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# INTERNATIONAL CATALOGUE

OF

## SCIENTIFIC LITERATURE

SIXTH ANNUAL ISSUE

### N ZOOLOGY

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LONDON :

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1908 (MARCH)

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ZOOLOGY

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# INTERNATIONAL CATALOGUE OF SCIENTIFIC LITERATURE

SIXTH ANNUAL ISSUE.

## N Z O O L O G Y

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PUBLISHED FOR THE INTERNATIONAL COUNCIL  
BY THE  
ROYAL SOCIETY OF LONDON

LONDON:  
HARRISON AND SONS, 45, ST. MARTIN'S LANE  
*France*: GAUTHIER-VILLARS, Paris  
*Germany*: FRIEDLÄNDER UND SOHN, Berlin

1908 (MARCH)

[Material received between Jan. 1907 and June 1907.]

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The *International Catalogue of Scientific Literature* is in effect a continuation of the Royal Society's *Catalogue of Scientific Papers* which will, when completed, consist of an Author Catalogue and Subject Index covering the period of 1800–1900. Twelve quarto volumes of the Author Catalogue covering the period 1800–1883 have already been published; the volumes for 1884–1900 are in course of preparation. The Subject Index will be issued separately for each of the seventeen sciences dealt with in the International Catalogue of Scientific Literature, and will be arranged in accordance with its Schedules. The volume for Pure Mathematics is in the Press.



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# ZOOLOGICAL RECORD

VOLUME THE FORTY-THIRD

BEING

## RECORDS OF ZOOLOGICAL LITERATURE

RELATING CHIEFLY TO THE YEAR

1906

COMPILED BY THE REGIONAL BUREAUS OF THE INTERNATIONAL CATALOGUE OF  
SCIENTIFIC LITERATURE;

SUPPLEMENTED AND ARRANGED FOR THE ZOOLOGICAL SOCIETY  
OF LONDON

BY D. SHARP, H. M. WOODCOCK, IGERNA B. J. SOLLAS, A. D. IMMS, MARGARET  
GRANT, F. A. POTTS, E. R. SYKES, S. PACE AND R. M. PACE,  
R. SHELFORD, R. BOWDLER SHARPE, AND R. LYDEKKER

SUPERINTENDED BY

DAVID SHARP, M.A., F.R.S., F.Z.S., &c.

*Curator in Zoology, University of Cambridge.*

Explorate solum: sic fit via certior ultrà.

LONDON:

PRINTED FOR THE SOCIETY;

SOLD AT THEIR HOUSE IN HANOVER SQUARE

M.DCCCCVIII

Papers and Memoirs intended for this work should be addressed to "THE EDITOR of the Zoological Record, Zoological Society, 3, Hanover Square, London, W." It is earnestly requested that in the case of separately-printed copies of papers so forwarded, the *original pagination* may be indicated.

## EXPLANATORY.

This Volume is printed in twenty Divisions, as enumerated on p. xii.

The pagination of each Division is separate, and is given at the left-hand top corner of the pages. The number and name of the Division is given as a heading on each left-hand page. The Registration Numbers are given at the right-hand top corner of the right-hand pages. The date 1906 corresponding to the bulk of the literature indexed is given at the right-hand top corner of the left-hand page.

In the Subject Index of each Division authors are quoted by name only. The full references will be found in the Title Section of the Division.

Where several papers by the same author are indexed they are numbered consecutively.

A List of Abbreviations of Titles of Journals is given at the end of the volume. This List includes not only journals actually indexed in this volume, but also journals that have been indexed in previous volumes. It should therefore be a fairly complete List of Journals that contain Zoological papers.

The Literature indexed is mainly that of 1906 but includes entries for 1901-1905 that have been received too late for inclusion in previous volumes of the International Catalogue.

The two title-pages show that Volume N (Zoology) of the Sixth annual issue of the International Catalogue of Scientific Literature and Volume XLIII of the Zoological Record are identical.

The proposal for an amalgamation of the Zoological Record with Volume N of the International Catalogue was approved by the International Convention which met in London in July, 1905. The agreement concluded with the Zoological Society of London provides that the amalgamation shall be for a period of five years, covering the literature of 1906-1910; at the end of this period each party to the agreement may resume the independent issue of its annual volumes, preserving the continuity of its series.

Subscribers to the Zoological Record will receive the volumes bound uniformly with previous volumes of the Record, while subscribers to the International Catalogue will receive their volumes in covers uniform with other volumes of the Catalogue.

The Schedules of Classification are bound up with the volumes intended for subscribers to the International Catalogue, but are absent from the volumes bound uniform with the Zoological Record.

The volume is arranged in accordance with these Schedules, but in one or two instances, notably in the case of Section XII Insecta, the Editor has adopted a modified arrangement.

## CONTENTS.

- I. COMPREHENSIVE AND GENERAL ZOOLOGY.
- II. PROTOZOA.
- III. PORIFERA OR SPONGIAE.
- IV. COELENTERATA.
- V. ECHINODERMATA.
- VI. VERMIDEA : including GEPHYREA AND PTEROBRANCHIATA.
- VII. BRACHIOPODA AND BRYOZOA OR POLYZOA.
- VIII. MOLLUSCA.
- IX. ARTHROPODA (GENERAL).
- X. CRUSTACEA.
- XI. ARACHINIDA AND MYRIOPODA ; including also GIGANTOSTRACA, EURYPTERIDA, PROTOTRACHEATA.
- XII. INSECTA.
- XIII. PROCHORDATA = TUNICATA, CEPHALOCHORDATA, ENTEROPNEUSTA.
- XIV. VERTEBRATA (GENERAL).
- XV. PISCES.
- XVI. REPTILIA AND BATRACHIA.
- XVII. AVES.
- XVIII. MAMMALIA.

ALPHABETICAL INDEX OF NEW NAMES OF GENERA AND SUBGENERA.

LIST OF ABBREVIATIONS AND OF TITLES OF JOURNALS.

International Catalogue of Scientific Literature

SCHEDULE

OF

CLASSIFICATION

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(N) ZOOLOGY

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## (N) ZOOLOGY.

## EXPLANATORY.

OWING to the great extent of Zoology, and the consequent specialisation that occurs amongst its workers, and because also of the desire that parts of the Zoological Catalogue shall be complete each one in itself, Zoology is divided into "Branches." These Branches, though primarily determined by the natural divisions of the animal kingdom, do not entirely correspond therewith, because of the great difference in the extent of the natural divisions. Some of these divisions (Phyla, or Classes) are consequently treated together, while others are divided into more than one Branch. When a division of this kind is adopted, there is also a Branch in which the divisions are still treated together as one whole, viz., Arthropoda, 2400-2431, and Vertebrata, 5200-5231. These two Branches will include only works of a wide scope. Thirty Branches are adopted, under the numbers 0400 to 6031, and there is also a comprehensive Branch numbered 0000-0231.

The subject matter of Zoology proper (as distinguished from the mode of arrangement of the animals alluded to above) is arranged under eight heads (or great Subjects). These eight Subjects all recur under each of the thirty Branches. Each Subject is indicated by a number, the terminal two digits of which are the same in every Branch. These great subjects will be found under 0207 to 0231.

Each great subject is divided into sub-divisions which are not numbered.

## (N) ZOOLOGIE.

## ERLÄUTERUNG.

BEI dem grossen Umfange der Zoologie und bei der hieraus sich ergebenden Speialisierung unter ihren Forschern, und ferner, weil der Wunsch besteht, dass einzelne Teile der zoologischen Bibliographie ein in sich geschlossenes Ganzes darstellen möchten, ist es als notwendig befunden, die Zoologie nach „Zweigen“ abzuteilen.

Diese Zweige sind zwar in erster Linie nach den natürlichen Gruppen des Tierreichs bestimmt, entsprechen ihnen aber doch nicht völlig, da der Umfang der einzelnen natürlichen Gruppen zu verschieden ist.

Demgemäß sind einzelne dieser Gruppen (Phyla oder Klassen) mit einander zusammengefasst, während andere in mehrere Zweige geteilt sind. In den Fällen, wo eine solche Teilung vorgenommen ist, giebt es auch einen Zweig, in dem die betreffende Gruppe ungeteilt als Ganzes behandelt wird, nämlich Arthropoden, 2400-2431 und Vertebraten, 5200-5231. Diese beiden Zweige sollen nur Werke allgemeinerer Art enthalten. Im ganzen sind unter Nummer 0400 bis 6031 dreissig Zweige angenommen und dazu kommt noch ein alles umfassender, unter Nummer 0000 bis 0231.

Der sonstige Stoff der Zoologie (im Unterschied von der Art der Anordnung der Tiere, von der bisher die Rede war) ist auf acht Kapitel (oder Hauptgegenstände) verteilt. Diese acht Gegenstände kehren bei jedem der dreissig Zweige wieder. Jeder Gegenstand ist durch eine Nummer bezeichnet, deren letzte beiden Ziffern in allen Zweigen die gleichen sind.

Diese Hauptgegenstände findet man unter 0207 bis 0231.

Jeder Hauptgegenstand ist in Unterabteilungen geteilt, die nicht numeriert sind.

## (N) ZOOLOGIE.

## EXPLICATION.

ETANT donnée d'une part la grande extension de la Zoologie, qui force les adeptes de cette science à se spécialiser, et d'autre part la nécessité de rendre les diverses parties du Catalogue zoologique indépendantes les unes des autres, et aussi complètes que possible, on a jugé nécessaire de diviser la Zoologie en un certain nombre de "branches." Ces branches ont été établies autant que possible d'après les divisions naturelles du règne animal ; toutefois elles ne correspondent pas toujours exactement à ces divisions, en raison des grandes différences qui existent dans l'éten-  
due de celles-ci. Il en résulte que certaines divisions (phyla, ou embranchements) sont traitées ensemble, tandis que d'autres sont partagées en plusieurs branches. Dans ce dernier cas il y a ordinai-  
rement une branche qui traite l'en-  
semble d'un embranchement, par  
exemple, Arthropodes, 2400-2431,  
et Vertébrés, 5200-5231. Ces deux  
branches ne comprennent que des ouvrages traitant un sujet assez vaste. On a adopté trente branches, portant les indies 0400 à 6031. Il y a en outre une branche de généralités portant l'indice 0000-0231.

La Zoologie considérée en elle-même, indépendamment des subdivisions en groupes auxquelles il vient d'être fait allusion, est parta-  
gée en huit chapitres (ou grandes catégories de sujets). Ces huit catégories se répètent dans chacune des trente branches, et sont indiquées chacune par des nombres dont les deux derniers chiffres sont les mêmes dans toutes les branches. Elles se trouvent sous les indies 0207 à 0231. Chacune d'elles se partage en subdivisions qui ne portent pas d'indies spéciaux.

## (N) ZOOLOGIA.

## SPIEGAZIONI.

IN causa della grande estensione della zoologia, e della conseguente specializzazione che esiste tra i suoi cultori, e perciò è desiderabile che le parti del Catalogo zoologico siano complete ciascuna per sé stessa, si è trovato necessario dividere la zoologia in "rami." Questi rami, quantunque principalmente determinati dalle naturali divisioni del regno animale, non corrispondono interamente ad esse in causa della grande differenza nella estensione delle divisioni naturali. Alcune di queste divisioni (phyla, oppure classi) sono conseguentemente trattate insieme, mentre che altre sono divise in più di un ramo. Quando una divisione di questo genere è adottata, vi è anche un ramo nel quale le divisioni sono tuttavia trattate insieme come un complesso, p. es. Arthropoda, 2400-2431, Vertebrata, 5200-5231. Questi due rami includeranno soltanto opere di largo soggetto. Trenta rami sono adottati, sotto i numeri 0400 a 6031, e inoltre è incluso un ramo comprensivo col numero 0000-0231.

La materia della zoologia comprensiva (distinta da quella dei gruppi degli animali qui sopra accennati) è disposta sotto otto capitoli (o grandi soggetti). Questi otto soggetti tutti si ripetono in ognuno dei trenta rami. Ciascun soggetto è indicato da un numero, del quale le due ultime cifre sono le stesse in ciaschedun ramo. Questi grandi soggetti si trovano sotto i numeri da 0207 a 0231. Ciascun grande soggetto è diviso in sottodivisioni, che non sono numerate.

## INSTRUCTIONS.

The registration numbers used in Zoology consist of four figures, of which the first two indicate the taxonomic position of the animal or animals dealt with and the last two the heading under which the paper is to be indexed.

Thus, in the registration number 2611 the figures 26 indicate *Crustacea*, while the figures 11 denote *Physiology*. All registration numbers beginning with 26 refer to Crustacea, and all registration numbers ending in 11 show that the paper indexed deals with a physiological subject.

The meaning to be assigned to the last two figures is always that given in the following list:—

- ..00 Title slip.
- ..03 Comprehensive and General Works.  
(For sub-divisions see Hyperzoology p. 18.)
- ..07 Structure. (For sub-divisions see 0207.)
- ..11 Physiology. (For sub-divisions see 0211.)
- ..15 Development. (For sub-divisions see 0215.)
- ..19 Ethology. (For sub-divisons see 0219.)
- ..23 Variation and Aetiology. (For sub-divisions see 0223.)
- ..27 Geography. (For sub-divisions see (J) Geography.)
- ..31 Taxonomy.  
The meaning of the first two figures is as follows:—
- 02.. General papers, or papers dealing with several classes of animals.
- 04.. Protozoa.
- 06.. Porifera (or Spongida).
- 08.. Coelenterata (or Cnidaria).
- 10.. Echinodermata.
- 12.. Platyhelminthes. Mesozoa and Trichoplax.
- 14.. Nemathelminthes.
- 16.. Chaetognatha. Rotifera. Gastrotricha. Kinorhyncha (or Echinodera).
- 18.. Archiannelida. Polychaeta. Myzostomaria. Oligochaeta. Gephyrea. Phoronis. Hirudinea.

## INSTRUKTIONEN.

Die in der Zoologie gebrauchten Ordnungsnummern bestehen aus vier Ziffern, von denen die beiden ersten die taxonomische Stellung des oder der behandelten Tiere anzeigen, während die letzten die Art der Behandlung angeben. So bedeutet z. B. in der Ordnungsnummer 2611 die 26 Crustacea, die 11 aber Physiologie. Die mit 26 beginnenden Ordnungsnummern beziehen sich also auf Crustacea, und alle Ordnungsnummern auf 11 geben an, dass die katalogisierte Arbeit sich mit einem physiologischen Gegenstande befasst.

Die Bedeutung der letzten beiden Ziffern ergiebt sich aus folgender Liste:—

- Titel-Zettel.
- Umfassende und allgemeine Arbeiten. (Unterabteilungen siehe Hyperzoologie p. 18.)
- Morphologie. (Unterabteilungen siehe 0207.)
- Physiologie. (Unterabteilungen siehe 0211.)
- Entwickelung. (Unterabteilungen siehe 0215.)
- Ethologie. (Unterabteilungen siehe 0219.)
- Variation und Ätiologie. (Unterabteilungen siehe 0223.)
- Geographische Verbreitung. (Unterabteilungen siehe (J) Geographie.)

## Taxonomie.

Die ersten beiden Ziffern bedeuten Folgendes:—

- Allgemeine, oder auf mehrere Tierklassen bezügliche Arbeiten.
- Protozoa.
- Porifera (oder Spongida).
- Coelenterata (oder Cnidaria).
- Echinodermata.
- Platyhelminthes. Mesozoa und Trichoplax.
- Nemathelminthes.
- Chaetognatha. Rotifera. Gastrotricha. Kinorhyncha (oder Echinodera).
- Archiannelida. Polychaeta. Myzostomaria. Oligochaeta. Gephyrea. Phoronis. Hirudinea.

## INSTRUCTIONS.

Les numéros enregistreurs employés en zoologie comprennent quatre chiffres, dont les deux premiers indiquent la position taxonomique de l'animal ou des animaux en question, tandis que les deux derniers indiquent la rubrique sous laquelle le mémoire doit être classé.

Ainsi, dans le numéro enregistrateur 2611 les chiffres 26 indiquent Crustacés, pendant que les chiffres 11 signifient Physiologie. Tout numéro enregistreur qui commence par 26 se rapporte aux Crustacés, de même que tout numéro enregistrateur en 11 indique que le mémoire dont il est question s'occupe de physiologie.

La signification des deux derniers chiffres est toujours celle qui est donnée dans la liste suivante :—

- .00 Fiche de titre.
  - .03 Ouvrages généraux ou d'une grande étendue. (Pour les subdivisions voy. Hyperzoologie p. 19.)
  - .07 Morphologie. (Pour les subdivisions voy. 0207.)
  - .11 Physiologie. (Pour les subdivisions voy. 0211.)
  - .15 Développement. (Pour les subdivisions voy. 0215.)
  - .19 Ethologie. (Pour les subdivisions voy. 0219.)
  - .23 Variation et étiologie. (Pour les subdivisions voy. 0223.)
  - .27 Distribution géographique. (Pour les subdivisions voy. (J) Géographie.)
  - .31 Taxonomic.
- La signification des deux premiers chiffres est comme suit :—
- 02.. Mémoires généraux ou ayant trait à plusieurs classes d'animaux.
  - 04.. Protozoaires.
  - 06.. Porifères (ou Spongaires).
  - 08.. Cœlenterés (ou Cnidaria).
  - 10.. Echinodermes.
  - 12.. Platyhelminthes. Mésozoaires et le Trichoplax.
  - 14.. Némathelminthes.
  - 16.. Chætognathes. Rotifères. Gastrotriches. Kinorhynques (ou Echinodères).
  - 18.. Archiannélides. Polychètes. Myzostomes. Oligochètes. Géphyriens. Phoronis. Hirudinées.

## ISTRUZIONI.

I numeri di registrazione adoperati nella zoologia consistono di quattro cifre, delle quali le due prime indicano la posizione tassonomica dell'animale o degli animali di cui si tratta, mentre che le due ultime indicano la rubrica sotto la quale si ha da catalogare la memoria. Così, nel numero di registrazione 2611 le cifre 26 indicano *Crustacea*, mentre che le cifre 11 si riferiscono alla *Fisiologia*. Ogni numero di registrazione che comincia con 26 si riferisce ai *Crustacea*, e da ogni numero che termina in 11 si può inferire che la memoria catalogata si occupa di fisiologia.

Le due ultime cifre hanno invariabilmente la significazione che si vede nell'elenco seguente :—

- Scheda a titolo.
- Opere generali e comprensive. (Per le suddivisioni *vedi Iperzoologia p. 19.*)
- Struttura. (Per le suddivisioni *vedi 0207.*)
- Fisiologia. (Per le suddivisioni *vedi 0211.*)
- Sviluppo. (Per le suddivisioni *vedi 0215.*)
- Etiologia. (Per le suddivisioni *vedi 0219.*)
- Variazione ed Etiologia. (Per le suddivisioni *vedi 0223.*)
- Geografia. (Per le suddivisioni *vedi (J) Geografia.*)

## Tassonomia.

Le due prime cifre hanno sempre la significazione seguente :—

Lavori generali o riferentisi a più classi di animali.

- Protozoa.
- Porifera (vel *Spongida*).
- Cœlenterata (vel *Cnidaria*).
- Echinodermata.
- Platyhelminthes. Mesozoa e Trichoplax.
- Nematelminthes.
- Chætognatha. Rotifera. Gastrotricha. Kinorhyncha (vel Echinodera).
- Archiannelida. Polychæta. Myzostomaria. Oligochæta. Gephyriæ. Phoronis. Hirudinea,

20..	Brachiopoda, Bryozoa (or Polyzoa).	Brachiopoda, Bryozoa (oder Polyzoa).
22..	Mollusca.	Mollusca.
24..	Arthropoda.	Arthropoda.
26..	Crustacea.	Crustacea.
28..	Trilobita. Xiphosura. Euryptera. Pantopoda. Tardigrada. Linguatulida.	Trilobita. Xiphosura. Euryptera. Pantopoda. Tardigrada. Linguatulida.
30..	Arachnida.	Arachnida.
32..	Prototraheata (or Onychophora).	Prototraheata.
34..	Myriopoda.	Myriopoda.
35..	Insecta.	Insecta.
36..	Aptera (or Apterygogenea). Anoplura. Mallophaga. Thysanoptera (or Physopoda). Siphonaptera (or Aphaniptera).	Aptera (oder Apterygogenea). Anoplura. Mallophaga. Thysanoptera (oder Physopoda). Siphonaptera (oder Aphaniptera).
38..	Orthoptera, Neuroptera and Trichoptera.	Orthoptera, Neuroptera und Trichoptera.
40..	Hemiptera (or Rhynchota), excluding Anoplura, which are placed in 36..	Hemiptera (oder Rhynchota), excl. Anoplura, die unter 36 .. eingeordnet sind.
42..	Diptera, excluding Siphonaptera, which are placed in 36..	Diptera, excl. Siphonaptera, die unter 36.. eingeordnet sind.
44..	Lepidoptera.	Lepidoptera.
46..	Hymenoptera.	Hymenoptera.
48..	Coleoptera, including Strepsiptera.	Coleoptera, incl. Strepsiptera.
50..	Prochordata : Amphioxus (or Leptocardii), Enteropneusta, Tunica.	Prochordata : Amphioxus (oder Leptocardii), Enteropneusta, Tunica.
52..	Vertebrata.	Vertebrata.
54..	Pisces, excluding Leptocardii (or Amphioxus), which are placed in 50..	Pisces, excl. Leptocardii (oder Amphioxus), d'e unter 50 .. eingeordnet sind.
56..	Amphibia and Reptilia.	Amphibia und Reptilia.
58..	Aves.	Aves.
60..	Mammalia.	Mammalia.
	In addition to the complete volume it is intended to issue as three separate parts sections 12.. to 18.. (Vermidea); 28.. to 34..; and 35.. to 48.. (Hexapoda). Each of the remaining sections will then be published as a separate part.	Es wird beabsichtigt, ausser dem Gesamtbande noch drei separate, aus folgenden Abschnitten bestehende Teile herauszugeben: 12.. bis 18.. (Vermidea); 28.. bis 34..; und 35.. bis 48.. (Hexapoda). Jeder der übrigen Abschnitte wird dann auch separat herausgegeben.

*Slips or Cards used in preparing the Volume.*

Four kinds of slips are to be provided:—(1) Title slips, (2) Subject slips, (3) Systematic (Taxonomic) slips, (4) New Genera or Species slips. The several slips relating to the same paper should be tied together, and should have a common (arbitrary) number. This number must not be used for any other paper until two years have

*Zettel zur Vorbereitung des Bandes.*

Es müssen vier verschiedene Zettel hergestellt werden:—(1) Titel-Zettel, (2) Sach-Zettel, (3) System-(Taxonomic)-Zettel, (4) Zettel für neue Gattungen oder Arten. Die verschiedenen, auf dieselbe Arbeit bezüglichen Zettel sollen zusammengeheftet und mit einer gemeinsamen (willkürlichen) Nummer verschen werden. Vor Ablauf von zwei

20..	Brachiopodes.	Bryozoaires (ou Polyzoaires).	Brachiopoda.	Bryozoa (vel Polyzoa).
22..	Mollusques.		Mollusca.	
24..	Arthropodes.		Arthropoda.	
26..	Crustacés.		Crustacea.	
28..	Trilobites.	Xiphosures. Euryptérides. Pantopodes. Tardigrades. Linguatulides.	Trilobita. Xiphosura. Eurypterida. Pantopoda. Tardigrada. Linguatulida.	
30..	Arachnides.		Arachnida.	
32..	Prototrichéates (ou Onychophores).		Prototrichetata (vel Onychophora). <sup>1</sup>	
34..	Myriapodes.		Myriopoda.	
35..	Insectes.		Insecta.	
36..	Aptères (ou Aptérygogénieurs).	Anoploures. Mallophages. Thisanoptères (ou Physopodes). Siphonapteres (ou Aphaniptères).	Aptera (vel Apterygogenea). Anoplura. Mallophaga. Thysanoptera (vel Physopoda). Siphonaptera (vel Aphaniptera).	
38..	Orthoptères, Névroptères et Trichoptères.		Orthoptera, Neuroptera et Trichoptera.	
40..	Hémiptères (ou Rhynchotes), à l'exclusion des Anoploures, qui sont placés sous le numéro 36..		Hemiptera (vel Rhynchota), esclusi Anoplura, che sono indicati col numero 36..	
42..	Diptères, à l'exclusion des Siphonapteres, qui sont placés sous le numéro 36..		Diptera, esclusi Siphonaptera, che sono indicati col numero 36..	
44..	Lépidoptères.		Lepidoptera.	
46..	Hyménoptères.		Hymenoptera.	
48..	Coléoptères, y compris les Strepsiptères.		Coleoptera, incl. Strepsiptera.	
50..	Prochordés : Amphioxus (ou Leptocardiens) Entéropneustes, Tuniciers.		Prochordata : Amphioxus (vel Leptocardii), Enteropneusta, Tunica.	
52..	Vertébrés.		Vertebrata.	
54..	Poissons, à l'exclusion des Leptocardiens (ou Amphioxus), qui sont placés sous le numéro 50..		Pisces, escl. Leptocardii (vel Amphioxus), i quali sono indicati col numero 50..	
56..	Batrachians et Reptiles.		Batrachia et Reptilia.	
58..	Oiseaux.		Aves.	
60..	Mainmifères.		Mammalia.	
	Outre le volume complet, l'on se propose de publier en trois volumes à part les sections 12.. à 18.. (Vermidés); 28.. à 34..; et 35.. à 48.. (Hexapodes). Puis chacune des sections suivantes sera aussi publiée à part.		Oltre il tomo completo si ha l'intenzione di pubblicare in tre parti separate le sezioni 12.. a 18.. (Vermidea); 28.. a 34..; e 35.. a 48.. (Hexapoda). Ciascuna delle rimanenti sezioni verrà poi anche pubblicata separatamente.	

