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## **Compiling Collectors in the Caribbean: Biographical Notes on Some Insect Collectors in Trinidad and Tobago during the British Colonial Period**

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# Compiling Collectors in the Caribbean: Biographical Notes on Some Insect Collectors in Trinidad and Tobago during the British Colonial Period

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## ABSTRACT

Biographical accounts are given of insect collectors, mainly from Great Britain, together with the locations of the museums where the collections are to be found. Most of the collections are held at the Natural History Museum in London. Both amateur and professional entomologists are included and some of the collectors are from Trinidad.

**Key words:** Trinidad, insect collectors, biography, history, museums.

## INTRODUCTION

Prior to becoming a British colony at the end of the eighteenth century, Trinidad was under Spanish rule and had many French people living there. From 1899 Tobago came under Trinidad and independence for both islands was granted in 1962. It is not surprising therefore that since Trinidad was a Crown Colony, most insect material was sent to London and ended up in the British Museum. The majority of insect workers were expatriates or visitors, although a few were residents, and some were Trinidadians as the chronological listing demonstrates.

The two islands of Trinidad and Tobago lie just off the northeast edge of the South American mainland and are typical continental islands unlike the rest of the West Indies, and closely resemble nearby mainland habitats in their biotic composition and diversity (see <http://ckstarr.net/cks/2009-ENCYCLOPEDIA.pdf>) and have only slight endemism. The great variety of habitats include evergreen seasonal forest, swamp forest, mangrove, savanna, lower montane forest and coastal habitats with sandy beaches and coral reefs.

Trinidad and Tobago have a well-studied Neotropical insect fauna especially the Lepidoptera. It has been stated that for the size of the islands they have the richest butterfly population in the world with several hundred species. Barcant (1970) lists 617 butterfly species of which 123 occur on Tobago. Between 1843 and 1987, the Natural History Museum (NHM) in London, formerly the British Museum (Natural History), received 84 separate collections of insects, mostly Lepidoptera, from Trinidad and Tobago (pers. comm. Blanca Heurtas, 9 December, 2013), some quite small, others large and significant. There are 72 collectors' names attached. A number of them, the moth experts, are listed by Cock (2003). In some cases more than one collection has been donated with the same name but at different times, for example Henry Caracciolo (1859-1934) in 1891

and 1895 and J.H. Hart (1847-1911) in 1895, 1901 and after his death in 1921. The names are interesting; some are well known entomologists and collectors, others are less familiar. There were non-resident amateur collectors who visited the islands to collect insects, mainly butterflies and moths. Others were based on the islands working in their professional capacity and some were born in Trinidad. This paper is based substantially on the names of people from the NHM collections plus some other institutions.

During the period under consideration, the study of insects on the two islands was both an amateur and a professional activity and there is a clear division of interest between them. The amateurs were mainly interested in the Lepidoptera whereas the professionals worked mainly on applied aspects of entomology such as biological and chemical control, crop pests and arthropod-borne diseases. A few were active naturalists as well as being professional scientists, good examples being Martin Adamson (1901-1945) and Henry Aitken (1912-2007).

The period embraces the development of an herbarium and a museum for zoological collections, the foundation of an important field naturalists' club in 1891 and the launching of two journals, the *Journal of the Trinidad Field Naturalists' Club* and *Tropical Agriculture*. The Imperial College of Tropical Agriculture (ICTA), the Trinidad Regional Virus Laboratory (TRVL) and the Commonwealth Agricultural Bureaux (CABI) in Trinidad were established. It ends with the foundation of the University of the West Indies in Trinidad (the abbreviation UWI will be used for this in the paper).

There was a collecting frenzy during this period, within the British amateur naturalist tradition, and an obvious fascination with tropical butterflies – large and colourful insects which can be caught fairly easily with a net. This led not just to collecting in the field but to exchanges and purchases of collections. Many amateur collectors

had butterfly cabinets on display in their homes which later would be donated to museums. Although amateurs continued to play an important role in taxonomy, biodiversity and field studies, in general terms the emphasis in entomology changed somewhat during the late nineteenth and early twentieth centuries. A laboratory based approach began to develop, involving insect anatomy, histology and physiology conducted by professional scientists. In light of the discoveries made during this time, entomology became vital particularly as the role of insects as vectors of disease was elucidated.

