

ATR report of the 28th European Dendroecological Fieldweek

By Edina Merdan

The European Dendroecological Fieldweek (EDF) is an annually occurring training program initiated by Fritz Schweingruber in the early 80's. Since 2007, it is organized by Kerstin Treydte, Dendrosiences Group at the Swiss Federal Institute for Forest, Snow and Landscape Research WSL together with partly alternating international collaborators in different countries across Europe. This year, the fieldweek took place in the Vosges Mountains in close collaboration with INRA Nancy (Cyrille Rathgeber) and IWW Freiburg (Hans-Peter Kahle), and was supported by ATR and IUFRO.

The EDF is designed mainly to introduce young scientists to dendrochronology and foster cross-disciplinary research and networking at the beginning of their academic careers. However, researchers at all career stages interested in tree ring research are warmly welcome. At the 28th EDF, 24 participants from 18 countries came together in the Vosges Mountains in France to exchange knowledge and experience in 4 interdisciplinary fields of Dendroscience: Dendroecology, -archaeology, -climatology and Wood Anatomy. Undergraduate and graduate students of Biology, Ecology and Geology learned along with professors, teachers, lecturers and other researchers. During the week, everyone was encouraged to present a talk of his or her research topic to the mixed audience of experts and newbies in a relaxed atmosphere; with experts comprising of senior scientists, graduate students and local experts, who coordinated events, supported projects and provided lectures.

The week started with the distribution of the participants to their preferred topic groups. The following day, all groups worked in the field, and learned about and applied specific sampling designs, depending on their particular research question. The main goal during fieldwork was to understand correct sampling procedures (i.e. site selection) and learn field techniques (labelling sampling, incremental coring). The study priority of my working group, Dendroarchaeology, was to analyse a beautiful late Gothic style cathedral in Thann, south of the Vosges Mountains. Our supervisor (Willy Tegel) dated this cathedral (Collégiale Saint-Thiébaud) previously to the 15th century. Since objects within the roof truss and timber differed in age, it was our week's task to solve. We learned how to define the dendrochronological potential of wood in different architectural portions of the cathedral by differentiating timber by wood anatomical features and to sample old and dry wood vs. living trees without destroying the structural integrity. Following the field expedition, we were taught to prepare, process and analyse the collected samples. This was done by cutting and sanding the wood cores and measuring tree-ring widths with software such as TSAP-Win and PAST. As Dendrochronology is the foundation of every further approach in Dendroscience, we learned how to build a chronology, and statistically confirm the output with reference chronologies.

During two work hiatuses, we visited the local museum of natural history of the Alsace and the Vosges Mountains, where a local expert introduced us to the ecological and social changes of the region. A second trip took us to one of the last wooden-shoe makers in Europe, where we witnessed the whole working procedure from trunk to convenient shoe with the perfect size.

The week culminated with a very intense, interesting, and inspiring afternoon of presentations and scientific discussion, where all topic groups introduced their research and findings to the whole audience. In our group, I presented the statistical confirmations of our chronologies, which provided a better understanding of all the useful tools and approaches.

To conclude, the EDF was a wonderful experience and opportunity for everyone new in the field of Dendroscience, as well as for more experienced researchers. It is a great combination of intense scientific but also multi-cultural exchange and fun. I am looking forward to participate in fieldweek in

the coming years, as I learned a lot and realized that there is a great new community growing and building a network for future interdisciplinary work. I thank the organizers for the opportunity and the ATR for their generous support.

For more information on the EDF, please contact kerstin.treydte@wl.ch



The "archaeologists" digging and coring



The dendroarchaeology group (from left: Lili Perreault, Erin Fien, Willy Tegel, Edina Merdan, Rebekka Riebl, Lenka Mateju)



Collégiale Saint-Thiébaud



The shoe maker presenting the smallest and the largest exemplar



The beech forest, typical for the Alsace region reflecting the mean snow cover level with bending and moss lichen



Intense working