ИССЛЕДОВАНИЯ

DOI 10.24412/2076-8176-2021-2-11-33

The Imperial Society of Friends of Natural Science, Anthropology and Ethnography ('IOLEAE') and the creation of a general educational museum in Moscow

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This article reviews the activities of the Imperial Society of Friends of Natural Science, Anthropology and Ethnography ('IOLEAE'), associated with the creation of the Museum of Applied Knowledge (Polytechnic Museum) in Moscow. It was the first complex general educational museum created to demonstrate with the help of the systematised collections practical aspects of natural and technical sciences and how their accomplishments were used in everyday life. A.P. Bogdanov, Professor of Zoology at Moscow University and member of the IOLEAE, had an important role in the creation of this museum. He developed the concept for a museum of applied natural science and was closely involved both in the building of its collections and in its science education activities. The article also analyses the views of V.K. Della-Vos (also the IOLEAE member) on the creation and development of the museum. The Polytechnic Museum was distinguished for its extensive educational efforts. A.P. Bogdanov proposed a new form of educational work with museum visitors, the Sunday Explanations of the Museum collections, conducted in a specially equipped lecture-hall and accompanied by the demonstration of museum items, specimens and visual aids. Bogdanov's idea concerning the creation of natural-science division at the Museum could not be fully implemented due to the lack of exhibiting floor space. The Department of Applied Zoology, headed by A.P. Bogdanov and subsequently by his followers, also the IOLEAE members, was the most successful division of the Museum in regard to the demonstration of practical importance of natural science.

Keywords: Imperial Society of Friends of Natural Science, Anthropology and Ethnography, IOLEAE, Museum of Applied Knowledge, Polytechnic Museum.

> *"An educational museum is a new phenomenon which is contemporary to us. It could only have emerged when a conviction has permeated public consciousness that it is necessary not only to learn different things but also to not limit the years of learning to one's early years only"*
>
> A.P. Bogdanov[1]

The history of Russia's scientific societies has been addressed in the works of Russian and international researchers[2], among which stands out a comprehensive collective work titled "Self-organisation of the Russian society in the last third of the 18th-early 20th century" (Tumanova, 2011).

The history of the Imperial Society of Friends of Natural Science, Anthropology and Ethnography per se is covered in the works devoted to the IOLEAE exhibition projects and various aspects of scientific activities of the Society and its individual members. Many of these works were authored by G.G. Krivosheina (IHST RAS)[3]. The historiography of the Polytechnic museum also comprises mostly the jubilee publications and a few articles[4]. One can only regret that the activities of these two organisations — the IOLEAE and the Polytechnic Museums, with all their significance for Russia — have not been the subjects of comprehensive historico-scientific studies. This article aims to review the role of the IOLEAE in the creation of the Museum of Applied Knowledge (Polytechnic Museum) and to analyse the views of the OLEAE members on the organisation and thematic structure of a museum of science and technology (applied natural science), to assess the extent to which these ideas were implemented, and to elucidate the role of the IOLEAE members in the Polytechnic Museum's collecting and educational activities. The sources used in this article included published materials concerned with the work of the IOLEAE and the Polytechnic Museum (the minutes of the meetings, reports, etc.) and documents deposited in the Archive of the Russian Academy of Sciences, Central State Archive of the City of Moscow, and the Polytechnic Museum's Collection of Written Sources ("Fond pismennykh istochnikov").

The second half of the 19th — early 20th century was marked by the emergence of a new type of museums — the museums of science and technology — created in different countries in response to society's growing need in applied knowledge in the context of the Industrial Revolution. These included the South Kensington Museum in London, Technisches Museum in Vienna, Deutsches Museum von Meisterwerken der Naturwissenschaft und Technik in Munich, and many others.

The idea of setting up a national museum of technology in Moscow was first put forward by Academician (the title of Full Member of the St Petersburg Academy of Sciences) I.Kh. Gamel (Joseph Hamel) back in 1824. In a memorandum titled "The thoughts on the

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[1] *Arkhiv Rossiĭskoĭ akademii nauk* [Archive of the Russian Academy of Sciences] (ARAS). F. 446. Op. 1. D. 32a. L. 8.

[2] See: Bastrakova, 1968; Filippov, 1978; Bradley, 1979; Savchuk, 1994; Tumanova, 2000; Krivosheina, 2016; Valkova, 2018; Baum, Bogatova, 2019; Kolchinsky, Sinelnikova, 2020; etc.

[3] See: Balakhonova, 2011, 2015a, 2015b; Bodrova, 2013; Efimova, 2009; Kerimova, 2007; Krivosheina, 2016a, 2018a, 2018b, 2018c, 2019; etc.

[4] See: Presnyakov, 1972; Anisimov, 1983; Barskii, 1987; Bradley, 2005, 2008; *Sbornik rasporiaditel'nykh dokumentov...,* 2008; Grigoryan, 2009; Semenova, 2011; Adamovich A., et al, Morozova S. et al, 2012; Nudel, 2020.

organisation of institutions under the proposed Moscow Society for Agriculture [and for] Encouraging Manufactories and Trade," J. Hamel proposed to organise a special Cabinet for storing and demonstrating the samples of articles produced at the plants and factories. At about the same time, the issue of creating a permanent depository for such articles and conducting industrial exhibitions was raised by Prince D.V. Golitsyn, President of the Moscow Society for Agriculture and Moscow Military Governor. The plans for organising a scientific and educational museum of applied natural science in Moscow were discussed at the Imperial Society of Friends of Natural Science, Anthropology and Ethnography ('Imperatorskoye Obshchestvo lyubitelei estestvoznaniya, antropologii i etnografii', 'IOLEAE').

The IOLEAE — initially, the Society of the Friends of Natural Science — was founded under the auspices of the Imperial Moscow University in 1863. The Society's Presidents were the prominent scientists G.E. Shchurovskii (1863–1884), A.Yu. Davidov (1884–1885), A.P. Bogdanov (1886–1889), V.F. Miller (1889–1890), D.N. Anuchin (1890–1923), and A.N. Severtsov (1923–1931). However, it was Anatolii Petrovich Bogdanov, Professor of Zoology at Moscow University, who was the Society's founder and chief scientific supervisor for 30 years even though he held the official position as its President for four ears only. Beginning with the first idea and the draft of the Society's first Constitution, Bogdanov had been the initiator of most of the Society's projects, including the creation of a general educational museum in Moscow.