Apart from the main collections at the Natural History Museum, London (NHM), a number of other museums in Britain contain insect material collected in Trinidad. The list below is not complete but includes museums at:

Aberdeen University  
 Brighton (The Booth Museum)  
 Cambridge (University Museum of Zoology)  
 Exeter (Royal Albert Memorial Museum)  
 Glasgow University Hunterian Zoology Museum  
 Leeds City Museum (Discovery Centre)  
 Norwich (Castle Museum)  
 Oxford University Museum of Natural History  
 University College London (Grant Museum)  
 Sheffield City Museums (Weston Park Museum)  
 Museum of the University of St. Andrews  
 Torquay, Devon, UK

The present paper provides biographical notes on some of these collectors, arranged chronologically, showing their interests and where a number of the collections may be found.

#### **Lord Walsingham, Thomas de Grey, 6<sup>th</sup> Baron of Walsingham (1843-1919)**

English Conservative MP, then House of Lords. President of the Royal Entomological Society on two occasions and FRS. His collection of Lepidoptera, which included other important collections he had purchased, totalled around 260,000 specimens which he donated to the NHM in 1889 with about 2,600 books. Special interest in the Microlepidoptera.

#### **John Hinchley Hart (1847-1911)**

Arrived in Trinidad in 1887 as Superintendent of the Royal Botanical Gardens and in charge of the Herbarium, to find that the previous plant collections had been badly looked after and largely destroyed by insects. British Colonial agronomist with a large publication list in applied botany including cacao (**note 1**). Collected insects and deposited them at NHM in 1895, 1901, and 1921. See

Baker (1952), Baksh-Comeau (1991), Hart (1892) and Pemberton (1999).

#### **Sir Gilbert Thomas Carter (1848-1927)**

Born London; died Barbados. Educated at the Royal Naval School, Greenwich, then Royal Navy. Colonial administrator for the British Empire in Gold Coast, Gambia, Bahamas, Bermuda, Lagos, Leeward Islands and, prior to retirement, administrated Trinidad and Tobago in the absence of the Governor from 1907 to 1910. KCMG (1893, for services in Nigeria). Moth named Carters' Sphinx, *Protambulyx carteri* (Rothschild and Jordan 1903); Carter collected the type specimen in Nassau, Bahamas. Deposited Trinidad material at NHM in 1907.

#### **Henry Caracciolo (1859-1934)**

Founder and first President of the Trinidad and Tobago Field Naturalists' Club in 1891. Revived the Society in 1924 and re-elected President. Member of the Société Entomologique de France. Cocoa planter and also interested in citrus, navel orange and grapefruit. Expert on bats and interested in butterflies also. Insects deposited at NHM in 1891 and 1895. Corresponded regularly with NHM staff 1888-1895 (letters also at NHM). Published work on rearing, life histories and mimicry in butterflies, mainly in the journal of the French society and the *Journal of the Trinidad Field Naturalists' Club*. See Caracciolo (1891, 1892a, b), Lamas (2014) and Rooks (1991).

#### **Margaret Elizabeth Fountaine (1862-1940)**

Born Norwich, England; died Trinidad of a heart attack while collecting on the slopes of Mount St. Benedict. Prolific collector who travelled all over the world to collect butterflies. Also bred butterflies to study their life cycles and painted watercolours of them. Her main collection of around 22,000 butterflies is at the Castle Museum, Norwich, known as the Fountaine-Neimy collection; some material at NHM, deposited in 1937. See Fountaine (1980), Cock (2004) and Lamas (2014).

