

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



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[Azul Sensatori Hotel]

Carretera Cancun - Puerto Morelos Km 27.5
Bahia Petempich, Puerto Morelos
Quintana Roo, Mexico 77580
<http://www.backtothepast.com.mx>
Email: info@backtothepast.com.mx

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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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Internet: www.marna.it

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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.)

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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 'Ohu 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



Table of Contents

Acknowledgements	XIII
PREFACE	<i>1</i>
Preface	2
Presentation by Dr. Maurizio Gnoli	4
Presentation by Sam ‘Olu Gon III, Ph.D.	5
The Back to the Past Museum	6
Some Notes on Classification and Terminology	9
Cladistics	10
TRILOBITA	12
General Introduction	13
ORIGINS	<i>20</i>
TRILOBITE MORPHOLOGY	<i>28</i>
Composition of the Exoskeleton	29
Trilobites in Thin Section	31
Cephalon	35
Glabella	35
Suture lines	36
Cephalic spines	38
Hypostome	39
Rostral plate	41
Eyes	42
Holochroal Eyes	43
Schizochroal Eyes	45
Lens Structure	46
Functional Morphology of the Eyes	48
Blindness	50
Thorax	55
Pygidium	62
Exoskeletal Sculpturing (Prosopon)	66
Domes and Nodes	66
Tubercles	66
Spines	67
Pits and Depressions	68
Ridges or Terracing	70
Structure of Trilobite Soft Parts	71
Ontogenesis	77
Exuviation (Molting)	79
Morphological Anomalies and Predation	85

Predation	85
Predators and Prey	87
“Functional” Deformities	94
PALEOECOLOGY	96
Morphotypes	97
Pelagic Species	97
Phacomorphs	97
Illaenomorphs	98
Atheloptic Species	98
Species with Marginal Cephalic Spines	98
Miniaturization	98
Species with Cephalic perforations	98
Olenimorphs	98
Habitat and Way of Life	100
Pelagic Species (Zooplankton Eaters)	100
Planktonic Species	101
Benthic Species	103
Posture	104
Feeding	106
Predators and Necrophages	106
Particle Feeders	108
Plankton Feeders	108
Symbiosis in Olenimorphs?	109
Filter Feeders	109
Ichnofossils	111
Taphonomy	117
FAUNAL PROVINCIALISM	124
The Significance of Faunal Provincialism for Paleontology	125
Faunal Provincialism and Biostratigraphy	125
Provincialism as a Function of Climate	126
Provincialism as a Function of Living Depth and Dispersion	126
Cambrian	127
Ordovician	128
Silurian	129
Devonian	130
Carboniferous and Permian	131
TRILOBITES IN ITALY	133
Sardinia	135
Friuli	152
Sicily	155

Order Agnostida	161
Suborder AGNOSTINA	162
Suborder EODISCINA	163
Order Redlichiida	164
Suborder OLENELLINA	165
Suborder REDLICHIINA	166
Order Corynexochida	167
Suborder ILLAENINA	168
Suborder CORYNEXOCHINA	169
Suborder LEIOSTEGIINA	170
Order Lichida / Odontopleurida	171
Superfamily LICHIDOIDEA (Order Lichida?)	172
Superfamily ODONTOPLEUROIDEA (Order Odontopleurida ?)	173
Superfamily DAMESELLOIDEA (Order Odontopleurida ?)	174
Order Phacopida	175
Suborder CALYMENINA	176
Suborder PHACOPINA	177
Superfamily PHACOPOIDEA	178
Superfamily DALMANITOIDEA	179
Superfamily ACASTOIDEA	180
Suborder CHEIRURINA	181
Subclass Libristoma	182
Evolution of the Hypostome	182
Order Proetida	184
Superfamily PROETOIDEA	186
Superfamily AULACOPLEUROIDEA	187
Superfamily BATHYUROIDEA	188
Order Asaphida	189
Superfamily ANOMOCAROIDEA	191
Superfamily ASAPHOIDEA	192
Superfamily DIKELOCEPHALOIDEA	193
Superfamily REMOPLEURIDIDOIDEA	194
Superfamily CYCLOPYGOIDEA	195
Superfamily TRINUCLEIOIDEA	196
Order Ptychopariida	198
Suborder PTYCHOPARIINA	200
Superfamily PTYCHOPARIOIDEA	201
Superfamily ELLIPSOCEPHALOIDEA	203
Suborder OLENINA	204
Order Harpetida	205
Order Nektaspida	207

PLATES	212
Introduction to the Plates	213
CAMBRIAN	214
Maotianshan Shale Member (Chengjiang Biota) (China)	215
Pioche Formation (USA)	220
Jbel Wawrmast Formation (Morocco)	225
Kaili Formation (China)	231
Spence Shale member (USA)	236
Jince Formation (Czech Republic)	243
Wheeler Formation (USA)	253
Marjum Formation (USA)	258
Weeks Formation (USA)	263
McKay Group (Canada)	278
ORDOVICIAN	285
Fezouata Formation (Morocco)	286
Fillmore Formation (USA)	296
Valongo Formation (Portugal)	300
El Fabar Ordovician Tunnel (Spain)	311
St. Petersburg (Russia)	314
Bobcaygeon Formation (Canada)	327
Beecher's Trilobite Bed (USA)	330
Rust Formation (USA)	335
Ktaoua Group (Morocco)	345
Cincinnatian Series (USA)	349
SILURIAN	354
Rochester Shale Formation (USA)	355
Hemse Marl (Hemse Group) (Sweden)	358
DEVONIAN	362
Haragan & Bois D'Arc Formations (USA)	363
Hunsrück Slate (Germany)	371

Belén Formation (Bolivia)	375
Devonian of Morocco (Morocco)	384
Ahrdorf Formation - Flesten Member (Germany)	403
Upper Emsian and Eifelian, Northern Europe	413
Penn Dixie Quarry (USA)	428
<u>CARBONIFEROUS</u>	<u>431</u>
Calcaire de Tournai (Belgium)	432
Lake Valley / Cabellero Formation (USA)	435
Aprath (Germany)	439
<u>FIELD WORK & PREPARATION TECHNIQUES</u>	<u>445</u>
Hunting for Trilobites	446
Precautions	450
Fossil Preparation Techniques	452
<u>REFERENCES</u>	<u>460</u>
<u>GENERAL INDEX</u>	<u>475</u>
<u>INDEX TO NAMED OR ILLUSTRATED TRILOBITES</u>	<u>484</u>



Spathacalymene nasuta
Middle Silurian

Osgood Formation - Indiana - USA

Photo courtesy of J. Skabelund and J. Cooper

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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.

