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Dr. Hendrik Engel Zoologist and Historian, Curator and Professor

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Hendrik Engel was born February 2nd, 1898 at Koog-aan-de-Zaan (Netherlands) and received his school education at the H.B.S. of Zaandam where Dr. K. Kuiper was his teacher of Natural History.

After his final examination he passed additional examinations in Latin and Greek. In 1917 he was called up for military service and served as an ensign till armistice day, November 11th, 1918.

Shortly afterwards he registered for the study of biology in the University of Amsterdam. There he followed the lectures in botany of the professors Th. J. Stomps and E. Verschaffelt, those in zoology of the professors C. Ph. Sluiter, Max Weber and J. C. H. de Meijere, and those in geology of professor Eugène Dubois.

The candidaats examination took place in 1921, the doctoral examination in 1924, with zoology, genetics and philosophy as subjects. A year later, on July 9th, 1925, he was awarded the doctor degree of sciences for a thesis on West Indian Opisthobranchiate Mollusca. His promotor was Dr. C. Ph. Sluiter, professor of zoology at Amsterdam University.

Henk Engel was a gay and cheerful student, young at heart, witty, full of imagination, and helpful to his colleagues.

In 1922 he was appointed assistant at the Zoological Museum, under the directorship of Dr. L. F. de Beaufort, and with the author of these lines as his only colleague. He began by studying the marine animals which he and Dr. J. Metzelaar, teacher at the School for Fisheries at IJmuiden, had collected the year before during a trawling trip in the seas around Iceland.

Echinoderms and opisthobranchs became his chief objects of study, but at the same time various other Museum matters had to be attended to also as the scientific staff was then very limited.

Radical renovations of the Museum buildings between 1923 and 1926

forced the entire personnel to move now and again into different rooms and the collections and library had to be moved also.

In addition to his Museum work Engel gave lessons in biology at a secondary school.

In 1926 he was appointed full curator. His marriage to Hilda Geertruida Faber in 1927 came to a premature end by her early death in 1931. They had one daughter.

In 1933 he remarried Florentine Henriëtte Helène Ottilie Nilant who gave him three sons. Unfortunately he was widowed again in 1942.

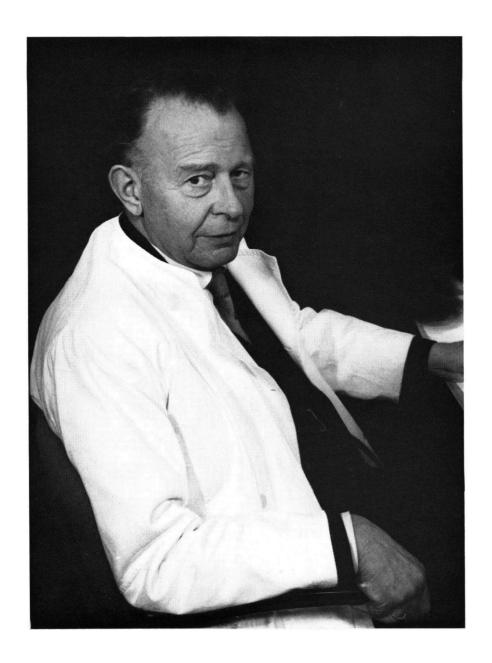
Meanwhile the scientific work in the years before and during the Second World War was concentrated chiefly on the study of echinoderms and opisthobranchs; both animal groups are still his favourite subjects. Engel's pioneer research on their anatomy and classification has resulted in several publications.

In 1932 he published a volume on echinoderms in the series Fauna van Nederland. In 1933 and 1938 appeared the results of the collections made by H. R. H. Crown Prince Leopold of Belgium and Princess Astrid during their two expeditions in the Netherlands Indies (Mémoires Musée Royal d'Histoire Naturelle de Belgique, Hors Série). For this work Engel received a memorial medal. A publication on Tertiary and Quaternary echinoderms from well-borings in the Netherlands appeared in 1941.

