

Higher Forestry Education in Estonia and Latvia before 1920

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Abstract

The principal aim of this study is to analyze the opportunities of receiving higher forestry education in Estonia and Latvia before 1920. The study relies on archival documents and published materials originating from the 19th century and from the beginning of the 20th century. The history of higher forestry education in Estonia and Latvia dates back to the beginning of the 19th century. During the 19th century Tartu University and the forestry classes of Jelgava and Riga Polytechnic Schools (Institute) successively provided forestry education. The study characterizes the organizational and theoretical aspects of forestry education in Tartu, Jelgava and Riga and analyzes the opportunities of receiving higher forestry education in Estonia and Latvia before 1920, and the connections, similarities and differences in the education provided.

Key words: higher forestry education, history of Estonian forestry, history of Latvian forestry, Tartu University, Jelgava Gymnasium, Riga Polytechnic Institute

Introduction

Estonian and Latvian history has many similarities as well as differences. The same is true for the history of higher forestry education in Estonia and Latvia. The beginning of higher forestry education in Estonia is traditionally considered to be 1920, when the Department of Forestry was opened in the Faculty of Agriculture of Tartu University. In the same year the Department of Forest Science was also formed in the Faculty of Agriculture of the Latvia Higher School (founded in 1919 on the basis of Riga Polytechnic Institute and reorganised into the University of Latvia in 1923). Therefore one common feature of Estonian and Latvian forestry history is the fact that special forestry departments were not established in either country until they became independent republics.

Nevertheless higher educational institutions teaching forestry existed in the Baltic provinces of Russia – in Estonia, Livonia and Courland (on the territory of present day Estonia and Latvia), also before 1920. Students from these institutions later worked as leading forestry officials. In fact – the first opportunities to study forestry at a higher level in the Baltic provinces were provided at the beginning and in the first half of the 19th century. At the same time the first institutions of higher forestry education and science were established in Western Europe and in Russia.

In 1807 the first lectures concerning forestry were given at Tartu University (University of Dorpat,

Yuryev), which had been reopened in 1802. Secondly Jelgava Gymnasium (Mitau' Gymnasium) and its forestry classes, which provided forestry education from 1835 until 1863, must be mentioned. Jelgava Gymnasium operated for a short period as a preparatory department of the higher educational institution of forestry in St. Petersburg. In the second half of the 19th century and at the beginning of the 20th century forestry was also taught at Riga Polytechnic School, established in 1862 as a private higher educational institution and reorganized into Riga Polytechnic Institute in 1896.

The analysis of forestry education given before 1920 is important since the development of forest science and forest management in independent Estonia and Latvia was strongly influenced by the conceptions and principles of forestry that had been formed during the 19th century and the beginning of the 20th century. Additionally, the formation of Estonian and Latvian national forestry organizations relied on the forestry officials who had received their education in the 19th century or at the beginning of the 20th century.

The earlier history of higher forestry education in Estonia and Latvia has received some attention before. T. Meikar has analyzed forestry education at Tartu University and has described the attempts to establish a training forest district or independent higher education institution of agriculture and forestry in Estonia in the 19th century and at the beginning of the 20th century (Meikar 1987a, 1987b, 1991). Several

authors have examined the work of the professorial chair of economics (agriculture) and technology, where forestry was also taught, at Tartu University (e.g. Kuum 1975a, 1975b, Järvesoo 1980b). From Latvia, different studies on Jelgava Gymnasium (e.g. Stradiņš and Strods 1975, Страдынь 1976) and Riga Polytechnic Institute must be mentioned (e.g. Rīgas Tehniskā universitāte 2002; Järvesoo 1980a; Leimanis 1972; Redlich 1987, Vasiļevskis 2003).

But thorough research covering different aspects of the history of higher forestry education in Estonia and in Latvia before 1920 is still missing. The synchronous treatment of the history of higher forestry education in Estonia and Latvia is essential since the impact of territorial adjacency and socioeconomic similarities created connections between Baltic provinces that are also reflected in the history of forestry education. Therefore the aim of the current study is to analyze the opportunities of completing higher forestry education synchronously in Estonia and Latvia before 1920, to compare Estonian and Latvian history, and to identify the connections, similarities and differences in different aspects of forestry education.

