Clifford Dobell, F.R.S.: 1886—1949

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THE DEATH of Clifford Dobell on December 23, 1949, following a cerebral hemorrhage two weeks previously, removed one of the leading protozoologists of our time. A man of indefatigable industry, of remarkable clarity of observation, of extreme independence of thought, and of a refreshing individuality of style in his published writing, Dobell exerted a strong influence in many fields of protozoology. A student at Sedgwick at Cambridge, and later of Richard Hertwig at Munich, his earliest important work was the treatise *The Principles of Protistology,* which he published at the age of 25. In this paper he suggested important concepts to be developed in the later growth of the science of protozoology—for example, the view that protozoa are not homologous with single cells of multicellular organisms, but might be considered to be noncellular, as well as the argument that protozoa are in no sense simple or primitive organisms.

During World War I, Dr. Dobell served as a director of training for the British War Office in identifying human intestinal protozoa. This led to a study of the intestinal protozoa, especially of the endamebae of man. His pioneer researches on these organisms culminated in the publication of *The Amoebae Living in Man,* in 1919, and *The Intestinal Protozoa of Man,* with F. W. O'Connor, two years later. These are still classics in their fields.

From these investigations he entered upon still another phase, perhaps the most fruitful of all: the working out of the complete life histories of the intestinal amebae of man and monkey *in vitro.* He was the first to follow the complete life history in culture of *Endameba histolytica.* He demonstrated the cross-infection of all the amebae of man for macaques and of the similar forms in the monkey for man. In this work Dobell used himself as the human test animal and succeeded in infecting himself with practically all the intestinal amebae and flagellates of man. This was followed by a study of the behavior of these intestinal protozoa under different cultural conditions. The experimental phases were brought to a close only shortly before he retired as protistologist at the National Institute for Medical Research in the fall of 1949, and the results are largely unpublished.

In 1915 Dobell and A. P. Jameson demonstrated that zygotic meiosis, with an accompanying haploid cycle, occurs in the coccidian *Aggregata* and the gregarine *Diplocystis.* This proved to be another fundamental contribution to protozoology in which he played a most important part.

In 1908 he spent some months at the Zoological Station at Naples. From work done at this time came, among other papers, the meticulous and now-classical life history of the coccidian *Aggregata* in the cuttlefish and the crab.

Probably Dobell's magnum opus, and the work for which he is best known beyond the field of protozoology, is the magnificent biography *Antony van Leeuwenhoek and his "Little Animals,"* which was published in 1932. This labor of love was begun by Dobell before World War I; part of it was written during the zeppelin raids on London. To write it Dobell taught himself, first, modern Dutch and then seventeenth-century Dutch, after he discovered that Leeuwenhoek's *Letters* to the Royal Society were not otherwise decipherable. One of the last papers published during Dobell's lifetime was his biography of D'Arcy W. Thompson, in the *Obituary Notices* of Fellows of the Royal Society for November, 1949. It was to D'Arcy Thompson, "my oldest and greatest friend," said Dobell, that he had dedicated in part the *Antony van Leewenhoek* with the words *Fratri carissimo D'Arcy Wentworth Thompson Scoto haec acta mortui batavi D.D.D. Editor Anglus animalculum Elephanti.*

Personally, Dobell was a prodigious and a meticulous worker, who insisted on carrying out every observation and making every preparation or examination himself. He abhorred the present-day practice of "research teams" and, during his thirty years at the National Institute for Medical Research, he consistently refused to accept the opportunity to employ research assistants. He wrote in a trenchant yet engaging style, and his published writings abound with footnotes that bring an added zest to an already vital page. His very honesty and sincerity militated against the use of "diplomatic" language or the glossing-over of what he considered to be shoddy scientific work. If he thought a man's experiments to be inadequate, or his conclusions invalid, Dobell did not hesitate to point this out in so many words. The result was a strong resentment on the part of some of those criticized and a feeling that Dobell had little respect for the work of others. Actually, he was more generous with his praise for work well done than he was with his criticism of what he believed had been done poorly. His first love was science, and his judgments were based on accuracy of observation and carefulness of experiment. It will be only rarely that anyone who was as much of an individual as Clifford Dobell can develop again in science in the near future.