

University of Groningen
Groningen Institute of Archaeology (GIA)

Annual Report 2011



Cover illustration: Visitors are informed on the findings from the 'Steilkantproject Terpenonderzoek Friesland' in Firdgum (2011) (photo RUG/GIA).

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FOREWORD

In the period 2011–2012 the Groningen Institute of Archaeology (GIA) will witness a major transformation as a result of many changes in personnel. In 2011 Dick Stapert, Henk Woldring and Luuk Tol retired. While Stapert had already been replaced by Hans Peeters in 2009, we were very pleased that Sylvia Blomsma's appointment to our archaeobotanical lab was made possible by the Faculty. Prior to Luuk Tol's retirement, Bert Criens came to the GIA to assist in our many tasks. By the end of 2011 Fester Possel had been appointed as Luuk's successor. Our secretary, Marlous Hazenhoek, left us for a great opportunity elsewhere in the Faculty and was succeeded by Aleida Bouman. I hope that all our new employees will greatly enjoy working at the GIA. In 2011 senior lecturer Sofia Voutsaki became full professor. The GIA is pleased that her expertise in Greek Archaeology has been recognised by the Faculty and expects that this position will strengthen our position in this important field of study.

In 2011 two PhD students successfully defended their theses. On 28 April Ricardo Roura defended his thesis, 'The footprint of polar tourism', while on 1 December Tymon de Haas defended his PhD, entitled 'Fields, farms and colonists'. At the same time four PhD students started their projects. We hope that Tamara Dijkstra, Daniël Postma, Brigitte Saan and Jorn Seubers enjoy a fruitful PhD period leading to successful and swift PhD defences.

In 2011 we welcomed Gilles de Langen as professor by special appointment in the field of *terp* archaeology in the northern Netherlands. We expect that this appointment will lead to a larger and more permanent research effort into this extraordinary Dutch landscape. A first step in this direction was the appointment of Johan Nicolay as a new lecturer in medieval archaeology. On a sad note, it is unfortunate that this appointment was due to the long-term illness of Jurjen Bos. We hope that he recovers soon.

While 2010 was very successful in terms of NWO funding, in 2011 several projects were launched, with one significant commercial project, the Onlanden, attracting a lot of attention. Some 80 medieval *terps* in a peat area near Groningen were all sampled and partly excavated. The fieldwork was carried out under the supervision of Johan Nicolay and with extensive input from Sander Tiebackx.

My final thoughts go to Aleida Bouman, Annette Scheepstra, Bert Criens, Daphne van der Pers, Erwin Bolhuis, Fester Possel, Frans Geubel, Gert van Oortmerssen, Kirsten van der Ploeg, Luuk Tol, Marlous Hazenhoek, Mirjam Los, Nienke Boschman, Rita Palfenier-Vegter, Robert Kusters, Sander Tiebackx, Siebe Boersma, Sylvia Blomsma and Tom Jacobs. While the GIA annual report deals with research, the research staff could not function without the continuous effort of the support staff. This is often taken for granted, but it is essential for a successful GIA. On behalf of our research staff, I would like to thank them all!

Daan Raemaekers
Director GIA

1 GRONINGEN INSTITUTE OF ARCHAEOLOGY

The Groningen Institute of Archaeology (GIA) was established on 23 November 1995. Before 1995, archaeological research within the Faculty of Arts had been organised into four separate departments: the Biologisch-Archaeologisch Instituut, the Department of Classical Archaeology, the Department of Languages and Cultures of the Near East, and the Arctic Centre.

1.1 INSTITUTIONAL EMBEDDING

The Groningen Institute of Archaeology is a research institute within the Faculty of Arts of the University of Groningen, and is responsible for all archaeological research within the University. Nationally, GIA is associated with ARCHON, the Dutch research institute, which comprises archaeology departments at five universities (University of Amsterdam, Vrije Universiteit Amsterdam, University of Groningen, University of Leiden, Radboud University Nijmegen), and the RCE (Rijksdienst voor het Cultureel Erfgoed) at Amersfoort.

Within the University of Groningen, the GIA is associated with CEES (Center for Ecological and Evolutionary Studies), ESRIG (Energy and Sustainability Research Institute Groningen) and the Faculty of Spatial Sciences.

1.2 PROFILE

GIA engages in fundamental archaeological research with a strong ecological component in the Northwest European, Mediterranean and the Polar Regions. Operating within the Faculty of Arts, it undertakes all the ecological-archaeological and cultural-archaeological research that is carried out by the University of Groningen. GIA stimulates and integrates fundamental research on past human societies and their environments, from the level of Palaeolithic hunter-gatherers to that of complex urban societies using archaeological and present-day evidence for reconstruction of ecosystems, resource exploitation, life style and societies. The Institute facilitates research and fieldwork through its laboratories, drawing facilities, documentation, GIS, and technical support. In addition, GIA co-ordinates the PhD student training programme and stimulates the dissemination of knowledge and culture to society at large.

1.3 STAFF

Director

Prof. D.C.M. Raemaekers

Advisory Board

Prof. P.A.J. Attema

Dr M.C. Galestin

F. Kruse M.Sc.

Dr P.M. van Leusen

Dr W. Prummel

Management Team

Prof. P.A.J. Attema

Prof. R.T.J. Cappers

Prof. L. Hacquebord

Prof. D.C.M. Raemaekers

Prof. S. Voutsaki

Members

Dr S. Arnoldussen

Prof. P.A.J. Attema

Dr D. Avango

Prof. R.T.J. Cappers

Dr M.C. Galestin

Prof. H.A. Groenendijk

Prof. A.L. van Gijn

Prof. L. Hacquebord

Prof. A.F.L. van Holk

Prof. G.J. de Langen

Dr P.M. van Leusen

Dr E. van 't Lindenhout

Dr M.J.J.E. Loonen

Dr A.J. Nijboer

Dr J.H.M. Peeters

Dr W. Prummel

Prof. D.C.M. Raemaekers

Dr D. Stapert

Ing F. Steenhuisen

Prof. S. Voutsaki

PhD Students

Y.I. Aalders MA

S.M. Beckerman MA

Drs U.I. Gustafsson

Drs H.R. de Haas

Drs T.C.A. de Haas

Drs F. Ippolito

G.M. Klein Goldewijk MA

Drs M.E. van Kruining

F. Kruse M.Sc.

Drs T. van Loon

S.G. Matthews MA

Drs W. de Neef

Drs A. Nieuwhof

G.R. Nobles M.Sc.

D. Postma MA

F.B. Postma-Saan MA

M.L. Ratliff MA

R.M. Roura M.Phil.

C. Sandström MSc

M. Schepers MA

J.F. Seubers MA

Drs T.K. Terpstra

J.G.M. Thilderqvist MA

Drs C.W. Wiersma

Drs S.L. Willemsen

Drs I. Woltinge

Support Staff

S.A. Blomsma

S.E. Boersma

E. Bolhuis

Drs J.B. Boschman

A.J. Bouman

O. Dolnik

M.M. Hazenhoek

T.P. Jacobs

R.J. Kusters

M.A. Los-Weijns

Post-doc

Dr K.L. Armstrong

Dr B. Belelli Marchesini

Dr J.A.W. Nicolay

Support Staff (*continued*)

N.D. van der Pers MA

Drs G.J.M. van Oortmerssen

R.M. Palfenier-Vegter

K. van der Ploeg

F. Possel

S. Tiebackx

L. Tol

Ing. H. Woldring

1.4 FINANCES**Revenue direct funding 2011 > €1000**

Projects	Staff	Exploit.
Raap Arch. Advies		1.250
Vereniging van Terpenonderzoek	1.000	
ARC BV	12.584	
Vlaardings Archief	3.600	
GUF		5.000
Digitale Zadenatlas	24.000	14.000
Hettingaskoall		2.500
Provincie Friesland		7.950
Provincie Drenthe		10.824
Provincie Drenthe	25.344	
St. Van Archeologie	4.713	
Gemeente Deventer		6.000
Dienst Landelijk gebied		7.500
St. Ned. Museum		3.750
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	71.241	58.774

Revenue indirect funding 2011

Projects	
Hidden Landscapes	81.120
Health Breeding Birds	4.602
Kings of the North Sea	26.716
Willem Barentsz Poolinstituut	2.500
Noordelijke Westergo Rom. tijd	10.000
Unlocking N-Holl Late Neolithic	108.000
Defining the Ritual, Analyzing Society	45.356
The People and the State	128.696
De grondsporen van Ezinge	40.000
Between appearance and reality	40.000
Rural life in protohist. Italy	143.880
Fora Stationes and sanctuaries	137.072
SIOS Consortium	49.107
AMAP	8.450
	<hr/>
	825.499

2 RESEARCH RESULTS

GIA 2010–2015: Dynamics in cultural landscapes and social organisation

The Groningen Institute of Archaeology's (GIA) research focuses on the dynamics of cultural landscapes and social organization based on its high-quality fieldwork, in which the methods themselves are also studied. GIA has in-house facilities for botanical and zoological research, and GIS and material culture labs. The aim of the GIA research programme 'Dynamics in cultural landscapes and social organization' is to carry out internationally significant research on site and at a regional level, and to combine cultural, ecological and archaeological approaches that aim to provide a new understanding of past societies in the Mediterranean, the Polar Regions and North-Western Europe.

2.1 PREHISTORIC AND PROTOHISTORIC ARCHAEOLOGY OF NORTH-WEST EUROPE

The interaction between human beings and the environment is the focal point of GIA research for the period 2010–2015. This general issue is being studied within two inter-related research fields. The first is the long-term development of cultural landscapes, in which research on early prehistory focuses on the IJssel-Vecht river system, and research on later prehistory and protohistory is carried out in the *terp* area of the Northern Netherlands. The second research field is that of economic landscapes, in which the exploitation of the environment is studied within a long-term framework of Mesolithic interference in natural landscapes, from hoe cultivation (Swifterbant) and Celtic fields to horticulture in the *terp* area. In both fields, research is carried out on site and at regional and supra-regional levels.

The chair Prehistoric and Protohistoric Archaeology has six research fields:

1. The development of cultural landscapes
2. Stone Age society: pattern and process
3. Material culture studies
4. Maritime archaeology
5. Archaeological heritage management
6. Other projects

2.1.1 The development of cultural landscapes

Celtic field research: Lunteren-Wekerom (*S. Arnoldussen*)

Current research concerns a programme on the genesis of Dutch Celtic fields, in which the history of how these agricultural landscapes were used is studied. This entails fieldwork in Celtic fields in different geogenetic parts of the Netherlands and will continue until 2014.

As part of a long-term research programme on the nature and dynamics of Celtic field systems, this year the Celtic field of Lunteren-Wekerom was investigated, in a joint project with the municipality of Ede. Situated on the lower slope of the central Dutch ice-pushed deposits, the Celtic fields of Wekerom may have spanned over 200 hectares, and in some parts continuous areas of nearly 80 hectares have been preserved. Within this extensive prehistoric agricultural landscape two forested plots were selected, because the Celtic field ridges there were in a better preserved state. A series of small test pits were dug in these plots. Sections of these trenches were drawn, photographed and studied to document their geogenetic, pedological and anthropogenic properties. By fine-mesh sieving at 5 cm intervals, archaeological and archaeobotanical remains can be used to study the genesis and possible agricultural usage of both field and ridge locations. To obtain information on the period(s) and longevity of use, samples for radiocarbon- and Optically Stimulated Luminescence dating were taken from various depths of the deposits. This strategy was also used the previous year, when the Celtic field of Zeijen was investigated.

In 2011 several *terp*-sites were studied. The preliminary results are presented below. At the same time the research on bone and plant remains focused on *terp*-sites excavated in previous years.

Excavation of over 70 terp sites at ‘De Onlanden’ (J.A.W. Nicolay)

Between February and May 2011 in the future water management area of ‘De Onlanden’ (Drenthe), southwest of the city of Groningen, over 70 *terps* were investigated. These *terps* were situated in a peat and clay-on-peat area, which was colonized from the northern salt-marsh area in several phases, initially during the 9th or 10th centuries (habitation directly on peat) and again during the 11-13th centuries (habitation on clay mounds, constructed after the area had been flooded for some time). In all known *terps* a small test pit of 2 x 1 m was dug by hand, documented and sampled. A selection of sites was further investigated with 50-80 m long trial trenches, resulting in additional information on chronology, stratigraphy and material culture, including pottery, animal bones and the remains of several burnt houses. The excavation was carried out by the GIA in conjunction with Arcadis, ARC bv and RAAP.

Excavation of a terp site at Firdgum (J.A.W. Nicolay)

In June 2011 a 130 m long section through the *terp* site of Firdgum (Friesland) was cleaned and documented. Well-preserved elevation layers of salt-marsh sods, originating from the central house podium, could be investigated, as well as an agricultural layer in the top of the natural salt-marsh sediments below this podium. The agricultural layer could date back to the 6th or 7th centuries, and the podium and later *terp* layers to between the 8th-13th centuries. Interestingly, this site is part of the youngest generation of habitation mounds that were constructed in Friesland – soon followed by the construction of the first sea dikes along the present-day coast. The excavation was part of the Dutch-German INTERREG project ‘Land of discoveries’.

Excavation of a terp site at Oosterbeintum (J.A.W. Nicolay)

In August and September 2011 two sections with a total length of 230 m were cleaned and documented at Oosterbeintum (Friesland). The most spectacular discovery was the ploughmarks in the natural saltmarsh below the actual *terp* – dating to around 500 BC. During the subsequent centuries (Late Iron Age-Roman Period, 200 BC–AD 300) several small house podia were constructed on this site, which merged into a larger villa *terp* in the early medieval period (after about AD 700). Although the site is situated next to a well-known and largely excavated cemetery dating back to the Merovingian Period, no additional features in this cemetery could be documented. Moreover, traces of the contemporary settlement were absent in the documented sections. The excavation is part of the five-year project ‘Steilkantproject Terpenonderzoek Friesland’.

Lost building traditions (D. Postma [PhD student])

Initially, from 16 February to 31 July, Postma, working as a student assistant, prepared the reconstruction of an early medieval, turf-walled building in the province of Friesland. The work was extended by writing a PhD-research proposal, organizing PR activities, and applying for funding and building permits. The position of student assistant was funded by the province of Friesland, the University of Groningen, the Fonds Nij Bethanië, the Vereniging voor Terpenonderzoek and the Stichting Yeb Hettinga Skoalle. The GIA-funded PhD project ‘Lost building traditions: turf construction and early medieval architecture in the southern North Sea area’ started on 1 September 2011 and aims to place developments in turf and timber-based vernacular architecture (c. AD 1–1500) in a wider cultural and economic context.

Archaeozoology in the terpen area (W. Prummel, with GIA students J.T. van Gent, A.G.J. Hullegie, H. Kranenburg, M. Post & S. Manuel)

The animal remains of the Jelsum *terp* (excavation 2010) were studied with second-year students during the archaeozoology course. The material dated back to the Iron Age, Roman Period, Migration Period and Early Middle Ages. Only the Roman Period’s remains were large enough to draw any conclusions on the use of animals at the *terp*. The materials of the other periods were too small to study possible changes in the composition of the livestock, as observed at many other *terpen* (compare GIA Annual Report 2010, p. 10). Cattle (*Bos taurus*) and sheep (*Ovis aries*) were the most important domestic animals, providing most of the meat, skins and milk. The sheep probably provided wool as well. Evidence of the presence of

domestic fowl (*Gallus gallus domesticus*) was demonstrated by one bone, confirming the early introduction of this species to the *terpen* area soon after the beginning of the Roman occupation of the southern half of the Netherlands.

One of the cattle skulls from the Roman Period proved to be that of a polled cow, a finding consistent with the regular appearance of polled cattle in the coastal region of the Netherlands at that time. A few bone tools were found: the top part of a bone needle (Iron Age); a perforated horse (*Equus caballus*) phalanx I (Roman period); a cattle femur (Roman Period); four worn and polished cattle metacarpi (three from the Roman period and one from the Early Middle Ages) used for skin and/or textile working; and three worn cattle rib fragments (Roman Period) used to scrape and polish pottery (and perhaps skins or textiles).

Few bird bones were recovered by hand collecting. Apart from the domestic fowl, a bone of a mallard (*Anas platyrhynchos*) was found. The intensive sieving at the excavation confirmed the insignificance of fowl at Jelsum. The small number of fish bones in the sieved samples showed that fishing was also not a very important activity. The fish species that were discovered were flounder/plaice/dab (Pleuronectidae), eel (*Anguilla anguilla*), pike (*Esox lucius*) and herring (*Clupea harengus*). Mussels (*Mytilus edulis*) were gathered and consumed in some quantity.

Van Gent and Prummel made an attempt to identify the bones of large whale (Cetacea) species recovered at some recent excavations in the *terpen* area: Englum, Leeuwarden-Oldehoofsterkerkhof, Achlum, Jelsum, Firdgum (excavation 2011). The sample of whale bones was increased by those already present at the GIA, which had been recovered during the commercial diggings at the beginning of the 20th century (mainly from the Ferwerd *terpen* in Friesland). Most of these whale bones showed chopping and cut-marks and probably came from stranded whales. The bones with chopping marks would have been used as chopping blocks. Various finds were identified thanks to Dr E.J.O. Kompagne (Natuurmuseum Rotterdam). They were a humerus with chopping and cut marks from a long-finned pilot whale (*Globicephala melas*) from Englum; a caudal vertebra from a sperm whale (*Physeter macrocephalus*) from Achlum; a killer whale (*Orcinus orca*); a northern bottlenose whale (*Hyperoodon ampullatus*); and a North Atlantic right whale (*Eubalaena glacialis*) from finds probably from Ferwerd. These identifications were confirmed with the kind help of P. Koomen and C. Walen at the Natuurmuseum Fryslân. The Jelsum skull fragment and the Leeuwarden-Oldehoofsterkerkhof findings have not yet been determined. The whale bones identified showed that a large variety of whale species were stranded in the Wadden Sea or on the islands off the coast and that the *terpen* inhabitants exploited all these.

Students M. Post and S. Manuel, along with Dr W. Prummel studied part of the animal remains recovered during the excavations by A.E. van Giffen in the 1920s and 1930s at Ezinge. This study was part of the Odyssee project at the Ezinge excavations by A. Nieuwhof (see below). Van Giffen was very selective in collecting samples of animal remains. Dog skulls, tools made out of bone, antler and horn, and cattle metacarpi and metatarsi were mainly recovered. Most animal remains were from the Iron Age and the Roman Period, with a few dating back to the Carolingian Period. Interesting tools from Ezinge were horn combs from the Iron Age, spindle whorls made from cattle femora (Iron Age and Roman Period), an antler checker (Roman Period), an antler cultivator (Roman Period), a dice made of a sheep metatarsus (Roman Period) and a metatarsus with grooves at distances of the length of the dice, perhaps raw material for dice production (Roman Period) and cattle metacarpi and metatarsi used in skin and/or leather work (Iron Age and Roman Period). The cattle metacarpi and metatarsi showed that the height at the withers of the Ezinge cattle varied between 1.01 m and 1.25 m. The sex identification based on the distal width of the cattle metacarpi showed that most cows were kept for reproduction, milk production and for their meat and skins. More than half the bull calves were killed at a young age. Half of the remaining bull calves were castrated, while the others were raised for reproduction. Part of the material is on show in the exhibition 'Ezinge in scherven en botten; de archeologische vondsten van Van Giffen onder de loupe' at the Museum Wierdenland in Ezinge, which runs from 4 February to 31 December 2012, organized by A. Nieuwhof and M. Blom (ARC).

Archaeobotany in the *terpen* area (R.T.J. Cappers, with GIA students T. Trienen & M. Hondelink, and R. van Klink [University of Groningen, Department Community and Conservation Ecology], E. Büning [University Leiden] & S. Thasing [GIA student])

Research in the *terpen* region focused on the study of plant macro remains with many different features. Previously, organic features were emphasized, such as dung layers and fillings of ditches or wells. As a result, the higher number of samples was partly compensated by a smaller sample size of about one litre.

In addition to these samples, the dried sieve residues from high volume samples were analysed. Because coarser sieves were used for this material, smaller plant remains were not found, resulting in a shorter species list. The sieve residues proved to be more useful in providing an insight into the availability of most economic plants, which is consistent with the results from Swifterbant (see section 2.1.2).

Although mainly analysed in 2010, a chapter on botanical macro remains of the Achlum *terp* was finished in early 2011 and this will be included in the monograph publication on Achlum.

The Jelsum *terp* was the focus of attention in plant macro-remains analysis in 2011. GIA student T. Trienen wrote a short paper on three samples from this excavation. During the year, more samples from Jelsum were analysed. GIA student M. Hondelink studied the dried sieve residues from this *terp*. Her findings were due to be presented in a paper early in 2012, and it is worth mentioning that spelt, a cereal previously unknown in the region, was discovered. The discovery of this wheat variety fitted nicely with the changing view of agricultural possibilities in the area. Previously it was thought that barley was probably cultivated locally and that wheat must have been imported and so been very rare. Although barley was probably the dominant crop in the area, the new sampling approach resulted in the discovery of wheat in practically all *terpen* that were examined. This, combined with the fact that great parts of the region appeared to have been far less saline than traditionally assumed and that no other plant food was found in the *terpen*, strengthened the idea that wheat must have been cultivated locally. An additional argument to support these findings came from the study of ground beetles. In collaboration with R. van Klink, from the University of Groningen, Department of Community and Conservation Ecology, an attempt was made to identify beetle remains from the Jelsum *terp*, by using a newly-built reference collection of beetle remains from the present-day salt marshes. This reference collection was made by Leiden University student E. Brüning. S. Thasing made a first attempt to match the Jelsum beetle remains with this reference collection with a surprising outcome. None of the beetle remains from Jelsum matched the present-day salt-marsh beetle fauna. Results were due to be published in 2012 and the research is to be continued.

Finally, small samples were analysed for the commercial company ADC from the Marssum *terp*. The most striking result from this study was the 'clean' salt marsh signal it showed. Usually, intensive exploitation of the prehistoric *terpen* landscape is clearly visible in botanical samples with the presence of direct (domesticates) or indirect (field weeds) anthropogenic indicators.

The history of falconry in Central Europe (W. Prummel)

An inventory of settlement sites in Central Europe, assembled for a meeting on hunting in Europe at the Zentrum für Baltische und Skandinavische Archäologie (ZBSA) in Schleswig (Germany) in June 2011, showed that falconry (also called hawking) had taken place in Central Europe from about AD 500. Although rarely practised in most of continental Europe before the 11th century, it was quite common in the 8th to 11th centuries Slavonic strongholds. Falconry became more common from the 11th century, though it was only practised in castles and strongholds, and by rich commoners. Goshawk (*Accipiter gentilis*) and sparrow hawk (*Accipiter nisus*) were almost the only hawk species used before the 13th century. Peregrine (*Falco peregrinus*) only became the vogue in the 13th century.

2.1.2 Stone Age society: pattern and process

Project Middle Palaeolithic Northern Netherlands (M.J.L.Th. Niekus, D. Stapert & J.R. Beuker [Drents Museum, Assen])

Field surveys on the MAT site (Mousterian of Acheulian Tradition) in the province of Drenthe were continued, leading to the discovery of several dozen artefacts including five handaxes or fragments of them (cordiformes and subtriangulaires). The surveys were conducted in close collaboration with the Drents Museum in Assen and with the aid of amateur archaeologists and GIA students. At present, the site consists of about 85 artefacts of which 14 (= 16%) are hand axes or hand axe-like objects. Again, most artefacts were found in an area measuring about 50x50 m, strengthening the interpretation of the site as a Late Neanderthal hunting stand.

Early Mesolithic flint technology (J.H.M. Peeters & M. Admiraal [GIA student])

Following trial trench excavations conducted in 2001, a rather small Mesolithic site was excavated in 2010 at Epse near Deventer, in cooperation with the municipal archaeological service. Initial observations of the flint material collected in 2001, suggested the presence of some Late Palaeolithic technological features in the production of blades combined with a Mesolithic tool spectrum. The first results of the analysis, conducted by M. Admiraal, seemed to confirm these initial observations. Rather small blades were produced by direct soft percussion, after careful preparation of striking platform edges. A deeper understanding of the dynamics of flint technology, combined with tool morphology, can inform us about the transmission of technological knowledge (savoir-faire) in the context of changing tool-production methods among bands of Mesolithic hunter-gatherers.

