

MILWAUKEE PUBLIC MUSEUM

Contributions

| in
| BIOLOGY
| and
| GEOLOGY

Number 88

December 31, 1994

A Compendium of Fossil Insect Families

Conrad C. Labandeira

MILWAUKEE PUBLIC MUSEUM

Contributions

in
BIOLOGY
and
GEOLOGY

Number 88

December 31, 1994

A Compendium of Fossil Insect Families

Conrad C. Labandeira

Department of Paleobiology
National Museum of Natural History
Smithsonian Institution
Washington, D.C. 20560

Milwaukee Public Museum Contributions in Biology and Geology

Rodney Watkins, Editor

This publication is priced at \$6.00 and may be obtained by writing to the Museum Shop, Milwaukee Public Museum, 800 West Wells Street, Milwaukee, WI 53233. Orders must include \$3.00 for shipping and handling (\$4.00 for foreign destinations) and must be accompanied by money order or check drawn on U.S. bank. Money orders or checks should be made payable to the Milwaukee Public Museum, Inc. Wisconsin residents please add 5% sales tax.

ISBN 0-89326-173-4

©1994 Milwaukee Public Museum, Inc.
Sponsored by Milwaukee County

CONTENTS

2	ABSTRACT
2	INTRODUCTION
2	PHILOSOPHY AND METHODS OF COMPILATION
5	GENERAL SUMMARY
6	ACKNOWLEDGEMENTS
7	TABLE 1: Completeness of the family-level insect fossil record
8	FIGURE 1: Geologic time scale used in this study
10	FIGURE 2: Family diversity of fossil insect orders
11	REFERENCES
15	THE COMPENDIUM
15	Archaeognatha
15	Monura
15	Zygentoma
15	Ephemeroptera
16	Odonata
17	Palaeodictyoptera
18	Permothemistida
18	Megasecoptera
19	Diaphanopteroidea
19	"Protorthoptera"
20	Blattodea
21	Mantodea
21	Isoptera
21	Protelytroptera
21	Dermaptera
21	Orthoptera
22	Phasmatodea
22	Titanoptera
23	Embioptera
23	Grylloblattodea
23	Plecoptera
23	Caloneuroidea
24	Hypoperlida
24	Zoraptera
24	Psocoptera
25	Phthiraptera
25	Thysanoptera
25	Hemiptera
29	Miomoptera
29	Glosselytroidea
29	Megaloptera
29	Raphidioidea
30	Neuroptera
30	Coleoptera
33	Strepsiptera
33	"Paratrachoptera"
34	Mecoptera
34	Siphonaptera
35	Diptera
38	Trichoptera
39	Lepidoptera
40	Hymenoptera
42	Incertae Sedis
42	COMPENDIUM BIBLIOGRAPHY

ABSTRACT

This compendium is a comprehensive documentation of fossil insect diversity. This compilation of diversity consists of 1272 families from 42 taxonomic orders, of which 98 percent are resolved to the level of the geologic stage for post-Carboniferous and epoch for Carboniferous occurrences. 63.4% of all modern insect families have fossil records, and documentation is provided for the extent of family-level completeness of each modern insect order in the fossil record. All literature-accessible, recent discoveries are incorporated in this compendium, particularly new taxa from several Cretaceous amber and compression deposits. The special features of this compendium are also discussed.

INTRODUCTION

Studies of insect diversity have been overwhelmingly confined to the modern world. Recently, many of these studies have been concerned principally with estimating the approximate number of known and unknown species for the global biota (Stork, 1988; Gaston, 1991). While these estimates range from two to five million (Gaston, 1991; Hodkinson and Casson, 1991; Hodkinson, 1992) to twenty million (Erwin, 1982) or even more (Erwin, 1988), it is highly unlikely that the total count will ever be exacted, given the ongoing rate of species loss from anthropogenic destruction of insect habitats, particularly in the tropics and subtropics, and continual erosion of systematic expertise in identifying and describing new insect species (Stork, 1988). However, if the question becomes refocused on the origin of insect diversity through geological time, a more tractable answer may be available if the taxonomic rank is raised to the family level, and diversity is evaluated in broader patterns of clade dynamics. Macroevolutionary phenomena such as clade origination and extinction, clade replacement and the internal fluctuation within clades accordingly can be studied. It is these issues of clade dynamics that motivated the compilation of family-level fossil insect diversity into this compendium. The compendium is designed for use by researchers interested in the evolutionary history and paleobiology of insects, including comparative studies of fossil insect diversity patterns with other relevant, interacting organismic groups. An example of the application of these data was the conclusion that insect diversity was not associated with the initial diversification of angiosperms (Labandeira and Sepkoski, 1993). It is hoped that the data provided herein will promote additional examination of the fossil insect record.

The methods used in the assembly of this compendium are discussed in the following section so that users will be aware of its strengths and weaknesses. Before presenting the compendium and its cross-linked bibliography, a summary is presented of modern and fossil familial diversities for each insect order (Table 1). This table provides an evaluation of the degree to which the fossil record captures the family-level diversity for each modern insect order.

PHILOSOPHY AND METHODS OF COMPILATION

The fossil insect literature initially consulted for this compendium consisted of approximately 2,500 sources that were written in several languages, dispersed among paleontological, geological and entomological journals of at least 35 countries, and of highly variable accessibility and reliability. Consequently, four criteria were established for acceptance of the data in a given bibliographic source for inclusion in the compendium.

The first of these criteria is that the family-level taxa must be accepted and used by a community of active paleoentomologists, allowing for minor, but not major, disagreements regarding validity and usage. Second, for those fossil families housed in extant orders, reliability was placed on the judgements of either those systematists who predominately work on modern descendants or relatives of fossil groups and occasionally describe fossil material, or on systematists who principally work with fossil subgroups, but nevertheless possess expertise in the subsuming modern group. Third, fossil families with inadequate diagnoses, descriptions, and figured material, or those which subsequently have been synonymized, have been excluded from the compendium as much as possible. For fossil material, Carpenter's (1992) Hexapoda volume of the *Treatise on Invertebrate Paleontology* was of valuable assistance, although it had a cutoff date of 1983 and some earlier descriptions were missed.

Last, special reliance was placed on major and recent works that revised the systematics of particular groups, especially those that combined fossil and recent taxa. Examples include Rasnitsyn (1975, 1980) and Köningsmann (1976-1978) for Hymenoptera; Schneider (1978) for Blattodea; Landa and Soldà (1985) and Hubbard (1987) for Ephemeroptera; Willmann (1989) for Mecoptera; Rohdendorf and Rasnitsyn (1980), Kukulová-Peck (1991) and Kukulová-Peck and Brauckmann (1992) for "Protorthoptera" (see below); and Nel et al., (1993) for Odonata. For polyphyletic taxa such as the "Protorthoptera" and "Paratrachoptera," allocation of constituent families to existing or new orders will occur. The "Protorthoptera" is a case in point. Because of its undoubtedly polyphyletic status, the "Protorthoptera" has been partly disassembled by various researchers (Rasnitsyn, 1980; Rohdendorf and Rasnitsyn, 1980; Kukulová-Peck, 1991; Kukulová-Peck and Brauckmann, 1992). Notably, 26 formerly protorthopteran families with apparent hemipteroid features have been segregated into the order Hypoperlida (Kukulová-Peck and Brauckmann, 1992). Although the status and content of the Hypoperlida will probably change, the establishment of this clade is based on explicit characters, and is preferable to the previous situation of inclusion into the undiagnosable and universally acknowledged polyphyletic "Protorthoptera" (Hennig, 1981; Labandeira, 1993a, 1993b). Consequently, implicit in this compilation is the notion that, like modern taxa, these fossil families are hypothesis statements that are testable with additional data. In summary, the compendium resulting from use of these criteria can be considered to include those families whose taxonomic legitimacy is well established or reasonably well-founded.

Twelve major data sources were used to establish the systematic and geochronological foundation of this compendium. These sources include six treatises that extensively document fossil insect occurrences throughout the geologic column: *Classe des Insectes* of the *Traité de Paleontologie* (Laurentiaux, 1953), *The Fossil Record: Arthropoda* (Crowson, et al., 1967); *Historical Development of the Class Insecta* (Rohdendorf and Rasnitsyn, 1980), *The Mesozoic Biocoenotic Crisis in the Evolution of Insects* (Ponomarenko, 1988), *Fundamentals of Paleontology: Tracheata, Chelicerata* (Rohdendorf, 1991), and the *Treatise on Invertebrate Paleontology: Hexapoda* (Carpenter, 1992). The four major compilations of amber insect occurrences that were used are *Baltic Amber: A Palaeobiological Study* (Larsson, 1978) and *Life in Amber* (Poinar, 1992), as well as Keilbach's (1982a,b) extensive bibliography of Baltic amber taxa, which has been updated and expanded by Spahr (1981-1992). Included in this compendium are reports of insects from seven major, recently described Cretaceous lagerstätten. These deposits occur in China (Hong, 1982); England (Jarzembowski, 1984); Spain (Whalley and Jarzembowski, 1985); Mongolia (Tatarinov, 1986); Australia (Jell and Duncan, 1986); Botswana (Rayner and MacKay,

1986; Rayner and Waters, 1991); and Brazil (Martins-Neto, 1987; Grimaldi, 1990). Also included are major Soviet revisions of fossil insects from extant orders, including the Plecoptera (Sinitshenkova, 1987), Coleoptera (Ponomarenko, 1969; Arnol'di, et al., 1992), Trichoptera (Sukacheva, 1982), Diptera (Rohdendorf, 1974; Kalugina and Kovalev, 1985), and Hymenoptera (Rasnitsyn, 1979, 1980). This combination of foundational treatises, compilations of amber taxa, recent descriptions of insects from Cretaceous lagersätten, and major, ordinal-level revisions of fossil insect taxa, has been extensively supplemented by numerous articles detailing smaller assemblages of fossil insects as well as notes describing single fossil insect species. These sources total to a bibliography of 550 references that were used to document the geochronologic occurrence of fossil insect families.

A baseline for the classification of modern families was provided by two recently published texts that are widely acknowledged as reference standards in entomology: the second edition of *The Insects of Australia* (Naumann, et al., 1991) and *Immature Insects* (Stehr, 1987, 1990). These two references were minimally updated by several recent systematic revisions to yield a modern insect diversity of 988 families, excluding noninsectan hexapods. This diversity is close to the 972 families recognized in the earlier compendium of Parker (1982). This value of global family diversity is a conservative one, and it undoubtedly will rise as distinctive insect clades are discovered and the current pattern of elevating subfamilies to the rank of family continues into the near future.

The insect families of this compendium have been stratigraphically resolved to the level of the geologic stage, except in the Carboniferous where the level of epoch is used. This is the highest resolution that is presently attainable, given the vagaries of interbasinal and intercontinental correlation in terrestrial deposits. *A Geological Time Scale--1989* (Harland, et al., 1990) was used as the standard geochronological reference (Figure 1). This reference introduces new changes in stratigraphic nomenclature and discusses calibrations from isotopic studies for improved resolution of absolute dates. It should be understood that the time durations of stages vary considerably, ranging from 0.8 million years for the Nammalian of the Triassic, to 15 million years for the Albian of the Cretaceous. All Devonian and Permian to Recent stages collectively represent a mean value of 5.2 million years, which is an approximate figure for the typical level of resolution attainable for the non-Carboniferous portion of this compendium. Most of the imprecision experienced in geochronological resolution originated from poor stage-level correlations in terrestrial Carboniferous deposits, and from Chinese studies, in which stratigraphic position is generally resolved by the more generalized epoch, translating to "early", "middle" and "late" within a geologic period. Nevertheless, in this compendium 98 percent of all families were either resolvable to the stage level for those with first and last occurrences during the Devonian and Permian to Recent, or to the epoch level for those with first and/or last occurrences during the Carboniferous.

The format of this compendium is similar to that of Sepkoski (1992) and represents an exhaustive updating of the data set that was used for creating the clade spindle diagrams in Sepkoski and Hulver (1985). In the first column, the sequence of taxonomic orders follows a phylogenetic progression from primitive to advanced (Hennig, 1981; Stehr, 1987, 1991; Naumann, et al., 1991), with families arranged alphabetically within orders. The parallel Russian classification of orders (Rohdendorf, 1977) is provided as synonyms in parentheses. In the second and third columns, the first occurrences and last (or recent) occurrences are demarcated according to the geologic period and stage abbreviations of Figure 1. Reference sources for first and last occurrences, systematic revisions, or other pertinent documentation are provided in the last column within parentheses; numbers refer to reference entries in the bibliography that follows the compendium. Taxa that have

not been formally named but warrant family-level taxonomic status are entered as italicized genera. If there is minor doubt regarding the ordinal placement of a family or if the stage-level assignment of a particular occurrence is only approximately known, a question mark is used.

There are several conventions used in this compendium. First, this compendium excludes all subfossil or Holocene occurrences. A data base is currently being developed to accommodate Pleistocene and Holocene insects (Sadler and Buckland, 1992). For three amber deposits, extensive sedimentary recycling and perhaps long geochronologic durations have resulted in wide-ranging stage designations in the literature. In these cases, conservative (i.e., more recent) assignments have been chosen: Baltic amber is considered Rupelian (lower Oligocene), Dominican amber is Chattian (upper Oligocene), and Mexican amber is Aquitanian (lowest Miocene). Similarly, where there was doubt about the assignment of a deposit to one of two temporally adjacent stages, the more recent stage was chosen. Lastly, families whose ordinal placement is largely unknown are grouped under "Incertae Sedis" at the end of the compendium.

After this compendium was submitted for publication, *The Fossil Record 2* appeared (Benton, 1993), in which a list of fossil hexapod families was provided (Ross and Jarzembowski, 1993; see also Jarzembowski and Ross, 1993). The present compendium differs from that of Ross and Jarzembowski (1993) by (1) greater stratigraphic resolution of families, (2) citation of source documentation for each family entry, including relevant systematic revisions and contenders for earliest or latest occurrences, and (3) a literature survey cutoff date of April, 1994. Mention of stratigraphic resolution is important, since Ross and Jarzembowski (1993) achieved 28 percent resolution to the stage level for those families with first and last occurrences during the Devonian and Permian to Recent, or to the epoch level in the case of those families with Carboniferous occurrences. This compares with a 98 percent level of geochronologic resolution in the present study. In many instances, stage-level data for the present study were available from primary insect descriptions, or from relevant but accessible secondary sources. For other family occurrences, more extensive consultation of secondary sources was necessary for documenting the regional biostratigraphy and correlations to known marine sections that allowed proper placement of insect deposits. These geochronologically finer-grained data are essential for studies of the macroevolutionary dynamics of insects, such as those of Wilson (1983) and Labandeira and Sepkoski (1993).

GENERAL SUMMARY

The general perception is that the insect fossil record is poor (Carpenter, 1992). However, when compared to other fossil groups, insects are well represented as fossils at the family level. A summary of this compendium indicates that 63.4 percent of extant insect families possess known fossil representatives (Table 1). Notably, three of the four most diverse homometabolous orders display higher than average capture rates of fossil families. When compared to the 63.4 percent average capture rate for all orders, the values for these important homometabolous orders are: Coleoptera (68.0% of 172 families), Diptera (74.1% of 135 families), and Hymenoptera (85.3% of 95 families). The very diverse Lepidoptera do not conform to this pattern (42.0% of 138 families); apparently their large, delicate, and lightly-sclerotized bodies have resulted in minor representation in lagerstätten deposits (Labandeira and Sepkoski, 1993). There are no other detectable trends in the preferred representation of major insect orders as fossils, other than the very poor representation of two parasitic orders (Phthiraptera and

Siphonaptera), and the lack of any fossil representative of the single extant family of the relict and rare order, Grylloblattodea.

There is a strong association between those insect orders that are currently most diverse, and those which have the greatest fossil diversities (Fig. 2). Four of the five most diverse insect clades have high modern and fossil familial diversities, namely Hemiptera (138 modern families, 167 fossil families), Diptera (135 modern, 160 fossil), Coleoptera (172 modern, 143 fossil), and Hymenoptera (95 modern, 109 fossil). These five clades collectively represent 55 percent of all modern and 45 percent of all fossil insect families, respectively. The principal explanation for these modern and fossil values is partly the poor representation of lepidopteran families; also important is the strikingly high diversities of orders originating during the Paleozoic that currently have low diversities. These include the Odonata (28 modern families, 72 fossil families), Blattodea (6 modern, 25 fossil), Neuroptera (18 modern, 34 fossil) and Mecoptera (9 modern, 34 fossil). Additionally, several other Paleozoic-originating insect orders that became extinct during the Late Permian to Early Mesozoic were moderately diverse, also contributing to the demphasis in familial diversity of currently diverse insect orders.

ACKNOWLEDGEMENTS

The indefatigable efforts of the interlibrary loan staffs of The University of Chicago, the University of Illinois at Urbana-Champaign and, most recently, the Natural History Library of the Smithsonian Institution have all made this compendium possible. I dedicate this compendium to the interlibrary loan staffs of these three superb institutions. Also, I am indebted to Finnegan Marsh for producing and implementing the appropriate spreadsheet programs to allow maximum flexibility and integration of the data base and corresponding bibliography. I express my appreciation to my colleagues Neil Evenhuis, David Grimaldi and Curtis Sabrosky, who have shared taxonomic data with me and the intricacies of Diptera classification. This data base was the initial work of Jack Sepkoski, who developed an original version of it during the early 1980s.

All responsibility for potential errors in this data base are mine. I welcome all reprints, and particularly suggestions for the updating of taxa, their geochronologic ranges, or any other modifications. This is contribution 14 from the Evolution of Terrestrial Ecosystems program at the National Museum of Natural History.

Insect Order	Extinct Familial Diversity	Extant Familial Diversity	Extant families with Fossil Records	Percent of Extant Families with Fossil Records
Archaeognatha	3	2	2	100.0
Monura	1	0	-	-
Zygentoma	4	4	3	75.0
Ephemeroptera	33	24	17	70.1
Odonata	72	28	22	78.6
Palaeodictyoptera	35	0	-	-
Permothemistida	4	0	-	-
Megaseoptera	28	0	-	-
Diaphanopteroidea	15	0	-	-
"Protorthoptera"	48	0	-	-
Blattodea	25	6	4	66.7
Mantodea	6	8	4	50.0
Isoptera	6	7	6	85.7
Protelytroptera	11	0	-	-
Dermaptera	7	10	6	60.0
Orthoptera	41	29	15	51.7
Phasmatodea	10	6	3	50.0
Titanoptera	3	0	-	-
Embioptera	8	8	6	75.0
Grylloblattodea	9	1	0	0
Plecoptera	21	15	11	73.3
Caloneuroidea	10	0	-	-
Hypoperlida	25	0	-	-
Zoraptera	1	1	1	100.0
Psocoptera	35	35	26	74.3
Phthiraptera	2	19	2	10.5
Thysanoptera	11	8	5	62.5
Hemiptera	167	138	82	59.4
Miomoptera	8	0	-	-
Glosselytroidea	6	0	-	-
Megaloptera	4	2	2	100.0
Raphidioidea	9	2	2	100.0
Neuroptera	34	18	14	77.8
Coleoptera	143	172	117	68.0
Strepsiptera	4	8	3	37.5
"Paratrachoptera"	7	0	-	-
Mecoptera	34	9	8	88.9
Siphonaptera	6	17	4	23.5
Diptera	160	135	100	74.1
Trichoptera	32	43	23	53.5
Lepidoptera	62	138	58	42.0
Hymenoptera	109	95	81	85.3
Incertae Sedis	11	0	-	-
TOTALS:	1272	988	626	63.4

Table 1. Completeness of the family-level insect fossil record. Extant familial diversity is taken from Naumann et al. (1991), with minor additions.

Era	Per.	Epoch (Abbreviation)	Stage	Stage Abbrev.	Age Ma	
Cenozoic	Q	Holocene		Holo	0.01	
		Pleistocene		Plei	1.64	
	Pliocene (Plio)	Piacenzian	Piac	3.4		
		Zancian	Zanc	5.2		
		Messinian	Mess	6.7		
		Tortonian	Tort	10.4		
	Miocene (Mioc)	Serravallian	Serr	14.2		
		Langhian	Lang	16.3		
		Burdigalian	Burd	21.5		
		Aquitanian	Aqui	23.3		
		Chatthian	Chat	29.3		
	Oligocene (Olig)	Rupelian	Rupe	35.4		
		Priabonian	Pria	38.6		
	Eocene (Eoce)	Bartonian	Bart	42.1		
		Lutetian	Lute	50.0		
		Ypresian	Ypre	56.5		
	Paleocene (Pale)	Thanetian	Than	60.5		
		Danian	Dani	65.0		
	Mesozoic	Cretaceous	Senonian (Seno)	Maastrichtian	Maas	74.0
				Campanian	Camp	83.0
Santonian				Sant	86.6	
Coniacian				Coni	88.5	
Gallic (Gall)			Turonian	Turo	90.4	
		Senonian	Seno	97.0		
		Albian	Albi	112.0		
		Aptian	Apti	124.5		
		Barremian	Barr	131.8		
Neocomian (Neoc)		Hauterivian	Haut	135.0		
		Valanginian	Vala	140.7		
		Berriasian	Berr	145.6		
		Tithonian	Tith	152.1		
		Malm	Malm	154.7		
Jurassic		Malm (Malm)	Kimmeridgian	Kimm	157.1	
			Oxfordian	Oxfo	161.3	
			Callovian	Call	166.1	
		Dogger (Dogg)	Bathonian	Bath	173.5	
			Bejocian	Bejo	178.0	
			Aalenian	Aale	187.0	
	Lias (Lias)	Toarcian	Toar	194.5		
Pliensbachian		Plie	203.5			
Sinemurian		Sine	208.0			
Hettangian		Hett	209.5			
Triassic	Upper (Upp)	Rhaetian	Rhae	223.4		
		Norian	Nori	235.0		
		Camian	Cam	239.5		
	Middle (Midd)	Ladinian	Ladi	241.1		
		Anisian	Anis	241.9		
	Scythian (Scyt)	Spathian	Spat	243.4		
		Nammalian	Namm	245.0		

Figure 1. Geologic time scale used in this study.

Era	Period	Epoch (Abbreviation)	Stage	Stage Abbrev.	Age Ma	
Paleozoic	Permian	Zechstein (Zech)	Changxingian	Chan	247.5	
			Longtanian	Long	250.0	
			Capitanian	Capi	252.5	
			Wordian	Word	255.0	
			Ufimian	Ufim	256.1	
		Rotliegendes (Rotl)	Kungurian	Kung	259.7	
			Artinskian	Arti	268.8	
			Sakmarian	Sakm	281.5	
			Asselian	Asse	290.0	
			Gzelian (Gzel)			295.1
	Carboniferous	Pennsylvanian	Kasimovian (Kasi)	Stages		303.0
			Moscovian (Mosc)	not		311.3
			Bashkirian (Bash)	used		322.8
				in		332.9
		Mississippian	Serpukhovian (Serp)	this		349.5
			Visean (Vise)	study		362.5
			Tournaisian (Tour)			367.0
			Devonian	Upper	Famennian	Fame
		Frasnian			Fras	380.8
		Middle		Givetian	Give	386.0
	Eifelian			Eife	390.4	
	Lower	Emsian		Emsi	396.3	
		Pragian		Prag	408.5	
		Lochkovian		Loch		

Figure 1. (Continued)

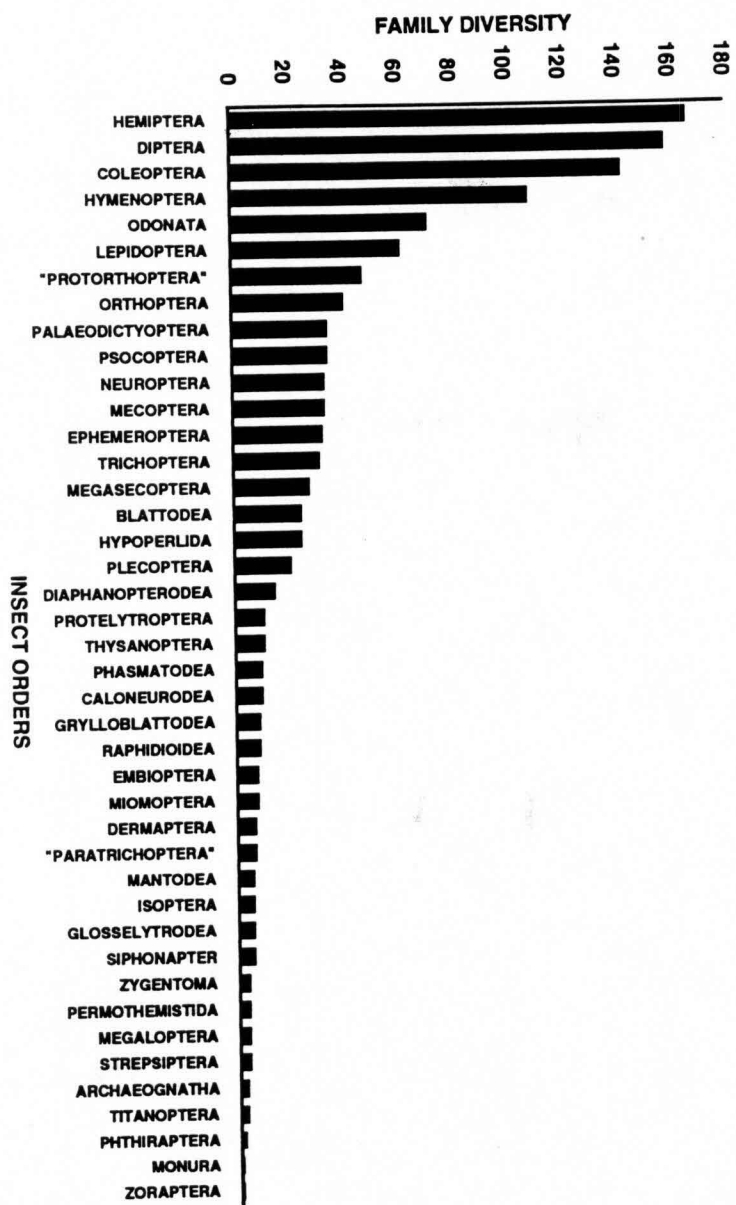


Figure 2. Family diversity of fossil insect orders.

