

CHRONICLE

Higher forestry education in Lithuania: 75th anniversary

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The Forestry faculty is one of the oldest faculties in the Lithuanian University of Agriculture. In 1997, it will celebrate the 75th anniversary of the higher forestry education. During this quite long time period the science of forestry was fostered by prominent personalities. Diplomas of high education were granted to 2385 foresters. However, this period was not always favorable for the productive work of foresters. We can distinguish four phases, when looking at the development of the higher forestry education in Lithuania.

The beginning of the higher forestry education

The Section of agronomy and the Department of forestry were decided to be established at Lithuanian university, whose inauguration was on 16 February, 1922. On 21 June of the same year the council of the Faculty defined and confirmed more exact names of its sections, taught subjects, and rules of the educational program. The Section of agronomy was called the Section of agronomy-forestry, taught subjects were divided into series of subjects. 25 obligatory general and special courses were planned in the series of the lectures of forestry.

In the autumn of 1922 the first students were accepted to the Section of forestry, followed by the second group of students in the autumn of next year.

Since January 29, 1923 Prof. Povilas Matulionis had worked in the Department of forestry, and later became rector at the Academy of Agriculture.

After long discussions and considerations in the summer of 1924 it was decided that a separate university for agriculture specialists should be established – the Academy of Agriculture in Dėtnuva. The statute of the Academy was approved on 31 July, 1924 and announced on 3 September, 1924 in Lithuanian Seimas. According to the statute, Sections of agronomy and forestry were founded. The Lithuanian University did away with the Section of agronomy-forestry. At the moment of inauguration of the Academy on 15 October, 1924, 26 students studied in the Section of forestry (4 of them were external students). 14 1st year students began their studies. 4 students came from Lithuanian University to continue their studies to the second year and 8 students came to the third year. In autumn of the next year 16 new students entered the studies.

According to the statute of the Academy education lasted for seven semesters – three and a half years. General lectured subjects covered both specialities at the same time. Special subjects of the forestry section were divided into 3 departments of: Silviculture (headed by Assoc. Prof. Antanas Rukuiža), Forest management (headed by Prof. P. Matulionis), and Forest utilization (headed by Assoc. Prof. Antanas Gravrogkas). A little later (in 1926) the Department of special silviculture was established, which was headed by Assoc. Prof. Vladas Vaitkus. In addition to the mentioned above persons, special courses were taught by Prof. Juozas Tonkūnas, Prof. Vincas Vilkaitis, Marijonas Daujotas, Assoc. Prof. Jurgis Elisonas, Assoc. Prof. Pranas Jucaitis, Assoc. Prof. Pranas Viktoras Raulinaitis, Assoc. Prof. Vincas Taujenis, Stanislovas Mastauskis and others.

For the educational purposes the rooms of general silviculture, forest management, forest technology and wood technology were established at departments of the Forestry section. There were no Lithuanian textbooks in forestry, except the works of Prof. P. Matulionis and his translations from Russian. Students had to use Russian, German and other foreign books in libraries.

In 1924, a training forest enterprise was set up with an area of 2474 hectares. It was assigned "to help professors for making experiments and students for doing practical work, to be an example of good forest management, according to scientific requirements and adopted to local conditions". Students themselves established arboretum with an area of 2.5 hectares in 1925, and which later was enlarged to an area of 5.5 hectares. As far back as 1924, the students during practical training of forest plantation created a nursery garden of 1.5 hectares, which was enlarged to 2.8 hectares in 1926.

Practical studies took place in other places of Lithuania too. For example, the practical training in forest mensuration was carried out in the forests of Užventis, and the practical training in mechanical wood technologies took place in the sawmill of Saldutiškis. During the educational excursions students visited the peat-bog of Ežerėlis and learned about its exploitation, they looked round the sands of Pažaislis and learned about the supporting of sands, as well as visited enterprises of chemical wood technologies in

Prienai and Punia. The excursion to Finland was organized in June of the same year, it was lead by Prof. P. Matulionis and Prof. Viktoras Ruokis. The students visited towns and natural monuments, institutions of forest research and forest stands, nursery gardens and enterprises of wood treatment, as well as other interesting places. In the end of the year, students visited the Department of forests (Ministry of agriculture) and learned about its activities.

The activity of Forestry sector, so successfully began, didn't last long. By the decree of the Cabinet of Ministers of 11 August, 1926, during the school year of 1926/1927 students of agronomy and forestry had to study general subjects at the Section of mathematics and nature at the Lithuanian University, and for special studies they had to return to Academy. After a year the Ministry of Agriculture was considering the idea of the exclusion of the Forestry section. There were many reasons for that, but the biggest recognition received the claim, that Lithuania did not need so many foresters, and after a short time there would be a redundant number of foresters. Besides, the existence of the Section of forestry caused the shortage of study rooms, and it delayed the growth of the Section of agronomy. If there was a need for foresters in Lithuania, it was said, they could be trained in foreign Universities. On 5 May, 1927, the Cabinet of Ministers decided to close the Section of forestry. There was no matriculation that year. Those who wanted to continue studies of forestry, after basic studies at the Lithuanian University, could not return to Academy. Thus, the forestry students, who began their studies in 1925, were the last ones. After they had finished the special courses, forestry rooms were reorganized, departments eliminated, professors and subsidiary personnel dismissed. On December 1, 1928 Prof. P. Matulionis was dismissed from his duties, and on 31 December the Section of forestry ceased to exist. Its rooms were taken by the agronomy section, and its training appliances and a part of forestry books were given to Alytus forestry school (founded in 1927). The nursery garden was eliminated, and training enterprise were transferred to Kėdainiai Forest enterprise.

