

Brown Fish Owl (*Bubo zeylonensis*) in Europe: past distribution and taxonomic status

Výr rybí (*Bubo zeylonensis*) v Evropě: minulé rozšíření a taxonomický statut

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ABSTRACT. Former existence of the Brown Fish Owl (*Bubo zeylonensis*) in the Mediterranean is documented for the Plio-Pleistocene period. The Mediterranean population is treated here as a subspecies *B. z. lamarmorae*. Other recognized subspecies include: *semenowi* (arid to desert areas from Asia Minor to Pakistan), *leschenaultii* (tropical forests from India to Indochina and south China), and nominal *zeylonensis* (forests of Sri Lanka). The latter three subspecies are extant, while *lamarmorae* became extinct with the onset of the last glaciation (Würm III).

INTRODUCTION

The Brown Fish Owl (*Bubo zeylonensis*) currently inhabits southern Asia from Asia Minor in the west to Vietnam and southern China in the east (VOOUS 1988, HUME 1991, KÖNIG et al. 1998, DEL HOYO et al. 1999). MLÍKOVSKÝ (2002a) observed that a variety of bones from Pliocene and Pleistocene deposits of Mediterranean islands belong to this owl species, thus extending its known range. In the present paper I map past distribution of the Brown Fish Owl in Europe, and discuss the taxonomic status of the species' Mediterranean population.

For the evaluation of the fossil taxa see MLÍKOVSKÝ (2002a). Stratigraphical divisioning of the late Tertiary and Quaternary of Europe follows STEININGER et al. (1996) and MLÍKOVSKÝ (2002b). For nomenclatural details of owls see Appendix 1.

FOSSIL RECORD

Prior to the MQ 2C zone, fossil records of *Bubo zeylonensis* are limited to the early Pliocene (MN 14-15) of Chirň 5 and 20, Pirro 11 and San Giovannino, all on the then island (now peninsula) of Gargano, Italy (BALLMANN 1976), and to the early Pleistocene (MQ 1a) of 'Ubeidiya, Israel (TCHERNOV 1980).

In the early part of the late Pleistocene (biozone MQ 2C), which corresponds to the classical Riss/Würm interglacial and early parts of the Würm glacial, the species was probably widespread in the Mediterranean (Fig. 1), being recorded – under different names (see MLÍKOVSKÝ 2002a) – from the islands of Corsica (MOURER-CHAUVIRÉ & WEESIE 1986, BONIFAY et al. 1998), Sardinia (LYDEKKER 1891, DEHAUT 1911, 1914, 1920, COMASCHI CARIA 1969, 1970, KOTSAKIS 1980, MOURER-CHAUVIRÉ & WEESIE 1986, PAVIA 1999, WEESIE 1999), Tavolara (LYDEKKER 1891, MOURER-CHAUVIRÉ & WEESIE 1986) and Crete (WEESIE 1988).

TAXONOMY OF THE ZEYLONENSIS COMPLEX

Four modern subspecies are usually recognized in *Bubo zeylonensis* on the basis of external morphology and geographic distribution (ECK & BUSSE 1973, KÖNIG et al. 1998): *semenowi*, *leschenaulti*, *orientalis* and the nominate *zeylonensis* (see Appendix for nomenclatural details). Of the three continental forms, the western *semenowi* is said to be paler than the central *leschenaulti*, while the eastern *orientalis* is said to be darker than *leschenaulti* (KÖNIG et al. 1998). VOOUS (1988) treated *semenowi* and *orientalis* as color variants of *leschenaulti*, recognizing two subspecies: the continental *leschenaulti* and the nominate *zeylonensis* from Sri Lanka. The latter subspecies is smaller and darker than the continental Brown Owl, and is generally considered to be well separated at the subspecific level (KÖNIG et al. 1998).

Data on the external morphology are not available for the birds from the Mediterranean area, and direct comparison with modern forms is thus impossible. However, data on ecological distribution contribute additional information, which gives a clue to the taxonomic treatment of continental Brown Fish Owls: (1) The Mediterranean population inhabited islands, breeding probably on rocks near shores, where skeletal remains of the owls were found. (2) Brown Fish Owls from southwestern Asia occur in arid to desert areas. (3) Birds from India and adjacent parts of southeastern Asia live in tropical forests. In all cases, the presence of water bodies is essential for the occurrence of Brown Fish Owls.

At the present state of knowledge, these three geographically and ecologically different populations of Brown Fish Owls are best understood as separate taxa, to which the following names are applicable: *lamarmorae*, *semenowi*, and *leschenaulti*. In addition, the nominate *zeylonensis* inhabits forests of Sri Lanka. I treat these forms as subspecies of *zeylonensis*, although further research may show that they represent full species.

