Nuts in the Netherlands: *Attalea* and other nuts from archaeological contexts, dating from the 16th to 19th century AD

Marloes Rijkelijkhuizen and Louise van Wijngaarden-Bakker

This paper describes the use of palm nuts for the manufacture of artefacts in the Netherlands. From the 17th to 19th century buttons were made of nuts of the Brazilian palm tree *Attalea* cf. *funifera*. Finds from 17th century shipwrecks suggest that the palm nuts of this species were directly imported from Middle or South America. Coconuts were used for carving, for example for the manufacture of coconut beakers. In the 19th century buttons were also made of 'vegetable ivory' or tagua nut.

Keywords: palm nuts, the Netherlands, buttons, objects of use, 16–20th century

Introduction

Kuijper and Manders (2003) report the finds of several palm nuts of the genus *Attalea* in Dutch coastal areas. The finds originate from shipwrecks of 17th-century vessels as well as from beach finds. It is possible that some of the latter came also from shipwrecks. The nuts must have been transported from Middle or South America to the Netherlands. Kuijper and Manders (2003), however, could not find a reason for the import of these nuts and they suggest that the nuts might have been collected out of curiosity or as a souvenir. In this short paper we put forward another reason for importing *Attalea* nuts, namely for the manufacture of artefacts.

The taxonomy of palms is highly complicated. In their paper, Kuijper and Manders (2003) use the generic name *Orbignya* which, according to Govaerts and Dransfield (2005) and Dransfield (pers. comm.), is a synonym of *Attalea*. The names that are used in this paper were checked on the World Checklist of Monocotyledons (2004).

The objects

The Archaeological Service of Amsterdam carries out excavations in the centre of Amsterdam and in the areas around the city centre. Sites date to between the 12th and 19/20th century. The excavators identified over 2000 objects from these excavations as bone, ivory or other hard animal material. On close examination a number of these items were found to be made not of animal tissue but of a raw material of vegetable origin (Rijkelijkhuizen 2004). In total, 78 objects made of hard vegetable material were isolated. Most of these objects, 69 in number, are buttons (Table 1 and Fig. 1). Almost all the buttons have an eye on the back to attach the button to the clothing; only one button has four holes for attachment. Four buttons have a separate eye made of bone, which is fixed to the button with screw thread. The other buttons are all made in one piece. The buttons vary in shape and size. The diameter varies from 9·5 to 30·8 mm and the thickness from 5·9 to 18·9 mm. Most of the buttons are dated to the 18th century (Table 1). The exact function of the other nine objects is unknown. They are shaped as knobs, lids or have a chalice form. One object has been shaped into a small figure of a man (Fig. 2).

Objects of the same material have recently been identified at excavations in Middelburg and Vleuten. In Middelburg six buttons and a small cigar holder were found in a military context of the 19th century (Rijkelijkhuizen 2005a). At Vleuten two buttons come from a 17th/18th century castle moat (Rijkelijkhuizen 2005b).

Marloes Rijkelijkhuizen (corresponding author) and Louise van Wijngaarden-Bakker, Amsterdam Archaeological Centre, University of Amsterdam, Department of environmental archaeology, Nieuwe Prinsengracht 130, 1018 VZ Amsterdam, The Netherlands; e-mail: M.J.Rijkelijkhuizen@uva.nl, L.H.vanwijngaarden@uva.nl
Received August 2005; revised manuscript accepted May 2006

Published by Maney
DOI 10.1179/174963106x123241

Figure 1 Buttons of palm nut from Amsterdam. Photo: Anneke Dekker, AAC. Collection: Afdeling Archeologie BMA/Amsterdams Historisch Museum

In the collection of the Nationaal Herbarium Nederland (National Herbarium of the Netherlands) in Leiden, some sawn nuts and a couple of buttons are present. The finds come from Ommerschans, a work camp that functioned between 1820 and 1890. In the colony, beggars and unemployed men and women were set to work, and among their activities buttons were produced from nuts. The nuts in the collection are split longitudionally (Fig. 3) or transversely. The buttons were originally identified in the 19th century as *Cocos lapidea* and were called 'small coconuts'. The buttons were dyed black after manufacturing.

