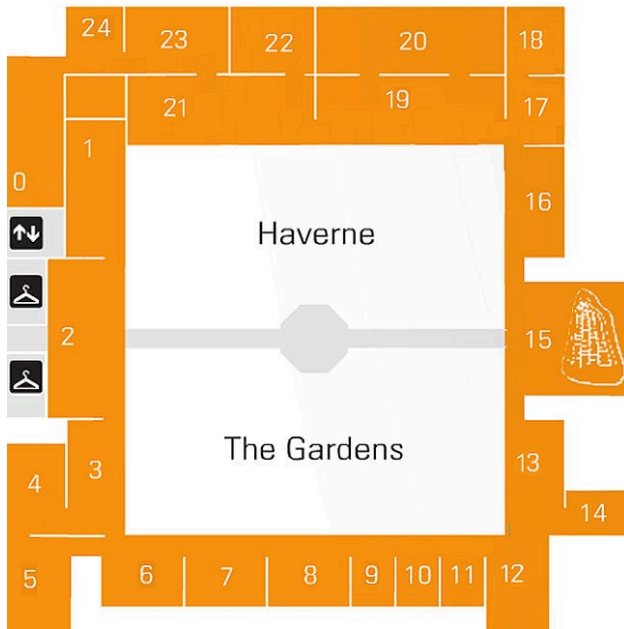


## Duke in Denmark 2022

### Exercise #1: Danish National Museum (Nationalmuseet) – Danish Prehistory Exhibit – The Stone Age

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The Danish Prehistory exhibit is on the same level you entered to your right. There are free maps available in the entrance foyer but here is the layout as well (the exhibit is the “orange” exhibit on the color map):



Our goal today is to understand what the archeology of Denmark (and surrounding areas) tells us about how Northern European civilization developed out of the frosty and unforgiving world that had been the last Ice Age. Answers to the questions can be found in wall descriptions (each room has a “theme”) and exhibit specimen labels. If you can’t find something, just ask!

As you are doing this, in the back of your mind, always keep the question of “how did the climate of the times influence people’s lifestyles”. Remember that climate is not just whether a time period was cold or warm, but that it controls the type of ecosystem (flora and fauna) in which people lived. How much was climate the driver for lifestyles? How does this compare to today?

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1) What are the age ranges of the Stone, Bronze, and Iron Ages in Denmark?

*Fun Fact: The “Three-Age System” was first formalized by the Danish scholar Christian Jürgensen Thompson in the 19<sup>th</sup> century, while he was Director of the Royal Museum of Danish Antiquities, which is.....drumroll, today’s Danish National Museum! Pretty cool, no?*

2) What was the primary (but not exclusive) rock type utilized for stone tools in the stone age? (Hint: this rock consists of the mineral quartz, which is pretty much the hardest natural substance commonly available).

3) What is “Bronze”?

4) What are the major ore minerals of copper?

5) Which of these copper ores is most commonly found in Sweden and Norway?

6) What is “bog iron”, the most common iron-bearing natural substance found in Denmark? (you might have to look this up online...)

*Fun Fact: Look at iron ore sample #3 which contains bands of the minerals hematite ( $Fe_2O_3$ ) and magnetite ( $Fe_3O_4$ ). This sample formed billions of years ago when the first photosynthetic oxygen combined with iron dissolved in the early oceans. Such “banded iron formations” (short BIFs) are in themselves evidence of one of the most important atmospheric events in Earth history: namely, the changing from an oxygen-free atmosphere to the one we can breathe today, rich in oxygen.*

7) How long ago did the first humans (referred to as “Cro-Magnon Man”, a traditional label in honor of remains from Cro-Magnon rock shelter in France) arrive in Denmark?

8) What brought these humans so far North at a time when glaciers were still dominating the Northern hemisphere?

9) What was Denmark like during the Last Glacial Maximum (LGM) 20,000 years ago (ugh, this probably explains why humans weren’t present at that time)?

