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## Diving into the life of a Mesolithic archer

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# Diving into the life of a Mesolithic archer

## Use-wear analysis and experimental archaeology on Doggerland bone and antler points

Merel Spithoven

### Introduction

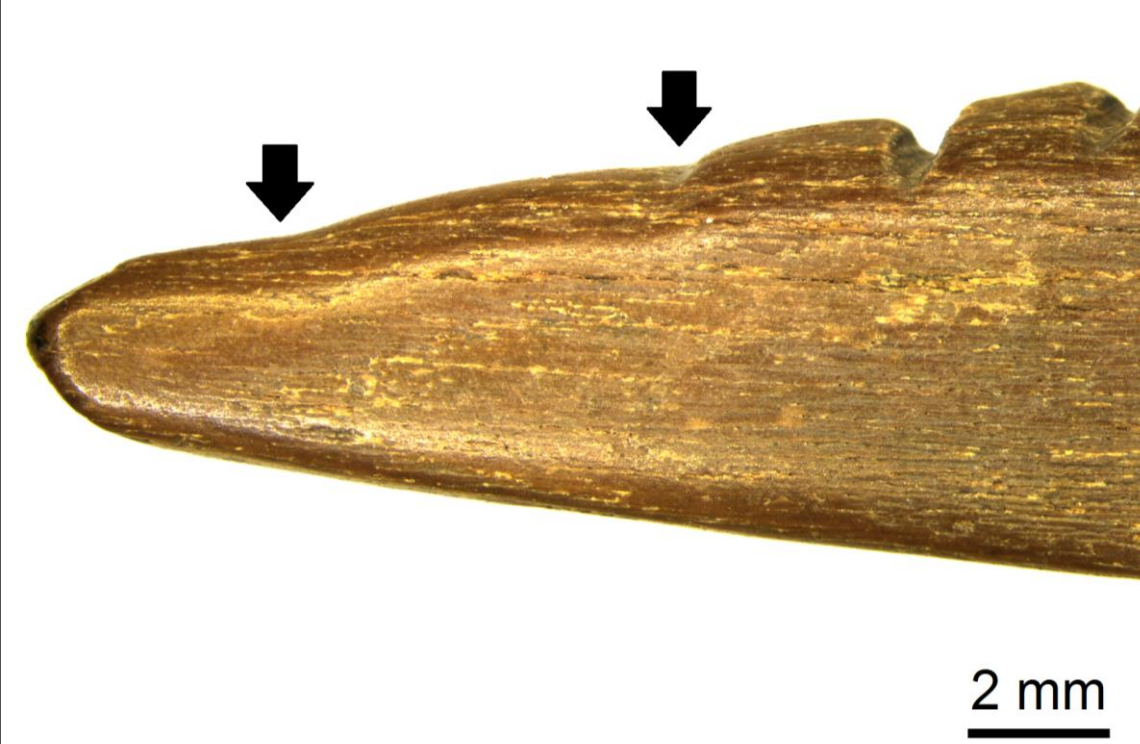
Mesolithic points are the largest category of bone and antler artefacts from Doggerland (N>1000) (Amkreutz & Spithoven 2019). Isotope research shows that the Mesolithic inhabitants of Doggerland shifted their dietary focus from more terrestrial to more marine resources (Van der Plicht *et al.* 2016). Given the simultaneous emergence of a large numbers of points, these may reflect a reaction to the changing landscape. Most sampled points are made of red deer, some of human bone (Dekker *et al.* 2021). This research is part of my PhD project about human-red deer relationships in postglacial Doggerland. The overarching NWO project is called *Resurfacing Doggerland*.

