

Tertiary Avian Localities of Hungary

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Abstract: Hungary yielded at least 15 avian Tertiary localities, most of which are late Miocene to late Pliocene in age. Some of the localities, particularly Polgárdi, Csarnóta 2 and Villány 3, belong to the most rich ones of their age in Europe.

Key- words: Aves, Tertiary, Miocene, Pliocene, Hungary.

INTRODUCTION

The history of Hungarian Tertiary paleornithology started in the early 1910s, when Václav Čapek (in Kormos 1911, in Lambrecht 1912a) and Kálmán Lambrecht (1912b) described avian remains from the Miocene localities Polgárdi (bones) and Ipolytárnóc (footprints), respectively. During subsequent decades, the work was limited only to a few remarks by Lambrecht (1933) and Miklós Kretzoi (1954a, 1955, 1957). Regular research was started only in the 1970s by Dénes Jánossy (1972, 1974, 1976a, b, 1977, 1979, 1980, 1986, 1991, 1992, 1995). Previous review of the Tertiary avian localities of Hungary was given by Mlíkovský (1992).

Stratigraphical divisioning of the Hungarian Neogene follows Mein (1990) throughout the present paper. It should be mentioned, however, that Hungarian authors have been using another stratigraphical system, where the Pliocene/Pleistocene boundary is placed approximately at the MN 15/16 boundary in the stratigraphical classification applied here (see Kretzoi 1969, 1985, Jánossy 1986, Horáček and Ložek 1988). Hence, stratigraphical terms used by Hungarian palaeontologists can be properly interpreted only after a re-evaluation.

Acronyms of museum collections are as follows:

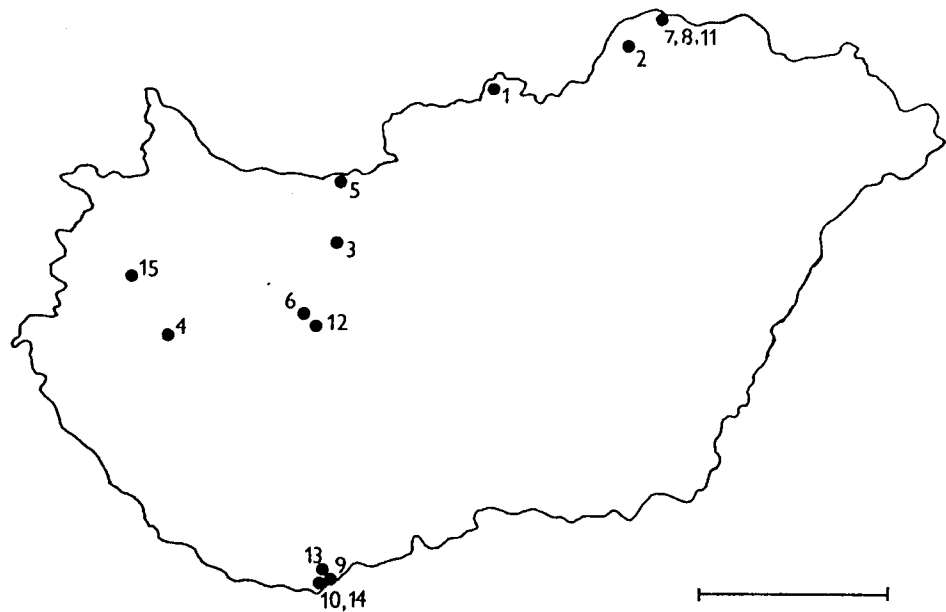


Fig. 1. Tertiary avian localities of Hungary. The numbering of the localities corresponds with that in the text. Scale bar = 100 km.

CHI: Conservation Hall, Ipolytarnóc, Hungary

FSL: Centre des Sciences Géologiques, Université Claude-Bernard, Lyon, France

GIB: Geological Institute, Budapest, Hungary

NMB: National Museum, Budapest, Hungary

SMS: Savario Museum, Szombathely, Hungary.

LIST OF LOCALITIES

(1) IPOLYTARNÓC

Location: Nógrád Province. Early Miocene, MN 3 (Kordos 1987).

Avifauna: Four kinds of avian footprints (Lambrecht 1912b, 1933: 675, Kordos 1983). Deposited in CHI and GIB. Type locality of the ichnospecies *Ornithotarnocia lambrechtii* Kordos 1983, *Aviadactyla media* Kordos 1983, *Aviadactyla tasnadii* Kordos 1983, and *Passeripedia ipolyensis* Kordos 1983.

