Léotard, J.-M., Straus, L. and Otte, M. (editors). *l'Abri du Pape*. Liège, ERAUL 88, 1999, p. 123-128.

BIRD REMAINS FROM ABRI DU PAPE

Johan Deville and Achilles Gautier

ANALYSIS

The bird remains discussed in this brief report were collected during the excavations of Abri du Pape (AP for short), a rockshelter in the Roches de Freyr, 5 km upstream of Dinant on the right bank of the Meuse Valley, almost directly opposite the Château de Freyr. Table 1 summarizes the stratigraphic sequence and the corresponding avifaunal assemblages. The lower levels at this small site yielded evidence of Middle Mesolithic occupations in strata 20 and 20.1 chronologically situated between about 6700 and 6500 BC (calibrated dates), while the underlying strata (21, 21.1, 22 and 22.1) document Early Mesolithic occupations approximately between 7900 and 7600 BC. In short, there were occupations respectively during the late Boreal/initial Atlantic period and in the late Preboreal/early Boreal period. The basal strata, 23 to 26, which are archaeologically almost sterile, could be Late Glacial or early Holocene, but the micromammals might suggest that this sequence postdates the Pleistocene (Gautier, this volume). The samples combine material hand-picked during the excavations and screened material from the latter, as well as from the sediment columns sampled specifically for the study of the microvertebrates and mollusks. For more details on the site context and the fauna, the reader is referred to the above-mentioned paper and others in this volume.

The identifications, based on the morphology and size of the remains, have been done with the aid of the comparative collection in the Ghent laboratory and the various German monographs cited in the references. In several cases, neither size nor morphology enabled a specific attribution. This is especially the case for the geese and ducks, of which most remains were divided into size categories, as in a previous report on the birds of the Grotte du Bois Laiterie (Deville and Gautier 1997). The thrushes or Turdidae were lumped, because many remains could not be assigned to a precise size category. To us, it would seem that some published studies on anseriforms and thrushes do underestimate the morphological and metric variation of the skeletons of these birds. Notes on the ecology and life habits of the birds mentioned in the following paragraphs are based on various guides (Peterson *et al.* 1969; Bruun 1986; Jonsson 1994).

No butchering traces were encountered and it would seem that most of the birds were killed by avian or mammalian predators, such as goshawk, kestrel, owl, wolf, fox, wild cat, polecat, etc. However, no traces of the action of these killers were found. Swifts, swallows, stockdove and jackdaw often live or spend much time near cliffs and may have succumbed at the site without the intervention of predators; such accidental deaths may, of course, also have occurred among other avian groups. The pygmy owl and the little owl probably roosted in the shelter and are no doubt responsible for the accumulation of microvertebrates, especially rodent, remains (Gautier, this volume). The fact that the avifauna is very diverse and that birds

