

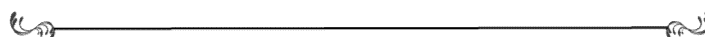
**TYPE SPECIMENS OF ARTHROPODS IN FOSSIL RESINS  
FROM COLLECTIONS OF THE PAS MUSEUM OF THE EARTH IN WARSAW**

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**ABSTRACT:** A list of 206 specimens of fossil arthropods in Paleogene amber from the collections of the PAS Museum of the Earth in Warsaw is presented. The holotypes (150 spp.), paratypes (54 spp.) and neotypes (2 spp.) belong to the following eleven groups: Amphipoda (3 spp.), Araneae (8 spp.), Acariformes (3 spp.), Diptera (47 spp.), Hemiptera (38 spp.), Hymenoptera (17 spp.), Coleoptera (14 spp.), Thysanoptera (11 spp.), Strepsiptera (5 spp.), Lepidoptera (3 spp.), Neuroptera (1 sp.).

**KEY WORDS:** Types, Baltic amber, inclusions, arthropods.



## **Introduction**

Amber is a fossilized resin secreted by trees from many groups, mainly conifers. The oldest fossil resin is 230 million years old (the Cretaceous amber), the youngest – approximately 5 million years. Baltic Amber is dated to Paleogene period, Eocene epoch (56–39 Ma).

The collections of amber (over 30,000 specimens) have been systematically accumulated since 1951 in the Amber Department. The collection of zooinclusions consists about 15,201 pieces of Baltic amber, including holotypes, paratypes and neotypes. Specimens of arthropods from two subcollections have been analyzed. The following abbreviations of the subcollections are used in the paper:

- **MZ** – collection of the PAS Museum of the Earth (except specimens of TG containing 7247 pieces of Baltic amber)
- **TG** – collection of Tadeusz Giećewicz (subcollection containing 7954 pieces of Baltic amber) (Kosmowska-Ceranowicz 2001)

One hundred and fifty specimens of arthropod holotypes together with 54 specimens of paratypes as syninclusions in 186 pieces of Baltic amber were found. Among 34 pieces of Baltic amber single paratype and two neotypes were found (Table 1).

This list of type specimens was prepared according to the Recommendation of the International Code of Zoological Nomenclature (ICZN), which states that every institution in which name-bearing types are deposited should publish lists of these types in its possession or custody and so far as possible, communicate information concerning name-bearing types when requested (ICZN 1999).

## **Type specimens of Amphipoda**

Three holotypes of amphipods among the Baltic amber pieces were found. The first amphipod specimen comes from the Baltic region and was kindly offered by Mr. A. Rybicki in 1997 to the collections of the PAS Museum of Earth in Warsaw (Jażdżewski & Kulicka 2002). The second and third specimen with amphipod's inclusions came from the private collection of Mr. Jürgen Velten (Idstein, Germany) and were purchased by the PAS Museum of the Earth in Warsaw (Jażdżewski et al. 2014).

### **Gammaridae Latreille, 1802**

†*Palaeogammarus debroyeri* Jażdżewski, Grabowski & Kupryjanowicz, 2014 – holotype [26611 MZ] specimen A plus paratype specimen B.

†*Palaeogammarus polonicus* Jażdżewski & Kulicka, 2002 – holotype [22999 MZ].

### **Crangonyctidae Bousfield, 1973**

†*Synurella aliciae* Jażdżewski, Grabowski & Kupryjanowicz, 2014 – holotype [26612 MZ] specimen A plus paratype specimen B.

## **Type specimens of Arachnida**

### **Acariformes Zakhvatkin, 1952**

#### **Caeculidae Berlese, 1883**

†*Procaeculus eridanosae* Coineau & Magowski, 1994 – holotype [11533b TG] and paratype [15680 TG].

#### **Camerobiidae Berlese, 1886**

†*Aclerogamasus stenocornis* Witaliński, 2000 – holotype [5895 TG].

†*Neophylliobius succineus* Boland & Magowski, 1990 – holotype [16749 TG].

### **Parasitidae Oudemans, 1901 Araneae Clerck, 1757**

### **Anapidae Simon, 1895**

†*Balticonopsis ceranowiczi* Wunderlich, 2004b – holotype [21689 TG].

†*Dubianapis obscura* Wunderlich, 2004b – holotype [15471 MZ].

#### Comaromidae Wunderlich, 2004

†*Balticoroma reschi* Wunderlich, 2004b – paratype [18689 TG].