As a sequel to his doctoral thesis a second study of West Indian Opisthobranchiate Mollusca was published in 1927. A survey of the nudibranchs of the Netherlands appeared in 1936 in the series Fauna van Nederland.

In the journal Temminckia came out a report on the nomenclature of the genera *Tethys* and *Dolabella*, and in 1942 in the Zoölogische Mededelingen van het Rijksmuseum van Natuurlijke Historie at Leiden a paper was published on the taxonomy of the genus *Dolabella*. Engel's standard of scientific accuracy is very high; he never publishes anything until all aspects of the subject have been clarified, even at the cost of considerable delay. It is his good fortune also to be a skilled draughtsman, so that he could himself illustrate his writings with explanatory figures.

Meanwhile, in addition to his strictly zoological research Engel became engaged in the history of zoology. Apart from some minor papers in popular or semi-popular periodicals there appeared a study on Linnaeus' voyage from Hamburg to Amsterdam in Svenska Linné-Sällskapets Arsskrift, 1936, and one on the Life of Albert Seba in 1937 in the same journal. On the occasion of the centenary of the Amsterdam Zoological Garden "Natura Artis Magistra" in 1938 he compiled an Alphabetical List of Dutch zoological Cabinets and Menageries, which was published in Bijdragen tot de Dierkunde, 1939. As a justification for the preparation of this list, which is still much in demand, I quote the author's introductory remarks: "If during one's work one comes across certain names again and again, names of old collectors, of one's colleagues in earlier days, who with their private museums laid the foundation of our scientific institutions, one naturally becomes keen on knowing more about them".



PROFESSOR DR. H. ENGEL

Photographed by L. R. HAFKAMP

For these historical studies he was fortunate to have acquired a good private library and to have the superb library of the Amsterdam Zoo (Artis Library) at his fingertips.

Under the leadership of Prof. De Beaufort Engel accompanied a party of Amsterdam students on a zoological excursion to the Kurische Nehrung (Germany) in 1936. In 1938 he went with a party of Dutch biologists to South Africa, visiting scientific institutes and studying the South African fauna. In 1939 he worked for some weeks in the Zoological Station at Naples investigating the marine fauna of the Mediterranean.

The Second World War suspended most international scientific activities, but in the Amsterdam Museum the daily occupations went on as far as the continually worsening conditions permitted. Fortunately the museum buildings were too old fashioned and too primitive to be occupied by the German Wehrmacht.

In 1944 Engel adopted admirably a Danish book by Anker & Dahl on the history of biology which he named "Leven en Wetenschap, 3000 Jaren Biologie". It treated not only the history of biology in the Netherlands, but it also contributed greatly to his encyclopeadic knowledge of bibliography and of early natural-history literature.

Although Amsterdam suffered very little from air attacks the ground situation was, off and on, very dangerous for young men especially, so that Engel had to hide occasionally. To appear older than he was he cultivated an impressive beard as camouflage!

A short time after the war, in 1946, he married Dr. Maria Sara Johanna Ledeboer who had worked as a plant pathologist in South Africa. Her arrival in the Engel family brought a new, affectionate life partner for the father and a new, devoted mother for the four children.

Engel's scientific museum work now took a new, high flight in the three traditional subjects: echinoderms, opisthobranchs and the history of zoology, with an additional new field of study, Hirudinea. To mention a few publications: a study of the genus *Mithrodia* appeared in the Zoölogische Verhandelingen van het Rijksmuseum van Natuurlijke Historie at Leiden; together with Dr. N. B. Eales he published on the species of *Aplysia* belonging to the subgenus *Tullia* in 1957 in Beaufortia; in collaboration with two of his pupils he published on opisthobranchs of Israel and Sinai (1962) and on *Glossodoris quadricolor* (1964); and apart from some small papers on leeches he published (together with Th. G. N. Dresscher and A. Middelhoek) a monograph of the Hirudinea of the Netherlands, in 1960.

Some valuable contributions to the history of zoology were realized in his Archivalia betreffende de familie Swammerdam (1947) and Linnaeus in Holland (1957). The latter paper formed part of a memorial volume commemorating the 250th anniversary of Linnaeus's birth. It was introduced, by the director of the State Herbarium at Leiden, Prof. H. J. Lam, as a contribution by "the Dutch Linnaeus connoisseur par excellence, Professor Engel at Amsterdam".

