

The archaeological record of domesticated and tamed birds in Sweden

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Abstract. This paper summarizes information on domesticated birds in Sweden up to the end of the Middle Ages. It is based on data from subfossil remains but also incorporates information from art and early written sources. The most important domestic bird in Sweden has always been the Domestic Fowl. It was probably introduced to Sweden during the Pre-Roman Iron Age and by the Migration period it had become common and spread as far north as Jämtland. During the Late Iron Age and the Middle Ages remains of Domestic Fowl are very common throughout the farming areas of southern and central Sweden. The only other common domestic bird was Domestic Goose. When this was first kept in Sweden is uncertain since Greylag Geese occur naturally in the area but it was probably introduced (or domesticated locally?) at approximately the same time as the Fowl. It is difficult to determine when domestic Duck was introduced, or how common it was since remains of wild Ducks are also common, but it seems that domesticated Ducks were of minor importance in Sweden. There is no definite proof that Pigeons were kept in Sweden until post-medieval times. Turkeys seem to have reached Sweden remarkably quickly and were apparently well established by the end of the sixteenth century. Falconry was probably introduced during the sixth century AD and, judging from remains in graves, it was widespread in aristocratic circles at least in Eastern Sweden up to the end of the Iron Age. The predominant species was Goshawk. An interesting aspect of the "falconry graves" is the frequent occurrence of Eagle Owls, almost certainly used as decoys to attract birds. Both literary and archaeological sources on Medieval falconry are sparse and it is uncertain how widespread it was, but it seems likely that it was less common than during the Late Iron Age.

Key words: Sweden, domestic birds, falconry, subfossil, iron Age, Middle Ages.

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I. INTRODUCTION

This paper is based on a review of approximately 520 sites with subfossil bird remains in Sweden (ERICSON & TYRBERG in press). This comprises essentially all published sites plus a majority of the sites where the avian remains have been determined but not yet published.

A c k n o w l e d g e m e n t s. I thank Per ERICSON, Naturhistoriska Riksmuseet, for permission to use data from our joint database of subfossil bird records, and also all those who have contributed unpublished data to the database.

II. SYSTEMATIC PART

Greylag Goose *Anser anser* (LINNAEUS, 1758)

Greylag Geese were possibly first domesticated in Egypt where there is evidence for domesticated geese as early as the 11th Dynasty, ca 2000 BC (BOESSNECK 1986).

Most of the many subfossil records of this species presumably derive from the domestic form of the Greylag Goose which was probably introduced to Scandinavia during the Iron Age (for the chronology of the Swedish Iron Age see Fig. 1), an event clearly attested by a massive increase of Greylag Goose records from the Iron Age onwards (Figs 2-3). That most of these are from domestic birds is further indicated by the fact that the only other avian species occurring with the geese is frequently the Domestic Fowl *Gallus gallus*.

Domesticated geese seem to have been much more common in central Sweden during the Iron Age and the Middle Ages than in recent centuries when goose keeping has been largely restricted to the ex-Danish provinces of Halland and Skåne in southern Sweden (e. g. GENRUP 1975). It has been suggested that the occurrence of probable domestic geese as far north as Hälsingland, where conditions for goose keeping must have been marginal, may have been due to geese being required as an article of taxation (MOGREN 2000).

A peculiarity in the distribution of subfossil records is the complete absence of records from Gotland where goose keeping was presumably rare or non-existent. Geese or at least goose-like birds are however frequently depicted on Gotlandic pictorial stones from the Vendel period, and it is conceivable that there were religious reasons why domesticated geese were apparently not kept on Gotland, though this could hardly apply to the Medieval period.

Although local domestication cannot be excluded, no evidence for this exists. In size and proportions, the earliest domesticated geese were however very similar to wild geese and they are hardly separable osteologically. Only later on in the domestication process, do domesticated geese become distinctly larger than wild geese and thereby identifiable. Such large and definitely domes-

Modern Period (Subrecent)		1500 - AD
Middle Ages		1060 - 1500 AD
Viking Period	Late Iron Age	800 - 1060 AD
Vendel Period		550 - 800 AD
Migration Period	Early Iron Age	400 - 550 AD
Roman Iron Age		1 - 400 AD
Pre-roman Iron Age		400 - 1 BC

Fig. 1. Chronologic scheme for Sweden during the Iron Age (400 BC-AD 2000). The dates given are conventional. Some authorities in recent years have moved the Vendel/Viking Period border to 750 AD. Also note that the beginning of the Middle Ages is usually placed somewhat earlier in the ex-Danish provinces in southern Sweden.

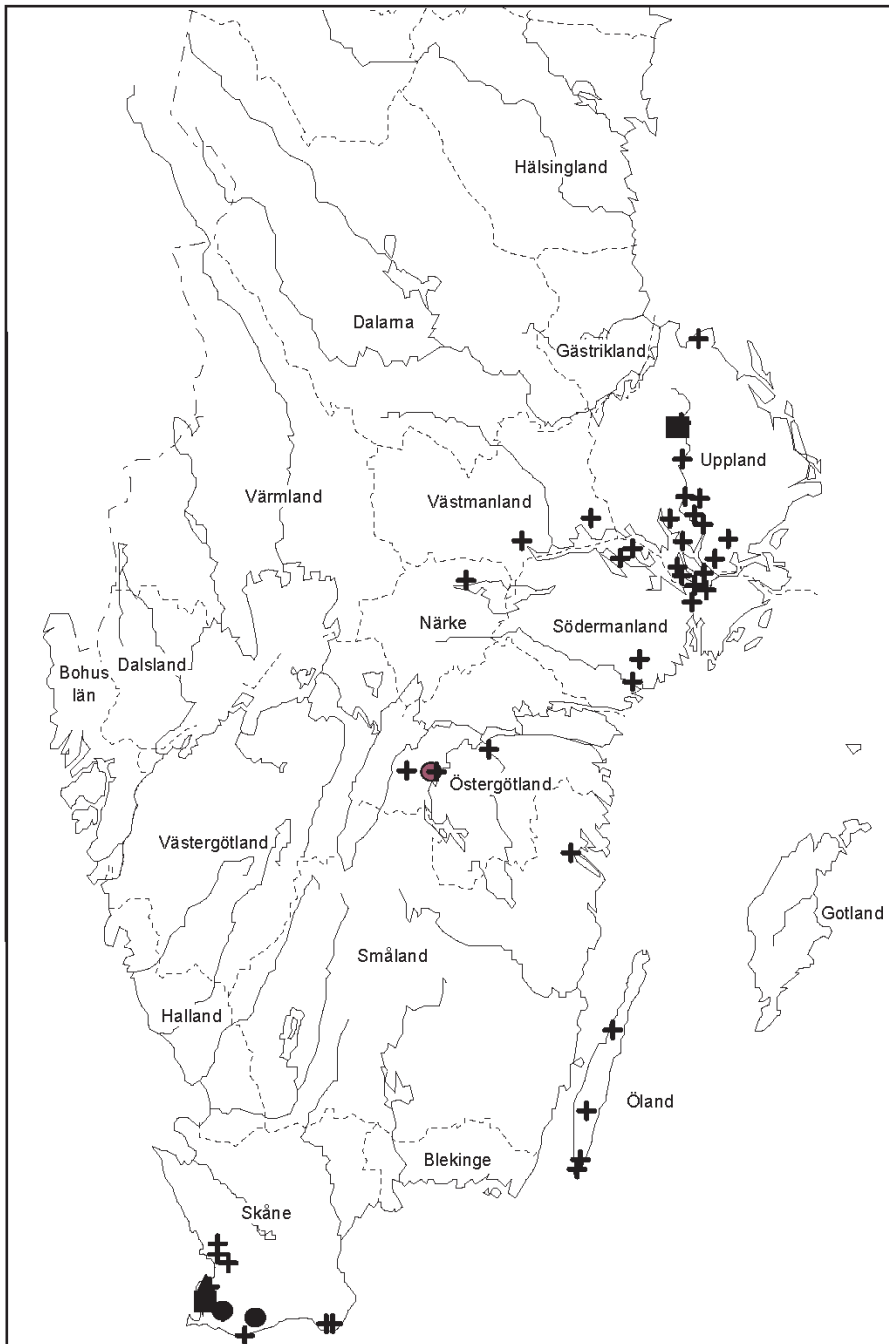


Fig. 2. Domestic Goose *Anser anser* records from the Pre-roman Iron Age (triangles), Roman Iron Age (circles), Migration Period (squares) and Late Iron Age (crosses).

