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Four new bat species from the "territory of the Czech Republic"

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Abstract. Twelve individuals of fruit bats belonging to four species, *Eidolon helvum*, *Rousettus aegyptiacus*, *Epomophorus gambianus*, and *Micropteropus pusillus*, were captured during three nights using ornithological mist nets. The fruit bats were caught when foraging in the garden of the Embassy of the Czech Republic in Dakar (Senegal), where they fed on ripe fruits of the neem trees (*Azadirachta indica*).

Fruit bats, territory of the Czech Republic, embassy, Dakar, Senegal, West Africa

Introduction

Initially, we wanted to conceive this report as an April Fool's joke. Nevertheless, during the writing we got an idea of informative series compiled from similar reports on faunistic curiosities which were encountered by Czech chiropterologists during their trips to the abroad "territories of the Czech Republic". Ridiculous? Objectively yes, formally no. There are tens of places all around the world officially belonging to the territory of the CR covered by Czech national legislation and Czech conventions in force. We talk about embassies, which are often surrounded by gardens with many fruit and decorative trees, with garden lakes or swimming pools – ideal places for an evidence of "new species for bat fauna of the Czech Republic". It would be nice if we instigated other chiropterologists to make similar efforts as we enthusiastically did in the garden of the embassy of the Czech Republic in Dakar. The checklist of "Czech as well as non-Czech" bats would please many taxonomists.

Although this is the first report, it is certainly not the first finding of a bat at an Embassy of the Czech Republic or the former Czechoslovakia. These would be the finding of colony of *Pipistrellus tramatus* Thomas, 1928 at the Czechoslovak Embassy in Hanoi (Vietnam) (I. Horáček, ad verb., cf. Zima et al. 1992) and nettings of *Artibeus jamaicensis* Leach, 1821 and *A. lituratus* (Olfers, 1818) in the Czech Embassy garden in Caracas (Venezuela) (R. Lučan, ad verb.).

Methods and Study area

The fruit bats were captured using ornithological mist nets in the garden of the Embassy of the Czech Republic in Dakar, Senegal (14° 41.5' N, 17° 28.0' E; ca. 2500 m^2) on 20 and 21 October, and 14 November 2004. The nets were exposed throughout the night. A number of trees with fruits suitable as fruit bat food were present in the garden. These were mainly the papaya trees (*Carica papaya*), mango trees (*Mangifera indica*), Brazilian pawpaw (*Annone muricata*), avocado trees (*Persea americana*), pomegranate trees (*Punica granatum*), and some citrus trees (*Citrus* sp.). The garden is lined with full-grown neem trees (*Azadirachta indica*).


2


4


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Results and Discussion

During the netting sessions we evidenced four fruit bat species: 1 individual of the straw-coloured fruit bat, *Eidolon helvum* (Kerr, 1772), 3 inds. of the Egyptian rousette, *Rousettus aegyptiacus* (Geoffroy, 1810), 3 inds. of the Gambian epauletted fruit bat, *Epomophorus gambianus* (Ogilby, 1835) and 5 inds. of the Peter's dwarf epauletted fruit bat, *Micropteropus pusillus* (Peters, 1868) (Table 1). All of the captured species belong to common West African fruit bat species (Rosevear 1965, Adam & Huber 1972, Boulay & Robbins 1989, Bergmans 1994, Owen-Ashley & Wilson 1998, Kwiecinski & Griffiths 1999, etc.). Many of these fruit bats were observed to feed on the fruits of the neem tree (*Azadirachta indica*), which were the only ripe fruits in the embassy garden at that time. However, these fruits as well as other parts of the neem tree contain azadirachtin – an alkaloid with antiparasitic, antiseptic, and several other curative effects. The oil from these fruits is used by traditional as well as modern medicines for preparation of a variety of drugs. Azadirachtin is reported to be slightly toxic for mammals even at small concentration (Ganguli 2002). Therefore the consumption of the neem tree fruits is really interesting, even though not unusual. Consumption of these fruits by the straw-coloured fruit bat, Gambian epauletted fruit bat and Peter's dwarf epauletted fruit bat was observed also at other sites in the inland of Senegal. The fruits of the related chinaberry (*Melia azedarach*) are a common winter diet of Egyptian rousettes in Lebanon and Israel (Korine et al. 1999, Horáček et al., unpubl.).

