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OBITUARY.

THOMAS WHITELEGGE, 1850-1927.

At Sydney on August 4, 1927, Thomas Whitelegge passed quietly from his circle of friends, after a life of intellectual attainment to which few have risen from such an obscure beginning. The death of this accomplished zoologist and able botanist removes one of our last links with the Australian systematists of last generation.

Whitelegge was born of humble parents at Stockport in Cheshire, England, on August 17, 1850. Soon after his birth the family was cast into destitute circumstances, and young Whitelegge received but meagre schooling, being put to work for one-half of each week at the tender age of eight years. One year later his father died and his son's miserable pittance of two shillings and sixpence per week contributed to the support of his mother, who was a bobbin winder by occupation. From this time up to the age of about fifteen, Whitelegge suffered hardships and privations which might well have seared the soul of a less spirited and resourceful being. A review of his vicissitudes will read like romance in these modern days of comparative comfort and protection; it will show the greatness of the man and the merit of his ultimate accomplishment.

From his early service in a tarpaulin factory, young Whitelegge moved to the occupation of "piecer" in a cotton mill. Later he went to learn weaving in the service of a cousin, but one day he made the grave error of putting two shuttles in the loom at one time, and the warp was broken. This act led to dismissal and the lad then gained employment in a machine shop, where he was occupied with tapping nuts and putting threads on bolts. At the age of eleven he entered Christy's Hat Manufactory at Stockport, after undergoing medical examination and being certified as a youth of fourteen years. After gaining an insight into this trade, the youth signed indentures and became bound as an apprentice to another hat manufacturer for a term of seven years. The wages were six shillings a week for the first two years of this employment, and then an increase of two shillings per week until half of the apprenticeship term was served. After that Whitelegge was to be put on journeyman's rates, but was to receive only one-third of these earnings. Just prior to this last employment he was receiving only four shillings per week, on which he and his mother subsisted during the awful days of the Lancashire cotton panic, brought about by the American Civil War. During the whole of one year the little family had no meat of their own buying, and in order to



T. Whitelegge

THOMAS WHITELEGGE, at the age of 45, from a self-taken portrait.

replenish the larder young Whitelegge used to rise at daylight on Sundays to scour the countryside for blackberries and mushrooms, and occasionally seized potatoes and turnips from the properties of unsuspecting farmers. At this time his earnings provided the rental of a house at one shilling and sixpence per week, leaving a balance of two shillings and sixpence for food and clothing. It was pitiful to hear Whitelegge relate these facts, and to realize that the family would have been better off if he had been out of employment, as the relief money given at the time of the cotton panic amounted to two shillings and twopence per head. Having all this suffering still vivid in his memory, Whitelegge soon became acutely aware that the terms of his apprenticeship were iniquitous, and after some contemplation he deserted his master. Setting out on foot towards Ashton-under-Lyne in Lancashire, he reached the village of Hurstbrook near this town, and succeeded in getting work as a journeyman with a kindly hat manufacturer, to whom he confessed his trials. With his new employer's help, Whitelegge evaded police inquiry, and sheltered at a farmhouse some distance away, where all available work was taken him. Except that he was all but arrested on several occasions when surreptitiously visiting his mother at Stockport, his stay of two years on the farm was spoken of by Whitelegge as one of the most enjoyable periods of his life. Apart from his trade he did farm work and some carting around the district, but was able to rise early and had finished work in the early afternoon. This gave him ample time to ramble the countryside as was his bent, and so develop what later became a profound acquaintance with Nature, coupled with acute powers of perception. The passing of years brought peace and comparative comfort to Whitelegge, and he was able to ply his trade uninterruptedly at the Hurstbrook shop. It was in this adopted centre that he first happened upon the means of indulging his great interest in natural history. The first inspiration came from reading accounts of the Manchester Science Lectures. One lecture on coal by Professor W. Boyd Dawkins caused Whitelegge to seek books on geology, and he studiously read on this subject for two years. Meantime he made an excellent collection of fossils from the rich coal measures of the district, and in seeking more knowledge soon came in contact with those societies of artisan naturalists which made Lancashire famous during last century. These organizations, in which Whitelegge rose to such eminence by assiduous self-culture before he left the Old Country, were supported mainly by men who never rose beyond comparative poverty and obscurity, their humble life preventing them from attaining to that rank and estimation among the naturalists of the age to which many were so eminently entitled. Whitelegge first joined the Ashton Linnæan Botanical Society (in 1874), for there were several among its members interested in geology. Soon, however, he took up the study of botany, which was the prominent subject among the men with whom he was

