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SCIENCE

First Hand



IN THIS ISSUE:

By the mid-twentieth century, the world economy used about 12,000 species of plants, and now this number is greater by a factor of more than 2.5

In Medieval China, imprints of personal stamps with benevolent texts on scrolls and in personal correspondence played the role of today's emoticons

Mikhail V. Lomonosov devoted six years of his life to setting up the first chemical laboratory, believing that one experiment is more valuable "than a thousand opinions, born of imagination alone"

Andrei M. Sagalaev: "Archaic culture needs neither protection nor justification; it calls for understanding"

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for Inquisitive People

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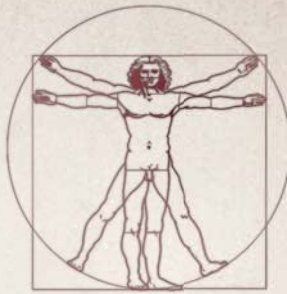
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*“The natural desire
of good men is knowledge”*

Leonardo da Vinci

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Founder and First
Editor-in-Chief
(from 2003 to 2020)
of the journal
SCIENCE First Hand
Academician Nikolay
L. Dobretsov

Dear friends!

This issue of SCIENCE First Hand could be called “historical” if the term history is used in a broad sense, i.e., not only as an academic discipline but also as a time trace left by a person or event, by a school of thought or a small yet significant material artifact of human culture... A trace that allows us to comprehend and interpret the present as well as the past...

For example, let us consider the seal or stamp, an imprint of which acts as an authorized proxy of a person or organization, – such a familiar and seemingly mundane thing. However, seals and their imprints, as an important phenomenon in the life of mankind, are the subject of research of sphragistics, a special historical discipline. Today’s symbol of bureaucracy, identified with power, the seal or stamp has been associated with violence and subjugation since its inception. No wonder that the ancient Chinese character yin, meaning a seal, represents a hand that grabs or holds a kneeling person. And the first seal was probably a brand burned on the body of an animal or a human (a slave or a criminal)...

It is known that the tradition of making and using seals originated more than three thousand years ago in the Middle East, from where it spread to the territory of modern China and then to the Japanese Islands. In this issue of SCIENCE First Hand, scientists from the Institute of Archeology and Ethnography SB RAS in Novosibirsk made an attempt to explore this phenomenon using specific examples from the history of the Far Eastern civilization.

The article dedicated to the history of introduction, a scientific field focused on the bringing of wild plants into cultivation and the expansion of the geographical distribution of cultivated plants, tells the reader about such “stars” as the traveler and founder of botanical geography Alexander von Humboldt; Academician Nikolay I. Vavilov, who collected more than 200,000 plant samples from all over the world;

the breeders–practitioners Ivan D. Michurin from Russia and Luther Burbank from America, who discovered limitless possibilities for “remaking” old varieties and creating new ones. All of these people played a great role in ensuring food security and improving people’s nutrition, which contributed to an increase in life expectancy.

Modern chemistry originated in the Middle Ages, in the depths of alchemy, which occupied an intermediate position between the craft and the occult. However, humankind had been engaged in “practical chemistry” since its inception because even the first bonfire was nothing but a chemical combustion reaction.

As an exact science, chemistry only began to develop in the 18th century. Even the first Russian chemist Mikhail V. Lomonosov clearly understood the importance of experiment in science: “I value one experiment over a thousand opinions, born of imagination alone.” The article dedicated to the accurate model of the first chemical laboratory of the St. Petersburg Academy of Sciences, kept at the Lomonosov Museum, gives the reader a unique opportunity to look two centuries into the past, when Russian science was taking its very first steps.

In 1992, the outstanding social scientist and ethnographer Andrei M. Sagalaev wrote: “The unity of world civilization fascinates precisely by the diversity of manifestations of cultures, by their dissimilarity and discord. <...> Statehood brings into people’s lives rigid structures and institutions. Religion fills their minds with canons and dogmas. Living culture, as an element, becomes formalized. Therefore, it is all the more interesting to look at the heritage of peoples who, until recently, were guided by fundamental values in their primordial form, so to speak.” The scientist passed away early, but his 1989 article, published in this issue and dedicated to the fate of the spiritual heritage of the Altai aborigines, remains immensely relevant today.

*Editorial board and editorial office
of the journal SCIENCE First Hand*

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