### Rédaction des Fiches.

Il doit y avoir quatre sortes de fiches, savoir :—(1) Fiches de titre, (2) Fiches de matière, (3) Fiches systématiques (taxonomiques), (4) Fiches pour les genres ou espèces nouvelles. Toutes les fiches qui se rapportent au même mémoire doivent être attachées ensemble et marquées d'un numéro en commun (arbitraire). Ce numéro ne

### Redazione delle Schede.

Devono farsi quattro specie di schede :—(1) Schede a titolo, (2) Schede a materia, (3) Schede sistematiche (tassonomiche), (4) Schede per i generi o le specie nuove. Tutte le schede riferentesi al medesimo lavoro devono essere attaccate insieme e segnate con un numero comune (arbitrario). Questo numero non è da usarsi

elapsed. The slips should be prepared as follows:—

(1) *Title slips.*—The first entry on a title slip is the letter N, followed by a four-figure registration number, in which the first two figures indicate the Branch of zoology as given in the above list, while the two last figures are ..00. The remaining entries on the title slips are to be made as on the author slips for the other sciences.

At the foot of each title slip all the registration numbers corresponding to the subject and systematic slips prepared for the paper are to be given. If a paper is to be indexed under more than one Branch of zoology a separate title slip must be prepared for each Branch.

**Example—**

N 6000.

Mansion, Arthur. La taupe commune. Rev. sci., Paris, (sér. 4), 17, 1902, (13-18). [6019 6031].

In order to economise space and to simplify entries, the full reference to a paper will be made only on the title and systematic slips. Each title slip will be printed in the Catalogue with a definite number attached. This number, together with the author's name, will be the reference to the paper in all other cases.

(2) *Subject Slips.*—The entries on the subject slips shall not, as a rule, be reproductions of the title, but such modifications thereof as shall serve to convey the necessary information in the clearest and most direct manner possible.

To prepare such slips properly it is essential that the papers shall have been read and indexed by those who are able to determine what are the several matters of importance to be brought under notice.

In the case of slips bearing the numbers 0000-0050, 0070 and 0090,

Jahren darf keine andere Arbeit mit derselben Nummer bezeichnet werden.

(1) *Titel-Zettel.*—Die erste Eintragung auf einem Titel-Zettel ist der Buchstabe N, worauf eine vierziffrige Ordnungsnummer folgt wovon die zwei ersten Ziffern den Zweig der Zoologie bezeichnen, wie in obiger Liste angegeben, während die zwei letzten Ziffern ..00 sind. Die übrigen Eintragungen auf dem Titel-Zettel sind in derselben Weise abzufassen wie bei den Autoren-Zetteln in den anderen Wissenschaften.

Am Fusse eines jeden Titel-Zettels müssen sämtliche, den für die betreffende Arbeit hergestellten Sach- und System-Zetteln entsprechende, Ordnungsnummern angegeben werden. Soll ein Aufsatz unter mehr als einem Zweige der Zoologie katalogisiert werden, so ist für jeden Zweig ein besonderer Titel-Zettel herzustellen.

**Beispiel—**

N 6000.

Mansion, Arthur. La taupe commune. Rev. sci., Paris, (sér. 4), 17, 1902, (13-18). [6019 6031].

Um Raum zu ersparen und die Eintragungen zu vereinfachen kommt das vollständige Citat nur auf die Titel- und System-Zettel. Jeden im Kataloge gedruckten Titel-Zettel wird eine bestimmte Nummer zugewiesen. Diese Nummer, mit dem Verfassernamen, bildet in allen anderen Fällen das Citat.

(2) *Sach-Zettel.* — Die Eintragungen auf den Sach-Zetteln sollen in der Regel keine Wiederholungen des Titels sein, sondern solche Modifikationen desselben, dass sie die erforderliche Auskunft so kurz und bündig wie möglich ertheilen.

Für die richtige Fassung solcher Zettel ist es von Wichtigkeit, dass die Aufsätze von Personen gelesen und katalogisiert werden, welche im stande sind das Wichtige darin zu erkennen und hervorzuheben.

Bei Zetteln, welche die Nummern 0000-0050, 0070 und 0090 tragen,

doit être employé pour aucun autre mémoire qu'au bout de deux ans. Voici comment il faut rédiger les fiches :—

(1) *Fiches de titre.*—La fiche de titre doit commencer par la lettre N, suivie d'un numéro enregistreur de quatre chiffres, dont les deux premiers indiquent la branche de zoologie d'accord avec la liste ci-dessus, tandis que les deux dernières sont 00. Ensuite la fiche de titre sera établie de la même façon que les fiches d'auteur pour les autres sciences.

Chaque fiche de titre doit porter en bas tous les numéros enregistrateurs qui correspondent aux fiches de matière et systématiques qui aient été rédigées pour le mémoire dont il s'agit. Si un mémoire doit être catalogué sous plus d'une branche de zoologie il faut une fiche séparée pour chaque branche.

#### Exemple—

N 6000.

**Mansion, Arthur.** La taupe commune. Rev. sci., Paris, (sér. 4), 17, 1902, (13-18). [6019 6031].

Pour gagner de la place et simplifier les articles, la référence ne sera donnée en entier que sur les fiches de titre et les fiches systématiques. Chaque fiche de titre sera imprimée dans le Catalogue et désignée par un numéro. Ce numéro, avec le nom d'auteur, servira de renvoi à l'article partout ailleurs.

(2) *Fiches de matière.*—Règle générale, la fiche de matière doit porter non pas une reproduction du titre mais de telles modifications du titre qui suffisent à donner les renseignements nécessaires de la manière la plus précise.

Afin que de telles fiches soient bien établies il est essentiel que les mémoires aient été lus et catalogués par des personnes à même de déterminer quelles sont les choses d'importance à faire ressortir. Là où il s'agit de fiches portant les numéros 0000-0050, 0070 et 0090, le

per nessun altro lavoro prima che siano scorsi due anni. Le schede devono essere redatte come segue :—

(1) *Schede a titolo.*—La scheda a titolo deve cominciare colla lettera N, seguita da un numero di registrazione di quattro cifre di cui le due prime indicano il ramo di zoologia d'accordo coll'elenco dissopra, mentre che le due ultime sono .00. Le altre annotazioni sulla scheda a titolo si fanno poi come sulle schede per autori nelle altre scienze.

La scheda a titolo deve portare in fondo tutti i numeri di registrazione corrispondenti colla scheda sistematica ed a materia che si siano preparate per il lavoro di cui si tratta. Se si vuol catalogare un lavoro sotto più d'un ramo di zoologia bisogna fare una scheda separata per ogni ramo.

#### Esempio—

N 6000.

**Mansion, Arthur.** La taupe commune. Rev. Sci., Paris, (sér. 4), 17, 1902, (13-18). [6019 6031].

Per risparmiare lo spazio e ridurre al più semplice le annotazioni, la riferenza non verrà scritta per esteso che sulle schede a titolo e le schede sistematiche. Ogni scheda a titolo si stamperebbe nel Catalogo con un numero definito. Questo numero, assieme al nome dell'autore, costituirà la riferenza al lavoro in ogni altro caso.

(2) *Schede a materia.*—Le annotazioni sulle schede a materia non saranno, di regola, ripetizioni del titolo, ma saranno tali modificazioni di questo che bastino a dare le informazioni necessarie nel modo più perspicuo che sia possibile.

Perchè tali schede siano ben redatte è essenziale che le memorie siano state lette e catalogate da persone che possano determinare quali sono le cose importanti da far risaltare.

Trattandosi di schede portanti i numeri 0000-0050, 0070 e 0090, il

the author's name should immediately follow the registration number.

Example—

N 0040.

Ross, R. Malaria and mosquitos. London, Proc. R. Inst., 16, 1901, (295-313).

This should be attached to the title slip and abbreviated thus:—

N 0040.

Ross, R. Malaria and mosquitos. (295-313).

In cases in which it is desirable, for other purposes which the Bureaus may have in contemplation, to enter the full reference on the slip, the shortened reference will be made at the Central Bureau by striking out unnecessary particulars.

On slips bearing a number ending in ..27 (Geographical Distribution) the registration number should be immediately followed by the geographical symbol. After this should come (a) the author's name, (b) the title of the paper.

Example—

N 2227 he.

Pilsbry, H. A. A new Colombian Pleurodonte [*P. clappi*]. Nautilus, Philadelphia, Pa., 15, 1901, (34-35).

which, if the above directions are followed, will be reduced to—

N 2227 he.

Pilsbry, H. A. A new Colombian Pleurodonte. (34-35).

The remaining registration numbers, viz., 0060, and those ending in ..03, ..07, ..11, ..15, ..19, and ..23, are divided into numerous sub-headings. One of these sub-headings should follow the registration number.

A separate card must be provided for each entry that is to appear separately in the Catalogue.

In cases in which entries cannot be included under existing subdivisions, and for which a new sub-

muss der Verfassername unmittelbar auf die Ordnungsnummer folgen.

Beispiel—

N 0040.

Ross, R. Malaria and mosquitos. London, Proc. R. Inst., 16, 1901, (295-313).

Dieser Zettel müsste an den Titel-Zettel gehetet und wie folgt abgekürzt werden:—

N 0040.

Ross, R. Malaria and mosquitos. (295-313.)

Falls es den Bureaus, zu irgend einem von ihnen beabsichtigten Zwecke, wünschenswert erscheint, das vollständige Citat beizubehalten, so wird das Centralbureau durch Streichen des Überflüssigen dasselbe abkürzen.

Bei Zetteln, welche eine Nummer auf ..27 tragen (geographische Verbreitung) muss das geographische Symbol unmittelbar auf die Ordnungsnummer folgen. Dann kommt (a) der Verfassername, (b) der Titel des Aufsatzes.

Beispiel—

N 2227 he.

Pilsbry, H. A. A new Colombian Pleurodonte [*P. clappi*]. Nautilus, Philadelphia, Pa., 15, 1901, (34-35).

was, obiger Vorschrift gemäss, abgekürzt so lautet:—

N 2227 he.

Pilsbry, H. A. A new Colombian Pleurodonte. (34-35).

Die übrigen Ordnungsnummern, namentlich 0060 und jene auf ..03, ..07, ..11, ..15, ..19 und ..23, sind in zahlreiche Unterabteilungen geteilt. Eine dieser Unterabteilungen muss auf die Ordnungsnummer folgen.

Jeder besonderen Eintragung im Kataloge muss ein besonderer Zettel entsprechen.

Falls die vorhandenen Unterabteilungen zur gehörigen Katalogisierung nicht hinreichen und

nom d'auteur doit suivre immédiatement le numéro enregistreur.

**Exemple—**

N 0040.

Ross, R. Malaria and mosquitoes. London, Proc. R. Inst., 16, 1901, (295-313).

Ceci doit être attaché à la fiche de titre et abrégé ainsi :—

N 0040.

Ross, R. Malaria and mosquitoes. (295-313).

Dans les cas où les bureaux régionaux, dans un but quelconque, désirent mettre la référence en entier sur la fiche, le Bureau Central en fera la référence abrégée en biffant les détails superflus.

Sur les fiches portant un numéro en ..27 (Distribution Géographique) le numéro enregistreur doit être suivi immédiatement du symbole géographique. Ensuite viendrait (a) le nom d'auteur, (b) le titre du mémoire.

**Exemple—**

N 2227 he.

Pilsbry, H. A. A new Colombian Pleurodonte [*P. clappi*]. Nautilus, Philadelphia, Pa., 15, 1901, (34-35).

Ce qui, conformément aux instructions ci-dessus, sera réduit à :—

N 2227 he.

Pilsbry, H. A. A new Colombian Pleurodonte. (34-35).

Les autres numéros enregistreurs, c.à.d. 0060 et ceux en ..03, ..07, ..11, ..15, ..19 et ..23, sont divisés en de nombreuses subdivisions. Une de ces subdivisions doit suivre le numéro enregistreur.

Il faut une fiche séparée pour chaque article qui doit paraître séparément dans le catalogue.

S'il se trouve que les subdivisions actuelles ne suffisent pas et qu'une nouvelle subdivision serait à désirer,

nome dell'autore deve seguire immediatamente il numero di registrazione.

**Esempio—**

N 0040.

Ross, R. Malaria and mosquitoes. London, Proc. R. Inst., 16, 1901, (295-313).

Questo si deve attaccare alla scheda a titolo ed abbreviare così :—

N 0040.

Ross, R. Malaria and mosquitoes. (295-313).

Ove gli Uffici Regionali, a qualunque scopo, volessero annotare la riferenza sulla scheda per esteso, la riferenza abbreviata si farebbe dall'Ufficio Centrale col cancellare i dottagli soverchi.

Sulle schede portanti un numero in ..27 (Distribuzione Geografica) il numero di registrazione dev'essere seguito immediatamente dal simbolo geografico. Poi verrebbe (a) il nome dell'autore, (b) il titolo della memoria.

**Esempio—**

N 2227 he.

Pilsbry, H. A. A new Colombian Pleurodonte [*P. clappi*]. Nautilus, Philadelphia, Pa., 15, 1901, (34-35).

Giusto le suddette istruzioni questo si ridurrebbe a :—

N 2227 he.

Pilsbry, H. A. A new Colombian Pleurodonte. (34-35).

I rimanenti numeri di registrazione, cioè 0060 e quelli in ..03, ..07, ..11, ..15 e ..23 sono divisi in numerose suddivisioni. Una di queste suddivisioni deve seguire il numero di registrazione.

Ci vuol una scheda separata per ogni articolo che deve apparire separatamente nel Catalogo.

Nel caso di articoli che non si possono includere nelle suddivisioni attuali e per i quali si stima desidera-

division is thought to be desirable, such suggested new sub-division shall be recorded upon the card, in order that the matter may be dealt with by the Central Burcau. In no case must two differently numbered subjects be placed on one slip.

If the book or paper deals with so many of these sub-headings as to render it unnecessary to mention all of them, the word "general" should be used for the sub-heading. The sub-heading should be followed by (a) the author's name, (b) the title or modified title of the paper.

**Example—**

N 6015 [Regeneration].

Lange, C. Experiments on regeneration [of kidneys]. (Danish) Kjöbenhavn, Biol. Forh., 1899-1900, 1901, (1-8).

If this card is sent to the Central Bureau tied to the corresponding title slip, it should be abbreviated, as explained above, to—

N 6015 [Regeneration].

Lange, C. Experiments on regeneration [of kidneys]. (Danish) (1-8).

(3) *Systematic slips*.—In these slips the name of the animal or animals should immediately follow the registration number. Where more than one genus is mentioned a separate slip must be prepared for each genus.

Every new genus must have a separate slip; the name of the new genus must be followed by the indication "n. gen.", a brief statement as to what it is allied to and some indication of the species it includes, followed by the author's name and reference.

New sub-genera are to be treated in a similar manner to genera, except that "n. subgen." will be used, and the name of the genus of which it is a division will follow.

eine neue Unterabteilung deshalb wünschenswert erscheint, so ist die vorgeschlagene neue Unterabteilung auf dem Zettel anzugeben, damit das Central-Bureau entscheide, wie dabei zu verfahren sei. Auf keinen Fall dürfen zwei verschieden numerierte Gegenstände auf einen Zettel gesetzt werden.

Bezieht sich das Buch, resp. der Aufsatz, auf so viele Unterabteilungen, dass es unzweckmässig ist, sie alle anzuführen, so gebraucht man das Wort „Allgemeines“ für die Unterabteilung. Auf die Unterabteilung folgt (a) der Verfassernname, (b) der Titel, resp. der modifizierte Titel der Arbeit.

**Beispiel—**

N 6015 [Regeneration].

Lange, C. Experiments on regeneration [of kidneys]. (Danish) Kjöbenhavn, Biol. Forh., 1899-1900, 1901, (1-8).

Wird dieser Zettel mit dem entsprechenden Titel-Zettel zusammengeheftet an das Central-Bureau geschickt, so ist er, wie oben erklärt, folgendermassen abzukürzen:—

N 6015 [Regeneration].

Lange, C. Experiments on regeneration [of kidneys]. (Danish) (1-8).

(3) *System-Zettel*.—Bei diesen Zetteln soll der Name des Tieres oder der Tiere unmittelbar auf die Ordnungsnummer folgen. Wird mehr als eine Gattung erwähnt, so ist für jede Gattung ein besonderer Zettel herzustellen. Jede neue Gattung muss einen besonderen Zettel erhalten; auf den Namen der neuen Gattung folgt die Bemerkung „n. gen.“ eine kurze Notiz, wem sie verwandt ist, und irgend eine Angabe über die Species, die sie umfasst; hierauf Verfassernname und Citat.

Neue Untergattungen sind ähnlich zu behandeln, wie Gattungen, nur dass die Bemerkung „n. subgen.“ gebraucht und der Name der Gattung, um deren Unterabteilung es handelt, hinzugefügt wird,

la nouvelle subdivision que l'on propose doit être indiquée sur la fiche afin que le Bureau Central décide comment il faut procéder. En aucun cas deux articles portant des numéros différents ne doivent être écrits sur la même fiche.

Dans le cas où le livre ou mémoire traité de tant de ces subdivisions qu'il est inutile de les citer toutes, il faut employer le mot "Généralités" pour la subdivision. La subdivision doit être suivie (a) du nom d'auteur, (b) du titre ou du titre modifié du mémoire.

#### Exemple—

N 6015 [Regeneration].

Lange, C. Experiments on regeneration [of kidneys].  
(Danish) Kjöbenhavn, Biol. Forh., 1899-1900, 1901, (1-8).

Si cette fiche est envoyée au Bureau Central attachée à la fiche de titre correspondante elle doit être abrégée, comme il est expliqué ci-dessus, à :

N 6015 [Regeneration].

Lange, C. Experiments on regeneration [of kidneys].  
(Danish) (1-8).

(3) *Fiches systématiques.*—Sur ces fiches le nom de l'animal ou des animaux doit suivre immédiatement le numéro enregistreur. Si mention est faite de plus d'un genre il faut une fiche distincte pour chaque genre.

Chaque genre nouveau doit avoir une fiche distincte ; le nom du genre nouveau doit être suivi de l'indication "n. gen.", puis d'une courte indication du genre ou des genres auxquels il est allié et de quelques indications relatives aux espèces qu'il renferme ; le tout sera suivi du nom d'auteur et de la référence.

Les sous-genres nouveaux seront traités de la même façon que les genres, mais l'indication "n. gen." sera remplacée par "n. subgen.", et l'on mettra ensuite le nom du genre auquel le sous-genre se rattache.

bile qualche nuova suddivisione, si deve annotare sulla scheda la nuova suddivisione proposta affinchè l'Ufficio Centrale decida come si debba comportare con essa. In nessun caso si devono porre sulla stessa scheda due soggetti portanti numeri diversi.

Se il libro o la memoria si riferisce a tante di queste suddivisioni che non fa d'uopo accennarle tutte, allora si pone per la suddivisione la parola "generale." La suddivisione dev'essere seguita (a) dal nome dell'autore, (b) dal titolo, ossia dal titolo modificato, del lavoro.

#### Esempio—

N 6015 [Regeneration].

Lange, C. Experiments on regeneration [of kidneys].  
(Danish) Kjöbenhavn, Biol. Forh., 1899-1900, 1901, (1-8).

Se questa scheda si manda all'Ufficio Centrale attaccata alla scheda a titolo corrispondente si deve abbreviare, come si è spiegato qui sopra, a :

N 6015 [Regeneration].

Lange, C. Experiments on regeneration [of kidneys].  
(Danish) (1-8).

(3) *Schede sistematiche.*—Su queste schede il nome dell'animale o degli animali deve seguire immediatamente il numero di registrazione. Se si fa menzione di più di un genere bisogna far una scheda separata per ogni genere.

Ciascun nuovo genere deve avere una scheda separata ; il nome del nuovo genere dev'essere seguito dalla indicazione "n. gen." poi viene una breve indicazione di quello cui esso si connette, e qualche indicazione delle specie che include, e segue infine il nome dell'autore e le riferenze.

I nuovi sottogenitori saranno trattati in modo simile ai nuovi generi, ma sarà adoperata la indicazione "n. subgen.", e seguirà il nome del genere del quale il sottogenere è divisione.

The author's name should *follow* the title or modified title on these slips.

Examples—

(I) N 2631.

*Amblyops crozeti*, bipolar occurrence. Ohlin, A. Ann. Mag. Nat. Hist., London, (Ser. 7), 7, 1901, (371-374). [Schizopoda.]

(II) N 4431.

*Heterophrya neximargo*, sp. n. Peru. Warren, W. Nov. Zool., Tring, 8, 1901, (457). [Geometridae.]

When more than one new species is described from the same genus, all the new species should be mentioned on the slip and the respective page references given. Where only one new species is mentioned the slip should be arranged as in Example II. In any case the habitat should be given where possible.

At the end of each slip the name of the group of animals referred to should be given. When the work gives no indication of the group (*i.e.*, Family, Sub-family or Tribe) and the slip-maker cannot from his own knowledge supply the deficiency the sign [?] may be written at the end of the slip.

When it is undesirable to index each genus separately a general entry should be given.

Example—

N 4431.

Hoyningen-Huene, F. von. Aberrationen einiger estländischer Eulen und Spanner. Berliner ent. Zs., 46, 1901, (309-319, mit 1 Taf.). [Noctuidae.]

On systematic slips Christian names should be represented by initials only.

Slips relating to fossil forms are to be marked †, and slips relating to fossil and recent forms †\*. (The latter condition occurs only rarely in this division.)

Bei diesen Zetteln sollte der Verfassername auf den Titel oder modifizierten Titel *folgen*.

Beispiele—

(I) N 2631.

*Amblyops crozeti*, bipolar occurrence. Ohlin, A. Ann. Mag. Nat. Hist., London, (Ser. 7), 7, 1901, (371-374). [Schizopoda.]

(II) N 4431.

*Heterophrya neximargo* sp. n. Peru. Warren, W. Nov. Zool., Tring, 8, 1901, (457). [Geometridae.]

Wird mehr als eine neue Art derselben Gattung beschrieben, so sollen sämtliche neuen Arten, mit Angabe der betreffenden Seiten-Zahlen, auf dem Zettel erwähnt werden. Wo es sich blos um eine neue Art handelt, ist der Zettel wie in Beispiel II herzustellen. Das Habitat ist auf jeden Fall wenn möglich anzugeben.

Am Ende eines jeden System-Zettels ist der Name der betreffenden Tiergruppe anzuführen. Enthält die Arbeit keine Angabe der Gruppe (d.h. Familie, Unterfamilie oder Tribus) und ist der Zettelschluß über nicht im stande, aus eigener Kenntnis die Lücke auszufüllen, so kann das Zeichen [?] an das Ende des Zettels gesetzt werden. Ist die gesonderte Angabe einer jeden Gattung nicht wünschenswert, so ist eine allgemeine Bezeichnung zu geben.

Beispiel—

N 4431

Hoyningen-Huene, F. von. Aberrationen einiger estländischer Eulen und Spanner. Berliner ent. Zs., 46, 1901, (309-319, mit 1 Taf.). [Noctuidae.]

Auf den System-Zetteln sollen die Vornamen nur durch Anfangsbuchstaben wiedergegeben werden.

Zettel, die sich auf fossile Formen beziehen, sind durch ein † zu bezeichnen; solche, die sich sowohl auf fossile als auf recente Formen beziehen, durch ein †\*. (Der letzte Fall kommt in diesem Abschnitt nur selten vor.)

Le nom d'auteur doit suivre le titre ou le titre modifié sur ces fiches.

Exemples—

(I) N 2631.

*Amblyops crozeti*, bipolar occurrence. Ohlin, A. Ann. Mag. Nat. Hist., London, (Ser. 7), 7, 1901, (371-374). [Schizopoda.]

(II) N 4431.

*Heterophrya neximargo* sp. n. Peru. Warren, W. Nov. Zool., Tring, 8, 1901, (457). [Geometridae.]

Quand il y a description de plus d'une espèce du même genre, toutes les espèces nouvelles doivent être portées sur la fiche avec le renvoi aux pages respectives. S'il ne s'agit que d'une seule espèce nouvelle la fiche doit être établie conformément à exemple II. L'habitat doit être indiqué en tout cas si possible. L'on devra placer à la fin de chaque fiche systématique le nom du groupe d'animaux auquel la fiche se rapporte. Quand l'ouvrage ne fournit aucune indication de groupe (famille, sous-famille ou tribu) et lorsque le rédacteur de la fiche ne peut, d'après ses propres connaissances, suppléer à ce défaut d'indications, l'on pourra mettre le signe [?] à la fin de la fiche.

S'il n'est pas à désirer que chaque genre soit catalogué séparément il faut établir un article général.

Exemple—

N 4431.

**Hoyningen-Huene, F. von.**  
Aberrationen einiger est-ländischer Eulen und Spanner. Berliner ent. Zs., 46, 1901, (309-319, mit 1 Taf.). [Noctuidae.]

Sur les fiches systématiques les noms de baptême doivent être représentés par des initiales sculément.

Les fiches relatives aux formes fossiles doivent être marquées †, et celles qui se rapportent aux formes fossiles récentes †\*. (Cette dernière condition ne se présente que rarement dans cette division.)

Su queste schede il nome dell'autore deve venire dopo il titolo o titolo modificato.

Esempi—

(I) N 2631.

*Amblyops crozeti*, bipolar occurrence. Ohlin, A. Ann. Mag. Nat. Hist., London, (Ser. 7), 7, 1901, (371-374). [Schizopoda.]

(II) N 4431.

*Heterophrya neximargo* sp. n. Peru. Warren, W. Nov. Zool., Tring, 8, 1901, (457). [Geometridae.]

