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The Back to the Past Museum Guide to **TRILOBITES**

Enrico Bonino
Carlo Kier

with contributions by Jake Skabelund and Dave Comfort.



The Back to the Past Museum Guide to

Trilobites

Enrico Bonino
Carlo Kier

English translation by Wendell Ricketts



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Includes bibliographical references and indices.

This volume, the enclosed poster *Systematic relationship and Chronological extent of the nine Trilobite orders* (BONINO 2009), and the thematic posters on display at the Back to the Past Museum are available from the authors or through the Museum's web site <http://www.backtothepast.com.mx>

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Front cover: Death assemblage of *Norwoodia* sp., Cambrian, Weeks Formation, Millard County, Utah (USA).

Lower panels, from left to right: *Deiracephalus aster* and *Olenoides* sp. from the Cambrian of the Weeks Formation, Millard County, Utah (USA); *Bristolia insolens* and *Bristolia fragilis*, Cambrian, Carrara Formation, from near Emigrant Pass, Nevada (USA).

Back cover: A fossiliferous outcrop of Lower Cambrian marls of the Carrara Formation, Nevada (USA).



Olenoides "abbotti"
Middle Cambrian
Whirlwind Formation - Drum Mountains - Utah - USA
Photo courtesy of Dave Comfort

To my parents, in whose presence I always encountered support and enthusiasm; to my wife, whose love carried me through long working evenings; and to my son, for the man he will one day become.

(E.B.)

To my parents, Vittorio and Marinella, and to my wife, Alice, for having nourished my passion even to the farthest corners of our planet.

(C.K.)

The Back to the Past Museum Guide to **TRILOBITES**

Enrico Bonino
Carlo Kier

with contributions by Jake Skabelund; Dave Comfort;
Dr. Richard A. Robison; Dr. Gian-Luigi Pillola; Jih-Pai Lin, Ph.D.;
Allart van Viersen, Ph.D.; Sam 'Olu Gon III, Ph.D.; and Arvid J. Aase.





Cruziana omanica, probable trilobite track.
Upper Cambrian (Chagshanian)
Al Bashair Formation, Andam Group, Huqf, Oman
Photo courtesy of Ru Smith



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Spathacalymene nasuta
Middle Silurian
Osgood Formation - Indiana - USA
Photo courtesy of J. Skabelund and J. Cooper

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Without the enthusiastic contributions of dozens of private collectors and professional paleontologists and researchers, it should be more than obvious, this book could never have been published. Nonetheless, I would like to express my personal gratitude to some of the many institutions and individuals who were pivotal in bringing this “magnum opus” to fruition.

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The organization of some of the themes in this book is based upon schemes created by Sam 'Olu Gon III on his extraordinary website, <http://www.trilobites.info>. Having unlimited access to the materials he so kindly made available to us (such as his drawings of trilobites and his many explanatory texts) was of immense assistance as we conceived and developed the graphic component of this volume.

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Because we were unable to create similarly cooperative relationships with museums and institutions in Italy's north and south, even for the purposes of receiving limited information regarding the trilobite faunas found in the best known localities, we were unable to further extend the chapter on Italian trilobites. Such information would have been extremely important both scientifically and culturally for a full understanding of Italy's trilobite fauna, and it would appear that even in this area (unfortunately) there is still much work to be done.

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Enrico Bonino

PREFACE



Preface

The original concept for this book was to create a catalog that illustrated the best of the specimens housed in the Back to the Past Museum in Cancún, Mexico, the first in the world dedicated to trilobites. We quickly realized, however, that the addition of in-depth material related to the morphology, paleoecology, and taxonomy of trilobites would make our effort more thorough and increase its appeal both for casual collectors and for professional paleontologists and researchers in museums, universities, and other institutions.

The profound enthusiasm that our friends and colleagues demonstrated for this project served as an additional impetus for the expansion of the book and pushed us to broaden our contacts with private collectors and research institutions all across the globe in the search for illustrations and photographs. Those new contacts, in fact, bore abundant fruit. Thanks to the photographs we obtained, we were able to enrich the second section of this volume with a series of illustrated tables that describe lesser known (but hardly less important) exposures where trilobites have been found.

This book, as we've already suggested, is divided into two sections. The first is dedicated to the systematic taxonomy of trilobites, while the second section (perhaps more aesthetically appealing) brings together images of nearly all the trilobites that made up the Museum's collections as of 2010. These are organized according to age and provenance.

The drafting of the section dedicated to taxonomy required extensive bibliographic research, particularly because we wanted to avoid republishing the "classic" images and information that are so common in general-interest publications about trilobites or which are available online. As scientific knowledge has developed, especially in the areas of systematic taxonomy and cladistics, the result has been an evolution in thought and a renewed interpretation of the morphology of fossil organisms in light of taxonomic considerations. This, in turn, has led to the reorganization of a number of trilobite orders and the creation of (or the splitting into) new orders. We made the greatest possible effort to provide our readers with the most up-to-date information available. Given the sometimes unpredictable nature of the development of paleontological knowledge, however, including the reinterpretation of existing data or the discovery of new fossiliferous exposures, we cannot exclude the possibility that some of the information in this book may already be "dated" by the time it is published.

The second part of the book is composed of illustrated plates that trace geological time from the Cambrian to the Carboniferous (at the moment, the Museum has no Permian trilobites). Each of these plates corresponds to a unique fossiliferous exposure or Lagerstätte and includes information regarding the paleogeography and position of the continents during the period in question; the location of the site today; a description of the paleoenvironment, sedimentology, and geology (both in the past and today); and photographs and drawings of the fossils found there.

To further enrich this volume, additional information and photographs regarding worldwide fossil sites that are of unique interest (some of which, unfortunately, are no longer accessible) and which are not represented in the Back to the Past Museum's collections have been compiled from a variety of sources.

The reader should understand that the Lagerstätten described in this book do not (and naturally cannot) represent an exhaustive list of important paleontological localities, just as the species we mention or illustrate do not represent all known trilobites. Indeed, it should come as no surprise that some well

known or interesting species are not illustrated in this work.

In general, the drawings in this volume are either the work of Enrico Bonino or were modified or readapted by him. The photographs, on the other hand, are all previously unpublished and represent trilobite specimens that have heretofore been inaccessible to the general public.

Some of the species we illustrate, moreover, have yet to be scientifically described and classified. Taken together, all of these factors make us confident that this book will be an important contribution to trilobite research and knowledge, and we hope it will be as useful and interesting to the specialist as it is to the everyday trilobite enthusiast.

Enrico Bonino & Carlo Kier

As the author of the “Paleoweb” column for PaleoItalia, the newsletter of the Italian Paleontological Society (which members receive along with the Society’s Bulletin), I was researching an article for my column when I stumbled upon Enrico Bonino’s website (<http://www.keyobs.be/fr/ebonino/index.html>). I was immediately struck by the richness of the materials he had assembled and by the rigor with which he approached them.

I should hasten to make clear that I have been employed for nearly forty years by the University of Modena and Reggio Emilia as a professor of paleontology. I am also a member of the “Paleozoic Group,” a team of friends and researchers dedicated to scientific investigation of the most disparate paleontological arguments related to that ancient period of Earth’s history—from some 542 to 251 million years ago.

What a happy coincidence, then, that Enrico Bonino, geologist and originator of the idea for this book, is principally interested in the first fossil evidence of life on our planet, evidence that often appears in unique localities (known to those in the field as “Fossil Lagerstätten”) which, for a variety of reasons, expose exceptionally well preserved fossils.

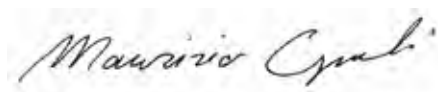
Trilobites are another topic dear to Enrico’s heart. Once I had finished the article I mentioned earlier, we began a profuse email correspondence, a sort of reciprocal scientific support group that was rewarding for both of us. When, some time later, he proposed the idea of creating a volume that would remedy the lack of trilobite materials available in Italian, I could do no less than offer my most enthusiastic support.

Behind all of this, of course, lies not solely the esteem in which we hold one another, but Enrico’s genuine passion for the subject matter. Add to that his excellence in wielding and elaborating scientific data and his fine aesthetic sense, and this exemplary book is the result. *The Back to the Past Museum Guide to Trilobites* stands out not solely for its abundance of extraordinary images but for the precision of the text and for its evident commitment to excellence.

Even beyond the book’s thorough treatment of the specific topics it covers, the reader may also be surprised by the material on trilobites and trilobite exposures in Italy (specifically, in Sardinia, Friuli and Sicily). Bravo, Enrico!

Dr. Maurizio Gnoli, Professor of Paleontology and Vertebrate Paleontology, University of Modena and Reggio Emilia.

Prof. Maurizio Gnoli



Trilobites have been a delightful obsession of mine for some time. As a young graduate student in Zoology over twenty years ago, I gravitated to these amazing Paleozoic arthropods, whose huge diversity and worldwide presence symbolized the diversification of life on Earth. I remember hunting for and devouring any books that offered significant focus on the Trilobita. My obsession eventually found virtual expression when in 1999, more than a decade ago now, I first unveiled *A Guide to the Orders of Trilobites*, a website celebrating trilobite diversity and evolution. That website opened international doors for me, introducing me to like-minded trilobitophiles on all continents, and confirming for me that trilobites were worthy of life-long dedication. One of these “fellow trilobitophiles” is Enrico Bonino.

When Enrico announced that he and Carlo Kier were working on a new book dedicated to trilobites, it drew my attention immediately. It was not a primarily technical work, such as the *Treatise of Invertebrate Paleontology* (Volume O - the so-called “Trilobite Bible”), and yet neither was it a purely popular account. The authors offer us a substantive work, exploring the “world of trilobites,” their origins, morphology, classification, ecology, and paleogeography in extensively researched and richly illustrated sections.

They follow the text with a large photographic catalogue of trilobites (and some close relatives) organized in geochronological order and by Lagerstätten (trilobites from all over the world are illustrated, including more than 600 species) that is more than adequate to demonstrate the richness and distinctiveness of this singularly wonderful class of ancient arthropods. Even some specimens only very recently discovered (2009) and published are included, such as the giant asaphids from the Valongo Formation of Portugal.

A work such as this could not have come into being without the cooperation of a large, international community of collectors, preparators, researchers, and public institutions that participated in sharing some of the finest trilobite specimens known, and I enjoyed contributing illustrations and feedback to this project over the years. The majority of the trilobites in this book are to be found in the Back to the Past Museum (an impressive collection, one of the best private exhibitions of trilobites in the world).

It was an additional delight, however, to recognize specimens from the collections of other notable collectors such as Peter Cameron, Sam Stubbs, Mark Marshall, Jake Skabelund and many others not possible to name here.

Like many who devote their lives to our extinct trilobed antecedents, Enrico and Carlo don't consider the amount of time, research, international networking, and artistic creation that were necessary to create this book. Rather, The Back to the Past Museum Guide to Trilobites is a product of the joy that comes from immersion into the world of creatures hundreds of millions of years gone by, a joy that we can all now share!

Samuel M. Gon III, Ph.D.
Creator and webmaster of “*A Guide to the Orders of Trilobites*”
<http://www.trilobites.info>
Honolulu, Hawai'i



Cancún, Mexico, located on the east coast of the Yucatán Peninsula and bathed by the blue waters of the Caribbean Sea, provides the setting for the Back to the Past Museum. Here, not far from the famous Chicxulub Crater, the impact site of a meteorite that struck the Earth some sixty-five million years ago, is housed the first museum dedicated entirely to trilobites. The rarity, quality, and scientific importance of the specimens on display at the Back to the Past Museum (more than three hundred species are represented) make this one of the most important collections of trilobites in the world.

The acronym “BPM coll.” indicates specimens drawn from the Museum’s collections.

These jewels, which have found their way to the Museum literally from the four corners of the globe, are the culmination of years of field research, acquisitions, or exchanges by the Museum’s director, Carlo Kier, the co-author of this book. The individuals whose work has made the Museum’s projects possible include Enrico Bonino (geologist, and the Museum’s scientific consultant and artistic director), Jake Skabelund (an American biologist and well known professional fossil hunter), and Carlo Kier. Behind the wings are specialists such as Dave Comfort, Bob Carroll, and Scott Vergiels who are responsible for the preparation of display specimens and whose contributions are literally indispensable. It hardly needs to be said that nothing of what visitors see at the Museum would be visible without their patient, professional preparation of the Museum’s invaluable fossil specimens.

The Museum, in addition to providing a careful scientific description of each of the specimens on display, is especially committed to its educational function as well. Each display case contains a reconstruction of the environment at the time the organisms lived, as well as photographs and illustrations that explain the geology of the sites where trilobites are found and the flora and fauna that shared an ecological niche with them.

A visit to the Museum begins at the dawn of the Paleozoic and continues in a virtual voyage through time across the millennia, from the Cambrian to the Permian. Each geological period is richly illustrated with specimens that are often one-of-a-kind, and the background of each display case follows the color standards established by the International Commission on Stratigraphy for the official geological time scale.

Fig. 1. Close-up of a display dedicated to trilobites from the Devonian of Morocco.



Fig. 2. Entrance to the Museum. On the right: the time scale showing the distribution of trilobites as compared to other members of the animal and plant kingdoms. In the background: display cases containing the Museum's collections, organized chronologically and according to provenance.



Fig. 3. Each Lagerstätte is represented by a display that includes drawings and photographs that illustrate the most important fossil fauna from that site, and is accompanied by a description of the site's geology and paleogeography, sedimentology, and position on the geological time scale.

The Museum is constantly being updated as new specimens are acquired and integrated into the displays. Our main goal is to inspire new generations of collectors and future paleontologists and to expand awareness of these ancient and fascinating organisms which colonized almost all Paleozoic oceans for nearly three hundred million years.



Fig. 4. Display dedicated to trilobites from the Lower Cambrian.

In addition, for those who can't easily travel to visit us, we have created a website expressly so that the Museum's collection and displays can be more widely seen and enjoyed. The website also provides access to the Museum's online store where books, posters, dioramas, and even trilobites themselves can be purchased. The address is: <http://www.backtothepast.com.mx>



Fig. 5. Display dedicated to trilobites from the Ordovician of Morocco.

