

might lead to isolated populations among freshwater organisms. In Namibia a completely isolated population of *Trithemis stictica* can be found in the Naukluft-Mountains. The distance between two most proximate populations of *T. stictica* is more than 900 km. How can a small isolated population of *T. stictica* survive in the middle of the desert? Why shows *T. stictica* such a special occurrence range which differs clearly from other *Trithemis* species? We want to determine if potential exist for forming of a new species in the isolated population in the Naukluft-Mountains.

A pilot study took place in 2014 in two areas: a) an isolated population, Naukluft-Mountain, Namibia and b) a large population, South Africa. The following methods were used: 1) Estimation of the population size and the dispersal behavior; 2) measurement of several morphological parameters; 3) observation of the males' territorial behavior and 4) investigation of several egg and larval parameters.

Kamilla Koch, Institut für Zoologie, Abteilung Ökologie, Johannes Gutenberg-Universität Mainz, Mainz, Deutschland
kochka@uni-mainz.de

Section 02 P 03

First record of *Pentacyphona* in the Palaeartic area with description of a new species, Diptera, Pediciidae

L.P. Kolcsar & L. Keresztes

Based on recent morphological and molecular revisions Pediciidae are considered as one of the most primitive dipterans of the large group of tipulomorphans. The *Tricyphona* genera are worldwide distributed, except Antarctica. From the 4 subgenera, *Pentacyphona* were considered to be exclusively Nearctic, from which 12 species were identified long western (Rocky Mountains) and eastern cost (Appalachian Mountains) of Northern America. In the case four American taxa the wing reduction is a general feature which suggests a highly stenotopic habit of the species. During 2014 a large dipteran belong to Pediciidae was identified in the Southern Carpathians, Central Europe, which was identified belonging to *Pentacyphona* based on genital structures. This is the first record of *Pentacyphona* in the Palaeartic Region. The Carpathian *Pentacyphona* differs from their American kin by gross morphological differences, mostly on the presence of a large apical lobe on the gonocoxite. Here we present the first illustration of the Palaeartic *Pentacyphona*, with comment on its identity and habitat requirements. This research was supported by a grant of the Ministry of National Education,

CNCS - UEFISCDI, project number PN-II-ID-2012-4-0595.

Levent Peter Kolcsar, Hungarian Department of Biology and Ecology, Babes-Bolyai University, Cluj, Rumania
kolcsar.peter@gmail.com

Section 02 P 04

Life-history strategies of two endemics and one widespread species of the genus *Annitella* Klapálek, 1907 (Trichoptera; Limnephilidae)

M. Sáinz-Bariáin, C. Zamora-Muñoz, J.E. Brittain

Life history strategies (growth patterns, voltinism, and developmental time) are essential to understand species adaptation to the environment. Despite they have a strong phylogenetic component some of them may be influenced by different biotic or abiotic factors. Thus the constraints imposed by the habitat characteristics influence the ecological traits of the species living on it. *Annitella* is a Palaeartic genus that comprises several endemic species from different mountain ranges, and only one, *A. obscurata*, widely distributed in different European mountain systems. The aim of this study is to describe and compare the unknown life cycle of *A. obscurata* in Norway, and of two endemic species from the southeast of the Iberian Peninsula, *A. esparraguera* and *A. iglesiasi*. Since related species or populations under the same environmental conditions present similar life history, it is expected similarities between high Spanish altitudinal sites (in the Sierra Nevada) and high latitudinal localities in Norway. After analyzing the population structure of the three species, all had a univoltine life cycle. In Spanish sites located at an altitude below 1800 m, adults are autumn-emerging, as is general for all the species of the genus. However, in Norwegian sites and those located at higher altitude in the Sierra Nevada, emergence anticipates to late summer.

Marta Sáinz-Bariáin, University of Granada, Granada, Spain
msainzb@ugr.es

Section 02 P 05

Molecular taxonomy can help to detect, describe and discriminate between larvae of *Tipula balcanica* species group (Diptera, Tipulidae)

E. Torok, L.P. Kolcsar & L. Keresztes

Larvae identifications in a series of insect groups opens new perspectives since molecular methods are presently largely available and easy to apply. The *Acutipula* larvae, belonging to the dipteran family Tipulidae, are frequently