According to the first Society's Constitution, it was established for "investigating the Governorates of the Moscow Educational Precinct[5] in respect of natural history and for spreading natural science among the masses."[6] In 1867, the Society's Constitution was reworked and amended, and the Society itself was renamed the Imperial Society of Friends of Natural Science, Anthropology and Ethnography ('IOLEAE'). The Society's goals were expanded to pursue "natural historical, anthropological and ethnographic studies in Russia, mainly in the governorates of the Moscow Educational Precinct, and for spreading scientific knowledge in these three subject areas among the public"[7]. It has also been noted there that "the Society's activities consist in [conducting] meetings, organising public readings, assembling scientific collections, organising exhibitions, excursions, expeditions"[8].

The Society's first major project was the preparation and conducting of the Ethnographic Exhibition. According to the initial plans, discussed during the Society's meeting on 9 December 1864, the exhibition was planned to include the anthropological and ethnographic sections. The Exhibition Rules were agreed upon, its cost was estimated at 20,000 rubles,

[5] Some authors translate 'obrazovatelnyĭ okrug' as 'educational district', the term used in the USA, while 'educational precinct' is more common in the UK, Australia and Canada

[6] Ustav Obshchestva liubiteleĭ estestvoznaniia, sostoiashchego pri Moskovskom universitete, [utverzhdennyĭ 14 marta 1864 goda] sbornik pozdneĭshikh ego postanovleniĭ i spisok chlenov. — Moskva, 1866 [The Constitution of the Society of Friends of Natural Science under Moscow University [approved on 14 March 1864], a collection of its latest resolutions and the list of members]. (1866). (pp. 3), Moscow. (in Russian).

[7] Ustav Imperatorskogo obshchestva liubiteleĭ estestvoznaniia, antropologii i ėtnografii: utverzhden g. Ministrom narodnogo prosveshcheniia 20 ianvaria 1868 goda [The Constitution of the Imperial Society of Friends of Natural Science, Anthropology and Ethnography: approved by Mr. Minister of Public Education on 20 January 1868]. (1893). (pp. 3), Moscow: Universitetskaia tipografiia. (in Russian).

[8] Ibid.

the Exhibition Steering Committee was elected, and its expected content and theme range was agreed on[9]. During the meeting held on 14 May 1865, a letter from V.A. Dashkov, Assistant Director of the Rumyantsev Museum[10] (since 1867, its Director), was presented, in which Dashkov appealed for help with organising a specialised ethnographic department at the Museum and assembling appropriate collections and materials for this department. Being aware of the Society's plans to organise an exhibition in Moscow that would include the ethnographic section, and believing that organising such an exhibition provided the best way for assembling collections needed for the Rumyantsev Museum, Dashkov proposed a loan for the organisation and convening of the exhibition on the condition that, after its closure, the ethnographic collections would be handed over to the Moscow Public Museum. V.A. Dashkov provided the loan and was elected as Chair of the Exhibition Steering Committee. It was also proposed to designate the ethnographic collection to be handed over to the Rumyantsev Museum "the Dashkov Ethnographic Museum, Organised with the Assistance of the Society of Friends of Natural Science"[11].

The Ethnographic Exhibition was held in Moscow from April 23 to June 19, 1867, and aroused much interest. After the end of the Exhibition, about 450 traditional regional costumes, 1,200 traditional household items, and 2,000 drawings and photographs were handed over to the Dashkov Ethnographic Museum (Miller, 1887). As a result, the latter became the first museum to hold a relatively comprehensive collection covering all regions of the Russian Empire (Fig. 1.). Therefore, the experience of assembling museum collections through the relevant exhibition proved to be successful.

Further on, IOLEAE continued to be involved in the Dashkov Museum's activities and contribute to its collections. The Ethnographic Museum had thus acquired the collections from A.P. Fedchenko's Turkestan Expedition (1871), N.K. Kertselli's (Kerzelli) expeditions to the Volga region (1886), N.L. Gondatti's collections on the peoples of Siberia and the Anadyr region, N.N. Kharuzin's collections on the ethnography of the northern peoples of Russia, as well as some collections from the Polytechnic and Anthropological Exhibitions that had also been organised by the IOLEAE (Miller, 1887–1895). Later on, several provincial ethnographic museums were created, modeled after the Dashkov Ethnographic Museum[12].

During a Society's meeting on 5 June 1867, after A.P. Bogdanov was awarded the gold medal and a letter of commendation for successfully conducting the Exhibition, he suggested to the Society to devote more attention to the popularisation of natural science. G.G. Krivosheina has described in detail how A.P. Bogdanov conceived the idea of an exhibition of applied natural science and how it morphed into the Polytechnic Exhibition (Krivosheina, 2012).

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[9] *Protokol 6-go zasedaniia 9 dekabria 1864 goda* [Minutes of the 6th meeting on 9 December 1864], *Izvestiia IOLEAE* [IOLEAE Bulletin], 1866, III(1), 76–94 (in Russian).

[10] In 1861, the Rumyantsev Museum was moved from St. Petersburg to Moscow to be accommodated in the Pashkov House and merged with the Moscow Public Museum. The resulting Moscow Public and Rumyantsev Museum was created in 1862. Its collections comprised three departments: paintings, etchings, and the collections of Russian explorers, particularly those of I.F .Kruzenshtern (Adam Johann von Krusenstern) and Yu.F. Lisyansky (Urey Lisiansky).

[11] *Protokol 9-go zasedaniia 14 maia 1865 goda* [Minutes of the 9th meeting on 14 May 1865], *Izvestiia IOLEAE* [IOLEAE Bulletin], 1866, III(1), 116–136 (in Russian).

[12] *Protokoly zasedanič Rasporiaditel'nogo Komiteta po ustroĭstvu Russkoĭ ėtnograficheskoĭ vystavki Obshchestvom liubiteleĭ estestvoznaniia* [Meeting Minutes of the Executive Committee for the Organisation of the Ethnographic Exhibition by the Society of Friends of Natural Science]. (1866). (pp. 13), Moscow. (in Russian).

Fig. 1. The exposition of the Dashkov Ethnographic Museum, early 20th century
Рис. 1. Экспозиция Дашковского этнографического музея, начало XX века

During the same period, Bogdanov was developing the main approaches to the creation of a complex general educational museum in Moscow, designed to introduce its visitors to the applied aspects of natural science. He saw very clearly that such museum would have a role in both the popularisation and advancement of natural science. A.P. Bogdanov wrote[13]:

For a philologist, jurist, mathematician, and philosopher, his own well-organised head and books are enough to embrace his entire science, to advance it infinitely, while a naturalist, physicist, chemist would produce little worthwhile and fundamental with these elements [*only*], as has been clearly shown by the *Naturphilosophie* school. They also need study objects, observations and comparisons; they need devices and tools, laboratories and museums.