Some Notes on Classification and Terminology

(based upon LEBRUN, 2002; modified).

With the intention of establishing order in the complex diversity of the animal and plant kingdoms, the publication of the tenth edition of Carl Von Linné's *Systema Naturae* (1758) gave rise to the creation of an elaborate hierarchical classification system – the beginning of zoological nomenclature.

The basic unit of this hierarchy was the species, and the system's purpose was to group organisms together according to their interrelationships. Each species was given a two-part or “binomial” scientific name composed, first, of the name of the genus to which an organism belonged. The genus name was followed by the species or “specific” name, which is the hierarchical level just below the genus.

The genus (or generic name) is always written with an initial capital letter, while the specific name is always written in lower case. Both names are printed in italics (for example, *Selenopeltis buchii*). If the name has been mentioned previously in a text – or in the case of a list of species that belong to the same genus – the generic name may be abbreviated using its first letter (*S. buchii*), but it can never be omitted. In general, scientific names are presumed to have Latin or Greek roots, such as in the case of the trilobite *Asteropyge longispina*. The generic name is formed from the Greek words *asteros* (star) and *pyge* (but-tocks) and the species name is a combination of *longi* (long) and *spina* (spine).



Fig. 6. *Asteropyge longispina*, x2.9. (A. Rückert coll.) Note the long spines on either side of the cephalon and the spinose pygidium.

This rule, however, has more recently been abandoned in large part, and zoological naming has been left to the liberal interpretations of the specialists who study and describe new taxa.

The name of the “author” or authors follows the binary or Linnaean classification; these are the workers who first named and described the organism – for example, the trilobites *Isotelus gigas* DE KAY 1824 or *Crozonaspis kerfornei* CLARKSON & HENRY 1970. When the author’s name appears within parentheses, such as, for example, in the case of *Panderia beaumonti* (ROUAULT 1847) – this indicates that the fossil had originally been given a different name. Rouault, for example, first called the trilobite in question *Il-laenus beaumonti*, though it was later assigned to a different genus.

Abbreviations such as “cf.” (*confere* or “compare with”) or “aff.” (*affinis* or “akin to”) are used to signal uncertainty regarding the classification of a particular organism – for example, *Calymene* cf. *breviceps* and *Lonchodomas* aff. *pennatus*. Finally, the abbreviation “sp.” following the genus name (e.g., *Phacops* sp.) indicates that the genus has been identified but not the species.

A genus (the plural is “genera”) includes one or more species that share a number of characteristics. Moving up the taxonomical hierarchy, a group of genera with shared features are contained within a family, whose name ends in the suffix “-idae.” Groups of families, in turn, may be placed within superfamilies (suffix “-oidea”), suborders (suffix “-ina”), and collected into orders (suffix “-ida”), orders into classes, and classes into phyla (the singular is phylum). At the very top of the hierarchy is the Kingdom.

To take a concrete example: *Neseuretus* (*Neseuretus*) *tristani tardus* HAMMANN 1983 belongs to the Family Calymenidae HAWLE & CORDA 1847, the Order Phacopida SALTER 1846, the Class Trilobita WALCH 1771, the Phylum Arthropoda SIEBOLD & STANNIUS 1845 and, finally, to the Kingdom Animalia. Within these basic taxonomic categories we find intermediate subdivisions: subspecies, subgenera, subfamilies (suffix “-inae”), and so on.

Cladistics

Cladistics, or cladistic taxonomy (from the Greek word *klados* = branch), is a systematic scheme for classifying living organisms. Cladistics, also known as **phylogenetic systematics**, originated in the work of WILLI HENNIG (1913-1976), and its system is based upon the degree of inferred kinship between and among organisms – or, to say it another way, on their temporal distance from their last shared ancestor. In the cladistic classification method, animals and plants are divided into monophyletic taxonomic groups (**clades**) that comprise the common ancestor and all its descendents.

The evolutionary relationships within a clade are established on the basis of shared features (**homologies**) and on the assumption that such features indicate the presence of a common ancestor. Classification is also based upon the presumption that two new species may be formed by the sudden separation from a common ancestor rather than through gradual evolutionary change. A clade that is included in a larger unit is said to be “**nested**” within that clade.

A clade possesses a single ancient member in common, and the phylogenetic lines of descent from that branch are called **monophyletic** groups. A taxon is said to be **polyphyletic**, on the other hand, if it does not share a common ancestor with another taxon, and polyphyletic groups have little pertinence to cladistics. Frequently, they reflect a sort of popular association of organisms that share some features (the algae, for instance), though, in fact, they actually represent a number of clades with distinct origins.

A monophyletic group is characterized by one or more **autapomorphies** (features that are uniquely present in the terminal phase of a group). Autapomorphies are observed exclusively in one member of a clade and not elsewhere, not even in closely related organisms, and it is essential to point out that such autapomorphies may, in some cases, be lost in adulthood, even if they are maintained at an embryonic

level following **paedogenesis** (that is, sexual development that is accelerated with respect to a normal individual).

Paedogenesis contrasts with **neoteny**, the more-or-less marked retention, by adults in a species, of traits previously seen only in juveniles. The term **paedomorphosis** is used, instead, when features are present in a sexually mature adult that are typical of earlier stages of development. In a practical sense, we are speaking of adult forms that retain aspects reminiscent of juvenile stages of life.

A clade is differentiated from others by derived features that do not appear in other clades (**apomorphy**), though it may be evolutionarily related to other clades through a common ancestor and exhibit shared derived characters (**synapomorphies**). If a clade does not include all the descendents of a common ancestor (that is, it includes most of the species derived from the ancestral progenitor but excludes some branches), the clade is called **paraphyletic**. A **symplesiomorphy** is a primitive feature shared by two or more taxa; that feature may appear in other taxa as well if they share an ancestor with the taxon in question, but cannot be used to define a clade.

All of these relationships are represented in diagrams called **cladograms**, formed of a series of two-pronged branches. Each point of branching represents a divergence from a common ancestor. A cladistic analysis may be based on a wide variety of data, including DNA sequencing (so-called “molecular data”) and on biochemical and morphological information.

In addition, the reader may come across the following terms in the scientific literature, which we describe here as a matter of thoroughness.

- The **nomen nudum** (plural: nomina nuda) or “naked name” is printed in normal characters (i.e., not in italics) to indicate that an organism’s name has not yet been accepted and standardized by the International Commission on Zoological Nomenclature (ICZN). If the organism’s name is later formalized, it is then written in italics (e.g., *Canis latrans*, the coyote). The formal scientific name given to an organism may or may not correspond to its previous nomen nudum.

- The **nomen oblitum** (from Latin, “forgotten name”) refers to names that have not been used by the scientific community since 1899 and when a name has either been replaced by a more recent name (called the **nomen protectum**) or when a formally accepted homonym exists. The former name, no longer in use, is said to be “forgotten” and the nomen protectum takes precedence.

- The **nomen dubium** (“doubtful name”) is used to indicate fossils that have no distinct or unique features that permit them to be classified according to rigorous scientific standards. This may happen when the holotype (the physical specimen upon which a species description is originally based) has been lost or lacks all the information necessary for a true taxonomic classification.

- The **nomen novum** (“new name”) is a scientific name created specifically to replace a name that is already in use but which is no longer considered legitimate (e.g., because it is a homonym or is spelled the same as an existing, older name.) A nomen novum is not applied, however, when a name is changed on the basis of a new taxonomic interpretation.

TRILOBITA

Biota (*Classification by Systema Naturae 2000*)

Domain : **Eukaryota** WHITTAKER & MARGULIS, 1978

Realm : **Animalia** LINNAEUS, 1758

Subkingdom : **Bilateria** HATSCHKE, 1888 (**Bilaterians** CAVALIER-SMITH, 1983)

Branch: **Protostomia** GROBBEN, 1908

Infrakingdom: **Ecdysozoa** AGUINALDO *et al.*, 1997

Superphylum: **Panarthropoda** CUVIER

Phylum: **Arthropoda** LATREILLE, 1829

Subphylum: **Arachnomorpha** HEIDER, 1913

Infraphylum: **Trilobita**

Class: **Trilobita** WALCH, 1771

Distribution: Lower Cambrian (~524Ma) – Upper Permian (251Ma).

Environment: marine, all ecological niches were occupied.

Feeding: full alimentary pyramid.

Exoskeleton: calcitic at lower concentration in magnesium.

Dimensions: from less than a millimeter to near one meter long.

Importance: paleoecological, paleobiogeographical, and partially biostratigraphic.

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Index to Named or Illustrated Trilobites

This index lists the genera and species of trilobites that are illustrated or discussed in this volume. Species are listed in alphabetical order.

We were not always able to determine the author who first officially described the species and, in those cases, the entry for that column has been left blank. A page number in bold face refers the reader to photographic material, while normal type corresponds to a description or other mention in the text.

The final columns on the right reports the order to which the species belongs: AGN (Agnostida), ASA (Asaphida), COR (Corynexochida), HAR (Harpetida), LIC (Lichida), NEK (Nektaspida), ODO (Odonopleurida), PHA (Phacopida), PRO (Proetida), PTY (Ptychopariida), RED (Redlichiida), UND (Undetermined), and the geological period in which they lived.

The reader is referred to JELL & ADRAIN (2003) for more in-depth information. Authors' names were taken from their work as well as from the Index to Organism Names (ION) site: <http://www.organism-names.com/>.

<i>Abadiella</i>	HUPÉ, 1953	26	RED	Cam
<i>Acadolenus snajdri</i>	FATKA & KORDULE, 1980	251	PTY	Cam
<i>Acadoparadoxides briareus</i>	GEYER, 1993	225, 226 , 227, 228, 229	RED	Cam
<i>Acadoparadoxides sirokyi</i>	SNAJDR, 1985	246	RED	Cam
<i>Acanthopleurella</i>	GROOM, 1902	79, 98	PTY	Ord
<i>Acanthopleurella stipulae</i>	FORTEY & RUSHTON, 1980	13	PTY	Ord
<i>Acanthopyge</i>	HAWLE & CORDA, 1847	62, 63, 385	LIC	Dev
<i>Acanthopyge consanguinea</i>	CLARKE, 1894	85, 364	LIC	Dev
<i>Acastava cf. schmidtii</i>	RICHTER, 1909	421	PHA	Dev
<i>Acastoides</i>	DELO, 1935	427	PHA	Dev
<i>Achatella achates</i>	BILLINGS, 1860	339	PHA	Ord
<i>Acidaspides praecurrens</i>	LERMONTOVA, 1951	174	ODO	Cam
<i>Acidaspis</i>	MURCHISON, 1839	83	ODO	Cam
<i>Acidaspis jessi</i>	PERRY & CHATTERTON, 1979	107	ODO	Cam
<i>Acidaspis kuckersiana</i>	SCHMIDT, 1885	173, 317	ODO	Cam
<i>Acropyge weggeni</i>	HAHN & HAHN, 1981	132	PRO	Per
<i>Agnostotes</i>	OPIK, 1963	279	AGN	Cam
<i>Agnostus</i>	BRONGNIART, 1822	36, 42, 161	AGN	Cam
<i>Agnostus pisiformis</i>	LINNAEUS, 1757	72, 73, 101	AGN	Cam
<i>Agraulos</i>	HAWLE & CORDA, 1847	138, 139	PTY	Cam
<i>Agraulos ceticephalus</i>	BARRANDE, 1846	203, 251	PTY	Cam
<i>Albertella</i>	WALCOTT, 1908	224	COR	Cam
<i>Alcymene</i>	RAMSKOLD, ADRAIN, EDGEcombe & SIVETER, 1994	83	PHA	Sil
<i>Aldonaia ornata</i>	LERMONTOVA, 1940	203	PTY	Cam
<i>Allolichas halli</i>	FOERSTE, 1888	350	LIC	Ord
<i>Alokistocarella</i>	RESSER, 1938	63, 202, 237	PTY	Cam
<i>Altiocculus drumensis</i>	SUNDBERG, 1994	70, 256	PTY	Cam
<i>Altiocculus harrisi</i>	ROBISON, 1971	254	PTY	Cam
<i>Amecephalus idahoense</i>	RESSER, 1939	237	PTY	Cam
<i>Amecephalus laticaudum</i>	RESSER, 1939	238	PTY	Cam
<i>Amecephalus packi</i>	RESSER, 1935	237	PTY	Cam
<i>Amecephalus piochensis</i>	WALCOTT, 1886	240	PTY	Cam
<i>Ameropiltonia lauradanae</i>	BREZINSKI, 2000	437	PRO	Car
<i>Ammagnostus laiwuensis</i>	LORENZ, 1906	162, 264	AGN	Cam
<i>Amphilichas</i>	RAYMOND, 1905	342	LIC	Ord
<i>Amphilichas cf. A. confrons</i>	RUEDEMANN, 1916	336	LIC	Ord
<i>Amphilichas cornutus</i>	CLARKE, 1894	336	LIC	Ord
<i>Amplifallotaspis</i>	HOLLINGSWORTH, 2007	26	RED	Cam
<i>Ampyx</i>	DALMAN, 1827	36, 145, 196	ASA	Ord
<i>Ampyx cf. priscus</i>	THORAL, 1935	121, 196, 287	ASA	Ord
<i>Ampyx nasutus</i>	DALMAN, 1827	57, 196, 315	ASA	Ord
<i>Andegavia</i>	KIM, 1997	57, 400	COR	Dev
<i>Anisopyge</i>	GIRTY, 1908	131	PRO	Per
<i>Anomocare</i>	HOHM & WESTERGAARD, 1930	191	ASA	Cam
<i>Anomocarioides</i>	LERMONTOVA, 1940	191	ASA	Cam
<i>Anopolenus cf. henrici</i>	SALTER, 1864	139	RED	Cam
<i>Antatlasia</i>	HUPE, 1953	26	PTY	Cam
<i>Apatokephalus</i>	KOBAYASHI, 1934	292	ASA	Ord
<i>Araiopleura</i>	HARRINGTON & LEANZA, 1957	196, 197	ASA	Ord
<i>Arapahoia spatulata</i>	MILLER, 1936	264	PTY	Cam
<i>Archaeaspis</i>	REPINA, (IN KHOMENTOVSKY & REPINA, 1965)	26	RED	Cam
<i>Archegonus (Laevibole) laevicauda</i>	SARRES, 1857	441, 442	PRO	Car
<i>Archegonus (Phillibole) cauliquercus</i>	BRAUCKMANN, 1981	441	PRO	Car