(2) RUDABANYA

Location: Borsod-Abaúj-Zemplén Province. Late Miocene, MN 9 (Kordos 1987, Mein 1990).

Avifauna: Bones of the Anatidae (?*Anas*), Phasianidae (*Palaeortyx*, *Miophasianus*), Rallidae (?*Miorallus*), Charadriiformes (indet.), Strigidae (*Strix*, *Athene*), Sylviidae (*Acrocephalus*, *Locustella*), and Corvidae (*Corvus*) (Jánossy 1976b, 1977, 1992). Deposited in GIB.

(3) CSÁKVÁR (Esterházy Cave)

Location: Fejér Province. Late Miocene, MN 11 (Rabeder 1985, 1989, Kordos 1987, Mein 1990).

Avifauna: A few bones of the Anatidae (*Cygnus*), Gruidae (*Grus*), and Strigidae (*Bubo*) (Lambrecht 1933, Kretzoi 1957, Mlíkovský 1992). Deposited in GIB. Type locality of *Cygnus csakvarensis* Lambrecht 1933, and *Bubo floriana* Kretzoi 1957.

(4) SÜMEG

Location: Veszprém Province. Late Miocene, MN 11 (Rabeder 1985, Kordos 1987, Mein 1990) or MN 12 (Fejfar and Heinrich 1987, Rabeder 1989).

Avifauna: A few bones of the Phasianidae (*Palaeortyx*), and Apodidae (?*Chaetura*) (Jánossy 1976b, 1977, Mlíkovský 1992). Deposited in GIB and NMB. Type locality of *Chaetura baconica* Jánossy 1977.

(5) TARDOSBÁNYA

Location: Komárom Province. Late Miocene, MN 12 (Kordos 1987, Mein 1990).

Avifauna: Bones of the Phasianidae (*Palaeortyx*) (Jánossy 1976b). Deposited in NMB.

(6) POLGÁRDI

Location: Fejér Province. Late Miocene, MN 13 (Rabeder 1985, 1989, Fejfar and Heinrich 1987, Kordos 1987, Mein 1990).

Avifauna: Bones of the Anatidae (*Anas*), Phasianidae (*Palaeocryptonyx*, *Pavo*), Rallidae (*Porzana*, ?*Rallicrex*), Otidae (*Otis*), Scolopacidae (*Gallinago*, *Tringa*), ?Glaucolidae (?*Cursorius*), Strigidae (*Tyto*), Apodidae (*Chaetura*), Motacillidae (*Motacilla*), Laniidae (*Lanius*), Sylviidae (*Acrocephalus*, *Cettia*, *Sylvia*), Turdidae (*Turdus*, *Luscinia*), and Corvidae (*Corvus*) (Lambrecht 1912b, Jánossy 1976b, 1979, 1991, 1995). Deposited in NMB. Type locality of *Anas albae* Jánossy 1979, *Palaeocryptonyx hungaricus* Jánossy 1991, *Pavo aesculapi phasianoides* Jánossy 1991, *Porzana estramosi veterior* Jánossy 1991, *Rallicrex polgardiensis* Jánossy 1991, and *Tyto campiterrae* Jánossy 1991.

(7) OSZTRAMOS 1 (Estramos)

Location: Borsod-Abaúj-Zemplén Province. Early Pliocene, MN 14 (Mein 1990, see also Jánossy and Kordos 1977).

Avifauna: Few bones of the Phasianidae (*Gallus*) and ?Timaliidae (?*Turdoides*) (Jánossy 1976b, 1979, Mlíkovský 1992). Deposited in GIB. Type locality of *Turdoides borealis* Jánossy 1979.

(8) OSZTRAMOS 9

Location: Borsod-Abaúj-Zemplén Province. Early Pliocene, MN 14 (Mein 1990).

Avifauna: Partial carpometacarpus of a small rail, ?*Porzana* (Jánossy 1979, Mlíkovský 1992). Deposited in GIB. Type locality of *Porzana estramosi* Jánossy 1979.

(9) CSARNÓTA 2

Location: Baranya Province. Early Pliocene, MN 15 (Fejfar and Heinrich 1987, Mein 1990, see also Kretzoi 1962).

