OP119

Final report for systematic studies on zerconid mites (Acari, Zerconidae) in Inner Aegean Region of Turkey

Raşit URHAN[1], Elif Hilal DURAN[1], Mehmet KARACA[2]
[1] Biology Department, Faculty of Arts & Sciences, Pamukkale University, Denizli, TURKEY
[2] Denizli Vocational School of Technical Sciences, Pamukkale University, Denizli, TURKEY
rurhan@pau.edu.tr

Aim of the study: In this study, to determine zerconid mites fauna of Inner Aegean Region, Totally 2439 samples were collected from litters, rotted tree roots, moss pads, lichens and soil samples from 1041 different localities in between 15 February 2014 – 15 August 2016. 44 species of belonging to 2 genera from the family Zerconidae were recorded from Turkey. We aim to reveal the biological richness which is done insufficiently before and consequently we aim to contribute Turkey and World mite fauna.

Materials and Methods: Collected samples from research area were put into plastic bags, labelled, transferred to laboratory and placed to seperate apparatus which consist of Berlese funnels. Samples were kept in seperate apparatus during 5 or 7 days according to their humidity. After all mites were collected in bottles containing 70 % ethanol which were placed under seperate apparatus. At the end of this process, the contents of bottles were transferred into Petri dishes Zerconid mites were seperated under disection microscope by means of pipette and forceps. They were placed in 60% lactic acid for clearing and mounted onto permanent microscope slides using a glycerin medium. The examination and drawing of mites were done using an Olympus CX41 microscope with DP25 camera.Detected species were described, illustrated, different body parts were measured, taken photographs and their world distributions were given. Then, the samples were put in stock bottles containing 70 % alcohol and 1- 3 drops glycine and labelled.

Results: As a result of the analysis of the samples, totally 44 zerconid species were detected which 7 of them as new for science and 4 of them as new record for Turkish fauna. From these species, 34 species are belong to genus *Zercon* (*Z. afyonensis* sp.nov., *Z. alattini, Z. anatolicus, Z. arslani, Z. beleviensis, Z. burdurensis, Z. cabylus, Z. carpathicus, Z. cokelezicus, Z. colligans, Z. delicatus, Z. denizliensis, Z. domanicensis, Z. ekizi, Z. emirdagicus, Z. hispanicus, Z. huseyini, Z. inonuensis, Z. insperatus, Z. juvarae, Z. karacamehmeti sp.nov., Z. laczii, Z. longisetosus, Z. magdae, Z. marinae, Z. mehmeturhani, Z. osmaneliensis, Z. plumatopilus, Z. quadricavum, Z. similifoveolatus, Z. soguticus sp.nov., Z. tefenniensis, Z. turcicus* and*Z. yusufi*) and 10 species are belong to genus *Prozercon* (*P.balikesirensis, P. banazensis, P. denizliensis, P. bulbiferus, P. erdogani, P. graecus, P. morazae, P. plumosus, P. tragardhi* and *P. yavuzi).* Species of *Z. arslani*, *Z. ekizi*, *Z. emirdagicus* and *P. banazensis* were identified as new species to science and published. Similarly, species of *Z. hispanicus*, *Z. juvarae*, *P. morazae* and *P. plumosus* werealso recorded new to Turkish fauna and added to Turkish mite fauna. Species of *Z. afyonensis*sp.n.,*Z. karacamehmeti* sp.n. and*Z. soguticus* sp.n. were identified as new to science and prepared for publishing. Also, in this study female specimens of *Z. plumatopilus* and male, deutonymph and protonymph specimens of *Z. cabylus* were recorded for the first time.

Acknowledgement: This research was financially supported by the Scientific and Technological Research Council of Turkey (TUBİTAK), Project number: 113Z717.

Keywords: Acari, Zerconidae,Systematic, Inner Aegean region, Turkey.