Abstract
Skeletal remains of birds of prey from (post-)medieval sites of high social status can sometimes be connected with falconry. This applies to bones of species such as sparrowhawk (*Accipiter nisus*), goshawk (*Accipiter gentilis*), peregrine falcon (*Falco peregrinus*) and possibly also hobby (*Falco subbuteo*). Remains of kestrel (*Falco tinnunculus*) are more likely to come from local (breeding) birds, as it seems to have hardly been used in falconry. Bones of common buzzard (*Buteo buteo*) and kite (*Milvus* sp.) are harder to explain. Buzzards were sometimes used in falconry (Oswald, 1982), but kites never were, although they were sometimes used in wildfowling as a decoy (Dobney & Jacques, 2002). In general, the presence of these species is explained by the fact that both are scavengers. Attracted by human waste and refuse in the vicinity of a site, they could have been killed or died naturally (Dobney & Jacques, 2002; Hamilton-Dyer, 2002; Thys & Van Neer, this volume).

The same problem arises when we look at the finds of owl bones. In most cases they can be interpreted as background fauna: barn owl (*Tyto alba*) and little owl (*Athene noctua*) often breed in buildings, while long-eared owl (*Asio otus*) and tawny owl (*Strix aluco*) could have been hunting around the buildings at night. On the contrary, the short-eared owl (*Asio flammeus*) is a bird of the open field: it is very unlikely to appear at castle or urban sites.

This paper, which is an extended version of a former publication (Zeiler, 2007a), will discuss the possibility that the finds of owl bones. In most cases they can be interpreted as background fauna: barn owl (*Tyto alba*) and little owl (*Athene noctua*) often breed in buildings, while long-eared owl (*Asio otus*) and tawny owl (*Strix aluco*) could have been hunting around the buildings at night. On the contrary, the short-eared owl (*Asio flammeus*) is a bird of the open field: it is very unlikely to appear at castle or urban sites.

Falconry and archaeozoology
The clearest indications of falconry are of an archaeological kind: parts of falconry equipment. Two nice examples come from the Valkhuis at...
The Hague (1250-1649 AD) and the castle of Eindhoven (1420-1649 AD), where falcon bells were found (Pavlović & Nieweg, 2007; De Jong, 1992). However, these finds are rare, especially because many parts of the falconry equipment are made of leather and thus are only preserved under favourable conditions (Prummel, 1997). Archaeozoological research can provide indirect proof of falconry. This is shown very convincingly by Prummel (1997) in the discussion of the bone material from the medieval castle (750-1150 AD) of Oldenburg, Germany. Not only there is a strong representation of sparrowhawk and goshawk among the identified species (15% of NISP), but also bones of females outnumber those of males. In both species the female birds are larger than the males and thus can catch larger prey, which means more food on the table. The third indication for falconry at Oldenburg castle is the presence of small mammals and birds of different sizes that could have been (and in fact often were) caught with hawks or falcons: hare (Lepus europaeus), herons (Ardeidae), ducks (Anatinae), grey partridge (Perdix perdix), woodcock (Scolopax rusticola), larks (Alaudidae), etc. Although there is no castle site in the Netherlands where the number of bones of birds of prey is as high as in Oldenburg, in many cases indications of falconry are found. For instance, among the bone material from the castle of Valkenburg (province of Zuid-Limburg) remains of two female sparrowhawks were found, together with a number of bones of hare, grey heron (Ardea cinerea), grey partridge, woodcock and various species of ducks and geese (Zeiler, 1995). A comparable species spectrum was found in the already mentioned castle of Eindhoven: hare and several dozens of wild bird species, along with bones of sparrowhawk and hobby (De Jong, 1992).

**Hunting the hunters: birds of prey ...**

The Dutch archaeozoological database BoneInfo contains 25 (post-)medieval sites where bones of birds of prey were found. Of these, 13 are castles or manorial estates and 12 are town contexts (table 1). Another find, from a rich urban household, is mentioned by Groeneweg (2008). Some species can be connected with falconry: sparrowhawk, goshawk, peregrine falcon and probably also hobby. It must be stressed that although falconry was practised in the countryside, some townsmen also kept hunting birds (Oggins, 2004). The finds of sparrow hawk (and hobby) in town contexts could be an illustration of that habit.