Materials and methods

Material concerning forestry education at Tartu University was obtained from archival documents such as teaching and examination plans from Tartu University, correspondence about the students of Tartu University who continued their studies in St. Petersburg, and notes written by two students in forestry lectures from the first half of the 19th century. Secondly, published material originating from the 19th century and from the beginning of the 20th century was used (e.g. statutes and constitutions of the university and lecture schedules) (Anonymous 1799, Kayserliche Universität zu Dorpat 1803, Kaiserliche Universität in Dorpat 1802–1893, Императорский Юрьевский Университет 1893–1918).

For the analysis of forestry education in Jelgava, materials published on the 50th and 100th anniversary of the institution (Braunschweig 1825, Dannenberg 1875) were used. Articles and a hand book compiled by the forestry lecturer A. F. Bode were used as well (1840a, 1840b, 1856, Бодэ 1838).

Information on the teaching of forestry at Riga Polytechnic School/Institute was obtained from the curricula of Riga Polytechnic School, statutes of the institution and examination regulations (Polytechnische Schule zu Riga 1862–1895, Rigasche Polytechnische Schule 1862, 1871, 1879, 1887a). Also the books concerning the history of the institution and published on its 25th and 50th anniversary (Rigasche Polytech-

nische Schule 1887b, Rigasches Polytechnisches Institut 1912) and publications from the department of agriculture were employed (Рижский Политехнический Институт 1915–17).

Additional data were provided by the articles regarding forestry education in the Baltic provinces, published in different magazines (*Baltische Wochenschrift*, *Allgemeine Forst- und Jagdzeitung*, *Neue Baltische Waidmannsblätter*) from the 19th century and from the beginning of the 20th century.

Data on the foresters who studied in Tartu, Jelgava or Riga were gathered by the examination of student data books – Album Academicum (Dannenberg 1875¹, Hasselblatt and Otto 1889, Kodasma *et al.* 1986–1988; Rigasches Polytechnikum 1912, Rīgas Politehnikums 1938) and the lists of student corporations (Dorpatsches Gymnasium 1879, Bernewitz 1885, Ottow 1908, Gernet 1910, Kröger 1910, Lingen and Rieder 1956, Fahrbach 1961, Helb 1972, Philisterverein der Livonia 1972, Gross and Meyer-Eltz 1981).

Table 1 provides an overview of the studied educational institutions, the time periods, duration and profile of forestry-related studies and estimated number of students who were later associated with forestry.

Results

First half of the 19th century

Tartu University

The question of teaching forestry at university level in the Baltic provinces was raised at the end of the 18th century when the re-opening of Tartu University was under discussion. An example was provided by German universities where teaching of agriculture and forestry had been started within the discipline of cameral science in the 18th century. Additionally, the end of the 18th century formed a period when forestry started to develop into the independent branch of economy in the Baltic provinces that caused the rise of interest in the discipline. In 1799 the Russian tsar Paul I confirmed a plan that prescribed among other things the establishment of a professorial chair of economics, cameral- and forest sciences and statistics in the faculty of philosophy at Tartu University (Anonymous 1799: 12). In December 1800 the tsar reconsidered the former decision to open the university in Tartu. Jelgava in Courland was regarded as a new university town and Jelgava's academy, established in 1775, foreseen as the basis for the university. The assassina-

¹ The book compiled by K. Dannenberg on the history of Jelgava academy contains also the lists of students.

Table 1. Forestry teaching in the studied educational institutions from the beginning of the 19th century until the beginning of the 20th century