REFERENCES

- Arnol'di, L.V., V.V. Zherikhin, L.M. Nikritin and A.G. Ponomarenko. 1992 [1977]. Mesozoic Coleoptera. Amerind Publishing Company, xii, 285 pp.
- Benton, M.J., ed. 1993. The Fossil Record 2. Chapman and Hall, London, 845 pp.
- Carpenter, F.M. 1992. Superclass Hexapoda. in Kaesler, R.L., E. Brosius, J. Keim and J. Priesner, eds., Treatise on Invertebrate Paleontology, Part R (Arthropoda 4). University of Kansas Press, Lawrence and Geological Society of America, Boulder, 655 pp.
- Crowson, R.A., W.D.I. Rolfe, J. Smart, C.D. Waterston, E.C. Willey and R.J. Wootton. 1967. Arthropoda: Chelicerata, Pycnogonida, *Palaeoisopus*, Myriapoda and Insecta. In Harland W.B., et al., eds., The Fossil Record, Geological Society of London, pp. 499-534.
- Erwin, T.L. 1982. Tropical forests: their richness in Coleoptera and other arthropod species. The Coleopterists Bulletin, 36(1): 74-75.
- Erwin, T.L. 1988. The tropical forest canopy: the heart of biotic diversity. In Wilson E.O. ed., Biodiversity. National Academy Press, pp. 123-129.
- Gaston, K.J. 1991. The magnitude of global insect species richness. Conservation Biology, 5(3): 282-296.
- Grimaldi, D.A. ed., 1990. Insects from the Santana Formation, Lower Cretaceous, of Brazil. Bulletin of the American Museum of Natural History, 195: 1-191.
- Harland, W.B., R.L. Armstrong, A.V. Cox, L.E. Craig, A.G. Smith and D.G. Smith. 1990. A Geologic Time Scale-1989. Cambridge University Press, xvi, 263 pp.
- Hennig, W. 1981. Insect Phylogeny. John Wiley and Sons, xix, 514 pp.
- Hodkinson, I.D. 1992. Global insect diversity revisited. Journal of Tropical Ecology, 8: 505-508.
- Hodkinson, I.D. and D. Casson. 1991. A lesser predilection for bugs: Hemiptera (Insecta) diversity in tropical rain forests. Biological Journal of the Linnean Society, 43: 101-109.
- Hong, Y.-C. 1982. Mesozoic Fossil Insects of Jiuquan Basin in Gansu Province. Geological Publishing House, 187 pp. [In Chinese.]
- Hubbard, M.D. 1987. Ephemeroptera. Fossilium Catalogus (I: Animalia), 129: 1-99.
- Jarzembowski, E.A. 1984. Early Cretaceous insects from southern England. Modern Geology, 9: 71-93.
- Jarzembowski, E.A. and A. Ross. 1993. Time flies: the geological record of insects. Geology Today, 9(6): 218-223.
- Jell, P.A. and P.M. Duncan. 1986. Invertebrates, mainly insects, from the freshwater, Lower Cretaceous, Koonwarra Fossil Bed (Korumburra Group), South Gippsland, Victoria. Memoirs of the Association of Australasian Palaeontologists, 3: 111-205.
- Kalugina, N.S. and V.G. Kovalev. 1985. Dipterous insects from the Jurassic of Siberia. Paleontological Institute of the USSR Academy of Sciences, 199 pp. [In Russian.]
- Keilbach, R. 1982a. Bibliographie und Liste der Arten tierischer Einschlüsse in fossilen Harzen sowie ihrer Aufbewahrungsorte. Teil 1. Deutsche Entomologische Zeitschrift, N.F., 29(1/3): 129-286.
- Keilbach, R. 1982b. Bibliographie und Liste der Arten tierischer Einschlüsse in fossilen Harzen sowie ihrer Aufbewahrungsorte. Teil 2. Deutsche Entomologische Zeitschrift, N.F., 29(4/5): 301-491.
- Königsmann, E. 1976. Das phylogenetische System der Hymenoptera. Teil 1: Einführung, Grundplanmerkmale, Schwestergruppe und Fossilfunde. Deutsche

- Entomologische Zeitschrift, N.F., 23(4/5): 253-279.
- Königsmann, E. 1977. Das phylogenetische System der Hymenoptera. Teil 2: "Symphyta." Deutsche Entomologische Zeitschrift, N.F., 24(1/3): 1-40.
- Königsmann, E. 1978a. Das phylogenetische System der Hymenoptera. Teil 3: "Terebrantes" (Unterordnung Apocrita). Deutsche Entomologische Zeitschrift, N.F., 25(1/3): 1-55.
- Königsmann, E. 1978b. Das phylogenetische System der Hymenoptera. Teil 4: Aculeata (Unterordnung Apocrita). Deutsche Entomologische Zeitschrift, N.F., 25(4/5): 365-435.
- Kukalová-Peck, J. 1991. Fossil history and the evolution of hexapod structures. In Naumann I.D., et al., eds., *The Insects of Australia: A Textbook for Students and Research Workers*. Cornell University Press, 1: 141-179.
- Kukalová-Peck, J. and C. Brauckmann. 1992. Most Paleozoic Protorthoptera are ancestral hemipteroids: major wing braces as clues to a new phylogeny of Neoptera (Insecta). *Canadian Journal of Zoology*, 71: 2452-2473.
- Labandeira, C.C. 1993a. What's new with fossil insects? *American Paleontologist*, 1(4): 1-5.
- Labandeira, C.C. 1993b. The real meaning of insect fossils. *Palaios*, 8(6): 509-511.
- Labandeira, C.C. and J.J. Sepkoski, Jr. 1993. Insect diversity in the fossil record. *Science*, 261: 310-315.
- Landa, V. and T. Soldán. 1985. Phylogeny and higher classification of the order Ephemeroptera: a discussion from the comparative anatomical point of view. *Studie Československá Akademie Věd*, 4: 1-121.
- Larsson, S.G. 1978. *Baltic Amber: A Palaeobiological Study*. Entomonograph 1: 1-192.
- Laurentiaux, D. 1953. Classe des insectes. In G.E.G. Piveteau, ed., *Traité de Paléontologie*. Paul Masson, pp. 397-527.
- Martins-Neto, R.G. 1987. A paleoentomofauna Brasileira: Estagio atual do conhecimento. *Anais do Décimo Congresso Brasileiro de Paleontologia*, Rio de Janeiro, pp. 567-591.
- Naumann I.D., P.B. Carne, J.F. Lawrence, E.S. Nielsen, J.P. Spradbery, R.W. Taylor, M.J. Whitten. and M.J. Littlejohn, eds. 1991. *The Insects of Australia: A Textbook for Students and Research Workers*, (second edition). Cornell University Press, xvii, 1137 pp.
- Nel, A., X. Martínez-Delclòs, J.-C. Paicheler and M. Henrotay. 1993. Les "Anisozygotera" fossiles: phylogénie et classification (Odonata). *Martinia*, 3: 1-312.
- Parker, S.P. ed. 1982. *Synopsis and Classification of Living Organisms*. Volume 2. McGraw-Hill Book Company, 1232 pp.
- Poinar, G.O., Jr. 1992. *Life in Amber*. Stanford University Press, xiii, 350 pp.
- Ponomarenko, A.G. 1969. Historical development of the Coleoptera Archostemata. *Transactions of the Paleontological Institute*, 125: 1-240. [In Russian.]
- Ponomarenko, A.G., ed. 1988. *The Mesozoic Biocoenotic Crisis in the Evolution of Insects*. USSR Academy of Sciences, 230 pp. [In Russian.]
- Rasnitsyn, A.P. 1979 [1969]. *Origin and Evolution of Lower Hymenoptera*. National Science Foundation, Science Information Program, xvii, 317 pp.
- Rasnitsyn, A.P. 1975. Hymenoptera Apocrita of the Mesozoic. *Transactions of the Paleontological Institute*, 147: 1-134. [In Russian.]
- Rasnitsyn, A.P. 1980. Origin and evolution of the Hymenoptera (Insecta). *Transactions of the Paleontological Institute*, 174: 1-192. [In Russian.]
- Rayner, R.J. and I.J. MacKay. 1986. The treasure chest of the Orapa diamond mine. *Botswana Notes and Records*, 18: 55-61.

- Rayner, R.J. and S.B. Waters. 1991. Floral sex and the fossil insect. *Naturwissenschaften*, 78: 280-282.
- Rohdendorf, B.B. 1974 [1964]. *The Historical Development of the Diptera*. University of Alberta Press, 360 pp.
- Rohdendorf, B.B. 1977. On the rationalization of names of higher taxa in Zoology. *Paleontological Journal*, 11(2): 14-22. [In Russian.]
- Rohdendorf, B.B., ed. 1991 [1962] *Arthropoda, Tracheata, Chelicerata*. In Orlov Y.A., ed., *Fundamentals of Paleontology*. Amerind Publishing Company, New Delhi. 894 pp.
- Rohdendorf, B.B. and A.P. Rasnitsyn. 1980. Historical development of the Class Insecta. *Transactions of the Paleontological Institute*, 175: 1-270. [In Russian.]
- Ross, A.J. and Jarzembowski E.A. 1993. *Arthropoda (Hexapoda; Insecta)*. In M.J. Benton, ed., *The Fossil Record 2*. Chapman and Hall, London, pp. 363-426.
- Sadler, J.P. and P.C. Buckland. 1992. BUGS: an entomological database. *Antenna*, 16: 158-166.
- Schneider, J. 1978. Zur Taxonomie und Biostratigraphie der Blattodea (Insecta) des Karbon und Perm der DDR. *Freiberger Forschungshefte, (C)*, 340: 1-152.
- Sepkoski, J.J. Jr. 1992. *A compendium of fossil marine families*, 2nd edition. Milwaukee Public Museum Contributions in Biology and Geology, 83: 1-156.
- Sepkoski, J.J. Jr. and M.L. Hulver. 1985. An atlas of Phanerozoic clade diversity diagrams. In J.W. Valentine, ed., *Phanerozoic diversity patterns: profiles in macroevolution*. Princeton University Press, ix, 442 pp.
- Sinitshenkova, N.D. 1987. Historical development of the Plecoptera. *Transactions of the Paleontological Institute*, 221: 1-143. [In Russian.]
- Spahr, U. 1981a. Bibliographie der bernstein- und kopal-Käfer (Coleoptera). *Stuttgarter Beiträge zur Naturkunde, (B)*, 72: 1-21.
- Spahr, U. 1981b. Systematischer Katalog der bernstein- und kopal- Käfer (Coleoptera). *Stuttgarter Beiträge zur Naturkunde, (B)*, 80: 1-107.
- Spahr, U. 1985. Ergänzungen und Berichtigungen zu R. Keilbach's Bibliographie und Liste der Bernsteinfossilien-Ordnung Diptera. *Stuttgarter Beiträge zur Naturkunde, (B)*, 111: 1-146.
- Spahr, U. 1987. Ergänzungen und Berichtigungen zu R. Keilbach's Bibliographie und Liste der Bernsteinfossilien-Ordnung Hymenoptera. *Stuttgarter Beiträge zur Naturkunde, (B)*, 127: 1-121.
- Spahr, U. 1988. Ergänzungen und Berichtigungen zu R. Keilbach's Bibliographie und Liste der Bernsteinfossilien-Überordnung Hemipteroidea. *Stuttgarter Beiträge zur Naturkunde, (B)*, 144: 1-60.
- Spahr, U. 1989. Ergänzungen und Berichtigungen zu R. Keilbach's Bibliographie und Liste der Bernsteinfossilien-Überordnung Mecopteroidea. *Stuttgarter Beiträge zur Naturkunde, (B)*, 157: 1-87.
- Spahr, U. 1990. Ergänzungen und Berichtigungen zu R. Keilbach's Bibliographie und Liste der Bernsteinfossilien-"Apterygota." *Stuttgarter Beiträge zur Naturkunde, (B)*, 166: 1-23.
- Spahr, U. 1992. Ergänzungen und Berichtigungen zu R. Keilbach's Bibliographie und Liste der Bernsteinfossilien-Klasse Insecta. *Stuttgarter Beiträge zur Naturkunde, (B)*, 182: 1-102.
- Stehr, F.W., ed. 1987. *Immature Insects*. Kendall-Hunt Publishing Company, 1: xiv, 1-754.
- Stehr, F.W., ed. 1991. *Immature Insects*. Kendall-Hunt Publishing Company, 2: xvi, 1-975.

- Stork, N.E. 1988. Insect diversity: facts, fiction and speculation. *Biological Journal of the Linnean Society*, 35: 321-337.
- Sukacheva, I.D. 1982. Historical development of the order Phryganeida. *Transactions of the Paleontological Institute*, 197: 1-112. [In Russian.]
- Tatarinov, L.P., B. Luvsandanzan, G.A. Afanasyeva, R. Barsbold, I.P. Morosowa, L.I. Novitskaya, V.Y. Reshetov, A.Y. Rosanov, V.A. Sysoev, B.A. Trofimov and A.P. Rasnitsyn, eds. 1986. Insects in the Early Cretaceous ecosystems of the west Mongolia. *Joint Soviet-Mongolian Palaeontological Expedition*, 28: 1-216. [In Russian.]
- Whalley, P.E.S. and E.A. Jarzembowski. 1985. Fossil insects from the lithographic limestone of Montsech (late Jurassic-early Cretaceous), Lérida Province, Spain. *Bulletin of the British Museum of Natural History, Geology*, 38(5): 381-412.
- Willmann, R. 1989. Evolution und phylogenetisches System der Mecoptera (Insecta: Holometabola). *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft*, 544: 1-153.
- Wilson, M.V.H. 1983. Is there a characteristic rate of radiation for the insects? *Paleobiology*, 9: 79-85.

THE COMPENDIUM

Or. ARCHAEOGNATHA (= Machilida, Microcoryphia)			
Machilidae	K (Haut)	- R	(201, 255, 350, 422, 468)
Meinertellidae	T (Chat)	- R	(531)
Unnamed family	D (Emsi)		(247)
Or. MONURA			
Dasyleptidae	C (Bash)	- P (Arti)	(106, 107, 242, 424)
Or. ZYGENTOMA (=Ectotropha, Lepismatida, Thysanura sensu stricto)			
Lepidotrichidae	K (Sant)	- R	(97, 350)
Lepismatidae	K (Sant)	- R	(97, 350)
Nicolettidae	T (Rupe)	- R	(468)
? <i>Ramsdelepidon</i> , n. fam	C (Mosc)		(240)
Or. EPHEMEROPTERA (= Ephemera)			
Aenigmephemeridae	J (Kimm)		(417)
Ameletopsidae	T (Rupe)	- R	(73, 108, 251)
Ametropodidae	K (Apti)	- R	(290, 418)
Aphelophlebodidae	T (Mess)		(251, 338)
Baetidae	K (Apti)	- R	(32, 132)
Behningiidae	J (Bajo)	- R	(383)
Bojophlebiidae	C (Mosc)		(242)
Epeoromimidae	J (Toar)	- K (Albi)	(97, 383, 456)
Ephemerellidae	J (Toar)	- R	(108, 271, 307)
Ephemeridae	K (Apti)	- R	(132, 280)
Euthyplociidae	K (Apti)	- R	(290, 280, 307)
Heptageniidae	T (Lute)	- R	(201, 268, 508)
Hexagenitidae	J (Toar)	- K (Albi)	(94, 97, 280, 290, 383)
Isonychidae	K (Sant)	- R	(549)
Jarmilidae	P (Arti)		(182)
Leptophlebiidae	J (Toar)	- R	(72, 172, 183, 209, 383, 418)
Litophlebiidae	Tr (Anis)		(182, 411, 418)
Mesephemeridae	P (Capi)	- J (Tith)	(44, 97, 232, 296)
Mesophlebiidae	Tr (Rhae)	- K (Apti)	(63, 194)
Mesopteropteridae	P (Capi)	- Tr(Namm)	(251, 420)
Metretopodidae	T (Rupe)	- R	(351)
Misthodotidae	P (Sakm)	- P (Kung)	(44, 73, 108, 205, 424)
Neopphemeridae	T (Aqui)	- R	(97, 263)
Oboriphlebiidae	P (Asse)		(182)
Oligoneuridae	J (Tith)	- R	(95, 280, 307)
Paleoanthidae	K (Sant)		(209)
Palingeniidae	J (?Bajo)	- R	(383, 385)
Polymitarcyidae	K (Apti)	- R	(255, 290)
Potamanthidae	K (Apti)	- R	(201, 255, 280, 290)
Protereismatidae	P (Arti)	- P (Word)	(59, 106, 143, 418, 424)
Siphonuridae	J (Toar)	- R	(97, 383)

Torephemeridae J (Oxfo) - K (Apti) (460)
 Triplosobidae C (Gzel) (107, 424)

Or. ODONATA (= Libellulida; including Protodonata)

Aeschniidae J (Oxfo) - K (Ceno) (97, 171, 416)
 Aeshnidae K (Vala) - R (249)
 Aktassiidae J (Kimm) - K (Vala) (63, 97, 417)
 Amphipterygidae J (Kimm) - R (9, 97, 115, 221, 319, 424)
 Archithemistidae J (Sine) - J (Kimm) (97, 294, 318, 517)
 Asiopteridae J (Kimm) (318, 417)
 Batkeniidae J (Hett) (372)
 Callimokaltaniidae P (Sakm) (106, 419, 424)
 Campterothlebiidae Tr (Rhae) - K (Apti) (97, 318, 371, 383)
 Calopterygidae T (Ypre) - R (132, 255, 265)
 Campotaxineuridae P (Arti) (418, 496)
 Chlorocyphidae T (Ypre) - R (132)
 Coenagrionidae J (Kimm) - R (97, 191)
 Congqingiidae J (Kimm) (318)
 Cordulegastridae T (Rupe) - R (320)
 Corduliidae K (Apti) - R (97, 280)
 Ditaxineuridae P (Arti) - P (Kung) (106, 299, 424)
 Eosagrionidae J (Plie) (63, 319, 418)
 Epiophlebiidae J (Toar) - R (318)
 Erasipteridae C (Bash) - C (Mosc) (26, 60, 424)
 Eugeopteridae C (Bash) (412)
 Euphaeidae T (Ypre) - R (63, 116, 265, 319, 511)
 Euthemistidae J (Kimm) - K (Haut) (189, 191, 318, 417)
 Gomphidae J (Sine) - R (97, 171)
 Hemeroscopidae K (Apti) - K (Albi) (97, 371)
 Heterophlebiidae J (Sine) - J (Kimm) (318, 417, 517)
 Isophlebiidae J (Hett) - K (Albi) (97, 318, 383)
 Italophebiidae Tr (Rhae) (519)
 Kaltanoneuridae P (Sakm) (419, 424)
 Kennedyidae P (Arti) - J (Hett) (106, 372, 424)
 Lestidae T (Ypre) - R (97, 275, 488, 511)
 Liadotypidae Tr (Spat) - J (Sine) (134, 256, 416)
 Liassogomphidae J (Sine) - J (Toar) (86, 418)
 Liassophlebiidae J (Hett) - J (Bajo) (171, 172, 318, 370, 424, 517)
 Libellulidae K (Vala) - R (97, 249)
 Meganeuridae C (Bash) - P (Capi) (26, 256)
 Megapodagrionidae K (Sant) - R (110, 418)
 Mesophlebiidae Tr (Rhae) - K (Apti) (318)
 Mitophlebiidae J (Hett) (372)
 Myopophlebiidae J (Toar) - K (Apti) (242, 318, 418)
 Oreopteridae J (Toar) - K (Albi) (97, 318, 418)
 Paralogidae C (Bash) - Tr (Anis) (60, 67, 106, 256, 411)
 Perilestidae T (Bart) - R (418)
 Permaeschnidae P (Word) - P (Capi) (296, 416, 418)
 Permagrionidae P (Long) (418)

Permeptallagidae	P (Sakm) - P (Capi)	(418, 419)
Permolestidae	P (Word)	(418)
Petaluridae	J (Kimm) - R	(9, 418)
Piroutetiidae	Tr (Rhae)	(316)
Platycnemididae	T (Rupe) - R	(255, 335, 527)
Polytaxineuridae	P (Word) - P (Long)	(405, 424)
Polythoridae	T (Bart) - R	(418)
Protomyrmeleontidae	Tr (Rhae) - K (Vala)	(97, 372, 491)
Protoneuridae	K (Apti) - R	(42, 279)
Pseudolestidae	T (Lute) - R	(63)
Pseudomacromiidae	K (Albi)	(42, 279)
Pseudostigmatidae	K (Albi) - R	(42, 279)
Selenothemistidae	J (Hett) - J (Toar)	(318)
Sieblosiidae	T (Chat) - T (Mess)	(97, 318)
Solikamptilonidae	P (Kung)	(416, 418)
Sonidae	K (Berr) - K (Apti)	(97, 290, 373)
Stenophlebiidae	J (Kimm) - K (Apti)	(9, 97, 318, 417)
Sublosiidae	T (Rupe)	(256)
Synlestidae	T (Chat) - R	(523)
Tarsophlebiidae	J (Toar) - K (Apti)	(97, 256, 318, 371, 383)
Triadophlebiidae	Tr (Ladi)	(63, 372)
Triadotypidae	Tr (Namm) - T (Ladi)	(256, 372)
Triassolestidae	Tr (Rhae) - J (Toar)	(84, 100, 318, 372, 424, 426)
Triassoneuridae	Tr (Anis) - Tr (Carn)	(118, 318, 411)
Triassothemidae	Tr (Anis) - Tr (Carn)	(63, 118, 318)
Turanothemistidae	J (Kimm)	(318, 417)
Xamenophlebiidae	J (Hett)	(372)
Zygophlebiidae	J (Hett)	(372)

Or. PALAEODICTYOPTERA (= Dictyoneurida)

Archaemegaptilidae	C (Mosc) - C (Gzel)	(107, 236)
Bardapteridae	P (Arti) - P (Kung)	(416, 418)
Breyeriidae	C (Bash) - C (Gzel)	(26, 107, 236)
Calvertiellidae	C (Mosc) - P (Word)	(59, 451)
Cockerelliellidae	C (Gzel)	(418)
Cryptoveniidae	C (Bash) - C (Gzel)	(418)
Dictyoneuridae	C (Bash) - P (Sakm)	(29, 106, 107, 418, 419)
Elmaboridae	P (Arti)	(58)
Eubleptidae	C (Mosc)	(61, 146, 418, 424)
Eugereonidae	C (Bash) - P (Sakm)	(106, 107, 236, 470)
Fouqueidae	C (Mosc) - C (Gzel)	(55, 107, 236)
Graphiptilidae	C (Bash) - C (Gzel)	(26, 107, 236)
Heolidae	C (Gzel)	(418)
Homoiopteridae	C (Bash) - P (Sakm)	(26, 106, 107, 237, 418)
Homothetidae	C (Bash) - C (Mosc)	(146, 418)
Hypermegethidae	C (Mosc) - C (Gzel)	(22)
Jongmansiidae	C (Mosc)	(418)
Lithomanteidae	C (Bash) - C (Gzel)	(26, 107, 256)
Lusiellidae	C (Gzel)	(257, 418)

Lycocercidae	C (Bash) - C (Gzel)	(56, 107, 236)
Macropteridae	C (Mosc) - C (Gzel)	(257, 418)
Mecynostomatidae	C (Gzel)	(107, 418)
Megaptilidae	C (Mosc) - P (Sakm)	(107, 236)
Neuburgiidae	C (Mosc)	(416, 418, 419)
Orthocostidae	C (Bash) - C (Mosc)	(20, 418)
Polycraegridae	C (Mosc) - C (Kasi)	(146, 418)
Protagriidae	C (Gzel) - P (Arti)	(60, 107, 256)
Psychroptilidae	C (Mosc)	(242, 409)
Rochlingiidae	C (Bash) - P (Arti)	(233)
Spilapteridae	C (Bash) - P (Kung)	(104, 106, 236, 451)
Straeleniellidae	C (Bash) - C (Mosc)	(258, 424)
Synarmogidae	C (Mosc)	(418)
Syntonopteridae	C (Mosc) - P (Arti)	(242, 395, 418)
Tchirkovaeidae	C (Mosc) - ?C (Kasi)	(242, 457)
Thesoneuridae	C (Bash) - C (Kasi)	(256)

Or. PERMOTHEMISTIDA (= Archodonata, Doterida)

Diathemidae	P (Kung) - P (Word)	(242, 458)
Permoneuridae	P (Arti) - P (Kung)	(58, 106, 418)
Permothemistidae	P (Arti) - P (Word)	(106, 418)
Rectineuridae	C (Bash) - P (Arti)	(418)

Or. MEGASECOPTERA (= Mischopterida)

Alectoneuridae	C (Mosc) - P (Arti)	(239, 342)
Anchineuridae	C (Kasi) - P (Arti)	(28, 239)
Ancopteridae	P (Arti)	(239)
Arcioneuridae	P (Arti)	(239)
Aspidohymenidae	P (Word)	(416, 418)
Aspidothoracidae	C (Mosc) - C (Gzel)	(27, 107, 424)
Aykhalidae	C (Gzel)	(461)
Bardohymenidae	C (Bash) - P (Kung)	(51, 106, 418)
Brodiidae	C (Mosc) - P (Sakm)	(107, 424)
Brodiopteridae	C (Bash) - C (Mosc)	(322, 424)
Campylopteridae	C (Gzel)	(149, 424)
Carbonopteridae	C (Mosc) - P (Arti)	(418)
Caulopteridae	P (Arti)	(239)
Corydaloididae	C (Gzel)	(107, 149, 418)
Dictyoneurellidae	C (Mosc)	(239)
Engisopteridae	P (Arti)	(239)
Eokulojidae	P (Kung) - P (Word)	(63, 242, 416, 418)
Foririidae	C (Gzel)	(107, 149, 418)
Frankenholziidae	C (Mosc)	(142, 239, 418)
Hanidae	P (Arti)	(239)
Ischnoptilidae	C (Gzel)	(50, 107, 418)
Mecynopteridae	C (Mosc)	(239)
Mischopteridae	C (Mosc) - C (Gzel)	(50, 256)
Moravohymenidae	P (Arti)	(237, 418)
Protohymenidae	P (Sakm) - P (Capi)	(43, 106, 107)

Scytohymenidae	P (Arti) - P (Long)	(410, 418)
Sphecopteridae	C (Gzel)	(50, 418)
Vorkutiidae	C (Mosc) - P (Arti)	(419, 424)

Or. DIAPHANOPTERODEA (= Diaphanoptera)

Aenigmatodiidae	C (Mosc) - P (Arti)	(22, 418, 419)
Asthenohymenidae	C (Gzel) - P (Word)	(43, 46, 106, 418, 424, 533)
Biarmohymenidae	P (Arti) - P (Kung)	(416, 418)
Diaphanopterae	C (Bash) - C (Gzel)	(107, 418)
Diaphanopteritidae	C (Mosc) - C (Gzel)	(346, 418, 419)
Elmoidae	P (Asse) - P (Arti)	(48, 107, 238, 418)
Kaltanelmoidae	P (Sakm) - P (Arti)	(418, 419)
Kulojidae	P (Word) - P (Capi)	(295, 416, 424)
Martynoviidae	P (Sakm) - P (Arti)	(106, 418)
Namurodiaphidae	C (Bash)	(27)
Parabrodiidae	C (Mosc) - P (Arti)	(46, 106, 107, 418)
Parelmoidae	P (Sakm) - P (Kung)	(106, 107, 244)
Paruraliidae	P (Kung)	(244)
Prochoropteridae	C (Mosc) - P (Arti)	(69, 106, 107, 256)
Rhapidopseidae	C (Mosc) - P (Rotl)	(46, 63, 424)

Or. "PROTORTHOPTERA" (= Gerarida, Paraplecoptera)

Adeloneuridae	C (Mosc)	(63)
Anthracoptilidae	C (Gzel)	(63)
Anthracothremmidae	C (Mosc) - C (Gzel)	(148, 256, 394, 418)
Apithanidae	C (Mosc)	(63, 148)
Archiprobnisidae	P (Sakm) - P (Arti)	(418, 419)
Asiopompidae	C (Kasi) - P (Asse)	(105, 107, 419)
Asyncritidae	C (Mosc)	(312, 394)
Atactophlebiidae	P (Word)	(418, 472)
Camptoneuritidae	P (Word)	(416, 418)
Cheliphlebiidae	C (Mosc)	(394, 418)
Chelopteridae	P (Arti) - P (Rotl)	(49, 256, 424)
Cnemidolestidae	C (Kasi) - C (Gzel)	(106, 107, 418)
Demopteridae	P (Sakm) - P (Arti)	(49, 106, 107, 256)
Eoblattidae	C (Mosc) - C (Gzel)	(148, 256, 394, 418)
Epideigmatidae	C (Mosc) - C (Gzel)	(107, 148, 394)
Euremiscidae	P (Kung)	(418)
Euryptilonidae	P (Sakm) - K (Kung)	(419)
Gerapompidae	C (Mosc)	(256, 394, 418)
Germanopriscidae	P (Asse) - P (Sakm)	(256, 470)
Hadentomidae	C (Mosc) - C (Gzel)	(256, 394, 407)
Havlatiidae	P (Asse)	(63)
Herbstialidae	C (Bash)	(63)
Heteroptilidae	P (Arti)	(58, 418)
Homalophlebiidae	C (Gzel)	(63)
Ideliidae	C (Gzel) - Tr (Anis)	(399, 418, 419)
Ischnoneuridae	C (Gzel)	(256)
Jablioniidae	P (Asse)	(63, 234)

Kliveridae	C (Mosc)	(141)
Narkeminidae	C (Bash) - P (Asse)	(6, 344, 347)
Pachytylopsidae	C (Mosc)	(256)
Palaeocixiidae	C (Mosc) - P (Arti)	(47, 256)
Paucineuridae	C (Gzel)	(168)
Permotermopsidae	P (Kung)	(63)
Probnidae	C (Mosc) - P (Arti)	(106, 256, 416)
Protemiidae	P (Sakm) - P (Arti)	(49, 256)
Protettigidae	C (Bash) - P (Sakm)	(106, 107)
Protokollariidae	C (Gzel)	(107, 256)
Protoperlidae	C (Mosc) - P (Kung)	(52, 106, 107, 418)
Protophasmatidae	C (Gzel)	(107, 256)
Psoropterae	P (Arti)	(58, 418)
Skaliciidae	P (Asse)	(63, 234)
?Stebaricerudae	C (Gzel)	(256)
Stegopteridae	P (Arti) - P (Word)	(418)
Stenoneuritidae	C (Gzel)	(63)
Stereopteridae	P (Sakm) - P (Word)	(49, 256, 419)
Sylvaphlebidae	P (Kung)	(299, 416)
Thoronyidae	C (Mosc)	(256, 418)
Tillyardemiidae	P (Arti) - P (Kung)	(416, 418)

Or. BLATTODEA (= Blattida, Blattaria)

Adeloblattidae	C (Bash) - P (Sakm)	(107)
Ambloblattidae	C (Mosc) - P (Arti)	(84, 418)
Archoblattinidae	C (Mosc) - P (Long)	(418, 442)
Blaberidae	T (Ypre) - R	(201, 353, 227)
Blattellidae	K (Turo) - R	(97, 201)
Blattidae	K (Apti) - R	(88, 97, 194, 280)
Blattulidae	J (Toar) - K (Sant)	(97, 383, 506)
Bradyblattidae	C (Gzel) - P (Arti)	(105, 418)
Cobaloblattidae	C (Bash) - C (Mosc)	(418)
Compsoblattidae	C (Kasi) - P (Asse)	(28, 441, 442, 470)
Fulgorinidae	C (Gzel) - P (Arti)	(105, 106, 107)
Latiblattidae	J (Kimm)	(97, 385)
Mesoblattinidae	C (Kasi) - K (Ceno)	(97, 242, 312, 437)
Mylacridae	C (Bash) - Tr (Rhae)	(106, 117, 418, 442, 497)
Necmylacridae	C (Bash) - P (Arti)	(21, 106, 442)
Phyloblattidae	C (Bash) - P (Arti)	(6, 31, 349, 442, 470)
Polyphagidae	K (Gall) - R	(97, 424)
Poroblattinidae	C (Mosc) - K (Seno)	(27, 98, 416, 418, 424, 442)
Pteridomyacridae	C (Bash) - P (Arti)	(107)
Raphidiomimidae	J (Kimm) - K (Apti)	(97, 280)
Schizoblattidae	C (Gzel) - P (Arti)	(105, 106, 107)
Spiloblattinidae	C (Mosc) - Tr (Carn)	(107, 273, 312, 419, 442, 507)
Subioblattidae	P (Arti) - J (Tith)	(442, 502)
Triassoblattidae	P (Asse) - Tr (Nori)	(98, 106, 117, 402, 490)
Umenocoleidae	K (Neoc)	(71, 424)

Or. MANTODEA (= Manteida)

Amorphoscelidae	K (Haut) - R	(133)
Baissomantidae	K (Haut)	(133)
Chaeteessiidae	K (Haut) - R	(97, 133)
Cretomanitiae	K (Sant)	(133)
Manteidae	T (Rupe) - R	(266, 424)
Mantoididae	K (Sant) - R	(97)

Or. ISOPTERA (= Termitida)

Hodotermitidae	K (Vala) - R	(122, 249, 350, 521)
Kalotermitidae	K (?Maas) - R	(188, 421)
Mastotermitidae	K (Haut) - R	(97, 188, 226)
Rhinotermitidae	T (Pria) - R	(188, 418)
Termitidae	T (Lute) - R	(188, 353, 418)
Termopsidae	T (Rupe) - R	(201)

Or. PROTELYTROPTERA (= Protelytrida)