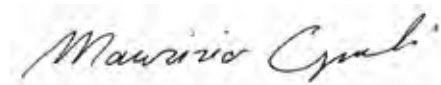
Trilobites are another topic dear to Enrico’s heart. Once I had finished the article I mentioned earlier, we began a profuse email correspondence, a sort of reciprocal scientific support group that was rewarding for both of us. When, some time later, he proposed the idea of creating a volume that would 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* (buttocks) 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** HATSCHKEK, 1888 (**Bilaterians** CAVALIER-SMITH, 1983)

Branch: **Protostomia** GROBBEN, 1908

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

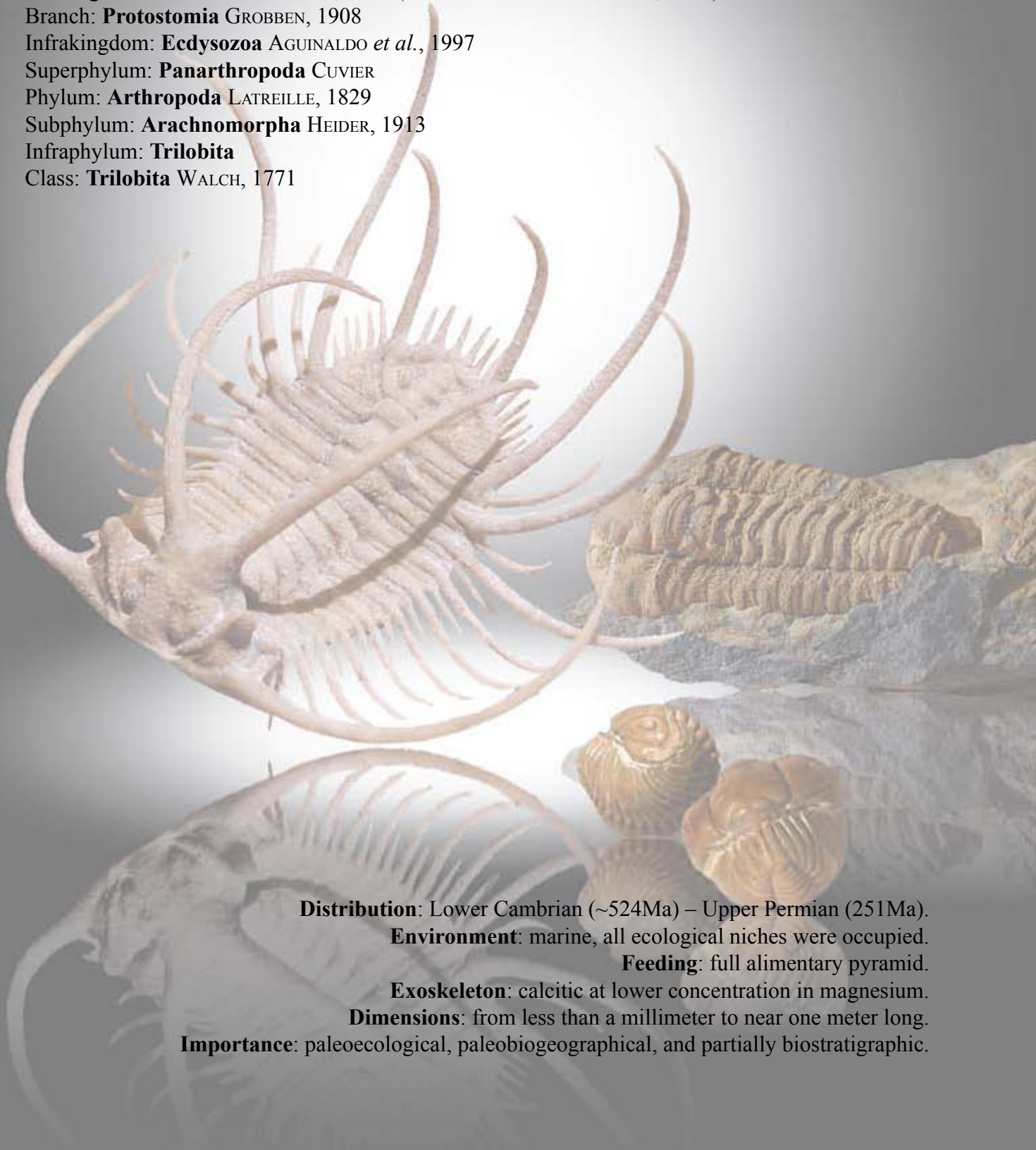
Superphylum: **Panarthropoda** CUVIER

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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Drotops armatus
Lower to Middle Devonian - Morocco
(BPM coll.)

General Index

A

- Abadiella* 26
Acadolenus snajdri 251
Acadoparadoxides briareus 225, 226, 227, 228, 229
Acadoparadoxides sirokyi 246
Acanthopleurella 79, 98
Acanthopleurella stipulae 13
Acanthopyge consanguinea 85, 364
Acanthopyge 62, 63, 385
Acastava cf. *schmidti* 421
Acastidae 180
ACASTOIDEA 177, 180
Acastoides 427
Achatella achates 339
Acidaspides praecurrens 174
Acidaspis 83
Acidaspis jessi 107
Acidaspis kuckersiana 173, 317
Acrocephalitidae 201
Acropyge weggeni 132
AGNOSTIDA 161
Agnostidae 162
AGNOSTINA 162
Agnostoidea 162
Agnostotes 279
Agnostus 36, 42, 161
Agnostus pisiformis 72, 73, 101
Agrauidae 203
Agraulos 138, 139
Agraulos ceticephalus 203, 251
Ahrdorf Formation - Flesten Member 404
Albertella 224
Alcymene 83
Aldonaia ornata 203
Aldonaiidae 203
Allolichas halli 350
Alokistocarella 63, 202, 237
Alokistocaridae 201
Alsataspididae 196
Altiocculus drumensis 70, 256
Altiocculus harrisi 254
Amecephalus idahoense 237
Amecephalus laticaudum 238
Amecephalus packi 237
Amecephalus piochensis 240
Ameropiltonia lauradanae 437
Ammagnostidae 162
Ammagnostus laiwuensis 162, 264
Amphilichas cf. *A. conifrons* 336
Amphilichas cornutus 336
Amplectobelua 88
Amplectobelua symbrachiata 218
Amplifallotaspis 26
Ampyx 36, 145, 196
Ampyx cf. *priscus* 121, 196, 287
Ampyx nasutus 57, 196, 315
Andegavia 57, 400
Andrarinidae 193
Anisopyge 131
Anomalocaris 103, 258
Anomalocaris saron 88
Anomocare 191
Anomocarellidae 191
Anomocaridae 191
Anomocarioides 191
ANOMOCAROIDEA 189, 191
Anopolenus cf. *henrici* 139
Antagmidae 201
Antatlasia 26
antennae 72
Apatokephalus 292
Araiopleura 196, 197
Arapahoia spatulata 264
Archaeaspinus 18, 24
Archaeaspis 26
Archegonus (Laevibole) laevicauda 441, 442
Archegonus (Phillibole) cauliquercus 441
Archegonus (Phillibole) nehdenensis 442, 443
Archegonus (Phillibole) polleni 441
Arctinurus 172
Arctinurus boltoni 63, 67, 74, 356
Arthrorhachis tarda 144
Asaphellus 121, 145, 144, 287
Asaphellus cf. *fezouataensis* 287
Asaphellus stubbsi 289
Asaphellus toledanus 301
ASAPHIDA 189
Asaphidae 192
Asaphiscidae 201
Asaphiscus 201
Asaphiscus wheeleri 202, 254, 255
ASAPHOIDEA 189, 192
Asaphoidichnus 114
Asaphopsoides 194
Asaphus 35, 108
Asaphus delphinus 315
Asaphus expansus 42, 45
Asaphus holmi 316
Asaphus kowalewskii 48, 103, 316
Asaphus lepidurus 52
Asaphus platyurus 315
Asaphus punctatus 315, 325
Asaphus raniceps 36, 44, 315
Asaphus robustus 315
Asteropyge 72, 75
Asteropyge comes 405
Asteropyge longispina 9, 405
Asteropyge pruemensis 421
Asteropyge punctata 415
Athabaskia bithus 169, 238
Atopidae 201
Aulacopleura 98, 187
Aulacopleura konincki 109, 187
Aulacopleuridae 187
AULACOPLEUROIDEA 184, 187
Auritama 191
Auritamiidae 194
Austerops smoothops 394
autapomorphies 10
Avalon explosion 22, 86

