

**CARNUS HEMAPTERUS NITZSCH, 1818 (DIPTERA: CARNIDAE)
PARASITE ON MEROPS APIASTER L. (AVES: MEROPIDAE)
IN SOUTHERN ROMANIA***

ANGELA PETRESCU, COSTICĂ ADAM

Abstract. The first mention of the species *Carnus hemapterus* (Diptera: Carnidae) from Romania was made by Collin (1911) on a specimen collected from a juvenile of *Falco cherrug*, from Malcoci (Ialoca), on 25th of May 1907, by A. Rettig. After 90 years, we found again this species on four chickens of *Merops apiaster* from Southern Romania.

Résumé. La première mention de l'espèce *Carnus hemapterus* (Diptera: Carnidae) pour Roumanie a été faite par Collin (1911) avec un exemplaire collecté sur un juvénile de *Falco cherrug* à Malcoci (Ialoca), le 25 mai 1907, par A. Rettig. Après 90 années nous retrouvons cette espèce sur 4 oisillons de *Merops apiaster* dans le sud de Roumanie.

Keywords: Bee-cater, *Merops apiaster*, adults, chickens, fly, *Carnus hemapterus*.

Inherent difficulties occurred on the spot during the studies on the Bee-cater, *Merops apiaster*, as their catching or nest digging (extremely tiresome action and dangerous for the birds taking into account the risk of the earth fall on nesting chickens or of disturbing the nest) made the ectoparasites and arthropods, in general, to be less known for a very long period of time. Kristofik & coll. (1996) concluded such a study on the Bee-cater nests from Slovakia (the only one of this kind in Europe) and found a large number of organisms of different taxonomical groups: Mallophaga, flies, spiders, pseudoscorpions, sheep lice, coleopterans, etc.

Carnus hemapterus was collected for the first time in Europe from *Merops apiaster*, in 1970, from Hungary by L. Papp (Grimaldi, 1997) and mentioned by Kristofik and coll. (1996) in the Bee-cater colonies from Slovakia, where he found 26 specimens on 46 chickens. In Europe were found around 34 host bird species of 18 families (Grimaldi, op.cit.) from 13 countries (Bequaert, 1942): Netherlands, Finland, Yugoslavia, Germany, Austria, Switzerland (Buttiker & coll., 1974), Romania, Italy, Lithuania, France, England, Hungary, Slovakia.

In specialized literature from Romania there are a few data on the ectoparasites on *Merops apiaster*. Papers which refer to the parasite arthropods on the Bee-cater are those published by Negru (1958, 1959), with mentions on mallophaga, and by Kiss and Hohn (1980) where it is mentioned *Ornithomya avicularia* (Fam. Hippoboscidae), in fact the first mention on a parasite fly on the Bee-cater from Romania.

In July 1997 I remarked on the four chickens from a Bee-cater nest from Fetești (Fig. 2), southern Romania (Fig.1), several small insects which were moving fast on featherless skin parts. I collected 10 specimens which I put in alcohol. The study, using a binocular, revealed a fly, *Carnus hemapterus* (Diptera:

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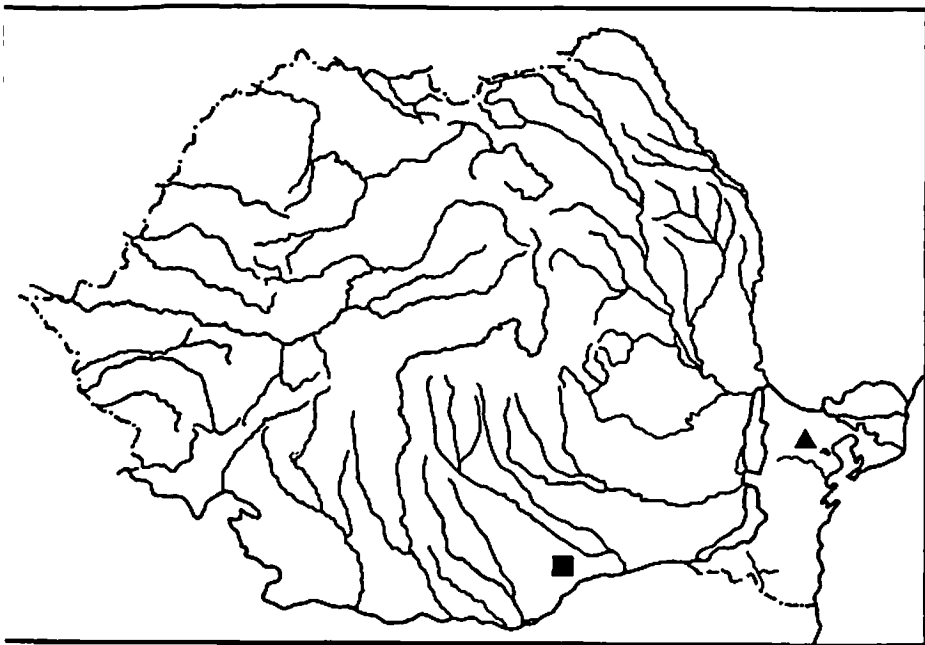


