

Review of: Klinkenberg, V., van Oosten, R. & van Driel-Murray, C. (eds). (2020). A Human Environment. Studies in honour of 20 years Analecta editorship by prof. dr. Corrie Bakels. (Analecta Praehistorica Leidensia, 50). Leiden: Sidestone Press. 196 pp, 81 figs. ISBN 978-90-8890-906-1. Open Access: <https://www.sidestone.com/books/a-human-environment>

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This special issue of the *Analecta Praehistorica Leidensia* is dedicated to their long-term editor Corrie Bakels whose 20 years of editorship it celebrates. Appropriately, it is also the 50th volume of the series.

The introduction to this volume is an interview or rather the protocol of a conversation over a meal between Corrie Bakels and colleagues from the faculty. This is a very warm-hearted, esteeming, and personal way of introducing the honored. The interview reads interesting as C. Bakels is a person that has to tell something. Being one of the pioneers of modern archaeobotany since the 1970 she educated many of the current leading researchers in the field. This interview paints the picture of a woman whose primary intention it was not to make a scientific career but who very much loves her work and therefore became excellent at it – proud of what she has achieved, yet unpretentious.

The *Analecta* were always meant as a series for the faculty where papers are published that could not be published elsewhere. Also, the *Analecta* allowed to bundle papers on a wide range of research topics which would otherwise not appear together in one journal. The current volume follows this tradition very neatly: it collects a number of papers under the heading “*A human environment*”, all by scientists working for or closely connected with the Faculty of Archaeology, Leiden University. The contributions to this volume are mostly short, but fine papers of a bit varying quality, which is quite usual for a volume in honor of a merited scientist. They showcase the archaeologies, the techniques and skills present at the faculty of archaeology of the University of Leiden. It is impressive to see the variety of archaeological research that is represented: it covers almost every epoch, is very international and methodologically diverse. It is noticeable that the authors really made an effort to directly connect their paper to the honored, and therefore the selection reflects the many interests of C. Bakels in “*ecology and cultural archaeology*”.

Corrie Bakels contributed substantially to the LBK research and this is taken up by two papers: Dusseldorp and Amkreutz re-examine the Mesolithic-Neolithic transition in the Netherlands based on faunal remains. They can show that the diversity of faunal elements remains quite constant from the late Mesolithic throughout the Neolithic in wetland sites. They conclude that the transition from hunter-gatherers to farmers actually lasted the whole of the Neolithic to the early Bronze Age. They see the broad-spectrum economy adopted by the Neolithic people in the wetlands not as a transition phenomenon but as an adaption to the living conditions in the wetlands – which seems to be very logical. Moreover, they point out that other complementary analyses – like botanical macroremain analyses – would help to better understand the changes in subsistence strategies during the Mesolithic-Neolithic transition than just one proxy alone.

Van Wijk and van de Velde try to answer the question “*House societies or societies with houses?*” They challenge Dusan Boric hypothesis – at least for the Netherlands – that the earliest Neolithic societies in Europe were “*House Societies*” or chiefdoms. They can show that neither the villages nor the graveyards show any form for centralization and thus chiefdom. On the contrary, there seems to be evidence that in some places centralization was actively avoided. This is especially true for the Cannerberg site, in which excavation C. Bakels was involved.

C. Bakels also pursued experimental approaches, for example the experimental growth of barley under different manuring regimes to obtain baseline isotope values. Her colleagues contributed papers on experimental work to this volume:

The paper by Sorensen is a quite interesting experimental approach as to whether manganese dioxide (MnO₂) could have been used to facilitate Palaeolithic fire making. Sorensen could convincingly show that tinder treated with MnO₂ catches sparks better than untreated tinder, but that the same is true for pyrite. Though it is no proof that MnO₂ was used by Neandertal people for fire making, the paper opens for speculation on the use of the mineral. Hitherto, the mineral – frequently found in Neandertal contexts – was interpreted as being used for body paint.

The paper by van Oosten et al. investigates the nature of medieval so-called “*manure pits*”. The authors want to test the hypothesis whether these could not have been hotbeds instead. They addressed this question in three ways: i) they reviewed the literature for these pits to

define common archaeological characteristics as to appearance and fossil content, ii) they build actual hotbeds and iii) they analysed three designated medieval manure pits in more detail to see whether these could have been hotbeds. Apart from being outdoors, big quadrangular and containing manure, hotbeds should contain crop indicators and thermophilic insects. These demands were apparently not met entirely by the three archaeological features the authors investigated. One of them contained garden waste, not manure, the other two contained manure but lacked thermophilous insects. They thus conclude that medieval manure pits did not serve as hotbeds for growing of difficult crops that need a high germination temperature like cucumber or melon but as warmbeds to ensure a solid yield. Although this case study does not allow to generally interpret manure pits as warm- or hotbeds, the authors advice to sample such features even more carefully for plant and insect remains in the future. In their opinion, in a town-based garden economy these hot/warmbeds show *"how closely husbandry and horticulture were interconnected within the town walls"*.

Archaeozoological research is an important discipline when investigating human-environment interactions and subsistence strategies. This field is covered by two papers, where one is focused rather on subsistence at one site, the other tries to unravel trends over a longer period of time.

