INSECT FIELD WORK OPPORTUNITIES IN BARBADOS, LESSER ANTILLES[1]

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The native insect faunas of the Lesser Antillean islands are still poorly known. For instance, in many groups of small beetles we still know little more than what was described nearly a century ago by Rev. A. Matthews from Grenada and St. Vincent. Many entomologists are now inclined to "write-off" many of the lesser Antillean islands for field work because of extensive deforestation and habitat disruption, and the high cost of visiting them.

However, a surprisingly productive exploratory trip in March 1979 showed that this was not entirely the case in Barbados. Very reasonable accommodation and excellent library and laboratory facilities for field work can be obtained at the Bellairs Research Institute (of McGill University), 1 km N of Holetown, on the coast north of Bridgetown. The institute is set up as a marine biology station, but any researcher is welcome (see Sander, 1973). A letter to the station Director can obtain current rates and more detailed information. Special vacation package air fares can be arranged from eastern cities with travel agents, as well as reservations for a "mini-moke" car from Sunset Crest Car Rentals at Holetown. These small 4-passenger cars are the most economical available and are the most time efficient way for a worker to visit a selection of field areas.

Barbados has undergone an incredible deforestation; most of it within 15 years after the introduction of sugar cane as a crop in 1645. It now covers more than 80% of the island. Less than 5% of the island's area has been continuously wooded throughout the past 300 years. The human population density of 1560/km^2 is one of the world's highest. However, a remarkable amount of native plants (6 are endemic) and native insects have survived in rough country along rocky escarpments and in the series of deep gullies that radiate from the island's center. Useful references in understanding the vegetation and its history as a guide to insect habitats, and their history and location, are: Gooding, 1974; Randall, 1970; Watts, 1970, and 1978. These give background data on geology, geography, weather, topography, etc., and additional references. Gooding (1974) and a most useful 1:50,000 topographic map are obtained in an information kiosk in the Independence Square Car Park, just south of the Inner Basin, downtown Bridgetown.

An attractive mix of introduced and native vegetation is preserved in Welchman Hall Gully, about 8 km E of Holetown, operated with an

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admission fee as a botanic garden by the Barbados National Trust. Plant collecting is not allowed, but discrete insect collecting is possible if the vegetation is not disturbed. Tree trunk and black light collecting at night would be good here because of the trail system. The Gulley is technically closed at night, but it is not supervised and one can simply walk in. Questions about ones activities should be satisfied with a polite reply that it is insect research in conjunction with Belairs Institute. Sweeping and beating that will mar the vegetation should not be attempted. This type of collecting is possible in the many other available gully forests, e.g., Jack-in-the-box Gully. Watts (1978) discusses the high abundance of native sub-canopy plant species (and presumably their insect associates) found in woodlots of introduced mahogony (*Swietenia mahogoni*) which are common around the island.

The finest native forest site is Turner Hall Woods, about 20 h (50 acres), located on a hill slope between 180-240 m(600-800') elev. It has a high and complete canopy, and is a multi-story tropical mesophytic (seasonal semideciduous) forest, located about 10 km NE of Holetown. This remnant gives an excellent idea of the nature of the former mesophytic forests of Barbados. It is reached by foot through a sugar cane field-road from the spur road to the east between Turners Hall and Mose Bottom villages. This foot path runs the length of the Woods and comes out at the village of Cheltenham. We collected here by sweeping, Malaise trap, litter sifting, and baited pitfall traps. Our results were rich and diverse considering that it was the middle of the dry season. Turners Hall Woods should be most rich and productive in the wet season from June to December, when it receives about 2/3 of its yearly rainfall of about 70 inches. The island average is 60 inches, but some coastal areas are decidedly semi-arid.

More entomological field work on Barbados is crucial for an understanding of the dynamics of the evolution and dispersal of Caribbean insects. Botanically and geologically it is one of the best known islands. It is a relatively isolated non-volcanic oceanic island which has been available for overwater colonization only since the early Pleistocene. This gives a valuable reference point in time, since which the flora and fauna have arrived. The dynamic capabilities of insect species may be deduced from what has and has not arrived and differentiated in this time.

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