Apachelytridae	P (Asse) - P (Arti)	(65, 235)
Archelytridae	P (Arti)	(106, 235)
Dermelytridae	P (Long)	(235)
Elytroneuridae	C (Kasi) - P (Arti)	(46, 107, 235)
Labidelytridae	P (Long)	(235, 241)
Megelytridae	P (Arti)	(46, 65, 235)
Permelytridae	P (Asse) - P (Arti)	(65, 106, 235)
Permophilidae	P (Long)	(235)
Planelytridae	P (Arti)	(63)
Protelytridae	C (Gzel) - P (Kung)	(106, 235, 253, 415)
Protocoleidae	P (Capi) - P (Long)	(235, 410)

Or. DERMAPTERA (= Forficulida)

Diplatyidae	T (Burd) - R	(429)
Forficulidae	T (Than) - R	(449)
Labiduridae	T (Than) - R	(449)
Labiidae	J (Kimm) - R	(364)
Protodiplatyidae	J (Sine) - K (Apti)	(487, 517)
Pygidicranidae	J (Kimm) - R	(97, 242)
Spongiphoridae	J (Kimm) - R	(417, 418)

Or. ORTHOPTERA (= Gryllida, Saltatoptera)

Acrididae	J (Tith) - R	(44, 132, 232)
Adumbratomorphidae	P (Kung)	(127)
Archaeopneumoridae	K (Apti)	(279, 285)
Baissogryllidae	J (Tith) - K (Albi)	(97, 124, 130)
Bintoniellidae	Tr (Ladi) - J (Sine)	(97, 418, 449, 515)
Bouretidae	K (Apti)	(279, 285)
Cearagryllidae	K (Apti)	(280, 289)
Elcanidae	P (Arti) - K (Apti)	(97, 242, 290, 418, 487)
Eumastacidae	J (Kimm) - R	(97, 449)
Gryllacrididae	K (Apti) - R	(97, 194, 242, 400, 424)

Gryllavidae	T (Ladi)	(125)
Gryllidae	J (Sine) - R	(97, 449, 517)
Gryllotalpidae	K (Apti) - R	(150, 280, 290, 449)
Haglididae	Tr (Anis) - R	(383, 408, 449, 523)
Hagloedischidae	Tr (Ladi)	(125)
Haglotettigoniidae	K (Albi)	(418)
Isfaropteridae	J (Sine) - J (Bajo)	(172)
Kamiidae	P (Sakm) - P (Word)	(418, 447, 449)
Locustavidae	Tr (Ladi)	(418, 449, 534)
Locustopseidae	Tr(Namm) - T (Chat)	(97, 204, 242, 449, 534)
Mesoedischidae	Tr (Ladi)	(126)
Mesogrammatidae	K (Neoc)	(176)
Myrmecophilidae	K (Apti) - R	(280, 290)
Oedischidae	C (Mosc) - P (Word)	(124, 424, 535)
Permelcanidae	P (Arti) - Tr (Ladi)	(63, 447, 449)
Permorphidiidae	P (Arti) - P (Kung)	(48, 106, 243, 329, 418)
Phasmomimidae	J (Toar) - T (Than)	(97, 264, 449, 523)
Pneumoridae	K (Albi) - R	(285)
Promastacidae	T (Than)	(97, 523)
Proparagryllacrididae	Tr (Anis) - Tr (Rhae)	(411, 418, 449)
Protogryllidae	Tr (Ladi) - J (Tith)	(97, 130, 290)
Pseudelcanidae	P (Kung)	(126)
Pygomorphidae	T (Mioc) - R	(97)
Raphidiophoridae	K (Apti) - R	(290, 536)
Stenopelmatidae	T (Burd) - R	(537)
Tetrigidae	K (Albi) - R	(97, 449)
Tettavidae	P (Word) - Tr (Ladi)	(63, 128, 424, 447, 449)
Tettigoniidae	J (Sine) - R	(290, 523, 531)
Triassomanteidae	Tr (Ladi) - J (Sine)	(447, 449, 518, 535)
Tridactylidae	K (Apti) - R	(97, 279, 280, 290, 449)
Tuphelliidae	Tr (Ladi) - J (Kimm)	(128, 129)
Vitimiidae	Tr (Ladi) - K (Albi)	(97, 449)
Xenopteridae	Tr (Ladi)	(242, 400)
Or. PHASMATODEA (= Phasmoptera, Phasmida, Cheuloptera)		
Aerophasmatidae	J (Sine) - K (Albi)	(97, 131, 242, 295, 416, 417)
Aeroplanidae	Tr (Ladi) - Tr (Rhae)	(411, 418, 449)
Chresmodidae	Tr (Ladi) - K (Vala)	(286, 418, 449)
Cretophasmatidae	K (Apti) - K (Turo)	(97, 131, 279, 280, 286, 449)
Necrophasmatidae	J (Kimm)	(97, 416, 449)
Phasmatidae	T (Rupe) - R	(201, 418, 449)
Phylliidae	T (Rupe) - R	(418, 449)
Prochresmodidae	Tr (Rhae) - K (Albi)	(97, 385, 418)
?Pseudophasmatidae	T (Zanc) - R	(337, 338)
Xiphopteridae	Tr (Ladi) - Tr (Rhae)	(242, 418, 449)
Or. TITANOPTERA (= Mesotitanida)		
Gigatitanidae	Tr (Ladi) - J (Hett)	(242, 418, 449)
Mesotitanidae	Tr (Anis) - T (Ladi)	(242, 308, 399, 418, 449)

Paratitanidae	Tr (Ladi)	(418, 449)
Or. EMBIOPTERA (= Embiidina)		
Anisembiidae	T (Chat) - R	(350)
Clothodidae	T (Chat) - R	(97)
Embiidae	T (Rupe) - R	(425, 527)
Notoligotomidae	T (Than) - R	(63, 97, 201)
Oligotomidae	T (Rupe) - R	(255, 418)
Sheimiidae	P (Word)	(416, 424)
Teratembiiidae	T (Chat) - R	(350)
Family "D"	T (Than)	(469)
Or. GRYLLOBLATTODEA (= Grylloblattaria, Grylloblattida, Notoptera)		
Blattogryllidae	P (Zech) - K (Albi)	(97, 380, 471, 473)
Geinitziidae	Tr (Anis) - J (Kimm)	(97, 117, 380, 411, 418)
Liomopteridae	C (Gzel) - P (Long)	(347, 406, 418, 475)
Madygenophlebiidae	Tr (Ladi)	(474)
Megakhosaridae	P (Sakm) - P (Word)	(418, 419, 474, 476)
Mesorthopteridae	Tr (Anis) - Tr (Rhae)	(105, 256, 401, 408, 474)
Oecanthoperlidae	K (Albi)	(471)
Phenopteridae	P (Arti) - P (Word)	(49, 295, 475)
Tomiidae	P (Kung) - Tr (Rhae)	(270, 416, 418, 474)
Or. PLECOPTERA (= Perlida)		
Baleopterygidae	J (Toar) - K (Albi)	(97, 383, 459)
Capniidae	?J (Toar) - R	(4, 425, 443)
Chloroperlidae	K (Berr) - R	(97, 386)
Eustheniidae	P (Long) - R	(256, 459)
Euxenoperlidae	P (Long) - Tr (Rhae)	(256, 459)
Gripopterygidae	?P (Long) - R	(194, 348, 406)
Leuctridae	K (Berr) - R	(97, 386, 459)
Mesoleuctridae	Tr (Ladi) - J (Toar)	(459)
Nemouridae	J (Bajo) - R	(517)
Notonemouridae	Tr (Ladi) - R	(97, 383)
Palaeonemouridae	P (Sakm) - P (Word)	(242, 419, 459)
Palaeoperlidae	P (Sakm) - P (Long)	(419, 424, 459)
Perlariopseidae	Tr (Ladi) - K (Apti)	(97, 456)
Perlidae	J (Tith) - R	(185, 424)
Perlodidae	K (Berr) - R	(459)
Perlopterygidae	P (Kung)	(299, 242, 459)
Platyperlidae	Tr (Rhae) - K (Albi)	(97, 459)
Pteronarcyidae	K (Ceno) - R	(392)
Siberioperlidae	Tr (Ladi) - K (Albi)	(97, 386, 487)
Taeniopterygidae	J (Sine) - R	(185, 416, 517)
Tschekardoperlidae	P (Kung)	(242, 459)
Or. CALONEURODEA (= Caloneurida)		
Amboneuridae	C (Mosc)	(60)
Anomalogrammatidae	P (Arti)	(48, 106, 418)

Apsidoneuridae	C (Gzel) - P (Arti)	(48, 106, 418)
Caloneuridae	C (Mosc) - C (Gzel)	(107, 419)
Eohymenidae	P (Kung) - P (Word)	(416, 424)
Euthygrammatidae	C (Gzel) - P (Word)	(107, 424)
Paleothygrammatidae	P (Sakm) - P (Capi)	(106, 107, 418)
Permobiellidae	C (Gzel) - P (Arti)	(106, 418)
Pleisiogrammatidae	P (Sakm) - P (Arti)	(107, 418, 419)
Synomaloptilidae	P (Arti) - P (Kung)	(48, 242, 300, 377, 416)

Or. HYPOPERLIDA (ancestral hemipteroids; Perielyrodea, in part)

Aenigmatodidae	C (Mosc) - C (Gzel)	(107, 418, 419)
Ampelipteridae	C (Bash)	(243, 379)
Blattinopsidae	C (Bash) - P (Word)	(53, 106, 243, 295, 379)
Cacurgidae	C (Serp) - P (Sakm)	(26, 106, 394, 395)
Cymbopsidae	P (Arti)	(55, 243)
Emphylopteridae	C (Gzel)	(79, 256)
Eucaenidae	C (Mosc)	(68, 105, 243, 256)
Fatjanopteridae	C (Gzel) - P (Arti)	(329, 424)
Geraridae	C (Bash) - Tr (Anis)	(41, 42, 106, 243, 399, 449)
Hapalopteridae	C (Mosc) - C (Gzel)	(23, 52, 418)
Herdinidae	C (Mosc)	(67, 242)
Homeodictyidae	P (Kung)	(243, 379, 416, 418)
Hypoperlidae	C (Kasi) - P (Capi)	(378, 416, 418, 420)
Lemmatophoridae	P (Arti) - P (Word)	(49, 106, 313, 416, 418)
Martynopsocidae	P (Word) - P (Capi)	(295, 379, 416, 418)
Narkemidae	C (Mosc) - C (Gzel)	(107, 243, 394, 418)
Nungononeuridae	P (Arti)	(58)
Paoliidae	C (?Serp) - P (Long)	(25, 60, 242, 410)
Perielytridae	P (Kung)	(379, 420)
Protoprosobolidae	C (Bash)	(25, 424)
Spanioderidae	C (Mosc)	(41, 243, 394, 418)
?Stenoneuridae	C (Gzel)	(107, 243, 418, 455)
Strephocladidae	C (Gzel) - P (Arti)	(106, 107, 330, 418, 423)
Stygnidae	C (Bash)	(424)
Tococladidae	P (Arti)	(58, 106)

Or. ZORAPTERA (= Zorotypida)

Zorotypidae	T (Chat) - R	(350)
-------------	--------------	-------

Or. PSOCOPTERA (= Psocida, Corrodentia)

Amphientomidae	J (Kimm) - R	(97, 242)
Amphipsocidae	T (Rupe) - R	(418)
Archipsocidae	T (Rupe) - R	(201, 255, 418)
Archipsyllidae	P (Word) - K (Albi)	(97, 504)
Asientomidae	J (Kimm)	(463)
Caeciliidae	T (Pria) - R	(187, 255)
Cladiopsocidae	T (Chat) - R	(350)
Dichentomidae	P (Sakm) - P (Arti)	(106, 107)

Dolabellapsocidae	T (Chat) - R	(350)
Ectopsocidae	K (Sant) - R	(201, 266, 350, 418, 503)
Edgarriekiidae	K (Apti)	(194)
Electrentomidae	T (Rupe)	(63, 97, 418)
Elipsocidae	K (Sant) - R	(97, 201, 418)
Epipsocidae	T (Than) - R	(255, 418)
Lachesillidae	J (Kimm) - R	(97, 242)
Lepidopsocidae	J (Kimm) - R	(417)
Liposcelidae	K (Maas) - R	(120)
Mesopsocidae	T (Rupe) - R	(63)
Myopsocidae	T (Chat) - R	(201, 266, 418)
Pachytroctidae	T (Ypre) - R	(97)
Peripsocidae	T (Pale) - R	(97)
Permopsocidae	P (Sakm) - P (Arti)	(106, 107, 424)
Philotarsidae	T (Rupe) - R	(201, 418)
Polypsocidae	T (Rupe) - R	(63)
Pseudocaeceilliidae	T (Rupe) - R	(418)
Psocidae	K (Sant) - R	(132, 350)
Psocidiidae	P (Arti)	(424, 494)
Psoquillidae	T (Chat) - R	(350)
Psyllipsocidae	K (Sant) - R	(97, 503)
Sphaeropsocidae	K (Ceno) - R	(97)
Surijokopsocidae	P (Word)	(418, 419)
Trichopsocidae	T (Aqui) - R	(201, 266)
Troctopsocidae	T (Chat) - R	(351)
Trogiidae	J (Kimm) - R	(97, 242)
Zygopsocidae	P (Long)	(418, 463)
Or. PHTHIRAPTERA (= Pediculidea, Mallophaga + Anoplura + Rhyncophthirina)		
Hoplopleuridae	Q (Plei) - R	(103)
Family uncertain	T (Rupe) - R	(255)
Or. THYSANOPTERA (= Thripida)		
Aeolothripidae	K (Sant) - R	(97, 255)
Heterothripidae	J (Kimm) - R	(97, 242, 255)
Karataothripidae	J (Kimm)	(97, 450)
Liassothripidae	J (Kimm)	(242, 417, 418)
Lophioneuridae	P (Sakm) - K (Sant)	(97, 419, 424, 505)
Merothripidae	K (Sant) - R	(201, 255, 350, 418)
Opadothripidae	K (Haut)	(469, 550)
Palaeothripidae	K (Sant) - T (Rupe)	(97, 350)
Permothripidae	P (Kung)	(416, 418)
Phlaeothripidae	K (Sant) - R	(201, 418, 469)
Thripidae	K (Sant) - R	(93, 231)
Or. HEMIPTERA (= Cimicida, Homoptera + Heteroptera)		
Acanthosomatidae	T (Bart) - R	(97, 275)
Achilidae	K (Apti) - R	(97, 144, 145, 279)
Adelgidae	K (Turo) - R	(97, 350)

Aetalionidae	T (Chat) - R	(63, 418)
Aleyrodidae	K (Haut) - R	(145, 350, 433, 434)
Alydidae	J (Kimm) - R	(97)
Anoeciidae	T (Rupe) - R	(63, 350)
Anthocoridae	K (Berr) - R	(97, 386)
Aphididae	J (Tith) - R	(158, 189, 190, 350, 544)
Aphrophoridae	K (Albi) - R	(88, 201, 467)
Aradidae	K (Apti) - R	(97)
Archaeococcidae	J (Kimm) - K (Albi)	(216, 219)
Archegocimicidae	J (Sine) - K (Albi)	(97, 366, 369, 386, 517)
Archescytinidae	P (Sakm) - P (Long)	(106, 111, 297, 419, 424)
Archijassidae	Tr (Rhae) - J (Oxfo)	(145, 418, 537)
Belostomatidae	J (Sine) - R	(517)
Bernaeidae	K (Haut)	(97)
Berytidae	T (Pria) - R	(255, 317, 424)
Biturritidae	Tr (Rhae) - R	(13, 418)
Blattoprosbolidae	C (Mosc) - J (Hett)	(11, 12)
Boreoscytidae	P (Arti) - K (Apti)	(279, 418)
Canadaphididae	K (Albi) - K (Camp)	(97, 156, 510)
Carsidaridae	T (Rupe) - R	(16)
Ceratocombidae	T (Aqui) - R	(424)
Cercopidae	J (Bajo) - R	(97, 154, 172)
Cercopionidae	Tr (Carn) - K (Apti)	(144, 145, 279, 290)
Chiliocyclidae	Tr (Rhae) - K (Ceno)	(242)
Cicadellidae	Tr (Rhae) - R	(16, 97, 112, 145)
Cicadidae	Tr (Rhae) - R	(97, 516)
Cicadoprosbolidae	P (Word) - K (Apti)	(112, 145, 279, 290)
Cicadopsyllidae	P (Sakm) - J (Hett)	(12, 171, 418, 419, 424)
Cixiidae	Tr (Rhae) - R	(97, 144, 242, 424)
Clastopteridae	T (Rupe) - R	(63, 424)
Coccidae	Tr (Ladi) - R	(157, 242)
Coleoscytidae	P (Sakm) - P (Long)	(12, 416, 418, 419)
Coreidae	Tr (Nori) - R	(272, 171)
Corixidae	?Tr (Nori) - R	(272, 517)
Creaphidae	Tr (Ladi)	(454)
Cretamyzidae	K (Camp)	(339)
Cuneocoridae	J (Plie) - J (Toar)	(369)
Curvicubitidae	Tr (Ladi)	(174, 225)
Cydnidae	J (Kimm) - R	(97, 385, 424)
Dactylopiidae	T (Chat) - R	(350)
Delphacidae	K (Apti) - R	(124, 290, 527)
Derbidae	Tr (Carn) - R	(283, 290)
Diaspididae	T (Rupe) - R	(214, 216, 467)
Dictyopharidae	K (Sant) - R	(97, 532)
Dipsocoridae	K (Haut) - R	(266, 350, 418)
Dunstaniidae	P (Word) - J (Oxfo)	(97)
Dysmorphoptilidae	P (Long) - J (Kimm)	(97, 112, 145, 411, 424)
Elektraphididae	K (Sant) - T (Piac)	(97, 156, 157, 159, 445)
Enicocephalidae	K (Apti) - R	(139, 418)

Enicocoridae	J (Tith) - K (Albi)	(97, 543)
Eoscarterellidae	P (Long) - J (Bajo)	(112, 145, 406, 418)
Eriococcidae	T (Rupe) - R	(214, 216, 467)
Eurymelidae	Tr (Rhae) - R	(63, 112, 113)
Flatidae	T (Rupe) - R	(132, 416)
Fulgoridae	K (Vala) - R	(122, 132, 171)
Fulgoridiidae	J (Hett) - J (Kimm)	(13, 97, 173, 383)
Gelastocoridae	K (Apti) - R	(194, 487)
Genaphididae	J (Kimm) - J (Tith)	(97, 155, 444, 509)
Gerridae	J (Kimm) - R	(97, 417)
Granulidae	Tr (Ladi)	(145, 167)
Hadrocoridae	J (Plie)	(418)
Hebridae	T (Aqui) - R	(97, 350)
Hydrometridae	T (Than) - R	(3, 418)
Hylicellidae	Tr (Ladi) - K (Ceno)	(97, 112)
Inkaidae	K (Sant)	(218, 424)
Ipsviciidae	P (Long) - K (Apti)	(12, 97, 111)
Issidae	J (Kimm) - R	(416, 417)
Jascopidae	J (Tith) - K (Camp)	(145, 201)
Karabasiidae	J (Hett) - K (Ceno)	(97, 366, 368)
Karajassidae	J (Kimm) - K (Apti)	(453)
Karanabiidae	J (Malm)	(424)
Kermesidae	T (Rupe) - R	(217)
Kobdocoridae	K (Apti)	(97, 385)
Lalacidae	K (Apti)	(145, 279)
Largidae	K (Sant) - R	(350, 549)
Laticutellidae	K (Apti)	(283, 344, 345)
Leptopodidae	T (Aqui) - R	(74, 350)
Liadopysyllidae	J (Toar) - K (Ceno)	(16, 97)
Ligavenidae	Tr (Rhae) - K (Apti)	(145)
Lithoscytinidae	P (Arti)	(46, 106)
Lophophidae	J (Sine) - R	(418)
Lygaeidae	J (Oxfo) - R	(97, 385)
Magnaciaciidae	Tr (Anis)	(145, 452)
Malmopysyllidae	J (Kimm)	(16, 97)
Margarodidae	K (Apti) - R	(97, 216)
Membracidae	J (Hett) - R	(271, 416)
Mesogereonidae	Tr (Anis) - K (Berr)	(10, 112, 411)
Mesopentacoridae	J (Kimm) - K (Berr)	(386, 417)
Mesotrephidae	K (Turo)	(97)
Mesoveliidae	K (Apti) - R	(110, 424)
Mesozoicoaphididae	K (Camp)	(339)
Microphysidae	K (Sant) - R	(350, 549)
Miridae	J (Kimm) - R	(418)
Nabidae	?J (Kimm) - R	(44, 255)
Naucoridae	Tr (Rhae) - R	(63, 97, 365, 369, 418, 424)
Neopsylloididae	J (Kimm)	(14)
Nepidae	J (Tith) - R	(44, 365, 418)
Nogodinidae	T (Lute) - R	(63)

Notonectidae	J (Toar) - R	(365, 366, 385)
Ortheziidae	T (Rupe) - R	(214, 418)
Oviparosiphidae	K (Berr) - K (Apti)	(97, 444, 446)
Pachymeridiidae	J (Sine) - K (Albi)	(88, 97, 369, 487, 517)
Palaeoaphididae	K (Apti) - K (Camp)	(97, 487)
Palaeontinidae	Tr (Ladi) - K (Vala)	(97, 113, 145, 189, 521)
Paraknightiidae	P (Long) - T (Uppe)	(424)
Peloriidae	?K (Albi) - R	(110, 420, 547)
Pemphigidae	K (Sant) - R	(155, 212)
Pentatomidae	K (Albi) - R	(97, 385)
Pereboriidae	P (Asse) - Tr (Ladi)	(112, 341, 418, 419)
Permaleyrodidae	P (Word) - P (Long)	(410, 418, 419)
Phylloxeridae	T (Ypre) - R	(265, 529)
Phymatidae	T (Rupe) - R	(274)
Piesmatidae	T (Rupe) - R	(418)
Pincombeidae	P (Long) - Tr (Ladi)	(16, 111, 418)
Pityococcidae	K (Camp)	(218)
Pricecoridae	K (Apti)	(283, 344, 345)
Probascaniidae	J (Toar)	(63, 418)
Proceropidae	J (Hett) - K (Turo)	(97, 145, 242)
Progonomicidae	P (Long) - K (Ceno)	(97, 368, 369)
Propreocoridae	J (Lias)	(97)
Prosboleccadidae	P (Word)	(343)
Prosbolopseidae	P (Arti) - P (Word)	(12, 416, 424)
Protabanidae	J (Lias) - J (Dogg)	(137, 171)
Protocoridae	J (Hett) - J (?Toar)	(271, 424)
Protosyllidiidae	P (Sakm) - K (Apti)	(97, 486)
Pseudococcidae	T (Rupe) - R	(214, 215, 216, 467)
Pseudonepididae	T (Piac)	(195)
Psyllidae	J (Kimm) - R	(10, 97, 194)
Pterocimicidae	J (Lias)	(97)
Pyrrhocoridae	T (Rupe) - R	(527)
Reduviidae	K (?Vala) - R	(97, 177)
Rhopalidae	T (Chat) - R	(97)
Ricaniidae	Tr (Rhae) - R	(97, 242)
Saldidae	K (Albi) - R	(132, 165, 279)
Scaphocoridae	J (Kimm)	(365, 417)
Schizopteridae	J (Tith) - R	(350, 544)
Scutelleridae	T (Ypre) - R	(165, 254)
Scytinopteridae	P (Asse) - K (Apti)	(106, 171, 175, 283, 419)
Serpentivenidae	P (Word) - J (Tith)	(145, 453)
Shaposhnikoviiidae	J (Malm) - K (Sant)	(97, 508)
Shuravellidae	J (Sine) - J (Kimm)	(97, 359, 365, 367, 385)
Spinidae	K (Apti)	(171)
Stenoviciidae	P (Long) - K (Haut)	(112, 350)
Taimyraphididae	K (Ceno) - K (Sant)	(97, 445)
Termitiaphididae	T (Aqui) - R	(352)
Tessartomidae	T (Tort) - R	(64)
Tettigarctidae	Tr (Nori) - R	(6, 270, 272, 416, 517)

Tettigometridae	T (Rupe) - R	(10, 418)
Thaumastocoridae	T (Chat) - R	(350)
Thaumestellidae	K (Haut) - R	(101, 350)
Tingidae	?Tr (Ladi) - R	(97, 416)
Triassoaphidae	Tr (Ladi)	(156, 157)
Triassocoridae	Tr (Rhae)	(112, 418)
Triozidae	T (Aqui) - R	(16)
Urostylidae	T (Lang) - R	(543)
Veliidae	K (Apti) - R	(194)
<i>Archeglyphis</i>	C (Mosc) - P (Arti)	(424)
Cercopidea, fam. nov.	Tr (Rhae)	(145)
Cimicomorpha, fam. nov.	J (Sine)	(517)
<i>Electrocoris</i>	T (Rupe)	(350)
Fulgoridea, fam. nov.	J (Kimm)	(145)
Lepdomorpha, fam. nov.	J (Sine)	(517)
Palaeoforda, fam. nov.	K (Sant)	(157, 212)

Or. MIOMOPTERA (= Palaeomanteida), (Protoperlaria)

Archaeiopteridae	C (Kasi) - P (Word)	(416, 418)
Delopteridae	C (Mosc) - P (Arti)	(46, 440)
Metropatoridae	C (Bash)	(52, 141, 203, 418)
Palaeomanteidae	C (Mosc) - P (Capi)	(22, 242, 418)
Palaeomantiscidae	P (Kung)	(377, 378, 419)
Permembiidae	C (Gzel) - P (Long)	(58, 106, 107, 406)
Permonkidae	P (Long) - J (Sine)	(377, 378, 406)
Permosialididae	P (Sakm) - J (Sine)	(97, 377, 378, 424)

Or. GLOSSELYTRODEA (= Jurinida)

Archoglossopteridae	P (Sakm) - P (Arti)	(416, 419, 424)
Glosselytridae	P (Kung) - P (Word)	(416, 418, 448)
Jurinidae	P (Sakm) - Tr (Rhae)	(419, 424)
Permoberothidae	P (Sakm) - P (Long)	(107, 242, 256, 400)
Polycyrtellidae	Tr (Carn) - J (Kimm)	(63, 416, 418)
Uskatytridae	P (Capi) - J (Hett)	(301, 418, 419)

Or. MEGALOPTERA (= Corydalida)

Corydalidae	K (Apti) - R	(97, 356)
Euchauliodidae	Tr (Anis)	(408, 411)
Parasialidae	P (Kung) - P (Word)	(327, 357)
Sialidae	K (Apti) - R	(201, 255, 290, 357)

Or. RAPHDIOIDEA (= Raphidiida, Raphidioptera)

Alloraphidiidae	J (Kimm) - K (Ceno)	(54, 97, 385)
Baissopteridae	J (Sine) - K (Apti)	(88, 97, 279, 280, 293, 329)
Huaxiraphidiidae	K (Albi)	(178)
Inocellidae	K (Turo) - R	(385)
Leptopalopteridae	P (Word)	(329, 418)
Mesoraphidiidae	J (Sine) - K (Haut)	(189, 329, 431, 517)
Raphidiidae	K (Apti) - R	(321, 527)

Sinoraphidiidae	J (Malm)	(171)
Sojanoraphidiidae	P (Word)	(329, 418)

Or. NEUROPTERA (= Myrmeleontida, Planipennia)

Allopteridae	J (Tith)	(542)
Ascalaphidae	K (Apti) - R	(97, 279, 288)
Babinskaiidae	K (Apti) - K (Albi)	(288, 360)
Berothidae	K (Haut) - R	(439, 513)
Brongiartiellidae	J (Hett) - K (Haut)	(189, 232, 520)
Choristosialidae	P (Arti)	(48, 106)
Chrysopidae	J (Toar) - R	(5, 279, 291, 436)
Coniopterygidae	J (Kimm) - R	(242, 309, 514)
Eomantispidae	J (Toar)	(19)
Epigambriidae	J (Tith)	(19, 250)
Glottidiidae	J (Toar)	(19)
Hemerobiidae	K (Apti) - R	(97)
Kalligrammatidae	Tr (Ladi) - T (Dani)	(9, 97, 175, 383)
Mantispidae	J (Kimm) - R	(97)
Mesithonidae	J (Toar) - K (Albi)	(97, 385)
Mesoberothidae	Tr (Ladi)	(63, 242, 400)
Mesochrysopidae	J (Plie) - K (Albi)	(5, 9, 97, 383, 385)
Mesopolystoechotidae	Tr (Rhae) - J (Tith)	(171, 242, 520)
Myrmeleontidae	K (Apti) - R	(97, 279, 287)
Nemopteridae	K (Apti) - R	(279, 288, 527)
Neurorthidae	T (Eoce) - R	(97, 255, 418)
Nymphidae	J (Tith) - R	(201, 250, 278)
Nymphitidae	Tr (Ladi) - K (Turo)	(97, 169, 303, 417)
Osmylidae	Tr (Ladi) - R	(250, 400, 424)
Osmylopsychopsidae	Tr (Ladi) - K (Ceno)	(97, 109, 242, 400)
Palaemeroibiidae	P (Sakm) - P (Long)	(242, 295, 410, 419)
Panfiloviidae	J (Kimm) - K (Apti)	(250, 281, 332)
Permithonidae	P (Kung) - J (Tith)	(6, 242, 341, 424, 520)
Polystoechotidae	?Tr (Carn) - R	(250, 256)
Prohemeroibiidae	Tr (Rhae) - K (?Albi)	(19, 97, 298, 489)
Psychopsidae	Tr (Rhae) - R	(97, 172, 401)
Sialidopsidae	P (Kung) - P (Word)	(242, 302)
Sisyridae	K (Apti) - R	(97, 290)
Solenoptilidae	J (Toar) - J (Kimm)	(416, 417)