Animal \ Stratum	20	20.1	21	22	22.1	23	24	24.1	25	26	Total
Great Crested Grebe (*Podiceps cristatus*)	-	-	-	1	-	-	-	-	-	-	1
Goose size of White fronted goose (*Anser albifron*	-	-	-	2	-	-	-	-	-	-	2
Mallard size of duck (*Anas platyrhynchos*)	2	-	-	-	-	-	-	-	-	-	2
Duck size of Pochard (*Aythya ferina*)	1	-	1	3	-	-	-	-	-	-	5
Duck size of common teal duck (*Anas crecca*)	-	-	-	2	-	-	-	-	-	-	2
Goosander (*Mergus merganser*)	1	-	-	-	-	-	-	-	-	-	1
Duck (*Anas* sp.)	-	-	3	-	-	-	-	-	-	-	3
Marsh Harrier (*Circus aeruginosus*)	-	-	1	-	-	-	-	-	-	-	1
Hen/Montagu's Harrier (*Circus cygneus/pygarus*)	1	-	-	1	-	-	-	-	-	-	2
Goshawk (*Accipiter gentilus*)	-	-	4	8	-	-	-	-	-	-	12
Falconiform size of Buzzard (*Buteo* sp.)	-	-	1	1	-	-	-	-	-	-	2
Kestrel (*Falco tinnunculus*)	-	-	-	-	1	-	-	-	-	-	1
Falcon (*Falco* sp.)	-	-	-	1	-	-	-	-	-	-	1
Black grouse (*Tetrao tetrix*)	-	-	-	-	-	1	3	-	-	-	4
Grey Partridge (*Perdix perdix*)	-	-	3	-	-	-	1	-	2	-	6
Crake (*Porzana* sp.)	-	-	-	5	-	1	-	-	-	-	6
Water Rail (*Rallus aquaticus*)	-	-	1	-	-	-	-	-	-	-	1
Corncrake (*Crex crex*)	-	-	2	1	2	2	3	-	1	-	11
Moorhen (*Gallinula chloropus*)	-	-	1	1	-	-	-	-	1	-	3
Coot (*Fulica atra*)	2	-	-	1	-	1	-	-	-	-	4
Golder Plover (*Pluvialis apricaria*)	-	-	-	2	-	-	-	-	-	-	2
Woodcock (*Scolopax rusticola*)	1	-	2	-	-	-	-	-	-	-	3
Stock Dove (*Columba oenas*)	2	-	-	-	-	-	-	-	-	-	2
Woodpigeon (*Columba palumbus*)	10(a)	-	2	3	1	-	-	-	-	-	16
Pygmy Owl (*Glaucidium passerinum*)	-	-	-	-	-	-	-	-	1	-	1
Little Owl (*Athena noctua*)	-	-	-	-	-	-	-	2	-	-	2
Swift (*Apus apus*)	-	-	-	1	-	2	1	-	-	-	4
Green Woodpecker (*Picus viridis*)	-	-	-	2	-	-	-	-	-	-	2
Swallow (*Hirundo rustica*)	-	-	-	-	-	-	-	-	-	-	1
House Martin (*Delichon urbica*)	2	1	-	5	-	-	-	-	-	-	8
Jackdaw (*Corvus monedula*)	1	-	-	-	-	-	-	1	1	-	3
Magpie (*Pica pica*)	-	-	-	-	-	-	-	-	1	-	1
Jay (*Garrulus glandarius*)	2	1	4	4	-	1	-	-	-	-	12
Thrushes (*Turdus* sp.)(b)	9	2	10	14	1	2	1	1	-	1	41
Small passerines(c)	3	-	-	5	-	1	2	-	-	1	12
Total identified	37	5	35	63	5	11	11	4	7	2	180
Not identified	11	-	21	26	2	5	4	1	3	-	73
Total	48	5	56	89	7	16	15	5	10	2	253

Table 1 : Avian remains of Abri du Pape (specimen counts).
a) Probably one individual; b) Blackbird (*Turdus merula*) and Mistle thrush (*Turdus viscivorus*) but probably also Song thrush (*Turdus philomelos*) and perhaps others;
c) probably mainly if not exclusively small tits (*Paridae* sp.).

which people usually prefer in their hunting bag (ducks, geese, grouse, partridge, pigeons etc.) are not well represented, is another indication that the Mesolithic bird assemblages are basically non-anthropic. The observation that in the non-cultural pre-Mesolithic strata comparable, albeit reduced, assemblages occur, corroborates this idea. Hence it makes little sense to look for clues for seasonal human occupation among the bird remains. Today white fronted goose is a winter visitor in Belgium, while swallows and some of the crakes found are summer guests migrating south in the colder season. These birds may have done so also in the Boreal and Atlantic, in which case the deaths of the groups mentioned would have occurred respectively in the cold and the warm season. If we assume that the white fronted goose is an opportunistic kill by people, it most likely occurred in the cold season.

According to Mr. Ph. Lacroix, who made a survey of the extant birds in the Pape area, all the species listed in Table 1 still occur in the area, except for the black grouse. Today this ground breeder is found mainly in higher and northern regions of the European continent; it apparently prefers woodland adjacent to open biotopes. In our opinion, its present day, in part disjunct, distribution is not necessarily indicative of a marked preference for colder climates, but most likely reflects the results of human disturbance and overhunting.

