



Contents lists available at ScienceDirect

Quaternary International

journal homepage: [www.elsevier.com/locate/quaint](http://www.elsevier.com/locate/quaint)

# The birdmen of the Pleistocene: On the relationship between Neanderthals and scavenging birds

Stewart Finlayson <sup>a, b, \*</sup>, Clive Finlayson <sup>b, c</sup>

<sup>a</sup> Department of Life Sciences, Anglia Ruskin University, East Road, Cambridge, Cambridgeshire CB1 1PT, United Kingdom

<sup>b</sup> Department of Natural History, The Gibraltar Museum, 18-20 Bomb House Lane, Gibraltar

<sup>c</sup> Institute of Life and Earth Sciences, The University of Gibraltar, Gibraltar Museum Associate Campus, 18-20 Bomb House Lane, Gibraltar

## ARTICLE INFO

Article history:  
Available online xxx

Keywords:  
Neanderthals  
Modern humans  
Raptors  
Corvids  
Scavengers  
Mid-latitude belt

## ABSTRACT

We have examined 192 Middle Palaeolithic sites in the Palaeartic which have raptor and corvid bones associated in human occupation contexts. We have also examined 395 sites with Upper Palaeolithic contexts for comparison. We show that Neanderthals were regularly associated with a suite of birds of prey and corvids. We identify that the main species were regular or seasonal scavengers which co-occurred across large areas of the Neanderthal geographical range. This suggests a long-standing inter-relationship between Neanderthals, raptors and corvids. We propose that the degree of difficulty of capturing these species was not an insurmountable problem for the Neanderthals and provide present-day examples of close interaction between scavenging birds and people. We also show that modern humans had a similar relationship with the same suite of birds as the Neanderthals. We suggest that one possibility is that Neanderthals transmitted the behaviour to modern humans.

© 2016 Elsevier Ltd and INQUA. All rights reserved.

## 1. Introduction

It has been widely accepted that the hunting of fast moving prey, such as birds and rabbits, is a defining feature of modern human behaviour and outside the capabilities of the Neanderthals (Stiner et al., 1999, 2000; Klein, 2001; Klein et al., 2004). Recent evidence, however, is throwing a different light on this question. Blasco et al. (2014) have shown that in Gibraltar Neanderthals exploited Rock Doves *Columba livia* for food on a regular basis for at least 35 thousand years. Birds of prey are generally considered to be aggressive as well as excellent flyers and therefore potentially among the most difficult birds to catch. Corvids are highly intelligent and active birds which also ought to be among the more difficult to catch. Nevertheless, Peresani et al. (2011) provided evidence of the exploitation of raptors and corvids by Neanderthals at Riparo Fumane (Italy) for feather extraction based on a small sample. Subsequently, Finlayson et al. (2012) showed that this behaviour was likely to have been widespread geographically. They also showed that the behaviour persisted for at least 30 thousand years at Gibraltar and could not be seen as casual or sporadic. The

behaviour has been widened to include the use of raptor talons. Morin and Laroulandie (2012) suggested the possible exploitation of Golden Eagle *Aquila chrysaetos* and White-tailed Eagle *Haliaeetus albicilla* for this purpose at Combe-Grenal (France) and Radović et al. (2015) have confirmed it for the latter species in Krapina (Croatia). Most recently, Laroulandie et al. (2015) have added Raven *Corvus corax* to the growing list of species with clear taphonomic evidence of Neanderthal intervention. Our aim in this paper is to review current evidence and:

- 1) Establish if the species known to have been exploited by Neanderthals belong to a particular ecological or behavioural group;
- 2) if so, identify the characteristics of the species involved as well as those excluded;
- 3) determine the degree of difficulty in capturing these species using present-day examples; and
- 4) suggest a possible mechanism for the exploitation of raptors and corvids by the Neanderthals.

## 2. Methods

We carried out a review of published sites with Neanderthal occupation that also recorded the presence of bird species,

\* Corresponding author. Department of Natural History, The Gibraltar Museum, 18-20 Bomb House Lane, Gibraltar.