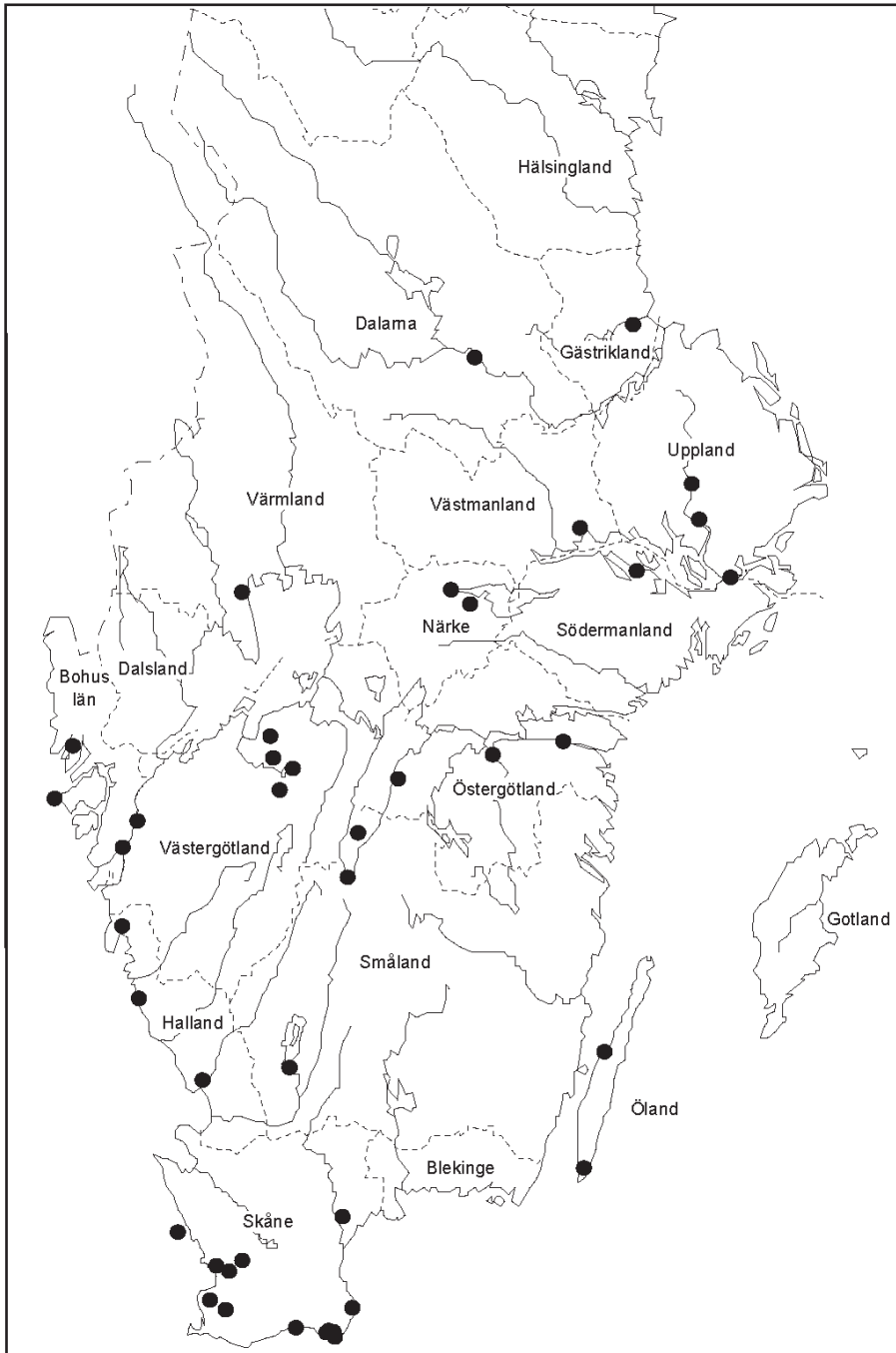


Fig. 3. Domestic Goose *Anser anser* records from the Middle Ages.

ticated geese do not occur in Sweden until the Late Iron Age at which time fowl and clearly domesticated geese were frequently deposited in graves (Fig. 2). In medieval deposits from towns and castles geese are usually the second most common bird species after the fowl (Fig. 3).

Mallard *Anas platyrhynchos* LINNAEUS, 1758

Domestic Ducks, as far as known, have never been particularly common or important in Sweden. The Swedish word for domesticated duck 'anka' is first mentioned in 1587 (BERNSTRÖM 1976) although it is uncertain to what extent subfossil records of *Anas platyrhynchos* are from domesticated birds. However it seems likely that at sites where it is found together with *Anser anser* and/or *Gallus gallus* but no other birds the remains may with some confidence be classed as Domestic Ducks (Fig. 4).

The domesticated form was apparently bred by the Romans to a limited extent (LUFF 1982) but does not seem to have spread outside the Empire. The earliest north European record supposedly dates from the twelfth century (ZEUNER 1963), however a few Swedish records from the Late Iron Age suggest that domesticated ducks occurred somewhat earlier in Sweden.

Domestic Fowl *Gallus gallus* f. *domestica* LINNAEUS, 1758

The Domestic Fowl is by far the most important domesticated bird in Sweden today and the same has apparently been true ever since it was introduced. It has been found as a subfossil at nearly 250 sites in Sweden.

The traditional view is that the Domestic Fowl was domesticated in India ca 2000 BC and introduced to the Mediterranean region in Classical times. This view has been questioned in view of the fact that Domestic Fowl occurs in China much earlier than in India, and that the oldest records from the Near East and the Balkans also seem to antedate 2000 BC (WEST & ZHOU 1988). Furthermore wild *Gallus* occurred during the last Ice Age in Israel (PICHON & TCHERNOV 1987) and probably in Transcaucasia (BURCHAK-ABRAMOVICH 1975) raising the possibility that the Domestic Fowl was actually domesticated somewhere in "The Fertile Crescent" (and independently in China). However Domestic Fowl do not occur in central Europe until the Iron Age (ca 700 BC) and the oldest Swedish records (Malmö, Scania) is from the Pre-Roman Iron Age (1st century BC, LEPIKSAAR 1977). A record from Hulje, Östergötland is only slightly younger (ANDERS KALIFF pers. com.). It seems likely that the oldest records actually indicate the approximate date of introduction since the species is absent from several somewhat older sites with large, well-studied avifaunas (Vistad, Östergötland; Sandeplan, Skåne; Apalle, Uppland).

