

18TH INTERNATIONAL SYMPOSIUM ON CHIRONOMIDAE TRONDHEIM NORWAY 4-6 JULY 2011

On the 4th of July 2011 about 80 chironomists from as far afield as Japan, New Zealand, Argentina and Canada converged on the Norwegian University of Science and Technology (NTNU), a short walk uphill from Trondheim city centre. After registering, the delegates were warmly welcomed by Kaare Aagaard, Elisabeth Stur and Torbjørn Ekrem, before the Symposium was officially opened by the NTNU Museum Director Prof. Axel Christophersen. The honorary Thienenamnn lecture was delivered by Oliver Heiri entitled 'Traces of past environments in the chemical composition of chironomid remains: stable isotopes in chironomid palaeoecology'. For the oldest of us, what has become possible in chironomid research – the analysis of stable isotopes in the fragments of long dead chironomid larval head capsules in order to reconstruct past climate changes, nitrogen pollution and the carbon food sources of lake foodwebs – is truly mind-boggling. One can only hope that there will be place still for the amateur chironomist with minimal equipment and finance. However, this is what these symposia are all about: widening the appreciation and knowledge of what can be done and is being done in the subject to which we are dedicated. This was an excellent start to a highly informative and exciting program.

18th International Symposium on Chironomidae



Logo from the symposium. Design: Elin Sandbakk

After a very agreeable lunch in the university canteen (repeated on the following two days), the general program took off with two sessions of papers on palaeolimnology: six papers on what is being done on little bits of subfossil chironomid larval head capsules. For those of us who find difficulty in identifying a complete extant larva the palaeolimnological identifications appear little more than

wishful thinking, but as they so well demonstrated you do not have to have specific identification to derive useful information from the exercise. Once again the use of a carbon isotope to determine the food source and therefrom the eutrophication states of a lake, demonstrated just how sensitive the technique can be: it so happens that during periods of eutrophication more of the carbon food source is derived from methanogenic bacteria and this can be detected in the $\delta^{13}\text{C}$ values derived from the subfossil chironomid larval head capsules.

There followed extreme activity in the lobby area outside the lecture theatre as posters were rapidly displayed on the substantial notice boards and the first period of viewing commenced. There was a wide variety of presentations including ecology, biodiversity, systematics traditional (even of some strange Mesozoic fossils with long biting proboscis) and more advanced (CAD and CO1 sequencing), six new species, species reappraised and species reinstated, and more palaeolimnology.

That evening an organ recital had been arranged at the Nidaros Cathedral, which has two organs: half the program was played on the older Baroque organ (Bach, including the famous Toccata and Fugue) and the second half on the main more recent Steinmeyer organ over the entrance to the cathedral (Egil Hovland – a composer new to most of the delegates). The organist was Øyvind Kåre Pettersen whose virtuosic performance, ending in a piece of Hovland fireworks, was pure artistic enjoyment for those of the delegates whose musical appreciation extends to that of works for large, loud organs. Rounding the evening off was a wine and canapés reception in the neighbouring restaurant: excellent provision for chatting the evening away with those of like mind.

Tuesday morning was devoted to taxonomy and systematics. Before the coffee break five papers based on morphology and after, four based on molecular techniques and one on morphology were presented, demonstrating the wide variety of techniques being used at this time to distinguish species. The use of the polymerase chain reaction for separating *Chironomus* species at any stage of development is a novel addition to the techniques already in use for the genus.

There followed a period of seventeen presentations on ecology and biomonitoring that lasted until lunch of the following day (Wednesday), that



Group photo of symposium participants outside University main building. Photo: Arnstein Staverløkk.

took the delegates across the world from arctic Canada through Iceland, Europe, India, and Korea to New Zealand, from alpine pools to lowland lakes and from freezing temperatures to geothermal waters. The talks gave a fascinating overview of the variety of studies that chironomids can stimulate.

These presentations were punctuated by the Tuesday evening Conference Dinner, held at Ringve Botanical Garden. The delegates were first shown round the garden by Vibekke Vange. The garden includes a large pond, where some delegates took the opportunity to do some collecting. The meal was a feast for the eye as well as for the palate, the evening further lifted by the camaraderie natural in the chironomist community.

The last session of the oral proceedings began after lunch on Wednesday on toxicology, cytology and genetics. The seven presentations covered genetic control of behaviour, stress response to endocrine-disrupting compounds, desiccation tolerance mechanisms, gamma radiation tolerance in *Chironomus ramosus*, DNA, chromosome responses to toxic contaminants and centromere structure. The Chironomidae are being comprehensively scrutinized and exhibiting just how plastic is their general physiology and cytology.

The final session entitled “Chironomidae Symposium Forum”, began with in memoriam accounts

of chironomists recently deceased: Paul Freeman and Arthur Harrison by Peter Cranston, and Alevtina Shilova and Alexander Konstantinov by Andrey Przhiboro; a minute’s silence was observed in their memory. The award for student presentation was awarded to Alyssa Anderson and for the student poster was presented to Isabelle Proulx. Two presentations were then given for the venue of the next symposium: Naime Arslan’s invitation to Turkey was followed by Jolana Tátošová’s to the Czech Republic; I could have happily gone to either location, but the vote went to the Czech Republic.