He also wrote that, at the time, it was important for Russia to not only address the problem of obtaining specialised higher education in various disciplines (at the universities and other higher education institutions) but also to enhance the overall level of science and technology education and awareness. This extended-learning function could be successfully provided by the museums:

There must be the conductors designed <…> to supplement the impact of school on those who have been trained by it. For the humanities and historical sciences, such supplements are general educational books and, for these sciences, such additional tools for self-learning and self-education are sufficient. For technical and natural historical sciences, however, books and pictures are far from enough, even for extended learning. They require something else: an opportunity to see with one's own eyes and get familiar

[13] ARAS. F. 446. Op. 1. D. 32a. L. 8.

with the objects to be studied by technical and natural historical sciences. The institutions that serve this purpose are publicly accessible museums, which are becoming increasingly more widespread these days[14].

A.P. Bogdanov was probably one of the first Russian scientists to formulate the concept of general educational museum and what distinguished it from scientific and technical collections. He wrote:

The museums devoted to applied sciences are of two distinctly different types: some collect within their walls the latest improvements, the most advanced applications of technology, and serve a narrow circle of specialists. Others aim to spread basic knowledge in applied sciences and select their collections with a desire to provide an opportunity to study and assimilate the whole succession of basic underpinnings, on which some matter or other is based. The museums of the first type may be called technical and their place is at the specialised schools and specialised institutions. The other museums are educational <…>, and a perfect model for these has been employed by our museum right from the start, both in its collection and in its activities[15].

It is obvious that this approach was used during the preparations for the Polytechnic Exhibition and creation of the Museum of Applied Knowledge in Moscow (Polytechnic Museum) that was based on the Exhibition's exhibits.

Bogdanov thus envisioned the structure of the would-be general educational museum[16]:

A. Department of Natural History:
(1) Mineralogical and geological collection ['sobraniye'];
(2) Botanical and horticultural collection (modeled after the Kew Museum in London);
(3) Zoological collection (breeds of domesticated animals);

B. Department of Experimental Sciences:
(4) Applied physics collection with a laboratory;
(5) Applied chemistry collection with agricultural and technical laboratories;
(6) Mechanics collection;
(7) Collection of technology;
(8) Agricultural collection;
(9) Collection of arts and crafts;
(10) Architectural and engineering collection.

C. Department of Teaching Aids.

A.P. Bogdanov also suggested to supplement such museum's zoological collection with aquariums that should be accommodated in the museum building.

Bogdanov's ideas concerning the design of the museum exposition sound very modern. Thus, he believed that the most important exhibits ought to be displayed in such a way so as to instantly attract the visitors' attention and that the museum collections ought to be

[14] ARAS. F. 446. Op. 1. D. 32a. L. 8.

[15] ARAS. F. 446. Op. 1. D. 32. L. 10.

[16] ARAS. F. 446. Op. 1. D. 32a. L. 16.

systematic because "a dozen or two machines, even if exemplary but pulled out of different manufactures, may hardly be regarded as a general educational collection"[17].

Victor Karlovich Della-Vos was another IOLEAE member who actively supported the idea of creating a general educational museum in Moscow. It was he who defined the main criteria for a general educational museum (Della-Voss V.K., 1874):

(1) a museum must be located in, or close to, a city's centre;
(2) a museum entrance fee must be small on weekdays and, on Sundays and holidays, admission must to be free for each visitor;
(3) a museum's interior must to be attractive for poorly-educated population;
(4) viewing different parts of the museum should be accompanied by the explanations provided by expressly appointed persons;
(5) a museum ought to have a special library available to all visitors; and
(6) a museum ought to have a comfortable lecture hall for public lectures.

Like Bogdanov, Della-Vos believed that there had to be a single general educational museum that would educate the visitors about natural sciences as well as about technology and machines. It was such polytechnic museums that Della-Vos referred to as "central museums." He also substantiated his choice of Moscow for building the first polytechnic museum, as it was Moscow and Moscow region where Russian industry and Russian trade were concentrated at the time.

To build up the systematised collections for the museum of applied natural science, the IOLEAE decided to organise a Polytechnic Exhibition in Moscow.

Bogdanov thus defined the goals of the Exhibition:

> First, to demonstrate, in the systematised collections, the application of natural science to industry, art, everyday life; second, to present the degree of perfection attained by science in its various applications; third, to present — in historical sequence, if possible — the development of industry in Russia, mostly from Peter the Great's time; fourth, to show, in particular, the stage where now are Russian industry, manufactures, trades and other practical endeavours that touch on natural science and are based on it; five, to present the samples of what is necessary for the development of technical education and training as well as for teaching natural science in general in different kinds of schools[18].

In 1867, the IOLEAE set up a Commission headed by A.P. Bogdanov to organise and convene the Exhibition. During the Commission's meeting on 22 August 1868, the *Rules* for the design of the Exhibition, proposed by Bogdanov, were reviewed and the Steering Committee was elected. This Committee included: G.E. Shchurovskii (President); A.S. Vladimirskii, N.K. Zenger, and V.F. Oshanin (Secretaries); A.P. Bogdanov, D.A. Naumov, A.A. Rikhter, I.I. Vilkins, and P.P. Muromtsev (members). N.A. Popov suggested timing the Polytechnic Exhibition to coincide with the 200th anniversary of the birth of Peter I and his proposal was adopted at the IOLEAE meeting on 17 November 1869.

The Exhibition's objectives and purposes were reflected in the programmes developed for each of its sections. All of these programmes — from the choice, systematisation and

[17] ARAS. F. 446. Op. 1. D. 32a. L. 16.

[18] *Tsentral'nyĭ gosudarstvennyĭ arkhiv Moskvy* [Central State Archive of the City of Moscow]. (TsGAM). F. 227. Op. 2. D. 3. L. 100 ob.

placing of exhibits to mandatory inclusion of applied natural science visual teaching aids in the exposition — were fundamentally different from the approaches used when designing industrial and manufacturing exhibitions.

According to these programmes, each section was to be represented by displaying:

> a collection of the most interesting instruments and machines from different applied sciences… and by putting them into operation so as to visually demonstrate how they are used in the industry; by a collection of samples of raw products of our industry and by assembling systematised collections from these, arranged in the order of their sequential technical processing (Della-Vos, 1870, p. 23).

Another aspect that distinguished the Polytechnic Exhibition from the previous industrial shows was the attitude towards the exhibitors who totaled 100,000. They were asked to assemble their collections in such way that, in accordance with the Exhibition's goals, they would demonstrate not only the products but also the relevant technologies and be graphic and easy to understand for general audience. To this end, the authorised representatives of the Exhibition Steering Committee were appointed across Russia and abroad.