The paper on the middle Palaeolithic site Lingjing in China by van Kolfschoten et al., deals with the mammalian fauna of the site. The paper is rather short and presents *"preliminary new results"* – which explains the absence of any figures showing cut marks on bones, for example. Stone tools, however, are depicted. The paper claims that Lingjing was a killing and butchering site. Overall, the site and the paper raise expectations to a more thorough work.

The archaeozoological study about palaeoenvironment and occupation patterns at Cova Fosca cave, Spain by Llorente-Rodríguez et al. reviews the archaeozoological remains. The cave contains sediments from the Epipalaeolithic until the Middle Neolithic which contained a large number of faunal remains. The authors investigate several faunal groups such as mollusks, micro-mammals, reptiles, and birds. The authors are to some extent able to reconstruct the environmental conditions and occupation patterns of the cave over time. This is important information and would be even more valuable in combination with other methods, for example micromorphology or iso-

tope analysis. The authors themselves see need for further, interdisciplinary research.

Three papers can be summarized under *"geoarchaeology and landscape history"*. The paper by Mol et al. is a geoarchaeological study carried out in the surroundings of the Les Cottés cave, central France. A coring transect was laid from the cave to the Gertempe river. In the course of this, peat deposits could be retrieved which were dated and analyzed by pollen analysis. The coring revealed older phases of river activity, which however could not be connected to the occupation of the cave. Nevertheless, the study resulted in more insights into the fluvial dynamics of the river during the last interglacial.

Verpoorte et al. unravel the landscape history of the Uddeler Heegde, Netherlands. As the Uddeler Heegde is a nature preserve, the methods used had to be minimal invasive, and at the same time as much information as possible had to be gained. Simultaneously, it was a kind of field experiment: as an archaeological landscape was preserved under the tree cover which only recently became visible through high resolution LIDAR scan, the authors wanted to record the preservation conditions and hence the needs for conservation. This study can be useful to assess such measures in other landscapes currently under tree cover in nature preserves.

Lambers reviews the geoglyphs in arid South America, namely in the Atacama and Nazca deserts, respectively. He points out differences in chronology, situation, usage, and motifs, but also similarities of function and possible meaning. Geoglyphs are obviously made to be seen and today's perceptions lacks two important aspects: the people who made the geoglyphs and used them, and the recurring activities connected to the geoglyphs. According to Lambers, to understand the South American geoglyphs, their socio-cultural context must be considered.

Barrevelds paper – based on his MA thesis – has a different angle on landscape. He investigates into state space and shatter zones in North Africa in late antiquity. This paper has many intersections with the environmental humanities. One major issue of the environmental humanities is space. Barreveld analyses whether the mountainous uplands and desert fringes of North Africa were indeed areas of resistance against the encroaching Roman state. He uses evidence from survey archaeology, epigraphy, and literary sources – a combination which is intriguing and promises insights which cannot be gained by archaeological methods alone. He finds a complex *"picture of in-*

terlocking micro-ecologies and ways of life” and concludes that “roman ideology [...] marginalized the Berber populations more than landscapes ever had”.

Casale et al. present yet another view on landscape: they research into the pre-Hispanic and contemporary clay procurement in the Rio Mayales Subbasin, Nicaragua to understand human-environment interactions in the finding of raw materials. The paper combines a survey for clay-rich soils and an ethnographic approach to present day geological sources. The results however remain a bit vague. It is also not clear what the human-environment relations actually are. The authors claim that the study “*created an understanding of clay availability across the valley*” – that is true only for the present day, but very little information is gained about pre-Hispanic pottery and their sources. The authors state that the study is basic research for more extensive future projects.

Field’s paper about the Happisburgh site in Norfolk, UK, is the only purely archaeobotanical paper in the volume. It investigates a middle Pleistocene plant macrofossil assemblage from fluvial deposits connected to a flint knapping site. The macrofossil assemblage allowed to reconstruct environmental aspects: here, “*a freshwater channel flowed into a brackish saltmarsh, located in an estuary that was surrounded by some heathland and [...] coniferous woodland*”. The author sees a certain coastal preference in the choice of the spot with certain advantages, such as ease of travel, access to marine and freshwater resources and flint.

It is at first sight surprising that a volume in honor of C. Bakels does not contain more archaeobotanical papers – but the broad variety of topics in this volume shows how she as a person and scientist has inspired her colleagues’ research in the faculty and it can be hoped that she continues to do so.

One topic from the introductory interview is worthwhile to take up again: apart from being a brilliant scientist – is Corrie Bakels a role model for young women? She herself doubts it and actually, the career of C. Bakels is in many ways so individual, it would be difficult for anybody to follow her footsteps. Without any quantitative data to support this – it seems that scientific careers of women in C. Bakels’ generation (and older) are often connected to lifestyles considered exceptional. Most of us are not that exceptional – neither are we as brilliant nor are we prepared to make the sacrifices C. Bakels did or had to make. But her advice to female scientists “*If you want something, go get it, keep your back straight and don’t*

let anyone intimidate you” is surely valid for every young scientist, independent of sex or gender.

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