Societé Internationale de Biospéologie

XVI International Symposium of Biospeleology

Verona, Italy
8-15 September 2002

ABSTRACTS

Edited by
Leonardo Latella, Enrico Mezzanotte & Marco Tarocco

Museo Civico di Storia Naturale di Verona
Università degli Studi - Verona

Several characters are analysed and compared with those of *T. moraguesi* from the Balearic Islands and of some populations from northern Morocco belonging to the same group of species, within the genus.

The Pascalis project in Italy: state of the art

Galassi D. M. P.*, Stoch F.**, Sambugar B.**, De Laurentiis P.*, D'Ambrosio P.*, Di Lorenzo T.*, Fiasca B.*, Gattone E.*

* Dipartimento di Scienze Ambientali, University of L'Aquila, Italy.
** Museo Civico di Storia Naturale di Verona, Italy.

The Pascalis project has as main objective the conservation of the groundwater biodiversity and the development of new monitoring tools such as biological indicators of groundwater ecosystem integrity. After the Pascalis workshop (Lyon, 2002), a sampling protocol has been established and subsequently applied in the five European countries involved.

In Italy, the selected region is represented by the Lessini Mountains (Verona Province), located in the north-eastern part of the Italian peninsula. They consist of a rocky table with a southward 10° slope, trapezium-shaped with the largest basis oriented to South. The major valleys are directed N-S and the streams flow into the river Adige.

The aquifer under study has an extension of 900 km^2 (mean aquifer discharge: 50 m^3/s, of which 15 m^3/s through alluvial deposits; 30 m^3/s through stream beds; 5 m^3/s through the Montorio spring).

The groundwater flow is directed from north to south and the main outlets are located along the boundaries of the alluvial plain of the river Adige at the base of each hydrogeological subsystem where the limestone enters in contact with the alluvial sediments.

Within the Lessinian aquifer three different subunits are recognizable:

1. Val d'Alpone subunit located in the eastern volcanic sector of the region. The groundwater drainage occurs mainly by low discharge springs.
2. The Illasi-Mezzane-Squaranto-Pantena-Fumane valleys subunit located in the central-northern sector of the region in Jurassic-Cretaceous limestone. The groundwater drainage occurs mainly by karstic springs and hyporheic upwelling areas.
3. The central-southern subunit in Cretaceous-Eocenic limestone and volcanic rocks. This sector corresponds to the northern limit of the alluvial plain of the river Adige. The groundwater drainage occurs mainly by low discharge karstic springs.

Several criteria have been adopted for the selection of sampling sites.

The biodiversity of the Lessinian area as a whole is one of the highest known in

the Pre-Alpine area, due to the relevant taxonomic dispersion of such a diversity, with elements of both freshwater and ancient marine origin. The degree of endemism is difficult to be assessed due to the fact that taxa thought to be endemic to this area have been recently recorded from adjacent regions of the Alpine arc. Most information of the qualitative composition of the biodiversity of the Lessinian massif comes from the alluvial plain of the river Adige and sparse investigations on caves.

The information in this document is resulting from the contract n° EVK2-CT-2001-00121- PASCALIS of the Fifth Research and Technological Development Framework Program supported by the European Community.

Biospeleological researches in some caves of Zambia (Central South Africa)

Grafitti G.*, De Waele J.**, Blondé P.***

* Dipartimento di Zoologia e Antropologia Biologica, Università degli Studi di Sassari (Coll. est.), - Gruppo Speleologico Sassarese.

** Dipartimento di Scienze della Terra, Università degli Studi di Cagliari,, Italy - Gruppo Speleo Archeologico "Giovanni Spano" Cagliari.

*** Vleermuizenwerkgroep Vlaanderen, Mechelen, Belgium.

During a couple of visits between 1995 and 2001 of four natural caves (Leopard's Hill, Chipongwe, Kapongo 1 and Kapongo 2) and three abandoned mine tunnels (Ngwerere), all situated in the Lusaka province, capital of Zambia, cave dwelling fauna belonging to several groups of Arthropods has been collected and several species of Bats have been examined, and the results of these studies are here reported.

Among the samples, many of which are still under study, can be mentioned: Crustacea Isopoda Oniscoidea with a new species of the Philosciidae Family (Genus *Aphiloscia*), one of the Eubeliidae Family (Genus *Bethalus*) and one, completely blind and colourless, of the Trichonisciidae Family; Beetles (Insecta) of the Carabidae Family, with two guano-liking Pterostichinae [*Strigomerus* sp. and *Somotrichus elevatus* (Fabricius)], and of the Dermestidae, Ptiniidae and Tenebrionidae Families, all with one species typically living in guano environments; Blattoidei Dictyoptera with three species living on guano; Orthoptera Grylloidea with two troglophile species; Hemyptera Heteroptera of the Cimicidae Family, with one species of ectoparasite of Bats, and of the Reduviidae Family, with a species living on guano; Lepidoptera of the Tineidae Family, with a species which larvae have been collected inside guano; Diptera Brachycera with one species and Cyclorrapha of the Nycteribiidae Family (Genus *Eucampsipoda*), ectoparasite of Bats; Arachnida Araneae with three species with eyes; Pseudoscorpiones with a species with eyes