

ХРОНИКА НАУЧНОЙ ЖИЗНИ

Ideas of Lamarckian Heredity in Czech Lands — International Workshop

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The workshop on the history of the reception of Lamarckian ideas in Central Europe, especially in the Czech lands, aimed to continue the efforts of previous meetings that attempted to explain and compare the local histories of Lamarckian ideas. Its goal was to consider Lamarckian theory while examining Lysenkoism as its context and one of the conditions for its application and development in individual countries. In this workshop, the participants concentrated on the specifics of the reception, developments and continuities of Lamarckian thought and practice in the Czech lands within a broader, (Central) European perspective.

On December 2013, in Prague, at the Faculty of Science, Charles University, at the Department of Philosophy and History of Science, researchers from Czech Republic and United States presented a series of talks with follow-up discussion. The opening talk, presented by **William DeJong-Lambert** (Bronx Community College and Columbia University), on “*Lysenkoism = Lamarckism? A Case Study in Pseudoscience.*” Here he addressed the question of the role of Lamarck in Lysenko affair and the connection of Lysenkoism with Lamarckism. Based on his current monograph project on the history of American biologists’ response to T. D. Lysenko’s work. His early reading of the literature revealed that they thought Lysenko was wrong because his views were Lamarckian, i.e., Lysenkoism equals Lamarckism. Next he discussed how often Lamarck’s name comes up in the Lysenko affair and asked two questions:

1. Did anyone actually care about Lamarck? If so, who and why?
2. If Lamarckism was not important to Lysenkoism, then what was?

He continued by analysing critiques made of Lysenko, including Nils Roll-Hansen’s talk at the first International Workshop on Lysenkoism, “*How important was Lamarckism to the Lysenko affair?*”. He then analysed Conway Zirkle’s work on the history of Lysenkoism to determine the background for Zirkle’s criticism. Among the items for consideration was Zirkle’s gratuitous mockery of Lamarck in his anti-Lysenko polemic, *Death of a Science in Russia*. DeJong-Lambert then showed how Zirkle was guilty of the exact fault he had accused the Lysenkoists of, i.e. “verbalism,” or the use of someone’s name as a signifier of false views. DeJong-Lambert concluded this section by arguing that Zirkle’s hatred of Lamarck can be explained by

tying it to his conservative views on eugenics, which he feared — for whatever reason — were undermined by his victim’s theories of heredity. So Zirkle’s problem was not with Lysenko but with Lamarck. Lamarck was just a way to get there.

At this point the question DeJong-Lambert posed at the beginning of his talk switched from does “*Lysenkoism = Lamarckism?*” to does “*Lysenkoism = Pseudoscience?*” He answered this by analyzing how Dunn, Dobzhansky, Haldane, Huxley, Muller and Zirkle reacted to Lysenko demonstrating that they wanted more or less the same thing as did Lysenko — state power to enforce their ideas — and thus they would be, by the same criteria, labelled pseudoscientists.

The talk of **Tomáš Hermann** (Institute for Contemporary History in Prague, Czech Academy of Sciences) in “*Arnošt Kolman and first Reception of Lysenkoism in Czechoslovakia*” dived into the first reception of Lysenkoism in Czechoslovakia. Hermann presented the peculiar personality of Arnošt Kolman and his views on Lysenko, and discussed the general reception of Lamarckian and later Lysenkoist reception in Czechoslovakian biology. Arnošt Kolman was mathematician by education but he was an important figure in the Soviet organization of science. As director of the Marx Section in the Marx-Engles-Lenin Institute in Moscow and The Institute of Red Professors for the Natural Sciences, he participated in various conferences with Soviet academics abroad and knew most of them personally. In the political arena of Soviet science Kolman was highly praised. He left Czechoslovakia as a young man during World War I, became a communist, took part in the Great October Socialist Revolution with Lenin and, later worked as a spy in Germany and propaganda officer in the Soviet Union. In the 1930’s he met Lysenko and favoured the Michurinist approach in biology, preferring his theories to the then official science of VASKhNIL. He disliked that Vavilov and the rest of VASKhNIL gave Lysenko too little space for his experiments, and admired Lysenko’s enthusiasm excusing his exaggerated results even though he recognized them as unorthodox experiments. Back in Czechoslovakia after the War, as a philosopher Kolman supported the sovietization of Czechoslovak science.