Odyssee project ‘Between appearance and reality: the excavation Bergumermeer S-64B as a milestone of Stone Age research in the Netherlands’ (M.J.L.Th. Niekus)

The Bergumermeer Odyssee project started in 2011 in close cooperation with De Steekproef BV (Zuidhorn). After an inventory of all relevant information on the excavation, the datasheets with individual artefacts were scanned and converted to Excel format. This data is currently being analysed, using different statistical techniques in order to gain an insight into the meaning and relevance of Bergumermeer for our understanding of Mesolithic societies in the Low Countries. The retouched artefacts were reclassified, with significantly different results compared to previously published information. The preliminary results suggest the presence of multiple occupations.

Swifterbant project (D.C.M. Raemaekers, W. Prummel, R.T.J. Cappers, M. Schepers, with GIA students H. Kranenburg, E.E. Scheele, J. Geuverink, A. Maurer & J. van der Laan)

This year, the material from the excavation at S25 (2009-2010) has been studied in particular. Student papers were written on ceramics (E. Scheele), stone (J. Geuverink), pollen (A. Maurer) and wood (J. van der Laan). Saxxon student L. Leenen digitized all the field drawings. The preliminary research indicates that S25 dates not only to the period 4300-4000 cal. BC (known from the various creek-bank sites in the region), but also to the period 3900-3700 cal. BC. The S25 ceramics allowed identification from the more recent phase at S3. This implies that the Swifterbant creek system functioned at this late stage as well (see article in *Paleo-aktueel* 22). Students were involved in the analysis of plant remains from the river dune site S25. Maurer studied both pollen and macro-remains from a shallow depression in the clay shore on the creek side of the dune. He concluded that human activity was only marginally visible in the macro remains, but he interpreted the presence of the dung-related fungus taxon *Sordaria* as an indication of animal farming. Van der Laan studied waterlogged wood remains under the supervision of N. Bottema-MacGillavry. Two specimens were identified as paddle fragments. In general, the preservation of the wood was excellent. Alder was dominant in both used and unused wood. Other taxa included Pomoideae (subfamily of Rosaceae including *a.o.* apple and hawthorn), oak and willow.

The archaeozoological data of S4 (excavated 2005–2007), which was put together by various students, was combined to examine the exploitation of animals. The animal remains of S4 (4300–4000 cal. BC) were heavily fragmented due to butchering, treading on the bones by man and animals, weathering and burning; more than 50% of the animal remains were calcined. Four domestic species were found: cattle (the most important), pig, sheep and dog. Eleven wild mammal species were found, of which beaver (*Castor fiber*), red deer (*Cervus elaphus*), wild boar (*Sus scrofa*) and otter (*Lutra lutra*) were the most hunted, for their meat, skin, teeth and antlers. Duck fowling was of some importance, but might have been underestimated due to the heavy fragmentation. Fishing was quite important. The fish species consumed the most were wels catfish (*Silurus glanis*), pike (*Esox lucius*), Cyprinids (Cyprinidae), eel (*Anguilla anguilla*) and sturgeon (*Accipenser* sp.). The differences observed in the composition of the identified animal remains of the Swifterbant sites S2, S3 and S4 were mainly taphonomic, hardly the result of variation in human behaviour towards animals.

A paper, previously submitted to the journal *Vegetation History and Archaeobotany* was revised with the help of one of the peer reviewers, Dr O. van Tongeren. The paper discussed a newly devised method to divide an archaeobotanical sample which represented a mixture of vegetation types into subsets of species that might have grown together. The division was based on coexistence values computed from hundreds of thousands of modern vegetation mappings carried out in the Netherlands. The overlapping subgroups were subsequently identified phytosociologically to the association or even the subassociation. Three samples from a driftline deposition on the S4 settlement creek shore were analysed by this means. All

three samples matched very well. In summary, the vegetation consisted of stream reed swamps (*e.g.* Sparganio-Glycerion alliance), pioneer wetland (*e.g.* Bidenton-tripartitae alliance) and forest and undergrowth wetland (*e.g.* Alno-Padion alliance). To make all of this possible, a modified version of the vegetation analysis software package ASSOCIA was developed by Van Tongeren. Resubmission of the manuscript was set for early 2012. The discovery of Alno-Padion, although already correctly identified by Van Zeist and Palfenier-Vegter in 1981, contradicted the classic characterization of the local woodland as 'alder carr'.

By combining the identified vegetation types with known characteristics from the geology and geomorphology of the Swifterbant region, we were able to make a vegetation map of the region. M. Schepers and I. Woltinge finished a chapter on the geology of the region for the Swifterbant site S4 monograph in 2011.

Botanical remains of dried sieve residues from S4 were inspected to see how they related to the archaeobotanical samples, for which finer sieves were used. The dried sieve residues were definitely more useful to gaining an insight into cereal remains. Charred grains are rarely found in concentrations on the Swifterbant sites, a burnt stock is still lacking, and concentrations that were found were still too scattered to be identified as such in the traditional one litre settlement samples. Previously, the decision on whether such a sample was selected for analysis or not was based on the presence of a cereal concentration in the sieve residues. This appeared to create a distorted view of the ratio between emmer wheat and naked barley. Apart from the fact that barley was the dominant cereal, it was also the only cereal found in concentrations. On a presence/absence level per sieve residue, Emmer was still less common than barley, but more frequent than could be shown by quantitative selection.

The EDR project 'Land der Ontdekkingen': TRB research module (D.C.M. Raemaekers, H.A. Groenendijk & W.A.B. van der Sanden [Drents Plateau])

The EDR project comprised fieldwork at three locations: Odoorn, Wetsingermaar and Onnen. The test trench near the megalith tomb D32-Odoorn aimed to provide more information on the elusive Neolithic features, on the basis of the hypothesis that features are better preserved in loam-rich sandy soils (Wiersma & Raemaekers, 2011). However, few features were found. Three features were ¹⁴C dated, but none dated back to the Neolithic! The earliest period was the Early Iron Age and derived from a feature that was scarcely visible.

The coring campaign at Wetsingermaar was a continuation of the fieldwork conducted there in 2005, the purpose being to gain further insight into the location. It appeared that this huge (c. 1.5 ha) pre-Drouwen TRB site was located on the border of the main stream that connected the Drenthe hinterland with the coastal zone.

The North-Holland Single Grave Culture project (S.M. Beckerman & G.R. Nobles [PhD students])

The aim of the PhD project on ceramics (Beckerman) was to obtain a better understanding of the role and function of vessels in settlements, but also, together with the other researchers on this project, to deepen our understanding of these societies as a whole. In 2011 the ceramics found at the Single Grave settlement site of Mienakker were examined and a start was made on studying the ceramics from the Zeewijk site. By combining this study with that of the Keinsmerbrug site in 2010 an image emerged of the similarities and differences between the ceramics found on both sites. Keinsmerbrug and Mienakker were previously identified as small-scale, special-activity sites. The new study showed, however, that there were many differences between the sites. At Keinsmerbrug only small sherds were found, with a large variety in their technological and morphological characteristics and decoration, whereas at the Mienakker site very uniform sherds were found.

As part of this project, spatial analysis (Nobles) endeavoured to show how space was used at Single Grave Culture settlement sites, specifically Keinsmerbrug, Mienakker and Zeewijk. The spatial analysis looked at the findings studied by other researchers, namely: lithics, ceramics, animal remains and botanical evidence. Returning these to their original locations allowed for detailed spatial analysis and, in combination with the archaeological features, it helped archaeologists to gain a deeper understanding of the sites regarding which activities were taking place, where and when. Furthermore, as has been demonstrated at the Keinsmerbrug settlement, on occasions the distributions of findings can help in the identification of structures. In this example two structures (dwellings) were identified, and this assisted in the identification of three more possible structures. In comparison, Mienakker yielded two definite structures. The structures here were very different to those at Keinsmerbrug. One was an ovoid dwelling

structure with paired posts. Whereas the other was trapezoidal and contained a burial, suggesting a structure related to mortuary practices. All of these structures appear unique within the Netherlands, although there are possible parallels in Germany, Denmark, Poland and France.

Groningen-Meerstad (H. Woldring & M. Schepers)

H. Woldring and M. Schepers studied pollen and plant macro remains from the vicinity of a Mesolithic camp site near Groningen. The study clearly showed the influence of Mesolithic communities on the local vegetation. The study was published in early 2012 with contributions from GIA students J. Mendelts and R. Fens.

2.1.3 Material culture studies

The Early Neolithic perforated wedges project (D.C.M. Raemaekers, J. Geuverink, M. Schepers, B.P. Tuin, E. van de Lagemaat & M. van der Wal)

In recent years the enigmatic Early Neolithic perforated adzes and broad wedges have been studied, resulting in several student papers. In 2011 a collection of these papers was published in a monograph, in which typology, chronology, function and meaning were addressed. The research showed that the perforated adzes (5300-4900 cal. BC) were mostly found as complete specimens in wetland settings, while the perforated broad wedges (5000-4000 cal. BC) were more often found as fragments on higher ground. These patterns suggested that while the older items predominantly had a symbolic connotation, the younger type operated in a more functional setting.

Odyssee project ‘The finds from Ezinge’ (A. Nieuwhof, W. Prummel, E. Knol, T.B. Volkers, H. Huisman & W.A. Van Bommel-van der Sluijs)

The results of the excavations at the Ezinge *terp*, conducted in the 1920s and 1930s, have never been fully published. This was due to the large number of finds from the excavations and the limited knowledge of prehistoric material at the time preventing a full study. Ezinge, however, is an important site in *terp* archaeology, because it serves as a type-site in many publications. Therefore, a full study of the finds is still important, even after so many years.

Finally, in 2011, a one-year project, aimed at the Ezinge finds, was funded by NWO as part of the Odyssee programme. The study initially focused on handmade pottery, Roman imported ware, bone objects and metal objects. During the project, beads and stone objects were added to the list.

The project started with the completion of an inventory of human remains in Ezinge, which had started earlier as part of a PhD project by Nieuwhof. Throughout 2011, the study of all material categories was completed. The results were used to make a description of all finds and to date them. This list of dated finds will hopefully result in a full publication of the excavations in the future.

2.1.4 Maritime archaeology

Excavation shipwreck OE 34 (A.F.L. van Holk, E. Bolhuis, G. Schreurs [RCE], L. Koehler [RCE], D. Velthuisen [Nieuw Land] & F. Dallmeijer [RCE])

In 2011 the IFMAF began the excavation of a shipwreck near Lelystad in the province of Flevoland. The wreck turned out to be complete, with the sides having fallen into a horizontal position. Nevertheless, the quality of the wood was rather poor, due to the relatively high position of the wreck in the subsoil. Some weaponry was found on board, which might indicate – as well as the dendro date of AD 1553 – that the ship’s original harbour was Amsterdam. Even though the Spanish were the enemy of the Dutch during the Eighty Years’ War, Amsterdam sided with the former. Probably ships heading for (or coming from) Amsterdam were armed to defend themselves against the *Watergeuzen*. The excavation is continuing in 2012.

The Zuiderzee as intersection: the natural and cultural context of peat shipping by sea 1600–1900 (F.B. Postma-Saan [PhD student])

The initial phase of this project concerned the setting up of a database. All wrecks of cargo ships found in the province of Flevoland from AD 1600–1900 AD were included. Approximately six of the 120 cargo ships were identified as peat barges with a reasonable amount of certainty. However, their probable return freights, such as bricks, tiles or other products from the peat-consuming industries, indicated that a much larger proportion of the 120 ships were peat barges. Other possible indications were ‘soft’ bulk goods (*e.g.* soil) or alternative types of fuel. In many wrecks no traces of cargo were found. As peat is easily swept or washed away, an unknown number of these wrecks may also have been peat barges. Because none of these indications were conclusive, the scope of the project was widened to include all cargo ships, although the main focus was on the transport of peat.

2.1.5 Archaeological heritage management

Land der Entdeckungen/ Land van ontdekkingen (J. Kegler [Ostfriesische Landschaft, Aurich], D.C.M. Raemaekers, H.A. Groenendijk, G.J. de Langen & A. Brindley)

The international project ‘Land van ontdekkingen’ included the module ‘Funnel Beaker Culture’ (TRB). In the first year of the project the search for lost TRB grave monuments (*hunebedden*) started in the province of Groningen. The location of the lost megalith G4 (Onnen) was detected by means of ground radar.

A stylistic comparison between the funeral ceramics found in Drenthe and in the vicinity of Oldenburg (Germany) was initiated with the aim of detecting specific production groups and the initial results were positive.

The project’s objective of opening modern field archaeology to a broader public was achieved by bringing together Dutch and German amateur archaeologists with a special interest in TRB culture. They collectively excavated a funeral urn, which had recently been found by one of them in the interior of a megalithic tomb in Dötlingen (Germany).

What lies beneath: the value of buried Stone Age landscapes (I. Woltinge [PhD student])

The final chapters of the PhD thesis remain a work in progress. These chapters revolve around the archaeological indicators present in sieve residues. The ‘traditional’ primary and secondary indicators were examined, as well as materials showing the presence of archaeological remains.

2.1.6 Other projects

Fayum Project (Egypt) (R.T.J. Cappers)

Progress has been made in the analysis of architectural features. The main objective was the quantification of threshing remains, including an estimate of the quality of threshing. These figures will be used for modelling the logistics of site-building in relation to the production of cereals. A second research project concerned with mud bricks deals in particular with the development of a typology for the mud bricks that have been used. This typology takes into account the size, volume, location, ingredients and colour of the clay.

A related study deals with the development of a typology of non-architectural samples. From some 150 sample photos (with an adjustment of colours) of the 2 mm sieve fraction a subdivision has been made into six main categories, some of them subdivided into two other categories. A photo was chosen for each category and a description of the composition was made. Together with a simple key, this classification will be used to further improve the selection of samples in relation to specific research questions. The next step is the archaeobotanical analysis of samples from each category.

A detailed study of the quality of field-sieved samples in comparison with samples processed under laboratory conditions was carried out. This resulted in the improvement of the sampling strategy. This study also shed light on the processes of mixing, reduction and contamination.

Umm Mawagir (Kharga oasis, Egypt) (R.T.J. Cappers, F. Heinrich, S. Kaaij & F. Fantone [all GIA students])

Archaeobotanical research was conducted at the second intermediate site, Umm Mawagir. This site was excavated by Prof. J. Jarnell (Yale University) and was considered to have played an important role in re-establishing the power of the Pharaohs, resulting in the reunion of Upper and Lower Egypt. All available plant remains have been analysed. Only charred plant remains were available (indicating fluctuating ground water levels) and no pulses were present (indicating specialization in bread production). To determine whether it is possible to make bread from barley spikelets (not dehusked) a replica of a grinding unit was made and original grinding stones were used. It turned out that the presence of fragments of chaff in the bread was not considered unpleasant, unlike the presence of clay particles. The grinding experiment was documented in photographs and video, and will be incorporated into the fourth part of the Digital Plant Atlas (*Digital Atlas of Traditional Agricultural Practices*). It has also contributed to the modelling of the selection of cereal in the past. A publication is being prepared.

Tepecik (Turkey) (R.T.J. Cappers, H. Woldring & F. Fantone)

Tepecik is a settlement in the core area of the Fertile Crescent. The plant remains found were Neolithic and Chalcolithic. It is suspected that in the near future this site will present evidence of the earliest transition to agriculture. The site was visited by H. Woldring and F. Fantone. Several corings were made, samples were taken from the site and processed, and ethno-archaeobotanical research was carried out. The documentation of the use of ovens has been incorporated into the model, taking into account the shifts in the selection of cereals.

Digital Plant Atlas (R.T.J. Cappers)

The third part of the Digital Plant Atlas (*Digital Atlas of Economic Plants in Archaeology*) was completed in collaboration with the Deutsches Archäologisches Institut (Berlin). This atlas became available in February 2012. It documents the recent and subfossil remains of almost 200 plants.

2.2 CLASSICAL AND MEDITERRANEAN ARCHAEOLOGY & GREEK ARCHAEOLOGY

With the establishment of a chair in Greek Archaeology in 2011, Mediterranean Archaeology at the Groningen Institute of Archaeology now has two chairs. The chair of Classical and Mediterranean Archaeology (CMA), with a focus on the central Mediterranean, is held by Prof. P. Attema and the chair of Greek Archaeology (GA), with a focus on the eastern Mediterranean, is held by Prof. S. Voutsaki.

The Classical and Mediterranean Archaeology section formed by the two chairs has a broad geographical coverage and carries out research on the prehistoric and protohistoric periods, as well as later historical periods (Hellenistic and Roman). The emphasis is both on rigorous methodology and the development of a more refined theoretical framework. The research programme for the period 2010-2015 is articulated in a series of interdisciplinary projects which explore ecological, economic, social and ideological aspects of past societies, and integrate traditional archaeological methods with novel scientific techniques. The GIA has a strong tradition in Mediterranean fieldwork, landscape and artefact studies, and is now developing more theory-oriented and interpretive approaches by exploring topics ranging from economy, diet, health standards and mobility to ritual, symbolism, ethnicity, personhood and agency. In addition, the study of attitudes to the past occupies an increasingly important position in the section's research.

The chair of Classical and Mediterranean Archaeology features the following research fields:

1. Landscape, settlement, ritual and society in protohistoric and Roman Italy
2. Methods of and approaches to archaeological detection in Mediterranean landscapes
3. Economy and living standards in the Roman world
4. Interaction in the margins of the Graeco-Roman world

The chair of Greek Archaeology features the following research fields:

5. Social change and cultural interaction in the prehistoric and protohistoric Aegean
6. Diet, mobility and society in the prehistoric and protohistoric Aegean
7. Social change and cultural interaction in the Hellenistic and Roman eastern Mediterranean
8. Attitudes to the past in the present

CLASSICAL AND MEDITERRANEAN ARCHAEOLOGY

2.2.1 Landscape, settlement, ritual and society in protohistoric and Roman Italy

Crustumerium Project (P.A.J. Attema, B. Belevi Marchesini [post-doc researcher], A.J. Nijboer, J.F. Seubers [PhD student], S.L. Willemsen [PhD student] and J. Hilbrants [Academy Assistant])

Various projects were carried out within the framework of the NWO project 'The People and the State. Material culture, social structure and political centralization in central Italy (800-450 BC)'. Field campaigns were conducted during the summer (excavations of the Monte del Bufalo cemetery) and autumn (urban survey and geophysical prospections of the settlement, in collaboration with the prospecting company Eastern Atlas from Berlin). Both yielded valuable data for the project. A third project consisted of the conservation and restoration at GIA's laboratory of objects from tombs excavated by the GIA in the campaign of 2010. A fourth project involved creating a database for the Crustumerium Iron Age cemeteries in collaboration with SITAR (Sistema Informativo Territoriale Archeologico di Roma), which now also contains data on the settlement and surroundings of the Crustumerium site. In February the research group organized a successful international two-day conference on pre-Roman burial grounds in central Italy at the Groningen Institute of Archaeology. The proceedings will be published in the *Caeculus* series. Post-doc researcher Belevi (with physical anthropologist W. Pantano) and PhD student Willemsen both submitted papers for this volume. Belevi also submitted her annual report (2010-2011).

During a stay in Rome in March PhD student Willemsen collected literature for her thesis. She spent the summer of 2011 at Crustumerium excavating three new tombs and a number of tombs that had already

been opened. Two tombs were not finished and will have to be reopened. The data from all GIA's excavation campaigns are currently being studied and processed, and the database has been updated. A second stay in Rome in October/November was spent collecting data from tombs excavated by the Italian Archaeological Service of Rome. These tombs were of a relatively late date (end of the 7th and 6th centuries BC), and provide insights into the way burial customs changed in this period. The rest of the year was spent on literature study and writing up chapter 1, which contains an overview of the scientific studies performed at the various burial grounds surrounding Crustumerium, and chapter 4, which describes the changing burial rites towards the end of the 7th century BC, based on the observations of the Soprintendenza excavations and GIA's own investigations.

Jorn Seubers, who was appointed in February 2011, carried out his first field reconnaissance of the territory of Crustumerium in June/July, mainly in the area north-east of the site. Here he confirmed the presence of archaeological material in several locations known from previous research. In October a team of six GIA students and alumni conducted surveys under his direction in an area south of Crustumerium to prepare for preventive excavations. This work was combined with survey research on the settlement itself and the first geophysical survey of part of the settlement plateau. As a result, we increased our knowledge of sub-surface structures of the site and quantitative data on surface distributions was collected that will eventually allow us to better interpret the dynamics of the landscape. At the end of our studies the combination of our own fieldwork data and that of previous research will allow for an integral interpretation of the territory of Crustumerium between 800 and 400 BC. For further information visit the GIA Webpages: www.rug.nl/let/onderzoek/onderzoekinstututen/gia/CurrentResearch/ironagetombs

Satricum Publication Project (*E. van 't Lindenhout, P.A.J. Attema*)

In 2011 work on the final publication of the Satricum excavations – ‘Settlement excavations at Borgo Le Ferriere, “Satricum” 3 – was started by Van 't Lindenhout, following the publication of her PhD thesis. The publication will be prepared in cooperation with Attema. Work was started on an inventory of the field drawings of the excavation campaigns carried out by the GIA between 1988 and 1990. An inventory had already been made of all ceramic finds by T. van Loon. In addition, Van 't Lindenhout organized and led a symposium on architectural studies in archaeology. For this event she was invited to be the guest chief editor by *Tijdschrift voor Mediterrane Archeologie* (TMA, the Dutch Journal of Mediterranean Archaeology). The symposium ‘Architecture as a source for Archaeology’ was held on 7 October, 2011. The papers were promptly published in *TMA* 46 (2012).

The Pontine Region Project (*P.A.J. Attema [director], T.C.A. de Haas [PhD student], G.W. Tol [PhD student] & P.M. van Leusen*)

No fieldwork was carried out this year within the framework of the Pontine Region Project. Instead, energy was devoted to publications and a new application for research funding (on the latter see section 2.2.3). Attema and De Haas finished editing the peer-reviewed article ‘Rural settlement and population extrapolation: a case study from the *ager* of Antium, Central Italy (350 BC – AD 400)’ for the Oxford Roman Economy group. Tol and Attema submitted the paper ‘A road station on the Tabula Peutingeriana. Excavations at Astura’ on GIA's Astura excavations for peer review at the 4th Conference of Late Roman Coarse Ware. Attema, De Haas and Termeer submitted the paper ‘Studying early colonization in the Pontine region (Central Italy)’ for peer review to the editors of the ESF workshop on Rome under the Republic held in Nijmegen in November 2010. Attema and De Haas submitted the paper ‘Intensive on-site artefact survey and proto-urbanization; case studies from Central and South Italy’ to a special volume of papers published by the British School at Rome (peer reviewed and accepted).

This year De Haas finalized the manuscript of his dissertation ‘Fields, farms and colonists: intensive field survey and early Roman colonization in the Pontine Region, central Italy’, which was sent to the reading committee and approved. The dissertation was successfully defended on 1 December. On 1 November 2011 De Haas was appointed as a post-doctoral researcher within the NWO project ‘Fora, stationes, and sanctuaries: the role of minor centres in the economy of Roman Central Italy’.

In 2011 Tol completed his PhD thesis, which he successfully defended on 22 March, 2012. On 1 December 2011 he was appointed as a post-doctoral researcher within the NWO project ‘Fora, stationes, and sanctuaries: the role of minor centres in the economy of Roman Central Italy’.

Campoverde project (T. van Loon [PhD student])

Van Loon finished processing the material from four collections and entered her findings in a database. She submitted the first draft of the first chapter of her PhD thesis entitled 'Defining the ritual, analyzing society. The social significance of material culture in pre-Roman cult places of Central Italy (c. 900 – 400 BC)', which introduces the theoretical and methodological background of her study on Laghetto del Monsignore at Campoverde, and worked on the publication of the materials from this sanctuary. Some parts of her preliminary results were presented at the 'Gods in ruins' conference in Oxford.