B

- Bailiella* 60, 138
Bailiella cf. *levyi* 139
Balcoracania 166
Balcoracania dailyi 55, 120
Balizoma 146
Balnibarbi 98, 204
Barrandeops forteyi 394
Barrandeops granulops 395
Barrandeops ovatus 393
Barrandeops 393
Basilicus (Basilicus) vidali 289
Bathycheilidae 176
Bathycheilus 176
Bathycheilus castilianus 301
Bathynotus kueichowensis 232
Bathyuridae 188
Bathyuriscus 258
Bathyuriscus rotundatus 188
Bathyuriscus wasatchensis 80, 241
BATHYUROIDEA 184, 188
Bauplan 29
Bavarilla 176
Bavarillidae 176
Beckwithia typa 274, 277
Beecher's Trilobite Bed 330
Belenopyge branikensis 389
Belgibole abruptirhachis 153
Bellacartwrightia calliteles 63, 180, 430, 431
Bigotina 26
Bigotinidae 203
Black Cat Mountain 363
Blackwelderia sinensis 174
blindness 50
Bobcaygeon Formation 327
Boedaspis ensifer 57, 173, 317
Bohemilla 194
Bohemillidae 194
Bohemoharpes 83
Bohemoharpes acuminatus 84, 206,

- Bojoscutellum campaniferum* 44
Bolaspidella 202, 259
Bolaspidella housensis 255
 Bolaspididae 201
Bolbineossia dictyosa 77
Bollandia globiceps 186, 434, 435
Bonnia 26
Bornemannaspis solitaria 137
Bouleia dagincourti 376
Bowmania americana 38
Brachyaspidium microps 256
Brachyaspidium sulcatum 255
 Brachymetopidae 187
Brachymetopus 131, 187
Bradyfallotaspis 26
Breizhops bigranulosus 422
Breviscutellum 367
Bristolia bristolensis 165, 221
Bristolia fragilis II, 223
Bristolia insolens II, 221, 224
Bristolia mohavensis 63, 221
Buenaspis 18, 207
Buenaspis fortayi 207
Bulaiaspis 161
Bumastoides holei 52, 63, 99, 338, 344
Bumastoides porrectus 338
Bumastus 98, 167, 168
Bumastus ioxus 357
Bundenbachia beneckeii 374
Burlingia ovata 232
Burmeisterella armata 94, 372
- C**
- Cabellero Formation 436
 caesura 44
 Calcaire de Tournai 433
 Calmoniidae 180
 Calodiscidae 163
Calodiscus foveolatus 138
Calycoscutellum 168
Calymene 83, 152
Calymene neotuberculata 360, 361
Calymene breviceps 10, 123
Calymenella boisseli 143, 145, 148
Calymene niagarensis 357
Calymene polgari 107
Calymene tuberculata 84, 359, 360
 Calymenidae 176
 CALYMENINA 175, 176
 Calymenoidea 176
Calypptaulax callicephalus 341
Cambroinyoella 26
Cambropallas telesto 225, 227
Cameraceras 90
 Cambrian explosion 21, 24, 215
Canadaspis 18
Carbonocoryphe suprahercynica 153
Carolinites 100, 108, 184, 188
 Carrara Formation 220
Caryocaris 142
Cedaria minor 92, 264, 266
 Cedariidae 201
Cedarina schachtii 57, 61, 266, 267
 Celmidae 188
Celmus 188
 cephalic spines 38
 cephalon 29, 35
Cephalopyge notabilis 225, 229
Ceratarges 57, 397
Ceratarges armatus 407
Ceratarges berlinensis 406
Ceratiocaris 112, 142, 146
Ceratonurus 364, 365, 397
Ceratopyge 192
 Ceratopygidae 192
Ceraurinus icarus 350
Ceraurinus marginatus 328
Ceraurus 118, 181, 340
Ceraurus globulobatus 40, 328
Ceraurus pleurexanthemus 34, 335, 339, 344
 cerci 72
Cernuolimbus cf. *pegakanthodes* 191, 279
Chagrinihnites brooksi 112
Chagrinihnites osgoodi 112
Chancelloria 258
Chancia ebdome 238
 Changshaniidae 201
Chasmops praecurrens 317
Chaunoproetus 153
 Cheilocephalidae 170
Cheiropyge 184
Cheiropyge koizumii 132
 Cheiruridae 181
 CHEIRURINA 175, 181
 Cheiruroidea 181
 Cheiruroididae 169
Cheirurus 147
Cheirurus (Crotalocephalus) gaertneri 147
Cheloniellon calmani 371
 Chenghuiidae 169
 Chengkouidae 203
Chlustinia keyserlingi 347
Choia 258
Chotecops ferdinandi 72, 371, 372, 373
Choubertella 26
 Cincinnatian Series 349
 circulatory system 74
 clade Arachnata 208
 clades 10
 cladograms 11
Clarkeia 129
 Clavagnostidae 162
Cliffia cf. *lataegenae* 279
Cloudina 86, 87
 coaptation 60
Colpocoryphe 289
Colpocoryphe bohémica 79
Colpocoryphe rouaulti 176, 311
Colpocoryphe thoralis 301
Coltranea 386
Comptonaspis 437, 438
Comptonaspis swallowi 437
Comura 57, 94
Comura bultyncki 94, 95, 386
Condylpyge eli 230
 Condylpygoidea 162
Conocoryphe 42, 98, 138, 201
Conocoryphe cf. *brevifrons* 139
Conocoryphe cirina 99, 249, 250
Conocoryphe sulzeri 109, 201, 249
 Conocoryphidae 201
 Conocephalinidae 201
Conomedusites lobatus 25
Conophillipsia 131
 Cooselidae 201
Coosella 52, 63, 92, 201, 202, 265, 266, 271
Coosia 201
Cordania 187
Cordania falcata 187, 365, 366
Cordania wessmani 365
 cornea 43
Cornuproetus 416
Cornuproetus beecheri 330, 331
Cornuproetus cornutus cornutus 405, 406, 416
Coronocephalus 129, 181
Corrugatagnostus 161
 CORYNEXOCHIDA 167
 Corynexochidae 169
 CORYNEXOCHINA 167, 169
 Corynexochidea 169
Corynexochus latus 138
Corynexochus sardous 138
Coscinocyathus 137
 Crepicephalidae 201
Cricocosmia jinningensis 219
Cromus 146
Crotalocephalina gibbus 63, 181, 397
Crozonaspis kerfornei 10
Crozonaspis morenensis 311
Crozonaspis struvei 46, 47, 302
Cruziana 111, 113
Cruziana omanica, VI
Cruziana polaris 112
Cruziana semiplicata 112, 115
Cryphaeoides rostratus 377
Cryptolithus 36, 42, 103, 196
Cryptolithus bellulus 330, 331

Cryptolithus tessellatus 110, 350
Ctenocephalus 138
Ctenocephalus coronatus 250
Ctenocephalus (Hartella) cf. terranovicus 139
Ctenopyge 43, 204
Cummingella belisama belisama 434
cuticle 29
Cyanorus singularis 22
Cybele 52, 317
Cybele bellatula 48, 61, 316
Cybeloides plana 329
Cybelurus 77
Cyclocoeloma tuberculata 56
Cyclopyge 98, 100, 102, 195
Cyclopyge marginata 144
Cyclopygidae 195
CYCLOPYGOIDEA 189, 195
Cyphaspis 57, 187, 422, 387
Cyphaspis balanops 407
Cyphaspis carrolli 366
Cyphaspis ceratophthalmus 407, 428
Cyphaspis gaultieri 422
Cyrtometopella 318
Cyrtometopus clavifrons 318
Cyrtometopus sembnitzkii 318, 319