According the statute of the Academy, students had to pass the semestrial exams of obligatory subjects, as well as the diploma exams of forest plantation, forest management, forest technology, wood technology and peat industry (there was no semestrial exams of these subjects). After the eliminating the Forestry section, there was established the particular order and terms of exams, as well as terms for defending of diploma works.

The short period of the existence of the Forestry section had seen four groups of forestry graduates: 8 in 1925, 4 – 1926, 14 – 1927, 15 – 1928. The established terms of the defending of diploma works were prolonged. Juozas Rauktys was the first to be granted the diploma of the

higher education in 1928, and the last diploma was granted even in 1937. The total number of 32 graduates were granted the diplomas of forestry education at the Academy.

The first steps of the forest science were made with the help of the Forestry section and by efforts of Prof. P. Matulionis. Long-term observations of Lithuanian forests and large experience in managing forests were generalized in books "How much wood can be cut in a forest" (published in 1924), "Selective wood-cutting of a forest" (published in 1925). Classification of Lithuanian forest sites and the way of estimating the annual cutting norm of the forest were worked out in the former, and the idea of selective cutting of forests was scientifically proved in the latter. One cannot argue the significance of the articles by Prof. P. Matulionis, which appeared in periodical press about the Lithuanian nature and its treasures, mountainousness, soils, flora etc. The first experiment of forest increment measurement had been done at four small sample plot in the park of the Academy under the management of Prof. P. Matulionis, and the experiments of stands thinings had been developed in the training forest enterprise were lead by Assoc. Prof. A. Rukuiža. But after the elimination of the Forestry section the works ceased and were not summarized. After the elimination of the Forestry section a number of scientific articles by the former students (Mykolas Jankauskas, Jonas Kuprionis and others) were published in periodical press. The articles were based on the base of their diploma works, and they had considerable influence on the development of the forest science in Lithuania.

Restoration of the higher forestry education

The prognosis of the Ministry of Agriculture and the Forest department about the redundancy of the specialists of forestry did not come true, and soon these specialists were in demand. A part of the forestry graduates went to work to forest industry and trade, the other part chose the pedagogical career or other work, and only several persons completed their forestry studies in foreign universities (from 1931 to 1938 – 7 persons). For this reason, the idea about the restoration of higher forestry education was born again. This idea was accomplished only after ten years, when the authorities of the Ministry of Agriculture and its Forest department had been changed, then foresters and broader society succeeded in convincing Lithuanian Seimas and Government to recover the training of forestry specialists at the Academy of Agriculture. In the summer of 1938 the matriculation to forestry section was announced again, and in 20 of September 25 first year students began their studies. Order of studies and its terms were not changed. Basic subjects were taught in common with the specialists

of agronomy, and the subjects of forestry (according to the amendment in statute of the Academy of 16 September, 1938) were transferred to the Departments of General silviculture, Forest plantation, Forest technology, Wood technology, Forest mensuration and management, Wood industry and trade, Geodesy and land-reclamation.

In 1939, 25 students were accepted to the first year course. It was clear, that owing to increasing of the number of students, soon the Academy would lack room. For this reason and other, it was decided to move the Forestry section from Dotnuva to Vilnius, leaving it in the Academy of Agriculture. The secretary of Academy, who acted as vice-rector, Assoc. Prof. Antanas Vasiliauskas, was responsible for the translocation of the Forestry section to Vilnius. Although it was not easy to get facilities for education and dormitories for students in Vilnius, but the necessary premises were got by efforts of the leadership of the Vilnius University. On October 1, 1940 first, second and third year students began to study their special courses in Vilnius, and 40 students (accepted to the first year studies in the same year) were left to study their general courses in Dotnuva. The departments of the Forestry section were reorganized in 1941. Instead of earlier 7 departments were formed 5 such as: General silviculture (headed by Prof. V. Vaitkus), Forest plantation (by Assoc. Prof. J. Kuprionis), Forest mensuration (Assoc. Prof. Jonas Vilčinskas), Mechanical wood technologies (Assoc. Prof. A. Vasiliauskas) and Chemical technologies (Assoc. Prof. Dr. Stasys Kripas).

There were no significant changes in the process of studies during the Soviet years. As in all other Lithuanian Universities, two new subjects were introduced: Marxism and Leninism, and Russian. Instead of political economics – political economics of Marxism.