The Symposium was brought to a very enjoyable conclusion with a social held in the garden of Kaare Aagaard’s home. Our grateful thanks go to Kaare and his family for the warm welcome they gave and the excellent refreshments.

The day following many of the delegates participated in the post symposium tour to the UNESCO cultural heritage site Røros, where we were given a guided tour of this post-mining community: exceedingly spartan living seems to have been a way of life for the miners – the tiny wooden cottages have left a lasting memory. Thence we travelled to the Sølendet Nature Reserve, where the wildflowers punctuated the fen with colour and the spring stream and fen pools provided the dedicated collectors an opportunity to get their nets in

action again. Wet but happy we boarded the coach again to pass over the scenically spectacular mountains to Tydal Valley and Sylane Mountains, where we were feasted at a remarkable restaurant in “the middle of nowhere”. We had a short time to photograph the wild flowers and do some more collecting before we were off again, now on our way back to Trondheim, but there was one more stop along the River Nea, a river regulated for hydroelectric power. We were given a guided tour of the large hydroelectric plant in the bowels of the mountain, which seems to be under the control of just two engineers. Culture, nature, spectacular scenery and pleasant company provided an experience that participants were very happy not to have missed.

On behalf of all the delegates I offer our grateful thanks to Elisabeth Stur, Torbjørn Ekrem, Kaare Aagaard and their helpers for a most educational, well organised and memorable symposium and to the NTNU for providing the venue.

Peter Langton
Londonderry

Memories of the 18th International Symposium on Chironomidae

What a great symposium! I would qualify my first international symposium on Chironomidae as being refreshing, resourceful and helpful. Being used to attending much bigger gatherings, I really appreciated the more one-on-one, friendly and personal feeling of this symposium. Having the time to talk to people who work with chironomids and authors whom I had known only through their publications was really rewarding. In my doctoral research, *Chironomus* species identification has been my biggest challenge, and so I came to this meeting with the specific objective of getting some feedback on the work I have been doing. Not only was I able to get some answers to my questions, but I also made new and very helpful contacts. I would really like to thank the organisers for this wonderful, well-organised and pleasant symposium. I only have good memories of my experience in Trondheim!

Isabelle Proulx
INRS Eau Terre Environnement
Université du Québec,
Québec (QC), Canada



Len Ferrington, Pete Cranston and Anker Halvorsen discussing midges during a coffee break. Photo: Elisabeth Stur.

First time impressions of the International Symposium on Chironomidae

The list of speakers and attendees of the 18th International Symposium on Chironomidae reads very much like the bibliography of any rigorous literature review of the subject. Any misgivings one might have about attending such a specialized and esteemed event are quickly forgotten after meeting the participants. This community of researchers is very welcoming and it was encouraging to listen to veteran attendees who told of similar apprehensions when they arrived for their first symposium. The expertise each of the speakers was unequivocal and the breadth of knowledge was clear in the insightful questions and discussions. However, the most prominent feature of this group is the passion that people share for their subject. Not only do the participants exude zeal for their research, but many have stories of personal collections, research performed without funding and for personal interest, and some of us cannot walk by a pond or stream without looking for the presence of larvae or exuviae. The personal investment in this work seems so great that many of the people in attendance do not even seem aware of the legacy of their research. Outside the seminars people stand around microscopes, trade slides and specimens, and discuss taxonomic features as if recollecting the appearance of old friends. Others debate the best habitats to find certain species and swap stories of collecting trips. There is no substitution for being present at this conference. There are no identification keys precise enough or species list long enough to replace the value of these shared discussions. One cannot help but be impressed at the diversity of session topics and the addition of the Chironomid Subfossil Workshop held in Finse, Norway, prior to the conference only serves to in-

crease the number of participants and demonstrate the versatility of midges in answering ecological, biogeographical, physiological and genetic questions. While the monetary costs of attending an international conference can be high, the value here is far greater. The hosts of this event deserve special recognition and gratitude. Elisabeth Stur, Torbjørn Ekrem and the Museum of Natural History and Archaeology organised a memorable programme of talks, outings and social events.

Christopher Luszczyk
York University
Toronto, Canada.

The 18th International Symposium on Chironomidae

Participation in the Chironomidae Symposium in Trondheim was an important step for my PhD thesis and future work with chironomids. It was a wonderful opportunity to meet the best experts from all the fields, in which this amazing animal group can be used. It was really surprising for me how friendly and helpful were the people that I met, especially the “good old” experts. To have these contacts and to know that there is always someone you can ask for help, is the most important thing for a young scientist. Finally, this Symposium was the easiest way to get to Chironomidae heaven!

Jarmila Lešková
Comenius University
Bratislava, Slovakia.

The 18th International Symposium on Chironomidae

Attending the 18th International Symposium on Chironomidae in Trondheim, Norway, has given me the chance to present my own work and listen to talks on a wide variety of Chironomidae research. Researchers from all over the world attended the conference, presenting their work on different subjects, ranging from taxonomy to ecology. The conference was very well organized along with social events, which included an organ recital at the Nidaros Cathedral, a visit to the botanic gardens and a day trip to Røros and neighbourhood. I feel this conference is an important venue for scientists to meet, present their work, get to know each other and create collaborations.

Elisabet Ragna Hannesdóttir
University of Iceland
Reykjavik, Iceland.