The spread of the chicken in Sweden initially seems to have been rather slow. Excepting the previously mentioned record from Hulje all records from the Roman Iron Age are from southern Skåne (Fig. 5) and during the Migration Period (ca 400-550 AD) chickens still seem to have been fairly uncommon, though they occur widely, with one record from as far north as Jämtland, ca 63° N (Figs 5, 8). During the Late Iron Age (550-1060 AD) and the Middle Ages (1060-1500 AD) chickens apparently were common and widespread throughout the settled parts of Sweden, with the possible exception of the Norrland coast north of Hälsingland.

The differences in the number and distribution of sites between the Late Iron Age and the Middle Ages (Figs 6 and 7 respectively) are largely due to the fact that the Iron Age records are mostly from graves while the Medieval records are almost exclusively from towns and castles.

The Medieval record from Rautasjaure in northern Lapland (Fig. 8) is quite remarkable. This is a Samish area and since the Saami have probably never kept Domestic Fowls the bird was probably brought there by Norse travellers.

Turkey *Meleagris gallopavo* LINNAEUS, 1758

The Turkey seems to have spread to Sweden remarkably soon after being brought to Europe.

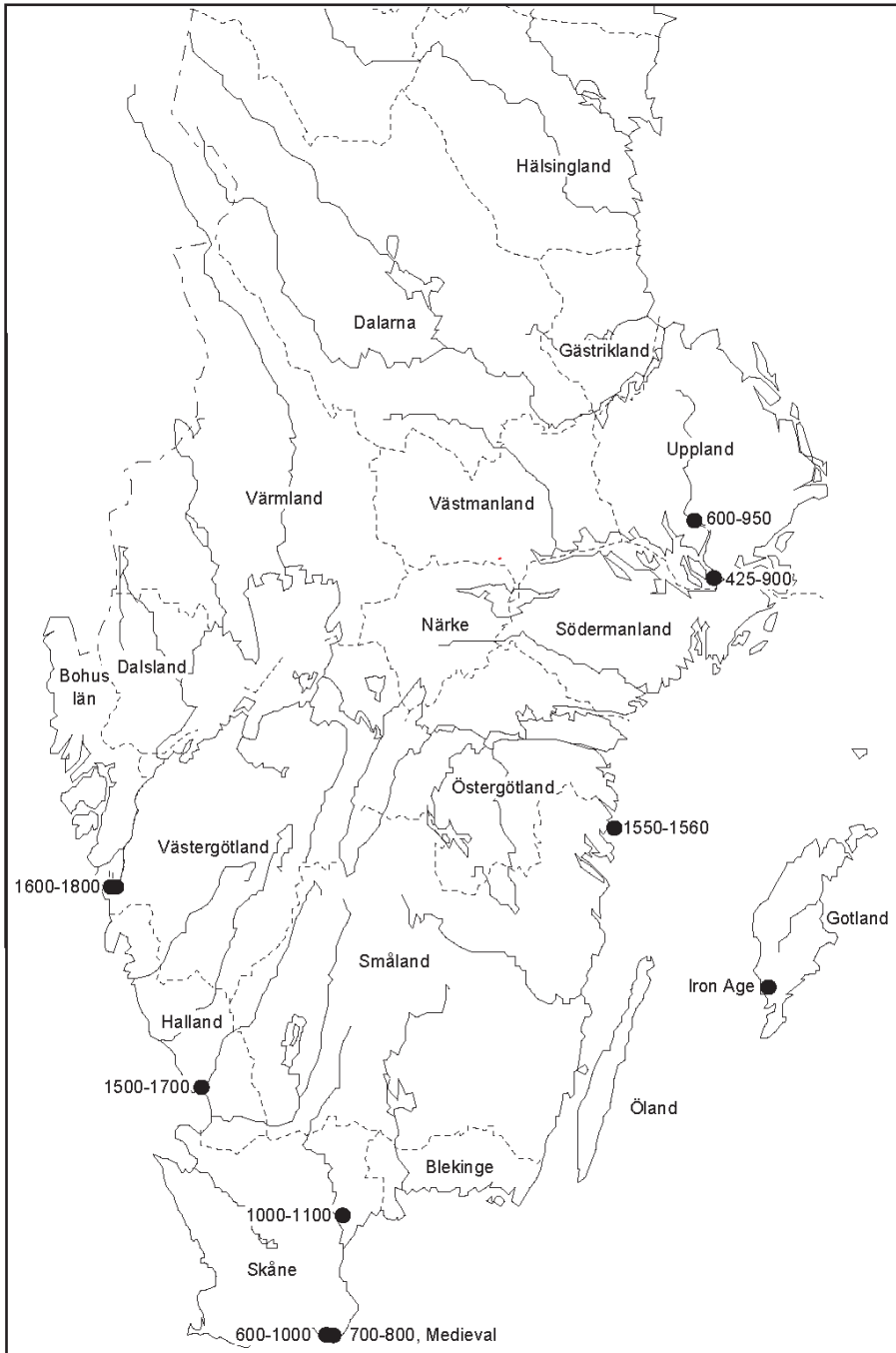


Fig. 4. Records of probable Domestic Ducks *Anas platyrhynchos* from the Iron Age and Middle Ages.