	Tartu University		Jelgava Gymnasium	Riga Polytechnic School (Institute)	
Year of establishment/ reopening	1632; reopened in 1802		1775 (as <i>Academia Petrina</i>)	1862 (since 1896 institute)	
Chair/ Department	Chair of economy, technology (and civil-engineering)	Chairs of botany and zoology	Forestry classes	Department of agriculture	Department of land surveying
Forestry teaching in the first half of the 19 th century	1807–1816 – courses on the principles of agriculture, including forestry; 1817–1864 – courses on forestry, held usually over a year	1834–1885 occasionally courses on forest botany, forest entomology, forest zoology	1835–1843 – different courses on forestry and natural sciences, practical exercises; 1843–1863 – forestry classes as the preparatory department of St. Petersburg Institute of Forestry and Land Surveying, teaching of preparatory subjects		
Forestry teaching in the second half of the 19 th century and in the beginning of the 20 th century	1875–1916 – occasionally courses on forestry			1868–1918 forestry course; after allocation of forest district in 1906, practical exercises in the forest	1876–1888 forestry course
Number of students who were later associated with forestry	103		70	56	

tion of Paul I in March 1801 brought about new changes, as his successor Alexander I decided to open the university in Tartu again. According to the university constitution from 1803 a professorial chair of economics (agriculture), technology and architecture was formed (Kayslerliche Universität zu Dorpat 1803: 19). In 1807 Johann Wilhelm Krause, the first professor of this chair lectured on the principles of agriculture, also including forestry. In the same year a course binding the themes of agricultural technology and forest technology was started. In 1817 a special course about forestry was included in the curriculum of this chair and from 1817 to 1864 the forestry course was taught regularly but under different names. From time to time there were also a few courses connected with forestry held in other chairs, *i.e.* in the chair of botany or zoology (Kaiserliche Universität in Dorpat 1807–1864). On the basis of archival materials (EHA F 1423, 1, 69; F 1874, 1, 770) it can be said that the most thorough forestry teaching at Tartu University before 1920 is related to the tenure of Professor J. F. L. Schmalz, who assumed the professorship of economics and technology in 1829 and remained at Tartu University until 1845. Distinguished scientist of agriculture, Professor Schmalz covered in his lectures the subjects of dendrology, forest biology, silviculture, forest management

planning, forest economics and forest technology. During his tenure a student originating from Courland, Julius Jürgensohn studied from 1829 until 1833 at Tartu University and concentrated on forestry in particular. After leaving Tartu he worked as a chief forester in the state forest in Courland (Hasselblatt and Otto 1889: 191). One of the aims of professor Schmalz was to connect theory and practical training. Under his leadership an agricultural institute was established at Vana-Kuuste estate in 1834 where forestry was also taught. The Vana-Kuuste estate, which was rented for establishing the Institute had a sufficient area of forest that was well managed according to the standards of the time. Professor Schmalz found its coniferous and deciduous mixed forest suitable for founding a forestry test and study base, but the lease contract did not allow this possibility. An annual quantity of firewood was cut for the estate and the students were allowed to move freely in the forest but any other kind of activity in the forest was prohibited. As the estate was for sale, Schmalz advised the university to buy it in order to found a forestry and agricultural institute, where according to his plan the forestry classes of Jelgava Gymnasium could also be delivered. The state did not support the idea. Schmalz's request to found a forestry institute and to establish a training and

experimental forest district near Tartu in state-owned Kärkna estate was also denied (Meikar 1991: 2634–2638). The institute at Vana-Kuuste had to be closed in 1839 and Professor Schmalz's plan to establish a special institute of agriculture and forestry could not be realised.

In the first half of the 19th century a student from the faculty of philosophy could choose agriculture and forestry as a major subject, graduating from university with the degree of graduated student or candidate. For receiving the degree of graduated student or candidate one also needed to pass an exam in forestry. In principle one could apply for a Master's degree in agriculture and forestry but not for a doctoral degree (EHA F 402, 4, 666, p. 77–79, 92–93).

Although Tartu University did not officially train forestry specialists and only one course on forestry was taught regularly, it was possible for the students in the first half of the 19th century to get basic knowledge about forest management at the university, which then permitted them to work as leading forestry specialists in the state or private sectors in Estonia, Livonia, Courland or in Russia. At least 28 foresters who studied at Tartu University in the first half of the 19th century can be named.