Attalea nuts

Although it became clear that the buttons and other objects were probably made out of palm nuts, further identification of genus and species presented some problems. With the kind help of Dr J. Dransfield of the Royal Botanical Gardens in Kew, the raw material was identified as the endocarp of palm trees of the genus *Attalea*. Identification to species level in *Attalea* is difficult, but we can narrow down the possibilities by size and thickness of the objects. *Attalea funifera* from Brazil is one of the species with

Table 1 Buttons and other objects made of vegetable material from excavations in the town centre of Amsterdam

Century	Buttons	Other objects	Total
16	–	1	1
17	2	1	3
17/18	4	2	6
18	44	2	46
18/19	2	–	2
19/20	–	1	1
Unknown	17	2	19
Total	69	9	78

Figure 2 Statuette made of palm nut from Amsterdam, 19th/20th century. Buttons on the man's clothing are made of bone. Photo: Anneke Dekker, AAC. Collection: Afdeling Archeologie BMA/ Amsterdams Historisch Museum

the largest fruits and is quite prolific in South America (T. Spanner, pers. comm.). The raw material from which the buttons and other objects are made is therefore tentatively identified as *Attalea* cf. *funifera*.

The identification is further supported by the fact that the species *Attalea funifera* is specifically mentioned by Hooker (1849) and Dahlgren (1944) in the manufacture of small objects from the thick, brown endocarp. Known in England under the name 'coquilla nut', the nuts were used for turnery work and could also be polished. Secondly, there are the previously mentioned finds from 17th-century shipwrecks, which show that *Attalea* nuts were actually imported into the Netherlands (Kuijper and Manders 2003).

The finds from Ommerschans were recently labelled as *Attalea funifera* (Fig. 3). This identification is supported by J. Dransfield. The finds are evidence that the nuts of *Attalea funifera* were used in the Netherlands in the 19th century.

Coconuts

The coconut palm (*Cocos nucifera)* is widespread along tropical coasts. With the expansion of the

Figure 3 Nut of ***Attalea funifera*** from Ommerschans. Photo: Marloes Rijkelijkhuizen. Collection: Nationaal Herbarium Nederland

Figure 4 Coconut beaker, Amsterdam 1745. Height: 11·6 cm. Private collection

trading network to tropical regions, coconuts were brought back to Europe. The seed of the coconut is encased in a hard, brown shell, which is suitable for carving. In Amsterdam for example, in the 17th and 18th centuries, carved coconut beakers, mounted on a silver foot, were used for display (Fig. 4). A fragment of such a decorated beaker from the end of the 16th century was found in archaeological excavations in Amsterdam (Fig. 5). A second find of coconut from Amsterdam is a half coconut shell with the date '10·6·1752' carved on the object (Fig. 6). Several other undecorated fragments of coconut were found in excavations in Amsterdam, Groningen, Gorinchem and Eindhoven (Table 2). The finds come from different social contexts. There is one piece from the site of a castle, but most come from urban sites. The excellent conditions of preservation of botanical material in cesspits may well have led to an over-representation of coconut finds in this type of context.

Table 2 Archaeological finds of coconut

Place	Date	Object	Reference	Context
Amsterdam	1575–1600	decorated fragment of a beaker	–	ditch, Nieuwe Spiegelstraat
Amsterdam	1750–1800, 1752	half coconut with inscription	–	cesspit, Prins Hendrikkade
Amsterdam	1600–1650	undecorated fragment	–	cesspit, Haarlemmerdijk
Amsterdam	1600–1650	undecorated fragment	–	cesspit, Oudezijds Achterburgwal
Amsterdam	unknown	undecorated	–	cesspit, Haarlemmerplein
Amsterdam	1700–1750		Paap 1983	Waterlooplein
Amsterdam	1700–1900		Paap 1983	Nieuwendijk
Eindhoven	1500–1600	half a coconut	Luijten 1992	castle moat
Groningen	1800	top part of a coconut	van Zeist 1992; van Zeist *et al.* 2000	cesspit
Gorinchem	1600–1650	top part of a coconut	van Haaster and Cavallo 1997	cesscellar