†*Balticoroma serafinorum* Wunderlich, 2004b – three paratypes [19506 MZ] and paratype [5739 TG].

#### Ctenizidae Thorell, 1887

†*Baltocteniza kulickae* Eskov & Zonstein, 2000 – holotype [12845 MZ].

#### Dictynidae Cambridge, 1871

†*Eodictyna commuri* Wunderlich, 2004 – paratype [7175 MZ].

#### Linyphiidae Blackwall, 1859

†*Succineta disoidalis* Wunderlich, 2004 – paratype [9915 MZ].

#### Nesticidae Simon, 1894

†*Eopopino inspinatus affinis* Wunderlich, 1986 – holotype [12581 MZ] plus paratype [14451 TG].

#### Salticidae Blackwall, 1841

†*Eolinus balticus* Żabka, 1988 – holotype [2923 MZ].

†*Eolinus tystschenkoi* Prószyński & Żabka, 1980 – holotype [14928 TG].

†*Prolinus fossilis* Petrunkevitch, 1958 – paratype [19342 TG].

#### Segestriidae Simon, 1893

†*Vetsegestria guingenspinosa* Wunderlich, 2004c – paratype [19968 MZ].

#### Synotaxidae Simon, 1894

†*Dubiosynotaxus erfectus* Wunderlich, 2004n – holotype [16189 MZ].

#### Theridiidae Sundevall, 1833

†*Rugapholcomma patellaris* Wunderlich, 2008 – holotype [1849/ 13 MZ].

†*Clya tricurvata* Wunderlich, 2008 – paratype [11530 TG].

†*Cymbiopholcomma dudum* Wunderlich, 2008 – paratype [5685 TG].

†*Lasaeola saxsaetosa* Wunderlich, 2008 – paratype [3246 TG].

†*Lasaeola sexsaetosa* Wunderlich, 2008 – paratype [8584 TG].

†*Succinobertus adjaceus* Wunderlich, 2008 – paratype [5679 TG].

#### Type specimens of Diptera

##### Tabanidae Latreille, 1802

†*Pseudotabanus (Pseudotabanus) dereckii* Trojan, 2002 – holotype [23926 TG].

##### Limoniidae Speiser, 1909

*Helius abditus* Krzemiński, an exoskeleton, type is deposited in the PAS Museum of the Earth in Warsaw, which is in a Priabonian terrestrial amber deposit in Poland. *Helius minutus* Loew, an exoskeleton (male), type is deposited in the Berendt Collection (the collection is deposited at the Museum of Inclusions in Gdańsk, Poland).

†*Helius minutus* Loew, 1850 = *Helius abditus* Krzemiński, 1985 – holotype [7895 MZ].

†*Palaeopoecilostola eocenica* Kania & Krzemiński, 2012 – holotype [19931 MZ].

†*Thaumastoptera ryszardi* Krzemiński, 1985 – holotype [6545 MZ].

##### Ceratopogonidae Newman, 1834

†*Alluaudomyia succinea* Szadziewski, 1988 – holotype [2353/32 MZ].

†*Atriculicoides cenomanensis* Szadziewski & Schlüter, 1992 – holotype [22224 MZ].