Forestry education in Latvia

The first note on forestry education in Latvia originates from the beginning of the 19th century and is connected with the name of Thomas von Bluhm, the higher chief forester (*oberforstmeister*) of Estonia and Livonia. In 1798 with the formation of Forest Department the state forestry organisation was established in Russia. *Oberforstmeisters* (higher chief foresters) and *forstmeisters* (chief foresters) were appointed to the head of local forestry organisations in provinces and districts, respectively. One of the duties of *forstmeisters* was to carry out training of two forestry pupils (Meikar 2007: 119). Although no such obligation was imposed to *oberforstmeisters*, Livonian and Estonian *oberforstmeister* T. von Bluhm established a forestry school in Riga that was merged to Orlovski forestry institute in 1810 (the latter united with the forestry school of Tsarskoje Selo in 1811 with the formation of St. Petersburg Forestry Institute) (С.-Петербургский Лесной Институт 1903: 22). Nevertheless, thorough forestry teaching in Latvia in the first half of the 19th century is connected with the forestry classes of Jelgava Gymnasium.

Jelgava Gymnasium

The educational institution in Jelgava (academic gymnasium or *Academia Petrina*) was established in 1775 and it acted as an intermediate institution between

gymnasium and university. The level of natural sciences education in Jelgava was high (Страдынь 1976: 192–202) and at least seven people worked as forestry specialists after graduating from Jelgava. The data concerning the information on students who studied in Jelgava contains an interesting fact that Johann Friedrich Groeger, who later worked as a forester in Courland, studied forestry (*res forestalis*) in Jelgava (Dannenberg 1875: 98), in 1804, although according to the available information, forestry was not taught separately in Jelgava at that time.

Jelgava's role in training foresters grew considerably with the opening of forestry classes in 1835. The main reason that led to the opening of forestry classes was the need for educated forestry specialists to improve the management of forests (Stradiņš and Strods 1975: 111). The students of the lower forestry class were taught basically the same subjects as in the penultimate class of gymnasium. Only Greek and Roman literature were left out and supplementary courses on mathematics, Russian, German, technical drawing and natural sciences were included. The curriculum of the higher forestry class contained forest botany, silviculture, forest value assessment, forest technology, forest protection, book keeping in forestry, mathematics with land surveying, technical drawing, mechanics, chemistry, physics, Russian and German. Different practical exercises were also included in the curriculum (Dannenberg 1875: 279, Bode 1840a: 125–126). From 1836 to 1841 forest scientist A. F. Bode worked as an instructor of forestry subjects in Jelgava. A. F. Bode valued the importance of practical exercises, just like his colleague J. F. L. Schmalz at Tartu University. Under his leadership, excursions to the local forest districts, as well as exercises in land surveying and working in the garden of the school took place. For the summer vacation a longer excursion was organized for the students of the higher forestry class with the aim to acquaint them with forest and peat management away from Jelgava and to revise their knowledge in botany, zoology and entomology (Bode 1840a: 125, 1840b, Бодэ 1838).

In 1841 A. F. Bode accepted the post of professor of forestry in St. Petersburg Institute of Forestry and Land Surveying, which brought about the transformation of Jelgava's forestry classes into a preparatory department for that institute. According to the new curriculum confirmed in 1843 the students of the forestry classes were lectured on zoology, general botany, organic and inorganic chemistry, entomology, ornithology, forest botany, architecture, geodesy and mineralogy in addition to the gymnasium courses. Forestry subjects were left out of the curriculum of the forestry classes, but after graduation the students

could continue their studies in St. Petersburg (Dannenberg 1875: 288; Bode 1856: 305).

In 1863, influenced by the reorganization of the St. Petersburg institute into Forestry Academy, it was decided to close Jelgava's forestry classes. Over almost 30 years when the forestry classes operated, at least 102 students attended the classes and at least 70 of them were later associated with forestry. Most of the foresters who had started in Jelgava continued their studies in St. Petersburg; many of them later worked as forestry specialists in Russia, more than 10 of them in Latvia and at least three people in Estonia, in Pärnumaa (Dannenberg 1875).

