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"IF I HAD KNOWN THAT MY LORD WANTED IRON"¹

The beginning of the common use of iron in Assyria

Caroline van der Brugge, rMA, Vrije Universiteit Amsterdam

Samenvatting/ Abstract (Dutch)

Al in de Bronstijd was het metaal ijzer bekend in het Oude Nabije Oosten. Vanwege de schaarste van de grondstof en omdat men nog geen staal kon produceren diende het ijzer alleen als materiaal voor ornamenten, sieraden en pronkstukken. Toen in de twaalfde eeuw v. Chr. op Cyprus het procedé voor het maken van staal werd ontwikkeld, ging men ijzer ook gebruiken voor wapens en gereedschappen. Het gebruik van ijzer verspreidde zich in de eeuwen daarna naar andere gebieden. De bodem van Assyrië, gelegen in de Noord-Mesopotamische vlakte, bevatte echter geen ijzererts; ijzer werd verkregen via handel of als buit en tribuut bij veroveringen.

Over de periode waarin ijzer in Assyrië een alledaags materiaal werd, zijn twee hypothesen geformuleerd: sommige auteurs denken dat dit reeds in de negende eeuw plaatsvond, anderen denken dat ijzer pas later in grote hoeveelheden beschikbaar was. De eerste groep noemt vier argumenten: twee op basis van Assyrische koningsinscripties en twee op basis van opgravingen. Geen van deze argumenten kan naar mijn mening echter de toets der kritiek doorstaan. Zo zijn er geen archeologische vondsten bekend van ijzer uit negende-eeuws Assyrië en ook datering van ijzeren voorwerpen in de achtste eeuw is onzeker. De koningsinscripties, waarop de tekstuele argumenten zijn gebaseerd, zijn niet betrouwbaar als het gaat om hoeveelheden ijzer. Als bovendien wordt gekeken naar de vermelding van brons in deze teksten, blijkt dit materiaal in de negende eeuw vele malen meer voor te komen: de indruk ontstaat van een maatschappij die vooral nog op brons leunt. Verder blijkt uit Assyrische en Babylonische brieven daterend uit de tweede helft van de achtste eeuw, dat er op dat moment weliswaar private handel in ijzer was, maar tevens dat het materiaal nog relatief schaars was: de vraag was groter dan het aanbod. Tegelijkertijd laat metallurgisch onderzoek aan ijzeren voorwerpen zien dat de vaardigheid van het maken van staal in de zevende eeuw in Assyrië nog niet algemeen werd beheerst. Dit zou men wel hebben verwacht als ijzer al vanaf de negende eeuw in voldoende mate beschikbaar zou zijn geweest. Naar mijn mening is het dan ook duidelijk dat ijzer pas vanaf het eind van de achtste eeuw in grotere hoeveelheden voor Assyrië beschikbaar kwam en daar een algemeen gebruikt materiaal werd.

Introduction

In the modern world iron is a very common material. Iron ore is found in many places all over the world; iron and steel can be produced with whatever strength and ductility are needed. This, however, has not always been the case. In the Near Eastern Bronze Age (3000 BC to 1200 BC²), the material was already known, but probably as a by-product of copper, the ore of which contained iron.³ Therefore it was scarce and expensive. Because in this period the process of making steel was not yet mastered, the iron remained soft and fragile, and was unsuitable as a material for weapons or tools.⁴ Despite this defect, the Hittites

valued the material highly for their ornamental and cultic objects.⁵

From the twelfth century on, an increasing use of iron as a material for utensils can be observed. In this period Cypriot smiths developed the method to produce steel by adding carbon to the iron, a process called carburization.⁶ Soon after, production of iron started in the southern Levant, and from the tenth century onward, steel tools and weapons are archaeologically attested in this area.⁷ In the northern Levant (modern Syria) and the Neo-Hittite states the production of iron and steel utensils started some time later.⁸ In all these areas, the soil contained iron ore; the soil of Assyria, situated in northern Mesopotamia, did not. The Assyrians had to acquire metals like gold, silver, bronze and iron from elsewhere. They imported them through trade, their armies took

¹ The title is part of a letter from the early Neo-Babylonian governor's archive from Nippur, second half eighth century. Cole 1996, 113-115 (text 41).

² All dates in this article are BC, unless mentioned otherwise.

³ Moorey 1994, 279-280; Tholander 1982.