A special role in the exposition was given to foreign exhibitors, selected to "primarily represent the manufactures that are not widespread in Russia."[19] Thus, the exhibitors from Sweden mostly participated in the expositions of the agricultural, educational, architectural, and zoological (fishing and fisheries) sections; the exhibitors from Germany, in the technical section expositions; and the exhibitors from the UK, in the expositions of the botanical section and the section of manufactories.

The Polytechnic Exhibition also had a long-term goal that was thus formulated by G.E. Shchurovskii: "When organising such an exhibition, the Society was pursuing its most heartfelt idea of creating a permanent institution in Moscow — the Polytechnic Museum. The Polytechnic Exhibition is, indeed, the temporary Polytechnic Museum" (Shchurovsky, 1874, p. 11). This goal was communicated to each of the invited exhibitors, many of whom agreed to hand over their exhibits to the future Museum.

In this paper, we will not dwell in detail on how the Exhibition was organised and how it operated, nor on the attitude of the Moscow and Russian public towards this event, as this has been covered in a number of works (Medved, Yudin, 2008; Krivosheina, 2012; Semenova, 2012). The Exhibition was launched on 30 May 1872 and remained open for three months. Its exposition occupied practically the entire central part of Moscow (the Manege, the Alexandre Garden, the Kremlin Embankment, and Varvarskaya Square) and comprised 24 sections hosted in 86 pavilions. The biological sciences were presented in the section of botany and horticulture, the section of game animals (applied zoology), and the veterinary, medical, forest, and agricultural sections.

The IOLEAE scientists' participation in developing section programmes and building up the collections provided the visitors with a general systemic idea of the practical role of biological sciences. Thus, the Chair of the Moscow Society of Friends of Horticulture A.I. Nikitin was sent to London to select the specimens for the botanical collection. Nikitin arranged for a collection of usable plants, formed from the duplicate specimens from the Royal Botanic Gardens, Kew, to be handed over to the Exhibition and the future museum[20].

[19] TsGAM. F. 227. Op. 2. D. 70. L. 9 ob.

[20] ARAS. F. 446. Op. 1. D. 41a. L. 32.

With the help of James Murray, excellently attributed collections of taxidermied animals, assembled by a prominent English zoologist and the superintendent of the London Zoo Abraham Dee Bartlett, were obtained for the section of applied zoology[21].

After the end of the Polytechnic Exhibition, all exhibits intended for the Museum were moved to a temporarily rented building on Prechistenka Street, where the first permanent exposition of the Museum of Applied Knowledge was opened on 30 November 1872 in the presence of the Honorary Chairman of the Museum Organisation Committee, Great Prince Alexei Alexandrovich. This exposition included the sections of sea and river shipbuilding, applied physics, and applied zoology, as well the postal, technical, educational, forest, agricultural, architectural and Turkestan sections.

According to its Constitution, the goal of the Museum of Applied Knowledge was "to help spreading applied knowledge in various sciences, to vividly demonstrate the achievements of these sciences, and to promote the newly invented tools, machines, instruments, and the newest methods and means of production so that they would be applied in practical life"[22]. To this end, the Museum could create various teaching collections and make them available for public viewing; organise free public explanations of its collections, lectures, readings, and systematic courses; and institute scientific societies in different fields of applied knowledge under the Museum's auspices[23].

A special Committee chaired by Prince Konstantin Nikolayevich was set up to manage the Museum's activities. Other members of this Committee included General N.V. Isakov and G.E. Shchurovskii (Vice Chairs of the Committee), Moscow Mayor I.A. Lyamin, Chair of the Stock Exchange Committee T.S. Morozov, as well as other prominent Moscow's business people and community leaders. The Museum Committee members also included the IOLEAE Vice President A.Yu. Davidov and the IOLEAE members A.P. Bogdanov and V.K. Della-Vos[24]. To manage the Museum's day-to-day activities, the Commissions were created, comprising the scientists from the relevant fields, whose task was to produce development programmes for the respective Museum departments and seek possible ways for acquiring new items for their collections.

Initially, the exhibitions held in Russia and abroad were chosen as the main and currently traditional source for acquiring new collection materials. Participating in exhibitions allowed to more carefully select the items for the Museum, to get already formed collections donated or to purchase such collections at acceptable prices.

Thus, after the Museum participated in the 1873 Vienna World's Fair, significant additions were made to its Technical Department's collections. In 1874, the Museum Committee's Academic Secretary V.D. Levinskii was seconded to the Agricultural Fair in

[21] *Obshchee obozrenie Moskovskoĭ Politekhnicheskoĭ vystavki Imperatorskogo obshchestva liubiteleĭ estestvoznaniia, antropologii i ėtnografii pri Moskovskom universitete* [An overview of the Moscow Polytechnic Exhibition of the Imperial Society of Friends of Natural Science, Anthropology and Ethnography]. (1872). Moscow. (in Russian).

[22] Polytechnic Museum's Collection of Written Sources. F..100. Op.1. No. 27271/1.

[23] Polytechnic Museum's Collection of Written Sources. F..100. Op.1. No. 27271/1.

[24] Otkrytie Politekhnicheskogo muzeia vo vremennom pomeshchenii 30 noiabria 1872 goda [The opening of the Polytechnic Museum at the temporary location on 30 November 1872], *Materialy kasaiushchiesia ustroĭstva muzeia, rechi, proiznesennye pri ego otkrytii 30 noiabria 1872 goda i otchet Komiteta muzeia za pervyĭ god ego sushchestvovaniia* [Materials concerning the Museum organisation, speeches made during its opening on 30 November 1872, and the Museum Committee Report for the first year of its existence]. (1874). (pp. 51–53), Moscow. (in Russian).

Warsaw. After this trip, the collections of manual and horse-driven farming implements, crop plant diseases, fertilisers, etc., were donated to the Museum's Agricultural Department. A collection of polypore fungi growing on different wood species as well as a collection on dry wood distillation were donated to the Forestry Department by the Warsaw Fair participants (Levinsky, 1875).

In 1875, the Society decided to donate the collections amassed by it to the Museum. The conditions on which all collections of items donated by the exhibitors at the Polytechnic Exhibition or acquired by the Society were to be handed over to the Museum Committee were approved during the meeting on 13 June 1875. These conditions included the following: "Keeping forever in one of the Museum rooms the portraits of persons who participated in the organisation of the Museum, namely: Their Imperial Highnesses Great Princes Alexei Alexandrovich and Konstantin Nikolayevich; Vice Honorary Chairs N.V. and G.E. Shchurovskii; honorary members: Prince V.A. Dolgorukov, Pr. V.A. Cherkasskii, K.P. von Kaufman, I.A. Lyamin, S.M. Soloviev; permanent members: A.P. Bogdanov, A.Yu. Davidov, V.K. Della-Vos; full members I.P. Arkhipov, V.I. Akhsharumov, A.S. Vladimirskii, P.I. Gubonin, F.N. Korolyov, N.K. Milyaev, D.A. Naumov, N.V. Nikitin, S.S. Podgoretskii, I.N. Shatilov, N.A. Shokhin; associate members of the Society N.A. Popov, I.I. Vilkins, and Secretary of the Society and the Museum N.K.Zenger."[25] And: "Keeping inside the Museum the inscription 'Organised by the Imperial Society of Friends of Natural Science, Anthropology and Ethnography under the auspices of Moscow University' and the same designation of the Society's name on the labels of the collections that have come from the Society" [26].