Second half of the 19th century and the beginning of the 20th century

Tartu University

While in the first half of the 19th century there were quite good opportunities to study forestry in Estonia and in Latvia, the second half of the century, especially the 1860s brought about some changes. First of all the forestry classes of Jelgava were closed. Secondly, after 1857 forestry became a subsidiary subject at Tartu University, the compulsory forestry exam was removed from the curriculum of the students of agriculture, and from 1864 regular teaching of forestry at Tartu University ceased (EHA F 402, 4, 751, p 155, Kaiserliche Universität in Dorpat 1864). As one of the reasons that led to the diminishing of forestry teaching at Tartu University the opening of the polytechnic school in Riga in 1862 and the convergence of the teaching of technical and practical disciplines to that institution can be named. At Tartu University there were a few courses connected to forestry held in different chairs over the next years and also the instruction of forestry was restored in the chair of agriculture (former economics) and technology. But it can be concluded that the instruction of forestry at Tartu University had lost its former position. At the same time rapid development was taking place in forestry, which also placed higher demands on the qualification of forestry specialists. This is why the number of people who, after a few years of study at Tartu University, decided to continue their studies in Russia or in Germany increased considerably. The majority of those 75 students who studied at Tartu University in the second half of the 19th century or at the beginning of the 20th century and were later associated with forestry, continued their studies in Russian or German forestry academies and institutes (mostly in St. Petersburg or in Tharandt) or under the leadership of a local head forester. At the end of the 1850s and at the beginning of the 1860s a special course of forestry for university graduates (with duration of

16-17 months) was opened at St. Petersburg Institute and it promoted the continuation of studies in Russia (EHA F 384, 1, 1000, p. 23–44; С.-Петербургский Лесной Институт 1903: 107–118). The majority of the students who made use of this opportunity later worked as leading forestry officials in Russia.

Nevertheless, there was a growing demand for a local institution of higher forestry education in the Baltic provinces. In 1877 a journal *Baltische Wochenschrift* published an anonymous proposal for the Livonian Public Benefit and Economic Society to petition the curator of Tartu education district about the institution of a chair of forestry at Tartu University (Anonymous 1877: 275–276). The proposition was rejected and although the articles in the local press later also emphasized the need for educated chief foresters and leading forestry officials, it was not until 1919 during the establishment of the national university in Tartu, that the idea to institute a forestry department at Tartu University surfaced once again. Instead, Riga Polytechnic School was regarded as a potential institution for educating the leading forestry officials.

Riga Polytechnic School/Institute

The teaching of forestry to the students of the Department of Agriculture at Riga Polytechnic School since 1868 can be seen as a counterbalance to the closure of Jelgava's forestry classes and the diminishing of forestry instruction at Tartu University. Initially the forestry course was assigned to the specialist of agriculture Carl Georg Franz Hehn, similarly to how forestry teaching was organized at Tartu University (Polytechnische Schule zu Riga 1868: 15–17). However, this kind of arrangement was not satisfactory, as forestry as an independent branch of industry needed to be taught by a forestry specialist. In 1878 forest scientist Eugen Heinrich Ostwald was appointed to the post of assistant professor of forestry and in 1904 Bronislav Poncet de Sandon, who had graduated from the St. Petersburg Forest Academy and had worked as a forestry official in Latvia became his successor. In 1907, when the chair of forestry was formed in Riga, B. Poncet de Sandon was named the associate professor of forestry.

The appointment of a forestry specialist was not accompanied by an increase in the number of forestry subjects at first. Forestry was still taught to the students of the Department of Agriculture and since the academic year 1876/77 to the students of land surveying² as one basic course (Polytechnische Schule zu

² The department of land surveying existed only a short period in Riga Polytechnic School.

Riga 1876–95). The increase in the teaching forestry with the involvement of practical exercises became possible only after the allocation of a forest district to the institution. In 1877 the state manor of Pētermuiža (Peterhof) was allocated to the Polytechnic School permitting the establishment of a training and experimental farm, but the repeated requests for the allocation of a forest area were answered only in 1906 (Понсетъ де Сандонъ 1915: 97–98). Under the leadership of professor Poncet de Sandon forest management works and first observations and experiments were initiated in the forest district that covered 1245 hectares and was situated near the training and experimental farm of Pētermuiža. This enabled the students to collect material for final thesis, in addition to Pētermuiža farm, also from the forest district, e.g. in 1915 Herbert Bruttan defended his final thesis on the subject of natural regeneration of conifers on felling areas of Pētermuiža forestry training district (Аноним 1916: 13). The allocation of the forest district promoted the wish to establish a special forestry department at the institute. According to plan the forestry department should have been opened in the autumn of 1915 (Базаревский 1916: 36) but the outbreak of the First World War and the evacuation of the Institute to Moscow prevented it.