Figure 5 Decorated fragment from Amsterdam, probably from a coconut beaker. Photo: Wiard Krook, Afdeling Archeologie BMA. Collection: Afdeling Archeologie BMA/Amsterdams Historisch Museum

Tagua nuts

The tagua nut, *Phytelephas*, *Aphandra or Ammandra*, is well known for its use as 'vegetable ivory' (J. Dransfield, pers. comm.). Tagua palms grow in South America and in many places the nuts are still used for carving. The tagua nut has a white, hard endosperm, and when dried it closely resembles ivory. Charasteristic for this nut is the void in the centre of the nut. From the 19th century onwards tagua nuts were shipped to North-west Europe for the button industry and the carving or turning of small objects (Kohrs n.d.). In the Netherlands, for example, a button factory in Veendam (province Groningen) produced buttons made of tagua nuts from 1876 until the 20th century, as is shown in a catalogue of the Royal Dutch stone nut button factory J. Mulder and Son. Tagua nuts might have been used as ballast for ships coming back from the Americas (Kohrs n.d.). Though there is no evidence as yet that the nuts of *Attalea* reached Europe in this way, the possibility cannot be excluded. Many other palm nuts can be

Figure 6 Coconut object from Amsterdam. Photo: Wiard Krook, Afdeling Archeologie BMA. Collection: Afdeling Archeologie BMA/Amsterdams Historisch Museum

used for carving (Doren 1997) but so far there is no evidence that other nuts were used in the Netherlands.

Discussion

Palm trees grow mainly in the tropical and subtropical parts of the world and their uses are numerous. Products derived from palms are, for example, food and drinks, oils, construction materials, fuels, medicines and cosmetics (Balick and Beck 1990). Many palm trees produce large fruits, and the nuts of several species are locally used for carving. From the 16th or 17th century onwards some of these large palm nuts reached Western Europe as part of the extensive trading network.

In the Netherlands, the nuts of the Brazilian palm tree *Attalea* cf. *funifera* were mainly used for the manufacture of buttons. Use continued probably from the late 16th or 17th century until the 19th or 20th century. The finds of whole *Attalea* nuts in shipwrecks indicate that the nuts were imported from Brazil as a raw material and not as finished objects. The finds from Ommerschans show that the buttons could be dyed.

Finds of fragments from the coconut, *Cocos nucifera*, are dated from the late 16th to 18th century. An example of the use of the coconut is the

manufacture of coconut beakers. From the 19th century onwards tagua nuts were imported from South America. This so-called vegetable ivory was mainly used for the manufacture of buttons.

Acknowledgements

This paper could not have been accomplished without the help and expertise of Dr John Dransfield of the Royal Botanical Gardens and Tobias Spanner of Rare Palm Seeds. Also we would like to thank Gerard Thijsse of Nationaal Herbarium Nederland. We wish to thank Jerzy Gawronski and Wiard Krook of the Archaeological Services of Amsterdam (Afdeling Archeologie BMA) and Joyce van Dijk and Kinie Esser of Archeoplan Eco. We would like to thank Anneke Dekker, Kees Troostheide, Rik Maliepaard and Carol van Driel-Murray of the Amsterdam Archaeological Centre (AAC). Ans Nieuwenburg provided an article on the button factory in Veendam.

References

Balick, M. J. and Beck, H. T. 1990. *Useful Palms of the World. A Synoptic Bibliography*. New York: Columbia University Press.

Dahlgren, B. E. 1944. Economic products of palms. *Tropical Woods* **78**, 10–35.

