Porphiry Bachmetjew

1860-1913

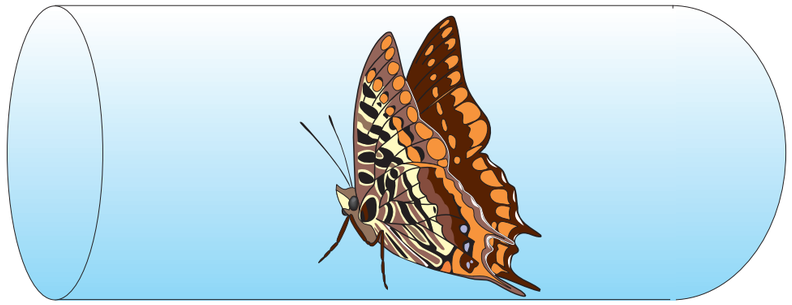
Porphiry Bachmetjew was a Professor of physics in Bulgaria. His discovery of ***anabiosis*** (a state 'between life and death') brought him world wide fame, but it also led to his removal from Sofia University.

Bachmetjew was born in Lopuhovka, a village in Russia. His father was a liberated serf peasant. Even as a schoolboy, Bachmetjew did some physics experiments and built machinery. When he was 20, he emigrated to Switzerland. He studied physics and chemistry at Zürich University, ignoring mathematical topics. **He was intelligent and had a tendency to dream**. His first articles were on acoustics, thermoelectricity and magnetism.

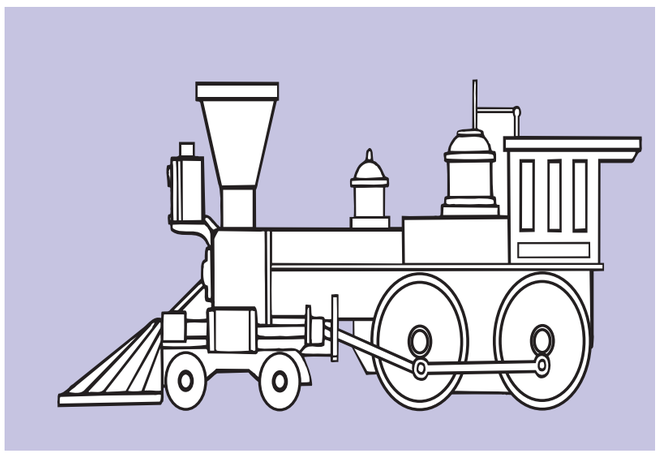
In 1885 he put forward a contrivance for transmitting pictures over long distances, called the telephotograph.

Bachmetjew returned from Zürich and joined the Physics-Mathematics Department of Sofia University in 1890. As the first Professor of Experimental Physics, he established two physics laboratories and constructed many instruments.

The Elisabeth Thompson Science Foundation at Boston University financed his geophysical investigations on ground electricity in Bulgaria.



He placed a butterfly in an ice-cooled tube and discovered 'anabiosis'



Even as a boy he built machinery

Bachmetjew married a Bulgarian woman and had a son and two daughters. Bachmetjew was quite a colourful personality. He had an unusual liveliness, vitality and power. He liked having a beer, collecting butterflies and writing science fiction stories. He was 2 metres tall and 125 kilograms in weight.

His most famous observations were calorimetric experiments with butterflies. A living butterfly was placed in an ice cooled metal tube. The butterfly's temperature was measured by a fine nickel-manganese thermocouple, made by himself. He found a reversible state of the butterfly between life and death, called anabiosis. Bachmetjew also tried to demonstrate anabiosis with bats. Graphical representation of his results attracted his interest to supercooling and the physical reasons for anabiosis.

He investigated the supercooling of some organic crystal melts. The recently discovered 'Lehmann liquid crystals' also inspired numerous biological analogies in Bachmetjew's mind. Bachmetjew's general physics course was put aside because of these studies, which were published in two entomological monographs. The University Council was not impressed, and it presented valid indictments against Bachmetjew's lecturing performance. In 1906 he was expelled from Sofia University.

Despite his problems, Bachmetjew became a member of the Bulgarian Academy of Sciences, Honoured Doctor of Zürich University and Professor of Biophysics in Shaniavski Moscow University.

G.S.K.