⁴ Muhly, *et al.* 1985, 73-74; Košak 1986, 134. However, Yalçin (1998, 90) thinks iron utensils have been made from 1800 BC on.

⁵ See for instance the letter from Hattusili III to an Assyrian king, Beckman 1999, 24b.

⁶ Muhly 2003, 180; Sherratt 1994, 60-61; Pickles/Peltenburg 1998, 90-91.

⁷ Stech-Wheeler *et al.* 1981, 245-256.

⁸ Geiss 1987, 395-396, 400.

them as booty after a conquest, and their kings demanded them as tribute from subjugated peoples.⁹

At the end of the second millennium the kingdom of Assyria expanded. The Assyrian king Tukulti-Ninurta II (890-884) went on campaign to the northern Levant. Among other products he received two talents of iron and one hundred iron daggers as tribute.¹⁰ His successor Aššurnāširpal (883-859) already received much more iron: his inscriptions refer to a total of 650 talents from three different cities plus an unknown number of talents from two other places, all in Syria and south-east Anatolia.¹¹ The inscriptions of his son Šalmaneser III (858-824) mention the receipt of several hundreds of talents of iron as tribute from different places in these regions.¹² The availability and probably also the use of iron in ninth-century Assyria was growing at a steady pace.

When did iron become relatively common in Assyria?

The hypothesis that already as early as the ninth century iron was an ordinary metal in Assyria has been advocated by Moorey and Haarer and by Reiter, according to whom, from the ninth century on, iron was "*das vorherrschende Gebrauchsmetall*".¹³ They deduced this hypothesis from an article by Curtis *et al.*, Wheeler, Muhly and Maddin, reporting: "it was probably in the ninth century that the crucial transition took place from an industry dominated by bronze working to one which used iron whenever appropriate...". Surprisingly, this article continues as follows: "... although clear archaeological evidence is lacking. It is not however, until the eighth-seventh centuries, by which time the ironworking industry was clearly well developed, that we have a large collection of extant ironwork."¹⁴ The second part shows that the authors of the article had their doubts. Two years later, three of them, Wheeler, Muhly and

Maddin revised their hypothesis by concluding that even in the eighth and seventh centuries the quality of the Assyrian iron was less than that of the Levantine iron two to three hundred years earlier: there was no proof that the Assyrians were able to make steel (Figure 1). This could only mean that in the ninth and part of the eighth century the Assyrian iron industry was not very well developed,¹⁵ a hypothesis supported by Bedford, who believes that Assyria only became a producer of iron in the third part of the eighth century.¹⁶

This article will evaluate both hypotheses: did the Assyrians already in the ninth century use iron as a common material for utensils, or was it not before the late eighth century that they were that far? First the arguments of the scholars who are convinced of a ninth-century common use of iron will be reviewed; then arguments against this view will be discussed, followed by a conclusion.



Figure 1: Assyrian soldiers (ca. 700) cutting trees with a double axe: bronze, iron or steel?

A critical look at the arguments in favour of a ninth-century common use of iron

Moorey and Haarer used four arguments to substantiate the hypothesis of a ninth-century common use of iron in Assyria. The first two arguments, based on Assyrian royal inscriptions, were formulated by Moorey. He states: "Under Šalmaneser III, for the first time, iron was listed among metals obtained 'without number' and thereafter, until available records cease in the

⁹ For booty and tribute see the Assyrian royal inscriptions, for example Grayson 1991, 176 (text 5, line 100); 177 (text 5, line 107); 193-223 (text 1, column i, line 84, column ii, line 122 and column iii, lines 66 and 74) and Grayson 1996, 18 (text 2, column ii, lines 22, 25 and 28).

¹⁰ Grayson 1991, 176 (text 5, line 100) and 177 (text 5, line 107). One talent is ca. 30 kilograms.

¹¹ Grayson 1991, 193-223 (text 1, column i, line 84, column ii, line 122 and column iii, lines 66 and 74).

¹² Grayson 1996, 18 (text 2, column ii, lines 22, 25 and 28).

¹³ Moorey 1994, 290; Haarer 2001, 266; Reiter 1997, 348.

¹⁴ Curtis *et al.* 1979, 369-370.

¹⁵ Stech-Wheeler *et al.* 1981, 267-268.

¹⁶ Bedford 2009, 34.



