Lepidopterists through the lens: portraits from the first fifty years of the LNHS

JOHN EDGINGTON

19 Mecklenburgh Square, London WC1N 2AD

Abstract

An album in the archives of the London Natural History Society contains photographs of fifty Victorian entomologists, most of whom were members of the Society's predecessors, the Haggerstone and City of London Societies. They have been identified, and their character and achievements reconstructed, by reference to the Society minute books and to contemporary entomological literature. This article traces the Society's development from a collectors' club to an association of scientifically minded naturalists, through pen-portraits of some of these members. They include Thomas Eedle, personally responsible for much of Lord Walsingham's collection of microlepidoptera (now in the Natural History Museum); Walsingham himself, patron of the Society; the early Australian lepidopterist Ernest Anderson; the renowned entomologist T. A. Chapman; and J. W. Tutt who first recognized industrial melanism as an example of Darwinian adaptive evolution in action.

Introduction

In June 1858, five men collecting butterflies at Wickham, Kent, decided to form a society. Thus began the Haggerstone Entomological Society, later the City of London Entomological and Natural History Society, which in 1914 merged with the North London Natural History Society to form the London Natural History Society. In the archives of the LNHS is a photograph album, acquired in 1891, containing portraits of fifty Victorian entomologists: thirtythree were members of the Haggerstone Society, ten joined the City of London (three as honorary members) while the other seven, though not members, were entomologists who had helped the Society or were held in high regard. Some of these men (they are all men - not until 1910 was a woman, Mrs Hemmings, admitted, and then only because her husband joined too) achieved fame but most are forgotten. The Appendix lists their names and brief details, The stories of a few of them, reconstructed here from the Society's minute books and the entomological literature of the time, reveal a world in which a common love of natural history struggled, sometimes successfully, to bridge the social gap between rich and poor, lord and commoner, amateur and professional.

In the beginning founders of the Hagg



FIGURE 1. C. Healey

The founders of the Haggerstone Society were neither wealthy nor especially learned. We have portraits of five of them - Charles Healey (instigator, and first chairman and president, of the Society, Figure 1), William Gates (treasurer, Figure 2), Thomas Eedle (Figure 11), J. Bryant and A. Woodage — and of seven others who joined during the first eighteen months. They met weekly in a room over the Carpenters Arms, Martha Street, subscribing the modest sum of 1d a week. According to Gates, they were 'men of small means and entirely of the working class whose time and money are both limited'. This was largely true, although these early members did include a medical practitioner, J. S. Sequeira, and J. A. Clark, a pharmaceutical chemist, a most able administrator and subsequently a substantial benefactor of the Society.



FIGURE 2. W. Gates



FIGURE 3. E. Newman

The members' pennies allowed William Wood's Index Entomologicus (1839) to be purchased, and the new Society grew rapidly. Twenty-five years later, Gates recalled that in October 1859 'it being necessary to find a larger room . . . the Society moved its quarters to the Brownlow Arms and owing to the liberality of Mr Finch the late landlord in not charging rent . . . they were enabled to purchase a bookcase and cabinet.' The second item for the bookcase was the monthly periodical Zoologist. donated by its founder and editor Edward Newman, a leading naturalist of the mid nineteenth century and editor also of the Entomologist and the Entomological Magazine. Newman wrote widely on botany and ornithology, his books on ferns being particularly popular, and he corresponded with Charles Darwin about dimorphism in ants. In 1863 Newman read a paper to the Society on larval anomalies in the gipsy moth Lymantria dispar (Lymantriidae) and in 1869 applied to join; the Minutes record that 'it was an honour that seldom fell to the lot of Societys of working men to have such a man as Mr Newman to condesend to join them' (original spelling). His photograph (Figure 3), signed on the reverse, was presented by Healey in 1871, 'to stand first in the album', and though Newman rarely attended meetings his donations enriched the Society's library. After his death, many years passed before his equal as naturalist and scientist joined the Society, by then the City of London, With few exceptions, the Haggerstone entomologists were content with the pleasure of the chase, followed by a convivial evening exhibiting and discussing their captures.