Quando si descrive più di una specie nuova del medesimo genere, tutte le specie nuove devono venire accennate sulla scheda colla riferenza alle pagine rispettive. Trattandosi di una sola specie nuova, la scheda dev'essere redatta come in esempio II. In ogni caso, per quanto sia possibile, si deve menzionare il habitat.

Al fine di ciascuna scheda sistematica si deve porre il nome del gruppo di animali cui la scheda si riferisce. Quando il lavoro non porta indicazione del gruppo (cioè famiglia, sottofamiglia, tribù) o il redattore della scheda non può di suo supplire alla deficienza, si può mettere al fine della scheda il segno [?].

Quando non si vuole catalogare separatamente ogni genere, si farà un'annotazione generale.

Esempio—

N 4431.

**Hoyningen-Huene, F. von.**  
Aberrationen einiger est-ländischer Eulen und Spanner. Berliner ent. Zs., 46, 1901, (309-319, mit 1 Taf.). [Noctuidae.]

I nomi di battesimo devono essere rappresentati sulle schede sistematiche colle sole iniziali.

Le schede relative a forme estinte saranno segnate †, e le schede relative a forme estinte e viventi †\*. (L'ultima condizione occorre soltanto raramente in questa divisione.)

(4) *Lists of New Genera and Species.*—For the preparation of these lists, the Regional Bureaus should give the names of genera and sub-genera (a) which are new, (b) the significance of which has been changed, (c) which contain new species. These may be written at the foot of the systematic slips, but it would greatly facilitate an earlier production of the volume if the Regional Bureaus would write each new genus on a separate card and attach it to the systematic slip.

#### *Date of Receiving Slips.*

The period during which the material for any one year will be received at the Central Bureau will not extend beyond June of the following year. Regional Bureaus are therefore earnestly requested to complete the indexing of their zoological literature within the time named.

The period covered by the literature indexed in any one of the annual volumes shall be from January 1st to December 31st of the particular year, but any matter which had not been received in time for insertion in the previous volume shall also be included therein.

#### *Distinctive Character of cards.*

The editorial work will be greatly facilitated by ruling a red line near the left-hand edge of the title slips, a green line near the left-hand edge of the subject slips, and no line at all on the taxonomy and new species slips. Or the slips may be printed on thin card of three colours, viz., red for the title slips, green for the subject slips, and white for the systematic slips. The size of the slips must be 16 em. by 8 em.

(4) *Listen neuer Gattungen und Arten.*—Zur Herstellung dieser Listen sollten die Regionalbureaus die Namen der Gattungen und Untergattungen angeben, (a) die neu sind, (b) deren Bedeutung sich geändert hat, (c) die neue Arten enthalten. Diese können am Fusse der System-Zettel angeführt werden, es würde jedoch zur schnelleren Erscheinung des Bandes wesentlich beitragen, wenn die Regionalbureaus jede neue Gattung auf einem besonderen Zettel schrieben und diesen an den System-Zettel hefteten.

#### *Termin des Empfangs der Zettel.*

Das Material für irgend ein Jahr darf nicht später als Ende Juni des folgenden Jahres in den Besitz des Centralbureaus gelangen. Die Regionalbureaus werden daher dringend ersucht, mit dem Katalogisieren ihrer zoologischen Literatur bis zu dem genannten Termin fertig zu werden.

Die in irgend einem der jährlichen Bände veröffentlichte Litteratur soll die Periode vom 1. Januar bis zum 31 December des betreffenden Jahres decken, ctwaiige Artikel aber, die für den vorigen Band zu spät eintrafen, werden darin mit aufgenommen.

#### *Markierung der Zettel.*

Die Herausgabe wird bedeutend erleichtert werden, wenn auf den Titel-Zetteln nahe dem linken Rande eine rothe Linie, auf den Sach-Zetteln entsprechend eine grüne Linie gezogen wird, während die Taxonomie- und Arten-Zettel ohne Linie bleiben. Man kann auch die Zettel auf drei verschiedenfarbige Sorten Carton drucken, nämlich die Titel-Zettel auf roten, die Sach-Zettel auf grünen und die System-Zettel auf weissen.

Die Zettel müssen 16 × 8 cm. gross sein.

(4) *Listes des genres et espèces nouvelles.*—Pour la rédaction de ces listes les Bureaux Régionaux doivent donner les noms des genres et sous-genres (a) qui sont nouveaux, (b) dont la signification est changée, (c) qui contiennent des espèces nouvelles. Ils peuvent être écrits au pied des fiches systématiques, pourtant si les Bureaux Régionaux voulaient écrire chaque genre nouveau sur une fiche séparée et l'attacher à la fiche systématique, cela contribuerait beaucoup à accélérer la publication du volume.

#### *Date de la réception des fiches.*

La période pendant laquelle les matières pour une année quelconque seront admises par le Bureau Central ne s'étendra pas au-delà du mois de juin de l'année suivante. Aussi les Bureaux Régionaux sont-ils instamment priés de compléter l'index de leur littérature zoologique avant l'expiration de ce terme.

La littérature indexée dans un volume annuel quelconque comprendra la période du 1er janvier au 31 décembre de l'année en question, ainsi que les articles qui étaient arrivés trop tard pour être incorporés dans le volume précédent.

#### *Caractère distinctif des fiches.*

Le travail du Directeur sera grandement facilité si l'on trace une ligne rouge près du bord gauche des fiches de titre, une ligne verte près du bord gauche des fiches de matière, et si l'on ne trace aucune ligne sur les fiches systématiques et sur les fiches pour les espèces nouvelles. On peut aussi imprimer les fiches sur des cartons minces de trois couleurs, savoir, une carte rouge pour les fiches de titre, une carte verte pour les fiches de matière, et une carte blanche pour les fiches systématiques.

Les dimensions des fiches doivent être de 16 em. sur 8 em.

(n-9720)

(4) *Elenchi di Generi e Specie nuove.*—Per la redazione di questi elenchi gli Uffici Regionali devono dare i nomi dei generi e sottogeneri, (a) che sono nuovi, (b) il cui significato si è cambiato, (c) che contengono delle specie nuove. Questi possono essere scritti in fondo alle schede sistematiche, ma contribuirebbe molto ad accelerare la pubblicazione del tomo se gli Uffici Regionali servissero ogni genere nuovo sopra una scheda separata e attaccassero questa alla scheda sistematica.

#### *Data di ricezione delle schede.*

Il periodo durante il quale il materiale per un anno qualunque sarà ammesso dall'Ufficio Centrale non si stenderà in là di Giugno dell'anno seguente. Gli Uffici Regionali sono perciò pregati con istanza di completare il catalogo della loro letteratura zoologica dentro del detto termine.

La letteratura catalogata in un tomo annuale qualunque comprendrà il periodo dal 1º Gennaio al 31 Dicembre dell'anno di cui si tratta, coll' aggiunto di quegli articoli che fossero ricevuti troppo tardi per essere inclusi nel tomo precedente.

#### *Carattere distintivo delle schede.*

Il lavoro dell' Ufficio Centrale sarà grandemente facilitato dal segnare il margine sinistro delle schede a titolo con una linea rossa, quello delle seconde a soggetto con una verde, e dal lasciare senza linea le schede tassonomiche e quelle per le specie nuove. Oppure le schede potranno essere scritte su carta di tre colori, rosso, verde, e bianco, il primo per le schede a titolo, il secondo per quelle a soggetto, il terzo per quelle sistematiche.

Il formato delle schede dev'essere di 16 per 8 centimetri di lato.

o

**0000-0231. Comprehensive Zoology.**

N.B.—The subjects enumerated under numbers 0000 to 0231 may occur in any one of the subsequent Branches. In the Catalogue only works that deal with several Branches will be registered under numbers 0000 to 0231; hence the term "Comprehensive Zoology."

**0000-0231. Allgemeine Zoologie.**

N.B.—Die unter Nr. 0000 bis 0231 aufgeführten Gegenstände können in jedem der nachfolgenden Zweige wiederkehren. Unter Nr. 0000-0231 bringt der Katalog nur solche Arbeiten, die mehrere Zweige behandeln. Daher der Ausdruck „Allgemeine Zoologie.“

**HYPEROZOLOGY.**

- 0000 Philosophy.
- 0010 History. Biography.
- 0020 Periodicals. Reports of Institutions, Societies, Congresses, Explorations.
- 0030 General Treatises, Text-books, Dictionaries, Collected Works, Tables.
- 0032 Bibliographies.
- 0040 Addresses, Lectures, etc., of a general character.
- 0050 Pedagogy.
- 0060 Institutions, Museums, Collections, Aquaria, Gardens, Utility and Harmfulness, Zoology in relation to Medicine, etc. (*See also* the general sections of Special Zoology.)
- 0070 Nomenclature (principles of).
- 0090 Technique. Methods of research, instruments and apparatus.
- 0207 STRUCTURE (OR MORPHOLOGY). [In general or of more than one of the classes of animals.] (*See also* (L) General Biology (O) Anatomy and (Q) Physiology.)  
  
General ; Comparative Anatomy ; Special Anatomy and Histology ; Tegument and its Organs ; Nervous System and Organs of Sense ; Myology ; Skeleton (including Osteology and Dentition) ; Skeletal Structures of Invertebrates ; Alimentary System ; Circulatory and Respiratory Organs ; Water Vascular System, Blood, Lymph, Cœlomic Fluid, Chyle. Special Glands ; Excretory Organs ; Reproductive Organs ; Special External Characters ; Colour. Rudimentary or Vestigial Organs, and Organs of uncertain nature.

**HYPEROZOLOGIE.**

- Philosophie.
- Geschichte. Biographien.
- Periodica. Berichte von Instituten, Gesellschaften, Kongressen, Forschungsreisen etc.
- Allgemeine Abhandlungen, Lehrbücher, Wörterbücher, Sammelwerke, Tabellen.
- Bibliographien.
- Festreden, Vorträge u.s.w., allgemeiner Art.
- Pädagogik.
- Institute, Museen, Sammlungen, Aquarien, Gärten, Nützlichkeit und Schädlichkeit, Zoologie in Beziehung zur Medizin etc. (*Siehe auch* die allgemeinen Abteilungen der speziellen Zoologie.)
- Nomenklatur (Prinzipien).
- Technik. Untersuchungsmethoden. Instrumente and Apparate.
- STRUKTUR (ODER MORPHOLOGIE). [Im allgemeinen oder von mehreren Tierklassen.] (*Siehe auch* (L) Allgemeine Biologie, (O) Anatomie und (Q) Physiologie.)  
  
Allgemeines ; Vergleichende Anatomie ; Spezielle Anatomie und Histologie : Tegument und seine Organe ; Nervensystem und Sinnesorgane ; Myologie ; Skelett (einsehl. Osteologie und Zahnbildung) ; Inneres Skelett bei Wirbellosen ; Ernährungssystem ; Circulations- und Respirationsorgane ; Wassergefäßsystem, Blut, Lymphe, Cœlomflüssigkeit, Chylus. Spezielle Drüsen ; Excretions-Organen ; Reproduktive Organe ; Specielle äussere Charaktere ; Farbe. Rudimentäre oder unentwickelte Organe und Organe ungewisser Natur.

## 0000-0231. Zoologie générale.

N.B.—Les sujets énumérés sous les indices 0000 à 0231 peuvent être représentés dans chacune des "branches" suivantes ; mais c'est seulement les ouvrages ayant trait à plusieurs "branches" qui doivent être catalogués sous les numéros 0000 à 0231 ; de là le terme de "Zoologie générale."

## HYPERZOOLOGIE.

- 0000 Philosophie.
- 0010 Histoire. Biographie.
- 0020 Périodiques. Rapports d'Institutions, de Sociétés, de Congrès, d'Explorations, etc.
- 0030 Traité généraux, Manuels, Dictionnaires, Recueils, Tables.
- 0032 Bibliographies.
- 0040 Discours, Cours, etc., d'un caractère général.
- 0050 Enseignement.
- 0060 Institutions, Musées, Collections, Aquaria, Jardins. Utilité et Nocivité. Zoologie en rapport avec la Médecine, etc. (*Voy. aussi les sections générales de la Zoologie spéciale.*)
- 0070 Nomenclature (principes de).
- 0090 Technique. Méthodes de recherche, instruments et appareils.
- 0207 STRUCTURE (ou MORPHOLOGIE). [En général ou dans plusieurs classes d'animaux.] (*Voy. aussi (L) Biologie Générale, (O) Anatonomie et (Q) Physiologie.*)

Généralités ; Anatomie comparée ; Anatomie spéciale et Histologie (ex. organes tégumentaires) ; Système nerveux et organes des sens ; Myologie ; Squelette (y compris Ostéologie et Dentition) ; Structure des Invertébrés ; Système digestif ; Appareils de la circulation et de la respiration ; Système aquifère vasculaire, sang, lymphé, liquide de la cavité générale, chyle. Glandes spéciales : Organes d'excrétion ; Organes de reproduction ; Organes externes spéciaux ; Couleur. Organes rudimentaires ou vestiges d'organes anciens ; Organes de nature incertaine.

(n-9720)

## 0000-0231. Zoologia comprensiva.

I soggetti designati coi numeri 0000 a 0231 possono ricorrere in ognuno dei seguenti rami. Nel catalogo, tuttavia, soltanto i lavori che trattano di diversi rami saranno registrati sotto i numeri 0000 a 0231 ; di qui il termine "Zoologia comprensiva."

## IPERZOOGIA.

- Filosofia.
- Storia. Biografia.
- Periodici. Resoconti di Istituti, Società, Congressi, Esplorazioni.
- Trattati generali, Libri di testo, Dizionari, Raccolte, Tavole.

## Bibliografie.

- Discorsi, Letture, etc., aventi un carattere generale.

## Pedagogia.

- Istituti, Musei, Collezioni, Aquaria, Giardini, Utilità e Nocività. Zoologia in rapporto alla medicina. (*Vedi anche le sezioni generali della Zoologia speciale.*)

## Principi di Nomenclatura.

- Tecnica. Metodi di ricerca, strumenti ed apparati.

- STRUTTURA (o MORFOLOGIA). [In generale oppure di più di una classe di animali.] (*Vedi anche (L) Biologia Generale, (O) Anatoma e (Q) Fisiologia.*)

Generalità ; Anatomia comparata; Anatomia speciale o Istologia : Tegumento e suoi organi ; Sistema nervoso e organi di senso ; Miologia ; Scheletro (incl. Osteologia e Dentizione) ; Strutture interne scheletriche degli invertebrati ; Apparecchio alimentare ; Organi della circolazione e della respirazione ; Sistema acquifero vascolare, Sangue, Linfa, Liquido celomatico, Chilo ; Glandule speciali ; Organi escretori ; Organi riproduttivi. Caratteri speciali esterni : Colore. Organi rudimentali e in vestigio e organi di natura incerta.

**0211 PHYSIOLOGY** [of the Animal Kingdom, or of more than one of its Branches]. (*See also* (Q) Physiology.)

[Physiology will be treated as a separate science. In zoology it is therefore only necessary to collect those physiological memoirs that specially interest zoologists; hence a detailed division is superfluous, but the following may be cited as examples to come under this heading.]

General ; Production of Sex ; Production of Caste ; Function of Sense Organs ; Function of Special Organs and Structures, *e.g.*, of Glands ; Assimilation ; Respiration ; Environmental Effects ; Change of Function ; Adaptation. Duration of Life ; Senescence ; Death.

**0215 DEVELOPMENT.** [General works on more than one of the Branches.] (*See also* L 2000-5900 ; O 1500-1940.)

General ; Budding and Asexual Reproduction ; Oogenesis and Ovum ; Spermatogenesis and Spermatozoon ; Phenomena of Fertilization ; Parthenogenesis ; Embryology, Organogeny and Histogeny ; Metamorphosis and Larval Forms ; Postembryonic Ontogeny ; Alteration of Generations ; Pædogenesis ; Dissogony ; Cycles of Generations ; Changes during Life ; Regeneration ; Hermaproditism.

For cell-structure and processes see (L) General Biology—Cytology.

**0219 ETHOLOGY.** [Works dealing with one or more of the following subjects, and relating to more than one Branch of the Animal Kingdom.]

General ; Habits ; Phenology ; Migration and Nonmigration ; Hibernation ; Parental Relations ; Sexual Relations ; Sexual Dimorphism ; Oviposi-

**PHYSIOLOGIE** [des Tierreichs oder mehrerer seiner Zweige]. (*Siehe auch* (Q) Physiologie.)

[Physiologie wird als besondere Wissenschaft behandelt werden. In „Zoologie“ brauchen daher nur solche physiologische Abhandlungen aufgeführt zu werden, die speziell den Zoologen interessieren. Darum ist eine detaillierte Einteilung hier überflüssig, doch mag das Folgende als Beispiel dienen.]

Allgemeines ; Hervorbringung des Geschlechtes, der Rasse ; Funktion der Sinnesorgane ; Funktion besonderer Bildungen, z. B. Drüsen ; Assimilation ; Atmung ; Wirkung der Umgebung ; Funktionswechsel ; Anpassung. Lebensdauer ; Altern ; Tod.

**ENTWICKELUNG.** [Allgemeine Werke über mehr als einen der Zweige.] (*Siehe auch* L 2000-5900 ; O 1500-1940.)

Allgemeines ; Knospenbildung und ungeschlechtliche Fortpflanzung ; Oogenesis und Ovum ; Spermatogenesis und Spermatozoon ; Befruchtungs-Phänomene ; Parthenogenesis ; Embryologie, Organogenie und Histogenie ; Metamorphose und Larvenformen ; postembryonale Ontogenie ; Generationswechsel ; Pædogenesis ; Dissogenie ; Generations-Cyklen ; Veränderungen während des Lebens ; Regeneration ; Hermaproditismus.

Zell-Struktur und -Processe *siehe* (L) Allgemeine Biologie—Cytologie.

**ETHOLOGIE.** [Arbeiten, die einen oder mehrere der folgenden Gegenstände behandeln und sich auf mehr als einen Zweig des Tierreichs beziehen.]

Allgemeines ; Lebensgewohnheiten ; Phänologie ; Wanderung und Nichtwanderung ; Winterschlaf ; Beziehungen zwischen Eltern und Nachkommenschaft;

**0211 PHYSIOLOGIE** [du règne animal ou de plusieurs branches du règne animal]. (*Voy. aussi (Q) Physiologie.*)

[La Physiologie doit être traitée comme une science distincte ; en conséquence, en Zoologie il ne sera nécessaire de relever que les mémoires de physiologie qui intéressent spécialement les zoologues ; une division détaillée est donc superflue, néanmoins on peut citer la suivante comme exemple ]

Généralités ; Production des sexes ; Formation des genres ; Fonctions des organes des sens ; Fonctions des organes de structure spéciale (*ex. des glandes*) ; Assimilation ; Respiration ; Influence du milieu ; Changement de fonction ; Adaptation ; Durée de la vie ; Sénescence ; Mort.

**0215 DÉVELOPPEMENT.** [Ouvrages généraux ayant trait à plusieurs "branches."] (*Voy. aussi L 2000-5900 ; O 1500-1940.*)

Généralités ; Bourgeonnement et reproduction asexuée ; Oogenèse et œuf ; Spermogénèse et Spermatozoïdes ; Phénomènes de fécondation ; Parthénogénèse ; Embryologie, organogénie et histogénie ; Métamorphose et formes larvaires ; Ontogénie postembryonnaire ; Générations alternantes ; Pädogénèse ; Dissogonie ; Cycles de générations ; Changements pendant la vie ; Régénération ; Hermaphrodisme.

Pour la structure et les processus cellulaires voir (L) Biologie générale—Cytologie.

**0219 ETHOLOGIE.** [Ouvrages traitant d'un ou de plusieurs des sujets suivants et se rapportant à un ou à plusieurs embranchements du règne animal].

Généralités : Habitudes ; Phénologie ; Migration et non-migration ; Hibernation ; Relations de parenté ; Relations sexuelles ; Dimorphisme sexuel ; Ponte ;

**FISIOLOGIA** [del Regno animale o di più di uno dei suoi rami]. (*Vedi anche (Q) Fisiologia.*)

[La fisiologia sarà trattata come una scienza separata. Nella zoologia è perciò soltanto necessario raccogliere quelle memorie di fisiologia che più specialmente possono interessare lo zoologo ; quindi una divisione particolareggiata è superflua, ma ciò che segue può rappresentare la divisione di questo capitolo.]

Generalità ; Produzione dei sessi ; Produzione di casto ; Funzione degli organi di senso ; Funzione di speciali organi, *p. es.* le glandule ; Assimilazione ; Respirazione ; Effetti dell' ambiente ; Cambiamento di funzione ; Adattamento. Durata della vita ; Sénescence ; Morte.

**SVILUPPO.** [Lavori generali su più di uno dei rami.] (*Vedi anche L 2000-5900 ; O 1500-1940.*)

Generalità ; Gemmazione e riproduzione asexuale ; Oogenesi e Uovo ; Spermatogenesi e Spermatozoide ; Fenomeni di Fecondazione ; Partenogenesi ; Embriologia, organogenia ed istogenia ; Metamorfosi e forme larvali ; Ontogenia postembrionica ; Alternanza delle generazioni ; Pedogenesi ; Dissogonia ; Cicli delle generazioni ; Cambiamenti durante la vita ; Rigenerazione ; Ermafroditismo.

Per la struttura cellulare e i processi di sviluppo *vedi* (L) Biologia generale—Citologia.

**ETOLOGIA.** [Lavori aventi a che fare con uno o più dei soggetti seguenti e relativi ad uno o più rami del regno animale.]

Generalità ; Abitudini ; Fenologia ; migrazione e non migrazione ; ibernazione ; rapporti parentali ; rapporti sessuali ; dimorfismo sessuale

tion ; Voice ; Sound Production ; (*see also* Q 4145). Luminosity ; (*see also* Q 0260). Habitat with sub-divisions, *e.g.*, Cavernicolous Animals, Pelagic and Deep-sea Animals (plankton), etc. ; Instinct and Psychology ; Social Relations ; Gregariousness ; Symbiosis ; (*see also* L 5550 ; Q 0285 ; R 1640) ; Parasitism ; Defensive Processes (including Protective Coloration, Mimicry and Protective Resemblance) ; Ornament and Colour ; Breeding and Acclimatisation.

**0223 VARIATION AND AETIOLOGY.** [Works dealing with one or more of the following subjects and relating to more than one Branch of the Animal Kingdom.] (*See also* (L) General Biology, and (Q) Physiology.)

General ; Substantive variation ; size, proportions, form, colour, etc. Meristic variations ; numerical [meristic proper] ; homoeotic ; teratological. Bionomic variation ; of fertility ; of time of appearance ; of maturity ; of development ; of habits. Phylogeny.

Or indexed alternatively or supplementally, with reference to treatment—descriptive, statistical, mathematical ; geographical or stational.

Heredity. Grafts. Crosses and Hybrids. In-breeding. Teleogeny. Evolution. (*See also* K 0200 ; L 4300.)

**0227 GEOGRAPHICAL ZOOLOGY.**

Geographical Distribution. [Works relating to the principles and modes of distribution.]

Topographical Zoology. [Works relating to the Fauna of one or more of the sub-divisions used in (J) Geography, and dealing

Sexuelle Beziehungen ; Sexueller Dimorphismus ; Eiablage ; Stimme ; Hervorbringung von Lauten (*siehe auch* Q 4145) ; Leuchtvermögen (*siehe auch* Q 0260) ; Habitat mit Unterabteilungen, z. B. Höhlentiere, pelagische und Tiefsee-Tiere (Plankton) u. s. w. ; Instinkt und Psychologie ; Soziale Beziehungen ; Heerdenleben ; Symbiose (*siehe auch* L 5550 ; Q 0285 ; R 1640) ; Parasitismus ; Verteidigungs-Prozesse (einschl. Schutzfärbung, Mimicry und schützende Ähnlichkeiten) ; Schmuck und Farbe ; Züchtung und Akklimatisierung.

**VARIATION UND AETOLOGIE.** [Arbeiten, die einen oder mehrere der folgenden Gegenstände behandeln und sich auf mehr als einen Zweig des Tierreichs beziehen.] (*Siehe auch* (L) Allgemeine Biologie und (Q) Physiologie.)

Allgemeines ; Substantielle Variation ; Grösse, Proportionen, Form, Farbe etc. Meristische Variationen ; numerische (meristische im eigentlichen Sinne) ; homoeotische ; teratologische. Bionomische Variation ; in Hinsicht auf Fruchtbarkeit, auf Erscheinungszeit ; auf Zeit der Reife ; auf Entwicklung ; auf Lebensgewohnheiten. Phylogenie.

Hierneben oder als Ergänzung eine Einteilung mit Rücksicht auf die Art der Behandlung—ob descriptiv, statistisch, mathematisch ; geographisch oder nach Standort.

Vererbung. Ppropfen. Kreuzungen und Bastardbildungen. Inzucht. Teleogenie. Evolution. (*Siehe auch* K 0200 ; L 4300.)

**GEOGRAPHISCHE ZOOLOCIE.**

Geographische Verbreitung. [Arbeiten, die sich auf die Prinzipien und die Arten der Verbreitung beziehen.]

Topographische Zoologie. [Arbeiten, die sich auf die Fauna einer oder mehrerer der Unterabteilungen in (J) Geographie,

Voix ; Productions des sons ; (*Voy. aussi Q 4145.*) Production de la lumière ; (*Voy. aussi Q 0260.*) Habitat avec subdivisions, *ex.* Animaux cavernicoles ; Animaux pélagiques et des zones abyssales (plankton), etc. ; Instinct et Psychologie ; Relations sociales ; Instincts sociaux ; Symbiose ; (*Voy. aussi L 5550 ; Q 0285 ; R 1640.*) Parasitisme ; Procédés de défense ; Ressemblance (y compris la coloration protectrice, le mimétisme et la ressemblance protectrice) ; Ornements et couleur ; Elevage et acclimation.

