

A century of research on the classical locality of Tegelen

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In 1904, EUGÈNE DUBOIS published the first paper on the fossil mammal locality of Tegelen (Province of Limburg, The Netherlands). At that time, the village of Tegelen was the home of a blooming ceramic industry. While digging for clay, workers regularly unearthed the bones of, for example, deer, rhinoceroses and beavers. By purchasing these bones for the Teylers Museum (Haarlem), DUBOIS gathered the first collections of Tegelen fossils. With the exception of the deer remains (DUBOIS 1905), DUBOIS himself did not describe any of the material from Tegelen. Instead, he prompted others to study the fossils. REID & REID (1907) examined the plant macro (seed) flora and concluded that it represented a distinct time interval, the Tiglian (REID & REID 1915). The mammal fauna was described by BERNSEN and SCHREUDER, both of who were assistants to DUBOIS and had obtained their PhDs on Tegelen mammals (BERNSEN 1927; SCHREUDER 1928).

In the 1950s, palaeontologists from the Rijksmuseum van Geologie en Mineralogie (now Naturalis) began collecting at Tegelen. Like DUBOIS, they did not excavate themselves, but gathered the incidental finds made by workers exploiting the clay. At about the same time, palynological research in The Netherlands took flight, primarily through the work of ZAGWIJN (e.g. 1963).

In the 1960s, the ceramic industry of Tegelen

rapidly declined. As building plans threatened the former clay pits, The Rijksmuseum van Geologie en Mineralogie launched a series of campaigns in order to collect micromammals (FREUDENTHAL et al. 1976). During these excavations, 180 m³ of clay were processed, yielding over 5000 rodent, insectivore, lagomorph and bat molars. However large this collection is, it also shows the Tegelen Clay to be relatively poor in fossils. On average, 28 micromammal fossils were found for each cubic meter of clay processed. Furthermore, surprisingly few remains of large mammals (<10) were found during these expeditions.

Thus it seems that, although it is technically an in situ locality, the Clay of Tegelen is in fact too poor for true palaeontological excavations. The gathering of bones found by clay workers was the only way to obtain suitable collections. This implies that we cannot be sure of the exact locations in which the various fossils were found.

A hundred years after its discovery, the Tegelen site still holds questions and surprises. Questions like the presumed presence of *Stephanorhinus kirchbergensis* in the fauna, which is the cause of debate. Surprises like the two species that were recently added to the faunal list, the dormouse *Glirulus pusillus* (HOEK OSTENDE 2003) and the flying squirrel *Hylopetes debruijini* (REUMER & HOEK OSTENDE 2003).

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