The Museum of Applied Knowledge began to actively engage in educational work, while still accommodated in temporary premises on Prechistenka. The duties of curators of the Museum Departments included conducting the explanations of the respective items and thematic collections on weekdays. On Sundays and holidays when there were more visitors, it was decided to involve the IOLEAE members in working with the public[27].

Another line of the Museum's educational activities was conducting "public readings" (lectures) with the participation of the leading Russian scientists invited by the IOLEAE. Thus, a famous Russian historian S.M. Soloviev (also spelled Solovyov) agreed to prepare the readings in the history of Russia (Soloviev, 1908) and N.S. Tikhonravov, in Russian literature. Other lecturers at the Museum were Moscow University professors F.A. Bredikhin (astronomy), V.Ya. Tzinger (mathematics), A.Yu. Davidov (theory of probability), V.V. Markovnikov (chemistry)[28].

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[25] Protokol 77-go zasedaniia Imperatorskogo obshchestva liubiteleĭ estestvoznaniia 13 iiunia 1875 goda. [Minutes of the 77th meeting of the Imperial Society of Friends of Natural Science, Anthropology and Ethnography of 13 June 1875], *Izvestiia IOLEAE* [IOLEAE Bulletin]. (1876). XXIV, (in Russian).

[26] Ibid

[27] Otkrytie Politekhnicheskogo muzeia vo vremennom pomeshchenii 30 noiabria 1872 goda [The opening of the Polytechnic Museum at the temporary location on 30 November 1872], *Materialy kasaiushchiesia ustroĭstva muzeia, rechi, proiznesennye pri ego otkrytii 30 noiabria 1872 goda i otchet Komiteta muzeia za pervyĭ god ego sushchestvovaniia* [Materials concerning the Museum organisation, speeches made during its opening on 30 November 1872, and the Museum Committee Report for the first year of its existence]. (1874). (pp. 46), Moscow. (in Russian).

[28] Godichnyĭ otchet komiteta po ustroĭstvu Muzeia prikladnykh znaniĭ i zavedovaniiu im za tretiĭ god ot 30 noiabria 1847 g. po 30 noiabria 1875 g. [Annual Report of the Committee for the

In 1876, ten "popular lectures" on "The life of the plant" were delivered by K.A. Timiryazev. Later on these lectures formed the basis for his book "The life of the plant: Ten popular lectures," several editions of which have been published since then both in Russian and in foreign languages (Timiryazev, 1878).

At the same time, the Museum Committee engaged in a difficult task of providing permanent premises for the Museum, which was absolutely necessary for its future development. There were two opinions on this issue among the IOLEAE members. A.P. Bogdanov was advocating the project of building a system of pavilions in the Alexandre Garden. V.K. Della-Vos was convinced that, due to the specifics of its exhibits (large weight and size), the Technical Department needed a permanent structure that could not be built in the Alexander Garden because of the nature of rocks in that area. He suggested that the Technical Department should be accommodated in the building on Lubyanskaya Square (the plot for its construction was allocated by the municipal government) while the Natural History, Forest, and Agricultural Departments could be hosted in the pavilions in the Alexander Garden that was also handed over to the Museum. After the discussion, the Museum Committee supported Della-Vos' proposal. At the same time, taking into account the funds available to the Museum, it was deemed feasible, at the first stage, to limit the construction on Lubyanka to the central part of the building and, as regards the Alexandre Garden, to begin with erecting a pavilion for the Museum's temporary expositions[29].

The thematic structure of the Museum divisions on Lubyanskaya Square and in the Alexander Garden[30] was planned to be as follows:

The Natural Historical Division in the Alexander Garden (the pavilion arrangement system, with total floor area of no less than 7,850 square metres) was planned to include:

— Educational section;
— Collections of teaching aids for studying natural history;
— Geological and mineralogical collections;

Organisation of the Museum of Applied Knowledge from November 30, 1874 to November 30, 1875], *Materialy dlia istorii ustroĭstva muzeia i otchet vysochaĭshe uchrezhdennogo komiteta muzeia za tretiĭ god ego sushchestvovaniia po 30 noiabria 1875 goda* [Materials concerning the Museum organisation and the Museum Committee Report for the third year of its existence]. (1876). (pp. 19–22). Moscow. (in Russian).

[29] Godichnyĭ otchet komiteta po ustroĭstvu Muzeia prikladnykh znaniĭ i zavedovaniiu im za tretiĭ god ot 30 noiabria 1847 g. po 30 noiabria 1875 g. [Annual Report of the Museum of Applied Knowledge Committee for the third year of its existence from 30 November 1874 to 30 November 1875], *Materialy dlia istorii ustroĭstva muzeia i otchet vysochaĭshe uchrezhdennogo komiteta muzeia za tretiĭ god ego sushchestvovaniia po 30 noiabria 1875 goda* [Materials concerning the Museum organisation and the Museum Committee Report for the third year of its existence]. (1876). (pp. 3–9), Moscow. (in Russian).

[30] Godichnyĭ otchet komiteta po ustroĭstvu Muzeia prikladnykh znaniĭ i zavedovaniiu im za tretiĭ god ot 30 noiabria 1847 g. po 30 noiabria 1875 g. [Annual Report of the Committee for the Organisation of the Museum of Applied Knowledge from November 30, 1874 to November 30, 1875], *Materialy dlia istorii ustroĭstva muzeia i otchet vysochaĭshe uchrezhdennogo komiteta muzeia za tretiĭ god ego sushchestvovaniia po 30 noiabria 1875 goda* [Materials concerning the Museum organisation and the Museum Committee Report for the third year of its existence]. (1876). (pp. 84). Moscow. (in Russian).

— Collections on applied botany, horticulture, forestry;
— Agricultural section;
— Collection on livestock breeding;
— Section of "Promysly" (whaling, fishing and fish-farming, trapping, sericulture, apiculture, etc.);
— Turkestan section;
— Photographic pavilion;
— The room for systematic courses;
— Storerooms for storing and processing collections;
— IOLEAE meeting room;
— Museum hall and library;
— Secretary's office and apartment;
— Five living quarters for the curators; and
— Service and utility spaces.

