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**ABSTRACTS**

"IN SITU" DAY-NIGHT MEASUREMENTS OF ZOOPLANKTONIC GRAZING RATES AT LAKE CONSTANCE (UBERLINGERSEE).  
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Grazing rates of herbivorous crustacean zooplankton were measured over a year cycle, adjusted to the diel rhythms of vertical migration. The in-situ-measurements were performed with a "Haney-like" chamber (2 x 10 L vol.) using C14-labelled *Rhodomonas minuta* as tracer food species. The method allowed measurements of the community grazing (CGR = % of the water volume filtered per day). Two size fractions were analysed separately: P1 > 160 µm and 50 µm < P2 < 160 µm. Additional measurements of individual filtering rates were made. The diel variations of these rates were obtained in seven dates in 1988 which tried to cover the most important phases of the seasonal planktonic succession in the lake (i.e.: spring bloom, clear-water phase, late summer, etc). Night grazing rates were greater in almost all the cases especially the values of near surface depths. The highest grazing rates were determined in the clear-water phase which occurred in June 1988. At this time, day-night differences were very pronounced, too. CGR values in 08 June 1988 were: 5.9 % /day (0.3 m, 11.48 Hs) and 91.1 % /day (0.3 m, 23.17 Hs). Individual filtering rates, in species which conduct vertical migration like *Daphnia hyalina* and *Eudiaptomus gracilis*, exhibited also diurnal variations: during the clear-water phase an individual of *D. hyalina* (L = 1.3 mm) would probably filtrate 0.24 ml/h during the day and 0.39 ml/h at night.

STRUCTURAL VARIATION OF THE CHIRONOMID POPULATIONS IN THE ORBIGO BASIN (LEÓN, NW SPAIN).  
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A study of chironomid populations along the rivers in the Orbigo basin (León, NW Spain) beginning from larval stage has been done. Forty-two sampling sites were sampled seasonally during 1987. Thirty-one genera have been found and sixteen chironomid species have been identified. The taxonomic and structural distance between sampling sites has been calculated with the results obtained. The taxonomic distance expresses the similarity relations between consecutive plots. The similarity percentages have been taken from the semiquantitative index matrix and the dissimilarity has been calculated. The basin is graphically represented, the points are situated in inverse order to their degree of affinity. The structural distance is a variation index and it modifies the real distance between adjoining sampling sites on base to the heterogeneity. It has been obtained using the beta diversity index. The configuration of the rivers has been graphically represented with the values obtained. The rivers plots are clearly defined in the basin. The river Orbigo has an irregular behaviour, because it is the main axis of the catchment, which receives the impacts of surrounding rivers. In the regulated streams by reservoirs is observed an increment of both distances in nearby points, they have a recuperation downstream. The rivers with important impacts of population centres have a great space between their sampling sites.

SPECIES COMPOSITION AND DISTRIBUTION OF CHIRONOMIDAE (DIPTERA: NEMATOCERA) IN LAKE CHIEMSEE

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The Chiemsee (80 km<sup>2</sup>) is the largest lake of the FRG. Because of its multistructured basin (due to the action of the glaciers) the Chiemsee shows a variety of habitats. Apart from the great influence of the river Tiroler Ache, the littoral is strongly affected by numerous affluents which drain the surrounding fields. Their high content of nutrients effects local eutrophication leading to distinct variation in water quality. These multifarious sites, together with strongly changing sediments, give rise to a multitude of habitats. Thus, Melzer (1986) found in the Chiemsee the highest number of macrophyte species ever reported from a middle-European lake. Concerning Chironomids, 160 species could be identified up to now by means of drift-netting pupal exuviae, i.e. one third of the total known Bavarian Chironomid fauna. 65 species are new to the Chiemsee region and 35 species new to Bavaria. The phenology of elected species is shown as well as the distribution of the subfamilies at the 11 sampling sites. An effort is made to classify the different shore sections using Chironomid pupal exuviae. Up to now, mainly lotic water systems have been analysed by drift-netting. Chironomid pupal exuviae could turn out to be an excellent indicator: They are easily and almost everywhere available in high abundance, identification to species niveau is mostly possible and there is no need to restrict oneself to certain substrates because exuviae of different microhabitats are united.

LEAF LITTER PROCESSING IN THE AGÜERA STREAM, NORTH SPAIN

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The processing of two leaf litter species has been studied in two sites of the Agüera stream watershed. One of the species (alder) was chosen by its presence along the water course; the other one (eucalyptus), by its dominance in local situations. The aim of this work was to elucidate if the processing of the different materials in both sites showed similar or different dynamics and/or loss rates on the basis of the benthic fauna response. Our results have indicated a clear relationship between the type of riparian plant community and the velocity at which the litter breakdown occurs, and this fact is related to the stream fauna in each site.