The International Francavilla Project (P.A.J. Attema, J.K. Jacobsen & P.M. van Leusen)

In order to close the excavations at the sanctuary of Timpone della Motta, consolidate the excavated remains and render the site accessible to the public, a comprehensive project was planned in collaboration with the IBAM (Istituto per i Beni Archeologici e Monumentali) of the CNR (Consiglio Nazionale delle Ricerche). However, this project was not approved by the Archaeological Superintendency of Calabria, so no application for funding could be submitted. Two campaigns were spent at Sybaris to inventory and transfer the artefacts from GIA's excavations of the Timpone della Motta to new store rooms (see below).

Attema submitted the paper 'Investigating indigenous and Greek space in the Sibaritide (S. Italy)' for the proceedings 'Griechen in Übersee und der historische Raum' (Göttingen). Carmelo Colelli submitted his PhD thesis 'Ceramica d'impasto da Francavilla Marittima' (promotor Attema, co-promotor Nijboer).

Associated researchers J.K. Jacobsen and C. Colelli presented the paper 'Pottery workshop organisation and transformations at the archaeological site of Timpone della Motta between 800 and 650 BC, a case study from Northern Calabria', at the conference 'Keramos, ceramics: a cultural approach' (9-13 May, 2011) at the EGE University in Izmir, Turkey.

Timpone della Motta Inventory (P.M. van Leusen, P.A.J. Attema, T.C.A. de Haas, F. Ippolito & M. Kleibrink)

The preparation and undertaking of the cleaning of the Timpone della Motta finds, the creation of a new inventory and the move to a new location at Parco del Cavallo (around 1,030 crates) took up a substantial amount of research time in 2011. Some 130 RAP crates were also included in the inventory. The work has not yet been completed. The inventory, which is now in spreadsheet format, still needs to be converted to a true database and submitted to the Soprintendenza. The work was carried out during two short but very intensive campaigns.

Radiocarbon results and the absolute chronology of Iron Age Italy (A.J. Nijboer)

In 2011 the project collaborated with P. von Eles (Bologna) on some radiocarbon results from Early Iron Age tombs at Bologna, Dr J. Jacobsen (Copenhagen) on a date for a context at Francavilla Marittima with early Euboean imports and their local imitations, and Dr A. Babbi (Heidelberg) on a ¹⁴C date for a fragment of textile from the famous Warrior Tomb of Tarquinia. All three collaborations resulted in texts with the intention to publish in the short term.

2.2.1 Methods of and approaches to archaeological detection in Mediterranean landscapes

The Hidden Landscapes Project (HLP) (P.M. van Leusen)

In 2011 the supervision and publication obligations of the HLP continued. The supervision of Feiken's PhD thesis again required much time, and progress was gradual. A new work plan agreed in June had already been prolonged by August, but a draft version of the final chapter is expected to be submitted before the end of December 2012.

A volume of conference proceedings and an article on HLP fieldwork were prepared for publication. The editing of the 2007 Siena HL conference proceedings, with Dr Pizziolo from the University of Siena was completed in December and submitted to Archaeopress (BAR International Series 2320). The volume contains 36 contributions, three of which came from Van Leusen.

The Rural Life Project (P.M. van Leusen [director], K.L. Armstrong [post-doc researcher] & W. de Neef [PhD student])

In 2011 Van Leusen directed and participated in three field campaigns on the Rural Life Project. A significant management task, an application in collaboration with colleagues from Leuven University for BELSPO funding (€ 175,000) to extend the use of remote sensing in our research, was successful. Other collaborations, including one with the University of Mainz, were also initiated. Three campaigns involving a fieldwalking survey, geophysics (directed by Dr Armstrong) and excavation (directed by Drs De Neef), and focusing on the Contrada Damale/Portieri, were conducted in April, July and October/November respectively. The results were excellent, with responses on all questions about the character, date and quality of the FBA remains. Relevant samples and readings were collected for our methodological study of geophysics. Preliminary reports were submitted to the Soprintendenza (local supervisor) but relations remain fragile.

Geophysical data was collected using different methods on a number of known sites. The natural stratigraphy and local geological processes were studied from soil pits and cores in different parts of the research area. In the first campaign a test trench was dug in a terrace bank on an LBA/IA site to establish archaeological stratigraphy which could be related to surface finds. The recovery of a nearly complete painted ceramic horse dated the site to the Early Iron Age. In the second and third campaigns a total of five test pits were dug to identify features detected by geophysical methods on known protohistoric surface sites and to establish the presence and depth of archaeological stratigraphy. Three rectangular geophysical features on site T219 could be identified as protohistoric buildings and one feature is probably a depression later filled in with earth and protohistoric building debris. An intensive survey of known protohistoric sites resulted in more accurate site locations and finds distributions, and more datable material.

Armstrong joined the GIA on 1 March 2011 as a post-doctoral researcher on the 'Rural Life in Protohistoric Italy' project. Work consisted mainly of the following activities: researching and procuring equipment for use in the field and laboratory research; familiarization with the project and the regional archaeology, specifically the issues that confront the geophysical and geoarchaeological side of the project, such as the influence of terracing; writing an article for publication in *Archaeological Prospection*, detailing the pilot geophysical work carried out in Calabria in the RAP and HL projects in 2006 and 2010; writing detailed reports on the geophysical aspects of the fieldwork conducted this year, including data processing, visualization and interpretation; designing a programme of research into the properties of soils collected during the fieldwork; preparing and presenting a paper on our results from this year and a methodological overview; training students and colleagues in the use of geophysical surveys and preparing manuals; and organizing a round-table discussion for CAA 2012 in Southampton, entitled 'Problems, methods and solutions in archaeological prospection'. In the remaining time the statutory reporting on PhD fieldwork in the UK was finished and two result papers were prepared for publication in *Archaeological Prospection*. These were provisionally entitled 'Archaeological Geophysical Prospection in Peatland Environments: Part 1- results from lowland sites' and 'Archaeological Geophysical Prospection in Peatland Environments: Part 2- results from upland sites'.

Prof. J. Sevink (IBED, University of Amsterdam) continued to supervise (with Van Leusen), the PhD thesis being prepared by H. Feiken. With H. van de Plicht and others he published an important article in *Quaternary Science Review*, providing a very precise date for the ash layer found in several parts of the Pontine plain during the Hidden Landscapes project. In June he made further field observations of ash layers with Leiden University staff and Drs Anastasia. These results were presented together with Van Leusen in February 2012 at the AIQUA conference in Pisa. In view of his important and continuing contributions to GIA research in Italy, Sevink was invited (and agreed) to become a GIA associate member. Starting in October 2011, Sevink became a collaborator in Van Leusen's Rural Life Project, providing advice on soil mapping, geology, and geomorphological processes.

2.2.3 Economy and living standards in the Roman world

Fora, Stationes and Sanctuaries, the role of minor centers in the economy of Roman central Italy (P.A.J. Attema, P.M. van Leusen, T.C.A. de Haas & G.W. Tol)

Attema and Van Leusen (main applicants), De Haas and Tol were successful in their research application 'Fora, Stationes and Sanctuaries: the role of minor centers in the Roman economy' for a grant from the NWO 'Vrije Competitie Geesteswetenschappen' (Free Competition in the Humanities scheme (€ 730,238). This project will require two main post-doc researchers (De Haas and Tol), two part-time post-doc researchers (vacancies) during the period 2011–2015, and research leave for Attema in 2016. De Haas and Tol were appointed post-docs in October and December respectively.

After the proposal for this project was approved by the NWO, the project started in October 2011. During a working visit, contacts with possible Italian partners were established and formal collaborations were prepared with the Soprintendenza per i Beni Archeologici del Lazio (the supervisor of the archaeological service in Lazio), with the municipality of Pontinia, with the Università di Roma la Sapienza and with the museums of Pontinia and Nettuno.

2.2.4 Interaction in the margins of the Graeco-Roman World

Džarylgač Survey Project (North-West Crimea, Ukraine) (P.A.J. Attema & P. Guldager Bilde [Aarhus University])

In 2011 funding was obtained to publish the Džarylgač Survey Project, edited by Attema in collaboration with Guldager Bilde of Aarhus University and Winther Jacobsen of Copenhagen University. Contributions to the book from the GIA were made by PhD students De Haas, De Neef and Williamson. This major two-volume publication marks the end of GIA's fieldwork in North-West Crimea.

Contacts across the Roman Frontier (M.C. Galetin)

The interaction in the margins of the Roman world, specifically the relations between Romans and Frisians, was the primary subject of study in 2011. More Roman material in a native context was examined, including, two bronze statuettes which were discovered in the Dutch provinces of Groningen and Friesland. These statuettes were thought to represent/symbolise Roman gods. In fact, both statuettes proved to be 18th-century figures that were once part of table clocks. The results were published. Also several *lemmata* regarding Romans and Frisians were written and prepared for the *Nieuwe Encyclopedie van Fryslan* (The New Encyclopaedia of Friesland) which will appear both in print and digitally.

GREEK ARCHAEOLOGY

2.2.5 Social change and cultural interaction in the prehistoric and protohistoric Aegean

Middle Helladic Argolid Project (S. Voutsaki, S. Triantaphyllou [University of Thessaloniki], A. Ingvarsson-Sundstrom [University of Uppsala], E. Milka [4th Ephorate / PhD student University of Groningen])

Research on the Middle Helladic Argolid Project is making progress. Results were announced at the annual meeting of the Prehistoric Society, UK (Europa Day), at the meeting of the European Association of Archaeologists and at a seminar at VU University, Amsterdam. Research is now focusing on the reconstruction of social change during the MH Period and the role of social agency in broad processes of change. Several articles (on MH houses in Lerna and Asine, radiocarbon dating, imagery, and mortuary practices in Prosymna and Mycenae), three monographs (comparative analysis of mortuary practices; bioarchaeological analysis of the human remains from Lerna and Asine) and the final synthesis are being prepared.

Argos Tumuli Project (S. Voutsaki, O. Dickinson [Emeritus, Durham], K. Sarri [Independent pottery specialist], S. Triantaphyllou [University of Thessaloniki], E. Milka [4th Ephorate / PhD student University of Groningen])

The final publication of the Argos Tumuli volume is being prepared, and one article is being printed. The aim of the Argos Tumuli Project is to re-examine the assemblage from the ‘tumuli’, to place the Argos ‘tumuli’ in their wider context and to understand the position of Argos in the changing political landscape of the MH Argolid. The chapters on the methodology, the grave contexts, the description of the graves, the mortuary practices and the catalogue of finds have been completed, while the chapters on the skeletal analyses, the additional analyses (stable isotopes and ancient DNA) and the final comparative discussion are being prepared. The volume will be published by the Institute of Aegean Prehistory Academic Press.

The emergence of complexity in the southern mainland: an analysis of houses and households (C. Wiersma [PhD student])

Corien Wiersma is making very good progress with her PhD thesis. She has completed three chapters, which contain analysis of the data from different regions of the southern mainland: Attica, Corinthia and the Argolid, and Messenia and Laconia. Despite the problems of uneven reservation and documentation, some very interesting patterns are emerging which are leading to a reconsideration of the prevailing idea of a static, homogeneous and undifferentiated society during the earlier part of the Middle Bronze Age.

Ayios Vasilios Project: The excavation of the Northern Cemetery (S. Voutsaki)

The main aims of the excavation at the Northern Cemetery this year were a) to carefully excavate the graves located last year, and to remove the skeletons; b) to understand the spatial organization of the cluster of graves excavated thus far; c) to reconstruct the sequence of the graves.

The graves were excavated very carefully, the soil was sieved, and soil samples were regularly taken. The skeletons were excavated and removed using state-of-the-art techniques. This will allow us to reconstruct mortuary treatment in the future, in particular the manipulation of body parts during secondary treatment. The preliminary study of the skeletons allowed us to conclude that the re-use of graves and secondary treatment were quite common in this cluster of graves, though they took many different forms. Unlike most cemetery excavations, the areas between the graves was also dug up, revealing human interventions, such as bedrock levelling, soil removal and the construction of short walls which seemed to divide the graves into clusters. The preliminary analysis of the data focused on the reconstruction of the sequence of use and on the study of variation between tombs and interments. The few ceramic vases deposited as funerary offerings are still being studied, but they indicate that the cemetery was in use in the MH III – LH I-LH II period.

The excavation of the palatial(?) complex at Ayios Vasilios once more produced spectacular results. The excavation in Building A, where in previous years 16 bronze swords and other valuables were found, continued and revealed an earlier period of use with an impressive feasting deposit consisting of broken pottery, animal bones, fragments of figurines and zoomorphic libation vases. Excavation further to the south confirmed the existence of a very large building with thick walls, which were built against a very substantial retaining wall. The building seemed to date from the later Mycenaean Period. More fragments of frescoes were found in the area, some of them being relatively large.

In general the 2011 excavations confirmed the expectations that we were dealing with a very important centre, which probably acquired a palatial character in the later Mycenaean Period.

Mycenaean ritual action in the twenty-first century (S. Voutsaki)

During 2011 the application for a new project on ritual action in the Mycenaean Period was prepared (to be submitted to NWO, *Vrije Competitie*). The project involves a critical re-assessment of Mycenaean ritual action, its material traces and its interpretations. The aim of the project is to compare practices in shrines, houses and tombs in order to explore the similarities and differences in ritual action in these different contexts. The research, however, will not remain restricted to identifiable ritual contexts, but will also examine the grey areas (the uncertain ritual deposits which may or may not belong to formal shrines, the evidence for one-off ritual episodes in houses, the evidence for ritual or cult outside tombs) in order to define and delimit ritual activities.

The project will also involve exemplary excavations of Mycenaean tombs and ritual deposits, in order to explore and combine different analytical methods (bioarchaeological analysis of human remains, soil micromorphology, organic residue analysis, etc.) which will allow us to better understand the principles

underlying ritual practices. The research design and some preliminary observations were presented to the meeting of the European Association for Archaeologists and to a research meeting of the Research School OIKOS.

***The Anatomy of Crisis* (S. Voutsaki)**

A new project has been initiated which focuses on periods of crisis, catastrophe and regression. The project has a strong methodological focus, as it sets out to explore and assess different methods which can detect the effect of the following causes of crisis: migrations and invasions, violence and warfare, epidemics and plague, climate change and land degradation. At the same time the project has a historiographical component which sets out to investigate the significance of periods of crisis (specifically of migrations, invasions and warfare) in ethnogenesis processes.

The project also has a strong theoretical component as it aims to interpret social regression and its impact on material culture and social practices. During 2011 a research network was set up, which included scholars from many European countries and the United States. A grant application for a European Science Foundation Exploratory Workshop was submitted. The proposal received high grades, but did not receive funding. The proposal will be re-worked and re-submitted next year. Applications to other funding bodies are also planned.

2.2.6 Diet, mobility and society in the prehistoric and protohistoric Aegean

***Diet, Economy and Society in the Ancient Greek World* (S. Voutsaki & S.-M. Valamoti [University of Thessaloniki])**

The proceedings of the conference held at the Netherlands Institute in Athens have been submitted to the publisher. The main aim of the conference was to initiate a discussion on the integration of scientific techniques, archaeological methods and theoretical debates, specifically on the questions of diet and the social practices surrounding the procurement, preparation, exchange and consumption of food. As archaeological science does not operate in a vacuum but in a very specific institutional and social context, the second aim of the conference was to discuss the regulations surrounding all aspects of archaeological science in Greece (the application procedure, the decision-making process, sampling strategies, rules governing the transport and exportation of samples, the organization of archives where results and samples can be stored, the dissemination of results etc.)

The main points made during the round-table discussion were submitted to the General Directorate of the Greek Ministry of Culture, as they have important policy implications for the regulation of archaeological practice in Greece. In addition, the round table and the ensuing discussion have initiated a debate on the ethical obligations of archaeological scientists. The volume will be published by Peeters, Leuven.

2.2.7 Social change and cultural interaction in the Hellenistic and Roman eastern Mediterranean

***Halos excavations* (T.M. Dijkstra & H.R. Reinders)**

The 2011 campaign was aimed at the study of an 8th house in New Halos, dubbed the 'House of Agnostos' when its foundations were laid bare in 2010. The House of Agnostos is located directly next to the House of the Tub that was excavated between 2007 and 2010. The campaign consisted of two main parts: the excavation (27 June –30 July) and an artefact study (1-27 August). The main questions formulated at the start of the campaign concerned the architecture and use of the House of Agnostos. The artefact study was aimed at identifying and cataloguing the finds of 2010 and 2011. Drawings were made of part of the diagnostic sherds and the metal artefacts. We also attempted to reconstruct some vessels, with the results including a semi-complete *chytra* and *lekythos*.

It was clear from the start that we would immediately hit the find layer in all seven (partial) rooms that had been identified the previous year. We removed 298.8 kg of roof tiles from the house and 48.5 kg of pottery, as well as some metal objects, coins, bone and shell fragments, weights and other objects. All the finds were identified, photographed and catalogued during the artefact study, except for the coins, they were corroded. They will be cleaned in the near future. The number of finds was quite low, especially

compared to the neighbouring House of the Tub. This made it very difficult to assign functions to the rooms, which was one of the aims of the excavation. Both the number and the state of the finds seemed to suggest that the House of Agnostos was not in use at the time the earthquake hit New Halos around 265 BC.

A preliminary report on the House of Agnostos has been written, but the results from the excavation and artefact study still need to be contextualized and compared to the other results from New Halos. This will be done in a forthcoming publication.

2.2.8 Attitudes to the past in the present

***Ancient Monuments and Modern Identities* (S. Voutsaki & P. Carledge [University of Cambridge])**

The volume *Ancient Monuments and Modern Identities* is now in press with Ashgate Publishers, London. The essays included in this volume examine the development of interpretive and methodological principles guiding the recovery, protection and interpretation of material remains and their presentation to the public. The role of archaeology is examined alongside prevailing perceptions of the past, and is thereby situated in its political and ideological context. The book is organized chronologically and follows the changing attitudes to the past during the formation, expansion and consolidation of the modern Greek state. The aim of this volume is to examine the premises of the archaeological discipline, and to apply reflection and critique to contemporary archaeological theory and practice.

2.3 ARCTIC AND ANTARCTIC STUDIES

In the Polar Regions, more than in any other region on Earth, human beings are limited in the development of opportunities. Whereas in the early days these regions could only support a limited number of inhabitants, resource development has meant that the number of inhabitants has now exceeded all original bounds. The regions are now used as a frontier resource, producing raw materials and energy sources for the rest of the world. Therefore, the exploration and exploitation of resources in the Polar Regions are more important for the rest of the world than for the inhabitants of the areas themselves. Although most economic activities are limited in these regions, their footprint on the natural landscape is usually substantial. This is, in fact, the first stage in the development of a cultural landscape and that is why it fits very well into the GIA's research programme. Environmental changes caused by climate change have made the regions more accessible and this has economic, scientific and political consequences.

The chair Arctic and Antarctic Studies has two research fields:

1. Exploration and resource development in polar areas
2. Environmental change and pollution in the Arctic

2.3.1 Exploration and resource development in polar areas

LARGE SCALE HISTORICAL EXPLOITATION OF POLAR AREAS (LASHIPA)

Green Harbour, Spitsbergen and the international history of exploitation of the polar areas (D. Avango [post-doc], Y.I. Aalders [PhD student] & L. Hacquebord)

In 2011 the project was completed by analysing the last of the research data, finishing the maps and writing the fieldwork reports LASHIPA 6 and 9. The final project-report was written and submitted to ALW/NWO in November 2011.

In general the research provided a better understanding of the way whalers, hunters and miners dealt with resources over the past 400 years. In most cases the exploitation of natural resources was market-driven, the aim being to supply whale oil, fur, ivory and coal. Usually only economic products were exploited until it was no longer considered profitable to do so. However, it would be wrong to conclude that only economic issues were important, given the fact that in the past 400 years the large-scale exploitation of natural resources has been related to geopolitics (Avango *et al.*, 2011).

Governments sometimes supported and even initiated research and industrial activities to claim sovereignty in the Polar Regions. Occasionally, organizations lobbied for sovereignty without support from their national government. In all these cases competitors used different forms of ritual and symbols to strengthen their positions. In terms of the history of the high Arctic the current interaction of oil and gas interests with governments of the Arctic states is not new, nor is the practice of flag-waving. Today, however, the legal context is different and there are more organizations and nations involved in regional governance. The results of the LASHIPA project indicated that we can expect more difficulties in the interaction between governments and multinationals in the future.

The exploitation of the natural resources in Green Harbour, Spitsbergen in the pre-industrial whaling and hunting period (Y.I. Aalders [PhD student] & L. Hacquebord)

The project has provided a better understanding of the way Russian hunters exploited the natural resources at Spitsbergen in the 18th century. Also, animal bone material from a Russian hunting station was examined for the first time. This study showed that the Russian hunters concentrated on reindeer and walrus, but in different ways: reindeer were killed for food and walrus for ivory. In addition, the archaeological research showed that the hunters were not very efficient in their exploitation of the natural resources. Most probably they killed the walrus only for their teeth. The excavations also showed that the hunters used their spare time to make shoes. Evidence was found of bartering between the Russian

hunters and the European whalers in the 18th century. The final project-report was written and submitted to ALW/NWO in November 2011.

Coal exploitation by the Dutch Spitsbergen Coal Company (NESPICO) (H.R. de Haas [PhD student] & L. Hacquebord)

The PhD thesis is in its final writing phase. All data has been collected and processed. The research project provided new insights into and explanations of the role and motives of Dutch entrepreneurs and the Dutch Government in processes that integrated Spitsbergen into global economic and political systems in the period 1900-1932. Also, more general conclusions were drawn on the economic driving forces behind the international interest in Spitsbergen's resources. Previously, these forces were often explained by looking at national and international political factors. The forthcoming publication of the thesis will contain a more detailed summary of the contributions of this project. The final project-report was written and submitted to ALW/NWO in November 2011.

The exploitation of natural resources by the early 20th century whaling industry (U.I. Gustafsson [PhD student] & L. Hacquebord)

The project has revealed that the primary driving force behind the development of the modern whaling industry in the Arctic and Antarctic has been economic. However, economic factors cannot be used to explain how and why the industry has been sustained by polar circumstances. The combination of archival and field research (archaeological surveys and mapping of settlements) has demonstrated why and how whaling companies adapted their technologies, settlement structure, organization structures and strategies to maintain their operations.

The project has provided new insights into the geopolitical role of polar industries. The modern whaling industry has frequently been used by politicians as an instrument to promote national geopolitical ambitions, and although the industry has been driven by economic motives, some whaling companies also actively supported these ambitions. The final project-report was written and submitted to ALW/NWO in November 2011.

British mining, exploration, and geopolitics on Spitsbergen, 1904-1953 (F. Kruse [PhD student] & L. Hacquebord)

Information was gathered during extensive archival research in England, Scotland and Norway, as well as during two archaeological expeditions to Spitsbergen (Svalbard) in 2008 and 2010. What became apparent is that four British mining companies began to exploit the mineral resources in the Arctic for commercial reasons. However, on meeting international rivals in no-man's-land, they appealed to their own government and other powerful parties in British society for support. While their rhetoric of boundless coal and iron found parallels in other companies, British entrepreneurs specifically used anti-German propaganda and early Cold War sentiments to pursue their goals. While some favoured British occupation of Spitsbergen, the archipelago nonetheless became Norwegian in 1920, which signalled the irrevocable decline of British development. The project is in the final stages of being written up. The driving forces behind British enterprise in the European Arctic within a rapidly changing historical context will be the focal points of a forthcoming PhD thesis.

Exploration and exploitation of Novaja Semlya and Franz Josef Land, Russia (L. Hacquebord)

In 2011 an opportunity was taken to join an expedition to Novaya Semlya and Franz Josef Land. Franz Josef Land was discovered relatively late, in 1872-1874. The high Arctic archipelago was hardly exploited. Apart from some walrus hunting, coal was mined only once. This makes this archipelago a very interesting area to compare with Spitsbergen.

