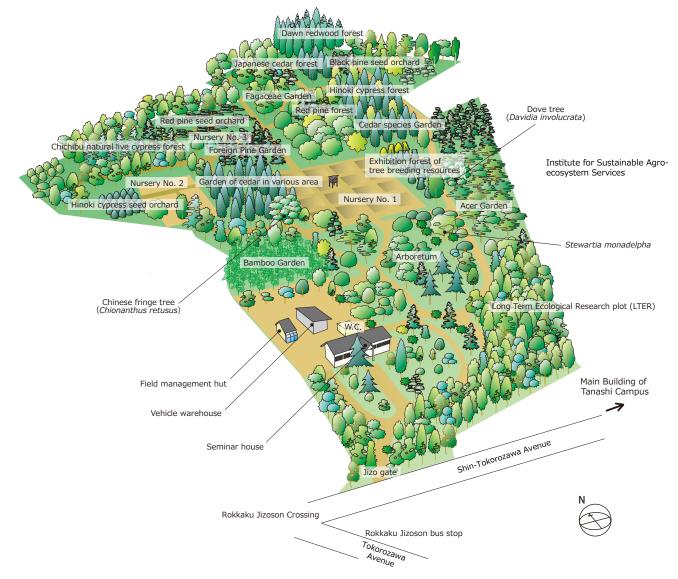


Graduate School of Agricultural and Life Sciences, The University of Tokyo





Guide map of The University of Tokyo Tanashi Forest



The Tanashi Nursery (total area of 8.3 ha), Department of Forestry, Faculty of Agriculture, Tokyo Imperial University, was founded in 1929.

The forest is used as a teaching and research field for forest sciences and ecological agriculture, as well as for urban forest research based on silviculture, forest ecology, tree physiology, pathology, and urban tree management, taking full advantage of the integrated field and laboratory facilities. The public is welcome to visit.

Visiting hours: 9:00 a.m. to 4:30 p.m. (weekdays only) Please complete the prescribed procedures at the entrance of the Seminar House and follow the tour guidelines.

> TEL: +81-42-461-1528 FAX: +81-42-461-2302 URL https://www.uf.a.u-tokyo.ac.jp/tanashi/

The University of Tokyo Tanashi

1. History and overview

The University of Tokyo Tanashi Forest (UTTF) was established in 1929 by the Department of Forestry Second Course (Laboratory of Silviculture) as the Tanashi Nursery, Department of Forestry, Faculty of Agriculture, Tokyo Imperial University (or Tama Nursery). Its origin can be traced back to a nursery of the Department of Forestry, established in 1893 in Komaba, which was the Faculty of Agriculture, Tokyo Imperial University, at that time. In 1956, the management and administration of the nursery was transferred from the Department of Forestry to the University Forest; in 1963 the name of the site was changed to Tanashi Experimental Site and the organizational structure was expanded. In 1982, the entire area was transferred from the Department of Forestry to the University Forest. In 2000, the University Forest was attached to the Graduate School of Agricultural and Life Sciences, with increased prioritization of graduate school education by the Faculty of Agriculture. Since establishment of the Institute for Sustainable Agroecosystem Services affiliated with the Graduate School of Agricultural and Life Sciences Faculty of Agriculture in 2010, faculty and staff of the Tanashi Experimental Site also work at this institute. In 2011, the name of the Tanashi Experimental Site was changed to the UTTF as part of an organizational restructuring of the entire University of Tokyo Forests, and the formal name of the site became the University of Tokyo Forests, Graduate School of Agricultural and Life Sciences, The UTTF.

There are also laboratories and field sites at the Institute for Sustainable Agro-ecosystem Services and Asian Research Center for Bioresource and Environmental Sciences, Graduate School of Agricultural and Life Sciences, The University of Tokyo at the Tanashi Campus, where the UTTF is located, which forms a hub for research and education with the Graduate School of Agricultural and Life Sciences in Nishi-Tokyo.

2. Location and environmental characteristics

The UTTF is situated conveniently in Nishi-tokyo, the Tokyo metropolitan area, about 1 hour from the Hongo campus of the University of Tokyo. This site is used by many faculty members and students as a research and education field site. The UTTF is located almost in the center of the Musashino area and, although the surrounding forests have been lost to residential development, vestiges remain of the secondary forest, which is characteristic to this area. This area is considered by the local residents to be a precious green oasis in the city.