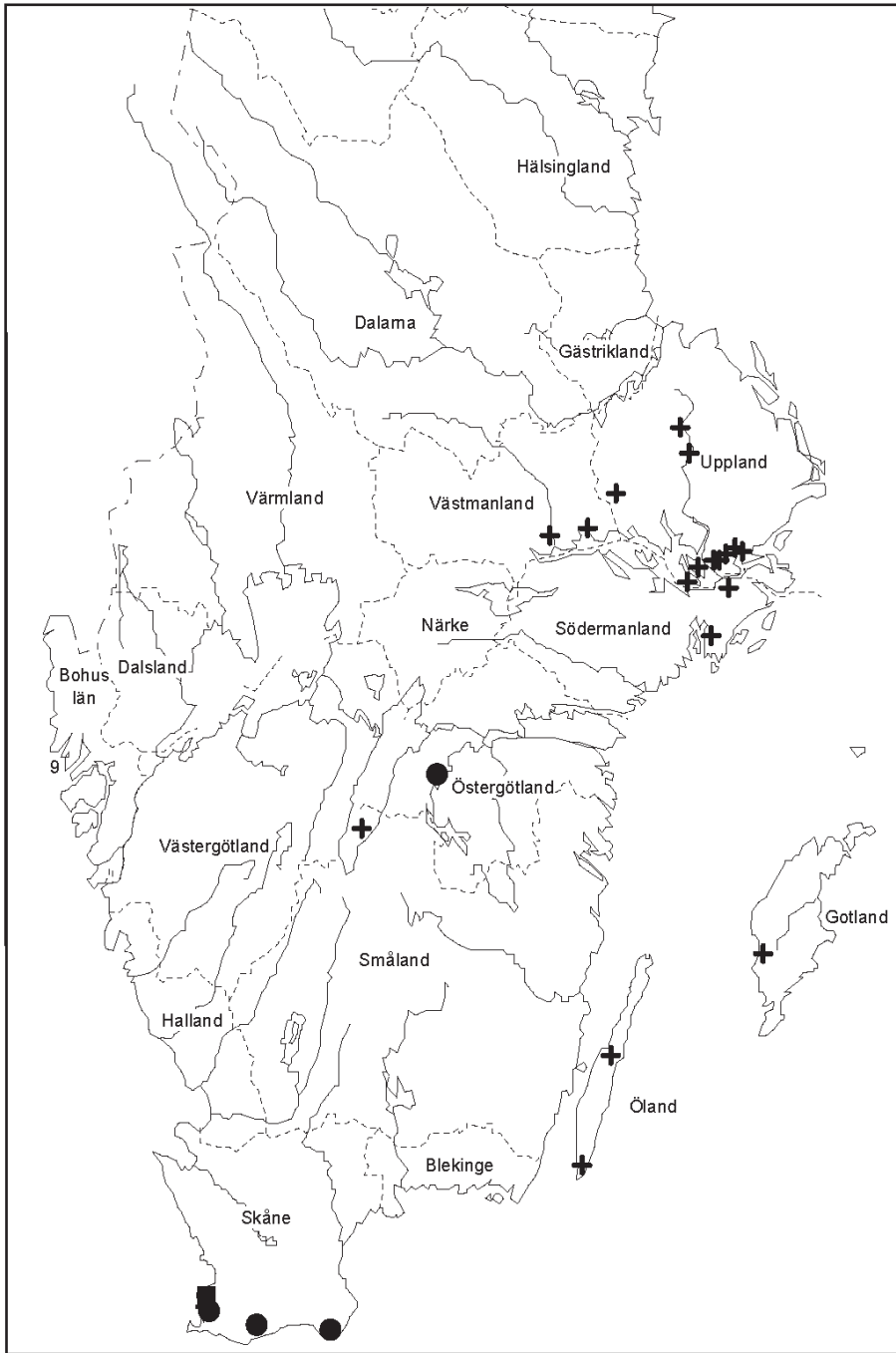


Fig. 5. Domestic Fowl *Gallus gallus* records from the Pre-roman Iron Age (squares), Roman Iron Age (circles) and Migration Period (crosses).

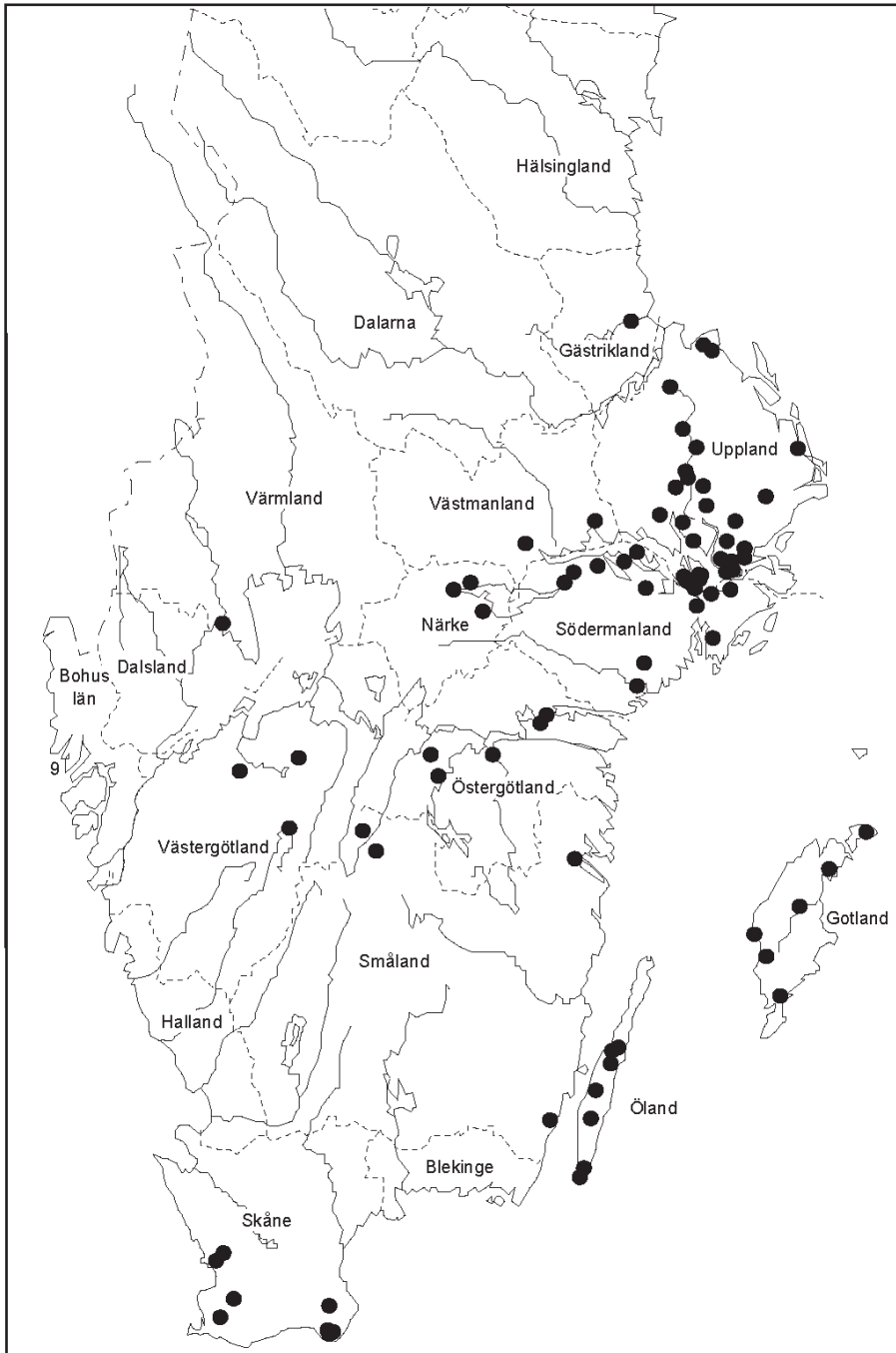


Fig. 6. Domestic Fowl *Gallus gallus* records from the Late Iron Age.

