



## **IUFR0 Unit 2.02.07**

### ***Larch breeding and genetic resources***

# *From the emergence of a group...*

*to nowadays*

- **1944 & 1958 : W. Schmidt , R. Schober :**

1st and 2nd international IUFRO provenance trials (*L.decidua*)

- **1957/58 : W. Langner, Iwakawa :**

International IUFRO provenance trials (*L.kaempferi*)

- **1976 : establishment of the IUFRO Working group S2.02-07 ‘Larch provenances and breeding’**

*“The work of the Unit is mainly concerned with genetic variation in Larix, including variation in adaptation to environmental conditions, wood productivity and wood quality”*



„Prof.-Schober-Weg“ wird eingeweiht. Der Geehrte durchschneidet die

**26-28/10/1987 : Fulda (Germany)**

Dr. H.A.Gussone

## ***‘Lärchen-Provenienzen’***

- *German speaking family group*
- *Larch international provenance testing results are at the core of the meeting*
- *Dr.Gussone’s interrogations about future of S2.02-07 group*
- *Dr. Gussone retires - Dr.H.Weisgerber new chairman*

**5-12/09/1992 : Berlin (Germany)**

Dr. H. Weisgerber

***‘Results and future trends in larch  
breeding on the basis of provenance  
research’***

- ***The group opens***
  - ***English speaking, more foreigners***
  - ***Larch provenance testing is still at the core of the meeting but also more broadly to larch breeding***
  - ***Opening towards Eastern Europe (field trip in CZ)***

IUFRO Centennial  
Meeting of the

IUFRO Working Party S2.02-07



Berlin, September 5 - 12, 1992

**31/07-4/08/1995 :  
Remmingstorp and Siljansfors (Sweden)**

Dr. H. Weisgerber

***‘Research findings and ecological-silvicultural demands’***

- *The group keeps on with its opening*
  - *The group has really integrated the importance of Russian Larch forests and research ; several Russians participate*
  - *Opening towards other themes (ecology, silviculture)*
- *Dr. Weigerber retires, Dr. Martinsson new chairman*



IUFRO WORKING PARTY S2.02-07  
July 31 - August 4, 1995  
Remmingstorp and Siljansfors, Sweden

## Larix'98

**1-5/09/1998 : Krasnoyarsk (Russia)**

Dr. O.Martinsson

*‘World resources for breeding, resistance  
and utilization’*

- *Geographic opening of the group is  
concrete : the group is faced with siberian  
forests*
- *joint meeting with divisions 5 & 7*



## Larix 2002

**16-21/09/2002 : Gap (France)**

Dr. O.Martinsson

*Improvement of larch for better growth, stem form and wood quality*

- *joined IUFRO-EU 'LARCH' meeting*
- *widely open to all fields of research in relation to larch tree improvement (wood technology, silviculture, etc)*
- *Dr.O.Martinsson retires, new chairman*



# Larix 2004

**26/09-1/10/2004 : Kyota-Nagano (Japan)**

Dr. L.E.Pâques

## *Larch breeding and genetic resources*

- *wide range of scientific topics (genetics, breeding, wood sciences, ecology, physiology)*
- *excellent opportunity to discover Japanese research implication on Larix*







Der „Prof.-Schöber-Weg“ wird eingeweiht. Der Gelehrte durchschneidet das



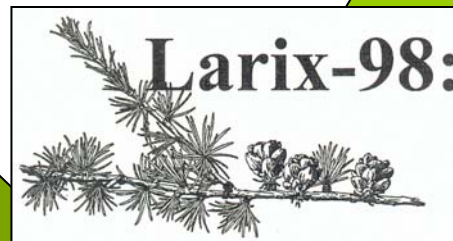
IUFRO Centennial  
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Berlin, September 5 - 12, 1992



