

COMPARISON OF GEOMETRIC MORPHOMETRIC CHARACTERISTICS OF BODY AND GENITAL PLATE OF *EURYGASTER INTEGRICEPS* FEMALES FOR DISCRIMINATION OF POPULATIONS

JAVAD NAZEMI RAFIE¹ & SARA SALEHI²

¹Assistant Professor, Department of Plant Protection, Faculty of Agriculture, University of Kurdistan,
Kurdistan Province, Iran

²Student, Department of Plant Protection, Faculty of Agriculture, University of Kurdistan, Kurdistan Province, Iran

ABSTRACT

Many studies about morphology have been conducted in the field of entomology that their aims are clarification the relationship in closely related taxa and identification different population within and between species. This study was conducted to determine differences in female body and genitalia plate of the *Eurygaster integriceps* (Scutelleridae) by looking at variation in the shapes using the method of geometric morphometrics. This research was conducted in Iran in 2013. Cross-validation tests based on discriminant functions (DFA) showed that genitalia plate of females can better discriminate populations (54%) than body of females (50.25%). Multivariate analysis on genital plates identified significant differences between populations from different areas ($F=2.1$, $p=0.002$). Additionally, multivariate analysis on bodies identified no significant differences between populations ($F=1.15$, $p=0.3$). Allometry testing on genital plates was identified a significant difference between the size (centroid size) of the genital plates and 28 shape variables (Wilks' $\lambda=2.47$, $p=0.0001$).

KEYWORDS: Genital Plates, Geometric Morphometrics, *Eurygaster integriceps*, Allometry