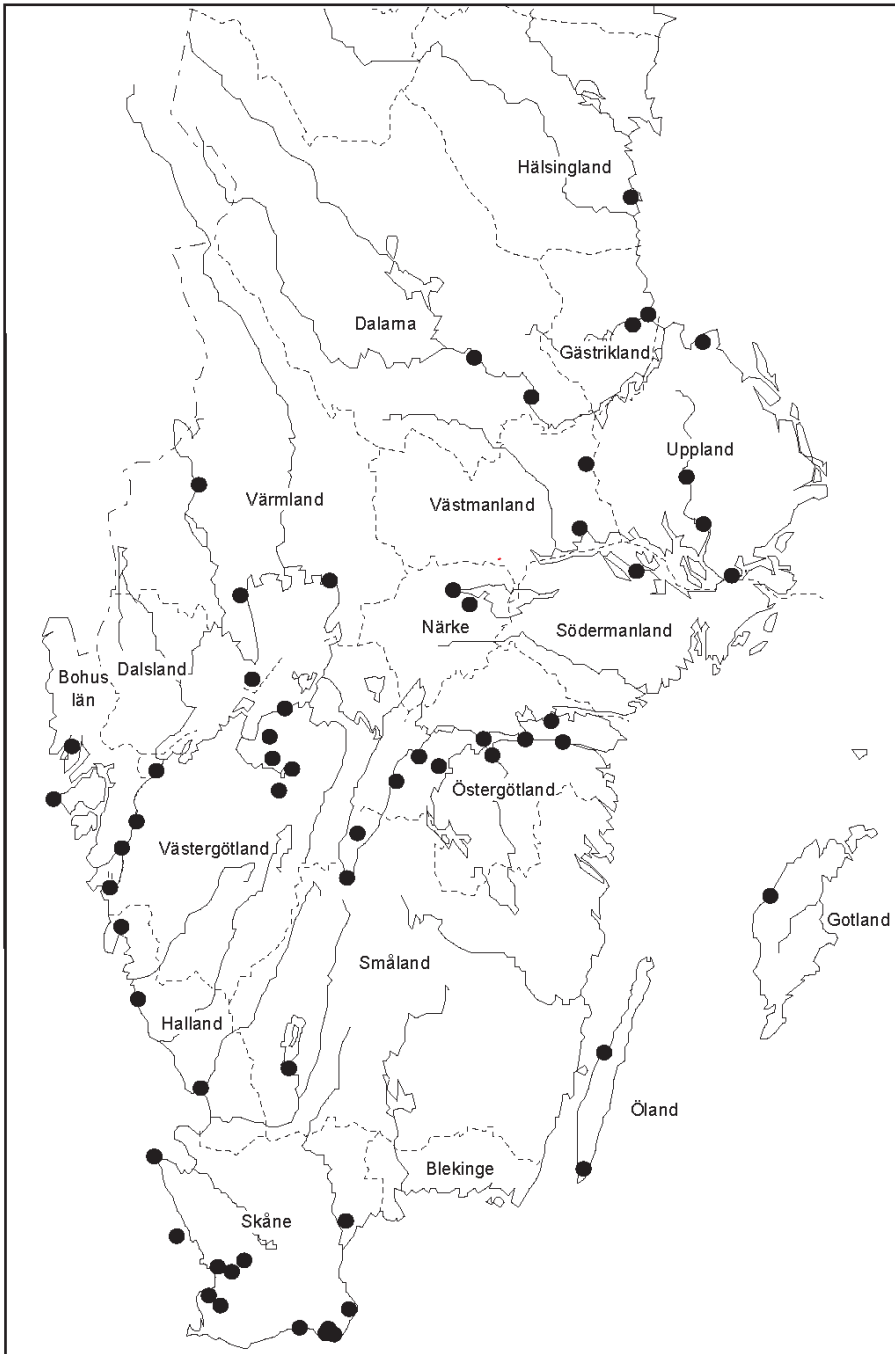


Fig. 7. Domestic Fowl *Gallus gallus* records from the Middle Ages.

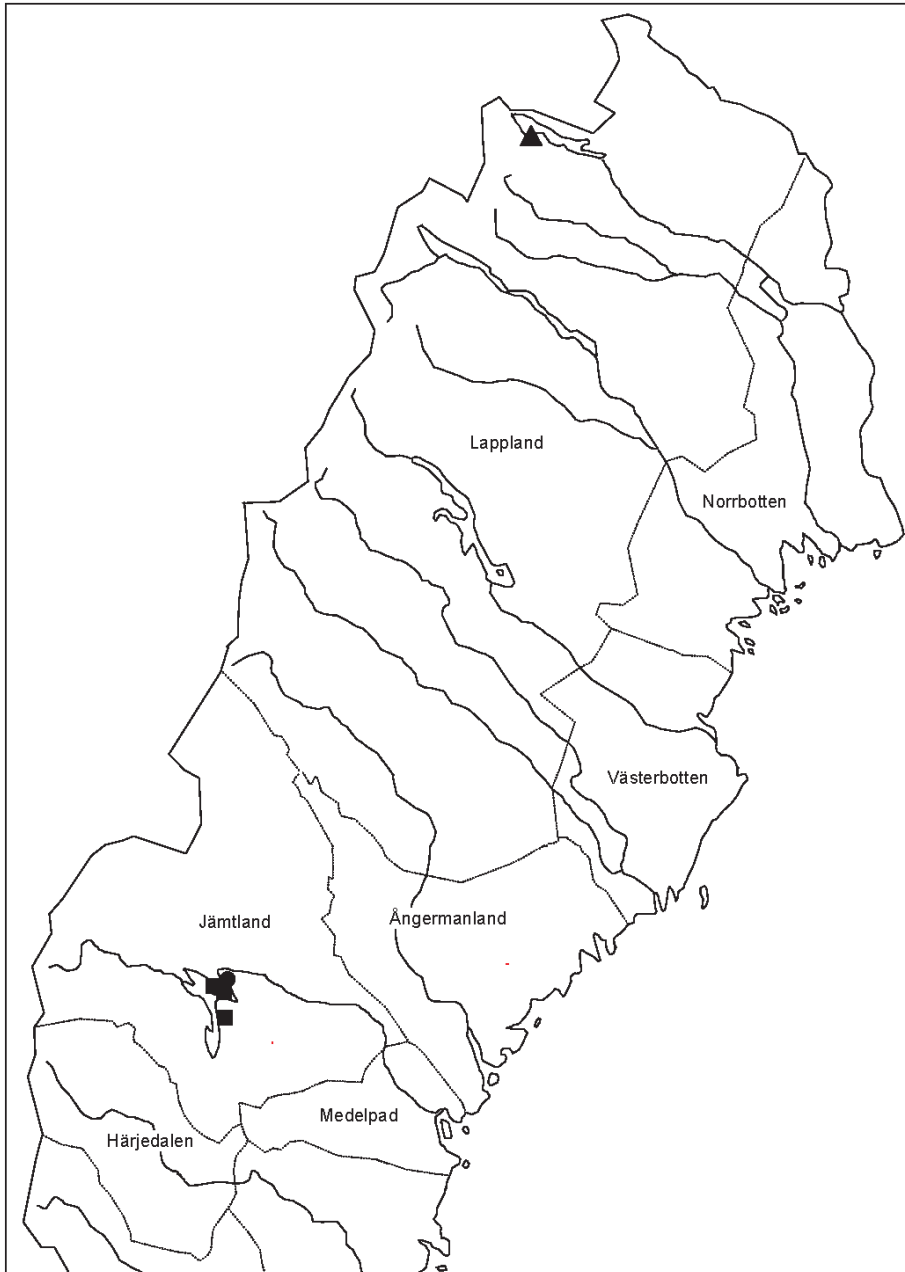


Fig. 8. Domestic Fowl *Gallus gallus* records in northern Sweden from the Migration Period (circle), Late Iron Age (Squares) and the Middle Ages (Triangle).