D

Daguinaspis 18, 26
Dalmanites 38
Dalmanites lamarmorae 135, 142
Dalmanites limulurus 179, 356, 357
Dalmanites meneghiniana 142
Dalmanitidae 179
Dalmanitina 152
Dalmanitina (Dalmanitina) acuta 143
Dalmanitina socialis 47, 119
DALMANITOIDEA 177, 179
Damesella paronai 174
Damesellidae 174
DAMESELLOIDEA 171, 174
Dawsonia 138
Deanaspis goldfussi fluminensis 143, 148
Deanaspis ?novaresei 150
Dechenella daumeriesi 68, 417
Dechenella verneuili 417
Declivolithus aff. alfredi 347
Degamella 97, 99, 100, 102
Degamella nuda 195
Deiracephalus aster II, 57, 80, 265
Delgadella 26
Deltacephalaspis magister 377
Densonella semele 92
Diacalymene 357
Diacanthaspis (Acanthalomina) minuta 173
Diacanthaspis parvula 343
Diademaproetus 418

Diademaproetus holzapfeli 427
Diademaproetus praecursor 186
Diagonella 258
Diaphanometopidae 179
Dicanthopyge 80, 279
Diceratocephalidae 201
Dickinsonia 18
Dicranopeltis nereus 357
Dicranopeltis ubaldoi 143
Dicranurus 173
Dicranurus hamatus elegantus 57, 368
Dicranurus menghii 143
Dicranurus monstrosus 57, 398
Dikelocephalidae 193
DIKELOCEPHALOIDEA 193
Dikelocephalus 193
Dikelocephalus gracilis 193
Dikelocephalina 292
Dikelocephalinidae 191
DIKELOKEPHALOIDEA 189
Dimeropyge 184
Dimeropygidae 188
Dinesidae 169
Dionide 36, 197
Dionide mareki 301, 311
Dionididae 196
Diplagnostidae 162
Diplagnostus 138
Dipleura dekayi 176, 378
Diplichnites 111, 113
Ditomopyge 131
Ditomopyge fatmii 132
diverticula 208
Dohmiella 418
Dohmiella dewildei 418
Dokimokephalidae 201
Dolerolenus 166
Dolerolenus bifidus 140
Dolerolenus courtessolei 140
Dolerolenus longioculatus 137
Dolerolenus zoppiii 135, 140
Dolichometopidae 169
domes and nodes 66
domicilium 77
Doryagnostidae 162
Dorypyge 138
Dorypygidae 169
doublet lens 46
doublure 35
Drepanura 174
Drepanura premesnili 174
Dresbachia amata 266, 277
Dreyfussina exoptalma 143, 145
Dreyfussina struvei 145
Drotops armatus 57, 178, 388, 474
Drotops megalomanicus 46
Ductina ductifrons 178
durophagy 89

Duslia insignis 295

E

Eccaparadoxides pusillus 244, 247
Eccaparadoxides rohanovicus 245
Eccoptychile almadenensis 303, 311, 312
Eccoptychile impedita 143
Eccoptychile tumifrons 145
ecdysis 79
Ectillaenus 167
Ectillaenus giganteus 302, 311, 312
Edelsteinaspidae 169
Ediacara 21
effacement 98, 189
Eldonia eumorpha 219
Eldonia 295
Eldredgeops rana 47, 61, 78, 80, 430, 431
Eldredgeops rana crassituberculata 29, 52
Elkanaspis 194
Ellipsocephalidae 203
ELLIPSOCEPHALOIDEA 200, 203
Ellipsocephalus 42, 60, 98
Ellipsocephalus hoffi 203, 245, 250, 251
Ellipsocephalus vetustus 251
Elrathia 60, 98, 199, 258
Elrathia kingii 92, 162, 198, 253, 254, 456
Elvinia roemeri 280
Elviniidae 201
Emeraldella 18, 274, 276
Emmrichellidae 201
Emuella 166
Emuelloidea 166
Enantiaspis enantiopa 137, 140
Encrinuraspis 83
Encrinuraspis beaumonti 83
Encrinuridae 181
Encrinuroides vigilans 328
Encrinurus 152
Encrinurus macourus 359
endopod 72, 115
enrollment 60
Entomaspididae 205
Entomaspis 205
Eodalmanitina destombesi 303
Eodiscidae 163
EODISCINA 163
Eodiscoidea 163
Eodrevermannia 147, 151
Eofallotaspis 26
Eoharpes 205
Eoharpes cristatus 303
Eohomalonotus 288
Eoredlichia 106, 137
Eoredlichia intermedia 73, 216

epichnia 111
epipodite 72
Erbenochile erbeni 48, 49, 180, 388
Esmeraldina 26
Estaingiidae 203
Estoniops exilis 318
Eudolatites flavus 143
Eudolatites 347
Eulomidae 201
Eurekiidae 193
Eurycare 204
evolution of the visual apparatus 49
exopod 72, 115
exuviation (molting) 79
eyes 42
 abathochroal 48
 holochroal 43
 schizochroal 45
eye socle 42

F

FALLOTASPIDOIDEA 165
Fallotaspis 26, 60
Fallotaspis cf. *typica* 165
feeding 106
Fillmore Formation 296
filter feeders 109
fixigenae 35
Flexicalymene 81, 83
Flexicalymene granulosa 351
Flexicalymene meeki 61, 112, 176, 352
Flexicalymene ouzregui 105, 348
Flexicalymene retrorsa 351
Flexicalymene senaria 34, 335, 343, 344
Fordinia perfecta 271
Fortiforceps 89
Foulonia 289, 291
Francovichia branisi 379
Fritzaspis 25, 26
“functional” deformities 94
functional morphology of the eyes 48
Furca 18, 293
Furca bohémica 293
Furca mauretánica 293
Furca pilosa 293
Furcaster paleozoicus 374
Fuxianhuia protensa 218

G

Gabriceraurus dentatus 181, 328, 329
Gabriellus 165
ganglia 74
Geesops schlotheimi 408, 409, 422
Geesops sparsinodosus gallicus 415
Gemelloides delasernai 378
genal spines 38
 metafixigenal 38

 metagenal 38
 metalibrigenal 38
 profixigenal 38
 progenal spines 38
 prolibrigenal 38
Genevievella granulata 85, 267, 271
Geragnostus 128, 145
Gerasaphes ulrichana 341
Gerastos 52
Gerastos catervus 415
Gerastos cf. *doernbergensis* 427
Gerastos cultrijugati 419, 420
Gerastos cuvieri 405, 409, 423
Gerastos granulatus 410
Gerastos prox lessensis 419
Gerastos tuberculatus marocensis 186
Germaropyge germari 249
Giordanella meneghinii 137
Giordanella vincii 140
glabella 35
glabellar furrows 35
glabellar lobes 35
Glaphuridae 188
Glossopleura 63, 239
Glossopleura bion 52, 239
Glossopleura gigantea 92, 239, 241
Glossopleura packi 241
Glyptagnostidae 162
gnathobases 72, 90, 106
Goldius 168
Goldius goolaertsi 416
Goldius grafi 406
Gondwanaspis 173
Goniotelus 186, 188
Grandinasus 26
Granolenus 26
Griffithidella doris 439
Griffithides acanthiceps 107
Grinnellaspis (Actinopeltis) globosus 346
Gudralisium lindlarensis 423

H

habitat and way of life 100
 benthic species 103
 pelagic species 100
 planktonic species 101
Hallucigenia 85
Hamatolenus (Hamatolenus) vincenti 225, 228
Hamatolenus (H.) marocanus 229
Hammatocnemidae 181
Hapalopleura 196
Haragan & Bois D’Arc Formation 363
Harpes 69, 147, 152, 206, 389, 403
Harpes macrocephalus 423
HARPETIDA 205
Harpetidae 205
Harpetina 205

