The Natal Microscopical Society (1878–1885?)

A surprising number of scientific societies flourished in South Africa during the nineteenth century, though most of them were short-lived and have been almost completely forgotten.[1] Only a few of these were specialist societies, in the sense of being devoted to a relatively small field of scientific endeavour. One of the earliest of these (outside medicine) was the Natal Microscopical Society, founded in Durban in April 1878. The purpose of this article is to describe the history and activities of this society. As no minute books or other primary documents appear to have survived, the main source of information used are contemporary accounts of the society's activities in local newspapers.

Although microscopy contributed significantly to scientific knowledge from the middle of the seventeenth century, its popularity increased dramatically during the first half of the nineteenth century, when good compound microscopes became available. As a result, a Microscopical Society was founded in London in 1839, to become the Royal Microscopical Society 30 years later.

Little is known about the early history of microscopy in southern Africa. However, our naturalists showed considerable interest in it during the latter half of the nineteenth century. As early as 1855 Dr George A. Hutton presented a paper on the history and construction of the microscope, and its use in science, to the Literary, Scientific and Medical Society in Grahamstown.[2] During the next few decades, microscopy featured prominently among the activities of the Eastern Province Naturalists' Society,[3] the King William's Town Naturalists' Society,[4] Natural History Association of Natal,[5] and elsewhere.

Furthermore, the Curator of the Durban Botanic Gardens from 1872 to 1881, William Keit, is said to have been affected in his botanical studies by the lack of a microscope.[6] The Government of Natal eventually provided £42 to the Natal Herbarium to buy a first class instrument in 1885.[7]

By early 1878, a number of persons interested in microscopy met in Durban from time to time to discuss their microscopical work. In April of that year,

> [they] deemed that the time had come for organizing themselves so as, with more effect, to cultivate their favourite pursuit, by the reading of papers, by the demonstration of objects, and by discussions on what had been read and shown. Mr H.E. Stainbank an enthusiastic and successful cultivator of microscopy, accordingly summoned a meeting at which it was decided to form a society.[8]

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Thus the Natal Microscopical Society was founded, and in a few months had attracted some 25 members.

Henry Ellerton Stainbank (1836–1915), who initiated the society, arrived in Natal from England in 1855.[9] After many years as a coffee cultivator he settled in Durban in 1883, and was a member of the Legislative Assembly from 1886. He did some plant collecting, and served on the committees of the Durban Natural History Museum and Durban Botanic Gardens.[10] He did not serve on the Committee of the Microscopical Society during its first two years (partly on account of a visit to England), but was president of the society for at least the next two years.[11]

The president of the society during the first two years was Dr Julius Schulz M.D. (Berlin), who arrived in Natal in 1858. He also served on the Council of the Natal Society in 1881.[12] The first honorary secretary and treasurer was Mr Stephen C. Adams, bookseller and stationer, who left Natal during 1879.[13]

Charles A. Holwell was elected the society's honorary librarian and curator. He furthermore took over as secretary and treasurer on the departure of Adams. Holwell was later also honorary secretary of the Durban Botanic Society.[14]

In addition to the president, secretary and librarian, the original office bearers of the society included two committee members, Alfred Okell (1849–?) and Maurice S. Evans (1854–1920), businessman and politician.[15] Evans made extensive plant collections in the Drakensberg and was co-author with John Medley Wood (1827–1915) of the first volume of *Natal Plants*.[16] He served on the first committee of the Durban Natural History Museum in 1855 and later became a fellow of the Zoological Society as well as a member of the South African Philosophical Society.[17]

Maurice S. Evans
(Photograph: National Botanical Research Institute, Pretoria)

The members of the society also included John Medley Wood, one of Natal's most prominent botanists and curator of the Durban Botanic Gardens from 1882; William D. Gooch, first honorary secretary of the Natural History Association of Natal, who's main interest was in entomology;[18] Robert Jameson (1832–1919), member of the Durban town council for many years from 1876,[19] office bearer of the Durban Horticultural Society, the Natal Agricultural and Horticultural Society and the Durban Botanic Society;[20] Mark R. Pascoe (1851– ?) a former gold digger who later undertook mining ventures on the Witwatersrand;[21] and John S. Steel, veterinary surgeon and office bearer of several other local scientific societies, who became treasurer in 1880. He was a strong supporter of the Durban Natural History Museum and initially stocked and arranged it (in 1887) with many of his own specimens.[22]

A person who turned out to be a most important member was John Sanderson (1820–1881), politician and editor of the *Natal Colonist*.[23] He had already been an office bearer of the Natural History Association of Natal, the Natal Agricultural and Horticultural Society, and the Durban Horticultural Society, and was also an active early plant collector.[24] Described as a 'domineering, sharp-tongued Scottish journalist',[25] he fortunately reported on most of the early meetings of the Natal Microscopical Society in his newspaper, thereby providing the main source of currently available information about it.