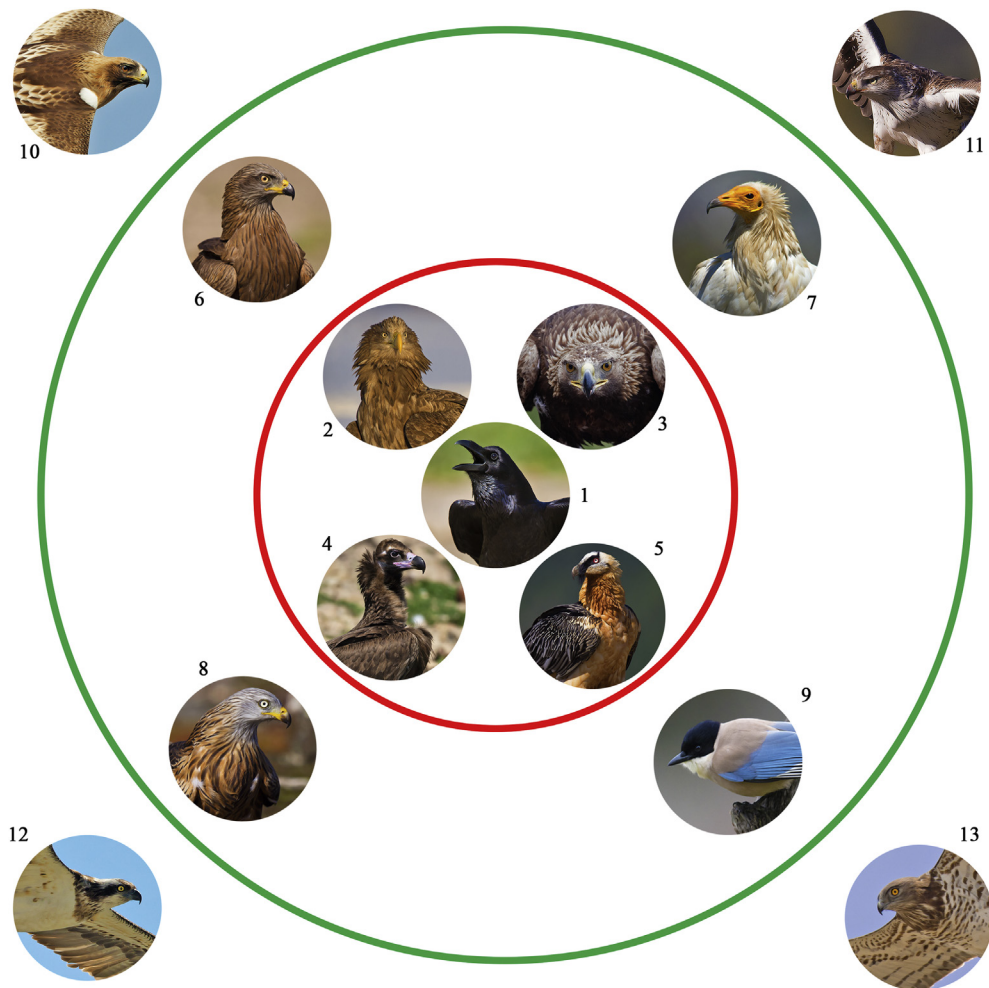
E-mail address: [stewart.finlayson@gibmuseum.gi](mailto:stewart.finlayson@gibmuseum.gi) (S. Finlayson).

summarised in Tyrberg (1998, 2008). We used these data to construct a database of 192 Neanderthal sites and associated raptors and corvids (Appendix 1). Presence of a bird species in a Neanderthal level need not implicate the Neanderthals as the main taphonomic agent. Nevertheless, an association between Neanderthals and particular types of raptors and corvids (and not others), would require explanation: are they occupying similar habitats, exploiting similar prey and are they doing so in a similar fashion? Any such association would be particularly important if the species involved could be shown to include those known, from taphonomic analyses, to have been processed by Neanderthals. We therefore supplemented the database with confirmed and published taphonomic evidence of Neanderthal exploitation of particular species (Peresani et al., 2011; Finlayson et al., 2012; Laroulandie et al., 2015; Radovic et al., 2015).

In order to understand the possible manner in which Neanderthals may have collected raptors and corvids, we provide direct observational evidence from work carried out in the field in areas where these bird species are still to be found. Using this evidence and data from the literature we classified all Palearctic raptors and corvids in order of dependence on scavenging, as follows:

1. Obligate scavenger – mainly attends large carcasses
2. Opportunistic scavenger – opportunistic, attending a wide range of bait and carrion regularly
3. Seasonal scavenger – attends bait and carrion, including large carcasses at specific times of year, typically winter
4. Opportunistic and sporadic scavenger – opportunistic and sporadic attendance at bait and carrion
5. Rare scavenger – infrequent or non-attendance at bait or carrion

This ranking was introduced in order to test whether the species associated with Neanderthals and, especially, those known to have been processed by them had particular characteristics related to their mode of feeding. Given that carcasses provided fixed points, over short time periods, that attract large gatherings of scavengers, it was considered that they might provide ideal opportunities for ambushing. The null hypothesis was that there would be no difference in the species associated with Neanderthals by scavenger rank. If highly ranked scavengers of the two taxa (raptors and corvids) featured highly in association with Neanderthals, then the null hypothesis would be rejected, especially so if low-ranking scavengers were underrepresented.



**Fig. 1.** Species of raptors and corvids associated with Neanderthals. Not all species are represented in this figure which is illustrative. The main species identified in this paper include those encircled by the red ring. Secondary species include those enclosed by the green ring and irregular ones are outside the green ring. Key: 1. Raven, 2. White-tailed Eagle, 3. Golden Eagle, 4. Cinereous Vulture, 5. Bearded Vulture, 6. Black Kite, 7. Egyptian Vulture, 8. Red Kite, 9. Iberian Magpie, 10. Booted Eagle, 11. Bonelli's Eagle, 12. Osprey, 13. Short-toed Eagle. For the complete list of species, see Tables 1 and 2. Note, although Bonelli's Eagle (a resident species) has the same rank as Black Kite and Egyptian Vulture in Table 1, it is placed as an irregular scavenger. The reason is that it is irregular and, as explained in the text, Egyptian Vulture and Black Kite are more frequent scavengers but the low rank is attributed to their absence from Europe in winter. Raven is afforded a higher status than the choughs as it is a year-round scavenger whereas the choughs are seasonal.

Download English Version:

<https://daneshyari.com/en/article/5114186>

Download Persian Version:

<https://daneshyari.com/article/5114186>

[Daneshyari.com](https://daneshyari.com)