Or. COLEOPTERA (= Scarabaeida)

Acanthocnemidae	K (Ceno) - R	(7, 97, 271, 424)
Ademosynidae	P (Arti) - K (Turo)	(97, 106, 354, 419)
Aderidae	T (Rupe) - R	(63, 464)
Amphizoidae	J (Tith) - R	(2)
Anobiidae	K (Haut) - R	(97, 189)
Anthicidae	T (Than) - R	(97, 283)
Anthribidae	K (Albi) - R	(88, 97)
Artematopidae	K (Vala) - R	(90, 91, 255, 340)
Asiocoleidae	P (Sakm) - P (Arti)	(418, 419)

Attelabidae	K (Albi) - R	(7, 63, 88, 97)
Boganiidae	J (Kimm) - R	(110)
Bostrichidae	T (Ypre) - R	(424, 428)
Bothrideridae	T (Rupe) - R	(213)
Brachypsectridae	T (Chat) - R	(350)
Brentidae	K (Apti) - R	(7, 500)
Brochocoleidae	J (Tith) - R	(171)
Bruchidae	T (Ypre) - R	(265, 527)
Buprestidae	?Tr (Carn) - R	(97, 328)
Byrrhidae	J (?Bath) - R	(97, 385)
Byturidae	T (Rupe) - R	(160)
Cantharidae	K (Apti) - R	(194, 242)
Carabidae	Tr (Rhae) - R	(7, 385, 517)
Catiniidae	Tr (Ladi) - K (Albi)	(97, 242, 354)
Cerambycidae	J (Bajo) - R	(171)
Cerophytidae	K (Ceno) - R	(7, 97)
Cerylonidae	K (Sant) - R	(97)
Chelonariidae	T (Rupe) - R	(30, 527)
Chrysomelidae	J (Kimm) - R	(92, 417, 418)
Ciidae	T (Rupe) - R	(418)
Clambidae	T (Rupe) - R	(255, 418, 424)
Cleridae	T (Rupe) - R	(2, 255, 424, 488, 511)
Coccinellidae	K (Albi) - R	(97, 385)
Colydiidae	K (Albi) - R	(97, 385, 500)
Colymbotethidae	Tr (Nori)	(361)
Coptoclavidae	J (Sine) - K (Albi)	(97)
Corylophidae	T (Rupe) - R	(255, 418)
Cryptophagidae	K (Sant) - R	(97)
Cucujidae	K (Sant) - R	(385, 549)
Cupedidae	P (Sakm) - R	(354, 419, 424)
Curculionidae	J (Sine) - R	(109, 517)
Dascillidae	J (Kimm) - R	(2, 418, 424)
Dermestidae	K (Haut) - R	(92, 97)
Derodontidae	Q (Plei) - R	(166)
Dryopidae	J (Tith) - R	(91, 97)
Dytiscidae	J (Kimm) - R	(92, 97, 355, 358)
Elateridae	J (Hett) - R	(2, 99, 119, 517)
Electrapatidae	T (Rupe)	(63)
Elmidae	T (Eoce) - R	(418, 424)
Endomychidae	K (Sant) - R	(91, 201, 255)
Erotylidae	T (Ypre) - R	(132)
Eucinetidae	J (Toar) - R	(97, 386, 487)
Eucnemidae	T (Ypre) - R	(33)
Euglenidae	T (Rupe) - R	(91, 418, 465)
Georyssidae	T (Bart) - R	(153, 227, 312)
Geotrupidae	J (Tith) - R	(97, 151)
Gyrinidae	?P (Word) - R	(7, 17, 97, 383)
Haliplidae	K (Albi) - R	(97)
Helotidae	K (Apti) - R	(194)

Heteroceridae	K (Apti) - R	(97, 487)
Histeridae	T (Lute) - R	(2, 150, 424, 500)
Hybosoridae	K (Vala) - R	(91, 340)
Hydraenidae	J (Toar) - R	(7, 97)
Hydrophilidae	J (Toar) - R	(2, 97, 383)
Hygrobiidae	T (Mioc) - R	(97)
Jurodidae	J (Toar) - K (?Albi)	(97, 383)
Labrodorocoleidae	K (Ceno)	(97, 354)
Lampyridae	T (Rupe) - R	(255, 527)
?Languriidae	T (Chat) - R	(464)
Lathridiidae	K (Sant) - R	(7, 97)
Leiodidae	K (Albi) - R	(160, 333)
Leptopodocoleidae	J (Tith)	(171)
Liadytidae	J (Toar) - K (Albi)	(7, 97, 383)
Limnichidae	T (Rupe) - R	(255)
Lucanidae	K (Sant) - R	(275, 324, 350, 527)
Lycidae	T (Rupe) - R	(201, 255, 418)
Lymexylidae	T (Rupe) - R	(2, 424)
Melandryidae	K (Sant) - R	(97, 323)
Meloidae	T (Rupe) - R	(255, 527)
Melyridae	K (Turo) - R	(97)
Micromalthidae	K (Haut) - R	(92, 427)
Micropeplidae	T (Rupe) - R	(255)
Mordellidae	J (Kimm) - R	(97)
Mycetophagidae	T (Rupe) - R	(1, 2, 255, 527)
Mycteridae	T (Rupe) - R	(1, 2, 255)
Nemonychidae	J (Kimm) - R	(97, 246)
Nitidulidae	Tr (Carn) - R	(2, 171, 328)
Nosodendridae	T (Ypre) - R	(132)
Noteridae	J (Toar) - R	(2, 63)
Oborocoleidae	P (Arti)	(63)
Oedemeridae	J (Kimm) - R	(152, 255, 416)
Ommatidae	?Tr (Anis) - R	(91, 92, 259, 354, 408)
Oxycorynidae	?J (Kimm) - R	(7, 279, 487)
Palaeogyrinidae	T (Chat)	(151, 418)
Parahygrobiidae	J (Aale) - J (Oxfo)	(7, 97, 383)
Passalidae	K (Apti) - R	(279, 385)
Pedilidae	T (Pria) - R	(79, 114, 201)
Peltosynidae	Tr (Ladi)	(7)
Permarhaphidae	P (Word)	(416, 418)
Permocoleidae	P (Sakm) - P (Kung)	(283, 354, 419)
Phalacridae	T (Rupe) - R	(418, 488)
Phenogodidae	T (Chat) - R	(464)
Platypodidae	T (Rupe) - R	(255, 350)
Praelateriidae	J (Lias)	(92, 97)
Propalticidae	T (Plio) - R	(97)
Protocucujidae	J (Kimm) - R	(97, 385)
Pselaphidae	K (Apti) - R	(194)
Psephenidae	T (Lute) - R	(276, 527)

Ptiliidae	K (Sant)	- R	(97)
Ptilodactylidae	T (Rupe)	- R	(255)
Ptinidae	T (Ypre)	- R	(132, 227)
Pyrochroidae	K (Apti)	- R	(1, 2, 201, 279, 285)
Pythidae	T (Rupe)	- R	(527)
Rhipiceridae	K (Vala)	- R	(71, 92, 172)
Rhipiphoridae	K (Camp)	- R	(114, 132, 350)
Rhizophagidae	T (Rupe)	- R	(201, 255, 418)
Rhombocoleidae	P (Sakm)	- P (Capi)	(354, 418, 419)
Rhysodidae	T (Rupe)	- R	(8, 97, 350)
Salpingidae	K (Haut)	- R	(255, 350)
Scaphidiidae	T (Rupe)	- R	(350, 465)
Scarabaeidae	J (Hett)	- R	(2, 92, 424)
Schizophoridae	P (Sakm)	- K (Apti)	(97, 354, 355, 382, 424)
Scirtidae	K (Apti)	- R	(97, 242)
Scolytidae	K (Vala)	- R	(192)
Scraptiidae	J (Kimm)	- R	(97)
Scydmaenidae	K (Haut)	- R	(97, 350, 385)
Silphidae	J (Aale)	- R	(7, 97, 383)
Silvanidae	T (Rupe)	- R	(160)
Sojanocoleidae	P (Word)		(416, 418)
Sphindidae	T (Rupe)	- R	(255)
Staphylinidae	?Tr (Carn)	- R	(123, 172, 383)
Taldycupidae	P (Sakm)	- J (Bajo)	(172, 419)
Tenebrionidae	Tr (Carn)	- R	(97, 117, 283)
Tetraphaleridae	J (Hett)	- R	(91, 92, 354)
Throscidae	K (Albi)	- R	(88, 97, 385)
Trachypacheidae	Tr (Ladi)	- R	(7)
Triplidae	Tr (Ladi)	- J (Bajo)	(7, 171)
Tricoleidae	Tr (Ladi)	- K (Albi)	(97, 354)
Trogidae	T (Chat)	- R	(97, 147)
Trogossitidae	J (Kimm)	- R	(97, 208)
Tshekardocoleidae	P (Arti)	- J (Lias)	(171, 424)
Ulyanidae	K (Albi)		(88)
Urodontidae	T (Rupe)	- R	(160)
Zopheridae	Q (Plei)	- R	(311)

Or. STREPSIPTERA (= Stylopida)

Bohartillidae	T (Chat)	- R	(200, 207)
Elenchidae	T (Chat)	- R	(97, 207)
Mengeidae	T (Rupe)		(201, 207, 255)
Myrmecolacidae	T (Lute)	- R	(206, 207)
Stylopidae	T (Rupe)	- R	(194)

Or. "PARATRICHOPTERA" (includes the stem-group, Amphiesmenoptera)

Cycochoristidae	P (Sakm)	- P (Kung)	(408, 525)
Cyclopteridae	P (Ufim)	- P (Word)	(418, 419, 525)
Kaltanidae	P (Sakm)	- P (Ufim)	(106, 107, 180, 419, 424)
Liassophilidae	Tr (Spat)	- J (Aale)	(97, 256, 383)

Mesopsychidae	Tr (Ladi)	- K (Berr)	(97, 171, 386, 401, 525)
Permocentropidae	P (Word)	- P (Capi)	(256, 418)
Tomiochoristidae	P (Sakm)	- P (Ufim)	(256, 418, 419, 525)

Or. MECOPTERA (= Panorpida)

Agetopanorpidae	P (Sakm)	- J (Sine)	(256, 408, 525)
Aneuropsychidae	J (Kimm)	- K (Apti)	(388)
Anormochoristidae	P (Arti)		(106, 418, 493)
Austropanorpididae	T (Than)		(397, 403, 524, 525)
Belmontiidae	P (Long)		(256, 398, 525)
Bittacidae	J (Aale)	- R	(97, 383)
Boreidae	J (Kimm)	- R	(97)
Choristidae	K (Apti)	- R	(97, 194)
Choristopanorpidae	Tr (Anis)	- K (Apti)	(194, 396, 525)
Cimbrophlebiidae	T (Ypre)		(525)
Cladochoristidae	P (Long)	- Tr (Ladi)	(400, 525)
Dinopanorpidae	T (Burd)		(57, 82)
Holcorpidae	T (Rupe)		(525)
Lithopanorpidae	P (Arti)	- P (Capi)	(256, 419)
Martynopanorpidae	P (Kung)	- P (Word)	(525)
Meropeidae	Tr (Ladi)	- R	(362, 527)
Mesopanorpididae	P (Long)	- K (Apti)	(97, 398)
Mesorthophlebiidae	J (Bajo)		(171)
Munchoriidae	J (Aale)		(525)
Nannochoristidae	P (Long)	- R	(97, 398)
Neoparachoristidae	P (Long)	- Tr (Ladi)	(400, 525)
Panorpidae	J (Oxfo)	- R	(97, 383, 525)
Panorpididae	T (Rupe)	- R	(525)
Parachoristidae	P (Kung)	- P (Long)	(256, 299, 418, 525)
Permochoristidae	P (Asse)	- J (Sine)	(106, 284, 418, 525)
Petrochoristidae	P (Sakm)	- P (Capi)	(419, 525)
Protomeropeidae	P (Arti)	- P (Long)	(245, 424, 481)
Protopanorpidae	P (?Arti)	- Tr (Ladi)	(256, 400, 525)
Pseudopolycentropididae	J (Sine)	- J (Kimm)	(416, 517)
Robinjohniidae	P (Long)		(404, 525)
Triassochoristidae	Tr (Ladi)		(242, 525)
Volitorididae	J (Malm)		(171)
Xenochoristidae	P (Long)	- Tr (Ladi)	(242, 398, 400, 525)

Or. SIPHONAPTERA (Pulicida)

Ctenophthalmidae	T (Rupe)	- R	(424)
Hystriopsyllidae	T (Rupe)	- R	(202, 255, 334)
Pulicidae	K (Apti)	- R	(194)
Rhopalopsyllidae	T (Chat)	- R	(350)
Saurophthiriidae	K (Vala)	- K (Apti)	(97, 242, 487)
Strashilidae	J (Oxfo)		(387)

Or. DIPTERA (= Muscida)

Acartophthalmidae	T (Rupe) - R	(162, 202, 255, 418)
Acroceridae	J (Kimm) - R	(501, 528)
Agromyzidae	T (Ypre) - R	(83, 529)
Alinkidae	Tr (Nori)	(230)
Anisopodidae	J (Bath) - R	(97, 385)
Ansorigiidae	J (Kimm)	(231)
Anthomyiidae	T (Ypre) - R	(132, 265)
Anthomyzidae	T (Rupe) - R	(162, 202, 418)
Archisargidae	J (Kimm)	(97, 416, 417)
Architendipedidae	J (Sine)	(230, 424)
Archizelmiridae	J (Kimm)	(97, 417)
Asilidae	J (Toar) - R	(97, 137, 279)
Asiochaoboridae	K (Haut)	(179)
Asteiidae	T (Rupe) - R	(162, 202, 255)
Athericidae	T (Lute) - R	(255, 275, 276)
Aulacigastridae	T (Rupe) - R	(162, 202, 418)
Bibionidae	?Tr (Carn) - R	(97, 137, 328)
Blephariceridae	K (Ceno) - R	(97)
Boholdoyidae	J (Toar) - K (Berr)	(97, 199, 386)
Bombyliidae	J (Bath) - R	(97, 199)
Calliphoridae	K (Maas) - R	(305)
Camillidae	T (Rupe) - R	(162, 202, 255)
Carnidae	T (Rupe) - R	(202, 255, 418)
Cecidomyiidae	K (Haut) - R	(137, 350, 386, 435)
Ceratopogonidae	?J (Tith) - R	(87, 350, 435, 484, 485)
Chamaemyiidae	T (Rupe) - R	(162, 202, 255, 418)
Chaoboridae	J (Toar) - R	(97, 199, 230, 545)
Chironomidae	J (Toar) - R	(97, 199, 230, 545)
Chloropidae	K (Haut) - R	(305, 350)
Chyromyiidae	T (Rupe) - R	(162, 202, 255, 418)
Clusiidae	T (Rupe) - R	(202, 255, 418)
Conopidae	T (Ypre) - R	(77, 132)
Crosaphididae	Tr (Carn) - J (Kimm)	(63, 97)
Culicidae	K (Camp) - R	(122, 180, 231, 316)
Cylindrotomiidae	T (Than) - R	(229)
Cypselosomatidae	T (Rupe) - R	(162, 202, 255, 418)
Diastatidae	T (Rupe) - R	(162, 202, 255)
Dictyodipteridae	J (Hett)	(63, 418)
Diopsidae	T (Rupe) - R	(162, 202, 255)
Diplopolynuridae	J (Hett)	(230, 424)
Ditomyiidae	T (Rupe) - R	(407)
Dixamimidae	J (Kimm)	(63, 417, 418)
Dixidae	K (Apti) - R	(194, 418)
Dolichopodidae	K (Apti) - R	(137, 549)
Drosophilidae	T (Rupe) - R	(135, 162, 202, 255)
Dryomyzidae	T (Rupe) - R	(97, 162, 255, 424)
Dyspolynuridae	J (Hett)	(230, 418, 424)
Ellidae	J (Tith) - K (Albi)	(227)

Empididae	J (Kimm) - R	(97, 418)
Eolimnobiidae	J (Plie)	(63, 271)
Eomyiidae	J (Kimm)	(97, 417)
Eophlebomyiidae	T (Ypre) - T (Rupe)	(132, 265)
Eoplectiidae	J (Plie) - K (?Albi)	(63, 97, 179, 418)
Eopolyneuridae	J (Hett)	(230, 424)
Eoptychopteridae	Tr (Nori) - K (Albi)	(97, 196, 199, 230)
Eostratiomyiidae	J (Kimm)	(63, 417)
Ephydriidae	T (Chat) - R	(78, 418)
Eremochaetidae	J (Kimm) - K (Apti)	(97, 137, 222)
Gasterophilidae	Q (Plei) - R	(140)
Glossinidae	T (Rupe) - R	(527)
Gracilitipulidae	K (Haut)	(179)
Heleomyzidae	T (Ypre) - R	(132)
Hippoboscidae	T (Chat) - R	(63, 97)
Hyperpolyneuridae	J (Sine)	(230, 424)
Hyperoscelididae	J (Bath) - R	(97, 199)
Ironomyiidae	K (Camp) - R	(63, 97)
Laurentipteridae	Tr (Namm) J (Toar)	(164, 530)
Lauxaniidae	T (Lute) - R	(170, 255, 527)
Limoniidae	Tr (Nori) - R	(199, 229, 230)
Lonchaeidae	T (Rupe) - R	(162, 202, 255)
Lonchopteridae	T (Rupe) - R	(418)
Luanpingitidae	J (Bajo)	(539)
Megamerinidae	T (Rupe) - R	(162, 202, 255)
Mesophantasmataidae	J (Kimm)	(63, 417, 418)
Mesosciophilidae	J (Bath) - K (Albi)	(97, 137, 199)
Micropezidae	T (Rupe) - R	(162, 202, 255)
Milichiidae	K (Coni) - R	(137, 202)
Muscidae	T (Ypre) - R	(132, 265)
Musidoromimidae	J (Sine)	(230, 424)
Mycetophilidae	J (Sine) - R	(517)
Mydidae	T (Rupe) - R	(527)
Nemestrinidae	J (Kimm) - R	(417)
Neriidae	T (Rupe) - R	(418)
Neurochaetidae	T (Pria) - R	(304)
Odiniidae	T (Chat) - R	(162, 202, 255)
Oestridae	T (Ypre) - R	(79, 132, 265)
Oligophrynidae	J (Sine)	(230, 424)
Opomyzidae	T (Chat) - R	(97)
Otitidae	T (Lute) - R	(79, 527)
Pachyneuridae	J (Kimm) - R	(97, 385)
Palaeolimnobiidae	K (Haut)	(179, 545)
Palaeophoridae	J (Kimm)	(63)
Palaeoplectiidae	J (Sine)	(230, 424)
Palaeostratiomyidae	J (Hett) - K (Haut)	(179, 418)
Pallopteridae	T (Rupe) - R	(202, 255, 418)
Paraplectiidae	J (Bajo)	(175)
Paratendipidae	K (Haut)	(179)

Paraxymyiidae	J (Toar) - J (Kimm)	(97, 416, 417)
Periscelididae	T (Aqui) - R	(418, 478)
Perissommatidae	J (Bath) - R	(97, 199)
Permotanyderidae	P (Ufim) - P (Long)	(398, 530)
Permotipulidae	P (Word) - P (Long)	(398, 525, 530)
Phoridae	K (Camp) - R	(97, 136, 137)
Phragmoligoneuridae	J (Sine)	(230, 418)
Piophilidae	T (Rupe) - R	(527)
Pipunculidae	K (Camp) - R	(306)
Platypzeidae	K (Haut)) - R	(97, 137, 179, 350, 540)
Platystomatidae	T (Rupe) - R	(80, 466)
Pleciodyctyidae	J (Sine)	(230, 424)
Pleciotungivoridae	J (Hett) - K (Berr)	(179, 199, 221, 386)
Pleciomimidae	J (Toar) - K (Sant)	(97, 199, 350)
Procramptonomyiidae	Tr (Nori) - J (Kimm)	(97, 199, 230)
Proneottiophilidae	T (Rupe)	(97, 202, 255)
Protempididae	J (Kimm)	(63, 501)
Protendipedidae	J (Bajo)	(97, 269, 417)
Protolbiogastridae	J (Sine)	(230, 424)
Protoligoneuridae	J (Sine)	(230, 424)
Protomphralidae	J (Kimm) - K (Haut)	(63, 179, 416, 418)
Protopleciidae	J (Toar) - K (?Albi)	(97, 179, 199)
Protorhyphidae	J (Sine) - K (?Albi)	(97, 230, 424)
Protoscatopsidae	J (Toar) - K (Apti)	(97, 199, 385)
Pseudopomyzidae	T (Rupe) - R	(163, 202, 255, 418)
Psilidae	T (Rupe) - R	(97, 162, 202, 255)
Psychodidae	J (Oxfo) - R	(97, 255)
Ptychopteridae	J (Oxfo) - R	(196, 198, 527)
Pyrgotidae	Q (Plei) - R	(466)
Rhaetomyiidae	J (Sine)	(230, 424)
Rhagionidae	J (Toar) - R	(97, 220)
Richardiidae	T (Chat) - R	(63, 97)
Sarcophagidae	T (Rupe) - R	(350, 418)
Scathophagidae	T (Rupe) - R	(79, 97)
Scatopsidae	K (Turo) - R	(97, 385)
Sciadoceridae	K (Haut) - R	(97, 137)
Sciaridae	K (Berr) - R	(97, 385)
Sciomyzidae	K (Vala) - R	(249, 521)
Siberhyphidae	J (Bajo) - J (Bath)	(97, 199)
Simuliidae	J (Call) - R	(89, 97, 487)
Sinemediidae	J (Kimm)	(63, 417)
Sinotendipedidae	K (Haut)	(179)
Sphaeroceridae	T (Ypre) - R	(78, 97, 265)
Stratiomyidae	K (Vala) - R	(249, 521)
Synneuridae	K (Camp) - R	(339)
Syrphidae	K (Sant) - R	(97, 137)
Tabanidae	K (Apti) - R	(132, 290)
Tachinidae	T (Ypre) - R	(132, 265)
Tanyderidae	J (Toar) - R	(97, 199)

Tanyderophrynidae	J (Kimm)	(63, 417, 418)
Tephritidae	T (Ypre) - R	(325)
Tethinidae	T (Aqui) - R	(97)
Thaumalaeidae	J (Tith) - R	(97, 223, 228, 386)
Therevidae	K (?Apti) - R	(97, 137)
Tipulidae	K (Haut) - R	(97, 229, 350, 391)
Tipulodictyidae	J (Sine)	(230, 424)
Tipuloplectiidae	J (Kimm)	(416, 417, 418)
Trichoceridae	J (Toar) - R	(97, 199, 229)
Trixoscelidae	T (Chat) - R	(424)
Vermileonidae	J (Toar) - R	(202, 222, 255, 363)
Xylomyidae	J (Bajo) - R	(172)
Xylophagidae	K (Ceno) - R	(97)
Asilomorpha, fam. nov.	K (Ceno)	(97)
Bibionoidea, fam. nov.	K (Ceno)	(97)
Scatopsoidea, fam. nov.	K (Ceno)	(97)

Or. TRICHOPTERA (= Phryganeida)

Baissoferidae	J (Aale) - K (Apti)	(97, 383, 482)
Beraeidae	T (Rupe) - R	(418)
Brachycentridae	T (Ypre) - R	(265)
Calamoceratidae	K (Apti) - R	(194, 290)
Dysoneuridae	J (Kimm) - K (?Albi)	(97, 417)
Ecnomidae	T (Rupe) - R	(418)
Electralbertidae	K (Camp) - K (Maas)	(24, 97, 350)
Glossosomatidae	T (Rupe) - R	(418)
Goeridae	T (Rupe) - R	(418)
Helicopsychidae	T (Rupe) - R	(418)
Hydrobiosidae	K (Sant) - R	(97, 350, 418)
Hydropsychidae	T (Ypre) - R	(128, 418)
Hydroptilidae	K (Sant) - R	(97, 418)
Lepidostomatidae	T (Rupe) - R	(267, 418)
Leptoceridae	K (Apti) - R	(194, 290)
Limnephilidae	K (Ceno) - R	(132, 262, 527)
Microptysmatidae	P (Asse) - P (Long)	(186, 256, 326, 419, 424, 481)
Molannidae	T (Ypre) - R	(255, 283, 418)
Necrotaulidae	Tr (Ladi) - K (Albi)	(193, 385, 480, 482)
Odontoceratidae	K (Apti) - R	(24, 267)
Philopotamidae	Tr (Ladi) - R	(97, 480)
Phryganeidae	K (Apti) - R	(97, 479)
Polycentropodidae	K (Berr) - R	(24, 97, 483)
Prorhacophilidae	Tr (Ladi) - J (Sine)	(400, 418, 480)
Prosepididontidae	J (Plie)	(63, 97, 418)
Psychomyiidae	T (Than) - R	(523)
Rhyacophilidae	J (Bajo) - R	(97, 383)
Sericostomatidae	K (Sant) - R	(549)
Stenopsychidae	T (Rupe) - R	(418)
Taymyrelectronidae	K (Sant)	(97)
Vitimotauliidae	J (Kimm) - K (Ceno)	(97, 479)

Xiphocentronidae	T (Chat) - R	(522)
Or. LEPIDOPTERA (= Papilionida)		
Adelidae	T (Rupe) - R	(97, 225)
Agathiphagidae	K (Haut) - R	(512)
Archaeolepididae	J (Sine)	(517)
Arctiidae	T (Lute) - R	(97, 511)
Argyresthiidae	T (Rupe) - R	(202, 255)
Blastobasidae	T (Chat) - R	(350)
Bombycidae	T (Rupe) - R	(413)
Bucculatricidae	K (Ceno) - R	(97, 225)
Coleophoridae	T (Zanc) - R	(121, 477)
Copromorphidae	T (Pria) - R	(188)
Cosmopterygidae	T (Lute) - R	(462, 499)
Cossidae	T (Pria) - R	(188)
Ctenuchidae	T (Rupe) - R	(418)
?Depressariidae	T (Rupe) - R	(255)
Elachistidae	T (Rupe) - R	(202, 229)
Eolepidopterigidae	J (Oxfo) - K (Albi)	(97, 382)
Eriocraniidae	T (Than) - R	(255)
Ethmiidae	T (Chat) - R	(81, 527)
Gelechiidae	T (Pria) - R	(188, 350)
Geometridae	T (Lute) - R	(188, 268, 511)
Gracillariidae	K (Ceno) - R	(97, 224, 225)
Heliodinidae	T (Rupe) - R	(462)
Heliozelidae	T (Rupe) - R	(462)
Hepialidae	T (Than) - R	(97)
Hesperiidae	T (Rupe) - R	(418)
Incurvariidae	K (Haut) - R	(350, 527)
Lasiocampidae	T (Rupe) - R	(85)
Libytheidae	T (Rupe) - R	(527)
Lophocoronidae	K (Sant) - R	(97)
Lycaenidae	T (Ypre) - R	(132, 188)
Lymantriidae	T (Mess) - R	(70)
Lyonetiidae	T (Ypre) - R	(97)
Micropterygidae	K (Haut) - R	(97, 513)
Mnesarchaeidae	K (Sant) - R	(110, 549)
Momphidae	T (Rupe) - R	(85)
Nepticulidae	K (Berr) - R	(97, 102, 225)
Noctuidae	T (Rupe) - R	(85, 97, 518, 511)
Notodontidae	T (Rupe) - R	(85, 97)
Nymphalidae	T (Ypre) - R	(97, 188)
Oecophoridae	T (Rupe) - R	(202, 255, 277, 418)
Opostegidae	?K (Ceno) - R	(248)
Papilionidae	T (Ypre) - R	(132, 418)
Pieridae	T (Rupe) - R	(35, 527)
Plutellidae	T (Ypre) - R	(97)
Psychidae	T (Rupe) - R	(255, 418)
Pterophoridae	T (Rupe) - R	(97)

Pyalidae	T (Pria)	- R	(188)
Riodinidae	T (Ypre)	- R	(97, 414)
Saturniidae	T (Rupe)	- R	(81, 527)
Satyridae	T (Rupe)	- R	(418)
Scythriidae	T (Rupe)	- R	(202)
Sesiidae	T (Rupe)	- R	(260, 541)
Sphingidae	T (Lute)	- R	(97, 424)
Symmocidae	T (Rupe)	- R	(202)
Thyrididae	T (Ypre)	- R	(132, 265)
Tineidae	?K (Camp)	R	(15, 188, 255)
Tortricidae	T (Rupe)	- R	(202, 255, 418)
Undopterigidae	K (Albi)	- K (Sant)	(97, 279, 292)
Yponomeutidae	T (Ypre)	- R	(132, 418)
Zygaenidae	T (Mess)	- R	(97, 314)
Homoneura, fam. nov.	K (Ceno)	- K (Sant)	(350, 462)

Or. HYMENOPTERA (= Vespida)

Agaonidae	T (Rupe)	- R	(36, 527)
Anaxyledidae	J (Bajo)	- R	(97, 171, 315)
Andrenidae	T (Rupe)	- R	(75, 255, 527)
Anthophoridae	T (Lute)	- R	(75, 255, 276, 527)
Aphelinidae	T (Rupe)	- R	(255)
Aphiidae	T (Rupe)	- R	(202, 255)
Apidae	K (Camp)	- R	(97, 310)
Archaeocynipidae	K (Apti)	- K (Albi)	(93, 97, 384)
Argidae	T (Lute)	- R	(418, 511)
Armaniidae	K (Albi)	- K (Turo)	(96, 97)
Aulacidae	J (Kimm)	- R	(97, 194, 379, 487)
Austroniidae	J (Kimm)	- R	(93, 97, 376, 384, 424)
Baissodidae	J (Oxfo)	- K (Albi)	(93, 189, 384, 487, 538)
Bethylidae	J (Kimm)	- R	(97, 384)
Bethylonymidae	J (Call)	- J (Kimm)	(93, 97)
Blasticotomidae	T (Rupe)	- R	(527, 546)
Braconidae	J (Kimm)	- R	(93, 97, 384)
Cephalidae	K (Albi)	- R	(171, 331)
Ceraphronidae	K (Turo)	- R	(252, 306, 350, 384)
Chalcididae	K (Haut)	- R	(290, 350)
Chrysididae	J (Kimm)	- R	(97, 384)
Cimbicidae	T (Than)	- R	(384, 418)
Colletidae	Q (Plei)	- R	(18)
Cretevaniidae	J (Kimm)	- K (Sant)	(93, 97, 376, 384)
Ctenoplectridae	T (Rupe)	- R	(255, 430)
Cynipidae	K (Ceno)	- R	(16, 97, 255, 261)
Diapriidae	K (Apti)	- R	(93, 97)
Diprionidae	T (Rupe)	- R	(418)
Dryinidae	J (Kimm)	- R	(93, 97, 376, 384)
Electrotomidae	T (Ypre)	- T (Rupe)	(97, 202, 378, 384)
Embolemidae	T (Rupe)	- R	(255, 384, 418)
Encyrtidae	T (Rupe)	- R	(255, 418)