SCIENCE AND POLITICS IN POLAR AREAS

The footprint of tourism: tourist behaviour on cultural heritage sites in Antarctica and Svalbard (R.M. Roura [PhD student] & L. Hacquebord)

After finishing his research in 2010, Roura successfully defended his thesis on 28 April 2011. The aim in 2011 was to follow up on some aspects of his doctoral research that were of interest, but for thematic or practical reasons did not fit into the dissertation. These included, in particular, some case studies and some specific research topics, such as site formation processes affecting cultural remains in the Polar Regions, other than tourism, which was the topic of the dissertation. The broad line of enquiry concerned human-environment interactions in the Polar Regions including the human footprint on the environment and its role in landscape transformation as examined from the perspective of behavioural archaeology. Coupled with this line of enquiry was the study of site formation processes affecting historic and archaeological polar sites. Related research topics addressed the management – and, more broadly, the governance – of the polar environment.

2.3.2 Environmental change and pollution in the Arctic

BIRDHEALTH IN THE ARCTIC

How are geese adapting to global warming? (M.J.J.E. Loonen, C.A.M. Sandström [PhD student, University of Groningen, FWN] & D. Egelkraut [University of Wageningen])

In 2011 data was collected on the long-term survival prospects and general health of Arctic-breeding barnacle geese. The data for this year exhibited a low predation pressure by Arctic foxes. The number of foxes was low, and there was no denning behaviour. Data loggers were collected to obtain more information on different migration strategies. In the field, the focus was on an experimental vegetation study simulating warming and grazing. In the laboratory, the focus was on the analysis of blood samples for antibodies of toxoplasmosis, a parasite, which is brought to the Arctic by infected geese.

Adaptation and migration

Adaptation and migration are both important strategies for indigenous peoples in dealing with environmental change.

The Thule migration to the Eastern Arctic (M.E. van Kruining [PhD student] & L. Hacquebord)

As part of her PhD project, Van Kruining conducted fieldwork in the southern part of Greenland. In addition, the history, background and different types of Thule winter dwellings were studied.

Transnational ties, urban networks and identity formation among Inuit migrants in Denmark and southern Canada (T.K. Terpstra [PhD student] & L. Hacquebord)

This PhD project concentrated on preparing and conducting anthropological fieldwork in Denmark and southern Canada. Three months were spent as academic visitor at the Canadian Circumpolar Institute at the University of Alberta in Canada.

3 RESEARCH ACTIVITIES

3.1 FIELDWORK

3.1.1 Prehistoric and Protohistoric Archaeology

3.1.1.1 *The Netherlands*

Province of Drenthe, 1 January 2011–1 January 2012. Field surveys on Middle Palaeolithic site(s).

Director : M.J.L.Th. Niekus
Staff : D. Stapert, J.R. Beuker (Drents Museum, Assen)
Participants : M.J.L.Th. Niekus, L. Kiers (student), J. Beuker (Drents Museum, Assen) and volunteers (amateur-archaeologists) from the Drents Prehistorische Vereniging
Cooperation : J.R. Beuker (Drents Museum, Assen)

Roderwolde-Matsloot (De Onlanden), 7 February–18 May. Excavation of 70 medieval peat *terps* (small, hand-dug trenches) and 10 trenches at a selection of these sites.

Director : J.A.W. Nicolay
Staff : S. Tiebackx, R.J. Kusters
Participants : *GIA students*: M. Bakker, T. Varwijk, J. Blom, A. Hullegie, A. Kuiper, J. Kuyper, J. Nieuwenhof, T. Trienen, T. van Wijck
ARC: M. Bannink, K. Lenting, S. le Biannic
Arcadis: W. Ytsma, F. Buurmans, A. Visser
RAAP: J. Hielkema, J. Jans
Saxion: V. de Bruyn, V. Koekkoek, M. Reinders, F. de Weerd
DPV (volunteers): G. Kerkhof, L. Hoven, H. Dalenberg
Cooperation : E. Akkerman (Arcadis), G. Aalbersberg (RAAP), E. van der Zwet (RAAP)

Wekerom, 14-29 May. Celtic Field Project.

Director : S. Arnoldussen
Staff : S. Arnoldussen, M. Schepers
Participants : M. Schepers
Cooperation : J.-W. de Kort

Firdgum, 14 May–7 July. Sampling for archaeobotanical *terpen* research.

Director : J.A.W. Nicolay
Staff : M. Schepers
Participants : S.R. Kaaijk
Cooperation : R. van Klink

Groningen–Europapark/Helperzoom, 16 May–23 June. Fieldschool at Middle Neolithic and Iron Age sites, sites excavated by ARC BV.

Director : J. Veldhuis (ARC BV)
Staff : S. Arnoldussen, A. Kuijper, E. Anker, T. Trienen
Participants : First year GIA students
Cooperation : ARC BV, Gemeente Groningen (ROEZ, G. Kortekaas)

Odoornerweg, municipality of Borger-Odoorn, 21 May–17 June. Test trench near megalith tomb D32-Odoorn.

Director : D.C.M. Raemaekers
Staff : E.C. Hopman (master student)
Participants : All first year students
Cooperation : W.A.B. van der Sanden (Drents Plateau).
This project was carried out as part of the EDR project 'Land der Ontdekkingen'.

Firdgum, 14 June–15 July. Excavation of an early medieval *terp* site.

Director : J.A.W. Nicolay
Staff : S. Tiebackx, R.J. Kusters, J.T. van Gent, M. Schepers
Participants : *GIA students*: D. Postma, M. Bakker, T. Varwijk, N. Dekker, P. Hoebe, L.-A. van Sambeek; J. Bloem (volunteer Fryske Akademy)
Cooperation : P.C. Vos (Deltares); RCE: H. Huisman, B. van Os, M. van IJzendoorn; D. Ngan-Tillard (University of Wageningen)

Lelystad, 20 June–29 July. Excavation of a 16th century shipwreck.

Director : A.F.L. van Holk
Staff : E. Bolhuis, D. Velthuisen, L. Koehler, G. Schreurs, F. Dallmeijer
Participants : *GIA students*: Y. van Popta, F.B. Postma-Saan, D. Spiekhout, K. Blok, C. de Boer, E. Wijshake; M. van der Linden (Saxion Hogeschool); L. Muis (UvA); D. Zwart (particulier); L. Ziengs (U.L.); F. Post (Saxion Hogeschool); A. Bulder (U.L.); J. de Kroon (Van Hall-Larenstein); and volunteers from the Archeologische Werkgemeenschap Nederland
Cooperation : D. Velthuisen (Nieuw Land); L. Koehler, G. Schreurs, F. Dallmeijer (all RCE)

Lunteren–Wekerom/ De Vijfsprong, 1-30 July. Excavation of the Celtic Field complex 'De Vijfsprong' near Lunteren.

Director : S. Arnoldussen
Staff : S. Arnoldussen
Participants : *GIA students*: K. de Vries, J. Top, M. Schepers, S. Dresscher, E. Anker, P. Schrijver
Cooperation : C. Peen (Gemeente Ede), C. van der Genugten (Stichting Gelders Landschap)

Wetsingermaar, municipality of Winsum, 4-8 July. Landscape corings around the site Wetsingermaar.

Director : D.C.M. Raemaekers
Staff : –
Participants : Bachelor students
Cooperation : This project was carried out as part of the EDR project 'Land der Ontdekkingen'.

Oosterbeintum, 15 August–15 September. Excavation of Iron Age to Middle Age *terp* site.

Director : J.A.W. Nicolay
Staff : S. Tiebackx, R.J. Kusters, J.T. van Gent, M. Schepers
Participants : *GIA students*: T. Varwijk, M. Bakker, N. Dekker, W. Samson, T. Douma
Fryske Akademy (volunteers): J. Bloem, R. Visser, A. Draaisma, H. Baron, L. Burger
Cooperation : P.C. Vos (Deltares), H. Huisman (RCE)

Oosterbeintum, 5-20 September. Sampling for archaeobotanical *terpen* research.

Director : J.A.W. Nicolay
Staff : M. Schepers, R.T.J. Cappers
Participants : *GIA students*: S.R. Kaaijk, M. Hondelink, J. van der Laan, F. Fantone; E. Brüning (Leiden University), K. Aluwé (Gent University)
Cooperation : R. van Klink (entomology department COCON, RUG)

3.1.2 Classical and Mediterranean Archaeology & Greek Archaeology

3.1.2.1 Italy

Crustumerium

Crustumerium, 28 June–6 August. Excavation of tombs on Iron Age-Archaic necropolis Monte Del Bufalo.

Director : P.A.J. Attema

Staff : P.A.J. Attema, B. Belevi Marchesini, S.E. Boersma, E. Bolhuis, G.J.M. van Oortmerssen, J.F. Seubers, S.L. Willemsen

Participants : *GIA students*: R. Brandhoff, R. Bronkhorst, B. Danhof, J. Hilbrants, P. Kalkman, T. Kauling, A. Kropp, T. Lanjouw, C. Luinge, S. Manuel, M. Nijboer, Y. van Popta, I. Rom, T. Trienen, F. Verhagen, A. Versendaal, J. Waanders, E. Witmer

Cooperation : F. di Gennaro (SSBAR: Soprintendenza Speciale per i Beni Archeologici di Roma) and W. Pantano (SSBAR)

Crustumerium (Settebagni), 12 October–5 November. Survey on and around the Iron Age settlement of Crustumerium.

Director : P.A.J. Attema

Staff : J.F. Seubers

Participants : *GIA students*: T. Kauling, J. Hilbrants, Y. van Popta, J. Krist, T. Lanjouw

Cooperation : B. Ullrich (Eastern Atlas, Berlin)

Calabria

Cerchiara di Calabria, 2-21 April. Archaeological survey, geophysical survey, soil pits and test trenches at Late Bronze Age sites T228, T94, T97, T113.

Director : P.M. van Leusen

Staff : W. de Neef, K.L. Armstrong, P.A.J. Attema

Participants : T. Roovers (*GIA student*), R. Freibothe (Technical University of Berlin), S. Seitz (Johann-Gutenberg-University of Mainz)

Cooperation : D. Jordan (Johann-Gutenberg-University of Mainz)

Cerchiara di Calabria, 1-31 July. Archaeological survey, geophysical survey, soil pits and test pits at Late Bronze Age sites T113, T114, Tx, T219, T94.

Director : P.M. van Leusen

Staff : W. de Neef, K.L. Armstrong, P.A.J. Attema

Participants : C. de Waal, J. Wubs (*students*), S. Seitz (Johann-Gutenberg-University of Mainz), B. Ullrich (Eastern Atlas Geophysical Prospektion GmbH, Berlin)

Cooperation : D. Jordan (Johann-Gutenberg-University of Mainz)

Cerchiara di Calabria, 20 October–18 November. Geophysical studies and test pits at Contrada Damale/Portieri di Cerchiara.

Director : P.M. van Leusen

Staff : W. de Neef

Participants : *GIA students*: H. Roovers, J. Wubs, C. De Waal, P. Kalkman, T. Kesteloot (U Gent), M. Pendavingh (*volunteer*)

Cooperation : J. Sevink (University of Amsterdam), D. Jordan (University of Mainz)

Civita and San Lorenzo Bellizi (Calabria), 25 September–2 October. Geophysical survey at protohistoric sites on Monte San Nicola and Maddalena areas.

Director : W. de Neef

Staff : B. Ullrich, R. Kniess, S. Hauff (all Eastern Atlas Geophysical Prospektion GmbH, Berlin)

3.1.2.2. Greece

Ayios Vasilios, Sparta, 3-17 July. Excavation of the Northern Cemetery.

Director : S. Voutsaki

Staff : I. Moutafi (University of Sheffield)

Participants : K. Sourgiadaki (University of Ioannina)

Cooperation : A. Vassilogamvrou, Director 5th Ephorate of Prehistoric and Classical Antiquities, Sparta

Halos, 1-30 July. Excavation House of Agnostos

Director : H.R. Reinders

Staff : T.M. Dijkstra

Participants : M. Admiraal, J. van der Heul, J. Krist, D. van der Linde, M. Post, P. Swart, D. Timmerman, D. Efstathiou, J. Mamaloudi, E. Stamelou

Cooperation : Z. Malakasiotis and V. Ronditi, 13th Ephorate of Prehistoric and Classical Antiquities, Volos

Halos, 1-30 August. Study artefacts House of Agnostos.

Director : H.R. Reinders

Staff : T.M. Dijkstra

Participants : J. van der Heul, R. Brandhoff, P. Swart

Cooperation : Z. Malakasiotis and V. Ronditi, 13th Ephorate of Prehistoric and Classical Antiquities, Volos

Delphi, 23 August–9 September. Study of Early Helladic and Middle Helladic ceramics from Kirra.

Director : D. Skorda

Staff : C. Wiersma, I. Mathioudakis

Zakynthos, 18-25 November. Study of Early Helladic and Middle Helladic ceramics from Zakynthos survey.

Director : G.J. van Wijngaarden (UvA)

Staff : C. Wiersma, N. Pieters, O. Hoogzaad

Cooperation : G.J. van Wijngaarden (UvA)

3.1.3 Arctic and Antarctic Studies

3.1.3.1 The Polar Regions

Jutland, Denmark, 25 April–20 May. Anthropological fieldwork: Greenlandic Inuit in Denmark.

Director : T.K. Terpstra

North Spitsbergen, 21-29 June. Archaeological survey of the north coast of Spitsbergen.

Director : L. Hacquebord

Ny-Ålesund, Spitsbergen, 22 June–24 August. Barnacle Goose Ecology.

Director : M.J.J.E. Loonen

Staff : M.J.J.E. Loonen

Participants : D. Egelkraut (University of Wageningen), S. Lubbe (volunteer), E. Kolvoort (University of Leiden)

Cooperation : S. Coulson (UNIS), G.W. Gabrielsen (Norwegian Polar Institute)

Ny-Ålesund, Spitsbergen, 8-25 July. Studying tourist motivation and education.

Director : M.J.J. E. Loonen

Staff : M.J.J.E. Loonen

Participants : N. Miedema

Cooperation : M. Cornelisse (NHTV, Breda)

Ny-Ålesund, Spitsbergen, 22-24 July. Finding location of marble quarry.

Director : F. Kruse

Staff : M.J.J.E. Loonen

Participants : S. Lubbe, N. Miedema

Novaya Semlya and Franz Josef Land, Russia, 25 July–9 August. Archaeological survey of Novaya Semlya and Franz Josef Land.

Director : L. Hacquebord

Nuummiut, Greenland, 26 July–11 August. Excavation of two Thule winterdwellings and survey of the Narsaq area.

Director : P. Knudsen (National Museum of Nuuk)

Staff : M. Soerensen (University of Copenhagen), M. Hardenberg (University of Copenhagen), K. Smiarowski (University of New York), C. Koch Madsen (University of Copenhagen), M. van Kruining (University of Groningen)

Participants : *University of the Faroe Islands*: H. Mohr Johansen
University of Copenhagen: S. Bohr, V. Joensen, A.S. Liedelsen Jacobsen, A. Monsted, A. Wolff-Jensen, K. Moeller, K. Fieldler

University of Greenland: M. Christensen, N. Silas Nathielsen, M. Petersen, P. Lyng

University of Lund: P. Pettersson

University of Oslo: A. Bruun Arnesen

Cooperation : M. Soerensen (University of Copenhagen), M. Hardenberg (University of Copenhagen), K. Smiarowski (University of New York)(CUNY), C. Koch Madsen (University of Copenhagen), M. van Kruining (University of Groningen)

Alberta, Canada, 6 September–27 November. Anthropological fieldwork: Inuit in southern Canada.

Director : T.K. Terpstra

3.2 LECTURES AND POSTER PRESENTATIONS

Armstrong, K.L.

2-3 December, Leiden (Netherlands): International Survey Workshop. Lecture: 'Geophysical research in the Raganello Watershed.'

9 December, Groningen (Netherlands): Annual meeting GIA. Lecture: 'Geophysical research in the Raganello Watershed.'

Attema, P.A.J.

25 January, Rome (Italy): Workshop 'Immensa aequora, Ricerche archeologiche, archeometriche e informatiche per la ricostruzione dell'economia e dei commerci nel bacino occidentale del Mediterraneo (metà IV sec.a.C - I sec.d.C)'. Lecture: 'Production and distribution of amphorae from le Grottaacce (Astura)' (with T.C.A. de Haas and G.W. Tol).

10 February, Groningen (Netherlands): International workshop 'Current Research into Pre-Roman Burial grounds in Italy'. Lecture: 'Pre-Roman burial grounds in Italy, introduction to the workshop.'

24 March, Groningen (Netherlands): Book presentation: *Regional Pathways to Complexity, Settlement and Land use dynamics in early Italy from the Bronze age to the Republican period*.

8 July, Rome (Italy): Royal Netherlands Institute at Rome. Book presentation: *Regional Pathways to Complexity. Settlement and Land-use Dynamics in early Italy from the Bronze Age to the republican period*. Lecture: 'RPC field survey methodology in the Crimea (Ukraine): A brief consideration on the potential and limitations of comparative survey of rural landscapes of antiquity.'

11-12 November, Valencia (Spain): SEMA XII, Seminario de Estudios de la mujer en la Antigüedad, Tiarae, Diadems and Headdresses in the Ancient Mediterranean Cultures: Symbolism and Technology. Lecture: 'Micrometric-scale investigations on a hairdressing of the Orientalizing period from Tomb 232 - Monte Del Bufalo, Crustumerium (Rome)'. Poster presentation with M.R. Giuliani, I.A. Rapinesi, D. Ferro, F. di Gennaro.

25-26 November, Leuven and Tongeren (Belgium): IAP-ROCT Symposium 'The Creation and Transformation of Roman Centrality, Urban Forms and Landscape Dynamics, (Geo)Archaeological Evidence and Historical Data for the Urban Centres and their Hinterland'. Lecture: 'The colonial past in Late republican and Early Imperial society in the Pontine region, Central Italy.'

29 November, Groningen (Netherlands): GIA Research Seminar, 'Towards an Explicit Publication Strategy?' Contribution to the seminar: Weighing Scientific Worth. A discussion on future research and research strategies by the GIA (with D. Raemaekers and S. Voutsaki).

9 December, Groningen (Netherlands): Annual meeting GIA. Lecture: 'Het koloniale verleden in Romeins Centraal-Italië.'

14 December, Amsterdam (Netherlands): Vrije Universiteit, MA Research Seminar. Lecture: 'De 'verre chora' van Chersonesos: het Dzarylgac Survey Project.'

Beckerman, S.M.

26 April, Groningen (Netherlands): Capita Selecta GIA. Lecture: 'Skeleton (and other goodies) in the closet! New possibilities for old research?!' (with G.R. Nobles).

1-2 December, Kraków (Poland): Corded Days in Kraków. Lecture: 'New insights in SGC settlement ceramics. Research into the function, use and chronology of the Single Grave Culture settlement ceramics from a tidal environment in the Netherlands.'

Cappers, R.T.J.

9 December, Groningen (Netherlands): Annual meeting GIA. Lecture: 'Brood van bedekt gerst. Etno-archeologisch onderzoek met een onverwacht resultaat'.

Galestin, M.C.

9 February 2010—16 March, Groningen (Netherlands): HOVO, 'De Etrusken en hun Cultuur' (5 lectures for the Seniorenacademie (HOVO) about the Etruscans).

22 March, Groningen (Netherlands): Lecture for Honours Students at the University of Groningen. Lecture: 'Rituele Ruimtes in Noord Nederland.'

24 March, Ezinge (Netherlands): Excursion of Honours Students at the University of Groningen. Lecture: 'Ezinge visit of the Excavation.'

2 April, Rolde (Netherlands): Drentse Prehistorische Vereniging. Lecture: 'De Archeologie van de Varus slag.'

Haas, T.C.A. de

12 January, Assen (Netherlands): Lezingenreeks Drents Prehistorische Vereniging. Lecture: 'De Romeinse kolonisatie en exploitatie van drie landschappen: veldverkenningen in de Pontijnse regio (midden-Italië).'

24-25 January, Rome (Italy): Workshop Immensa Aequora. Lecture: 'Production and distribution of amphorae from Le Grottacce (Astura)' (co-authored with G.W. Tol).

30 March, Amsterdam (Netherlands): VU research seminars. Lecture: 'Roman colonization of the Pontine Marsh: confronting archaeological, environmental and historical evidence.'

6 April, Groningen (Netherlands): Guestlecture in the series 'Villa's en Boeren': 'Roman colonization of the Pontine Marsh: confronting archaeological, environmental and historical evidence.'

9 December, Groningen (Netherlands): Annual meeting GIA. Lecture: 'Fora, stationes en heiligdommen en hun rol in de Romeinse economie' (co-authored with G.W. Tol).

Hacquebord, L.

18 May, Groningen (Netherlands): NGIZ-Noord. Lecture: 'Arctica en Antarctica. Common Heritage of Mankind?'

20 May, Borne (Netherlands): Scandinavische Vereniging Twente. Lecture: 'Van wie is de Noordpool?'

30 May–1 June, Moscow (Russia): Historical Museum, at the invitation of the Dutch Embassy. Lecture: 'The Legacy of Willem Barentsz'.

27 August, Warffum (Netherlands): Opening of the exhibition *Bedijking van Groningen*. Lecture: 'Wierden en dijken getuigen van 2000 jaar strijd tegen het water'.

7-9 September, Dundee (Scotland): Congress South Georgia Heritage Trust. Lecture: 'Polar Industrial Heritage Sites; Sources of Historical Information' (with D. Avango).

22-24 October, Siena (Italy): Congress. Lecture: 'Social Economic Consequences of Change in Arctic Regions'.

25 October, Bedum (Netherlands): Senioren Rotary Groningen-Noord. Lecture: 'Noordpool-Zuidpool'.

11 December, Drachten (Netherlands): Karmelklooster. Lecture: 'Antarctica en Arctica, werelderfgoed?'

14 December, Utrecht (Netherlands): National Polar Symposium, exploring Polar Regions / 100 Years since Amundsen. Lecture: 'Roald Amundsen, a hero?'

22 December, Groningen (Netherlands): Studentenvereniging Ruimtelijke Wetenschappen *Battuta*. Lecture about 'Geopolitiek in poolgebieden'.

Holk, A.F.L. van

30 August, Groningen (Netherlands): Introduction lecture 'Maritime archaeology in Flevoland.'

27 September, Groningen (Netherlands): Wetland Archaeology. Lecture: 'Maritime cultural landscape.'

15 November, Amersfoort (Netherlands): NoA, Project 'Aanloop Molengat'. Lecture: 'IFMAF.'

Kruining, M.E. van

11 January, Groningen (Netherlands): Polar night of Groningen. Lecture: 'Over Thule en Kalaallit: Inuit migratie in het verleden en het heden' (with T.K. Terpstra).

24 November, Groningen (Netherlands): Staff meeting Martiniziekenhuis. Lecture: 'Archeologie in de kou: Inuit, walvisvaarders en Neanderthalers' (with M.J.L.Th. Niekus).

Leusen, P.M. van

12 February, Regensburg (Germany): Kolloquium des Interdisziplinären Zentrums Antike Welt: Stadt und Land in der Antike – Archäologische und Historische Perspektiven. Lecture: 'Systematic field-walking surveys in Lazio and Calabria: Results, Limitations and Opportunities.'

8 July, Rome (Italy): KNIR, presentation of RPC book: 'Spin-off of the RPC Project.'

Lindenhout, E. van 't

7 October, Groningen (Netherlands): TMA symposium 'Architectuur als bron in de archeologie'. Keynote lecture: 'Architectuur in de archeologie: een mental cinema?'

9 December, Groningen (Netherlands): Annual meeting GIA. Lecture: 'Verder bouwen in Latium.'

Loon, T. van

19-23 March, Oxford (UK): Gods in Ruins Conference. Lecture: 'Defining the Ritual, Analyzing Society.'

Loonen, M.J.J.E.

1 January–31 December, Netherlands: various popular lectures:

19 January, Ter Apel, IVN; 25 January, Zwolle, KNNV; 28 January, Groningen, University of Groningen, Krans van Professorenvrouwen; 11 February, Stadskanaal, Exposition Eskimo's; 4 March, Den Helder, Bird experts working group; 6 March, Amsterdam, Bird experts club; 10 May, Groningen, students of the Willem Lodewijk Gymnasium; 5 July, Ny-Ålesund (Spitsbergen): Kings Bay lecture; 26 October, Oslo (Norway): Tourism lecture; 22 November, Hardenberg, IVN; 24 November, Groningen, Augustinus College; 29 November, Berkenwoude, Nature club.

