



Jan Peter Verhave, *The Moses of Malaria: Nicolaas H. Swellengrebel (1885-1970) Abroad and at Home* (Rotterdam: Erasmus Publishing, 2011, 317 pp., ISBN 978 90 5235 208 4).

The transmission of the malaria parasite by mosquitoes of the family of *Anopheles* is an important public health danger in large parts of the world. It can possibly lead to the lethal tropical malaria, or to one of the milder variations resulting in recurrent fevers. Prophylaxis by taking measures to reduce the danger of mosquito bites (nets and anti-insect gel) and by taking malaria tablets (despite the possible severe side-effects) diminishes but not totally reduces the danger.

In the case of malaria western medicine is still unable to fulfill its promise of finding definitive solutions for diseases. After the Second World War this promise seemed to be on the brink of fulfillment by the use of insecticides (DDT) and anti-malaria medication as Paludrin. But the development of insect resistance had shattered these hopes by the last decades of the twentieth century. Air travel brings the disease even back to Europe, where it had been eradicated since the war.

It is the merit of the biography of Nicolaas Swellengrebel by biologist Jan Peter Verhave that it gives some insight into the historical background and context of the Dutch contribution to the fight against malaria, a field that is hardly explored. In doing so, Verhave has expanded on the work of Annemarie de Knecht-van Eekelen, who at the end of the 1980s published on the role of doctors in the Dutch East Indies in the development of parasitology.

Although we now tend to think of malaria as a 'tropical disease', this was far from the case until after the Second World War. Even in the Netherlands malaria was still endemic, although not in its most severe form. Like his biographer Swellengrebel was a Dutch biologist who became an internationally renowned specialist in the field of malaria and parasitology. He first gained his expertise by his work in the Dutch East Indies in the 1910s, after which he worked for the Institute of Tropical Hygiene of the Royal Tropical Institute in Amsterdam and was a member of the Malaria Commission of the League of Nations in the interwar period. Swellengrebel's research played an important part in establishing the exact etiology of malaria and the role of different sorts of mosquitoes of the *Anopheles* family.

Verhave has been publishing over the past 25 years about the history of Dutch malaria research. His biography of Swellengrebel once again shows his enormous fascination for his predecessor. An important source, are the reminiscences of

Swellengrebel's family and the letters and other materials in their possession. This fascination for Swellengrebel as a scientist as well as a person makes it possible for Verhave to give a detailed and chronological account of his subject's life. But the choice for a chronological account is not always a lucky one. This reader could have done with a little less personal detail about Swellengrebel, and a little more historical analysis and contextualization. Though Verhave assures us that he does not view Swellengrebel as a 'hero' (14), in this way it is hard to get a different impression.

Nonetheless Verhave succeeds in pointing to an important issue in public health policies, namely the relationship between public health authorities and the population. After the Second World War eradication programs using DDT became the fashion in the fight against malaria. These programs were very intrusive for the population, of whom the houses were sprayed with insecticides. Swellengrebel had his doubts about these programs, and feared disturbances in the relationships in the human-parasite environment. By then he was out of fashion, but the development of insect resistance seems to justify his doubts after all.

The advanced method of the first half of the twentieth century, advocated by Swellengrebel and pioneered in British Malaysia just before the First World War, was however at least as intrusive for local communities. 'Species sanitation' was based on the recognition of the role of *Anopheles* mosquitoes breeding in the forests and the swamps. Swellengrebel was involved with the first instance of this kind of malaria control in the Dutch East Indies, in Sibolga on Sumatra. It involved clearing of the forests and the building of new drainages in the town quarters, but also compulsory measures that – as Verhave rightly notes – limited the freedom of the population. In other instances measures were taken for the compulsory cleaning of dwelling places, the use of quinine (then the only existing medication against malaria attacks) and bed nets, and the regulation of rice culture. Such public health measures 'from above' were only possible in the new colonial state influenced by 'ethical' principles developing after 1900, but were often resented by the local population. A more structural analysis of these policies would have been welcome.

But all in all, *The Moses of Malaria* – although not always an easy read – succeeds in uncovering important material about malaria policies and research in the twentieth century.

Stephen Snelders, Utrecht University