

PALAEOHISTORIA

ACTA ET COMMUNICATIONES

INSTITUTI ARCHAEOLOGICI

UNIVERSITATIS GRONINGANAE

57/58

(2015/2016)

University of Groningen / Groningen Institute of Archaeology

&

Barkhuis

Groningen 2016

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Barkhuis
Kooiweg 38
9761 GL Eelde
the Netherlands
info@barkhuis.nl
www.barkhuis.nl

Typesetting

Hannie Steegstra

Cover design

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Cover

Bronze fibula with three pinned-on rings from Crustumerium, Monte Del Bufalo burial ground, Tomb 153 (photo G.J.M. van Oortmerssen, RUG/GIA).

ISSN 0552-9344
ISBN 9789492444592

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IN MEMORIAM – WIM VAN ZEIST

12 March 1924 – 7 October 2016



Wim van Zeist is flotating samples of tell Hadidi in the Euphrates (northern Syria; 1974-1977).

Although his health had been gradually declining the last little while, the death at age 92 of Professor Wim (Willem) van Zeist, in Bedum, The Netherlands, was still unexpected. With his passing, we have had to bid farewell to a colleague who made a particularly major contribution to the field of palaeobotany.

From a young age, Wim had a great interest in biology, and in botany in particular. He became a member of the Nederlandse Jeugdbond voor Natuurstudie (NJV; the Dutch youth organisation for the study of nature) and was active in its working group on plant sociology. The knowledge that he gained there will have played an important role in his later interpretations of subfossil plant remains. It was at the NJV that Wim met his future wife, Martha Slager. She was of Frisian origin, and Wim honoured her parents' request to first learn some Frisian.

In 1951, having completed a degree in biology at Utrecht University, Wim was hired as an assistant by the University of Groningen's Biologisch-Archaeologisch Instituut (BAI, which merged in 1995 with the departments of classical archaeology and arctic archaeology to form the current Groningen Institute of Archaeology).

In 1955, he obtained his doctorate with a thesis entitled *Pollen analytical investigations in the northern Netherlands, with special reference to archaeology*. Two years later he became a permanent employee of the BAI. In 1967 Wim was appointed reader in Quaternary palaeobotany at the University of Groningen, and in 1973 he was made professor by special appointment. In 1983 he became a member of the Koninklijke Nederlandse Akademie van Wetenschappen (the Royal Netherlands Academy of Arts and Sciences).

Although palynology was seen by Professor Albert van Giffen, who had appointed Wim, as an ancillary science in the service of dating, Wim saw the wider potential of this type of botanical research and wanted to rid it of its image as ancillary science. In the period 1955–1960 he realized this ambition with the founding of a separate department of palaeobotany, with three specialisations: palynology, research on wood, and research on diaspores (seeds, fruits, and related macroremains).

Initially, Wim occupied himself with palynology and research on wood. He was the first to publish on the research into the Mesolithic canoe at Pesse, known as the

oldest boat in the world, and on research into wooden fen trackways. This research into wood was later taken over by Willem Casparie, who, in 1972, obtained his doctorate under van Zeist's supervision with a thesis titled *Bog development in southeastern Drenthe (the Netherlands)*.

The palynological research conducted by Wim was initially focussed on the Netherlands and France (Brittany). He also acted as PhD supervisor to Wim Gremmen, who, in 1982, defended a thesis titled *Palynological investigations of late Pleistocene deposits in southeastern France*. Gradually, Wim's palynological research expanded to include the Mediterranean and the Near East. Sytze Bottema, who, in 1974, defended a thesis titled *Late Quaternary vegetation history of northwestern Greece*, again supervised by van Zeist, continued this research, together with Henk Woltring. After a considerable investment in numerous field seasons, Wim and his colleagues Sytze and Henk succeeded in finding suitable coring locations in Albania, Greece, Turkey, Jordan, Israel, Syria, Iran, and Iraq – regions where the climate does not favour good preservation of organic material.