14 January, Portland, Oregon (USA): North American Arctic Goose Conference. Lecture: 'The delicate role of the barnacle goose in northern vegetations' (presented by J. Prop).

3 February, Akureyri (Iceland): CAFF meeting. Lecture: 'The Netherlands as observer to CAFF.'

30 May, Delft (Netherlands): Course Civil Engineering. Lecture: 'Vulnerability of the Arctic ocean: creating awareness and sustainability.'

26 August, Churchill (Canada): Jefferies Memorial Symposium. Keynote lecture: 'Understanding goose numbers.'

20 September, Wageningen (Netherlands): Symposium Host-Pathogen Interactions on the Move. Lecture: 'Bird migration as an escape to disease risk: the Barnacle goose.'

24 October, Oslo (Norway): NySMAC symposium. Lecture: 'Terrestrial Ecosystem Flagship.'

24 October, Oslo (Norway): NySMAC symposium. Lecture: 'Top down control in terrestrial arctic ecosystems.'

28 October, Leeuwarden (Netherlands): Symposium Animal Experiments in the Wild. Keynote lecture: 'Animal experiments with wildlife.'

3 November, Groningen (Netherlands): Course Polar Ecosystems Faculty of Science. Lecture: 'Polar terrestrial ecosystems.'

14 November, Groningen (Netherlands): Course Polar Ecosystems Faculty of Science. Lecture: 'Estimating body condition of goslings.'

20 November, Osnabrück (Germany): Gaese Gruppe Deutsche Ornithologische Gesellschaft. Lecture: 'Population control of geese in arctic ecosystems.'

30 November, Amsterdam (Netherlands): Workshop Netherlands Arctic Program NOW. Keynote lecture: 'The Netherlands Arctic Station on Spitsbergen.'

Neef, W. de

2 December, Leiden (Netherlands): International Mediterranean Survey Workshop. Lecture: 'The Rural Life in Protohistoric Italy Project: Goals, Approaches and First Results.'

Nicolay, J.A.W.

10 February, Aurich (Germany): Marschenratskolloquium 2011. Lecture: 'A new phase of *terp* research in the northern Netherlands: the value of a damaged cultural heritage.'

9 December, Groningen (Netherlands): Annual meeting GIA. Lecture: 'Ruim 70 'veenterpen' op de schop. Archeologisch feestje in 'De Onlanden'.'

Niekus, M.J.L.Th.

6 February, Leiden (Netherlands): Annual Steentijddag (Stone Age archaeology). Lecture: 'Inhumatie, 600 haardkuilen en 100.000 vuurstenen. Een mesolithische opgraving binnen het tracé van de N23 te Swifterbant' (with T. Hamburg [ARCHOL bv Leiden]).

6 February, Leiden (Netherlands): Annual Steentijddag (Stone Age archaeology). Lecture: 'Fire in the hole! Configuraties van haardkuilen op mesolithische vindplaatsen in Noord-Nederland.'

- 11 February, Aurich (Germany): Marschenratskolloquium 2011, Aktuelle archäologische Forschungen im Küstenraum der südlichen Nordsee: Methoden – Strategien – Projekte. Lecture: ‘Fire in the hole! Mesolithic hearth-pits in the northern Netherlands and Lower Saxony with special reference to Eversten’ (with J.E. Fries (Oldenburg, Germany)).
- 4 June, Groningen (Netherlands): Nacht van de Kunst & Wetenschap. Keynote lecture: ‘Neanderthals’ Discussion on Neanderthals with A. Kennis led by M. Bentveld in Forum Images (Groningen).
- 24 November, Groningen (Netherlands): Meeting Martiniziekenhuis Groningen. Keynote lecture: ‘De Neanderthaler in Noord-Nederland: over oude vondsten en nieuwe inzichten’.

Nieuwhof, A.

- 29 March, Groningen (Netherlands): GIA Research Seminar. Lecture: ‘Human remains in Ezinge. Account of a quest.’
- 19 November, Wijnaldum (Netherlands): Themadag Vereniging Oudgermanisten. Lecture: ‘Het bewoningshaat in het Noord-Nederlandse kustgebied aan het einde van de Romeinse tijd.’

Nijboer, A.J.

- 20-22 April, Verucchio (Rimini, Italy): Workshop ‘Immagini di Uomini e di donne dalle Necropoli Villanoviane di Verucchio’. Lecture: ‘Cremated human bones, radiocarbon dates and the Iron Age in Italy.’

Peeters, J.H.M.

- 16 February, Deventer (Netherlands): AWN 18th annual meeting. Lecture: ‘Jager-verzamelaars langs de IJssel.’

Postma, D.

- 13 April, Firdgum (Netherlands): Information night for locals on the plans to reconstruct an early medieval turf-walled building. Lecture: ‘Zodenhuisproject: vroegmiddeleeuws zodenhuis Firdgum.’ (with D. Bosma, chairman of Stichting Yeb Hettinga Skoalle, and L. Vogels, committee member Vereniging Dorpsbelang Tzummarum-Firdgum).
- 2 July, Firdgum (Netherlands): Open day *terp* excavation and Yeb Hettinga Museum. Permanent two-piece poster presentations: ‘Bouwen in een boomloos kustgebied’ and ‘Reconstructie van een verloren bouwtraditie’.
- 16 September, Firdgum (Netherlands): Public lecture on the academic background of the Turf House Project, ‘De reconstructie van een vroegmiddeleeuws zodenhuis: archeologisch onderzoek naar een verloren bouwtraditie uit het kustgebied van Noord-Nederland’.
- 23 September, Firdgum (Netherlands): General meeting of the *Gebiedsplatform voor Noardwest Fryslân*. Lecture: ‘De reconstructie van een vroegmiddeleeuws zodenhuis: archeologisch onderzoek naar een verloren bouwtraditie uit het kustgebied van Noord-Nederland.’
- 2 November, Assen (Netherlands): Drents Prehistorische Vereniging. Lecture: ‘De reconstructie van een vroegmiddeleeuws zodenhuis: archeologisch onderzoek naar een verloren bouwtraditie uit het kustgebied van Noord-Nederland.’
- 15 November, Leeuwarden (Netherlands): Argeologysk Wurkferban, Fryske Akademy. Lecture: ‘De reconstructie van een vroegmiddeleeuws zodenhuis: archeologisch onderzoek naar een verloren bouwtraditie uit het kustgebied van Noord-Nederland.’
- 18 November, Groningen (Netherlands): Guest speaker at a lecture on early medieval settlements. Lecture: ‘Archeologisch onderzoek naar een verloren bouwtraditie uit het kustgebied van Noord-Nederland’ (part of a lecture series by J.A.W. Nicolay: ‘Van kwelderboer naar stedeling’).
- 19 November, Wijnaldum (Netherlands): Vereniging van Oudgermanisten. Lecture: ‘De reconstructie van een vroegmiddeleeuws zodenhuis: archeologisch onderzoek naar een verloren bouwtraditie uit het kustgebied van Noord-Nederland.’
- 9 December, Groningen (Netherlands): Annual Meeting GIA. Lecture: ‘De reconstructie van een vroegmiddeleeuws zodenhuis: archeologisch onderzoek naar een verloren bouwtraditie uit het kustgebied van Noord-Nederland.’

Postma-Saan, F.B.

- 8 November, Groningen (Netherlands): Workshop on Wetland Archaeology. Lecture: 'De Zuiderzee als verkeersplein: de natuurlijke en culturele context van de turfvaart over zee.'
- 10 November, Lelystad (Netherlands): Introduction project at the Nieuw Land Erfgoedcentrum. Lecture: 'De Zuiderzee als verkeersplein: de natuurlijke en culturele context van de turfvaart over zee 1600-1900.'

Prummel, W.

- 12 February, Aurich (Germany): Marschenratskolloquium 2011. Lecture: 'The animals from the *terp* Wijnaldum-Tjitsma (Netherlands), landscape, economy and status' (also on behalf of: E. Esser & J.T. Zeiler).
- 28 April, Buitenpost (Netherlands): IJstijdenmuseum. Lecture: 'De jacht op oeros langs de rivier de Tjonger in de midden-steentijd.'
- 17 June, Schleswig (Germany): Hunting Workshop at the Centre for Baltic and Scandinavian Archaeology (ZBSA). Lecture: 'Falconry in Central Scandinavia: origin and examples.'
- 13 December, Amersfoort (Netherlands): Workshop archaeozoology. Lecture: 'Leeftijdbepalings: geven alle methoden dezelfde uitkomst?'

Raemaekers, D.C.M.

- 26 January, Amersfoort (Netherlands): Seminar by the State Service for Cultural Heritage. Lecture: 'Van steentijd tot schepen. Onderzoeksthema's van de Groningse archeologie.'
- 11 February, Aurich (Germany): Marschenratskolloquium 2011. Lecture: 'From the house of the dead to the house of the living. New initiatives for research on Funnel Beaker settlements in the Netherlands.'
- 28 June, Wilhelmshaven (Germany): Keynote lecture 'From Swifterbant to TRB. Evidence of Frühneolithikum (4000-3400 cal. BC) in the northern Netherlands'.
- 29 November, Groningen (Netherlands): GIA Research Seminars. Lecture: 'Visitatierapport en reactie.'
- 13 December, Münster (Germany): Keynote lecture 'Neolithic Margins. The Swifterbant culture as wetland phenomenon'.

Schepers, M.

- 15 March, Kiel (Germany): Socio-environmental Dynamics. Lecture: 'Dung layers in terpen.'
- 6 October, Schiermonnikoog (Netherlands): Palynologendagen 2011. Lecture: 'Palaeoassocia: phytosociologische vegetatiereconstructie op basis van hedendaagse co-existentie van soorten.'
- 9 December, Groningen (Netherlands): Annual meeting GIA. Lecture: 'Uit de schaduw van het elzenbroekbos: vegetatiereconstructie rond Swifterbant'.

Seubers, J.F.

- 29-30 April, Madrid (Spain): Mediterranean Survey Workshop. Lecture: 'Crustumerium and its territory, new light through old windows.'
- 2-3 December, Leiden (Netherlands): Mediterranean Survey Workshop. Lecture: 'A new box of crayons, preliminary quantitative data from the Crustumerium Survey 2011.'
- 9 December, Groningen (Netherlands): Annual meeting GIA. Lecture: 'Het territorium van Crustumerium, de eerste resultaten uit het veld.'

Terpstra, T.K.

- 11 January, Groningen (Netherlands): The Polar Night of Groningen. Lecture: 'Over Thule en Kalaallit: Inuit migratie in het verleden en het heden' (with M.E. van Kruining).
- 15 March, Groningen (Netherlands): Minor Canadian Studies. Lecture: 'Inuit and Migration.'
- 22 June, Akureyri (Iceland): 7th International Congress of Arctic Social Sciences. Lecture: 'Mobility and Immobility in Narratives of Inuit: Stories of Greenlanders about living in Denmark.'
- 6 and 10 December, Groningen (Netherlands): Minor Arctic Studies. Lecture: 'Arctic Indigenous Peoples.'

Tol, G.W.

- 14 January, Groningen (Netherlands): TMA conference 'Archeologie en de Romeinse economie'. Lecture: 'Scherven tellen. Een studie naar site-complexiteit en -evolutie in het achterland van Antium (Lazio, Centraal Italië).'

- 24-26 January, Rome (Italy): Workshop 'Immensa Aequora'. Lecture: 'Production and distribution of amphorae from Le Grottaacce (Astura)' (with T.C.A. de Haas and P.A.J. Attema).
- 31 March, Groningen (Netherlands): Guest lecture in lecture series 'Villa's en boeren in Romeins Italië'. Lecture: 'Evidence for Post-Roman occupation in the ager of Antium (AD 300 – 700)'.
- 7-10 April, Thessaloniki (Greece): Conference 'Late Roman Coarse Ware 4'. Lecture: 'A road station on the Peutinger map. Ceramics from the coastal settlement of Astura (4th-7th century AD), Lazio, Central Italy' (with P.A.J. Attema).
- 9 December, Groningen (Netherlands): Annual meeting GIA. Lecture: 'Fora, stationes en rurale heiligdommen. De rol van kleine centrale plaatsen in de Romeinse economie' (with T.C.A. de Haas).

Voutsaki, S.

- 11 February, Groningen (Netherlands): Conference Research on Pre-Roman Cemeteries. Keynote lecture: 'Stable isotope analysis: potential and limitations.'
- 14 May, Durham (UK): Annual Meeting of the Prehistoric Society, Europa Day. Keynote lecture: 'The Aegean and the eastern Mediterranean in the Bronze Age: Cultural interaction and social change.'
- 7 September, Groningen (Netherlands): Lecture opening academic year GLTC: 'Hunters and warriors in Homer and Mycenae.'
- 14-18 September, Oslo (Norway): Meeting European Association of Archaeologists. Lecture: 'Classical archaeology and the study of death.'
- 14-18 September, Oslo (Norway): Meeting European Association of Archaeologists. Lecture: 'Funerary ceremonies in the Mycenaean world.'
- 2 November, Amsterdam (Netherlands): Research Seminar at the VU University Amsterdam: 'Human agency in times of change.'
- 25 November, Utrecht (Netherlands): Research meeting, National Research School OIKOS. Lecture: 'Mycenaean ritual action in the 21st century.'

Wiersma, C.

- 18 May, Groningen (Netherlands): Meeting of PhD Peer Group. Lecture: 'Building blocks and social differentiation in Bronze Age Greece.'
- 15-17 September, Oslo (Norway): Annual Meeting European Association of Archaeologists. Lecture: 'Information storage in domestic assemblages: object, situation, and location'; and session organization (with G.R. Nobles).
- 3-21 October, Groningen (Netherlands): Seminars in Mediterranean Pre and Proto History.
- 7 October, Groningen (Netherlands): TMA Symposium 'Architectuur als bron in de archeologie'. Lecture: 'Bronstijd architectuur in Griekenland. Toegang tot het huis en zijn bewoners.'

Willemsen, S.L.

- 10 February, Groningen (Netherlands): NWO Workshop 'Current research into Pre-Roman burial grounds in Italy'. Lecture: 'Tracing status differences at Monte Del Bufalo - Crustumierium.'
- 11 February, Groningen (Netherlands): NWO Workshop 'Current research into Pre-Roman burial grounds in Italy'. Lecture: 'Plans for spatial analyses at Monte Del Bufalo - Crustumierium.'
- 22 February, Groningen (Netherlands): Research Seminar GIA. Lecture: 'Princes among men? Interpreting mortuary variability at Monte Del Bufalo (Crustumierium).'
- 28 March, Rome (Italy): Research presentation at the Royal Netherlands Institute at Rome. Lecture: 'IJzertijd grafarendewerk uit Crustumierium - Een functionele benadering.'
- 30 March, Rome (Italy): Etruria, British School at Rome, Workshop 'Le Frontière'. Lecture: 'Crustumierium e i confini.'
- 12 April, Amsterdam (Netherlands): University of Amsterdam, core module Research Master Archeologie 'IJzertijd grafarendewerk uit Crustumierium'. Lecture: 'De archeologie van grafrituelen'.

3.3 WORKING VISITS AND EVENTS (A.O. CONFERENCES, WORKSHOPS, MEETINGS)

Armstrong, K.L.

19-24 September, Izmir (Turkey): 9th International Conference on Archaeological Prospection. Handing out information sheets about the RLiPI project, nominated to run a round-table discussion at the CAA 2012 conference in Southampton, and contacts with Prof. S. Sheriff of the University of Montana and with the editor of Archaeological Prospection.

Attema, P.A.J.

5-8 February, Royal Netherlands Institute at Rome (Italy): Meeting with the Superintendent of Calabria.
2-22 March, Cerchiara (Calabria, Italy): Meetings on Francavilla Marittima and participation in the field campaign of the Rural Life in Prohistoric Italy project (GIA, P.M. van Leusen).
10-16 September, Torre Saracena (Calabria, Italy): Reorganization of Francavilla Marittima store rooms at Parco di Cavallo and Casa Bianca at Sybaris (with P.M. van Leusen).
7 October, Groningen (Netherlands): TMA symposium 'Architectuur als Bron in de Archeologie'.
2-3 December, Leiden (Netherlands): International Mediterranean Survey Conference.

Belelli Marchesini, B.

9-11 February, Groningen (Netherlands). Crustumerium research meeting.
9-13 May, Groningen (Netherlands). Crustumerium research meeting.

Haas, T.C.A. de

22 May–6 June, Sibari (Italy): Reorganization of the storerooms and the inventory of the excavated material of the GIA-excavations at Timpone della Motta (1991-2004).
7 October, Groningen (Netherlands): TMA symposium.
17-27 October, Sermoneta (Italy): Preparations for the project 'Fora Stationes and Sanctuaries'.
16-19 December, Pontinia (Italy): Opening of the Museo dell'Agro Pontino.

Hacquebord, L.

11-14 January, Potsdam (Germany): Chairing the IASC Human and Social Science working group meeting.
14 January, Groningen (Netherlands): Final debate 'Poolnacht van Groningen'.
26 March–1 April, Seoul (Korea): Arctic Science Summit Week 2011.
6 April, Den Haag (Netherlands): Paleis Noordeinde, discussion with Her Majesty Queen Beatrix about the future of polar research in the Netherlands.
12 April, Den Haag (Netherlands): Ministry of Foreign Affairs, Interdepartmental Polar Meeting.
27 April, Yerseke (Netherlands): Retirement of Dr A. Huiskes.
28 April, Groningen (Netherlands): PhD defense of R. Roura.
24 May, Den Haag (Netherlands): Discussion with J. de Jong, Inspector General of Mines regarding relations with Russia.
15 June, Den Haag (Netherlands): NWO, Meeting of the Dutch Polar Commission.
15 June, Den Haag (Netherlands): Farewell occasion Norwegian ambassador Ms E. Berg.
27 August, Warffum (Netherlands): Opening exhibition 'De bedijking van Groningen'.
24 October, Den Haag (Netherlands): Farewell occasion Mr V. van Zeijst, Ministry of Foreign Affairs.
16 November, Nijmegen (Netherlands): Discussion sustainable oil and gas extraction in Greenland with Royal Haskoning staff.
30 November, Amsterdam (Netherlands): NWO discussion meeting on the future of polar research.

Holk, A.F.L. van

6 May, Antwerpen (Belgium): Advise on research Doeler cog.
9 December, Groningen (Netherlands): Annual meeting GIA.

Kruining, M.E. van

- 14 January, Groningen (Netherlands): Debate on the economic exploitation in the Arctic: conflicting interests?
25-29 January, Paris (France): International conference Polar Worlds, environmental and social sciences to understand observed changes.
5 February, Leiden (Netherlands): Steentijddag (Stone Age archaeology).
10-12 February, Aurich (Germany): Marschenratskolloquium 2011. Current archaeological research in the coastal area of the lower North Sea: methods-strategies-projects.
8-13 December, Copenhagen (Denmark): Working visit to SILA (Arctic Centre from the National Museum) and the University of Copenhagen.
14 December, Utrecht (Netherlands): National Polar Symposium.

Langen, G.J. de

- 9 December, Groningen (Netherlands): Annual meeting GIA.

Leusen, P.M. van

- 6-13 February, Rome and Francavilla (Italy): Fieldwork preparation, including meetings with the Soprintendente for Calabria and mayor of Francavilla.
17 March–23 September, Schiphol/Leuven/Brussels (Belgium): Preparation and defense of ANAGHLIA research proposal.
18-23 March, Florence (Italy): Editorial meeting of the Hidden Landscapes proceedings.
21-31 May, Sibaris (Italy): Reorganization of the storerooms and the inventory of the excavated material of the GIA-excavations at Timpone della Motta (1991-2004).
22-23 June, Mainz (Germany): Working meeting with D. Jordan, colleagues of the speleothem and remote sensing research groups in Mainz on potential collaborations.
5-9 July, Lazio (Italy): Meeting with Alessandri and Anastasia; publication obligations of the Hidden Landscapes Project in Lazio.
10-15 September, Francavilla (Italy): Meeting with mayor and aldermen; work on Timpone della Motta strage.
10-16 September, Torre Saracena (Calabria, Italy): Reorganization of Francavilla Marittima store rooms at Parco di Cavallo and Casa Bianca at Sybaris (with P.A.J. Attema).
9 December, Groningen (Netherlands): Annual meeting GIA.

Lindenhout, E. van 't

- 1 November, Leiden (Netherlands): Exposition 'Etruskische vrouwen van aanzien'.
1 November, Leiden (Netherlands): Attending a Bijvanck lezing.
9 December, Groningen (Netherlands): Annual meeting GIA, session leader.

Loon, T. van

- 1-9 July, Rome/Sermoneta (Italy): Working visit on the publication of the material of 'Laghetto del Monsignore', meeting with the inspector and research group about the publication, a visit to the storeroom in Borgo Le Ferriere, and a visit to the Satricum excavations.

Loonen, M.J.J.E.

- 1-4 February, Akureyri (Iceland): Conservation Arctic Flora and Fauna.
24-30 August, Churchill (Canada): Bob Jefferies Memorial Symposium.
24-27 October, Oslo (Norway): Symposium and meeting Ny-Ålesund Science Managers Committee.

Neef, W. de

- 7-11 February, Italy: Project preparation.
16-17 February, Berlin (Germany): Workshop Geoarchaeology.
15-18 March, Mainz (Germany): Workshop Geoarchaeology and Geophysics (with K. Armstrong).
22-23 June, Mainz (Germany): Fieldwork preparation and coordination of research cooperation (with P.M. van Leusen and K. Armstrong).
9-10 September, Mainz (Germany): Conference Archaeological Prospection.
9 December, Groningen (Netherlands): Annual meeting GIA.
19 December, Leiden (Netherlands): ARCHON workshop In Search of Nature.

Nicolay, J.A.W.

24-28 September, Hannover (Germany): Sachsensymposium.
24 November, Haarlem (Netherlands): Reuvsdagen.
9 December, Groningen (Netherlands): Annual meeting GIA.

Niekus, M.J.L.Th.

7 July, Amersfoort (Netherlands): Workshop 'Prospectiekenmerken Steentijdvindplaatsen', organised by the Rijksdienst voor het Cultureel Erfgoed (RCE).

Nieuwhof, A.

29 May, Utrecht (Netherlands): Study group Middle Ages.
22 June, Firdgum (Netherlands): GIA-*terp* excavation.
25 August, Nijmegen (Netherlands): Work meeting archaeological project agency Auxilia.
6 September, Oosterbeintum (Netherlands): GIA-*terp* excavation.
24-28 October, Hannover (Germany): Sachsensymposium.

Peeters, J.H.M.

5 February, Leiden (Netherlands): Steentijddag (Stone Age archaeology).
11-12 April, Berlin (Germany): SPLASHCOS meeting (EU-COST). Meetings of the Management Committee and workgroups of the project Submerged Prehistoric Archaeology and Landscapes of the Continental Shelf.
25-31 October, East Lansing (U.S.): Michigan State University, Dept. of Anthropology. PhD defense M.E. Brouwer. Member of the PhD committee of Ms M.E. Brouwer (also a discussion on future co-operation on hunter-gatherer archaeology with Dr W. Lovis).
9 December, Groningen (Netherlands): Annual meeting GIA.

Postma, D.

1 April, Onlanden (Netherlands): Open day at a GIA-*terp* excavation.
11 April, Franeker (Netherlands): Meeting with the Gemeente Franeker.
24 May, Zwolle (Netherlands): Meeting with Fame Architectuur & Stedenbouw.
7 June, Leeuwarden (Netherlands): Meeting with the Fries Museum.
13 June–14 July, Firdgum (Netherlands): Occasional visits to the GIA-*terp* excavation.
2 July, Firdgum (Netherlands): Open day at the GIA-*terp* excavation and Yeb Hettinga Museum.
5 July, Noarderleech and Firdgum (Netherlands): Meeting with It Fryske Gea and contractor H. Witte.
14 July, Leeuwarden (Netherlands): Meeting with the Provincie Friesland, Gemeente Franekeradeel and Fame Architectuur & Stedenbouw.
7 October, Groningen (Netherlands): TMA-conference 'Architectuur als bron in de Archeologie'.
19 October, Zwolle (Netherlands): Meeting with Fame Architectuur & Stedenbouw and Goudsticker-De Vries.
9 November, Firdgum and Noarderleech (Netherlands): Probing by Koops & Romeijn Grondmechanica and meeting with Stichting Yeb Hettinga Skoalle and It Fryske Gea.
21 November, Diemen (Netherlands): Meeting with Koninklijke Saan B.V.
3 December, Noarderleech and Hegebeintum (Netherlands): Field trip to salt marsh and the Archeologisch Steunpunt with volunteers.
9 December, Groningen (Netherlands): Annual meeting GIA.
16 December, Amsterdam (Netherlands): PhD defense M.F.D. Dijkstra, 'Rondom de mondingen van Rijn en Maas'.