Figure 2: Iron spearhead from Hasanlu, ca. 800.

earlier seventh century BC, very considerable quantities of iron are recorded."¹⁷ Indeed, in one of his inscriptions Šalmaneser used the term *ana lā māni*, uncountable, to describe iron that had been received from the Neo-Hittite state of Patina. What is noteworthy here, is, that it was part of a tribute that contained an uncountable quantity not only of iron, but also of silver, gold, tin, bronze, and ivory.¹⁸ Further investigation into the royal inscriptions reveals that other kings also used the expression *ana lā māni* to describe large numbers of enemies¹⁹ or booty.²⁰ The expression seems to have been used for other reasons than to specify the actual quantities of materials or objects, for instance to impress the reader or to disguise the fact that the enemy or tribute had not been counted precisely.

Moorey's second argument, the recording of 'very considerable quantities of iron' after the reign of Šalmaneser III, has been derived from an inscription of Adad-Nārārī III (810-783). According to this Assyrian king, the city of Damascus paid a tribute of, among other products, five thousand talents (more than 150,000 kilograms) of iron. However, there is a second text about the same event, in which the weight of the iron belonging to this tribute is two thousand talents and a third text (unfortunately partly illegible) where a weight of possibly sixty talents is mentioned.²¹ In addition to that, two thousand (or 2,300, depending on the text) talents of silver were delivered, whereas not even fifty years earlier Šalmaneser III had received only one hundred talents of silver.²² The

differences and uncertainties make it impossible to take this huge quantity of five thousand talents of iron for granted.

Haarer's two arguments for a ninth-century common use of iron have been based on archaeological findings. The first argument has been deduced from Pigott's research on Hasanlu, an independent city east of Assyria, which was destroyed around 800, probably by an Urartian army. In the destruction layer more than two thousand iron artefacts were found during excavations between 1956 and 1974 (AD), most of which were weapons: arrowheads, spearheads (Figure 2), knives and swords that had been used in the preceding siege of the city.²³ It is, however, not clear which party had used these weapons: the besieged citizens, the attackers or maybe even Assyrians who had come to the aid of the city. Although a contemporaneous Assyrian influence on Hasanlu has been established,²⁴ the archaeological finds cannot prove that the iron had been brought there by the Assyrians, nor that the Assyrians had adopted the iron technology from Hasanlu, as Haarer suggests.²⁵ In addition, whoever made these weapons did not yet control the process of making them of good quality: the objects were of "low-carbon, heterogeneously carburized steel".²⁶

The most powerful argument for an abundance of iron in the ninth century would be the finds of iron in Assyria itself, which is Haarer's second argument. He mentions finds from the ninth, eighth and seventh centuries, based on a publication of Curtis *et al.*²⁷ But surprisingly, this publication does not mention any finds of iron in Assyria from the ninth century, and only twice the authors refer to a find from the eighth century.

¹⁷ Moorey 1994, 290.

¹⁸ Grayson 1996, 81-82 (text 16, lines 268-286) and 69 (text 14, black obelisk, lines 146-156).

¹⁹ Grayson 1987, 184 (text 1, line 69); Grayson 1991, 88 (text 1, line 10).

²⁰ Grayson 1991, 14 (text 1, column i, line 84), 134 (text 1, line 44) and 173 (text 5, line 40).

²¹ Pleiner/ Bjorkman 1974, 292-293. For 5000 talents of iron see Grayson 1996, 213 (text 8, line 19); for 2000 talents of iron see Grayson 1996, 211 (text 7, line 6).

²² For the silver Adad-Nārārī III received see Grayson 1996, 213 (text 8, line 19) and 211 (text 7, line 6). For the silver

of Šalmaneser III see Grayson 1996, 18 (text 2, column ii, lines 22-24).

²³ Pigott 1989, 67-73.

²⁴ Pigott 1989, 76.

²⁵ Haarer 2001, 266.

²⁶ Pigott 1989, 76.

²⁷ Haarer 2001, 266; Curtis *et al.* 1979, 382-384.



Figure 3: Iron wheels from the temple of Nabû in Dūr-Šarrukīn

The first reference is an enormous quantity of 160,000 kilograms of iron, found in a room in the palace of Sargon II (721-705) in Dūr-Šarrukīn.²⁸ Sargon had built this city as his new capital; the project was finished in 706, a year before the king's death. Soon after its inauguration, the city was deserted again by the new king; what happened to Dūr-Šarrukīn after its desertion is unknown. However, the iron was not deposited in the storage room before the very end of the eighth century, and if the city still had functioned after having been deserted, as finds of iron in other buildings suggest (Figure 3),²⁹ it could have been stored there up to one hundred years later.

