21st Century Science and Technology* (<http://www.21stcenturysciencetech.com/>) in making the legacy of Vernadsky known to the American public. "The link between Vernadsky and modern science is much better known in Eastern Europe than here in the United States," he said. Pre-publication copies of the Spring 2013 Vernadsky anniversary issue of *21st Century* were available at the event for the participants.

There were also in-depth discussions about the Planetary Defense issue of *21st Century* magazine, which had just arrived from the printer, and was also available at the event. Discussions continued among participants at the reception which followed. Nikitov also requested a number of copies of the print edition of the Vernadsky anniversary issue to send back to Kiev for the National Library and other libraries.



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