Altogether at least 56 people who studied in Riga and were later associated with forestry can be identified. Most of them continued their studies in Russia or Germany, under the tutorship of head forester in the Baltic provinces or, since 1920, at the University of Latvia, working later mostly in Russia or Latvia. But at least nine people who studied in Riga later worked in Estonia as foresters.

Discussion

The connections between Baltic provinces (Estonia and Latvia) regarding forestry history were formed throughout the 19th and the beginning of the 20th century by people who studied in Estonia and worked in Latvia or *vice versa*. When comparing Estonia and Latvia in regard to higher forestry education before 1920 it can be concluded that there were quite good possibilities to study forestry in the Baltic provinces in the first half of the 19th century. In Estonia Tartu University was a central institution at that time, especially during the tenure of professor Schmalz, who had had set as his goal to improve the teaching quality and involve practical exercises. If the plans of professor Schmalz had been accomplished, a special institute of agriculture and forestry would have been established in Estonia. In Latvia the period when A. F. Bode was working in Jelgava and the time when the

forestry classes of Jelgava were operating as a preparatory department of the St. Petersburg Institute should be considered significant.

In the second half of the 19th century the possibilities to study forestry at university level diminished in Estonia. Forestry teaching became more and more insignificant at Tartu University and that tendency persisted until the formation of Tartu University in independent Estonia. Concurrently in Latvia a new development in forestry teaching was initiated in Riga Polytechnic School that later provided a basis for the instruction at the University of Latvia. Links were forged between forestry education in Riga Polytechnic School and forestry instruction at the University of Latvia by E. H. Ostwald, the assistant professor of forestry in Riga Polytechnic School and afterwards the professor of forestry in the University of Latvia. Additionally A. Kalniņš, another instructor from the Forestry Department of the University of Latvia, had also studied at Riga Polytechnic Institute. A connection of this kind cannot be distinguished in the history of Tartu University, as the professors from the Department of Forestry of Tartu University lacked earlier connections with the institution

Nevertheless, a real centre of higher forestry education could not be developed before 1920 in either Latvia or Estonia. Both countries remained dependent on Russian and German forestry academies and institutes throughout the 19th and the beginning of the 20th century because many people who had initiated their studies in Tartu, Jelgava or Riga completed their education in forestry in Russia or in Germany. The institution of higher forestry education in St. Petersburg must specifically be singled out, but also the forestry academies in Germany – Tharandt, Eberswalde, Münden, etc. Foreigners, who had studied forestry outside the Baltic provinces, also found jobs and a new home in the Baltic provinces. The dependency on foreign forestry academies and institutes was problematic in many ways, since those who had headed foreign academies or institutes quite often did not return to their homeland. Secondly, the instruction in forestry in foreign educational institutions did not always accord to the conditions in Estonian or Latvian forestry. The best solution under these circumstances was the establishment of a local higher forestry educational institution, which occurred in Estonia as well as in Latvia in 1920.

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ВЫСШЕЕ ЛЕСОХОЗЯЙСТВЕННОЕ ОБРАЗОВАНИЕ В ЭСТОНИИ И ЛАТВИИ ДО 1920 ГОДА

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Резюме

Основной целью исследования является анализ существовавших возможностей получения высшего лесохозяйственного образования в Эстонии и Латвии до 1920 года. Исследование базируется на архивных материалах и публицистических источниках 19-го – начала 20 века. История высшего лесохозяйственного образования в Эстонии и Латвии начинается в подходе к началу 19 века. В течение 19 века лесохозяйственное образование, один за другим проводили Тартуский университет, лесные классы гимназии Елгава и Рижский политехникум (Политехнический институт). В исследовании выявлена характеристика структурных и содержательных сторон обучения в Тарту, в Елгаве и в Риге, анализируются возможности получения высшего лесохозяйственного образования в Эстонии и в Латвии до 1920 года, приводятся их сходные черты и различия.

Ключевые слова: высшее лесохозяйственное образование, история лесного хозяйства Эстонии, история лесного хозяйства Латвии, Тартуский университет, гимназия Елгава, Рижский политехнический институт.