

Genetic variability in Turkish honey bee populations using geometric morphometrics analysis.

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The genetic variability of 14 honey bee populations from Turkey (Thrace area) was studied, using geometric morphometrics analysis, on a sample of 795 honey bees collected from 53 different apiaries. Data acquisition was done using tps-UTIL1.28 and tps-DIG packages.

The geometric morphometrics analysis was based on using the coordinates of 18 landmarks located at vein intersections of the fore right wing. Statistical analysis was performed using MS Excel, Mathematica 4.1 and Origin 7.5 packages. Our results show that no considerable intrapopulation variability was detected. It is very interesting that Kirklareli honey bee population is discriminated from the rest ones. This result is in coincidence with analogous studies, using microsatellite, isoenzymic and classical morphometrics approaches and it is very useful for conservation reasons.

Geometric morphometrics analysis can be very powerful in exploring intra-specific variation at the population level and it is largely employed in evolutionary studies, combined with other approaches such as classical morphometrics and molecular markers.