After the German occupation, the Section of forestry was excluded from the Academy of Agriculture and from 15 October, 1941, it was joined to the Faculty of mathematics and nature at the Vilnius University. The Forestry section was headed by vice-dean of this faculty Assoc. Prof. A. Vasiliauskas. The Forestry section was reorganized into the separate Faculty of the Forest Sciences on 1 September, 1942. A. Vasiliauskas became dean and J. Rautkys vice-dean of the Faculty. Before the closing of the University in March 17, 1943, the Faculty had consisted of the following departments: General silviculture (headed by Assoc. Prof. J. Kuprionis), Forest technology (by Assoc. Prof. Dr. S. Kripas), Forest protection (by Prof. J. Rautkys), Forest utilization (by Assoc. Prof. A. Vasiliauskas), and Forest management (by Assoc. Prof. J. Vilčinskas). In addition to the mentioned above dean, vice-dean, and heads of the departments, special and basic courses were taught by Prof. T. Ivanauskas, Prof. Antanas Minkevičius, S. Mastauskis, Antanas Rubikas, Assoc. Prof. Dr. Jonas Dagys, Assoc.

Prof. Dr. Kazys Daukšas, Dr. Povilas Garmus, Vytautas Žemkalnis-Landsbergis and other lecturers.

In 1941 an arboretum for educational purposes with an area of 20 hectares was started to be created by efforts of students near the Botanical park, and a nursery garden in the Vingis park. The practical works of special courses were done in the training forest enterprise in Trakai with an area of 8235 hectares. It was much cared for the acquiring and producing of training appliances; some of them left until present time. The number of Lithuanian printed material had increased a little: "Dendrology" by J. Rautkys published in (1938), as well as a number of valuable scientific and practical articles, which were published in the magazine "Mūsų girios" ("Our Forests"), that was put out regularly 1929-1940 and 1943-1944.

During the German occupation 3 groups of students graduated from the Vilnius University. The first group of 20 students graduated from the Faculty of mathematics and nature; they wrote their diploma projects, defended them and received diplomas in June of 1942. The second group of graduates completed the forestry course just before the closing of the University on March 15, 1943, but they got the permission to pass their diploma exams in the end of May. Out of 17 foresters who passed the diploma exams, 10 wrote diploma works and were granted the diplomas. The third group of 13 foresters completed the course, which was hastened and half legal, and passed their diploma exams on December of 1943, and on March of 1944. Only two students wrote their diploma works. It should be noted, that the diplomas of forestry education granted during the German occupation were not acknowledged by the Soviet system of education.

Lecturers of special subjects were doing research works as much as they could under the circumstances. Assoc. Prof. J. Kuprionis continued with the research of seeds of trees, Prof. J. Rautkys investigated the damage to spruce stands of the cold winter of 1939/1940. He studied the flora of eastern Lithuania too. Assoc. Prof. J. Vilčinskas studied alder stands and the history of Lithuanian forestry. The results of the research works were announced in "Žemės ūkio metraštis" 1 t. 1-2 sąs ("Chronicle of Agriculture") and in the magazine "Mūsų girios" ("Our Forests").

When the front line moved to the west, the Faculty of forest sciences was restored at the Vilnius University on September 13, 1944; the school year began on 10 of October. The beginning of studies was very difficult. The buildings of the University were devastated and the teaching rooms were plundered. The war scattered lecturers and students, some of them were cut off from Vilnius for a longer time, others (among them was about a half of the teaching personnel) moved to the West. The largest weight of restoration fell on dean Prof. V. Vaitkus (who worked in

this position from 1944 till 1946), on vice-dean chief lect. Algirdas Končius (who worked as vice-dean from 1.1.1945 till this post was eliminated in 1.5.1947), and on the first lecturers of the Faculty.

The matriculation of students was not limited in the beginning, but since 1947 the limit of 50 first year students was established.

Assoc. Prof. M. Jankauskas had been dean of the Faculty from 1947.

There had been 3 departments in the Faculty of forest sciences before its transfer to the Academy of Agriculture: Silviculture (headed by Prof. V. Vaitkus), Economics and organization of forestry (by Assoc. Prof. M. Jankauskas), and Forest protection and forest plantation (by chief lect. A. Končius, later chief lect. P. Garmus) departments. The special subjects were taught by Prof. T. Ivanauskas, Prof. A. Minkevičius, Prof. V. Vaitkus, and by chief lecturers Jonas Alekna, Mikalojus Lukinas, Andrius Milaknis, Bronius Rugelis, Vincas Stinskas and Leonardas Šernas. Antanas Rubikas and Povilas Vilkus lectured for a short time (1944-1945) in the Faculty. Both of them were subjects to repression – they were dismissed from their duties.

Practical training of students were done in the nursery of the Vingis park and in arboretum. The both places were supplemented with new kinds of trees and brushes. The practical training were also performed in Trakai forest enterprise.

The education lasted for 10 semesters. In the post-war period three groups of graduates, who had already began their studies during the German occupation, graduated from the University: 1 – in 1947, 4 – in 1948, 9 – in 1949.

