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The use of INFOL for the Storage
and Retrieval of
Palaeontological References

by

T. Quinlan

The information contained in this report has been obtained by the Department of National Development as part of the policy of the Commonwealth Government to assist in the exploration and development of mineral resources. It may not be published in any form or used in a company prospectus or statement without the permission in writing of the Director, Bureau of Mineral Resources, Geology & Geophysics.



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OF PALAEOLOGICAL REFERENCES

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INTRODUCTION

INFOL (Information Orientated Language) is a generalized information storage and retrieval system for the Control Data 3600 Computer. With it a file of pieces of information can be assembled and preserved on magnetic tape. Selected pieces of this information, which satisfy specified criteria, can be extracted and printed as a report.

It is a free field language, in that items of information may be in plain language and of variable length, and as such it is suitable for use with bibliographic references.

Its application to the storage and retrieval of palaeontological references will be described and examples of its use will be given. A complete description of the system is given in the Control Data Manual No. 60170300 '3600/3800 Computer Systems Infol Reference Manual'.

The system operates in two stages. A file of references is constructed and preserved on magnetic tape in the first operation. It is then available for interrogation, in subsequent operations, to obtain a list of references which satisfy specified criteria.

ESTABLISHMENT

Description of References

A number of bibliographic references are assembled as a file. Each reference is considered to be an element of that file, and consists of a number of items. For convenience each item is numbered and described when a file is created. In this application the items of information concerning each reference are:

1. The accession number
2. author(s) name
3. year of publication
4. title and bibliographic reference
5. geological subject
6. palaeontological taxa
7. geological age
8. geographic location
9. availability of reprints.

The accession number is used to identify uniquely the reference in the file, and is allocated sequential from one upward. Items 5 to 8 are specified by the use of the codes which are listed in Appendix A. The availability of reprints in item 9 is indicated by the initials of geologists who hold copies.

The items are named and their types or category are specified to the Infol System at the time the file is created. This is done by punching the information onto 80 column cards as shown in figure 1. The categories of items used in this application are,

Unary and numeric
 unary and alphanumeric
 multiple and numeric
 multiple and alphanumeric
 multiple and coded.

Which depends on whether the item contains one or several pieces of information (i.e. unary or multiple) and whether the item is a number, a mixture of letters and numbers, or a numeric code which is used for brevity.

Item 5, which indicates the geological subject, is a coded multiple item. This means that a reference can be indexed under one or more subjects, and that these are printed out in plain language. The way in which the coding is specified is shown in figure 1.

Input of References

The first card is punched with the words 'INITIAL INPUT', to indicate that the cards which follow contain the references and the number 8. The latter refers to the use of the first eight columns for a numbering system by which the cards can be resorted, in the event that their order is disturbed.

Each reference is punched onto a number of eighty column cards in free field between columns 9 and 80, that is the items of information are assembled consecutively into one string. A fixed card format is not used; instead asterisks are used as delimiters. Individual items are preceded by their identifying number enclosed in asterisks, individuals in a multiple item are separated by asterisks, and as well each item is terminated by an asterisk. Examples of this procedure are given in figure 2.

PROGRAM		NAME		JOB		DATE		PAGE NO.	
CSIRO DATA SHEET									
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 COMMENT									
ESTABLISHMENT									
ITEM DESCRIPTIONS 9									
REF. NO. *1*AUTHOR*2*YEAR*3*TITLE AND REFERENCE*4*GEOLOGICAL SUBJECT*5*TAXA*6*									
GEOLOGICAL AGE*7*GEOGRAPHIC LOCATION*8*REPRINTS*9*									
CATEGORY-TYPE									
*1*UNARY NUMERIC*2*UNARY ALPHANUMERIC*3*UNARY NUMERIC*4*UNARY ALPHANUMERIC*5*									
MULTIPLE CODED*6*MULTIPLE ALPHANUMERIC*7*MULTIPLE ALPHANUMERIC*8*MULTIPLE NUMERI									
C*9*MULTIPLE ALPHANUMERIC									
CODES *5* NUMERIC									
GENERAL GEOLOGY * HISTORICAL GEOLOGY * STRATIGRAPHY * TYPE SECTIONS * CORRELATION									
* BOUNDARIES * MAPPING * SEDIMENTATION * STRUCTURAL * GEOMORPHOLOGY * CRYSTALLOGR									
APHY * PETROLOGY * VOLCANOLOGY * ECONOMIC * PETROLEUM * COAL * GEOPHYSICS *									
GEOCHRONOLOGY * RADIOMETRIC AGE * PALAEOMAGNETISM * PALAEOGRAPHY * CONTINENTAL D									
RIFT * GLACIATION * EUSTATIC CHANGES * OCEANOGRAPHY * HYDROLOGY * PHILOSOPHY OF P									
ALAEONTOLOGY * NOMENCLATURE * TAXONOMY * MORPHOLOGY * NEW TAXA DESCRIBED * TAXA									
REDESCRIBED * ONTOGENY * STATISTICAL VARIATION IN FOSSILS * ECOLOGY * STUDIES OF									
LIVING FORMS * PALAEONTOLOGICAL TECHNIQUES * ORIGIN OF LIFE * EVOLUTION * PHYLOG									
ENY * STRATIGRAPHIC RANGE * @ON THE AGE OF ... @* REVISION OF TAXA * BIBLIOGRAPHIE									
S * FAUNAL MONOGRAPHS * OCEANIC ENVIRONMENT * OBITUARIES * FOSSIL LISTS * REVIEWS									
* MICRO STRUCTURES OF FOSSILS * OTHERS **									

CSIRO DATA SHEET

PROGRAM	NAME	JOB	DATE	PAGE NO.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 COMMENT

INITIAL INPUT 8

1A *1*1*2*DICKINS, J.M., AND MCTAVISH, R.A. *3*1963*4*LOWER TRIASSIC MARINE
 1B FOSILS FROM THE BEAGLE RIDGE BORE (BMR 10), PERTH BASIN, WESTERN AUST
 1C ALIA. J. GEOL. SOC. AUST. 10(1), 123-124, 2PLS. *5*32**6*1293*1330*1341*
 1D GEN3*GEN4*0943**7*064*056**8*281*305**

859A *1*859*2*NEBBY, W.P. *3*1964
 859B *4*STRUCTURE OF THE DEVONIAN ROCKS IN THE BRENDON HILLS, WEST SOMERSET.
 859C PRCL. USSHER SOC. 1, 73
 859D *5*09**7*095**8*266**9*SKS**

1115A *1*1115*2* MU, A.T. *3*1955
 1115B *4*THE NEW MATERIALS OF THE DENDROID GRAPTOLITES OF CHINA. PALEONT. SINI
 1115C CA 138 SER. B(5)
 1115D *5*32**6*1514*1516*1517*1515*7*113*128**8*046**9*SKS**

Figure 2: Input of references.

FORTRAN CODING FORM

NAME _____

DATE _____

PAGE

OF

[illegible]

Figure 3: System cards to establish a file.

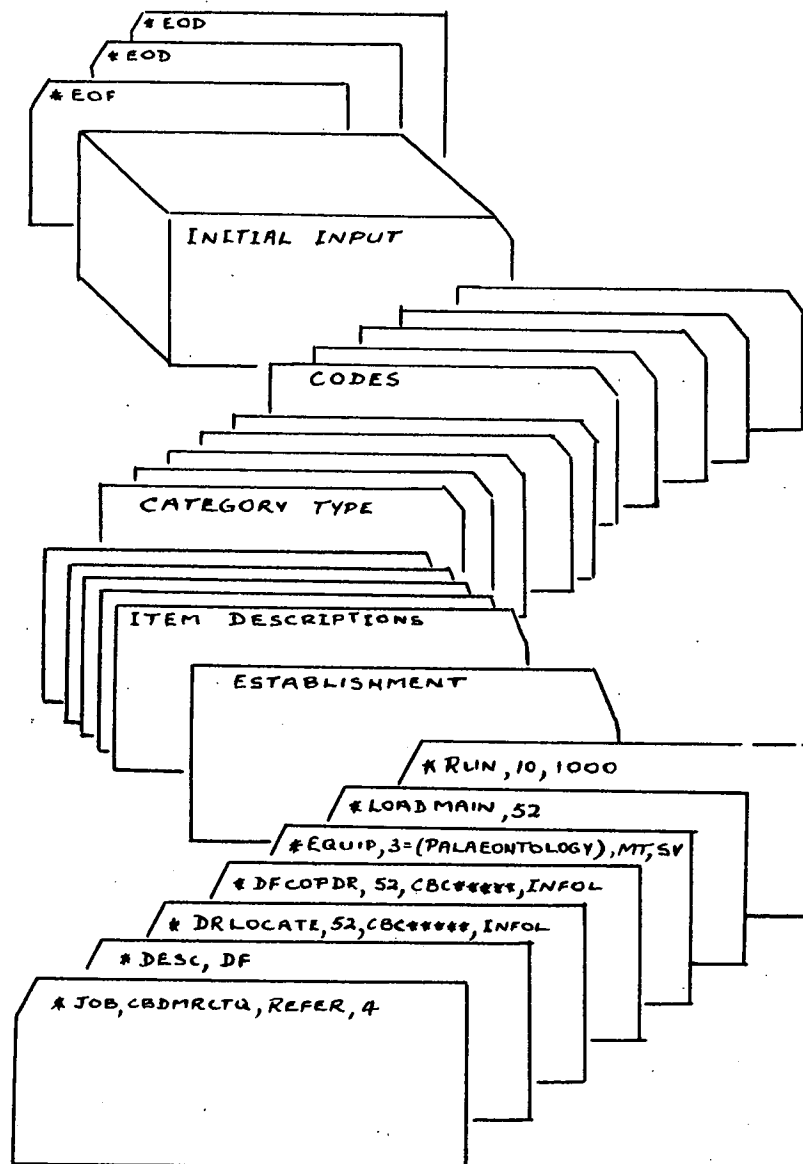


Figure 4: Structure of card deck to establish a file.

Blank columns immediately before and after the asterisks are ignored by the system but those within items of information are not. It should be noted that multiple items are terminated by an asterisk, so that two are then required before the next item number, and that each reference is terminated by two.

System Cards

A number of system cards are required to initiate and control the computer job which produces the magnetic tape file of references. These should be reproduced faithfully from the coding sheet in figure 3, and assembled with the data cards in the order shown in figure 4.

Output

The printed output from the Establishment run includes some statistics on the size of the file and error messages, if any. The latter are for those items which could not be properly interpreted by the program, and were thus excluded from the file of references. Examples of these are shown in figure 5, and most occur because of mistakes in the punching of the data onto cards. Commonly because item numbers are misplaced, or they are not indicated by the right number of asterisks. That portion of the reference which could not be interpreted properly is printed out with the message, but occasionally it is an error in the previous reference which is responsible, and this is not always immediately apparent.

INTERROGATION

The magnetic tape which was created by the establishment run is preserved and is available for future interrogation runs. During the latter those references which satisfy the specified criteria are printed as a report. The process is initiated by a card which contains the word 'INTERROGATION' (Fig. 6), and involves two functions, the search for references which satisfy the Retrieval Criteria, and the extraction of specified items.

ERROR MESSAGES

2015 CONVERSION ERROR IN PROCESSING MULTIPLE OR NECESSARY UNARY ITEM IN INITIAL INPUT
ELEMENT 5 ITEM 5 SUB-ITEM 1
*SCHEN KUSTENPROVINZ. *5*MEV. COM. GEOL. ST. PETERSB. 14. 1 59 * *

2005 ITEM NUMBER TOO LARGE IN INITIAL INPUT
ELEMENT 26 *delete* * ITEM 340
1321*1329*1330*13311340*

2001 ITEM NUMBER OR NUMERIC ITEM CONVERSION ERROR IN INITIAL INPUT
ELEMENT 42 *insert* * ITEM 3
*, RICCARDI. *3*1953 *4*IL TRIAS IN LOMBARDIA. (STUDI GEOLOGICI E PALEONTOLOGICI) 4. FOSSILI DELL ANISICO SUPERIORE DELLA VAL CAMONICA. INST. DE PAL. DELL UNIV. DEGLI STUDI DI MILANO SER. P. (129) *

2001 ITEM NUMBER OR NUMERIC ITEM CONVERSION ERROR IN INITIAL INPUT
ELEMENT 44 ITEM 9
* A* * *information missing*

2015 CONVERSION ERROR IN PROCESSING MULTIPLE OR NECESSARY UNARY ITEM IN INITIAL INPUT
ELEMENT 64 ITEM 6 SUB-ITEM 1
* PAPER 53-17 *5*03*05**5** *delete *6**

2002 NECESSARY ITEM OMITTED IN INITIAL INPUT
ELEMENT 78 *delete* * ITEM 1
*IC. 2(1966) *5*21***6* *

2005 ITEM NUMBER TOO LARGE IN INITIAL INPUT
ELEMENT 81 *delete* * ITEM 374
*48*0957*0951*1004**0974**

2005 ITEM NUMBER TOO LARGE IN INITIAL INPUT
ELEMENT 85 *delete* * ITEM 353
*0948*0950*0944**0953* *

2015 CONVERSION ERROR IN PROCESSING MULTIPLE OR NECESSARY UNARY ITEM IN INITIAL INPUT
ELEMENT 102 ITEM 9 SUB-ITEM 2 *should be a number*
*493*1434**7*013*012**3*113(V)* *

2007 CONVERSION ERROR IN PROCESSING UNARY ITEM IN INITIAL INPUT
ELEMENT 129 ITEM 3 *insert*
1*129*2*COLLIGNOV. M. *3*1955*4

2001 ITEM NUMBER OR NUMERIC ITEM CONVERSION ERROR IN INITIAL INPUT
ELEMENT 129 *insert* * ITEM 3
*ON. M. *3*1956*4*SUR IN SPITICERAS NOUVEAU DU TITHONIQUE SUPERIOUR DE MADAGASCAR. COMP. RENDUS SEM. GEOL. MADAGASCA R 1965. 45-46 2PLS *

2005 ITEM NUMBER TOO LARGE IN INITIAL INPUT
ELEMENT 149 *delete* * ITEM 320
*4*1341*1340*1978*1354**1320* *

2015 CONVERSION ERROR IN PROCESSING MULTIPLE OR NECESSARY UNARY ITEM IN INITIAL INPUT
ELEMENT 151 ITEM 6 SUB-ITEM 1
*A. SER. 9, 3(3) *5*32**5** *delete *6**

Figure 5: Example of error messages.

Retrieval Criteria

These are specified on a number of punched cards the first of which contains the words 'RETRIEVAL CRITERIA' (Fig. 6). Individual criteria can be specified on the following cards for any item, and each is preceded by the item number, enclosed in asterisks, to which it refers. The number which follows is arbitrary and is used for identification. Individual criteria can be specified for items 5 to 9 on the following cards, and each is preceded by the item number, enclosed in asterisks, to which it refers.

The simplest criterion is that an item

5 EXISTS

or *5* DOES NOT EXIST

for a reference.

In addition the facility is available to test the value of an item, so that it may be extracted if it satisfies a certain relation to a value which is defined. The relations must be one of the following

EQ equals

NE does not equal

GT is greater than

LT is less than

GE is greater than or equal to

LE is less than or equal to

a number for item 8, and an alphanumeric value enclosed in asterisks for items 4 to 7 and item 9.

The way in which these criteria are used will be illustrated by the example 'Triassic Bivalvia of Malaysia', for which the criteria relate to the items,

No. 6 Taxa

No. 7 Geological age

No. 8 Geographic location.