**0223 VARIATION ET ETIOLOGIE.** [Ouvrages traitant d'un ou de plusieurs des sujets suivants, et ayant trait à plus d'une branche du règne animal.] (*Voy. aussi (L) Biologie Générale et (Q) Physiologie.*)

Généralités ; Variations traitées en elles-mêmes ; Taille, proportions, forme, couleur, etc. Variations mériстиques ; variations numériques (mériстиques proprenent dites) ; homéotiques ; tétratologiques. Variations bionomiques, variations de fécondité ; variations dans l'époque d'apparition, la maturité, le développement, les habitudes. Phylogénie. Variations traitées d'une façon supplémentaire dans les ouvrages descriptifs, statistiques, mathématiques, géographiques.

Hérédité. Greffes. Croisements et Hybrides. Unions consanguines. Télégénie. Évolution. (*Voy. aussi K 0200 ; L 4300.*)

**0227 ZOOLOGIE GÉOGRAPHIQUE.**

Distribution géographique des animaux. [Ouvrages ayant trait aux principes et aux modes de distribution géographique.]

Zoologie topographique. [Ouvrages ayant trait à la faune d'une ou de plusieurs des subdivisions employées en (J)]

oviposizione ; voce ; produzione di suoni (v. anche Q 4145) ; luminosità (v. anche Q 0260) ; Habitat con suddivisioni, p. es. animali cavernicoli, animali pelagici e delle zone abissali (plankton), etc. ; istinto e psicologia ; rapporti sociali ; istinti gregarii ; simbiosi (v. anche L 5550 ; Q 0285 ; R 1640) ; parasitismo ; processi difensivi (compresovi la colorazione protettiva, il mimetismo e la rassomiglianza protettiva) ; ornamenti e colore ; Allevamento ed acclimatazione.

**VARIAZIONE ED ETIOLOGIA.** [Lavori aventi a che fare con uno o più dei soggetti seguenti e relativi ad uno o più rami del regno animale.] (*Vedi anche (L) Biologia Generale e (Q) Fisiologia.*)

Generalità ; Variazione sostanzialmente considerata ; dimensioni, proporzioni, forma, colore, etc. Variazioni meristiche ; numeriche (meristico vero e proprio) ; omotetiche ; per teratologia. Variazioni bionomiche ; di fecondità ; di epoca di apparizione ; di maturità ; di sviluppo ; di abitudini. Filogenia.

Oppure considerata alternativamente e supplementariamente sotto il punto di vista descrittivo, statistico, matematico, geografico o stazionale.

Eredità. Innesti. Incrociamenti e ibridismi. Consanguinità. Teleogenia. Evoluzione. (*Vedi anche K 0200 ; L 4300.*)

**ZOOLOGIA GEOGRAFICA.**

Distribuzione geografica. [Lavori relativi ai principi e ai modi di distribuzione.]

Zoologia topografica. [Lavori relativi alla Fauna di una o più delle suddivisioni adottate in (J) Geografia, e riferentisi a

with more than one of the Branches of Zoology.]

**0231 TAXONOMY OR CLASSIFICATION in general.**

[In this are to be placed works dealing with the principles of zoological classification ; works discussing the classification of more than one of the Branches ; works dealing with the relations of the great groups of existing animals ; phylogenetic classification, *i.e.*, the relations in time of the great groups of animals. Works relating to the classification of only one of the Branches are to be dealt with in that Branch.]

beziehen und mehr als einen Zweig der Zoologie umfassen.]

**TAXONOMIE ODER KLASSEIFIKATION IM ALLGEMEINEN.**

[Hierher sind Arbeiten zu stellen, welche die Prinzipien der zoologischen Klassifikation behandeln ; ferner Arbeiten, welche die Klassifikation von mehr als einem der Zweige discutieren ; Arbeiten, welche die Beziehungen der grossen Gruppen der lebenden Tierwelt behandeln ; phylogenetische Klassifikation, d. h. die zeitlichen Beziehungen der grossen Tiergruppen. Dagegen sind Arbeiten, die sich auf die Klassifikation eins einzelnen Zweiges beziehen, bei diesem zu erledigen.]

**0400-6031 Special Zoology.**

**0400-0431 Protozoa. (See also R 1200.)**

The principal divisions are :—  
Mycetozoa ; Rhizopoda (Radiolaria, Heliozoa, Foraminifera, Amœbaea, Proteomyxa) ; Sporozoa (Gregarinida, Coccidiidea, Haemosporidia, Myxosporidia, Sarcosporidia) ; Mastigophora (Flagellata, Dinoflagellata) ; Infusoria (Acinetaria, Ciliata).

**0600-0631 Porifera (or Spongida).**

The principal divisions are :—  
Calcarea ; Hexactinellida ; Demospongiae (Carnosa, Tetractinellida, Monaxonida, Keratosa, Myxospongida).

**0300-0831 Coelenterata (or Cnidaria).**

The principal divisions are :—  
Cnephidae ; Hydrozoa ; Scyphomedusae ; Monticuliporidae ; Stromatoporidae ; Aleyonaria ; Zoantharia ; Ctenophora.

**1000-1031 Echinodermata.**

The principal divisions are :—  
Cystoidea ; Crinoidea ; Blastoidea ; Asteroidea ; Ophiuroidea ; Echinoidea ; Holothurioidea.

**0400-6031 Specielle Zoologie.**

**Protozoa. (Siehe auch R 1200.)**

Hauptabteilungen sind :—

Mycetozoa ; Rhizopoda (Radiolaria, Heliozoa, Foraminifera, Amœbaea, Proteomyxa) ; Sporozoa (Gregarinida, Coccidiidea, Haemosporidia, Myxosporidia, Sarcosporidia) ; Mastigophora (Flagellata, Dinoflagellata) ; Infusoria (Acinetaria, Ciliata).

**Porifera (oder Spongida).**

Hauptabteilungen sind :—  
Calcarea ; Hexactinellida ; Demospongiae (Carnosa, Tetractinellida, Monaxonida, Keratosa, Myxospongida).

**Cœlenterata (oder Cnidaria).**

Hauptabteilungen sind :—  
Cnephidae ; Hydrozoa ; Scyphomedusae ; Monticuliporidae ; Stromatoporidae ; Aleyonaria ; Zoantharia ; Ctenophora.

**Echinodermata.**

Hauptabteilungen sind :—  
Cystoidea ; Crinoidea ; Blastoidea ; Asteroidea ; Ophiuroidea ; Echinoidea ; Holothurioidea.

Géographie et ayant trait à plus d'une branche de la Zoologie.]

**0231 TAXONOMIE ou CLASSIFICATION en général.**

[Dans cette division doivent être placés les ouvrages traitant des principes de la classification zoologique ; les ouvrages discutant la classification de plus d'une "branche" ; les ouvrages traitant des relations des grands groupes d'animaux de la faune actuelle ; la classification phylogénétique, c'est à dire les relations anciennes entre les grands groupes d'animaux. Les ouvrages ayant trait à la classification d'une branche isolée seront traités à propos de cette branche.]

più di uno dei rami della zoologia.]

**TASSONOMIA E CLASSIFICAZIONE IN GENERALE.**

[Qui saranno posti i lavori che trattano dei principi della classificazione zoologica ; i lavori discutenti la classificazione di più di un ramo ; i lavori riguardanti le relazioni tassonomiche dei grandi gruppi degli animali esistenti ; la classificazione filogenetica, ossia le relazioni nel tempo dei grandi gruppi di animali. I lavori relativi alla classificazione di uno solo dei rami sono trattati in quel ramo.]

**0400-6031. Zoologie spéciale.**

**0400-0431 Protozoaires. (Voy. aussi R 1200.)**

Voici les divisions principales :—  
Mycétozoaires ; Rhizopodes (Radiolaires, Héliozaires, Foraminifères, Amœbiens, Protomyxes) ; Sporozoaires (Grégariinides, Coeidiidées, Haemosporidies, Myxosporidies, Sarcosporidies) ; Mastigophores (Flagellés, Dinoflagellés) ; Infusoires (Acinetiens, Ciliés).

**0600-0631 Porifères (ou Spongaires).**

Voici les divisions principales :—  
Calcaires ; Hexactinellides ; Démospongaires (Carnosa, Tetractinellides, Monaxonides, Kératosa, Myxospongaires).

**0800-0831 Cœlenterés (ou Cnidaria).**

Voici les divisions principales :—  
Graptolites ; Hydroméduses ; Scyphoméduses ; Monticuliporides ; Stromatoporides ; Alcyonaires ; Zoanthaires ; Ctenophores.

**1000-1031 Échinodermes.**

Voici les divisions principales :—  
Cystoïdes ; Crinoïdes ; Blastoïdes ; Asteroïdes ; Ophiuroïdes ; Echinoïdes ; Holothurioïdes.

**0400-6031. Zoologia Speciale.**

**Protozoa. (Vedi anche R 1200.)**

Le divisioni principali sono :—

Mycetozoa ; Rhizopoda (Radiolaria, Heliozoa, Foraminifera, Amoeboea, Protomyxa) ; Sporozoa (Gregarinida, Coeidiida, Haemosporidia, Myxosporidia, Sarcosporidia) ; Mastigophora (Flagellata, Dinoflagellata) ; Infusoria (Acinetaria, Ciliata).

**Porifera (vel Spongida).**

Le divisioni principali sono :—

Calcarea ; Hexactinellida ; Demospongiae (Carnosa, Tetractinellida, Monaxonida, Keratosa, Myxospongida).

**Cœlenterata (vel Cnidaria).**

Le divisioni principali sono :—

Graptolites ; Hydromedusae ; Scyphomedusae ; Monticuliporidae ; Stromatoporidae ; Alcyonaria ; Zoautharia ; Ctenophora.

**Echinodermata.**

Le divisioni principali sono :—

Cystoidea ; Crinoidea ; Blastoidea ; Asteroidea ; Ophiuroidea ; Echinoidea ; Holothurioidea.

**1200–1231 Platyhelminthes. Mesozoa and Trichoplax.**

The principal divisions are :—

Platyhelminthes (Turbellaria, Trematoda, Cestoda, Nemertinea); Mesozoa (Dicyemidae, Orthonectidae); *Trichoplax*.

**1400–1431 Nemathelminthes.**

The principal divisions are :—

Nematoda; Nematomorpha (or Gordiidae); Acanthocephala.

**1600–1631 Chaetognatha. Rotifera. Gastrotricha. Kinorhyncha (or Echinodera.)**

**1800–1831 Archiannelida. Polychaeta. Myzostomaria. Oligochaeta. Gephyrea. Phoronis. Hirudinea.**

**2000–2031 Brachiopoda. Bryozoa (or Polyzoa).**

The principal divisions are :—

Brachiopoda.  
Bryozoa : Entoprocta; Ectoprocta (Gymnolaema : Cyclostomata, Trepostomata, Cryptostomata, Cheilostomata, Ctenostomata; Phylactolaema).

**2200–2231 Mollusca.**

The principal divisions are :—

Lamellibranchiata (or Pelecypoda) (Order should be given); Scaphopoda; Amphineura.

Gastropoda includes Prosobranchiata (Rhipidoglossa, Ptenoglossa, Taenioglossa, Rachiglossa, Toxoglossa); Heteropoda; Opisthobranchiata (Tectibranchiata, Nudibranchiata); Pteropoda; Pulmonata (Bassomatophora, Stylommatophora). Families of Prosobranchiata and Pulmonata should be mentioned. See Cambridge Natural History.

Cephalopoda includes Nautiloidea, Ammonoidea, Dibranchiata.

**2400–2431 Arthropoda.**

2431 will not include a systematic arrangement of genera and species.

**Platyhelminthes. Mesozoa und Trichoplax.**

Hauptabteilungen sind :—

Platyhelminthes (Turbellaria, Trematoda, Cestoda, Nemertinea); Mesozoa (Dicyemidae, Orthonectidae); *Trichoplax*.

**Nemathelminthes.**

Hauptabteilungen sind :—

Nematoda; Nematomorpha (oder Gordiidae); Acanthocephala.

**Chætognatha. Rotifera. Gastrotricha. Kinorhyncha (oder Echinodera).**

**Archiannelida. Polychæta. Myzostomaria. Oligochæta. Gephyrea. Phoronis. Hirudinea.**

**Brachiopoda. Bryozoa (oder Polyzoa).**

Hauptabteilungen sind :—

Brachiopoda.  
Bryozoa : Endoprocta; Ectoprocta (Gymnolaema : Cyclostomata, Trepostomata, Cryptostomata, Cheilostomata, Ctenostomata; Phylactolaema).

**Mollusca.**

Hauptabteilungen sind :—

Lamellibranchiata (oder Pelecypoda) (Ordnung angeben); Scaphopoda; Amphineura.

Gastropoda umfasst Prosobranchiata (Rhipidoglossa, Ptenoglossa, Taenioglossa, Rachiglossa, Toxoglossa); Heteropoda; Opisthobranchiata (Tectibranchiata, Nudibranchiata); Pteropoda; Pulmonata (Bassomatophora, Stylommatophora). Familien der Prosobranchiata und Pulmonata angeben. Siehe Cambridge Natural History.

Cephalopoda umfasst Nautiloidea, Ammonoidea, Dibranchiata.

**Arthropoda.**

2431 wird eine systematische Anordnung der Gattungen und Arten nicht enthalten.

**1200-1231 Plathelminthes. Mésozoaires et le Trichoplax.**

Voici les divisions principales :—

Plathelminthes (Turbellariés, Trématodes, Cestodes, Némertiens); Mésozoaires (Dicyenidæ, Orthonectidæ); *Trichoplax*.

**1400-1431 Némathelminthes.**

Voici les divisions principales :—

Nématodes; Nématomorphes (ou Gordiens); Acanthocephales.

**1600-1631 Chætognathes. Rotifères. Gastrotriches. Kinorhynques (ou Echinodères).**

**1800-1831 Archiannélides. Polychètes. Myzostomes. Oligochètes. Géphyriens. Phoronis. Hirudinées.**

**2000-2031 Brachiopodes. Bryozoaires (ou Polyzoaires).**

Voici les divisions principales :—  
Brachiopodes.

Bryozoaires : Entoproctes; Ectoproctes (Gymnolèmes : Cyclostomes, Trepostomes, Cryptostomes, Cheilostomes, Cténostomes; Phylactolèmes).

**2200-2231 Mollusques.**

Voici les divisions principales :—  
Lamellibranches (ou Pélécypodes) (indiquer l'ordre); Scaphopodes; Amphicures.

Les Gastropodes comprennent les Prosobranches (Rhipidoglosses, Pténoglosses, Taenioglosses, Rachiglosses, Toxoglosses); Hétéropodes; Opisthobranches (Tectibranches, Nudibranches); Ptéropodes; Pulmonés (Basomatophores, Stylommatophores). Indiquer les familles des Prosobranches et des Pulmonés. Voy. la Cambridge Natural History.

Les Céphalopodes comprennent les Nautilles, Ammonites, Dibranches.

**2400-2431 Arthropodes.**

2431 ne comprendra pas un arrangement systématique des genres et des espèces.

**Plathelminthes. Mesozoa et Trichoplax.**

Le divisioni principali sono :—

Plathelminthes (Turbellaria, Trematoda, Cestoda, Nemertinea); Mesozoa (Dicyemidæ, Orthonectidæ); *Trichoplax*.

**Nemathelminthes.**

Le divisioni principali sono :—

Nematoda; Nematomorpha (vel Gordiidæ); Acanthocephala.

**Chætognatha. Rotifera. Gastrotricha. Kinorhyncha (vel Echinodera).**

**Archiannelida. Polychæta. Myzostomaria. Oligochæta. Gephyrea. Phoronis. Hirudinea.**

**Brachiopoda. Bryozoa (vel Polyzoa).**

Le divisioni principali sono :—  
Brachiopoda.

Bryozoa : Entoprocta; Ectoprocta (Gymnolaenia : Cyclostoma, Trepostomata, Cryptostoma, Cheilostomata, Ctenostomata; Phylactolaema).

**Mollusca.**

Le divisioni principali sono :—  
Lamellibranchiata (vel Pelecypoda) (indicare l'ordine); Scaphopoda; Amphineura.

Gastropoda includono Prosobranchiata (Rhipidoglossa, Ptenoglossa, Taenioglossa, Raehiglossa, Toxoglossa); Heteropoda; Opisthobranchiata (Tectibranchiata, Nudibranchiata); Ptéropoda; Pulmonata (Bassomatophora, Stylommatophora). Indicare le famiglie dei Prosobranchiata e Pulmonata. Vedi Cambridge Natural History.

Cephalopoda includono Nautioidea, Ammonoidea, Dibranchiata.

**Arthropoda.**

2431 non deve includere la disposizione sistematica dei generi e delle specie.

## 2600-2631 Crustacea.

Entomostraca (= Cirripedia, Ostracoda, Copepoda, Phyllopoda).

Leptostraca.

Arthrostraca (or Edriophthalma) (= Amphipoda, Isopoda, Anisopoda).

[Malacostraca (= Thoracostraca + Arthrostraca).]

Thoracostraca (or Podophthalma) includes Decapoda, Schizopoda, Stomatopoda, Cumacea.

## 2800-2831 Trilobita. Xiphosura. Eurypterida. Pantopoda. Tardigrada. Lingualulida.

## 3000-3031 Arachnida.

Arachnida consists of Scorpions, Pedipalpi, Palpigradi, Araneida, Solifugae, Chernetida (or Pseudoscorpiones), Phalangida (or Opiliones), Acarida (or Acari).

## 3200-3231 Prototracheata (or Onychophora).

Prototracheata includes only *Peripatus* and its divisions.

## 3400-3431 Myriopoda.

Myriopoda consists of Chilopoda, Diplopoda (= Pselaphognatha and Chilognatha), Symphyla (or Scolopendrella), Pauropoda.

## 3500-3531 Insecta.

3531 will not include a systematic arrangement of genera and species.

## 3600-3631 Aptera (or Apterygogenea).

Anoplura. Mallophaga. Thysanoptera (or Physopoda). Siphonaptera (or Aphaniptera).

Aptera, proper, consists of Thysanura and Collembola.

## 3800-3831 Orthoptera. Neuroptera. Trichoptera.

The principal divisions are :—

Orthoptera (Forsiculidae or Dermaptera, Ifenimeridae, Blattidae, Mantidae, Phasmidae, Gryllidae, Locustidae, Acrididae).

## Crustacea.

Entomostraca (= Cirripedia, Ostracoda, Copepoda, Phyllopoda).

Leptostraca.

Arthrostraca (oder Edriophthalma) (= Amphipoda, Isopoda, Anisopoda).

[Malacostraca (= Thoracostraca + Arthrostraca).]

Thoracostraca (oder Podophthalma) umfasst Decapoda, Schizopoda, Stomatopoda, Cumacea.

## Trilobita. Xiphosura. Eurypterida. Pantopoda. Tardigrada. Lingualulida.

## Arachnida.

Arachnida umfasst Scorpionida, Pedipalpi, Palpigradi, Araneida, Solifugae, Chernetida (oder Pseudoscorpiones), Phalangida (oder Opiliones), Acarida (oder Acari).

## Prototracheata (oder Onychophora).

Prototracheata umfasst nur *Peripatus* und dessen Abteilungen.

## Myriopoda.

Myriopoda umfasst Chilopoda, Diplopoda (= Pselaphognatha und Chilognatha), Symphyla (oder Scolopendrella), Pauropoda.

## Insecta.

3531 wird eine systematische Anordnung der Gattungen und Arten nicht enthalten.

## Aptera (oder Apterygogenea).

Anoplura. Mallophaga. Thysanoptera (oder Physopoda). Siphonaptera (oder Aphaniptera).

Aptera, im eigentlichen Sinne, umfasst Thysanura und Collembola.

## Orthoptera. Neuroptera. Trichoptera.

Hauptabteilungen sind :—

Orthoptera (Forsiculidae oder Dermaptera, Ifenimeridae, Blattidae, Mantidae, Phasmidae, Gryllidae, Locustidae, Acrididae).

## 2600-2631 Crustacés.

Entomostracés (= Cirripèdes, Ostacodes, Copépodes, Phyllopodes).

## Leptostracés.

Arthrostracés (ou Edriophthalmes) (= Amphipodes, Isopodes, Anisopodes).

[Malacostracés (= Thoracostracés + Arthrostracés).]

Les Thoracostracés (ou Podophthalmaires), comprennent les Décapodes, Schizopodes, Stomatopodes, Cumacés).

## 2800-2831 Trilobites. Xiphosures. Euryptérides. Pantopodes. Tardigrades. Linguatulides.

## 3000-3031 Arachnides.

Les Arachnides comprennent les Scorpions, Pédipalpes, Palpigrades, Aranées, Solifuges, Chernetes (ou Pseudoscorpions), Phalangides (ou Opilions), Acariens.

## 3200-3231 Prototrachéates (ou Onychophores).

Les Prototrachéates comprennent seulement le genre *Peripatus* et ses divisions.

## 3400-3431 Myriapodes.

Les Myriapodes comprennent les Chilopodes, Diplopodes (Psélaphognathes et Chilognathes), Symphyliens (ou Scolopendrelles), Pauropodes.

## 3500-3531 Insectes.

3531 ne comprendra pas un arrangement systématique des genres et des espèces.

## 3600-3631 Aptères (ou Aptérygogéniens).

Anoplourès. Mallophages. Thysanoptères (ou Physopodes). Siphonaptères (ou Aphanoptères).

Les Aptères proprement dits comprennent les Thysanourès et les Collemboles.

## 3800-3831 Orthoptères. Névroptères. Trichoptères.

Voici les divisions principales :—

Orthoptères (Forficulidæ ou Dermaptères, Hémiméridæ, Blattidæ, Mantidæ, Phasmidæ, Gryllidæ, Locustidæ, Acrididæ).

## Crustacea.

Entomostraca (= Cirripedia, Ostacorda, Copepoda, Phyllopoda).

## Leptostraca.

Arthrostraca (vel Edriophthalma) (= Amphipoda, Isopoda, Anisopoda).

[Malacostraca (= Thoracostraca + Arthrostraca).]

Thoracostraca (vel Podophthalma) includono Decapoda, Schizopoda, Stomatopoda, Cumacea.

## Trilobita. Xiphosura. Eurypterida. Pantopoda. Tardigrada. Lingultida.

## Arachnida.

Arachnida includono Scorpionida, Pedipalpi, Palpigradi, Araneida, Solifingæ, Chernetida (vel Pseudoscorpiones), Phalangida (vel Opiliones), Acarida (vel Acari).

## Prototracheata (vel Onychophora).

Nei Prototracheata è incluso il solo *Peripatus* e le sue divisioni.

## Myriopoda.

Chilopoda, Diplopoda (= Psélaphognatha e Chilognatha), Synphypha (vel Scolopendrella), Pauropoda.

## Insecta.

3531 non deve includere la disposizione sistematica dei generi e delle specie.

Aptera (vel Apterygogenea). Anoplura. Mallophaga. Thysanoptera (vel Physopoda). Siphonaptera (vel Aphanoptera).

Gli Aptera propriamente detti consistono nei Thysanura e Collembola.

## Orthoptera. Neuroptera. Trichoptera.

Le divisioni principali sono :—

Orthoptera (Forficulidæ vel Dermaptera, Hemimeridæ, Blattidæ, Mantidæ, Phasmidæ, Gryllidæ, Locustidæ, Acrididæ).

Neuroptera (Planipennia, Embiidæ, Termitidæ, Psocidæ, Perlidæ, Ephemeridæ, Odonata).

Each slip relating to Neuroptera should also state to which of these divisions it refers.

Most of the Palaeozoic Insects are to be dealt with in this branch.

Neuroptera (Planipennia, Embiidæ, Termitidæ, Psocidæ, Perlidæ, Ephemeridæ, Odonata).

Jeder Zettel für Neuroptera soll auch angeben, auf welche dieser Abteilungen er sich bezieht.

Die meisten der paläozoischen Insekten werden bei diesem Zweige zu behandeln sein.

**4000-4031 Hemiptera (or Rhynchota) excl. Anoplura, which are placed in 3600.**

The principal divisions are :—

Hemiptera Heteroptera and Hemiptera Homoptera. [Phytophthires (Aphidæ, Psyllidæ, Aleurodidae, Coccidae) are included in Hemiptera Homoptera.]

Families to be mentioned in all cases.

See Cambridge Natural History.

**Hemiptera (oder Rhynchota), excl. Anoplura, welche unter 3600 eingeordnet sind.**

Hauptabteilungen sind :—

Hemiptera Heteroptera und Hemiptera Homoptera. [Phytophthires (Aphidæ, Psyllidæ, Aleurodidae, Coccidae) sind in Hemiptera Homoptera enthalten.]

Familien immer angeben. Siehe Cambridge Natural History.

**4200-4231 Diptera (excl. Siphonaptera, which are placed in 3600-3631).**

The slips should be marked with the name of the family of Diptera. See Cambridge Natural History.

**Diptera (excl. Siphonaptera, welche unter 3600-3631 eingeordnet sind).**

Bei den Diptera sind auf den Zetteln die Namen der Familien zu vermerken. Siehe Cambridge Natural History.

**4400-4431 Lepidoptera.**

The principal divisions are :—

Rhopalocera ; Heterocera.

The family to be mentioned in all cases. See Cambridge Natural History.

**Lepidoptera.**

Hauptabteilungen sind :—

Rhopalocera ; Heterocera.

Familien immer angeben. Siehe Cambridge Natural History.