Harpides 70, 205, 206, 292
Harpides plautini 206, 319
Harpididae 205
Hebediscidae 163
Hebediscina sardoa 136
Hedinaspis canadensis 379
Helianthaster rhenanus 374
Heliomedusa minuta 219
Helioproetus 153
Heliopyge helios 424
Heliopyge troaonensis 423
Helmetia 209
Helmetia expansa 209
Helmetiidae 208
Hemse marl 358
Hemiarges 343
Hemirhodon amplipyge 260
Hibbertia brevigena 148
Holanshaniidae 201
holaspis 78
Hollandops mesocristata 389
Holocephalinidae 201
Holo-trachelidae 188
Homalonotidae 176
homeomorphism 97
homologies 10
Hoploichas plautini 57, 67, 320
Hoplolichoides conicotuberculatus 320
Housia 191, 279
Housia ?vacuna 280
Housiidae 191
Huemacaspis 143
Hungaiidae 191, 194
Hungioides bohemicus arouquensis 308
Hunsrück Slate 371
Huntoniatonia 38
Huntoniatonia huntonensis 179, 367
Huntoniatonia lingulifer 367
Huntoniatonia oklahomae 366
Hupeidiscus 26
Hupetina antiqua 25
Hurdia victoria 88
Hydrocephalus carens 166, 247
Hydrocephalus mandiki 245
Hydrocephalus minor 244, 247
Hyolites 121
Hypagnostus parvifrons 63, 162, 252
hypichnia 111
Hypodicranotus 194
Hypodicranotus striatulus 107, 341
hypostome
 conterminant 40
 impudent 40
 morphology 39
 natant 40

I

Ichnofossils 111
Ichnusa cocozzai 144
 Idahoiidae 194
Iglesiiella ichnusae 135, 136
 Ignotogregatidae 201
 Illaenidae 168
 ILLAENINA 167, 168
 Illaenoidea 168
Illaeopsis 98
Illaeula struvei 426
 Illaenuridae 170
Illaeus 98
Illaeus creber 145
Illaeus dalmani 321
Illaeus incisus 105, 168, 321
Illaeus insignis 168, 357
Illaeus sarsi 168
Illaeus schmidti 320
Illaeus tauricornis 320
 Inouyiidae 201
 inquilinism 83
 intralensar bowl 46
 intralensar sclera 45
 intrascleral membrane 45
Irvingella 280
Isabelinia glabrata 304, 311, 313
 Isocolidae 201
Isopodichnus 112
Isoteloides flexus 297
Isotelus 83, 118
Isotelus brachycephalus 352
Isotelus gigas 10, 52, 68, 107, 335, 342, 344
Isotelus iowensis 62
Isotelus mafritzi 328
Isotelus maximus 61, 352, 353
Isotelus rex 13
Isotelus walcotti 343

J

Jakutidae 169
Jakutus primigenius 169
Jegorovaia 196, 197
Jenkinsonia varga 256
 Jince Formation 243
Jincella 138, 139
Jincella convexa 139
Jincella prantli 139
Judomia 26

K

Kainellidae 194
 Kaolishaniella 170
 Kaolishaniidae 170
Kathwaia capitorosa 132
Kayserops 415, 424
Kayserops daleidensis 423
Kettneraspis 171, 425
Kettneraspis elliptica 413

Kettneraspis seiberti 426
Kettneraspis williamsi 57, 99, 369, 456
Kingaspidoides 229
Kingaspidoides cf. angustigena 229
Kingaspidoides laetus 225
Kingaspis maroccana 229
 Kingstoniidae 201
Kjerulfia 60
Kleptothule rasmusseni 24
Kochina vestita 62, 77, 79, 239
 Koldinioidia 139
Kolihapeltis 57, 168
Kolihapeltis rabatensis 399
 Komaspidae 201
Koneprusia 57, 397, 428
Koneprusia lukiana 410
 Konservat-Lagerstätten 71
Kootenia 63, 169, 240, 254, 260, 452
Kootenia spencei 240, 458, 459
 Ktaoua Formation 345
Kuamaia lata 211
Kuanyangia pustulosa 217

L

Labiostria 281
Labiostria westropi 281
Lachnostoma latucelsum 62, 297
Laethoprusia 367, 369
Laggania cambria 88
 Lake Valley 436
 Langston Formation 236
 Latham Shale 220
Latoucheia (L.) cf. epichara 229
Leancoilia 103
 Lecanopygidae 170, 188
Lehua 290
Lehua corbachoi 290
Lehua ponti 57, 290
Lehua velai 290
Lehua vinculum 290
 Leiostegidae 170
 LEIOSTEGIINA 167, 170
 Leiostegioidea 170
Lejopyge 98
Lemdadella 26
Leningradites longispinus 322
 lens structure 46
Leonaspis 98, 104, 147, 391
Leonaspis deflexa 104
 Leptoplastinae 204
Leptoplastus 43, 204
Lermontovia 98, 203
Leviceraurus mammioides 328
 librigenae 35
 LIBRISTOMA 182
 Lichakephalidae 172
Lichas 172
Lichas barcai 145

Lichas vinassai 143
 LICHIDA 171
 Lichidae 172
 LICHOIDEA 171, 172
Limulus polyphemus 90, 100, 120
Lingulocaris 142
Liobole 153
Liobole abducta 153
Liobole finitima 153
Liobole glabroides 153
Liobole (Panibole) subaequalis stania 153
Liobole subaequalis 153
 Liobolina 153
Liobolina nebulosa 442
Liolophops sublevatus 426
Liosolenopleura serventi 139
 lira 70
 Lisaniidae 201
Litavkaspis rejkovicensis 250
Liwia 18
Liwia convexa 207
 Liwiidae 207, 208
 Llanoaspididae 201
Lloydolithus lloydi 197
Lobocephalina emmrichi 248
Lobopyge 424
Lochkovella deckeri 46, 52, 99, 178, 369, 370
Lochkovella misera 147
 Loganellidae 193
Loganellus 194
 Loganopeltidae 205
 Lonchocephalidae 201
Lonchocephalus plena 99, 267
Lonchodomas 196
Lonchodomas aff. pennatus 10
 Longduiidae 169
 Lorenzellidae 201

M

Macrobole 153
 macropleurae 55
 macropyge 139
 maculae 39, 49
Maladioidella cf. colcheni 112, 139
Malungia laevigata 216
Malvinella buddeae 378
Mansuyia 170
 Mapaniidae 201
 Marble Mountains 220
Maritimella rara 207
Marjumiya typa 260
 Marjumiidae 201
Marrella 18, 103, 234
Marrella splendens 72, 73
Marrolithus bureaui 197
Maryvillia 201
Marywadea ovata 22

- Maurotarion axitiosum* 370
Maurotarion legrandi 378
 McKay Group 278
Meadowtownella trentonensis 340
 median tubercle 35
Megalaspidella 192
Megistaspidella triangularis 63, 322
Megistaspis nericus 192
Megistaspis (Ekeraspis) hammondi 288
Menomonina 201
Menomonina semele 267
 Menomoniidae 201
Menoparia 194
 meraspis 78
Merceriella 86
Mesonacis 278
Metacanthina barrandei 391
Metacanthina issoumourensis 385
Metacryphaeus (Eldredgeia) venustus 380
Metacryphaeus giganteus 379
Metadoxides armatus 137, 140
 Metagnostidae 162
 metameres 78
Meteoraspis dis 92, 202, 268
Metopolichas cf. *platyrhinus* 172
Metopolichas huebneri 39, 63, 321
Mexicella 98
Micragnostus cf. *haudei* 139
Microparia 100
Microphillipsia tetraptera 155
Mimetaster 18
Mimetaster hexagonalis 72, 73, 371, 374
 miomerid 55
Miraspis 98
Misszhouia 18
Misszhouia longicaudata 207, 208
Modocia 256, 258, 268, 270
Modocia brevispina 256
Modocia laevinucha 259
Modocia typicalis 92, 202, 259, 260
 monophyletic 10
Montezumaspis 26
Morgatia cf. *primitiva* 311
Morgatia hupei 309
Morocconites malladoides 392
Morocops struvei 393
 morphotypes 97
 atheloptic species 98
 illaenomorphs 98
 miniaturization 98
 olenimorphs 98
 pelagic species 97
 phacomorphs 97
 species with cephalic perforations 98
 species with marginal cephalic spines 98
Mrakibina cattoi 389
Mucronaspis mucronata mucronata 144
Myopsolenites boutiouiti 166, 225, 228