<i>Archegonus (Phillibole) nehdenensis</i>	HAHN & HAHN, 1969	442, 443	PRO	Car
<i>Archegonus (Phillibole) polleni</i>	WOODWARD, 1894	441	PRO	Car
<i>Arctinurus</i>	CASTELNAU, 1843	172	ODO	Sil
<i>Arctinurus boltoni</i>	BIGSBY, 1825	63, 67, 74, 356	LIC	Sil
<i>Arthrorhachis tarda</i>	BARRANDE, 1846	144	AGN	Cam
<i>Asaphellus</i>	CALLAWAY, 1877	121, 144, 145, 287	ASA	Ord
<i>Asaphellus cf. fezouataensis</i>	VIDAL, 1998	287	ASA	Ord
<i>Asaphellus stubbsi</i>	FORTEY, 2009	289	ASA	Ord
<i>Asaphellus toledanus</i>	GIL CID, 1976	301	ASA	Ord
<i>Asaphiscus</i>	MEEK, 1873	201	ASA	Cam
<i>Asaphiscus wheeleri</i>	MEEK, 1873	202, 254, 255	ASA	Cam
<i>Asaphopsoides</i>	HUPE, 1955	194	ASA	Ord
<i>Asaphus</i>	BRONGNIART, 1822	35, 108	ASA	Ord
<i>Asaphus delphinus</i>	LAWROW, 1856	315	ASA	Ord
<i>Asaphus expansus</i>	DALMAN, 1827	42, 45	ASA	Ord
<i>Asaphus holmi</i>	SCHMIDT, 1901	316	ASA	Ord
<i>Asaphus kowalewskii</i>	LAWROW, 1856	48, 103, 316	ASA	Ord
<i>Asaphus lepidurus</i>	NIESZKOWSKI, 1859	52	ASA	Ord
<i>Asaphus platyurus</i>	ANGELIN, 1854	315	ASA	Ord
<i>Asaphus punctatus</i>	LESNIKOVA, 1949	315, 325	ASA	Ord
<i>Asaphus raniceps</i>	DALMAN, 1828	36, 44, 315	ASA	Ord
<i>Asaphus robustus</i>	HAWLE & CORDA, 1847	315	ASA	Ord
<i>Asteropyge</i>	HAWLE & CORDA, 1847	72, 75	PHA	Dev
<i>Asteropyge comes</i>	BASSE, 2003	405	PHA	Dev
<i>Asteropyge longispina</i>	RÜCKERT & KLEVER, 2007	9, 405	PHA	Dev
<i>Asteropyge pruemensis</i>	BASSE, 2003	421	PHA	Dev
<i>Asteropyge punctata</i>	STEININGER, 1831	415	PHA	Dev
<i>Athabaskia bithus</i>	WALCOTT, 1916	169, 238	COR	Cam
<i>Aulacopleura</i>	HAWLE & CORDA, 1847	98, 187	PRO	Sil
<i>Aulacopleura konincki</i>	BARRANDE, 1846	109, 187	PRO	Sil
<i>Auritama</i>	ŌPIK, 1967	191	ASA	Cam
<i>Austerops smoothops</i>	CHATTERTON, FORTEY, BRETT, GIBB & MCKELLAR, 2006	394	PHA	Dev
<i>Bailiella</i>	MATTHEW, 1885	60, 138	PTY	Cam
<i>Bailiella cf. levyi</i>	MUNIER-CHALMAS & BERGERON, 1889	139	PTY	Cam
<i>Balcoracania</i>	POCOCK, 1970	166	RED	Cam
<i>Balcoracania dailyi</i>	POCOCK, 1970	55, 120	RED	Cam
<i>Balizoma</i>	HOLLOWAY, 1980	146	PHA	Sil
<i>Balnibarbi</i>	FORTEY, 1974	98, 204	PTY	Ord
<i>Barrandeops</i>	MCKELLAR & CHATTERTON, 2009	393	PHA	Dev
<i>Barrandeops forteyi</i>	MCKELLAR & CHATTERTON, 2009	394	PHA	Dev
<i>Barrandeops granulops</i>	CHATTERTON, FORTEY, BRETT, GIBB & MCKELLAR, 2006	395	PHA	Dev
<i>Barrandeops ovatus</i>	MCKELLAR & CHATTERTON, 2009	393	PHA	Dev
<i>Basilicus (Basilicus) vidali</i>	CORBACHO & VELA, 2010	289	ASA	Ord
<i>Bathycheilus</i>	HOLUB, 1908	176	PHA	Ord
<i>Bathycheilus castilianus</i>	HAMMANN, 1983	301	PHA	Ord
<i>Bathynotus kueichowensis</i>	LU	232	RED	Cam
<i>Bathyriscus</i>	MEEK, 1873	258	COR	Cam
<i>Bathyriscus rotundatus</i>	ROMINGER, 1887	188	COR	Cam
<i>Bathyriscus wasatchensis</i>	RESSER, 1939	80, 241	COR	Cam
<i>Bavarilla</i>	BARRANDE, 1968	176	PHA	Ord
<i>Belenopyge ballivani</i>	PEK & VANEK, 1991	376	LIC	Dev
<i>Belenopyge branikensis</i>	BARRANDE, 1872	389	LIC	Dev
<i>Belgibole abruptirhachis</i>	RICHTER & RICHTER, 1919	153	PRO	Dev
<i>Bellacartwrightia calliteles</i>	GREEN, 1837	63, 180, 430, 431	PHA	Dev
<i>Bigotina</i>	COBBOLD, 1935	26	PTY	Cam
<i>Blackwelderia sinensis</i>	BERGERON, 1899	174	LIC	Cam
<i>Boedaspis ensifer</i>	WHITTINGTON & BOHLIN, 1958	57, 173, 317	ODO	Ord
<i>Bohemilla</i>	BARRANDE, 1872	194	ASA	Ord
<i>Bohemoharpes</i>	VANEK, 1963	83	HAR	Sil
<i>Bohemoharpes acuminatus</i>	BEYRICH	84, 206, 361	HAR	Sil
<i>Bojoscutellum campaniferum</i>	RESSER, 1937	44	COR	Dev
<i>Bolaspidella</i>	RESSER, 1937	202, 259	PTY	Cam
<i>Bolaspidella housensis</i>	WALCOTT, 1886	255	PTY	Cam
<i>Bollandia globiceps</i>	PHILLIPS, 1836	186, 434, 435	PRO	Car
<i>Bonnia</i>	WALCOTT, 1916	26	COR	Cam
<i>Bornemannaspis solitaria</i>	BORNEMANN, 1888	137	RED	Cam
<i>Bouleia dagincourti</i>	ULRICH, 1892	376	PHA	Dev
<i>Bowmania americana</i>	WALCOTT, 1884	38	HAR	Cam
<i>Brachyaspidion microps</i>	ROBINSON, 1971	256	PTY	Cam
<i>Brachyaspidion sulcatum</i>	ROBINSON, 1964	255	PTY	Cam
<i>Brachymetopus</i>	MCCOY, 1847	131, 187	PRO	Per
<i>Bradyfallotaspis</i>	MCCOY, 1847	26	PRO	Car
<i>Breizhops bigranulosus</i>	MORZADEC, 1983	422	PHA	Dev
<i>Breviscutellum</i>	ŠNAJDR, 1960	367	COR	Dev
<i>Bristolia bristolensis</i>	RESSER, 1928	165, 221	RED	Cam
<i>Bristolia fragilis</i>	PALMER & HALLEY, 1979	11, 223	RED	Cam
<i>Bristolia insolens</i>	RESSER, 1928	11, 221, 224	RED	Cam
<i>Bristolia mohavensis</i>	HAZZARD & CRICKMAY, 1933	63, 221	RED	Cam
<i>Bulaiaspis</i>	LERMONTOVA IN CHERNYSHEVA, 1956	161	PTY	Ord
<i>Bumastoides holei</i>	FOERSTE, 1920	52, 63, 99, 338, 344	COR	Ord
<i>Bumastoides porrectus</i>	RAYMOND, 1925	338	COR	Ord
<i>Bumastus</i>	MURCHISON, 1839	98, 167, 168	COR	Sil
<i>Bumastus ioxus</i>	HALL, 1852	357	COR	Sil
<i>Burlingia ovata</i>	ZHOU & YUAN, 1980	232	UND	Cam

<i>Burmeisterella armata</i>	BURMEISTER, 1843	94, 372	PHA	Dev
<i>Calodiscus foveolatus</i>	HOWELL, 1935	138	AGN	Cam
<i>Calycoscutellum</i>	ARCHINAL, 1994	168	COR	Dev
<i>Calymene</i>	BRONGNIART, 1822	83, 152	PHA	Sil
<i>Calymene neotuberculata</i>	SCHRANK, 1970	360, 361	PHA	Sil
<i>Calymene breviceps</i>	RAYMOND, 1916	10, 123	PHA	Sil
<i>Calymene niagarensis</i>	HALL, 1852	357	PHA	Sil
<i>Calymene polgari</i>	SIVETER & CHATTERTON, 1996	107	PHA	Sil
<i>Calymene tuberculata</i>	BRÜNNICH, 1885	84, 359, 360	PHA	Sil
<i>Calymenella boisseli</i>	BERGERON, 1890	143, 145, 148	PHA	Ord
<i>Calyptraulax callicephalus</i>	HALL, 1847	341	PHA	Ord
<i>Cambroinyoella</i>	LIEBERMANN, 2001	26	RED	Cam
<i>Cambropallas telesto</i>	GEYER, 1993	225, 227	RED	Cam
<i>Carbonocoryphe (Winterbergia) suprahercynica</i>	HAHN, HAHN & MUELLER, 2000	153	PRO	Car
<i>Carbonocoryphe suprahercynica</i>	RICHTER & RICHTER, 1950	153	PRO	Car
<i>Carolinites</i>	KOBAYASHI, 1940	100, 108, 184, 188	PRO	Ord
<i>Cedaria minor</i>	WALCOTT, 1924	92, 264, 266	PTY	Cam
<i>Cedarina schachti</i>	ADRAIN, PETERS & WESTROP, 2009	57, 61, 266, 267	PTY	Cam
<i>Celmus</i>	ANGELIN, 1854	188	PRO	Ord
<i>Cephalopyge notabilis</i>	GEYER, 1988	225, 229	AGN	Cam
<i>Ceratarges</i>	GÜRICH, 1901	57, 397	LIC	Dev
<i>Ceratarges armatus</i>	GOLDFUSS, 1839	407	LIC	Dev
<i>Ceratarges berolinensis</i>	RICHTER, 1909	406	LIC	Dev
<i>Ceratonurus</i>	PRANTL & PRIBYL, 1949	364, 365, 397	ODO	Dev
<i>Ceratopyge</i>	HAWLE & CORDA, 1847	192	ASA	Ord
<i>Ceraurinus icarus</i>	BILLINGS, 1860	350	PHA	Ord
<i>Ceraurinus marginatus</i>	BARTON, 1913	328	PHA	Ord
<i>Ceraurus</i>	GREEN, 1832	118, 181, 340	PHA	Ord
<i>Ceraurus globulobatus</i>	BRADLEY, 1930	40, 328	PHA	Ord
<i>Ceraurus pleurexanthemus</i>	GREEN, 1832	34, 335, 339, 344	PHA	Ord
<i>Cernuolimbus cf. pegakanthodes</i>	PRATT, 1992	191, 279	ASA	Cam
<i>Chancia ebdome</i>	WALCOTT, 1924	238	PTY	Cam
<i>Chasmops praecurrens</i>	SCHMIDT, 1881	317	PHA	Ord
<i>Chaunoproetus</i>	RICHTER, 1919	153	PRO	Den
<i>Cheiropyge</i>	DIENER, 1897	184	PRO	Per
<i>Cheiropyge koizumii</i>	KOBAYASHI & HAMADA, 1982	132	PRO	Per
<i>Cheirurus</i>	BEYRICH, 1845	147	PHA	Dev
<i>Cheirurus (Crotalocephalus) gaertneri</i>	ALBERTI, 1962	147	PHA	Dev
<i>Chlustinia keyserlingi</i>	BARRANDE, 1846	347	ODO	Ord
<i>Chotecops ferdinandi</i>	KAYSER, 1880	72, 371, 372, 373	PHA	Dev
<i>Choubertella</i>	HUPÉ, 1953	26	RED	Cam
<i>Cliffia cf. lataegenae</i>	WILSON, 1949	279	PTY	Cam
<i>Colpocoryphe</i>	NOVAK IN PERNER, 1918	289	PHA	Ord
<i>Colpocoryphe bohemia</i>	VANEK, 1965	79	PHA	Ord
<i>Colpocoryphe rouaulti</i>	HENRY, 1970	176, 311	PHA	Ord
<i>Colpocoryphe thoralis</i>	DEAN, 1966	301	PHA	Ord
<i>Coltraneia</i>	LIEBERMANN & KLOC, 1997	386	PHA	Dev
<i>Comptonaspis</i>	BREZINSKI, 1988	437, 438	PRO	Car
<i>Comptonaspis swallowi</i>	SHUMARD, 1855	437	PRO	Car
<i>Comura</i>	RICHTER & RICHTER, 1926	57, 94	PHA	Dev
<i>Comura bultyncki</i>	MORZADÉC, 2001	94, 95, 386	PHA	Dev
<i>Condylopyge eli</i>	GEYER, 1998	230	AGN	Cam
<i>Conocoryphe</i>	HAWLE & CORDA, 1847	42, 98, 138, 201	PTY	Cam
<i>Conocoryphe cf. brevifrons</i>	THORAL, 1948	139	PTY	Cam
<i>Conocoryphe cirina</i>	BARRANDE, 1846	99, 249, 250	PTY	Cam
<i>Conocoryphe sulzeri</i>	SCHLOTHEIM, 1823	109, 201, 249	PTY	Cam
<i>Conophillipsia</i>	ROBERTS, 1963	131	PRO	Car
<i>Coosella</i>	LOCHMAN, 1936	52, 63, 92, 201, 202, 265, 266, 271	PTY	Cam
<i>Coosia</i>	WALCOTT, 1911	201	PTY	Cam
<i>Cordania</i>	CLARKE, 1892	187	PRO	Dev
<i>Cordania falcata</i>	WHITTINGTON, 1960	187, 365, 366	PRO	Dev
<i>Cordania wessmani</i>	ADRAIN & KLOC, 1997	365	PRO	Dev
<i>Cornuproetus</i>	RICHTER & RICHTER, 1919	416	PRO	Dev
<i>Cornuproetus beecheri</i>	RUEDEMANN, 1926	330, 331	PRO	Ord
<i>Cornuproetus cornutus cornutus</i>	GOLDFUSS, 1843	405, 406, 416	PRO	Dev
<i>Coronocephalus</i>	GRABAU, 1924	129, 181	PHA	Sil
<i>Corrugatagnostus</i>	KOBAYASHI, 1939	161	AGN	Ord
<i>Corynexochus latus</i>	RASETTI, 1972	138	COR	Cam
<i>Corynexochus sardous</i>	RASETTI, 1972	138	COR	Cam
<i>Cromus</i>	BARRANDE, 1852	146	PHA	Sil
<i>Crotalocephalina gibbus</i>	BEYRICH, 1845	63, 181, 397	PHA	Dev
<i>Crozonaspis kerfornei</i>	CLARKSON & HENRY, 1970	10	PHA	Ord
<i>Crozonaspis morenensis</i>	HAMMANN, 1972	311	PHA	Ord
<i>Crozonaspis struvei</i>	HENRY, 1968	46, 47, 302	PHA	Ord
<i>Cryphaeoides rostratus</i>	KOZŁOWSKI, 1923	377	PHA	Dev
<i>Cryptolithus</i>	GREEN, 1832	36, 42, 103, 196	ASA	Ord
<i>Cryptolithus bellulus</i>	ULRICH, 1878	330, 331	ASA	Ord
<i>Cryptolithus tessellatus</i>	GREEN, 1832	110, 350	ASA	Ord
<i>Ctenocephalus</i>	HAWLE & CORDA, 1847	138	PTY	Cam
<i>Ctenocephalus (Harttella) cf. terranovicus</i>	RESSER, 1937	139	PTY	Cam
<i>Ctenocephalus coronatus</i>	BARRANDE, 1846	250	PTY	Cam
<i>Ctenopyge</i>	LINNARSSON, 1880	43, 204	PTY	Cam
<i>Cummingella belisama belisama</i>	HAHN & BRAUCKMANN, 1985	434	PRO	Car
<i>Cybele</i>	LOVÉN, 1846	52, 317	PHA	Ord