**4600-4631 Hymenoptera.**

The principal divisions are :—

Acnleata = Anthophila (Apidae, Andrenidae), Vespidae (Diploptera), Sphegidae s.l. (Fossoria). Formicidae (Heterogyna). Tubulifera = Chrysidae. Parasitica = Trigonidae, Proctotrupidae, Pelecinidae, Chalcididae, Ichneumonidae, Braconidae, Megalyridae, Evanidae, Stephanidae, Cynipidae. Sessiliventres (or Chalastogastra) = Cephidae, Siricidae, Oryssidae, Tenthredinidae.

**Hymenoptera.**

Hauptabteilungen sind :—

Acnleata = Anthophila (Apidae, Andrenidae), Vespidae (Diploptera), Sphegidae s.l. (Fossoria). Formicidae (Heterogyna). Tubulifera = Chrysidae. Parasitica = Trigonidae, Proctotrupidae, Pelecinidae, Chalcididae, Ichneumonidae, Braconidae, Megalyridae, Evanidae, Stephanidae, Cynipidae. Sessiliventres (oder Chalastogastra) = Cephidae, Siricidae, Oryssidae, Tenthredinidae.

Névroptères (Planipennes, Embiidés, Termitidés, Psocidés, Prolidés, Ephéméridés, Odonates).

Chaque fiche relative aux Névroptères doit aussi indiquer à laquelle de ces divisions elle se rapporte.

La plupart des Insectes paléozoïques devront être traités dans cette branche.

**4000-4031 Hémiptères (ou Rhynchotes) à l'exclusion des Anoplures, qui sont placés sous le numéro 3600.**

Voici les divisions principales :—  
Hémiptères Hétéroptères et Hémiptères Homoptères. [Les Phytophthires (Aphides, Psyllidés, Aleurodidiés, Coccidés) sont compris dans les Hémiptères Homoptères.]

Indiquer les familles en tout cas.  
*Voy. Cambridge Natural History.*

**4200-4231 Diptères (sauf les Siphonapteres, qui sont placés sous les numéros 3600-3631).**

Les fiches doivent porter le nom de la famille des Diptères. *Voy. Cambridge Natural History.*

**4400-4431 Lépidoptères.**

Voici les divisions principales :—  
Rhopalocères ; Hétérocères.  
Indiquer la famille en tout cas.  
*Voy. Cambridge Natural History.*

**4600-4631 Hyménoptères.**

Voici les divisions principales :—  
Aculeata (ou Porte-aiguillons) = Antophiles (Apidés, Andrénidés), Vespides (Diploptères) Sphégidés s.l. (Fouisseurs) Formicides (Hétérogynes). Tubulifères = Chrysidées. Parasites = Trigonalidés, Proctotrupidés, Pélécinidés, Chalcididés, Ichneumonidés, Braconidés, Mégalyridés, Evanidés, Stéphanidés, Cynipidés. Sessiliventres (ou Chalastogastres) = Céphidés, Siricidés, Oryssidés, Tenthredinidés.

Neuroptera (Planipennia, Embiidac, Termitidæ, Psocidæ, Prolidæ, Ephemeridæ, Odonata.)

Ciascuna scheda relativa ai Neuroptera deve stabilire a quale di queste divisioni del gruppo si riferisce.

La maggior parte degli insetti paleozoici riferiscono a questo ramo.

**Hemiptera (vel Rhynchota), esclusi Anoplura, che sono indicati col numero 3600.**

Le divisioni principali sono :—  
Hemiptera Heteroptera e Hemiptera Homoptera. [Phytophthires (Aphidæ, Psyllidæ, Aleurodidiæ, Coccidæ) sono inclusi in Hemiptera Homoptera.]

Indicare la famiglia in ogni caso.  
*Vedi Cambridge Natural History.*

**Diptera (esclusi Siphonaptera, che sono indicati dai numeri 3600-3631).**

Le schede dovranno portare il nome della famiglia dei Diptera cui si riferiscono. *Vedi Cambridge Natural History.*

**Lepidoptera.**

Le divisioni principali sono :—  
Rhopalocera ; Heterocera.  
Indicare la famiglia in ogni caso.  
*Vedi Cambridge Natural History.*

**Hymenoptera.**

Le divisioni principali sono :—  
Aculeata = Anthophila (Apidæ, Andrenidæ), Vespidae (Diploptera), Sphegidae s.l. (Fosoria). Formicidae (Heterogyna). Tubulifera = Chrysidiidae. Parasitica = Trigonalidæ, Proctotrupidæ, Pélécinidae, Chalcididæ, Ichneumonidae, Braconidae, Megalyridæ, Evanidae, Stephanidae, Cynipidæ. Sessiliventres (vel Chalastogastra) = Cephidae, Siricidae, Oryssidae, Tenthredinidæ.

## 4800-4831 Coleoptera (incl. Strepsiptera).

The name of the family referred to should be given on each slip.

The families are numerous. They are included in the Munich Catalogue of the Coleoptera (Catalogus coleopterorum hucusque descriptorum synonymie et systematicus) and (the subsequent additions) in "Cambridge Natural History," vol. vi.

## 5000-5031 Prochordata, viz., Leptocardii, Enteropneusta, Tunicata.

## 5200-5231 Vertebrata.

No systematic enumeration is to be placed under 5231.

## 5400-5431 Pisces [excl. Leptocardii (or Amphioxus), for which see 5000-5031].

The principal divisions are:—

Cyclostomi, Ostracodermi, Plagiostomi, Holocephali, Arthrodira, Dipnoi, Teleostomi (or Teleosteii and Ganoidei, with the exception of Arthrodira and Ostracodermi).

The family should be mentioned.  
See Cambridge Natural History.

## 5600-5631 Amphibia and Reptilia.

The principal divisions are:—

Batrachia or Amphibia (Stegocephalia or Labyrinthodontia, Apoda, Caudata or Urodea, Ecaudata or Anura).

Reptilia (Anomodontia, Rhynchocephalia, Plesiosauria, Ichthyosauria, Cotylosauria, Pareiasauria, Diapsauria, Protorosauria, Rhynchosauria, Procolophonia, Proganosauria, Choristodera, Chelonia, Crocodilia, Dinosauria, Ornithosauria or Pterosauria, Ophidia, Pythonomorpha, Rhiptoglossa, Lacertilia).

## Coleoptera (incl. Strepsiptera).

Auf jedem Zettel ist der Name der betr. Familie anzugeben.

Die Zahl der Familien ist gross. Sie sind aufgeführt in dem Münchener Coleopteren-Katalog (Catalogus coleopterorum hucusque descriptorum synonymie et systematicus) und (soweit es sich um spätere Zusätze handelt) in „Cambridge Natural History,“ vol. vi.

## Prochordata, d.h., Leptocardii, Enteropneusta, Tunicata.

## Vertebrata.

5231 wird keine systematische Aufzählung enthalten.

## Pisces [mit Ausschluss der Leptocardii (oder Amphioxus), siehe 5003-5031].

Hauptabteilungen sind:—

Cyclostomi, Ostracodermi, Plagiostomi, Holocephali, Arthrodira, Dipnoi, Teleostomi (oder Teleosteii und Ganoidei, mit Ausnahme von Arthrodira und Ostracodermi).

Familie angeben. Siehe Cambridge Natural History.

## Amphibia und Reptilia.

Hauptabteilungen sind:—

Batrachia oder Amphibia (Stegocephalia oder Labyrinthodontia, Apoda, Caudata oder Urodea, Ecaudata oder Anura).

Reptilia (Anomodontia, Rhynchocephalia, Plesiosauria, Ichthyosauria, Cotylosauria, Pareiasauria, Diapsauria, Protorosauria, Rhynchosauria, Procolophonia, Proganosauria, Choristodera, Chelonia, Crocodilia, Dinosauria, Ornithosauria oder Pterosauria, Ophidia, Pythonomorpha, Rhiptoglossa, Lacertilia).

**4800-4831 Coléoptères (y compris les Strepsiptères).**

Le nom de la famille dont il est question doit être donné sur chaque fiche.

Les familles sont nombreuses. Elles sont indiquées dans le Catalogue des Coléoptères de Munich (*Catalogus coleopterorum hucusque descriptorum synonymicus et systematicus*) et (pour les additions subséquentes) dans "Cambridge Natural History," vol. vi.

**5000-5031 Prochordés, c'est à dire, Leptocardiens, Entéropneustes, Tuniciers.**

**5200-5231 Vertébrés.**

Aucune énumération systématique n'est placée sous le numéro 5231.

**5400-5431 Poissons [à l'exception des Leptocardiens (ou *Amphioxus*), qui se trouvent sous les numéros 5000-5031].**

Voici les divisions principales :—  
Cyclostomes, Ostracoderms, Plagiostomes, Holocéphales, Arthrodiros, Dipnoïques, Téléostomes (ou Téléostéens et Ganoïdes, à l'exception des Arthrodiros et des Ostracoderms).

La famille doit être mentionnée.  
Voy. Cambridge Natural History.

**5600-5631 Batraciens et Reptiles.**

Voici les divisions principales :—  
Batraciens ou Amphibies (Stégocéphales ou Labyrinthodontes, Apodes, Caudés ou Urodèles, Ecaudés ou Anoures).

Reptiles (Anomodontes, Rhynchocéphales, Plésiosauniens, Ichthyosauniens, Cotylosauniens, Parciasauniens, Diaptosauiens, Protorosauiens, Rhynchosauiens, Procolophoniens, Progausauiens, Choristodères, Chéloniens, Crocodiliens, Dinosauriens, Ornithosauiens ou Ptérosauiens, Ophiidiens, Pythonomorphes, Rhiptoglosses, Lacertiliens).

(n-9720)

**Coleoptera (incl. Strepsiptera).**

Il nome della famiglia dev'essere indicato su ciascuna scheda.

Le famiglie sono numerose. Si trovano indicate nel Catalogo dei Coleoptera di Monaco (*Catalogus coleopterorum hucusque descriptorum synonymicus et systematicus*) e (le susseguenti aggiunte) in "Cambridge Natural History," vol. vi.

**Prochordata, cioè Leptocardii, Entéropneusta, Tunicata.**

**Vertebrata.**

Non deve porsi alcuna enumerazione sistematica sotto 5231.

**Pisces [escl. Leptocardii (vel *Amphioxus*), per i quali vedi 5000-5031].**

Le divisioni principali sono :—

Cyclostomi, Ostracodermi, Plagiostomi, Holocéphali, Arthrodira, Dipnoi, Teleostomi (o Teleosteoi o Ganoidei, con esclusione di Artbrodira e Ostracodermi).

Indicare la famiglia. Vedi Cambridge Natural History.

**Batrachia et Reptilia.**

Le divisioni principali sono :—  
Batrachia vel Amphibia (Stegocéphala vel Labyrinthodontia, Apoda, Caudata vel Urodela, Ecaudata vel Anura).

Reptilia (Anomodontia, Rhynchocéphalia, Plesiosauria, Ichthyosauria, Cotylosauria, Parciasauria, Diapsauria, Protorosauria, Rhynchosauria, Procolophonia, Proganosauria, Choristodera, Chelonia, Crocodilia, Dinosauria, Ornithosauria vel Pterosauria, Ophidida, Pythonomorpha, Rhiptoglossa, Lacertilia).

## 5800-5831 Aves.

The principal divisions are :—  
 Accipitres, Aepyornithes, Aleae,  
 Alectorides (including *Cariama*),  
 Anisodactylæ (including Podargidae  
 and *Steatornis*), Anseres (including  
 Phoenicopteri and Palamediidae),  
 Apteryges, Casuarii, Coccyges, Colum-  
 bæ, Coraciæ, Crypturi, Cypseli,  
 Dinornithes, Fulicariæ, Gallinæ,  
 Gaviae, Herodiones, Heterodactylæ,  
 Impennes, Limicolæ, Odontolæ,  
 Odontormæ, Opisthocomi, Passeres  
 (mention families), Pici, Psittaci,  
 Pterocletes, Pygopodes, Rheaæ,  
 Saururæ, Steganopodes, Stereorni-  
 thes, Striges, Struthiones,  
 Tubinares, Zygodactylæ.

## Aves.

Hauptabteilungen sind :—  
 Accipitres, Aepyornithes, Alcæ,  
 Alcetorides (einschl. *Cariama*),  
 Anisodactylæ (einschl. Podargidæ  
 und *Steatornis*), Anseres (einschl.  
 Phœnicopteri und Palamediidae),  
 Apteryges, Casuarii, Coccyges,  
 Columbæ, Coraciæ, Crypturi,  
 Cypseli, Dinornithes, Fulicariæ,  
 Gallinæ, Gaviae, Herodiones,  
 Heterodactylæ, Impennes, Limicolæ,  
 Odontolæ, Odontormæ, Opisthocomi,  
 Passeres (Familien angeben),  
 Pici, Psittaci, Pterocletes, Pygo-  
 podes, Rheaæ, Saururæ, Steganopodes,  
 Stereornithes, Striges, Stru-  
 thiones, Tubinares, Zygodactylæ.

## 6000-6031 Mammalia.

The principal divisions are :—  
 Carnivora, Cetacea, Chiroptera,  
 Edentata, Insectivora, Marsupialia,  
 Monotremata, Multituberculata, Pri-  
 mates, Rodentia, Sirenia, Tillo-  
 dontia, Ungulata (Artiodactyla,  
 Perissodactyla, Subungulata).

## Mammalia.

Hauptabteilungen sind :—  
 Carnivora, Cetacea, Chiroptera,  
 Edentata, Insectivora, Marsupialia,  
 Monotremata, Multituberculata, Pri-  
 mates, Rodentia, Sirenia, Tillo-  
 dontia, Ungulata (Artiodactyla,  
 Perissodactyla, Subungulata).

## 5803-5831 Oiseaux.

Voici les divisions principales :—  
 Accipitres, Aepyornithéens,  
 Alcicéns, Alctoriens (y compris les  
*Cariama*), Anisodactyles (y compris  
 les Podargides et les *Steatornis*),  
 Ansériens (y compris les Phénico-  
 ptères et les Palamédiidés), Aptery-  
 giens, Casuariens, Coccoygiens,  
 Colombins, Coraciens, Crypturiens,  
 Cypséliens, Dinornithiens, Fulicar-  
 iens, Gallinacés, Gaviens,  
 Hérodien, Hétérodaactyles, Im-  
 pennes, Limicoliens, Odontolciens,  
 Odontormiens, Opisthocomes, Pas-  
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 Pics, Perroquets, Ptérociiens,  
 Pygopodes, Rhéens, Saururiens,  
 Stéganopodes, Stérénithiens, Stri-  
 giens, Struthioniens, Tubinariens,  
 Zygodactyles.

## 6000-6031 Mammifères.

Voici les divisions principales :—  
 Carnivores, Cétacés, Chiroptères,  
 Édentés, Insectivores, Marsupiaux,  
 Monotremes ; Multituberculés, Pri-  
 mates, Rongeurs, Siréniens, Tillo-  
 dontes, Ongulés [Ungulata] (Artio-  
 dactyles, Périsodactyles, Subon-  
 gulés).

## Aves.

Le divisioni principali sono :—  
 Accipitres, Aepyornithes, Alcæ,  
 Alctorides (incl. *Cariama*), Aniso-  
 dactylæ (incl. Podargidae et  
*Steatornis*), Anseres (incl. Phœni-  
 copteri et Palamediidæ), Apteryges,  
 Casuarii, Coccoyges, Columbæ,  
 Coracie, Crypturi, Cypscili, Dinor-  
 nithes, Fulicariæ, Gallinae, Gaviae,  
 Herodiones, Heterodactylæ, Im-  
 pennes, Limicole, Odontolæ, Odontormæ, Opisthoconi, Passores  
 (indicare le famiglie), Pici, Psittaci,  
 Pterocletes, Pygopodes, Rhee, Saururæ, Steganopodes,  
 Sterenithes, Striges, Struthiones,  
 Tubinari, Zygodactylæ.

## Mammalia.

Le divisioni principali sono :—  
 Carnivora, Cetacea, Chiroptera,  
 Edentata, Insectivora, Marsupialia,  
 Monotremata, Multituberculata, Pri-  
 mates, Rodentia, Sirenia, Tillo-  
 dontia, Ungulata (Artiodactyla,  
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# I. COMPREHENSIVE ZOOLOGY

ARRANGED BY

D. SHARP

This section includes works that deal with more than one branch of Zoology, or that are of general interest to Zoologists. It is, therefore, not complete in itself as regards any one subject included in it. The special records complete each subject. Many memoirs included in the special records are repeated in this division.

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histologische Untersuchung, insbesondere der Hautgewebe; Dieck.

Die tierische Zelle; Gunther, G., 1.

Zelle u. Gewebe; Hertwig, O., 2.

Cell communications; Shearer.

Les vacuolides, constitution intime du protoplasma des Protozoaires; Dubois, 3.

Nomenclature des éléments protoplasmiques; Künstler, 1.

Zelle und Zellkern (Russ.); Cholodkovsky.

Noyaux unis- et plurisphériaux; Künstler, 2.

Nouvelle espèce cellulaire dans les glandes de Lieberkühn; Giacchio.

Zellformen des lockeren Bindegewebes; Maximow.

Cellules rhagiocérines libres du liquide des diverses séreuses; Renaut et Dubreuil.

Homologisierung des Binnennetzes der Ganglienzellen mit den Chromidien (= Mitochondria, etc.) der Geschlechtszellen; Popoff.

La structure fine du système nerveux; Nageotte.

Ueber Spinalganglienzellen und Markscheiden. Zugleich ein Versuch die Wirkungsweise der Osmiumsäure zu analysieren; Sjövall, 2.

Noyau de la cellule nerveuse dans la méthode à l'argent réduit; Lache.

Etwas über Neurilemmkerne. (Zum „Vorschlag“ des Herrn Prof. O. Schultze.); Leontowitsch.

Vakuolisierung der Ganglienzellen; Mencel.

Per la colorazione delle cellule cromofile dell' Hypophysis cerebri; Cagnetto.

Struttura della cellula nervosa dei gangli spinali; Cesa-Bianchi.

Neurone und Neuronenbahnen; Schiefferdecker.

L'origine des nucléoles vrais ou plasmosomes des cellules nerveuses; Havet.

Expansioni nervose periferiche; Ruffini, 1.

Nature pathologique des canalicules de Holmgren des cellules nerveuses; Legende.

Struttura delle placche motrici e dei fusi neuromuscolari; Gemelli.

Guaina subsidaria von Ruffini, Nervenfasern; Retzius.

### Tegument and Special Glands.

Materialien zur vergleichenden Histologie der Hautdecke der Wirbeltiere; Nusbaum und Kulczycki.

Beitrag zur Kenntnis des Pigmentes; Vörner.

Morphologie der Nebenniere iii (Russ.); Landau.

Thymus-Elemente, Natur der; Stöhr.

### Skeleton.

Les trous de la symphyse du menton; Dubreuil-Chambardel.

Economia di sostanza, ossa cave; Enriques.

Ueber die Mundbildung der Wirbeltiere; Jaekel.

Technique pour l'étude du tissu osseux rougi par l'alimentation garancée; Retterer, 2.

Colorations intra-vitales et post-vitales du tissu osseux; Retterer, 3.

Adaptive modifications of the limb skeleton in aquatic reptiles and mammals; Osburn.

Demonstration embryonaler Skelette; Moser.

Nature et origine de fibres de Sharpey; Retterer, 1.

Torsion of the crustacean limb; Herrick.

### Nervous system. Sense organs.

Vide etiam Histology.

Elementaren Bau des Nervensystems; Pflüger.

Augen der Tiefseeptiere; Rabes, 1.

Eyes of the blind vertebrates; Payne.

Ear, labyrinth; Gray.

### Myology.

Nomenclature myologique; Chaïne.

Den feineren Bau der contractilen Substanz (Russ.); Schlater.

Das Studium der Gelenke und Muskeln in gegenwärtiger Zeit (Russ.); **Leshafft.**

### Alimentary system. Blood.

Villosités intestinales; **Bujard.**

Valeur cellulaire des hématies des Mammifères et de l'origine de leurs parties constituantes; **Retterer, 4.**

### Respiratory system.

Die Homologie der Anamnieri Kiemen; **Grell.**

## PHYSIOLOGY. 0211

### General.

Revue annuelle de physiologie; **Fredericq, Léon, 1.**

Das Gesetz von der Erhaltung der Energie in seiner Anwendung auf den tierischen Organismus; **Caspari.**

The dynamics of living matter; **Loeb, 1.**

(Bohn, 10. Sur le parallélisme entre le phototropisme et la parthénogénèse artificielle.)

Pathologie et classification zoologique; **Galli-Valerio, 1.**

Croissance de la cellule artificielle; **Leduc.**

Crystals and organisms; **Lehman, 2;** also **Przibram.**

Physiologie comparée. Etude du liquide périviscéral des Oursins. Éléments figurés. Phénomène de la coagulation et son rôle biologique; **Henri.**

Animal and plant, distinctions; **Quayle.**

Studies on the germ cells of aphids; **Stevens, 1, 2 and 4.**

(Calkins, 3. Life history of Protozoa. IV. Death of the A series. Conclusions.)

### Cytological. Protoplasm and Cell.

Zellkern und Zellplasma, selbständige Systeme?; **Schucking.**

Karyokinesis, Bipolar interpretation of; **Gallardo.**

Les explications physiques du champ de force de la cellule en cinèse; **Hartog.**

(N-9720 q)

Maiotic process, *Mammalia*; **Moore and Walker.**

Ursache der Reifeteilungen und den Charakter der Polkörper; **Kuckuck, 1.**

Chromosomes, aberrant, behaviour, terminology; **Montgomery, 1.**

Chromosome reduction (in Slavonian); **Gjurasin.**

Rapporti fra nucleolo, nucleo, e granulazione del protoplasma; **Ferrata.**

Insect - parthenogenesis, cytology; **Hewitt.**

Effets généraux produits par les rayons de Röntgen sur les cellules vivantes d'après les résultats observés jusqu'à présent dans l'épithélium séminal; **Regaud et Blanc, 1.**

### Sex.

Weitere Untersuchungen über das Sexualitätsproblem; **Hertwig, 2.**

Indépendance des deux problèmes de la spécificité sexuelle des ovules et de la production des sexes à volonté. Théorie physique de la sexualité; **Bard.**

Le caractère physiologique du sexe est l'état électrique des colloïdes des cellules sexuelles; **Kuckuk, 2.**

Déterminisme sexuel, et la procréation des sexes; **Loisel, 2.**

Production of sex, Hertwig's views; **Wilson, 2.**

Polyembryony and determination of sex; **Howard.**

The sexual differences of the chromosome-groups in Hemiptera, with some considerations on the determination and inheritance of sex; **Wilson, 3.**

Wodurch erzielen wir bei Menschen und Tieren willkürlich männliches und weibliches Geschlecht; **Zappold.**

L'individu femelle, caractéristique générale; **Loisel, 4.**

Geschlechtsdimorphismus bei Tieren und Haustieren. Aus d. Ital. übers.; **Marchi.**

Die Geschlechter der Tiere. Tl 3: Der Schädel; **Mobius, P. J.**

(Kellogg, 5. Influence of the primary reproductive organs on the secondary sexual characters.)

Hermaphrodismsen. [Neuere Anschauungen über den Hermaphroditismus]; Bonnevie, 3.

### Parthenogenesis.

Parthenogenesis, nature of; Punnett.

Cytological phenomena of parthenogenesis; Hewitt.

Variation in parthenogenetic insects; Kellogg, 4.

Artificial parthenogenesis *vide* Development p. 54.

### Metabolic. Metamorphosis.

Der morphologische Metabolismus des lebenden Protoplasmas; Růžička.

Rinnovamento dell'organismo studiate negli animali ibernanti; Monti, 1.

Metabolism in unicellular organisms; Caikins.

Stoffwechsel und Herz; Hesse, 1.

Ueber die Beziehungen der Wanderzellen zu den Zellbrücken, Zelllücken und Trophospongien; Reinke, 1.

Genesi endoteliale e la natura degenerativa dei globuli bianchi mononucleati; Corti.

Processus phagocytaires pendant la métamorphose des Batraciens anoures et des Insectes; Mercier.

Fonctions de nutrition, des processus d'ontogenèse, de régénération et de métamorphose, chez les larves d'*Alytes*, en l'absence d'une grande étendue de la moelle; Wintrebert, 1.

La métamorphose de *Salamandra maculosa* en dehors de la moelle et des ganglions spinaux; Wintrebert, 2.

Indépendance de la métamorphose vis-à-vis du système nerveux chez les Batraciens; Wintrebert, 3.

Generationswechsel, Metamorphose und direkte Entwicklung; Wedekind, 1 and 2.

### Function.

Theorie der Richtungsbewegungen niederer schwimmender Organismen; Ostwald,

La vision dans les grandes profondeurs de la mer; Caullery, 2.

Experiments on the developing ear vesicle of the tadpole with relation to equilibration; Streeter.

Nerfs du cœur des Invertébrés; Carlson, 1 and 2.

(Parker, 2; Ctenophores, theories of ciliary metachronism.)

Croissance de l'homme et des êtres vivants, en général; Henry et Bastien.

### Environment. Adaptation.

Ueber Konvergenzerscheinungen im Tierreich; Gerhardt.

Konvergenzerscheinungen im Tierreich; Schmidt, (Russ). 1.

Volant adaptation in vertebrates; Lull.

Maintien du milieu marin originel, comme milieu vital chez les Vertébrés; Quinton, 3.

Loi de constance marine originelle; Quinton, 1.

Loi générale de constance originelle du milieu vital des cellules; Quinton, 2.

Das Aufleben aus der Erstarrung; Müller, W.

Blanchissement hivernal des poils et des plumes; Metchnikoff, 2.

Modifications de constitution de la substance vivante consécutives aux variations du milieu; Künstler et Gineste, 1.

Sur les courbures dues à la lumière; Bohn, 1.

Le rythme des marées et la matière vivante; Bohn, 9.