The second eighth-century find of iron in Assyria that is mentioned by Curtis *et al.*³⁰ is from Aššur, another capital of the Assyrian empire. Archaeologists found three ploughshares, sixteen sickle blades, three hoes and thirty-six knives, in a context in which it was not possible to distinguish between the eighth and seventh centuries.³¹ In Kalhu, destroyed in 614-612 by Medes and

Babylonians, many iron objects have been found as well. Although precise dating is not possible, Curtis *et al.* came to the conclusion that most objects must have been from the seventh century.³² Two other scholars, Pleiner and Bjorkman mention lances, spears and arrowheads of iron found in Kalhu in levels of the late eighth and seventh centuries.³³ To conclude, there is no unequivocal evidence for iron objects from Assyria proper before the late eighth century. All in all, none of the four arguments seems to be convincing enough to prove that already in the ninth century iron was a commonly used metal. Perhaps arguments against this hypothesis can be found.

Arguments against a ninth-century common use of iron

Now that the current archaeological evidence for iron as a common material in Assyria appears to be from the late eighth century at its earliest, a return to the texts is necessary to explore whether more information can be obtained about an earlier use of iron. In the royal inscriptions of Aššurnāṣirpal, the ninth-century Assyrian king,

²⁸ Curtis *et al.* 1979, 382.

²⁹ The city of Kalhu, present day Nimrud, became a garrison town after it ceased to be the Assyrian capital, see Millard, 1961.

³⁰ Curtis *et al.* 1979, 382-384.

³¹ Curtis *et al.* 1979, 382.

³² Curtis *et al.* 1979, 370.

³³ Pleiner/ Bjorkman 1974, 288-289.

much of the tribute has been described, though not quantified. The most elaborate of these inscriptions has a reference to iron as part of a tribute on five occasions. Bronze, however, as part of a tribute is mentioned sixty-two times in this same inscription, and tin, necessary for the production of bronze, an additional fifteen times.³⁴ This suggests that the importance of bronze in the first half of the ninth century was still much greater than that of iron. Unfortunately most of the tribute received by his successors has not been described, so we cannot determine whether there was a development towards a growing importance of iron as tribute. What we do know is that the number of places from which iron was received certainly increased over time (Figure 4).

From the eighth century other textual sources which can say something about the importance of iron are available. An archive of the governor of the Babylonian city of Nippur contains letters from the period between 755 and 732.³⁵ Some of these letters reveal that private entrepreneurs traded in iron in this period. According to one of the letters, a trader had sold twenty talents of iron to a merchant family in the Assyrian city of Kalhu. He

promised the governor of Nippur, who had wanted to buy the iron as well, that he would find as much iron as the governor had wished to receive.³⁶ In another letter someone wanted to buy one mina of iron. The seller was permitted to choose whatever he wanted to receive in return: silver, wool or land.³⁷ A servant of the governor had sent his master a letter requesting the delivery of five iron spades as quickly as possible.³⁸

These texts demonstrate that in the second half of the eighth century iron was available not only for the state, but also for civilians. However, it was still a seller's market as the letters show; the metal must have been scarce at that time. This conclusion corresponds to a prohibition of the sale of iron to Arabs in the time of Sargon II (721-705), as mentioned in a letter to him from Bēli-qiḫi, the governor of Šupat.³⁹ Although it is possible that Sargon was afraid of the weapons which the Arabs could forge from the iron, it can certainly not be excluded that he did not want the iron to leave the country, if it was still not widely available in Assyria proper.