Restored Lithuanian Academy of Agriculture

According the decree by the Ministry of High Education of USSR of April 5, 1949, the Faculty of forest sciences was moved and transferred from the Vilnius University to the Academy of Agriculture in Kaunas. In September 1, 1949, the Faculty (then the Faculty of forest husbandry) started its studies as constituent part of the Kaunas Academy of Agriculture. Till 1952 dean of the Faculty had been Assoc. Prof. M. Jankauskas. M. Lukinas was associate dean afterwards, and since 1952 Assoc. Prof. S. Mastauskis was appointed as dean, who was changed by Assoc. Prof. Antanas Latvelis in 1956. When S. Mastauskis had went to a course for improving his qualifications, once again M. Lukinas was assigned to the post of associate dean.

Number of the first year students was limited to 25 in 1955. Soon the total number of students decreased in the Faculty. As the result of this, in 1957 the responsibilities of deans of the Faculty of forest husbandry and the Faculty of agricultural economics were merged. Assoc. Prof. K.

Jasiūnas became dean for the both Faculties. The number of the first year students increased to 50 in 1964. The next year a post of vice-dean was reestablished. Assoc. Prof. Pranas Džiaukštas was assigned to be the vice-dean of the Faculty in 1965. Later (1968-1990) Assoc. Prof. P. Džiaukštas became dean of the Faculty.

When the Faculty of forest husbandry was transferred to the Academy in the summer of 1949, it had 3 departments: Silviculture, Forest economics and organization, as well as Forest protection. The Department of forest protection had been working only until 1952. In the beginning it was managed by chief lect. I. Šernas, and later by Prof. T. Ivanauskas. In 1952 the department of Forest plantation was founded, but soon (1953) it was merged with the Silviculture department. The Silviculture department was headed by chief lect. V. Vaitkus (1949-1950), later by Assoc. Prof. M. Lukinas (1951-1952), Prof. T. Ivanauskas (1952-1955), Assoc. Prof. V. Stinskas (1955-1967), Assoc. Prof. Algirdas Navasaitis (1967-1977), Assoc. Prof. Pranas Jakas (1977-1988), Prof. Antanas Juodvalkis (1988-1996) and Prof. Edvardas Riepšas (until now). In 1987 this department became the department of Silviculture and nature protection and in 1995 – department of Silviculture.

In time, the name of the Department of economics and organization was changing. In 1963 it became the department of Forest economics and forest management, and in 1977 – the department of Forest management. This department was headed by Assoc. Prof. M. Jankauskas (until 1952), chief lect. Benediktas Labanauskas (1952-1953), Assoc. Prof. M. Lukinas (1953-1961), Assoc. Prof. Jonas Repšys (1962-1974), Prof. Vaidotas Antanaitis (1974-1989), Prof. Romualdas Deltuvas (1989), Assoc. Prof. Albinas Tebėra (1990), Assoc. Prof. Algimantas Venckus (until now).

During this period the following teachers were lecturing in the Faculty too: Assoc. Prof. V. Stinskas, chief lect. A. Končius, c. lect. Benediktas Kančys, c. lect. A. Milaknis, c. lect. Jurgis Gečys, Prof. Petras Šalčius, c. lect. Aleksandras Kazakevičius, c. lect. Leonas Čibiras, Assoc. Prof. Vasilijus Daraškevičius, Assoc. Prof. A. Latvelis, c. lect. Jonas Kenstavičius, lect. Algimantas Gradeckas, lect. Regina Murkaitė, c. lect. Albertas Kirklys, Assoc. Prof. Samuelis Karčiauskas, Assoc. Prof. Ričardas Žadeikis, Assoc. Prof. Mindaugas Navasaitis, Assoc. Prof. Romualdas Mankus, c. asst. Jonas Račinskas, Assoc. Prof. Juozas Mažeika, Assoc. Prof. Slavomiras Mirinas and others.

The process of education was regulated by the All-Union curriculum, which was created by the board of Higher and special-secondary education of Ministry of agriculture USSR. The education for receiving the degree of forestry engineer lasted for 4 years and 7 months. The curriculum consisted of basic subjects – 28 per cent,

general subjects of forests – 10 per cent, forest management – 37 per cent, foreign languages – 4 per cent, marxism-leninism ideology – 10 per cent, military training – 11 per cent of total time of studies (data of 1987-1988).