now associating. One, Edwin Clough, became his tutor and field companion, and he successfully attended a course of advanced study under Mr. J. R. Byrom of Oldham and Mr. H. Hyde of Manchester. Soon Whitelegge gained a reputation for knowledge in the surrounding districts, and attained high office in several societies. The formation of an herbarium resulted from his week-end rambles, and this afterwards numbered 1,000 species. Later developing an interest in microscopic pond life, he founded the Ashton Biological Society and gained a reputation as a specialist in this branch of natural science. Several of his faunal lists were published in the *Ashton Evening Reporter* and the *Manchester Guardian*. Also in the pages of these newspapers appeared full notice of the meetings and other activities of the various bodies to which Whitelegge belonged. Application and industry eventually secured for him a post as teacher of an evening course in botany at the Albion Schools, Ashton-under-Lyne, under the Science and Art Department. While studying the cross-fertilization of flowers in 1878 Whitelegge made several interesting observations and communicated them to Charles Darwin. The kindly advice and help of this great naturalist encouraged Whitelegge to a discovery of gynodioecious flowers on single plants in two species of buttercups (*Ranunculus*). With reference to this discovery Darwin wrote:

Down, Beckenham, Kent,  
May 12, 1878.

DEAR SIR: I am much obliged for your letter. I am certain that I have never met with any account of any species of *Ranunculus* being gynodioecious, but I have seen it stated that they tend to be dioecious, perhaps in consequence of such plants as you have been so good as to send me. Should I print a new edition of my last book I will introduce on your authority this case.

Dear Sir, yours faithfully,

(Signed) CHAS. DARWIN.

Later Whitelegge found *Stachys germanica* with the same kind of flowers as above, and, following a further letter to Darwin, he received a reply:

Down, Beckenham, Kent.

July 16, 1878.

DEAR SIR: It is very kind of you to take so much trouble, but I beg you not to take any more, as I do not think it likely that there will be a new edition of my "Forms of Flowers," and unless there be one I shall not be able to use all the information which you have been so good as to send me. The *Stachys* seems a very fine case of what I have called gynodioeciousness. Your activity and powers of observation seem very great.

Dear Sir, yours faithfully,

(Signed) CHAS. DARWIN.

Whitelegge had married some years after, removing to Ashton-under-Lyne, and after the death of his mother he developed a keen desire to migrate to Australia with his wife and child. Fascinating

accounts of the opportunities in the new land and its wonderful unstudied flora continued to interest him, and on October 16, 1882, he left from Plymouth on the sailing ship *Uterpe* to try his lot in the land of his adoption.

It was fitting that he be farewelled by members of the Society of which he was founder. Thus it was at the annual meeting of the Ashton Biological Society that the president, Mr. J. R. Eyrom, presented Whitelegge with an illuminated address and a purse of gold subscribed by members of the Society and other local bodies. The address read as follows:

To Mr. THOMAS WHITELEGGE.

DEAR SIR: On the occasion of your leaving your native land for Australia, the members of the Societies hereinafter named could not permit your departure without placing on record their appreciation of your patient, persevering and eminently successful labours in the various fields of biological research. You have taken a leading part in investigating Botany, Geology, and more especially the micro-pond life of the surrounding district. Your contributions to the fauna and flora of the Ashton district will ever remain a monument of your indefatigable industry. Your enthusiasm in science has won the admiration of all your co-workers in the same pursuit, and your unassuming and genial disposition, joined to an unvarying readiness to assist has endeared you to us all. You carry with you our best wishes for your future welfare and success in life. We also trust that in new fields of labour which will be opened out to you, you may be as successful as a teacher and student of Nature as you have been at home.