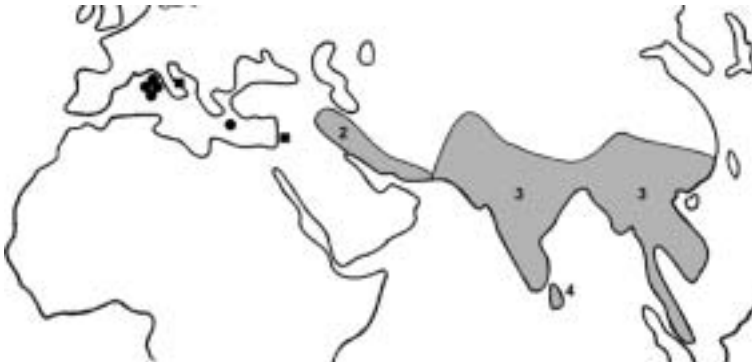


Fig. 1 – Distribution of *Bubo zeylonensis*. 1 – *B. z. lamarmorae*: Pliocene and early Pleistocene (■) and late Pleistocene (●) records; 2 – *B. z. semenowi* (current distribution); 3 – *B. z. leschenaulti* (current distribution); 4 – *B. z. zeylonensis* (current distribution).

Obr. 1 – Rozšíření *Bubo zeylonensis*. 1 – *B. z. lamarmorae*: záznamy z pliocénu a raného pleistocénu (■) a pozdního pleistocénu (●); 2 – *B. z. semenowi* (současné rozšíření); 3 – *B. z. leschenaulti* (současné rozšíření); 4 – *B. z. zeylonensis* (současné rozšíření).

The existence of *Bubo zeylonensis lamarmorae* is documented from the early Pliocene. During the biozone MQ 2C (sensu MLÍKOVSKÝ 2002b), when the climate was mild and stable (KUKLA 2000, RIOUAL et al. 2001), *lamarmorae* was widespread on islands in the Mediterranean Sea. It probably became extinct with the onset of the last glacial (Würm III), because more recent records are absent.

Bubo zeylonicus semenowi is a rare bird of arid to desert areas ranging from Asia Minor to Pakistan, but its exact status and distribution remain unknown (KÖNIG et al. 1998). An early Pleistocene (MQ 1a) record from Israel (TCHERNOV 1980) may be the oldest for the form.

The east Asian forms *Bubo zeylonensis leschenaulti* and *Bubo zeylonensis zeylonensis* have no fossil record, which may well be caused by the scarcity of avian fossil record in the region they occupy.

SOUHRN

Výr rybí (*Bubo zeylonensis*) je dnes rozšířen od Malé Asie po Indočínu a jižní Čínu. Nález pliocenních a kvartérních kostí svědčí o tom, že v minulosti byl tento druh rozšířen i v jižní Evropě, zejména na ostrovech Středozevního moře (obr. 1).

S ohledem na předchozí morfologické studie a známé ekologické a geografické rozšíření je navrženo toto taxonomické členění druhu *Bubo zeylonensis*: (1) *B. z. lamarmorae*, který obýval oblast Středozevního moře a vyhynul s nástupem poslední doby ledové (Würm III). (2) *B. z. semenowi*, který obývá aridní až pouštní oblasti od Malé Asie po Pákistán. (3) *B. z. leschenaulti*, který obývá pralesy od Indie po Indočínu a jižní Čínu. (4) *B. z. zeylonensis*, který obývá pralesy na Srí Lance. Synonymika a nomenklatorické údaje jsou uvedené v příloze.

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APPENDIX

For the synonymization of modern taxa see SHARPE (1875), HARTERT (1912-1921), VAURIE (1965), VOOUS (1988) and the present paper. Synonymy of fossil forms follows MLÍKOVSKÝ (2002a). For the generic position of *zeylonensis* see FORD (1967), ECK & BUSSE (1973), AMADON & BULL (1988), WINK & HEIDRICH (1998) and MLÍKOVSKÝ (2002a).

***Bubo zeylonensis* (Gmelin)**

***Bubo zeylonensis lamarmorae* (Dehaut)**

Ophthalmomegas lamarmorae Dejaut, 1911: 212 [Late Pleistocene of Figari, Sardinia.]

Strix? perpasta Ballmann, 1976: 27 [Early Pliocene of San Giovannino, Italy.]

Bubo insularis Mourer-Chauviré & Weesie, 1986: 198 [Late Pleistocene of Rapaci, Sardinia]

***Bubo zeylonensis semenowi* (Zarudnyj)**

Ketupa semenowi Zarudnyj, 1905: 141 [Recent of Zagros Mts., Iran.]

***Bubo zeylonensis leschenault* (Temminck)**

Strix Leschenault[i] Temminck, 1820: pl. 20 [Recent of Chandranagore, India.]

Strix dumeticola Tickell, 1833: 571 [Recent of Sisdah, India.]

Strix Hardwickii Gray, 1834: pl. 31 [Recent of India.]

Cultrunguis nigripes Hodgson, 1836: 364 [Recent of Nepal.]

Ketupa ceylonensis orientalis Delacour, 1926: 11 [Recent of Dakte, Vietnam.]

***Bubo zeylonensis zeylonensis* (Gmelin)**

Strix zeylonensis Gmelin, 1788: 287 [Recent of Sri Lanka.]