

Wood-destroying insects and decay fungi in and moulds on wooden cultural heritage objects and constructions (Training School); Hamburg, 16-20.3.09

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Abstract

The training school which was carried out as a COST Outreach Activity focussed on the important wood-destroying organisms, both insects and fungi which damage wooden cultural heritage, artworks and timber constructions. The training school fulfilled the initial objectives and intentions regarding most fields of the Conservation of Wooden Cultural Heritage. Thirteen courses and presentations were given by 9 lecturers. New techniques and methods were taught and discussed (e.g., monitoring and control measures for insects, molecular methods for fungi, detection methods for moulds). New contacts between trainees and lecturers were made, especially with reference to the different fields of work of the participants. There is demand for a repetition of this training school on the basis of the reactions of the participants during and after the courses as well as by the response during the application period.

1. INTRODUCTION

In the scope of the COST Action IE 0601 (WoodCultHer) it is one objective to bring together younger and experienced researchers, conservators and other scientists concerned with the multidisciplinary fields of wood science. This training school was planned to focus on the main wood-destroying organisms, both insects and fungi which damage wooden cultural heritage, artworks and timber constructions. Additionally, selected species of moulds found on historic wooden objects were to be studied. For the insects and fungi courses on microscopy and damage characteristics were conducted. With regard to insects there was an introduction to Integrated Pest Management (IPM) including monitoring and control measures illustrated with many case studies. An excursion to a historic farmhouse in Eastern Hamburg was also carried out.

Nine international lecturers were invited with 4 lecturers conducting the main courses and 5 lecturers giving presentations on aspects of surveys, diversity of species and application of methods in 5 European countries (ES, LV, MK, PT, RO). These studies on specific wooden cultural heritage objects and taxa of insects, fungi, and moulds were to portray wood-destroying species in the various geographical regions of the 21 participating countries. Global market and reduction of economical borders as well as global warming were interesting topics for imported organisms from other continents with respect to invasion and neobiota in Europe.

2. CHRONOLOGY

- 12/12/2008 Organiser of a planned training school ("TS" from here on) within COST Action IE0601, Dr. Uwe Noldt, was informed about the possibility of applying for a COST Outreach Activity by Chair Prof. L. Uzielli ("Invitation to Participate in an exciting COST Outreach Activity for Early Stage Researchers", Brussels, 27/11/2008).
- 07/01/2009 Expression of Interest in Cost Outreach Activity for planned TS was sent to COST Office.
- 29/01/2009 Notification of successful application received from COST Office (Inge De Prins, Public Relations and Communications Manager).

- 06/02/2009 Notification of training school by folder and “First announcement of training school” to MCs of COST Action IE 0601, other COST Actions (E 37, D42, G8), and other organisations associated with wood science.
- 10/01/2009 Fifty-two applications received from applicants of 23 countries (AT, BE, CH, CZ, EE, ES, FI, DE, FR, GR, IT, LV, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, UK) ranging from 1 per country to up to 5 per country (CZ, IT).
No response from 6 of the Action’s countries (BG, DK, HU, LT, RS, TR). Furthermore, up to now 12 additional applications for a future training school on the same topics.
- 19/01/2009 Notification to all applicants to send their **CVs**
- 09/02/2009 Selection of trainees on the basis of the CVs and by definition of a ESR (Early stage researcher); 24 selected to attend and 4 other applicants to be next in line (DE, FI, FR, IT)
- 09/02/2009 First TS letter of information to trainees
- 23/02/2009 Second TS letter of information to trainees/First information letter to lecturers



Figure 1 – Participants of the Hamburg COST Training school

3. PARTICIPANTS

Twenty-four trainees from 21 COST IE 0601 countries (AT, BE, CH, CZ, EE, FI, DE, FR, GR, IT, LV, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK) attended the training school including Malta, Poland, and Romania with 2 trainees each. Attendance was limited to 24 trainees due to the size of the lecture hall and 24 plus available microscopes. There were 16 female and 8 male trainees with altogether 21 of a true ESR status and 3 trainees who have done work with wood-destroying animals before (AT, GR, NL)

A total of 9 lecturers from 6 countries attended: Dr. Livia Bucsa (University "Lucian Blaga", Sibiu/RO), Dr. Tobias Huckfeldt (Mykologisches Labor, Hamburg/DE); Dr. Ilze Irbe (Latvian State Institute of Wood Chemistry (LSIWC), Riga/LV), Prof. Dr. Mitko Karadelev (Ss. Cyril and Methodius University, Skopje/MK), Dr. Uwe Noldt (HTB of vTI, Hamburg/DE), Dr. Lina Nunes (Laboratorio Nacional de Engenharia Civil, Lisbon/PT), Dr. Wolfram Scheiding (Institut für Holztechnologie Dresden gGmbH, Dresden/DE), Prof. Dr. Olaf Schmidt (University of Hamburg, Hamburg/DE), Dr. Manuel Cesareo Touza Vazquez (Galician Timber Technological Innovation and Services Centre (CIS-Madera), San Cibrao das Vinas – Ourese/ES).