Technical Division in the building on Lubyanskaya Square (minimum floor space of about 9,800 square metres) was planned to include:

— Section of applied physics
— Physical and meteorological laboratory;
— Mechanical cabinet;
— Machines and implements in operation;
— Mechanical technology;
— Hydraulic division;
— Railroad division;
— Mining and metallurgical division, material processing;
— Construction division (architecture, including historical architecture and construction materials);
— Sea and river shipbuilding;
— Technology section;
— Chemical laboratory;
— Exhibition of new inventions;
— Postal section;
— Big lecture hall for public readings;
— Smaller lecture room;
— Curators' apartments;
— Pattern shop and workshop;
— Storerooms for storing and processing collections;
— Library and drafting room;
— Museum hall and secretary's office;
— Service and utility spaces.

Unfortunately, these plans have not been fully implemented.

On 30 May 1877, the Moscow Museum of Applied Knowledge opened in its permanent location on Lubyanskaya Square (Fig. 2). On the occasion of the Museum opening, A.P. Bogdanov made a speech "The future tasks for the Moscow Polytechnic Museum." Having mentioned the achievements over the last 5 years in the development of the Polytechnic Museum and its collections, Bogdanov said that the IOLEAE, "above all and more than anything, has been thinking about, as a natural historical society, organising the departments that would be directly relevant to its goals, i.e. zoological, botanical, and

geological"[31]. Reviewing the specifics of developing collections for the natural history departments, Bogdanov said:

> Everyone will understand the importance of machines but not everyone, not even the well-educated persons, will recognise general importance of natural historical collections whose general educational and practical importance has been far from sufficiently recognised and assessed accordingly to their actual significance in public life[32].

Therefore, Bogdanov saw the Museum's priority task as creating its natural history department in the Alexandre Garden, as, by that time, the construction of pavilions in the Alexandre Garden had not begun.

Fig. 2. The building of the Museum of Applied Knowledge (Polytechnic Museum) in Moscow, 1880s.
Рис. 2. Здание Музея прикладных знаний (Политехнический музей) в Москве, 1880-е гг.

As the first step on the road to creating the Museum of Applied Knowledge's natural history department in the "Kremlin Gardems"[33], Bogdanov suggested to organise and convene the Anthropological Exhibition, relying on the IOLEAE resources. He believed that such exhibition would provide a good opportunity for developing systematic natural

[31] ARAS. F. 446. Op. 1. D. 32. L. 10.

[32] Ibid. L. 11.

[33] Today this is the territory of the Alexandre Garden.

historical collections: "The systematics and ethnography of tribes comprise an essential addition to the geographic division of our Museum's educational collections. The questions of prehistoric man are closely related to geological and paleontological data — which is necessary for completing the general educational geological department"[34]. Talking about the plans for convening the Anthropological Exhibition, A.P. Bogdanov rekindled the idea that had been put forward and discussed practically since the moment of the Society's inception.

Yet, the history of our Society shows that, from the very beginning of its existence, it had set itself a goal of improving the possibilities for studying anthropology in Moscow. Therefore, with its exhibition, it is only completing what it has already accomplished with the collections it has already built up: the Public Museum's ethnographic collection, the craniological one — at the University, at the department of anthropology[35] that has been organised by it [the Society][36].

Initially, this exhibition was planned to be held in Alexandre Garden and Bogdanov saw it as a kind of testing ground for developing and testing the approaches to building the expositions of the Museum's natural historical division in the Alexandre Garden[37]. At the same time, being aware that the items for the future Museum at the department of anthropology could not be crammed into the premises of Moscow University due to the lack of available space, A.P. Bogdanov suggested to organise the Anthropological Museum as part of the Polytechnic Museum's natural historical division in the Alexandre Garden[38]. Later on, however, it was decided to hold the exhibition in the Manege[39] due to financial difficulties.

The Anthropological Exhibition was launched on 3 April 1879. The colorful exposition with numerous eye-catching dioramas designed to show the interiors and landscapes consisted of seven sections: antiquities (compiled by D.N. Anuchin); geological and palaeontological (N.Yu. Zograf and A.A. Tikhomirov); craniological (A.P. Bogdanov); photographical (A.I. Kelsiev); medico-anthropological (E.A. Pokrovskii); ethnographic (E.V. Barsov); and busts and masks (D.N. Anuchin) (Balakhonov, 2011).

Even though the exhibition was conceived as anthropological, the ethnographic materials comprised a large part of it. After the end of the exhibition, many of the ethnographic exhibits were handed over to the Museum of Applied Knowledge where they formed a specialised department devoted to the industry on the outskirts of Russia and the existing Turkestan department was merged into it (in May 1890, the whole Department was transferred to the Rumyantsev Museum). Some exhibits from the geological and paleontological section,

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[34] Ibid. L. 11–12.

[35] Although A.P. Bogdanov mentions a "department of anthropology", the first Department of Anthropology was actually established under the auspices of the Physico-mathematical Division of Moscow University in 1880, where it existed until 1884. The Department of Anthropology was re-eastablished at Moscow University in 1919.

[36] ARAS. F. 446. Op. 1. D. 32. L. 11–12.

[37] *Antropologicheskaia vystavka Imperatorskogo obshchestva liubiteleĭ estestvoznaniia, antropologii i ėtnografii* [Anthropological Exhibition of the Imperial Society of Friends of Natural Science, Anthropology and Ethnography]. (1878). (Vol. 1, pp. 9), Moscow: Tip. M.N. Lavrova i Ko. (in Russian).

[38] Ibid. L. 229, 420.

[39] Ibid. L. 76.

including the model of the mammoth, the specimens of Carboniferous fossil plants, and the geological maps, were also handed over to the Museum of Applied Knowledge (Balakhonov, 2011) (Fig. 3). Therefore, the idea of adding new exhibits from the Anthropological Exhibition to natural historical collections of the Museum of Applied Knowledge failed.

