

# Title of Ph.D. dissertation and Mater course (1998~)

## Ph.D.

(C: Doctoral course work, S: Submitted Doctoral Thesis)

### 2012

**Mao, QiaoZhi** (c): Ecophysiological study on the growth responses of larch species to changing environments –Effects of elevated CO<sub>2</sub>, O<sub>3</sub> and high nitrogen loading–

**Novriyanti Eka** (c) : Chemo–ecophysiological study on growth and defense responses of the afforestation species eucalypt and acacias under a changing environment

### 2010

**Kim, YongSuk** (c) : Soil–atmospheric exchange of greenhouse gases in forest ecosystems under various environmental changes

### 2009

**Makoto, Kobayashi** (c) Effects of charcoal production after fires on the traits of soil and regeneration in mixed conifer–broadleaved forests of Far East Russia (in Japanese)

**Ohno, Yashuyuki** (s) Study on the factors affecting the growth and declining of mature Monarch birch in broadleaved forests (in Japanese)

### 2007

**Eguchi, Norikazu** (c) Study on the changes in CO<sub>2</sub> fixation and storage capacity of deciduous tree species native to cool temperate zone with increasing ambient CO<sub>2</sub> concentration (in Japanese)

**Ji, DongHun** (c) Study on the physiological ecology of Korean pine in early stage of regeneration (in Japanese)

### 2005

**Kitahashi, Yoshinori** (c) Physiological ecology of water relations and leaf surface structure of broadleaved trees (in Japanese)

**Uemura, Akira** (S) Ecophysiology of environmental adjustment in photosynthesis and water relations of mature trees of Siebold’ s beech and Japanese beech (in Japanese)

**Yasaka, Michiyasu** (S) Conservation ecology of the reproduction of forest plants (in Japanese)

## 2004

**Choi, DongSu** (C) Ecophysiological study on growth of the ectomycorrhizal conifer species in Korea treated with soil acidification and elevated CO<sub>2</sub>

**Noguchi, Mahoko** (C) Studies on forest dynamics and vegetation changes in mixed conifer–broadleaved forests in Hokkaido under disturbance regimes (supervisor: Dr. Yoshida, Toshiya) (in Japanese)

**Wang, Wenjie** (S) Physiological ecology of respiratory consumption of a larch (*Larix gmelinii*) forest in Northeast China

## 2003

**Qu, Laiye** (C): Ecophysiological study on the natural regeneration in the two larch species with special references to soil environment in northern Japan

**Kitaoka, Satoshi** (C): Ecophysiological study on the environmental acclimation capacity of deciduous broadleaved tree seedlings invading to unmanaged larch plantations (in Japanese)

**Matsuki, Sawako** (C) :Species biology of plant defense in deciduous broadleaved trees with special references to Betulaceae (in Japanese)

## 2002

**Yamashita, Naoko** (S) Physiological ecology of *Bischofia javanica* Bl. invading to the Bonin Islands and its application for environmental conservation (in Japanese)

## 2001

**Kayama, Masazumi** (C) Study on the environmental adaptation of spruces species on serpentine soil and its application for forest rehabilitation practices (in Japanese)

**Nakamura, Takatoshi** (C) Ecological gradients of north Japanese mires on the basis of hydrochemical features and nitrogen use traits of *Carex* species. (supervisor: Dr. Uemura, Shigeru)

## Master Thesis

### 2013

**Oikawa, Monta:** Patterns of grazing by insect herbivore and defense traits in 3 kinds of birch saplings grown under elevated CO<sub>2</sub>, FACE (in Japanese)

**Sakuma, Akira:** Relations between nutrient and/or water stress and decline phenomenon of mountain birch (*Betula ermanii*) in Lake Mashu somma – Prediction of future forest physiognomy–

**Yuko, Hara:** Time course of Leaf Area Index of three birches grown under Free Air CO<sub>2</sub> Enrichment (FACE) system

### 2012

**Tatsuda, Shinpei:** Seasonal changes of photosynthetic rate of Japanese mountain birch (*Betula ermanii*) grown at Lake Mashu somma under O<sub>3</sub> polluted condition (in Japanese)

**Ito, Hiroataka:** Fine root dynamics of Japanese white birch (*Betula platyphylla* var. *japonica*) grown under brown forest soil and immature volcanic ash soil at elevated CO<sub>2</sub> condition at FACE (Free Air CO<sub>2</sub> Enrichment) (in Japanese)

**Inada, Naoki:** Effects of elevated ozone (O<sub>3</sub>) on photosynthetic rates of different crown position of deciduous broadleaved tree sapling with free air O<sub>3</sub> fumigation system – Oak, Beech and birch– (in Japanese)

**Kawaguchi, Korin:** Combination effects of elevated O<sub>3</sub> and CO<sub>2</sub> on hybrid larch F<sub>1</sub> (*Larix gmelinii* var. *japonica* x *L. kaempferi*) saplings with open top chambers (in Japanese)

### 2011

**Sato, Kaori:** Combination effects of ground vegetation and canopy gap on the regeneration of deciduous broadleaved trees after surface forest fire (in Japanese)

**Suetsugu, Naoki:** Effects of long-term fertilization on organic matter and meso-scale animal of a Monarch birch (*Betula maximowicziana*) stand (in Japanese)