Simona Valová (Faculty of Science and Faculty of Philosophy, Masaryk University in Brno) presented a talk on the life story of Jaroslav Kříženecký in the era of Lysenkoism. She examined archival material related to Kříženecký’s life in the 1940s and 1950s aiming to explain the difficulties he had in his career during the Lysenkoist era. Kříženecký was a distinguished biologist with very broad interests in the natural sciences including entomology, physiology, embryology and genetics. He was pupil of Czech geneticist Vladislav Růžička who was a strong proponent of the heredity of acquired characteristics before the World War II. Kříženecký adopted his teacher’s ideas but later developed his own theory of heredity disagreeing with the concept of acquired characteristics and, later, also the „Michurinist approach“ and Lysenkoism. In the late 1940s he was excluded from the university supposedly due to his criticism of Lysenkoism. Valová presented new evidence, however, that his exclusion was based not on his anti-Lysekoist views but rather on reasons of a rather personal origin. Kříženecký was forbidden to enter the Faculty of Science, but did retain his academic post at the University for Agrobiology. In the 1950s, he was expelled from all university departments and jailed for 18 months, this time truly for his criticism of Lysenkoism.

Marco Stella (Department of Philosophy and History of Science, Charles University in Prague) offered a completely different perspective on Lamarckian biology. Since most of the work on biology under Lysenko and the “Michurinist approach” is done primarily from the scientific point of view, Stella explored the impact of Lysenkoism on everyday life and culture in Czechoslovakia during the early 1950s. He dealt with the implementation of the “Michurinist

cult" in allotment gardening communities. These populous communities of laymen breeders were very popular in Czechoslovakia before World War II. Originally their function, lacking any ideological background, was to provide leisure activity and relaxation for urban inhabitants. They were connected with addressing the growing need for a healthy life style and the idea of 'getting back to nature' mostly for factory workers and middle class urban citizens. After World War II and the restoration of the agricultural sciences according to the Soviet model, the allotment gardening communities became part of the Lysenkoist ideology. Stella distinguished three ways this occurred.

First, the laymen gardeners from the allotment gardening communities started to be presented as "people" successors of Lysenko's and Michurin's work and legacy. In the official ideology the ordinary layperson working on his private garden became a "people breeder" following the legacy of Soviet people breeders. Now the goal of gardening was not to produce private goods or to relax after work in the city, but rather it became a way to improve the future through better agricultural methods. Even the private gardeners on their allotments were, as the ideology claimed, trying to follow the Lysenkoist and Michurinist approaches. Second, this ideology portrayed the allotment gardeners as part of the Stalinist myths of the "Great transformation of Nature" and the „Creation of the New Soviet Man". They were presented as transforming nature and working on the new methods of gardening. Thus everyone following the methods of Lysenko and Michurin and following the official Stalinist ideology could be part of the new future and new process of transformed Nature. The third way, Stella shows, was that the former leisure activity became a research-like, science-pretending "professional" gardening that aimed to discover new methods in agriculture and breeding, thus turning the allotment gardeners into "Czech Michurins".