At first sight, a link with falconry seems to be absent in three other species: white-tailed eagle (Haliaeetus albicilla), common buzzard and kite. They could have been shot because they were considered as a pest, a view that is reflected in several historical documents. For instance, in 1672 the government of the province of Groningen decreed that all inhabitants had to prevent the nesting of a number of bird species, among them “Klemvogels, Boom-Valcken, Ganse-Arents en Hanebijters” (goshawks, hobbies, white-tailed eagles and marsh harriers) on or at their own or used houses, towers, farms, land, trees and woods, and to expel and destroy the nests of these birds as soon as they started nesting. This decree was repeated in 1708 and 1711 (Zeiler & Prummel, 2001). In the 17th-century book on hunting practices *Jacht-Bedryff* (Swaen, 1948) it is written that white-tailed eagles cause great harm to the wild fauna in the dunes, for which reason the wardens are allowed to shoot them (“*Doen groot quaet inde duijnen en daerom is de duynmayers geoorloft die te schieten*”). However, there could be another, more intriguing explanation for the finds of buzzard and kite bones. Although they could come from birds scavenging on human waste, it is striking that they are almost exclusively associated with places of high social status. Five out of six finds of buzzard bones are from castle sites and the

<table>
<thead>
<tr>
<th>Castle (N = 13)</th>
<th>Town (N = 13)</th>
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<tbody>
<tr>
<td>White-tailed eagle (Haliaeetus albicilla)</td>
<td>1</td>
</tr>
<tr>
<td>Common buzzard (Buteo buteo)</td>
<td>5</td>
</tr>
<tr>
<td>Goshawk (Accipiter gentilis)</td>
<td>1</td>
</tr>
<tr>
<td>Sparrowhawk (Accipiter nius)</td>
<td>4</td>
</tr>
<tr>
<td>Peregrine falcon (Falco peregrinus)</td>
<td>1</td>
</tr>
<tr>
<td>Kestrel (Falco tinnunculus)</td>
<td>2</td>
</tr>
<tr>
<td>Kite (Milvus sp.)</td>
<td>-</td>
</tr>
<tr>
<td>Bird of prey (Accipitridae)</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
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Figure 1. Two saker falcons (Falco cherrug) and, in the upper left corner, a (saker) falcon striking a kite (from: J.A. Naumann, 1899, Plate 13).
only find of a kite bone comes from a rich context too. The same phenomenon is found by Dobney & Jacques (2002), in their survey of 26 avian assemblages from Anglo-Saxon sites. Although remains of buzzard were found in different site categories, their highest incidence is from high status estate centres. Remains of red kite are almost exclusively found in places of high social status, “which seems a strange pattern if all these were merely the remains of scavenging commensal individuals” (Dobney & Jacques, 2002).

As was said before, kites and buzzards were never or only occasionally used in falconry as hunting birds. Nevertheless, a possible explanation leads us back to falconry, be it with buzzards and kites in another role: not as hunting birds, but as part of the game bag. This is based on the phenomenon of kite-hawking: hunting kites with falcons or goshawks, a type of falconry that was practised both in Europe and beyond. In England and France, where the red kite (Milvus milvus) was the main prey, this was the case until the first half of the 19th century. The hunting records of the 18th-century Austrian imperial court mention both red and black kite (Milvus migrans) as part of the falconers’ game bag (Hardegg, 1965; Van Oorschot, 1974). In India and Pakistan, where kite-hawking was practised until c. 1947, black kites were hunted (Mavrogordato, 1966). Besides in written sources, we can find evidence for kite-hawking in paintings and drawings. The most spectacular painting is from 1856 by the German-British painter Joseph Wolf: two gyrfalcons (Falco rusticolus) strike a red kite in a dramatic scenery (Schulze-Hagen & Geus, 2000). A more subtle reference to kite-hawking can be found in one of the plates in J.A. Naumann’s Naturgeschichte der Vogel Mitteleuropas (1899, Bd. 5, Raubvögel), depicting two saker falcons (Falco cherrug). In the left upper corner of this illustration a (saker) falcon strikes a kite (fig. 1). In their book Coursing and Falconry, Cox & Lascelles (1892) describe kite-hawking with saker falcons as follows: “This hawk (= the saker) will make excellent sport with a kite, who, as soon as she sees the saker … cast off … and geteth to her pitch as high as possible she may by making many turns and wrenches in the air, which, well if observed, together with the variety of contests and bickerings there are between them, it cannot but be very pleasant and delightful to the beholder.”

Dobney & Jacques (2002) also point to kite-hawking as an explanation for the fact that red kite bones are almost exclusively associated with places of high social status. However, kites were not the only birds of prey that were hunted in this way. In the already mentioned 18th century hunting records of the Austrian court (1709 and 1713-1730), among the hares, ducks, herons, kites, etc. occasionally a bird is mentioned, named “Geier”. Apart from meaning “vulture” in official German language, this was until very recently (and perhaps still is) a local popular name for buzzard (Hardegg, 1965)! In the records of 1713 and 1714 even an “Adler” is mentioned. If indeed an eagle is meant here, is not clear. It is hard to imagine that a large species such as golden eagle (Aquila chrysaëtos) could be caught with falcons, not even with saker or gyrfalcons. However, in case of a smaller species like the booted eagle (Hieraaetus pennatus), it might have been possible.