More books concerned with forestry were published in the post-war period. In the beginning most of books were translated from Russian. These were textbooks dedicated for the students of professional forestry schools: some of them were about forest stands thinings, forest breeding and forest plantation, as well as various instructions, and references. However, most of the books were not acceptable to high school students, besides they did not reflect the conditions of Lithuanian forestry, and they soon became outdated. For a long time a book, "Forest mensurations" (1951) by M. Jankauskas, was the only original textbook for forestry students. The books, "The growing of trees and bushes for plantations of collective farms" (1955) by M. Lukinas and "Afforestation of the collective farms" (1958) by B. Labanauskas, were useful to the students too. In 1963, the book "Dendrology" (2nd edition in 1973) was published, that had been written by the group of authors (among them the lecturers of the Department of silviculture V. Daraškevičius, P. Džiaukštas, A. Navasaitis); "Silviculture" (1976) by V. Daraškevičius, P. Džiaukštas, A. Navasaitis – the textbook for agronomy students; "Forest Management" (1968) by V. Antanaitis, P. Jakas, R. Mankus; "Reference book of Forest mensuration" compiled by J. Repšys and others; "Forest mensuration" by J. Repšys and V. Antanaitis; "Biology of forest birds and beasts, and game management" (1971) by T. Ivanauskas, A. Navasaitis and Vytautas Skuodis; "Forest economics" (1975, compiled by S. Karčiauskas) by the group of authors; "Silviculture" (1979, compiled by Leonardas Kairiūkštis) by V. Daraškevičius, P. Jakas and others; "Forest exploitation" (1987) by R. Žadeikis; "Forest Management" (1988) by V. Antanaitis and R. Deltuvas. Other useful books to students were: "Trees in Lithuania" (1979) by A. and M. Navasaitis, and "Birds in Lithuanian forests" by A. Navasaitis. Besides, for educational purposes many lectures were printed.

A scientific work on a larger scale was performed by the Department of forest economics and organization. The research works especially intensified, when in 1959 V. Antanaitis began to work in the Department and when post-graduate studies were established in 1962. Eventually, the number of post-graduate students increased. Post-graduate students were performing research works together with professors, the scientific groups were formed, and the scientific qualification of scientists was increasing. The research works, that were began with modest means of the Academy, were expanding with the help of economic contracts with the Ministry of forestry and forest industry (later the Ministry of forestry), the former All-Union

incorporation "Lesprojekt" ("Forest Management Institute"), and with other enterprises and organizations of science and industry of the former USSR.

In 1983 a Branch of the department of forest management was established for performing the scientific-research work in Kazlų Rūda forest enterprise, which was managed by A. Tebėra. A Laboratory of forest monitoring was instituted in 1985. Until 1989 the scientific manager of the Laboratory had been Prof. V. Antanaitis. 1989-1990 – Prof. R. Deltuvas. The heads of the Laboratory were: Dr. Romualdas Juknys (1985-1987 and 1990), Dr. R. Deltuvas (1988), Dr. J. Mažeika (1989) and Dr. Algirdas Augustaitis since 1991.

There is no possibility to name all the scientific works (it would require much space), we will mention only trends of the research works:

1. New methods of the forest management (V. Antanaitis, 1960).
2. Investigations of forest increment (V. Antanaitis, I. Čerškienė, P. Jakas, R. Mankus, J. Mažeika, A. Patackas, L. Vilkauskas, N. Zaunienė, R. Žadeikis, 1961-1984).
3. National forest inventory (J. Repšys, V. Antanaitis, I. Vilkauskas, R. Juknys, A. Kuliešis, R. Mankus, T. Tovianskas, R. Žadeikis, 1968-1971).
4. Developing of forest management technology (V. Antanaitis, B. Baroniūnas, J. Čepinskis, R. Deltuvas, R. Juknys, E. Juzeliūnas, R. Mankus, J. Mažeika, E. Navys, A. Tebėra, J. Repšys, 1971-1981).
5. Economical evaluation of forest lands and formation of forest cadastre (V. Antanaitis, J. Lukošius, J. Mažeika, S. Mirinas, 1975-1980).
6. Developing of forest mensuration methods in forest stands. Modeling of forest productivity (V. Antanaitis, J. Repšys, R. Deltuvas, J. Grigaliūnas, R. Juknys, A. Kuliešis, J. Mažeika, A. Rutkauskas, J. Šepietienė, A. Tebėra, A. Venckus, N. Zaunienė, 1966-1991).
7. Multiple use of forests (V. Antanaitis, R. Deltuvas, 1975-1989).
8. Classification of forest lands (J. Mažeika, V. Antanaitis, 1978-1988).
9. Control of forest husbandry (V. Antanaitis, R. Deltuvas, J. Mažeika, 1978-1990).
10. Management of protected areas (J. Mažeika, R. Mankus, 1981-1985).
11. Investigations and prognosis of demands of the employes in forest enterprises (R. Mankus, J. Mažeika, R. Žadeikis, 1989-1990).
12. Dynamics of forest ecosystems under anthropological influence (V. Antanaitis, A. Augustaitis, I. Bartkevičius, V. Daraškevičius, R. Deltuvas, P. Jakas, R. Juknys, A. Kliučius, V. Liekis, R. Mankus, M.B. Mastauskis, J. Mažeika, A. and M. Navasaitis, E. Petrauskas, J. Repšys, J.

Sidaravičius, J. Šepetienė, A. Tebėra, A. Venckus, R. Žadeikis, 1980-1990).

13. History of forestry in Lithuania (S. Karčiauskas, R. Mankus, 1964-1990).

It is understandable, that the named above trends of scientific works show neither volumes of the works, nor significance of results, and the listed names do not tell about the real input to the works.

Without exaggeration, it is possible to assert that this Department in the field of forest research took firmly the leader's position among the analogous departments of the former USSR. Not accidentally, in 1987 the board for high and special secondary education of committee of agro-industry USSR authorized the Forest management department to form a council, which would regulate forestry research works in the high schools of forestry in the whole of USSR. The chairman of this coordinating committee became Prof. V. Antanaitis, and the scientific secretary Dr. A. Tebėra.