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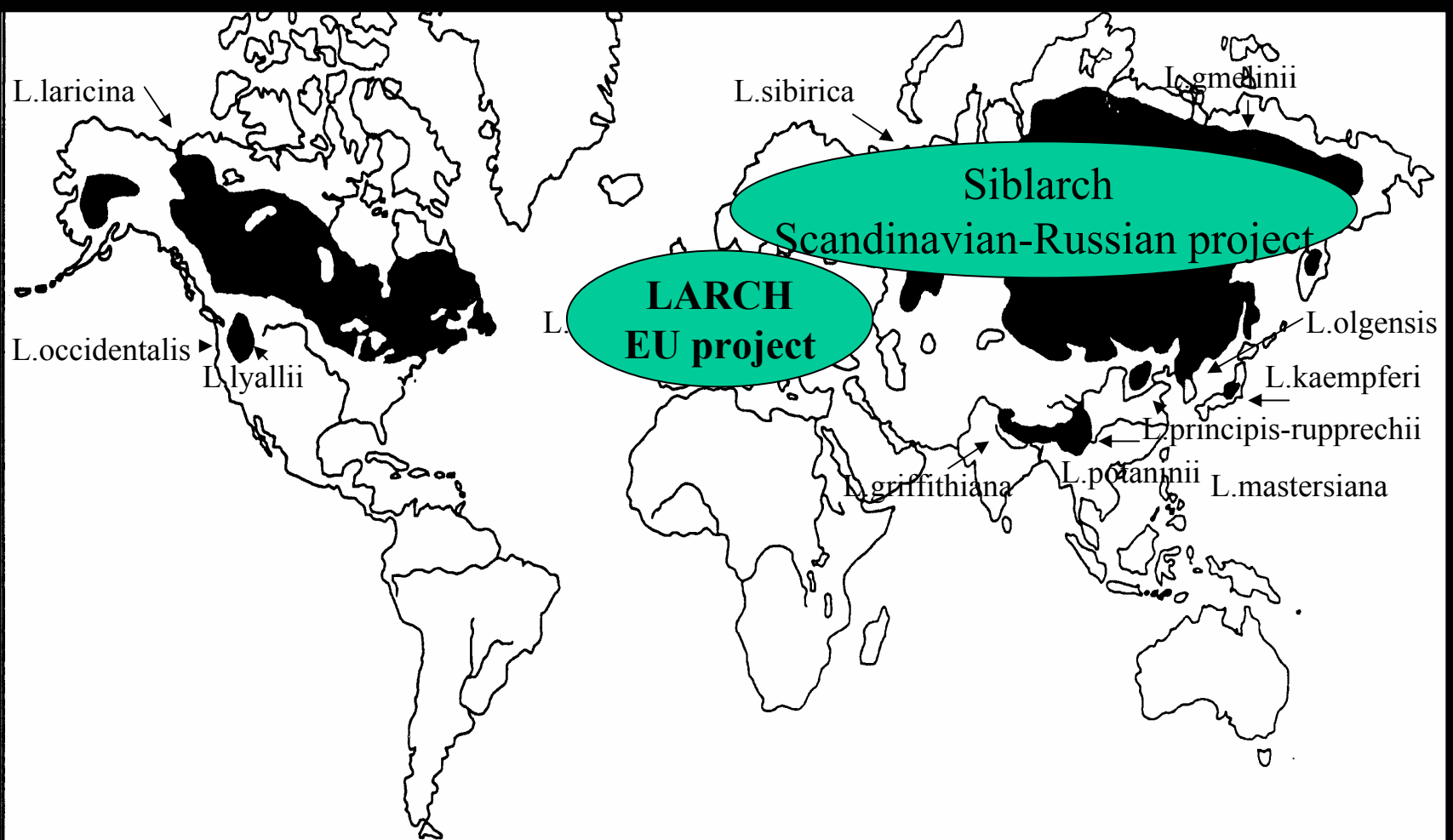




