SCIENTIFIC PROGRAMME

MONDAY, 24 September
University Residence "Colegio Mayor Rector Peset"

12:30	Registration
13:30	Get Together & Lunch
15:30	Opening Session
16:00	Opening Lecture. **Artem Sinev.** Modern changes in the system of the subfamily Aloninae.
	Oral Session:
16:45	**Rikke Bjerring.** Cladoceran subfossils along a European climate gradient
17:15	**Lidia Romero.** Climate signal in annually calcite laminated sediment of Lake la Cruz (Cuenca, Spain).
17:35	**Coffee break.**
18:00	**Tourist Visit** to Cathedral, University of Valencia: Historic Building & Library, Valencia historic quartiers.

TUESDAY, 25 September
University Residence "Colegio Mayor Rector Peset"

Oral Session:

9:00 **Kaarina Sarmaja-Korjonen.** The mysterious sex life of *Alonella nana* (see Abstract)
Liisa Nevalainen.
Short presentation by Kaarina.

9:30 **Marina Manca:** Climate and trophy interactions: evidence from studies on subfossil cladocerans

10:00 **Mirva Nykänen:** Rotifer resting eggs in the sediment.

10:30 **Artem Sinev:** European species of *Acroperus*

11:00 **Coffee break**

11:30 **Krystyna Szeroczynska** & Krystyna Milecka: The history of the Moczadło and Sierzywk - lobelia lakes (Tuchola Forest, North Poland) in the light of Cladocera and pollen analyses (see Abstract).

12:00 **Janos Korponai:** Cladocera remains in sediment of Lake Balaton and Zalavari Pond bay of the Lake Balaton.

12:30 **Edyta Zawisza:** Climate and human impact on the lake Jelonek recorded in the remains of Cladocera.

13:30 **Maria R. Miracle** & T. Merino**:** Recent changes in Albufera of Valencia identified by Cladocera subfossils.

13:30 **Lunch**

Poster Session:

15:30 **Giri Raj Kattel.** Palaeocladocera of a New Zealand maar lake (Onepoto maar, Auckland) (see Abstract).

Krystyna Szeroczynska & Krystyna Milecka: The history of the Moczadło and Sierzywk - lobelia lakes (Tuchola Forest, North Poland) in the light of Cladocera and pollen analyses (see Abstract).

Marco-Barba, J., Mezquita, F., Holmes, J. A. & Miracle, M.R. Salinity changes in Albufera lagoon (eastern Iberian Peninsula) during the Holocene, inferred by ostracod assemblages and geochemistry.

Marco-Barba, J., Merino, T., Vicente, E., Mezquita, F. & Miracle M.R. Salinity changes in Albufera lagoon (eastern Iberian Peninsula) in recent times, inferred by ostracoda-cladocera assemblages and geochemistry.

Lidia Romero. Sedimentary multiproxy to hydroclimatic variability in two doline lakes of different morphometry.

17:35 **Coffee break.**

18:00 **Tourist Visit** to La Lonja (Merchant Guild House), Crypt of Sat Vincent, Admiral's Baths, Serranos Towers, and The City of Arts and Sciences

WEDNESDAY, 26 September
Botanical Garden

Laboratory Session

9:30 Slide Presentations.
Giri Kattel
Karina Jensen
Liisa Nevalainen (presented by Kaarina)
Maria Sahuquillo (Cladoceran ephippia from sediments of temporary ponds)
Jonatan Val (Cladocera subfossil from Albufera's core)

11:00 **Coffee break**

11:30 Microscopy sample observations
(Digital photograph projection for specimen observations will be available)

13:30 **Lunch**

15:30 Microscopy sample observations.

16:30 **Conclusions & Closing session**

17:30 **Coffee break** & Visit to Botanical Garden.

19:30 **Concert**

21:00 **Workshop Dinner**

THURSDAY, 27 September

Excursion to Albufera of Valencia lagoon, Sagunto Castle and Subterranean river and Caves of Vall d'Uixó.

ABSTRACTS

The mysterious sex life of *Alonella nana*

Kaarina Sarmaja-Korjonen

During the EPHIPPIUM project (2005-2007) we collected much data about chydorid reproduction patterns. The project included monitoring of living chydorids in several lakes near Helsinki and analyses of surface samples from the same lakes (Liisa Nevalainen´s part), as well as surface samples from ca. 80 lakes all over the country (my part). These results show that the sex life of *Alonella nana* is greatly variable - and really puzzling!