Cores measuring many metres long, extracted by hand, proved suitable for the reconstruction of past vegetation and associated climate change during the late Pleistocene and the Holocene. For example, in Iran, Wim and Herb Wright (1963) drilled a core measuring at least 40 m in length entirely by hand. In order to enable the taxonomic identification and interpretation of pollen, an extensive reference collection was created. In addition, large-scale research was conducted into the relationship between recent vegetation and its associated pollen rain. A particular merit of this pollen research was its ability to demonstrate that during the transition to the Holocene the climate did not become warmer and drier, as had been widely assumed, but, instead, warmer and wetter. This new characterisation of the climate formed the basis for models of the origins of agriculture in the Near East. Wim also initiated pollen research in West Java (Indonesia), carried out in collaboration with Inge-Lise Stuijts, who obtained her PhD on this research in 1993, with Wim as her supervisor.

It had been obvious as far as 1969, during the public lecture he gave upon assuming his lectureship, that Wim was interested in the initial development of agriculture in the Near East. As his interest was subsequently piqued in researching seeds and fruits, he gradually exchanged palynology for research into plant macroremains. As part of his plant macroremain research, he also identified wood charcoal and mosses, which resulted in an exceptionally rich dataset for vegetation reconstruction. To complement the already extensive reference collection of pollen from northwestern Europe, the Near East, and Southeast Asia, Wim also assembled an extensive reference collection of seeds and fruits from these regions.

The research into seeds and fruits was focussed on Europe and the Near East. Wim conducted palaeobotanical research into a large number of settlement sites

in the Netherlands. His first wide-ranging overview article about food plants, based on research from 27 sites, appeared in 1968 (with a publication date of 1970). An important addition to this research was a publication from 1974, in which the assemblages from a further 16 sites were used to reconstruct the vegetation in coastal areas, on the basis of waterlogged seeds and fruits of wild plants. The year 1981 saw the appearance of extensive studies of the remains from Noordbarge and Swifterbant.

Although his interest in seeds and fruits was initially directed at prehistoric sites, later on, this research was expanded to include the historic period, accompanied by publications on, among other sites, Het Torp, Odoorn, Pesse, Gasselte, Groningen, Leeuwarden, and Dorestad. The archaeobotanical research on Dorestad (find location De Horden) was taken over by Guus Lange, who defended his PhD thesis on it in 1988, with Wim as his supervisor.

In order to assess the possibilities for growing crops in unprotected saltmarshes in the past, Wim, following in the footsteps of Udelgard Körber-Grohne (1967), grew a selection of crops in the saltmarsh at Westpolder, together with a number of colleagues. These agricultural experiments, which spanned a number of years, made an important contribution to the discussion around the possibilities and risks of agriculture in wetlands prior to dike construction.

Even early on in his career, Wim also undertook archaeobotanical research into seeds and fruits from sites outside the Netherlands. The countries and sites where he made important contributions are France (Douai), Switzerland (Niederwil), Serbia (Gomolava), Cyprus (Cape Andreas), Greece (Nea Nikomedea), Turkey (Aşıklı Höyük, Çayönü, Erbaba, Girikihaciyán, İkiztepe, İlipinar, Korucutepe, and Tepecik), Syria (Aswad, Al-Raq'a'i, Bderi, Bouqras, El Kowm, es-Sin, es-Sweyhat, Ghoraifé, Hadidi, Hammam et-Turkman, Mureybit, Ramad, Ras Shamra, Schech Hamad, Selenkahiye, and Sabi Abyad), Iran (Ganj Dareh), Iraq (ed-Der), Tunisia (Carthago), Egypt (Ibrahim Awad and Maadi), and Sudan (Semna). During this research, Wim had help from, among others, his assistants Rita Palfenier-Vegter and Mien Waterbolk-van Rooijen.

Wim was a driven researcher who wanted to contribute to the larger themes within the field of palaeobotany. He was therefore especially interested in research at sites that, because of their age and geographical location, may have played an important role in relation to these themes. A large number of Wim's publications therefore pertain to key sites. And while many of these works are now decades old, they are still of great value for the reconstruction of past landscapes and food economies.