#### **Walter Elias Broadway (1863-1935)**

Born Hampshire, England; worked as a gardener both in his home county and in Devon before an appointment at Kew Gardens in 1888 where he reached the position of sub-foreman. Assistant Superintendent of the Royal Botanical Garden in Trinidad from his arrival in 1888. Founding member of the Trinidad and Tobago Field Naturalists' Club. In addition to plants, also wrote about and made collections of insects (Broadway 1892a, b). Discovered a new genus of dragonfly and a butterfly named after him (Carr 1991). Butterfly material to NHM in 1898. Several plants, a spider and an insect bear his

name. Published work on disease caused by thrips (**note 2**). See Baksh-Comeau (1991).

### **Sir Norman Lamont (1869-1949)**

Scottish politician and agriculturalist who died in San Fernando, Trinidad. Liberal Party politician and MP. Moved to Trinidad around 1907 where family had sugar plantations but gave up unprofitable sugar and branched out into other crops. Closely involved with the development of ICTA and a Governor there from 1921 to 1945. Wide interests in agriculture, grasses, history and especially Lepidoptera of Trinidad. Prolific collector. National Museums Scotland, Edinburgh (NMS) houses Lamont's collections of butterflies (pers. comm. Graham Rotheray, email, 8 October, 2013) as does the Zoology Museum at the University of the West Indies in Trinidad; other Lepidoptera deposited at NHM in 1921. According to Cock (2003) and Tikasingh (2003), Lamont's collections are divided fairly evenly between the UWIT Zoology Museum and NMS. See Lamont (1917) regarding Tobago butterflies, and Cock (2003), Lamont (1917), Kaye and Lamont (1927) and Lamont and Callan (1950).

### **Frederick William Urich (1870-1937)**

Born Trinidad; died Port of Spain, Trinidad. Educated in Frankfurt (Germany) and Geneva (Switzerland). Keen insect collector from youth. Later specialist in applied entomology and bats. Described by Adamson as an "excellent naturalist" (**note 3**), did not publish much on insects but a large number of animal species were named after him. Worked on froghoppers of sugar cane and thrips of cacao and corresponded with many entomologists abroad, especially in USA. "Encyclopedic knowledge of the local aspects of whatever problem or biological group" (Wolcott 1938). Entomologist for the Department of Agriculture from 1920 and on staff at the ICTA (Assistant Professor) until 1934 when he retired. Entomological material registered at NHM in 1933. See Busck (1937) and Wolcott (1938).

### **Sir Guy Anstruther Knox Marshall (1871-1959)**

British entomologist and specialist on weevils (Curculionidae). Born India; schooled in Margate where he began collecting butterflies. Honorary doctorate Oxford and Honorary Fellow Royal Entomological Society of London. Became a scientific administrator as Scientific Secretary of the Entomological Research Committee (Tropical Africa) in 1910 which became the Imperial Bureau of Entomology, of which he was Director from 1913 to 1942. This in turn became the Commonwealth Institute of Entomology in 1947 and part of CAB. Insects donated in his name to NHM in 1917. Knighted in 1920; FRS; KCMG on his

retirement in 1942. See Scrivenor (1980).

### **Arthur Hall (1873-1952)**

Lived in Brighton. Wide interests in natural history. Collected material but the bulk of his collections were obtained by purchase and exchange; over 600 types. Described species and published over 25 papers, mainly in the 1920s and 1930s, chiefly in the *Entomologist*. Produced a large hand-written volume monograph, now in microfiche format (Hall 1983) available at Brighton. Extensive unpublished diaries, additional notes, catalogues and main collection of some 30 cabinets at the Booth Museum, Brighton (pers. comm. John Cooper, 1 September, 2014). Much of the material from Central and South America collected by him in the field. Main interests were in the Nymphalidae. Butterfly material deposited at NHM in 1933. See Hall (1905, 1929, 1933, 1983), Legg (1984). Lamas (2014) has a publication list.

### **William James Kaye (1875-1967)**

Expert on Trinidad Lepidoptera, collecting, studying and publishing from the 1890s to 1950s, working with his brother S.J. Kaye. Large number of publications which include catalogues and lists of butterflies and some Trinidadian moths. NHM donations dated 1904 and 1906. His preliminary list of moths had 242 species which rose to 1016 by 1927. See Kaye (1904, 1914, 1921, 1940), Kaye and Lamont (1927), Cock (2003) and Lamas (2014).