<i>Cybele bellatula</i>	DALMAN, 1826	48, 61, 316	PHA	Ord
<i>Cybeloides plana</i>	SINCLAIR, 1944	329	PHA	Ord
<i>Cybelurus</i>	LEVITSKY, 1962	77	PHA	Ord
<i>Cyclopyge</i>	HAWLE & CORDA, 1847	98, 100, 102 , 195	ASA	Ord
<i>Cyclopyge marginata</i>	HAWLE & CORDA, 1847	144	ASA	Ord
<i>Cyphaspis</i>	BURMEISTER, 1843	57, 187, 387, 422	PRO	Dev
<i>Cyphaspis balanops</i>	ERBEN, 1953	407	PRO	Dev
<i>Cyphaspis carrolli</i>	ADRRAIN & KLOC, 1997	366	PRO	Dev
<i>Cyphaspis ceratophthalmus</i>	GOLDFUSS, 1843	407, 428	PRO	Dev
<i>Cyphaspis gaultieri</i>	ROUAULT, 1851	422	PRO	Dev
<i>Cyrtometopella</i>	NIKOLAISEN, 1961	318	PHA	Ord
<i>Cyrtometopus clavifrons</i>	DALMAN, 1827	318	PHA	Ord
<i>Cyrtometopus sembnitzkii</i>	EICHWALD, 1840	318, 319	PHA	Ord
<i>Daguinaspis</i>	HUPÉ, 1953	18, 26	RED	Cam
<i>Dalmanites</i>	BARRANDE, 1892	38	PHA	Sil
<i>Dalmanites lamarmorae</i>	MENEGHINI, 1880	135, 142	PHA	Sil
<i>Dalmanites limulus</i>	GREEN, 1832	179, 356, 357	PHA	Sil
<i>Dalmanites meneghiniana</i>	VINASSA, 1927	142	PHA	Sil
<i>Dalmanitina</i>	REED, 1905	152	PHA	Ord
<i>Dalmanitina (Dalmanitina) acuta</i>	HAMMANN, 1971	143	PHA	Ord
<i>Dalmanitina socialis</i>	BARRANDE, 1846	47, 119	PHA	Ord
<i>Damesella paronai</i>	AIRAGHI, 1902	174	LIC	Cam
<i>Dawsonia</i>	HARTT IN DAWSON, 1868	138	AGN	Cam
<i>Deanaspis goldfussi fluminensis</i>	BARRANDE, 1846	143, 148	ASA	Ord
<i>Deanaspis ?novaresei</i>	HAMMANN & LEONE, 1997	150	ASA	Ord
<i>Dechenella daumeriesi</i>	VAN VIERSEN & PRESCHER, 2008	68, 417	PRO	Dev
<i>Dechenella verneuili</i>	BARRANDE, 1852	417	PRO	Dev
<i>Declivolithus aff. alfredi</i>	ZZELISKO, 1906	347	ASA	Ord
<i>Degamella</i>	MAREK, 1961	97, 99 , 100, 102	ASA	Ord
<i>Degamella nuda</i>	WALCOTT, 1916	195	PTY	Cam
<i>Deiracephalus aster</i>	WALCOTT, 1917	II, 57, 80, 265	PTY	Cam
<i>Delgadella</i>	WALCOTT, 1912	26	AGN	Cam
<i>Deltacephalaspis magister</i>	ELDREDGE & BRANISA, 1980	377	PHA	Dev
<i>Densonella semele</i>	WALCOTT, 1916	92	PTY	Cam
<i>Diacalymene</i>	KEGEL, 1927	357	PHA	Sil
<i>Diacanthaspis (Acanthalomina) minuta</i>	BARRANDE, 1846	173	ODO	Sil
<i>Diacanthaspis parvula</i>	WALCOTT, 1877	343	ODO	Ord
<i>Diademaproetus</i>	ALBERTI, 1964	418	PRO	Dev
<i>Diademaproetus holzapfeli</i>	NOVÁK, 1890	427	PRO	Dev
<i>Diademaproetus praecursor</i>	ALBERTI, 1969	186	PRO	Dev
<i>Dicanthopyge</i>	PALMER, 1965	80, 279	ASA	Cam
<i>Dicranopeltis nereus</i>	HALL, 1863	357	LIC	Sil
<i>Dicranopeltis ubaldoi</i>	HAMMANN & LEONE, 2007	143	LIC	Sil
<i>Dicranurus</i>	CONRAD, 1841	173	ODO	Dev
<i>Dicranurus hamatus elegantus</i>	CAMPBELL, 1977	57, 368	ODO	Dev
<i>Dicranurus menghii</i>	HAMMANN & LEONE, 2007	143	ODO	Dev
<i>Dicranurus monstrosus</i>	BARRANDE, 1852	57, 398	ODO	Dev
<i>Dikelocephalus</i>	OWEN, 1852	193	ASA	Cam
<i>Dikelocephalus gracilis</i>	ULRICH & RESSER, 1930	193	ASA	Cam
<i>Dikelocephalina</i>	BROGGER, 1896	292	ASA	Ord
<i>Dimeropyge</i>	ŌPIK, 1937	184	PRO	Ord
<i>Dionide</i>	BARRANDE, 1847	36, 197	ASA	Ord
<i>Dionide mareki</i>	HENRY & ROMANO, 1978	301, 311	ASA	Ord
<i>Diplagnostus</i>	JAEKEL, 1909	138	AGN	Cam
<i>Dipleura dekayi</i>	GREEN, 1832	176, 378	PHA	Dev
<i>Ditomopyge</i>	NEWELL, 1931	131	PRO	Per
<i>Ditomopyge fatmii</i>	GRANT, 1966	132	PRO	Per
<i>Dohmiella</i>	LÜTKE, 1990	418	PRO	Dev
<i>Dohmiella dewildei</i>	VAN VIERSEN, 2006	418	PRO	Dev
<i>Dolerolenus</i>	LEANZA, 1949	166	RED	Cam
<i>Dolerolenus bifidus</i>	BORNEMANN, 1891	140	RED	Cam
<i>Dolerolenus courtessolei</i>	PILLOLA, 1991	140	RED	Cam
<i>Dolerolenus longiocularatus</i>	PILLOLA, 1991	137	RED	Cam
<i>Dolerolenus zoppii</i>	MENEGHINI, 1882	135, 140	RED	Cam
<i>Dorypyge</i>	DAMES, 1883	138	COR	Cam
<i>Drepanura</i>	BERGERON, 1899	174	LIC	Cam
<i>Drepanura premesnili</i>	BERGERON, 1899	174	LIC	Cam
<i>Dresbachia amata</i>	WALCOTT, 1916	266, 277	PTY	Cam
<i>Dreyfussina exophthalma</i>	DREYFUSS, 1948	143, 145	PHA	Ord
<i>Dreyfussina struvei</i>	DESTOMBES, 1963	145	PHA	Ord
<i>Drotops armatus</i>	STRUVE, 1995	57, 178, 211, 388, 474	PHA	Dev
<i>Drotops megalomaniacus</i>	STRUVE, 1990	46	PHA	Dev
<i>Ductina ductifrons</i>	RICHTER & RICHTER, 1923	178	PHA	Dev
<i>Eccaparadoxides pusillus</i>	BARRANDE, 1846	244, 247	RED	Cam
<i>Eccaparadoxides rohanovicus</i>	ŠNAJDR, 1986	245	RED	Cam
<i>Eccoptochile almadenensis</i>	ROMANO, 1980	303, 311, 312	PHA	Ord
<i>Eccoptochile impedita</i>	HAMMANN, 1972	143	PHA	Ord
<i>Eccoptochile tumifrons</i>	HAMMANN & LEONE, 2007	145	PHA	Ord
<i>Ectillaenus</i>	SALTER, 1867	167	COR	Ord
<i>Ectillaenus giganteus</i>	BURMEISTER, 1843	302, 311, 312	COR	Ord
<i>Eldredgeops rana</i>	STUMM, 1953	47, 61, 78, 80, 430, 431	PHA	Dev
<i>Eldredgeops rana crassituberculata</i>	STUMM, 1954	29, 52	PHA	Dev
<i>Elkanaspis</i>	LUDVIGSEN, 1982	194	ASA	Cam
<i>Ellipsocephalus</i>	ZENKER, 1833	42, 60, 98	PTY	Cam