### 2010

**Aoyama, Chiho:** Time courses of the induced defense in Siebold beech and oak saplings

**Imori, Masakazu:** Effects of nitrogen application on the photosynthesis and growth of hybrid larch F<sub>1</sub> for 3 years (in Japanese)

### 2009

**Karaki, Takayuki:** Development of water impermeability of seed coat and requirements for the seed germination in black locust (*Robinia pseudoacacia* L.)—A consideration focused on the anatomical feature—

**Hinata, Kiyomi:** Study on the localization of defense chemicals in leaves of deciduous broad-leaved tree seedlings under changing environment

**Ryu, Koharu:** The effects of nitrogen deposition on the growth of the hybrid larch grown on the serpentine soil

## 2008

**Matsunami, Shiro:** Ecophysiological survey on the dispersal capacity of root sucker of Black locust and its application for the management

**Kanetoshi, Masaharu:** Photosynthetic nitrogen use efficiency of Black locust, an invasive species with special references to nitrogen allocation in leaves grown under different light and CO<sub>2</sub> regimes

## 2007

**Matsui, Katsuhiko:** Effects of elevated CO<sub>2</sub> on the decomposition rate of leaf litter through grazing of wood louse (*Porcellio scaber* (Isopoda; Oniscidae) ) with special reference to its growth and consumption rate

**Agari, Tokihisa:** Effect of elevated CO<sub>2</sub> and nutrients on the defense of alder species (in Japanese)

## 2006

**Otsuka, Yuka:** The localization of defense chemicals in leaves of beech and oak.

**Makoto, Kobayashi:** Effects of nitrogen supply on the growth and photosynthetic responses of seedlings of *Pinus koraiensis* grown under different light conditions

**Morii, Noriko:** Water relations in deciduous broadleaved tree saplings grown under a free air CO<sub>2</sub> enrichment (FACE).

**Hida, Takeshi:** Change in the light compensation point of deciduous broad-leaved tree saplings grown under elevated CO<sub>2</sub>

**Karatsu, Kazuki:** Photosynthetic acclimation of deciduous broadleaved tree saplings grown under a free air CO<sub>2</sub> enrichment (FACE) (in Japanese)

## 2005

**Sakuma, Yuko:** Anatomical structure and physiological traits of heterophyllous needles of Japanese larch (*Larix kaempferi*) trees

**Endo, Ikuko:** Growth and survival of three species of Betulaceae seedlings in the large disturbed area.

**Shibata, Takanori:** Defense characteristics of deciduous broadleaved tree seedlings raised under different CO<sub>2</sub> and nitrogen levels (in Japanese).

## 2004年

**Eguchi, Norikazu:**

Change of photosynthetic capacity of *Alnus hirsuta* with increasing of atmospheric CO<sub>2</sub> concentration: comparing the proximate *Betula* spp. Without symbiotic N<sub>2</sub> fixing micro-organism

## 2002年

**Kitahashi, Yoshinori:** Physiological and morphological adaptation of broad-leaved trees with two different height positions of the same sunny crown

## 2001年

**Ooishi, Machiko:** Photosynthesis and nutrient dynamics of *Picea glehnii* seedlings grown under immature volcanic ash soil with special references to the activities of ectomycorrhiza (in Japanese)

**Noguchi, Mahoko:** Effects of partial logging on tree regeneration and forest floor vegetation in conifer-hardwood mixed forests in northern Hokkaido (supervisor: Dr. Yoshida, Toshiya)

## 2000年

**Kitaoka, Satoshi:** Seasonal changes of light utilization capacity in deciduous broad-leaved trees seedlings invaded into a larch plantation.

**Yanagihara, Yuko:** The effects of soil type and vegetation change on soil respiration rate in larch forests

## 1999年

**Shimizu, Kensuke:** Seasonal gas exchange and characteristics of leaves in relation to successional traits in deciduous broad-leaved forest canopy (supervisor: Dr. Hiura, Tsutom)

## Bachelor research

(on leave from Lab. Of Prof. Y. Takeuchi, Department of Bio-Engineering, Hokkaido Campus, Tokai University)

**Kanie, Sanako:**

**Tonooka, Mai:** Effects of elevated CO<sub>2</sub> and O<sub>3</sub> on growth of Japanese, Dahurian and their hybrid larch F<sub>1</sub> with OTC system (in Japanese)

**Yamakawa,:** Study on the elevated CO<sub>2</sub> on the growth and development of deciduous broadleaved trees (in Japanese)

**Abe, Tomohiro:** Study on defense trait in Betulaceae seedlings (in Japanese)

**Shibutani, Takuma:** Nitrogen allocation and photosynthesis of deciduous broadleaved tree seedlings (in Japanese)

**Shibata, Takanori:** Growth and survival of Erisan (*Samia risiri*) larvae fed with leaves of deciduous broadleaved tree seedlings grown at elevated CO<sub>2</sub> (in Japanese)

**Karatsu, Kazuki:** Changes in photosynthetic activities of deciduous broadleaves tree seedlings at FACE system with special reference to the amount of Rubisco (in Japanese)

**Agari, Tokihisa:** Effect of elevated CO<sub>2</sub> and nitrogen levels on the nitrogen fixation of symbiotic micro-organisms in three alder species (in Japanese) (supervisor: Dr. Tobita, Hiroyuki)

**Kato, Kohta:** Photosynthetic characteristics of deciduous broadleaved tree saplings grown under elevated CO<sub>2</sub> with a FACE (in Japanese).