10) Sea level was still low at the end of the last Ice Age ~9,600 years ago (why?). How was the “Baltic Sea” fundamentally different at that time from today?

11) What remarkable “technological innovation” first appears in the Danish archeological record around 7000 B.C.? How did this technology completely revolutionize these people’s lives?

12) How do we know that the Maglemose People actually took to the water? Make sure to marvel at the actual evidence itself (in a glass cabin near the middle of the room) – this is as REAL as it gets?!

13) What type of forest replaced the icy tundra of the Ice Age in Denmark?

*NOTE: From this point on, keep track of the kinds of animals that were hunted by Stone Age hunters.*

14) The elk hunters at Skottemarke did not stop with eating the elk’s meat. What highly nutritious substance did they also extract from the bones?

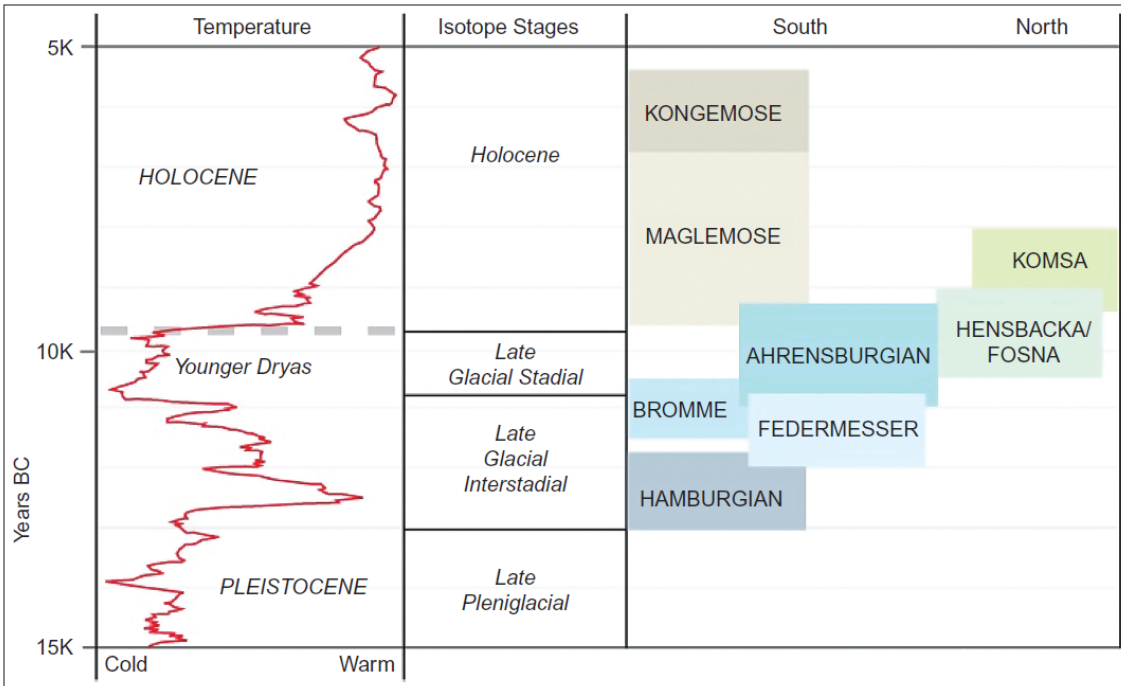
15) What did the hunters do with the hollowed-out and cracked bones? (hm, keep this in mind, it is a “theme” we will encounter again and again in early Northern European history)

16) Other than elk, what else was on the hunter’s diet? How do we know? How were the tools used to the acquisition of this food “augmented” to make them even more deadly?

17) What animals were on the menu for stone age hunters at the Bromme site?

18) What evidence do we have that the Bromme people lived in tents (so much for being called cavemen...)?