The upper strata yielded more finds, because more deposits were excavated, but the assemblages do not show any striking differences and, ecologically, the avifauna can perhaps better be treated as a whole. The vicinity of the Meuse is clearly indicated by such typical swimming birds as the Great Crested Grebe, and some ducks and geese. Typical for reed vegetation along rivers are the already cited grebe, harriers, Water Rail and Common Coot. Golden Plover as a wading bird prefers standing water. Open country is suggested by Kestrel, Partridge and Corncrake, while Goshawk, Wood Pigeon, Green Woodpecker, Jackdaw and Jay, indicate woodland; the latter two prefer mixed or deciduous forest. Swifts, Swallows and the doves encountered are typical cliff dwellers.

The Middle and Early Mesolithic strata do not show any particular difference in their avian spectra, but the presence of the Black Grouse in the basal, pre-Mesolithic sequence (strata 23 and 24) may indicate less wooded conditions. The finds of Little Owl in stratum 24.1 may be another indication of more open conditions.

The Pape avifauna can be compared with the one excavated in the Grotte du Coléoptère (Mourer-Chauvire 1983) and that of the Grotte de Bois Laiterie (Deville and Gautier 1997). The attribution of the Grotte du Coléoptère assemblages is unfortunately equivocal (Gautier, this volume). We also have some doubts about the paleoecological interpretation of some of the bird finds in this site and do not understand how the author has estimated the minimum number of individuals of the most frequent bird group (*ibid.*: Table 1 and Table 2). This group comprises Willow Grouse *(Lagopus lagopus)*, Ptarmigan *(L. mutus)* and not specifically identified *Lagopus*. Willow Grouse and Ptarmigan occur today mainly in northern and higher parts of Europe, but do not avoid the subarctic regions as does the Black Grouse. Both may therefore be regarded as indicators of colder, open landscapes. Another "cold" species in the Grotte du Coléoptère may be the Hawk Owl *(Surnia ulula)* found today in northern Europe, but occasionally encountered as far south as Belgium in wintertime. The mentioned *Lagopus* species and the Hawk Owl were identified in layer 5, which would

represent a mixture of Boreal and Atlantic material. As pointed out elsewhere (Gautier *ibid.*), the upper part of layer 5 (5a) has been attributed to the Atlantic on the basis of a C^{14} date on unidentified bone splinters, while the artifacts suggest a Middle Mesolithic, pre-Atlantic age for layer 5a and *a fortiori* for the mixed assemblage of layer 5 (5a and the underlying layer 5b); the finds attributed to either 5a or 5b furthermore suggest that most of this mixed assemblages derives from layer 5b.

The exact attribution of the main avifaunal assemblages of the Grotte de Bois Laiterie is still unclear, but they are no doubt essentially Late Glacial. Willow Grouse appears to be prominent in this context. This corroborates the idea that most of the avifauna of layer 5 in the Grotte de Coléoptère is older than has been proposed and dates in fact to the Late Glacial or very early postglacial period.

Summing up, the Pape avifaunal assemblages suggest a diverse riverine and woodland environment. They represent essentially non-anthropic taphocoenoses and can be dated to the lower Holocene, perhaps with the exclusion of the oldest levels, when *Lagopus* may still have been frequent.

ACKNOWLEDGMENTS

We thank Mr. Ph. Lacroix for his survey of the birds living today in the vicinity of Pape and for some of the preliminary sorting of the smaller bird remains in the micromammal column. Dr. J. Peters (Munich) identified some bird remains which were erroneously included in samples of some recalcitrant mammal bones sent to him for identification.

DEVILLE, Johan. Vakgroep Geologie en Bodemkunde, Laboratorium voor Paleontologie, Universiteit Gent, Krijgslaan 281/S8, B-9000 Gent BELGIE

GAUTIER, Achilles. Vakgroep Geologie en Bodemkunde, Laboratorium voor Paleontologie, Universiteit Gent, Krijgslaan 281/S8, B-9000 Gent BELGIE.