Signed, on behalf of the

Ashton Biological Society,

J. R. BYROM, President.

J. S. ROWSE, Secretary.

Ashton Linnæan Botanical Society,

JOHN WHITEHEAD, President.

HENRY SEARLE, Secretary.

Ashton Field Naturalists' Society.

CHAS. WALDEN, President.

A. NEWTON, Secretary.

Oldham Microscopical Society,

J. ASHTON, President.

CHAS. WALTERS, Secretary.

Stalybridge Microscopical Society.

R. HOPWOOD, M.D., President.

W. H. HIRST, Secretary.

Mechanics' Institute, Ashton-under-Lyne,

7 October, 1882.

Another glowing account which appeared in the *Ashton Reporter* in October, 1882, was from the pen of Mr. A. Park of the Albion Schools, Ashton-under-Lyne. Portion of it read:

Mr. Whitelegge sustained to me—for several years, owing to his being a member of the teaching staff of our Science Course at the Albion School—a very close and intimate connection, and I wished to say that nothing

surprised me more than the readiness of resource—the facility and simplicity of illustration—the quiet yet forceful energy which he brought to bear on his instruction to the student under his care.

I have not the smallest doubt that he is destined yet to add immensely, by his original investigations, to the knowledge we now possess of many departments of Natural Science.

After an eventful voyage of nearly four months Whitelegge landed in Sydney with his family on 10th February, 1883, and took up his residence at North Sydney. He had in his possession some excellent letters of introduction, and testimonials from such prominent scientists as Sir Joseph Hooker of Kew Gardens, Professors W. C. Williamson and Milne Marshall of Victoria University, Manchester, and Professor Marcus Hartog of Queen's College, County Cork, Ireland. For several months these proved of no service, and Whitelegge was forced to take up labouring work with a plasterer. During this hard period he sought solace in the evenings examining under the microscope at an open street window the many strange creatures he had collected in the pools of the surrounding district. Residents commented interestedly on this habit, so that Whitelegge soon came under the notice of a brewer named Kingdon living in the district, who hailed him as a fellow microscopist. This romantic meeting resulted in Whitelegge's acceptance of an offer of employment at the old Orient Brewery in Bourke Street, Redfern. Here Whitelegge spent six months in more or less congenial surroundings, for when he was not busily engaged with his labouring task he mounted and prepared micro-organisms and plants collected in the adjacent swamps. One day the late Rev. J. E. Tenison-Woods called on the brewer and during a conversation remarked on the similarity of certain of the local aquatic plants to those he was familiar with in England. Mr. Kingdon kindly introduced Whitelegge into the discussion and he surprised Tenison-Woods with the accurate knowledge he possessed of the various plants and their names. At that time Tenison-Woods was president of the Linnæan Society of New South Wales, and induced Whitelegge to attend the next meeting of that body in company with his employer for the purpose of exhibiting before the members samples of the plants under discussion. Thus he became introduced to the Society, on the Council of which he afterwards served. It was Sir William Macleay, the founder of the Society, who proposed Whitelegge as a member, and his election took place on 30th May, 1883. In the same year he became a member of the Royal Society of New South Wales. With his entry into this sphere of scientific activity, Whitelegge's accomplishments soon gained their long deserved recognition. He regu- largely associated himself with the band of enthusiasts who attended the now historical week-end gatherings of the Linnæan Society in Sir William Macleay's home at Elizabeth Bay in Sydney, and through the kind offices of the Rev. Tenison-Woods was brought under the

notice of Dr. E. P. Ramsay, Curator of the Australian Museum. A minor temporary appointment was secured for Whitelegge in that institution on 27th August, 1883. After a service of six months his ability was noticed by Dr. J. C. Cox, President of the Board of Trustees, who selected him to investigate the oyster pests of New South Wales on behalf of the State Fisheries. The results of this important work were published by the Australian Museum. As a mark of esteem for the valuable service rendered, the Parkes Government voted Whitelegge a bonus of thirty-five pounds. This and other zealous work earned him a permanent appointment on the staff of the Australian Museum in July, 1887, as a senior scientific assistant in charge of the Department of Lower Invertebrates. It is noteworthy that Whitelegge had earlier declined a position as demonstrator under Professor W. A. Haswell in the School of Zoology, Sydney University, and later an appointment under Dr. N. A. Cobb to the scientific staff of the Department of Agriculture. Always he had in mind the establishment of the proposed Marine Biological Station on Green Point, Watson's Bay, and was closely associated with the Russian scientist, M. de Miklouho Maclay, who took an active interest in the project. Unfortunately, strained relations between Britain and Russia caused the project to be abandoned, and Whitelegge's fond hope of a congenial appointment was never realized. For some time about this period of Whitelegge's career he was lecturer in botany at the Sydney School of Arts and the Sydney Technical College.