Sallowing and sugaring — the Haggerstone Society

Thus the 'cabinet', primarily of Lepidoptera though a few members collected beetles, was the focus of the weekly meetings. The greater the range of varieties and aberrations of some common moth or butterfly that a member could show, the better. There was animated discussion of the relative merits of fresh willow. catkins ('sallowing') or treacle ('sugaring') for attracting moths (light-traps were introduced to Britain as late as 1866). Duplicates were exchanged and surplus specimens donated to the cabinet. What was not captured could be purchased, but prices (perhaps ten shillings for a British rarity) were out of most members' reach. The photographs include one of Edwin Birchall, first President of the Isle of Man Natural History Society. In 1863 he presented a box of moths, namely four and a half dozen of the burnet moth Zygaena minos (Zygaenidae) and five dozen Lycia zonaria (Geometridae), the belted beauty — 'a munificent gift', the minutes assert, as well they might, the latter being a scarce, extremely localized species while the former does not even occur in Britain. Thus in time the collection became quite valuable and Clark had the foresight, and means, to insure it, arranging a policy for £300 with the Liverpool, London & Globe Co.

Born in Aldermanbury in the City of London, John Adolphus Clark (Figure 4) grew up in Homerton, then well-known for its rose gardens, and collected 'all over Hackney, Clapton and Stoke Newington', winning a prize in 1864 for the best exhibit by a member under twenty-five. Elected president in 1876,



FIGURE 4. J. A. Clark



FIGURE 5. J. S. Sequeira



FIGURE 6. L. Lormier

following the resignation en masse of the officers when rule changes they had proposed were rejected, and president and treasurer from 1890-95, Clark guided and virtually bankrolled the Society through its leanest years; it was he who gave the album containing these portraits, and much else besides. Clark was vice-president from 1896 until he died, on the last day of 1908, from the after-effects of a brutal attack by pickpockets in Bethnal Green. Almost his last act, at the Society's meeting on 1 September 1908, was to present a copy of Joseph Greene's The insect hunters' companion to each member present. The photograph reproduced here shows Clark in his prime. For such a talented man, his contributions to science were few; all I have traced, other than two short papers in the Society's Transactions for 1892 and 1893, is a revision of Acleris cristana (Torticidae) and its varieties (Entomologist's Rec. J. Var. 13 (1902)).

James Scott Sequeira, his close friend for nearly fifty years, wrote Clark's obituary (Entomologist's Rec. J. Var. 21: 22-24 (1909)). Despite losing his eyesight shortly thereafter ('all the extransient beauty of art and nature are now, to me, a sealed book . . .'), Sequeira continued to exhibit, and in 1911, at the age of eighty-three, delivered a thirty-page paper on collecting at that rich site for Lepidoptera, Wicken Fen. His patriarchal portrait (Figure 5) was taken in 1905.

Collecting for these men was fraught with difficulties. the law of trespass being fiercely enforced. Ernest Anderson advised members 'always go to localities where the keeper is absent', and in 1887 Mr Pearson was ordered off Epping Forest, then still in private hands, 'on account of having lanterns alight, but refused to go, arguing there had been a long history of collecting'. Infinitely more tragic is the fate that befell Lewis Lormier. A member for only four years, Lormier left England in 1873 for Madagascar. Twelve months later, the Minutes record that he had died there 'from the effect of burns accidentally incurred while collecting'. A note on the back of his photograph (Figure 6) records the month of his death as August 1873. Anderson himself emigrated to Australia where he discovered butterflies new to science. He sent reports to London, to be read at Society meetings, wrote articles for Melbourne newspapers, and coauthored, with Frank Spry, Victorian butterflies and how to collect them, whose 129 pages in two parts described seventy-two species (Kitching 1999); Anderson donated copies to the Society. His portrait (Figure 7) was taken in Melbourne in 1893.