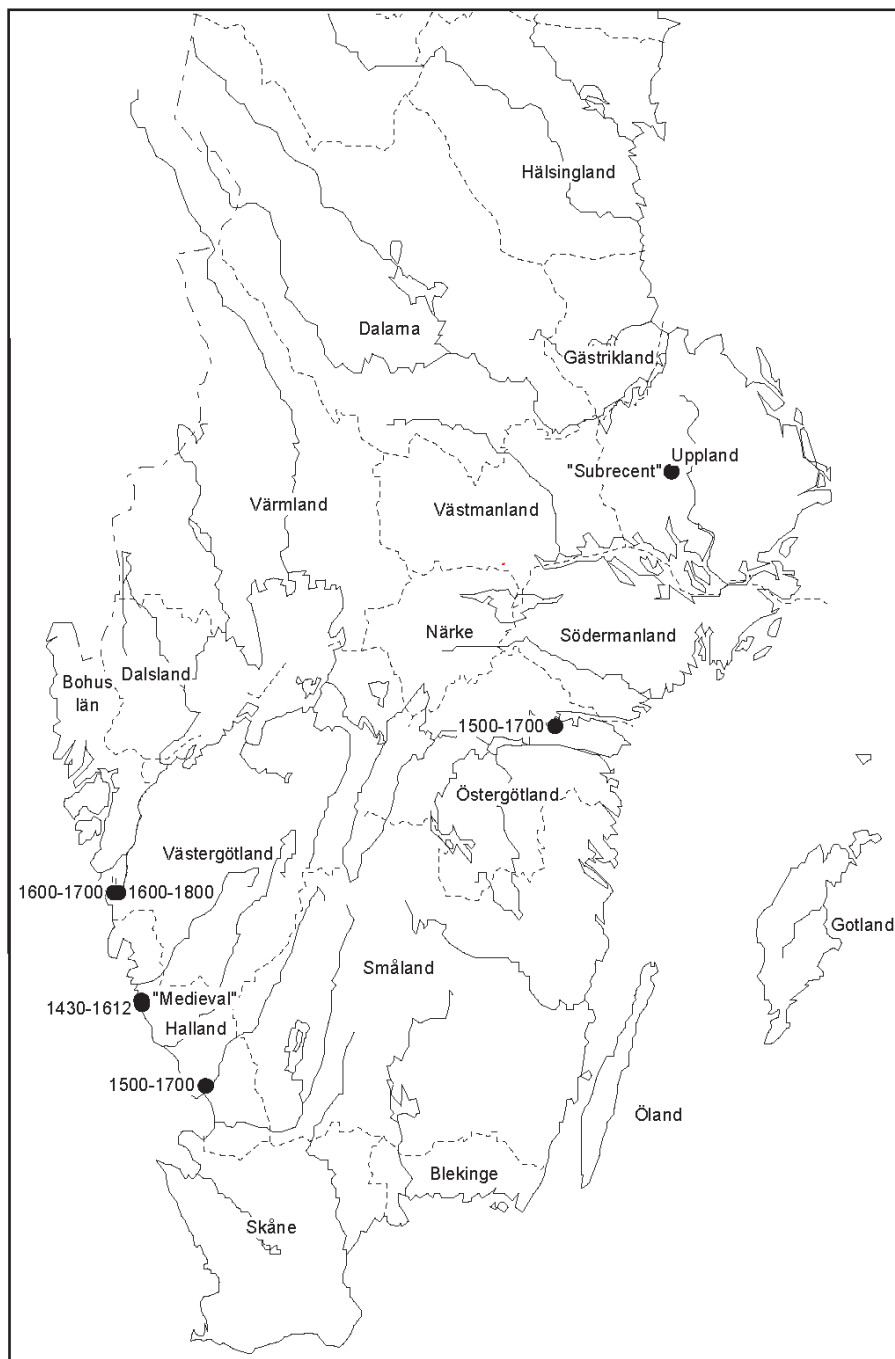


Fig. 9. Archaeological records of Turkey *Meleagris gallopavo*.

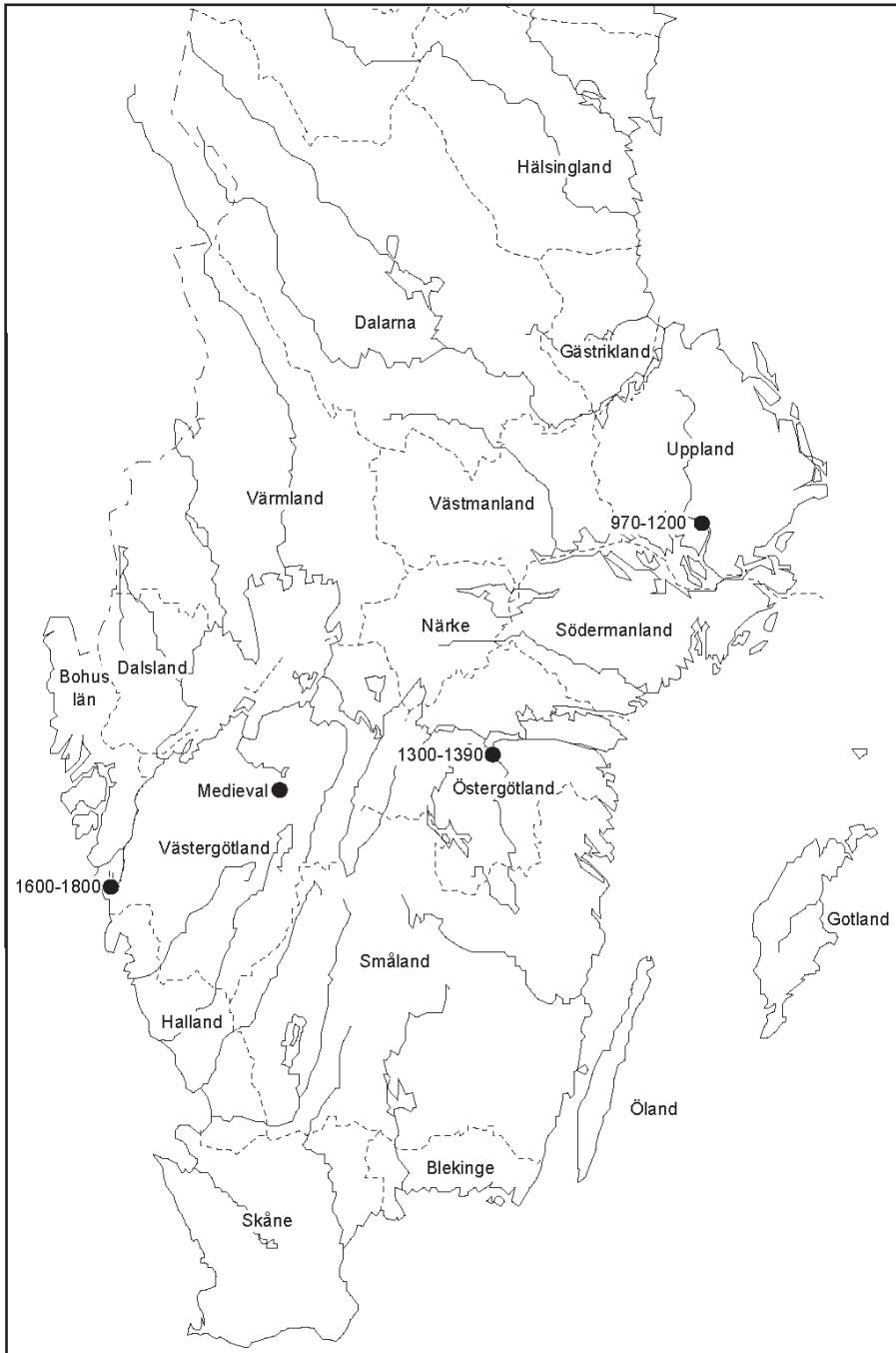


Fig. 10. Archaeological records of Domestic Pigeon *Columba livia*.

The species is first mentioned from Sweden and Denmark in ca 1550 (JONSSON 1992) and again by Aron Forsius in 1611 (FORSIUS 1952), and it seems to have been well-known by that time. In Sweden the oldest finds (Ny Varberg, Norrköping) dates back to the early seventeenth, or perhaps even the late sixteenth century (Fig. 9). A record from Medieval layers in Varberg castle is obviously intrusive! The number of finds is surprisingly large considering that Turkey-keeping has never been of any economic importance in Sweden.