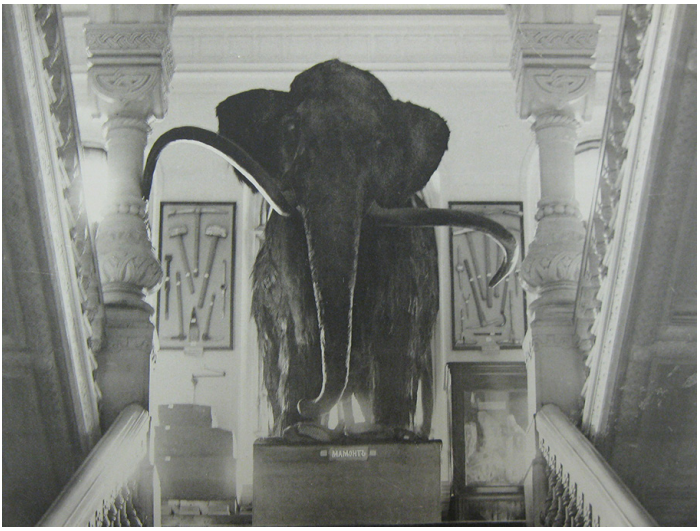

Fig. 3. The model of mammoth from the Anthropological Exhibition, exhibited at the Polytechnic Museum
Рис. 3. Макет мамонта с Антропологической выставки, представленной в Политехническом музее

After the Museum moved to its own building on Lubyanskaya Square, the number of visitors increased dramatically: from an average of 100,000 visitors attending the temporary exposition on Prechistenka each year, the number of visitors to the Museum on Lubyanka reached 5 to 6 thousands daily, especially on Sundays and holidays. The social composition of the audience changed too. While before the relocation it was mostly students of various educational institutions, the greater part of visitors to the new building comprised common people[40]. Explaining the Museum collections to the visitors in the Museum rooms became a complicated task and A.P. Bogdanov proposed a new form of educational work: Sunday explanations of the collections conducted in a specially equipped lecture hall with lectures accompanied by the demonstrations of Museum exhibits, specimens, and visual aids, expressly selected for each lecture.

During the first six months, the Sunday Explanations covered the themes of four Museum departments: Technical, Agricultural, Applied Zoology, and Educational. In 1878, the Applied Physics Department joined this programme, followed by the rest of the departments in 1879.

The IOLEAE members were fully committed to preparing and conducting the Sunday Explanations for the Museum collections. The first three such events were[41]:

[40] ARAS. F. 446. Op. 1a. D. 69. L. 27 ob.

[41] Ibid. L. 28.

— 2 October 1877: "Parasite worms" by A.P. Bogdanov and "Collection of animal foetuses" by A.A. Tikhomirov;
— 9 October 1877: "Helpful and harmful insects" by A.P. Bogdanov and "Mineral coal" by N.Yu. Zograf; and
— 16 October 1877: "Stone implements" by A.P. Bogdanov and "Lake salts" by N.Yu. Zograf.

Summarising the results of the first two years of conducting the Sunday explanations, A.P. Bogdanov wrote, "it is much easier to write a serious lecture than to muse over and conduct an explanation of particular specimens, taking into account that it must be comprehensible, simple, concise, and, at the same time, sensible" (Bogdanov, 1878: VI).

Professor K.A. Timiryazev had thus described his impressions from the Sunday Explanations at the Polytechnic Museum:

I dare say, neither in London's Kensington nor in Paris' Conservatoire have I seen a more comforting sight. You would behold there the most motley crowd <…> you could have imagined anywhere, but surely not in a lecture hall. This, however, is a fact: this crowd is the audience that intently and avidly devours every word not of a tale, not of a comic story, but of a scientific question that has become intelligible to them (Bogdanov, 1914).

Indeed, the Sunday Explanations of the Polytechnic Museum collections presented an innovative approach in the museums' science education activities. This form of working with museum visitors combined traditional explanations in museum rooms with a popular science lecture. Such form of educational work had not been practised in any foreign museum of science and technology.

The Sunday Explanations were extremely popular. Every Sunday there was a crowd of those who wanted to attend these lectures, waiting at the entrance. Usually, there were two Explanations delivered during the day, each gathering 500–600 attendees in the lecture hall. Delivering such "public lectures" required not only the extensive knowledge of subject area but also the talent of science communicator.

Should a lecturer indulge in intellectualising, imagine that he was delivering a lecture, fall into verbosity, the audience would instantly become agitated, the signs of boredom would appear, even the attempts to sneak out of the lecture hall. But the moment of the lecturer's getting carried away would pass, and he would come back down to earth and switch to a comprehensible and simple explanation using concrete specimens, and the very same audience would be all ears, — recalled an active participant in the Sunday Explanations, an IOLEAE member N.Yu. Zograf[42].

From 1878 to 1908, 1704 Sunday Explanations were conducted. The Museum reports mention 571 Explanations, 158 of which dealt with applied zoology; 143, with technology, mechanics, and chemistry; and 138, with agriculture, forestry, and botany[43].

[42] ARAS. F. 446. Op. 1a. D. 69. L 29.

[43] ARAS. F. 446. Op. 1a. D. 69. L 28 ob.

The Sunday Explanations were so popular that the Society decided to publish them as separate issues of *Izvestiia IOLEAE*, with the first such issue published as early as in 1879[44]. A total of eleven issues containing 356 Explanations were released and circulated across the country. It was the programme of Sunday Explanations that gained the Polytechnic Museum the status of the "first Russian popular university that did a vast deal to help spreading educational information among the masses" (Bogdanov, 1914).

The main obstacle that hindered the Museum's further development was the lack of exhibiting floor space. After the southern wing of the building on Lubyanka was completed, the floor spaces of the Technical, Manufacturing, Architectural, Educational, Applied Physics and Applied Zoology Departments were significantly expanded[45]. The Forest and Agricultural Departments whose floor space remained the same since the Museum's relocation to Lubyanka were badly space-constrained. For this reason, these Departments' expositions changed very little over time and their newly acquired collections were stored in the back rooms[46].

As has been mentioned, it was initially planned for the Forest and Agricultural Departments' exposition to be hosted in the pavilions erected in the Alexandre Garden. However, due to constant lack of funds, this part of the IOLEAE project of general educational museum failed to be implemented and, in 1889, the Alexandre Garden was returned to the Court Administration (Gladkikh, 2019).

Of natural historical departments whose creation and development was so ardently advocated by A.P. Bogdanov, the Department of Applied Zoology was the most successful in regard to the implementation of Bogdanov's ideas about demonstrating practical importance of natural sciences. The Department of Applied Zoology existed in the Museum from its opening to 1928. Its first head was A.P. Bogdanov who was succeeded by his followers who were also the IOLEAE members: A.A. Tikhomirov (1896–1908), N.Yu. Zograf (1908–1919), and N.M. Kulagin (1919–1928). The Department's core collections that had been handed over by the same name section of the Polytechnic Exhibition included S.A. Maslov's unique collection on Russian sericulture, Wilhelm Gottlob Rosenhauer's collection of harmful insects, and others.

The Department of Applied Zoology was one of the largest in regard to the number of exhibits and exhibiting floor space, and, in 1916, occupied eight rooms in the southern wing of the Museum[47]. This department's exposition and its collections covered the following areas devoted to different animals with a role in human life: sericulture, apiculture, applied entomology, fish-farming and fishing, fur-trapping and hunting, domestic animals (other than agricultural), and wild animals used by humans.