Québec, 16-21/09/2007

*Integrated Research Activities for Supply of  
Improved Larch to Tree Planting: Tree  
Improvement, Floral Biology and Nursery  
Production*

# World natural distribution of *Larix* species



From genetic diversity studies and

gene conservation

Genetic diversity studies and identification of gene conservation needs ... to tree breeding and use of

- static

- dynamic

genetic resources

➤ Better understanding of genetic architecture of traits and coherent evaluation of genetic control of traits

*Research needs remain important*

➤ Development of indirect selection procedures for early selection

➤ Basic knowledge for initiating rationale hybridisation programmes

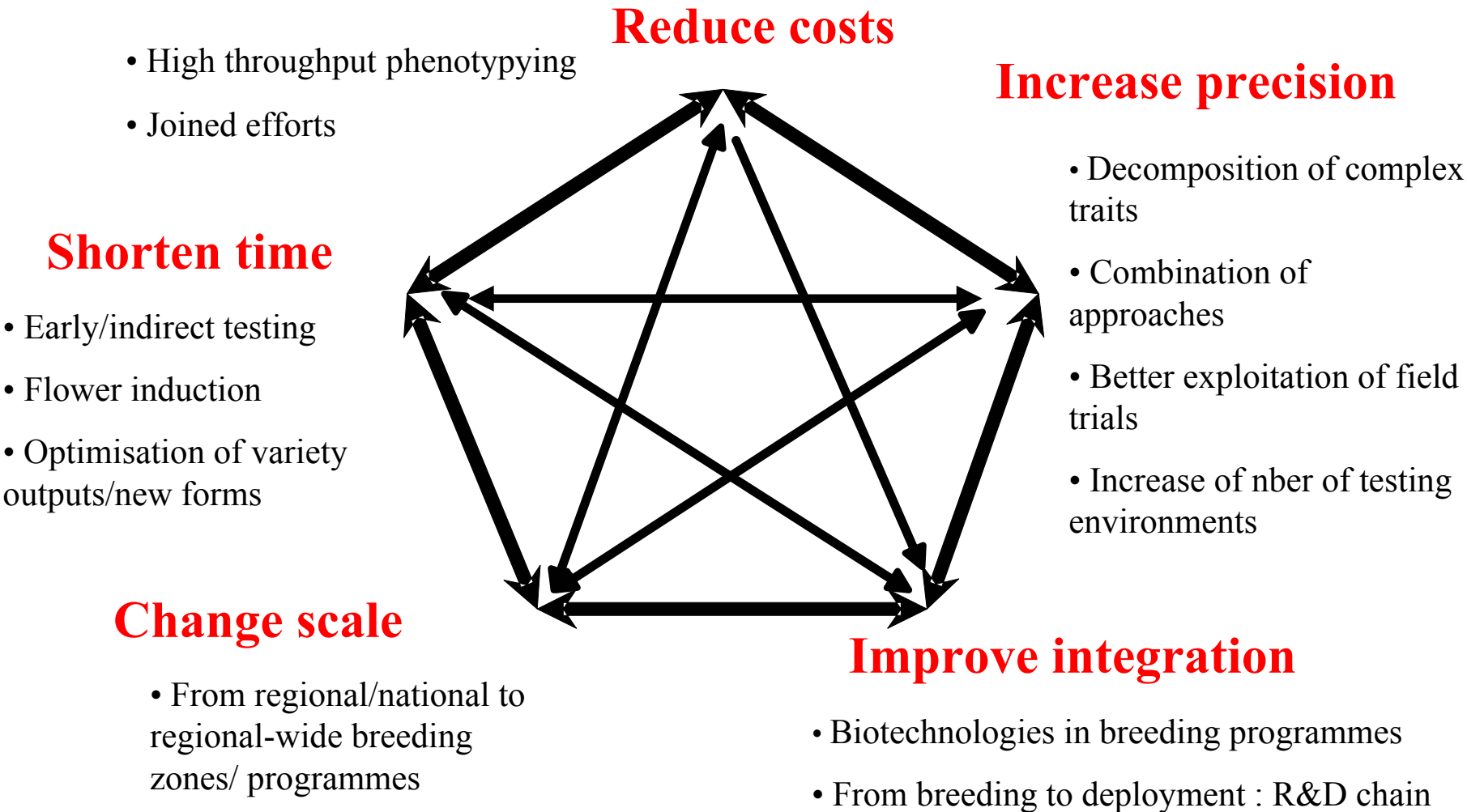
➤ Implementation of new breeding tools and mass-propagation techniques