Another point of attention is the quality of iron that has been excavated in Assyria. Three objects

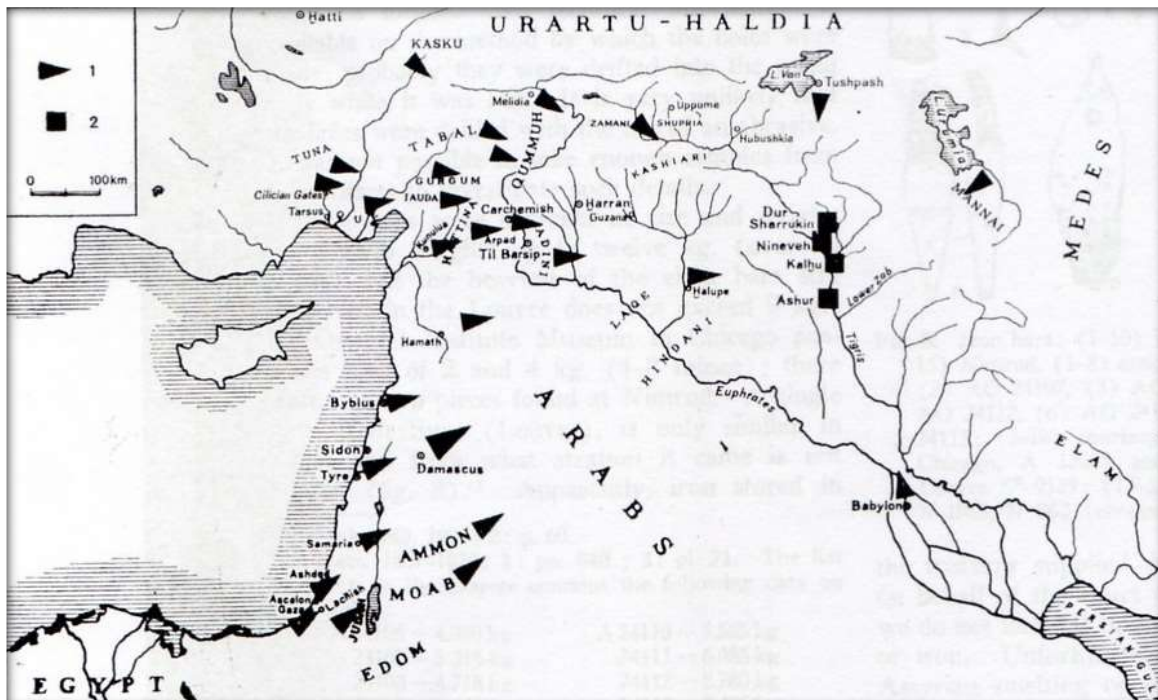


Figure 4: Sources (1) and places of finding (2) of Assyrian iron in the eighth and seventh centuries.

³⁴ The numbers have been deducted from Grayson 1991, 197-219 (text 1).

³⁵ Cole 1996, 1.

³⁶ Cole 1996, 113-115 (text 41).

³⁷ Cole 1996, 200-201 (text 96).

³⁸ Cole 1996, 210-212 (text 102).

³⁹ Parpola 1987, 140-141 (text 179).



Figure 5: Two armour scales (left) and a hoe (right) from Kalhu.

from Dūr-Šarrukīn have been examined recently: a hoe, an adze and a bar. The iron of the hoe and the adze was pure but relatively soft. The bar was partly iron and partly steel, which is inconvenient for material that still had to be worked.⁴⁰ Curtis *et al.* have analysed two iron ingots from Dūr-Šarrukīn and two parts of iron bars from Kalhu. All four objects were partly, but not consistently carburized. It seems that the steel was not made intentionally.⁴¹ Furthermore, nine other objects from Kalhu have been analysed by these scholars: a sickle blade, a dagger, an arrowhead, a knife, two armour scales, a hoe and two chisels (Figure 5) that all turned out to be only lightly and certainly not optimally carburized. Their conclusion was that the smiths who had made these objects did not control the process to strengthen the iron where it had to be strengthened, for instance on the cutting edge. On the other hand, it is interesting to know that for the production of the armour scales a mould was used: a sign of uniformity in the seventh century.⁴²

The fact that the Assyrians used iron to make these utensils indicates that the quality of the material must have been acceptable to them.⁴³ But, in general, the seventh-century technology was certainly not state-of-the-art and steel products were probably still relatively scarce in Assyria at a time, in which for example in Greece⁴⁴ and the Levant⁴⁵ the technique of producing steel was already common. If the use of iron had already been common in Assyria for two hundred years, we would have expected a different

picture. The prevalence of bronze in the ninth century, the scarcity of iron concerning private trade during the third quarter of the eighth century and the relatively poor quality of iron in the seventh century all suggest that iron was not widely used before the last decades of the eighth century.