Doren, E. T. 1997. Vegetable ivory and other palm nuts/seeds as an art/craft medium. *Principes* **41**, 184–9, 208–10.

Govaerts, R. and Dransfield, J. 2005. *World Checklist of Palms*. Kew: Royal Botanic Gardens.

van Haaster, H. and Cavallo, C. 1997. *Plantaardige en dierlijke resten uit de opgraving Blijenhoek te Gorinchem* (Plant and animal remains from the excavation Blijenhoek at Gorinchem) (BIAXiaal 45). Zaandam: BIAX.

Hooker, W. J. 1849. Piaçaba; fibre and fruit of the coquilla nut, *Attalea funifera* Mart. *Hooker's Journal of Botany and Kew Garden Miscellany* **4**, 121–3.

Kuijper, W. and Manders, M. 2003. South American palm seeds (*Oribignya* sp.) in Dutch shipwrecks. *Environmental Archaeology* **8**, 185–7.

Kohrs, C. T. Vegetable ivory moves into the 21dt century. http://www.tias.com/articles/buttons/archives/98_07_12/articles.html

Luijten, H. 1992. Zaden en vruchten, overblijfselen van het plantaardige voedsel en de begroeiing van de grachten (Seeds and fruits, remains of the vegetable diet and the vegetation of the castle-moat), pp. 237–44 in Arts, N. (ed.), *Het Kasteel van Eindhoven. Archeologie, Ecologie en Geschiedenis van een Heerlijke Woning 1420–1676* (The Castle of Eindhoven. Archaeology, Ecology and History of a Noble Mansion). Eindhoven: Museum Kempenland Eindhoven.

Paap, N. 1983. Economic plants in Amsterdam: qualitative and quantative analysis, pp. 315–25 in Jones, M. (ed.), *Integrating the Subsistence Economy* (BAR International Series 181). Oxford: British Archaeological Reports.

Rijkelijkhuizen, M. J. 2004. *Dierlijke Materialen in Amsterdam* (Animal Materials in Amsterdam). Unpublished Masters thesis, University of Amsterdam.

Rijkelijkhuizen, M. J. 2005a. Voorwerpen van bot, gewei, ivoor en hoorn (Objects of bone, antler, horn and nut), pp. 36–46 in Esser, E., Beerenhout, B., Kuijper, W. J., and Rijkelijkhuizen, M. J., Dierlijke resten uit de stad Middelburg (Animal remains from the city of Middelburg) (Ossicle 100). Unpublished report for Archaeoplan Eco.

Rijkelijkhuizen, M. J. 2005b. Voorwerpen van bot, ivoor en noot (Objects of bone, ivory and nut), pp. 27–31 in van Dijk, J., Esser, E., Beerenhout B. and Rijkelijkhuizen, M. J., Huis te Vleuten, archeozoölogie (Huis te Vleuten, archaeozoology) (Ossicle 95). Unpublished report for Archaeoplan Eco.

World Checklist of Monocotyledons 2004. The Board of Trustees of the Royal Botanic Gardens, Kew. http://www.kew.org/monocotChecklist/

van Zeist, W. 1992. Cultuurgewassen en wilde planten (Crop plants and wild plants), pp. 525–35 in Broekhuizen, P. H., van Gangelen, H., Helfrich K., Kortekaas, G. L. G. A., Alma, R. H. and Waterbolk, H. T. (eds.), *Van Boerenerf tot Bibliotheek. Historisch, Bouwhistorisch en Archeologisch Onderzoek van het Voormalig Wolters-Noordhoff-Complex te Groningen* (From Farmyard to Library. Study of the History, Building History and Archaeology of the Former Wolters-Noordhoff-Complex at Groningen). Groningen: Stichting Monument en Materiaal.

van Zeist, W., Cappers, R. T. J., Oudkerken, M. G., Palfenier-Vegter, R. M., de Roller, G. J. and Vrede, F. 2000. Cultivated and Wild Plants in Late and Post Medieval Groningen. Unpublished report for the University of Groningen.