By the late 19th century, due to the collaboration with the Department of Ichthyology of the Imperial Society for the Acclimatisation of Animals and Plants (the Department of Ichthyology was chaired by N.Yu. Zograf who also headed the Fish-farming Commission at the Museum), the Museum's Department of Applied Zoology amassed a unique

[44] Voskresnye ob"iasneniia kollektsiĭ Politekhnicheskogo muzeia (1878–1879) [The Sunday Explanations for the Polytechnic Museum collections (1878–1879)], *Izvestiia IOLEAE* [IOLEAE Bulletin]. (1879). XXXVI(1).

[45] *Dvadt͡satipiatiletie Muzeia prikladnykh znaniĭ v Moskve* [25th anniversary of the Museum of Applied Knowledge in Moscow]. (1898). (pp. 19). Moscow: Russkaia tipolitografiia.

[46] Polytechnic Museum's Collection of Written Sources. F. 100. Op. 2. No. 16534/104.

[47] *Kratkiĭ ukazatel' kollektsiĭ muzeia* [A brief index to the Museum collections]. (1946). Moscow.

piscatory collection, which included collections on fish taxonomy and biology; collections demonstrating various fishing methods and equipment; collections on artificial fishery and fish product preservation technologies; and collections on oyster farming, crayfish farming, and malacology[48] (Fig. 4). In 1923–1924, the Department of Applied Zoology acquired new exhibits related to this line of work after the All-Russia Agricultural and Industrial Show[49].

Fig. 4. The hall of fish-farming and fishery at the Department of Applied Zoology of the Polytechnic Museum, the late 19th century
Рис. 4. Зал рыбоводства и рыболовства отдела прикладной зоологии Политехнического музея, конец XIX века

The Department's collections and exposition represented the whole range of applied aspects of zoology in a systemic way. They not only showed the animals per se (taxidermied animals, models, and alcohol-preserved specimens), their biology and behavioral patterns, but also demonstrated the entire technological chain of their utilisation by humans. This included the equipment for their capture and upkeep, devices and tools used to study these animals, as well as the types of animal products (fur, skin, feathers, meat, etc.) and relevant processing technologies. This was the realisation of A.P. Bogdanov's dream about museum exposition that "must serve as a kind of living and comprehensive book on applied science, in which the place of text and pictures is filled by objects themselves and by visual demonstrations of their characteristic features in specimens and models"[50]. It had been in no small measure due to relentless guidance and support on the part of the IOLEAE. The Society members headed this department, curated its collections, conducted Sunday Explanations, and prepared popular science editions on applied zoology.

[48] *Dvadtsatipiatiletie Muzeia prikladnykh znanii v Moskve* [25th anniversary of the Museum of Applied Knowledge in Moscow]. (1889). (pp. 20), Moscow: Russkaia tipolitografiia.

[49] Polytechnic Museum's Collection of Written Sources. F. 100. Op. 7. No. 27915/12.

[50] ARAS. F. 446. Op. 1a. D. 69. L. 32 ob.

In 1927, a zoological laboratory was created at the Department, which had also been part of Bogdanov's plans. The laboratory carried out applied research on sericulture, apiculture, fish breeding, and fur trapping[51]. Until 1928, while Prof. P.P. Petrov remained the Museum's Director, the Department of Applied Zoology and its collections were actively developing, and its exposition was being constantly enhanced.

In 1928, the Museum exposition was completely reorganised to meet the new goal of promoting industrialisation of manufacturing and agriculture. The then main departments of the Museum (Technical, Agricultural, Architectural, Applied Physics, Applied Zoology, Forest, and Educational) were reorganised into three sectors — General, Factories & Plants, and Agricultural. The collections on applied zoology were handed over to the "Promyslovyi" Department (hunting, fishing, fur trapping) in the Factories and Plants Sector, i.e. the Department of Applied Zoology ceased to exist as the Museum's autonomous division. In 1931, the Society of Friends of Natural Science, Anthropology and Ethnography also lost its autonomy and was forcefully merged into the Moscow Society of Naturalists.

The Polytechnic Museum in Moscow, which is justly believed to be founded by the Imperial Society of Friends of Natural Science, Anthropology and Ethnography, was the third oldest national museum of science and technology in the world. At the same time, with its systematised collections, assembled and further developed so as to demonstrate the practical role of natural and technical sciences, and with its extensive and largely innovative science-education efforts that spread beyond its walls as popular science editions, intended for the broadest audience, the Polytechnic Museum may be safely called the first complex general education museum, which it remained for the first 50 years of its history.

These accomplishments were made possible through the Museum's long-standing collaboration with the IOLEAE and other scientific societies. The IOLEAE members who made significant contributions to the making and development of the Polytechnic Museum included A.P. Bogdanov, G.E. Shchurovskii, V.K. Della-Vos, V.A. Cherkasskii, A.Yu. Davidov, N.K. Zenger, A.A. Tikhomirov, N.Yu. Zograf, N.M. Kulagin, and many others.

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[51] Polytechnic Museum's Collection of Written Sources. F. 100. Op. 7. Historical information ("Istoricheskaia spravka")

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Императорское общество любителей естествознания, антропологии и этнографии (ИОЛЕАЭ) и создание общеобразовательного музея в Москве

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В статье рассмотрена деятельность Императорского общества любителей естествознания, антропологии и этнографии по созданию в Москве Музея прикладных знаний (Политехнического музея). Это был первый комплексный общеобразовательный музей, в котором с помощью систематических коллекций планировалось показать прикладное значение естественных и технических наук, использование их достижений в повседневной жизни людей. Большую роль в создании музея сыграл член ИОЛЕАИ профессор зоологии Московского университета А.П. Богданов. Именно он разработал основы концепции музея прикладного естествознания, принимал активное участие в формировании его коллекций и научно-просветительской деятельности. В статье также проанализированы взгляды на создание музея и его развитие члена ИОЛЕАЭ В.К. Делла-Воса. Отличительной чертой Политехнического музея была масштабная просветительская деятельность. А.П. Богдановым была предложена новая форма просветительской работы с посетителями музея — воскресные объяснения коллекций, проходящие в специальной аудитории и сопровождавшиеся демонстрацией музейных предметов, образцов и наглядных материалов. Из-за нехватки экспозиционных площадей идею А.П. Богданова по созданию естественноисторического отделения музея не удалось реализовать в полном объёме. Наиболее успешным с точки зрения показа прикладного значения естественных наук стал отдел прикладной зоологии музея, который возглавлял А.П. Богданов и его ученики, члены ИОЛЕАЭ.

Ключевые слова: Императорское общество любителей естествознания антропологии и этнографии, Музей прикладных знаний, Политехнический музей.