The forest's total area is approximately 8.3 ha, with an altitude of 60 m. It is located on flat terrain in the Musashino terrace (Musashino side) of the Musashino Plateau. Its geological features are made up of a gravel bed (Musashino gravel layer) topped with a volcanic ash layer of 6 to 8 m thickness (loamy layer of the Kanto district). Black soil, formed from volcanic ash, is distributed on the loamy layer with a thickness of 50 to 60 cm. An annual mean temperature of 14.8 °C and annual mean rainfall of 1,575 mm were recorded from 2011 to 2020.

3. Forest characteristics

The Musashino forest has a long history of human intervention. Although the original vegetation communities only comprise a small part of the forest types, there are small scattered areas of coppice (secondary forest) containing a mixture of Carpinus tschonoskii, Styrax japonicus, Zelkowa serrata, and Cornus controversa within the Tanashi Forest, where the dominant trees are Japanese red pine (Pinus densiflora), Quercus serrata and Quercus acutissima. There are also many shrubs and climbing plants, including Rhus javanica, Euonymus hamiltonianus, Aralia elata, Viburnum dilatatum, Celastrus orbiculatus, and Lonicera japonica, as well as a wide variety of herbaceous plants on the forest floor, representing the variety of flora that grow in Musashino. There are also exhibition forests (foreign varieties of pine, cedar, and bamboo), an arboretum (approximately 244 species, including 63 species of coniferous trees and 181 species of broad-leaved trees), a research forest (improved poplar trees, Dawn redwood, Quercus myrsinifolia, and a seed orchard and scion garden. The forest, which occupies two-thirds of the total area is now a valuable urban forest.

4. Facilities

1 Nursery

The Tanashi Forest was originally a forest nursery attached to the Laboratory of Silviculture, and has thus been used for student practice and research on plant nursing since its inception. The nurseries occur in three locations; Nursery No. 1 is 0.52 ha, Nursery No. 2 is 0.14 ha, and Nursery No. 3 is 0.18 ha, corresponding to a total area of 0.84 ha. Of these, Nursery No. 1 is the most utilized for growing Japanese red pine (Pinus densiflora), black pine (Pinus thunbergii), sugi (Cryptomeria japonica), and hinoki (Chamaecypris obtusa) seedlings for practice and research. Trees are also grown using



Photograph 1 View of the forest at the UTTF The forest has the appearance of an island floating in the city.



Photograph 2 Practical training for students in Nursery No.1 Practical training transplanting pine seedlings

cuttings and grafting, and various types of seedlings are grown for research.

2 Laboratories

Indoor laboratories including a UTF sample preparation room and two UTF laboratory rooms are shared by students and faculty of the UTF. The sample preparation room is 57.2 m² equipped with a central laboratory table and nine small incubators. This sample preparation room is used exclusively for primary processing of field samples and for breeding and culturing insects, etc. The laboratory rooms are 86.6 m² equipped with two central benches, incubators, autoclave, dissecting microscopes, fluorescence microscope, freezing microtome, PCR equipment, and a high-speed microcentrifuge, etc. These laboratory rooms can be used for molecular biology, biochemistry, and microbiology experiments. **3** Seminar House

Seminar House is a precious wooden building, built as the Tanashi Nursery office in 1932. Since then, it has been used as the office and laboratory for the Tanashi Experimental Site and UTTF. In March 2021, the office and laboratory functions were transferred to the main Tanashi building. Seismic retrofitting work was implemented the same year, and now the Seminar House is used as a lecture room and can be rented to the public for a fee.

5. Education

Given its history under the management and administration of the Laboratory of Silviculture, Forestry Department, the UTTF has always been used for forestry studies, in particular by students for practical training in the field of plant nursing. The UTTF is now also used for practical training by other laboratories and universities, focusing on field experiments and observations.

The UTTF also holds practical training for students in liberal arts courses, centered on hands-on activities in urban forests. The forests and nurseries are made available to undergraduate and graduate students, both from the University of Tokyo and outside the university, for research assignments focusing on related specializations and majors, and the students may also use the laboratories as appropriate. The UTTF sells seeds and seedlings of tree species, including Japanese red pine and black pine, as well as the branches and leaves of various standing trees, and also responds to requests for use of the forest for tree felling.

6. Research

The University of Tokyo Tanashi Forest has forests, including various research forests, and also maintains indoor and outdoor research facilities, such as nurseries and laboratories, thereby providing a research environment that integrates field sites and laboratories for university and non-university researchers. Work is ongoing to improve the research environment and



Photograph 4 Survey of habitat animals using camera

Sensor cameras are installed in the forest to survey the animals inhabiting the forest (raccoon dogs are pictured in the photo).