Within item 6 Bivalvia have alphanumeric codes between 1290 and 1503 (Appendix A), and a Triassic age (item 7) has alphanumeric code numbers between 056 and 064. The code for Malaysia is the number 144. The retrieval criteria are then specified as (Fig. 6),

+6+ EXISTS AND GE +1290+ AND LE +1503+

+7+ EXISTS AND GE +056+ AND LE +064+

+8+ EXISTS AND EQ 144

The criteria may be specified as a particular value, or as a range of values.

CSIRO DATA SHEET

[illegible]

Figure 6: Specifications for interrogation.

FORTRAN CODING FORM

NAME _____

DATE _____

PAGE

OF

[illegible]

Figure 7: System cards for interrogation.

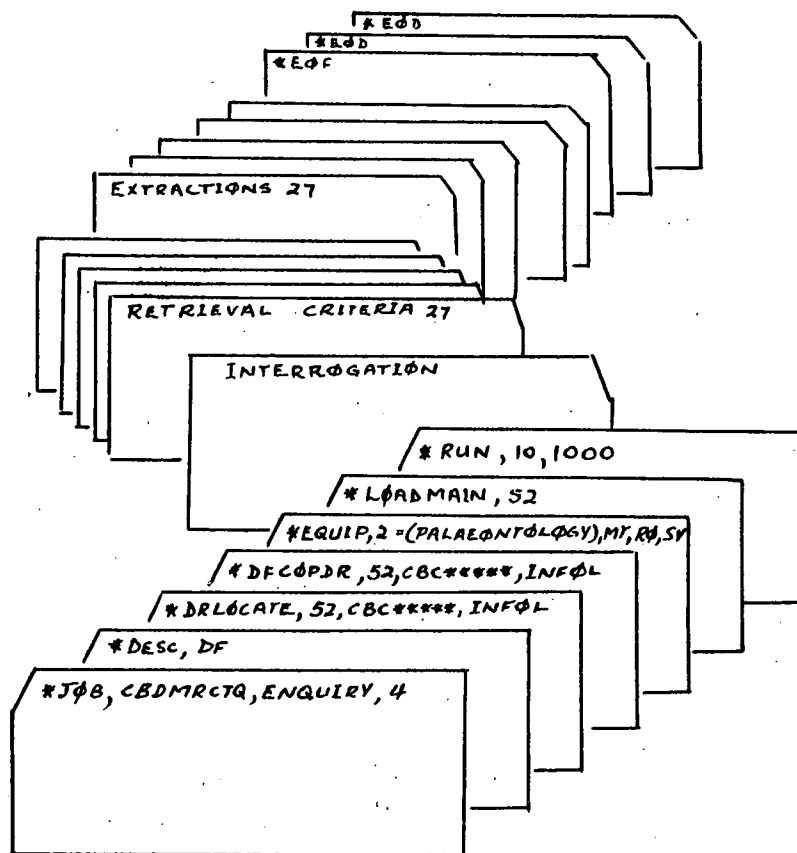


Figure 8: Structure of a card deck to interrogate a file.

TRIASSIC BIVALVIA OF MALAYSIA

AUTHOR ICHIKAWA, K. AND YIN, E.H.
YEAR 1966
TITLE AND REFERENCE DISCOVERY OF EARLY TRIASSIC BIVALVES FROM KELANTAN, MALAYA, J. GEOSCI. OSAKA CITY UNIV.
9, ART. 4-11, 101-106, PL. 2
GEOLOGICAL SUBJECT TAXA REDESCRIBED
GEOLOGICAL AGE 064 * 056
GEOGRAPHIC LOCATION 144

AUTHOR ICHIKAWA, K. YIN, E.H.
YEAR 1966
TITLE AND REFERENCE DISCOVERY OF EARLY TRIASSIC BIVALVES FROM KELAR TAN, MALAYA, J. GEOSCI. OSAKA CITY UNIV. 9 ART 4-2,
101-108
GEOLOGICAL SUBJECT TAXA REDESCRIBED
GEOLOGICAL AGE 056 * 054
GEOGRAPHIC LOCATION 144

AUTHOR COX, L.R.
YEAR 1936
TITLE AND REFERENCE ON A FOSSILIFEROUS UPPER TRIASSIC SHALE FROM PAHANG; FEDERATED MALAY STATES.
ANN. MAG. NAT. HIST. SER. 10(17), 213-221 1PL.
GEOLOGICAL SUBJECT TAXA REDESCRIBED
GEOLOGICAL AGE 056 * 057
GEOGRAPHIC LOCATION 144

AUTHOR KOBAYASHI, T.
YEAR 1963
TITLE AND REFERENCE ON THE TRIASSIC DADNELLA BEDS IN CENTRAL PAHANG, MALAYA. JAP. J. GEOL. GEOGR. 34(2-4), 101-112, PL. 5
GEOLOGICAL SUBJECT STRATIGRAPHY
GEOLOGICAL AGE 056
GEOGRAPHIC LOCATION 144

AUTHOR KOBAYASHI, T.
YEAR 1963
TITLE AND REFERENCE HALOBIA AND SOME OTHER FOSSILS FROM KEDAH, NORTHWEST MALAYA. JAP. J. GEOL. GEOGR. 34(2-4), 113-128, PL. 6
GEOLOGICAL SUBJECT TAXA REDESCRIBED
GEOLOGICAL AGE 056 * 066 * 075
GEOGRAPHIC LOCATION 144

Figure 9: Example of an INFOL report.

Extractions

This function of the system is initiated by a card on which is punched the word 'EXTRACTIONS' which may be followed by a number to be used for identification in error messages. The next card (Fig. 6) contains the information to be printed on the flyleaf; an asterisk is used to indicate the end of this information. A headline is printed on each page, on the line specified by the number which follows the word 'HEADLINE'. This number must be present, be less than 10, and must be separated from the headline by a blank space. An asterisk is used to indicate the end of the headline.

The following cards specify the numbers of those items which are to be printed out for each reference. The item numbers are enclosed in asterisks; and no reference is made to those items which are not required. In the example of figure 6, the coded number for the 5th item, the geological subject, is decoded and replaced by the name of the appropriate subject, which was specified at the time of the creation of the file.

System Cards

A number of system cards are required to initiate and control the computer job which retrieves the palaeontological references. These should be reproduced faithfully from the coding sheet in figure 7, and assembled with the parameter cards (Fig. 6) in the order shown in figure 8.

Output

An example of portion of a report is reproduced in figure 9.

APPENDIX A

ITEM 5 GEOLOGICAL SUBJECT

- 01 General geology: "Geology of ..."
- 02 Historical geology
- 03 Stratigraphy
- 04 Type sections, localities
- 05 Correlation
- 06 Boundary problems
- 07 Field mapping; cartography
- 08 Sedimentary structures, sedimentation
- 09 Structural geology, petrofabrics
- 10 Geomorphology; topography
- 11 Crystallography
- 12 Mineralogy & petrology
- 13 Vulcanology; earthquakes
- 14 Mineral prospecting; economic geology (ixcluding fuels)
- 15 Petroleum geology
- 16 Coal
- 17 Geophysics
- 18 Geochronology, age of a stratum or strata, general dating
- 19 Radiometric age determination
- 20 Palaeomagnetism
- 21 Palaeogeography; palaeoclimatology
- 22 Continental Drift
- 23 Glaciation
- 24 Eustatic sea level changes
- 25 Marine geology, oceanography
- 26 Hydrology; hydrogeology
- 27 Philosophy of palaeontology
- 28 Nomenclature -- application of ICZN Rules.
- 29 Classification; taxonomy
- 30 Morphology, morphological terminology, new terms, etc.
- 31 Descriptive palaeontology -- new taxa (species & genus groups)
- 32 Descriptive palaeontology -- known or un-named taxa (idem.)
- 33 Ontogeny
- 34 Variation in fossils; statistical methods & results
- 35 Palaeoecology; ecology
- 36 Laboratory or field studies of living forms -- i.e. biological processes
etc.
- 37 Palaeontological laboratory techniques
- 38 Origin of life
- 39 Evolution
- 40 Phylogeny; relationships between taxa.
- 41 Stratigraphic ranges of fossils
- 42 "On the age of ..." (a taxon)
- 43 Revision of taxa
- 44 Bibliographies, keys, synopses
- 45 Monographs of faunas
- 46 Oceanic environment
- 47 Obituaries
- 48 Fossil lists
- 49 Reviews
- 50 Micro structures of fossils
- 51 Others

ITEM 6 PALAEONTOLOGICAL TAXA

30.VII.1967

Until such time as the following groups are fully coded,
references to them can be placed under code 'names' as shown:

- GEN1 Diatoms, coccoliths, etc.
- GEN2 Bryozoa
- GEN3 Brachiopoda
- GEN4 Echinodermata
- GEN5 Gastropoda
- GEN6 Coleoidea (dibranchiate cephalopods)
- GEN7 Trilobitomorpha
- GEN8 Crustacea, Myriapoda, Hexapoda, etc. (excl. Ostracods)
- GEN9 Conodonts
- GEN0 Trace fossils, problematica, etc.
- GEN11 Vertebrates
- GEN12 Floras (microfloras)
- GEN13 " (macrofloras)
- GEN14 Annelids and other worms
- GEN15 RUDISTIDS
- GEN16 Non marine mollusks
- GEN17 Insecta

PROTISTA:1
Rhizopodea

FIELD B -- TAXA

- 0001 Phylum PROTISTA
- 0002 Subphylum SARCODINA
- 0003 Class RHIZOPODEA
- 0004 Order AMOEBIDA
- 0005 Superfamily PELOMYXACEA
- 0006 Family Pelomyxidae
- 0007 Thecamoebidae
- 0008 Hyalodiscidae
- 0009 Hartmannellidae
- 0010 Chaetoproteidae
- 0011 Entamoebidae
- 0012 Pansporellidae
- 0013 Superfamily TETRAMITACEA
- 0014 Family Tetramitidae
- 0015 Mastigamoibidae
- 0016 Paramoebidae
- 0017 Order MYCETOZOIDA
- 0018 Suborder SOROPHORINA
- 0019 Family Sappiniidae
- 0020 Pocheiniidae
- 0021 Dictyostelliidae
- 0022 Suborder PLASMIDIOPHORINA
- 0023 Family Plasmodiophoridae
- 0024 Suborder EUMYCETOZOINA
- 0025 Superfamily CERATIOMYXACEA
- 0026 Family Ceratiomyxidae
- 0027 Superfamily STEMONITACEA
- 0028 Family Physaridae
- 0029 Stemonitidae
- 0030 Superfamily TRICHIACEA
- 0031 Family Liceidae
- 0032 Trichiidae
- 0033 Order ARCELLINIDA
- 0034 Superfamily ARCELLACEA
- 0035 Family Cochliopodiidae
- 0036 Microcoryciidae
- 0037 Arcellidae
- 0038 Centropyxidae
- 0039 Plagiopyxidae
- 0040 Trigonopyxidae
- 0041 Hyalospheniidae
- 0042 Paraquadrulidae
- 0043 Diffugiidae
- 0044 Superfamily CRYPTODIFFLUGIACEA
- 0045 Family Cryptodiffugiidae
- 0046 Phryganellidae

PROTISTA: 2
 Reticularia: 1
 (Foraminiferida: 1)

- 0045 Class RETICULAREA
- 0046 Subclass FILOSIA
- 0047 Order ACONCHULINIDA
 - Family Penardiidae
- 0048 Order GROMIDA
 - 0049 Superfamily GROMIACEA
 - 0050 Family Gromiidae
 - 0051 Amphitrematidae
 - 0052 Superfamily EUGLYPHACEA
 - 0053 Family Euglyphidae
 - 0054 Cyphoderiidae
 - 0055 Paulinellidae
- 0056 Subclass GRANULORETICULOSIA
 - Order ATHALAMIDA
 - Family Biomyxidae
 - 0057 Order FORAMINIFERIDA
 - 0058 Suborder ALLOGROMIINA
 - 0059 Superfamily LAGYNACEA
 - 0060 Family Lagynidae
 - 0061 Allogromiidae
 - 0062 Suborder TEXTULARIINA
 - 0063 Superfamily AMMODISCACEA
 - 0064 Family Astrorhizidae
 - 0065 Schizamminidae
 - 0066 Saccamminidae
 - 0067 Ammodiscidae
 - 0068 Superfamily LITUOLACEA
 - 0069 Family Hormosinidae
 - 0070 Nouridae
 - 0071 Rzehakinidae
 - 0072 Lituolidae
 - 0073 Textulariidae
 - 0074 Trochamminidae
 - 0075 Ataxophragmiidae
 - 0076 Pavonitidae
 - 0077 Dicyclinidae
 - 0078 Orbitolinidae
 - 0079 Suborder FUSULININA
 - 0080 Superfamily PARATHURAMMINACEA
 - 0081 Family Parathuramminidae
 - 0082 Caligellidae
 - 0083 Moravamminidae
 - 0084 Superfamily ENDOTHYRACEA
 - 0085 Family Nodosinellidae
 - 0086 Colahiellidae
 - 0087 Ptychocladidae
 - 0088 Palaeotextulariidae
 - 0089 Semitextulariidae
 - 0090 Tetrataxidae
 - 0091 Biseriamminidae
 - 0092 Tournayellidae
 - 0093 Endothyridae
 - 0094 Archaeodiscidae
 - 0095 Lasiodiscidae

0096	Superfamily FUSULINACEA
0097	Family Ozawainellidae
0098	Staffellidae
0099	Fusulinidae
0100	Verbeekinae
0101	Suborder MILIOLINA
0102	Superfamily MILIOLACEA
0103	Family Squamulinidae
0104	Fischerinidae
0105	Nubeculariidae
0106	Miliolidae
0107	Barkerinidae
0108	Soritidae
0109	Alveolinidae
0110	Suborder ROTALIINA
0111	Superfamily NODOSARIACEA
0112	Family Nodosariidae
0113	Polymorphinidae
0114	Glanulinidae
0115	Superfamily BULIMINACEA
0116	Family Turritinidae
0117	Sphaeroidinidae
0118	Bolivinitidae
0119	Islandiellidae
0120	Eouvigerinidae
0121	Buliminidae
0122	Uvigerinidae
0123	Superfamily DISCORBACEA
0124	Family Discorbidae
0125	Glabratellidae
0126	Siphoninidae
0127	Asterigerinidae
0128	Epistomariidae
0129	Superfamily SPIRILLINACEA
0130	Family Spirillinidae
0131	Rotaliellidae
0132	Superfamily ROTALIACEA
0133	Family Rotaliidae
0134	Calcarinidae
0135	Elphidiidae
0136	Nummulitidae
0137	Miogypsinidae
0138	Superfamily GLOBIGERINACEA
0139	Family Heterohellicidae
0140	Planomalinidae
0141	Schackoinidae
0142	Rotaliporidae
0143	Globotruncanidae
0144	Hantkeninidae
0145	Globorotaliidae
0146	Globigerinidae

PROTISTA: 4
 Reticularia: 3
 (Foraminiferida: 3)
 Actinopoda: 1
 (Heliozoa)
 (Radiolaria: 1)