- †*Atriculicoides incompletus* Szadziewski & Schlüter, 1992 – holotype [22223 MZ].
- †*Atrichopogon eocenicus* Szadziewski, 1988 – holotype [4834 TG].
- †*Austroconops borkenti* Szadziewski & Schlüter, 1992 – holotype [22225 MZ].
- †*Bezzia eocenicus* Szadziewski, 1988 – holotype [16584 TG].
- †*Brachypogon (Brachypogon) gedanicus* Szadziewski, 1988 – holotype plus two females paratypes [20007 TG].
- †*Ceratopogon ceranowiczi* Szadziewski, 1988 – holotype [18553d MZ] plus male paratype [4827 TG].
- †*Ceratopogon gedanicus* Szadziewski, 1988 – holotype [4483 MZ].
- †*Ceratopogon grogani* Szadziewski, 1988 – holotype [11411 TG].
- †*Ceratopogon hennigi* Szadziewski, 1988 – holotype plus female paratype [4504 MZ].
- †*Ceratopogon margaritae* Szadziewski, 1988 – holotype [19078 TG].
- †*Ceratopogon remmicolus* Szadziewski, 1988 – holotype plus two males paratypes [15788 TG].
- †*Ceratopogon ritzkowskii* Szadziewski, 1988 – holotype plus two females paratypes [18553a MZ].
- †*Ceratopogon tertiaricus* Szadziewski, 1988 – holotype [16125 TG].
- †*Culicoides (Oecacta) balticus* = *Culicoides balticus* Szadziewski, 1988 – holotype [19193 TG] plus uncompleted female.
- †*Culicoides eoselficus* Szadziewski, 1988 – holotype [5205 TG].
- †*Culicoides (Oecacta) succivarius* Szadziewski, 1988 – holotype [11926 MZ].
- †*Culicoides gedanensis* Szadziewski, 1988 – holotype [18558 MZ].
- †*Culicoides ceranowiczi* Szadziewski, 1988 – holotype [4827 TG].
- †*Dasyhelea eodicyptoscenica* Szadziewski, 1988 – holotype [9356 MZ] plus male paratype [8709a MZ] and female paratype [5230 TG].
- †*Dasyhelea gedanica* Szadziewski, 1988 – holotype [16133 TG].
- †*Dasyhelea stanislavi* Szadziewski, 1988 – holotype [9617 MZ] plus two paratypes [7647 MZ, 8862a MZ].
- †*Eohelea gedanica* Szadziewski, 1988 – holotype [7106 MZ].
- †*Eohelea grogani* Szadziewski, 1988 – holotype [14831 TG].
- †*Eohelea petrunkevitchi* Szadziewski, 1985 – holotype [13990 TG].
- †*Forcipomyia eobreviflagellata* Szadziewski, 1988 – holotype [19242 TG].
- †*Forcipomyia (Forcipomyia) eocostata* Szadziewski, 1988 – holotype [8035 MZ].
- †*Forcipomyia (Forcipomyia) gedanicola* Szadziewski, 1988 – holotype [10116 MZ].
- †*Forcipomyia krzeminskii* Szadziewski, 1988 – holotype [8156 MZ] plus paratype [9084 MZ].
- †*Gedanohelea loewi* Szadziewski, 1988 – holotype plus two females paratypes [10287 MZ].
- †*Gedanohelea succinea* Szadziewski, 1988 – holotype [20010 TG].
- †*Monohelea baltica* Szadziewski, 1988 – holotype [18161 TG].
- †*Mantohhelea gedanica* Szadziewski, 1988 – holotype [10026 MZ].

†*Meunierohoelea gedanicola* Szadziewski, 1988 – holotype [5018 TG].

†*Palpomyia jantari* Szadziewski, 1988 – holotype [1325 MZ].

†*Serromyia polonica* Szadziewski, 1988 – holotype [14977 TG].

†*Serromyia ryszardi* Borkent, 1990 – holotype [16110 TG].

†*Serromyia sinuosa* Borkent, 1990 – holotype [14972 TG].

†*Serromyia succinea* Szadziewski, 1988 – holotype plus male paratype [11907 MZ] and paratype [13987 TG].

†*Serromyia anamalicornis* Loew, 1850 – neotype [5045 TG].

†*Wirthohoelea trifida* Szadziewski, 1988 – holotype [4457 MZ].

#### **Dolichopodidae Latreille, 1809**

†*Eomesorhaga szwedoi* Azar & all, 2013 – holotype [15574 TG].

†*Wheelerenomyia kupryjanowiczi* Bickel, 2013 – holotype [26328 MZ].

#### **Type specimens of Hemiptera**

##### **Adelgidae Annand, 1928**

†*Adelges (Adelges) balticus* Węgierek, 2003 – holotype [14699 TG].

##### **Anthocoridae Fieber, 1836**

†*Lyctoferus kupryjanowiczi* Popov, 2003 – holotype [23986 TG].

†*Persephonocoris kulickae* Popov & Herczek, 2001 – holotype [22931 MZ].

##### **Aphalaridae Loew, 1879**

†*Eogyropsylla eocenica* Klimaszewski, 1993 – holotype [14667 TG].

†*Eogyropsylla jantaria* Klimaszewski, 1993 – holotype [21096 MZ].

##### **Aphididae Latreille, 1802**

†*Ambopemphigus romani* Węgierek, 1996 – holotype [5948a TG].

†*Germaraphis aradryoides* Węgierek, 1990 – holotype [8558 MZ] plus two paratypes [15504 TG and 18839 TG].