While making the scientific research works the Department of forest management cooperated with many scientific and industrial enterprises such as: Forest research institute, Institute of economics at the Academy of Sciences (AS), Geography section at AS, the Computer centre at the Vilnius University, the Ministry of Forestry, Department of nature protection, Forest management institute. Also with institutions of former USSR: State Committee of forestry, All-Union Incorporation "Forest management institute", All-Union research institute of forestry and mechanization. As well as with foreign institutions: Tarant Forestry section at the Dresden Technical University (Germany), Zvolen Technical Forestry Institute (Czechoslovakia) and others.

The results of scientific research works were set forth in 12 monographs, 28 books of different volumes, as well as in many articles which were published in scientific magazines in Lithuania, the former USSR, and in different foreign countries. Besides, the results were presented in scientific conferences and many of them were organized by the Forest management department itself. It is worth mentioning, that the monograph "Forest Increment" (in Russian) by V. Antanaitis and V. Zagrejev had two editions (1969, 1981), it was translated to Chinese in 1988, and the monography "Forest productivity" was written by V. Antanaitis together with Prof. C. Chmelko (Czechoslovakia) and G. Venk (Germany) and it was published in German (1990). Results of research were used in making the rules of forest management (1981).

On the base of performed research works V. Antanaitis, R. Deltuvas, and R. Juknys defended their dissertations for doctors' degrees (habil. dr), and another 27 specialists defended their dissertations for degrees of the candidates of science (dr.).

Forestry faculty in restored independent Lithuania

From 1990 the possibilities of financing of research works diminished dramatically, which caused the decrease of scientists in research groups (remained small Laboratory of forest monitoring). A part of scientists were called to work a pedagogical work. In 1990 A. Tebėra was elected to be dean of the Faculty. Edmundas Bartkevičius became the chief assistant. Later (in 1995) he become a vice-dean of Faculty. (This position was restored again, when the number of students increased). Romualdas Juknys, Juozas Mažeika and Janina Šepetienė become the associate professors. Edmundas Petrauskas become the chief assistant, Eduardas Derenka and Dalius Vitunskas – assistants. Jonas Daniulis returned from Leningrad to Lithuania, where he began to work as associate professor Prof. in Department of forest management. Edvardas Riepšas came to work to the Faculty from the Forest research institute, and changed Prof. A. Juodvalkis (who became vice-rector of the Academy), and became the head of the Department of silviculture. Mentioned above newcomers together with professors R. Deltuvas (since 1995 – vice rector of the Academy) and A. Juodvalkis, associate professors A. Navasaitis, M. Navasaitis, P. Jakas, R. Žadeikis, R. Mankus, A. Venckus, S. Mirinas and chief assistant J. Račinskas, who have been working earlier, undertook the works of study reforms. During a short period a new system of acquiring scientific degrees was formed (Fig. 1).

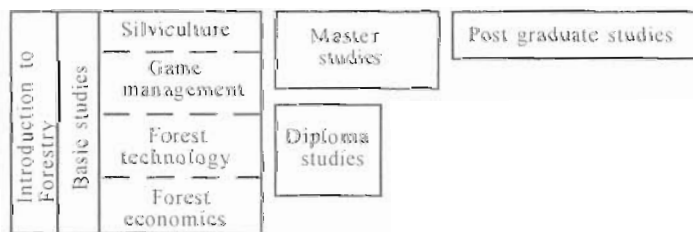


Fig. 1. The organization of studies of the forestry specialty.

As before, 50 students are accepted into the Forestry speciality. First of all the accepted students pass the introduction to a forestry, then they study fundamental sciences, humanities and disciplines of forest cognition. These subjects are passed in 1st and 2nd year. Many selective subjects are offered in the 3rd and 4th years of studies, which enable students to specialize in a some particular field. The specialty of game management was the quickest to prepare the new educational program. The study plan to this specialization was made especially by the efforts of Kęstutis Pėtelis (post graduate student) and Prof. Vytautas Padaiga (Forest research institute). A little later the study plans for

forest technologies and forest economics were made. Studies of traditional sivilculture became a separate specialization. Students, who successfully have completed their 4 year studies, are granted the first degree of higher education i.e. they become Bachelors of forest sciences. The first bachelors of forestry graduated in 1995. Specialists with this degree either begin to work in forest enterprises, or continue to study striving for the degree of diploma engineer (one year of study), or for the Master degree (two years of study). Masters of forest sciences may enter the postgraduate studies and strive for a doctors degree.