### **Charles William Beebe (1877-1962)**

Beebe was famous for a wide range of biological activities including deep sea investigations and was one of the foremost naturalists in the world for a period. He collected animals as an employee of the New York Zoological Society in India and on moving to Trinidad in 1949, purchased and renamed an old plantation house 'Simla', in the Arima Valley, after the Indian station. Director of the New York Zoological Society, Department of Tropical Research Simla Station, he donated the property to the NYZS in 1951. Although they were not a principal part of his earlier work, after settling in Trinidad, insects became a focus from 1950 and several papers were produced during this period (Welker 1975). For example, the paper on Trinidad mantids (Beebe *et al.* 1952) included the first observations from fresh specimens on the remarkable asymmetrical species *Tithrone* as described in Barabás and Hancock (2000). See Lamas (2014) for a list of some of his more general publications as well as for those on butterflies. See also, Guide to the Records of the New York Zoological Society, Department of Tropical Research Simla Station, Trinidad Expeditions, 1949-1961 (website, Collection 1005D-Department of Tropical Research). Much has been



written about the man, his life and work including Welker (1975) and Gould (2004).

### **Hugh Scott (1885-1960)**

Born London. Started collecting butterflies around the age of seven. Cambridge University research under entomologist David Sharp; Curator of Entomology, University Museum of Zoology, Cambridge, where some of his collections are deposited. Studied the fauna of bromeliad tanks (Fig. 1). FRS. Lepidoptera at NHM in 1914 and 1922. See Scott (1912) and Thompson (1961).

### **Joseph Lennox Pawan (1887-1957)**

Born Trinidad, educated at St. Mary's College (1900-1907), Trinidad. Scholarship to study medicine at Edinburgh University (1907-1912) then Pasteur Institute in France. Worked as a surgeon in the hospital at Port of Spain and then as District Medical Officer in Tobago. Bacteriologist for Trinidad and Tobago. First person to demonstrate that rabies could be spread by vampire bats. Isolated rabies virus from several bat species. Also studied *Aedes* and anopheline mosquitoes, their histology and role in the transmission of disease and the water supplies of Trinidad and Tobago. Insect specimens to NHM in 1921 and 1922.

### **Carrington Bonsor Williams (1889-1981)**

Keen butterfly collector and breeder in his youth. Cambridge graduate then agricultural entomologist. Head of Entomology Department, Rothamsted Experimental Station, England 1932-1955. Early statistical ecologist. Studied thrips in Trinidad, working on insect pests of sugar cane. As a result he became interested in insect migration and biogeography, especially of butterflies (Williams 1958). Material to NHM, 1919. See also Marren (1995).

### **Patrick Alfred Buxton (1892-1955)**

Quaker family background and interested in nature study as a boy. Cambridge and then qualified in medicine at St. George's London. RAMC. Became eminent British medical entomologist; in charge of Entomology at the London School of Hygiene and Tropical Medicine and Professor at London University from 1933. President of the Royal Entomological Society, London; FRS (1943), FLS (Linnean Medal, 1953). Special interests include lice, tse-tse flies, other insects of medical importance and insecticides. Insects to NHM in 1954. See Wigglesworth (1956).

### **Alistair Martin Adamson (1901-1945)**

School in Ayrshire, Scotland, followed by a first class degree in Natural Science from St. Andrew's University, Scotland; assistant to Professor D'Arcy Wentworth

Thompson at St. Andrew's for a short period. Following work in California and on the Pacific Entomological Survey, he was appointed Senior Lecturer and Head of the Department of Entomology at the Imperial College of Tropical Agriculture in 1933 and later Professor. PhD (1936), University of California. Correspondence at St. Andrew's with copies at the Alma Jordan Library, UWI (Trinidad). Specialities: termites (Adamson 1937, 1946), thrips and biological control (Adamson 1936). Main termite collection at the American Museum of Natural History, New York and material also at the NHM, deposited in 1936. Made wider collections in Trinidad and elsewhere for teaching purposes, including marine animals, some of which are in the Zoology Museum, UWIT. See Baker and Rutherford 2014.