4. COURSES AND PRESENTATIONS

- 01 Presentation “Introduction” (Noldt)
- 02 Presentation “Insects/General” (Noldt)
- 03 Presentation “Insects/Species” (Noldt)
- 04 Course/Presentation “Insects/Microscopy” (Noldt)
- 05 Presentation “Insects/Termites” (Nunes)
- 06 Course/Presentation “Insects/Damages” (Noldt, Touza Vasquez)
- 07 Presentation “Fungi and bacteria/General” (Schmidt)
- 08 Course/Presentation “Fungi/Microscopy” (Huckfeldt)
- 09 Presentation “Fungi/Romania” (Bucsa)
- 10 Presentation “Fungi/Latvia” (Irbe)
- 11 Presentation/Visit to laboratory “Fungi/Molecular methods” (Schmidt)
- 12 Presentation “Fungi/Moulds” (Scheiding)
- 13 Presentation “Fungi/Macedonia” (Karadelev)



Figures 2 a-d – Impressions from the the Hamburg COST Training school

5. ADDITIONAL ACTIVITIES

- Visits to different departments of the Institute HTB (Wood collection / Wood identification, Wood protection, Dendrochronology, Insect rearing stations)
- Organisation of the TS
- Excursion to the historical farmhouse „Rieckhaus“
- Get together at Restaurant “Alt Lohbrügger Hof” with dinner and sports (“skittling”)
- Short presentation on COST (Uzielli)
- Video film on wood-destroying insects (Noldt)
- Promenade along Hamburg harbour and dinner at historical brewery “Gröninger”



Figures 3 a-d – Impressions from the the Hamburg COST Training school

6. MATERIAL

6.1. TS Booklet and Proceedings of Detmold Conference

The TS Booklet contains all lectures of the TS, some additional publications and is complemented by a copy of the Proceedings of a Conference (ed. Noldt & Michels, 2007) held in Detmold in 2006, with some English articles and English abstracts regarding studies on monitoring and control measures in wooden cultural heritage.

6.2. Questionnaire

A questionnaire was handed out to the participants, filled out anonymously and 24 questionnaires were returned for evaluation.

6.3. PR activities

The local newspaper (Bergedorfer Zeitung) printed an article about the TS in the weekend edition. The newspaper “Hamburg Abendblatt” and “Hamburg TV 1” were informed. On April 1st, 2009 German television “ARD” broadcasted live from the HTB of the vTI, and the organiser of the TS mentioned the TS by COST. A report on the TS was written in the vTI-journal.

7. RESULTS

7.1. Results of Questionnaire

The results of the questionnaire reach from a “completely satisfied” to very detailed remarks and annotations about the pros and cons of the TS conducted in Hamburg:

The cons: not enough time in some of the courses and lectures, too little time for discussion in some courses and presentations, too much time spent on microscopy of fungi; no time for a 3 minute introduction of each individual participant; not enough time for inside visit of the farmhouse “Rieckhaus”; some parts of lectures “too basic” for some experts within the group of trainees; too long of a walk along the harbour for some and too little time for a visit of Hamburg harbour and/or other sites in the City of Hamburg. Individual remarks included: too less time spent on termites, case studies, technical advice, institute visits.

The pros: expertise of lecturers; mention of new technologies, status quo knowledge, and future problems; very good overview according to title of TS; good organisation, good atmosphere, friendly and helpful staff; contacts to people from other nations, other fields of work, and other backgrounds; excellent handouts and good “Training school booklet”

7.2. Benefits for Trainees and Lecturers

From evaluation of the questionnaire it is obvious that: 1) Most of the trainees benefited from the knowledge/competence of the experts not only in general topics and basics of the respective subjects, but also in specifics when they were asked for as well as the knowledge of application and applicability of new and improved methods in the different fields of work. 2) The good atmosphere from the lecture hall was carried forward to other activities of the whole group or smaller groups while going to lunches and evening activities. 3) Discussions took place wherever trainees/lecturers were in groups working with the samples, specimens or slides. 4) They experienced working individually, in changing smaller groups or in the forum by using the foreign (English) language. 5) There were many new contacts made to people from other nations, backgrounds, and working areas. Especially the lecturers on fungi met each other for the first time (except: LV and MK) and they used the TS for exchange of knowledge and future cooperation. 6) If not anyone else has engaged in the topics of this TS in the respective countries before, the trainees have had an introduction to this field of work, will be the persons to spread word around and, thus, may multiply their knowledge to other countrymen and -women.

7.4. Future TS

A repetition of this TS would be warranted since in the shortage of time of application not the complete possible group of interested ESRs could be reached by making the TS known to a broader community, especially with respect to applicants in even other EC countries (6 countries with no response!!!). Suggestions: a) Possibly a seven-day long TS would be advised (for field work in problem building, longer time for insect microscopy, more time for macroscopic determination of fungi, a half-day or longer course on moulds, etc.); b) For the excursion a real “problem house” should be provided, however, that this object is within close driving range; c) Reduced number of presentations from other countries regarding one subject (here: fungi). More presentations relating to case studies and practical work. d) Possibly IPM could be taken up in a broader way.

8. Summary

The TS fulfilled the initial objectives and intentions of the TS regarding most fields of the Conservation of Wooden Cultural Heritage. New techniques and methods were taught and discussed (e.g., monitoring and control measures for insects, molecular methods for fungi, detection methods for moulds). New contacts between trainees, lecturers and the two groups were made, especially with reference to the different fields of work of the participants. Some lecturers – including the organiser – ran out of time once in awhile. As a result, less discussion in forum was possible. However, during the TS there were very many discussions between the participants related to the respective subjects. The organiser has already experienced many “after TS contacts” between participants. There is a demand for a repetition of this TS on the basis of the reactions of the participants during and after the TS as well as by the response during the application period.

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