Beobachtungen auf alpinen Höhen zur kalten Jahreszeit; Ammann.

Bedeutung des Pigmentes für die physiologische Wirkung der Lichtstrahlen Vergleichend physiologische Untersuchungen; Hertel.

The influence of light and heat on the movement of melanophore pigment, especially in lizards; Parker, 1.

Light reactions in lower organisms; Mast,

**Regeneration.**

Regeneration und Transplantation im Tierreich; **Korschelt**, 3 and 4.

The physiology of regeneration; **Morgan**, T. H., 3.

Regeneration und Involution; **Barfurth**, 2.

Regenerierende Regenerate; **Driesch**, 1.

Morphogenesis, regulation; **Child**, 1.

Experimentelles und Kritisches, Regeneration; **Tornier**, 2.

Regeneration and autotomy, *Arachnida*; **Friedrich**, P.

The relation between functional regulation and form-regulation; **Child**, 3.

Germ-layers and regeneration; **Morgan**, T. H., 4.

Beziehungen des Lymphdruckes zu den Erscheinungen der Regeneration und des Wachstums; **Reinke**, Fr., 2.

Regulation. I. The significance of the different methods of regulation in *Turbellaria*; **Child**, 2.

(**Child**, 7; Studies on regulation. IV. Form-regulation in *Leptoplana*.)

(**Child**, 8; Studies on regulation. V. The relation between the central nervous system and regeneration in *Leptoplana*.)

(**Child**, 9; Studies on regulation. VI. The relation between the central nervous system and regulation in *Leptoplana*.)

(**Child**, 10; Studies on regulation. VII. Further experiments on form regulation in *Leptoplana*).

Incomplete anterior regeneration in the absence of the brain in *Leptoplana littoralis*; **Morgan**, Lilian V., 2.

The relation between regulation and fission in *Planaria*; **Child**, 4.

Regeneration of grafted pieces of anarians; **Morgan**, Lilian V., 1.

(Regeneration in *Polychoerus caudatus*; **Stevens** and **Boring**, 1 and 2.)

(**Child**, 6; Form-regulation in *Cerianthus*, 9. Regulation, form, and proportion.)

(**Hahn**; Dimorphism and regeneration in *Metridium*.)

Regeneration in *Fundulus heteroclitus*; **Morrill**.

Regeneration of heteromorphic tails in posterior pieces of *Planaria simplicissima*; **Morgan**, T. H., 6.

Analysis of the phenomena of polarity in *Tubularia*; **Morgan**, T. H., 8.

Hydranth formation and polarity in *Tubularia*; **Morgan**, T. H., 2.

Polarity in *Tubularia*; **Morgan** and **Stevens**.

Regeneration of a heteromorphic tail, *Allolobophora foetida*; **Dimon**.

(Physiological "polarity" and electrical polarity, earthworm; **Morgan** and **Dimon**.)

Physiological regeneration in insects; **Kellogg**, 1.

Tissues, in regeneration of skin; **Tornier**, 1.

(**Zeleny**, 2; Compensatory regulation).

(**Zeleny**, 3; Relation of the degree of injury to the rate of regeneration.)

The regeneration of a double chela in the fiddler crab (*Clasimus pugilator*) in place of a normal single one; **Zeleny**, 4.

Light as a factor in the regeneration of hydroids; **Goldfarb**.

Growth and regeneration of the gills in the young *Necturus*; **Eycleshymer**.

Torsion in the regeneration of the cheliped of the lobster; **Emmel**.

Regeneration peripherer Nerven; **Barfurth**.

**Senescence, Death.**

La mort naturelle dans le règne animal; **Metchnikoff**, 1.

Tod und Fortpflanzung; **Hartmann**, Max.

Das Altern (ungarisch); **Dalmady**.

Das Alter der Tiere; **Korschelt**, 2 & 6.

**Chemical.**

Jahres-Bericht über die Fortschritte der Tier-Chemie oder der physiologischen und pathologischen Chemie. Begr. v. Richard Malv. Fortges. v. R. Andreasch, M. v. Nencki †, K. Spiro.

34, über das Jahr 1904. Hrsg. u. red. v. Rud. Andreasch und Karl Spiro unter Mitwirkung v. L. Blum [u. a.]. Wiesbaden (J. F. Bergmann), 1905, (v + 1244). 23 cm.

#### Tierische Gifte; Faust.

Daten zur Kenntnis der quantitativen Zusammensetzung verschiedener Körperfüssigkeiten von Seetieren (Fischen und einigen Wirbellosen); Baglioni.

Tierische Gifte und Arzneistoffe; Maass.

Lehrbuch der Intoxikationen. 2. durchweg neu bearb. Aufl. 2 Bde. Bd II: Spezieller T.; Kobert.

#### La toxicité des œufs; Loisel, 12.

(Loisel, 14; Toxicité du liquide séminal et considérations générales sur la toxicité des produits génitaux).

Sur les venins animaux (Polish); Lemberger.

(Szczawinska; Cytotoxines chez les Invertébrés.)

Substances toxiques produites par les parasites intestinaux; Blanchard, 2.

#### Phosphorous compounds; Bensley.

Substances fluorescentes chez quelques animaux invertébrés; Dubois, 2.

Kristallinische Chitosanverbindungen aus Sepienschulpen; ein Beitrag zur Kenntniss des Chitins; Fürth und Russo.

Hybrids: *vide* Aetiology.

## DEVELOPMENT. 0215

Metamorphosis, *vide* Physiology.

Regeneration; *vide* Physiology.

#### General.

Lehrbuch der Entwicklungsgeschichte des Menschen und der Wirbeltiere; Hertwig, O., 1.

Das Wesen der Fortpflanzung. Neue Gesichtspunkte; Koenig.

Jahresberichte, Anatomie und Entwicklungsgeschichte, 1904; Schwalbe, G., 1.

Neurosyncytial development; Gaskell.

Parthenogenetic development, Amphielite; Scott.

Alternation of generations in animals from a botanical standpoint; Chamberlain.

Der Bau der Geschlechtszellen; Thesing.

Beobachtungen an den Keimzellen von *Enteroxenos östergreni*; Bonnevie, 1.

L'œuf et la genèse des organes; Caullery, 1.

Ein Versuch, das Binnennetz von Golgi-Kopsch bei der Spermato- und Ovogenese zu homologisieren; Sjövall, 1.

A reducing division in *Ascaris*; Griggs.

The relation between functional regulation and form-regulation; Child, 3.

“Polarity” a phenomenon of gradation of materials; Morgan, T. H., 7.

The effects on embryonic development of the Rontgen rays acting on the spermatozoa of the toad previous to fertilization; Bardeen.

#### Ovum Oogenesis.

Trasformazione sperimentale delle uova lecistiche diffuse in uova telolecistiche; Sanzo.

Oogenesis, *Antedon*, cell-metabolism; Chubb.

Vitelus; Du Buisson.

Polarité de l'œuf des oursins (*Paramcentrotus lividus*; Garbowksi. (Polish.)

Ovocytes ramifiés et à forme hydroïde; Soyer.

Structure de l'œuf de Chauve-Souris (*Vespertilio noctula*); Van der Stricht, 1.

Les mitoses de maturation de l'œuf de la Chauve-Souris (*V. noctula*); Van der Stricht, 2.

Formation of the first polar spindle, egg, *Bufo lentiginosus*; King, 3.

#### Spermatogenesis.

Action des rayons X sur les diverses générations de la lignée spermatique. Extrême sensibilité des spermatogones à ces rayons; Regaud et Blanc, 1 and 2.

Morphologie und Genese abweichend gestalteter Spermatozoen; **Korschelt**, 1.

Ueber das Verhalten von Wirbeltierspermatozoen in strömenden Flüssigkeiten; **Adolphi**.

(**Pizon**; Prétendue ovulase des spermatozoïdes.)

Accessory chromosome, *Epeira*; **Berry**, 2.

Heterochromosomen; **Guthertz**.

Heterochromosomes, *Coleoptera*, *Hemiptera* and *Lepidoptera* sex determination; **Stevens**, 3 and 3a.

Comparative study of the spermatogenesis of insects; **McClung**.

Chromosomes in the spermatogenesis of the Hemiptera Heteroptera; **Montgomery**, 2.

(**Wilson**, 6; Studies on chromosomes. The behaviour of the idiochromosomes in Hemiptera.)

(**Wilson**, 7; Studies on chromosomes. II. The paired microchromosomes, idiochromosomes and heterotrophic chromosomes in Hemiptera.)

Spermatogenesis, *Triton*; **Walker & Embleton**.

Spermatogenesis, *Oniscus*, chromosomes; **Nichols**.

Spermatogenesis *Förficula*; **Zweiger**, 1 & 2.

Spermatogenesis of *Coptocycla auriculacea* and *guttata*, sex determination; **Nowlin**.

Spermatogenesis of the butterfly, *Papilio rutulus*; **Munson**.

Spermatogenesis of the honey bee; **Mark and Copeland**.

Modifications du syncytium nourricier dans le tube séminifère des hybrides; **Stephan**, 3.

### Embryology. Organogeny.

Revue annuelle d'Embryologie; **Loisel**, 10.

The relation between normal and abnormal development of the embryo of the frog; **Morgan**, T. H., 5.

(**Peter**, 1; Variabilität in der tierischen Entwicklung.)

Abriss der Keimblätterlehre in der Vergangenheit und der Gegenwart. (Russ.); **Kuschakewitsch**.

Mode of origin of the germinal layers in *Megalobatrachus maximus* (Schlegel) [and in holoblastic Anamnia in general.] (Dutch); **Lange**, D. de.

Corrélations embryonnaires; **Rabaud**, 2.

Herkunft der Teilungscentren der ersten Furchungsspinde im befruchten Ei; **Kostanecki**.

Gastrulation; **Eternod**.

Embryology, *Chaetopterus*; **Lillie**.

Development of the starfish egg; **Tennent and Hogue**.

(**Conklin**, 3; Mosaic development in ascidian eggs.)

Egg and first stages, Ascidiants; **Conklin**, 1; **Child**, 5.

Cell-lineage, Ascidian egg; **Child**, 5.

(**Wilson**, 4; Experimental studies on germinal localization. I. The germ-regions in the egg of *Dentalium*.)

Experimental studies in germinal localization. II. *Patella* and *Dentalium*; **Wilson**, 5.

Entwicklung des peripheren Nervensystems; **Kohn**.

Zur Frage nach der Entwicklung der peripherischen Nervenfasern.; **Lenhossek**.

Entwicklungsphysiologie der Bilateralität; **Driesch**, 2.

### Fertilization.

Imprégnation et fécondation; **Bataillon**, 1.

Ueber das Wesen der Befruchtung; **Prowazek**, 1.

Kontakteizbarkeit; **Dewitz**.

Attrazione delle cellule sessuali; **Drago**.

Dispermy; **Boveri**.

Physiologische Polyspermie; **Bonnevie**, 2.

Self-fertilization induced by artificial means; **Morgan**, T. H., 1.

Versuche über Entwicklungserregung und Membranbildung bei Seeige-

leieren durch Molluskensperma; Kupelwieser.

### Experimental embryology.

Influence de quelques facteurs sur la parthénogénèse expérimentale; Delage, 1.

Adjutants spécifiques de la parthénogénèse expérimentale; Delage, 2.

Einfluss der Radiumstrahlen auf embryonale und regenerative Entwicklung. Nach den hinterlassenen Präparaten von Prof. Alfred Schaper; Levy.

Künstliche Parthenogenese und das Wesen des Befruchtungsvorgangs; Loeb, 2.

(Battaillon, 3. Role de la pression osmotique en tératogénèse et en parthénogénèse expérimentales.)

Pressione osmotica e potere fecondante, nematospermi; Ariola.

Maturazione de l'œuf chez *Rana fusca*: segmentation parthénogénésique; Battaillon, 2.

Développement de l'œuf de l'*Ascaris vitulorum* en milieu artificiel; Jammes et Martin.

Salt solutions, frog's egg; Jenkinson, 2.

Compression, effects of on maturation and early development; King, 1 and 2.

Parthénogénèse artificielle des œufs du bombyx du mûrier, Recherches expérimentales; Quajat.

Elimination der Augenblasen und Entwicklung des Gesamtorganismus; Steinitz.

(Zeleny, 1; Experiments on the localization of developmental factors in the nemertine egg.)

Wetter und Erdbeben anzeigen Tiere (ungarisch); Méhely.

Popular work on habits; Coupin & Lea.

Footprints, mammals; Gauvreau.

### Phenology.

Observations phénologiques effectuées à Ozydów en 1904 (Polish); Hawryszewicz.

### Parental.

Origines de l'amour maternel; Giard, 2.

Relations entre les phénomènes du rut, de la lactation, de la mue et de l'amour maternel chez une Chienne hybride; Loisel, 11.

### Sexual.

Sexualität und ästhetisches Empfinden in ihrem genetischen Zusammenhang; Kronfeld.

### Social.

Sociétés animales, origine; Petrucci.

Soziales und Wirtschaftliches aus dem Tierreich; Huncke.

Anfänge von Recht und Rang bei den höheren Tieren; Velden, 2.

Symbiose als abstrakte Auffassung des beweglichen Gleichgewichts der Symbionten. (Russ. & deutsch. Résumé); Elenkin.

Animals associated with *Spongilla carteri*; Annandale.

### Parasitism.

Parasitismus der Thiere. (Russ.); Mordvilkov.

Parasitisme et mutualisme dans la nature; Lafitte.

Notes de parasitologie. A. Parasites végétaux. B. Parasites animaux; Galli-Valerio, 2.

How parasites are transmitted, modes of infection; Ransom.

Bacterial flora of carnivorous and of herbivorous animals; Herter.

### ETHOLOGY. 0219

#### General.

Ecological adaptation and ecological selection; Robertson.

Einführung in die Biologie der niederen Meerestiere; Schoenichen.

Naturwissenschaftliche, Plaudereien. Populär; Beobachtungen aus d. Tierleben; Budde.

**Voice.**

Die Stimm laute der Tiere sind Mitbewegungen; **Knickenberg.**

(Régis; Les cris des animaux.)

**Habitat.**

Tierleben am Strande eines Atolles; **Schnee, 1.**

Faune bathypélagique, et des grands fonds; **Bouvier, 2.**

Faune pélagique, invertébrés; **Bouvier, 1.**

Sharks' teeth and cetacean bones; **Eastman, 2.**

Das Leben im Wasser und das Aquarium; **Jaeger.**

Termobiosi; **Issel.**

Die Kokospalme als Wohnort für Tiere; **Winkler.**

Die Bewohner der Moosrasen Ostpreussens; **Selinik.**

Ueber die mikroskopische Fauna und Flora eines im Freien stehenden Taufbeckens; **Zacharias, 6.**

(Monti, Rina, 2; Un modo di migrazione del plancton [lacustre] fin qui sconosciuto.)

**Speleology.**

Spelunca. Bulletin et Mémoires de la Société de Spéléologie. Dir. Martel. Trimestriel. Paris, (34, rue de Lille), 25 cm, 5. [Résultat de la fusion, à partir de 1901, de deux publications de la Société de Spéléologie: Spelunca et Paris, Mém. soc. spéléol.]

La spéléologie au XX<sup>e</sup> siècle. Revue et bibliographie des recherches souterraines de 1901 à 1905; **Martel.**

Origines de la faune souterraine; **Peyerimhoff, 1.**

Faune cavernicole des Basses-Alpes; **Peyerimhoff, 2.**

**Movement.**

La finalité dans l'étude des mouvements; **Bohn, 8.**

Mouvements en relation avec l'assimilation pigmentaire chez les animaux; **Bohn, 7.**

Spazierengehende Fische, musizierende Krobse und andere sonderbare Gesellen; **Schnee, 2.**

Locomotion of amoebae and allied forms; **Dellinger.**

**Psychology.**

Intelligence of animals; **Avebury.**

Instinkt und Seelenleben; **Rohweder.**

De la bêtise du Chien et de la haute intelligence du Mouton (éthologie et psychologie comparées); **Baron.**

L'abstraction chez les animaux; **Hachet-Souplet.**

Menschlichen Reflexerscheinungen im Vergleich zu den tierischen; **Velden, 1.**

Menschen- und Tierseele; **Wundt.**

L'individualité animale. Observations de MM. Perrier, Baron; **Mezzara.**

Können die Tiere Schönheit wahrnehmen und empfinden?; **Möbius, 2.**

Orts- und Richtungssinn der Tiere; **Hopf.**

Stereotropismus etc.; **Dewitz.**

The mutual relations of stimuli in the frog; **Yerkes, 4.**

Relations of some plancton animals to light, (Danish); **Ditlevson.**

Sur l'adaptation des réactions phototropiques; **Bohn, 4.**

Sur des mouvements de roulement influencés par la lumière; **Bohn, 6.**

Temporal relations of neural processes; **Yerkes, 5.**

Le rythme des marées et le phénomène de l'anticipation réflexe; **Bohn et Piéron.**

George Bohn's studies in animal behavior; **Yerkes, 1.**

Modifiability of behavior in *Hydroïdes dianthus*; **Yerkes, 2.**

Behavior of the lower organisms; **Jennings, 2.**

Method of regulation in behavior and in other fields; **Jennings, 4.**

Modifiability in behavior. I. Behavior of sea anemones; **Jennings, 3.**

Modifiability of behavior. 2. Factors determining direction and character of

movement in the earthworm ; Jennings, 1.

The mental life of the domestic pigeon. An experimental study of certain emotional and associative processes ; Rouse.

Comparative studies in the psychology of ants and of higher animals ; Wasmann, 1.

Some reactions of caterpillars and moths ; Mayer and Soule.

Reactions of the crayfish ; Bell.

Behavior of *Gonionemus* ; Yerkes, 3.

Behavior of *Gonionemus* ; Morse.

### Colour. Defensive Processes.

Coloration ; Prince.

Les couleurs dans la nature ; Bohn, 3.

Die Schutz- und Trutzfarben der Tiere ; Rothe.

Albinismus (Leucismus) und Melanismus ; Seulen.

Chromotropisme et son inversion artificielle ; Minkiewicz, 1.

Phénomènes chromotropiques dans l'étude des problèmes biologiques et psycho-physiologiques ; Minkiewicz, 2.

Biologische Untersuchungen Transkaspien (Russ.) ; Faussek.

Blutspritzende Thiere ; Rabes, 3.

Mimikry ; Lorentz.

### AETIOLOGY AND VARIATION.

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#### General.

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# II. PROTOZOA

ARRANGED BY

H. M. WOODCOCK, D.Sc. (Lond.)

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Morphology of *Triposolenia*, a new Dinoflagellate; Kofoid, 2.

*Pyrodinium*, a new genus of Dinoflagellates; Plate.

A new Rhynchosflagellate, *Radiozoum lobatum* n. g., n. sp.; Mingazzini.

(d.) of CILIOPHORA.

Notes on certain aspirotrichous Infusoria; Schouteden, 1.

Structure of *Epistylis gasterostei* n. sp.; Fauré-Fremiet, 2.

Beiträge zur Kenntnis von: *Campanella umbellaria* L. sp. (*Epistylis flavicans* + *grandis* Ehrbg.); Schröder, 1; *Epistylis plicatilis* (Ehrbg.); Schröder, 2; *Vorticella monilata* Tem; Schröder, 4; *Stentor coeruleus* Ehrbg. und *St. roeselii* Ehrbg.; Schröder, 5.

A new Vorticellid, *Opisthontecta henneguyi*; Fauré-Fremiet, 7.

Detailed account of *Trichodinopsis paradoxa*; Issel.

Orientation of the body in *Opalina*; Kunstler and Gineste, 2.

Structure of: *Ophrydium versatile*; Fauré-Fremiet, 8; *Tintinnoidium inquinum*; Fauré-Fremiet, 9; *Dendrosomides*, a new Acinetarian; Collin.

Minute structure; special anatomy.

(a) *Test, shell, etc.*

On the tests of certain new freshwater Rhizopods; Averintzev, 3.

Die Struktur und die chemische Zusammensetzung der Gehäuse bei den Süßwasserrhizopoden; Averintzev, 4.

Finer structure of the test of *Arcella*; Cushman and Henderson.

Étude sur la *Clypeolina marginata*, Rhizopode avec coquille à deux valves; Penard.

General structure of Foraminiferan shells; Lister.

Sur la structure du test dans les Fusulines; Douville, 1; structure of shell in *Orbitolina*; Douville, 5.

Sur la formation du réseau des Nummulites réticulées; Boussac, 1, 3.

Über die Mittel der Formbildung im Radiolarienkörper; Häcker, 3.

Chemical nature of the skeletal substance of Acantharia; Bitschli, 1.

Presence of a spherical skeleton or test, in addition to spines, in *Acanthocystis pertiana*; Lord.

Skeletal structure of *Acanthomertidae*; Mielck: Of the *Acanthophracta*; Popofsky, 2.

La paroi sporale des Myxosporidies; Léger et Hesse.

Structure and arrangement of the skeletal plates in *Gonyaulax triacantha*; Kofoid, 5.

(b.) *Cytoplasm and Nucleus.*

Sur la structure intime du protoplasma chez les Protozoaires; Fauré-Frémiel, 1.

Protoplasm of Protozoa; discussion with regard to terms "spherule," "spheroplast," &c.; Fauré-Frémiel, 3.

Intimate structure of the cytoplasm in Protozoa; the nature of spherules or *spheridia* (for "spheroplasts"); Kunstler, 1.

Les sphérolites chromophiles chez les Protozoaires; Kunstler et Gineste, 5.

Unispherular nuclei among Amœbae and Flagellates; Kunstler, 2.

Nuclear structure in the Foraminifera; Lister.

Minute structure of certain Nummulites; Boussac, 2.

Variety of nuclear structure in Aggregata; Moroff, 2.

Histological study of the malarial parasites; Pezopoulo and Cardamati.

Structure and chemical constitution of paramylum (*Euglena*); Bütschli, 2.

Les sphérides trophoplasmiques des Infusoires ciliés; Kunstler et Gineste, 6.

(Differenziazioni citoplasmatiche nel *Cryptochilum echini* (Maupas); Russo e Di Mauro, 2.)

Le *Glancomia pyriformis* et l'organisation de la substance vivante; Fauré-Frémiel, 15.

Minute structure of *Opalina dimidiata*; Kunstler et Gineste, 3.

Histologische Beobachtungen über Paramaecien; Chaiński.

Formation of perivacuolar membranes around the food-vacuoles, in Ciliates; Kunstler, 3.

Food-vacuoles of Vorticellids, and their alteration during digestion; Fauré-Frémiel, 6.

Ueber die Augen der Tiere; Haselbach.

## PHYSIOLOGY. 0411

### General.

Biological considerations on the life-history of Protozoa; Calkins, 1-3.

Beobachtungen über das Leben der Protozoen; Oelzelt-Newin.

Das einfachste Tier (ungarisch); Entz, 1, 2.

On the vitality of resting cysts and spores of Protozoa, and their resistance under different conditions; Certes.

General account of physiology of fresh-water Rhizopods; Averintzev, 1.

Physiological considerations concerning *Volvox aureus*; Stempell.

### Metabolism.

Nutrition and its relation to nuclear constitution in *Didinium nasutum*; Prandtl.

Das Leben ohne Sauerstoff; Kulagin.

### Senescence, recuperation.

(Significance of the meganuclear fragmentation in *Cryptochilum echini* with regard to senile degeneration; Russo and di Mauro, 1.)

(Recuperation in *Cryptochilum*; Russo and di Mauro, 3.)

Recuperation in Protozoa; Calkins, 6 and 7.

### Sexual relations.

(Physiological significance of conjugation in the life-cycle of Protozoa; Calkins, 7.)

On the conditions which determine conjugation among Infusoria; Enriques.

Significance of association in Gregarines; Woodcock, 1.

### Movement.

The mode of movement in *Amœba* and *Difflugia*; Dellinger.

*Amœba blattæ* and amoeboid motion; Gerould.

Energy of the ciliary movement of the adoral zone of Vorticellids, and its significance; Fauré-Fremiet, 5.

### Environmental effects; adaptation.

Influence of surface-evaporation upon the distribution of Infusoria in a confined medium; Robertson, T. B., 2.

Modifications in living protoplasm (e.g., of *Opalina*), produced by variations in the environmental conditions (in this case in the host); Kunstler and Gineste, 1.

Physiologische Beobachtungen über Paramaecien; Chaiński.

De la persistante vitalité de l'hématozoaire de Laveran dans le cadavre humain; Gillot.

Vitalité du Trypanosome de la Dourine dans les conditions artificielles; Yakimoff.

On the significance of the asymmetry in *Triposolenia* (adaptive to flotation); Kofoid, 4.

Effects of various rays on Trypanosomes; Ross, 3.

Ein für *Trypanosoma brucei* specifisches Serum und seine Einwirkung auf *Trypanosoma gambiense*; Kleine und Möllers.

Reactions of Infusoria to chemical and osmotic stimuli; Robertson, T. B., 1.

Galvanotropismus und Galvanotaxis der Ciliata. Mitt. 4-5; Statkewitsch.

Chemical and physical effects produced in *Glaucoma* by anaesthetizing; Fauré-Fremiet, 4.

The behavior of *Paramaecium*. Additional features and general reactions; Jennings.

Der Einfluss verschiedener Narcotica, Gase und Salze auf die Schwimmgeschwindigkeit von *Paramaecium*; Nagai.

Relation of Infusoria (*Paramaecium* and *Colpidium*) towards certain ions (OH and H) in their medium; Peters and Rees.

Reactions of *Stentor coeruleus* to light; Mast.

#### DEVELOPMENT AND RE- 0415 PRODUCTION.

Life-cycle of the Protozoa; Calkins, 1-3.

