

Work Package Activity Number: (WP2a) Training visits of MCM's young researchers to international partner institutions

Dates: September 22nd – October 5th, 2014.

Working days: 10 (5 from Lovcen + 5 in kind support)

Address:

University of Novi Sad

Faculty of Agriculture,

Department of Phytomedicine and Environment Protection

Laboratory for Medical and Veterinary Entomology

Novi Sad, Serbia

Person responsible (trainer): Dušan Petrić: dusanp@polj.uns.ac.rs

Attendees: Ljiljana Pajović and Igor Pajović

WP where the training visit topic belongs: WP2

TRAINER REPORT

Purpose of the Training Summary

Short synopsis: Training in identification of mosquito species using classical and computer aided identification keys; sampling techniques; mosquito sampling and sample conservation; invasive mosquito surveillance and mosquito vector sampling for virus detection.

This short course was based on formal lectures on the principles and common classical taxonomy, biology and morphology of mosquitoes, techniques for identification of larvae and adult specimens to genera and species level, techniques for sample storage and conservation, but most crucially provided hands-on practical aspects both in the laboratory and in supervised usage of classical and computer aided identification keys to familiarize the participants with an array of morphological features essential for taxonomy studies. At the end of this course, participants have acquired the necessary basic skills to analyze, interpret and present their own results in a professional manner.

Course aims*: The aims of this course were five-fold allowing participants

to: (a) understand the principles of mosquito taxonomy, specimen acquisition, specimen identification (both with specimens sampled by trainer and with their own specimens) and preservation for both morphology and integrated systematic studies; (b) get familiar with available identification keys; (c) master the mosquito sampling and sample conservation; d) get familiar with state-of-the-art of the vector and invasive mosquito surveillance techniques; e) be able to choose most appropriate sampling technique according to environmental factors, purpose of sampling and cost benefit estimation.

*[Note: the course is designed to be flexible, and be extended when needed through hosting institution in kind contribution.]

Equipment Used: Participants had access to all necessary laboratory equipment/consumables, computers and library (contribution in kind).

Lectures

Lecture 1: Mosquito Taxonomy, Systematics and Biology.

Lecture 2: Morphological features of mosquito adults with emphasis to these important for identification

Lecture 3: Collection and preservation of mosquitoes for morphological study.

Lecture 5: Collection and preservation of vector mosquitoes for morphological study and identification of mosquito borne viruses.

Lecture 6: Sampling protocol for mosquito eggs

Lecture 7: Sampling protocol for mosquito larvae

Lecture 8: Sampling protocol for adult mosquitoes (resting, seeking the oviposition site, host seeking)

Lecture 9: Protocol for the surveillance of the native mosquitoes

Lecture 10: Protocol for the surveillance of the invasive mosquitoes

Laboratory Practical Exercises

Laboratory practical 1: Key morphological features of male mosquitoes.

Laboratory practical 2: Key morphological features of female mosquitoes

Laboratory Practical 3: Preparation of specimens for morphological identification

Laboratory Practical 4: Key morphological features of mosquito genera present in Europe (adult females)

Laboratory Practical 5: Using of the classical and computer aided identification keys (adult, female)

Laboratory Practical 6: Identification of well preserved adult females

Laboratory Practical 7: Identification of damaged adult females

Laboratory Practical 8: Identification of adult mosquitoes sampled by participants

Laboratory Practical 9: Identification of adult mosquitoes sampled by participants

Laboratory Practical 10: Identification of adult mosquitoes sampled by host staff members

Novi Sad, 9.10.2014.

Prof. Dušan Petrić