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Efficency of Scan Photo Technique in morphometric measurement at honeybees

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In this study were performed morphometric measurements at Hymenoptera Apis mellifera carnica, in Tirana district. Samples were collected in strong hives at four different colonies: (1-Kamez, 2- Dajt, 3- Linze, 4-Lunder). From each sample 20 bees were prepared, scanned and measured using a computer software. Measuring of 19 morphological characters of honey bees was carried out using advanced technique named Scan Photo Technique (SPT) as well as using the binocular method. Averages estimated from the data of measurements made with the Binocular and SPT methods were: 6.411mm and 6.373mm for tongue length; 9.264mm and 9.237mm for fore wing length; 3.144mm and 3.114mm for forewing width; 2.63mm and 2.601mm for cubital index; 6.43mm and 6.385mm for hind wing length; 1.84mm and 1.82mm for hind wing width; 19.787 for 19.744 number of hooks; 2.557mm and 2.552mm for femur length; 3.235mm and 3.204mm for tibia length; 2.051mm and 2.031mm for metatarsus length; 1.22mm and 1.19mm for metatarsus width; 2.07mm and 2.03mm for longitudinal diameter of tergite IV; 0.812mm and 0.8mm for (TOM A); 0.519mm and 0.52mm for (TOM B); 0.325mm and 0.277mm for HLT 5; 2.776mm and 2.75mm for S3 longitudinal diameter; 1.338mm and 1.308mm for wax mirror longitudinal; 2.394mm and 2.354mm for wax mirror transversal; 0.371mm and 0.359mm for distance between wax mirrors. The results obtained from the measurements made by the two different methods were compared using the T-test. Comparison between SPT and using Binocular showed no significant difference between the two methods in measuring the chosen morphometric characters. These results show that SPT can be used extensively in Biology to make other morphometric measurements in the direction of Zoology or Botany. We suggest extending of the study for other morphometric traits in other biological disciplines.