### **Theresa Rachel Clay (1911-1995)**

Educated at St. Paul's School, London and Edinburgh University. World authority on bird lice. Various posts at the NHM London, then a full time Senior and later Principal Scientific Officer there from around 1950 and Deputy Keeper of Entomology from 1970-1975. Specialised in parasitic insects, Mallophaga and Apterygota; studied lice from Trinidad. Donations to NHM in 1961. Joint author with Miriam Rothschild of *Fleas, Flukes and Cuckoos* (Rothschild and Clay 1952). See also Carriker (1962) and Marren (1995).

### **Thomas Henry Gardiner Aitken (1912-2007)**

Born in California and died in New York, aged 94. Entomologist and naturalist. University of California, Berkeley. Doctorate on "Studies on the Anophelene Complex of Western America". Became a world expert on mosquito taxonomy, their control and on arthropod-borne viruses (arboviruses) (Aitken *et al.* 1969; Heinemann *et al.* 1980). Also worked on other flies from Trinidad (Aitken 1968). The insect material at NHM, London is dated 1955. Worked at the Trinidad Regional Virus Laboratory (TRVL), now the Caribbean Epidemiology Centre (CAREC), Port of Spain, from 1954 to 1966. According to Tikasingh (2003) it took the staff and in particular Aitken, "painstakingly to collect and identify the species of mosquitoes present in the country". Speciality - arthropods of medical importance. Nariva Swamp enthusiast who proposed the Bush Bush Forest as a nature reserve in 1960 (Aitken 1973a). Published widely on medical and entomological aspects of virology and also on the biology of animals collected in the Bush Bush Wildlife Sanctuary, including arthropods (Aitken 1973b), amphibians, reptiles and mammals. Other papers in the *Journal of The Trinidad and Tobago Field Naturalists' Club*. Collections in Trinidad are held at CAREC (Tikasingh 2003, 2007).

**Edward McCallum Callan (1912-1996)**

Member of staff at ICTA, Trinidad, late 1930s to 1940s. PhD, DIC. Moved to Rhodes University, South Africa as Senior Lecturer in Entomology and then Principal Research Scientist at the Australian Council for Scientific and Industrial Research (CSIRO) from 1963-1972, based at the Division of Entomology at Black Mountain, Canberra. Material deposited at NHM in 1954 and 1957. Worked with Adamson and published widely on insect pests of cash crops and termites during his time in Trinidad (Callan 1943, 1947, 1948) and the solitary wasps of Trinidad (Callan 1990).

**Malcolm Barcant (1913-1986)**

Born in Trinidad and died in Florida. Amateur who collected butterflies from an early age and amassed a very large collection now housed and on display at Angostura Ltd., near Port of Spain. It is regarded as one of the most important insect collections in the Caribbean. He also bred butterflies, added new records to the Trinidad list and helped to describe new species. His book on the *Butterflies of Trinidad and Tobago* (Barcant 1970) is the standard work. See Baker (2014).

**Alan Brindle (1915-2001)**

Born in Nelson, Lancashire; died Burnley, Lancashire. Worked in a mill for several years, later Assistant Keeper (1958-1961) then Curator of Entomology at Manchester Museum. Expert on the Dermaptera, earwigs, (see Brindle 1971) and the immature stages of Diptera. Described over 200 new species of insects; material at Manchester Museum.

**Hugh Bernard Noel Hynes (1917-2009)**

PhD (1941) Imperial College, London was on stoneflies (Plecoptera). Colonial Scholar 1941-1942 at the ICTA, Trinidad, studying tropical agriculture. University of Liverpool from late 1940s and then the University of Waterloo, Canada (1964-1983) to establish department, first Professor and Head of Biology. Collected and published on aquatic Heteroptera in Trinidad. See Hynes (1948) and Williams (2009).

