

## Beech Research in the Light of Climate Change

Report from the 8th IUFRO International Beech Symposium\* by Palle Madsen, Kazuhiko Terazawa and Khosro Sagheb-Talebi, Coordinators of Working Party 1.01.07 "Ecology and silviculture of beech"

Presently, there is a strong scientific focus on predicting climate change effects and creating the best possible knowledge base for forest management to prepare the forests for an unknown future.

### Adaptive management for beech-dominated forests

At the recent IUFRO beech symposium in Japan participants had a close look at beech-dominated forests and their response to climate change with a view to providing scientific support for proper adaptive management measures. They considered it important to strengthen the linkage between recent advances in research, trends in silviculture, and the sustainable management and adaptation of beech-dominated deciduous forests in order to respond to changing social needs and the global climate.



### Understanding beech populations

The event highlighted the research progress in understanding beech populations and their present distribution, as well as their migration into the Holocene landscapes. Studies of flowering, pollen and seed dispersal, regeneration patterns and advanced functional-structural tree models were presented. Together with several studies of genetic structures and diversity, they showed that important scientific progress had been made to meet the identified challenges for beech forests and their management.

### Seeking interdisciplinary cooperation

One of the main conclusions from the symposium was to seek further cooperation and coordination among beech researchers who are active in the many scientific disciplines represented at the conference. Suggested approaches involved the use of the important beech-dominated forest types as model forests for studies of climate change effects and the development of adaptive management measures for temperate deciduous forests.

### First IUFRO beech symposium in East Asia

This conference was the first ever IUFRO Beech Symposium to be held in East Asia, one of the major distribution areas of the genus *Fagus* in the world. Thus, the conference also

Photo by Palle Madsen:

Symposium organizer Dr. Kazuhiko Terazawa (Deputy coordinator of 1.01.07) introducing the local host Mr. Shiro Ishibashi, who is employed as a ranger at the UNESCO World Heritage Site Sirakami-Sanchi in the northern Honshu about 50 km's south-west of Aomori. The protected area covers about 17,000 ha of virgin beech (*Fagus crenata*) dominated deciduous forest.

provided excellent opportunities for the participants to discuss both similarities and differences in ecology, genetics and silviculture among *Fagus* species.

### Publication of proceedings and selected papers

The Symposium proceedings will be downloadable from the following websites in January 2009:

<http://www.iufro.org/science/divisions/division-1/10000/10100/10107/>

<http://www.rif-ac.ir/english/group/beecheforest/about.htm>

Selected papers from the symposium will be published in a special issue of Forest Ecology and Management entitled "The ecology and silviculture of beech: from gene to landscape". The special issue is scheduled for late 2009.

\* The 8th IUFRO International Beech Symposium took place from 8-13 September 2008 in Nanae, Hokkaido, Japan. It was organized by IUFRO Unit 1.01.07 "Ecology and silviculture of beech". The following organizations sponsored the meeting: Forestry Agency of Japanese government; Hokkaido government; The Ecological Society of Japan; The Japanese Forest Society; National Land Afforestation Promotion Organization; Swedish University of Agricultural Sciences; The Broadleaf Program; Municipal government of Kuromatsunai town; Kao Foundation for Art and Sciences; IUFRO-Japan

Number of participants of each representing country: Sweden(8), France(7), Iran(5), Germany(4), The Netherlands(2), Slovenia(2), Romania(2), Ireland(1), UK(1), Italy(1), Kosovo(1), Switzerland(1), Spain(1), Czech Republic(1), Denmark(1), Japan(53). The presentations included 6 keynotes, 35 volunteer papers and 26 posters.