➤ New valorisation of genetic field trials networks

➤ Deployment of international genetic trials

- New socio-economical context
  - Impact of breeding activities
  - New needs: new functions/ new products
- Increased complexity
  - New traits (adaptive traits, biomass, durability, etc)
  - New techniques

# Future... is for more efficiency, more reactivity



# Future is for more broadened scope

## Interaction/impact

Improved on natural populations/ natural resources

Soft breeding

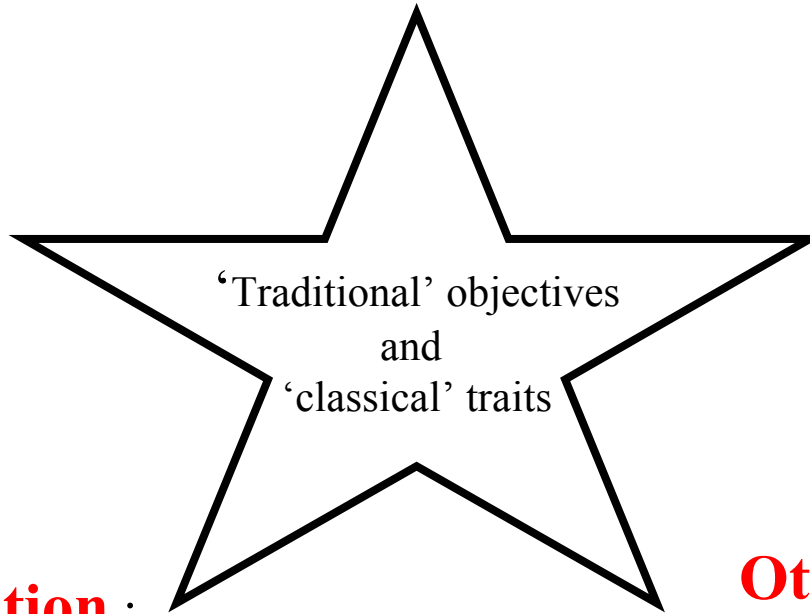
**Time-scale** : from short-term to long-term breeding : sustainability

**Space-scale** : from regional/ national to European biogeographical zones

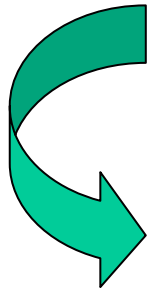
‘Traditional’ objectives and ‘classical’ traits

**Conservation** : management of natural resources

**Other economical priorities/uses** : selection criteria priority



Dramatic erosion/loss of research forces in breeding (funding, humans, facilities, etc)



*Urgent need to join forces*

*at regional levels at least*





- *“Success in the fields of larch research depends in no small measure on **close cooperation** including **task distribution among institutes**. In the past, IUFRO has proved its value in the complex research on this tree species. Faced with many new study fields, both in genetics and breeding, we consider **IUFRO to be a more indispensable institution** than ever for productive research on larch”*

Weisgerber and Sindelar, 1992.

# How ?

- Communication (papers, meetings, etc)
  - *Precious not-anymore publishable results become more and more unavailable*
- Joint experimentation
  - *Would we still have the means for ambitious common testing, etc ?*
- Easier share of resources (plant material, access to trials, data ?)
  - *First thing is to be aware of first*
- Exchange of technical/scientific expertise
- Joint research projects / breeding programmes