Few members, however, could afford the time and cost of travel far from London. One who could was E. G. Meek (Figure 8), presumably a relative of the J. and W. Meek who were founder members in 1858. We know little of E. G., not even his dates, but he seems to have been a discriminating collector. He exhibited scarce species such as Barrett's marbled coronet *Hadena andalusica* ssp. barrettii (Noctuidae) taken in Ireland, and black forms of the noctuids



FIGURE 7. E. Anderson



FIGURE 8. E. G. Meek



FIGURE 9. T. Gurney

autumnal rustic Paradiarsia glareosa ssp. edda and coast dart Euxoa cursoria from Unst in the Shetlands. He, too, collected at Wicken Fen, and in 1884 captured a rare immigrant, the three-humped prominent Notodonta tritophus (Notodontidae), at Southwold, Suffolk (Entomologist 17: 253 (1884)). His manuscript Notes on the Sesia (the hornet moth genus), a paper read to the Haggerstone and other Societies, is in the entomological collections of the Natural History Museum.

If, as seems likely, the Thomas Gurney who joined in 1877 (Figure 9) was the cabinetmaker of that name who traded in London Fields, Hackney (teste Colin Plant), the Society and its members would have had a ready source of high-quality entomological cabinets. Gurney was a regular exhibitor in the 1890s, and the Society's librarian for

several years.

William Machin (Figure 10), a compositor by trade, was a successful breeder of microlepidoptera. As such he assisted the distinguished entomologist H.T. Stainton in the 1850s by collecting and rearing Tineinae, thus providing much of the source material for Stainton's great 13-volume Natural history of the Tineina, published in four languages between 1855 and 1873. Probably in the hope of building on this relationship, in 1860 the Society offered Stainton 'an address of thanks for his entomological work', a clumsy gesture which Stainton declined. Years later, under very different circumstances, Sir Henry Tibbats Stainton became a member of the City of London Society.

One founding member, Thomas Eedle (Figure 11) deserves special mention. Eedle was a taxidermist, a trader in natural history subjects and a man of unrivalled field-craft. Essentially, he was a professional collector of Lepidoptera. In 1868 and 1870 the Society paid his expenses for collecting in Rannoch, where he procured 146 specimens including the northern dart Xestia alpicola (Noctuidae), apparently only the second taken in Britain. In 1871-72 he accompanied Lord Walsingham, a hugely wealthy young man and an ardent entomologist, to California and Oregon, as 'collector and assistant'. The minutes for 27 April 1871 record that Eedle had arrived safely in New York 'after a troublesome voyage' and on 9 May 1872 reported his safe return from California. In September he presented a copy of Walsingham's Directions for collecting microlepidoptera (The American Naturalist 6: 275–280 (1872)) to the Society, and

subsequently arranged donations of other books and collections. In 1878 he collected for Walsingham again, at Wicken Fen, his captures including a long series of Camberwell beauty *Nymphalis antiopa*, said to be the largest in the country. There can be little doubt that Walsingham's magnificent collections, which form the basis of the Natural History Museum's holdings of Lepidoptera, were due in large part to Eedle. Though he published nothing, his



FIGURE 10. W. Machin



FIGURE 11. T. Eedle

knowledge was encyclopaedic; he once remarked that he 'thought he knew a great deal more of many species than could be found in books'. As a professional amongst amateurs he was widely respected, for according to his obituarist, J.T. Carrington, 'he made his study his business, and never withheld a locality, nor a bit of useful knowledge, "for trade purposes"' (Entomologist 22: 52 (1889)).

Respectability — the City of London Society

In 1886, disillusioned with a declining, inwardlooking membership, Anderson suggested amalgamation with another society, though nearly thirty years passed before this happened. A further concern was the effect on the Society's reputation of continuing to meet in a public house. The answer, proposed and implemented by the indefatigable Clark, was to move the meeting place to the better address of Albion Hall, London Wall, and to widen its appeal by changing the name to incorporate the words 'natural history'. Clark seems to have been on good terms with Sir John Lubbock, later Lord Avebury, scientist, politician, author and family friend of Charles Darwin. Lubbock facilitated the move to Albion Hall. The first meeting of the City of London Entomological and Natural History Society was held there on 6 October 1887, when Lord Walsingham consented to become patron of the reformed Society, and was elected an honorary member.