*Maglemose, Bromme, Hamburg, Federmesser,....what do these cultural divisions mean? These designations are primarily based on the types of stone tools that were developed and in use by different “peoples or cultures” in Northern Europe. Some of these “tool-type” cultures existed at the same time but were geographically separated. See this graph from your reading of Chapter 2 in “Ancient Scandinavia”:*



19) Finding bones with “cut and butcher marks” on them is one thing, what does specimen 2A in the cabin “Tents on the Tundra” preserve that is DIRECT evidence of actual hunting practices by the Hamburg People!?

20) How did the Hamburg and Ahrensburgian Cultures utilize reindeer antlers?

**Ok, let's go to the next room**

21) What evidence exists that the enormous aurochs were actually hunted by stone age hunters?

22) When did the auroch disappear from the ecology of Denmark? When did the last auroch breathe its last breath on Earth?

23) When we think of cows, relatives of the auroch, we imagine them grazing on lush green fields. How was the ecology of the auroch different?

*Fun Fact: In both Danish and German, the auroch is known as the “Urochse”. The prefix Ur- is one that unfortunately never made into the English language directly. “Ur” carries a meaning of “first”, “original”, or*

*“ancient”. Things and concepts preceded by “Ur-“ are viewed as being essentially from “the dawn of time”. Great examples in German are: “Ur-knall” or Big Bang, “Ur-schleim” or primordial soup, “Ur-zeit” or prehistoric times, “Ur-mensch” or early hominids, and even “Ur-wesen” or “primordial beast”. Ur. It carries a sense of mystery and the unknown, so old it can barely be understood....Ur. Cool little prefix.*

22) What “four-legged aid” did stone age hunters likely utilize in their hunts?

24) What do some archeologists informally call the time period between 8700-6500B.C., why?

25) What did the Maglemose hunters do seasonally?

26) Throughout this exhibit several “claims” are made about the spiritual views of stone age hunters, and the meanings they attached to various beings and concepts. Discuss with your group how you think scientists infer this information?

27) What musical instruments do archaeologists believe some stone age hunters actually played?

28) What substance makes up the only three-dimensional artwork of the Danish stone age and what animals are commonly depicted?

29) List two interesting properties of this material that might explain why it stirred spiritual awe in the minds of stone age peoples?

30) What makes it extremely difficult today to reconstruct the lives of stone age hunters that lived between Denmark and the British Isles? What happened?

31) How is evidence for the existence of human settlements in this region primarily discovered today?

32) Which early Danish stone age hunting culture had most of its settlements along the shorelines of the early post-glacial North Sea? What makes it difficult to study these sites today?

33) Which animals were extirpated (locally extinct) from the island of Zealand (Denmark) by the hunting activity of post-ice age stone age hunters?

### **Let's go to the next room**

34) Why did the practice of farming take nearly 1000 year longer (in 4,5000 B.C.) to become established in the Northern coastal lands, including Denmark, than it did in the rest of Central Europe (in 5,500 BC).

- 35) What was on the menu for typical Baltic Sea stone age settlements along the Baltic Sea after temperatures had recovered from the Ice Age?
- 36) The forests that grew in this warmer climate consisted mostly of what kind of tree?
- 37) What type of water vessels were utilized by these hunters for fishing?
- 38) When did sea levels stabilize after the Ice Age?
- 39) The Ertebølle Culture developed along the food-rich coasts of the North Sea in Northern Denmark, just before sea level stabilized. What interesting geological phenomenon explains why these archaeological sites are found above sea level in Northern Denmark, and below sea level in Southern Denmark, today?
- 40) A rich source of information on the Ertebølle Culture comes from the remains found in their “dump piles” which archaeologists call.....
- 41) Several Ertebølle burials have been unearthed. What was special about how some of these individuals were buried?
- 42) What led some early archeologists to conclude that some of the remains found at Ertebølle settlements were victims of cannibalism?
- 43) When did the first farming communities arise in the Middle East?
- 44) When were goats, sheep, and cattle first domesticated?
- 45) What impact did the farming and permanent settlement have on the landscape?
- 46) What major metric increased as a result of farming during this time?
- 47) Based on bones from archeological sites, we know that the livestock of the day differed from their descendants, how?