Postma-Saan, F.B.

20 September, Groningen (Netherlands): World Canals Conference.

Prummel, W.

28 January, Amersfoort (Netherlands): Workshop archaeozoology.
10-12 February, Aurich (Germany): Marschenratskolloquium 2011. Current archaeological research in the coastal area of the lower North Sea: methods-strategies-projects.
8 April, Amsterdam (Netherlands): *Kroonlezing* J. Müller (Kiel).

- 16-17 June, Schleswig (Germany): Hunting Workshop at the Centre for Baltic and Scandinavian Archaeology (ZBSA).
- 21-23 October, Amsterdam (Netherlands): Conference Subsistence and Surplus Production of the Association for Environmental Archaeology.
- 9 December, Groningen (Netherlands): Annual meeting GIA, session leader.
- 13 December, Amersfoort (Netherlands): Workshop archaeozoology.
- 19 December, Rotterdam (Netherlands): Natuurmuseum Rotterdam, identification of whale bones from *terpen* (with J. van Gent, visit to Dr E.J.O. Kompagne).

Raemaekers, D.C.M.

- 28 January, Zaandam (Netherlands): Meeting with L. Kubiak-Martens (BIAX) and T. Oudemans (Kenaz) on functional analysis Swifterbant pottery.
- 10-12 February, Aurich (Germany): Marschenratkolloquium 2011.
- 8 April, Amsterdam (Netherlands): *Kroonlezing* J. Müller (Kiel University).
- 8 April, Amsterdam (Netherlands): Meeting with L. Kubiak-Martens (BIAX) en T. Oudemans (Kenaz) on functional analysis of Swifterbant pottery.
- 28 June, Wilhelmshaven (Germany): Discussion with colleagues from Niedersächsisches Institut für historische Küstenforschung.
- 7 September, Leeuwarden (Netherlands): Meeting with EDR-project team.
- 21 September, Groningen (Netherlands): Meeting with W.A.B. van der Sanden (Drents Plateau) in preparation of excavation Middle Paleolithic site in Drenthe.
- 10 October, Groningen (Netherlands): Meeting with M.J.L.Th. Niekus (GIA), J. Beuker (Drents Museum), J. Jelsma (Steekproef) and W.A.B. van der Sanden (Drents Plateau) on the excavation of a Middle Palaeolithic site in Drenthe.
- 19 October, Groningen (Netherlands): Meeting with K. Nowak (Ostfriesisches Landschaft) on EDR project.
- 21 October, Amersfoort (Netherlands): Meeting with B.I. Smit and G. Mauro (both RCE) on archeological site Schokkerhaven-E170.
- 11 November, Amersfoort (Netherlands): Meeting with A.L. van Gijn (Leiden University and GIA) on NWO proposal Dutch TRB.
- 9 December, Groningen (Netherlands): Annual meeting GIA.
- 13-14 December, Münster (Germany): Meeting with K. Schierholdt about publication on Vlaardingen-Stein-Wartberg.
- 15 December, Zaandam (Netherlands): Meeting with L. Kubiak-Martens (BIAX) and T. Oudemans (Kenaz) on functional analysis of Swifterbant pottery.

Roura, R.M.

- 20 June – 1 July, Buenos Aires (Argentina): 34th Antarctic Treaty Consultative Meeting and 14th Meeting of the Committee for Environmental Protection.
- 16-17 July, Montevideo (Uruguay): Club Naval, Committee for Environmental Protection (CEP) workshop on terrestrial and marine Antarctic Specially Managed Areas – ASMAs.
- 12-13 October, Brussels (Belgium): Arctic Futures Symposium 2011, organized by the International Polar Foundation and the Prince Albert II Foundation.
- 31 October–4 November, Hobart (Australia): 30th Meeting of the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) (second week).

Schepers, M.

- 26 June–3 July, Northern Germany: Excursion.
- 9 December, Groningen (Netherlands): Annual meeting GIA.

Seubers, J.F.

- 1-31 March, Rome (Italy): Consultation of archives at SSBAR and meetings with Italian colleagues.
- 21 June–4 August, Rome (Italy): First reconnaissance of fieldwork area and visit to SITAR (Archaeological Informatics System of Rome).

Steenhuisen, F.

- 17-18 January, Oslo (Norway). Norsk Institutt for Luftforskning (NILU), Meeting AMAP mercury assessment and UNEP mercury programme.

- 19-22 January, Tromsø (Norway): AMAP working group meeting 24, Arctic Monitoring and Assessment Programme.
- 3-6 May, Copenhagen (Denmark): AMAP Congress 'The Arctic as a messenger for global processes, climate change and pollution', presentation of a.o. AMAP Assessment 2011: Mercury in the Arctic.
- 23-27 May, Østerås (Norway): NRPA. Establish the AMAP Radioactivity Data Center and transferring the data to a server at the University of Groningen and Consultation on the continued development of a (historical) fallout model for Norway.
- 3-6 October, Moscow (Russia): AMAP working group meeting 25 (Joint CAFF/AMAP meeting October 5, 2001).
- 21-25 November, Østerås (Norway): NRPA, Discuss and test the fallout model for Norway.

Terpstra, T.K.

- 14 January, Groningen (Netherlands): Debate on the economic exploitation in the Arctic: conflicting interests?
- 22-26 June, Akureyri (Iceland): 7th International Congress of Arctic Social Sciences. Paper presentation PhD project and presentation of personal ideas for the next Arctic Human Development Report.
- 16 September, Edmonton (Canada): Seminar 'Canada's Arctic Policies and Strategies'.
- 6 September—27 November, Edmonton (Canada): Academic visitor at the Canadian Circumpolar Institute, University of Alberta.
- 11-13 October, Edmonton (Canada): Conference 'Canada's North Beyond 2011'.
- 14 December, Utrecht (Netherlands): Symposium Willem Barentsz Polar Institute.

Tol, G.W.

- 16-26 October, Pontine Region (Italy): Preparation for NWO-project 'Fora, stationes, and rural sanctuaries: the role of minor centres in the economy of Roman Central Italy'.
- 16-19 December, Pontinia (Italy): Opening 'Museo del Agro Pontino'.

Voutsaki, S.

- 2-8 January, Athens and Sparta (Greece): Meeting of the Argos Tumuli Project Team, Athens. Meeting with the Ephor of Sparta Ephorate. Preparation of the Ayios Vasilios 2011 season. Research in the British School Library, Athens.
- 19-26 April, Athens (Greece): Preparation of the Ayios Vasilios Project. Meeting in the National Museum (conservation of Ayios Vasilios finds).
- 14-15 May, Durham and York (UK): Research visit to York to discuss the Argos Tumuli publication with Dr O. Dickinson after conference and meeting in Durham. Meeting with the research team preparing an application for an ESF proposal (Dr J. Montgomery, Prof. T. Wilkinson and Prof. K. Kristiansen).
- 14-18 September, Oslo (Norway): Meeting of European Association of Archaeologists.
- 2-7 October, Sparta (Greece): Preparation of the annual report of the Institute of Aegean Prehistory, preparation of an application for a Research Grant Renewal for the Institute of Aegean Prehistory and meeting to plan the 2012 excavation season.
- 7 October, Groningen (Netherlands): Attending TMA symposium 'Architectuur als bron in de archeologie'.
- 1 November, Leiden (Netherlands): Attending Byvanck lecture.
- 9 December, Groningen (Netherlands): Annual meeting GIA.

Wiersma, C.

- 28 March—8 April, University College London (UK): Course Ceramic Petrography.
- 7 October, Groningen (Netherlands): TMA symposium 'Architectuur als bron in de archeologie'.
- 9 December, Groningen (Netherlands): Annual meeting GIA.

Willemsen, S.L.

- 1-31 March, Rome (Italy): Consultation of literature in Italian libraries and meetings with Italian colleagues.
- 11 October—6 November, Rome (Italy): Data collection at the Special Superintendency for the Archaeological Heritage of Rome; preparation export of archaeological objects to the Netherlands.
- 9 December, Groningen (Netherlands): Annual meeting GIA.

3.4 WORKSHOPS AND EXHIBITIONS (co-organized by GIA staff)

- 13 November 2010—14 January 2011, Groningen (Netherlands): ‘De Poolnacht van Groningen’, event with various exhibitions, lecture and discussions, organised by A.J.M. Scheepstra, L. Hacquebord and others.
- 9-11 February, Groningen (Netherlands): NWO workshop ‘Current research into Pre-Roman burial grounds in Italy’, organised by S.L. Willemsen, A.J. Nijboer and P.A.J. Attema.
- 24 March, Groningen (Netherlands): Book presentation ‘Regional pathways to complexity, settlement and land use dynamics in early Italy from the Bronze age to the Republican period’, organised by P.A.J. Attema.
- 1 May—30 November, Jelsum (Netherlands): Contribution to an exhibition on the 2010 excavation in Jelsum in the Dekemastate, organised by T. Varwijk, M. Bakker, W. Prummel and J.A.W. Nicolay.
- 17 September, Oslo (Norway): Session ‘From finds to the social use of domestic space in prehistory. How to do it?’, organised by C.W. Wiersma and G.R. Nobles.
- 26 September, Lelystad (Netherlands): Workshop on the building of a replica of a medieval ship in Nijmegen, organised by R. Bos and A.F.L. van Holk.
- 6-7 October, Schiermonnikoog (Netherlands): Palynologist days, organised by M. Schepers, R.T.J. Cappers and A. Maurer.
- 7 October, Groningen (Netherlands): TMA symposium ‘Architectuur als bron in de Archeologie’, organised by T. van Loon, S.L. Willemsen and others.
- 7-8 November, Groningen (Netherlands): MA workshop Wetland Archaeology, organised by J.H.M. Peeters and D.C.M. Raemaekers. Lectures were given by Prof. R. van de Noort (Exeter) and Prof. H. Jöns (Wilhelmshaven), while several PhD students (L. Amkreutz [Leiden University], B. Postma-Saan [GIA] and A. Overmeer [Lelystad]) presented their research.
- 28 November, Groningen (Netherlands): MA Workshop ‘Historiografie van architectuurstudies in de archeologie’, organised by E. van 't Lindenhout.
- 9 December, Groningen (Netherlands): Annual meeting GIA, ten lectures on GIA research, organised by R.T.J. Cappers, P.M. van Leusen, J.A.M. Nicolay and N.D. van der Pers.

3.5 VISITING SCHOLARS

Delley, G. (Neuchatel University, Switzerland): Discussion on history of ¹⁴C analysis in Switzerland.

Gnade, M. Prof. (University of Amsterdam, Netherlands): Member of the corona at a PhD defense ceremony.

Gnade, M. Prof. and three PhD-students (University of Amsterdam, Netherlands): Discussion on the ceramic fabrics research at the Laboratory of Conservation and Material Studies (LCM) of the Groningen Institute of Archaeology.

Goldgar, A. Dr (Kings College London, UK): Representation of Barentsz.

Jacobsen, J.K. Dr (associated researcher at the GIA): Lecture 'Excavations in the area Rovitti at Francavilla Marittima 2009-2010'.

Jöns, H. Prof. (Niedersächsisches Institut für historische Küstenforschung, Germany): Lecture during the workshop on Wetland Archaeology.

Jöns, H. Prof. (Niedersächsisches Institut für historische Küstenforschung, Germany): Discussion on TRB house plans.

Jordan, D. Dr (Johannes Gutenberg University of Mainz, Germany): Visit for planning the geophysical sampling programme of the Rural Life project.

Heinze, A. (Esens, Germany): Delivering dung samples from German outerdike *terpen*.

Hilditch, J.R. Dr (University of Amsterdam, Netherlands): Discussion on the ceramic fabrics research at the Laboratory of Conservation and Material Studies (LCM) of the Groningen Institute of Archaeology.

Hurmuzlu, B. Dr (Isparta, Suleyman Demirel University, Turkey): Visit to inform GIA students about the Erasmus exchange with Isparta and the possibility to participate in fieldwork in Turkey.

Lambert, J., Ambassador of Canada (Canadian Embassy The Hague, Netherlands): Future collaborations in Arctic research.

Lintoft, B. Dr (Scot Polar Research Institute, Cambridge, UK): The hut of Barentsz on Novaya Semlya.

Noort, R. van de Prof. (University of Exeter, UK): Lecture during the workshop on Wetland Archaeology.

Schierholdt, K. Dr (Munster University): Preparation of the publication on Vlaardingen-Stein-Wartberg.

Sewell, J. Dr and Dr C. Melisch (Berlin, Germany; Petri Platz excavations): *Omnia mors aequat* and other problems with processing data from a large cemetery.

Stek, T. Dr (Leiden University, Netherlands): Member of the corona at a PhD defense ceremony.

Vermeulen, F. Prof. (University of Ghent, Belgium): Member of the corona at a PhD defense ceremony.

3.6 EDITORSHIPS AND REPRESENTATION ON BOARDS AND COMMITTEES

Arnoldussen, S.

Member of the editorial board of the *Journal of Archaeology in the Low Countries* (www.jalc.nl)

Attema, P.A.J.

Head of the Department of Archaeology
Director of Studies of the Research Master in Art History and Archaeology
Chairman of the GIA Advisory Board
Coordinator of the Chair Classical and Mediterranean Archaeology
Member of the GIA Management Team
Member of the editorial board of *Paleoahistoria*
Member of the editorial board of the *Groningen Archaeological Studies* (GAS)
Member of the advisory Board of the *Journal of Mediterranean Archaeology* (TMA)

Cappers, R.T.J.

Member of the GIA Management Team
Member of the Scientific Committee of the Netherlands School of Archaeological Research (ARCHON)
Member of the Curatorium of the Netherlands Institute for the Near East (NINO)
Member of the Stichting Berenike
Member of the Groningen Roman Economy Group
Member of the editorial board of the e-journal *Indian Medicine*
Member of the editorial board of the *Groningen Archaeological Studies* (GAS)

Galestin, M.C.

Chair of the educational advisory board of the Research Master Art History and Archaeology
Member of the GIA advisory board
Member of the Faculty BSA committee
Secretary of the examination committee of the Study of Archaeology

Groenendijk, H.A.

Member of the editorial board *Historisch Jaarboek Groningen*

Hacquebord, L.

Director of the Willem Barentsz Polar Institute
Executive Secretary of the Willem Barentsz Foundation Groningen
Member of the Science Standing Committee on Social System of IASC
Council member and delegate for the Netherlands in IASC
Leader of the IPY-LASHIPA project (www.lashipa.nl)
Core member of the National Committee International Polar Year 2007-2008
Member of the GIA Management Team
Member of the International Polar Heritage Committee ICOMOS
Member of the board of the Centre for Canadian Studies
Member of the editorial board of the *Groningen Archaeological Studies* (GAS)
Member of the editorial committee *Circumpolar Studies*
Member of the National Polar Committee

Holk, A.F.L. van

Member of the Glavimans Stichting
Member of the Scientific Committee 'Doeler Cog' (Belgium)

Kruining, M.E. van

Editor of the journal *Miniatuur*

Langen, G.J. de

Member of the editorial board of the *Nieuwe Encyclopedie van Fryslân*

Leusen, P.M. van

Chair of the educational advisory board of Archaeology

Member of the GIA Advisory Board

Member of the Faculty of Arts advisory board on ICT

Loon, T. van

Chief editor of the editorial board *Journal of Mediterranean Archaeology* (TMA)

Loonen, M.J.J.E.

Netherlands representative of the Ny-Ålesund Science Managers Committee (NySMAC)

Netherlands representative for the Conservation of Arctic Flora and Fauna (CAFF)

Member of the Willem Barentsz Polar Institute

Member of the EU-FP7 project SIOS

Member of the Scientific Advisory Committee of SOVON bird research

Station leader of the Netherlands Arctic station

Webmaster of the Netherlands Ornithological Union (www.nou.nu)

Webmaster of the international journal ARDEA (www.ardeajournal.nl)

Niekus, M.J.J.L.Th.

Scientific advisor of the *Drents Prehistorische Vereniging* (DPV)

Nieuwhof, A.

Secretary of the *Vereniging voor Terpenonderzoek*

Editor of the annual reports of the *Vereniging voor Terpenonderzoek*

Nijboer, A.J.

Member of the Departmental Board of Archaeology (till September)

Member of the educational advisory board of Archaeology (till September)

Secretary of the exam committee for the BA and MA Archaeology (from September)

Coordinator of the GIA Library

Member of the FEWI (Facultaire Expertisegroep Wetenschappelijke Informatie)

Member of the Diocesane Commissie voor Kerkinrichting en Kerkelijk Kunstbezit van het Bisdom Groningen-Leeuwarden (DCKKK)

Peeters, J.H.M.

Member of the advisory board UK Maritime and Marine Historic Environment Research Framework

Member of the management committee of SPLASHCOS (EU Cost Action TD0209)

Chief editor of the journal *Archeologie*

Prummel, W.

Member and chair of the GIA educational advisory board of Archaeology

Member of the scientific committee of the National Reference Collection Bibliography Groningen

Member of the International Council for Archaeozoology (ICAZ)

Member of the editorial board of *Groningen Archaeological Studies* (GAS)

Member of the editorial board of *Palaeohistoria*

Member of the editorial board of Letterenmagazine *Artes*

Raemaekers, D.C.M.

Director of the GIA

Secretary of the Department of Archaeology

Member of the exam committee Archaeology

Member of the board of the Research Master in Art History and Archaeology

Secretary of the exam committee Research Master Art History and Archaeology

Chair of the board of the National Research School ARCHON

Member of the advisory board ARCHIS (Dutch Heritage Agency)
Member of the advisory board ADC Projecten
Member of the advisory board *Groningen Archaeological Studies* (GAS)
Editor of the GIA digital series *Grondsporen*
Member of the editorial board of *Offa*

Roura, R.M.

Peer review of an Antarctic tourism article submitted to the *Arctic and Antarctic: International Journal of Circumpolar Socio-cultural Issues*.

Terpstra, T.K.

Member of the Research Group Circumpolar Cultures
Member of the Groningen Research Group on Migration and Culture
Representative for the Netherlands in the Sustainable Development Working Group of the Arctic Council
Member of the Centre for Canadian Studies

Voutsaki, S.

Member of the GIA Management Team
Member of the departmental board of Archaeology
Member of the departmental board of GLTC
Erasmus coordinator Archaeology
Rosalind Franklin Fellowship Appointments Committee
Graduate School of the Humanities Teaching Programme Committee
Member of the board of CRASIS (Centre for Interdisciplinary Studies in Graeco-Roman Antiquity)
Member of the NWO Rubicon Selection Committee
Member of the NWO VIDI Selection Committee
Member of the Faculty of Arts Praemium Erasmianum Committee
Member of the board of Stichting 'Archaeological Dialogues'
Advisory board of the journal *Archaeological Dialogues*
Editorial board of *BABesch*
Advisory board of the journal *Pharos* of the Netherlands Institute at Athens
Member of the editorial board of the *Groningen Archaeological Studies* (GAS)
Member of the editorial board of *Palaeohistoria*
ARCHON Teaching Programme Committee

Wiersma, C.

Member of the editorial board of the *Journal for Mediterranean Archaeology* (TMA)
Member of the PhD council of the Graduate School for Humanities (GSH)
Member of the Educational Committee (OC) of the GSH

Willemsen, S.L.

Chief editor of the editorial board of the *Journal of Mediterranean Archaeology* (TMA)
Member of the committee organizing the international conference 'Pre-roman burial grounds'

Woltinge, I.

Member of the Externe Gebruikersgroep Archis2

4 PHD PROJECTS

In September 2008 the Graduate School for the Humanities opened its doors for the first group of PhD students. The Graduate School provides a 20 ECTS training programme encompassing multidisciplinary and monodisciplinary courses. This last group of activities is carried out as part of the Posthumus Research School (PhD's Arctic archaeology) or in close cooperation with Research School ARCHON (all other PhD's).

4.1 PHD DEFENSES 2011

28 April: R.M. Roura

Promotor: Prof. L. Hacquebord

Members of the board of examiners:

- Prof. S. Barr (Michigan University)
- Prof. C.J. Bastmeijer (Tilburg University)
- Prof. D.C.M. Raemaekers (Groningen University)
- Prof. F. Vanclay (Groningen University)

1 December: T.C.A. de Haas

Promotor: Prof. P.A.J. Attema

Co-promotor: Dr P.M. van Leusen

Members of the board of examiners:

- Prof. M. Gnade (Amsterdam University)
- Prof. M. Millett (Oxford University)
- Prof. F. Vermeulen (Gent University)

4.2 GIA/NWO FUNDED PHD PROJECTS

Aalders, Y.I.

Exploitation of natural resources and cross cultural contacts of Russian Furhunters and European Whalers on Spitsbergen in the 18th century

Promotor: Prof. L. Hacquebord

Beckerman, S.M.

Ceramic analysis of Late Neolithic settlements in the province of Noord-Holland (The Netherlands) and interregional comparison

Promotor: Prof. D.C.M. Raemaekers

Co-promotor: Dr S. Arnoldussen

Devriendt, I.I.J.A.L.M.

Flint and other stone material from Swifterbant

Promotor: Prof. D.C.M. Raemaekers

Co-promotor: Dr J.H.M. Peeters

Feiken, H.

Geo-archaeological approaches to the hidden landscapes of Italy

Promotor: Prof. P.A.J. Attema

Co-promotor: Dr P.M. van Leusen

Gustafsson, U.I.

The exploitation of natural resources by the early 20th century whaling industry; its impact on the environment and the geo-political situation in the Polar Regions

Promotor: Prof. L. Hacquebord

Co-promotor: Dr D. Avango

Haas, H.R. de

The coal exploitation of the Dutch Spitsbergen Coal Company (NESPICO) Green Harbour in its national and international context

Promotor: Prof. L. Hacquebord

Co-promotor: J.W. Veluwenkamp

Ippolito, F.

Before the Iron Age: the oldest settlement in the Sibaritide (Calabria, Italy)

Promotor: prof. P.A.J. Attema

Klein Goldewijk, G.M.

Standard of living in the Roman Empire

Promotor: Prof. P.A.J. Attema

Co-promotores: Dr W.M. Jongman, Dr J.P.A.M. Jacobs

Kruining, M.E. van

Surviving change by migration or adaptation

Promotor: Prof. L. Hacquebord

Kruse, F.

British exploration, mining and diplomacy on Spitsbergen, 1898-1952

Promotor: Prof. L. Hacquebord

Co-promotor: Dr D. Avango

Loon, T. van

Defining the ritual, analyzing society. The social significance of material culture in pre-Roman cult places of central Italy (ca. 900-400 BC)

Promotor: prof. P.A.J. Attema

Matthews, S.G.

Techniques and Society: A use-wear analysis of the metalwork from the Middle Bronze Age of North-western Europe

Promotor: Prof. D.C.M. Raemaekers

Co-promotores: Dr S. Hamilton, Dr S. Arnoldussen

Milka, E.

Mortuary differentiation and social structure in the Middle Helladic Argolid

Promotor: Prof. P.A.J. Attema

Co-promotor: Dr S. Voutsaki

Neef, W. de

Rural life in Protohistoric Italy: relating sub-surface remains to archaeological survey data

Promotor: prof. P.A.J. Attema

Co-promotor: dr P.M. van Leusen

Niekus, M.J.L.Th.

Stone Age Occupation of the northern Netherlands, Time, Space, Location and Subsistence

Promotor: Prof. D.C.M. Raemaekers

Nieuwhof, A.