P h e a s a n t *Phasianus colchicus* LINNAEUS, 1758

This species has not been found as a subfossil and it is only mentioned here because literary sources indicate that it has been kept in captivity in Sweden at least since the early eighteenth century.

Numerous efforts to establish the Pheasant in the wild were made at least from the early nineteenth century, but they were only successful from the 1880's in Skåne and ca 1900 in central Sweden.

P e a c o c k *Pavo cristatus* LINNAEUS, 1758

The Peacock was introduced by the Romans to Europe north of the Alps (e.g. LUFF 1982). In Scandinavia the oldest record is of a male in the Royal ship-burial at Gokstad in Västfold, Norway (900-905 AD), proving that the Peacock was known to the Norse during the Viking Age. In Sweden however it is not definitely attested until the early sixteenth century when OLAUS MAGNUS (1555) states that they were bred in some numbers in Östergötland and Västergötland. The two Swedish subfossil records are both from Gothenburg and post-medieval (1600-1800 AD) and are possibly connected with the activities of the Swedish East India Company which imported large quantities of Far Eastern merchandise via Gothenburg 1732-1803.

R o c k D o v e *Columba livia* LINNAEUS, 1758

There is little evidence that pigeons were kept in Sweden in medieval times. None of the three reported medieval subfossil occurrences is quite certain. In one case (Gudhem monastery) the bones may be intrusive and in the two others (Linköping, Sigtuna) the determinations are not entirely certain since there is some possibility of confusion with Wood Pigeon *Columba palumbus* or Stock Dove *C. oenas*.

Domestic pigeons are barely mentioned in Swedish Medieval sources (BERNSTRÖM 1958) and OLAUS MAGNUS (1555) specifically says that dovecotes were rare or unknown in Sweden. PEDER MÄNSSON in his *Bonda-Konst* (ca 1500) writes a great deal about pigeon keeping although his information all seems to be derived from non-Swedish sources. On the other hand there seems no reason to doubt the seventeenth- or eighteenth-century record from Gothenburg (Fig. 10), so by this time pigeon keeping had clearly been introduced.

Today Feral Pigeons are widespread and common in Sweden, but there is very little information in the ornithological literature when this happened since this species has usually been considered to be of little interest. The few available reports seem to indicate that Feral Pigeons have only become common after 1850. In fact NILSSON's (1858) note that Feral Pigeons bred in small numbers in church-towers in Scania seems to be the first specific reference to feral breeding in Sweden.

III. FALCONRY

This section is largely based on the previous work of STEN, VRETEMARK and JOHANSSON (JOHANSSON 1996, VRETEMARK 1983, 1984, STEN & VRETEMARK 1988).

Falconry, in this case perhaps more appropriately called hawking, seems to have been introduced to Sweden during the sixth century AD. The main evidence for hawking comes from aristo-

cratic graves dated between 500 and 1000 AD which frequently contain raptor bones, presumably from falconry. Such remains are completely absent even in very rich graves of earlier date.

The sixth century was a period of marked change and discontinuity in Scandinavia both with regard to settlement patterns, social structure and (probably) religion. Many of these changes have been interpreted as being due to the introduction of an aristocratic warrior ethic inspired by the new Germanic states founded in the ex-Roman Empire. It seems likely that hawking was introduced as a part of this “package” of aristocratic warrior ideals. In this particular case the influence of the Goths may have been of particular importance since they must have come into contact with the old falconry tradition of the Eurasian steppe zone when they settled in Ukraine.

In all, bones of raptors have been found in 34 graves (Fig. 11). The most common species by far is the Goshawk *Accipiter gentilis* LINNAEUS, 1758 (found in 27 graves) followed by Peregrine *Falco peregrinus* TUNSTALL, 1771 (5), Gyrfalcon *Falco rusticolus* LINNAEUS, 1758 (4), Sparrowhawk *Accipiter nisus* LINNAEUS, 1758 (3), and Eagle *Aquila chrysaetos* LINNAEUS, 1758 (2) or *Aquila chrysaetos/Haliaeetus albicilla* (1) and Merlin *Falco columbarius* LINNAEUS, 1758 (1).

Medieval sources are unanimous that Gyrfalcon and Peregrine were the most prestigious species as well as being considered the most exciting to hunt with. However falcons can only be used in open country so the predominance of the Goshawk in the heavily wooded Swedish Iron Age countryside is hardly surprising. Also the Goshawk is a more productive and less specialized hunting bird than the falcons, though it is also more difficult to train and handle.

It is worth noting that seven of the ten falcons have been found in graves where Goshawks also occurred. Gyrfalcon has been found alone in three graves. It is notable that the Merlin, which was a common hawking bird in Medieval England, is so rare. The Kestrel *Falco tinnunculus* LINNAEUS, 1758 meanwhile is completely absent. In Medieval times this species was considered as an inferior bird, used only by commoners, hence “a Kestrel for a knave”. The eagle records are of considerable interest if they were indeed hawking birds. Eagles were hardly used for hawking in Europe during the Middle Ages, but they are well attested from Asia where they have been used for hunting game as large as wolves. In this context it is worth noting that there is an eleventh century runic stone (Balingsta, Uppland, U 855) which depicts a deer or moose being attacked by a bird while it’s being hunted by another bird, two dogs and two men, one mounted and one on skis.

The origin of the four Gyrfalcons is interesting since, if they were eyas birds (i.e. caught on the nest), it would mean that long range trade in Gyrfalcons was already in existence during the Iron Age. Such a trade is well attested from the Middle Ages when the white Gyrfalcons from Iceland and Greenland were particularly prized, but Swedish gyrfalcons were also traded as far as Egypt in the fourteenth century (FRITZ 1993). It is however possible that the Iron Age Gyrfalcons may have been caught as passage migrants (haggards) in southern Sweden.

In almost half of the “falconry graves” (13) Eagle Owls *Bubo bubo* have also been found. These Eagle Owls were almost certainly used as lures for corvids and other birds, a role in which they are extremely effective. Living Eagle Owls were used in this way in Sweden until quite recently. This hunting method was also practised in England, though with other species of owls as shown by a Medieval miniature painting (YAPP 1982, p. 37). Eagle Owls have additionally been found in three graves without raptors. Several other bird species have been recorded from the “falconry graves”. Predictably Fowl *Gallus gallus* (19 graves) and Geese *Anser anser/Anser* sp. (15) are most common, but they also include Teal *Anas crecca* LINNAEUS, 1758 (1 grave), Goldeneye *Bucephala clangula* (LINNAEUS, 1758) (1), Red-breasted Merganser *Mergus serrator* LINNAEUS, 1758 (1), indeterminate Ducks Anatinae sp. (5), Black Grouse *Tetrao tetrix* LINNAEUS, 1758 (3), Capercaillie *Tetrao urogallus* LINNAEUS, 1758 (1), Hazel Grouse *Bonasa bonasia* (LINNAEUS, 1758) (2), Crane *Grus grus* (LINNAEUS, 1758) (5), Golden Plover *Pluvialis apricaria* (LINNAEUS, 1758) (1), Snipe *Gallinago gallinago* (LINNAEUS, 1758) (1), Pigeon *Columba* sp. (1), Starling *Sturnus vulgaris* LINNAEUS, 1758 (1) and Crow *Corvus corone* LINNAEUS, 1758 (1).

