講演2 Ecology of African Highland Malaria "project review"

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Since the late 1980s, East African highlands have been experiencing a series of malaria outbreaks. The causes of malaria outbreak in these regions are controversial. A number of mechanisms have been proposed, including global warming, climate variability, human migration, land use and land cover changes, drug resistance and other factors. The original goal of the project is to determine the contribution of land use and land cover changes to malaria transmission in the highlands. As the project is being conducted, we included climate factors and topography in our research questions. We found that 1) climate variability was significantly associated with malaria incidences in some sites in East African highlands, 2) land use and land cover changes such as deforestation and swamp cultivation in the highland enhance larval and adult mosquito survivorship, and shorten larval mosquito development time and the sporogonic development time of malaria parasites, and 3) topography is one major determinants for the spatial distribution of malaria reservoirs and clinical malaria risk. Project management and administrative issues will be discussed.