Eoichneumonidae	K (Apti)	(194, 390)
Ephialtitidae	J (Sine) - K (Apti)	(93, 279, 384, 532)
Eucoilidae	T (Chat) - R	(464)
Eulophidae	K (Turo) - R	(97, 252)
Eumenidae	K (Turo) - R	(283, 376)
Eupelmidae	K (Camp) - R	(339)
Eurytomidae	T (Bart) - R	(36)
Evaniidae	T (Lute) - R	(36, 255)
Falsiformicidae	K (Ceno) - K (Sant)	(97, 376, 384)
Figitidae	K (Apti) - R	(384, 527)
Formicidae	K (?Haut) - R	(194, 280, 526)
Gasteruptiidae	J (Kimm) - R	(97, 194, 350, 424, 487)
Gigasiricidae	J (Plie) - K (Apti)	(97, 375, 417)
Halictidae	T (Rupe) - R	(75, 527)
Heloridae	J (Bajo) - R	(384, 417)
Ibaliidae	K (Sant) - R	(97, 350)
Ichneumonidae	J (Kimm) - R	(93, 97, 384)
Jurapriidae	J (Oxfo)	(97, 384)
Karatavidae	J (?Sine) - J (Kimm)	(97, 384, 417)
Limnetidae	J (Bajo)	(97)
Maimetsheidae	K (Sant) - K (Camp)	(376, 389)
Masaridae	K (Albi) - R	(97, 379)
Megalchilidae	T (Ypre) - R	(34, 75, 527)
Megalyridae	J (?Sine) - R	(97, 384)
Megapteridae	J (Kimm)	(374)
Megaspilidae	J (Kimm) - R	(93, 97, 384)
Melittidae	T (Rupe) - R	(527)
Mesoserphidae	J (Hett) - K (Albi)	(88, 93, 97, 279, 385, 487)
Monomachidae	J (Kimm) - R	(210)
Mutillidae	K (Sant) - R	(93, 97, 282, 538)
Mymaridae	K (Haut) - R	(350, 438, 528)
Mymaromatidae	K (Ceno) - R	(93)
Ormyridae	K (Camp) - R	(97)
Orussidae	K (Ceno) - R	(97)
Pamphilidae	J (Bajo) - R	(171, 384)
Pararchexyelidae	J (Toar) - J (Kimm)	(379, 417)
Paroryssidae	J (?Bajo) - K (Apti)	(97, 269, 417)
Pelecinidae	J (Kimm) - R	(97, 384)
Pelecinopteridae	T (Rupe)	(38, 255, 418)
Pergidae	T (Rupe) - R	(76)
Perilampidae	T (Rupe) - R	(255, 418)
Platygastridae	T (Than) - R	(97)
Plumariidae	K (Sant) - R	(211)
Pompilidae	J (Kimm) - R	(93, 97, 384)
Praeaulacidae	J (Bath) - K (Apti)	(93, 97, 384, 424)
Praeichneumonidae	J (Kimm) - K (Apti)	(93, 97, 384)
Praesiricidae	J (Oxfo) - K (Maas)	(97, 381, 384)
Proctotrupidae	J (Kimm) - R	(97, 384, 487)
Pteromalidae	K (Sant) - R	(350, 527)

Rhopalosomatidae	K (Apti) - R	(93, 280)
Roproniidae	J (Aale) - R	(97, 384)
Sapygidae	T (Rupe) - R	(255)
Scelionidae	K (Ceno) - R	(93, 438)
Scolebythidae	K (Ceno) - R	(418)
Scoliidae	J (Kimm) - R	(97, 384)
Sepulcidae	J (Plie) - K (Ceno)	(97, 375, 379, 424)
Serphitidae	J (Kimm) - K (Maas)	(93, 97, 202, 384, 389)
Sierolomorphidae	T (Rupe) - R	(37, 255)
Signiphoridae	T (Chat) - R	(464)
Sinoryssidae	J (Bajo)	(171)
Siricidae	J (Plie) - R	(97, 375, 384)
Sphecidae	J (Kimm) - R	(189, 194, 487)
Spheconyrmidae	K (Ceno) - K (Camp)	(97)
Stenotritidae	Q (Plei) - R	(181)
Stephanidae	T (Rupe) - R	(36, 255, 418)
Stigmaphronidae	J (Kimm) - K (Camp)	(93, 97, 376, 389)
Tenthredinidae	J (Kimm) - R	(93, 97, 384)
Tetracampidae	K (Ceno) - R	(97)
Tiphidae	K (Albi) - R	(93, 280, 527)
Torymidae	K (Sant) - R	(97)
Trichogrammatidae	K (Camp) - R	(97)
Trigonalidae	K (Berr) - R	(93, 97, 386, 424)
Vanhorniidae	?K(Camp) - R	(306)
Vespidae	K (Apti) - R	(39, 66, 242, 290, 424)
Xiphidriidae	?K (Albi) - R	(379)
Xyelidae	Tr (Ladi) - R	(97, 375, 384)
Xyelotomidae	J (Kimm) - K (Albi)	(97, 375, 378)
Xyelydidae	J (Toar) - K (Vala)	(97, 177, 381, 384, 417)
Incertae Sedis		
Apheloneuridae	P (Arti)	(58)
Dobertiniidae	J (Toar)	(63, 525)
Gelasopteridae	P (Arti)	(58)
Ignotalidae	P (Zech)	(63, 406)
Khosaridae	P (Kung)	(299)
Lygobiidae	J (Tith) - K (?Berr)	(97)
Miracopteridae	P (Kung)	(327)
Sypharopteridae	C (Mosc)	(55)
Teneopteridae	C (Mosc)	(48, 393)
Trachopteryidae	P (Arti)	(58)
Uninervidae	P (Capi) - Tr (Rhae)	(418, 430)

COMPENDIUM BIBLIOGRAPHY

1. Abdullah, M. 1964. New heteromorous beetles (Coleoptera) from the Baltic amber of eastern Prussia and gum copal of Zanzibar. Transactions of the Royal Entomological Society of London, 116: 329-346. pls. 1-2.

2. Abdullah, M. 1975. The higher classification of the insect order Coleoptera including fossil records and a classified directory of the coleopterists and Coleoptera collections of the world. *Zoologische Beiträge, N.F.*, 21: 363-461.
3. Anderson, N. M. 1982. A fossil water measurer (Insecta, Hemiptera, Hydrometridae) from the Paleocene/Eocene of Denmark and its phylogenetic relationships. *Bulletin of the Geological Society of Denmark*, 30: 91-96.
4. Ansoerge, J. 1993. *Dobbertinopteryx capniomimus* gen. et. sp. nov.-die erste Steinfliege (Insecta: Plecoptera) aus dem europäischen Jura. *Paläontologische Zeitschrift*, 67(3/4): 287-292.
5. Ansoerge, J., and T. Schlüter. 1990. The earliest chrysopid: *Liassoehrysa stigmatica*, n.g., n.sp. from the Lower Jurassic of Dobbertin, Germany. *Neuroptera International*, 6 (2): 87-93.
6. Archangelsky, S., et al. 1978. The Carboniferous and Early Permian of the South American Gondwana area: a summary of biostratigraphic information. *Actas del Segundo Congreso Argentino de Paleontología y Bioestratigrafía y Primer Congreso Latinoamericano de Paleontología*, 4: 257-269.
7. Arnoldi, L. V., V. V. Zherikin, L. M. Nitrikin, A. G. Ponomarenko. 1977. Mesozoic Coleoptera. *Transactions of the Paleontological Institute*, 161: 1-204. [In Russian.]
8. Baroni-Urbani, C., and J. B. Saunders. 1982. The fauna of the Dominican Republic amber: the present status of knowledge. *Memoirs of the Ninth Caribbean Geology Conference*, 1: 213-223.
9. Barthel, K. W., N. H. M. Swinburne, and S. Conway Morris. 1990. *Solnhofen: A study in Mesozoic Palaeontology*. Cambridge: Cambridge University Press, 236 pp.
10. Bekker-Migdisova, E. E. 1949. Mesozoic Homoptera of central Asia. *Transactions of the Paleontological Institute*, 22: 1-68. [In Russian.]
11. Bekker-Migdisova, E. E. 1958. New fossil Homoptera. Part 1. New ancient Homoptera from the coal-bearing Kusnetsk Basin. *Materials for the Fundamentals of Paleontology*, 2: 57-67. [In Russian.]
12. Bekker-Migdisova, E. E. 1960. New Permian Homoptera from the European USSR. *Transactions of the Paleontological Institute*, 76: 1-112. [In Russian.]
13. Bekker-Migdisova, E. E. 1962. Some new hemipterans and psocids. *Paleontological Journal*, 1962(1): 89-104.
14. Bekker-Migdisova, E. E. 1985. Fossil insect Psyllomorpha. *Transactions of the Paleontological Institute*, 206: 1-93, pls. 1-16. [In Russian.]
15. Berry, E. W. 1916. The Lower Eocene floras of southeastern North America. *United States Geological Survey Professional Paper*, 91: 1-149.
16. Berry, E. W. 1923. Pathological conditions among fossil plants. In: R.L. Moodie, editor. *Paleopathology*, pp. 99-114, pls. 12-13. Urbana: University of Illinois Press.
17. Beutel, R. G. 1993. Phylogenetic analysis of Adephaga (Coleoptera) based on characteristics of the larval head. *Systematic Entomology*, 18: 127-147.
18. Blair, K. G. 1927. Insect remains from oil sand in Trinidad. *Transactions of the Entomological Society of London*, 75: 137-141.
19. Bode, A. 1953. Die Insektenfauna des Ostniedersächsischen Oberen Lias. *Palaeontographica, (A)*, 103: 1-375.
20. Bolton, H. 1912. Insect-remains from the Midland and South-eastern Coal Measures. *Quarterly Journal of the Geological Society of London*, 68: 310-323.

21. Bolton, H. 1917. The "Mark Stirrup" collection of fossil insects from the Coal Measures of Commeny (Allier), central France. Notes from the Manchester Museum, 61(2): 1-33.
22. Bolton, H. 1921. Fossil insects of the British Coal Measures. Part 1. Palaeontographical Society Monograph, 73(348): 1-80, pls. 1-4.
23. Bolton, H. 1934. New forms from the insect fauna of the British Coal Measures. Quarterly Journal of the Geological Society of London, 90: 277-304, pls. 9-10.
24. Botosaneanu, L., and W. Wichard. 1983. Upper-Cretaceous Siberian and Canadian amber caddisflies (Insecta: Trichoptera). Bijdragen Tot de Dierkunde, 53(2): 187-217.
25. Brauckmann, C. 1988. Hagen-Vorhalle, a new important Namurian Insecta-bearing locality (Upper Carboniferous; FR Germany). Entomologia Generalis, 14(1): 73-79.
26. Brauckmann, C. 1991a. Arachniden und Insekten aus dem Namurium von Hagen-Vorhalle (Ober-Karbon; West-Deutschland). Veröffentlichungen aus dem Fuhlrott-Museum, 1: 1-275.
27. Brauckmann, C. 1991b. Ein neuer Insekten-Rest (Megasecoptera) aus dem Ober-Karbon von Osnabrück. Osnabrücker Naturwissenschaften Mitteilungen, 17: 25-32.
28. Brauckmann, C. 1993. Notiz über Insekten-Reste aus dem Ober-Karbon in Spanien. Jahrbucher der naturwissenschaftern Wuppertal, 46: 115-119.
29. Brauckmann, C., and L. Koch. 1983. Ein weitere neue Insektenart aus den Vorhalle-Schichten (Ober-Karbon, oberes Namurium B) von Hagen Vorhalle. Dortmunder Beiträge Landeskunde, Naturwissenschaftliche Mitteilungen, 17: 3-8.
30. Brauckmann, C., and T. Schlüter. 1993. Neue insecten aus der Trias von Unter-Franken. Geologica et Palaeontologica 27: 181-199.
31. Brauckmann, C., and R. Willman. 1990. Insekten aus dem Permo-Silesium der Bohrung Weiterstadt 1. (Blattodea, "Protorthoptera"; Oberrheinische Tiefebene, SW-Deutschland). Neues Jahrbuch für Geologie und Paläontologie, 1990(8): 470-478.
32. Brito, I. M. 1987. Nota preliminar sobre uma nova efêmera do Cretáceo do Ceará (Insecta Ephemeroptera). Anais da 10th Congresso Brasileiro de Paleontologia, 2: 593-597.
33. Britton, E. B. 1960. Beetles from the London Clay (Eocene) of Bognor Regis, Sussex. Bulletin of the British Museum of Natural History, Geology, 4(2): 27-50, pls. 2-7.
34. Brooks, H. K. 1955. Healed wounds and galls on fossil leaves from the Wilcox deposits (Eocene) of western Tennessee. Psyche, 62(1): 1-9.
35. Brown, F. M. 1976. *Oligodonta florissantensis*, gen. n., sp. nov. (Lepidoptera: Pieridae). Bulletin of the Allyn Museum, 37: 1-4.
36. Brues, C. T. 1910. The parasitic Hymenoptera of the Tertiary of Florissant, Colorado. Bulletin of the Museum of Comparative Zoology, 54(1): 1-125, pl. 1.
37. Brues, C. T. 1923. Some new fossil parasitic Hymenoptera from Baltic amber. Proceedings of the American Academy of Arts and Science, 58(8): 327-346.
38. Brues, C. T. 1933. The parasitic Hymenoptera of the Baltic amber. Bernstein-forschungen, 3: 4-178.
39. Burnham, L. 1978. Survey of social insects in the fossil record. Psyche, 85: 85-133.
40. Burnham, L. 1984. Les insectes du Carbonifère Supérieur de

- Montceau-les-Mines. 1. L'ordre des Caloneurodea. *Annales de Paléontologie*, 70(3): 167-180.
41. Burnham, L. 1986. Revisionary Studies on Upper Carboniferous Insects in the Order Protorthoptera. Cornell University: Ph.D. dissertation, xi + 178 pp.
 42. Carle, F. L., and D. C. Wighton. 1990. Odonata. In: Grimaldi, D. A., ed., *Insects from the Santana Formation, Lower Cretaceous, of Brazil*, Bulletin of the American Museum of Natural History, 195: 51-68.
 43. Carpenter, F. M. 1930. The Lower Permian insects of Kansas. Part 3. The Protohymenoptera. *Psyche*, 37: 343-374.
 44. Carpenter, F. M. 1932. Jurassic insects from Solenhofen in the Carnegie Museum and the Museum of Comparative Zoology. *Annals of the Carnegie Museum*, 21: 97-129.
 45. Carpenter, F. M. 1933a. A new megasecopteran from the Carboniferous of Kansas. *University of Kansas Science Bulletin*, 21(10): 365-367.
 46. Carpenter, F. M. 1933b. The Lower Permian insects of Kansas. Part 6. Delopteridae, Protelytroptera, Plecoptera and a new collection of Protodonata, Odonata, Megasecoptera, Homoptera and Psocoptera. *Proceedings of the American Academy of Arts and Science*, 68(11): 409-503, pl. 1.
 47. Carpenter, F. M. 1934. Carboniferous insects from Pennsylvania in the Carnegie Museum and the Museum of Comparative Zoology. *Annals of the Carnegie Museum*, 22: 323-341.
 48. Carpenter, F. M. 1943. The Lower Permian insects of Kansas. Part 9. The orders Neuroptera, Raphidioidea, Caloneurodea and Protorthoptera (Probnisidae), with additional Protodonata and Megasecoptera. *Proceedings of the American Academy of Arts and Sciences*, 75(2): 55-84, pl. 1.
 49. Carpenter, F. M. 1950. The Lower Permian insects of Kansas. Part 10. The Order Protorthoptera: the family Liomipteridae and its relatives. *Proceedings of the American Academy of Arts and Sciences*, 78: 185-219, pls. 1-3.
 50. Carpenter, F. M. 1951. Studies on Carboniferous insects from Commeny, France: Part II. The Megasecoptera. *Journal of Paleontology*, 25(3): 336-355, pl. 53.
 51. Carpenter, F. M. 1963. Studies on North American Carboniferous insects. 2. The genus *Brodioptera*, from the Maritime Provinces, Canada. *Psyche*, 70(2): 59-63.
 52. Carpenter, F. M. 1965. Studies on North American Carboniferous insects. 4. The genera *Metropator*, *Eubleptus*, *Hapaloptera* and *Hadentomum*. *Psyche*, 72: 175-190.
 53. Carpenter, F. M. 1966. The Lower Permian insects of Kansas. Part 11. The orders Protorthoptera and Orthoptera. *Psyche*, 73(1): 46-88.
 54. Carpenter, F. M. 1967a. Cretaceous insects from Labrador. 2. A new family of snake-flies (Neuroptera: Alloraphidiidae). *Psyche*, 74: 270-275.
 55. Carpenter, F. M. 1967b. Studies on North American Carboniferous insects. 5. Palaeodictyoptera and Megasecoptera from Illinois and Tennessee, with a discussion of the order Sypharopteroidea. *Psyche*, 74(1): 58-84.
 56. Carpenter, F. M. 1970. Fossil insects from New Mexico. *Psyche*, 77(4): 400-412.
 57. Carpenter, F. M. 1972. The affinities of *Eomerope* and *Dinopanorpa* (Mecoptera). *Psyche*, 79: 79-87.
 58. Carpenter, F. M. 1976. The Lower Permian insects of Kansas. Part 12. Protorthoptera (continued), Neuroptera, additional Palaeodictyoptera, and families of uncertain position. *Psyche*, 83: 336-378.
 59. Carpenter, F. M. 1979. Lower Permian insects from Oklahoma. Part 2. Orders

- Ephemeroptera and Palaeodictyoptera. *Psyche*, 86(2/3): 261-290.
60. Carpenter, F. M. 1980. Studies on North American Carboniferous insects. 6. Upper Carboniferous insects from Pennsylvania. *Psyche*, 87: 107-119.
 61. Carpenter, F. M. 1983. Studies on North American Carboniferous insects. 7. The structure and relationships of *Eubleptus danielsi* (Palaeodictyoptera). *Psyche*, 90(1/2): 81-95.
 62. Carpenter, F. M. 1986. Substitute names for the extinct genera *Cycloptera* Martynova (Mecoptera) and *Parelcana* Carpenter (Orthoptera). *Psyche*, 93(3/4): 375-376.
 63. Carpenter, F. M. 1992. Superclass Hexapoda. In: Kaesler, R.L., Brosius, E., Keim, J., Priesner, J., editors. *Treatise on Invertebrate Paleontology, Part R (Arthropoda- 4), Volumes 3 and 4: xxi + 655*. Boulder, Colorado and Lawrence, Kansas: Geological Society of America and The University of Kansas.
 64. Carpenter, F. M., Cockerell, T. D. A., Kennedy, C. H., Synder, T., Wickham, H. F. 1931. Insects from the Miocene (Latah) of Washington. *Annals of the Entomological Society of America*, 24: 307-323.
 65. Carpenter, F. M., and J. Kukalová. 1964. The structure of the Protelytroptera, with description of a new genus from Permian strata of Moravia. *Psyche*, 71: 179-183.
 66. Carpenter, J. M., and A. P. Rasnitsyn. 1990. Mesozoic Vespidae. *Psyche*, 97(1/2): 1-20.
 67. Carpenter, F. M., and E. S. Richardson. 1971. Additional insects in Pennsylvanian concretions from Illinois. *Psyche*, 78(4): 267-295.
 68. Carpenter, F. M., and E. S. Richardson. 1976. Structure and relationships of the Upper Carboniferous insect, *Eucaenus ovalis* (Protorthoptera: Eucaenidae). *Psyche*, 83(3/4): 223-242.
 69. Carpenter, F. M., and E. S. Richardson. 1978. Structure and relationships of the Upper Carboniferous insect, *Prochoroptera calopteryx* (Diaphanopteroidea, Prochoropteridae). *Psyche*, 85(2/3): 219-228.
 70. Cavallo, O., and E. S. Richardson. 1987. Studi di Carlo Sturani su Odonati e altri insetti fossili del Messiniano albese (Piemonte) con descrizione di *Oryctodiplax gypsonum* n. gen. n. sp. (Odonata, Libellulidae). *Bollettino della Società Paleontologia Italiana*, 26: 151-176.
 71. Chen, S.-H., Tang, C.-C. 1973. A new family of Coleoptera from the Lower Cretaceous of Kansu. *Acta Entomologica Sinica*, 16(2): 161-167.
 72. Chernova, O. A. 1969. New Early Jurassic mayflies (Ephemeroptera, Epeoromimidae and Mesonetidae). *Entomological Review*, 48(1): 88-93.
 73. Chernova, O. A. 1970. On the classification of fossil and recent Ephemeroptera. *Entomological Review*, 49: 71-81.
 74. Cobben, R. H. 1971. A fossil shore bug from the Tertiary amber of Chiapas Mexico (Heteroptera, Saldidae). *University of California Publications in Entomology*, 63: 49-56.
 75. Cockerell, T. D. A. 1906. Fossil Hymenoptera from Florissant, Colorado. *Bulletin of the Museum of Comparative Zoology*, 50(2): 1-58.
 76. Cockerell, T. D. A. 1908. The fossil sawfly *Perga coloradensis*. *Science*, 28: 113-114.
 77. Cockerell, T. D. A. 1909. A catalogue of the generic names based on American insects and arachnids from the Tertiary rocks, with indications of the type

- species. Bulletin of the American Museum of Natural History, 26: 77-86.
78. Cockerell, T. D. A. 1916. British fossil insects. Proceedings of the United States National Museum, 49(2119): 469-499, pls. 60-65.
 79. Cockerell, T. D. A. 1917. Insects in Burmese amber. Annals of the Entomological Society of America, 10: 323-329.
 80. Cockerell, T. D. A. 1921. An ortolid fly in British amber. The Entomologist, 54: 30-31.
 81. Cockerell, T. D. A. 1922. A fossil moth from Florissant, Colorado. American Museum Novitates, 34: 1-2.
 82. Cockerell, T. D. A. 1924a. Fossil insects in the United States National Museum. Proceedings of the United States National Museum, 64(2503): 1-15, pls. 1-2.
 83. Cockerell, T. D. A. 1924b. An ancestor of the Agromyzidae. The Entomologist, 58(736): 199-201.
 84. Cockerell, T. D. A. 1927. The Carboniferous insects of Maryland. Annals and Magazine of Natural History, (9), 19: 385-416.
 85. Covell, C. V., Jr. 1991. An annotated list of moths recorded at Florissant Fossil Beds National Monument, Colorado. Journal of Research on the Lepidoptera, 30(1/2): 38-44.
 86. Cowley, J. 1942. Descriptions of some genera of fossil Odonata. Proceedings of the Royal Entomological Society of London, (B), 11: 63-78.
 87. Craig, D. A. 1977. A reassessment of the systematic position of *Pseudosimulium humidum* (Westwood), an Upper Jurassic fossil dipteran. Entomological Gazette, 28: 175-179.
 88. Cromav, V. V., V. Y. Dmitriev, V. V. Zherikin, E. L. Lebedev, A. G. Ponomarenko, A. P. Rasnitsyn, and I. D. Sukasheva. 1993. Cretaceous insects from the Uljya River Basin (West Okhot Region). In: Ponomarenko, A. G., ed., Mesozoic Insects and Ostracods from Asia. Transactions of the Paleontological Institute, 252: 5-60. [In Russian.]
 89. Crosskey, R. W. 1991. The fossil pupa *Simulimima* and the evidence it provides for the Jurassic origin of the Simuliidae (Diptera). Systematic Entomology, 16: 401-406.
 90. Crowson, R. A. 1973. On a new superfamily Armatopodea of polyphagan beetles, with the definition of two new fossil genera from the Baltic amber. Journal of Natural History, 7: 225-238.
 91. Crowson, R. A. 1976. The evolutionary history of Coleoptera, as documented by fossil and comparative evidence. Atti 10th Congresso Nazionale della Italiana Entomologia, pp. 47-90.
 92. Crowson, R. A. 1981. The Biology of the Coleoptera. New York Academic Press, 802 pp.
 93. Darling, D. C., and M. J. Sharkey. 1990. Order Hymenoptera. In: Grimaldi, D.A., editor. Insects from Santana Formation, Lower Cretaceous, of Brazil. Bulletin of the American Museum of Natural History, 195: 123-153.
 94. Demoulin, G. 1954. Les éphéméroptères jurassiques du Sinkiang. Bulletin et Annales de la Société Entomologique de Belgique, 90: 322-326.
 95. Demoulin, G. 1971. Contribution a l'étude morphologique, systematique et phylogénique des éphéméroptères Jurassiques. VI. L'aile postérieure des *Hexagenites* Scudder et les rapports Hexagenitidae-Chromarcyidae-Oligoneuriidae. Bulletin de l'Institut Royale des Sciences Naturelles de Belgique, 47(29): 1-10.

96. Dlussky, G. M. 1983. A new family of Upper Cretaceous Hymenoptera: an "intermediate link" between the ants and the scolioids. *Paleontological Journal*, 1983(3): 65-78.
97. Dmitriev, V. Y., and V. V. Zherikhin. 1988. Changes in the familial diversity of insects and a demonstration of the method of data analysis. In: Ponomarenko, A.G., ed., *The Mesozoic Biocoenotic Crisis in the Evolution of Insects*, pp. 208-215. Moscow: Academy of Sciences. [In Russian.]
98. Dodds, B. 1949. Mid-Triassic Blattoidea from the Mount Crosby insect bed. *Papers of the Department of Geology, University of Queensland*, 3(10): 1-11.
99. Dolin, V. G. 1975. A contribution to the systematics of Mesozoic click beetles (Coleoptera, Elateridae). *Paleontological Journal*, 4: 474-486.
100. Dolin, V. G., D. V. Panfilov, A. G. Ponomarenko, and L. N. Pritykina. 1985. Fossil insects of the Mesozoic. Kiev Ukrainian Academy of Sciences, Institute of Zoology, 136 pp. [In Russian.]
101. Dolling, W. R. 1981. A rationalized classification of the burrower bugs (Cydnidae). *Systematic Entomology*, 6: 61-76.
102. Donner, H., and C. Wilkinson. 1989. Nepticulidae (Insecta: Lepidoptera). *Fauna of New Zealand*, 16: 1-88.
103. Dubinin, B. V. 1948. Discovery of a Pleistocene louse (Anoplura) and nematodes during the study of a corpse of Indigirsk fossil gophers. *Doklady, Academiai Nauk USSR*, 62: 417-420. [In Russian]
104. Dunbar, C. O., and R. J. Tillyard. 1924. Kansas Permian insects. Part 1. The geologic occurrence and the environment of the insects. *American Journal of Science* (5), 8: 171-209, pl. 1.
105. Durden, C. J. 1969. Pennsylvanian correlation using blattoid insects. *Canadian Journal of Earth Science*, 6: 1159-1177.
106. Durden, C. J. 1984. Carboniferous and Permian entomology of western North America. In: P. M. Sutherland and W. L. Manger, eds., *Compte Rendu, Neuvième Congrès International de Stratigraphie et de Géologie du Carbonifère*, 2: 81-89. Carbondale and Edwardsville: Southern Illinois University Press.
107. Durden, C. J. 1988. Insect fauna. In: G. Mapes and R. H. Mapes, eds., *Regional Geology and Paleontology of Upper Paleozoic Hamilton Quarry Area in Southeastern Kansas*, pp. 117-124. Geological Society of America, field trip guidebook.
108. Edmunds, G. F., Jr. 1972. Biogeography and evolution in the Ephemeroptera. *Annual Review of Entomology*, 17: 21-42.
109. Ellenberger, F., P. Ellenberger, D. Laurentiaux, and J. Ricour. 1953. Note préliminaire sur la faune et un niveau insectifère des lentilles de grès et schistes noirs des gypses de la Vanoise (Trias Supérieur). *Bulletin de Société Géologique de France*, (6), 2: 269-274, pl. 13.
110. Eskov, K. Y. 1987. A new archaetid spider (Chelicerata: Aranae) from the Jurassic of Kazakstan, with notes on the so-called "Gondwanan" ranges of recent taxa. *Neues Jahrbuch für Geologie und Paläontologie Abhandlungen*, 175(1): 81-106.
111. Evans, J. W. 1943. Upper Permian Homoptera from New South Wales. *Records of the Australian Museum*, 21: 180-198.
112. Evans, J. W. 1956. Palaeozoic and Mesozoic Hemiptera (Insects). *Australian Journal of Zoology*, 4: 165-258.
113. Evans, J. W. 1963. The phylogeny of the Homoptera. *Annual Review of*

- Entomology, 8: 77-94.
114. Fletcher, T. B. 1920. Indian fossil insects. Scientific Reports of the Agricultural Research Institute of Pusa, 3: 983-990.
 115. Fraser, F. C. 1938. Additions to the family Amphipterygidae (Order-Odonata). Proceedings of the Royal Entomological Society of London, (B), 7(7): 137-143.
 116. Fraser, F. C. 1940. A note on the classification of *Zacallites balli* Cockerell (Upper Eocene) (Order Odonata). Proceedings of the Royal Entomological Society of London, (B), 9(4): 62-64.
 117. Fujiyama, I. 1973. Mesozoic insect fauna of East Asia. Part 1. Introduction and Upper Triassic faunas. Bulletin of the National Science Museum, 16(2): 331-386, pls. 1-5.
 118. Fujiyama, I. 1991. Late Triassic insects from Mine, Yamaguchi, Japan. Part 1. Odonata. Bulletin of the National Science Museum, (C), 17(2): 49-56.
 119. Gardiner, B. G. 1961. New Rhaetic and Liassic beetles. Palaeontology, 4(1): 87-89.
 120. George, V. P. 1969. Record of an apparently new microfossil species (Insecta: Corrodentia) from the Cretaceous Limestone Clay, Seminar Hills, Nagpur, (India). Bulletin of Entomology, 10: 1-3.
 121. Givulescu, R. 1981. Pathological elements on fossil leaves from Chiuzbaia (galls, mines and other insect traces). Dari de Seama, Institute of Geology and Geophysics, 18(3): 123-133, pls. 1-6.
 122. Gomez-Pallerola, J. E. 1986. Nuevos insectos fósiles de las calizas litográficas del Cretácico Inferior del Montsec (Lérida). Boletín Geológico y Minero, 97(6): 717-736.
 123. Gore, P. J. W. 1988. Paleocology and sedimentology of a Late Triassic Lake, Culpepper Basin, Virginia, U.S.A. Palaeogeography, Palaeoclimatology, Palaeoecology, 62: 593-608.
 124. Gorochov, A. V. 1985. Mesozoic crickets (Orthoptera, Grylloidea) of Asia. Paleontological Journal, 19(2): 56-66.
 125. Gorochov, A. V. 1986. Triassic grasshoppers of the superfamily Hagloidea (Orthoptera). Transactions of the Zoological Institute, 143: 65-100. [In Russian.]
 126. Gorochov, A. V. 1987a. New fossil orthopterans of the families Bintonellidae, Mesoedischiidae fam. n. and Pseudelcanidae fam. n. (Orthoptera, Ensifera) from Permian and Triassic deposits of the U.S.S.R. Vestnik Zoologii, 1987(1): 18-23. [In Russian.]
 127. Gorochov, A. V. 1987b. New fossil orthopterans of the families Adumbratomorphidae fam. n., Pruvostitidae and Proparagryllacrididae (Orthoptera, Ensifera) from Permian and Triassic deposits of the U. S. S. R. Vestnik Zoologii 1987(4): 20-28. [In Russian.]
 128. Gorochov, A. V. 1987c. Permian Orthoptera of the infraorder Oedischiidea (Ensifera). Paleontological Journal, 21(1): 72-85.
 129. Gorochov, A. V. 1988. Grasshoppers of the superfamily Hagloidea (Orthoptera) from the Lower and Middle Jurassic. Paleontological Journal, 1988(2): 54-66. [In Russian.]
 130. Gorochov, A. V. 1992. New and little-known fossil Grylloidea (Orthoptera) from Eurasia. Paleontological Journal, 1992(2): 96-102. [In Russian.]
 131. Gorochov, A. V. 1993. Fossil Phasmoptera from the Jurassic and Cretaceous. In: A. G. Ponomarenko, ed., Mesozoic Insects and Ostracods from Asia. Transactions of the Paleontological Institute, 252: 112-117. [In Russian.]