Timetables of new type are a novelty too. According to these timetables students study only 1-2 subjects at the same time and not 8-11 as it used to be before. Such an order enables lecturers after an intensive pedagogical work to concentrate more on the scientific activities or to raise their qualifications in other ways. Besides, such an order of studies is useful to students too. Students when studying a lesser number of subjects better understand problems of studied subjects. Moreover, this new order creates better possibilities for inviting guest-lecturers to read series of lectures. Partly of this the Faculty can better cooperate with

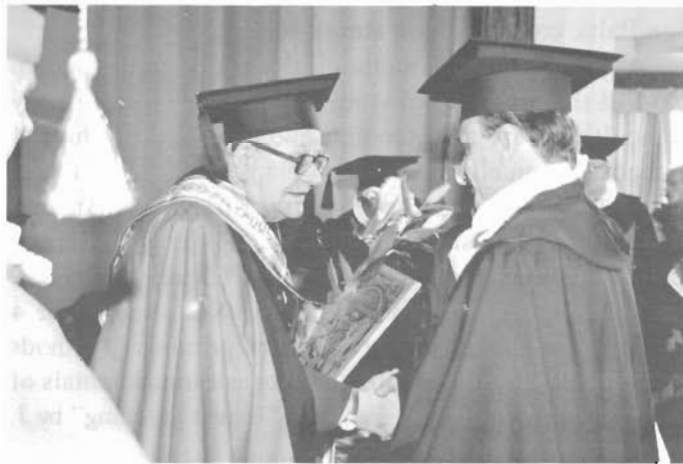


Fig. 2. Prof. M. Jančiauskas as a former dean of the Faculty of Forestry is being granted with the name of Doctor Honoris Causa

Forest research institute, Forest management institute, Geography institute of AS, Ecology institute of AS and Kaunas technological university. The representatives from these Institutes (Assoc. Prof. Julius Danusevičius, Prof. A. Gradeckas, Prof. V. Padaiga, Prof. Mečislovas Vaičys, Dr. Rimvydas Gabrielavičius, Dr. Stasys Mizaras, Prof. Stasys Karazija, habil. Dr. Andrius Kuliešis, Dr. Algirdas Rutkauskas, Acad. Gediminas Pauliukevičius, Dr. Petras Kurlavičius, Dr. Rimantas Baleišis, Dr. Gediminas Petruzis, Assoc. Prof. Bronius Papreckis, Assoc. Prof. A. Baltrušaitis, Prof. Antanas Kajalavičius, Assoc. Prof. Justinas Juozapas Rusėckas, Assoc. Prof. E. Satkevičius and others) successfully read lectures, lead practical training for students of the Faculty.

Taking into account that the Faculty accumulated a big experience in the field of ecology and nature protection, in 1994 it was decided to establish a new specialty of applied ecology. The former department of Silviculture and nature protection was reorganized into the Silviculture department, and in 1995 the Ecology department was founded, which was the third in the Faculty. Assoc. Prof. S. Mirinas and the vice-dean E. Bartkevičius came to work in this department. Associate Prof. Vida Rutkoviene (who earlier worked in Chemistry department) became the head of the Department of ecology. The following teachers were invited to do a pedagogical work at the Department: Acad. G. Pauliukevičius (Geography institute AS), Dr. P. Kurlavičius (Ecology institute AS), Prof. Regina Gražulevičienė (Kaunas medical academy).

The plan of studies of applied ecology (Fig. 3) provide for three specialisations (agroecology, hydroecology and forest ecology) to be trained. It is supposed, that these specialists would work in the system of the Ministry of environment protection.

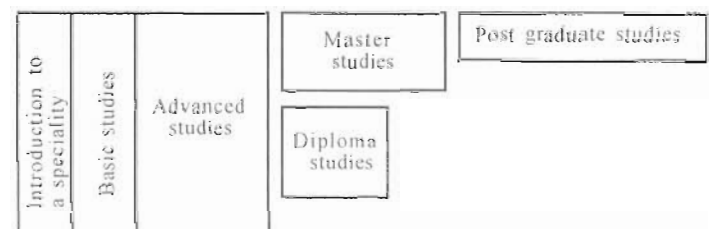


Fig. 3. Organization of studies for the specialty of Environment protection

The first students were accepted to specialty of applied ecology in 1994. Every year 25 students accepted to this specialty.

After implementing of the new study system, the structure of management of the Faculty was settled. Taking into account, that the activities of the Faculty became more diverse, it was decided to change the name of the Faculty. Since 1993 according the decision of the council of the Faculty and rectorate, it is called the Faculty of Forestry.

As we mentioned above, at present there are 3 departments in the Faculty of forestry (fig. 4). The lecturers of the departments are divided into sectors. Each sector is responsible for the making and improving of study plans of different specialization, as well as for organizing of studies according these plans.

Now it is much cared about a new generation of teachers. Every year 2-3 students are accepted to a post graduate course. At present, there are 5 post graduate students in the Forest management department, 4 – in Silviculture department, and 2 – in the Ecology department.

The greater part of success of studies depends on the right equipment of studies and of effective visual material.