- 0147 Superfamily ORBITOIDACEA
- 0148 Family Eponididae
- 0149 Amphisteginidae
- 0150 Cibicididae
- 0151 Planorbulinidae
- 0152 Acervulinidae
- 0153 Cymbaloporidae
- 0154 Homotrematidae
- 0155 Orbitoididae
- 0156 Discocyclinidae
- 0157 Lepidocyclinidae
- 0158 Pseudorbitoididae
- 0159 Superfamily CASSIDULINACEA
- 0160 Family Pleurostomellidae
- 0161 Annulopatellinidae
- 0162 Caucasinidae
- 0163 Delosinidae
- 0164 Loxostomidae
- 0165 Cassidulinidae
- 0166 Tremachoridae
- 0167 Involutinidae
- 0168 Nonionidae
- 0169 Alabaminidae
- 0170 Osangulariidae
- 0171 Anomalinidae
- 0172 Superfamily CARTERINACEA
- Family Carterinidae
- 0173 Superfamily ROBERTINACEA
- 0174 Family Ceratobuliminidae
- 0175 Robertinidae
- 0176 Class ACTINOPODA
- 0177 Subclass HELIOZOA
- 0178 Order ACTINOPHRYDEA
- 0179 " CENTROHELIDIA
- 0180 " DESMOTHORACA
- 0181 " HELIOFLAGELLIDA
- 0182 Subclass RADIOLARIA
- 0183 Order PORULOSIDA
- 0184 Suborder ACANTHARINA
- 0185 Division ASTROLOPHI
- 0186 Superfamily ASTROLOPHICAE
- 0187 Family Astrolophidae
- 0188 Litholophidae
- 0189 Acanthochiasmatidae
- 0190 Superfamily ACTINASTRICAE
- 0191 Family Actinastridae
- 0192 Rosettidae
- 0193 Trizonidae
- 0194 Superfamily ASTROLONCHICAE
- 0195 Family Astrolonchidae
- 0196 Acanthostrauridae
- 0197 Acantholonchidae
- 0198 Division ACANTHOPHRACTI
- 0199 Superfamily DORATASPIDICAE
- 0200 Family Dorataspididae
- 0201 Astrocapsidae
- 0202 Aspidommatidae

0203	Superfamily BELONASPIDICAE
0204	Family Belonaspidae
0205	Hexalaspidae
0206	Diploconidae
0207	Suborder SPEMELLINA
0208	Division COLLODARI
0209	Superfamily THALASSICOLICAE
0210	Family Thalassicolidae
0211	Cristallosphaeridae
0212	Collozoidae
0213	Superfamily THALASSOSPHAERICAE
0214	Family Thalassosphaeridae
0215	Sphaeroidae
0216	Meyenellidae
0217	Thalassothamnidae
0218	Lithacanthidae
0219	Superfamily OROSPHAERICAE
	Family Orosphaeridae
0220	Division SPHAERELIARI
0221	Superfamily LIOSPHAERICAE
0222	Family Liosphaeridae
0223	Protosphaeridae
0224	Collosphaeridae
0225	Dorysphaeridae
0226	Stylosphaeridae
0227	Triplosphaeridae
0228	Staurosphaeridae
0229	Pentasphaeridae
0230	Cubosphaeridae
0231	Astrosphaeridae
0232	Dactyliosphaeridae
0233	Superfamily ELLIPSIDIICAE
0234	Family Ellipsidiidae
0235	Druppulidae
0236	Sponguridae
0237	Artiscidae
0238	Cyphantidae
0239	Panartidae
0240	Zygartidae
0241	Superfamily CENODISCICAE
0242	Family Cenodiscidae
0243	Phacodiscidae
0244	Coccodiscidae
0245	Euchitoniidae
0246	Pylodiscidae
0247	Spongodiscidae
0248	Superfamily LARACARIICAE
0249	Family Laracariidae
0250	Larnacillidae
0251	Pyloniidae
0252	Tholomiidae
0253	Zonariidae
0254	Litheliidae
0255	Strebloniidae
0256	Phorticidae
0257	Soreumatidae

- 0258 Order OSCULOSIDA
- 0259 Suborder MASSELINA
- 0260 Division PLECTELLARI
- 0261 Superfamily CYSTIDIICAE
 - Family Cystidiidae
- 0262 Superfamily PLAGONIICAE
 - 0263 Family Plagoniidae
 - 0264 Plectaniidae
- 0265 Superfamily STEPHANIICAE
 - 0266 Family Stephaniidae
 - 0267 Cyrtostephanidae
 - 0268 Semantididae
 - 0269 Acanthodesmiidae
 - 0270 Paratympnidae
- 0271 Division CYRTELLARI
- 0272 Superfamily TRIOSPYRIDICAE
 - 0273 Family Triospyrididae
 - 0274 Tholospyrididae
 - 0275 Phormospyrididae
 - 0276 Androsphyrididae
- 0277 Superfamily ARCHIPILIICAE
 - 0278 Family Archipiliidae
 - 0279 Archiphormididae
 - 0280 Archicorythidae
 - 0281 Sethopiliidae
 - 0282 Sethophormididae
 - 0283 Lophophaenidae
 - 0284 Theopiliidae
 - 0285 Theophormididae
 - 0286 Theocorythidae
 - 0287 Triacartidae
 - 0288 Artophormididae
 - 0289 Stichocorythidae
- 0290 Superfamily CANNOBOTRYDICAE
 - 0291 Family Cannobotrydidae
 - 0292 Glycobotrydidae
 - 0293 Pylobotrydidae
- 0294 Suborder PHAEODARINA
- 0295 Superfamily PHAEODINICAE
 - 0296 Family Phaeodinidae
 - 0297 Caementellidae
 - 0298 Cannorrhaphididae
 - 0299 Aulacanthidae
 - 0300 Astracanthidae
- 0301 Superfamily AULOSPHAERICAE
 - 0302 Family Sagosphaeridae
 - 0303 Aulosphaeridae
 - 0304 Cannosphaeridae
- 0305 Superfamily CHALLENGERIICAE
 - 0306 Family Challengeriidae
 - 0307 Cadiidae
 - 0308 Medusettidae
 - 0309 Porospathididae
 - 0310 Atlanticellidae
 - 0311 Castanellidae
 - 0312 Circoporidae
 - 0313 Tuscadoridae

PROTISTA: 7
 Actinopoda: 4
 (Radiolaria: 4)
 Ciliata
 Suctoria

- 0314 Superfamily CONCHARIICAE
 - Family Conchariidae
- 0315 Superfamily COELODENDRICAE
 - 0316 Family Coelodendridae
 - 0317 Coelographididae
- 0318 Subphylum SPOROZOA
- 0319 " CILIOPHORA
- 0320 Class CILIATA
 - 0321 Subclass PROTOCILIATA
 - 0322 " EUCILIATA
 - 0323 Order HOLOTRICHIDA
 - 0324 " PERITRICHIDA
 - 0325 " CHONOTRICHIDA
 - 0326 " SPIROTRICHIDA
 - 0327 Suborder HETEROTRICHINA
 - 0328 " OLIGOTRICHINA
 - 0329 " TINTINNINA
 - 0330 Family Tintinnidiidae
 - 0331 Codonellidae
 - 0332 Codonellopsidae
 - 0333 Dictyocystidae
 - 0334 Coxliellidae
 - 0335 Cyttarocylididae
 - 0336 Ptychocylididae
 - 0337 Epiplocylididae
 - 0338 Petalotrichidae
 - 0339 Rhabdonnellidae
 - 0340 Xystonellidae
 - 0341 Undellidae
 - 0342 Tintinnidae
 - 0343 Suborder ENTODINIOMORPHINA
 - 0344 " HYPOTRICHINA
 - 0345 " CTENOSTOMINA
- 0346 Class SUCTORIA

ARCHAEOCYATHA: 1
 PORIFERA: 1
 Desmospongia: 1

- 0347 Phylum ARCHAEOCYATHA
- 0348 Class MONOCYATHEA
- 0349 Order MONOCYATHIDA
- 0350 Family Monocyathidae
- 0351 Rhizacyathidae
- 0352 Order ARCHAEOPHYLLIDA
- Family Archaeophyllidae
- 0353 Class ARCHAEOCYATHEA
- 0354 Order AJACICYATHIDA
- 0355 Family Ajacicyathidae
- 0356 Dictyocyathidae
- 0357 Bicyathidae
- 0358 Ethmophyllidae
- 0359 Coscinocyathidae
- 0360 Order METACYATHIDA
- 0361 Family Archaeocyathidae
- 0362 Pycnoidocyathidae
- 0363 Metacoscinidae
- 0364 Order ACANTHINOCYATHIDA
- Family Acanthinocyathidae
- 0365 Order HETAIRACYATHIDA
- Family Radiocyathidae
- 0366 Order SYRINGOCNEMIDA
- Family Syringocnemidae
- 0367 Class ANTHOCYATHEA
- 0368 Order ANTHOMORPHIDA
- Family Anthomorphidae
- 0369 Order SOMPHOCYATHIDA
- Family Somphocyathidae
- 0370 Phylum PORIFERA
- 0371 Class DESMOSPONGEA
- 0372 Order KERATOSIDA
- 0373 Family Spongiidae
- 0374 Dysideidae
- 0375 Order HAPLOSCLERIDA
- 0376 Family Spongillidae
- 0377 Haliclonidae
- 0378 Desmacidontidae
- 0379 haplistiidae
- 0380 Wapkiidae
- 0381 Hazeliidae
- 0382 Takakkawiidae
- 0383 Order POECILOSCLERIDA
- 0384 Family Myxillidae
- 0385 Tedaniidae
- 0386 Cladorhizidae
- 0387 Amphilectidae
- 0388 Hamptoniidae
- 0389 Acarniidae

- 0390 Order HADROMERIDA
- 0391 Family Spirastrellidae
- 0392 Suberitidae
- 0393 Piraniidae
- 0394 Clionidae
- 0395 Order EPIPOLASIDA
- 0396 Family Sollasellidae
- 0397 Corralloidae
- 0398 Choiidae
- 0399 Tethyidae
- 0400 Order CHORISTIDA
- 0401 Family Ancorinidae
- 0402 Geodiidae
- 0403 Craniellidae
- 0404 Scolioraphididae
- 0405 Ophiraphiditidae
- 0406 Order CARNOSIDA
- 0407 Family Halinidae
- 0408 Order LITHISTIDA
- 0409 Suborder RHIZOMORINA
- 0409 Family Kaliapsidae
- 0410 Scytaliidae
- 0411 Chonellidae
- 0412 Astroboliidae
- 0413 Cnemidiastridae
- 0414 Jereopsiidae
- 0415 Leiodorellidae
- 0416 Plinthodermatiidae
- 0417 Neopeltidae
- 0418 Scleritodermatidae
- 0419 Suborder MEGAMORINA
- 0420 Family Pleromidae
- 0421 Dorydermatidae
- 0422 Helobrachiidae
- 0423 Isoraphiniidae
- 0424 Suborder TETRACLADINA
- 0425 Family Aulocopiidae
- 0426 Archaeoscyphiidae
- 0427 Chenendoporidae
- 0428 Hallirhoidae
- 0429 Plinthosellidae
- 0430 Astrocladiidae
- 0431 Aulaxiniidae
- 0432 Jereidae
- 0433 Discodermiidae
- 0434 Phymaraphiniidae
- 0435 Suborder EUTAXICLADINA
- 0436 Family Astylospongiidae
- 0437 Gignouxiidae
- 0438 Chiastoclonellidae
- 0439 Pseudoverruculinidae
- 0440 Suborder ANOMOCLADINA
- 0441 Family Cyliodrophymatidae
- 0442 Eospongiidae
- 0443 Mastosiidae

- 0444 Class HYALOSPONGEA
 0445 Order LYSSAKIDA
 0446 Family Hyalonematidae
 0447 Pheronematidae
 0448 Euplectellidae
 0449 Sympagellidae
 0450 Lanuginellidae
 0451 Stauractinellidae
 0452 Protospongiidae
 0453 Leptomitidae
 0454 Teganiidae
 0455 Holasterellidae
 0456 Dictyospongiidae
 0457 Uphantenidae
 0458 Brachiospongiidae
 0459 Multivasculatidae
 0460 Vauxiidae
 0461 Amphispongiidae
 0462 Titusvilliidae
 0463 Order DICTYIDA
 0464 Family Euryplegmatidae
 0465 Hexactinellidae
 0466 Eubrochididae
 0467 Staruodermatidae
 0468 Leptophragmatidae
 0469 Emplocidae
 0470 Polythyrididae
 0471 Polystigmatiidae
 0472 Pleurostomatidae
 0473 Porospongiidae
 0474 Myliusiidae
 0475 Botryosellidae
 0476 Euretidae
 0477 Dactylocalycidae
 0478 Aphrocallistidae
 0479 Wapkiosidae
 0480 Order LYCHNISKIDA
 0481 Family Ventriculitidae
 0482 Coeloscyphiidae
 0483 Polyblastidiidae
 0484 Camerospongiidae
 0485 Coeloptychiidae
 0486 Cypelliidae
 0487 Oncotoechidae
 0488 Callodictyidae
 0489 Coscinoporidae
 0490 Becksidae
 0491 Calyptrellidae
 0492 Order HETERACTINIDA
 0493 Family Chancelloriidae
 0494 Astreaospongiidae
 0495 Asteractinellidae
 0496 Class CALCISPONGEA
 0497 Order SOLENIDA
 Family Camarocladiidae
 0498 Order LEBETIDA
 0499 Family Grantiidae
 0500 Leuconiidae

0501	Order PHARETRONIDA
0502	Suborder CHALARINA
0503	Family Sestrostomellidae
0504	Stellispongiidae
0505	Elasmostomatidae
0506	Pharetrospongiidae
0507	Lelapiidae
0508	Discocoeliidae
0509	Elasmocoeliidae
0510	Suborder STEREINA
0511	Family Porosphaeridae
0512	Bactronellidae
0513	Order THALAMIDA
0514	Family Sebargasiidae
0515	Barroisiidae
0516	Cystothalamiidae
0517	Celyphiidae
0518	Cryptocoeliidae
0519	Sphaerocoeliidae

- 0520 Phylum COELENTERATA
- 0521 Subphylum CNIDARIA
- 0522 Class PROTOMEDUSAE
 - Order BROOKSELLIDA
 - Family Brooksellidae
- 0523 Class DIPLEUROZOA
 - Order DICKINSONIIDA
 - Family Dickinsoniidae
- 0524 Class SCYPHOZOA
- 0525 Subclass SCYPHOMEDUSAE
- 0526 Order STAUROMEDUSIDA
 - Family Tesseranthidae
 - 0528 Eleutherocarpidae
 - 0529 Cleistocarpidae
- 0530 Order CARYBDEIDA
 - Family Carybdeidae
- 0531 Order CORONATIDA
 - Family Periphyllidae
 - 0533 Ephyridae
 - 0534 Atorellidae
 - 0535 Collaspididae
- 0536 Order SEMAEOSTOMATIDA
 - Family Pelagiidae
 - 0538 Cyaneidae
 - 0539 Ulmariidae
 - 0540 Semaestomitidae?
 - 0541 Eulithotidae?
- 0542 Order LITHORHIZOSTOMATIDA
 - Family Thizostomitidae
- 0543 Order RHIZOSTOMATIDA
 - Family Cassiopeidae
 - 0545 Cepheidae
 - 0546 Catostylidae
 - 0547 Leptobrachiidae
 - 0548 Rhizostomatidae
 - 0549 Archirhizidae
- 0550 SCYPHOMEDUSAE incertae sedis
- 0551 Subclass CONULATA
- 0552 Order CONULARIIDA
 - Suborder CONCHOPELTINA
 - Family Conchopeltidae
 - Suborder CONULARIINA
 - Family Conulariellidae
 - 0556 Conulariidae
 - 0557 Conulariopsidae
- 0558 Class HYDROZOA
- 0559 Order TRACHYLINIDA
 - Suborder TRACHYMEDUSINA
 - Family Olindiadidae
 - 0562 Petasidae
 - 0563 Limnocythidae
 - 0564 Pectyllididae
 - 0565 Kirklandiidae
 - 0566 Trachynematidae
 - 0567 Geryoniidae