Whitelegge's retiring nature and family responsibilities caused him to decline many offers of extended trips such as the Royal Society's Expedition to Funafuti, Ellice Islands, in 1897, and the trawling expedition of the H.M.C.S. *Thetis* off the coast of New South Wales in 1898. He did, however, visit Lord Howe Island in the south Pacific with an Australian Museum expedition headed by the late Director, R. Etheridge, jun., and the scientific results afterwards appeared in one of the institution's "Memoirs." The year 1899 saw Whitelegge appointed a Fellow of the Royal Microscopical Society.

As a collector he was indefatigable, and possessed a most intimate and enviable knowledge of both the local marine and freshwater faunas. His interest in the latter brought about a close correspondence with the noted G. O. Sars of Norway, which continued until his demise. Whitelegge habitually sent this great naturalist samples of mud collected from the swamps and pools he explored, and from these the micro-organisms were later bred out in Norway. As a botanist he made numerous excursions into the Blue Mountain Ranges, adding to his wide knowledge of the flora, particularly the cryptogamic. This last Whitelegge termed his recreation, and he spent much of his private time classifying and mounting mosses for inclusion in his large herbarium. A joint

paper with the Rev. W. W. Watts—"A Classified Catalogue of the Frondose Mosses of Australia"—was the outcome of his interest in cryptogamic botany. Another botanical paper of lasting quality was "The Gametophyte of *Psilotum*," published in the *Proceedings of the Linnean Society of New South Wales*.

Whitelegge's greatest zoological achievement was his "List of the Marine and Fresh-water Invertebrate Fauna of Port Jackson and Neighbourhood," which has been referred to as "the marine zoologists' bible." This was published in 1889, and earned for its author the distinction of a special gold medal and prize presented by the Royal Society of New South Wales. Other special zoological papers included reports on the Crustacea, Echinodermata, Alcyonaria, Porifera, Madreporaria, Hydrozoa, and Vermes collected by the Royal Society's Expedition to Funafuti. Numerous species in botanical and zoological literature have been named after Whitelegge, thus serving as a lasting tribute to his zeal as a collector.

Right up to the date of his death Whitelegge retained that unquenchable enthusiasm for science which marked his earlier career. It had even survived a trying period of his early middle age when he suffered the loss of his wife, and was left with five children to care for, the youngest only two hours old. Always of a most unassuming and modest bearing, he will be remembered by his intimates for the quiet energy and accuracy which he brought to the execution of his work. Latterly, he constantly associated with the staff of his old institution, The Australian Museum, frequently accompanying parties doing field work. In addition he retained a small post in the National Herbarium at the Botanic Gardens, Sydney, where he was the authority on mosses and ferns.

Whitelegge's life was one of persistent endeavour and successful achievement, and his work in diverse branches of natural history bears witness to his untiring industry and broad sympathies. His colleagues cherish his memory as an unassuming, kind-hearted and sincere friend, ever generous in helping others, and ever ready to give others the benefit of his wide knowledge of zoology and botany.

Two daughters and a son survive him.

FRANK A. MCNEILL.

CONTRIBUTION TO A BIBLIOGRAPHY OF THOMAS WHITELEGGE.

(By GILBERT P. WHITLEY.)

This bibliography is not presumed to be complete, since I have no means of tracing the earlier writings of Whitelegge which may have been published in the natural history journals of the northern and midland counties of England. Whenever known, the exact date of publication of each paper is given. The titles are arranged in chronological sequence; papers of joint authorship are placed alphabetically under the second author's name, then in order of publication.