

FIRST RECORD IN IRAQ OF TWO NEMATODE PARASITES FROM
THE BLUE-CHEEKED BEE-EATER *MEROPS SUPERCILIOSUS*
PERSICUS PALLAS, 1773

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ABSTRACT

Thirty three specimens of the blue-cheeked bee-eater were collected at central and southern Iraq from April 1997 to October 2000. Two nematodes *Hadjelia truncata* and *Syphaciella capensis*, were recovered from the alimentary tract. Reporting these two nematodes represents the first record for Iraq as well as a new host record.

INTRODUCTION

The blue-cheeked bee-eater *Merops superciliosus persicus* Pallas, 1773 is one of the most common summer visitors in central and southern Iraq and for a lesser extent in the north. It is widely distributed in the Middle East countries including Palestine, Syria, Iran, Egypt, Kuwait and Saudi Arabia (Allouse, 1961). It breeds in the suitable areas of central and southern parts of the country sometimes in huge colonies beyond freshwater vicinities which provide winged insect diet.

The bird was designated as a threatened species by the International Union for Conservation of Nature (Bird Life International, 2004).

Information data on biology, distribution, parasites, ecology and population dynamics of this bird in Iraq are rather few, scanty and fragmentary, such as Allouse (1961), Jennings (1981), Cramp (1985) and Fry (1991). However, only two papers were published so far on it. Mohammad & Al-Naeimi (2000) reported on the haematozoa and described a new species of the protozoan blood parasitic genus *Haemoproteus* (Sporozoa : Apicomplexa), then Mohammad *et al.* (2002) studied the breeding biology as well as some ecological aspects of this bird in central Iraq.

This paper deals with recording of two nematodes from the alimentary tract of this bird for the first time in Iraq and they also constitute new host records as well.

MATERIALS AND METHODS

During the period from April 1997 to October 2000 a total of 33 specimens including 15 males and 18 females of the blue-cheeked bee-eater were collected mainly from central and southern Iraq with only few representatives from northern and western parts of the country. Specimens were either dissected directly in the field or transferred to the laboratory as soon as possible and then dissected. The alimentary tracts were carefully separated and stored in 70% methanol. The recovered nematodes were immersed overnight in lactophenol at room temperature for clearing. Measurements are in millimeters unless otherwise stated. Drawings were made with the aid of camera lucida.

RESULTS AND DISCUSSION

Only two host specimens (6.1%) were found infected with hitherto unrecorded nematodes for Iraq, one female bird host was infected with three female specimens of the nematode *Hadjelia truncata* (Crepl., 1825) recovered underneath the tunic of gizzard with percentage infection rate of 3.1% and intensity of 3 parasites/host, while another one male bird host was found infected with one female specimen of the nematode *Syphaciella capensis* Monnig, 1924 which recovered from the caeca of the bird with infection rate of 3.1% and intensity of one parasite/host. The sample size as well as the number of infected hosts are very low and make it practically impossible to obtain any conclusion in regard to the correlation of host sex to the percentage infection rate and the intensity or to compare between the results of two parasite species.

The parasitic nematode fauna of this bird is rather poorly known. Gupta & Kumar (1976) reported the nematode *Histocephalus tridens* Gendre, 1921, in Lucknow, India. Borgarenko (1990) reported seven nematodes: *Geopetitia* sp.; *Stellobronema acuariana* Gushanskaja, 1937; *Stellobronema ryzhikovi* Borgarenko, 1961; *Tetrameres* sp.; *Torquatella balanocephala* (Gendre, 1922), *Physocephalus ellobii* Schulz, 1927 and *Oxyspirura petrovi* (Skrjabin, 1929) in Tadzhikistan. So, recovering these nematodes represent new host record for this bird as well.

Hadjelia truncata (Crepl., 1825) (Fig. 1 A & B)

Female: Body cylindrical attenuated at extremities, 14.00 to 15.22. (14.62) long, 0.168 to 0.199. (0.183) wide, cuticle transversely striated, Mouth with large well developed trilobed lips without teeth with two wings set on external surface of each. Head separated from body by a slight constriction, 0.048 to 0.052 (0.050) in diameter, mouth leads to a cylindrical vestibule. Oesophagus consists of two parts an anterior short, narrow and muscular 0.512 to 0.57 (0.54) long, 0.016 to 0.052 (0.042) wide; and posterior longer, wider and glandular 0.589 to 0.622 (0.605) long, 0.036 to 0.057 (0.0465) wide. Nerve ring 0.003 to 0.024 (0.015) long, 0.020 to 0.048 (0.034) wide. Tail short and rounded 0.113 to 0.150 (0.132) long, 0.020 to 0.060 (0.040) wide, eggs thick -shelled, slightly thickened at the poles.

The parasite is well recognized as an avian parasite but is rarely reported as pathogenic although Appleby *et al.* (1995) described in an occasional record severe disease in Cyprus pigeons due to this parasite.

It was reported from a wide range of vertebrate (avian) and invertebrate hosts scattered among different families and orders. It was reported from the Starling *Sturnus vulgaris* L, Sturnidae, Passeriformes (Hair & Forrester, 1970), from pigeons *Columba livia*, Columbidae, Columbiformes (Al-Attar & Abdul-Aziz, 1985; Appleby *et al.*, 1995), from hoopoe *Upupa epops* and *Upupa* sp., Upupidae, from Indian roller *Coracias benegalensis*, from *Coracias* sp., Coraciidae, Coraciiformes (Singh, 1949; Yorke and Maplestone, 1962); and from a beetle *Phylan abbreviatus*, Tenebrionidae, Coleoptera (Yamaguti, 1961). Reporting this species from the blue-cheeked bee-eater in this study is not surprising since it was frequently reported from coraciiform bird.

