HUYNH THI THUY TRANG 論文内容の要旨

主　論　文

A comparative study of dengue virus vectors in major parks and adjacent residential areas in Ho Chi Minh City, Vietnam

ベトナム社会主義共和国ホーチミン市内の主要公園と隣接する住宅地における
デングウイルス媒介蚊の比較研究

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緒　　言:
The dengue virus vectors, *Aedes aegypti* and *Aedes albopictus*, are primarily daytime biting mosquitoes. The risk of infection is suspected to be considerable in urban parks due to visitor traffic. Despite the importance of vector control for reducing dengue transmission,little information is available on vector populations in urban parks. The present study characterized mosquito habitats and estimated vector densities in the major urban parks in Ho Chi Minh City, Vietnam and compared them with those in adjacent residential areas.

対象と方法:
Aedes mosquito larvae were collected in the six major parks and their adjacent residential areas (total 480 houses) by pipets,dippers and aquatic nets during the period between September and early October 2014,in the middle of the rainy season. Habitat types and their locations were categorized for analysis. Adult mosquitoes were collected by net collection method during the same period as the larval survey. A total of 3,456 sampling points was assigned for the parks and residential areas.

結　　果:
The prevalences of habitats where *Aedes* larvae were found were 43% and 9% for the parks and residential areas, respectively. The difference was statistically significant (prevalence ratio [PR]: 5.00, 95% CI: 3.85-6.49). The prevalences

of positive larval habitats were significantly greater in the parks for both species than the residential areas (PR：1.52, 95% CI: 1.04-2.22 for *A. aegypti*, PR: 10.10, 95% CI: 7.23-14.12 for *A. albopictus*). Larvae of both species were positively associated with discarded containers and planters. *Aedes albopictus* larvae were negatively associated with indoor habitats, but positively associated with vegetation shade. The adult density of *A. aegypti* was significantly less in the parks compared with the residential areas (rate ratio [RR]; 0.09, 95% CI: 0.05-0.16), while the density of *A. albopictus* was significantly higher in the parks (RR: 9.99, 95% CI: 6.85-14.59). When the species were combined, the density was significantly higher in the parks (RR: 2.50, 95% CI: 1.92-3.25).

考　　察:

The role of urban parks in viral transmission should not be underestimated, and urban parks should be included in current vector control programs. As suggested by past studies, the present study confirms the importance of artificial vessels such as discarded containers for breeding mosquitoes in the urban parks. The results suggest that periodic removal of discarded containers in the parks is important for vector control. Managing over-grown understory vegetation not only reduces the quality of larval habitats, but also adult mosquito resting sites. The study results regarding the distances from the parks suggest that the importance of the peripheral area for vector control; however, further studies are needed to confirm this notion.