Photograph 3 Jizo Gate

The entrance to the UTTF field and seminar house. It is located along Shin-Tokorozawa Kaido, which is easily accessible.



Photograph 5 Laboratories There are two laboratories, the UTF sample preparation laboratory and the UTF Laboratory in Tanashi main building.

upgrade the equipment that underpins the research. In 2014, wireless LAN and power supply stations were installed. Data are collected daily, including meteorological data, flora and fauna, and historical data on forest land management. In addition to this research base, urban forest research is also promoted, as discussed below, making full use of the location of the forest.

1 Research on urban forest planning

Information on existing urban forests is collected and organized to explore the functions required for new urban forests at the present and in the future. The research is aimed at formulating a plan to implement the necessary functions, establish an urban forest, and evaluate and verify the functions. Long Term Ecosystem Research (LTER) sites, which have been largely unmanaged since their establishment in 1992, are regarded as abandoned urban forests and are used as controls for the evaluation of functions. Measurement equipment is provided to facilitate research and use of the forests. The forest functions correspond to the ecosystem services, and their research require collaboration with the adjacent Institute for Sustainable Ágroecosystem Services(ISAS), to evaluate the impact of these functions on agroecosystems.

2 Research on urban forest management

This research will cover the management of urban forest density, pruning, and forest hygiene, and will also promote research on managing genetic resources, such as trees used for planting, propagation methods, and seedling growing methods. More specific examples include empirical research to verify the accuracy of tree vigor determined non-destructively the through reanalysis after felling standing trees, and establishing propagation techniques for various trees, including landscaping and greening trees. Eradication measures need to be developed for Japanese oak

wilt disease and pine wilt disease, which occurred sporadically around 2020, which require further scientific verification.

3 Research on urban forest utilization

This field promotes research on exploring unused resources, surveying the amount of resources, and developing utilization methods, particularly for urban forests. With the current trends in population aging, it is vital to find mechanisms to involve older people in the use and independent management of urban forests. It is also necessary to investigate how the interests of various stakeholders can be coordinated. Possible research topics could include harvesting, characterization, and sale of timber and non-timber products from urban forests, and research on learning, recreation, and volunteer activities in urban forests.

7. Extension

From the perspective of contributing to the local community, lifelong education, and support for primary and secondary education, the forestry education activities have been conducted at the UTTF in cooperation with various organizations by holding public lectures such as the "Junior Arborist Certification Program". The UTTF is also used as an off-campus field by many nearby elementary and junior high schools, and accepts junior high school students for work experience. In addition to opening the premises to the general public for nature observation on weekdays, the museum is open to the public several times a year during the season of fresh greenery and beautiful autumn leaves, attracting as many as approximately 2,000 visitors annually. Signs with QR codes are posted to provide academic information and emergency contact information for the safety of the many visitors. The tour route is routinely patrolled for fallen branches, and dead branches are removed as necessary using an elevating work truck. Forest partner systems started in 2022 and they assist elementary and junior high school students in forestry educationrelated classes.



Photograph 6 Complete enumeration

Changes in species composition and biomass for each forest type throughout the UTTF is surveyed every 5 years.



Photograph 7 Experiment in Basic Forest Science I Practical training for students is implemented several times a year.



Photograph 8 "Kids Tree Expert" program We hold a "Kids Tree Expert" program every spring and fall.



Gentiana zollingeri

Marasmius pulcherripes





Jewel beatle (Chrysochroa fulgidissima)



Scarlet bottlebrush (Callistemon speciosus)

Snow-covered nursery





Autumn

Arboretum of Autumn Leaves



Dove tree (Davidia involucrata) Sympetrum baccha matutinum

Dawn redwood (Metasequoia glyptostroboides)

Arboretum in winter



Wintersweet (Chimonanthus praecox)

User guide

Procedures for use

· Use for research and/or education

Please complete the required sections of the UTTF Research and Education Use Application Form (designated form) to use the UTTF for research and/or educational purposes. Please submit the form to the UTTF by the 15th of the month before the date you wish to use the forest facilities.

• Use for visits and/or studies

The general public may use the forest facilities for observation and learning from 9:00 am to 4:30 pm on weekdays (Monday to Friday, except for the year-end and New Year holidays and other public holidays). For groups of 9 or less, please fill in the details in the notebook on the table to the right of the Seminar House entrance. For groups of 10 or more, such as part of a class or elementary school, kindergarten, nursery school, or community group activity, submit the UTTF Visitor Use (Group) Application form (designated form) to the UTTF by the 15th of the month before the date you wish to use the forest facilities. • Use of the Seminar House

Individual rooms of the Seminar House at the UTTF are available to rent for training, meetings, and similar activities.