Petr Hampl's (Department of Philosophy and History of Science, Charles University in Prague) paper "*Lamarckism or Epigenetics? Multilevel Theory of Heredity by Vladimír J. A. Novák*" presented a case study regarding a genuine Czech theory of heredity by evolutionary biologist and entomologist Vladimír J. A. Novák. This scientist was the key figure of Czech evolutionary biology and genetics. He developed the theory of sciogenesis as an "eastern" parallel of the "western" sociobiology by Edward O. Wilson. This theory unified all the important aspects of eastern biology, i.e. Oparin's coacervate theory, Severtsov morphology, Pavlov's physiology, Engels' dialectics and also Lysenkoist genetics. This eastern "new synthesis", as he called it in allusion to Wilson, contained a specific theory of heredity. After the fall of Lysenko in Czechoslovakia, marked by the Mendel anniversary in 1965, Novák transformed Lysenkoist views into new theory of heredity developed in his Laboratory for evolutionary biology. Novák developed the term of "non-herited phylogenetic changes" that defined heredity as directly affected by the environment. Basically, it was the inheritance of acquired characteristics, but it was not Lysenkoist or Michurinist, because Novák respected the Weismann barrier, and the inheritance of acquired characteristics was based not on classic Mendelian heredity but on very broad genetic flexibility.

Novák combined older Lamarckian ideas with new Neodarwinian ideas, i.e. the combination of inheritance of acquired characteristics without destroying the central genetic principles. Novák's approach was nothing new and original because these theories were developed much earlier. Interestingly, in the West the science of epigenetics appeared mainly in C. H. Waddington's work. Novák's theory of heredity from the 1970s-1980s was very close to the science of epigenetics. The climax of Novák's ideas is the remarkable "theory of multilevel heredity". The main points of the theory were:

- DNA cannot contain all the needed information for a trait.

- The information value of a gene depends on the environment of the cell, in which the nucleic acid is present and also on the environment of the whole body, its biochemistry and physiology.

- The genetic information always depends on the context of other genes. There is no individual information and no individual gene.

Thus, Hampl argued, in Novák's view heredity always worked in feedback with the environment, which directly affected which genes would be used and how. Heredity was seen as a dynamic system of interacting information. That is how environment was inherited — not through the change of DNA itself by the inheritance of acquired characteristics, but by expressing the right genes. Novák cited Waddington's experiments and used epigenetic theory for his own neo-Lamarckian synthesis. He started with Lysenkoism and ended up with epigenetics.

Празднование 70-летнего юбилея Победы в Зоологическом институте РАН

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В год празднования 70-летия Победы в Великой Отечественной войне группа сотрудников Зоологического института объединилась для того, чтобы подобрать новые материалы по военной истории института, о которой написано, к сожалению, очень мало. Идея этой работы принадлежит старейшему сотруднику ЗИН — В. В. Хлебовичу, который в конце 2014 г. адресовался к коллегам с просьбой уделить внимание этой теме в связи с круглой датой. Собралась инициативная группа, приступившая к созданию небольшой монографии, посвященной ЗИНу в Великой Отечественной войне. Кроме того, было принято решение выступить с рядом сообщений на ежегодной Отчётной сессии ЗИН, проходившей 14–16 апреля 2015 г. В ходе подготовки к Отчётной сессии инициативная группа провела ряд заседаний с целью обмена необходимыми сведениями и выработки общих подходов к представлению материалов.

Само празднование 70-летия Победы прошло в два этапа. Во-первых, несколько докладов на тему о ЗИН в войне было предложено вниманию участников очередной Отчётной сессии института. Они были сгруппированы в отдельную утреннюю сессию 15 апреля. Общей шапкой работ было выбрано название задуманной монографии: «Зоологический институт АН СССР в войну 1941–1945 гг.» Всего было сделано 5 сообщений:

- Слепкова Н. В. ЗИН в эвакуации. Работа Сталинабадской группы.
- Дунаева Ю. А. Отбор персоналий для справочно-биографического раздела будущей монографии.
- Тихонова Е. П. Работа Ленинградской группы (1942–1944 гг.).
- Смирнов А. В. Защиты диссертаций в блокадном Ленинграде.
- Бродская Н. К. Война 1941–1945 гг. в воспоминаниях сотрудников ЗИН. Новые материалы.