

Oral presentation

[B] Taxonomy, Morphology, Histology

Fri. Mar 29, 2024 1:30 PM - 6:00 PM Site B (Hagi)

1:45 PM - 2:00 PM

[B-12] 発育環境がキイロショウジョウバエの翅干渉色パターンに与える影響

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I investigated the Wing Interference Patterns (WIPs) in the wings of *Drosophila melanogaster*, with a focus on understanding the intraspecific variations influenced by larval developmental environments. While insect morphogenesis is affected by nutritional and temperature conditions, their impact on WIPs remains unclear. The current study explores the effects of larval nutritional and temperature conditions on WIPs. Larvae reared under different conditions were sampled upon adulthood, and WIPs were analyzed using hyperspectral imaging. Principal component analysis reduced hyperspectral variables to PC1 and PC2, enabling a multivariate assessment of environmental effect of larval development on WIPs. Additionally, the current study evaluates the influence of developmental conditions on fitness parameters, including adult survival rates, developmental periods, and wing areas. The findings contribute to our understanding of how environmental factors shape intraspecific variation in WIPs and shed light on potential connections between larval conditions, WIPs, and overall fitness in *Drosophila melanogaster*.