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38 Vector biology and control in Iran: Challenges and opportunities

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Malaria is the most important mosquito-borne disease in Iran, but sporadic transmissions of various arboviruses have also been documented. Leishmaniasis, transmitted by phleobotomine sandflies, is also of primary concern. The mosquito fauna in Iran currently includes 7 genera, 65 species, and three subspecies. However, the invasive Asian tiger mosquito, Aedes albopictus, has recently been documented to have established in southern Iran, near the Pakistan border. This is of particular concern because of the high rates of travel and dengue infections across these two international borders. Iran currently boasts a growing assemblage of entomologists that are being trained at local universities throughout the country in various public health and medical entomology programs. Additionally, there is a growing interest in integrated vector management strategies to combat vector-borne diseases throughout the country. Although residual insecticide spraying, use of insecticide treated nets, ultra-low volume aerosol spraying, use of larvivorous fish, and increase of biorational larvicide applications such as Bacillus thuringiensis israelensis and Bacillus sphaericus have increased in recent years, there still remains some gaps in technology and methods that would benefit from external training and involvement. The vector research and control community in Iran is eager to increase collaborations with international collaborators with the hopes of increasing our knowledge of vector biology, ecology, taxonomy, insecticide resistance, product and equipment assessments, surveillance evaluations, and training of future students and public health stewards.