Ritual deposits in the northern Netherlands coastal area – Iron Age until Christianization

Promotores: Prof. D.C.M. Raemaekers, Prof. J. Bazelmans

Nobles, G.R.

Spatial analysis of Late Neolithic settlements in the province of Noord-Holland (The Netherlands) and interregional comparison

Promotor: Prof. D.C.M. Raemaekers

Co-promotor: Dr J.H.M. Peeters

Postma, D.

Lost building traditions: turf construction and early medieval architecture in the southern North Sea area

Promotor: Prof. G.J. de Langen

Co-promotor: Prof. D.C.M. Raemaekers

Postma-Saan, D.

De Zuiderzee als verkeersplein: de natuurlijke en culturele context van de turfvaart over zee 1600-1900

Promotor: Prof. A.F.L. van Holk

Co-promotor: Prof. D.C.M. Raemaekers

Satijn, O.

A socio-economic and political landscape archaeology of transition: southern Lazio from the Late Roman period to incastellamento

Promotor: Prof. P.A.J. Attema

Schepers, M.

Coastal culture: a methodological palaeobotanical study on land use and landscape development in two distinct coastal areas

Promotores: Prof. D.C.M. Raemaekers, Prof. R.T.J. Cappers

Seubers J.F.

The Settlement of Crustumium and its hinterland (800-450 BC)

Promotor: Prof. P.A.J. Attema

Terpstra, T.K.

Transnational ties, urban networks and identity formation among Inuit migrants in Southern Canada and Denmark

Promotor: Prof. L. Hacquebord

Thilderqvist, J.G.M.

Ritual bones or common waste? A study of bone deposits in northwestern Europe

Promotor: Prof. D.C.M. Raemaekers

Co-promotor: Dr W. Prummel

Wiersma, C.W.

Transitional periods in Bronze Age mainland Greece. A household perspective of the development of social differentiation of EH3 until LH1

Promotores: Prof. P.A.J. Attema, Prof. S. Voutsaki

Willemsen, S.L.

The Iron Age necropolis of the Latin site Crustumium

Promotor: Prof. P.A.J. Attema

Co-promotor: Dr A.J. Nijboer

Woltinge, I.

What lies beneath? The value of buried Stone Age landscapes

Promotor: Prof. D.C.M. Raemaekers

4.3 SELF AND OTHER FUNDED PHD PROJECTS

Colelli, C.

A study of the impasto pottery from the Timpone della Motta di Francavilla Marittima (Calabria, Italy)

Promotor: Prof. P.A.J. Attema

Comis, S.

Het textiel van Spitsbergen

Promotor: Prof. L. Hacquebord

Drenth, E.

The Beaker Cultures in Northwest Europe

Promotor: Prof. D.C.M. Raemaekers

Elevelt, S.

Subsistence en sociale stratificatie in de Sibaritide in de periode Midden-Bronstijd – Vroege IJzertijd

Promotor: Prof. P.A.J. Attema

Masci, M.F.

The production of Oinotrian geometric pottery in southern Italy (Calabria, Basilicata and Campania) during the Iron Age: a comparative study on technological aspects

Promotor: Prof. P.A.J. Attema

Co-promotor: Dr A.J. Nijboer

Oome, N.

Hellenistisch aardewerk en Hellenitische sites in de Sibaritide

Promotor: Prof. P.A.J. Attema

Overmeer, A.B.M.

Dutch clinker-built ships in the 15th and 16th centuries

Promotores: Prof. D.C.M. Raemaekers, Prof. H.R. Reinders, Prof. A.F.L. van Holk

Tol, G.W.

The archaeological map of Nettuno; site classification and analysis of a local settlement system (700 BC – 500 AD) in a regional context

Promotor: Prof. P.A.J. Attema

Weistra, E.

Archaic terracotta votive offerings from the Athenaion in Francavilla Marittima (Calabria, Italy)

Promotores: Prof. P.A.J. Attema, Prof. M. Kleibrink

4.4 PHD PROJECTS 2005-2011

This table lists GIA PhD students for the period 2005-2011.

RUG funded:

RUG = Employed PhD student

DPB = Dutch PhD Bursary

UE = Ubbo Emmius bursary

Other funding:

NWO = Dutch Research Council

NWOt = Dutch Research Council toptalent scholarship

RCE = Rijksdienst voor Cultureel Erfgoed

SNL = Stichting Nieuw Land

B = Begin date, E = End date, D = Defence, S = Stopped

Name		2005	2006	2007	2008	2009	2010	2011
Aalders, Y.I.	NWO			1-8 B				1-8 E
Abbink, B.P.	NWO			31-12 E		26-11 D		
Alessandri, L.	UE		31-10 E			29-10 D		
Beckerman, S.M.	DPB					1-11 B		
Dam, K.I.M. van	RUG		31-5 E		11-12 D			
Devriendt, I.I.J.A.L.M.	RUG				1-9 E			
Feiken, H.	NWO	1-9 B					31-3 E	
Gustafsson, U.I.	NWO			1-3 B				1-8 E
Haas, H.R. de	NWO			1-4 B				16-9 E
Haas, T.C.A. de	RUG	1-9 B						28-2 E 1-12 D
Hao Qi	-					1-9 B		1-6 S
Karstkarel, N.	RUG	9-6 D						
Klein Goldewijk, G.M.	NWOt			28-9 B				28-9 E
Kruining, M.E. van	DPB					01-12 B		
Kruse, F.	UE				1-6 B			
Loon, T. van	NWOt						1-9 B	
Matthews, S.G.	UE			1-9 B				1-9 E
Milka, E.	NWO			31-10 E				
Mulder, S.A.	RUG	1-2 S						
Neef, W. de	NWO						01-10B	
Niekus, M.J.L.Th.	RUG			28-2 E				
Nieuwhof, A.	RUG		1-4 B			31-3 E		
Nobles, G.R.	NWO					1-11 B		
Postma-Saan, F.B.	SNL							1-4 B
Postma, D.	RUG							1-9 B
Ratliff, M.L.	UE			1-10 B (ICOG)		1-9 (GIA)	31-12 S	
Roura, R.M.	UE	1-3 B				28-2 E		28-4 D
Satijn, O.	NWO		30-4 E					
Schepers, M.	DPB					1-9 B		
Seubers, J.F.	NWO							1-2 B
Smit, B.I.	NWO			31-12 E				
Terpstra, T.K.	RUG					1-1 B		
Thilderqvist, J.G.M.	UE	1-9 B				31-8 E		
Wiersma, C.W.	RUG						1-11 B	
Willemsen, S.L.	DPB				1-9 B			
Woltinge, I.	NWO		1-9 B					1-1 E

5 EMERITI

Kleibrink, M.

Research activities

Considerable work was spent on adding items to the Francavilla website by M. Kleibrink and E. Weistra (MuseumFrancavilla.com). Furthermore, in May at Sibari Parco del Cavallo, Kleibrink assisted in the reorganization of the storage rooms of the Francavilla Marittima excavations, directed by P.M. van Leusen. The majority of the year was spent on the publications of the protohistoric matt-painted pottery (9th–8th centuries BC) from excavations at Francavilla Marittima (1991–2004). The drawings took more time than planned. An article by Kleibrink, Barresi and Fasanella Masci on the matt-painted pottery from Francavilla was accepted by the journal *Antike Kunst*. The correction of the English text of the book by Kleibrink and Weistra on the iconography and cults of the Athenaion on the Timpone della Motta at Francavilla Marittima was finished in January 2011. Hopefully the book will be published in 2012. From mid-October until late November Kleibrink worked on the publication of the Archaic house material in the Scuola Lagaria at Francavilla Marittima with a small group of archaeologists. Kleibrink also worked on the weaving implements in the storeroom of the Sibari Museum. The studied materials came from the Francavilla excavations. In October we organized the 10th Giornata Archeologica Francavillese.

Publications

Kleibrink, M., 2011. *Archaeological Park “Lagaria”, Francavilla Marittima (near Sibari)*. Rossano, Associazione ‘Lagaria’ Onlus, 158.

Kleibrink, M., 2011. Schizzo biografico sull’archeologa olandese Maria Wilhelmina Stoop e le sue relazioni di scavo a Timpone della Motta 1963-’65, 10–40.

Kleibrink, M., 2011. Nuovi dati sulle tombe enotrie di rango a Francavilla Marittima. In: A. Naso (ed.), *Tumuli e sepolture monumentali nella protostoria europea, Atti del Convegno internazionale Celano 21-24 settembre 2000, Mainz 2012*, 201–221. Mainz, Alessandro Naso.

Lectures

April, Groningen (Netherlands). Fransum colloquium ‘Sacred Landscapes, Connecting Routes’. Lecture: ‘Bride ritual in contested landscapes. Sanctuaries and their role in the prospection and colonization in South and Central Italy’.

November, Francavilla Marittima (Italy). City Hall FM. Lecture: ‘La ceramica medio geometrica da Francavilla Marittima, X Giornata Archeologica Francavillese’ (with M. Fasanella Masci).

December, Castrovillari (Italy). Archaeological Museum. Lecture: ‘La ricostruzione della Dea di Francavilla Marittima’.

Reinders, H.R.

Research activities

In 2011 Waterbolk and Reinders continued their study of the habitation history of medieval Pesse (Iron Age until Early Middle Ages). In cooperation with Samson and Wennink they also prepared publications about *schuldmudden* and ceramics in the late medieval period.

Reinders continued research on the *Trekvaart* landscape of Groningen during the period 1594 to 1900. He presented a paper about this subject at the World Canals Conference (Groningen, September 2011) and gave a series of lectures for historical societies in the province of Groningen.

In July and August the GIA investigated the House of Agnostos in Hellenistic Halos (T. Dijkstra, field director; Reinders, supervisor). A report about the 2011 field season was prepared by Dijkstra and Van Heul. Catalogues of the loom weights of the House of the Tub and the South-East Gate were prepared by Van der Linden and Swart, and a catalogue of the metal artefacts of the South-East Gate by Brandhoff and Swart. In November Reinders made drawings of the loomweights of the South-East Gate. Preliminary

catalogues are available. A preliminary report on the 2007–2010 field seasons (House of the Tub) is being printed (*Pharos*).

In 2011 a PhD thesis, supervised by Reinders and Heidinga, was defended at the University of Amsterdam by M. Dijkstra.

Publications:

Waterbolk, H.T. & H.R. Reinders, 2011. Archeologie en geschiedenis van Pesse. 3. Bewoning in de IJzertijd, Romeinse tijd en Vroege Middeleeuwen. *Nieuwe Drentse Volksalmanak* 128, 87–119.

Waterbolk, H.T.

Research activities

The study of the archaeology and history of the village of Pesse in the province of Drenthe was continued with Reinders. We are now preparing a paper on habitation in the Neolithic and Bronze Age in the area. A paper on the methods of excavating prehistoric burial mounds was prepared for a *Festschrift*. 'Cattle stalling in medieval houses' was the subject of a critical comment on the publication of an excavation in the *Achterhoek* area. The death of T.H. van Andel led to a paper on the introduction of pollen analysis at the Groningen Institute of Archaeology.

Publications

Waterbolk, H.T., 2011. Het land Threat. Schets van het Drentse cultuurlandschap in de vroege middeleeuwen. In: M.J.L.Th. Niekus *et al.* (red.), *Gevormd en omgevormd landschap. Prehistorie tot middeleeuwen*. Uitgave Drents Prehistorische Vereniging, 98–109.

Waterbolk, H.T., 2011. De aquarel van Jan Wiegers. *De Spieker, periodiek van de Drents Prehistorische Vereniging* 32, 2. 16–19.

Waterbolk, H.T., 2011. Koeien in de kubbing? Over het stallen van vee in middeleeuwse boerderijen. *Nieuwe Drentse Volksalmanak* 128, 147–154.

Waterbolk, H.T., 2011. Tjeerd van Andel en het begin van de pollenanalyse in Groningen. *Paleo-aktueel* 22, 100–105.

Waterbolk, H.T. & H.R. Reinders, 2011. Archeologie en geschiedenis van Pesse. 3. Bewoning in de IJzertijd, de Romeinse tijd en de Vroege Middeleeuwen. *Nieuwe Drentse Volksalmanak* 128, 87–119.

6 PUBLICITY

6.1 DOCUMENTATION

During 2011 structural progress was made in the design of the repository, which was meant for the preservation of relevant digital documentation from GIA excavations. At the end of 2011 the test project was fully archived, and 2012 will see an upscaling of digital archiving. Besides the regular request for the use of GIA images, a lot of work was done for two Odyssee projects, Ezinge and Bergumermeer. There has also been an increase in requests from and support of (research)master students who want to use GIA-documentation to (re)publish old GIA excavations, for example those of the Klaarkamp and Aduard monasteries.

6.2 PRESS

Arnoldussen, S.

- 1 September: *Website Municipality Ede*, Celtic field project (www.ede.nl/cultuur/cultuur-en-kunst/archeologie/parels-van-edde/celtic-fields-raatakkers/).
- 1 December: *Probos Nieuwsbrief*, news item Celtic fields Ede (www.probos.nl/oudebossenveluwe/nieuwsbrief3.html).

Hacquebord, L.

- 7 January: *Algemeen Dagblad*, article 'Verhaal Nova Zembla heeft alles voor een topfilm'.
- 15 January: *Leeuwarder Courant*, section 'Balanceren tussen geldverdiene en natuurbeschermen', article 'Er is wat te halen op de Noordpool'.
- 17 February: *MAX broadcasting, Radio 1 programme 'Wekker wakker'*, interview on the hibernation on Nova Zembla.
- 18 August: *Svalbard Posten*, review on the PhD thesis of R. Roura.
- 5 September: *Ommelander Courant*, article 'Noordpolder 200 jaar' (following the opening by L. Hacquebord).
- 21 September: *NRC Handelsblad*, article 'Noordpool wordt oliepool'. On oil and gas extraction in the Arctic.
- 19 November: *Trouw*, article 'Nova Zembla, de nationale evergreen'.
- 26 November: *Leeuwarder Courant, Algemeen Dagblad, Volkskrant*, film review 'Nova Zembla'.
- 28 November: *BNN Newsradio*, film review 'Nova Zembla'.
- 29 November: *Nieuwsblad van het Noorden, TV Noord, Radio Noord, Radio 1 News*, film review 'Nova Zembla'.
- 30 November: *Radio Drenthe*, film review 'Nova zembla'.
- 13 December: *Radio 1 programme 'Met het oog op Morgen'*, interview 'Amundsen 100 jaar geleden op de Zuidpool'.

Holk, A.F.L. van

- 20 May: *Flevopost*, newspaper article on the excavation of shipwreck OE 34.
- 24 May: *RUG website*, article on the excavation of shipwreck OE 34.
- 12 June: *Archeonet.be*, article excavation shipwreck OE 34.
- 20 June: *Telegraaf, RTV Noord site, Flevopost Lelystad, Omroep Flevoland, Journal Zeilen site, ANP pers support, de Stentor*, articles/interviews on the excavation of shipwreck OE 34.
- 21 June: *Dagje weg.nl*, article on the excavation of shipwreck OE 34.
- 23 June: *Universiteitskrant*, article on the excavation of shipwreck OE 34.
- 27 June: *SBS radio Australia*, interview on the excavation of shipwreck OE 34 (translated in 66 languages).
- 4 July: *Dagblad van het Noorden*, interview on the excavation of shipwreck OE 34.
- 14 July: *Journal de Couturekrant site*, article on the excavation of shipwreck OE 34.

- 27 July: *Website Gemeente Lelystad*, article on the excavation of shipwreck OE 34.
1 August: *Omroep Flevoland*, interview on the excavation of shipwreck OE 34.
1 August: *Transport online*, article on the excavation of shipwreck OE 34.
2 August: *Historiek.nl*, article on the excavation of shipwreck OE 34.
22 September: *Kenniscafé Almere*, interview on the excavation of shipwreck OE 34.

Langen, G.J. de

- 12 February: *Leeuwarder Courant*, interview 'Professor van onze terpen. Kennis verwerven om onze terpen te bewaren. Dat is de missie van Nederlands eerste hoogleraar terpenarcheologie, Gilles de Langen'.
16 July: *Friesch Dagblad*, interview 'Kennis van onze verre voorouders is nuttig'.

Loonen, M.J.J.E.

- 29 June: *Svalbardposten*, article 'Introducing local newspaper'.
18 July: *Radio 1 news*, interview 'Over het smelten van het ijs op de Noordpool'.
31 July: *VARA radio programme 'Vroege Vogels'*, interview 'Veldseizoen'.
1 September: *Universiteitskrant*, interview on rhino theft.
6 October: *Universiteitskrant*, article 'Portret Joris Kijkt: duikend'.

Neef, W. de

- 1 April: *www.comune.cerchiara.cs.it*, official website of the municipality of Cerchiara di Calabria (Italy), Public announcement about fieldwork and archaeological research. The municipality announced the upcoming fieldwork campaigns of the RLPI project in Contrada Damale, and gave a short statement of the aims and scientific relevance of the project.

Nicolay, J.A.W.

- 22 June: *Leeuwarder Courant*, newspaper article 'Dorp van de laatste terpenbouwers' (with D. Postma).
29 June: *Extra*, article 'Open dag terpopgraving Firdgum'.
30 June: *Fries Dagblad*, newspaper article 'Zoeken naar plaggenwand bij Firdgum'.
30 June: *GP TV Friesland*, interview on the open day of the GIA *terp* excavation in Firdgum.
2 July: *Omrop Fryslân (radio & TV)*, interview on the open day of the GIA *terp* excavation in Firdgum.
16 July: *Leeuwarder Courant*, newspaper article 'Elfhonderd jaar oude kat in Firdgum'.
3 September: *Leeuwarder Courant*, newspaper article 'Scherven ruim 24 eeuwen oud'.
3 September: *Leeuwarder Courant*, newspaper article 'Terp Easterbeintum geeft offerpotten prijs'.
7 September: *SawnStjerrenNijs*, article 'Op Easterbeintum zoeken naar sporen van voorouders'.
10 September: *Leeuwarder Courant*, newspaper article 'Uniek: sporen van ploegwerk'.
10 September: *Omrop Fryslân (radio & TV)*, interview on the open day of the GIA-*terp* excavation in Firdgum.
12 September: *Fries Dagblad*, newspaper article 'Kwelders waren veel zoeter dan gedacht'.

Niekus, M.J.L.Th.

- 26 February: *Volkskrant*, newspaper article on Neanderthal finds in the province of Drenthe.
23 April: *Dagblad van het Noorden*, newspaper article on Neanderthal finds in the province of Drenthe.
23 May: *Dagblad van het Noorden*, *Nu.nl*, *RTV Drenthe news* (with J.R. Beuker (Drents Museum, Assen): newspaper article/interviews on Neanderthal finds in the province of Drenthe.
24 May: *De Telegraaf*, *Algemeen Dagblad*, newspaper articles on Neanderthal finds in the province of Drenthe.

Nieuwhof, A.

- 13 September: *TV Noord programme 'Het vervolg'*, interview on Ezinge pottery research at the NAD (Northern Archaeological Depot) in Nuis.

Postma, D.

- 14 March: *Friesch Dagblad*, newspaper article 'Oud-Fries zodenhuis moet verrijzen op een weiland in Firdgum'.
- 11 April: *Twitter*, Twitter account '@zodenhuis' (occasional messages on the progress of the Turf House Project (first message on 11 April)).
- 19 April: *Leeuwarder Courant*, newspaper article 'Experiment op restant dorpsterp: huis bouwen van klei in Firdgum'.
- 20 April: *Archeologie Online*, newspaper article 'Fries terpdorp krijgt zodenhuis'.
- 29 May: *Franeker Courant*, newspaper article 'Firdgum: open dag terpopgraving'.
- 1 June: *De Spieker*, lecture announcement 'De reconstructie van een Vroeg-Middeleeuws zodenhuis'.
- 14 June: Information sign 'Land van Ontdekkingen' (set up at GIA *terp* excavation in Firdgum (14 June-15 July)).
- 14 June: *GIA website*, webcam on excavation GIA *terp* excavation in Firdgum (14 June-15 July) (limited internet broadcasting due to technical difficulties, but full recordings stored for future use).
- 22 June: *Leeuwarder Courant*, newspaper article 'Dorp van de laatste terpenbouwers' (with J.A.W. Nicolay).
- 29 June: *Harlinger Courant Extra*, newspaper article 'Open dag terpopgraving Firdgum'.
- 30 June: *Dagblad van het Noorden*, newspaper article 'Archeologen leggen Friese terp bloot'.
- 30 June: *Friesch Dagblad*, newspaper article 'Zoeken naar plaggenwand bij Firdgum'.
- 30 June: *GPTV (TV)*, news item and interview 'Verleden van Firdgum wordt blootgelegd'. (www.youtube.com/watch?v=QuU9IK3kWws).
- 2 July: *Yeb Hettinga Museum*, information leaflet 'De reconstructie van een zodenhuis'. (available since the joint open day at the *terp* excavation in Firdgum).
- 2 July: *Omrop Fryslân (TV)*, news item in 'It nijs yn fiif minuten' (Stipe foar bondelbus). (www.youtube.com/watch?v=JTolfjyFhms&noredirect=1 (item on Turf House Project starts at 2.45 min.)).
- 3 July: *Omrop Fryslân (TV)*, news item in 'Hjoed' (Bondelbus moat iepenbier ferfier op plattelân rêde) (www.youtube.com/watch?v=Z3df-GZ2HKs (item on GIA *terp* excavation and Turf House Project starts at 6.38 min.)).
- 5 July: *Dagblad van het Noorden*, newspaper article 'Vondsten Friese terp naar Assen'.
- 13 July: *Franeker Courant*, newspaper article 'Volgend jaar zodenhuis bij Firdgum'.
- 15 August: Information sign 'Terpenproject Steilkantonderzoek Friesland' (set up at GIA *terp* excavation in Oosterbeintum (15 August–14 September)).
- 14 September: *Franeker Courant*, newspaper article 'Lezing zodenhuis'.
- 14 September: *Van Wad tot Stad*, newspaper article 'Zodenhuislezing'.
- 2 November: *Het Gezinsblad*, newspaper article 'Lezing voorhistorische huizenbouw'.
- 5 November: *GP TV*, news item 'Zodenhuis bij Firdgum' (www.youtube.com/watch?v=75tneEo653U).

Prummel, W.

- 19 March: *Leeuwarder Courant*, newspaper article 'Zolder vol dierenbotten' (with R.J. Kusters & J.T. van Gent).
- 30 March: *Boerenvee 2011: 1*, interview 'Coöperatie mens en dier al 12.000 jaar oud'.
- 1 May: *Journal Stad en Lande*, interview 'Mijn vondst'.
- 14 June: *Discovery*, news item 'Prehistoric BBQ Leftovers Found' (with M.J.L.Th. Niekus) (<http://news.discovery.com/history/ancient-barbeque-aurochs-110627.html>).
- 16 July: *Leeuwarder Courant*, newspaper article 'Elfhonderd jaar oude kat in Firdgum' (with J.T. van Gent).
- 14 December: *De Bildtse Post*, newspaper article 'Determinatiedag Archeologische Steunpunt De Aerden Plaats'; start of the project 'Occupation history of Het Bildt' (with J.T. van Gent).

Raemaekers, D.C.M.

- 21 September: *Dagblad van het Noorden*, newspaper interview on archaeological depots.

7 AWARDS

Hacquebord, L.

29 April: Royal Honours, *Officier in de Orde van Oranje Nassau*

Terpstra, T.K.

15 June: ACSN Student Research Award, granted by the Association for Canadian Studies in the Netherlands, € 900

Voutsaki, S.

18 May: *Broedbonus*, € 6160

15 December: Akademie Assistent Programme (1 assistant)

8 PUBLICATIONS

Number of refereed articles (ra), non-refereed articles (nra), books (b), book chapters (bc), PhD-theses (phd), conference papers (cp), professional publications (pro), popular publications (pop) and other research output (or).