Protomedusae
 Dipleurozoa
 Scyphozoa
 (Scyphomedusae)
 (Conulata)
 Hydrozoa: 1

- 0568 Suborder NARCOMEDUSINA
- 0569 Family Solmariidae
- 0570 Cuninidae
- 0571 Aeginidae
- 0572 TRACHYLINIDA incerta sedis
- 0573 Order HYDROIDA
- 0574 Suborder GYMNOBLASTINA
- 0575 Family Hydractiniidae
- 0576 Sarsiidae
- 0577 Cladonematidae
- 0578 Oceanidae
- 0579 Suborder CALYPTOBLASTINA
- 0580 Family Thaumantiadidae
- 0581 Eucopidae
- 0582 Aequoreidae
- 0583 CALYPTOBLASTINA incertae sedis
- 0584 HYDROIDA incertae sedis
- 0585 Order SPONGIOMORPHIDA
- Family Spongiomorphidae
- 0586 Order MILLEPORINA
- 0587 Family Milleporidae
- 0588 Axoporidae
- 0589 Order STYLAETERINA
- Family Stylasteridae
- 0590 Order STROMATOPOROIDEA
- 0591 Family Actinostromatidae
- 0592 Clathrodictyidae
- 0593 Stromatoporellidae
- 0594 Syringostromatidae
- 0595 Stromatoporidae
- 0596 Disjeotoporidae
- 0597 Milleporellidae
- 0598 Milleporidiidae
- 0599 Labechiidae
- 0600 Aulaceridae
- 0601 STROMATOPOROIDEA incertae sedis
- 0602 Order SIPHONOPHORIDA
- 0603 Suborder CALYCOPHORINA
- 0604 Family Sphaeronektidae
- 0605 Diphyidae
- 0606 Prayidae
- 0607 Hippopodiidae
- 0608 Suborder PHYSOPHORINA
- 0609 Family Forsakaliidae
- 0610 Agalmatidae
- 0611 Physophoridae
- 0612 Anthophysidae
- 0613 Rhodaliidae
- 0614 Suborder RHIZOPHYSALIINA
- 0615 Family Rhizophysidae
- 0616 Physaliidae
- 0617 Suborder CHONDROPHORINA
- 0618 Family Velellidae
- 0619 Porpitidae
- 0620 HYDROZOAN MEDUSAE incertae sedis

COELENTERATA: 3
 Anthozoa: 1
 (Ceriantipatheria)
 (Octocorallia: 1)

- 0621 Class ANTHOZOA
- 0622 Subclass CERIANTIPATHARIA
- 0623 Order ANTIPATHARIA
- 0624 " CERIANTHARIA
- 0625 Subclass OCTOCORALLIA
- 0626 Order STOLONIFERA
- 0627 Family Cornulariidae
- 0628 Clavulariidae
- 0629 Tubiporidae
- 0630 Order TELESTACEA
- 0631 Family Telestidae
- 0632 Pseudocladochonidae
- 0633 Order ALCYONACEA
- 0634 Family Alcyoniidae
- 0635 Astrospiculariidae
- 0636 Nephtheidae
- 0637 Siphonogorgiidae
- 0638 Vigueriidae
- 0639 Xeniidae
- 0640 Order TRACHYPSAMMIACEA
- Family Trachypsammiidae
- 0641 Order COENOTHECALIA
- 0642 Family Helioporidae
- 0643 Ceratoporellidae
- 0644 Order GORGONACEA
- 0645 Suborder SCLERAXONIA
- 0646 Family Briareidae
- 0647 Anthothelidae
- 0648 Subergorgiidae
- 0649 Paragorgiidae
- 0650 Coralliidae
- 0651 Melithaeidae
- 0652 Parisididae
- 0653 Suborder HOLAXONIA
- 0654 Family Keroedidae
- 0655 Acanthogorgiidae
- 0656 Paramuriceidae
- 0657 Plexauridae
- 0658 Gorgoniidae
- 0659 Ellisellidae
- 0660 Ifalukellidae
- 0661 Chrysogorgiidae
- 0662 Primnoidae
- 0663 Ainigmaptilidae
- 0664 Isididae
- 0665 Order PENNATULACEA
- 0666 Suborder SESSILIFLORAE
- 0667 Family Veretillidae
- 0668 Echinoptilidae
- 0669 Renillidae
- 0670 Kophobelemnidae
- 0671 Anthoptilidae
- 0672 Funiculinidae
- 0673 Protoptilidae
- 0674 Stachyptilidae
- 0675 Scleroptilidae
- 0676 Chunellidae
- 0677 Umbellulidae

Anthoza: 2

(Octocorallia: 2)

(Zoantharia: 1)

[RUGOSA]

[SCLERACTINIA: 1]

- 0678 Suborder SUBSELLIFLORAE
- 0679 Family Virgulariidae
- 0680 Pennatulidae
- 0681 Pteroeididae
- 0682 GORGONACEA incertae sedis
- 0683 Subclass ZOANTHARIA
- 0684 Order ZOANTHINIARIA
- 0685 " CORALLIMORPHARIA
- 9686 " ACTINARIA
- 0687 " RUGOSA
- 0688 Suborder STREPTELASMATINA
- 0689 Superfamily CYATHAXONIIICAE
- 0690 Family Metriophyllidae
- 0691 Laccophyllidae
- 0692 Petraiidae
- 0693 Polycoeliidae
- 0694 Hadrophyllidae
- 0695 Cyathaxoniidae
- 0696 Amplexidae
- 0697 Lophopyllidiidae
- 0698 Timorphyllidae
- 0699 Hapsiphyllidae
- 0700 Superfamily ZAPHRENTICAE
- 0701 Family Streptelasmataidae
- 0702 Halliidae
- 0703 Arachnophyllidae
- 0704 Acervulariidae
- 0705 Mycophyllidae
- 0706 Cyathophyllidae (= Zaphrentidae)
- 0707 Disphyllidae
- 0708 Phillipsastraeidae (=Phacellophyllidae)
- 0709 Craspedophyllidae
- 0710 Lithostrotionidae
- 0711 Aulophyllidae
- 0712 Durhaminiidae
- 0713 Cyathopsidae
- 0714 Calostylidae? (ZAPHRENTICAE?)
- 0715 Suborder COLUMNARIINA
- 0716 Family Stauriidae
- 0717 Spongophyllidae
- 0718 Chonophyllidae
- 0719 Ptenophyllidae
- 0720 Stringophyllidae
- 0721 Lonsdaleiidae
- 0722 Waagenophyllidae
- 0723 Suborder CYSTIPHYLLINA
- 0724 Family Tryplasmataidae
- 0725 Cystiphyllidae
- 0726 Goniophyllidae
- 0727 Digonophyllidae
- 0728 RUGOSA incertae sedis
- 0729 Order HETEROCORALLIA
- Family Heterophyllidae
- 0730 Order SCLERACTINIA
- 0731 Suborder ASTROCOENIINA
- 0732 Family Astrocoeniidae
- 0733 Thamnasteriidae
- 0734 Pocilloporidae
- 0735 Acroporidae
- 0736 Stylinidae

- 0737 Suborder FUNGIINA
- 0738 Superfamily AGARICIICAE
- 0739 Family Procyclolitiidae
- 0740 Calamaphylliidae
- 0741 Argariciidae
- 0742 Siderastreidae
- 0743 Superfamily FUNCIICAE
- 0744 Family Synastreidae
- 0745 Cyclotidae
- 0746 Haplaraeidae
- 0747 Fungiidae
- 0748 Microbaciidae
- 0749 Superfamily PORITICAE
- 0750 Family Microsolenidae
- 0751 Actinacididae
- 0752 Poritidae
- 0753 Suborder FAVIINA
- 0754 Superfamily STYLOPHYLLICAE
- 0755 Family Stylophyllidae
- 0756 Amphiastreidae
- 0757 Superfamily FAVIICAE
- 0758 Family Montlivaltiidae
- 0759 Faviidae
- 0760 Rhizangiidae
- 0761 Oculinidae
- 0762 Meandrinidae
- 0763 Merulinidae
- 0764 Mussidae
- 0765 Pectiniidae
- 0766 Anthemiphyllidae
- 0767 Suborder CARYOPHYLLIINA
- 0768 Superfamily CARYOPHYLLICAE
- 0769 Family Caryophylliidae
- 0770 Rhipidogyridae
- 0771 Superfamily FLABELLICAE
- 0772 Family Flabellidae
- 0773 Guyniidae
- 0774 Suborder DENDROPHYLLIINA
- Family Dendrophyllidae
- 0775 SCLERACTINIA incertae sedis
- 0776 Order TABULATA
- 0777 Suborder FAVOSITINA
- 0778 Superfamily FAVOSITACEA
- 0779 Family Theciidae
- 0780 Favositidae
- 0781 Syringolitidae
- 0782 Micheliniidae
- 0783 Cleistoporidae
- 0784 Palaeacidae
- 0785 Superfamily THAMNOPORACEA
- 0786 Family Pachyporidae
- 0787 Trachyporidae
- 0788 Trachypsammiidae
- 0789 Superfamily ALVEOLITACEA
- 0790 Family Alveolitidae
- 0791 Coenitidae

- 0792 Suborder SYRINGOPORINA
- 0793 Family Syringoporidae
- 0794 Multithecoporidae
- 0795 Tetraporellidae
- 0796 Thecostegitidae
- 0797 Suborder SARCINULINA
- 0798 Family Syringophyllidae
- 0799 Calapoeciidae
- 0800 Suborder AULOPORINA
- 0801 Family Auloporidae
- 0802 Moniloporidae
- 0803 Auloheliidae
- 0804 Romingeriidae
- 0805 Aulocystidae
- 0806 Sinoporidae
- 0807 Fletcheriidae (?)
- 0808 Suborder LICHENARIINA
- 0809 Family Lichenariidae
- 0810 Billingsariidae
- 0811 Lyoporidae
- 0812 Suborder TETRADIINA
- Family Tetradiidae
- 0813 Suborder HALYSITIDINA
- 0814 Family Halysitidae
- 0815 Hexismiidae
- 0816 TABULATA incertae sedis
- 0817 Order HELIOLITIDA
- 0818 Superfamily PROTARAEACEA
- 0819 Family Coccoserididae
- 0820 Palaeoporitidae
- 0821 Pycnolithidae
- 0822 Superfamily HELIOLITACEA
- 0823 Family Heliolitidae
- 0824 Plasmoporidae
- 0825 Cyrtophyllidae
- 0826 Superfamily PROPORACEA
- 0827 Family Proporidae
- 0828 Proheliolitidae
- 0829 HELIOLITIDA incertae sedis
- 0830 ORDER & SUBORDER uncertain : Family Chaetetidae
- 0831 ZOANTHARIA incertae sedis
- 0832 Subphylum OTENOPHORA
- 0833 COELENTERATA incertae sedis

- 0834 Phylum MOLLUSCA
- 0835 Class SCAPHOPODA
- 0836 Family Dentaliidae
- 0837 Siphonodentaliidae
- 0838 SCAPHOPODA incertae sedis
- 0839 Class AMPHINEURA
- 0840 Subclass POLYPLACOPHORA
- 0841 Order PALEOLORICATA
- 0842 Suborder CHELODINA
- 0843 Family Chelodidae
- 0844 Gotlandochitonidae
- 0845 Scanochitonidae
- 0846 Suborder SEPTEMCHITONINA
- Family Septemchitonidae
- 0847 Order NEOLORICATA
- 0848 Suborder LEPIDOPLEURINA
- 0849 Family Lepidopleuridae
- 0850 Hanleyidae
- 0851 Chorioplacidae
- 0852 Suborder ISCHNOCHITONINA
- 0853 Family Subterenchitonidae
- 0854 Ischnochitonidae
- 0855 Schizoplacidae
- 0856 Callochitonidae
- 0857 Callistoplacidae
- 0858 Chaetipleuridae
- 0859 Mopaliidae
- 0860 Schizochitonidae
- 0861 Chitonidae
- 0862 Suborder ACANTHOCHITONINA
- Family Acanthochitonidae
- 0863 Suborder AFOSSOCHITONINA
- Family Afossochitonidae
- 0864 Suborder uncertain -- Family Llandeiloichitonidae
- 0865 NEOLORICATA incertae sedis
- 0866 Subclass APLACOPHORA
- 0867 Order NEOMENIIDA
- 0868 Family Neomeniida
- 0869 Proneomeniidae
- 0870 Lepidomeniidae
- 0871 Gymnomeniidae
- 0872 Order CHAETODERMATIDA
- Family Chaetodermatidae
- 0873 Class MONOPLACOPHORA
- 0874 Order TRYBLIDIOIDEA
- 0875 Superfamily TRYBLIDIACEA
- 0876 Family Palaeacmaeidae
- 0877 Tryblidiidae
- 0878 Superfamily CYRTONELLACEA
- Family Cyrtionellidae
- 0879 TRYBLIDIOIDEA?, incertae sedis
- 0880 Order ARCHINACELLOIDEA
- 0881 Superfamily ARCHINACELLACEA
- 0882 Family Archinacellidae
- 0883 Hyseloconidae (?)
- 0884 Order CAMBRIDIOIDEA (?)
- Superfamily CAMBRIDIACEA
- Family Cambridiidae

- 0885 Class CEPHALOPODA
- 0886 Subclass AMMONOIDEA
- 0887 Order AMMONOIDEA
- 0888 Suborder ANARCESTINA
- 0889 Superfamily ANARCESTACEA
- 0890 Family Mimoceratidae
- 0891 Agoniatitidae
- 0892 Anarcestidae
- 0893 Superfamily PROLOBITACEA
- Family Prolobitidae
- 0894 Superfamily PHARCICERATACEA
- 0895 Family Gephuroceratidae
- 0896 Pharciceratidae
- 0897 Beloceratidae
- 0898 Suborder CLYMENIINA
- 0899 Superfamily GONIOCLYMENTIACEA
- 0900 Family Hexaclymeniidae
- 0901 Acanthoclymeniidae
- 0902 Gonioclymeniidae
- 0903 Wocklumeriidae
- 0904 Glatziellidae
- 0905 Superfamily CLYMENIACEA
- 0906 Family Clymeniidae
- 0907 Cyrtoclymeniidae
- 0908 Rectoclymeniidae
- 0909 Superfamily PARAWOCKLUMERIACEA
- Family Parawocklumeriidae
- 0910 Suborder GONIATITINA
- 0911 Superfamily CHEILO CERATACEA
- 0912 Family Tornoceratidae
- 0913 Cheiloceratidae
- 0914 Superfamily AGATHICERATACEA
- 0915 Family Agathiceratidae
- 0916 Shumarditidae
- 0917 Perrinitidae
- 0918 Superfamily CYCLOLOBACEA
- 0919 Family Popanoceratidae
- 0920 Cyclolobidae
- 0921 Superfamily GONIATITACEA
- 0922 Family Goniatitidae
- 0923 Neoicoceratidae
- 0924 Metalegoceratidae
- 0925 Schistoceratidae
- 0926 Superfamily ADRIANITACEA
- Family Adrianitidae
- 0927 Superfamily DIMORPHOCERATACEA
- 0928 Family Dimorphoceratidae
- 0929 Thalassoceratidae

Cephalopoda: 1
(Ammonoidea: 1)

[ANARCESTINA]

[CLYMENIINA]

[GONIATITINA]

Cephalopoda: 2
(Ammonoidea: 2)

[PROLECANITINA]

[CERATITINA: 1]

