

Fossil Diptera in Baltic amber: the collection of the Muséum d'histoire naturelle Neuchâtel

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Abstract. The history and scope of the collection of inclusions in Baltic amber of the Muséum d'histoire naturelle Neuchâtel (MHNN) is briefly outlined. Diptera are largely dominant, with some 4600 specimens belonging to 38 families, some of which are of rare or very rare occurrence in Baltic amber. A table summarizing the families represented in the collection and including the number of specimens of each of them is provided.

Key words: Baltic amber, collections, Diptera.

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I. INTRODUCTION

The collection of inclusions of fossils insects in Baltic amber of the Muséum d'histoire naturelle of Neuchâtel (MHNN) was initiated in 1991 when an exhibition on this subject "*The ghosts of amber*" was prepared there with the scientific support of the Natural History Museum in Kraków and the Museum of the Earth in Warszawa (KRZEMIŃSKA et al. 1992, 1993). Since that time the collection has rapidly grown and is amounting now several thousands pieces.

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II. SCOPE OF THE COLLECTION

Although many orders of Insects and other Arthropoda are represented, the accent of the collection has been constantly put on Diptera by a directed policy of acquisition.

The Diptera, which are anyway the dominant element among animal inclusions in Baltic amber, represent thus about 90 % of the collection of the MHNN, with about 4600 specimens. A preliminary preparation for study has been undertaken for a number of selected pieces (HAENNI & PERRENOUD 1998).

III. NOTICEABLE FAMILIES

On the basis of preliminary sorting, no less than 38 families of Diptera are present in the collection. Families represented are listed in Table I together with the number of specimens in collection. The best represented families are Mycetophilidae s. l. (incl. Keroplatidae), Limoniidae s. l. (incl. Pediciidae), Psychodidae, Empididae s. l. (incl. Hybotidae and Microphoridae), Chironomidae and Dolichopodidae. Scatopsidae are noticeably well represented.

Table I

Families represented in Baltic amber in the collection of Muséum d'histoire naturelle Neuchâtel; number of specimens is given

Family	N. specimens	Family	N. specimens	Family	N. specimens
Mycetophilidae s.l.	917	Simuliidae	51	Tanyderidae	2
Limoniidae s.l.	497	Rhagionidae	37	Asilidae	2
Psychodidae	481	Trichoceridae	18	Acroceridae	2
Empididae s.l.	481	Syrphidae	13	Lauxaniidae	2
Chironomidae	473	Tipulidae	10	Cryptochetidae	2
Dolichopodidae	382	Bibionidae s.l.	9	? Anthomyzidae	2
Phoridae	297	Dixidae	8	Therevidae	1
Sciaridae	278	Pipunculidae	7	Rachiceridae	1
Ceratopogonidae	215	? Clusiidae	4	Platypezidae	1
Cecidomyiidae	198	Anisopodidae s.l.	3	? Acartophthalmidae	1
Scatopsidae	184	Acalypratae ind.	3	? Curtonotidae	1

Some families which are of rare or very rare occurrence in amber, e.g. Tanyderidae, Trichoceridae, Acroceridae, Rachiceridae (Figs 1-2), Platypezidae and several families of Acalypratae (Fig. 4), are present in the collection.

It must be noticed that most frequently encountered families Chironomidae and Sciaridae have been partially let aside and are thus somewhat under-represented in the MHNN collection. On the other hand Tipuloidea and Scatopsidae (Fig. 3) have been actively searched for and are thus over-represented. For this reason, the general figure for these families differs somewhat from that given by KULICKA et al. (1985) for the collections of Museum of Earth, Warszawa and Zoological Museum, Copenhagen.

Fig. 1 (top left). Female representative of the rare primitive Brachycerous family Rachiceridae (MHNN 931). Fig. 2 (top right). Head of the same specimen (MHNN 931). Fig. 3 (bottom left). Male specimen of Scatopsidae with perfectly preserved genitalia belonging to an undescribed genus (MHNN 883). Fig. 4 (bottom right). Well preserved specimen tentatively ascribed to family Clusiidae (MHNN 1283).



A c a l l f o r s c i e n t i s t s. Up to now, only very few families have been studied scientifically: PODENAS (1999, 2001) described several new species of Limoniidae and Trichoceridae and is currently working the Tipuloidea, while HAENNI & AMORIM (in preparation) initiated the study of Scatopsidae.

It is hoped that in the future further families will meet the interest of the dipterists, who are welcome.

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