At the end of the century this changed, as the many archaeological findings in Kalhu, Dūr-Šarrukīn and Aššur demonstrate. In this period, renewed Assyrian conquests intensified the contacts with Anatolia and the Levant, re-established the flow of tribute from the subdued kingdoms, and increased the control over trade in those regions. Therefore, the quantities of iron entering Assyria grew quickly. That was the moment when the iron industry of Assyria started to spread its wings.

Summary of the conclusions

The arguments given by scholars who believe that iron was already in the ninth century a common metal are not convincing. The Assyrian royal inscriptions cannot be taken literally when they mention quantities of iron. Archaeological finds of iron in late ninth-century Hasanlu cannot be connected with Assyria, despite the Assyrian influence on the city that has been established. But most striking is that no iron object older than the late eighth century has been excavated in Assyria itself. Moreover, the frequency by which bronze is mentioned in the ninth-century Assyrian royal inscriptions indicates that this material was still very important in that time. Likewise, there are the letters from the governor's archive in Nippur from the second half of the eighth century, that demonstrate that iron was still scarce. Finally the metallographic examinations reveal the inferior quality of seventh-century iron utensils: the process of making steel was not mastered by

⁴⁰ Pleiner/ Bjorkman 1974, 307.

⁴¹ Curtis *et al.* 1979, 371-377.

⁴² Curtis *et al.* 1979, 377-381.

⁴³ Curtis *et al.* 1979, 382.

⁴⁴ Pleiner/ Bjorkman 1974, 307.

⁴⁵ Stech-Wheeler *et al.* 1981, 245-256.

the Assyrian smiths. The probable lack of quantities of iron in the eighth, and its relatively poor quality in the seventh century suggest that until the late eighth century iron could not have been a common material in Assyria.

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Auteurs

Yesno Akkerman heeft in 2011 de master Oudheidkunde aan de Vrije Universiteit afgerond. Haar masterscriptie is gehonoreerd met een eervolle vermelding door jury van de Faculty of Arts Thesis Prize 2011. Dit artikel is een samenvatting van haar afstudeeronderzoek.

Susan Franzen is een afgestudeerde masterstudente Oudheidkunde aan de Vrije Universiteit. Inmiddels is zij werkzaam als management assistent bij de politie. Susan heeft een propedeuse Geschiedenis gehaald aan de HvA, met speciale interesse voor oude geschiedenis en zodoende is zij naar de VU gekomen om zich te specialiseren in de oude geschiedenis in het Oude Nabije Oosten.

Franka Kerklaan is in 2008 aan de Universiteit Leiden begonnen aan de opleiding Archeologie. Na haar tweede jaar liep ze stage bij *Archaeo-Zoo* en kwam zo in contact met archeo-ichthyologie, kort gezegd het onderzoek aan visresten. Het onderzoek aan de visresten van Hazerswoude was de eerste kennismaking met vismateriaal waarna meer vondstcomplexen volgden. In 2012 rondde ze haar BA af met een scriptie over het vismateriaal aangetroffen tijdens opgravingen van een Neolithische/Bronstijd site te Emmeloord om vervolgens ook haar MA scriptie over vis schrijven, dit keer uit laat middeleeuwse context. Na haar afstuderen in februari 2013 kan zij dit onderzoek voortzetten en ze hoopt nog veel meer te weten te komen over de status en de consumptie van vis in het verleden.

Toen in 2007 de WAMz werd ingevoerd, studeerde **Mirjam Lobbes** voor haar bachelor Archeologie aan de UvA. Er werd veel aandacht besteed aan de veranderingen in de Nederlandse Archeologie. Het bracht voor haar als student veel nieuwe perspectieven met zich mee. Archeologie werd onderdeel van het Cultureel Erfgoed en er werd een markt ontwikkeld voor archeologie in Nederland.

Uitdagende ontwikkelingen die maakte dat zij ervoor koos haar master Archeologie & Erfgoed aan de VU te doen. Al tijdens haar studie vond zij een baan (weliswaar als nul-uren contractant) bij Buro de Brug in Amsterdam, en RAAP in Leiden. Die positie heeft zij tot op heden. Vanuit de Erfgoed-gedachte, zal zij ook als rondleider in het Rijksmuseum te Amsterdam gaan werken.

Esther Plomp is een tweedejaars Research Master student aan de universiteit Leiden. Haar specialisaties zijn Caraïbische Archeologie, Archeologie van Noord-West Europa en Osteoarcheologie.