†*Glaesaricallis kulickae* Węgierek, 1996 – holotype [16809 TG].

†*Halajaphis siphonosetae* Węgierek, 1996 – holotype [6543 MZ].

†*Lyncuricallis polonicus* Węgierek, 1996 – holotype [10241 MZ].

†*Mindarus incrustatus* Węgierek, 1996 – holotype [14448 TG].

##### **Aradidae Brulle, 1836**

†*Aradus frater* Popov, 1978 – holotype [5624 TG].

†*Aradus popovi* Heiss, 1998) – holotype [14693 TG].

##### **Cicadellidae Latreille, 1825**

†*Nastlophia nigra* Szwedo & Gebicki, 2002 – holotype [1874/38 MZ].

†*Protodikraneura nasti* Gebicki & Szwedo, 2006 – holotype [13876 TG].

†*Stareono mirabilis* Gebicki & Szwedo, 2006 – holotype [20515 TG].

##### **Cixiidae Spinola, 1839**

†*Kulickamia jantaris* Gebicki & Szwedo, 2000 – holotype [6455 MZ].

##### **Derbidae Spinola, 1839**

†*Positrona shcherbakovi* Emeljanov, 1994 – holotype [4390 MZ].

##### **Elektraphididae Steffan, 1968**

†*Skalskiana malakiae* Węgierek, 1996 – holotype [11496 TG].

### **Eriococcidae Ferris, 1957**

†*Balticococcus spinosus* Koteja, 1988a – holotype, a nymph (first instar larva) [15493 TG].

†*Gedanicooccus gracilis* Koteja, 1988a – holotype a nymph (first instar larva) [15494 TG].

### **Kermesidae Signoret, 1875**

†*Sucinikermes kulickae* Koteja, 1988 – holotype [14669 TG].

### **Microphysidae Dohrn, 1859**

†*Loricula (Loricula) ceranowiczae* Popov, 2004 – holotype [5623 TG].

†*Loricula (Eocenophysa) damzeni* Popov, 2004 – holotype [24107 MZ].

### **Family Miridae Hahn, 1833**

†*Ambocylapus kulickae* Herczek & Popov, 2000 – holotype [2293 MZ] plus paratype [23136 MZ].

†*Ambercylapus nigrus* Carvalho & Popov, 1984 – holotype [2344/40 MZ].

†*Archeofulvius kotejai* Herczek & Popov, 2005 – holotype [24333 MZ].

†*Balticofulvius kulickae* Herczek & Popov, 1997 – holotype [17356 TG].

†*Electromyiomma polonicum* Popov & Herczek, 1992 – holotype [13098 TG].

†*Epigonomiris skalskii* Herczek & Popov, 1998 – holotype [22932 MZ].

†*Hallodapomimus elektrinus* Herczek, 2000 – holotype [22918 MZ] plus paratype [26362 MZ].

†*Hoffeinsoria rubosa* Herczek & Popov, 2012 – holotype [1560 MZ].

†*Isometopsallops schuhi* Herczek & Popov, 1992 – holotype [23933 MZ].

†*Leptomimoides jonasdamzeni* Herczek & Popov, 2010 – holotype [26452 MZ].

†*Metoisops kerzhneri* Popov & Herczek, 1992 – holotype [14646 TG].

†*Myiomma voigti* Popov & Herczek, 1992 – holotype [13670 MZ].

†*Psallops eocenicus* Herczek, Popov & Gorczyca, 2015 – holotype [26174 MZ].

### **Phylloxeridae Herrich-Schaeffer, 1854**

†*Acanthohermes longirostris* Wegierek, 2003 – holotype [17410 TG].

### **Type specimens of Hymenoptera**

#### **Apidae Latreille, 1802**

†*Boreallodape mollyae* Engel, 2001 – two paratypes [19948 TG].

†*Electrapis krishnorum* Engel, 2001 – paratype [5589 TG].

#### **Chrysididae Latreille, 1802**

†*Palaeochrum diversum* Krombein, 1986 – holotype [19774 TG].

†*Protadelphae aenea* Krombein, 1986 – holotype [6473 MZ].

#### **Dryinidae Haliday, 1833**

†*Laberites polonicus* = *Ponomarenkoa polonica* Ponomarenko, 1988 – holotype [8736 MZ].

#### **Evaniidae Latreille, 1802**

†*Evaniella eocenica* Sawoniewicz & Kupryjanowicz, 2003 – holotype [23945 MZ] plus two paratypes – [5811 TG and 13665 MZ].