Apart from purposeful hunting of kites, sometimes a trained falcon or hawk may catch another bird of prey by accident, i.e. when this is not the falconer’s intention. In this respect it is remarkable what is mentioned by Mavrogordato (1966): “In Holland, ..., Henk Dijkstra has perhaps found a substitute for the red kite in the buzzard; he has had some astonishing successes flying a Peregrine at buzzards.” Mr. Dijkstra himself was quite unhappy with the term “astonishing success”, because it concerned unintentional collisions between falcon and buzzard. In general, falconers will do what they can to avoid these confrontations, because they are dangerous not only for the buzzard, but also for the trained falcon or hawk (G.J. van Nie, personal communication).

…and owls

As said before, the presence of owl bones in (post-)medieval castles and towns can easily be explained as a reflection of the background fauna, i.e. of birds that bred and/or hunted there. However, among the finds mentioned in the Dutch archaeozoological database BoneInfo (table 2) there is one that cannot be explained in this way: a bone of short-eared owl from the late medieval castle of Brederode (Zeiler, 2007b). This day-active bird of the open field is very unlikely to appear at castle sites. A possible explanation is found in the 17th-century book Jacht-Bedryff, bringing us back to falconry once more, in a description of the way short-eared owls were hunted with (male) gyrfalcons or peregrine falcons (”Dese werden metten Geer-tarsel ende slechten Valck gevlogen”). It is striking that the description of this “owl-hawking” is very much like that of the kite-hawking with saker
falcons mentioned above, laying emphasis on the spectacular sight of the fighting birds as they climb higher and higher in the sky, with feathers flying around when the falcon hits its prey. In *Jacht-Bedryff* it is also mentioned that Prince Maurice of Orange (son of William of Orange and Anna van Saksen, 1567–1625) loved this type of falconry and even paid for it when people brought him a living owl or showed him the spot in the dunes where he could find one.

**Food for the falcons?**

From the above it is clear that in historical times it was quite common to hunt “slow” birds of prey like buzzards and kites, as well as short-eared owls, with trained falcons and hawks. The finds of their bones in castle and urban contexts show that they were brought back home with the rest of the game. One question remains: what was done with them? The dead birds might have been thrown away after showing them around. However, they could very well have served as an additional food source for the tamed falcons and hawks. In historical times this was indeed the case in Turkey: if birds of prey were caught alive they were kept for a while, as a supply of fresh food when needed (G.J. van Nie, personal communication).

**Conclusions**

There is broad evidence, both in written sources and in drawings and paintings, for “kite-hawking”: the hunting of kites with trained falcons and hawks. It was practised throughout Europe and beyond until quite recently. Though kites seem to have been the favourite prey in this type of falconry, there is also written evidence that buzzards, short-eared owls and perhaps even small eagles were caught. Besides, it is known that unintentional confrontations between a trained falcon or hawk and another bird of prey may occur. This might explain the presence of common buzzard, kite and short-eared owl in (post-)medieval contexts of high socio-economic status. These species cannot be regarded as birds breeding locally nor are known to have been trained by falconers. Although buzzards and kites are known to be scavenging on human refuse, this cannot explain the almost exclusive association with places of high social status. The remains of these three species could very well come from birds caught – intentionally or unintentionally – in hawking. The same applies to other “slow” birds of prey that have not been found yet but could turn up in these contexts, such as honey buzzard (*Pernis apivorus*) and harrier (*Circus* sp.). The latter, however, was found in the

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**Table 2.** Number of (post-)medieval castles and towns with finds of bones of owls

<table>
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<tr>
<th></th>
<th>Castle (N = 7)</th>
<th>Town (N = 9)</th>
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<tr>
<td>Barn owl (<em>Tyto alba</em>)</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Long-eared owl (<em>Asio otus</em>)</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Short-eared owl (<em>Asio flammeus</em>)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Little owl (<em>Athene noctua</em>)</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Tawny owl (<em>Strix aluco</em>)</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8</strong></td>
<td><strong>9</strong></td>
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castle of Oldenburg (Germany), for which there is clear evidence for falconry. The birds caught in hawking could have served as additional (fresh) food for the trained falcons and hawks.

Acknowledgements
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References