<i>Ellipsocephalus hoffi</i>	SCHLOTHEIM, 1823	203, 245, 250, 251	PTY	Cam
<i>Ellipsocephalus vetustus</i>	POMPECKJ, 1895	251	PTY	Cam
<i>Elrathia</i>	WALCOTT, 1924	60, 98, 199, 258	PTY	Cam
<i>Elrathia kingii</i>	MEEK, 1870	92, 162, 198, 253, 254, 456	PTY	Cam
<i>Elvinia roemeri</i>	SHUMARD, 1861	280	PTY	Cam
<i>Emuella</i>	POCOCK, 1970	166	RED	Cam
<i>Enantiaspis enantiopa</i>	BORNEMANN, 1891	137, 140	RED	Cam
<i>Encrinuraspis</i>	WEBBY, MOORS & McLEAN, 1970	83	PHA	Ord
<i>Encrinuraspis beaumonti</i>	BARRANDE, 1846	83	PHA	Ord
<i>Encrinuroides vigilans</i>	HALL, 1847	328	PHA	Ord
<i>Encrinurus</i>	EMMRICH, 1844	152	PHA	Sil
<i>Encrinurus macourus</i>	SCHMIDT, 1859	359	PHA	Sil
<i>Entomaspis</i>	ULRICH IN BRIDGE, 1931	205	HAR	Cam
<i>Eodalmantina destombesi</i>	HENRY, 1965	303	PHA	Ord
<i>Eodrevermannia</i>	PRIBYL, 1946	147, 151	PRO	Dev
<i>Eofallotaspis</i>	SDZUY, 1978	26	RED	Cam
<i>Eoharpes</i>	RAYMOND, 1905	205	HAR	Ord
<i>Eoharpes cristatus</i>	ROMANO, 1975	303	HAR	Ord
<i>Eohomalonotus</i>	REED, 1918	288	PHA	Ord
<i>Eoredlichia</i>	ZHANG IN LU & DONG, 1952	106, 137	RED	Cam
<i>Eoredlichia intermedia</i>	LU, 1940	73, 216	RED	Cam
<i>Erbenochile erbeni</i>	ALBERTI, 1981	48, 49, 180, 388	PHA	Dev
<i>Esmeraldina</i>	RESSER & HOWELL, 1938	26	RED	Cam
<i>Estoniops exilis</i>	EICHWALD, 1858	318	PHA	Ord
<i>Eudolatites</i>	DELO, 1935	347	PHA	Ord
<i>Eudolatites flavus</i>	GUTIÉRREZ-MARCO & RABANO, 1987	143	PHA	Ord
<i>Eurycare</i>	ANGELIN, 1854	204	PTY	Cam
<i>Fallotaspis</i>	HUPÉ, 1953	26, 60	RED	Cam
<i>Fallotaspis cf. typica</i>	HUPÉ, 1953	165	RED	Cam
<i>Flexicalymene</i>	SHIRLEY, 1936	81, 83	PHA	Ord
<i>Flexicalymene granulosa</i>	FOERSTE, 1909	351	PHA	Ord
<i>Flexicalymene meeki</i>	FOERSTE, 1910	61, 112, 176, 352	PHA	Ord
<i>Flexicalymene ouzregui</i>	DESTOMBES, 1966	105, 348	PHA	Ord
<i>Flexicalymene retrorsa</i>	FOERSTE, 1910	351	PHA	Ord
<i>Flexicalymene senaria</i>	CONRAD, 1841	34, 335, 343, 344	PHA	Ord
<i>Foulonia</i>	PRIBYL & VANEK, 1985	289, 291	PHA	Ord
<i>Francovichia branisi</i>	WOLFART, 1968	379	PHA	Dev
<i>Fritaspis</i>	HOLLINGSWORTH, 2007	25, 26	RED	Cam
<i>Gabriceaurus dentatus</i>	RAYMOND & BARTON, 1913	181, 328, 329	PHA	Ord
<i>Gabriellus</i>	FRITZ, 1992	165	RED	Cam
<i>Geesops schlotheimi</i>	BRONN, 1825	408, 409, 422	PHA	Dev
<i>Geesops sparsinodosus gallicus</i>	STRUVE, 1982	415	PHA	Dev
<i>Gemelloides delasernai</i>	DE CARVALHO, EDGECOMBE & SMITH, 2003	378	PHA	Dev
<i>Genevievella granulata</i>	WALCOTT, 1916	85, 267, 271	PTY	Cam
<i>Geragnostus</i>	HOWELL, 1935	128, 145	AGN	Cam
<i>Gerasaphes ulrichana</i>	CLARKE, 1894	341	ASA	Ord
<i>Gerastos</i>	GOLDFUSS, 1843	52	PRO	Dev
<i>Gerastos catervus</i>	VAN VIERSEN, 2006	415	PRO	Dev
<i>Gerastos cf. doernbergensis</i>	BASSE, 2002	427	PRO	Dev
<i>Gerastos cultrijugati</i>	RICHTER & RICHTER, 1918	419, 420	PRO	Dev
<i>Gerastos cuvieri</i>	STEININGER, 1831	405, 409, 423	PRO	Dev
<i>Gerastos granulatus</i>	GOLDFUSS, 1843	410	PRO	Dev
<i>Gerastos prox lessensis</i>	VAN VIERSEN & PRESCHER, 2008	419	PRO	Dev
<i>Gerastos tuberculatus marocensis</i>	CHATTERTON, FORTEY, BRETT, GIBB & McKELLAR, 2006	186	PRO	Dev
<i>Germanopyge germari</i>	BARRANDE, 1852	249	PTY	Cam
<i>Giordanella meneghini</i>	BORNEMANN, 1883	137	RED	Cam
<i>Giordanella vincii</i>	PILLOLA, 1991	140	RED	Cam
<i>Glossopleura</i>	POULSEN, 1927	63, 239	COR	Cam
<i>Glossopleura bion</i>	WALCOTT, 1916	52, 239	COR	Cam
<i>Glossopleura gigantea</i>	RESSER, 1939	92, 239, 241	COR	Cam
<i>Glossopleura packi</i>	RESSER, 1935	241	COR	Cam
<i>Goldius</i>	DE KONINCK, 1841	168	COR	Dev
<i>Goldius goolaertsi</i>	VAN VIERSEN, 2007	416	COR	Dev
<i>Goldius grafi</i>	BASSE (IN BASSE & MÜLLER, 2004)	406	COR	Dev
<i>Gondwanaspis</i>	FEIST, 2002	173	ODO	Dev
<i>Goniotelus</i>	ULRICH, 1927	186, 188	PRO	Ord
<i>Grandinasus</i>	HOLLINGSWORTH, 2006	26	RED	Cam
<i>Granolenus</i>	JAGO, 1980	26	RED	Cam
<i>Griffithidella doris</i>	HALL, 1860	439	PRO	Car
<i>Griffithides acanthiceps</i>	WOODWARD, 1896	107	PRO	Car
<i>Grinnellaspis (Actinopeltis) globosus</i>	POULSEN, 1946	346	PRO	Ord
<i>Gudralisium lindlarensis</i>	BASSE, 2003	423	PHA	Dev
<i>Hamatolenus (Hamatolenus) marocanus</i>	NELTNER, 1938	229	PTY	Cam
<i>Hamatolenus (Hamatolenus) vincenti</i>	GEYER & LANDING, 2004	225, 228	PTY	Cam
<i>Hapalopleura</i>	HARRINGTON & LEANZA, 1957	196	ASA	Ord
<i>Harpes</i>	GOLDFUSS, 1839	69, 147, 152, 206, 389, 403	HAR	Dev
<i>Harpes macrocephalus</i>	GOLDFUSS, 1839	423	HAR	Dev
<i>Harpides</i>	BEYRICH, 1846	70, 205, 206, 292	HAR	Ord
<i>Harpides plautini</i>	SCHMIDT, 1894	206, 319	HAR	Ord
<i>Hebediscina sardoa</i>	RASETTI, 1972	136	AGN	Cam
<i>Hedinaspis canadensis</i>	CHATTERTON & LUDVIGSEN, 1998	279	ASA	Cam
<i>Helioproetus</i>	RICHTER & RICHTER, 1919	153	PRO	Dev
<i>Heliopyge helios</i>	RICHTER & RICHTER, 1926	424	PHA	Dev
<i>Heliopyge troaonensis</i>	MORZADÉC, 1969	423	PHA	Dev

<i>Hemiarges</i>	GÜRICH, 1901	343	LIC	Ord
<i>Hemirhodon amplipyge</i>	ROBISON, 1964	260	COR	Cam
<i>Hibbertia brevigena</i>	HAMMANN & LEONE, 1997	148	HAR	Ord
<i>Hollardops mesocristata</i>	LE MAITRE, 1952	389	PHA	Dev
<i>Hoploichas plautini</i>	SCHMIDT, 1885	57, 67, 320	LIC	Ord
<i>Hoploichoides conicotuberculatus</i>	NIESZKOWSKI, 1859	320	LIC	Ord
<i>Housia</i>	WALCOTT, 1916	191, 279	ASA	Cam
<i>Housia ?vacuna</i>	WALCOTT, 1890	280	ASA	Cam
<i>Huemacaspis</i>	PRIBYL & VANĚK, 1980	143	PHA	Ord
<i>Hungioides bohemicus arouquensis</i>	THADEU, 1955	308	ASA	Ord
<i>Huntoniatonia</i>	CAMPBELL, 2003	38	PHA	Dev
<i>Huntoniatonia huntonensis</i>	ULRICH & DELO, 1940	179, 367	PHA	Dev
<i>Huntoniatonia lingulifer</i>	ULRICH & DELO, 1940	367	PHA	Dev
<i>Huntoniatonia oklahomae</i>	RICHARDSON, 1949	366	PHA	Dev
<i>Hupeidiscus</i>	ZHANG IN LU, ZHANG, QIAN, ZHU, LIN, ZHOU, ZHANG & YUAN, 1974	26	AGN	Cam
<i>Hupetina antiqua</i>	SDZUY, 1987	25	PTY	Cam
<i>Hydrocephalus carens</i>	BARRANDE, 1852	166, 247	RED	Cam
<i>Hydrocephalus mandiki</i>	KORDULE, 1990	245	RED	Cam
<i>Hydrocephalus minor</i>	BOECK, 1827	244, 247	RED	Cam
<i>Hypagnostus parvifrons</i>	LINNARSSON, 1869	63, 162, 252	AGN	Cam
<i>Hypodicranotus</i>	WHITTINGTON, 1952	194	ASA	Ord
<i>Hypodicranotus striatulus</i>	WALCOTT, 1875	107, 341	ASA	Ord
<i>Iglesiaella ichnusae</i>	RASETTI, 1972	135, 136	RED	Cam
<i>Iliaenopsis</i>	SALTER, 1866	98	ASA	Ord
<i>Iliaenula struvei</i>	BASSE & MÜLLER, 2000	426	PHA	Dev
<i>Iliaenus</i>	DALMAN, 1827	98	COR	Ord
<i>Iliaenus creber</i>	HAMMANN, 1992	145	COR	Ord
<i>Iliaenus dalmani</i>	VOLBORTH, 1863	321	COR	Ord
<i>Iliaenus incisus</i>	JAANUSSON, 1957	105, 168, 321	COR	Ord
<i>Iliaenus insignis</i>	HALL, 1865	168, 357	COR	Sil
<i>Iliaenus sarsi</i>	JAANUSSON, 1954	168	COR	Ord
<i>Iliaenus schmidtii</i>	NIESZKOWSKI, 1857	320	COR	Ord
<i>Iliaenus tauricornis</i>	KUTORGA, 1848	320	COR	Ord
<i>Irvingella</i>	ULRICH & RESSER IN WALCOTT, 1924	280	PTY	Cam
<i>Isabelinia glabrata</i>	SALTER, 1853	304, 311, 313	ASA	Ord
<i>Isoteloides flexus</i>	HINTZE, 1953	297	ASA	Ord
<i>Isotelus</i>	DEKAY, 1824	83, 118	ASA	Ord
<i>Isotelus brachycephalus</i>	FOERSTE, 1919	352	ASA	Ord
<i>Isotelus gigas</i>	DEKAY, 1824	10, 52, 68, 107, 335, 342, 344	ASA	Ord
<i>Isotelus iowensis</i>	OWEN, 1852	62	ASA	Ord
<i>Isotelus «mafritzi»</i>		328	ASA	Ord
<i>Isotelus maximus</i>	LOCKE, 1838	61, 352, 353	ASA	Ord
<i>Isotelus rex</i>	RUDKIN, YOUNG, ELIAS & DOBRZANSKI, 2003	13	ASA	Ord
<i>Isotelus walcotti</i>	WALCOTT, 1918	343	ASA	Ord
<i>Jakutus primigenius</i>	IVANTSOV, 2005	169	COR	Cam
<i>Jegorovaia</i>	LU IN WANG, 1964	196, 197	ASA	Cam
<i>Jenkinsonia varga</i>	ROBINSON, 1971	256	PTY	Cam
<i>Jincella</i>	SNAJDR, 1957	138, 139	PTY	Cam
<i>Jincella convexa</i>	ALVARO, VIZCAINO, KORDULE, FATKA & PILLOLA, 2004	139	PTY	Cam
<i>Jincella prantli</i>	RUZICKA, 1944	139	PTY	Cam
<i>Judomia</i>	LERMONTOVA, 1951	26	RED	Cam
<i>Kaolishaniella</i>	SUN, 1935	170	COR	Cam
<i>Kathwaia capitorosa</i>	GRANT, 1966	132	PRO	Per
<i>Kayserops</i>	DELO, 1935	415, 424	PHA	Dev
<i>Kayserops daleidensis</i>	BASSE, 2003	423	PHA	Dev
<i>Ketneraspis</i>	PRANTL & PRIBYL, 1949	171, 425	ODO	Dev
<i>Ketneraspis elliptica</i>	BURMEISTER, 1843	413	ODO	Dev
<i>Ketneraspis seiberti</i>	BASSE, 2004	426	ODO	Dev
<i>Ketneraspis williamsi</i>	WHITTINGTON, 1956	57, 99, 369, 456	ODO	Dev
<i>Kingaspidoides</i>	HUPÉ, 1953	229	PTY	Cam
<i>Kingaspidoides cf. angustigena</i>	-	229	PTY	Cam
<i>Kingaspidoides laetus</i>	GEYER, 1990	225	PTY	Cam
<i>Kingaspis maroccana</i>	GIGOUT, 1951	229	PTY	Cam
<i>Kjerulfia</i>	KIAER, 1916	60	RED	Cam
<i>Kleptothule rasmusseni</i>	BUDD, 1995	24	UNC	Cam
<i>Kochina vestita</i>	RESSER, 1939	62, 77, 79, 239	PTY	Cam
<i>Kolihapeltis</i>	PRANTL & PRIBYL, 1947	57, 168	COR	Dev
<i>Kolihapeltis rabatensis</i>	ALBERTI, 1966	399	ODO	Dev
<i>Koneprusia</i>	PRANTL & PRIBYL, 1949	57, 397, 428	ODO	Dev
<i>Koneprusia lukiana</i>	RÜCKERT & KLEVER, 2007	410	ODO	Dev
<i>Kootenia</i>	WALCOTT, 1889	63, 169, 240, 254, 260, 452	COR	Cam
<i>Kootenia spencei</i>	RESSER, 1939	240, 458, 459	COR	Cam
<i>Kuanyangia pustulosa</i>	LU, 1941	217	RED	Cam
<i>Labiostria</i>	PALMER, 1955	281	ASA	Cam
<i>Labiostria westropi</i>	CHATTERTON & LUDVIGSEN, 1998	281	ASA	Cam
<i>Lachnostoma latucelsum</i>	ROSS, 1951	62, 297	ASA	Ord
<i>Laethoprusia</i>	RAMSKÖLD, 1991	367, 369	ODO	Dev
<i>Latoucheia (L.) cf. epichara</i>	GEYER, 1990	229	PTY	Cam
<i>Lehua</i>	BARTON, 1916	290	PHA	Ord
<i>Lehua corbachoi</i>	VELA, 2007	290	PHA	Ord
<i>Lehua ponti</i>	VELA, 2007	57, 290	PHA	Ord
<i>Lehua velai</i>	CORBACHO, 2008	290	PHA	Ord
<i>Lehua vinculum</i>	BARRANDE, 1872	290	PHA	Ord
<i>Lejopyge</i>	HAWLE & CORDA, 1847	98	AGN	Cam