132. Grande, L. 1980. Paleontology of the Green River Formation with a review of the fish fauna. *Bulletin of the Geological Survey of Wyoming*, 63: 1-333.
133. Gratshev, V. G. 1993. New fossil mantids (Insecta, Mantida [sic]). *Paleontological Journal* 27(1A): 148-165.
134. Grauvogel, L., and D. Laurentiaux. 1952. Un protodonate du Trias des Vosges. *Annales de Paléontologie*, 38: 121-129, pl. 4.
135. Grimaldi, D. A. 1987. Amber fossil Drosophilidae (Diptera), with particular reference to the Hispaniolan taxa. *American Museum Novitates*, 2880: 1-23.
136. Grimaldi, D. A. 1989. The genus *Metopina* (Diptera: Phoridae) from Cretaceous and Tertiary ambers. *Journal of the New York Entomological Society*, 97(1): 65-72.
137. Grimaldi, D. A. 1990. Diptera. In: D. A. Grimaldi, ed., *Insects from the Santana Formation, Lower Cretaceous, of Brazil*. *Bulletin of the American Museum of Natural History*, 195: 164-183.
138. Grimaldi, D. A. 1992. Vicariance biogeography, geographic extinctions, and the North American tsetse flies. In: M. J. Novacek, and Q. D. Wheeler, eds., *Extinction and Phylogeny*. Columbia University Press, New York, pp. 178-204.
139. Grimaldi, D. A., C. Michalski, and K. Schmidt. 1993. Amber fossil Enicocephalidae (Heteroptera) from the Lower Cretaceous of Lebanon and Oligo-Miocene of the Dominican Republic, with biogeographic analysis of *Enicocephalus*. *American Museum Novitates*, 3071: 1-30.
140. Grunin, K. Y. 1973. The first discovery of larvae of the mammoth bot-fly *Cobboldia* (*Mamontia*, subgen. n.) *russanovi* sp. n. (Diptera, Gasterophilidae). *Entomological Review*, 52(1): 165-169.
141. Guthörl, P. 1939. Zur arthropoden-Fauna des Karbons und Perms. 9. Palaeodictyoptera, Mixotermitoidea, Miomoptera und Blattariae. *Senckenbergiana*, 21(5/6): 314-329.
142. Guthörl, P. 1962. Zur arthropoden-Fauna des Karbons und Perms. 16. *Frankenholzia culmanni* n.g. n.sp. (Ins., Palaeodict.) aus dem Westfal D der Grube Frankenholz-Saar. *Paläontologische Zeitschrift*, 36(3/4): 226-231.
143. Guthörl, P. 1965. Zur arthropoden-Fauna des Karbons und Perms. 21. *Protereisma rossenrayensis* n. sp., ein Ephemeropterenfund (Insecta) aus dem niederrheinischen zechstein. *Paläontologische Zeitschrift*, 39(3/4): 229-233.
144. Hamilton, K. G. A. 1990. Chapter 6: Homoptera. In: D. A. Grimaldi, ed., *Insects from the Santana formation, Lower Cretaceous, of Brazil*. *Bulletin of the American Museum of Natural History*. 195: 82-122.
145. Hamilton, K. G. A. 1992. Lower Cretaceous Homoptera from the Koonwarra fossil bed in Australia, with a new superfamily and synopsis of Mesozoic Homoptera. *Annals of the Entomological Society of America*, 85: 423-430.
146. Handlirsch, A. 1905. Revision of American Paleozoic insects. *Proceedings of the United States National Museum*, 29(1441): 661-820.
147. Handlirsch, A. 1910. Insects from the Tertiary lake deposits of the southern interior of British Columbia, collected by Mr. Lawrence M. Lambe, in 1906. *Contributions to Canadian Palaeontology, Geological Survey of Canada*, 2(3): i-viii, 93-129.
148. Handlirsch, A. 1911. New Paleozoic insects from the vicinity of Mazon Creek, Illinois. *American Journal of Science*, 31: 297-326, 353-377.
149. Handlirsch, A. 1919. Revision der Palaeozoischen Insekten. *Denkschriften Akademie der Wissenschaftlichen (Mathematisch Naturwissenschaftliche Klasse) in Wien*, 96: 511-592.

150. Handschin, E. 1944. Insekten aus den Phosphoriten des Quercy. Schweizerische Palaeontologische Abhandlungen, 64(4): 1-23, pls. 1-3.
151. Hatch, M. H. 1927. A revision of fossil Gyrinidae. Bulletin of the Brooklyn Entomological Society, 22: 89-96, pl. 7.
152. Haupt, H. 1950. Die Käfer (Coleoptera) aus der eozänen Braunkohle des Geiseltales. Geologica, 6: 1-168.
153. Haupt, H. 1956. Beitrag zur Kenntnis der eozänen Arthropodenfauna des Geiseltales. Nova Acta Leopoldina, N.F., 18(128): 1-90.
154. Heggemann, H., R. Kohring, and T. Schlüter. 1990. Fossil plants and arthropods from the Phra Wihan Formation, presumably Middle Jurassic, of northern Thailand. Alcheringa, 14: 311-316.
155. Heie, O. E. 1967. Studies on fossil aphids (Homoptera: Aphidoidea). Spolia Zoologica Musei Hauniensis, 26: 1-273.
156. Heie, O. E. 1981. Morphology and phylogeny of some Mesozoic aphids (Insecta, Hemiptera). Entomological Scandinavica, Supplementum, 15: 401-415.
157. Heie, O. E. 1985. Fossil aphids: a catalogue of fossil aphids, with comments on systematics and evolution. Proceedings of the International Aphidological Symposium, pp. 101-134. Warsaw: Institute of Zoology of the Polish Academy of Sciences.
158. Heie, O. E. 1987. Paleontology and phylogeny. In: A. K. Minks, and P. Harreijn, eds., Aphids: Their Biology, Natural Enemies and Control, A: 367-391. Amsterdam: Elsevier.
159. Heie, O. E. 1989. Fossil aphids (Insecta, Homoptera) from the Tertiary deposits of Bolshaya Svetlovodnaya, the U.S.S.R. Entomologica Scandinavica, 19: 475-488.
160. Heike, F., Pietrzeniuk, E. 1984. Die Bernstein-Käfer des Museums für Naturkunde, Berlin (Insecta, Coleoptera). Mitteilungen aus dem Zoologischen Museum in Berlin, 60(2): 297-326.
161. Hennig, W. 1965. Die Acalptrae des baltischen Bernsteins. Stuttgarter Beiträge zur Naturkunde, 145: 1-215.
162. Hennig, W. 1969. Neue Übersicht über die aus dem Baltischen Bernstein bekannten Acalyptrae. Stuttgarter Beiträge zur Naturkunde, 209: 1-42.
163. Hennig, W. 1971. Die Familien Pseudopomyzidae und Milichiidae im baltischen Bernstein (Diptera: Cyclorrhapha). Stuttgarter Beiträge zur Naturkunde, 233: 1-16.
164. Hennig, W. 1981. Insect Phylogeny. New York, John Wiley and Sons, 514 pp.
165. Henrikson, K. L. 1922. Eocene insects from Denmark. Danmarks Geologiske Undersøgelse, 37(2):1-36.
166. Hoganson, J. S., and A. C. Ashworth. 1982. The late-glacial climate of the Chilean Lake region implied by fossil beetles. Proceedings of the Third North American Paleontological Convention, 1: 251-256.
167. Hong, Y.-C. 1980a. Granulidae, a new family of Homoptera from the Middle Triassic of Tongchuan, Shanxi Province. Acta Zootaxonomica Sinica, 5: 63-70. [In Chinese with English summary.]
168. Hong, Y.-C. 1980b. The discovery of Late Paleozoic insects in Shanxi Province. Geological Review, 26(2): 89-95. [In Chinese.]
169. Hong, Y.-C. 1980c. Fossil insects. Mesozoic Stratigraphy and Paleontology of the Shansi, Gansu and Ningia Basins, 2: 111-114. [In Chinese.]
170. Hong, Y.-C. 1981. Eocene fossil Diptera Insecta in amber of Fushun coalfield. Geological Publishing House, Beijing, 166 pp. [In Chinese.]

171. Hong, Y.-C. 1982. Mesozoic Fossil Insects of Jiuquan Basin in Gansu Province. Beijing: Geological Publishing House, 187 pp., 39 pls. [In Chinese.]
172. Hong, Y.-C. 1983a. Middle Jurassic Fossil Insects in North China. Beijing: Geological Publishing House, 223 pp., 28 pls. [In Chinese with English summary.]
173. Hong, Y.-C. 1983b. Fossil insects in the diatom[ite]s of Shanwang. Bulletin of the Tianjin Institute of Geology and Mineral Resources, 8: 1-15. [In Chinese.]
174. Hong, Y.-C. 1984a. Curvicutitidae fam. nov. (Lepidoptera?, Insecta) from Middle Triassic of Shaanxi. Acta Paleontologica Sinica 2(6): 782-785. [In Chinese.]
175. Hong, Y.-C. 1984a. New fossil insects of Laiyang Group from Laiyang Basin, Shandong Province. Professional Papers in Stratigraphy and Paleontology, 11: 31-41, pls. 1-3. [In Chinese.]
176. Hong, Y.-C. 1985. Insecta. In: Palaeontological Atlas of North China. II. Mesozoic Volume. Geological Publishing House, Beijing, pp. 128-185. [In Chinese.]
177. Hong, Y.-C. 1987. The study of Early Cretaceous insects of "Kezuo," West Liaoning. Professional Papers in Stratigraphy and Paleontology, 18: 76-91. [In Chinese.]
178. Hong, Y.-C. 1992. A new family of Mesozoic snake-flies (Insecta, Raphidioptera) from the Laiyang Basin. Paleontological Journal, 1992(3): 101-105. [In Russian.]
179. Hong, Y.-C., and W.-I. Wang. 1990. Fossil insects from the Laiyang Basin, Shandong Province. In: Regional Geological Surveying Team: The Stratigraphy and Palaeontology of Laiyang Basin, Shandong Province, pp. 44-189. Shandong: Shandong Bureau of Geology and Mineral Resources. [In Chinese.]
180. Hong, Y.-C., D.-S. Yan, and D.-R. Wang. 1989. Discovery of Early Cretaceous *Cretacechorista* gen. nov. Insecta: Mecoptera from Jiuquan Basin, Gansu Province. Memoirs of the Beijing Natural History Museum, 44(9): 109. [In Chinese with English summary.]
181. Houston, T. F. 1987. Fossil brood cells of stenotritid bees (Hymenoptera: Apoidea) from the Pleistocene of South Australia. Transactions of the Royal Society of South Australia, 3(2): 93-97.
182. Hubbard, M. D., and J. Kulalová-Peck. 1980. Permian mayfly nymphs: new taxa and systematic characters. In: J.F. Flannagan and K.E. Marshall, eds., Advances in Ephemeropteran Biology, pp. 19-31. New York: Plenum Publishing Co.
183. Hubbard, M. D., and H. M. Savage. 1981. The fossil Leptophlebiidae (Ephemeroptera): a systematic and phylogenetic review. Journal of Paleontology, 55: 810-813.
184. Hurd, P. D., Jr., R. F. Smith, R. F., and J. W. Durham. 1962. The fossiliferous amber of Chiapas, Mexico. Ciencia, 21(3): 107-118.
185. Illies, J. 1965. Phylogeny and zoogeography of the Plecoptera. Annual Review of Entomology, 10: 117-140.
186. Ivanov, V. D. 1992. A new family of caddisflies (Insecta, Trichoptera) from the Permian of the middle Urals. Paleontological Journal, 1992(4): 31-35. [In Russian.]
187. Jarzembowski, E. A. 1976. Report of Easter Field Meeting: the Lower Tertiaries of the Isle of Wight, 27-31.III.1975. Tertiary Research, 1(1): 11-16.
188. Jarzembowski, E. A. 1980. Fossil insects from Bembridge Marls, Palaeogene of the Isle of Wight, southern England. Bulletin of the British Museum of Natural History (Geology), 33: 237-293.

189. Jarzembowski, E. A. 1984. Early Cretaceous insects from southern England. *Modern Geology*, 9: 71-93.
190. Jarzembowski, E. A. 1989. A fossil aphid (Insecta: Hemiptera) from the Early Cretaceous of southern England. *Cretaceous Research*, 10: 239-248.
191. Jarzembowski, E. A. 1990a. Early Cretaceous zygopteroids of southern England, with the description of *Cretacoenagrion alleni* gen. nov., spec. nov. (Zygoptera: Coenagrionidae: "Anisozygoptera": Tarsophlebiidae, Euthemistidae). *Odonatologica*, 19(1): 27-37.
192. Jarzembowski, E. A. 1990b. A boring beetle from the Wealden of the Weald. *Proceedings of the Geologists' Association*, 102(2): 93-108.
193. Jarzembowski, E. A. 1991. New insects from the Weald Clay of the Weald. *Proceedings of the Geologists' Association*, 102(2): 93-108.
194. Jell, P. A., and P. M. Duncan. 1986. Invertebrates, mainly insects, from the freshwater, Lower Cretaceous Koonwarra fossil bed (Korumburra Group), South Gippsland, Victoria. *Association of Australasian Palaeontologists Memoir*, 3: 111-205.
195. Jordan, K. H. C. 1967. Wanzen aus dem Pliozän von Willershausen. *Bericht der Naturhistorischen Gesellschaft zu Hannover*, 111: 77-90.
196. Kalugina, N. S. 1989. New psychodomorph dipteran insects from the Mesozoic of Siberia. *Paleontological Journal*, 1989(1): 65-77. [In Russian.]
197. Kalugina, N. S. 1991. New Mesozoic Simuliidae and Leptoconopidae and the origin of bloodsucking in the lower dipteran insects. *Paleontological Journal*, 25(1): 66-77.
198. Kalugina, N. S. 1992. Psychodomorphan Diptera from the Jurassic of Mongolian Altai (Diptera: Tanyderidae, Eoptychoptera). *Paleontological Journal*, 1992(3): 110-113. [In Russian.]
199. Kalugina, N. S., and V. G. Kovalev. 1985. Dipterous Insects from the Jurassic of Siberia. *Moscow: Academy of Sciences*, 199 pp., 8 pls. [In Russian.]
200. Kathirithamby, J., and D. Grimaldi. 1993. Remarkable stasis in some Lower Tertiary parasitoids: descriptions, new records, and review of Strepsiptera in the Oligo-Miocene amber of the Dominican Republic. *Entomologica Scandinavica*, 24: 31-41.
201. Keilbach, R. 1982a. Bibliographie und Liste der Arten tierischer Einschlüsse in fossilen Harzen sowie ihrer Aufbewahrungsorte. Teil 1. *Deutsche Entomologische Zeitschrift, N.F.*, 29: 129-286.
202. Keilbach, R. 1982b. Bibliographie und Liste der Arten tierischer Einschlüsse in fossilen Harzen sowie ihrer Aufbewahrungsorte. Teil 2. *Deutsche Entomologische Zeitschrift, N.F.*, 29: 301-491.
203. Keller, G. 1931. Paläodictyopteron aus den Magerkohlschichten (Namurische Stufe) Westfalens. *Glückauf*, 67: 1155-1156.
204. Kevan, D. K. M., and D. C. Wighton. 1981. Paleocene orthopteroids from south-central Alberta, Canada. *Canadian Journal of Earth Science*, 18(12): 1824-1837.
205. Kinzelbach, R. K., and H. Lutz. 1984. Eine neue Eintagsfliege *Misthodotes stapfi* n. sp. aus dem Rotliegenden des Nahe-Gebietes (Ephemeroptera: Permoplectoptera: Misthodotidae). *Paläontologische Zeitschrift*, 58: 247-253.
206. Kinzelbach, R. K., and H. Lutz. 1985. Styloid larva from the Eocene--a spotlight on the phylogeny of the styloids (Strepsiptera). *Annals of the Entomological Society of America*, 78: 600-602.

207. Kinzelbach, R. K., and H. Pohl. 1993. The fossil Strepsiptera (Insecta: Strepsiptera). *Annals of the Entomological Society of America*, 87(1): 59-70.
208. Kirejtschuk, A. G., Ponomarenko, A. G. 1990. Fossil beetles of the Peltidae and Nitidulidae families. *Paleontological Journal*, 24(2): 79-90.
209. Kluge, N. Y. 1993. New data on mayflies (Ephemeroptera) from Mesozoic and Cenozoic resins. *Paleontological Journal*, 27(1A): 35-49.
210. Köningsmann, E. 1976. Das phylogenetische System der Hymenoptera. Teil 1. Einführung, grundplanmerkmale, schwestergruppe und fossillfunde. *Deutsche Entomologische Zeitschrift*, N.F., 23(4/5): 253-279.
211. Köningsmann, E. 1978. Das phylogenetische System der Hymenoptera. Teil 3. "Terebrantes" (Unterordnung Apocrita). *Deutsche Entomologische Zeitschrift*, N.F., 25(1/3): 1-55.
212. Kononova, E. L. 1977. New aphid species (Homoptera, Aphidinea) from Upper Cretaceous deposits of the Taimyr. *Entomological Review*, 56(3): 72-80.
213. Kosmowska-Ceranowicz, B. 1990. The scientific importance of museum collections of amber and other fossil resins. *Prace Muzeum Ziemi*, 41: 141-146.
214. Koteja, J. 1984. The Baltic amber Matsucoccidae (Homoptera, Coccinea). *Annales Zoologici*, 37: 438-496.
215. Koteja, J. 1985. Essay on the prehistory of the scale insects (Homoptera, Coccinea). *Annales Zoologici*, 38: 461-503.
216. Koteja, J. 1986. Current state of coccid paleontology. *Bollettino di Laboratoria Entomologia Agraria di Filippo Silvestri*, Supplemento, 43: 29-34.
217. Koteja, J. 1988. *Succinikermes kulickae* gen. et sp. n. (Homoptera, Coccinea) from Baltic amber. *Polskie Pismo Entomologiczne*, 58: 525-535.
218. Koteja, J. 1989. *Inka minuta* gen. et sp. n. (Homoptera, Coccinea) from Baltic amber. *Polskie Pismo Entomologiczne*, 58: 525-535.
219. Koteja, M. V. 1990. Paleontology. In: Rosen, D., ed. *Armored Scale Insects: Their Biology, Natural Enemies and Control*, World Crop Pests, 4A: 149-163. New York: Elsevier.
220. Kovalev, V. G. 1981. The oldest representatives of the Diptera with short antennae from the Jurassic in Siberia. *Paleontological Journal*, 1981(3): 84-100.
221. Kovalev, V. G. 1988. The Mesozoic mycetophiloid Diptera of the family Pleciofungivoridae. *Paleontological Journal*, 21(2): 67-79.
222. Kovalev, V. G. 1989. Eremochaetidae, the Mesozoic family of brachycerous dipterans. *Paleontological Journal*, 23(2): 100-105.
223. Kovalev, V. G. 1990. Geological history and systematic position of the Thaumaleidae (Diptera). *Entomological Review*, 69(4): 121-131.
224. Kozlov, M. V. 1987. New Ditrysan lepidopterans from Baltic amber. *Paleontological Journal*, 1987(4): 59-67.
225. Kozlov, M. V. 1988. Paleontology of lepidopterans and problems of the phylogeny of the order Papilionida. In: Ponomarenko, A.G., *The Mesozoic Biocoenotic Crisis in the Evolution of Insects*, pp. 16-69. Moscow: Academy of Sciences. [In Russian.]
226. Krishna, K. 1990. Isoptera. In: Grimaldi, D.A., ed. *Insects from the Santana Formation, Lower Cretaceous, of Brazil*, *Bulletin of the American Museum of Natural History*, 195: 76-81.
227. Krumbiegel, L., L. Ruffle, and H. Haubold. 1983. *Das Eozäne Geiseltal*. A. Ziemsen; Wittenberg.
228. Krzeminska, E., V. Blagoderov, and W. Krzeminski. 1993. Elliidae, a new fossil

- family of the infraorder Axymyiomorpha (Diptera). *Acta Zoologica Cracoviensia*, 35(3): 581-591.
229. Krzeminski, W. 1992a. The oldest Polyneura (Diptera) and their importance to the phylogeny of the group. *Acta Zoologica Cracoviensia*, 35(1): 45-52.
 230. Krzeminski, W. 1992b. Triassic and Lower Jurassic stage of Diptera evolution. *Mitteilungen der Schweizerischen Entomologischen Gesellschaft*, 65(1/2): 39-60.
 231. Krzeminski, W., and L. Lukashevitch. 1993. Ansoigiidae, a new family from the Upper Cretaceous of Kazakhstan (Diptera, Ptychopteromorpha). *Acta Zoologica Cracoviensia*, 35(3): 593-596.
 232. Kuhn, O. 1961. Die Tier- und Pflanzenwelt des Solnhofener Schiefers mit vollständigem Arten- und Schriftenverzeichnis. *Geologica Bavarica*, 48: 1-68.
 233. Kukulová, J. 1958. New Palaeodictyoptera (Insecta) of the Carboniferous and Permian of Czechoslovakia. *Sborník Ústředního Ústavu Geologického, Oddíl Paleontologický*, 25: 239-251, pl. 1.
 234. Kukulová, J. 1964. Permian insects of Moravia. Part II. Liomopterida. *Sborník Geologických Věd, Paleontologie*, 3: 39-118, pls. 1-24.
 235. Kukulová, J. 1966. Protelytroptera from the Upper Permian of Australia, with a discussion of Protocoleoptera and Paracoleoptera. *Psyche*, 73: 89-111.
 236. Kukulová, J. 1969. Revisional study of the order Palaeodictyoptera in the Upper Carboniferous shales of Commeny, France, Pt. 1. *Psyche*, 76: 163-215.
 237. Kukulová-Peck, J. 1972. Unusual structures in the Paleozoic insect orders Megaseoptera and Palaeodictyoptera, with a description of a new family. *Psyche*, 79(3): 243-268.
 238. Kukulová-Peck, J. 1974. Wing-folding in the Paleozoic insect order Diaphanopteroidea (Paleoptera), with a description of new representatives of the Family Elmoidae. *Psyche*, 81(2): 315-333.
 239. Kukulová-Peck, J. 1975. Megaseoptera from the Lower Permian of Moravia. *Psyche*, 82: 1-19.
 240. Kukulová-Peck, J. 1987. New Carboniferous Diplura, Monura, Thysanura, the hexapod ground plan, and the role of thoracic side lobes in the origin of wings (Insecta). *Canadian Journal of Zoology*, 65: 2327-2345.
 241. Kukulová-Peck, J. 1988. A substitute name for the extinct genus *Stenelytron* Kukulová (Protelytroptera). *Psyche*, 94: 339.
 242. Kukulová-Peck, J. 1991. Fossil history and the evolution of hexapod structures. In: I. D. Naumann et al., eds., *The Insects of Australia: A Textbook for Students and Research Workers*, pp. 141-179. Ithaca, N.Y.: Cornell University Press.
 243. Kukulová-Peck, J., and C. Brauckmann. 1992. Most Paleozoic Protorthoptera are ancestral hemipteroids: major wing braces as clues to a new phylogeny of Neoptera (Insecta). *Canadian Journal of Zoology*, 70: 2452-2473.
 244. Kukulová-Peck, J., and N. D. Sinitchenkova. 1992. The wing venation and systematics of Lower Permian Diaphanopteroidea from the Ural Mountains, Russia (Insecta: Palaeoptera). *Canadian Journal of Zoology*, 70: 229-235.
 245. Kukulová-Peck, J., and R. Willmann. 1990. Lower Permian "mecopteroide-like" insects from central Europe (Insecta, Endopterygota). *Canadian Journal of Earth Science*, 27: 459-468.
 246. Kuschel, G. 1983. Past and present of the relict family Nemonychidae (Coleoptera, Curculionoidea). *Geojournal*, 7: 499-504.
 247. Labandeira, C. C., B. S. Beall, and F. M. Hueber. 1988. Early insect diversification: evidence for a Lower Devonian bristletail from Québec. *Science*, 242: 913-916.

248. Labandeira, C. C., D. L. Dilcher, D. R. Davis, and D. L. Wagner. 1994. Ninety-seven million years of angiosperm-insect association: paleobiological insights into the meaning of coevolution. *Proceedings of the National Academy of Sciences*, 91: 12278-12282.
249. Lacasa-Ruiz, A., and X. Martinez-Delclòs. 1986. Fauna y flora de los yacimientos Neocomienses del Montsec. *Paleontologia y Evolución*, 20: 215-223.
250. Lambkin, K. L. 1988. A re-examination of *Lithosmylidia* Riek from the Triassic of Queensland with notes on Mesozoic "osmylid-like" fossil Neuroptera (Insecta: Neuroptera). *Memoirs of the Queensland Museum*, 25(2): 445-458.
251. Landa, V., and T. Soldán. 1985. Phylogeny and Higher Classification of the Order Ephemeroptera: A Discussion from the Comparative Anatomical Point of View. Prague: Czechoslovakian Academy of Sciences, 121 pp.
252. Langenheim, R. L., Jr., C. J. Smiley, and J. Gray. 1960. Cretaceous amber from the Arctic coastal plain of Alaska. *Bulletin of the Geological Society of America*, 71: 1345-1356.
253. Langiaux, J., and H. Parriat. 1975. Entomofaune du bassin de Blanzly-Montceau: nouvelles acquisitions. *Revue Periodique de "La Physiophile"*, 82: 35-45.
254. Larsson, S. G. 1975. Paleobiology and mode of burial of the insects of the Lower Eocene Mo-clay of Denmark. *Bulletin of the Geological Society of Denmark*, 24: 193-209.
255. Larsson, S. G. 1978. Baltic amber-a palaeobiological study. *Entomonograph*, 1: 1-192.
256. Laurentiaux, D. 1953. Classe des insectes. In: Piveteau, J., ed., *Traité de Paléontologie*, 3: 397-527. Paris: Paul Masson.
257. Laurentiaux, D., and G. Teixeira. 1958. Um género de insecto palaeodictyoptero do carbónico continental do Baixa-Douro (Portugal). *Boletim da Sociedade Geológica de Portugal*, 12(3): 41-49.
258. Laurentiaux-Vieira, F., and D. Laurentiaux. 1986. Paleodictyoptere nouveau du Namurien Belge. *Annales de Société Géologique du Nord*, 105: 187-193.
259. Lawrence, J. F., and E. B. Britton. 1991. Coleoptera. In: C.S.I.R.O., eds. *The Insects of Australia: A Textbook for Students and Research Workers* (second edition), 2: 543- 683. Ithaca: Cornell University Press.
260. Leestmans, R. 1983. Les lépidoptères fossiles trouvés en France (Insecta Lepidoptera). *Linneana Belgica*, 9(1): 64-89.
261. Lesquereaux, L. 1892. The flora of the Dakota Group. *United States Geological Survey Monograph*, 17: 1-400.
262. Lewis, S. E. 1970. Fossil caddisfly cases (Trichoptera) from the Cobb's Creek Site (Cretaceous) near New Ulm, Minnesota. *Annals of the Entomological Society of America*, 63: 1779-1780.
263. Lewis, S. E. 1977. Two new species of fossil mayflies (Ephemeroptera: Neophemeridae and Siphonuridae) from the Ruby River Basin (Oligocene) of southwestern Montana. *Proceedings of the Entomological Society of Washington*, 79(4): 583-587.
264. Lewis, S. E. 1989a. Paleocene insect localities in the United States and Canada. *Occasional Papers in Paleobiology, St. Cloud State University*, 3(1): 1-11.
265. Lewis, S. E. 1989b. Eocene insect localities in the United States and Canada. *Occasional Papers in Paleobiology, St. Cloud State University*, 3(2): 1-38.
266. Lewis, S. E. 1989c. Oligocene insect localities in the United States and Mexico. *Occasional Papers in Paleobiology, St. Cloud State University*, 3(3): 1-25.