- 0930 Suborder PROLECANITINA
- 0931 Superfamily PROLECANITACEA
- 0932 Family Prolecanitidae
- 0933 Prodromitidae
- 0934 Daraelitidae
- 0935 Superfamily MEDLICOTTIACEA
- 0936 Family Pronoritidae
- 0937 Medlicottiidae
- 0938 Sageceratidae
- 0939 Suborder CERATITINA
- 0940 Superfamily OTOCERATACEA
- 0941 Family Xenodiscidae
- 0942 Otoceratidae
- 0943 Ophiceratidae
- 0944 Dieneroceratidae
- 0945 Superfamily NORITACEA
- 0946 Family Gyronitidae
- 0947 Flemingitidae
- 0948 Xenoceltitidae
- 0949 Paranoritidae
- 0950 Proptychitidae
- 0951 Paranannitidae
- 0952 Ussuriidae
- 0953 Hedenstroemiidae
- 0954 Kashmiritidae
- 0955 Meekoceratidae
- 0956 Noritidae
- 0957 Prionitidae
- 0958 Sibiritidae
- 0959 Superfamily CERATITACEA
- 0960 Family Stephanitidae
- 0961 Tirolitidae
- 0962 Dinaritidae
- 0963 Hellenitidae
- 0964 Acrochordiceratidae
- 0965 Beyrichitidae
- 0966 Ceratitidae
- 0967 Danubitidae
- 0968 Balatonitidae
- 0969 Hungaritidae (including Longobardistidae)
- 0970 Carnitidae
- 0971 Proteusitidae
- 0972 Aplococeratidae
- 0973 Superfamily CLYDONITACEA
- 0974 Family Trachyceratidae
- 0975 Clydonitidae
- 0976 Clionitidae
- 0977 Arpaditidae
- 0978 Heraclitidae
- 0979 Lecanitidae
- 0980 Cyrtopleuritidae
- 0981 Tibetitidae
- 0982 Buchitidae
- 0983 Thisbitidae
- 0984 Noridiscitidae
- 0985 Distichitidae
- 0986 Choristoceratidae
- 0987 Cochloceratidae

Cephalopoda: 3
(Ammonoidea: 3)

[CERATITINA: 2]

[PHYLLOCERATINA]

[LYTOCERATINA: 1]

- 0988 Superfamily TROPITACEA
- 0989 Family Tropitidae
- 0990 Tropicelitimidae
- 0991 Celtitimidae
- 0992 Metasibiritidae
- 0993 Haloritidae
- 0994 Didymitidae
- 0995 Superfamily LOBITACEA
- Family Lobitidae
- 0996 Superfamily ARCESTACEA
- 0997 Family Arcestitidae
- 0998 Joannitidae
- 0999 Sphingitidae
- 1000 Cladiscitidae
- 1001 Megaphyllitidae
- 1002 Nathorstidae
- 1003 Superfamily PTYCHITACEA
- 1004 Family Ptychitidae
- 1005 Isculitidae
- 1006 Nannitidae (?)
- 1007 Superfamily PINACOCERATACEA
- 1008 Family Pinacoceratidae
- 1009 Gymnitidae
- 1010 Suborder PHYLLOCERATINA
- 1011 Superfamily PHYLLOCERATACEA
- 1012 Family Ussuritidae
- 1013 Discophyllitidae
- 1014 Phylloceratidae
- 1015 Juraphyllitidae
- 1016 Suborder LYTOCERATINA
- 1017 Superfamily LYTOCERATACEA
- 1018 Family Pleuroacanthitidae
- 1019 Ectocentritidae
- 1020 Derolytoceratidae
- 1021 Lytoceratidae
- 1022 Nonmolytoceratidae
- 1023 Protetragonitidae
- 1024 Tetragonitidae
- 1025 Macroscaphitidae
- 1026 Cicatritidae
- 1027 Superfamily SPIROCERATACEA
- 1028 Family Arcuceratidae
- 1029 Spiroceratidae
- 1030 Superfamily ANCYLOCERATACEA
- 1031 Family Bochianitidae
- 1032 Ancyloceratidae
- 1033 Heteroceratidae
- 1034 Hemihoplitidae
- 1035 Superfamily TURRILITACEA
- 1036 Family Ptychoceratidae
- 1037 Hamitidae
- 1038 Baculitidae
- 1039 Anisoceratidae
- 1040 Phlycticrioceratidae
- 1041 Turritidae
- 1042 Nostoceratidae
- 1043 Diplomoceratidae

Cephalopoda: 4
(Ammonoidea: 4)

[LYTOCERATINA: 2]

[AMMONITINA: 1]

- 1044 Superfamily SCAPHITACEA
- 1045 Family Scaphitidae
- 1046 Labeceratidae
- 1047 Suborder AMMONITINA
- 1048 Superfamily PSILOCERATACEA
- 1049 Family Psiloceratidae
- 1050 Schlotheimiidae
- 1051 Arietitidae
- 1052 Oxynoticeratidae
- 1053 Echioceratidae
- 1054 Superfamily EODEROCERATACEA
- 1055 Family Eoderoceratidae
- 1056 Polymorphitidae
- 1057 Liparoceratidae
- 1058 Amaltheidae
- 1059 Dactylioceratidae
- 1060 Superfamily HILDOCERATACEA
- 1061 Family Hildoceratidae
- 1062 Graphoceratidae
- 1063 Hammatoceratidae
- 1064 Sonniniidae
- 1065 Superfamily HAPLOCERATACEA
- 1066 Family Strigoceratidae
- 1067 Haploceratidae
- 1068 Oppeliidae (also 'family' Aconoceratidae)
- 1069 Superfamily STEPHANOCERATACEA
- 1070 Family Otoitidae
- 1071 Stephanoceratidae
- 1072 Thamboceratidae
- 1073 Clydoniceratidae
- 1074 Sphaeroceratidae
- 1075 Tulitidae
- 1076 Macrocephalitidae
- 1077 Oecoptychiidae
- 1078 Pachyceratidae
- 1079 Mayaitidae
- 1080 Kosmoceratidae
- 1081 Cardioceratidae
- 1082 Superfamily PERISPINCTACEA
- 1083 Family Parkinsoniidae
- 1084 Morphoceratidae
- 1085 Reineckeidae
- 1086 Perisphinciidae
- 1087 Aspidoceratidae
- 1088 Craspeditidae
- 1089 Olcostephanidae
- 1090 Berriasellidae
- 1091 Oosterellidae
- 1092 Superfamily DESMOCERATACEA
- 1093 Family Desmoceratidae
- 1094 Holcodiscidae
- 1095 Silesitidae
- 1096 Kossmaticeratidae
- 1097 Pachydiscidae
- 1098 Muniericeratidae

Cephalopoda: 5
(Ammonoidea: 5)

[AMMONITINA: 2]

(Endoceratoidea)
(Actinoceratoidea)

- 1099 Superfamily HOPLITACEA
- 1100 Family Pulchelliidae
- 1101 Trochleiceratidae
- 1102 Douvilleiceratidae
- 1103 Deshayesitidae
- 1104 Engonoceratidae
- 1105 Placenticeratidae
- 1106 Leymeriellidae
- 1107 Hoplitidae
- 1108 Schloenbachiidae
- 1109 Forbesiceratidae
- 1110 Superfamily ACANTHOCERATACEA
- 1111 Family Brancoceratidae
- 1112 Flickiidae
- 1113 Lyelliceratidae
- 1114 Acanthoceratidae
- 1115 Binneyitidae
- 1116 Vascoceratidae
- 1117 Tissotiidae
- 1118 Coilopoceratidae
- 1119 Collignoniceratidae
- 1120 Sphenodiscidae
- 1121 APTYCHI
- 1122 Subclass ENDOCERATOIDEA
- 1123 Order ENDOCERIDA
- 1124 Family Thylacoceratidae
- 1125 Proterocameroceratidae
- 1126 Piloceratidae
- 1127 Endoceratidae
- 1128 Chihlioceratidae
- 1129 Manchuroceratidae
- 1130 Cyrtondoceratidae
- 1131 Emmonsoceratidae
- 1132 Narthecoceratidae
- 1133 Allotrioceratidae
- 1134 Humeoceratidae (?)
- 1135 Order INTEJOCERIDA
- 1136 Family Intejoceratidae
- 1137 Padunoceratidae
- 1138 Bajkaloceratidae (?)
- 1139 Subclass ACTINOCERATOIDEA
- 1140 Order ACTINOCERIDA
- 1141 Family Polydesmiidae
- 1142 Actinoceratidae
- 1143 Armenoceratidae
- 1144 Gonioceratidae
- 1145 Huroniidae
- 1146 Ormoceratidae
- 1147 Carbactinoceratidae
- 1148 ACTINOCERIDA incertae sedis

- 1150 Subclass NAUTILOIDEA
- 1151 Order ELLESROCERIDA
- 1152 Family Ellesmeroceratidae
- 1153 Plectronoceratidae
- 1154 Bassleroceratidae
- 1155 Protocycloceratidae
- 1156 Baltoceratidae
- 1157 Bathmoceratidae
- 1158 Cyrtocerinidae
- 1159 Shideleroceratidae
- 1160 Order ORTHOCERIDA
- 1161 Superfamily ORTHOCERATACEA
- 1162 Family Orthoceratidae
- 1163 Sphooceratidae
- 1164 Brachycycloceratidae
- 1165 Sactorthoceratidae
- 1166 Lamellorthoceratidae
- 1167 Troedssonellidae
- 1168 Geisonoceratidae
- 1169 Dawsonoceratidae
- 1170 Clinoceratidae
- 1171 Paraphragmitidae
- 1172 Superfamily PSEUDORHOCERATACEA
- 1173 Family Pseudorthoceratidae
- 1174 Mysterioceratidae
- 1175 Stereoplasmoceratidae
- 1176 Proteoceratidae
- 1177 ORTHOCERIDA incertae sedis
- 1178 Order ASCOCERIDA
- 1179 Family Ascoceratidae
- 1180 Choanoceratidae
- 1181 Hebetoceratidae
- 1182 Order ONCOCERIDA
- 1183 Family Graciloceratidae
- 1184 Oncoceratidae
- 1185 Tripterooceratidae
- 1186 Valcouroceratidae
- 1187 Diestoceratidae
- 1188 Hemiphragmoceratidae
- 1189 Trimeroceratidae
- 1190 Brevioceratidae
- 1191 Jovellaniidae
- 1192 Tripleuroceratidae
- 1193 Nothoceratidae
- 1194 Acleistoceratidae
- 1195 Archiacoceratidae
- 1196 Karoceratidae
- 1197 Poterioceratidae
- 1198 Polyelasmoceratidae
- 1199 ONCOCERIDA incertae sedis

- 1200 Order DISCOSORIDA
- 1201 Family Ruedemannoceratidae
- 1202 Cyrtogomphoceratidae
- 1203 Westonoceratidae
- 1204 Lowoceratidae
- 1205 Discoridae
- 1206 Phragmoceratidae
- 1207 Mandaloceratidae
- 1208 Mesoceratidae (?)
- 1209 Greenlandoceratidae (?)
- 1210 Order TARPHYCERIDA
- 1211 Family Tarphyceratidae
- 1212 Estonioceratidae
- 1213 Trocholitidae
- 1214 Litutidae
- 1215 Ophidioceratidae
- 1216 Order BARRANDEOCERIDA
- 1217 Family Barrandeoceratidae
- 1218 Plectoceratidae
- 1219 Uranoceratidae
- 1220 Lechtritoceratidae
- 1221 Nephriticeratidae
- 1222 Apsidoceratidae
- 1223 Order NAUTILIDA
- 1224 Superfamily TAINOCERATACEA
- 1225 Family Tainoceratidae
- 1226 Rutoceratidae
- 1227 Tetroagonoceratidae
- 1228 Riphaeoceratidae
- 1229 Koninckioceratidae
- 1230 Superfamily TRICONOCERATACEA
- 1231 Family Trigonoceratidae
- 1232 vCentroceratidae
- 1233 Grypoceratidae
- 1234 Permoceratidae
- 1235 Syringonautilidae
- 1236 Superfamily AIPOCERATACEA
- 1237 Family Aipoceratidae
- 1238 Solenochilidae
- 1239 Scyphoceratidae
- 1240 Superfamily CLYDONAUTILACEA
- 1241 Family Clydonautilidae
- 1242 Liroceratidae
- 1243 Ephippioceratidae
- 1244 Gonionautilidae
- 1245 Siberionautilidae
- 1246 Superfamily NAUTILACEA
- 1247 Family Nautilidae
- 1248 Pseudonautilidae
- 1249 Paracenoceratidae
- 1250 Cymatoceratidae
- 1251 Hercoglossidae
- 1252 Aturiidae
- 1253 Order uncertain: Family Neptunoceratidae

- 1254 NAUTILOIDEA incertae sedis
 1255 CONCHS
 1256 RHYNCHOLITES
 1257 Subclass BACTRITOIDEA
 1258 Order BACTRITIDA
 1259 Family Bactritidae
 1260 Parabactritidae
 1261 CEPHALOPODA incertae sedis
 1262 Class CRICOCONARIDA
 1263 Order TENTACULITIDA
 1264 Family Tentaculitidae
 1265 Homoctenidae
 1266 Uniconidae
 1267 Order DACRYOCONARIDA
 1268 Family Nowakiidae
 1269 Styliionidae
 1270 Class CALYPTOPTOMATIDA
 1271 Order HYOLITHIDA
 1272 Suborder HYOLITHINA
 1273 Family Hyolithidae
 1274 Ceratothecidae
 1275 Orthocetidae
 1276 Sulcayitidae
 1277 Pterygothecidae
 1278 Suborder MATTHEVINA
 Family Mattheviidae
 1279 Order GLOBORILIDA
 Family Globorilidae
 1280 Order CAMEROTHECIDA
 1281 Suborder CAMEROTHECINA
 Family Camerothecidae
 1282 Suborder DIPLOTHECINA
 Family Diplothecidae
 1283 CALYPTOPTOMATIDA incertae sedis
 1284 Phylum & Class uncertain:
 Order HYOLITHELMINTHES
 1285 Family Hyolithellidae
 1286 Torellectidae
 1287 Phylum, Class & Order uncertain: Family Coleoidae
 1288 " " " " " : Family Cornulitidae
 1289 Conical shells, Phylum CEPHALOPODA?