<i>Lemdadella</i>	SDZUY, 1978	26	RED	Cam
<i>Leningradites longispinus</i>	BALASHOVA, 1976	322	ASA	Ord
<i>Leonaspis</i>	RICHTER & RICHTER, 1917	98, 104, 147, 391	ODO	Dev
<i>Leonaspis deflexa</i>	LAKE, 1896	104	ODO	Sil
<i>Leptoplastus</i>	ANGELIN, 1854	43, 204	PTY	Cam
<i>Lermontovia</i>	SUVOROVA, 1956	98, 203	PTY	Cam
<i>Leviceraurus mammilloides</i>	HESSIN, 1988	328	PHA	Ord
<i>Lichas</i>	DALMAN, 1827	172	LIC	Ord
<i>Lichas barcai</i>	HAMMANN & LEONE, 2007	145	LIC	Ord
<i>Lichas vinassai</i>	HAMMANN & LEONE, 2007	143	LIC	Ord
<i>Liobole</i>	RICHTER & RICHTER, 1949	153	PRO	Car
<i>Liobole (Panibole) subaequalis stania</i>	HAHN, HAHN & MUELLER, 2000	153	PRO	Car
<i>Liobole abducta</i>	HAHN, HAHN & MUELLER, 2000	153	PRO	Car
<i>Liobole finitima</i>	HAHN, HAHN & MUELLER, 2000	153	PRO	Car
<i>Liobole glabroides</i>	RICHTER & RICHTER, 1949	153	PRO	Car
<i>Liobole subaequalis</i>	HOLZAPFEL, 1889	153	PRO	Car
<i>Liobolina</i>	RICHTER & RICHTER, 1951	153	PRO	Car
<i>Liobolina nebulosa</i>	RICHTER & RICHTER, 1951	442	PRO	Car
<i>Liolophops sublevatus</i>	STRUVE, 1970	426	PHA	Dev
<i>Liosolenopleura serventi</i>	THORAL, 1948	139	PTY	Cam
<i>Litavkaspis rejkovicensis</i>	FATKA, KORDULE & SNAJDR, 1987	250	PTY	Cam
<i>Liwia</i>	DZIK & LENDZION, 1988	19, 195	NEK	Cam
<i>Lloydolithus lloydi</i>	MURCHISON, 1839	197	ASA	Ord
<i>Lobocephalina emmrichi</i>	BARRANDE, 1846	248	PTY	Cam
<i>Lobopyge</i>	PŘIBYL & ERBEN, 1952	424	LIC	Dev
<i>Lochkovella deckeri</i>	DELO, 1935	46, 52, 99, 178, 369, 370	PHA	Dev
<i>Lochkovella misera</i>	BARRANDE, 1852	147	PHA	Dev
<i>Loganellus</i>	DEVINE, 1863	194	ASA	Cam
<i>Lonchocephalus plena</i>		99, 267	PTY	Cam
<i>Lonchodomas</i>	ANGELIN, 1854	196	ASA	Ord
<i>Lonchodomas aff. pennatus</i>	DEAN, 1961	10	ASA	Ord
<i>Macrobole</i>	RICHTER & RICHTER, 1951	153	PRO	Car
<i>Maladioidella cf. colcheni</i>	SHERGOLD, LINAN & PALACIOS, 1983	112, 139	ASA	Cam
<i>Malungia laevigata</i>	LU, 1961	216	RED	Cam
<i>Malvinella buddeae</i>	LIEBERMAN, EDGEcombe & ELDREDGE, 1991	378	PHA	Dev
<i>Mansuyia</i>	SUN, 1924	170	COR	Cam
<i>Maritimella rara</i>	REPINA & OKUMAERA, 1969	207	NEK	Cam
<i>Marjumia typa</i>	WALCOTT, 1916	260	PTY	Cam
<i>Marrolithus bureaui</i>	OELHERT, 1895	197	ASA	Ord
<i>Maryvillia</i>	WALCOTT, 1916	201	PTY	Cam
<i>Maurotarion axitiosum</i>	CAMPBELL, 1977	370	PRO	Dev
<i>Maurotarion legrandi</i>	ADRAIN & EDGEcombe, 1996	378	PRO	Dev
<i>Meadowtownella trentonensis</i>	HALL, 1847	340	ODO	Ord
<i>Megalaspidella</i>	KOBAYASHI, 1937	192	ASA	Ord
<i>Megistaspidella triangularis</i>	SCHMIDT, 1906	63, 322	ASA	Ord
<i>Megistaspis nericus</i>		192	ASA	Ord
<i>Megistaspis (Ekeraspis) hammondi</i>	CORBACHO & VELA, 2010	288	ASA	Ord
<i>Menomonina</i>	WALCOTT, 1916	201	PTY	Cam
<i>Menomonina semele</i>	WALCOTT, 1916	267	PTY	Cam
<i>Menoparia</i>	ROSS, 1951	194	ASA	Ord
<i>Mesonacis</i>	WALCOTT, 1885	278	RED	Cam
<i>Metacanthina barrandei</i>	OELHERT, 1889	391	PHA	Dev
<i>Metacanthina issoumourensis</i>	MORZADEC, 2001	385	PHA	Dev
<i>Metacryphaeus (Eldredgeia) venustus</i>	WOLFART, 1968	380	PHA	Dev
<i>Metacryphaeus giganteus</i>	ULRICH, 1892	379	PHA	Dev
<i>Metadoxides armatus</i>	MENEGHINI, 1881	137, 140	RED	Cam
<i>Meteoraspis dis</i>		92, 202, 268	PTY	Cam
<i>Metopolichas cf. platyrhinus</i>	SCHMIDT, 1907	172	LIC	Ord
<i>Metopolichas huebneri</i>	EICHWALD, 1843	39, 63, 321	LIC	Ord
<i>Mexicella</i>	LOCHMAN, 1948	98	PTY	Cam
<i>Micragnostos cf. haudei</i>	SHERGOLD & SDZUY, 1984	139	AGN	Ord
<i>Microparia</i>	HAWLE & CORDA, 1847	100	ASA	Ord
<i>Microphillipsia tetraptera</i>	RUGGERI, 1959	155	PRO	Per
<i>Miraspis</i>	RICHTER & RICHTER, 1917	98	ODO	Sil
<i>Misszhouia</i>	CHEN, EDGEcombe & RAMSKÖLD, 1997	18	NEK	Cam
<i>Misszhouia longicaudata</i>	ZHANG & HOU, 1985	207, 208	NEK	Cam
<i>Modocia</i>	WALCOTT, 1924	256, 258, 268, 270	PTY	Cam
<i>Modocia brevispina</i>	ROBISON, 1964	256	PTY	Cam
<i>Modocia laevinucha</i>	ROBISON, 1964	259	PTY	Cam
<i>Modocia typicalis</i>	RESSER, 1938	92, 202, 259, 260	PTY	Cam
<i>Montezumaspis</i>	HOLLINGSWORTH, 2006	26	RED	Cam
<i>Morgatia cf. primitiva</i>	HAMMANN, 1972	311	PHA	Ord
<i>Morgatia hupei</i>	NION & HENRI, 1967	309	PHA	Ord
<i>Morocconites malladoides</i>	STRUVE, 1989	392	PHA	Dev
<i>Morocops struvei</i>	SCHRAUT, 2000	393	PHA	Dev
<i>Mrakibina cattoi</i>	MORZADEC, 2001	389	PHA	Dev
<i>Mucronaspis mucronata mucronata</i>	BRONGNIART, 1822	144	PHA	Ord
<i>Myopsolenites boutiouiti</i>	GEYER & LANDING, 2004	166, 225, 228	PTY	Cam
<i>Namuropyge</i>	RICHTER & RICHTER, 1939	187	PRO	Car
<i>Nanillaenus americanus</i>	BILLINGS, 1859	337	COR	Ord
<i>Nankinolithus granulatus</i>	WAHLENBERG, 1818	144	ASA	Ord
<i>Naraoia</i>	WALCOTT, 1912	89, 103, 106	NEK	Cam
<i>Naraoia bertiensis</i>	CARON, RUDKIN & MILLIKEN, 2004	18, 207	NEK	Cam
<i>Naraoia compacta</i>	WALCOTT, 1912	18, 207, 234	NEK	Cam

<i>Naraoia spinifer</i>	WALCOTT, 1931	18	NEK	Cam
<i>Naraoia spinosa</i>	ZHANG & HOU, 1985	18, 207, 208	NEK	Cam
<i>Nebidella limbata</i>	RASETTI, 1972	137	RED	Cam
<i>Neocobboldia</i>	ZHANG & CLARKSON, 1990	48	AGN	Cam
<i>Neometacanthus</i>	RICHTER & RICHTER, 1948	421	PHA	Dev
<i>Neometacanthus stellifer</i>	BURMEISTER, 1843	411	PHA	Dev
<i>Neoproetus verrucosus</i>	GEMMELLARO, 1892	156	PRO	Per
<i>Neseuretinus turcicus</i>	DEAN, 1967	145, 148	PHA	Ord
<i>Neseuretus (Neseuretus) tristani tardus</i>	HAMMANN, 1983	10	PHA	Ord
<i>Neseuretus avus</i>	HAMMANN, 1977	304	PHA	Ord
<i>Neseuretus tristani</i>	BRONGNIART, 1822	305, 311	PHA	Ord
<i>Nevadia</i>	WALCOTT, 1910	26	RED	Cam
<i>Nevadia weeksi</i>	WALCOTT, 1910	165	RED	Cam
<i>Nileus</i>	DALMAN, 1827	35	ASA	Ord
<i>Nileus armadillo</i>	DALMAN, 1827	195, 322	ASA	Ord
<i>Niobe schmidtii</i>	BALASHOVA, 1976	322	ASA	Ord
<i>Niobella</i>	REED, 1931	145	ASA	Ord
<i>Niobella cf. primaeva</i>	WESTERGARD, 1909	139	ASA	Ord
<i>Niobella lindstroemi</i>	SCHMIDT, 1901	323	ASA	Ord
<i>Nobiliasaphus</i>	PRIBYL & VANEK, 1965	145	ASA	Ord
<i>Nobiliasaphus delessei</i>	DUFET, 1875	304	ASA	Ord
<i>Nobiliasaphus nobilis</i>	BARRANDE, 1846	143, 306, 311	ASA	Ord
<i>Norwoodia</i>	WALCOTT, 1916	40, 201, 270, 271	PTY	Cam
<i>Novakella</i>	WHITTARD, 1961	100, 195	ASA	Ord
<i>Nunnaspis stitti</i>	BREZINSKI, 2000	438, 439	PRO	Car
<i>Nyterops hollandi</i>	VAN VIERSEN, 2007	67, 420	PHA	Dev
<i>Nyterops nyter</i>	STRUVE, 1970	419, 420	PHA	Dev
<i>Odontopleura</i>	EMMRICH, 1839	98	ODO	Sil
<i>Ogygiocaris</i>	ANGELIN, 1854	35	ASA	Ord
<i>Ogyginus</i>	RAYMOND, 1912	145, 306	ASA	Ord
<i>Ogyginus armoricanus</i>	TROMELIN & LEBESCONTE, 1876	116	ASA	Ord
<i>Ogyginus corndensis corndensis</i>	MURCHISON, 1839	52	ASA	Ord
<i>Ogyginus forteyi</i>	RABANO, 1989	122, 307	ASA	Ord
<i>Ogyginus forteyi hammondi</i>	CORBACHO & VELA, 2010	288	ASA	Ord
<i>Ogygiocaris</i>	ANGELIN, 1854	192	ASA	Ord
<i>Ogygopsis typicalis</i>	RESSER, 1939	241	COR	Cam
<i>Ohleum cf. eurydice</i>	BASSE, 1998	426	LIC	Dev
<i>Oinochoe</i>	THOMAS & HOLLOWAY, 1988	172	LIC	Dev
<i>Olekmaspis</i>	SUVOROVA, 1956	203	PTY	Cam
<i>Olenellus cf. transitans</i>	WALCOTT, 1910	222	RED	Cam
<i>Olenellus clarki</i>	RESLER, 1928	123, 224	RED	Cam
<i>Olenellus fremonti</i>	WALCOTT, 1910	57, 222	RED	Cam
<i>Olenellus gilberti</i>	MEEK IN WHITE, 1874	223	RED	Cam
<i>Olenellus nevadensis</i>	WALCOTT, 1910	221, 223	RED	Cam
<i>Olenellus schucherti</i>	RESSER & HOWELL, 1938	278	RED	Cam
<i>Olenellus terminatus</i>	PALMER, 1998	223	RED	Cam
<i>Olenoides</i>	MEEK, 1877	III, 103, 106, 255, 257, 258, 272	RED	Cam
<i>Olenoides inflatus</i>	WALCOTT	262, 496	COR	Cam
<i>Olenoides nevadensis</i>	MEEK, 1870	254, 257	COR	Cam
<i>Olenoides paraptus</i>	ZHAO, AHLBERG & YUAN, 1994	232	COR	Cam
<i>Olenoides pugio</i>	WALCOTT, 1908	262	COR	Cam
<i>Olenoides serratus</i>	ROMINGER, 1887	72, 76, 169	COR	Cam
<i>Olenoides superbus</i>	RASETTI, 1946	52, 63, 92, 99, 261, 262	COR	Cam
<i>Olenus</i>	DALMAN, 1927	43, 98	PTY	Cam
<i>Olenus truncatus</i>	BRUNNICH, 1781	109	PTY	Cam
<i>Olenus wahlenbergi</i>	WESTERGAARD, 1922	109	PTY	Cam
<i>Onchonetellus</i>	LERMONTOVA, 1951	139	PTY	Cam
<i>Onnia</i>	BANCROFT, 1929	69, 99, 348	ASA	Ord
<i>Opipеuter</i>	FORTEY, 1974	42, 97, 100	PRO	Ord
<i>Opsidiscus</i>	WESTERGAARD, 1949	48	AGN	Cam
<i>Ornamentaspis usitata</i>	GEYER, 1990	225	PTY	Cam
<i>Oryctocephalus</i>	WALCOTT, 1886	169	COR	Cam
<i>Oryctocephalus indicus</i>	REED, 1910	233	COR	Cam
<i>Orygmaspis</i>	RESSER, 1937	281, 282	ASA	Cam
<i>Orygmaspis contracta</i>	FREDERICKSON, 1949	281	ASA	Cam
<i>Otarion</i>	ZENKER, 1833	184, 187	PRO	Dev
<i>Otarion oceanicum</i>	MORZADEC, 1983	425	PRO	Dev
<i>Otarionella</i>	WEYER, 1965	387	PRO	Dev
<i>Paciphacops</i>	MAKSIMOVA, 1972	370	PRO	Dev
<i>Paciphacops campbelli</i>	RAMSKÖLD & WERDELIN, 1991	46, 370	PHA	Dev
<i>Paciphacops orurensis</i>	BONARELLI, 1921	381	PHA	Dev
<i>Pagetia</i>	WALCOTT, 1916	48, 161	AGN	Cam
<i>Pagetia cf. P. significans</i>	ETHERIDGE, 1902	163, 233	AGN	Cam
<i>Pagodia</i>	WALCOTT, 1905	139	COR	Cam
<i>Palmettaspis</i>	FRITZ, 1995	26	RED	Cam
<i>Pandaspinapyga</i>	ESKER & LEVIN, 1964	323	PHA	Ord
<i>Panderia</i>	VOLBORTH, 1863	41	COR	Ord
<i>Panderia triquetra</i>	VOLBORTH, 1863	323	COR	Ord
<i>Parabarrandia</i>	PRANTL & PRIBL, 1949	97	ASA	Ord
<i>Parabarrandia cf. crassa</i>	BARRANDE, 1872	311	ASA	Ord
<i>Parablackwelderia luensis</i>	PENG, YANG & HUGHES, 2008	48	LIC	Cam
<i>Parabolina</i>	SALTER, 1849	204	PTY	Cam
<i>Parabolinella</i>	BRÖGGER, 1882	283	PTY	Cam
<i>Parabolinella bolbifrons</i>	FORTEY & OWENS, 1997	77	PTY	Cam