Thomas de Grey, sixth Baron Walsingham, had been elected a Fellow of the Royal Society in June

1887, on the basis, according to the citation, of his 'extensive private collection' of microlepidoptera (which he had gifted to the British Museum the previous month) and two publications in particular: Illustrations of Lepidoptera Heterocera, in Catalogue of North American Tortricidae in the British Museum (1879), and On some probable causes of a tendency to melanic variation in Lepidoptera of high latitudes, a presidential address to the Yorkshire Naturalists' Union (1885). His acceptance of the position of patron was perhaps his way of recognizing the debt he owed to Thomas Eedle, for his life-style and interests, apart from entomology, had little in common with those of the Society's ordinary members. Born in Mayfair (Walsingham House is now the Ritz Hotel), he was MP for West Norfolk from 1865 to 1871, when he succeeded to the title, a trustee of the British Museum (1876) and High Steward of the University of Cambridge (1891). He was particularly fond of shooting, once killing 1,070 grouse in 14 hours 18 minutes. His marital infidelities, according to the present (ninth) Lord Walsingham, 'were remarkable, in an age when infidelity was commonplace; though the scandal was for the most part confined to the locality since it seems he usually slept with his housemaids'. Unusually, the Royal Society did not publish a biographical memoir of Walsingham after his death. His photograph, copied from newsprint, is too poor to reproduce.

With a noble lord as patron, and now meeting in respectable premises, the Society began to attract other eminent entomologists. Meetings became fortnightly. At the second, Sir John Lubbock (FRS 1858, Figure 12) consented to become an additional patron, and two weeks later Sir Henry Stainton (FRS



FIGURE 12. Sir John Lubbock



FIGURE 13. Sir Henry Stainton



FIGURE 14. J. W. Tutt

1867; Figure 13), having rebuffed the Haggerstone Society in 1860, 'acceded to a request that he should become a member'. Three Fellows of the Royal Society in one month! They were, of course, members in name only. Nearly thirty years would pass before the Society produced its first homegrown FRS.

One other member was elected at Albion Hall on 6 October 1887. James William Tutt (Figure 14) was born in Strood, Kent, on 26 April 1858, a few weeks before the Haggerstone Society itself. The triumvirate of Tutt and two others, C. R. N. Burrows and T. A. Chapman who joined a few years later, established the City of London as a scientific society, not just a collectors' club. Chapman's entomological discoveries were wider-ranging, and Burrows was the more skilled anatomist, but Tutt combined a gift for communicating with profound insights, much underestimated in his lifetime, into what we now call evolutionary biology, and it is these for which he deserves to be remembered.

Tutt and melanism

Tutt was a successful schoolmaster but entomology was his life. In 1890 he founded the Entomologist's Record and Journal of Variation which he edited until his death in 1911. He wrote over 900 articles, notes and reviews, while his books include The British Noctuae and their varieties, in four volumes (1891–92), British moths and British butterflies (both 1896), Practical hints for the field lepidopterist, in three volumes (1901–05), and the great nine-volume work, A natural history of the British Lepidoptera (1899-1914,the last volume published posthumously), as well as popular guides to collecting areas in Britain and abroad. He revised the British Pterophoridae, described many new species of Cyaniris (Lycaenidae), and is commemorated by Megacraspedus tutti (Gelechiidae), Diachrysia tutti (Noctuidae) and others. Tutt found his spiritual home in the City of London Society, of which he was president (1896-98) and vice-president (1891-95, 1899–1902). His portrait in the Natural History Museum is that in the Society's album.

Tutt was a committed Darwinist, his seminal contribution to science being to provide a perfect example of evolution by natural selection, taking place before our eyes. This is industrial melanism, the appearance of dark varieties of moth which, Tutt hypothesized, were better fitted to withstand predation pressure in an environment darkened by soot and smoke. He developed this idea gradually as

a series of papers in his new magazine ('Melanism and melanchroism in British Lepidoptera', Entomologist's Rec. J. Var. 1: 5-7, and seriatim (1890-91)); at the end of 1891 he presented the complete forty-page article, subsequently published in book form, to the Society's library. During that year, to illustrate his theory, he exhibited 'very dark, almost black' specimens of great oak beauty