Cephalopoda: 8
 (Nautiloidea: 3)
 (Bactritoidea)

Cricoconarida

[TENTACULITIDA]

[DACRYOCONARIDA]

Calyptoptomatida

HYOLITHELMINTHES

- 1290 Class BIVALVIA (= Pelecypoda, Lamellibranchiata) (Palaeotaxodonta)
 1291 Subclass PALAEOTAXODONTA (Cryptodonta)
 1292 Order NUCULOIDA (Pteriomorpha: 1)
 1293 Superfamily NUCULACEA [ARCOIDA]
 Family Nuculidae (also Ctenodontidae)
 1294 Superfamily NUCULANACEA [MYTILOIDA]
 1295 Family Nuculanidae
 1296 Malletiidae (also Ledidae) [PTERIOIDA: 1]
 1297 Subclass CRYPTO DONTA
 1298 Order SOLEMYOIDEA
 Superfamily SOLEMYACEA
 Family Solemyidae
 1299 Order PRAECARDIODA
 1300 Superfamily PRAECARDIACEA
 Family Praecardiidae
 1301 Superfamily EDMONDIACEA
 1302 Family Edmondiidae
 1303 Orthonotidae
 1304 Sanguinolitiidae
 1305 Order CONOCARIOIDA (?)
 Superfamily CONOCARDIACEA
 Family Conocardiidae
 1306 Subclass PTERIOMORPHIA
 1307 Order ARCOIDA
 1308 Superfamily CYRTODONTACEA
 Family Cyrtodontidae
 1309 Superfamily ARCACEA
 1310 Family Arcidae
 1311 Cucullaeodae
 1312 Noetiidae
 1313 Parallelodontidae (also Grammatodontidae)
 1314 Superfamily LIMOPSACEA
 1315 Family Limopsidae
 1316 Glycymerididae
 1317 Manzanellidae (?)
 1318 Philobryidae (?)
 1319 Order MYTILOIDA
 1320 Superfamily MYTILACEA
 Family Mytilidae (Modiolopsidae)
 1321 Superfamily PINNACEA
 Family Pinnidae
 1322 Order PTERIOIDA
 1323 Suborder PTERIINA
 1324 Superfamily AMBONYCHIACEA
 1325 Family Ambonychiidae
 1326 Myalinidae
 1327 Lunulacardiidae
 1328 Superfamily PTERIACEA
 1329 Family Pteriidae
 1330 Bakevellidae
 1331 Cassianellidae
 1332 Dattidae
 1333 Inoceramidae
 1334 Isognomonidae
 1335 Kochiidae
 1336 Malleidae
 1337 Pterineidae
 1338 Pulvinitidae

n Bivalvia: 2
 (Pteriomorpha: 2)
 [PTERIOIDA: 2]
 (Palaeoheterodonta)
 [ACTINODONTOIDA]
 [UNIONOIDA]
 [TRIGONIOIDA]
 (Heterodonta: 1)
 [HOPPURITOIDA: 1]

- 1339 Superfamily PECTINACEA
- 1340 Family Pectinidae
- 1341 Aviculopectinidae
- 1342 Buchiidae
- 1343 Deltopectinidae
- 1344 Dimyidae
- 1345 Monotidae
- 1346 Family Oxytomidae
- 1347 Entoliidae
- 1348 Plicatulidae
- 1349 Posidoniidae
- 1350 Pseudomonotidae
- 1351 Pterinopectinidae
- 1352 Spondylidae
- 1353 Superfamily ANOMIACEA
- Family Anomiidae
- 1354 Suborder OSTREINA

- Superfamily OSTREACEA
- Family Ostreidae
- 1355 Subclass PALAEOHETERODONTA
- 1356 Order ACTINODONTOIDA
- 1357 Superfamily MODIOMORPHACEA
- 1358 Family Modiomorphidae
- 1359 Cycloconchidae
- 1360 Lamellodontidae
- 1361 Carydiidae
- 1362 Order UNIONOIDA
- 1363 Superfamily ANTHRACOSIACEA
- 1364 Family Anthracosiidae
- 1365 Ferganoconchidae
- 1366 Pseudocarndiniidae
- 1367 Superfamily UNIONACEA
- 1368 Family Unionidae
- 1369 Desertellidae
- 1370 Etheriidae
- 1371 Margaritferidae
- 1372 Mutelidae
- 1373 Pachycardiidae (?)
- 1374 Order TRIGONIOIDA
- 1375 Superfamily TRIGONIACEA
- 1376 Family Trigoniidae
- 1377 Lyrodesmitidae (?)
- 1378 Myophoriidae
- 1379 Scaphellinidae (?)
- 1380 Trogonioididae (?)
- 1381 Subclass HETERODONTA
- 1382 Order HOPPURITOIDA
- 1383 Superfamily CHAMACEA
- Family Chamidae
- 1384 Superfamily MEGALODONTACEA
- Family Megalodontidae

- 1385 Superfamily HIPPURITACEA
- 1386 Family Hippuritidae
- 1387 Caprinidae
- 1388 Caprotinidae
- 1389 Diceratidae
- 1390 Monopleuridae
- 1391 Radiolitidae
- 1392 Requiieniidae
- 1393 Order VENEROIDA
- 1394 Suborder LUCININA
- 1395 Superfamily LUCINACEA
- 1396 Family Lucinidae
- 1397 Babinkidae
- 1399 Fimbriidae
- 1400 Mactromyidae
- 1401 Thyasiridae
- 1402 Ungulinidae
- 1403 Superfamily LEPTONACEA
- 1404 Family Leptonidae
- 1405 Chlamydoconchidae
- 1406 Erycinidae
- 1407 Gaimardiidae
- 1408 Galeomatidae
- 1409 Kelliidae
- 1410 Montacutidae
- 1411 Superfamily CYAMIACEA
- 1412 Family Cyamiidae
- 1413 Neoleptonidae
- 1414 Turtoniidae
- 1415 Superfamily CARDIRACEA
- 1416 Family Carditidae
- 1417 Condyllocardiidae
- 1418 Permophoridae
- 1419 Superfamily CRASSATELLACEA
- 1420 Family Crassatellidae
- 1421 Astartidae
- 1422 Cardiniidae
- 1423 Superfamily CARDIACEA
- 1424 Family Cardiidae
- 1425 Adacnidae
- 1426 Lahilliidae
- 1427 Superfamily TRIDACNACEA
- Family Tridacnidae
- 1428 Superfamily MACTRACEA
- 1429 Family Mactridae
- 1430 Anatinellidae
- 1431 Cardiliidae
- 1432 Mesodesmatidae
- 1433 Superfamily SOLENACEA
- 1434 Family Solenidae
- 1435 Cultellidae
- 1436 Superfamily TELLINACEA

Bivalvia: 4

(Heterodonta: 3)

[VENEROIDA: 2]

[MYOIDA]

(Anomalodesmata: 1)

[PHOLADOMYOIDA: 1]

- 1437 Family Tellinidae
- 1438 Donacidae
- 1439 Garidae
- 1440 Icanotiidae
- 1441 Quenstedtiidae
- 1442 Scrobiculariidae
- 1443 Semelidae
- 1444 Solecurtidae
- 1445 Sowerbyidae
- 1446 Tancrediidae
- 1447 Suborder ARCTICINA
- 1448 Superfamily ARCTICACEA (CYPRINACEA)
- 1449 Family Arcticiidae (CYPRINIDAE?)
- 1450 Euloxidae
- 1451 Trapeziidae
- 1452 Superfamily DREISSENACEA
- Family Dreissenidae
- 1453 Superfamily GLOSSACEA
- 1454 Family Glossidae
- 1455 Dicerocardiidae
- 1456 Kelliellidae
- 1457 Vesicomysidae
- 1458 Superfamily CORBICULACEA
- 1459 Family Corbiculidae
- 1460 Pisidiidae
- 1461 Superfamily VENERACEA
- 1462 Family Veneridae
- 1463 Cooperellidae
- 1464 Glauconomidae
- 1465 Petrocolidae
- 1466 Rzehakiidae
- 1467 Order MYOIDA
- Suborder MYINA
- 1469 Superfamily MYACEA
- 1470 Family Myidae
- 1471 Corbulidae
- 1472 Erodontidae
- 1473 Megadesmatidae
- 1474 Raetomyidae
- 1475 Spheniopsidae
- 1476 Superfamily GASTROCHAENACEA
- Family Gastrochaenidae
- 1477 Superfamily HIATELLACEA
- Family Hiatellidae
- 1478 Suborder PHOLADINA
- 1479 Superfamily PHOLADACEA
- 1480 Family Pholadidae
- 1481 Tandredinidae
- 1482 Subclass ANOMALODESMATA
- 1483 Order PHOLADOMYOIDA
- 1484 Suborder PHOLADOMYINA
- 1485 Superfamily PHOLADOMYACEA
- 1486 Family Pholadomyidae
- 1487 Burmesidae
- 1488 Ceratomyidae
- 1489 Plueromyidae

- 1490 Superfamily PANDORACEA
- 1491 Family Pandoridae
- 1492 Cleidothaeridae
- 1493 Laternulidae
- 1494 Lyonsiidae
- 1495 Myochamidae
- 1496 Periplomatidae
- 1497 Thraciidae
- 1498 Suborder CLAVAGELLINA
- Superfamily CLAVAGELLACEA
- Family Clavagellidae
- 1499 Order POROMYOIDA
- 1500 Superfamily POROMYACEA
- 1501 Family Poromyidae
- 1502 Cuspidariidae
- 1503 Verticordiidae

- 1504 Phylum HEMICHORDATA
- 1505 Subphylum STOMOCHORDA
- 1506 Class ENTEROPNEUSTA
- 1507 Class PTEROBRANCHIA
- 1508 Order RHABDOPLEURIDA
 - Family Rhabdopleuridae
- 1509 Order CEPHALODISCIDA
 - 1510 Family Eocephalodiscidae
 - 1511 Cephalodiscidae
- 1512 Class GRAPTOLITHINA
- 1513 Order DENDROIDEA
 - 1514 Family Dendrograptidae
 - 1515 Anisograptidae
 - 1516 Acanthograptidae
 - 1517 Inocaulidae
 - 1518 Ptilograptidae
 - 1519 Chaunograptidae
 - 1520 DENDROIDEA incertae sedis
- 1521 Order TUBOIDEA
 - 1522 Family Tubidendridae
 - 1523 Idiotubidae
 - 1524 Parvitubidae
 - 1525 Multitubidae
- 1526 Order CAMAROIDEA
 - 1527 Family Bithecocameridae
 - 1528 Cysticameridae
- 1529 Order STOLONOIDEA
 - Family Stolonodendridae
- 1530 Order GRAPTOLOIDEA
- 1531 Suborder DIDYMOGRAPTINA
 - 1532 Superfamily DICHOGRAPTACEA
 - 1533 Family Dichograptidae
 - 1534 Abrograptidae
 - 1535 Azygograptidae
 - 1536 Leptograptidae
 - 1537 Superfamily DICRANOGRAPTACEA
 - 1538 Family Sinograptidae
 - 1539 Dicranograptidae
- 1540 Superfamily CORYNOIDIDACEA
 - 1541 Family Corynoididae
- 1541 Suborder GLOSSOGRAPTINA
 - 1542 Family Cryptograptidae
 - 1543 Glossograptidae
- 1544 Suborder DIPLOGRAPTINA
 - 1545 Family Diplograptidae
 - 1546 Lasiograptidae
 - 1547 Retiolitidae
 - 1548 Peiragraptidae
 - 1549 Dimorphograptidae
- 1550 Suborder MONOGRAPTINA
 - 1551 Family Monograptidae
 - 1552 Cyrtograptidae
- 1553 Order CRUSTOIDEA
- 1554 GRAPTOLITHINA incertae sedis: Group GRAPTOVERMIDA
- 1555 " " " : Group GRAPTOBLASTI
- 1556 " " " : Group ACANTHASTIDA

ARTHROPODA: 1
 CHELICERATA: 1
 Merostomata: 1
 (Xiphosura)
 (Eurypterida)

- 1557 Phylum ARTHROPODA
- 1558 Subphylum CHELICERATA
- 1559 Class MEROSTOMATA
- 1560 Subclass XIPHOSURA
- 1561 Order AGLASPIDA
- 1562 Family Palaomeridae
- 1563 Aglaspididae
- 1564 Strabopidae
- 1565 Beckwithiidae
- 1566 Order XIPHOSURIDA
- 1567 Suborder SYNZIPHOSURINA
- 1568 Family Limuloididae
- 1569 Bunodidae
- 1570 Neolimulidae
- 1571 Pseudonisoidae
- 1572 Weinberginidae
- 1573 Suborder LIMULINA
- 1574 Superfamily BELINURACEA
- Family Belinuridae
- 1575 Superfamily EUPROOPACEA
- 1576 Family Euproopidae
- 1577 Liomesaspididae
- 1578 Elleriidae
- 1579 Keaeriidae
- 1580 Superfamily LIMULACEA
- 1581 Family Paleolimulidae
- 1582 Mesolimulidae
- 1583 Limulidae
- 1584 LIMULINA incertae sedis
- 1585 Subclass EURYPTERIDA
- 1586 Superfamily EURYPTERACEA
- 1587 Family Hughmilleriidae
- 1588 Pterygotidae
- 1589 Eurypteridae
- 1590 Carcinosomatidae
- 1591 Mixopteridae
- 1592 Megalograptidae
- 1593 Superfamily STYLONURACEA
- 1594 Family Stylonuridae
- 1595 Dolichopteridae
- 1596 Rhenopteridae
- 1597 Mycteropidae
- 1598 Class uncertain (Merostomata or Arachnida)

- 1599 Class ARACHNIDA
- 1600 Subclass LATIGASTRA
- 1601 Order SCORPIONIDA
- 1602 Suborder PROTOSCORPIONINA
- 1603 Superfamily PALAEOPHONOIDEA
 - Family Palaeophonidae
- 1604 Superfamily MAZONIOIDEA
 - 1605 Family Dolichophinidae
 - 1606 Mazoniidae
- 1607 Suborder EUSCORPIONINA
- 1608 Superfamily PALAEOSCORPIOIDEA
 - Family Palaeoscorpiidae
- 1609 Superfamily ARCHAEOCTONOIDEA
 - Family Archaeoctonidae
- 1610 Superfamily SCORPIONOIDEA
 - 1611 Family Eoscorpiidae
 - 1612 Buthidae
 - 1613 Scorpionidae
- 1614 Superfamily CYCLOPHTHALMOIDEA
 - Family Cyclophthalmidae
- 1615 Superfamily ISOBUTHOIDEA
 - Family Isobuthidae
- 1616 Superfamily CENTROMACHOIDEA
 - Family Centromachidae
- 1617 Superfamily MESOPHONOIDEA
 - Family Mesophonidae
- 1618 EUSCORPPONINA incertae sedis
- 1619 Order PSEUDOSCORPIONIDA
- 1620 Suborder CHTHONIINA
- 1621 Family Dithidae
- 1622 Chthoniidae
- 1623 Suborder NEOBISIINA
- 1624 Superfamily NEOBISIOIDEA
 - Family Neobisiidae
- 1625 Superfamily GARYPOIDEA
 - 1626 Family Olpiidae
 - 1627 Garypidae
- 1628 Superfamily FEALLOIDEA
 - Family Pseudogarypidae
- 1629 Suborder CHELIFERINA
- 1630 Superfamily CHEIRIDIODEA
 - Family Cheridiidae
- 1631 Superfamily CHELIFEROIDEA
 - 1632 Family Cheliferidae
 - 1633 Chernetidae
- 1634 Order PHALANGIIDA
- 1635 Suborder CYPHOPHTHALMINA
- 1636 " PALPATORINA
- 1637 Superfamily TROGULOIDEA
 - 1638 Family Eotrogulidae
 - 1639 Trogulidae
 - 1640 Nemastomatidae
 - 1641 Nemastomoididae
 - 1642 Ischyropsalidae

- 1643 Superfamily PHALANGIOIDEA
 - Family Phalangiidae
- 1644 Suborder LANIATORINA
 - Family Gonyleptidae
- 1645 Order ARCHITARBIDA
 - Family Architarbidae
 - Opiliotarbitidae
 - 1648 Heterotarbitidae
- 1649 Order ACARIDA
 - 1650 Suborder NOTOSTIGMATINA
 - 1651 " HYLOTHYRINA
 - 1652 " TROMBIDIINA
 - 1653 Family Eupodidae
 - 1654 Bdellidae
 - 1655 Erythraeidae
 - 1656 Trombidiidae
 - 1657 Anystidae
 - 1658 Cheyletidae
 - 1659 Tetranychidae
 - 1660 Suborder PARASITINA
 - 1661 Superfamily PARASITOIDEA
 - Family Phytosiidae
 - 1662 Superfamily IXODOIDEA
 - Family Ixodidae
 - 1663 Suborder ACARINA
 - 1664 Superfamily ACAROIDEA
 - Family Acaridae
 - 1665 Superfamily ORIBATOIDEA
 - 1666 Family Belbidae
 - 1667 Camisiidae
 - 1668 Carabodidae
 - 1669 Ceratozetidae
 - 1670 Cymbaeremidae
 - 1671 Oribatidae
 - 1672 Galumnidae
 - 1673 Haplozetidae
 - 1674 Hypochthoniidae
 - 1675 Hermannelliidae
 - 1676 Liacaridae
 - 1677 Neoliodidae
 - 1678 Oribatellidae
 - 1679 Oribatulidae
 - 1680 Oripodidae
 - 1681 Parakalumnidae
 - 1682 Phenopelopidae
 - 1683 Phthiracaridae
 - 1684 Suborder TETRAPODILINA
 - 1685 Subclass STETHOSTOMATA
 - 1686 Order HAPTOPODIDA
 - Family Plesiosironidae
 - 1687 Order ANTHRACOMARTIDA
 - Family Anthracomartidae
 - 1688 Subclass SOLUTA
 - 1689 Order TRIGONOTARBIDA

