# ANALISIS PARAMETER ENTOMOLOGIS PADA TRANSMISI FILARIASIS LIMFATIK DI KELURAHAN SIMBANG KULON, KECAMATAN BUARAN, KABUPATEN PEKALONGAN

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## ABSTRAK

**Latar belakang:** Penyakit filaria termasuk *neglected tropical disease* dan tersebar hampir di seluruh wilayah Indonesia. Kelurahan Simbang Kulon dikategorikan sebagai daerah endemis filariasis berdasarakan hasil-hasil penelitian survei darah jari (SDJ), namun penelitian terhadap survei parameter entomologis jarang dilakukan. Penelitian ini bertujuan mengukur parameter entomologis dan pemeriksaan molekular pada transmisi filariasis limfatik di Kelurahan Simbang Kulon, Kecamatan Buaran, Kabupaten Pekalongan, Provinsi Jawa Tengah.
**Metode:** Penelitian ini menggunakan metode survei dengan desain studi *cross-sectional*. Parameter entomologis yang diteliti berupa identifikasi nyamuk, *man biting rate*, *man hour density*, kelimpahan nisbi, tingkat paritas, *infection rate*, *infective rate* dan *Reverse Transcriptase* PCR. Penangkapan nyamuk dilakukan dengan metoda umpan orang dan *resting* baik di dalam maupun di luar rumah. Hasil penangkapan nyamuk dibawa ke laboratorium untuk proses *rearing* selama 14 hari. Data dianalisis secara deskriptif.
**Hasil:** Hasil identifikasi 50 nyamuk didapati 94% nyamuk *Culex quinquefasciatus* dan 6% nyamuk *Culex vishnui*. *Culex quinquefasciatus* memiliki kelimpahan nisbi tertinggi (23,5%). Tingkat paritas, tingkat infeksi dan tingkat infektif *Culex quinquefasciatus* dan *Culex vishnui* adalah nol.
**Kesimpulan:** Berdasarkan hasil analisis data penelitian, larva filaria tidak ditemukan dalam tubuh nyamuk disebabkan kedua spesies nyamuk *Culex* belum pernah bertelur (*nulliparous*) dan proporsi populasi *Cx.quinquefasciatus* berlimpah sehingga mudah dijumpai selama survei penelitian.

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**Kata kunci:** parameter entomologis, transmisi filariasis limfatik, Kelurahan Simbang Kulon

# Analysis of Entomological Parameters in Lymphatic Filariasis Transmission In Simbang Kulon Village, Buaran District, Pekalongan Regency

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## ABSTRACT

**Background:** Filarial disease is a neglected tropical disease and is spread in almost all parts of Indonesia. Simbang Kulon subdistrict is categorized as a filariasis endemic area based on the results of finger blood survey (SDJ) research, but research on entomological parameter surveys is rarely done. This study aims to measure the entomological parameters and molecular examination of the transmission of lymphatic filariasis in Simbang Kulon Village, Buaran District, Pekalongan Regency, Central Java Province.

**Methods:** This study used a survey method with a cross-sectional study design. The entomological parameters studied were mosquito identification, man bitting rate, man hour density, relative abundance, parity rate, infection rate, infective rate and Reverse Transcriptase PCR. Mosquito catching is done by baiting people and resting both inside and outside the house. The results of the mosquito catching were brought to the laboratory for the rearing process for 14 days. Data were analyzed descriptively.

**Results:** The results of the identification of 50 mosquitoes found 94% *Culex quinquefasciatus* mosquitoes and 6% *Culex vishnui* mosquitoes. *Culex quinquefasciatus* had the highest relative abundance (23.5%). Parity rate, infection rate and infective rate of *Cx.quinquefasciatus* and *Cx.vishnui* were zero.

**Conclusion:** Based on the results of the analysis of research data, filarial larvae were not found in the mosquito body because the two *Culex* mosquito species had never laid eggs (nulliparous) and the population proportion of *Cx.quinquefasciatus* was abundant so it was easy to find during the research survey.

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Keywords: entomological parameters, lymphatic filariasis transmission, Simbang Kulon Village