<i>Paraceraurus exsul</i>	BEYRICH, 1846	63, 323	PHA	Ord
<i>Paradamesella</i>	YANG IN ZHOU ET AL., 1977	174	LIC	Cam
<i>Paradoxides</i>	BRONGNIART, 1922	80, 138	RED	Cam
<i>Paradoxides (Acadoparadoxides) mureoensis</i>	SDZUY, 1958	138	RED	Cam
<i>Paradoxides (Eccaparadoxides) brachyrachis</i>	LINNARSSON, 1883	139	RED	Cam
<i>Paradoxides (Eccaparadoxides) mediterraneus</i>	POMPECKJ, 1901	138, 140	RED	Cam
<i>Paradoxides gracilis</i>	BOECK, 1827	107, 166, 247, 248	RED	Cam
<i>Parafallotaspis</i>	FRITZ, 1972	26	RED	Cam
<i>Paralejurus</i>	HAWLE & CORDA, 1847	390	PHA	Dev
<i>Paralejurus hamlagdadicus</i>	ALBERTI, 1983	44, 70, 390	PHA	Dev
<i>Paranephrolenellus cf. besti</i>	WEBSTER, 2007	222	RED	Cam
<i>Paranevadella</i>	PALMER & REPINA, 1993	26	RED	Cam
<i>Paraphillipsia karpinskyi</i>	TOUMANSKY, 1935	132	PRO	Per
<i>Paraphillipsia middlemissi</i>	DIENER, 1847	132	PRO	Per
<i>Parapilekia</i>	KOBAYASHI, 1934	290	PHA	Ord
<i>Parasolenopleura</i>	POLETAeva IN EGOROVA, LOMOVITSKAYA, POLETAeva & SIVOV, 1955	230	PTY	Cam
<i>Parasolenopleura cf. lemdadensis</i>	GEYER, 1998	230	PTY	Cam
<i>Paraszechuanella</i>	LIU IN ZHOU ET AL., 1977	170	COR	Ord
<i>Pardailhania hispida</i>	THORAL, 1935	138	PTY	Cam
<i>Peachella iddingsi</i>	WALCOTT, 1884	222, 224	RED	Cam
<i>Pedinopariops</i>	STRUVE, 1972	425, 427	PHA	Dev
<i>Pedinopariops brongniarti</i>	STEININGER, 1831	46, 411, 412	PHA	Dev
<i>Peltura</i>	MILNE-EDWARDS, 1840	109	PTY	Cam
<i>Pennaia verneuili</i>	D'ORBIGNY, 1847	381	PHA	Dev
<i>Permoproetus postcarbonarius</i>	GEMMELLARO, 1890	156	PRO	Per
<i>Peronopsis</i>	HAWLE & CORDA, 1847	138, 258	AGN	Cam
<i>Peronopsis fallax</i>	LINNARSSON, 1869	139	AGN	Cam
<i>Peronopsis integra</i>	BEYRICH, 1845	162, 252	AGN	Cam
<i>Peronopsis interstricta</i>	WHITE, 1874	162, 253, 254, 256	AGN	Cam
<i>Petigurus</i>	RAYMOND, 1913	31	PRO	Ord
<i>Phacopidina micheli</i>	TROMELIN, 1877	310, 311	PHA	Ord
<i>Phacops imitator</i>	STRUVE, 1970	46, 411, 412, 419	PHA	Dev
<i>Phacops latifrons</i>	BRONN, 1825	46, 428	PHA	Dev
<i>Phacops saberensis torkozensis</i>	SCHRAUT, 2000	395	PHA	Dev
<i>Phaetonellus</i>	NOVAK, 1890	186, 390	PRO	Dev
<i>Phaetonellus planicauda</i>	BARRANDE, 1846	396	PRO	Dev
<i>Phalagnostus nudus</i>	BEYRICH, 1845	252	AGN	Cam
<i>Phillipsia</i>	PORTLOCK, 1843	131, 186	PRO	Car
<i>Phillipsia oehlerti</i>	GEMMELLARO, 1892	156	PRO	Per
<i>Phillipsia pulchella</i>	GEMMELLARO, 1892	156	PRO	Per
<i>Phillipsia sosisensis</i>	GEMMELLARO, 1892	156	PRO	Per
<i>Piltonia carlakertisae</i>	BREZINSKI, 2000	438	PRO	Car
<i>Piltonia kuehnei</i>	GOLDRING, 1955	434	PRO	Car
<i>Placoparia</i>	HAWLE & CORDA, 1847	60, 181, 346	PHA	Ord
<i>Placoparia (Coplacoparia) tournemini</i>	ROUAULT, 1847	311, 313	PHA	Ord
<i>Placoparia cambriensis</i>	HICK, 1875	308	PHA	Ord
<i>Placoparia tourneminei</i>	ROUAULT, 1847	305	PHA	Ord
<i>Platiscutellum cf. massai</i>	ALBERTI, 1981	400	COR	Dev
<i>Plesiomalvinella boulei</i>	KOZLOWSKI, 1923	382	PHA	Dev
<i>Pleuroctenium</i>	HAWLE & CORDA, 1847	161	AGN	Cam
<i>Pliomera fischeri</i>	EICHWALD, 1825	324	PHA	Ord
<i>Pliomerops</i>	RAYMOND, 1905	181	PHA	Ord
<i>Polyleuraspis</i>	POULSEN, 1927	169	COR	Cam
<i>Porterfieldia</i>	COOPER, 1953	109	PTY	Ord
<i>Presbynileus ibexensis</i>	HINTZE, 1954	297	ASA	Ord
<i>Pricyclopyge</i>	RICHTER & RICHTER, 1954	66, 101, 195	ASA	Ord
<i>Pricyclopyge longicephala</i>	KLOUCEK, 1916	66, 195	ASA	Ord
<i>Primaspsis crosotus</i>	LOCKE, 1843	330	ODO	Ord
<i>Prionocheilus</i>	ROUAULT, 1847	143, 176, 311	PHA	Ord
<i>Prionocheilus inermis</i>	KOBOLOVA IN SOKOLOV & YOLKIN, 1978	145, 148, 150	PHA	Ord
<i>Prionocheilus mendax</i>	VANEK, 1965	308	PHA	Ord
<i>Proceratopyge</i>	WALLERIUS, 1895	114, 139	ASA	Cam
<i>Proceratopyge rectispinata</i>	TROEDSSON, 1937	283	ASA	Cam
<i>Prochuangia</i>	KOBAYASHI, 1935	139	COR	Cam
<i>Proetus</i>	STEININGER, 1831	147, 340	PRO	Ord
<i>Proetus granulatus</i>	LINDSTRÖM, 1885	360, 361	PRO	Sil
<i>Proetus postcarbonarius</i>	GEMMELLARO, 1892	155	PRO	Per
<i>Profallotaspis</i>	REPINA IN KHOMENTOVSKY & REPINA, 1965	26	RED	Cam
<i>Profallotaspis jakutensis</i>	KHOMENTOVSKY & REPINA, 1965	25	RED	Cam
<i>Proliobole podarge</i>	HAHN & HAHN & MÜLLER, 1998	153	PRO	Car
<i>Proteuloma geinitzi</i>	BARRANDE, 1868	139	PTY	Ord
<i>Protolenus (Protolenus) pisidianus</i>	DEAN & OZGUL, 1994	138	PTY	Cam
<i>Protolenus (Protolenus) cf. densigranulatus</i>	GEYER, 1990	229	PTY	Cam
<i>Protopresbynileus</i>	HINTZE, 1954	297	ASA	Ord
<i>Pseudoasaphinus tecticaudatus</i>	STEINHARDT, 1874	325	ASA	Ord
<i>Pseudobasiliculus lawrowi</i>	SCHMIDT, 1898	325	ASA	Ord
<i>Pseudocybele</i>	ROSS, 1951	105, 297	PHA	Ord
<i>Pseudocybele altinasuta</i>	HINTZE, 1952	63, 298, 299	PHA	Ord
<i>Pseudocybele lemurei</i>	HINTZE, 1952	299	PHA	Ord
<i>Pseudocybele nasuta</i>	ROSS, 1951	61	PHA	Ord
<i>Pseudogygites</i>	KOBAYASHI, 1934	91	ASA	Ord
<i>Pseudokainella</i>	HARRINGTON, 1938	194	ASA	Cam
<i>Pseudomegalaspis patagiata</i>	TORNQUIST, 1884	192	ASA	Ord
<i>Pseudonaraioia hammani</i>	BUDIL, FATKA, BRUTHANSOVA, 2003	18	NEK	Ord

<i>Pseudophillipsia</i>	GEMMELLARO, 1892	154, 184	PRO	Per
<i>Pseudophillipsia anshunensis</i>	QIAN YIYUAN, 1977	132	PRO	Per
<i>Pseudophillipsia elegans</i>	GEMMELLARO, 1892	155, 156	PRO	Per
<i>Pseudophillipsia gemmellaroi</i>	GRECO, 1935	156	PRO	Per
<i>Pseudophillipsia obtusicauda</i>	KAYSER, 1883	132	PRO	Per
<i>Pseudophillipsia sumatrensis</i>	ROEMER, 1880	132	PRO	Per
<i>Pseudosphaerexochus pahnschi</i>	SCHMIDT, 1881	324	PHA	Ord
<i>Pseudowaribole (Dushania) heisingi</i>	HAHN & BRAUCKMANN, 1988	443	PRO	Car
<i>Pseudowaribole (Geigibole) inusitata</i>	HAHN, HAHN & MUELLER, 2000	153	PRO	Car
<i>Pseudowaribole (Geigibole) thomasi</i>	BRAUCKMANN, 1974	444	PRO	Car
<i>Pseudowaribole inusitata</i>	HAHN, HAHN & MUELLER, 2000	153	PRO	Car
<i>Psychopyge elegans</i>	TERMIER & TERMIER, 1950	57, 401	PHA	Dev
<i>Psychopyge praestans</i>	MORZADEC, 2001	402	PHA	Dev
<i>Psychopyge termierorum</i>	MORZADEC, 2001	401	PHA	Dev
<i>Pterocephalia</i>	ROEMER, 1849	41	ASA	Cam
<i>Pterocephalia norfordi</i>	CHATTERTON & LUDVIGSEN, 1998	191, 283	ASA	Cam
<i>Pteroparia coumiaciensis</i>	FEIST, 1976	50	PRO	Dev
<i>Ptychagnostus</i>	JAECKEL, 1909	138, 258	AGN	Cam
<i>Ptychagnostus praecurrens</i>	WESTERGAARD, 1936	162	AGN	Cam
<i>Ptychoparia</i>	HAWLE & CORDA, 1847	199	PTY	Cam
<i>Ptychoparia milena</i>	KORDULE, 2006	248	PTY	Cam
<i>Ptychoparia striata</i>	EMMRICH, 1839	248	PTY	Cam
<i>Ptychopyge cf. angustifrons</i>	DALMAN, 1827	192	ASA	Ord
<i>Ptyocephalus yersini</i>	HINTZE, 1953	297	ASA	Ord
<i>Pudoproetus</i>	HESSLER, 1963	439	PRO	Car
<i>Quadrops</i>	MORZADEC, 2001	94	PHA	Dev
<i>Quadrops flexuosa</i>	MORZADEC, 2001	52, 93, 95, 399	PHA	Dev
<i>Radiaspis</i>	RICHTER & RICHTER, 1917	143, 396	ODO	Dev
<i>Radiaspis comes</i>	BASSE, 1998	410, 425	ODO	Dev
<i>Radnorina simplex</i>	KOLOBOVA IN SOKOLOV & YOLKIN, 1978	148, 150	PRO	Ord
<i>Raphiophorus</i>	ANGELIN, 1854	189, 196	PTY	Sil
<i>Raymondites</i>	SINCLAIR, 1944	188	PRO	Ord
<i>Redlichia</i>	COSSMANN, 1902	166	RED	Cam
<i>Redlichia takooensis</i>	LU, 1950	89, 166	RED	Cam
<i>Reedops bronni</i>	BARRANDE, 1849	392	PHA	Dev
<i>Reedops cephalotes hamlagdadianus</i>	ALBERTI, 1983	391	PHA	Dev
<i>Reedops maurulus</i>	ALBERTI, 1970	392	PHA	Dev
<i>Rejkocephalus knizeki</i>	KORDULE, 1990	245	RED	Cam
<i>Rejkocephalus rotundatus</i>	BARRANDE, 1846	244, 247, 251	RED	Cam
<i>Remopleurides</i>	PORTLOCK, 1843	43, 194	ASA	Ord
<i>Remopleurides nanus</i>	LEUCHTENBERG, 1843	194, 326	ASA	Ord
<i>Repinaella</i>	GEYER, 1996	26	RED	Cam
<i>Resserops</i>	RICHTER & RICHTER, 1940	166	RED	Cam
<i>Retamaspis melendezi</i>	HAMMANN, 1972	309	PHA	Ord
<i>Rhenops</i>	RICHTER & RICHTER, 1943	75	PHA	Dev
<i>Rhenops cf. anserinus</i>	RICHTER, 1916	372, 373	PHA	Dev
<i>Saharops bensaïdi</i>	MORZADEC, 2001	45, 396	PHA	Dev
<i>Saltaispis</i>	HARRINGTON & LEANZA, 1952	204	PTY	Ord
<i>Salterocoryphe</i>	HAMMANN, 1977	309, 310	PHA	Ord
<i>Salterocoryphe salteri</i>	ROUAULT, 1851	176, 311	PHA	Ord
<i>Sao hirsuta</i>	BARRANDE, 1846	250	PTY	Cam
<i>Sardaspis laticeps</i>	BORNEMANN, 1881	137, 140	RED	Cam
<i>Sardaspis papillosa</i>	BRASIER, 1976	137	RED	Cam
<i>Sardoites pillolai</i>	HAMMANN & LEONE, 2007	143	PHA	Ord
<i>Sardoredlichia arenivaga</i>	MENEGHINI, 1888	137	RED	Cam
<i>Sardoredlichia carinata</i>	RASETTI, 1972	137	RED	Cam
<i>Sardoredlichia frabouleti</i>	PILLOLA, 1991	140	RED	Cam
<i>Sarrabesia teichmuelleri</i>	HAMMANN & LEONE, 1997	145, 148	PHA	Ord
<i>Saukia</i>	WALCOTT, 1914	193	ASA	Cam
<i>Scabriscutellum</i>	RICHTER & RICHTER, 1956	63, 168, 400	COR	Dev
<i>Schizostylus brevicaudatus</i>	KOZLOWSKI, 1923	380, 381	PHA	Dev
<i>Schmalenseeia fusilis</i>	PENG, BABCOCK & LIN, 2004	55	UNC	Cam
<i>Scutellum</i>	PUSCH, 1833	425	COR	Dev
<i>Scutellum geesense</i>	RICHTER & RICHTER, 1956	412	COR	Dev
<i>Scutellum aff. pustulatum</i>	ARCHINAL, 1994	400	COR	Dev
<i>Selenecece</i>	CLARK, 1924	98, 128, 189, 196	ASA	Ord
<i>Selenocoryphe platyura (nomen nudum)</i>	BEEBE, 1990	74, 270	PTY	Cam
<i>Selenopeltis</i>	HAWLE & CORDA, 1847	171	ODO	Ord
<i>Selenopeltis aff. kamila</i>	SNAJDR, 1984	311	ODO	Ord
<i>Selenopeltis buchii</i>	BARRANDE, 1846	9, 57	ODO	Ord
<i>Selenopeltis gallica</i>	BRUTON, 1978	310	ODO	Ord
<i>Selenopeltis inermis beyrichi</i>	HAWLE & CORDA, 1847	457	ODO	Ord
<i>Selenopeltis longispinus</i>	VELA & CORBACHO, 2009	347	ODO	Ord
<i>Selenopeltis macrophtalma</i>	KLOUCEK, 1916	311	ODO	Ord
<i>Serrania</i>	LINAN, 1978	26	PTY	Cam
<i>Serrania gordaensis</i>	LINAN, GOZALO, ALVAREZ, VINTANED & ZAMORA, 2008	25	PTY	Cam
<i>Shumardoella</i>	PEK & VANĚK, 1989	201	PTY	Ord
<i>Shumardoella (Conophrys) salopiensis</i>	CALLAWAY, 1877	78	PTY	Ord
<i>Sinodiscus</i>	ZHANG IN LU, ZHANG, QIAN, ZHU, LIN, ZHOU, ZHANG & YUAN, 1974	26	AGN	Cam
<i>Skreiaspis spinosa</i>	COURTESOLE, 1973	245, 252	PTY	Cam
<i>Skrejaspis brianensis</i>	COURTESOLE, 1973	139	PTY	Cam
<i>Solenopleuropsis (Manublesia) ribeiro</i>	DE VERNEUIL & BARRANDE, 1860	138	PTY	Cam
<i>Solenopleuropsis (Manublesia) thoralis</i>	SDZUY, 1958	138	PTY	Cam
<i>Soomaspis</i>	FORTEY & THERON, 1995	18, 195	NEK	Ord