The grouse and wildfowl are presumably food items. This may also be true of the Cranes, since Medieval sources (e. g. Fredrik Hohenstaufen’s *Ars venandi cum avibus*) show that Cranes were

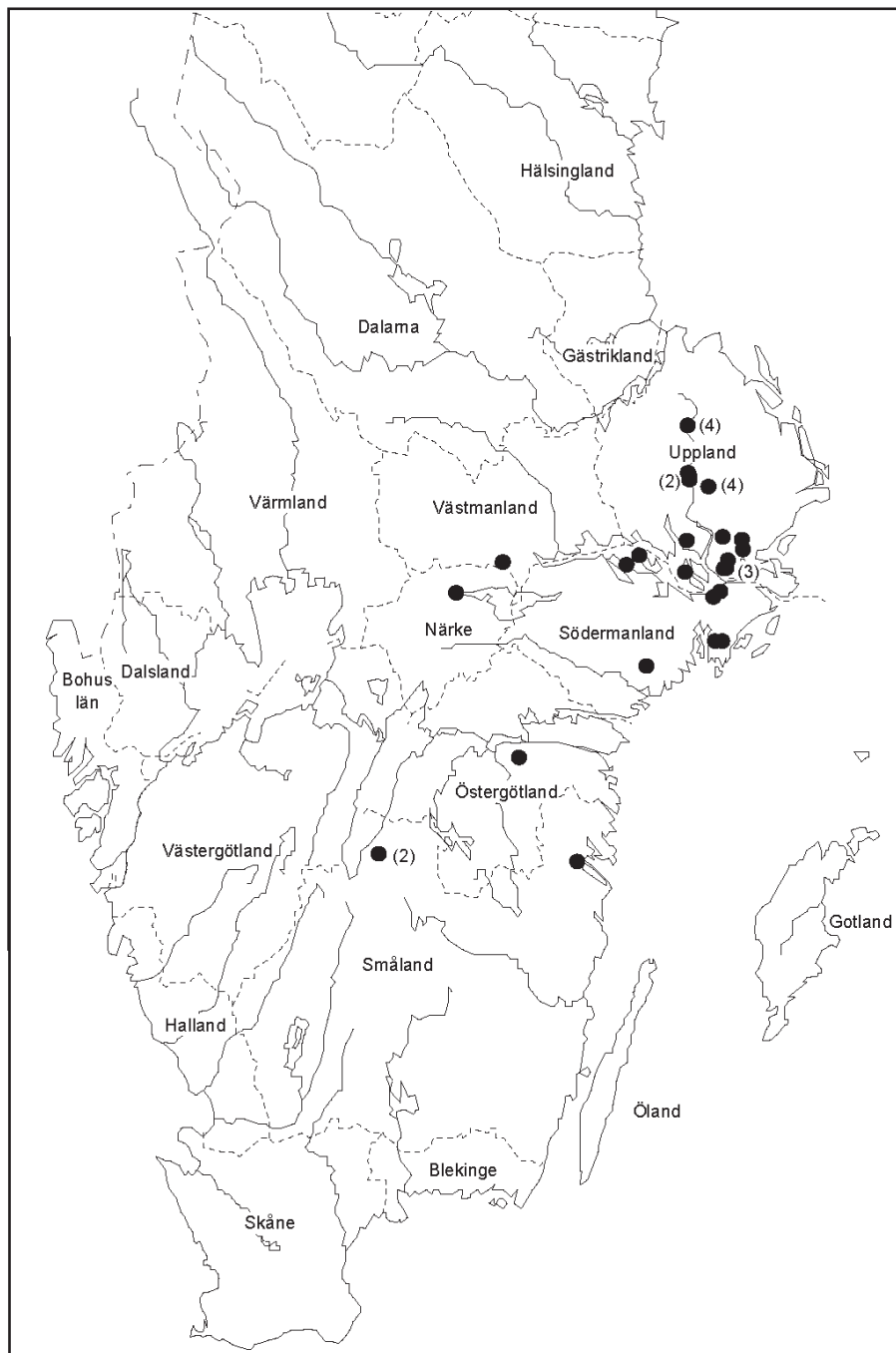


Fig. 11. Iron Age Graves containing raptors.

highly prized as prey for falconry. Indeed Crane and Black Grouse respectively are specifically mentioned as prey in two different saga accounts of a hawking foray by the Swedish king Olof Skötkonung in ca 1019 AD (*Saga Óláfs konungs hins helga* and *Fagrskinna* respectively). These sagas were written in the early thirteenth century, and while it is highly unlikely that such minor details would have been remembered for two centuries, the accounts presumably indicate what prey was considered likely and appropriate for hawking in the early thirteenth century.

The Crow and particularly the Starling would seem to be inferior prey and they may have been kept as pets or been intended as food for the hawks.

The geographical distribution of the “falconry graves” is rather restricted (Fig. 11). With the exception of three from Småland and single instances from Östergötland, Närke and Västmanland, respectively, they are all from Uppland and Södermanland, the “core” provinces of Sweden in the Late Viking/Early Medieval period. The complete absence of such graves in the formerly Danish and Norwegian provinces is striking. The Icelandic sagas do however mention falconry in Norway and western Sweden during the Viking Age so the absence may be due to differences in burial customs. Most of the burials are probably of men, but at least one or two seem to contain women and a few contain bones of boys still in their teens.

The chronological distribution of the falconry graves indicate a rather abrupt inception in the sixth century, a marked peak with about a dozen graves from the seventh century and a lower but fairly stable number of graves from the eighth through the tenth century. This pattern probably reflects real changes in frequency, though the seventh century peak may be exaggerated by an unusual number of excavated aristocratic graves of that age.

There is practically no written information on Medieval falconry in Sweden (BERNSTRÖM 1962), though this is probably more due to the general paucity of sources than anything else. Only two depictions of falconry seem to be known, both from Östergötland and the thirteenth century. Hunting and trading of falcons are somewhat better attested. Falcon eyries (*falkalaeghen*) are mentioned in a few Medieval diplomas and were apparently regarded as valuable property and as already mentioned Gyrfalcons were traded as far as the Mediterranean in the fourteenth century.

The subfossil evidence for falconry during the Middle Ages is also sparse. The changes in burial customs with the conversion to christianity during the eleventh century means that graves no longer furnish any evidence. Remains of raptors are reasonably common in anthropogenic deposits from Medieval towns and castles but it is usually not possible to determine whether these remains are from falconry birds or if they were simply killed while raiding somebody’s chicken coop.

In one case, a twelfth/fourteenth century Goshawk from Broberg castle, Bohuslän (at that time part of Norway), it is however clear that the bird had been kept in captivity since it had a callus from a tight-fitting ring on one leg (LEPIKSAAR 1987). In at least one other case the circumstances strongly suggest that a falconry bird was involved. This is in the town of Söderköping, Östergötland where a female Gyrfalcon, found in layers from the twelfth century, had a healed fracture of the scapula which it could hardly have been survived in the wild (VRETEMARK 1997). It is also worth noting that there is a strong predominance of the larger females among Goshawk remains found in medieval towns. The females may have been preferred for hawking since they are capable of attacking larger prey than the males.

IV. CAGE-BIRDS

Cage-birds and bird-cages are mentioned in a few late medieval sources, but only one bird species is mentioned in a medieval source (1476) in this context: ‘siseke’, i. e. Siskin *Carduelis spinus* (LINNAEUS 1758), which was also one of the most popular cage birds in more recent times. There are no subfossil records that can plausibly be identified as cage-birds.

Parrots are also mentioned a few times in late medieval sources, but there are no explicit references to live parrots in Sweden until the sixteenth century.

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