Tab.1. List of fruit bats evidenced at the garden of the Embassy of the Czech Republic in Dakar, Senegal
Tab. 1. Přehled kaloňů chycených na zahradě zastupitelského úřadu ČR v Dakaru, Senegal

date / datum	species / druh	n	sex ratio / poměr pohlaví [♂ : ♀]
20 October 2004	*Micropteropus pusillus*	2	1 : 1
21 October 2004	*Rousettus aegyptiacus*	3	1 : 2
	Eidolon helvum	1	0 : 1
14 November 2004	*Epomophorus gambianus*	3	1 : 2
	Micropteropus pusillus	3	2 : 1

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Souhrn

Čtyři nové druhy netopýrů pro "území České republiky". V příspěvku jsou popsány výsledky odchytů netopýrů na zahradě Českého zastupitelského úřadu v Dakaru (Senegal). Vzhledem k tomu, že parcela na které stojí budova velvyslanectví i přiléhající zahrada patří *de jure* České republice, mohli bychom s určitou nadsázkou zařadit chycené kaloně do české fauny. Kaloni byli chytání do nárazových ornitologických sítí po tři noci (X–XI 2004) na zahradě zastupitelského úřadu (14° 41,5' N, 17° 28,0' E), kde se vyskytovalo větší množství stromů, jejichž plody mohly sloužit kaloňům jako potencionální potrava. Jednalo se především

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Figs. 1–4. Fruit bats from the garden of the Embassy of the Czech Republic at Dakar, Senegal. 1 – female of straw-coloured bat (*Eidolon helvum*). 2 – male of Peter's dwarf epauletted fruit bat (*Micropteropus pusillus*). 3 – male of the Egyptian rousette (*Rousettus aegyptiacus*). 4 – male of the Gambian epauletted fruit bat (*Epomophorus gambianus*).
Obr. 1–4. Kaloni ze zahrady velvyslanenectví ČR v Dakaru, Senegal. 1 – samice kaloně plavého (*Eidolon helvum*). 2 – samec kaloně nigerijského (*Micropteropus pusillus*). 3 – samec kaloně egyptského (*Rousettus aegyptiacus*). 4 – samec kaloně výložkového (*Epomophorus gambianus*).

Fig. 5. Fruits of the neem tree (*Azadirachta indica*), the only fruits available as a fruit bat food in the garden.
Obr. 5. Plody zederachu indického (*Azadirachta indica*), jediné plody vhodné jako potrava kaloňů na zahradě.

o papáju melounovou (*Carica papaya*), mangovník indický (*Mangifera indica*), granátovník obecný (*Punica granatum*), avokádo (*Persea americana*), anonu ostnitou (láhevník) (*Annone muricata*) a různé druhy citrusů (*Citrus* sp.). Pozemek je lemován vzrostlými stromy zederachu indického (*Azadirachta indica*). Celkem byly chyceny čtyři druhy kaloňů (tab. 1): 1 jedinec kaloně plavého (*Eidolon helvum*), 3 jedinci kaloně egyptského (*Rousettus aegyptiacus*), 3 jedinci kaloně výložkového (*Epomophorus gambianus*) a 5 jedinců kaloně nigerijského (*Micropteropus pusillus*). Všechny zjištěné druhy patří k běžným západoafrickým kaloňům (Adam & Huber 1972, Boulay & Robbins 1989, Bergmans 1994, Owen-Ashley & Wilson 1998). Kromě plodů zederachu indického, nebyly na zahradě ambasády zralé žádné jiné plody, které by mohli kaloni konzumovat. Na stromy zederachu nalétávali kaloni ve velkém množství, takže nebyl problém konzumaci těchto plodů doložit i přímým pozorováním. Plody zederachu, ale i jiné jeho části, obsahují alkaliod azadirachtin, který je známý svými antiparazitickými i insekticidními účinky. Olej z plodů se v tradiční i moderní medicíně používá i pro přípravu různých léků. Azadirachtin je pro savce i v nízkých koncentracích mírně toxický (Ganguli 2002). Proto se zdá konzumace plodů zederachu zajímavá, ale nikoliv ojedinělá. Kaloně plavé, kaloně výložkové a kaloně nigerijské jsme pozorovali při konzumaci těchto plodů i na desítkách dalších lokalit ve vnitrozemí Senegalu. Plody příbuzného stromu druhu *Melia azedarach* jsou také nejběžnější zimní potravou kaloně egyptského v Libanonu a Izraeli (Korine et al. 1999, Horáček et al., unpubl.).

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