Hypomecis roboraria and twin-spot carpet Perizoma didymata (both Geometridae) from Liverpool. At the meeting on 2 May 1893 he stated his belief that 'melanism is due to natural selection, for protective purposes' and in 1896 (British moths, pp. 305–307) he explicitly proposed that melanism in the peppered moth Biston betularia (Geometridae) was an evolutionary adaptation to soot-covered trees, rendering the moth less noticeable to bird predators. Sixty years later, Bernard Kettlewell (1955, 1973) provided experimental proof of this hypothesis, though whether from ignorance or oversight he ignored Tutt's elegant and convincing formulation of it. Gradually doubts were cast on Kettlewell's results (at first by scientists critical of his methods and later by creationists anxious to attack evolution) but recent work by Michael Majerus (1998) including observational data acquired under carefully controlled conditions over many years (Majerus 2008) has wholly vindicated them. Owen (1997) gives a fuller account of Tutt's views on industrial melanism; it is the classic text-book example of Darwinian evolution in action.

Though he remained interested in the subject, exhibiting melanic specimens of scalloped hazel *Odontopera bidentata* (Geometridae) in 1902, and ruby tiger *Phragmatobia fuliginosa* (Arctiidae) in 1903, Tutt concentrated thereafter on his multi-volume survey of British Lepidoptera. His early death at his home in Blackheath, on 11 January 1911, before he could take up the Presidency of the London Entomological Society to which he had just been elected, deprived both that and the City of London Society of their leading scientist. The issue of his journal of 15 May that year was devoted entirely to tributes from twenty-six friends and fellow scientists, led by E. B. Poulton, Hope Professor of Zoology

at Oxford (Entomologist's Rec. J. Var. 23: 105-139 (1911)).

Tutt, it must be said, was respected and admired, but not always liked. He was 'a combative man' whose attacks on others' theories were sometimes seen, not without reason, as attacks on the theorizers. A proposal by the distinguished German entomologist Professor Weissmann that dark coloration can be produced by the action of cold he dismisses as 'a very farfetched notion', Weissmann's experiments being 'of little or no value' (Entomologist's Rec. J. Var. 1: 228-234 (1890)) — this was not his first criticism of Weissmann. In the same article, Tutt refers to Walsingham's presidential address to the Yorkshire naturalists in 1885: 'His paper can hardly be said to propound a theory, as it scarcely seeks to show what is the cause of melanism, but that, melanism once having been produced, the dark coloration is an advantage to the insect possessing it; it then goes on to suggest that this advantage, therefore, is the cause of the insect being melanic; although, how it can in any way be looked upon as a "cause" of melanism, I fail entirely to see. But we have to bear in mind that although the whole of Lord Walsingham's theory (?) that melanism is probably due to the rapidity with which insects would absorb heat because of their darker colouration, is extremely interesting and full of good reasoning, yet it is entirely misleading, because based on entirely fallacious data.' Since this address had been specifically cited in support of Walsingham's admission to Fellowship of the Royal Society, it would not be surprising if relations between Patron and ordinary member became cool; Walsingham's contribution to Tutt's obituary tributes, written from Villa Sans Souci in Monte Carlo, was polite but not effusive.

The final years

In December 1891 the Society moved for the last time, to the London Institution in Finsbury Square, before amalgamating with the North London Society in 1914. By now several members, including some portrayed in the album, had interests beyond entomology. J. Riches, for example, was a gardener by profession, who exhibited plants and read a paper on



Figure 15. C. R. N. Burrows



Figure 16. T. A. Chapman

chrysanthemums, while the coleopterist Henry Hillman was responsible for some extraordinary exhibits — a collection of house crickets, the skulls of a dormouse and an extinct kangaroo, 'a bottle containing 3 pigeons from 2 eggs' and much more. But most members concentrated on Lepidoptera and tried to study them following the principles set forth by Tutt. Arthur W. Mera, president from 1903 to 1913 and subsequently a leading member of the LNHS, was one, though his interests were exclusively British and he published very little; his fine collection

is now held by the Essex Field Club.