Anyone wishing to use the Seminar House should read the internal regulations for renting the premises and submit a Request to Use Seminar House Lecture Rooms (designated form) to the UTTF at least two weeks before the intended use date.

The designated forms can be downloaded from the UTTF website.

Contact details for usage inquiries

UTTF Faculty Office

Room 107, 1F Tanashi Main Building, 1-1-1 Midori-cho, Nishi-Tokyo, Tokyo, 188-0002, Japan TEL +81-42-461-1528 FAX +81-42-461-2302 Access

- Access
- [Walking from the station]
- It is a about a 20-minute walk from the north exit of Tanashi Station on the Seibu Shinjuku Line → Enter from the main gate of Tanashi Campus of the University of Tokyo
- [Travelling by bus from the station]
- From the north exit of Tanashi Station on the Seibu Shinjuku Line, take the Seibu Bus bound for Hibarigaoka Station (Sakai 04) and get off at the Rokkaku jizoson-mae bus stop after about 10 minutes
- From the South Exit of Hibarigaoka Station on the Seibu Ikebukuro Line, take the Seibu Bus bound for Musashi-Sakai Station (Sakai 04) and get off at the Rokkaku jizoson-mae bus stop after about 15 minutes
- From the north exit of Musashisakai Station on the JR Chuo Line, take the Seibu Bus bound for Hibarigaoka Station (Sakai 04) and get off at the Rokkaku jizoson-mae bus stop after about 25 minutes
 - → Walk towards Hoya at the Rokkaku Jizoson intersection near the bus stop and walk about 5 minutes
- Enter from the main gate of the Tanashi Campus of the University of Tokyo
- * Groups of 9 or less only may enter the campus from the Jizo gate, which is about a 1-minute walk from the Rokkaku Jizoson intersection

Points to note

The UTTF is a facility for forest-related research and education. Please carefully read the following rules before visiting or using the site for study. We appreciate your understanding and cooperation.

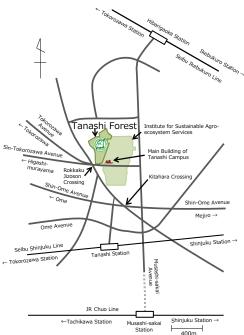
- <Prohibited activities>
- · Eating, drinking, and smoking
- Use of picnic blankets
- · Collecting animals and plants (including fallen leaves, acorns, and soil)
- · Entry into areas of the forest outside the designated roads
- · Touring the forest in a car or motorbike
- Getting into a car
- Bringing pets
- · Unaccompanied children of elementary school age or younger

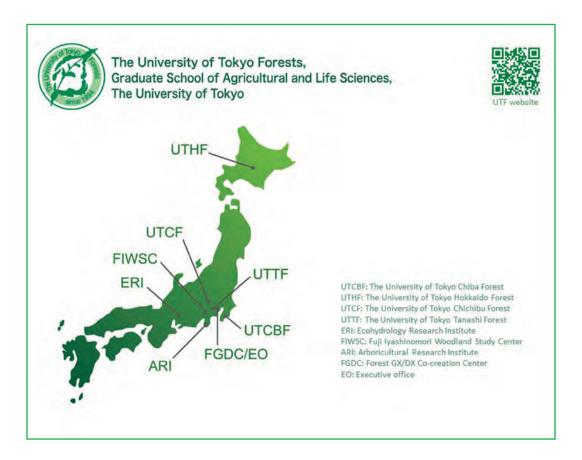
<For your safety>

The University Forest is a natural environment, thus you may encounter unexpected dangers. Please be careful of possible attacks by bees and crows, heatstroke, and falling branches.

List of Seminar House Usage Fees

| Room name | Area (m²) | Capacity (people) | Usage fee per hour (JPY) | Eating and drinking | Remarks |
|--------------|--------------|----------------------|-----------------------------|------------------------|---|
| Lecture room | 73 | 30 | 1,000 | Permitted | The lecture preparation room and changing room are available. Wireless LAN is available. |
| Meeting room | 58 | 24 | 1,000 | Permitted | Wireless LAN is available. |
| Craft room | 44 | 20 | 1,000 | Not permitted | Changing room is available. Wireless LAN is available. |





The University of Tokyo Forests, Graduate School of Agricultural and Life Sciences, The University of Tokyo Tanashi Forest (UTTF)

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[Planted forest / Seminar House] 1-1-8 Midoricho, Nishi-Tokyo, Tokyo, 188-0002, Japan

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