- 1690 Family Palaeocharinidae
- 1691 Anthracosironidae
- 1692 Eophrynidae
- 1693 Trigonotarbidae
- 1694 Trigonomartidae
- 1695 Subclass CAULOGASTRA
- 1696 Superorder LATISTERNA
- 1697 Order PALPIGRADIDA
- 1698 Family Sternarthronidae
- 1699 Eukoenereniidae
- 1700 Superorder CAMAROSTOMATA
- 1701 Order THELYPHONIDA
- Family Thelyphonidae
- 1702 Order SCHIZOMIDA
- 1703 Family Schizomidae
- 1704 Calcitronidae
- 1705 Order KUSTARACHNIDA
- Family Kustarachnidae
- 1706 Superorder LABELLATA
- 1707 Order PHRYNICHIDA
- Family Phrynichidae
- 1708 Order ARANEIDA
- 1709 Suborder LIPHISTIINA
- 1710 Family Arthromygalidae
- 1711 Arthrolycosidae
- 1712 Suborder THERAPHOSINA
- 1713 Superfamily THERAPHOSOIDEA
- Family Theraphosidae
- 1714 Superfamily ATYPOIDEA
- Family Dipluridae
- 1715 THERAPHOSINA incertae sedis
- 1716 Suborder HYPOCHILINA
- 1717 " DIPNEUMONINA
- 1718 Division TRIONYCHI
- 1719 Superfamily HERSILIOIDEA
- 1720 Family Urocteidae
- 1721 Hersiliidae
- 1722 Superfamily SCYTODOIDEA
- Family Pholcidae
- 1723 Superfamily ZODARIOIDEA
- 1724 Family Zodariidae
- 1725 Spatiayoridae
- 1726 Superfamily LYCOSOIDEA
- 1727 Family Eresidae
- 1728 Amaurobiidae
- 1729 Psechridae
- 1730 Agelenidae
- 1731 Insecutoridae
- 1732 Pisauridae
- 1733 Lycosidae
- 1734 Superfamily ARANEOIDEA
- 1735 Family Archaeidae
- 1736 Mimetidae
- 1737 Arthrodictynidae
- 1738 Dictynidae
- 1739 Micryphantidae
- 1740 Theridiidae
- 1741 Adjutoridae
- 1742 Ephalmatoridae
- 1743 Linyphiidae
- 1744 Araneidae

ARTHROPODA: 5
 CHELICERATA: 5
 Arachnida: 4
 PYCNOGONIDA
 Crustacea: 1
 (Ostracodoidea: 1)

- 1745 Superfamily ARCHAEOMETOIDEA
 - Family Archaeometidae
- 1746 Division DIONYCHI
- 1747 Superfamily ZOROPSOIDEA
 - Family Zoropsidae
- 1748 Superfamily THOMISOIDEA
 - 1749 Family Eusparassidae
 - 1750 Selenopidae
 - 1751 Thomisidae
- 1752 Superfamily CLUBIONOIDEA
 - 1753 Family Drassodidae
 - 1754 Inceptoridae
 - 1755 Clubionidae
 - 1756 Parattidae
- 1757 Superfamily SALTICOIDEA
 - Family Salticidae
- 1758 Superfamily PYRITARANEOIDEA
 - Family Pyritaraneidae
- 1759 Division QUADROSTIATI
- 1760 Superfamily DYSDEROIDEA
 - 1761 Family Segestriidae
 - 1762 Dysderidae
 - 1763 Oonopidae
- 1764 Superfamily ANPHAENOIDEA
 - Family Anyphaenidae
- 1765 Superfamily ARGYRONETOIDEA
 - Family Argyronetidae
- 1766 Suborder APNEUMONINA
- 1767 ARENEIDA incertae sedis
- 1768 Superorder ROSTRATA
 - Order SOLPUGIDA
 - Family Galeodidae
- 1769 Superorder PODOGONA
 - Order RICINULEIDA
 - 1771 Family Poliocheridae
 - 1772 Curculioididae
 - 1773 Ricinoididae
- 1774 ARACHNIDA incertae sedis
- 1775 Subphylum PYCNOGONIDA
 - 1776 Order PANTOPODA
 - 1777 Family Nymphonidae
 - 1778 Pallenidae
 - 1779 Colosseneidae
 - 1780 Ammotheidae
 - 1781 Tanystylidae
 - 1782 Phoxichilidiidae
 - 1783 Endeidae
 - 1784 Pycnogonidae
 - 1785 Order PALAEOPANTOPODA
 - Family Palaeopantopodidae
- 1786 ARTHROPODA incertae sedis: G. Palaeoisopus
- 1787 Class CRUSTACEA
- 1788 Subclass OSTRACODOIDEA
 - 1789 Order HRADORIIDA

Crustacea: 2
(Ostradoidea: 2)

- 1790 Suborder BRADORIINA
- 1791 Family Bradoriidae
- 1792 Beyrichonidae
- 1793 Hipponicharionidae
- 1794 Inianidae
- 1795 Suborder PHOSPHATOCOPINA
- 1796 Family Hesslandonidae
- 1797 Falitidae
- 1798 Order LEPERDITIIDA
- 1799 Family Leperditiidae
- 1800 Isochilinidae
- 1801 Order PALAEOCOPIIDA
- 1802 Suborder BEYRICHIOPINA
- 1803 Superfamily BEYRICHIACEA
- 1804 Family Beyrichiidae
- 1805 (Subfamily Beyrichiinae)
- 1806 (Zygobolbinae)
- 1807 (Kloedeniinae)
- 1808 (Hexophthalmoidinae)
- 1809 Family Craspedobolbinidae
- 1810 (Subfamily Craspedobolbininae)
- 1811 (Treposellinae)
- 1812 (Amphitoxotidinae)
- 1813 Superfamily EURYCHILINACEA
- 1814 Family Eurychilinidae
- 1815 (Subfamily Eurychilininae)
- 1816 (Chilobolbininae)
- 1817 (Oepikellinae)
- 1818 Family Piretellidae
- 1819 (Subfamily Piretellinae)
- 1820 (Tvaerenellinae)
- 1821 (Euprimitiinae)
- 1822 Family Bassleratiidae
- 1823 (Subfamily Bassleratiinae)
- 1824 (Quadrijugatorinae)
- 1825 (Octenonotellinae)
- 1826 Family Aparchitidae
- 1827 Superfamily PRIMITIOPSACEA
- 1828 Family Primitiopsidae
- 1829 (Subfamily Primitiopsinae)
- 1830 (Leiocyaminae)
- 1831 (Anisocyaminae)
- 1832 (Polenovulinae)
- 1833 (Sulcicuneinae)
- 1834 (Bubnoffiopsinae)
- 1835 Superfamily HOLLINACEA
- 1836 Family Hollinidae
- 1837 (Subfamily Hollininae)
- 1838 (Ctenoloculininae)
- 1839 (Neodrepanellinae)
- 1840 Family Oepikiumidae
- 1841 Tetradellidae
- 1842 (Subfamily Tetradellinae)
- 1843 (Sigmoopsinae)
- 1844 (Dilobellinae)
- 1845 (Glossomorphitinae)

[BRADORIIDA]
[LEPERDITIIDA]
[PALAEOCOPIIDA: 1]

ARTHROPODA: 7
 Crustacea: 3
 (Ostracodoidea: 3)
 [PALAEOCOPIDA: 2]
 [OSTRACODA: 1]

- 1846 Superfamily KIRKBYACEA
- 1847 Family Kirkbyidae
- 1848 Amphissitidae
- 1849 Arcyzonidae
- 1850 Cardiniferellidae
- 1851 Kelletinidae
- 1852 Placideidae
- 1853 Scrobiculidae
- 1854 Superfamily LEPERDITELLIDAE
- 1856 Drepanellidae
- 1857 Aechminellidae
- 1858 Aechminidae
- 1859 Bolliidae
- 1860 Kirkbyellidae
- 1861 Richinidae
- 1862 Superfamily YOUNGIELLACEA
- Family Youngiellidae
- 1863 Superfamily PUNCIACEA
- 1864 Suborder KLOEDENELLIOCOPIA
- 1865 Superfamily Kloedenellacea
- 1866 Family Kloedenellidae
- 1867 Geisinidae
- 1868 Indivisiidae
- 1869 Glyptopleuridae
- 1870 Beyrichiopsidae
- 1871 Lichviniidae
- 1872 Miltonellidae
- 1873 Sansabellidae
- 1874 Monotiopleuridae
- 1875 Lomatopisthiidae
- 1876 Superfamily PARAPARCHITACEA
- Family Paraparchitidae
- 1877 Order OSTRACODA
- 1878 Suborder PODCOPINA
- 1879 Superfamily BAIRDIACEA
- 1880 Family Bairdiidae
- 1881 (Subfamily Bairdiinae)
- 1882 (Allanellinae)
- 1883 (Nodobairdiinae)
- 1884 (Triebelininae)
- 1885 (Carinobairdiinae)
- 1886 Family Beecherellidae
- 1887 Macrocyprididae
- 1888 Superfamily CYPRIDACEA
- 1889 Family Cyprididae
- 1890 (Subfamily Cypridinae)
- 1891 (Cypridopsinae)
- 1892 (Disopontocypridinae)
- 1893 (Candoninae)
- 1894 Family Cyclocyprididae
- 1895 Eucandonidae
- 1896 Ilyocyprididae
- 1897 (Subfamily Ilyocypridinae)
- 1898 (Cyprideinae)
- 1899 Family Notodromadidae
- 1900 Paracyprididae
- 1901 Pontocyprididae

- 1902 Superfamily DARWINULACEA
 - Family Darwinulidae
- 1903 Superfamily CYTHERACEA
 - 1904 Family Cytheridae
 - 1905 Acronotellidae
 - 1906 Berounellidae
 - 1907 Brachycytheridae
 - 1908 Bythocytheridae
 - 1909 Cytherettidae
 - 1910 Cytherideidae
 - 1911 (Subfamily Cytherideinae)
 - 1912 (Cuneocytherinae)
 - 1913 (Eucytherinae)
 - 1914 (Krithinae)
 - 1915 (Neocytherideidinae)
 - 1916 Family Cytherissinellidae
 - 1917 Cytheruridae
 - 1918 Entocytheridae
 - 1919 Hemicytheridae
 - 1920 Kliellidae
 - 1921 Leguminocythereididae
 - 1922 Leptocytheridae
 - 1923 Limnocytheridae
 - 1924 Loxoconchidae
 - 1925 Paradoxostomatidae
 - 1926 (Subfamily Paradoxostomatinae)
 - 1927 (Microcytherinae)
 - 1928 (Cytheromatinae)
 - 1929 Family Pectocytheridae
 - 1930 Permianidae
 - 1931 Progonocytheridae
 - 1932 (Subfamily Protocytherinae)
 - 1933 (Progonocytherinae)
 - 1934 Family Psammocytheridae
 - 1935 Schizocytheridae
 - 1936 Sinusuellidae
 - 1937 Tomiellidae
 - 1938 Trachyleberididae
 - 1939 Xestoleberididae
 - 1940 (Suborder) METACOPINA
 - 1941 Superfamily HEALDIACEA
 - 1942 Family Healdiidae
 - 1943 Bairdiocyprididae
 - 1944 Barychilinidae
 - 1945 Cavellinidae
 - 1946 Krausellidae
 - 1947 Pachydomellidae
 - 1948 Superfamily QUASILLITACEA
 - 1949 Family Quasillitidae
 - 1950 Bufinidae
 - 1951 Ropolonellidae
 - 1952 Superfamily THLIPSURACEA
 - Family Thlipsuridae

ARTHROPODA: 9
 Crustacea: 5
 (Ostracodoidea: 5)
 [OSTRACODA: 3]

- 1953 Suborder PLATYCOPINA
 - Family Cytherellidae
- 1954 Suborder MYODOCOPINA
- 1955 Superfamily ENTOMOZOACEA
 - 1956 Family Entomozoidae
 - 1957 (Subfamily Entomozoinae)
 - 1958 (Bouciinae)
 - 1959 (Richterinae)
 - 1960 Family Bolbozoidae
- 1961 Superfamily ENTOMOC ONCHACEA
 - 1962 Family Entomoconchidae
 - 1963 (Subfamily Entomoconchinae)
 - 1964 (Oncotechmoninae)
 - 1965 Family Cyprosinidae
- 1966 Superfamily THAUMATOCYPRIDACEA
 - Family Thaumatocyprididae
- 1967 Superfamily CYPRIDINACEA
 - 1968 Family Cypridinidae
 - 1969 (Subfamily Cypridininae)
 - 1970 (Philomedinae)
 - 1971 Family Cylindroleberididae
 - 1972 Cyprellidae
 - 1973 Cyprellidae
 - 1974 Rhombinidae
 - 1975 Sarsiellidae
- 1976 Superfamily HALOCYPRIDACEA
 - Family Halocypridacea
- 1977 Suborder CLADOCOPINA
 - Family Polycopidae

ITEM 7 GEOLOGICAL AGE.

001	RECENT	
002	CAINOZOIC Era / TERTIARY	
003	NEOGENE Period	
004	PLEISTOCENE	
005	PLIOCENE	
006	MIOCENE	
007	PALAEOCENE Period	
008	OLIGOCENE	
009	EOCENE	
010	PALEOCENE	
011	MESOZOIC Era	
012	CRETACEOUS Period	
013	Upper CRETACEOUS (Eu.)	GULFIAN Series (N.Am)
014	Senonian Subseries (15-18)	
015	Maastrichtian Stage	Navarroan Stage
016	Campanian	Tayloran
017	Santonian	
018	Coniacian	
019		Austinian
020	Turonian Stage	
021	Cenomanian	
022		Woodbinian (=Tuscaloosan)
023		CONAMCHEAN Series
025		Washitan Stage
026		Fredericksburgian
027		Trinitian
028	Lower CRETACEOUS (Eu.)	
029	Albian Stage	
030	Aptian	
031	Neocomian Subseries	
032	Barremian Stage	
033	Hauterivian	
034	Valangian	
035	Berriasian	
036		COAHUILAN Series
037		Nuevoleanian Stage
038		Durangoan
039	JURASSIC Period	
040	Upper JURASSIC (Malm)	
041	Perbeckian Stage	Volgian Stage = Tithonian (U.S.S.R.)
042	Purbeckian Stage	
043	Portlandian	
044	Kimmeridgian (= Dorsetian + Grussolian)	
045	Oxfordian (Corallian Beds)	
046	Calloviaian	
047	Middle JURASSIC (Dogger)	
048	Bathonian Stage (Superior Oolite)	
049	Bajocian (Inferior Oolite)	