### Research design

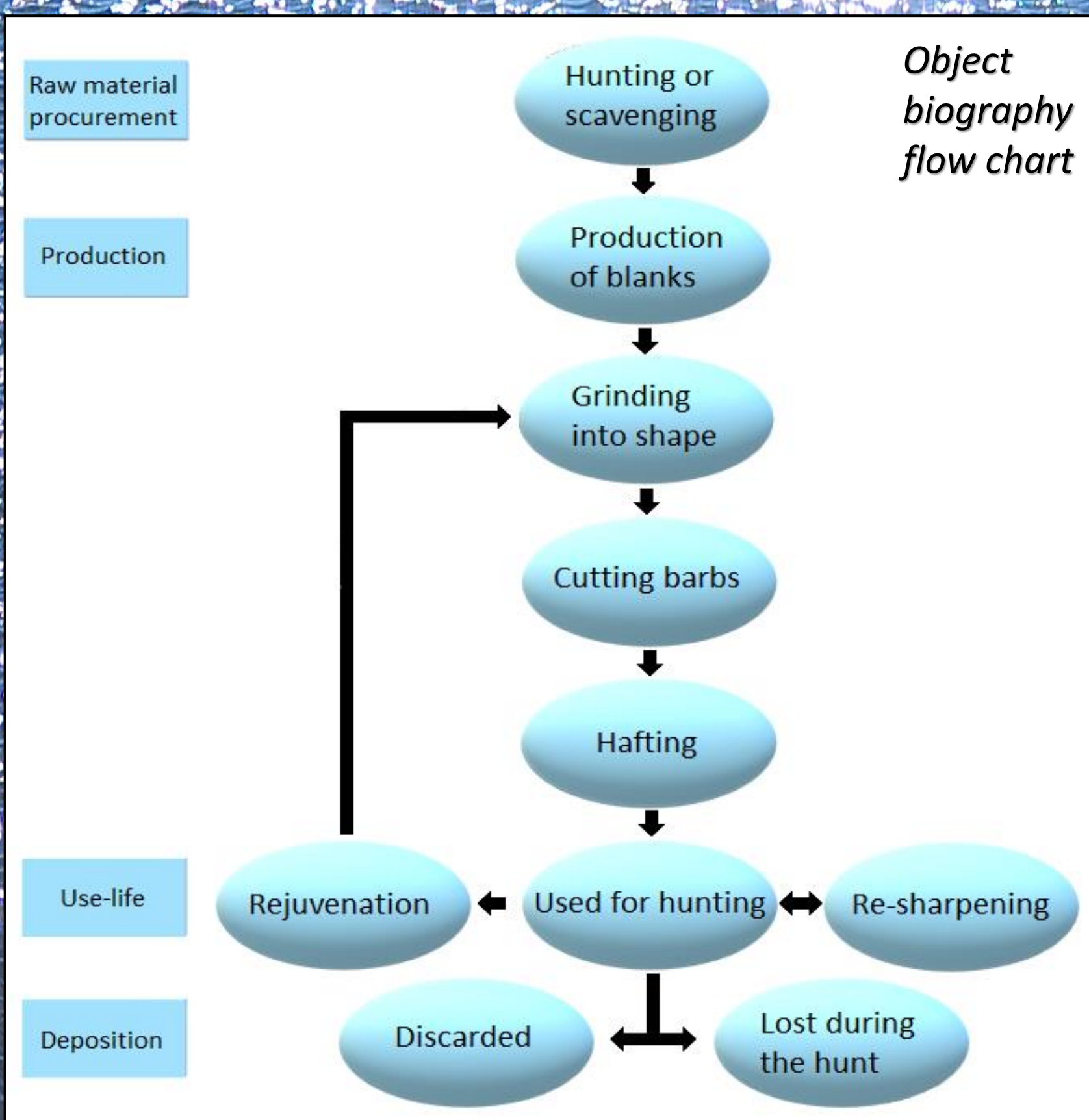
I am reconstructing the behaviour of hunter-gatherers by use-wear analysis on these points. What makes the points unique is their relatively short length and intensity of (re-)use (Spithoven 2018). Impact scars and reworked barbs are evidence of the latter. The following aspects will be investigated:

- Binding of points to shafts
- Development of use-wear by carrying arrows in a quiver
- Development of use-wear during use as arrowheads
- Taphonomical processes

### Reworked barbs



### Archaeological points



### Production of points



### Experimental archaeology

A representative reference collection is essential to interpret wear. Various experiments are being conducted:

- Quiver experiment
- Archery experiment
- Taphonomic experiment

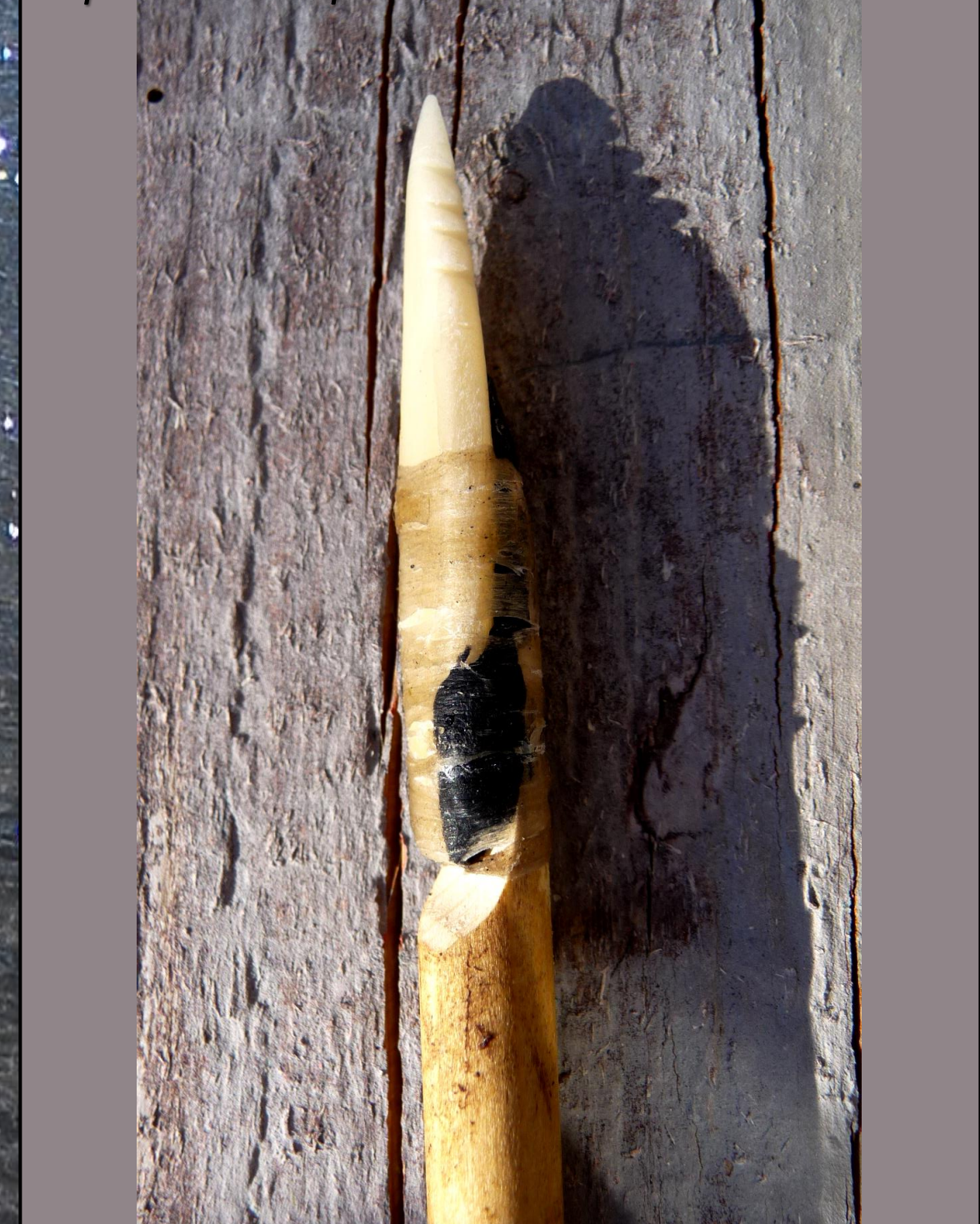
Experimental points are made of metapodia and antler from red deer. Flint blades and flakes are used to cut barbs into points. Arrows are shot with a wooden bow. Three different quivers are used:

1. Fallow deer skin hairs on the inside
2. Fallow deer skin hairs on the outside
3. Birch bark.

### Expected results

- Explanation of use-wear on archaeological points caused by shooting and/or carrying in quiver
- Proving that smaller points are more likely arrowheads than larger points
- Broad reference collection

### Experimental point



### References

- Amkreutz, L. & M. Spithoven (2019), 'Hunting beneath the waves. Bone and antler points from the North Sea Doggerland off the Dutch coast', in D. Groß, H. Lübke, J. Meadows en D. Jantzen (eds.), *Working at the sharp end: from bone and antler to Early Mesolithic life in Northern Europe* (Untersuchungen und Materialien zur Steinzeit in Schleswig-Holstein und im Ostseeraum 10), 383-404.
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- Spithoven, M., 2018. *Mesolithic Doggerland, where the points are small: A functional analysis of the small barbed bone points*. Leiden (unpublished MSc thesis, Leiden University).
- (Background photo of Maasvlakte 2 by Portpictures. Photos of archaeological points by National Museum of Antiquities)