In addition to the many publications relating to research into specific sites, Wim also regularly (co-)wrote overview papers. A standard among these is *Late Quaternary vegetation of the Near East*, which he and Sytze published in 1991. Wim was also co-editor of a number of

books that are still being used today: *Plants and ancient man* (with Willem Casparie), *Man's role in the shaping of the eastern Mediterranean landscape* (with Sytze Bottema and Gertie Entjes-Nieborg), and *Progress in Old World palaeoethnobotany* (with Krystyna Wasylkowa and Karl-Ernst Behre). Although such publications were aimed particularly at other researchers, Wim also regularly published articles aimed at a broader public and thus made his specialist area accessible to anyone with an interest in past vegetation, food production, and trade.

Wim's publications are characterized by a thorough presentation of results and well thought out interpretations. Tables containing all the relevant data on seeds, fruits, and other identifiable plant macroremains are complemented by detailed descriptions and by many illustrations by Henk Roelink. This detailed method of documentation formed an important foundation for research into subfossil plant macroremains. A publication by Hillman *et al.* (1996) about the standardization of descriptions of subfossil remains of wheat states: 'Descriptions should be supported by illustrations (the publications of Willem van Zeist in *Palaeohistoria* set the standard fort this), [...]'.

Initially, Wim was none too keen on the introduction of the computer, in the second half of the 1980s. When he saw students working on one, he sometimes couldn't resist remarking that they of course would prefer to be able to have their reports be compiled and printed entirely automatically. But eventually Wim was won over and started to talk about RAM memory and the size of his hard disk, and he wrote the remainder of his publications on a computer – initially with the support of secretary Gertie Entjes-Nieborg, but eventually unaided.

Wim was a reserved and modest scientist. He was not the type to draw attention to himself, even though he was widely known because of his pioneering work. If you wanted to make his acquaintance at a conference, you'd usually have to make the first move. But once that move had been made, and the conversation turned to your mutual passion for the research, Wim was very attentive and helpful and prepared to share his knowledge with you. Colleagues and students were always welcome in his department, and were permitted to use the facilities for shorter or longer periods. It was also a tradition to be invited to his house for an elaborate dinner prepared by his wife, Martha. You would also be given a tour of his beautiful garden and a peek in his study, with its microscope, books, and collection of offprints.

That it was occasionally necessary to push Wim to be a little less reserved is illustrated by the events that unfolded at a party during the first International Workshop for African Archaeobotany (IWAA), held at a beautiful estate near Krakow belonging to the Polish academy of sciences. After dinner, the music was turned on and the floor was cleared for dancing. It wasn't long before Wim's absence was noted. One of the participants went to Wim's room and knocked on the door. Wim opened it in his slippers. Fortunately it didn't take much convincing

to get him to put his shoes back on and come to the dance floor. In the end, Wim felt safe and comfortable enough to dance just like everyone else and thus enjoy a very special evening.

Wim was very dutiful, promptly finishing each piece of research that he was involved in and then submitting it for publication. He eventually self-published a number of works because he saw no other way to get them into print in a timely manner.

In 1989 Wim retired, but that did not prevent him from continuing to work. For the first few years of his retirement, Wim was still working at the institute daily. That he viewed his pension as a formality is evident, for example, from a casual comment he made in 1994 while showing a new colleague around the institute, about everything he still wanted to research and publish ... once he retired!

Regrettably, his wife, Martha, passed away quite soon after Wim was pensioned. But Wim found the energy to undertake a number of big trips, among other places to Mexico. These travels made a great impression on him, and he used to enjoy telling people about them during the communal coffee breaks at our institute.

Lately Wim had become less mobile and his visits to the institute became less frequent. However, for a long time he remained interested in the developments in his field, and during visits to the institute he enjoyed being brought up to date. He was still very interested to learn about the PhD dissertation of Mans Schepers (2014), whose research into wetlands built on Wim's own research. One of us (RC) visited him at home together with Mans, and it was really special to see how interested and analytical he still was. It must have done him good to realize that his research still has a future and that his contributions to the field have turned out to form an important foundation for that future.

It was Wim's wish to have a private funeral service and to only then have his passing be announced publicly. We wish his children, grandchildren, and great-grandchildren courage in their loss.

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