Rediscovery of *Aedes scapularis* (Diptera: Culicidae) in the Florida Keys

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Aedes scapularis (Rondani) (Diptera: Culicidae) is a widely distributed mosquito that can be found from southern Texas, to Argentina, and most of the Caribbean islands (Arnell 1976). Pritchard et al. (1947) reported collecting this mosquito from Vaca Key, Florida, USA, an island now within the current city of Marathon (Monroe County), Florida, USA. No further collections of *Ae. scapularis* have been reported in the Keys (Hribar et al. 2016). Recently Reeves et al. (2020) recorded this mosquito on the Florida mainland from multiple localities in Broward and Miami-Dade counties.

On 21 May 2020, 3 female mosquitoes that conformed to the morphological description of *Ae. scapularis* were collected in a dry ice-baited American Biophysics Company light trap (Clarke, St. Charles, Illinois, USA) on Boca Chica Key, Florida. Later, 5 more specimens were collected from the same trap location but collection data were not recorded. All specimens were tentatively identified as *Ae. scapularis* and sent to N. Burkett-Cadena, University of Florida, Vero Beach, Florida, USA, for verification; identification was confirmed independently as *Ae. scapularis* by N. Burkett-Cadena and L. Reeves. The 3 specimens originally collected in May 2020 were deposited into the Florida State Collection of Arthropods (accession number E2021-336-1). On 18 Feb 2021 another female specimen was collected in an ABC light trap on the island of Key West, Florida, USA.

Aedes scapularis is one of the most widely distributed mosquitoes in the Americas, and like other members of the Scapularis group, larvae can be found in a variety of temporary and semi-permanent freshwater habitats including swamp margins and crab holes (Arnell 1976). In Jamaica, *Ae. scapularis* larvae often are found with those of *Aedes tortilis* (Theobald) (Diptera: Culicidae); the latter species is found throughout the Florida Keys (Hribar et al. 2016). Reeves et al. (2020) have reviewed the pertinent literature related to *Ae. scapularis*. As the authors point out, the 2020 collections may indicate that a reintroduction of this species occurred in the recent past. Whether the occurrence of this species at multiple sites in multiple counties represents 1 reintroduction event or several is unknown and likely unknowable. However, its vector status and importance to human and animal health, although not entirely clear, are of concern. Arnell (1976) briefly reviewed the literature pertaining to the medical importance of *Ae. scapularis*. The causative agent of Bancroftian filariasis, *Wuchereria bancrofti* (Cobbold) Seurat (Spirurida: Onchocercidae), has been detected in this mosquito. At least 15 viruses have been isolated from *Ae. scapularis*, including yellow fever, Venezuelan equine encephalitis, and Mayaro viruses, the latter an emerging pathogen in Latin America and the Caribbean with potential to reach North America (Blohm et al. 2019; Mota et al. 2019). Ecological niche modeling suggests that *Ae. scapularis* could become established in more counties in Florida (Campbell et al. 2021). The re-introduction of this mosquito species underscores the importance of continuing surveillance as well as adequate vigilance in identification of those collections to proactively detect the presence of possible invasive vectors.

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Summary

The first collections of *Aedes scapularis* (Rondani) (Diptera: Culicidae) from the Florida Keys in 70 yr are reported from Boca Chica Key and Key West, Florida, USA. The importance of this species as a disease vector is briefly discussed.

Key Words: geographic distribution; reintroduction; island; surveillance; Boca Chica Key; species inventory

Sumario

Se registran las primeras colecciones de *Aedes scapularis* (Rondani) (Diptera: Culicidae) en 70 años de Boca Chica Key y Key West, Florida, EE. UU. Se discute brevemente la importancia de esta especie como vector de enfermedades.

Palabras Claves: distribución geográfica; reintroducción; isla; vigilancia; Cayo Boca Chica; inventario de especies

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