050	Lower JURASSIC (Lias)	
051	Toarcian Stage (Upper Lias)	
052	Domerian = Upper Pliensbachian (Middle Lias)	
053	Carixian = Lower "	
054	Sinemurian	
055	Hettangian	
056	TRIASSIC	
057	Upper TRIASSIC	
058	Rhaetian Stage	
059	Norian	
060	Carnian	
061	Middle TRIASSIC	
062	Ladinian Stage	
063	Anisian (= Virglorian)	
064	Lower TRIASSIC = Scythian Stage = Werfenian Stage	
P64	PALAEOZOIC ERA	
065	Upper PALAEOZOIC = Permian + Carboniferous	
066	PERMIAN	
067	Upper PERMIAN	
068	Tartarian Stage (Eurasia)	Ochan Stage (N.Am.)
069	Kazanian	Guadalupian
070	Middle PERMIAN (stages not specified)	
071	Lower PERMIAN	
072	Kungurian Stage	
073	Artinskian	
074		Leonardian Stage
075	Sakmarian (<u>sensu lato</u>)	Wolfcampian
076	CARBONIFEROUS	
077	Upper CARBONIFEROUS (Silesian)	PENNSYLVANIAN
078	Stephanian Stage (W. Eu.)	KAWVIAN Series
079	Orenburgian St. (USSR)	Virgilian Stage
080	Zhigulevian (")	Missourian
081	Westphalian Stage (W. Eu.)	OKLAN Series
082	Moscovian St. (USSR)	Desmoinesian Stage
083	Bashkirian = Kayalian	Bendian = Atokan = Derryan
084	Namurian Stage (Eurasia)	ARDIAN Series
085		Morrowan Stage
086		Springeran
087	Lower CARBONIFEROUS (Dinantian)	MISSISSIPPIAN
088	Visean Stage	TENNESSEAN Series
089		Chesteran Stage
090		Meramecian
091	Tournaisian	WAVERLEYAN Series
092		Osagian Stage
093		Kinderhookian

094	Middle PALAEOZOIC = Devonian + Silurian	
095	DEVONIAN	
096	Upper DEVONIAN	
097	Famennian Stage	CHAUTAUQUAN Series
098		Conewangoan Stage
099		Cassagan
100	Frasnian Stage	SENECAN Series
101		Chemugnian Stage
102		Fingerlakesian
103	Middle DEVONIAN	Erian Series
104	Givetian Stage	
105		Taghanican Stage
106		Tioughniogan
107	Eifelian (approx. = Couvinian)	Cazenovian
108	Lower DEVONIAN	ULSTERIAN Series
109	Coblenzian Subseries (approx. = Breconian, U.K.)	
110	Emsian Stage (approx. = Zlichovian)	Onesquethewan Stage (=Onondaga)
111	Siegenian (approx. = Pragian)	Deerparkian (=Oriskany)
112	Gedinnian (approx. = Dittonian, Lochkovian)	Helderbergian
113	SILURIAN	
114	Upper SILURIAN (=Budnanian)	CAYUGAN Series
115	Downtonian Stage (=Skala) (=Pridoli)	Keyseran Stage
116	Salopian Series	
117	Ludlovian Stage (=Melbournian)	
118		Tonolowayan
119		Salinan (approx. = Guelph)
120	Wenlockian (=Eildonian --	Middle SILURIAN (Eurasia)
121		NIAGARAN Series
122		Lockportian Stage
123		Cliftonian
124	Llandoveryian (=Valentian, -- Keilorian)	Lower SILURIAN (Eurasia)
125	Taranian (=Gala)	Clintonian
126	Birkhill	MEDINAN Series = Alexandrian Stage
127	Lower PALAEOZOIC = Ordovician + Cambrian + Eocambrian	
128	ORDOVICIAN	
129	Upper ORDOVICIAN = Bala Series	
130	Ashgillian Stage (approx. = Harjuan Series) (Bolindian)	CINCINNATIAN Series
131		Richmondian Stage
132		Maysvillian
133		Edenian
134		CHAMPLAINIAN Series (approx. = Viruan Series)
135	Caradocian	Mohawkian Series
136	Eastonian Stage (Aust.)	Trentonian
137	Gisbournian	Blackriveran = Bolarian
138	Middle ORDOVICIAN	

- 139 Darriwillian St. (Aust) CHAZYAN Series
 140 Lower ORDOVICIAN
 141 Llandeillian Stage
 142 Llanvirnian
 143 CANADIAN Series (=Deepkill shale)
 144 Arenigian (=Skiddavian) (approx.
 = Ontikan Subseries)
 145 Yapeenian Stage (Aust.)
 146 Castlemainian "
 147 Chewtonian "
 148 Bendigonian "
 149 Tremadocian (=Iruan Subseries
 = Lancefieldian (Aust.))
 150 CAMBRIAN
 151 Upper CAMBRIAN = POTSDAMIAN = CROXIAN Series
 152 Trempealeauan Stage
 153 Franconian Stage
 154 Dresbachian
 155 Idamean Stage (Aust.)
 156 Mindyallan ("
 157 Middle CAMBRIAN = ACADIAN = ACADIAN = ALBERTAN
 158 (un-named, Aust.)
 159 (" ")
 160 (" ")
 161 Templetonian (")
 162 Lenian St. (USSR) Ordian (")
 163 Lower CAMBRIAN (approx. = GEORGIAN (Fr.)) = WAUCOBAN = GEORGIAN s.s.
 = Aldanian St. (USSR)
 164 EOCAMBRIAN
 165 PROTEROZOIC Era
 166 ARCHAEOZOIC Era

ITEM 8 -- GEOGRAPHIC LOCATION

001	Aden Protectorate	056	Cyprus
002	Afghanistan	057	Czechoslovakia
003	Alabama (U.S.A.)	058	Dahomey
004	Alaska (U.S.A.)	059	Delaware (U.S.A.)
005	Albania	060	Denmark
006	Alberta (Can.)	061	District of Columbia (U.S.A.)
007	Algeria	062	Dominican Republic
008	Andhra Pradesh (India)	063	Ecuador
009	Andorra	064	Egypt
010	Angola	065	Eire
011	Anhwei (China)	066	El Salvador
012	Argentina	067	Eritrea
013	Arizona (U.S.A)	068	Estonia (U.S.S.R.)
014	Arkansas (U.S.A.)	069	Ethiopia
015	Armenia (U.S.S.R.)	070	Finland
016	Assam (India)	071	Florida (U.S.A.)
017	A.C.T. (Aust.)	072	France
018	Austria	073	French Guiana
019	Azerbaijan (U.S.S.R.)	074	French Somaliland
020	Bahrein	075	Fukien (China)
021	Balearic Is. (Sp.)	076	Gabon
022	Basutoland	077	Gambia
023	Bechuanaland	078	Georgia (U.S.A.)
024	Belgium	079	Germany (East + West)
025	Bhutan	080	Ghana
026	Bihar (India)	081	Gibraltar
027	Bolivia	082	Goa (India)
028	Brazil	083	Greece
029	British Columbia (Can.)	084	Greenland (Norway)
030	British Guiana	085	Gruzinskaya S.S.R. (U.S.S.R.)
031	British Honduras	086	Guatemala
032	Brunei (Malaysia)	087	Gujarat
033	Bulgaria	088	Haiti
034	Burma	089	Hawaii (U.S.A.)
035	Byelorussia (U.S.S.R.)	090	Himachal Pradesh (India)
036	California (U.S.A)	091	Honan (China)
037	Cambodia	092	Honduras
038	Cameroons (Trust territories)	093	Hong Kong
039	Cameroun	094	Hopeh (China)
040	Canada	095	Hunan (China)
041	Central African Republic	096	Hungary
042	Ceylon	097	Hupei (China)
043	Chad	098	Iceland
044	Chekiang (China)	099	Idaho (U.S.A.)
045	Chile	100	Ifui
046	Chinese Peoples' Republic	101	Illinois (U.S.A.)
047	Colombia	102	India
048	Colorado (U.S.A.)	103	Indiana (U.S.A.)
049	Congo	104	Indonesia
050	Congo-Brazzaville	105	Inner Mongolia
051	Connecticut (U.S.A.)	106	Iowa (U.S.A.)
052	Corsica	107	Iran
053	Costa Rica	108	Iraq
054	Crete	109	Israel
055	Cuba	110	Italy + San Marino

111	Ivory Coast	167	Nepal
112	Jammu + Kashmir (India/Pakistan)	168	Netherlands
113	Japan	169	Nevada (U.S.A.)
114	Jordan	170	New Britain + New Ireland
115	Kansas (U.S.A.)	171	New Brunswick (Can.)
116	Kansu (China)	172	Newfoundland (Can.)
117	Kazakhstan (U.S.S.R.)	173	New Guinea + Papua
118	Kentucky (U.S.A.)	174	New Hampshire (U.S.A.)
119	Kenya	175	New Jersey (U.S.A.)
120	Kerala (India)	176	New Mexico (U.S.A.)
121	Kiangsi (China)	177	New South Wales (Aust.)
122	Kiangsu (China)	178	New York (U.S.A.)
123	Kirgizia (U.S.S.R.)	179	New Zealand
124	Korea (north + South)	180	Nicaragua
125	Kuwait	181	Niger
126	Kwangsi (China)	182	Nigeria
127	Kwangtung (China)	183	North Borneo (Malaysia)
128	Kweichow (China)	184	North Carolina (U.S.A.)
129	Laos	185	North Dakota (U.S.A.)
130	Latvia (U.S.S.R.)	186	Northern Rhodesia
131	Lebanon	187	Northern Territory (Aust.)
132	Liberia	188	Northwest Territories (Can.)
133	Libya	189	Norway
134	Liechtenstein	190	Nova Scotia (Can.)
135	Lithuania (U.S.S.R.)	191	Nyasaland
136	Louisiana (U.S.A.)	192	Ohio (U.S.A.)
137	Luxembourg	193	Oklahoma (U.S.A.)
138	Macao	194	Ontario (Can.)
139	Madhya Pradesh (India)	195	Oregon (U.S.A.)
140	Madras (India)	196	Orissa
141	Maharashtra (India)	197	Pakistan - East
142	Maine (U.S.A.)	198	Pakistan - West
143	Malagasay Republic	199	Panama
144	Malaya (Malaysia)	200	Paraguay
145	Mali	201	Pennsylvania (U.S.A.)
146	Malta + Gozo	202	Peru
147	Manchuria	203	Phillipines
148	Manipur (India)	204	Poland
149	Manitoba (Can.)	205	Portugal
150	Maryland (U.S.A.)	206	Portugese Guinea
151	Massachusetts (U.S.A.)	207	Portugese Timor
152	Mauritania	208	Puerto Rico
153	Mexico	209	Punjab (India)
154	Michigan (U.S.A.)	210	Qatar
155	Minnesota (U.S.A.)	211	Quebec (Can.)
156	Mississippi (U.S.A.)	212	Queensland (Aust.)
157	Missouri (U.S.A.)	213	Rajasthan (India)
158	Moldavia	214	Rhode Island (U.S.A.)
159	Monaco	215	Romania
160	Mongolian Peoples' Republic	216	Ruanda-Urundi
161	Montana (U.S.A.)	217	Sarawak (Malaysia)
162	Morocco	218	Sardinia
163	Mozambique	219	Saskatchewan (Can.)
164	Muscat + Oman	220	Saudi Arabia
165	Mysore (India)	221	Senegal
166	Nebraska (U.S.A.)	222	Shansi (China)

223	Shantung (China)	279	Washington (U.S.A.)
224	Shensi (China)	280	West Bengal (India)
225	Siberian U.S.S.R. (east of Ural Mts.)	281	Western Australia (Aust.)
226	Sicily (It.)	282	West Indies
227	Sierra Leone	283	West Virginia (U.S.A.)
228	Sikkim	284	Wisconsin (U.S.A.)
229	Singapore	285	Wyoming (U.S.A.)
230	Sinkiang (China)	286	Yemen
231	Solomon Is.	287	Yugoslavia
232	Somalia	288	Yukon (Can.)
233	South Australia	289	Yunnan (China)
234	South Carolina (U.S.A.)		
235	South Dakota (U.S.A.)		
236	Southern Rhodesia		
237	South-west Africa		
238	Spanish Guinea		
239	Spanish Sahara		
240	Spitzbergen		
241	Sudan		
242	Surinam		
243	Swaziland		
244	Sweden		
245	Switzerland		
246	Syria		
247	Szechwan (China)		
248	Tadzhikistan (U.S.S.R.)		
249	Taiwan		
250	Tanzania		
251	Tasmania (Aust.)		
252	Tennessee (U.S.A.)		
253	Texas (U.S.A.)		
254	Thailand		
255	Tibet		
256	Togo		
257	Tripura (India)		
258	Trucial States		
259	Tunisia		
260	Turkey		
261	Turkmenistan (U.S.S.R.)		
262	Uganda		
263	Ukraine (U.S.S.R.)		
264	Union of South Africa		
265	Union of Soviet Socialist Republics (European part)		
266	United Kingdom		
267	United States of America		
268	Upper Volta		
269	Ural Mountains + Novaya Zemlya (U.S.S.R.)		
270	Uruguay		
271	Utah		
272	Uttar Pradesh (India)		
273	Uzbekistan (U.S.S.R.)		
274	Venezuela		
275	Vermont		
276	Victoria (Aust.)		
277	Vietnam		
278	Virginia (U.S.A.)		

Oceans and important seas, with the islands therein:

- 290 Arctic Ocean (but not Spitzbergen, Iceland, Novaya Zemlya)
- 291 Atlantic Ocean (" " Greenland)
- 292 Baltic Sea (but not Gotland etc.)
- 293 Black Sea
- 294 Carribean Sea (but not Haiti, Puerto Rico, West Indies, Cuba)
Dominican Republic
- 295 Caspian Sea
- 296 Indian Ocean (but not Bahrein, Kuwait, Madagascar, Qatar)
- 297 Mediterranean Sea (but not Balaeric Is., Corsica, Crete, Cyprus,
Gozo, Malta, Sardinia, Sicily)
- 298 North Sea (but not Spitzbergen)
- 299 Pacific Ocean (but not Hawaii, New Britain, New Guinea, New Ireland,
North Borneo, Indonesia, Papua, Portugese Timor, Sarawak,
Solomon Is., Phillipines)
- 300 Red Sea
- 301 Southern Ocean

Continents:

- 302 Africa
- 303 Antarctica
- 304 Asia
- 305 Australia
- 306 Europe
- 307 North America
- 308 South America

Addenda:

- 309 U.S.S.R.
- 310 Spain
- 311 New Caledonia
- 312 Madagascar
- 313 South-east asia
- 314 Scandinavia

List of geographic synonyms

An-hui = Anhwei
 Armyanskaya S.S.R. = Armenia
 Azerbaydzhanskaya S.S.R. = Azerbaijan
 Belgian Congo = Congo
 Byelorusskaya S.S.R. = Byelorussia
 Estonskaya S.S.R. = Estonia
 Federal German Republic = Germany (West)
 Formosa = Taiwan
 French Congo = Congo-Brazzaville
 German Democratic Republic = Germany (East)
 Gold Coast = Ghana
 Gozo --- see Malta
 Gyana = British Guiana
 Hopei = Hopeh
 Hupei = Hupeh
 Irian = New Guinea
 Irish Republic = Eire
 Jugoslavia = Yugoslavia
 Kashmir --- see Jammu
 Kazakhskaya S.S.R. = Kazakhstan
 Kirgizskaya S.S.R. = Kirgizia
 Kirgiztan = Kirgizia
 Latviyskaya S.S.R. = Latvia
 Litovskaya S.S.R. = Lithuania
 Madagascar = Malagasay Republic
 Malgache Republic = Malagasay Republic
 Mocambique = Mozambique
 New Ireland --- see New Britain
 Novaya Zemlya --- see Ural Mountains
 Oman --- see Muscat
 Papua --- see New Guinea
 Persia = Iran
 San Marino --- see Italy
 Siam = Thailand
 Svalbard = Spitzbergen
 Tadzhikskaya S.S.R. = Tadzhikistan
 Tanganyika = Tanzania
 Turkmenskaya S.S.R. = Turkmenistan
 Ukrainskaya S.S.R. = Ukraine
 Uzbekskaya S.S.R. = Uzbekistan
 West Irian --- see New Guinea
 Zanzibar = Tanzania

+ - - - - - list dated 21.VII. 1967

Aden Protectorate = Republic of South Yemen
 Bechuanaland = Botswana
 Brunei = Malaysia
 North Borneo = Sabah
 Northern Rhodesia = Zambia
 Nyasaland = Malawi
 Union of South Africa = Republic of South Africa