##### (a.) SARCOIDINA.

Life-cycle of *Myxomonas betae*, a new Mycetozoan; Brzezinski.

Die Süsswasser-Rhizopoden; Averintzev, 1.

Encystment in fresh-water Rhizopods; Averintzev, 5.

Plasmodiogonye, eine Vermehrungsart der niederen Protozoen. Nach den Untersuchungen an mehrkernigen Formen von *Amoeba proteus*; Stolc.

Ueber die Fortpflanzung von *Pelomyxa palustris*; Bott: Ueber eine eigenartige Form der Fortpflanzung bei *Pelomyxa palustris*; Korschelt.

Life-cycle of the Foraminifera; Lister.

Development of certain nummulites from young stages; Boussac, 2.

##### (b.) SPOROZOA.

Sur l'évolution des Grégaries gymnosporées des Crustacés; Léger et Duboscq, 1.

Development (schizogony) of *Aggregata eberthi* [= *Eucoccidium e.*] of the cuttle-fish, in a crab (*Portunus*); Léger and Duboscq, 2.

Modes of nuclear division in *Aggregata*; Moroff, 2.

*Eleutheroschizon duboscqi*, Sporozoaire nouveau; Brasil, 1.

Nouvelles recherches sur la reproduction des Grégaries monocystidées; Brasil, 2.

Stages in life-history of *Cystobia chiridotae* and *Hyalosphaera gregarincola*; Dogiel.

Life-cycle of *Diplodina* (*Cystobia*) *irregularis*; Woodcock, 1.

Étude sur *Taeniocystis mira* Léger, Grégarine métamérique; Léger, 3.

Untersuchungen über Cocciden. I. *Adeleia zonula* nov. sp.; Moroff, 3.

Sur l'évolution des prétendues Coccides des Céphalopodes; Moroff, 1.

Ueber eine Coccidenart, *Orcheobius herpobdellae* nov. gen. nov. sp.; Schuberg und Kunze.

Intracorporeal conjugation in malarial parasites; Craig.

Developmental phases of *Leucocytozoon canis*; Christophers.

Beiträge zur Entwicklungsgeschichte der Piroplasmen; Koch.

Zur Kenntnis von Entwicklung der Babesien (Piroplasmen); Lühe, 2.

Sexual phenomena in *Myxobolus pfeifferi*; Mercier, 1.

Development of spores in *Myxobolus pfeifferi*; Mercier, 2.

Cyst and spores of *Myxidium giardi* n. sp.; Cépède, 2.

Spores of *Chloromyxum cristatum* and *C. truttae*, n. spp., and their development; Léger, 1, 2.

Pansporoblasts and spores of a new Microsporidian, *Pleistophora macrospora* n. sp.; Cépède, 1, 2.

Observations on the life-history of *Pleistophora periplanetae*; Perrin, 1, 2.

Sur une Microsporidie du Talitre; Mercier, 4.

(Recherches sur les Haplosporidies; Caullery et Mesnil.)

Stages in life-cycle of *Anurosporidium*, a new Haplosporidian; **Caulery** and **Chappellier**.

Sur la biologie des *Amæbidium*; **Chatton**, 2.—Sur l'évolution de l'*Amæbidium recticola*, nouvelle espèce commensale des Daphnies; **Chatton**, 3.

(c.) **MASTIGOPHORA.**

Development and life-cycle of Haematozoa of salt-water fish, general account as so far known; **Lebailly**.

*Herpetomonas*-like parasites; **Balfour**, 1.

The development of the " *Herpetomonas*" [*Herpetomonas*] of Kala-Azar, from Leishman - Donovan bodies; **Rogers**.

Modes of development of certain Piscine Trypanosomes in leeches; **Brumpt**, 1, 2.

(Hémoflagellés des poissons d'eau douce. Leur forme dans les sanguines; **Léger**, 7.)

Researches on the life-history of " *Trypanosoma*" [*Spirochaeta*] *balbianii* (Certes); **Perrin**, 3.

Developmental-phases of *Trypanosoma duttoni*, observed in the foetus; **Pricolo**.

Phenomena of division in *T. rotatorium*; **Franca** and **Athias**, 1.

Multiplication and developmental forms of *T. theileri*; **Luhs**.

Generations- und Wirtswechsel von *Trypanoplasma borreli* Laveran et Mesnil; **Keysseltz**.

Beobachtungen an *Volvox aureus* Ehrbg. (= minor Stein); **Stempell**.

Beiträge zur Kenntnis der Peridineen; **Dogiel**.

*Pyrocystis lunula* und ihre Fortpflanzung; **Apstein**.

Les Blastodinides, ordre nouveau de Dinoflagellés parasites; **Chatton**, 1.

(d.) **CILIOPHORA.**

(Life-history of Protozoa. IV Death of the A Series (*Paramaecium*)—Cycles of generations; **Calkins**, 7.)

Life-history of hypotrichous Infusoria; **Woodruffe**.

Ueber die Konjugation der Infusorien; **Versluys**.

(Frammentazione del macronucleo nel *Cryptochilum echini* (Maupas); **Russo e Di Mauro**, 1.)

(La coniugazione nel *Cryptochilum echini*, Maupas; **Russo e Di Mauro**, 3.)

Konjugation von *Didinium nasutum*; **Prandtl**.

Ungeschlechtliche und geschlechtliche Fortpflanzung der Tintinen; **Laackmann**.

On sexual differentiation among Vorticellids; **Enriques**.

**ETHIOLOGY.** 0419

General.

Die Süßwasser-Rhizopoden; **Averintzev**, 1.

Luminosity.

*Pyrodinium bahamense* n. g., n. sp., die Leucht-Peridinee des „Feuersees“ von Nassau, Bahamas; **Plate**.

Plankton.

Zur Charakteristik des Phytoplanktons temperierter Meere; **Schröder**, B.

Fresh-water Mastigophora occurring in the sea; **Lemmermann**, 2.

Protozoan plankton of certain Irish Lakes; **West and West**.

Protozoan plankton from the Elbe in 1904 and 1905 compared; **Volk**.

Protozoa from a churchyard font near Plön; **Zacharias**, 2.

Flagellata, ponds near Bremerhaven; **Lemmermann**, 1.

Various lakelets, East and West Prussia; Protozoa; **Krause**.

Protozoan winter-plankton, 2 lakelets of Southern Finnland; **Levander**, 1.

Plankton-Untersuchungen in norwegischen Seen; **Huitfeldt-Kaas**.

Protozoa (mostly Flagellata) from Lake Valkea-Mustajärvi, near Evois; **Levander**, 2.

Lakelets near Lunz, Nieder-Oesterreich, Protozoa; Woltereck.

Dinoflagellates, certain lakes in the Eastern Alps; Brehm and Zederbauer.

Protozoan plankton from various lakes in Istria and Dalmatia; Car.

Formation of large silty masses in the Adriatic Sea, off Trieste, by Peridinium; Cori.

In ponds of Madrid, Glenodinium pusillum; Forti.

Periodicity, variation, and distribution of various plankton-organisms in South European seas; Zacharias, 4.

Atlantic Ocean (Planton-Exped. Humboldt-Stiftung), Atlanticella, a new Tripylarian; Borgert, 2.

Medusettidae from Atlantic Ocean and elsewhere (Plankton-Exped. Humboldt-Stiftung), tables of distribution; Borgert, 3.

Atlantic and Pacific Oceans (Plankton-Exped. Humboldt-Stiftung), Tuscaroridae; Borgert, 1.

Atlantic Ocean ("Valdivia"-Expedition), Dinoflagellates; Karsten.

Indian and Atlantic Oceans, Acanthometridae; Popofsky, 1.

Dio Acantharia der Plankton-Expedition, Tl II: Acanthophraeta. (Ergebnisse Plankton-Exped. Humboldt-Stiftung); Popofsky, 2.

Eine Anzahl Tintinnen aus dem Planceton der Bucht von Rio de Janeiro; Bresslau.

San Diego region, Heterodinium and Triposolenia, now Dinoflagellates; Kofoid, 1, 2.

## Psychology.

Ueber verständiges Tun niederer Tiere [Radiolarien]; Hensen.

## Commensalism.

Le commensalisme spécifique chez les Vorticelles d'eau douce; Fauré-Frémiel, 10.

Le commensalisme des Opercularia; Le facteur mouvement et les facteurs de la spécificité; Fauré-Frémiel, 11, 12.

## Parasitism.

### General.

Wirtswechsel und Vererbung bei Protozoeninfektionen; Loewenthal.

Urtierchen als Parasiten und Krankheitserreger; Thesing.

### Plantae.

In the beetroot, tissues of all the members, both intra- and inter-cellular, Myxomonas betae n. g., n. sp.; Brzezinski.

### Sporozoa.

In Cystobia chiridotae, Hylosphaera gregarinicola n. g., n. sp.; Dogiel, 1,

### Echinodermata.

In respiratory trees and body-cavity of Cucumaria pentactes and C. plancti, Diplosoma minchinii; Woodcock, 1.

Cystobia chiridotae nov. sp.; Dogiel, 1.

### Rotifera.

In a South African Rotifer, Bertramia kirkmani sp. nov.; Warren.

### Platyhelminthes.

In sporocysts of a Trematode ("Cercaria" [Brachycotylum] lutea), itself parasitic in Donax, a new Haplosporidian, Anurosorpidium; Caullery and Chappellier.

Monocystidée nouvelle de Pheretima; Hesse, 1.

### Chaetopoda.

(Sur un nouveau Myxocystis des Oligochètes; Hesse, 3.)

### Hirudinea.

Expériences relatives au mode de transmission des Trypanosomes et des Trypanoplasmes par les Hirudinées (Hemilepsis); Brumpt, 3.

In testes of Nephelis vulgaris (Herpobdella atomaria), a new Coccidian, Orcheobius herpobdellae; Schuberg and Kunze.

### Crustacea.

Parasitic in the eggs of Copepods, Gynnodinium parasiticum sp. n.; Dogiel, 2.

In various Copepods, intestine, *Blas-*  
*todinium*, a new Dinoflagellate; Chatton,  
1.

Sur un Amœbien parasite des em-  
bryons de *Peltogaster curvatus* Kossm;  
Caullery.

Sur une Microsporidie du Talitre  
(*Amphipoda*); Mercier, 4.

Ectoparasitic on *Eupagurus* spp., *Den-*  
*drosomides*, a new Acinetarian; Collin.

Sur l'évolution des Grégariines  
gymnosporées des Crustacés; Léger et  
Duboscq, 1.

In *Portunus depurator*, forming coe-  
lomic cysts, *Aggregata* (= *Eucoccidium*)  
of the cuttle fish; Léger and Duboscq, 2.

Sur quelques Microsporidies parasites  
des Crustacés; Pérez, 2 and 3.

Ovaries of crab attacked by Micro-  
sporidia (*Thelohania moenadis*); Pérez, 1.

#### Myriapoda.

*Eleutheroschizion duboscqi*, sporozoaire  
nouveau parasite des *Scoloplos armiger*  
O. F. Müller; Brasil, 1.

#### Insecta.

(Myxosporidies nouvelles des Insectes ;  
Hesse, 2.)

*Gregarina socialis* sp. n., from larvae  
of *Eryx ater*; Léger, 3.

Fat bodies of *Blaps mortisaga* (larva)  
*Adelea zonula* n. sp.; Moroff, 3.

*Pleistophora periplanetae* from Mal-  
pighian tubules of *Periplaneta orientalis*;  
Perrin, 1, 2.

Sur le second hôte (*Lynchia maura*)  
de *Hæmoproteus* (*Halteridium*) du  
pigeon; Sergent et Sergent, 3.

Flagellate parasite (probably *Critidia*) in *Culex fatigans*; Ross, 1.

Parasites of mosquitoes (*Culex*) in  
India; Ross, 2.

In *Culex pipiens* and *Stegomyia*  
*fasciata*, females, *Herpetomonas alge-*  
*riense* n. sp.; Sergent, E. and E., 2.

*Herpetomonas*-like parasites in fleas  
(*Pulex cleopatrae*); Balfour, 1.

Relation of *Trypanosoma gambiense*  
and other Trypanosomes to *Glossina*  
*palpalis*; Minchin, Gray and Tulloch,

Expériences d'infection de trypanoso-  
miasis (probablement *T. gambiense*) par  
des *Glossina palpalis* infectées naturelle-  
ment; Cazalbou.

Tsetse-flies and Trypanosomes, ticks  
and *Piroplasmata*; Koch, 2.

Tsetse-flies and "fly-Trypanosomes";  
Novy.

On destruction of the ovary and  
castration in Termites, due to parasitic  
Protozoa; Brunelli.

#### Arachnida.

Alternate host of the Haemogre-  
garine of *Testudo ibera* is probably  
*Ilyoloma syriacum* (*I. affine*);  
Popovici-Baznosanu.

In dog-tick (*Rhipicephalus sanguineus*),  
*Leucocytozoon canis*; Christophers.

#### Mollusca.

Un nouveau *Nematopsis* parasite des  
moules de la Méditerranée; Léger, 4.

In *Octopus* sp., *Eucoccidium jacquemeti*  
n. sp.; Moroff, 1.

#### Pisces.

In African fish, *Bageus bayard*,  
*Lyuodonitis schal*, and *Mugil* sp., Try-  
panosomes, spp. incert.; Neave.

In an African fish (*Clarias angolensis*),  
Haemosflagellates; Dutton, Todd and  
Tobey, 3.

New Myxosporidian (*Henneguya*  
*acerinae*) from gills of *Acerina cernuae*;  
Schröder, 3.

In *Alosa finta*, gills and branchial  
tissue, *Caprina aurantacea*, a new  
Ciliate, and *Branchiophaga alosicida*, a  
new Myxosporidian; Mazzarelli, 1  
and 2.

In kidney of an eel (*Anguilla*  
*vulgaris*), *Myxidium giardi* n. sp.;  
Cépède, 2, 3.

In an eel (*Anguilla vulgaris*?), a new  
*Haemogregarina*; Laveran, 3.

In *Cobitis barbatula*, kidneys and  
bladder, *Myxidium barbatulae* and  
*Henneguya legeri* n. spp.; Cépède, 3.

In muscular wall of abdomen,  
*Cobitis barbatula*, *Pleistophora macro-*  
*spora* n. sp.; Cépède, 1, 2.

In head of *Gadus aclefinus*, a new species of *Myxobolus*; **Auerbach**.

In flounder (*Pleuronectes flesus*), gall-bladder, *Leptotheca agilis*; **Robertson, M., 2.**

In the following fish, new species of *Trypanosoma*, viz.: *Barbus fluviatilis*, *T. barbi*; *Perca fluviatilis*, *T. percae*; *Acerina cernua*, *T. acerinæ*; *Phoxinus laevis*, *T. phoxini*; *Cottus gobio*, *T. langeroni*; *Scardinius erythrophthalmus*, *T. scardinii*; *Leuciscus* sp., *T. leucisci*: *Gobio fluviatilis*, *T. elegans*; *Squalius cephalus*, *T. squalii*; **Brumpt, 1.**

In the following fish, new species of *Trypanoplasma*, viz.: *Barbus fluviatilis*, *T. barbi*; *Abramis brama*, *T. abramidis*; *Salmo fario*, *T. truttae*; **Brumpt, 2.**

In gall bladder of tench (*Tinca*), *Chloromyxum cristatum* n.sp.; **Léger, 2.**

In *Trutta fario*, gall-bladder, and conn. tissue, *Chloromyxum truttae* n. sp.; **Léger, 1.**

(Myxosporidies des Poissons des Alpes françaises; **Cépède, 5.**)

Deux nouvelles Myxosporidies parasites des Poissons d'eau douce; **Léger, 6.**

*Trypanoplasma borreli*, in relation to its hosts (fish and leeches); **Keysseltz.**

#### Amphibia.

In a Somali toad (*Bufo reticulatus*). *Trypanosoma somalense* n.sp.; **Brumpt, 2.**

In *Rana esculenta*, *Trypanosoma elegans* and *T. undulans* n. spp.; **France and Athias, 2.**

The host of *Haemogregarina neireti* is *Rana mazareniensis*; **Liveran, 1.**

#### Reptilia.

Sur une Hémogrégarine karyolyssante d'un lézard (*Mabuya vittata*); **Nicolle et Comte, 2.**

Sur une Hémogrégarine de *Varanus griseus*; **Nicolle et Comte, 3.**

Protozoaires parasites des Vipères (*Vipera aspis*); **Léger, 5.**

In an African python, *Trypanosoma pythonis* sp. n. [really a Haemogregarine]; **Robertson, M., 1, 2.**

#### Aves.

In blood of an African stork (*Leptoptilus*), a *Halteridium* regarded as new; **Hirst.**

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In African birds, vultures (*Neophron percnopterus*) shrike (*Laniarius crenatus*), *Trypanosomes* spp. incert.; **Neave.**

In guinea-fowl (*Numida ptilorhyncha*), a "Haemamoeba" resembling "H." (*Leucocytozoon ziemanni*; **Neave.**

#### Mammalia.

Protozoan parasite in polymorpho-nuclear leucocytes of a dog; **Gerrard**, also **Wenyon.**

Trypanosomiasis beim Schweine (*Trypanosoma suis* n. sp.); **Ochmann.**

*Trypanosoma theileri* in oxen in Trans-Caucasia; **Luhs.**

Trypanosomes and new intracorporeal parasites in a mole; **Thomson.**

A Haemogregarine from a Mammal (*Jaculus, jerboa*); **Balfour, 3.**

A *Leucocytozoon* from the rat; **Balfour, 4.**

In white rats (*Mus rutilus*) *Piroplasma muris* n. sp.; **Fantham.**

In rats (*Mus rutilus*), leucocytes, a *Leucocytozoon*; **Adie.**—In *Mus decumanus*, a *Leucocytozoon* (perhaps *L. ratti*); **Cleland.**

In white blood-corpuses of palm-squirrels, *Sciurus palmarum* (= *Funambulus pennantii*), *Leucocytozoon funambuli* n. sp.; **Patton.**

In an Antelope, *Trypanosoma theileri*; **Dutton, Todd and Tobey, 1.**

Occurrence of endoglobular parasites ("ringförmige") and Trypanosomes in bats (*Vesperugo pipistrellus*); **Kisskalt.**

Haematozoa in a bat (*Vespertilio carpus*); **Bowhill.**

In *Vesperugo kuhlii*, "Achromaticus" *vesperuginis*; **Gonder.**

In a Monkey (*Cercopithecus*) a Trypanosome sp. incert; **Dutton, Todd and Tobey, 1.**

Remarks on parasitism and symbiosis of the pathogenic *Amœbae*; **Musgrave and Clegg.**

From typhus stools, a new *Balantidium*; **Krause.**

Un cas de présence des Flagellés dans les excréments humains; **Zaleski.**

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## VARIATION, PHYLOGENY. 0423

## Variation, etc.

Les cultures de Protozoaires et les variations de la matière vivante; **Kunstler et Gineste**, 4.

Variation and correlation in *Chilomonas* under favourable and unfavourable conditions; **Pearl**, 2.

*Paramaecium aurelia* and mutation (*P. caudatum*, a variant of *P. a.*); **Calkins**, 4, 5.

Variation and correlation in conjugating and non-conjugating individuals of *Paramaecium caudatum*; **Pearl**, 1.

A case of monstrosity in *Stentor coeruleus*; **Fauré-Fremiet**, 14.

Experimental variation of *Vorticella microstoma* (into "V. hians"); **Fauré-Fremiet**, 13.

On the abundance and variety of Radiolarian species, as bearing upon the Darwinian theory; **Zacharias**, 5.

## Classification and Phylogeny.

Evolution and phylogeny of the *Nummulitidae*; **Douville**, 3.

Phylogeny of *Nummulites*—2 chief types; **Boussac**, 3.

Classification and phylogeny of the *Acanthophracta*; **Popofsky**, 2.

Relationship of *Amoebidium* is to the Thallophytes (*Fungi*), rather than to the Sporozoa; **Chatton**, 2.

Phylogeny of Trypanosomes discussed; **Woodcock**, 2.

On the origin of the *Ureoolaridae*; **Fauré-Fremiet**, 2.

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Geographical Distribution of fresh-water Rhizopods; **Averintzev**, 1 and 5.

## Europe.

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Protozoa on the ice-floes of the North Polar sea; **Nansen**.

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Upper Rhine district (Rheinpfalz, Heidelberg), Protozoa, incl. *Pleodorina illinoiensis*, *Cyclonexis annularis*, *Placocysta spinosa*, and *Paulinella chromatophora*; **Lauterborn**, 2.

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East-Prussia, moss bogs and swamps, Rhizopods; **Sellnick**.

Rhizopoda from lakelets in the Massif of Ruitor, Graian Alps; **Monti**.

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Foraminifera obtained off Great Barrier Island, New Zealand; **Chapman**.

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#### Oceanic.

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#### Geological.

##### General.

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Birregurra and Campbell's Point (near Geelong), Australia, horizon not given, Foraminifera; **Mulder**, 1, 2; also (locality not given); **Brady** and **Mulder**.

Notes on the geological distribution of Foraminifera, Radiolaria, Silicollagellata and *Coccolithophoridae*; **Stromer**.

#### Quaternary.

Pleistocene clays and sands, Isle of Man, Foraminifera; **Reade** and **Wright**.

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#### Tertiary.

Sur quelques gisements nummulitiques de Madagascar; **Douville**, 2.

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(N-9720 c)

Geological distribution of *Orthophragmina* and *Orbitoidea*, as bearing upon the correct horizon of the "Flysch"; **dal Lago**.

Foraminiferenfauna der Tertiärschichten von Biarritz; **Liebus**.

Nummulitic zones (Tertiaries), Gassino and Biarritz, Foraminifera; **Prever**.

Tertiaries, Piedmont, Foraminifera; **Sacco**, 2.

Tertiary, Kienthaler Alps, *Globigerinoozoa*; **Gerber**.

Lower Tertiary ("Kalkmergel"), King William's Land, (German New Guinea), Radiolaria; **Haupt**.

Miocene and Pliocene ("trubi"), Bonfornello (near Palermo), Foraminifera; **Silvestri**, 4.

Upper Miocene, Batangas Province, (Philippines), *Orbitoides martini* sp. n.; **Smith**, 2.

Miocene, Monte Titano (San Marino), Foraminifera; **Nelli**.

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Oligocene, Apennines (Modena), "*Orbitoides gumbelii*" and other Foraminifera; **Silvestri**, 1.

Oligocene ("Septarienton"), Wonsheim, (Rhenish Hesse), Foraminifera; **Stoltz**.

Oligocene, Bavaria, Foraminifera; **Stuchlik**.

Eocene and Miocene, Monte Sirente, Central Apennines, *Nummulitidae*; **Cassetti**.

Eocene and Miocene, S. Marino, Foraminifera; **Trabucco**.

Eocene, Alicante, *Nummulitidae*; **de Cisneros**.

Eocene *Lepidocyclinae*, doubts with regard to alleged existence; **Douville**, R., 1.

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Middle Eocene, "Plana de Vich," Spain, *Nummulites*; **Almera**, 1, 2.

Eocene, Sicily, *Lepidocyclinae* n. spp.; **Checcia-Rispoli**, 1.

Eocene, Capo S. Andrea (Taormina), Foraminifera; **Checcia-Rispoli**, 2.

Eocene, New Caledonia, *Nummulitidae* and *Orbitoidea*; **Deprat**.

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Eocene (Nummulitic limestones), Madagascar, *Nummulites* and *Orthophragmina*; **Douvillé**, R. 2.

Eocene, Rieti, *Nummulitidae*; **Lotti**.

Eocene, Beaulieu, occurrence of *Nummulites*; **Maury** and **Caziot**.

Eocene (Nummulitic zones), Valleys of the Gurk and Görtschitz, (Austria), *Nummulitidae*; **Redlich**.

Eocene, Basin of Lake Trasimeno, Foraminifera; **Ristori**.

Eocene, Penisola Salentina (provincia di Lecce), *Nummulitidae*; **di Stefano**.

#### *Mesozoic.*

Upper Cretaceous, Eastern Rhaetikon, *Globigerininae*; **v. Seidlitz**.

Upper Cretaceous, Upper Engadine, *Globigerininae*; **Zoepritz**.

Cretaceous, Persia, Foraminifera; **Douvillé**, II., 6.

Cretaceous, Tripoli, *Omphalocyclus macropora*; **Krumbeck**.

Cretaceous, Sac and Ida Counties, Iowa, Foraminifera; **MacBride**.

Cretaceous, Taraluna (Tripoli), *Orbitolina* n. spp.; **Parona**.

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Lower Lias, near Gloucester, Foraminifera; **Richardson**.

#### *Palaeozoic.*

Cambrian, near Shantung, China, *globigerina* (?) *mantoensis* n. sp.; **Walcott**.

### III.—SYSTEMATIC. 0431

#### PROTOZOA, GENERAL.

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Exp., Scientific Results, (Kristiania), 5, No. XVI, 1906, (22, 8 pls.).

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#### 1. MYCETOZOA.

General account (continued); TEMPÈRE, Microgr. Prépar. 14, (76-79, 249-252, pls. viii, xxviii).

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*Myxomonas* gen. n., (allied to *Plasmadiophora*) *M. betae* sp. n.; BRZEZINSKI, Kraków, Bull. Int. Acad., 1906, (139-202, pls. 2-6).

#### 2. SARCODINA (=GYMNONYXA, RHIZOPODA, sens lat.).

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†*Bolivina lata* nom. nov., Tertiaries, Biarritz; LIEBUS, Wien, Jahrb. Geol. RehsAnst., **56**, (357, fig. 2).

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†*Cassidulina oblonga* (=*C. globosa*?), Tertiaries, Biarritz; LIEBUS, Wien, Jahrb. Geol. RehsAnst., **56**, (357, fig. 5).