N

Nahecaris stuerzi 371
 Namaqualand 21
Namuropyge 187
Nanillaenus americanus 337
Nankinolithus granulatus 144
Naraoia 89, 103, 106
Naraoia bertiensis 18, 207
Naraoia compacta 18, 207, 234
Naraoia spinifer 18
Naraoia spinosa 18, 207, 208
 Naraoiidae 207, 208
Nautilus 90
Nebidella limbata 137
 NEKTASPIDA 18, 207
Neocobboldia 48
Neometacanthus 421
Neometacanthus stellifer 411
Neoproetus verrucosus 156
 neoteny 11
 Nepeidae 201
Neseuretinus turcicus 145, 148
Neseuretus avus 304
Neseuretus (Neseuretus) tristani tardus 10
Neseuretus tristani 305, 311
Nevadia 26
Nevadia weeksi 165
 Newfoundland 21
 Nileidae 195
Nileus 35
Nileus armadillo 195, 322
Niobella 145
Niobella cf. *primaeva* 139
Niobella lindstroemi 323
Niobe schmidtii 322
Nobiliasaphus 145
Nobiliasaphus delessei 304
Nobiliasaphus nobilis 143, 306, 311
 nomen
 dubium 11
 novum 11
 nudum 11
 oblitum 11
Norwoodia 40, 201, 270, 271
 Norwoodiidae 201
 notches 60
Novakella 100, 195
Nunnaspis stiitti 438, 439
Nyterops hollandi 67, 420
Nyterops nyter 419, 420

O

 occipital ring 35
Odontopleura 98
 ODONTOPLEURIDA 171
 Odontopleuridae 173
 ODONTOPLEUROIDEA 171, 173
Ogyginus 145, 306
Ogyginus armoricanus 116
Ogyginus corndensis corndensis 52
Ogyginus fortleyi 122, 307
Ogyginus fortleyi hammondi 288
Ogygiocaris 35, 192
 Ogygopsidae 169
Ogygopsis typicalis 241
Ohleum cf. *eurydice* 426
Oinochoe 172
Olekmaspis 203
 OLENELLINA 164, 165
 OLENELLOIDEA 165
Olenellus cf. *transitans* 222
Olenellus clarki 123, 224
Olenellus fremonti 57, 222
Olenellus gilberti 223
Olenellus nevadensis 221, 223
Olenellus schucherti 278
Olenellus terminatus 223
 Olenidae 204
 OLENINA 198, 204
 Oleninae 204
Olenoides 103, 106, 255, 257, 258, 272
Olenoides inflatus 262, 496
Olenoides nevadensis 254, 257
Olenoides paraptus 232
Olenoides pugio 262
Olenoides serratus 72, 76, 169
Olenoides superbus 52, 63, 92, 99, 261, 262
Olenus 43, 98
Olenus truncatus 109
Olenus wahlenbergi 109
Onchonotellus 139
 Onchonotopsidae 201
Onnia 69, 99, 348
 ontogenesis 77
Opabinia 103
Opipeuter 42, 97, 100
 Opipeuteridae 194
 opisthothorax 55
Opsidiscus 48
 Ordosiidae 170
Ornamentaspis usitata 225
 Orometopidae 196
 Oryctocephalidae 169
Oryctocephalus 169
Oryctocephalus indicus 233
Orygmaspis contracta 281
Orygmaspis sp., Type 1 282
Orygmaspis sp., Type 2 281
Orygmaspis sp., Type 3 282
Orygmaspis sp., Type 4 282

- Orygmaspis* sp., Type 5 282
osmolska cavities 32
Otarion 184, 187
Otarionella 387
Otarion oceanicum 425
- P**
- Paciphacops* 370
Paciphacops campbelli 46, 370
Paciphacops orurensis 381
paedogenesis 11
paedomorphosis 11
Pagetia 48, 161
Pagetia cf. *P. significans* 163, 233
Pagetiidae 163
Pagodia 139
Pagodiidae 170
Palaeolenidae 203
Palmettaspis 26
palpebral suture 42
Pandaspinapyga 323
Panderia 41
Panderia triquetra 323
Panderidae 168
Panlongia spinosa 209, 210
Panlongia tetranudosa 209
Papyriaspidae 201
Parabarrandia 97
Parabarrandia cf. *crassa* 311
Parablackwelderia luensis 48
Parabolina 204
Parabolinella 283
Parabolinella bolbifrons 77
Parabolinoididae 191
Paraceraurus exsul 63, 323
Paradamesella 174
Paradoxides 80, 138
Paradoxides (Acadoparadoxides) murensis 138
Paradoxides (Eccaparadoxides) mediterraneus 138, 140
Paradoxides gracilis 107, 166, 247, 248
Paradoxidoidea 166
Parafallotaspis 26
Paralejurus hamlagdadicus 44, 70, 390
Paralejurus 390
Paranepholenella cf. *besti* 222
Paranevadella 26
Parapeytoia 89
Paraphillipsia karpinskyi 132
Paraphillipsia middlemissi 132
paraphyletic 11
Parapilekia 290
Parasolenopleura 230
Parasolenopleura cf. *lemdadensis* 230
Paraszechuanella 170
Pardailhanian hispidia 138
particle feeders 108
Parvancorina 18
Parvancorina minchami 23
Parvancorina sagitta 23
Parvancorinomorpha 18, 22
pathological deformities 85
Peachella iddingsi 222, 224
Pedinopariops 425, 427
Pedinopariops brongniarti 46, 411, 412
Peltura 109
Pelturinae 204
Pennaia verneui 381
Penn Dixie quarry 429
Permproetus postcarbonarius 156
Peronopsidae 162
Peronopsis 138, 258
Peronopsis fallax 139
Peronopsis integra 162, 252
Peronopsis interstricta 162, 253, 254, 256
Petigurus 31
PHACOPIDA 175
Phacopidae 178
Phacopidina micheli 310, 311
PHACOPOINA 175, 177
PHACOPOIDEA 177, 178
Phacops imitator 46, 411, 412, 419
Phacops latifrons 46, 428
Phacops saberensis torkozensis 395
Phaetonellus 186, 390
Phaetonellus planicauda 396
Phalagnostus nudus 252
Pharostomatidae 176
phaselus stage 77
Phillipsia 131, 186
Phillipsia oehlerti 156
Phillipsia pulchella 156
Phillipsia sosisensis 156
Phillipsiidae 186
Phillipsinellidae 168
Phycodes circinatum 145
Phylacteridae 201
Phytophilaspis pergamena 210
Pilekiidae 181
Piltonia carlakertisae 438
Piltonia kuehnei 434
Pioche Formation 220
pits and depressions 68
Placoparia 60, 181
Placoparia cambriensis 308
Placoparia (Coplacoparia) tournemini 311, 313
Placoparia 346
Placoparia tourneminei 305
plankton feeders 108
Platiscutellum cf. *massai* 400
Plectodiscus discoides 374
Plesiomalvinella boulei 382
pleural furrow 55
pleural lobes 29
Pleuroctenium 161
Pliomera fischeri 324
Pliomeridae 181
Pliomerops 181
point omega 36
polymerid 55
polyphyletic 10
Polypleuraspis 169
Porcellio scaber 60
Porterfieldia 109
posture 104
active 104
bumastoid 105
death 105
enrolled 60, 104
resting 104
precoxa 72
predation 85
predators and necrophages 106
preexopod 72
preglabellar field 35
Presbynileus ibexensis 297
Pricyclopyge 66, 101, 195
Pricyclopyge longicephala 66, 195
Primaspis crosotus 330
Primicaris 18
Primicaris larvaformis 23
Prionocheilus 143, 176, 311
Prionocheilus inermis 145, 148, 150
Prionocheilus mendax 308
Proarticulata 24
Proasaphiscidae 201
Proceratopyge 114, 139
Proceratopyge rectispinata 283
Prochuangia 139
PROETIDA 184
Proetidae 186
Proetina 184
PROETOIDEA 184, 186
Proetus 147, 340
Proetus granulatus 360, 361
Proetus postcarbonarius 155
Profallotaspis 26
Profallotaspis jakutensis 25
progenesis 79, 98
Proliobole podarge 153
Prosopiscidae 179
prosopon 66
protaspis 78
Proteuloma geinitzi 139
prothorax 55
Protichnites 111
Protolenidae 203
Protolenus (Protolenus) cf. densigranulatus 229
Protolenus (Protolenus) pisidianus 138

