

Dataset for mosquitoes (Diptera, Culicidae) from Gun Club Road, Key Largo, Monroe County, Florida, USA

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Abstract

Background

The Florida Keys Mosquito Control District utilises dry ice-baited light traps to monitor mosquito populations on Key Largo, Florida. This paper describes the methodology of trapping, habitat description and dataset of adult mosquito populations from 18 years of weekly monitoring from a single site on Key Largo, Monroe County, Florida, USA.

New information

This paper details a previously unreported dataset derived from trap collections made on Key Largo, Florida at a site designated as “Gun Club Road.”

Keywords

Diptera, Culicidae, Key Largo, mosquito abundance, Florida Keys

Introduction

The Florida Keys Mosquito Control District has conducted adult mosquito surveillance along Gun Club Road in Key Largo, Florida for 18 years. Collections were made by utilising dry ice-baited light traps. A single CDC trap was set for a 20 hour period on a weekly basis, excluding weeks when situations prevented collections, including storms, dry ice shortages and personnel scheduling conflicts. Traps were loaded with approximately 1-2 kilograms of

dry ice, set in the afternoon and retrieved the following morning and positioned in the same area (within 20 feet - 6 metres) during the collection period. Trapping location varied only due to altered environmental conditions, such as downed trees. Mosquito collections were returned to the laboratory, euthanised by freezing and identified to species when possible. This paper reports data pertaining to 27 identified mosquito species, two specimen categories identified to genera and one category identified to Family Culicidae (unidentified mosquito).

General description

Purpose: These data were collected to document the species composition and abundance of mosquitoes (Diptera, Culicidae) on a single trapping site in Key Largo, Florida.

Sampling methods

Description: Mosquito surveillance on Key Largo started in December of 2003 and continued through December 2021. Collections were made weekly unless storms, material shortages or scheduling conflicts interfered with trapping.

Sampling description: A single 6-volt battery-powered light trap (American Biophysics Company, Clarke, John Hocke) was baited with approximately 1-2 kilograms of dry ice and hung in the same vicinity once a week for 18 years. Traps were set from afternoon until the following morning when the trap bag was collected (approximately 20 h), brought to the lab and the collected species were euthanised by freezing. All mosquitoes were identified to species and sex when possible and totalled using available identification guides including Darsie and Morris (1998) and Darsie and Ward (2005).

The site is a high tidal transition zone, becoming inundated only during the highest tidal events of the year or under extreme weather events. Buttonwood (*Conocarpus erecta* L.) trees dominate the immediate trapping location with stands of Black mangroves (*Avicennia germinans* L.) located nearby (Hribar 2002). Additional flora include a variety of hardwood hammock plants common to the Florida Keys. *Aedes taeniorhynchus* (Wiedemann) (87.7%), a capable vector of Venezuelan Equine Encephalitis (VEE) and Dog heartworm (*Dirofilaria immitis*) and *Deinocerites cancer* Theobald (6.89%) are the most abundant species collected at this site.

Geographic coverage

Description: The dry ice-baited light traps were deployed on the east end of Gun Club Road in Key Largo, Monroe County, Florida, USA. The coordinates of the trap location are: 25.103952 N, -80.425889 W.

Taxonomic coverage

Description: Twenty-seven unique mosquito species were documented during the sampling period.

Temporal coverage

Notes: Data Collection began on 2 December 2003 and continued through to 16 December 2021.

Usage licence

Usage licence: Creative Commons Public Domain Waiver (CC-Zero)

Data resources

Data package title: Excel

Number of data sets: 1

Data set name: GunClubRoad2003-2021

Data format: csv

Description: Suppl. material 1 Excel spreadsheet detailing adult mosquito abundance collected per trapping date and separated by males and females.

Column label	Column description
Site	Site name
Island	Island name
Latitude	North coordinates
Longitude	West coordinates
Trap Type	trap type
Year	collection year
Week of Year	Collection week of year
Date of Retrieval	collection date
Day of Year	day of the year collected
mosquito totals	mosquito totals

Additional information

The size of the dataset is 169.44 kb. The File format is CSV. Data are available in Supplementary material 1.

Acknowledgements

The authors thank all the biologists, technicians and inspectors who assisted with trapping, identification and data recording.

References

- Darsie R, Ward R (2005) Identification and Geographical Distribution of the Mosquitoes of North America, North of Mexico. 2. University of Florida Press, 416 pp. [ISBN 0 8130 2784 5]
- Darsie RF, Morris CD (1998) Keys to the adult females and fourth instar larvae of the mosquitoes of Florida (Diptera, Culicidae). Technical Bulletin of the Florida Mosquito Control Association 1: 1-156 .
- Hribar LJ (2002) Mosquito (Diptera: Culicidae) collections in the Florida Keys, Monroe County, Florida, USA. *Studia Dipterologica* 9: 679-691.

Supplementary material

Suppl. material 1: Gun Club Rd dataset 2003-2021

Authors: Michael Boehmler, Larry Hribar, Heidi Murray, Catherine Pruszynski, David DeMay, Adriane Rogers

Data type: occurrences

Brief description: Species occurrence at one mosquito trap location named "Gun Club Road" in Key Largo, FL.

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