48) What is unusual about the Vedbæk burial? What touching gift was added to the burial?

49) What interesting perspective of how the transition from hunting to farming took place is perhaps given by the remains found at the Dragsholm?

50) The transition from stone age to bronze age was not abrupt. Provide an example of how we know this from the archaeological record of the late Neolithic Northern settlements?

51) What archaeological evidence do we have that the end of the Stone Age possibly saw conflict between different settlements?

52) What two major types of household items make their first appearance in the archeological record at this time?

53) What two large marine mammals also first appear on the regular menu of these early coastal farming communities?

54) How might population growth and permanent settlement as farmers create regional conflicts?

**OK, let's go to the next room**

55) What farming tool saw widespread demand and caused a new renaissance of stone age implements in the latter Stone Age? Why this tool?

56) Where does most of the flint used for stone axes in Denmark come from?

57) What other role did these valuable flint axes play in the society?

58) Archaeologists are "lucky" that many of these axes were preserved from this age because of what apparent practice? (hm, where have we seen this before?)

59) What makes archeologists think that some of these flint axes were actually never used for what they were originally designed for, but were instead used in bartering and as a form of "money"?

60) What other natural substance experiences, yet again, a renaissance in the Neolithic?

61) How are bog deposits used to carefully reconstruct past climate conditions?

62) What does this climate record suggest about the human impact on the landscape in 4000 B.C.?

63) What natural sites were apparently considered “sacred” by Neolithic people? (this “reverence” persists in many European countries to the present day).

64) Why were strong oxen, a valuable commodity to Neolithic farmers?

65) It is during the Neolithic that a particularly “dark” ritual first appears in the Northern cultures. What was it? What evidence suggests that participants in these rituals were not necessarily volunteers.

66) Remarkably, what dangerous medical procedure was practiced during this time (and was survived) to treat battle wounds on the head?

67) Why were most of these treatments done to the left side of the head?

68) Interestingly, what do some of the fancy flintstone axes seem to copy?

69) Ugh, if flintstone is the hardest substance available, how was it ground and polished?

70) Some of the fancy Neolithic axes were made from a rock called diabase which does not naturally outcrop anywhere in Denmark but only in Northern Scandinavia. Why is this NOT necessarily evidence of long-distance trading?

**Ok, let's go to the next room**

71) What prominent “cultural features” show up in the landscape around 3800-3100B.C. in Northern Europe?

73) Ever seen “*Ancient Aliens*” with crazy-haired Giorgio Tsoukalos? People like him claim that the massive “megalithic” grave sites could not have been built by stone age people but it was, in his famous words: “Aliens!”. What archeological evidence strongly suggests that the massive stone “megalithic” tombs are the result of centuries of development and experimentation (and not sudden construction by aliens)?

74) What is a barrow, and what is a dolmen?

75) Why do you think these graves were open to the East?

76) What other purpose did these gravesites serve in stone age society? (in some cases this is still the case in modern societies)

77) What replaced the “megalith” graves?

78) What do the myriad of graves suggest about society and population size at the time?

79) What “art” other than weaponry and tool-making saw a renaissance during the passage grave period?

80) What interesting phenomenon is meant by “wagon graves”?

**Ok, let’s go to the next room**

81) At the end of the Stone Age, how do settlement patterns change in Northern Europe?

82) What major innovation was made by Neolithic people?

83) What is misleading about labelling the dominant culture at the time the “Single Grave Culture”.

84) Although the “Bronze Age” was well on its way in Southern and Central Europe, stone age implements remained dominant and popular in Northern Europe. What metal objects did become popular among SOME parts of the population?

85) What Danish-sourced stone age implement remained popular and shows up in early Bronze Age archeological sites in Central and Southern Europe at this time?

Now take a stroll through the Bronze and Iron Age – both topics we will return to later.