Fig. 1 – Romanian localities where *Carnus hemapterus* was mentioned:

■ - Frătești (1997); ▲ - Malcoci (Tulcea)

um. Carnidae). The identification was confirmed to us by Dr. L. Papp (Museum of Natural History, Budapest) and by Dr. M. Weinberg (Museum of Natural History, Bucharest).

Carnus hemapterus is a small fly, of 2–3 mm, hematophagous, ectoparasite, lithophilous. Females fixed on their host lose the wings, and the abdomen swells very much.

The first mention for Romania of a specimen of *Carnus hemapterus* was made by Collin (1911) from a juvenile of *Falco cherrug* Gray, 1834 (*Falco sacer*) from Malcoci (Tulcea) (Fig.1), on 25th of May 1907, collected by A. Rettig.

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CARNUS HEMAPTERUS NITZSCH, 1818 (DIPTERA: CARNIDAE) PARAZIT PE *MEROPS APIASTER* L. (AVES: MEROPIDAE) ÎN SUDUL ROMÂNIEI

REZUMAT

În iulie 1997 am colectat dintr-un cuib de albinărel, cu patru pui, de la Frătești, sudul României, o exemplare de *Carnus hemapterus* (Diptera: Carnidae).

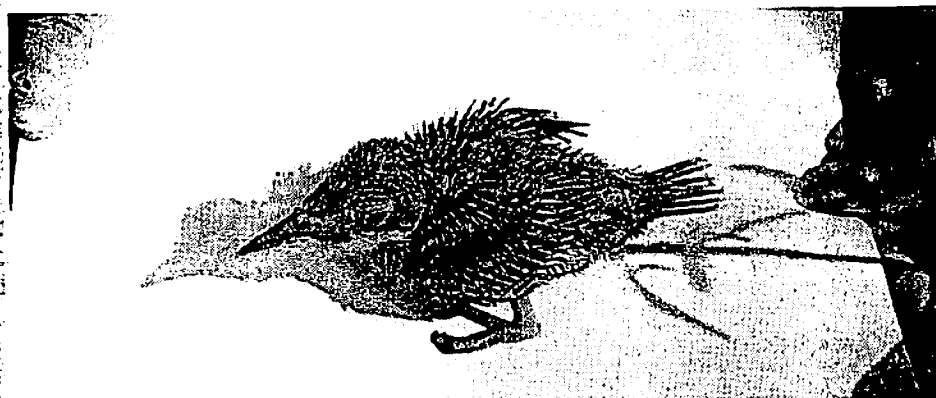
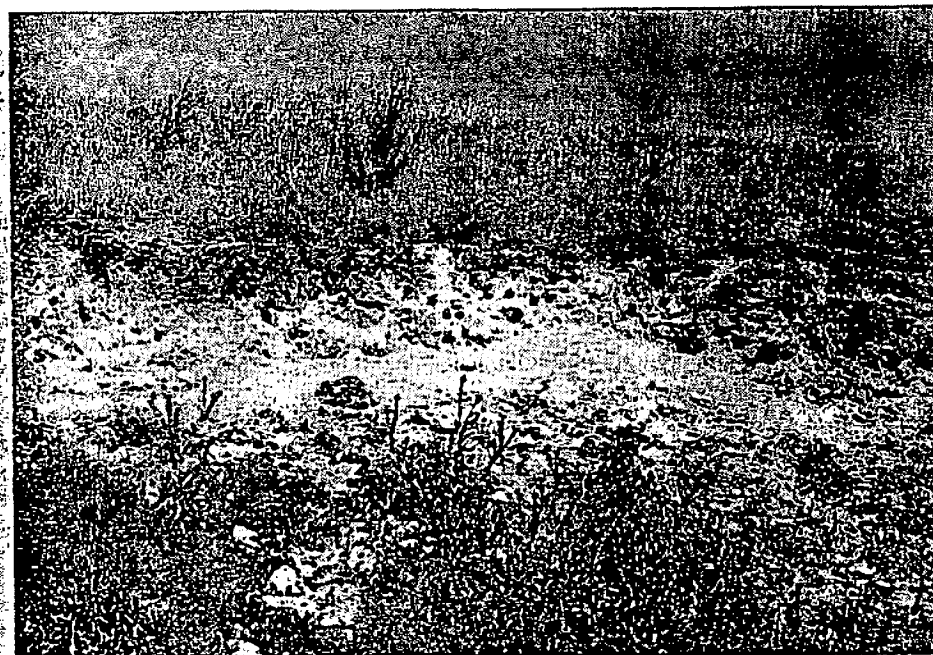