267. Lewis, S. E. 1989d. Bibliographic data on fossil Trichoptera from the Upper Mesozoic and the Cenozoic of the Nearctic, Neotropical, Palearctic and Oriental zoogeographical regions. *Occasional Papers in Paleobiology*, St. Cloud State University, 3 (7): 1-22.
268. Lewis, S. E. 1992. Insects of the Klondike Mountain Formation, Republic, Washington. *Washington Geology* 20(3): 15-19.
269. Lin, Q.-B. 1976. The Jurassic fossil insects from western Liaoning. *Acta Palaeontologica Sinica*, 15(1): 97-116, pls. 1-3. [In Chinese with English summary.]
270. Lin, Q.-B. 1978. Upper Permian and Triassic fossil insects of Guizhou. *Acta Palaeontologica Sinica*, 17(3): 313-317, pl. 1. [In Chinese with English summary.]
271. Lin, Q.-B. 1986. Early Mesozoic fossil insects from South China. *Palaeontologica Sinica*, (B), 170(12): 1-112, pls. 1-20. [In Chinese.]
272. Lin, Q.-B. 1992. Late Triassic insect fauna from Toksin, Xinjiang. *Acta Palaeontologica Sinica*, 31(3): 313-335, pls. 1-4. [In Chinese with English summary.]
273. Lin, Q.-B., and W.-J. Han. 1985. A new cockroach from the Upper Shihhotse Formation (Upper Permian) in Yu County, Hunan Province. *Acta Palaeontologica Sinica*, 24(1): 122-124, pl. 1. [In Chinese with English summary.]
274. Lutz, H. 1984. Beitrag zur Kenntnis der unteroligozänen Insektenfauna von Cereste (Süd-Frankreich). *Documenta Naturae*, 21: 1-26, pls. 1-9.
275. Lutz, H. 1987. Die Insekten-Thanatocoenose aus dem mittel-Eozän der "Grube Messel" bei Darmstadt: Erste Ergebnisse. *Courier Forschungsinstitut Senckenberg*, 91: 189-201.
276. Lutz, H. 1992. Giant ants and other rarities: the insect fauna. In: S. Schaal and W. Ziegler, eds., *Messel: An Inquiry into the History of Life and of the Earth*. Oxford: Oxford University Press, pp. 53-67.
277. Mackay, M. R. 1969. Microlepidopterous larvae in Baltic amber. *Canadian Entomologist*, 101(11): 1173-1180.
278. MacLeod, E. G. 1970. The Neuroptera of the Baltic Amber. I. Ascalaphidae, Nymphidae, and Psychopsidae. *Psyche*, 77: 147-180.
279. Maisey, J. G. ed. 1991. *Santana Fossils: An Illustrated Atlas*. Neptune City, NJ: T.F.H. Publications, 459 pp.
280. Maisey, J. G. 1993. Tectonics, the Santana Lagerstätten, and the implications for late Gondwanan biogeography. In: P. Goldblatt, ed., *Biological Relationships Between Africa and South America*. Yale University Press, New Haven, pp. 435-454.
281. Makarkin, V. N. 1990. New names for Jurassic Neuroptera. *Paleontological Journal*, 24(1): 79.
282. Manley, D. G., and G. O. Poinar, Jr. 1991. A new species of fossil *Dasymutilla* (Hymenoptera: Mutillidae) from Dominican amber. *Pan-Pacific Entomologist* 67: 200-205.
283. Martinez, S. 1982. Catalogo sistematico de los insectos fósiles de America del Sur. *Revista de la Facultad de Humanidades y Ciencias*, 1(2): 29-83.
284. Martins-Neto, R. G. 1987a. A paleoentomofauna Brasileira: estágio atual do conhecimento. *Anais da 10th Congresso de Brasileira Entomologia*, pp. 567-591.
285. Martins-Neto, R. G. 1987b. Descrição de três novos gêneros e três novas espécies de Orthoptera (Insecta, Acridoidea) da Formação Santana, Bacia do Araripe, (Cretáceo Inferior) nordeste do Brasil, representando três famílias, sendo que duas novas: Archaeopneumoridae nov. fam. e Bouretidae, nov. fam. *Anais da*

- Academia Brasileira de Ciências, 59(4): 444.
286. Martins-Neto, R. G. 1989. Primeiro registro de Phasmatodea (Insecta: Orthopteromorpha) na Formação Santana, Bacia do Araripe (Cretáceo Inferior), nordeste do Brasil. *Acta Geologica Leopoldensia*, 12(28): 91-104.
 287. Martins-Neto, R. G. 1990. Neurópteros (Insecta: Planipennia) da Formação Santana (Cretáceo Inferior), Bacia do Araripe, nordeste do Brasil. VI. Ensaio filogenético das espécies do gênero *Blittersdorffia* Martins-Neto & Vulcano, com descrição de nova espécie. *Acta Geological Leopoldensia*, 13(31): 3-12.
 288. Martins-Neto, R. G. 1992a. Neurópteros (Insecta, Planipennia) da Formação Santana (Cretáceo Inferior), Bacia do Araripe, nordeste do Brasil. V. Aspectos filogenéticos, paleoecológicos, paleobiogeográficos e descrição de novas taxa. *Anais da Academia Brasileiro de Ciências*, 64(2): 117-148.
 289. Martins-Neto, R. G. 1992b. Primeros resultados sobre a composição da fauna de ensíferos (Insecta) de Formação Santana, Cretáceo Interior de Nordeste do Brasil. pp. 486-488. São Paulo: Boletim de Resumos Expandidos, 37 Congress de Brasileira Geologia.
 290. Martins-Neto, R. G., J. C. K. Santos, and M. V. Mexsqita. 1991. A paleoentomofauna do nordeste Brasileiro: Estado do Arte. *Sociedade Brasileira de Geologia do Nordeste*, 12: 59-62.
 291. Martins-Neto, R. G., and M. A. Vulcano. 1988. Neurópteros (Insecta: Planipennia) da Formação Santana (Cretáceo Inferior), Bacia do Araripe, nordeste do Brasil. 1. Família Chrysopidae. *Anais da Academia Brasileiro de Ciências*, 60(2): 189-201.
 292. Martins-Neto, R. G., and M. A. Vulcano. 1989. Amphiesmenoptera (Trichoptera + Lepidoptera) na Formação Santana (Cretáceo Inferior) Bacia do Araripe, nordeste do Brasil. 1. Lepidoptera (Insecta). *Anais da Academia Brasileiro de Ciências*, 61(4): 459-466.
 293. Martins-Neto, R. G., and M. A. Vulcano. 1990. Primeiro registro de Raphidioptera (Neuropteroidea) na Formação Santana (Cretáceo Inferior), Bacia do Araripe, nordeste do Brasil. *Revista Brasileira de Entomologia*, 34(1): 241-249.
 294. Martynov, A. V. 1925. To the knowledge of fossil insects from Jurassic beds in Turkestan. 2. Raphidioptera (continued), Orthoptera (s. l.), Odonata, Neuroptera. *Bulletin de l'Academie des Sciences de Russie*, (6), 19(12/15): 569-598.
 295. Martynov, A. V. 1928. Permian fossil insects of north-east Europe. *Travaux du Musée Géologique de Académie des Sciences de USSR*, 4: 1-118, pls. 1-19.
 296. Martynov, A. V. 1931a. New Permian Palaeoptera with the discussion of some problems of their evolution. *Transactions of the Paleontological Institute*, 1: 1-44, pls. 1-2. [In Russian.]
 297. Martynov, A. V. 1931b. New Permian insects from Tikhie Gory. II. Neoptera (excluding Miomoptera). *Transactions of the Geological Museum of the USSR Academy of Sciences*, 8: 149-212.
 298. Martynov, A. V. 1935. Note on the fossil insects from the Mesozoic deposits in the Cheliabinsk District. *Transactions of the Paleontological Institute*, 4: 37-48. [In Russian with English summary.]
 299. Martynov, A. V. 1938. Studies on the geologic history and the phylogeny of the orders of insects (Pterygota). First part: Palaeoptera and Neoptera-Polyneoptera. *Transactions of the Paleontological Institute*, 7(4): 1-150.
 300. Martynov, A. V. 1940. Permian fossil insects from Tschekarda. *Transactions of the Paleontological Institute*, 11: 1-62, pls. 1-6. [In Russian.]

301. Martynova, O. M. 1943. Glosselytrodea from the Jurassic shales of the coal bed Sogjuta. *Comptes Rendus de l'Academie des Sciences de l'URSS*, 39: 284-285.
302. Martynova, O. M. 1952. Permian Neuroptera of the USSR. *Transactions of the Paleontological Institute*, 40: 197-237. [In Russian.]
303. Martynova, O. M. 1958. New insects from Permian and Mesozoic deposits of the USSR. *Materials for the Fundamentals of Paleontology*, 2: 69-94. [In Russian.]
304. McAlpine, D. K. 1988. Studies in upside-down flies (Diptera: Neurochaetidae). Part 1. Systematics and phylogeny. *Proceedings of the Linnean Society of New South Wales*, 110(1): 31-58.
305. McAlpine, J. F. 1970. First record of calypterate flies in the Mesozoic Era (Diptera: Calliphoridae). *Canadian Entomologist*, 102: 342-346.
306. McAlpine, J. F., Martin, J. E. H. 1969. Canadian amber—a paleontological treasure-chest. *Canadian Entomologist*, 101: 819-838.
307. McCafferty, W. P. 1990. Ephemeroptera. In: D. A. Grimaldi, ed., *Insects from the Santana Formation, Lower Cretaceous, of Brazil*. *Bulletin of the American Museum of Natural History*, 195: 20-50.
308. McKeown, K. C. 1937. New fossil insect wings (Protohemiptera, Family Mesotitanidae). *Records of the Australian Museum*, 20: 31-37.
309. Meinander, M. 1975. Fossil Coniopterygidae (Neuroptera). *Notulae Entomologicae*, 55: 53-57.
310. Michener, C. D., and D. A. Grimaldi. 1988. A *Trigona* from Late Cretaceous amber of New Jersey (Hymenoptera: Apidae: Melponinae). *American Museum Novitates*, 2917: 1-10.
311. Miller, S. E. 1983. Late Quaternary insects of Rancho La Brea and McKittrick, California. *Quaternary Research*, 20(1): 90-104.
312. Müller, A. H. 1963-1970. *Lehrbuch der Palaeozoologie*. Jena: Veb Gustav Fischer Verlag.
313. Müller, A. H. 1978. Zur Entomofauna des Permokarbon. Teil 4. Revision von *Germanoprisca zimmermanni* ("Protoperlaria", Protorthoptera) aus dem Unterrotliegenden des Thüringer Waldes. *Freiburger Forschungsheft*, (C), 334: 41-47.
314. Naumann, C. M. 1987. On the phylogenetic significance of two Miocene zygaenid moths (Insecta, Lepidoptera). *Paläontologische Zeitschrift*, 61(3/4): 299-308.
315. Naumann, I. D., K. Van Achterberg, T. F. Houston, C. D. Michener, and R. W. Taylor. 1991. Hymenoptera. In: C.S.I.R.O., ed. *The Insects of Australia: A Textbook for Students and Research Workers* (second edition), 2: 916-1000. Ithaca: Cornell University Press.
316. Nel, A. 1989. *Piroutetia liasina* Meunier, 1907, insecte du Lias de France, espèce-type des Piroutetiidae nov. fam. *Bulletin du Museum National d'Histoire Naturelle*, (4), (C), 11(1): 15-19.
317. Nel, A. 1993. Essai de révision des Berytidae fossiles (Heteroptera, Pentatomorpha). *Bulletin du Museum National d'Histoire Naturelle*, (4), (C) 14(3/4): 275-287.
318. Nel, A., X. Martínez-Delclòs, J.-C. Paicheler, and M. Henrotay. 1993. Les "Anisozygoptera" fossiles: phylogenie et classification (Odonata). *Martinia*, 3: 1-311.
319. Nel, A., and J.-C. Paicheler. 1992a. Les Odonates fossiles: état actuel des connaissances. Huitième partie: Les Calopterygoidea fossiles (Odonata, Zygoptera). *Bulletin de Société Entomologique de France*, 94(4): 381-396.
320. Nel, A., and J.-C. Paicheler, J.-C. 1992b. Les Odonata fossiles: état actuel des

- connaissances. Deuxième partie: Les Petaluridae et Cordulegastridae fossiles (Odonata, Anisoptera, Petaluroidea). *Nouveau Revue d'Entomologie*, N.S., 94: 305-323.
321. Nel, A., Y. Séméria, R. G. Martins-Neto. 1990. Un Raphidioptera fossile du Cretace Inferieur du Bresil (Neuropteroidea). *Neuroptera International*, 6(1): 27-37.
322. Nelson, C. R., and W. D. Tidwell. 1987. *Brodioptera stricklani* n. sp. (Megasecoptera: Brodiopteridae), a new fossil insect from the Upper Manning Canyon Shale Formation, Utah (lowermost Namurian B). *Psyche*, 94(3/4): 309-316.
323. Nikitskiy, N. B. 1977. Two new genera of the Melandryidae (Coleoptera) from the Upper Cretaceous. *Paleontological Journal*, 1977(2): 267-270.
324. Nikolayev, G. B. 1991. Stag beetles (Coleoptera, Lucanidae) from the Paleogene of Eurasia. *Paleontological Journal*, 24(4): 119-122.
325. Norrbom, A. L. 1994. New genera of Tephritidae (Diptera) from Brazil and Dominican amber, with phylogenetic analysis of the tribe Ortalotrypetini. *Insecta Mundi*, 8(1/2): 1-15.
326. Novokshnov, V. G. 1993a. Caddis flies (Insecta, Trichoptera, Microptysmatidae). *Paleontological Journal* 27(1A): 90-102.
327. Novokshov, V. G. 1993b. New insects (Insecta) from the Lower Permian of Chekarda (central Urals). *Paleontological Journal* 27(1A): 172-178.
328. Olsen, P. E., C. L. Remington, B. Cornet, and K. S. Thomson. 1978. Cyclic change in Late Triassic lacustrine communities. *Science*, 201(4357): 729-733.
329. Oswald, J. D. 1990. Raphidioptera. In: D. A. Grimaldi, ed., *Insects from the Santana Formation, Lower Cretaceous, of Brazil*, *Bulletin of the American Museum of Natural History*, 195: 154-163.
330. Oudard, J. 1980. Les insectes des nodules du Stephanien de Montceau-les-Mines. *Bulletin Trimestrelle de Société Histoire Naturelle et les Amis de Muséum d'Autun*, 94: 37-51.
331. Pagliano, G., and P. Scaramozzino. 1990. Elenco dei generi di Hymenoptera del mondo. *Memorie della Società Entomologica Italiana*, 68: 1-210.
332. Panifilov, D. V. 1980. New representatives of the neuropterans (Neuroptera) from the Jurassic of the Karatau region. In: V.G. Dolin, A.G. Ponomarenko and L.N. Pritykina, eds., *Fossil Insects of the Mesozoic*, pp. 82-111. Kiev: Naukova Dumka. [In Russian.]
333. Perkovskiy, Y. E. 1991. First discovery of Cretaceous insects of the family Leioididae (Coleoptera). *Paleontological Journal*, 24(4): 116-118.
334. Peus, P. 1968. Über die beiden Bernstein-Flöhe (Insecta, Siphonaptera). *Paläontologische Zeitschrift*, 42(1/2): 62-72.
335. Pfau, H. K. 1975. Zwei neue Kleinlibellen (Odonata, Zygoptera--möglicherweise Platycnemidae) aus dem baltischen Bernstein. *Stuttgarter Beiträge zur Naturkunde, (B)*, 270: 1-7.
336. Pierce, W. D. 1945. Fossil arthropods of California. *Bulletin of the Southern California Academy of Science*, 44(1): 1-9.
337. Pierce, W. D. 1950. Fossil arthropods from onyx marble. *Bulletin of the Southern California Academy of Science*, 49(3): 101-104.
338. Pierce, W. D. 1951. Fossil arthropods from onyx-marble. *Bulletin of the Southern California Academy of Science*, 50(1): 34-49.
339. Pike, E. M. 1992. [Unpublished list of Albertan amber arthropod taxa held in the collections of the Department of Biology, University of Calgary].

340. Ping, C. 1928. Study of the Cretaceous fossil insects of China. *Palaeontologica Sinica*, (B), 13(1): 5-57, pls. 1-3.
341. Pinto, I. D. 1972. Late Paleozoic insects and crustaceans from Parana Basin and their bearing on chronology and continental drift. *Anais da Academia Brasileira de Ciências*, Suplemento, 44: 247-254, pls. 1-4.
342. Pinto, I. D. 1986. Carboniferous insects from Argentina. III. Familia Xenopteridae Pinto, nov., Ordo Megasecoptera. *Pesquisas, Universidad Federal Rio Grande do Sul*, 18: 23-29.
343. Pinto, I. D. 1987. Permian insects from Parana Basin, south Brazil. IV. Homoptera. 2. Cicadidea. *Pesquisas, Universidad Federal Rio Grande do Sul*, 19: 13-22.
344. Pinto, I. D. 1992. Carboniferous insects from Argentina. V. Narkeminidae Pinto et Ornellas 1991-Ordo Paraplecoptera. *Anais da Academia Brasileira de Ciências*, 64(3): 289-292.
345. Pinto, I. D., and L. P. Ornellas. 1975. New Cretaceous Hemiptera (Insecta) from Codo Formation-northern Brazil. *Anais 28th Congresso Brasileiro de Geologia*, pp. 289-304.
346. Pinto, I. D., and L. P. Ornellas. 1978a. Upper Carboniferous insects from Argentina. 1. Familia Diaphanopteridae (Megasecopteroidea). *Pesquisas, Universidad Federal de Rio Grande do Sul*, 10: 77-86.
347. Pinto, I. D., and L. P. Ornellas. 1978b. Carboniferous insects (Protorthoptera and Paraplecoptera) from the Gondwana (South America, Africa and Asia). *Pesquisas, Universidad Federal Rio Grande do Sul*, 11: 305-321.
348. Pinto, I. D., and I. Purper. 1979a. A new genus and two new species of plecopteran insects, from the Triassic of Argentina. *Pesquisas, Universidad Federal Rio Grande do Sul*, 10: 77-86.
349. Pinto, I. D., and I. Purper. 1979b. Brazilian Paleozoic blattoids: revisions and new species. *Pesquisas, Universidad Federal Rio Grande do Sul*, 12: 9-23.
350. Poinar, G. O., Jr. 1992. *Life in Amber*. Stanford, CA: Stanford University Press, 350 pp.
351. Poinar, G. O., Jr. 1993. Insects in amber. *Annual review of Entomology*, 38: 145-159.
352. Poinar, G. O., Jr., and J. T. Doyen. 1992. A fossil termite bug, *Termitaradus protera* sp. n. (Hemiptera: Termitaphididae), from Mexican amber. *Entomologica Scandinavica*, 23: 89-93.
353. Pongracz, A. 1935. Die eozäne Insektenfauna des Geiseltales. *Nova Acta Leopoldina, N.F.*, 2(3/4): 485-572, pls. 1-7.
354. Ponomarenko, A. G. 1969. Historical development of the Coleoptera-Archostemmata. *Transactions of the Paleontological Institute*, 125: 1-239, pls. 1-14. [In Russian.]
355. Ponomarenko, A. G. 1971. Systematic position of some beetles from the Solenhofen shales of Bavaria. *Paleontological Journal*, 1971(1): 62-75.
356. Ponomarenko, A. G. 1976. Corydalidae (Megaloptera) from the Cretaceous of northern Asia. *Entomological Review*, 55(2): 114-122.
357. Ponomarenko, A. G. 1977. Paleozoic members of the Megaloptera (Insecta). *Paleontological Journal*, 1977(1): 73-81.
358. Ponomarenko, A. G. 1988a. New Mesozoic water beetles (Insecta, Coleoptera) from Asia. *Paleontological Journal*, 21(2): 79-92.
359. Ponomarenko, A. G. 1988b. New Mesozoic insects. In: L. P. Tatarinov et al., eds., *New Species of Fossil Invertebrates of Mongolia*. *Transactions of the*

- Joint Soviet-Mongolian Paleontological Expedition, 33: 71-80, pls. 13-15. [In Russian.]
360. Ponomarenko, A. G. 1992. Neuroptera (Insecta) from the Lower Cretaceous of Transbaykalia. *Paleontological Journal*, 26(3): 56-66.
 361. Ponomarenko, A. G. 1993. Two new species of Mesozoic dytiscoid beetles from Asia. *Paleontological Journal*, 27(1A): 182-191.
 362. Ponomarenko, A. G., and A. P. Rasnitsyn. 1974. New Mesozoic and Cenozoic Protomecoptera. *Paleontological Journal*, 1974(4): 493-507.
 363. Ponomarenko, A. G., and O. Schultz. 1988. Typen der Geologisch-Paläontologischen Abteilung: Fossile Insekten. *Kataloge der Wissenschaftlichen Sammlungen des Naturhistorischen Museums in Wien, Paläozoologie*, 6(1): 5-39, pls. 1-14.
 364. Popham, E. J. 1990. Dermaptera. In: D. A. Grimaldi, ed., *Insects from the Santana Formation, Lower Cretaceous of Brazil*. *Bulletin of the American Museum of Natural History*, 195: 69-75.
 365. Popov, Y. A. 1971. Historical development of the hemipteran infraorder Nepomorpha (Heteroptera). *Transactions of the Paleontological Institute*, 129: 1-230, pls. 1-9. [In Russian.]
 366. Popov, Y. A. 1985. Jurassic bugs and Peloridiinae of southern Siberia and western Mongolia. In: A. P. Rasnitsyn, ed., *Jurassic Insects of Siberia and Mongolia*, *Transactions of the Paleontological Institute*, 211: 28-47.
 367. Popov, Y. A. 1988. New Mesozoic water bugs (Corixidae, Shurabellidae). *Transactions of the Joint Soviet-Mongolian Paleontological Expedition*, 33: 63-71. [In Russian.]
 368. Popov, Y. A., and D. E. Schcherbakov. 1991. Mesozoic Peloridioidea and their ancestors (Insecta: Hemiptera, Coelorrhyncha). *Geologica et Palaeontologica*, 25: 215-235.
 369. Popov, Y. A., and R. J. Wootton. 1977. The Upper Liassic Heteroptera of Mecklenburg and Saxony. *Systematic Entomology*, 2: 333-351.
 370. Pritykina, L. N. 1970. Triassic and Jurassic dragonflies of the Liassophlebiidae from Soviet Central Asia. *Paleontological Journal*, 1970(1): 91-102.
 371. Pritykina, L. N. 1977. New dragonflies from Lower Cretaceous deposits of Transbaikalia and Mongolia. *Transactions of Mesozoic and Cenozoic Faunas, Floras and Biostratigraphy of Mongolia*, 4: 81-96, pls. 1-4. Moscow: Academy of Sciences. [In Russian.]
 372. Pritykina, L. N. 1981. New Triassic dragonflies from Central Asia. *Transactions of the Paleontological Institute*, 183: 5-42, pls. 1-13. [In Russian.]
 373. Pritykina, L. N. 1986. Two new dragonflies from the Lower Cretaceous deposits of west Mongolia (Anisoptera: Sonidae fam. nov., Corduliidae). *Odonatologica*, 15: 169-184.
 374. Rasnitsyn, A. P. 1968. New Mesozoic sawflies. In: B. B. Rohdendorf, ed., *Jurassic Insects of Karatau*, pp. 190-236. Moscow: Academy of Sciences. [In Russian.]
 375. Rasnitsyn, A. P. 1969. Origin and evolution of lower Hymenoptera. *Transactions of the Paleontological Institute*, 123: 1-317. [In Russian.]
 376. Rasnitsyn, A. P. 1975. Hymenoptera Apocrita of the Mesozoic. *Transactions of the Paleontological Institute*, 147: 1-134. Moscow: USSR Academy of Sciences.
 377. Rasnitsyn, A. P. 1977a. New Paleozoic and Mesozoic insects. *Paleontological Journal*, 11: 60-72.
 378. Rasnitsyn, A. P. 1977b. A new family of sawflies (Hymenoptera, Tenthredinoidea,

- Electrotomidae) from the Baltic amber. *Zoological Journal*, 56: 1304-1308. [In Russian with English summary.]
379. Rasnitsyn, A. P. 1980. Origin and evolution of the Hymenoptera (Insecta). *Transactions of the Paleontological Institute*, 174: 1-191, pls. 1-3.
 380. Rasnitsyn, A. P. 1982. Triassic and Jurassic insects of the genus *Shurabia* (Grylloblattida, Geinitziidae). *Paleontological Journal*, 1982(3): 77-86.
 381. Rasnitsyn, A. P. 1983a. Fossil Hymenoptera of the superfamily Pamphilioidea. *Paleontological Journal*, 1983(2): 56-70.
 382. Rasnitsyn, A. P. 1983b. First find of a moth from the Jurassic. *Doklady USSR Academy of Sciences*, 269(2): 467-471. [In Russian.]
 383. Rasnitsyn, A. P., ed. 1985. Jurassic insects of Siberia and Mongolia. *Transactions of the Paleontological Institute*, 211: 1-192, 24 pls.
 384. Rasnitsyn, A. P. 1988a. An outline of the evolution of the hymenopterous insects (Order Vespida). *Oriental Insects*, 22: 115-145.
 385. Rasnitsyn, A. P. 1988b. Problems in the global crisis in insect communities during the Middle Cretaceous period. In: A. G. Ponomarenko, ed., *The Mesozoic Biocoenotic Crisis in the Evolution of Insects*, pp. 191-207. Moscow: Academy of Sciences. [In Russian]
 386. Rasnitsyn, A. P. ed. 1990. Late Mesozoic insects of eastern Transbaikalia. *Transactions of the Paleontological Institute*, 239: 1-224, 16 pls.
 387. Rasnitsyn, A. P. 1992. *Strashila incredibilis*, a new enigmatic mecopteroid insect with possible Siphonapteran affinities from the Upper Jurassic of Siberia. *Psyche*, 99: 323-333.
 388. Rasnitsyn, A. P. and M. V. Kozlov. 1991. A new group of fossil insects: scorpion[fly]s with cicad[ian] and butterfly adaptations. *Doklady of the USSR Academy of Sciences, Earth Sciences*, 310(1/6): 233-236. [In Russian.]
 389. Rasnitsyn, A. P. and R. Kulicka. 1990. Hymenopteran insects in Baltic amber with respect to the overall history of the order. *Prace Muzeum Ziemi*, 41: 53-64.
 390. Rasnitsyn, A. P. and M. Sharkey. 1988. Eoichneumonidae from the Early Cretaceous of Siberia and Mongolia (Hymenoptera: Ichneumonoidea). *Advances in Parasitic Hymenoptera Research*, 1988: 169-197.
 391. Rayner, R. J., and S. B. Waters. 1990. A Cretaceous crane-fly (Diptera: Tipulidae). 93 million years of stasis. *Zoological Journal of the Linnean Society*, 99: 309-318.
 392. Rice, H. M. A. 1968. An antlion (Neuroptera) and a stonefly (Plecoptera) of Cretaceous age from Labrador, Newfoundland. *Papers of the Geological Survey of Canada*, 68-65: 1-11.
 393. Richardson, E. S., Jr. 1953a. Techniques in studying Pennsylvanian insects. *Proceedings of the Pennsylvania Academy of Sciences*, 27: 159-161.
 394. Richardson, E. S., Jr. 1953b. Pennsylvanian insects of Illinois. *Transactions of the Illinois Academy of Sciences*, 46: 147-153.
 395. Richardson, E. S., Jr. 1956. Pennsylvanian invertebrates of the Mazon Creek area, Illinois. *Fieldiana (Geology)*, 12(1/2): 1-76.
 396. Riek, E. F. 1950. A fossil mecopteroid from the Triassic beds at Brookvale, N.S.W. *Records of the Australian Museum*, 22: 254-256.
 397. Riek, E. F. 1952. The fossil insects of the Tertiary Redbank Plains Series. Part 1. An outline of the fossil insects of the orders Mecoptera and Neuroptera. *Publications of the Department of Geology, University of Queensland, N.S.*, 4(1): 3-14, pls. 1-2.
 398. Riek, E. F. 1953a. Fossil mecopteroid insects from the Upper Permian of New

- South Wales. Records of the Australian Museum, 23: 55-87, pls. 5-6.
399. Riek, E. F. 1953b. Further Triassic insects from Brookvale, N.S.W. (Orders Orthoptera Saltatoria, Protorthoptera, Perlaria). Records of the Australian Museum, 23: 161-168.
 400. Riek, E. F. 1955. Fossil insects from the Triassic beds at Mt. Crosby, Queensland. Australian Journal of Zoology, 3: 654-691, pls. 1-4.
 401. Riek, E. F. 1956. A re-examination of the mecopteroid and orthopteroid fossils (Insecta) from the Triassic beds at Denmark Hill, Queensland, with descriptions of further specimens. Australian Journal of Zoology, 4: 98-110, pls. 1-2.
 402. Riek, E. F. 1962. Fossil insects from the Triassic at Hobart, Tasmania. Papers and Proceedings of the Royal Society of Tasmania, 96: 39-40.
 403. Riek, E. F. 1967. Further evidence of Panorpidae in the Australian Tertiary (Insecta: Mecoptera). Journal of the Australian Entomological Society, 6: 71-72.
 404. Riek, E. F. 1968a. *Robinjohnia tillyardi* Martynova, a mecopteroid from the Upper Permian of Belmont, New South Wales. Records of the Australian Museum, 27: 299-302, pl. 44.
 405. Riek, E. F. 1968b. Undescribed fossil insects from the Upper Permian of Belmont, New South Wales. Records of the Australian Museum, 27(15): 303-315, pl. 45.
 406. Riek, E. F. 1973. Fossil insects from the Upper Permian of Natal, South Africa. Annals of the Natal Museum, 21(3): 513-532.
 407. Riek, E. F. 1974a. A fossil insect from the Dwyka Series of Rhodesia. Palaeontologica Africana, 17: 15-17.
 408. Riek, E. F. 1974b. Upper Triassic insects from the Molteno "formation", South Africa. Palaeontologica Africana, 17: 19-31.
 409. Riek, E. F. 1976a. Neosecoptera, a new insect suborder based on a specimen discovered in the Late Carboniferous of Tasmania. Alcheringa, 1: 227-234.
 410. Riek, E. F. 1976b. New Upper Permian insects from Natal, South Africa. Annals of the Natal Museum, 22(3): 755-789.
 411. Riek, E. F. 1976c. A new collection of insects from the Upper Triassic of South Africa. Annals of the Natal Museum, 22(2): 791-820.
 412. Riek, E. F., and J. Kukalová-Peck. 1984. A new interpretation of dragonfly wing venation based on early Upper Carboniferous fossils from Argentina (Insecta: Odonatoidea) and basic character states in pterygote wings. Canadian Journal of Zoology, 62: 1150-1166.
 413. Ritzkowski, S. 1990. Die Inklusen der ehemaligen Königsberger Bernsteinsammlung in Göttingen. Prace Muzeum Ziemi, 41: 149-153.
 414. Robbins, R. K. 1992. Personal communication. National Museum of Natural History, Department of Entomology.
 415. Rohdendorf, B. B. 1939. A new protelytropteroid from the Permian of the Urals. Doklady, Academy of Sciences USSR, 23(5): 506-508.
 416. Rohdendorf, B. B. 1957. Paleontological investigations in the USSR. Transactions of the Paleontological Institute, 66: 1-102. [In Russian.]
 417. Rohdendorf, B. B., ed. 1968. Jurassic Insects of Karatau. Moscow: USSR Academy of Sciences, 252 pp, 25 pls.. [In Russian.]
 418. Rohdendorf, B. B., ed. 1991. Arthropoda, Tracheata, Chelicerata. In: Y. A. Orlov, ed. Fundamentals of Paleontology, 9: xxxi, 1-894. Washington, D.C.: Smithsonian Institution Libraries and National Science Foundation. [English Translation, D. R. Davis, ed.]
 419. Rohdendorf, B. B., E. E. Bekker-Migdisova, O. M. Martynova, and A. G. Sharov.