Protopresbynileus 297
 provincialism
 function of climate 126
 function of living depth and dispersion 126
Pseudoasaphinus tecticaudatus 325
Pseudobasilicus lawrowi 325
Pseudobilobites 112
Pseudocybele 61, 297
Pseudocybele altinasuta 63, 298, 299
Pseudocybele lemurei 299
Pseudogygites 91
Pseudokainella 194
Pseudomegalaspis patagiata 192
Pseudonaraoia hammani 18
Pseudophillipsia 154, 184
Pseudophillipsia anshunensis 132
Pseudophillipsia elegans 155, 156
Pseudophillipsia gemmellaroi 156
Pseudophillipsia obtusicauda 132
Pseudophillipsia sumatrensis 132
Pseudosphaerexochus pahnschi 324
Pseudowaribole (Dushania) heisingi 443
Pseudowaribole (Geigibole) inusitata 153
Pseudowaribole (Geigibole) thomasi 444
Pseudowaribole inusitata 153
Psychopyge elegans 57, 401
Psychopyge praestans 402
Psychopyge termierorum 401
Pterocephalia 41
Pterocephalia norfordi 191, 283
 Pterocephalidae 191
Pteroparia coumiacensis 50
 Pterygometopidae 178
 Ptychagnostidae 162
Ptychagnostus 138, 258
Ptychagnostus praecurrens 162
 Ptychaspidae 193
Ptychoparia 199
Ptychoparia milena 248
Ptychoparia striata 248
 PTYCHOPARIIDA 198
 Ptychopariidae 201
 PTYCHOPARIINA 198, 200
 PTYCHOPARIOIDEA 200, 201
Ptychopyge cf. *angustifrons* 192
Ptyocephalus yersini 297
Pudoproetus 439
 pygidium 29, 62
 isopygous 62
 macropygous 62
 micropygous 62
 subisopygous 62

Q

Quadrops 94

Quadrops flexuosa 52, 93, 95, 399

R

Raaschichnus 112
 rachis 29
 radial lamellae 42
Radiaspis 143, 396
Radiaspis comes 410, 425
Radnorina simplex 148, 150
 Raphiophoridae 196
Raphiophorus 189, 196
Raymondites 188
Redlichia 166
Redlichia takooensis 89, 166
 REDLICHIDA 164
 REDLICHINA 166
 Redlichioidea 166
Reedops bronni 392
Reedops cephalotes hamlagdadianus 391
Reedops maurulus 392
Rejkocephalus knizeki 245
Rejkocephalus rotundatus 244, 247
Remopleurides 43, 194
Remopleurides nanus 194, 326
 Remopleuridoidea 189
 REMOPLEURIDOIDEA 194
Repinaella 26
Resserops 166
Retamaspis melendezi 309
Rhabdinopora flabelliformis flabelliformis 139
Rhenops cf. *anserinus* 372, 373
Rhenops 75
 ridges or terracing 70
 Rorringtoniidae 187
 rostral plate 41
 rostellum 41
Rotadiscus 295
Rusophycus 111, 113
Rusophycus dispar 107

S

Saharops bensaïdi 45, 396
Saltaspis 204
 salterian
 mode 80
 position 80
Salterocoryphe 309, 310
Salterocoryphe salteri 176, 311
Sanctacaris 18, 89
Sao hirsuta 250
Sardaspis laticeps 137, 140
Sardaspis papillosa 137
Sardoites pillolai 143
Sardoredlichia arenivaga 137
Sardoredlichia carinata 137
Sardoredlichia frabouleti 140
Sarrabesia teichmuelleri 145, 148

Saukia 193
 Saukiidae 193
 Scabriscutellum 63, 168, 400
Schinderhannes bartelsi 88, 90
 Schizoramia 22
Schizostylus brevicaudatus 380
Schmalenseeia fusilis 55
 sculptures 66
Scutellum 425
Scutellum geesense 412
Scutellum n. sp. aff. *pustulatum* 400
Seleneceme 98, 128, 189, 196
 Selenocoryphe platyura (nomen nudum), 74, 270
Selenopeltis 171
Selenopeltis aff. *kamila* 311
Selenopeltis buchii 9, 57
Selenopeltis gallica 310
Selenopeltis inermis beyrichi 457
Selenopeltis longispinus 347
Selenopeltis macrophtalma 311
 sensillae 31
 sensory spines 56
Serrania 26
Serrania gordaensis 25
 Sharyiidae 188
 Shirakiellidae 170
 Shumardiidae 201
Shumardoella 201
Shumardoella (Conophrys) salopiensis 78
Sinodiscus 26
Skania 18
Skania sundbergi 23, 234
Skioldia aldna 209
Skreiaspis spinosa 245, 252
Skrejaspis brianensis 139
 Solenopleuridae 201
Solenopleuropsis (Manublesia) ribeiroi 138
Solenopleuropsis (Manublesia) thorali 138
Soomaspis 18
Soomaspis splendida 207
Spathacalymene nasuta 176
 Spence Shale member 236
Spencia 241
Spencia typicalis 242
Sphaeragnostus 144
Sphaerexochus 129
Sphaerocoryphe robusta 63, 338
Sphaerophthalmus 43
Sphaerophthalmus alatus 43, 44
Sphooceras truncatum 83
 spines 67
Spinibole (Coombewoodia) coddonensis 444
Spriggina floundersi 22, 25
 stalked eyes 48

Staurocephalidae 181
Staurocephalus clavifrons 144, 150
Stenaster 329
Stenopilus pronus 60
sternites 74
St. Petersburg 314
structure of trilobite soft parts 71
Styginidae 168
suture
 gonatoparian 36
 opisthoparian 36
 cedariiform 37
 entomaspidiform 37
 harpidiform 37
 isoteliform 37
 kainelliform 37
 metaparian 37
 ptychopariiform 37
 trinucleiform 37
 proparian 36
 burlingiiform 37
 cheiruriform 37
 dalmanitiform 37
suture lines 36
 perirostral 41
Svalbardichnus 112
Svalbardites 31
Sydneya 18
symbiosis in olenimorphs? 109
Symphysops 102
Symphysops armata 144, 148
symplesiomorphy 11
synapomorphies 11
Szechuanella 170

