

**ANALISIS GEOMETRI DAN MORFOMETRI *Anopheles* spp. BETINA  
(DIPTERA : CULICIDAE) HABITAT HUTAN DEKAT PEMUKIMAN DAN  
HUTAN JAUH PEMUKIMAN DI DAERAH ENDEMIS MALARIA,  
LAMPUNG BARAT**

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**INTISARI**

**Latar Belakang:** *Anopheles vagus*, *Anopheles kochi*, *Anopheles minimus*, *Anopheles subpictus*, *Anopheles maculatus*, *Anopheles indefinitus*, *Anopheles barbirostris*, *Anopheles sundaicus*, *Anopheles acconitus*, *Anopheles tessellatus* dan *Anopheles balabacensis* merupakan 11 spesies yang terkonfirmasi sebagai vektor malaria di Lampung. Perbedaan kompetensi vektor dapat terjadi antar maupun intra spesies yakni spesies yang sama namun berada pada wilayah yang berbeda. Identifikasi vektor dan diferensiasi spesies isomorfik yang tersembunyi sering mengalami kegagalan sehingga filogeni nyamuk dibutuhkan dalam studi ko-evolusioner tentang parasit dan vektor.

**Metode:** Penelitian observational deskriptif dengan rancangan *cross sectional*. Desa kubu Perahu sebagai habitat hutan dekat pemukiman dan bukit barisan sebagai habitat hutan jauh pemukiman. Sampel yang diamati yaitu larva dan imago *Anopheles* spp. betina. Teknik sampling yang digunakan adalah *Simple Random Sampling* dengan metode *umpan orang dalam (UOD)*, *umpan orang luar (UOL)* dan *umpan ternak (UT)*. Perbedaan variabel-variabel morfometri dan geometri dianalisis menggunakan ANOVA dan *Chi square*.

**Hasil:** Pola sebaran *breeding place Anopheles* di hutan dekat pemukiman lebih mengelompok dengan komposisi jenis spesies yang berbeda, sedangkan habitat hutan jauh pemukiman lebih menyebar. Analisis geometri menunjukkan adanya perbedaan antara *An. kochi* UOD dengan *An. kochi* UOL dan UT serta *An. vagus* UOD dengan *An. vagus* UOL dan UT. Analisis morfometri *An. vagus* menunjukkan adanya perbedaan pada subapical gelap dan pucat palpus, panjang dan ukuran serta letak noda pucat proboscis, panjang serta lebar sayap kanan dan kiri dari metode UOD, UOL dan UT habitat hutan dekat pemukiman.

**Kesimpulan:** Karakter habitat mendukung keberagaman spesies serta variasi geometri dan morfometri *Anopheles* spp. Pada saat penelitian terdapat perbedaan spesies antara hutan dekat pemukiman dan hutan jauh pemukiman. Perbedaan morfologi terdapat pada karakter palpus, proboscis dan sayap.

**Kata kunci:** *Anopheles*, analisis morfometri, analisis geometri, habitat, filogeni

**GEOMETRIC AND MORPHOMETRIC ANALYSIS of FEMALE *Anopheles* spp. (DIPTERA : CULICIDAE) AT FOREST NEAR HABITATION AND FOREST FAR FROM HABITATION IN MALARIA ENDEMIC AREA, WEST LAMPUNG**

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**ABSTRACT**

**Background:** *Anopheles vagus*, *Anopheles kochi*, *Anopheles minimus*, *Anopheles subpictus*, *Anopheles maculatus*, *Anopheles indefinitus*, *Anopheles barbirostris*, *Anopheles sundaicus*, *Anopheles acconitus*, *Anopheles tessellatus* and *Anopheles balabacensis* were 11 species which have been confirmed as malaria vector in Lampung. Differences in vector competencies could occur between or intra species, namely the same species but in different regions. Vector identification and differentiation of hidden isomorphic species often fail so that mosquito phylogeny is needed in co-evolutionary studies of parasites and vectors.

**Methods:** Descriptive observational study with cross sectional design. Kubu Perahu Village as a forest habitat near habitation and Bukit Barisan as forest habitat far from habitation. The samples observed were female *Anopheles* spp. larvae and imago. The sampling technique used was Simple Random Sampling (SRS) with indoor and outdoor landing technique, including human and cattle animal. The differences in morphometric and geometric variables were analyzed using ANOVA and chi square.

**Results:** Distribution patterns of *Anopheles* breeding place in forest near habitation were more clustered with different species composition while in the forest far from habitation were more spreading. Geometric analysis showed the differences between *An. kochi* UOD and *An. kochi* UOL and UT. It also showed the differences between *An. vagus* UOD and *An. vagus* UOL and UT. Morphometric analysis *An. vagus* showed differences at subapical dark band and subapical pale band palpus, length, size, and pale node position of proboscis, length and width of left and right wings from methods UOD, UOL and UT in forest near habitation.

**Conclusion:** Character of the habitat supports species diversity, geometric and morphometric variation of *Anopheles* spp. During the study, there were differences of species between forest near habitation and far from habitation. Morphologic differences were found at palpus, proboscis and wings character.

**Key words:** *Anopheles*, morphometric, geometric, phylogeny