Charles Richard Nelson Burrows (Figure 15) was sometime curate of Haggerston (the final 'e' was lost around 1872) and subsequently vicar of Rainham, Essex. Before taking holy orders he trained as a chemist and then collected Lepidoptera for the British Museum, first in Natal (1873-75) and later in Manitoba, describing taxa new to science in Annals and Magazine of Natural History (4) 16 (1875). He joined the Society on New Year's Day 1895, having exhibited for several years, and was soon presenting 'instructive and amusing' papers on, for example, his experiences collecting large wainscot Rhizedra lutosa (Noctuidae) as well as detailed studies of geometrid moths such as Essex emerald *Thetidia smaragdaria* (probably now extinct in Britain), large emerald Geometra papilionaria, and the scarce small grass emerald Chlorissa viridata. Burrows dabbled in all things scientific, experimenting with the newly discovered elements radium and thorium, building crystal sets to receive early wireless transmissions, and, more relevant to the Society, pioneering colour photography. In March 1901, and again in May, he showed slides of Lepidoptera 'in their natural colours', the photographs taken and processed

by himself using the Sanger-Shepherd process that had just come on the market. These were possibly the first true-colour natural history photos taken in Britain.

Burrows was an authority on the Psychidae and Geometridae. He was a superb microscopist, producing most of the illustrations for F. N. Pierce's The genitalia of the British Geometridae (1909), though he declined to be named coauthor. (At a meeting where ferns were discussed, Burrows remarked 'ferns often hybridise in the prothallus stage'; if he had personally observed this, it suggests great patience as well as microscopic skill.) An admirer of Tutt, he described several new species of Amphipoea (Noctuidae) including Crinan ear A. crinanensis and several non-British species; Chapman named A. burrowsi after him. His collection is at the Natural History Museum.

On his retirement from medical practice in 1896, Thomas Algernon Chapman, 'the Doctor', moved to Reigate and joined all the local societies including the City of London. His obituarist W. G. Sheldon (Entomologist 55: 44–48 (1922)) described Chapman (Figure 16) as 'One of the greatest and most scientific entomologists we have ever produced'. He was elected a Fellow of the Royal Society in 1918, the citation reading: 'Has made laborious and extended researches into the structure, habits and life-histories of insects (Coleoptera, Hymenoptera and especially Lepidoptera). The results are recorded in a long series of original papers published from 1868 onwards in the Entomologist's Monthly Magazine, the Entomologist's Record, and the Proceedings and Transactions of the Entomological Society of London, &c.'

He had a wider range of interests than his close friend Tutt, as the titles of some of his early papers in the Entomologist's Monthly Magazine suggest: 'The oviposition of Octotemnus glabriculus [a ciid beetle]' (Ent. mon. Mag. 5: 297 (1869)); 'The occurrence of chalcididdous larvae [parasitic wasps] in the imago of Cynips' (Ent. mon. Mag. 9: 13 (1872)); 'The life-history of Bombylius major [bee-fly]' (Ent. mon. Mag. 14: 196-208 (1878)). When Tutt brought out his new journal, Chapman became the most prolific contributor after Tutt himself, the very first article being Chapman's 'The genus Acronycta and its allies' (Entomologist's Rec. J. Var. 1: 1-4, and seriatim (1890-91)). Many species of Acronicta (Noctuidae: this spelling has priority) exhibit melanism, and Chapman espoused Tutt's views on its origin.

Chapman was vice-president of the City of London Society from 1900 until 1913, when he proposed, and Burrows seconded, the motion to merge with the North London Society. A modest man, Chapman declined the presidency of the Entomological Society. He travelled extensively in Europe, often with Tutt, and thought nothing of walking forty miles a day. In the last year of the City of London Society he returned to one of its favourite haunts, Wicken Fen, where he collected the marsh dagger *Acronicta strigosa* (*Entomologist* 47: 218–219 (1914)), a moth now extinct in Britain. Our photograph shows him in 1906,

aged sixty-four.

Plant (1985) has indexed the papers published in the *Transactions* of the City of London Society, including six by Burrows, eleven by Chapman and thirteen by Tutt. With the merger came new faces, new interests and a new journal, *The London Naturalist* (known as the *Transactions of the LNHS* until 1922), which publishes obituaries of members, sometimes with photographs.

I hope this note, by bringing together portraits and contemporary accounts, does something similar for those who carried the Society through the first one

third of its 150-year history.

Appendix

Portraits in the photograph album of the City of London Entomological and Natural History Society. Square brackets show, in the case of members, date of joining the Society or its predecessor, the Haggerstone Entomological Society.