#### **Formicidae Latreille, 1802**

†*Dolichoderus nanus* Dlussky, 2002a – holotype [5845 TG].

†*Dolichoderus granulinotus* Dlussky, 2008 – holotype [22957 MZ].



†*Dolichoderus polonius* Dlussky, 2002a – holotype [3120 MZ].

†*Eocenomyrma orthospina* Dlussky & Radchenko, 2006 – holotype [13434 TG].

†*Plagiolepis jacobseni* Dlussky, 2008 – holotype [18742 TG].

†*Ponera mayri* Dlussky, 2009 – holotype [11487 TG].

†*Proceratium eocenicum* Dlussky, 2009 – holotype [18097 MZ].

†*Procerapachys sulcatus* Dlussky, 2009 – holotype [23537 MZ].

†*Tetramorium kulickae* Radchenko & Dlussky, 2015 – holotype [20246 TG].

†*Tetramorium paraarmatum* Radchenko & Dlussky, 2015 – holotype [15440 TG].

†*Aphaenogaster sommerfeldti* Mayr, 1868 – paratype [20842 MZ].

†*Ctenobethylus goepperti* Mayr, 1868 – paratype [6473 MZ].

†*Formica paleopolonica* Dlussky, 2008 – four paratypes [15690 TG, 16478 TG, 19392 TG and 20238 TG].

†*Myrmica rudis* Mayr, 1868 – paratype [1945/6 MZ].

#### **Ichneumonidae Latreille, 1802**

†*Marjorietta major* Kasparyan, 1994 – holotype [17828 TG].

†*Paxylommites reticulatus* Kasparyan, 1988 – holotype [17387 TG].

†*Tobiasites striatus* Kasparyan, 1988 – holotype [19140 TG].

†*Marjorietta minor* Kasparyan, 1994 – paratype [5793 TG].

†*Townesites mandibularis* Kasparyan, 1994 – paratype [14714 TG].

#### **Type specimens of Coleoptera**

##### **Cantharidae Imhoff, 1856**

†*Absidiella sucinokotejai* = *Cantharis (Cyrptomoptila) sucinokoteja* Kuška, 1996 – holotype [10424 MZ].

†*Cantharis sucinonigra* = *Cantharis (Cantharis) sucinonigra* Kuška, 1992 – holotype [18094 MZ].

†*Malthodes (Malthodes) ceranowiczae* Kuška & Kupryjanowicz, 2005 – holotype [24198 MZ].

†*Malthodes (Malthodes) kotejai* Kuška & Kupryjanowicz, 2005 – holotype [24199 MZ].

†*Sucinorhagonycha kulickae* Kuška, 1996 – holotype [22345 MZ].

##### **Curculionidae Latreille, 1802**

†*Archaeosciaphilus marshalli* Legalov, 2012 – holotype [7975 MZ].

†*Phloeophagus sucinopunctatus* Kuška, 1992 – holotype [7554 MZ].

†*Sucinostyphlus mroczkowskii* Kuška, 1996 – holotype [6427 MZ].

†*Sucinophyllobius viridis* = *Protonaupactus viridis* Wanat & Borowiec, 1986 – holotype [5657 TG].

##### **Dermestidae Latreille, 1804**

†*Anthrenus (Nathrenus) electron* Hava, Prokop & Kadej, 2006 – holotype [3209 MZ].

##### **Lathrididae Erichson, 1842**

†*Lathridius jantarius* Borowiec, 1985 – holotype [5646 TG].

†*Lathridius kulickai* = *Stephostethus kulickae* Borowiec, 1985 – holotype [17798 TG].

##### **Leiodidae Fleming, 1821**

†*Catops nathani* Perkovsky, 2001 – holotype [10410 MZ].

### **Ptinidae Latreille, 1802**

†*Microbregma sucinoemarginatum*  
= *Anobium (Microbregma)*  
*sucinoemarginatum* Kuška, 1992 – holotype  
[21644 MZ].

### **Type specimens of Thysanoptera**

#### **Aeolothripidae Uzel, 1895**

†*Rhipidothripoides involvus* Schliephake,  
2001 – holotype [14159 TG].

#### **Melanthripidae Haliday, 1836**

†*Archankothrips zawirskae* Schliephake, 2001  
– holotype [18332 TG].

#### **Phlaeothripidae Halliday, 1836**

†*Protolispotrips multisetiger* Schliephake,  
2001 – holotype [5594 TG].