In 1948 Engel obtained his venia legendi as private University teacher; on

that occasion he gave a talk "On the History of Zoology". Soon afterwards, in 1950, he succeeded Prof. De Beaufort as extraordinary professor of zoogeography and capita selecta of zoology, and as director of the Zoological Museum. The professorship was transferred to an ordinary one in 1961. It includes lectures in systematic zoology and zoogeography and in the history of zoology.

In addition to the various functions directly pertaining to the University Engel holds offices on the councils of several societies and committees. To mention a few of the principal ones: he is a member of the board of the Amsterdam Zoo and one of the trustees of the Artis Library; member of the committee for the re-editing of the Leeuwenhoek writings; member of the Biological Council of the Netherlands; member of the municipal committee for the local history and natural history (Heemkennis) of Amsterdam; and president of the State advisory board for the natural history museums in the Netherlands.

In addition to his lectures for graduate and undergraduate students Engel pays much attention to the practical courses for those pupils who choose a taxonomic or zoogeographic subject for their examination. In accordance with the animal group which has been selected the student is put under the charge of the pertinent museum-curator who coaches him during a five months period of study. After this period the student is obliged to hand in to the professor a written report of his work.

Engel also greatly encourages the yearly excursions of parties of up to 30 students to one of the principal marine biological stations abroad: Ambleteuse, Roscoff, Banyuls, Bangor. He is a great friend to his students, benevolent and tolerant. He listens to them and understands the younger generation like a fatherly friend, at the same time expecting high standards from them in their studies.

Meanwhile the management of a large Museum demands a considerable amount of his time and energy. Since 1950 various improvements have been seen in the buildings, the technical equipment, the extension of the library, in the appointing of scientific, artistic, administrative and technical staff, and in the editing of the museum journal "Beaufortia", which was started on his initiative. For the whole personnel of the Museum he has a deep sense of responsibility, and at the same time he is kindness personified, gentle in all his ways and blessed with a wonderful sense of humour.

Inevitably the growth of the Zoological Museum has led to an untenable state of affairs: the lack of space, the neglected state of some of the buildings and the shortage of technical and administrative assistants apparently do not warrant a full and efficient operation of the Museum's mandate. Endless negociations, first with the municipal, later on with the university authorities for the building and interior equipment of a new, modern and practical institute have not yet born fruit. This attitude is the more incomprehensible as from the very beginning the Amsterdam Zoological Museum has not withdrawn into an ivory tower, but has united the standards expected of a scientific research institute with the popularization of science among the

general public by means of an exhibition gallery, of lectures and conducted tours for school classes and natural-history minded amateurs, and of practical courses for specialists in certain animal groups.

To this social mission of the Museum and the contact with all classes of people Engel devotes much attention. It has resulted in a growing amount of goodwill in the country and abroad.

In the first years of his directorship Engel gave lessons on old and contemporary literature of biology to classes of library assistants in the Public Library of Amsterdam.

It is easily understood that a man with such an overburdened programme cannot find much time for scientific work in his own special fields, yet he has succeeded in publishing the results of various investigations in his four branches of research. In 1961 he published a note on a curious document which had been lost for a long time: "The sale catalogue of the cabinets of natural history of Albertus Seba (1752)". In collaboration with Mrs. Engel-Ledeboer he wrote a homage, published in 1960, to the memory of Charles Darwin on the occasion of the centenary of the "Origin of Species". In 1964 he and Mrs. Engel annotated and re-edited the first (1735) edition of the Systema Naturae of Linnaeus.

Through his publications, the scientific as well as the more popular, and through his academic and social functions Engel contributes largely to the fundamental and philosophical aspects of science, and to the propagation of this knowledge among a wide circle of interested persons.

For many years Engel has been a freemason. Since 1954 he has been Grand Commander of the Netherlands Federation of mixed masonic Orders "Le Droit Humain".

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