The society's activities consisted mainly of monthly meetings, during which a paper was usually read, specimens from one or several members investigated, and both the paper and specimens discussed. As it was difficult finding one's

John Sanderson
(Photograph: National Botanical Research Institute, Pretoria)

way after dark, meetings were held on the Tuesday next to full moon.[26] The papers covered a variety of topics as the following list for the first year indicates:[27]

21 May 1878:	'History and development of the microscope' (President's inaugural address).
June 1878:	'The microscope as a means of recreation' (H.E. Stainbank).
July & 13 August 1878:	'The study of the blood' (two papers by Dr Schulz).
17 September 1878:	'The microscopic examination of lignite found in the Market Square, Durban during boring for water' (A. Belville).
22 October 1878:	'Results of microscopic examination of water of Little Umhlanga' (Dr Schulz).
12 November 1878:	'Pollen' (M.S. Evans).
3 December 1878:	'Local fields of microscopic investigation' (W.D. Gooch)
4 March 1879:	(specimens exhibited)
8 April 1879:	'Diatoms' (H.E. Stainbank).
6 May 1879:	First annual meeting; presidential address on the work of the first year.

The paper on pollen, by M.S. Evans, was particularly well received, both by members and by the society's correspondents in Britain.[28] It includes brief descriptions of the pollen of about 50 species, both indigenous and imported. Due to its perceived importance, the paper was published in pamphlet form.[29]

Specimens, shown during meetings, included blood samples (Schulz), diatoms (Stainbank), polyzoa (T.J. Hill), muscle fibres (Schulz), rotifers (S. Adams), forminifera (Stainbank), ferns and leaf fungi (J.M. Wood), and microscopic shells (A. Bellville). Some of the specimens were collected during a field day in October 1878, but only the president and secretary were present.[30]

A small specialist library was started by the society soon after its formation. Some books were donated by members and others purchased. The *Journal of the Royal Microscopical Society*, *Journal of Microscopical Science*, *American Journal of Microscopy* and the *Midland Naturalist* were received early in 1880.[31]

A cabinet was purchased to house microscopical slides, many of which were donated by members. Others, including a set of 'Cole's physiological preparations' (a set of 24 stained pathological specimens of human tissue) were purchased. Interesting samples were also obtained by exchange with the Quekett Microscopical Club in Britain.[32]

The society's contract with Britain is further illustrated by the election of Mr J.W. Phillips of Hertford, England as an honorary member of the society, 'in recognition of many services rendered'.[33] Another influence on the society was a lecture delivered to its members in April 1880 by the visiting Polish botanist Anton Rehmann (1840–1917), on the mosses of the Transvaal and Natal.[34]

The Natal Microscopical Society flourished during a period when there was much enthusiasm for science, both in South Africa and overseas. The motives for scientific enquiry were complex and included the expansion of scientific knowledge, solving practical problems (especially in agriculture), economic development (especially through geological prospecting and horticulture), providing entertainment (through public lectures and demonstrations) and even furthering religion (by exposing the wonders of creation). The activities of the Natal Microscopical Society reflect several of these aspects of science. Evans' paper on pollen was probably its most important contribution to fundamental scientific knowledge.

Two community problems were investigated during the first two years, showing that members were prepared to apply their knowledge and expertise in practice. One involved a microscopical investigation of the water of the Little Umhlanga River to find the cause of the bloody urine produced by people who drank its water. No explanation could be given for the phenomenon.[35] The second problem related to the purity of the water of Currie's Fountain, from which Durban was supplied. A chemical investigation proved it to be pure.[36]

To promote the study of natural history among the youth, the society offered a prize of a microscope for the best essay on botany by pupils throughout Natal taking part in the government examinations in December 1879.[37]

There is also an element of entertainment present in some of the society's activities, as shown by Stainbank's lecture in June 1878. Another example is the exhibition of 'a micro-photograph of Saturn, showing the three rings and four of his satellites', by a Mr Behrens.[38] Microscopy was clearly intended also to be fun. The prevailing interest in science by the clergy at this time is shown by the presence, at this same meeting of the following visitors: the Very Rev. Dean Green, of Pietermaritzburg, Archdeacon Usherwood, and Rev. Mr Whittington.[39]

Due to the demise of the *Natal Colonist* in April 1880, very little is known about the later activities of the Society. Its second annual meeting, scheduled for 25 May 1880, was briefly announced in the *Natal Mercury*, but not reported upon.[40] A brief but informative description of the society was drawn up late in 1880 and published in the *Natal Almanac* for 1881.[41] The number of members is given as 33. Among them they possessed 15 microscopes, with a total value of some £500. Although the society is not listed in subsequent editions of the *Natal Almanac* it appears to have survived for several years more. It is listed in the annual *Blue Books for the Colony of Natal* from 1880 to 1885, when it had 29 members.[42] No returns were received from the society after that, so that it must have ceased to function in about 1885. No other microscopical society appears to have existed in South Africa until the Microscopical Association of the Cape was founded during the nineteen-fifties.

The Natal Microscopical Society was noteworthy because it was the only one of its kind in southern Africa. On the other hand, it was a fairly typical example of southern African scientific societies at the time: small; local; short-lived; funded by private subscription; its membership consisting of enthusiastic amateur scientists; in regular correspondence with similar societies or individuals overseas (especially in Britain); representing mainly the more prosperous section of the community; enjoying the support of political, religious and other cultural leaders; and striving to contribute towards scientific knowledge, the welfare of the community, as well as the cultural needs of a small portion of the population.

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CORNELIS PLUG