Karin Scharringhausen en **Mark van Kesteren** hebben in onlangs hun BA Archeologie aan de VU behaald. Karin is nu eerstejaars student researchMaster Archeologie aan de Universiteit van Amsterdam en Mark studeert voor zijn master Heritage management in a world context & Museumstudies aan de universiteit van Leiden. Zij hebben samen met onder andere met Michiel Bouwman SOJA 2012 georganiseerd aan de VU en in 2013 vormde dit drietal de redactie van de SOJA 2012 bundel. In 2012 vierde SOJA haar 2^{de} lustrum. Karin en Mark hebben hun eigen invalshoek op dit heugelijke feit in een korte presentatie verwoord op de dag van het Symposium. Het artikel 'SOJA 10 jaar' is een weergave van deze presentaties.

Elisha van den Bos behaalde in 2010 haar onderzoeksmaster Oudheidstudies aan de VU, waarna haar voorstel voor promotieonderzoek werd gehonoreerd door NWO. Het vierjarige onderzoek ging in oktober 2011 van start en wordt begeleid door prof. Douwe Yntema en dr. Fokke Gerritsen. Voor meer informatie kunt u contact opnemen via e.o.vanden.bos@vu.nl.

Caroline van der Brugge studeerde Bedrijfseconomie van 1980 tot 1986. Daarna werkte ze achttien jaar als organisatie-adviseur

en management consultant in verschillende vakgebieden en projecten bij de Nederlandse Spoorwegen. In 2008 besloot ze weer te gaan studeren. Ze koos voor de studie Oudheidkunde aan de VU. Op dit moment is Carolien research Masterstudent Oudheidstudies aan de VU, met als specialisatie Assyriologie. Daarnaast werkt ze als vrijwilliger bij opgravingen, uitgevoerd door het Centrum voor Archeologie in Amersfoort.

Joëlla van Donkersgoed is een Masterstudent aan de Faculteit der Archeologie, Universiteit Leiden. Hier heeft ze haar BA in archeologie behaald met een focus op West-Europese Prehistorie en Publieksarcheologie. Tijdens haar Master specialiseert ze zich in Archaeological Heritage Management in a World Context, en heeft ze aanvullend een semester aan de Rutgers University in Amerika gestudeerd. Daar volgde ze het Cultural Heritage and Preservation Studies MA Program, en was ze rapporteur tijdens een internationaal congres van UNESCO over Cultural Landscapes. Op dit moment is een artikel over haar bachelor-onderzoek in druk bij de Westerheem, welke in 2013 zal verschijnen en meer informatie zal bevatten dan dit artikel. Verder was ze editor en contributor voor *Out in the Field*, Sidestone Press (2012) en werkte ze als student-assistent aan de meest recente publicaties van de onderzoeksgroep Ancestral Mounds.

Ewoud van Meel is een afgestudeerd archeoloog die zich gedurende 3 jaar intensief heeft beziggehouden met paleodemografie en zich binnen zijn BA en rMA onderzoek aan de Universiteit Leiden voornamelijk heeft gericht op populatiedynamiek en samenstelling in het Pre-Columbiaans Caribische gebied. Zijn interesses concentreren zich op begravingen-archeologie, populatiedynamiek, fysische archeologie, de archeologie van het Caraïbische gebied en publieke archeologie.

Erik van Rossenberg is de bedenker en initiatiefnemer van SOJA. Hij is onlangs (november 2012) gepromoveerd op het proefschrift "Cultural landscapes, social networks and historical trajectories: A data-rich synthesis of Early Bronze Age networks (c. 2200-1700 BC) in Abruzzo and Lazio (Central Italy)" aan de Universiteit Leiden.

Rein van 't Veer legt zich toe op de digitale aspecten van de archeologie. Hij studeerde in 2006 af als Onderzoeksmaster Archeologie aan de UvA. Daarna werkte hij tot 2012 als veldarcheoloog en tot 2012 als database- en GIS-specialist bij ADC ArcheoProjecten. Sindsdien is hij werkzaam als archeologisch informatiespecialist bij Picturae en heeft een eigen archeologisch advies- en softwarebedrijf genaamd Bureau Digitaal Erfgoed. Hij is mede-ontwerper van de archeologische uitwisselingsstandaard SIKB0102 en is als vrijwilliger betrokken bij de archeologische Stichting Kasteeltuin Culemborg.