Ernest ANDERSON	[1877]
Charles J. BIGGS	[1859]
Edwin BIRCHALL, F.L.S., 1819–1884	[entomologist; Isle of Man]
Frederick BOND, F.L.S., F.Z.S., F.E.S., 1811–1889	[entomologist; London]
P. BOULDEN	[1870]
J. BRAMLEY, d. 1884	[1859]
J. BRYANT	[1858; president, 1859]
David BURNETT	[1873]
Revd Charles Richard Nelson BURROWS, 1851–1936	[1895]
Roland BURRY, d. 1887	[1868]
H. BUSH	[c.1865]
Thomas Algernon CHAPMAN,	
M.D., F.R.S., F.Z.S., F.E.S., 1842–1921	[1896]
John Adolphus CLARK,	
f.z.s., f.e.s., m.p.s., l.d.s., 1842–1908	[1863; president 1876, 1890–95]
J. A. COOPER	[1858]
William Hartley DANBY, 1850–1920	[1870]
E. W. DAVIS, d. 1875	[1868]
Thomas EEDLE, 1829–1888	[1858]
William GATES, 1828–1900	[1858]
Thomas GURNEY, b. 1843	[1877]
W. HARPER, d. 1884	[1858]

Charles HEALEY, d.1877 [1858; first president, 1858] Henry HILLMAN, F.Z.S. [1871] Gerald George C. HODGSON, 1860-1911 [1905] 'JEFFREY of Scarborough' [no details traced] C. A. Le PELLEY [1870] Lewis LORMIER, d. 1873 [1869] Sir John William LUBBOCK, P.C., F.R.S., 1st Baron Avebury, 1834-1913 [patron, hon, member, 1887] William MACHIN, 1821–1894 [1858] J.W. MACQUEEN [c.1872]John William MAY, F.E.S., 1814-1902 [entomologist] E. G. MEEK [1869] [1887; president, 1903-13] Arthur William MERA, 1849-1930 [1858; president, 1860] C. MILLER Edward NEWMAN, F.L.S., F.Z.S., F.E.S., 1801–1876 [1869] [no details traced] W. NORMAN G. PEARSON [1878] D. PRATT [ca 1872] John Marmaduke RAINE [1879] I. RICHES, 1848-1928 [1891] J. W. RUSSELL [1876] James Scott SEQUEIRA, M.D., 1828-1912 [1859] W. A. SOUTHEY [c.1891]Sir Henry Tibbats STAINTON, F.R.S., F.L.S., F.E.S., 1822-1892 [hon. member, 1887] James William TUTT, 1858-1911 [1887; president, 1896-98] I.W. VANDENBERGH [1878; president, 1881] Philip Henry VAUGHAN, 1846–1917 [lepidopterist; Bristol] WALSINGHAM, Lord Thomas de Grey, [patron, hon. member, 1887] P.C., F.R.S., 1843–1919 John Jenner WEIR, F.L.S., F.Z.S., 1822-1894 [naturalist; London] Thomas WILKINSON, 1818-1876 [coleopterist; Scarborough] A. WOODAGE [1858]

References

KETTLEWELL, H. B. D. 1955. Selection experiments on industrial melanism in the Lepidoptera. *Heredity* 9: 323-342.

KETTLEWELL, H. B. D. 1973. The evolution of melanism. Clarendon Press, Oxford.

KITCHING, R. L. 1999. Biology of Australian butterflies. CSIRO, Canberra.

MAJERUS, M. E. N. 1998. Melanism: evolution in action. OUP, Oxford.

MAJERUS, M. E. N. 2007. The peppered moth: the proof of Darwinian evolution. Presented at XI Congress of the European Society for Evolutionary Biology, Uppsala, August 2007. Transcript available at www.gen.cam.ac.uk/Research/majerus.htm

OWEN, D. F. 1997. Natural selection and evolution in moths: homage to J. W. Tutt. Oikos 78: 177–181.

PLANT, C. W. 1985. An index to the Transactions of the City of London Entomological and Natural History Society, 1892–1914. Lond. Nat. 64: 95–101.