Avifauna: Bones of the Phasianidae (*Tetrao*, *Plioperdix*), Rallidae (*Rallus*, *Gallinula*), Scolopacidae (*Scolopax*, *Gallinago*), Cuculidae (*Cuculus*), Strigidae (*Bubo*), Motacillidae (indet.), Sittidae (*Sitta*), Turdidae (*Turdus*), Timaliidae (?*Turdoides*), Sylviidae (*Hippolais*), Fringillidae (indet.), and Corvidae (*Pyrrhocorax*, *Pica*) (Jánossy 1976a, 1977, 1979, 1986, Mlíkovský 1992, 1996). Deposited in GIB (incl. type of *Tetrao macropus*) and NMB (incl. other types). Type locality of *Tetrao macropus* Jánossy 1976a, *Scolopax baranensis* Jánossy 1977, *Gallinago veterior* Jánossy 1977, and *Cuculus csarnotanus* Jánossy 1977. *Pliogallus kormosi* Gaillard 1939 and *Pliogallus crassipes* Gaillard 1939, allegedly described from this locality, were later shown to be based on remains of Recent domestic chickens (Jánossy 1976a, b). Their types are deposited in FSL.

(10) BEREMEND 5

Location: Baranya Province. Late Pliocene, MN 16a (Mein 1990)

Avifauna: Bones of the Phasianidae (*Gallus*), Rallidae (indet.), Apodidae (*Apus*), and unidentified passerines (Jánossy 1976b, 1977). Deposited in GIB. Type locality of *Gallus beremendensis* Jánossy 1976b.

(11) OSZTRAMOS 7

Location: Borsod-Abaúj-Zemplén Province. Late Pliocene, MN 16b (Fejfar and Heinrich 1987, Mein 1990).

Avifauna: Bones of the Phasianidae (*Tetrao*, *Plioperdix*), and Strigidae (*Bubo*, ?*Athene*, *Surnia*) (Jánossy 1976b, 1977, 1986, Mlíkovský 1992, 1996). Deposited in NMB.

(12) KISLÁNG

Location: Fejér Province. Late Pliocene, MN 17 (cf. Jánossy 1986).

Avifauna: Eggshell fragments and bones of the Struthionidae (*Struthio*), and Anatidae (?*Anas*), respectively (Kretzoi 1954a, 1955, Jánossy 1986, Michajlov 1988, Michajlov and Kuročkin 1988). Deposited in GIB. Type locality of *Struthio pannonicus* Kretzoi 1954.

(13) VILLÁNY 3 (Villány-Kalkberg, Kalkberg-Nord, Templomhegy)

Location: Baranya Province. Late Pliocene, MN 17 (cf. Jánossy 1986, see also Kretzoi 1956).

Avifauna: Bones of the Anatidae (*Tadorna*), Phasianidae (*Plioperdix*), Accipitridae (*Aquila*), Otidae (*Otis*), Strigidae (*Surnia*), Picidae (*Dendrocopos*), Hirundinidae (*Hirundo*), and Corvidae (*Pica*, *Corvus*) (Jánossy 1976a, b, 1977, 1979, 1980, Mlíkovský 1981, 1982, 1996). Deposited in GIB (incl. types of *Francolinus subfrancolinus* and *Dendrocopos praemedius*) and NMB (incl. types of *Anas submajor* and *Surnia robusta*). Type locality of *Anas submajor* Jánossy 1979, *Francolinus subfrancolinus* Jánossy 1976b, *Surnia robusta* Jánossy 1977, and *Dendrocopos praemedius* Jánossy 1974.

(14) BEREMEND 11

Location: Baranya Province. Late Pliocene, MN 17 (cf. Jánossy 1986).

Avifauna: Few bones of the Phasianidae (*Plioperdix*), Falconidae (*Falco*), and undetermined passerines (Jánossy 1986). Deposited in NMB.

(15) GÉRCE

Location: Szombathely Province. Pliocene, MN ? (Fischer and Habby 1991).

Avifauna: Two unidentified feather imprints (Fischer and Habby 1991). Deposited in SMS.

DISCUSSION

Most of the localities yielded only small numbers of avian remains. However, Polgárdi (MN 13), Csarnóta 2 (MN 15) and Villány 3 (MN 17) produced rather rich avifaunas, which significantly contributed to our knowledge of the late Neogene birds of Europe.

The Tertiary avian localities of Hungary range in age between the early Miocene (MN 3) and latest Pliocene (MN 17). Most of them, however, are Pliocene in age. All of the localities, but Ipolytarnóc and Gérce, are cave and fissure deposits, formed in rich Hungarian karstic areas (cf. Bárdossy and Kordos 1989). Most of the remains were thus probably brought to the sites by owls and/or raptors.

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