BIBLIOGRAPHY

BACHER, A., 1967,
Vergleichend morphologische Untersuchungen an Einzelknochen des postkranialen Skeletts in Mitteleuropa vorkommender Schwäne und Gänze. München: Instit. für Palaeoanatomie, Domestikationsforschung und Geschichte der Tiermedizin. (Inaug.-Diss. Doc. Vet.)

BRUUN, B. *et al.*, 1986,
The Hamlyn guide to birds of Britain and Europe. London: Hamlyn.

DEVILLE, J. and GAUTIER, A., 1997,
The Avifauna of la Grotte du Bois Laiterie. In *La Grotte du Bois Laiterie. Recolonisation Magdalénienne de la Belgique* (M. Otte and L.G. Straus, eds.), pp. 215-218. E.R.A.U.L. 80.

ERBERSDOBLER, K., 1968,
Vergleichend morphologische Untersuchungen an Einzelknochen des postcranialen Skeletts in Mitteleuropa vorkommender mittelgroßer Hühnervögel. München: Instit. für Palaeoanatomie, Domestikationsforschung und Geschichte der Tiermedizin. (Inaug.-Diss. Doc. Vet.)

GAUTIER A, 1999,
The Mammalian Remains of the Mesolithic and Earlier Holocene Strata in Abri du Pape. In *L'Abri du Pape*, edited by J.-M. Léotard, L.G. Straus and M. Otte. Liège, ERAUL 88, p.105-121.

JONSSON, L., 1994,
Vogels van Europa, Noord-Afrika en het Midden-Oosten. Baarn: Thieme.

KRAFT, E., 1972,
Vergleichend morphologische Untersuchungen an Einzelknochen Nord- und Mitteleuropäischer kleinerer Hühnervögel. München: Instit. für Palaeoanatomie, Domestikationsforschung und Geschichte der Tiermedizin., Inaug.-Diss. Doc. Vet.)

LANGER, G., 1980,
Vergleichend morphologische Untersuchungen an Einzelknochen in Mitteleuropa vorkommender mittelgrosser Eulenarten. München: Instit. für Palaeoanatomie, Domestikationsforschung und Geschichte der Tiermedizin., Inaug.-Diss. Doc. Vet.)

MOURER-CHAUVIRE, C., 1983,
Les oiseaux de la couche 5 de la Grotte du Coléoptère à Bomal-sur-Ourthe, Belgique, *Soc. Wall. Palethnologie, Mém.* 5: 53-65.

OTTO, C., 1981,
Vergleichende morphologische Untersuchungen an Einzelknochen in Zentraleuropa vorkommender mittelgrosser Accipitridae. I. Schädel, Brustbein, Schultergürtel und Vorderextremität. München: Instit. für Palaeoanatomie, Domestikationsforschung und Geschichte der Tiermedizin., Inaug.-Diss. Doc. Vet.)

PETERSON, R., MOUNTFORT, G. and HOLLOM, P.A.D., 1962,
Guide des oiseaux d'Europe. Neuchatel, Suisse): Delachaux and Niestlé.

SCHMIDT-BURGER, P., 1982,
Vergleichende morphologische Untersuchungen an Einzelknochen in Zentraleuropa vorkommender mittelgrosser Accipitridae. II. Becken und Hinterextremität. München: Instit. für Palaeoanatomie, Domestikationsforschung und Geschichte der Tiermedizin., Inaug.-Diss. Doc. Vet.)

WOELFLE, E., 1967,
Vergleichend morphologische Untersuchungen an Einzelknochen des postcranialen Skeletten in Mitteleuropa vorkommender Enten, Hallgänze und Säger. München: Instit. für Palaeoanatomie, Domestikationsforschung und Geschichte der Tiermedizin., Inaug.-Diss. Doc. Vet.).