Fig. 2 – Nests from the colony of *Merops apiaster* from Frătești (up); chicken of *Merops apiaster* with parasites (down) (Photo: I. Petrescu)

mult. Prima semnalare pentru România este făcută de Collin (1911) pentru un exemplar de *Carnus hemapterus* colectat de pe un juvenil de *Falco sacer* (*Falco cherrug*) de la Mălcoci (Tulcea) în 25 mai 1907, de A. Rettig. După 90 de ani regăsim această specie pe pui de *Merops apiaster* în sudul României.

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TAXONOMICAL VALUE OF THE MORPHOLOGICAL DIFFERENCES OF THE COXAL BONE IN SIX SOUTH-AMERICAN BAT SPECIES (CHIROPTERA: EMBALLONURIDAE, MORMOOPIDAE AND PHYLLOSTOMIDAE)*

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Abstract. We describe the coxal bone in six South-American bat species: *Saccopteryx bilineata* (Temminck, 1838), fam. Emballonuridae; *Pteronotus parnellii* (Gray, 1843), fam. Mormoopidae; *Phyllostomus hastatus* (Pallas, 1767), *Glossophaga soricina* (Pallas, 1766), *Carollia perspicillata* (Linnaeus, 1758), *Desmodus rotundus* (E. Geoffroy, 1810), fam. Phyllostomidae. Coxal bones, having specific structures, are useful in the identification of the species. The paper is important for systematists in mammalogy and for ornithologists to study some birds of prey as well as for the paleontologists interested in the knowledge of the faunal structure of some fossil deposits.

Résumé. On décrit l'os coxal des six espèces sud-américaines de chauves-souris: *Saccopteryx bilineata* (Temminck, 1838), fam. Emballonuridae; *Pteronotus parnellii* (Gray, 1843), fam. Mormoopidae; *Phyllostomus hastatus* (Pallas, 1767), *Glossophaga soricina* (Pallas, 1766), *Carollia perspicillata* (Linnaeus, 1758), *Desmodus rotundus* (E. Geoffroy, 1810), fam. Phyllostomidae. Les os coxaux ayant des structures spécifiques, sont nécessaires pour l'identification des espèces. Le travail est important pour les études sur des certaines oiseaux de proie et pour les paléontologistes qui sont intéressés de la structure faunistique des certaines dépôts fossilifères.

Keywords: os coxae, identification keys, Chiroptera, Emballonuridae, Mormoopidae, and Phyllostomidae

It is known that the value of the characteristic divergences is important in establishing the statute of different taxa. In order Chiroptera there are keys for the species identification but they refer to entire specimens and, especially, to comparative series.

But in some cases only remains of the skeleton have been preserved and for them comparative researches were not made.

However, till the present paper, studies of comparative anatomy in mammals have been made for: the spine (Dornescu and Nițescu, 1965; Nițescu, 1966), measurements of the coxal bones (Herăñ, 1967), pelvic girdle (Herăñ, 1968), nasal ducts (Andreescu, 1970), coxal bone (Andreescu, 1971), omoplate (Žalman, 1971) postcranial skeleton (Červený and Žalman, 1974; Červený, 1978).

The aim of this paper is to add new anatomical data on the structure of the coxal bone of six species of south-American bat species.

We have chosen the coxal bone because both in the skeleton fragments preserved in shelters (caves, attics, cellars, hollows, etc.) and in the prelets of the birds of prey, the pelvic girdle is very well preserved, besides the teeth.

The paper is necessary both the mammalogists who study the present bat species, ornithologists interested in knowing the food of some birds of prey, and the palaeontologists who study the faunal structure of some fossiliferous deposits