<i>Spathacalymene nasuta</i>	ULRICH, 1879	XII, 176	PHA	Sil
<i>Spencia</i>	RESSER, 1939	241	PTY	Cam
<i>Spencia typicalis</i>	RESSER, 1939	242	PTY	Cam
<i>Sphaeragnostus</i>	HOWELL & RESSER, in COOPER & KINDLE, 1936	144	AGN	Ord
<i>Sphaerexochus</i>	BEIRICH, 1845	129	PHA	Sil
<i>Sphaerocoryphe robusta</i>	WALCOTT, 1875	63, 338	PHA	Ord
<i>Sphaerophthalmus</i>	ANGELIN, 1854	43	PTY	Cam
<i>Sphaerophthalmus alatus</i>	BOECK, 1838	43, 44	PTY	Cam
<i>Spinibole (Coombewoodia) coddonensis</i>	WOODWARD, 1902	444	PRO	Car
<i>Staurocephalus clavifrons</i>	ANGELIN, 1854	144, 150	PHA	Sil
<i>Stenopilus pronus</i>	RAYMOND, 1924	60	PTY	Cam
<i>Svalbardites</i>	FORTEY, 1974	31	PTY	Ord
<i>Symphysops</i>	RAYMOND, 1925	102	ASA	Ord
<i>Symphysops armata</i>	BARRANDE, 1872	144, 148	ASA	Ord
<i>Szechuanella</i>	LU, 1962	170	COR	Ord
<i>Tadakoustia</i>	GEYER, 1990	230	PTY	Cam
<i>Taihungshania</i>	SUN, 1931	145, 195	ASA	Ord
<i>Taklamakania</i>	ZHANG, 1979	196	ASA	Ord
<i>Taklamakania europaea</i>	HAMMANN & LEONE, 1997	148, 150	ASA	Ord
<i>Tariccoia</i>	HAMMANN, LASKE & PILLOLA, 1990	18	NEK	Ord
<i>Tariccoia arrusensis</i>	HAMMANN, LASKE & PILLOLA, 1990	142, 143, 207, 210	NEK	Ord
<i>Telephina</i>	MAREK, 1952	97, 100, 128, 184, 188	PRO	Ord
<i>Thaleops laurentiana</i>	AMATI & WESTROP, 2004	337, 344	COR	Ord
<i>Thigriffides</i>	HESSLER, 1965	131	PRO	Car
<i>Thysanopeltis</i>	HAWLE & CORDA, 1847	168	COR	Dev
<i>Thysanopyge</i>	KAYSER, 1898	192	ASA	Ord
<i>Tretaspis latilimba</i>	LINNARSSON, 1869	110	ASA	Ord
<i>Treveropyge</i>	STRUVE, 1958	385	PHA	Dev
<i>Triadaspis bigeneris</i>	OPIK, 1967	267	AGN	Cam
<i>Triangulaspis</i>	LERMONTOVA, 1940	26	PTY	Cam
<i>Triarthrus</i>	GREEN, 1832	35, 66, 204	PTY	Ord
<i>Triarthrus eatoni</i>	HALL, 1838	71, 73, 75, 109, 330, 332-334	PTY	Ord
<i>Triarthrus spinosus</i>	BILLINGS, 1857	204	PTY	Ord
<i>Tricrepicephalus</i>	KOBAYASHI, 1935	201	PTY	Cam
<i>Tricrepicephalus texanus</i>	SHUMARD, 1861	202, 269	PTY	Cam
<i>Trimercephalus</i>	McCOY, 1849	152	PHA	Dev
<i>Trimercephalus mastophthalmus</i>	RICHTER, 1926	50	PHA	Dev
<i>Trimerus</i>	GREEN, 1832	42, 98, 175	PHA	Sil
<i>Trimerus delphinocephalus</i>	GREEN, 1832	356	PHA	Sil
<i>Trinucleus</i>	MURCHISON, 1839	36, 196	ASA	Ord
<i>Tropidocoryphe</i>	NOVAK, 1890	186	PRO	Dev
<i>Tropidocoryphe bassei</i>	VAN VIERSEN, PRESCHER & SAVELSBERGH, 2009	410	PRO	Dev
<i>Tsuniyidiscus</i>	ZHANG, 1966	26, 161	AGN	Cam
<i>Uktaspis</i>	KOROBOV, 1963	26	COR	Cam
<i>Ulugtella angelini</i>	HOLM, 1882	145	COR	Ord
<i>Ulugtella mediterranea</i>	HAMMANN & LEONE, 1997	143, 145, 148	COR	Ord
<i>Uralichas cf. hispanicus</i>	VERNEUIL & BARRANDE, 1856	311	LIC	Ord
<i>Uralichas hispanicus tardus</i>	VELA & CORBACHO, 2009	172, 346	LIC	Ord
<i>Uralichas ribeiroi</i>	DELGADO, 1892	13	LIC	Ord
<i>Uromystrum</i>	WHITTINGTON, 1953	110, 188	PRO	Ord
<i>Utasps marjumiensis</i>	ROBISON, 1964	202, 262	PTY	Cam
<i>Viaphacops</i>	MAKSIMOVA, 1972	46, 370	PHA	Dev
<i>Viaphacops kozlowskii</i>	PEK & VANÉK, 1989	381	PHA	Dev
<i>Vogesina aspera</i>	WOLFART, 1968	382	PHA	Dev
<i>Vogesina lacunafera</i>	WOLFART, 1968	382	PHA	Dev
<i>Walliserops</i>	MORZADEC, 2001	94	PHA	Dev
<i>Walliserops hammii</i>	CHATTERTON, FORTEY, BRETT, GIBB & McKELLAR, 2006	95, 402	PHA	Dev
<i>Walliserops trifurcatus</i>	MORZADEC, 2001	38, 57, 180, 402	PHA	Dev
<i>Wanneria</i>	WALCOTT, 1910	278	RED	Cam
<i>Warburgella rugulosa canadensis</i>	ORMISTON, 1967	107	PRO	Sil
<i>Waribole</i>	RICHTER & RICHTER, 1926	153	PRO	Car
<i>Waribole (Latibole) laticampa</i>	OSMOLSKA, 1962	444	PRO	Car
<i>Waribole aello</i>	HAHN, HAHN & MUELLER, 2000	153	PRO	Car
<i>Waribole richteri</i>	HAHN, 1967	153	PRO	Car
<i>Weberides</i>	REED, 1942	186	PRO	Car
<i>Weeksina unispina</i>	WALCOTT, 1916	92, 202, 268	PTY	Cam
<i>Wenndorfia</i>	SANDFORD, 2005	396	PHA	Dev
<i>Wolfartaspis cornutus</i>	WOLFART, 1968	383	PHA	Dev
<i>Wujiagiania</i>	LU & LIN, 1980	98, 109, 204, 283, 284	PTY	Cam
<i>Wutingaspis tingi</i>	KOBAYASHI, 1944	217	RED	Cam
<i>Xenasaphus devexus</i>	EICHWALD, 1859	82, 122, 326	ASA	Ord
<i>Yiliangella serra</i>	PILLOLA, 1991	140	RED	Cam
<i>Yunnanaspis</i>	ZHANG, 1966	166	RED	Cam
<i>Yunnanoccephalus</i>	KOBAYASHI, 1936	203	PTY	Cam
<i>Yunnanoccephalus yunnanensis</i>	MANSUY, 1912	217	PTY	Cam
<i>Zacanthoides</i>	WALCOTT, 1888	242	COR	Cam
<i>Zacanthoides grabaui</i>	PACK, 1906	55, 57, 242	COR	Cam
<i>Zacanthoides idahoensis</i>	WALCOTT, 1908	242	COR	Cam
<i>Zacanthoides typicalis</i>	WALCOTT, 1886	52	COR	Cam
<i>Zeliskella toledana</i>	HAMMANN, 1971	311	PHA	Ord
<i>Zeliskella torrubiae</i>	VERNEUIL & BARRANDE, 1855	310	PHA	Ord
<i>Zetillaenus ibericus</i>	HAMMANN, 1976	143	COR	Ord
<i>Zetillaenus wahlenbergianus</i>	BARRANDE, 1852	150	COR	Ord
<i>Zlichovaspis rugosa</i>	HAWLE & CORDA, 1847	52, 179, 402	PHA	Dev



Olenoides inflatus
Middle Cambrian - Marjum Fm. - House Range, Millard County, USA
(BPM coll.)

With regard to human interest in fossils, trilobites may rank second only to dinosaurs. Having studied trilobites most of my life, the English version of *The Back to the Past Museum Guide to TRILOBITES* by Enrico Bonino and Carlo Kier is a pleasant treat. I am captivated by the abundant color images of more than 600 diverse species of trilobites, mostly from the authors' own collections. Specimens amply represent famous trilobite localities around the world and typify forms from most of the 250-million-year history of trilobites. Numerous specimens are masterpieces of modern professional preparation.

Richard A. Robison
Professor Emeritus
University of Kansas



Enrico Bonino

was born in the Province of Bergamo in 1966 and received his degree in Geology from the Department of Earth Sciences at the University of Genoa. He currently lives in Belgium where he works as a cartographer specialized in the use of satellite imaging and geographic information systems (GIS). His proficiency in the use of digital-image processing, a healthy dose of artistic talent, and a good knowledge of desktop publishing software have provided him with the skills he needed to create graphics, including dozens of posters and illustrations, for all of the displays at the Back to the Past Museum in Cancún. In addition to his passion for trilobites, Enrico is particularly interested in the life forms that developed during the Precambrian.

Carlo Kier

was born in Milan in 1961. He holds a degree in law and is currently the director of the Azul Hotel chain. He lives in Cancún, Mexico, where he is involved in efforts to preserve the marine environment. At the age of sixteen, he began a long collaboration with Milan's Museum of Natural History, but it wasn't until 1970 that his true passion for trilobites began to take shape. Today, that passion has become the impetus behind one of the most important collections in the world. His tireless field research across the globe and his involvement with professionals in paleontology have given him the opportunity to describe new species of trilobites and other arthropods. His personal determination and the development of the Azul Sensatori hotel complex finally brought his dream to fruition: the Back to the Past Museum, the world's first museum dedicated entirely to trilobites.