#### **Stenurothripidae Bagnall, 1923**

†*Holarthrothrips crassicornis* Schliephake,  
2001 – holotype [19415 TG].

†*Stenurothrips polonius* Schliephake, 2001 –  
holotype [18780 TG].

#### **Thripidae Stevens, 1829**

†*Anaphothrips pusillus* Schliephake, 2001  
– holotype [5593 TG].

†*Dendrothrips giecewiczi* Schliephake, 2001 –  
holotype [15035 TG].

†*Protoxythrips stenuroideus* Schliephake,  
2001 – holotype [20197 TG].

†*Schedodendrothrips ursulae* Schliephake,  
2001 – holotype [16536 TG].

†*Taeniothrips litoralis* Schliephake, 2001 –  
holotype [13879 TG].

†*Taeniothrips majoribalticus* Schliephake,  
2001 – holotype [16276 TG].

### **Type specimens of Strepsiptera**

#### **†Mengeidae Pierce, 1907**

†*Mengea mengei* Kulicka, 1979 – holotype  
[13561 MZ].

†*Mengea tertiaria* Menge, 1866 – neotype  
[9270 MZ].

#### **Myrmecolacidae Saunders, 1872**

†*Palaeomyrmecolax giecewiczi* Kulicka, 2001  
– holotype [15119 TG].

†*Palaeomyrmecolax gracilis* Kulicka, 2001 –  
holotype [19593 TG].

†*Palaeomyrmecolax succineus* Kulicka, 2001  
– holotype [16321 TG].

#### **Stylopidae Kirby, 1813**

†*Jantarostylops kinzelbachi* Kulicka, 2001 –  
holotype [18139 TG].

### **Type specimens of Lepidoptera**

#### **Tineidae Latreille, 1810**

†*Simulotinea intermedia* Skalski, 1977–  
holotype [1535/8 MZ].

#### **Oecophoridae Bruand, 1849**

†*Schiffermuelleria jantharica* Skalski, 1977 –  
holotype [1531/14 MZ] plus paratype  
specimen B

#### **Autostichidae Le Marchand, 1947**

†*Microsymmocites kuznetzovi* Skalski, 1977 –  
holotype plus paratype [2015/1 MZ].

### **Type specimens of Neuroptera**

#### **Rhachiberothidae Tjeder, 1959**

†*Whalfera wiszniewskii* Makarkin &  
Kupryjanowicz, 2010 – holotype [24203 MZ].



Table 1. Number of type specimens and amber pieces with type specimens from the collections of the PAS Museum of the Earth in Warsaw

Order	Number of type specimens			Number of amber pieces		
	Holotype	Paratype	Neotype	Holotype	Paratype	Neotype
Amphipoda	3	2	0	3	0	0
Acariformes	3	1	0	3	1	0
Araneae	8	15	0	8	13	1
Diptera	47	15	1	47	7	0
Hemiptera	38	4	0	38	0	0
Hymenoptera	17	15	0	17	13	0
Coleoptera	14	0	0	14	0	0
Thysanoptera	11	0	0	11	0	0
Strepsiptera	5	0	1	5	0	1
Lepidoptera	3	2	0	3	0	0
Neuroptera	1	0	0	1	0	0
<b>Total</b>	<b>150</b>	<b>54</b>	<b>1</b>	<b>150</b>	<b>34</b>	<b>2</b>

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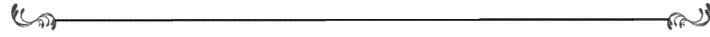
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## Streszczenie

### *Typy opisowe stawonogów w żywicach kopalnych ze zbiorów Muzeum Ziemi PAN w Warszawie*

W artykule została przedstawiona lista 206 okazów kopalnych stawonogów w bursztynie bałtyckim (Paleogen) ze zbiorów Polskiej Akademii Nauk Muzeum Ziemi w Warszawie. Holotypy (150 spp.), paratypy (54 spp.) i neotypy (2 spp.) należą do następujących jedenastu rzędów: Amphipoda (3 spp.), Araneae (8 spp.), Acariformes (3 spp.), Diptera (47 spp.), Hemiptera (38 spp.), Hymenoptera (17 spp.), Coleoptera (14 spp.), Thysanoptera (11 spp.), Strepsiptera (5 spp.), Lepidoptera (3 spp.), Neuroptera (1 sp.).