The monitoring of Liisa´s lakes (2005) showed that the species relied on gamogenesis in dystrophic lakes and in lakes with higher nutrient state. In very oligotrophic and acidic lakes the proportion of gamogenesis was very insignificant. The same pattern was also visible in the surface samples from the lakes. In the surface samples from all over the country ephippia of *A. nana* were indeed very rare in most of the lakes in southern and central Finland but alas! when the Arctic Circle was crossed its ephippia were found in every lake and they were abundant. The same scarcity or even lack of its ephippia in most Holocene sediment cores from southern Finland is a fact, as if the role of sexual reproduction has been very weak during thousands of years in these southern lakes. However, to make things even more complicated, in a few of the surface samples from southern Finland, it seemed to have a kind of personal stress and in the surface samples many ephippia were found. So, is it (and has been) perennial in lakes with low nutrient state and/or good oxygen conditions? But having abundant gamogenesis in (Liisa´s) dystrophic and meso/eutrophic lakes and some other lakes in southern Finland? What is the stressor or forcing behind this? And why does it rely heavily on gamogenesis in the north? Is it adaptation to different conditions or is being perennial impossible in these lakes with long ice cover? These are things we can discuss together in the workshop. I hope you have ideas!!!

The history of the Moczadło and Sierzywk - lobelia lakes (Tuchola Forest, North Poland) in the light of Cladocera and pollen analyses.

Krystyna Szeroczyńska [1] & Krystyna Milecka [2]

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Lobelia lakes are not numerous in Poland. They are located in West Pomerania (Tuchola Forest), exceptionally in Masurian Lake District and Karkonosze Mountains. Generally lobelia lakes are determined on the floristic and phytocenotic base. They are classified according to presence of *Lobelia dortmanna*, *Isoëtes lacustris* and/or *Littorella uniflora*. Lobelia lakes belong to oligotrophic or mesotrophic soft water lakes occurring at the area of the last glaciation. During the Holocene in many lobelia lakes changed the trophy, and often they transformed into eutrophic lakes.
Sediments from two lobelia lakes have been investigated to understand the transformation from lobelia to eutrophic lake.
The changes in flora and fauna composition of species living in such lakes allow to describe the water temperature fluctuations and trophy status, and then indirectly - the climate and anthropogenic influence.
The poster presents the results of palynological and subfossil Cladocera analyses. Lake Moczadło and Lake Sierzywk (Tuchola Forest, North Poland) were selected for the study. During the development of these lakes the species composition and the specimens of *Lobelia dortmana, Isoëtes lacustris* and Cladocera abundance often changed what resulted mainly from the climate changes, but also from the human activity. Their succession was mainly related to trophy conditions in the lake. The studied lakes are not located closely to one another. For centuries they have been subjected to the same climate but different human impact.
The species composition of subfossil Cladocera in the Lake Moczadło was different from Lake Sierzywk, and other studied lakes in this region. There existed *Rynchotalona falcata, Alonopsis elongata* and *Alona intermedia*, the rare species in Polish lakes. These littoral species and some planktonic ones indicated high oligotrophic condition, especially in the Late Glacial and early Holocene. Quality and quantity of Cladocera species were compared to the presence and/or abundance of *Lobelia dortmanna, Isoëtes lacustris* and some other plants (e.g. algae) reflecting climatic changes and human activity. The regularity was observed that usually during the periods of isoetids presence the Cladocera species preferring the higher water trophy decreased and *Rynchotalona falcata* was much more abundant than in the other periods. The species composition of subfossil Cladocera in the Lake Sierzywk indicated meso – or eutrophy condition. Some phases of the lake trophy increase were distinguished on the basis of the eutrophic Cladocera species. According to the palynological analysis, these phases correlate with periods of isoetids absence and are related to the periods of stronger human activity.

Palaeocladocera of a New Zealand maar lake (Onepoto maar, Auckland)

Giri Raj Kattel.

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New Zealand has a large number of lakes in which the maar crater lakes in the Auckland region are older than 15,000 years (up to ca 250 kyrs) and capable of recording a number of shorter and longer time scale events of climate change. Reliable chronologies for some of these lakes have been established well beyond 30,000 cal. yrs BP. A very first attempt has been made to investigate the palaecladoceran assemblages and their response to past environmental change in one of the Auckland maar lakes, Lake Onepoto. The primary data examined from an Onepoto core ranging from 0.8 m to 1.6 m indicates that the lake contains a significant number of cladoceran species predominantly the planktonic New Zealand endemic species, *Bosmina meridionalis*, and the most common littoral species including *Alona guttata, Alona intermedia* and *Graptoleberis testudinaria*. Over the period between 19,000 and 13,000 years BP, the littoral and planktonic Cladocera have shown significant response to past environmental change including climate change. However, unlike the Northern Hemisphere, the understanding of the taxonomy and ecology of New Zealand Cladocera is still limited. This study would contribute a subject for a discussion of the New Zealand fossil Cladocera in the 9th international subfossil Cladocera workshop (September 24-27, 2007) in Valencia, Spain and would help in improving the problems associated to taxonomy and ecology of Cladocera thereby reconstructing past environmental change in the Southern Hemisphere including New Zealand.