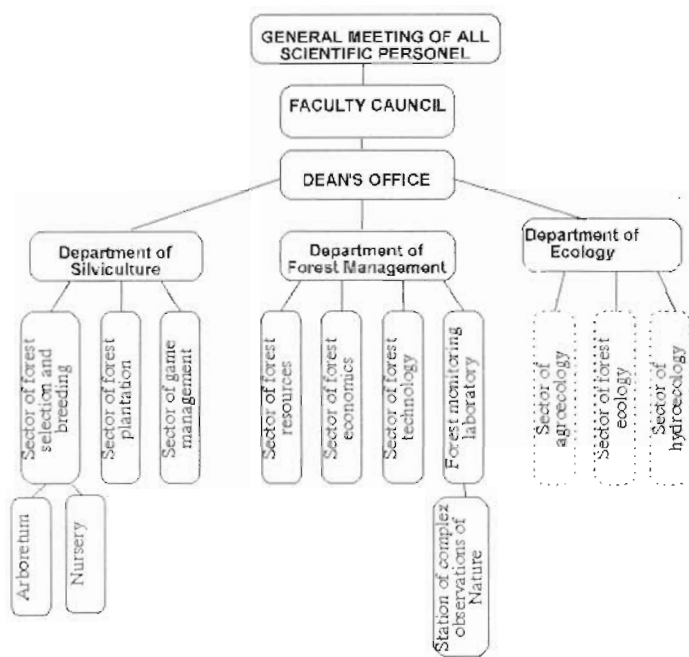


Fig. 4. Structure of the Forestry faculty

For this reason, computers are used more widely, and the class of personal computers have been created. A new arboretum is being made near the 3rd House of the Academy, which will be a good educational establishment for subjects such as: dendrology, botany, seed-growing, genetics, and others. New teaching rooms of game management, forest technologies and forest economics are being built. The teaching rooms of chain saw remote sensing has been enriched. The visual material is being added to the teaching room of biology of beasts and birds, that was named by prof. T. Ivanauskas, and the teaching room of forest management was named by Prof. P. Matulionis.

The authorities of the Faculty are greatly concerned with practical training of students. Many educational places for practical training was established in Kazlų Rūda forest enterprise, which since 1995 was granted the status of training enterprise. More and more new educational objects are created in the enterprise. The modern project of technological ordering of forests is going to be implemented in Jūrės district, as well as the workplace of a forester controlled by a computer, which will be connected through modem to the computers of Forest management department. Students will be able to use an electric device for mensuration here, besides, they will have a possibility to use information of the activities of the enterprise. These all works in Kazlų Rūda require large financial means. These works, as well as transportation and accommodation of students are financed by the Ministry of forestry.

Not only Kazlų Rūda enterprise is used for practical training of students. Students visit other forest enterprises too, where could be found significant objects for practical training: the Dubrava experimental forest enterprise, and the forest enterprises of Panevėžys, Biržai, Kretinga, Jurbarkas, Kaunas, Jonava and other; also national parks of Kuršių Nerija, Aukštaitija and Dzūkija.

After the restoration of independent Lithuania, students and teachers have better possibilities for cooperation with institutions of other states. Each year a considerable number of students study on probation in various universities and other scientific institutions in Europe and even in other continents. These studies are very different: from short course till studies for a doctor's degree. 25 students have studied in various scientific institutions of Denmark, Finland, Germany, Holland, Hungary, Poland, Slovak, Slovenia, Swiseland, Sweden, USA.

Almost all lecturers of the Faculty studied on probation in foreign institutions. Some of them (Prof. Deltuvas, Prof. E. Riepšas, Dr. E. Petrauskas) participate in joint projects with the partner of West Europe. It is a pity, but it must be admitted, that the earlier close relations with research institutions of Russia, Ukraine, Belorussia and even Baltic countries have almost broken.

At present period, methodical work is great concern also. All the programs of studying are renewed and many methodical means are accomplished for practical works. 4 textbooks are published: "Forest plantation" (1991) by J. Danusevičius, A. Gradeckas, Albertas Kirklys, and Antanas Malinauskas, "Forests mensuration" (1994) by J. Repšys, "Forest land-reclamation" (1994) by Zigmās Galminas, "Forest tapping" (1995) by J. Račinskas. And other 4 textbooks are already prepared for the printing: "Methods of aerophoto" by J. Daniulis, "Biological fundamentals of game management" by V. Padaiga, "Forest breeding" by J.



Fig. 5. Students on their educational practice

Danusevičius, "Diseases of beasts and birds" by Stasys Juknevičius and Ramūnas Jucevičius.

In spite of the decrease of financing and number of scientists, research works have not stopped in the Faculty. Now lecturers are more involved in scientific research work. Each performs is involved in at least one field of research, which is financed by the Ministry of Forestry, the Ministry of Environment Protection or other organizations. The scientific works by the Department of siviculture deal with the methods of stability of forest ecosystems. The Department of forest management divides its research into three field. The first one – strategic planning of multiple

use of forests; the second – methodological fundamentals for improving of forest husbandry, and third – the economical evaluation of wood procurement. The department of ecology works with modeling of after-effects to agro, hydro and forest ecosystems caused by anthropological activities. Scientists of monitoring laboratory perform the monitoring of Lithuanian National parks.

The social research is also performed at the Faculty. Investigation and prognosis of demands of the employes in forest enterprices is going again. This research work will enable to improve curriculum and to estimate optimal number of specialists, which will by needed in future.