Limnología

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book of **abstracts**

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Posters

AMWQ.P20

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ESTUDIO COMPARATIVO DE METODOLOGÍAS DE MUESTREO USADAS EN DISTINTAS REDES DE SEGUIMIENTO

La aprobación de la DMA en el año 2000 y su posterior proceso de implantación ha dado lugar a un desarrollo amplio de trabajos cuyo objetivo ha sido la estandarización y comparabilidad de metodologías y sistemas de calificación del estado ecológico y el estado químico, conceptos básicos en el establecimiento de objetivos ambientales.

Todo el proceso de calificación del estado ecológico depende de la bondad o no de la recogida de información en un área determinada, lo que denominamos muestreo siendo el listado taxonómico la unidad esencial de todo el proceso. Este listado es un inventario de biodiversidad de un área determinada y de su idoneidad dependerá la fiabilidad y robusted de la calificación que obtengamos con sus datos. Pero nos planteamos una pregunta ¿es necesario recoger toda la biodiversidad de un área determinada para que un sistema de calificación de la calidad de una masa sea fiable?

Hemos planteado una comparación entre dos metodologías de muestreo, la establecida por el MIMAM, con un esfuerzo de muestreo superior (20 Kicks) y la establecida por la Agencia vasca del agua que es una adaptación del muestreo multihábitat estratificado a los ríos vascos. Este sistema presenta una modificación que implica la reducción del esfuerzo de muestreo y posterior identificación pasando a una media de 4-5 unidades de extracción (kicks).

Para la comparación entre procedimientos de muestreo, se utilizaron estimadores no paramétricos y se construyeron curvas colectoras de especies. Se han obtenido unos resultados que muestran que ambas metodologías de muestreo proporcionan listados faunísticos fiables y representativos de la biodiversidad real existente en el tramo estudiado. Las diferencias entre ambas metodologías son evidentes ya que la de mayor esfuerzo de muestreo recoge inventarios cercanos al 100% mientras que la de menor esfuerzo de muestreo recoge valores cercanos al 80% de muestreo; sin embargo, ambas curvas de acumulación y modelos aplicados nos establecen que los listados recogidos por ambas metodologías proporcionan la misma fiabilidad y son representativos de la biodiversidad de un lugar.

BB.P5

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NATURAL SWIMMING POOLS: STEPPING STONES HABITATS AT THE LANDSCAPE SCALE?

Natural swimming pools are artificially created ponds, where the ecological processes occurring in the natural water bodies are recreated. These ponds constitute recreational spaces of low environmental impact, because no chemical products for water purification are used. Clarifying and purifying of the water is achieved through biological filters and plants growing in the system. Since no conventional chemicals are added to water, these ponds are rapidly colonized by a wide range of organisms such as plankton, macro-invertebrates and some vertebrates. Therefore, natural swimming ponds promote biodiversity maintenance and increase the aesthetic value of the surrounding landscape meaning. In this work are presented the results of faunal surveys performed in several natural swimming pools across Portugal. The zooplankters more frequently found were: the copepods A. robustus and C.numidiacus; the cladocerans Ceripdaphnia pulchella, Daphnia longispina/pulex, Simocephalus vetulus, Alona sp. Chidorus sphaericus and the rotifer Keratella cochlearis. The most emblematic macro-invertebrates found, were the dragonflies Anax imperator, Coenagrion scitulum, Crocothemis erythraea, Diplacodes levebvrei, Erythromma lindenii, Gomphus pulchellus, Ischnura graellsi, Libellula quadrimaculata, Orthetrum cancellatum Orthetrum chrysostigma and Orthetrum coerulescen. Amphibians such as, the newts Lissotriton boscai, Triturus marmoratus and Triturus pygmaeus; the salamander Pleurodeles waltl, the tree frog Hyla meridionalis; the frog Rana perezii; the toads, Pelobates cultripes and Bufo spinosus use natural swimming pools for reproduction. The most common reptiles were the viperine water snake (Natrix maura) and the terrapins (Mauremys leprosa) were frequently found. Concerning birds, squacco heron (Ardeola ralloides), grey heron (Ardea cinerea) and kingfisher (Alcedo atthis) were the commonest species found in the pools surroundings. The presence of otter (Lutra lutra) was also detected. Some of the mentioned species are considered to be endangered. The role of natural swimming pools as stepping stones habitats at the landscape scale is also discussed.

BB.P2

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BIODIVERSITY OF MICROCRUSTACEANS IN LAKE SOMOLINOS (GUADALAJARA)

Most limnological studies in lentic systems are focused on the water column, paying less attention to the benthic zone. However, in shallow lakes, which are the predominant type in the Iberian Peninsula, benthic/littoral communities can be very important. The aim of this study is to characterize the microcrustacean assemblages (cladocerans, copepods and ostracods) of Somolinos Lake in Guadalajara (Spain). This karstic lake belongs to the Tajo basin; it is located South of Pela Range (at 1250 m a.s.l.) and is mainly fed by the Manadero River. It has a flat bottom with steep banks and a maximum depth of around 8 m. It covers 2.3 ha and the water is oligotrophic and oligosaline. To characterize its littoral microcrustacean fauna (cladoceran, copepods and ostracods) four sampling campaigns were performed in May and September 2007 and in February and June 2008. In order to take into account the high variety of habitats in the littoral area, thirteen sampling points around the shore were selected, plus two sites located at the South and North central area of the lake. Littoral samples were taken with a 65 µm handnet and planktonic ones by vertical hauling a 45 µm plankton net from the bottom. Planktonic assemblages were poorer in species composition, and dominated by Cyclops sp., Tropocyclops prasinus, Daphnia longispina gr. and Ceriodaphnia cf. pulchella. We found a high specific richness with 42 species, including 13 cladocerans, 16 copepods and 13 ostracods, out of 4800 individuals identified. The most abundant cladocerans were Acroperus neglectus followed by Alona affinis, Simocephalus vetulus and Alona quadrangularis. Conversely Alonella sp., Ceriodaphnia sp. Oxyurella tenuicaudis and Pleuroxus laevis were scarcely represented. Among copepods, Paracyclops fimbriatus, Macrocyclops albidus, Eucyclops serrulatus and one Harpacticoid species were very abundant while the more scarce species were Cyclops sp., plus three Harpacticoid species and Microcyclops rubellus. Ostracods were analyzed only from the samples collected in May 2007 and were dominated by Cypria ophtalmica and Cyclocypris ovum, two small phytophilous species typically found in mountain lakes in the Iberian Peninsula and widely distributed in Central Europe.

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CERTIFICATE OF ATTENDANCE

We confirm that

ANA MARÍA GERALDES

has presented the Poster entitled:

NATURAL SWIMMING POOLS: STEPPING STONES HABITATS AT THE LANDSCAPE SCALE?

also authored by:

CLAUDIA SCHWARZER, UDO SCHWARZER

at the Limnologia 2014 Congress

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On behalf of the organizing committee:

José Barquín Ortiz

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