Syphaciella capensis Monnig, 1924 (Fig.2A, B&C)

Female: This worm is small 4.108 long, 0.223 wide with a transversely striated cuticle, the head 0.040 diameter bears three lips, vestibule 0.014 long, oesophagous 0.416 long, 0.046 wide, slightly enlarged posteriorly and separated from the globular bulb by a constriction, bulb 0.093 long 0.039 wide, it opens into the intestine.

Taxonomic position of this genus is not settled yet since Monnig (1924) erected this genus in the family Oxyuridae to accommodate the species *S. capensis* from *Eremialector bicinctus* and *Pteroclorus namaqua* from the Transvaal. The genus then moved to the family

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Cosmocercidae, after that it was placed in the subfamily Syphaciellinae erected for it alone (Skrjabin and Schikhobalova, 1951) In its turn the species of the genus *Syphaciella* is rather confusing also, Hugot (1989) stated that this genus includes six very closely related species and specific to the avian hosts genus *Pterocles*, stating that its geographical range from South Africa and Madagascar to India. This is in contradiction with Khalil (1963) who described *S. sudanica* from Omdurman, Central Sudan far north of the given range. Hugot *et al.* (1991) concluded that this genus parasitizing birds only. Yamaguti (1961) and York & Maplestone (1962) reported *Syphaciella capensis* from avian genera *Pterocles* and *Pteroclorus*.

However, the present record constitutes a new host record and a new record for the Iraqi helminth fauna as well. Its finding in this host is coincide with the route of its migration to Iraq. It comes to our country from South Africa and Eastern coasts of Africa after spending winter therewith the beginning of March (Fry, 1991; Mohammad *et al.*, 2002).

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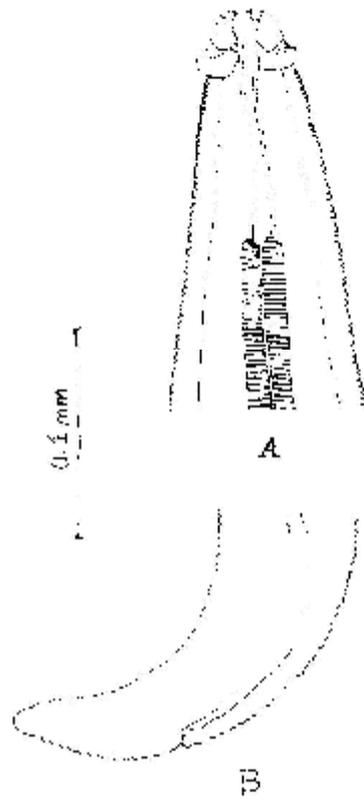


Fig.1 : *Haemaphysalis truncata* ♂

A- Anterior extremity
B- Posterior extremity.

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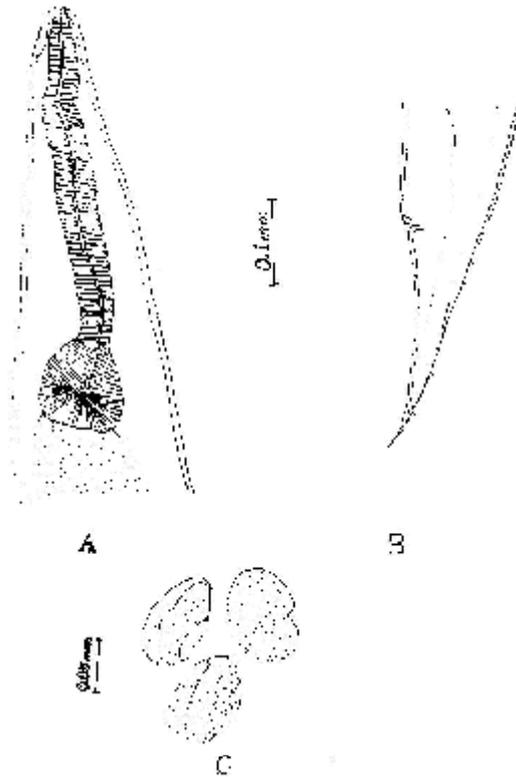


Fig.2 : *Sphaerolito capensis* ♀

- A- Anterior extremity.
- B- Posterior extremity.
- C- Eggs.

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بي قلم راوولر ناطن قارملاي فرم ولاء قولم ل نليلن من ع نلجه ت
BLUE-CHEEKED BEE-EATER *MEROPS SUPERCILIOSUS PERSICUS*
PALLAS, 1773

بيسوم اسم اراهم ا
وحب كرمي يطلا ا وائل محتموث
دلغه بتمماج- دلغه ب- قلم ا
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اتصال اخل

ع تم ٣٣ بي قلم راوولر ناطن من قيع blue-cheeked bee-eater و سوم
قرف ل قلم لبوج (رذآ ١٩٩٧ - لولأ بيشته ٢٠٠٠) راط الم يمضها اقم و
ين رول الم يجهت تم *Hadjelia truncata* و *Syphaciella capensis* للهبر و
لهه في ل سمك اربع لفي بين يليف لن يلق ل ا ه ل ج ت ل ف ي ص ك ر ط ل اة ا ر د ل ا
لهد ي ج ل م .