**Douglas Keith McEwan Kevan (1920-1991)**

Born Helsinki, Finland, of English parents; naturalist from an early age. Student at Edinburgh University, several prizes/medals for Zoology followed by a British Colonial Office Postgraduate Agricultural Scholarship (Entomological Special Cadet) at ICTA, Trinidad on a two-year course in tropical agriculture. Associateship ICTA (1943). Head of new Zoology section in Faculty of Agriculture, University of Nottingham (1948), Chair of Department

of Entomology, McGill University (1957). Fellow of the Royal Society of Edinburgh (1958). Curator of the Lyman Entomological Museum (1971-1986). Keen collector in the field, specialist groups include Neuroptera, Orthoptera and Dermaptera, also soil zoologist. See Kevan (1951) and [http://www.insects.org/ced3/dkmce\\_kevan.html](http://www.insects.org/ced3/dkmce_kevan.html)

Other insect collectors in Trinidad, some of which fall into the timescale of the period, with the dates of their donations to the NHM, London and where possible their special interests, include F.D. Bennett (1976) Lepidoptera; E.W. Classey (1974); W.M. Crowfoot (1887) Lepidoptera but “based on collections made by another physician” (Tikasingh 2003); W. Douglas (1843) Lepidoptera, Coleoptera and Hemiptera; F.W. Jackson (1922) Lepidoptera; R. Thaxter (1917) thrips and ants (Wheeler 1916); C.L. Withycombe (1924) Lepidoptera. More recently, collections have been deposited at National Museums Scotland, Edinburgh, which now houses most of D.J. Stradling’s (**note 4**) collection of butterflies and other orders of insects. At Glasgow University’s Hunterian Zoology Museum are insects collected in Trinidad by E.G. Hancock (**note 5**) and other staff and students from the 1990s onwards. There are also collections in Trinidad (Tikasingh 2003) such as those of Barcant (Baker 2014) at Angostura Ltd; the Caribbean Epidemiology Centre (CAREC), CAB International Bioscience, and the Zoology Museum at UWI in Trinidad (Baker and Rutherford 2014).

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**Notes**

1. The cacao tree (*Theobroma cacao*) is a small, widely cultivated evergreen tree, the seed from which cocoa and chocolate are made.
2. The redbanded thrips, *Selenothrips rubrocinctus*, was first described from Guadeloupe, West Indies, and it was causing considerable damage to cacao. As a result, it was referred to as the cocoa thrips. The earliest report of damage relating to these thrips was by W.E. Broadway in 1898, when he called attention to the “blight” of cacao in the *Government Gazette for Grenada* (no.139) although he did not give the scientific name for the species at that time.

3. A.M. Adamson to D'Arcy Wentworth Thompson (ms 9289 dated 12 January, 1933). Special Collections, University of St. Andrew's, Scotland.
4. David J. Stradling (1939-2012)  
Career entomologist and ecologist at UWIT and University of Exeter. Insect collection divided between Exeter and Edinburgh. At the latter are 48 insect boxes mainly Lepidoptera but includes some Odonata, Hemiptera, Hymenoptera, Diptera and Coleoptera many from Trinidad plus two boxes of microscope slides. The rest of the collection at the Royal Memorial Museum, Exeter. Special interests were in leaf-cutting ants and hawkmoths.
5. E. Geoffrey Hancock (1948 - )  
Career in museums in Liverpool, Bolton and Glasgow (Kelvingrove) moving to Glasgow University (The Hunterian) as curator of entomology in 1997. Special interest in Diptera. Collected in Trinidad on field trips with students from 1994 onwards; material mainly in the Hunterian with some at Kelvingrove.

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**Fig. 1.** *Dryadoblatta scotti* (Shelford 1912), bromeliad-dwelling cockroach, specimens from Morne Bleu, Trinidad, 1-15 July, 2006, Glasgow University Exploration Society. The Hunterian (Zoology Museum, Entry No. 419).