1961. Paleozoic insects from the Kusnetsk Basin. Transactions of the Paleontological Institute, 85: 1-705, 40 pls.
420. Rohdendorf, B. B., and A. P. Rasnitsyn. eds. 1980. Historical development of the Class Insecta. Transactions of the Paleontological Institute, 175: 1-269, pls. 1-8. [In Russian.]
421. Rohr, D. M., A. J. Boucot, J. Miller, and M. Abbott. 1986. Oldest termite nest from the Upper Cretaceous of west Texas. Geology, 14: 87-88.
422. Rolfe, W. D. I., P. M. Bonamo, J. D. Grierson, and W. A. Shear. 1983. The earliest land animals. p. 38-39, 149th Annual Meeting, Abstracts of Papers, Washington, D.C.: American Association for the Advancement of Science.
423. Rolfe, W. D. I., F. R. Schram, G. Pacaud, D. Sotty, and S. Secretan. 1982. A remarkable Stephanian biota from Montceau-les-Mines, France. Journal of Paleontology, 56(2): 426-428.
424. Ross, A. J., and E. A. Jarzembowski. 1993. Arthropoda (Hexapoda; Insecta). In: M. J. Benton, ed., The Fossil Record 2. Chapman and Hall, London, pp. 363-426.
425. Ross, E. S. 1956. A new genus of Embioptera from Baltic amber. Mitteilungen aus dem Geologischen Staatinstitut in Hamburg, 25: 76-81.
426. Rozefelds, A. C. 1985. A fossil zygopteran nymph (Insecta: Odonata) from the Late Triassic Aberdare Conglomerate, southeast Queensland. Proceedings of the Royal Society of Queensland, 96: 25-32.
427. Rozen, J. G., Jr. 1971. *Micromalthus debilis* LeConte from amber of Chiapas, Mexico (Copeoptera: Micromalthidae). University of California Publications in Entomology, 63: 75-76.
428. Rundle, A., and J. R. Cooper. 1971. Occurrence of a fossil insect larva from the London Clay of Herne Bay, Kent. Proceedings of the Geologists' Association, 82: 293-295.
429. Sakal, S., and I. Fujiyama. 1989. New dermapteran fossil from Sado Islands, Japan, with description of a new species (Dermaptera, Diplatyidae). Special Bulletin of Daito Bunka University, 38(1): 3102-3103.
430. Salt, G. 1931. Three bees from Baltic amber. Bernstein-forschungen, 2: 136-147.
431. Sanz, J. L., S. Wenz, A. Yebenes, R. Estes, X. Martínez-Delclòs, E. Jimenez-Fuentes, C. Diéguez, A. Buscalioni, L. J. Barbadillo, and L. Vio. 1988. An early Cretaceous faunal and floral continental assemblage: Las Hoyas fossil site (Cuenca, Spain). Geobios, 21(5): 611-635.
432. Schaal, S., and W. Ziegler, eds. 1992. Messel: An insight into the history of life and of the earth. Clarendon Press, Oxford, 322 pp.
433. Schlee, D. 1970. Insektenfossilien aus der unteren Kreide. I. Verwandtschaftsforschung an fossilen und rezenten Aleyrodina (Insecta, Hemiptera). Stuttgarter Beiträg zur Naturkunde, 213: 1-72.
434. Schlee, D. 1972. Bernstein aus dem Libanon. Kosmos, 1972: 460-463.
435. Schlee, D., and H.-G. Dietrich. 1970. Insektenführender Bernstein aus der Unterkreide des Libanon. Neues Jahrbuch für Geologie und Paläontologie Monatschafte, 1: 40-50.
436. Schlüter, T. 1975. Nachweis verschiedener Insecta-Ordines in einem mittelmittelkretazischen Harz Nordwestfrankreichs. Entomologica Germanica, 1(2): 151-161.
437. Schlüter, T. 1978. Zur Systematik und Palaökologie harzkonserverter Arthropoda einer Taphozönose aus dem Cenomanium von NW-Frankreich. Berliner Geowissenschaftliche Abhandlungen, (A), 9: 1-150, pls. 1-13.

438. Schlüter, T. 1983. A fossiliferous resin from the Cenomanian of the Paris and Aquitanian Basins of northwestern France. *Cretaceous Research*, 4: 265-269.
439. Schlüter, T., and W. Stürmer. 1984. Die Identifikation einer fossilen Rachiberothinae-Art (Planipennia: Berothidae oder Mantispidae) aus mittelkretazischem Bernstein NW-Frankreichs mit Hilfe röntgenographischer Methoden. *Proceedings of the First International Symposium of Neuropterology*, pp. 49-55.
440. Schmidt, W. 1962. Neue Insekten aus dem rheinischwestfälischen Oberkarbon. *Fortschritte der Geologie Rheinischen und Westfalen*, 3(2): 819-860.
441. Schneider, J. 1978. Zur Taxonomie und Biostratigraphie der Blattodea (Insecta) des Karbon und Perm der DDR. *Freiberger Forschungshefte, (C)*, 340: 1-152.
442. Schneider, J. 1984. Die Blattodea (Insecta) des Paläozoikums. Teil 1: Systematik, Ökologie und Biostratigraphie. *Freiburger Forschungshefte, (C)*, 382: 106-145, pls. 1-3.
443. Schumann, H., and H. Wendt. 1989. Zur Kenntnis der tierischen Inkluden des Sächsischen Bernsteins. *Deutsche Entomologische Zeitschrift, N.F.*, 36(1/3): 33-44.
444. Shaposhnikov, G. K. 1979. Late Jurassic and Early Cretaceous aphids. *Paleontological Journal*, 1979(4): 449-461.
445. Shaposhnikov, G. K. 1980. Evolution of morphological structures in aphids (Homoptera, Aphidinea) and the mode of life of Recent and Mesozoic aphids. *Entomological Review*, 59: 29-48.
446. Shaposhnikov, G. K., and P. Wegierek. 1989. New Late Mesozoic aphids (Oviparosiphidae, Homoptera). *Paleontological Journal*, 23(3): 37-47.
447. Sharov, A. G. 1965. Evolution and taxonomy. *Zeitschrift für Zoologische Systematik und Evolutionsforschung*, 3: 346-358.
448. Sharov, A. G. 1966. The position of the orders Glosselytrodea and Caloneurodea in the system of the Insecta. *Paleontological Journal*, 3: 84-93. [In Russian.]
449. Sharov, A. G. 1971. Phylogeny of the Orthopteroidea. Jerusalem: Israel Program for Scientific Translations, 251 pp.
450. Sharov, A. G. 1973. The phylogenetic relations of the order Thysanoptera. *Entomological Review*, 51(4): 506-508.
451. Sharov, A. G., and N. D. Sinitshenkova. 1977. New Palaeodictyoptera from the USSR. *Paleontological Journal*, 1977(1): 44-59.
452. Shcherbakov, D. E. 1984. Systematics and phylogeny of Permian Cicadomorpha (Cimicida and Cicadina). *Paleontological Journal*, 17(2): 87-97.
453. Shcherbakov, D. E. 1992. The earliest leafhoppers (Hemiptera: Karajassidae n. fam.) from the Jurassic of Karatau. *Neues Jahrbuch für Geologie und Paläontologie*, 1992(1): 39-51.
454. Shcherbakov, D. E., and P. Wegierek. 1991. Creaphididae, a new and the oldest aphid family from the Triassic of middle Asia. *Psyche*, 98(1): 81-85.
455. Simon, R. 1971. Neue Arthropodenfunde aus dem Stephan der Halleschen Mulde. *Berichte der Deutschen Gesellschaft für Geologische Wissenschaften, (A)*, 16(1): 53-62, pls. 1-4.
456. Sinishenkova, N. D. 1976. New Early Cretaceous mayflies (Insecta, Ephemeroptera) from eastern Transbaikalia. *Paleontological Journal*, 1976(2): 189-197.
457. Sinishenkova, N. D. 1979. A new family of the Palaeodictyoptera from the Carboniferous of Siberia. *Paleontological Journal*, 1979(2): 192-205.
458. Sinishenkova, N. D. 1980. A revision of the order Permothemistida (Insecta). *Paleontological Journal*, 1980(4): 97-112.

459. Sinishenkova, N. D. 1987. The historical development of the Plecoptera. *Transactions of the Paleontological Institute*, 221: 1-142. [In Russian.]
460. Sinishenkova, N. D. 1989a. New Mesozoic mayflies (Ephemeroptera) from Mongolia. *Paleontological Journal*, 23(3): 26-37.
461. Sinishenkova, N. D. 1989b. A new insect family, Aykhalidae, from the Upper Paleozoic of Yakutia-Sakha (Insecta: Mischopteroidea = Megaseoptera). *Paleontological Journal*, 27(1A): 131-134.
462. Skalski, A. S. 1976. Les lépidoptères fossiles de l'ambre. État actuel de nos connaissances (3e partie et fin). *Linnaea Belgica*, 6: 221-233.
463. Smithers, C. N. 1972. Fossil Psocoptera. In: C. N. Smithers, *The Classification and Phylogeny of the Psocoptera*, Australian Museum Memoirs, 14: 240-248.
464. Smithsonian Institution. 1992. [Unpublished data base printout of Dominican amber arthropod taxa held in the collections of the Departments of Paleobiology].
465. Spahr, U. 1981. Bibliographie der Bernstein- und Kopal-Käfer (Coleoptera). *Stuttgarter Beiträge zur Naturkunde*, (B), 72: 1-21.
466. Spahr, U. 1985. Ergänzungen und Berichtigungen zu R. Keilbach's bibliographie und Liste der Bernstein-fossilien-Ordnung Diptera. *Stuttgarter Beiträge zur Naturkunde*, (B), 111: 1-146.
467. Spahr, U. 1988. Ergänzungen und Berichtigungen zu R. Keilbach's Bibliographie und Liste der Bernsteinfossilien-Uberordnung Hemipteroidea. *Stuttgarter Beiträge zur Naturkunde*, (B), 144: 1-60.
468. Spahr, U. 1990. Ergänzungen und Berichtigungen zu R. Keilbach's Bibliographie und Liste der Bernsteinfossilien-"Apterygota". *Stuttgarter Beiträge zur Naturkunde*, (B), 166: 1-23.
469. Spahr, U. 1992. Ergänzungen und Berichtigungen zu R. Keilbach's Bibliographie und Liste der Bernsteinfossilien-Klasse Insecta. *Stuttgarter Beiträge zur Naturkunde*, (B), 182: 1-102.
470. Staesche, K. 1963. Übersicht über die Fauna des deutschen Rotliegenden (Unteres Perm). *Stuttgarter Beiträge zur Naturkunde*, 110: 1-6.
471. Storozhenko, S. Y. 1989. New and little-known Mesozoic grylloblattids (Insecta). *Paleontological Journal*, 22: 45-52.
472. Storozhenko, S. Y. 1990. Permian fossil insects of north-east Europa: revision of the family Actactophlebiidae (Insecta, Gerarida, Actactophlebiidae). *Deutsche Entomologische Zeitschrift*, N.F., 37(4/5): 407-412.
473. Storozhenko, S. Y. 1991. New Permian and Mesozoic insects (Insecta, Grylloblattida: Blattogryllidae, Geinitziidae) from Asia. *Paleontological Journal*, 24(4): 53-61.
474. Storozhenko, S. Y. 1992a. A new family of Triassic grylloblattids from Central Asia. *Spixiana*, 15(1): 67-73.
475. Storozhenko, S. Y. 1992b. Permian fossil insects of Northeast Europe: New Liomopterids. *Deutsche Entomologische Zeitschrift*, N.F., 39(1/3): 209-220.
476. Storozhenko, S. Y. 1993. The revision of Megakhosaridae (Grylloblattida). In: A. G. Ponomarenko, ed., *Mesozoic Insects and Ostracods from Asia*. *Transactions of the Paleontological Institute* 252: 100-112. [In Russian]
477. Strauss, A. 1977. Gallen, Minen und andere Fraßspuren im Pliokän von Willershausen am Harz. *Verhandlungen des Botanischen Vereins der Provinz Brandenburg*, 113: 43-80.
478. Sturtevant, A. H. 1963. A fossil perisclid (Diptera) from the amber of Chiapas, Mexico. *Journal of Paleontology*, 37(1): 121-122, pl. 16.

479. Sukacheva, I. D. 1968. Mesozoic caddis flies (Trichoptera) of Transbaikalia. *Paleontological Journal*, 1968(2): 202-216.
480. Sukacheva, I. D. 1973. New caddis-flies (Trichoptera) from the Mesozoic of Soviet Central Asia. *Paleontological Journal*, 1973(3): 377-384.
481. Sukacheva, I. D. 1976. Caddis-flies of the suborder Permotrichoptera. *Paleontological Journal*, 1976(2): 198-209.
482. Sukacheva, I. D. 1982. Historical development of the order Phryganeida. *Transactions of the Paleontological Institute*, 197: 1-111, pls. 1-8. [In Russian.]
483. Sukacheva, I. D. 1993. Oldest Polycentropidae (Trichoptera) from Mongolia. *Paleontological Journal*, 27(1A): 192-196.
484. Szadziewski, R. 1988. Biting midges (Diptera, Ceratopogonidae) from Baltic amber. *Polskie Pismo Entomologiczne*, 58: 3-283.
485. Szadziewski, R., and T. Schlüter. 1992. Biting midges (Diptera: Ceratopogonidae) from Upper Cretaceous (Cenomanian) amber of France. *Annales de la Société de France*, N.S., 28(1): 73-81.
486. Szelegiewicz, H., and J. A. Popov. 1978. Revision der fossilen "Permaphidopsidae" aus dem Perm der USSR (Hemiptera: Sternorrhyncha). *Entomological Germanica*, 4(3/4): 234-241.
487. Tatarinov, L. P., et. al., eds. 1986. Insects in the Early Cretaceous ecosystems of the West Mongolia. *The Joint Soviet-Mongolian Palaeontological Expedition*, 28: 1-214, pls. 1-24. [In Russian.]
488. Théobald, N. 1937. *Les Insectes Fossiles des Terrains Oligocenes de France*. Nancy: Georges Thomas, 473 pp, 29 pls.
489. Tillyard, R. J. 1917. Mesozoic insects of Queensland. No. 1. Planipennia, Trichoptera, and the new order Protomecoptera. *Proceedings of the Linnean Society of New South Wales*, 42: 175-200, pls. 7-9.
490. Tillyard, R. J. 1919. Mesozoic insects of Queensland. No. 6. Blattoidea. *Proceedings of the Linnean Society of New South Wales*, 44: 358-382.
491. Tillyard, R. J. 1922. Mesozoic insects of Queensland. No. 9. Orthoptera and additions to the Protorthoptera, Odonata, Hemiptera and Planipennia. *Proceedings of the Linnean Society of New South Wales*, 47: 447-470, pls. 51-53.
492. Tillyard, R. J. 1925. The British Liassic dragonflies (Odonata). *British Museum (Natural History), Fossil Insects*, 1: 1-40, pls. 1-5.
493. Tillyard, R. J. 1926a. Kansas Permian insects. Part 7. The order Mecoptera. *American Journal of Science*, (5), 11(62): 133-164.
494. Tillyard, R. J. 1926b. Kansas Permian insects. Part 8. The order Copeognatha. *American Journal of Science*, (5), 11(64): 313-349.
495. Tillyard, R. J. 1926c. Kansas Permian insects. Part 9. The order Hemiptera. *American Journal of Science*, (5), 11(65): 381-395.
496. Tillyard, R. J. 1937. Kansas Permian insects. Part 17. The order Megasecoptera and additions to the Palaeodictyoptera, Odonata, Protoperlaria, Copeognatha, and Neuroptera. *American Journal of Science*, (5), 33: 81-110.
497. Tillyard, R. J., and B. Dunstan. 1916. Mesozoic and Tertiary insects of Queensland and New South Wales. Descriptions of the fossil insects and stratigraphical features. *Queensland Geological Survey Publication*, 253: 1-63.
498. Tindale, N. B. 1985. A butterfly moth (Lepidoptera, Castniidae) from the Oligocene shales of Florissant, Colorado. *Journal of Research on the Lepidoptera*, 24(1): 31-40.
499. Tröster, G. 1992. Fossile Insekten aus den mitteleozänen Tonsteinen der Grube

- Messel bei Darmstadt. Mitteilungen des Internationalen Entomologischen Vereins, 17(4): 191-208.
500. Tröster, G. 1993. Wasserkäfer und andere raritäten-neue Coleoptera-funde aus den mitteleozänen Tonsteinen der Grube Messel bei Darmstadt. *Kaupia*, 2: 145-154.
 501. Usachev, D. A. 1968. New Jurassic Asilomorpha (Diptera) of the Karatau. *Entomological Review*, 47(3): 378-384.
 502. Vishniakova, V. N. 1968. Mesozoic cockroaches with an external ovipositor and the specific relations of their reproduction (Blattoidea). In: Rohdendorf, B. B., *Jurassic Insects of Karatau*, pp. 55-86. Moscow: Academy of Sciences. [In Russian.]
 503. Vishniakova, V. N. 1975. Psocoptera in Late Cretaceous insect-bearing resins from the Taimyr. *Entomological Review*, 54: 63-75.
 504. Vishniakova, V. N. 1976. Relict Archipsyllidae (Insecta, Psocoptera) in the Mesozoic fauna. *Paleontological Journal*, 1976(2): 180-188.
 505. Vishniakova, V. N. 1981. New Paleozoic and Mesozoic lophioneurids (Thripida, Lophioneuridae). *Transactions of the Paleontological Institute*, 183: 43-63. [In Russian.]
 506. Vishniakova, V. N. 1982. Jurassic cockroaches of the new family Blattulidae from Siberia. *Paleontological Journal*, 1982(2): 67-77.
 507. Vishniakova, V. N. 1993. New Paleozoic Spiloblattinidae from Russia. *Paleontological Journal*, 27(1A): 135-147.
 508. Wegierek, P. 1989. New species of Mesozoic aphids (Shapshnikoviidae, Homoptera). *Paleontological Journal*, 23(4): 40-49.
 509. Wegierek, P. 1991a. The aphid family Genaphididae (Homoptera, Aphidina) from the Upper Mesozoic of Mongolia. *Polskie Pismo Entomologiczne*, 61: 79-84.
 510. Wegierek, P. 1991b. Cretaceous aphids of the family Canadaphidae (Hemiptera, Aphidomorpha). *Paleontological Journal*, 1991(2): 114-115. [In Russian.]
 511. Wehr, W. C. 1996. Middle Eocene insects and plants of the Okanogan Highlands. In: J. E. Martin, ed., *Contributions to the Paleontology and Geology of the West Coast in Honor of V. Standish Mallory*. Thomas Burke Memorial Washington State Museum Report, no. 6 [in press].
 512. Whalley, P. E. S. 1977. Lower Cretaceous Lepidoptera. *Nature*, 266: 526.
 513. Whalley, P. E. S. 1978. New taxa of fossil and Recent Micropterygidae with a discussion of their evolution and a comment on the evolution of the Lepidoptera. *Annals of the Transvaal Museum*, 31: 71-86.
 514. Whalley, P. E. S. 1980. Neuroptera (Insecta) in amber from the Lower Cretaceous of Lebanon. *Bulletin of the British Museum of Natural History, Geology*, 33: 157-164.
 515. Whalley, P. E. S. 1982. *Bintoniella brodei* Handlirsch (Orthoptera) from the Lower Lias of the English Channel, with a review of British bintoniellid fossils. *Bulletin of the British Museum of Natural History, Geology*, 36(2): 143-149.
 516. Whalley, P. E. S. 1983. A survey of Recent and fossil cicadas (Insecta, Hemiptera-Homoptera) in Britain. *Bulletin of the British Museum of Natural History, Geology*, 37(3): 139-143.
 517. Whalley, P. E. S. 1985. The systematics and palaeogeography of the Lower Jurassic insects of Dorset, England. *Bulletin of the British Museum of Natural History, Geology*, 39(3): 107-189.
 518. Whalley, P. E. S. 1986a. A review of the current fossil evidence of Lepidoptera in the Mesozoic. *Biological Journal of the Linnean Society*, 28: 253-271.

519. Whalley, P. E. S. 1986b. Insects from the Italian Upper Trias. *Rivista del Museo Civico di Scienze Naturali "Enrico Caffi,"* 10: 51-60.
520. Whalley, P. E. S. 1988. Mesozoic Neuroptera and Raphidioptera (Insecta) in Britain. *Bulletin of the British Museum of Natural History, Geology,* 44(1): 45-63.
521. Whalley, P. E. S., and E. A. Jarzembowski. 1985. Fossil insects from the Lithographic Limestone of Montsech (Late Jurassic-Early Cretaceous), Lérida Province, Spain. *Bulletin of the British Museum of Natural History, Geology,* 83(5): 381-412.
522. Wichard, W. 1987. Caribbean amber caddisflies--biogeographical aspects. *Proceedings of the Fifth International Symposium on the Trichoptera,* pp. 67-69.
523. Wighton, D. C. 1982. Middle Paleocene insect fossils from south-central Alberta. *Proceedings of the Third North American Paleontological Convention,* 2: 577-578.
524. Willmann, R. 1977. Zur systematischen Stellung von *Austropanorpa* (Insecta, Mecoptera) aus dem Altertiär Australiens. *Paläontologische Zeitschrift,* 51(1/2): 12-18.
525. Willmann, R. 1989. Evolution und phylogenetisches System der Mecoptera (Insecta: Holometabola). *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft,* 544: 1-153.
526. Wilson, E. O., F. M. Carpenter, and W. L. Brown. 1967. The first Mesozoic ants. *Science,* 157: 1038-1040.
527. Wilson, M. V. H. 1978. Paleogene insect faunas of western North America. *Quaestiones Entomologicae,* 14: 13-34.
528. Wilson, M. V. H. 1983. Is there a characteristic rate of radiation for the insects. *Paleobiology,* 9: 79-85.
529. Wittlake, E. B. 1981. Fossil plant galls. In: H. E. Kaiser, ed., *Neoplasms-Comparative Pathology of Growth in Animals, Plants, and Man,* pp. 729-731. Baltimore: Williams and Wilkins.
530. Wootton, R. J., and A. R. Ennos. 1989. The implications of function on the origin and homologies of the dipterous wing. *Systematic Entomology,* 14: 507-520.
531. Wygodzinsky, P. 1971. A note on a fossil machilid (Microcoryphia) from the amber of Chiapas, Mexico. *University of California Publications in Entomology,* 63: 101-102.
532. Yemel'yanov, A. F. 1983. Dictyopharidae from the Cretaceous deposits on the Taimyr Peninsula (Insecta, Homoptera). *Paleontological Journal,* 1983(3): 77-82.
533. Zalessky, Y. M. 1958. Morpho-functional causes of wing-folding in Palaeoptera. *Zoological Journal,* 37: 845-854. [In Russian.]
534. Zessin, W. 1983. Revision der mesozoischen Familie Locustopsidae unter Berücksichtigung neuer Funde. *Deutsche Entomologische Zeitschrift, N.F.,* 30(1/3): 173-237.
535. Zessin, W. 1985. Neue oberliassische Apocrita und die Phylogenie der Hymenoptera (Insecta, Hymenoptera). *Deutsche Entomologische Zeitschrift, N.F.,* 32(1/3): 129-142.
536. Zessin, W. 1987. Variabilität, Merkmalswandel und Phylogenie der Elcanidae im Jungpaläozoikum und Mesozoikum und die Phylogenie der Ensifera (Orthopteroida, Ensifera). *Deutsche Entomologische Zeitschrift, N.F.,* 34: 1-76.
537. Zeuner, F. E. 1939. *Fossil Orthoptera Ensifera.* London: British Museum of Natural History, 321 pp., 80 pls.
538. Zhang, J.-F. 1985. New data of the Mesozoic fossil insects from Laiyang in Shandong. *Geology of Shandong,* 1: 23-39, pls. 1-7. [In Chinese with English

- summary.]
539. Zhang, J.-F. 1986. Luanpingitidae--a new fossil insect family. *Acta Palaeontologica Sinica*, 25(1): 49-54, pl. 1. [In Chinese with English summary.]
 540. Zhang, J.-F. 1987. Four new genera of Platypezidae. *Acta Palaeontologica Sinica*, 26(5): 595-603, pl. 1. [In Chinese with English summary.]
 541. Zhang, J.-F. 1989. Fossil Insects from Shanwang, Shandong, China. Jinan: Shandong Science and Technology Publishing House, 459 pp., 92 pls. [In Chinese with English summary.]
 542. Zhang, J.-F. 1991a. A new family of Neuroptera (Insecta) from the Late Mesozoic of Shandong, China. *Science in China, (B)*, 34(9): 1105-1111, pl. 11.
 543. Zhang, J.-F. 1991b. Going further into late Mesozoic mesolygaeids (Heteroptera, Insecta). *Acta Palaeontologica Sinica*, 30(6): 679-704, pls. 1-5. [In Chinese and English.]
 544. Zhang, J.-F. 1992. Late Mesozoic entomofauna from Laiyang, Shandong Province, China, with discussion of its paleoecological and stratigraphical significance. *Cretaceous Research*, 13: 133-145.
 545. Zhang, J.-F., Liu, D.-Z. 1986. Fossil insects (Diptera, Nematocera) of Laiyang Basin in Shandong Province. *Geology of Shandong*, 2(1): 14-39. [In Chinese with English summary.]
 546. Zhelochovtzev, A. N., and A. P. Rasnitsyn. 1972. On some Tertiary sawflies (Hymenoptera, Symphyta) from Colorado. *Psyche*, 79(4): 315-327.
 547. Zherikhin, V. V. 1978. Development and change in the Cretaceous and Cenozoic insect fauna complex. *Transactions of the Paleontological Institute*, 165: 1-198. [In Russian.]
 548. Zherikhin, V. V., and V. G. Gratshev. 1993. Obrieniidae, fam. nov., the oldest Mesozoic weevils (Coleoptera, Curculionidae). *Paleontological Journal*, 27(1A): 50-69.
 549. Zherikhin, V. V., and I. D. Sukacheva. 1973. On Cretaceous insect-bearing amber (retinite) from Northern Siberia. Reports of the Twenty-fourth Annual Lecture in Memory of N.A. Kholodkovskogo, 24: 3-48. Moscow: USSR Academy of Sciences. [In Russian.]
 550. Zur Strassen, R. 1973. Insektenfossilien aus der unteren Kreide. 5: Fossile Fransenflüger aus Mesozoischem Bernstein des Libanon (Insecta: Thysanoptera). *Stuttgarter Beiträge zur Naturkunde, (A)*, 256: 1-51.