<i>Chairs</i>	<i>ra</i>	<i>nra</i>	<i>b</i>	<i>bc</i>	<i>phd</i>	<i>cp</i>	<i>pro</i>	<i>pop</i>	<i>or</i>
Prehistoric and Protohistoric Archaeology	5	4	2	1	0	3	7	24	8
Classical and Mediterranean Archaeology & Greek Archaeology	3	6	3	2	1	4	0	3	0
Arctic and Antarctic Studies	5	0	0	0	1	1	4	0	1
Total	13	10	5	3	2	8	11	27	9

Total: **88** publications

8.1 Refereed articles

Prehistoric and Protohistoric Archaeology

- Niekus, M.J.L.Th., D. Stapert, J.R. Beuker & L. Johansen, 2011. A new site of the Mousterian of Acheulian Tradition in the northern Netherlands. *Quartär* 58, 67–92.
- Nienhuis, J., J. Sietsema & S. Arnoldussen, 2011. The production process and potential usage of Bronze Geistinge Axes. *Journal of Archaeology in the Low Countries* 3 (1), 47–63.
- Prummel, W. & M.J.L.Th. Niekus, 2011. Late Mesolithic hunting of a small female aurochs in the valley of the river Tjonger (The Netherlands) in the light of Mesolithic aurochs hunting in NW Europe. *Journal of Archaeological Science* 38 (7), 1456–1467.
- Prummel, W., H. Halici & A. Verbaas, 2011. The bone and antler tools from the Wijnaldum-Tjitsma terp. *Journal of Archaeology in the Low Countries* 3 (1/2), 65–106.
- Weijdema, F., O. Brinkkemper, J.H.M. Peeters & B. van Geel, 2011. Early Neolithic human impact on the vegetation in a wetland environment in the Noordoostpolder, central Netherlands. *Journal of Archaeology in the Low Countries* 3 (1/2), 31–46.

Classical and Mediterranean Archaeology & Greek Archaeology

- Bruins, H.J., A.J. Nijboer & J. van der Plicht, 2011. Iron Age Mediterranean Chronology: A Reply. *Radiocarbon* 53 (1), 199–220.
- Haas, T.C.A. de, G.W. Tol & P.A.J. Attema, 2011. Investing in the colonia and ager of Antium. *FACTA* 5, 111–144.
- Leusen, P. M. van, 2011. A Career in Classical Archaeology: An Interview with Marianne Kleibrink. *European Journal of Archaeology* 14 (1-2), 11–28.

Arctic and Antarctic Studies

- Avango, D., L. Hacquebord, Y.I. Aalders, H.R. de Haas, U.I. Gustafsson & F. Kruse, 2011. Between markets and geo-politics: natural resource exploitation on Spitsbergen from 1600 to the present day. *Polar Record* 47 (240), 29–39.

- Dolnik, O.V., B.J. Metzinger & M.J.J.E. Loonen, 2011. Keeping the clock set under the midnight sun: diurnal periodicity and synchrony of avian Isospora parasites cycle in the High Arctic. *Parasitology* 138 (9), 1077–1081.
- Fox, A.D., B.S. Ebbinge, C. Mitchell, T. Heinicke, T. Aarvak, K. Colhoun, P. Clausen, S. Dereliv, S. Farago, K. Koffijberg, H. Kruckenberg, M.J.J.E. Loonen, J. Madsen, J. Mooij, P. Musil, L. Nilsson, S. Pihl & H. van der Jeugd, 2011. Current estimates of goose population sizes in western Europe, a gap analysis and assessment of trends. *Ornis svecica* 20, 115–127.
- Hacquebord, L., 2011. Book review: C. Ian Jackson (ed.), *The Arctic Whaling Journals of William Scoresby the Younger. Volume II: The Voyages of 1817, 1818 and 1820*. London, Hakluyt Society. *International Journal of Maritime History*, Vol. XXII, No. 2, 417–420.
- Hahn, S., M.J.J.E. Loonen & M. Klaassen, 2011. The reliance on distant resources for egg formation in high Arctic breeding barnacle geese *Branta leucopsis*. *J. Avian Biology* 42, 159–168.

8.2 Non-refereed articles

Prehistoric and Protohistoric Archaeology

- Cappers, R.T.J., 2011. Bookreview: M. Ciaraldi, People and plants in ancient Pompeii. A new approach to urbanism from the microscope room. The use of plant resources at Pompeii and in the Pompeian area from the 6th century BC to AD 79. *Accordia Specialist Studies on Italy* 12. *Bonner Jahrbücher* (2008), 357–358.
- Hartz, S., J. Beuker & M.J.L.Th. Niekus, 2011. Neandertaler drangen in den Norden vor. *Archäologie in Deutschland* 2, 56.
- Prummel, W., 2011. Book review: Canan Çakırlar, Mollusk Shells in Troia, Yenibademli, and Ulucak. An Archaeomalacological Approach to the Environment and Economy of the Aegean. *BAR International Series* 2051. Oxford, Archeopress. *Praehistorische Zeitschrift* 86, 137–140.
- Prummel, W., 2011. Book review: T. O'Connor & N. Sykes (ed.), *Extinctions & invasions: a social history of British fauna*. Oxford, Windgather Press. *Antiquity* 85 (330), 1499–1500.

Classical and Mediterranean Archaeology & Greek Archaeology

- Feiken, H., R. van Beek, T. van Asch & P.M. van Leusen, 2011. CALEROS: an erosion-deposition model for landscape archaeology. *BAR International Series* 2320, 13–16.
- Galestin, M.C., 2011. Een Romeinse god in Wildervank? *Historisch Jaarboek Groningen*, 126–128.
- Haas, T.C.A. de, 2011. The agricultural colonization of the Pomptinae Paludes: surveys in the lower Pontine plain. *Bollettino di Archeologia on-line edizione special*, 1–14.
- Kattenberg, A & P. M. Van Leusen, 2011. Magnetic susceptibility prospection in northern Calabria. *BAR International Series* 2320, 47–50.
- Leusen, P.M. van, G. Pizziolo & L. Sarti, 2011. Introduction. *BAR International Series* 2320, 11–14.
- Wiersma, C.W., 2011. Early Helladic III - Late Helladic I house architecture and social relations. *SOJA Bundel 2010*, 65–71.

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8.3 Books

Prehistoric and Protohistoric Archaeology

Cappers, R.T.J. & R.M. Bekker, 2011. *Determinatie van zaden en vruchten* (1st ed.). Groningen, Barkhuis Publishing.

Raemaekers, D.C.M., J. Geuverink, M. Schepers, B.P. Tuin, E. Van de Lagemaat & M. van der Wal, 2011. *A biography in stone. Typology, age, function and meaning of Early Neolithic perforated wedges in the Netherlands* (Groningen Archaeological Studies 14). Groningen, Barkhuis Publishing.

Classical and Mediterranean Archaeology & Greek Archaeology

Attema, P.A.J., T.C.A. de Haas & G.W. Tol, 2011. *Between Satricum and Antium: settlement dynamics in a coastal landscape in Latium Vetus* (Babesch supplement 18). Leuven, Peeters.

Leusen, P.M. van, G. Pizziolo & L. Sarti, 2011. Hidden Landscapes of Mediterranean Europe. Cultural and methodological biases in pre- and protohistoric landscape studies. *Proceedings of the international meeting Siena, Italy, May 25-27, 2007* (BAR International Series 2320). Oxford, Archaeopress.

Lindhout, E. van 't., 2011. *Bouwen in Latium in de archaische periode* (1st ed.). Groningen, Barkhuis Publishing.

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8.4 Book chapters

Prehistoric and Protohistoric Archaeology

Peeters, J.H.M., 2011. How wet can it get? Approaches to submerged prehistoric sites and landscapes on the Dutch Continental Shelf. In: J. Benjamin, C. Bonsall, C. Pickard & A. Fischer (eds.), *Submerged Prehistory*. Oxford, Oxbow Books, 55–64.

Classical and Mediterranean Archaeology & Greek Archaeology

Attema, P.A.J. & T.C.A. de Haas, 2011. Rural settlement and population extrapolation, a case study from the *ager* of Antium, central Italy (350 BC – AD 400). In: A. Bowman & A. Wilson (eds.), *Settlement, Urbanisation and Population* (Oxford Studies on the Roman Economy 2). Oxford, Oxford University Press, 97–140.

Willemsen, S.L., 2011. *Oil Lamps from the Antiquarium of Nettuno*. Chapter 22, 99–109. Babesch, Annual Papers on Mediterranean Archaeology. Leuven/Paris/Walpole, Peeters.

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8.5 PhD theses

Prehistoric and Protohistoric Archaeology

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Classical and Mediterranean Archaeology & Greek Archaeology

Haas, T.C.A. de, 2011. *Fields, farms and colonists. Intensive field survey and early Roman colonization in the Pontine region, central Italy*. PhD thesis Rijksuniversiteit Groningen.

Arctic and Antarctic Studies

Roura, R.M., 2011. *The footprint of polar tourism: tourist behaviour at cultural heritage sites in Antarctica and Svalbard*. PhD thesis Rijksuniversiteit Groningen.

8.6 Conference papers (Proceedings)

Prehistoric and Protohistoric Archaeology

Nieuwhof, A., 2011. Living in a dynamic landscape: prehistoric and proto-historic occupation of the northern-Netherlands coastal area. In: H. Marencic, K. Eskildsen, H. Farke & S. Hedtkamp (eds.), *Science for Nature Conservation and Management: the Wadden Sea Ecosystem and EU Directives. Proceedings of the 12th International Scientific Wadden Sea Symposium in Wilhelmshaven, Germany, 30 March - 3 April, 2009*. Wilhelmshaven, Common Wadden Sea Secretariat, 174–178.

Nieuwhof, A., 2011. Discontinuity in the Northern-Netherlands coastal area at the end of the Roman Period. In: T.A.S.M. Panhuysen (ed.), *Transformations in North-Western Europe (AD 300-1000). Proceedings of the 60th Sachsensymposium in Maastricht, 19-23 September, 2009. Neue Studien zur Sachsenforschung 3*. Hannover, Theiss, 55–66.

Raemaekers, D.C.M., 2011. Early Swifterbant pottery (5000-4600 BC): research history, age, characteristics and the introduction of pottery. *Proceedings Conference Early Pottery 21 October, 2006, Schleswig, Germany. Berichte Römisch-Germanische Kommission 89*, 485–500.

Classical and Mediterranean Archaeology & Greek Archaeology

Nijboer, A.J., 2011. Italy, its interconnections and cultural shifts during the Iron Age. In: M. Dalla Riva & H. Di Giuseppe (eds.), *Meetings between cultures in the ancient Mediterranean. Proceedings of the 17th International Congress of Classical Archaeology, Rome, 22-26 September, 2008*, 1–22.

Nijboer, A.J., 2011. Leggere la colonizzazione greca antica nel XX e XXI secolo d.C. In: *IX Giornata Archeologica Francavillese*, 32–60. Associazione per la scuola Internazionale d'Archeologia 'Lagaria' Onlus. Castrovillari, Tipografia d'Arte Patitucci.

Nijboer, A.J. & P.A.J. Attema, 2011. Cultural characteristics of the ancient community living at Crustumerium and the excavations of the Groningen Institute of Archaeology at the Monte Del Bufalo necropolis. In: M. Dalla Riva & H. Di Giuseppe (eds.), *Meetings between cultures in the ancient Mediterranean. Proceedings of the 17th International Congress of Classical Archaeology, Rome 22-26 September, 2008*, 1–16. Published online in *Bollettino di Archeologia online Volume special (2010)*.

Willemsen, S.L., 2011. Amazons in pre-Roman Italy, symbols of a new era. In: P.S. Lulof & C. Rescigno (eds.), *Deliciae Fictiles IV, Rome, 21 November 2009*, 44–49. Oxford, Oakville, Oxbow Books.

Arctic and Antarctic Studies

Kruse, F., 2011. Four former British mining settlements on Spitsbergen. In: P. Claughton & C. Mills (eds.), *Mining Perspectives. Thurso, Cornwall and West Devon Mining Landscape World Heritage Site. Proceedings of the 8th International Mining History Congress 2009, Thurso*, 117–124.

8.7 Professional publications (including reports)

Prehistoric and Protohistoric Archaeology

- Arnoldussen, S., 2011. Een Olla a coppetta uit de Vroege IJzertijd in Limburg. *De Maasgouw* 130 (2), 65–69.
- Arnoldussen, S. & J. Mendelts, 2011. Een mesolithische vindplaats onderzocht te Meerstad. *Hervonden Stad* 2011, 89–96.
- Arnoldussen, S. & E.E. Scheele, 2011. The ancestors nearby. The domestic and funerary landscape of Angelslo-Emmerhout. In: H.M. van der Velde, E. Drenth, N.L. Jaspers & H.B.G. Scholte-Lubberink (eds.), *Van graven in de prehistorie en dingen die voorbij gaan* (opstellen aangeboden aan Eric Lohof ter gelegenheid van zijn pensionering in de Nederlandse archeologie). *Sidestone / ADC*, 151–183.
- Holk, A.F.L. van, 2011. Recent research on Roman shipfinds from the Netherland. In: G. Boetto, P. Pomey & A. Tchernia (eds.), *Batterie Gallo-Romaine. Pratiques régionales et influences maritimes Méditerranéennes* (collection BiAMA 9). Paris/ Aix-en-Provence, Editions Errance/Centre Camille Jullian, 33–43.
- Nieuwhof, A., E. Knol & E. Taayke (eds.), 2011. *Jaarverslagen van de Vereniging voor Terpenonderzoek 94*. Groningen, Vereniging voor Terpenonderzoek.
- Prummel, W., 2011. Dieren in de Romeinse tijd en de vroege Middeleeuwen op de Oldehoveterp te Leeuwarden. *Leovardia. Historisch tijdschrift voor Leeuwarden en omgeving* (35), 19–21.
- Tuinstra, S.J., J.R. Veldhuis & J.A.W. Nicolay (eds.), 2011. *Hallum, een welvarend dorp aan de monding van de Middellzee. Een archeologische opgraving te Hallum, gemeente Ferwerderadeel (Fr)*. *ARC-Publicaties 205*. Groningen, ARC bv.

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- Gauthier, G., K.F. Abraham, M. Doiron, K.A. Edwards, E.J. Horrigan, E. Lévesque, M.J.J.E. Loonen & R.F. Rockwell, 2011. Geese. Chapter 4, 54–65. *ArcticWOLVES: Arctic Wildlife Observatories Linking Vulnerable EcoSystems* (Final synthesis report 4).
- Steenhuisen, F., 2011. Arctic Pollution 2011. Oslo, Arctic Environmental Assessment Programme (AMAP).
- Steenhuisen, F. *et al.*, 2011. AMAP Assessment 2011, Mercury in the Arctic. Oslo, Arctic Environmental Assessment Programme (AMAP).
- Terpstra, T.K., 2011. Review of 'Migration in the Circumpolar North: Issues and Contexts'. *Polar Geography* 34 (3), 209–211.

8.8 Publications aimed at the general public (Popular publications)

Prehistoric and Protohistoric Archaeology

- Arnoldussen, S. & A. Bouman, 2011. Van de wal en het veld: nieuw archeologisch onderzoek aan Celtic fields. *Paleo-aktueel* 22, 45–54.
- Arnoldussen, S., P.C. Vos, H.J.T. Weerts, R. Lauwerier & O. Brinkkemper, 2011. 1500 v. Chr. Nederland raakt overveend, 54–57. In: P.C. Vos, J. Bazelmans, H.J.T. Weerts & M.J. van der Meulen (eds.), *Atlas van Nederland in het Holoceen*. Amsterdam, Uitgeverij Bert Bakker.
- Arnoldussen, S., P.C. Vos, H.J.T. Weerts, R. Lauwerier & O. Brinkkemper, 2011. Boeren in het rivierenlandschap: Rumpt-Eigenblok, 57. In: P.C. Vos, J. Bazelmans, H.J.T. Weerts & M.J. van der Meulen (eds.), *Atlas van Nederland in het Holoceen*. Amsterdam, Uitgeverij Bert Bakker.
- Fens, R. & W. Prummel, 2011. Wilde koeien in de kudde. *Paleo-aktueel* 22, 24–31.

- Gijn, A.L. van, J. Geuverink, J.J. Wiersma & W.B. Verschoof, 2011. Hunebed D6 in Tynaarlo (Dr.): meer dan een berg grijze stenen? *Paleo-aktueel* 22, 38–44.
- Groenendijk, H.A., E. Renken, J. van der Veen & H. Woldring, 2011. Terug naar Vriescheloo (Gr.). *Paleo-aktueel* 22, 65–74.
- Holk, A.F.L. van, 2011. Een lading kloostermoppen onder een brandnetelkwekerij. Kogge van Kraggenburg onderzocht. *Tijdschrift van de RCE* 3 (2), 8–9.
- Holk, A.F.L. van, 2011. International Fieldschool for Maritime Archaeology Flevoland. *Cultuurhistorisch Jaarboek Flevoland*, 178–181.
- Kaaijk, S.R., R.T.J. Cappers, I.L.C.C. van der Velde, M.S. van Bruggen, F.B.J. Heinrich & A. Ufkes, 2011. ‘Appels met peren vergelijken’: een beerputvulling uit Tiel (Gld.) energetisch geschaald. *Paleo-aktueel* 22, 84–91.
- Kolen, J.C.A. & M.J.L.Th. Niekus, 2011. *Van cultureel streekdiagram tot landschapsbiografie. Een overzicht van 50 jaar landschapsarcheologie in Drenthe*. Chapter 9, 132–144 (1st ed.). Assen, Drents Prehistorische Vereniging.
- Lagemaat, E. van de, D. Stapert & L. Johansen, 2011. De kern van Zeijen (Dr.): vuursteenbewerkers groot en klein. *Paleo-aktueel* 22, 9–15.
- Langen, G.J. de, 2011. Netwerken op terpen. In: K. Terwisscha van Scheltinga & K. Wagenaar (eds.), *Een caleidoscopische kijk op het verhaal van Fryslân - Op het snijvlak van economie, cultuurhistorisch erfgoed, recreatie & toerisme*. Leeuwarden, Provincie Fryslân, 56–59.
- Langen, G.J. de, 2011. De gang naar een ander landschap. De ontginning van de klei-op-veengebieden in Fryslân gedurende de late ijzertijd, Romeinse tijd en middeleeuwen (van ca. 200 v. Chr. tot ca. 1200 na Chr.). In: M.J.L.Th. Niekus (ed.), *Gevormd en omgevormd landschap. Van Prehistorie tot Middeleeuwen*. Assen, Drents Prehistorische Vereniging, 70–97.
- Niekus, M.J.L.Th., 2011. Ruimtelijke configuraties van mesolithische haardkuilen in Noord-Nederland. *Paleo-aktueel* 22, 16–23.
- Niekus, M.J.L.Th., J. Beuker & D. Stapert, 2011. Spectaculaire werktuigen van de neanderthaler in Drenthe. *Archeobrief* 1, 36–37.
- Niekus, M.J.L.Th., S. van der Zee, T. Looijenga & F. Kiestra (eds.), 2011. *Gevormd en omgevormd landschap van Prehistorie tot Middeleeuwen* (1st ed.). Assen, Drents Prehistorische Vereniging.
- Peeters, J.H.M., P.C. Vos, H.J.T. Weerts, R. Lauwerier & O. Brinkkemper, 2011. 5500 v.Chr. Het water stijgt, 42–45. *Atlas van Nederland in het Holoceen*. Amsterdam, Uitgeverij Bert Bakker.
- Peeters, J.H.M., P.C. Vos, H.J.T. Weerts, R. Lauwerier & O. Brinkkemper, 2011. 3850 v.Chr. Het veen breidt zich uit, 46–49. *Atlas van Nederland in het Holoceen*. Amsterdam, Uitgeverij Bert Bakker.
- Postma, D., 2011. Vroeg-middeleeuwse bouwtradities in het zuidelijke Noordzeegebied. *Paleo-aktueel* 22, 55–63.
- Postma, D., 2011. Nieuwe inzichten in voorhistorische huizenbouw, aan de hand van de reconstructie van een zodenhuis. *De Spieker* 32, 3–4.
- Postma, D., 2011. Reconstructie van een 'Oud-Friese' bouwtraditie. *Van wierden en terpen. Mededelingen van de Vereniging voor Terpenonderzoek* 16, 5–7.
- Raemaekers, D.C.M., 2011. Iets nieuws uit Swifterbant (Fl.). Het aardewerk van S25 als sleutel voor nieuwe vergezichten. *Paleo-aktueel* 22, 32–37.
- Stapert, D., G.J. Boekschoten & L. Johansen, 2011. Een Levallois-kern en een bijzonder geslepen bijl van Vlieland (Fr.). *Paleo-aktueel* 22, 1–8.
- Wiersma, J.J. & D.C.M. Raemaekers, 2011. Over de plaats van leven en dood in het neolithicum. Een landschapsbenadering van de trechterbekercultuur in Drenthe. In: M.J.L.Th. Niekus (ed.), *Gevormd en omgevormd landschap. Van prehistorie tot Middeleeuwen*. Assen, Drents Prehistorische Vereniging, 32–43.

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- Attema, P.A.J. & W. Jongman, 2011. Archeologie en de Romeinse Economie. *Tijdschrift voor Mediterrane Archeologie* 44, 1–5.
- Haas, T.C.A. de, 2011. Review: Cult places and cultural change in Republican Italy. *Tijdschrift voor Mediterrane Archeologie* 45, 52–54.
- Tol, G.W., 2011. Scherven tellen. Een studie naar site-complexiteit en -evolutie in het achterland van Antium (Lazio, Centraal-Italië). *Tijdschrift voor Mediterrane Archeologie* 44, 20–27.

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8.9 Other research output

Arnoldussen, S., R.T.J. Cappers, G.J. de Langen, E. van 't Lindenhout, J.H.M. Peeters, N.D. van der Pers, W. Prummel, D.C.M. Raemaekers, 2011. *Paleo-aktueel* 22.

Prehistoric and Protohistoric Archaeology

Daleman, M., J.A.W. Nicolay & C.G. Koopstra, 2011. Metaal. In: S.J. Tuinstra, J.R. Veldhuis & J.A.W. Nicolay (eds.), *Hallum, een welvarend dorp aan de monding van de Middellzee. Een archeologische opgraving te Hallum, gemeente Ferwerderadeel (Fr)*. Chapter 7, 137–190. *ARC-Publicaties* 25. Groningen, ARC bv.

Holk, A.F.L. van, 2011. Schepen als schakels. Verbondenheid in ruimte en tijd. Inaugurele rede uitgesproken op 27 april 2010.

Nicolay, J.A.W., S.J. Tuinstra & J.R. Veldhuis, 2011. Synthese. In: S.J. Tuinstra, J.R. Veldhuis & J.A.W. Nicolay (eds.), *Hallum, een welvarend dorp aan de monding van de Middellzee. Een archeologische opgraving te Hallum, gemeente Ferwerderadeel (Fr)*. Chapter 13, 241–284. *ARC-Publicaties* 25. Groningen, ARC bv.

Niekus, M.J.L.Th. & H. Huisman, 2011. *Natuursteen. Stadse fratsen* 29. Stichting Monument & Materiaal / Gemeente Groningen Report 6. Groningen, Gemeente Groningen, 49–55.

Niekus, M.J.L.Th., A.L. van Gijn & A. Verbaas, 2011. *Vuursteen en natuursteen. BOORrapporten* 439 (7), 45–72. Rotterdam, BOOR.

Niekus, M.J.L.Th., D. Stapert & L. Johansen, 2011. *Vuursteen. Stadse fratsen* 29. Stichting Monument & Materiaal / Gemeente Groningen Report 5. Groningen, Gemeente Groningen, 37–48.

Verbaas, A., M.J.L.Th. Niekus, A.L. van Gijn, S. Knippenberg, Y.L. Lammers-Keijsers & P.C. van Woerdekom, 2011. *Vuursteen uit de Hanzelijn. Archol rapport 138 / ADC rapport 2576* (7), 335–393. Leiden, Archol BV / Amersfoort, ADC.

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Arctic and Antarctic Studies

Roura, R.M., 2011. Poster presentation: Post-depositional formation processes affecting historic and archaeological polar sites: a preliminary overview. Polar Symposium *Exploring Polar Regions. 100 years since Amundsen, Utrecht, 14 December 2011*. Utrecht, Willem Barentsz Poolinstituut.

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