T

Tadakoustia 230
Taihungshania 145, 195
Taishunghaniidae 195
Taklamakania 196
Taklamakania europaea 148, 150
Tanganoxichnus 112
Tanglangia 89
taphonomy 117
Tariccoia 18
Tariccoia arrusensis 142, 143, 207, 210
Tegopeltiidae 208
Telephina 97, 100, 128, 184, 188
Telephinidae 188
telopodite 72
telson 62
Tengfengiidae 201
teratological abnormalities 85
Thaleops laurentiana 337, 344
The Significance of Faunal Provincialism for Paleontology 125
Thigriffides 131
thin sections 32

Thoracocare 98, 167
thoracopygon 79
thorax 29, 55
Thysanopeltis 168
Thysanopyge 192
Toernquistiidae 188
trabeculae 42
Trachomatichnites 114
Tremaglaspis cf. *unite* 294
Tretaspis latilimba 110
Treveropyge 385
Triadaspis bigeneris 267
Triangulaspis 26
Triarthrinae 204
Triarthrus 35, 66, 204
Triarthrus eatoni 72, 330, 75, 332, 333, 334
Triarthrus spinosus 204
Tricrepecephalidae 201
Tricrepecephalus 201
Tricrepecephalus texanus 202, 269
trilobite morphology 28
Trimeroccephalus 152
Trimeroccephalus mastophthalmus 50
Trimerus 42, 98, 175
Trimerus delphinocephalus 356
Trinucleidae 196
TRINUCLEIOIDEA 189, 196
Trinucleus 36, 196
Tropidocoryphe 186
Tropidocoryphe bassei 410
Tsinaniidae 168
Tsunyiidiscidae 163
Tsunyidiscus 26, 161
tubercles 66

U

Ukraine 21
Uktaspis 26
Ulugtella angelini 145
Ulugtella mediterranea 143, 145, 148
Upper Emsian and Eifelian, Northern Europe 414
Uralichas cf. *hispanicus* 311
Uralichas hispanicus tardus 172, 346
Uralichas ribeiroi 13
Uromystrum 110, 188
Utahcaris 89
Utaspis marjumensis 202, 262
Utiidae 201

V

Vachonisia 18
Vachonisia rogeri 72, 371
Valongo Formation 300
Vendia 18
Viaphacops 46, 370
Viaphacops kozlowskii 381
vincular furrows 60

Vogesina aspera 382
Vogesina lacunafera 382

W

Walliserops 94
Walliserops hammii 95, 402
Walliserops trifurcatus 38, 57, 180, 402
Wanneria 278
Waptia ovata 219
Warburgella rugulosa canadensis 107
Waribole 153
Waribole aello 153
Waribole (Latibole) laticampa 444
Waribole richteri 153
Weberides 186
Weeksina unispina 92, 202, 268
Wenndorfia 396
Weymouthiidae 163
Wheeler Shale Formation 253
White Sea 21
Windom Shale member 429
Wiwaxia 85
Wolfartaspis cornutus 383
Wolhow river 314
Wuaniidae 201, 203
Wujiajiania 98, 109, 204, 283, 284
Wutingaspis tingi 217

X

Xandarella spectaculum 211, 218
Xandarelliidae 208
Xenasaphus devexus 82, 122, 326
Xylokorys 18

Y

Yiliangella serrae 140
Yohoia 89
Yorgia waggoneri 86
Yukoniidae 163
Yunnanaspis 166
Yunnanocephalidae 203
Yunnanocephalus 203
Yunnanocephalus yunnanensis 217

Z

Zacanthoides 242
Zacanthoides grabaui 55, 57, 242
Zacanthoides idahoensis 242
Zacanthoides typicalis 52
Zacanthoididae 169
Zeliszella toledana 311
Zeliszella torrubiae 310
Zetillaenus ibericus 143
Zetillaenus wahlenbergianus 150
Zlichovaspis rugosa 52, 179, 402

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. schmidti</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 toledamus</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>	ÓPIK, 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>	BRÜENNICH, 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>Cedarina minor</i>	WALCOTT, 1924	92, 264, 266	PTY	Cam
<i>Cedarina schachti</i>	ADRRAIN, 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 bohémica</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>Coltranea</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>	ADRRAIN & 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 (Hartella) 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>	ADRAIN & 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 limulurus</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	11, 57, 80, 265	PTY	Cam
<i>Delgadella</i>	WALCOTT, 1912	26	AGN	Cam
<i>Deltacephalaspis magister</i>	ELDRIDGE & BRANISA, 1980	377	PHA	Dev
<i>Densonella semele</i>	WALCOTT, 1916	92	PTY	Cam
<i>Diacalymene</i>	KEGEL, 1927	357	PHA	Sil
<i>Diacanthaspis (Acantholomia) 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>	ÓPIK, 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 longioculatus</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 exoptalma</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 megalomanicus</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>	SNAJDR, 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 & RÁBANO, 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>Francoichia branisi</i>	WOLFART, 1968	379	PHA	Dev
<i>Fritzaspis</i>	HOLLINGSWORTH, 2007	25, 26	RED	Cam
<i>Gabriceraurus 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 VIERSSEN, 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 VIERSSEN & PRESCHER, 2008	419	PRO	Dev
<i>Gerastos tuberculatos 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 VIERSSEN, 2007	416	COR	Dev
<i>Goldius grafi</i>	BASSE (IN BASSE & MULLER, 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>Hoplolichas plautini</i>	SCHMIDT, 1885	57, 67, 320	LIC	Ord
<i>Hoplolichoides 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>	LINARSSON, 1869	63, 162, 252	AGN	Cam
<i>Hypodicanotus</i>	WHITTINGTON, 1952	194	ASA	Ord
<i>Hypodicanotus 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>	JANUSSON, 1957	105, 168, 321	COR	Ord
<i>Iliaenus insignis</i>	HALL, 1865	168, 357	COR	Sil
<i>Iliaenus sarsi</i>	JANUSSON, 1954	168	COR	Ord
<i>Iliaenus schmidti</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>	ŠNAJDR, 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>Kingaspidoidea</i>	HUPÉ, 1953	229	PTY	Cam
<i>Kingaspidoidea cf. angustigena</i>	-	229	PTY	Cam
<i>Kingaspidoidea 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 rasmussenii</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>Marjumiya 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>	ADRIN & 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 & RAMSKOLD, 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>Moroccanites 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 schmidti</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 cornedensis cornedensis</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>Opipeuter</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>Pandertia</i>	VOLBORTH, 1863	41	COR	Ord
<i>Pandertia 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>	POMPECKI, 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>Paranepholenellus 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>Pardailhanian hispidia</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>Pennia 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>Polypleuraspis</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>Primaspis 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) pisidiamus</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>Pseudobasilicus 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>Pseudonaraoia 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 coumiacensis</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 bensaidi</i>	MORZADEC, 2001	45, 396	PHA	Dev
<i>Saltaspis</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>Sardoties 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>Seleneceme</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) thorali</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>Trimerocerphalus</i>	McCoy, 1849	152	PHA	Dev
<i>Trimerocerphalus 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>Trinuclaus</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>Utaspis marjumensis</i>	ROBISON, 1964	202, 262	PTY	Cam
<i>Viaphacops</i>	MAKSIMOVA, 1972	46, 370	PHA	Dev
<i>Viaphacops kozlowskii</i>	PEK & VANĚK, 1989	381	PHA	Dev
<i>Vogesina aspera</i>	WOLFART, 1968	382	PHA	Dev
<i>Vogesina lacunifera</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>Wenddorfia</i>	SANDFORD, 2005	396	PHA	Dev
<i>Wolfartaspis cornutus</i>	WOLFART, 1968	383	PHA	Dev
<i>Wujiajiania</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>Yunnanocephalus</i>	KOBAYASHI, 1936	203	PTY	Cam
<i>Yunnanocephalus 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>Zeliszella toledana</i>	HAMMANN, 1971	311	PHA	Ord
<i>Zeliszella 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.