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(505, pl. 18, figg. 20–22), *O. pentagonalis* sp. n. (507, pl. 18, figs. 24, 25, pl. 19, fig. 27). *O. stella* (508, pl. 19, fig. 28), *O. lanceolata* (509, pl. 19, figg. 29, 30), Eocene, New Caledonia; DEPRAT, Paris, Bull. Soc. géol., (ser. 4), 5.—*O. colcanapi* sp. n., Eocene, Madagascar; DOUVILLE, R., Paris, Ann. Paléont., 1, (67, figs. 4–5).

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*Ramulina herdmani* sp. n., Ceylon; DAKIN, Roy. Soc. Rep. Ceylon Pearl Fish., 5, (226–228, 236, figs. i–vi).

(*Rheophax euneta* sp. n., Byron Bay, N.S.W., JENSEN, Sydney, N.S.W., Proc. Linn. Soc., 29, (821, pl. xxiii, figs. 5–7.)

*Rotalidae*; Illustrazione di specie orbignyanne istituite nel 1826, FORNASINI, Bologna, Mem. Acc. sc., (Ser. 6), 3, (61–70, 4 tav.).

†*Sigmoilina schlumbergeri* nom. nov., (267), *S. celata* (Costa) sens. str., (268, figs. 12–14), Miocene and Pliocene ("trubi"), Bonfornello; SILVESTRI, Roma, Mem. Acc. Nuovi Lincei, 22.

*Spirillina vivipara* var. *revertens* var. n., Laysan and Chatham Isles; RHUMBLER, Zool. Jahrb. Syst., 24, (32, figs. 8–10).

†*Spiroclypeus granulosus* sp. n., Priabona; BOUSSAC, Paris, Bull. Soc. géol. (4) 6, (96, pl. 2, figg. 15–18, pl. 3, fig. 19).

†*Spirolecta corrugata*, Miocene and Pliocene ("trubi"), Bonfornello; SILVESTRI, Roma, Mem. Acc. Nuovi Lincei, **22**, (242, fig. 2).

†*Textularia folium*, Tertiaries, Biarritz; LIEBUS, Wien, Jahrb. geol. Rch. Aust., **56**, (356, fig. 2).—*T. gibbosu* d'Orb., on the dimorphism of; also distribution, geogr. and geol.; SILVESTRI, Roma, Mem. Acc. Nuovi Lincei, **24**, (225–242, 9 figs.).

†*Tritaxia lepida*, Tertiaries, Biarritz; LIEBUS, Wien, Jahrb. Geol. Rch. Anst., **56**, (353, fig. 7).

*Tabinella* gen. n. (fam. *Rhabdamnidæ*), for *T. perforata* sp. n., Laysan; RHUMBLER, Zool. Jahrb., Syst., **24**, (25–27, fig. 5).

*Tubinellinae* subfam. n., RHUMBLER, Zool. Jahrb. Syst., **24**, (25).

†*Vagulinopsis inversa* (Costa), var. *Carinata* Silv., "trubi," Bonfornello; SILVESTRI, Roma, Mem. Acc. Nuovi Lincei, **22**, (251, fig. 5).

†*Vulvulina pennatula*, "trubi," Bonfornello; SILVESTRI, Roma, Mem. Acc. Nuovi Lincei, **22**, (244, fig. 1).

#### *Incertae sedis.*

(Probably allied to Foraminifera.)

†*Spongiosstromaceae* ord. n.

†*Spongiosstromidae* fam. n. (35).

†*Aphrostroma* gen. n., (36); *A. tencrum* sp. n., (36, pls. 1, 2, 3).

†*Chondrostroma* gen. n., 45; *C. problematicum* sp. n., (45, pl. 12, fig. 3); *C. globuliferum* sp. n. 46, pl. 12, figs. 1, 2); *C. intermixtum* sp. n., (47, pl. 13) *C. terniculiferum* sp. n. 48, pl. 14, fig. 1, 2, 3).

†*Malacostroma* gen. n. 48); *M. concentricum* sp. n. (49, pls. 15–17, 20, 23, fig. 7); *M. plumosum* sp. n. (50, pl. 18, fig. 1); *M. undulosum* sp. n. (51, pls. 18, fig. 2, 19).

†*Pycnostroma* gen. n. (38); *P. densius* (39, pls. 4, 5); *P. spongilliferum* sp. n. (40, pl. 6, fig. 2).

†*Spongiosstroma* gen. n. (40); *S. maeandrinum* sp. n. (41, pl. 6); *S. bacilliferum* sp. n. (42, pl. 7, pl. 10, fig. 1); *S. oruliferum* sp. n. (43, pls. 8, 9, 10, fig. 2); *S. granulosum* sp. n. (44, pl. 11); all from limestones ("Viséen"), Namur, Gürich, Bruxelles, Mém. Musée Belge., **3**, IV. (55, 23 pls.).

#### *Xenophyophora.*

Die Xenophyophoren der Siboga-Expedition; SCHULZE, Resultats des explorations zool., Botan., océan. géol. entreprises aux Indes Néerl. Or. 1899–1900, à bord du Siboga, publiés par Max Weber. Leiden, Livr., **31**, Monogr. 4 bis, 1906, (18, avec 3 pl.).

Xenophyophora der amerikanischen Albatros-Expedition 1904–05; SCHULZE, Berlin, SitzBer. Ges. natf. Freunde, **1906**, (205–229, mit 1 Karte).

*Psammetta globosa* sp. n.; SCHULZE, Rés. exp. Siboga, Livr. **31**, Monogr. 4 bis, (1–11, pl. 1 and pl. 2, figg. 1–10).

#### (e) *Heliozoa.*

*Acanthocystis klepica* sp. n.; HUITFELDT-KAAS, Plankton-Untersuchungen in norwegischen Seen. (Norw.), (IV + 199, mit 3 Taf. u. 9 Tab.), deutsches Rés. (147–197).—*A. pertiana*, test ("skeleton") and spines in, described; LORD, Manchester, Trans. Microsc. Soc., **1905**, (41–44, 1 pl.).

*Lithocolle apsteinii* sp. n.; HUITFELDT-KAAS, Plankton-Untersuchungen in norwegischen Seen, (Norw.), (iv + 199, 3 Taf. u. 9 Tab.), deutsches Rés. (147–197).

#### (d) *Radiolaria.*

Ueber die Mittel der Formbildung im Radiolarienkörper. (6. Mitt. über die Tripyleen der "Valdivia"-Ausbeute.)—HÄCKER, Verh. D. zool. Ges., Leipzig, **16**, (31–51).

Aeantharia, various, chemical nature of skeletal substance; BüTSCHLI, Zool. Anz., **30**, (781–789).

*Acanthochiasma bruhni* sp. n., Indian Ocean; POPOFSKY, Arch. Protistenkunde, **7**, (352).—*A. plana* var. *schotti*, Indian Ocean; POPOFSKY, Arch. Protistenkunde, **7**, (351, fig. 8).

*Acanthometudae*, Pacific Ocean, skeletal structure; MIELCK, Zool. Anz., **30**, (754–762, 3 fig.).—*A.*, systematic account; POPOFSKY, Arch. Protistenkunde, **7**, (345–394, 4 pls.).

*Acanthometron erinaceum* sp. n., Atlantic; POPOFSKY, Arch. Protistenkunde, **7**, (354, fig. 12).

*Acanthophracta*, from the Plankton-Expedition of the Humboldt-Stiftung, classification and systematic account;

POPOFSKY, Ergeb., 3, L. f. β, (160, 16 pls.).

*Arachnothauma* gen. n., (Monopylaria), near *Arachnocorys*) *A. mirabile* sp. n.; ZACHARIAS, Arch. Hydrobiol., 1, (566).

*Astracantha* gen. n. (Tripylaria), (888); *A. paradoxa* (890, fig. 12); *A. heteracantha* (891, fig. 13); *A. umbellifera* (891, fig. 14), spp. n., "Valdivia"-expedition; HÄCKER, Zool. Anz., 30.

*Astracanthidae* fam. n., "Valdivia"-material, diagnosed; HÄCKER, Zool. Anz., 30, (888).

*Atlanticella* gen. n. (Tripylaria), (125); *A. anacantha* (125, pl. 10 figs. 1-3); *A. craspedota* (126, pl. 10, figs. 4 and 5); *A. planktonica* (126, pl. 10, figs. 6-8), spp. n., Atlantic Ocean; BORGERT, Ergebn. Plankton-Exped. Humboldt Stiftung, 3, L. h. 3.—*A. bicornis* sp. n.; HÄCKER, Zool. Anz., 30, (894, fig. 16).

*Atlanticellidae*, fam. n., diagnosed; BORGERT, Ergebn. Plankton-Exped. Humboldt-Stiftung, 3, L. h. 3, (117).

*Auloceros paleaceus* sp. n.; ZACHARIAS, Arch. Hydrobiol., 1, (572).

*Aulospathis monodon* sp. n.; ZACHARIAS, Arch. Hydrobiol., 1, (550).

*Castanea amphora* sp. n., Atlantic; HÄCKER, Arch. Protistenkunde, 8, (65).

*Castanidium sol* sp. n. Atlantic; *C. moseleyi* subsp. n. *circoporoidea*; HÄCKER, Arch. Protistenkunde, 8, (64).

*Castanissa valdiviae* sp. n. Atlantic, HÄCKER, Arch. Protistenkunde, 8, (64).

*Castanura echinus* sp. n. Atlantic, HÄCKER, Arch. Protistenkunde, 8, (64).

*Challengeridae*; vierte Mitteilung über die Tripyleen-Ausbeute der deutschen Tiefsee-Expedition. HÄCKER, Arch. Protistenkunde, Jena, 7, 1906, (259-306, 1 Taf.).

*Challengeron häckeri* sp. n.; ZACHARIAS, Arch. Hydrobiol., 1, (572).—*C. sacculus* sp. n. "Valdivia" deep-sea expedition; HÄCKER, Arch. Protistenkunde, 7, (302, pl. xi, fig. 10).

*Challengerosium avicularia* sp. n., "Valdivia" deep-sea expedition; HÄCKER, Arch. Protistenkunde, 7, (300, pl. xi, fig. 8).

*Circocastanaca* gen. n., (Tripylaria), *margarita* sp. n., HÄCKER, Arch. Protistenkunde, 8, (59, fig. 8).

*Circoporcta* gen. n., (Tripylaria), HÄCKER, Verh. D. zool. Ges., 16, (36).

*Circostephanus valdiriae* sp. n., HÄCKER, Verh. D. zool. Ges., 16, (36).

*Coleaspis tridentifera* sp. n., Atlantic, POPOFSKY, Ergebn. Plankton-Exp., 3, L. f. β, (75, pl. 5, fig. 4).

*Cribrosphaera* gen. n., (Acantharia), for *C. polypora*, POPOFSKY, Ergebn. Plankton-Exp., 3, L. f. β., (63).

*Cruciforma* gen. n. for part of *Amphilonche*, (Acantharia), POPOFSKY, Arch. Protistenkunde, 7, (376).

*Cyctocladus* gen. n., (Peripylyaria), for *C. gracilis*, *C. major* spp. nn., German South Polar Expedition; SCHRODER, Zool. Anz., 30, (448-454, 9 figg.).—*C. gracillimus* sp. n., "Valdivia" material; HÄCKER, Zool. Anz., 30, (879, fig. 1).—*C. spinosus* sp. n., Japan; SCHRODER, Zool. Anz., 30, (587-590, 1 fig.).

*Diploconus nitidus* with var. *indicus*, Indian and Pacific Oceans, (123, pl. 15, figs. 1-3), *D. tridentatus*, Atl., Ind., Pac., (123, pl. 15, figs. 4, 5), spp. n., POPOFSKY, Ergebn. Plankton-Exp., 3, L. f. β.

*Diporaspis planctonica* sp. n., Atl., POPOFSKY, Ergebn. t.c. (50, pl. 2, fig. 7, pl. 3, fig. 1).

*Dorataspis loricata* varr. nn. *disparopora*, *delibitata*, POPOFSKY, t.c. (42, pl. 1, figs. 10-12).

*Globispinum* gen. n., (Acantharia), for *G. lanceolatum*, POPOFSKY, t.c. (56).

*Heliocochleageron* gen. n., (Tripylaria), for *H. (Challengeron) channeri*, HÄCKER, Arch. Protistenkunde, 7, (300, pl. xi, fig. 9).

*Hystrichaspis arbusta* sp. n., Atlantic, POPOFSKY, Ergebn. Plankton-Exp., 3, L. f. β., (68, pl. 6, fig. 5).

*Lepidella* gen. n., (inc. *seditis*), for *L. chuniana* sp. n., ZACHARIAS, Arch. Hydrobiol., 1.

*Medusellidae* from plankton, Atlantic and elsewhere, BORGERT, Ergebn. Plankton-Exped. Humboldt-Stiftung, Bd. 3, L. h. 4, (133-192, 4 pls.).

*Nationaletta valdiviae* sp. n., HÄCKER, Zool. Anz., 30, (892, fig. 15).

*Phyllostaurus quadrisfolius* var. n.  
*phyllacantha*, ZACHARIAS, Arch. Hydrobiol., 1, (512).

*Planktonetta decapus* sp. n., Atlantic Ocean; BORGERT, Ergebn. Plankton-Exped. Humboldt-Stiftung, 3, I., h. 4, (162, pl. 13, figs. 10-14).

*Porodiscus armatus* sp. n., ZACHARIAS, Arch. Hydrobiol., 1, (548).

*Protocystis acornis* (292, pl. xi, fig. 3); *P. bicornis* (293, pl. xi, fig. 4); *P. micropelecus* (298, pl. xi, fig. 5); *P. thyroma* (299, pl. xi, fig. 6); *P. tuba* (299, pl. xi, fig. 7), spp. n., "Valdivia" deep-sea expedition; HÄCKER, Arch. Protistenkunde, 7.

*Sagenarium anthophorum* sp. n., Antarctic, HÄCKER, Verh. D. zool. Ges., 16, (40).—*S. (?) norvegicum* sp. n. Nordatlantic; BROCK, Zool. Anz., 29, (657-659).

*Stauromidya leptacantha* sp. n., ZACHARIAS, Arch. Hydrobiol., 1, (566).

*Tesseraspis cribiforma* with var. *ambigua*, Atl., Pacif., (83, pl. 8, figs. 1, 2, pl. 9, fig. 2); *T. planctorica*, Atl., Ind., Pacif., (83, pl. 8, figs. 3, 4); *T. incognita*, Ind., (84, pl. 8, figs. 5, 6), spp. n.; POROFSKY, Ergebn. Plankton-Exp., 3, L. f. β.—*T. micropora* var. n. *sargassiana*, id., t.c. (83, pl. 7, fig. 9).

*Thalassothamnidae* fam. n., characterized, HÄCKER, Zool. Anz., 30, (885).

*Thalassothamnus* gen. n., (Peripylaria), (886); *T. tenerrimus* (879, fig. 2); *T. ramosus* (880, fig. 3); *T. genista* (881, figs. 4 and 9); *T. spermatochorus* (881, fig. 5), spp. n., "Valdivia"-Material, HÄCKER, Zool. Anz., 30.

*Tignisphaera* gen. n., (Acantharia), for *T. tubulata* and *T. tetragonopa*, POROFSKY, Ergebn. Plankton-Exp., 3, L. f. β., (104, pl. 16, fig. 1).

*Thoracaspis elegans* varr. nn.; *T. callosa*, (57, pl. 4, figs. 2-5); *T. imperfecta*, (57, pl. 4, figs. 7, 8); *T. perforata*, (58, pl. 4, fig. 6); *T. salebrosa* sp. n., (59, pl. 4, fig. 11); *T. latispicula* sp. n., (60, pl. 5, fig. 2), POROFSKY, Ergebn. Plankton-Exp., 3, L. f. β.

*Tuscaroridae*, in "Plankton-Expedition der Humboldt-Stiftung"; BORGERT, 3, L. h. 2, (95-112, 1 pl.).

*Zygacantha annulata* sp. n., Atlantic, POROFSKY, Arch. Protistenkunde, 7, 358, fig. 13).

## II. Protozoa. [1906]

### 3. SPOROZOA.

#### (a) Gregarinidea.

*Aggregata* [vide under Coccidia].

*Cystobia chiridotae* sp. n.; DOGIEL, Arch. Protistenkunde, Jena, 7, 1906, (106-130, 1 Taf.).

*Diplodina*, gen. n. (for *Cystobia irregularis*, life-cycle, *D. minchinii*, notes on, WOODCOCK, Q. J. Microsc. Sci., 50, (1-100, 6 pls.).

*Eleutheroschizizon* gen. n., for *E. duboscqi* sp. n., BRASIL, Arch. zool., 4, Notes et Rev., (xvii-xxii, with fig.).

*Gregarina cavalierina* sp. n., BLANCHARD, Paris, C.-R. ass. franç. avanc. sci., 33, (926-928), Bull., 1904, (269).—*G. socialis* sp. n., LÉGER, Arch. Protistenkunde, 7, (327, text-fig.).

*Monocystis coronatus* sp. n., from *Pheretima*, HESSE, Paris, Bull. ass. franç. avanc. sci., 1904, (268).—*Monocystis* spp., conjugation and reproduction; BRASIL, Arch. Zool., Paris, 4, 1905, (69-99, 2 pls.).

*Styloclyynchus gladiator* sp. n., BLANCHARD, Paris, Bull. ass. franç. avanc. sci., 1904, (269), C.-R., 33, (924-925.).

*Taenocystis mira*, structure and development, LÉGER, Arch. Protistenkunde, 7, (307-329, 2 Taf.).

#### (b) Coccidiidea.

*Adelea zonula* sp. n., from *Blaps*; MOROFF, Arch. Protistenkunde, 8, (17-51, 1 Taf.).

*Aggregata* (= *Eucoccidium*) *eberthi*, development in a crab (*Portunus*); LÉGER et DUBOSQ, Paris, C.-R. Soc. Biol., 60, (1001-1003).—*A. spinosa* sp. n., diagnosed, (74); *A. spp.*, varieties of nuclear division; MOROFF, Zool. Anz., 31, (72-78).

*Diplospora fragilis* sp. n., from *Vipera aspis*, LÉGER, Paris, Bull. Ass. franç. avanc. sci., 1904, (268).

*Eucoccidium* (syn. "Benedenia," *Klossia*), genetically connected with *Aggregata*; *E. jacquemeti* sp. n., MOROFF, Paris, C.-R. Acad. Sci., 142, (652-654).—*E. eberthi* and *E. jacquemeti* of Cephalopods, development in crabs (*Iuachus*, *Portunus*, etc.) in an *Aggregata*-form; LÉGER et DUBOSQ, Paris, C.-R. Acad. sci., 142, (1225-1227).

*Hyalosphaera* gen. n., for *H. gregari-nicola* sp. n.; DOCHET, Arch. Protisten-kunde, 7, (123-128, pl. iii, figs. 20-29).

*Karyospora* gen. n. for *K. simplex* sp. n., from *Vipera aspis*, noted only, LÉGER, Paris, Bull. Ass. franç. avanc. sci., 1904, (268).

*Nematospisia schneideri* sp. n., from *Mytilus*, LÉGER, Paris, Bull. ass. franç. sci., 1905, (331).

*Orcheobius* gen. n. for *O. herpobdellae* sp. n. from *Nephelis* (*Herpobdella*); SCHUBERG und KUNZE, Verh. D. zool. Ges., 16, (233-250).

### (c) Haemosporidia.

On Haematozoa [spec. indet.] in a bat; BOWHILL, J. Hygiene, 6, (246-247, pl. iii).

On Haematozoa of bats; SCHINGAREFF, St. Peterb., Arch. Sci. biol., 12, (181-189, 1 pl.).

On the Haematozoan of *Testudo ibera*; POPOVICI-BAZNOSANU, Paris, C.-R. soc. biol., 60, (173-174).

Blood parasites of the mole; THOMSON, J. Hygiene, 6, (574-579, pl. 10).

"Achromaticus" *resperuginis* (Dionisi), GÖNDLER, Berlin, Arb. Gesundheitsamt, 24, (220-226, 1 Taf.).

*Halteridium crumenum* sp. n., from an African stork; HIRST, London, Proc. Zool. Soc., 1905, ii, (297).

"*Haemamoeba*" *neavei* [sic!] sp. n., recalling "*H.*" (*Leucocytozoon*) *zie-manni*; NEAVE, Khartoum, Rep., Wellcome Research Lab., 2, (200, pl. 20).

*Haemogregarina balfouri* (Laveran), BALFOUR, Khartoum, Rep. Wellcome Res. Lab., 2, (97-110, figs. 57-60, pl. xi-xiii), and J. Trop. Medicine, 9, (81-92, 2 pls.). — *H. borreli* sp. n., from *Varanus*, NICOLLE et COMTE, Paris, C.-R. soc. biol., 61, (310-312, with fig.). — *H. callionymi* (380, text-fig. 3); *H. quadrigemina* (381, text-fig. 3, A-H); LEBAILLY, Arch. Parasit., 10. — *H. (flesi + platessa)*, notes on structure; ROBERTSON, M., Edinburgh, Proc. R. Physic. Soc., 16, (242, pl. 9). — *H. lignièresi* sp. n., from *Anguilla*; LAVERAN, Paris, C.-R. Soc. biol., 60, (457-458). — *H. mabuiae* sp. n., from a lizard (*Mabuia*), NICOLLE et COMTE, Paris, C.-R. soc. biol., 61, (294-295, with fig.).

*Haemoproteus* (*Halteridium*) *columbae*, Kruse; a Hippoboscid (*Lynchia*) as alternate host; SERGENT et SERGENT, Paris, C.-R. soc. biol., 61, (494-496). — *H. macallumi*, *H. rouxi*, *H. sacharovi* spp. nn.; NOVY and MACNEAL, New York, Proc. Soc. Exp. Biol. Med., 2, 1905, (23-28).

*Leishmania* ("*Piroplasma*") *donovani*, the "*Hepatomonas*" of Kala-Azar, development of Flagellate phases; ROGERS, Loudon, Proc. R. Soc., 77, B, (284-293, pl. vii).

On a Protozoan parasite from a dog (= *Leucocytozoon canis*); WENYON, J. Hygiene, 6, (231-236, pl. 2).

*Leucocytozoon funambuli* sp. n., from palm-squirrels; PATTON, Sci. Mem. India, 24, (13, 1 pl.). — *L. muris* sp. n., from the rat; BALFOUR, Khartoum, Rep. Wellcome Res. Lab., 2, (110-111, pl. xi). — *L. ratti* sp. n. (prov.), from *M. rattus*; ADIE, Journ. trop. Medicine, 9, (325-329, text-figs.). — *L. sp.* (perhaps *ratti*) from *Mus decumanus*; CLELAÑD, Journ. Trop. Medicine, 9, (296-297).

Malarial parasites; differentiation of the various ring-forms; BILLET, Paris, C.-R. Soc. biol., 61, (754-756). — Malarial parasites, specific unity of; TUNOTX, Paris, C.-R. Acad. sci., 143, (615-617), also Ann. Inst. Pasteur, 20, (766-778, 869-873).

*Piroplasma bigeminum*, also *P.* of East African Coast fever, developmental phases in ticks; KOCH, Zs. Hyg., Leipzig, 54, (1-9, 3 Taf.). — *P. canis*, observations on morphology and life-history; NUTTALL and GRAHAM-SMITH, J. Hygiene, 6, (586-651, pl. 11-13, 23 text-figs.). — *P. c.* attempts at cultivation; KLEINE, Zs. Hyg., Leipzig, 54, (10-16, 2 Taf.). — *P. muris* sp. n.; FANTHAM, Q. J. Microsc. Sci., 50, (493-516, 1 pl.). — *P. (Babesia)*, spp., minute structure and relation to blood-corpuscles; LÜHE, Zool. Anz., 30, (45-52). — *P.* (sp. incert.) in cattle in Japan; MIYAJIMA und SHIBAYAMA, Zs. Hyg., 54, (189-200, 1 Taf.).

Protozoa in "bouton du Nil," probably the same as *Piroplasma* [*Leishmania*] *tropica*, of Delhi boil; BILLET, Paris, C.-R. Soc. Biol., 60, (1149-1151).

*Plasmodium malariae*, parasite of quartan fever, haemogregariniform phase; BILLET, Paris, C.-R. Soc. Biol., 60, (1146-1148, text-figs.). — *P. m.* technique;

RÜGE, Jena, 1906, (ix + 420, 5 Taf.).—*P. praecox*, *P. vivax* u. *P. malariae*; PEZOPOULO und CARDAMATI, Centralbl. Bakter., Abt. I, 40, Originale, (344-350, 2 Taf., 480-495, 2 Taf.).—*P. quartanae*, studio morfologico e biologico; LEVI DELLA VIDA, Roma, Atti Soc. studi malariae, 7, (137-148, 1 tav.).—*P. vaughani* sp. n.; NOVY and MACNEAL, New York, N.Y., Proc. Soc. Exp. Biol. Med., 2, (23-28).

#### (d) Myxosporidia.

Sur la structure de la paroi sporale des Myxosporidies; LÉGER et HESSE, Paris, C.-R. Acad. sci., 142, (720-722, figg.).

Microsporidies parasites des crabes d'Arcachon; PÉREZ, Arcachon, Trav. Soc. sci. station zool., 8, (15-36, figg.).

Sur quelques Microsporidies parasites des Crustacés; PÉREZ, Paris, Bull. ass. franç. avanc. sci., 1905, (329-330).

*Branchiophaga alosicida*, Mazzar. Rapporti col *Blastulidium*; MAZZARELLI, Rivista mensile di Pesca, 8, (209-214, 7 fig.).

*Chloromyxum cristatum* sp. n., from *Tinca*; LÉGER, Paris, C.-R. Acad. sci., 142, (1097-1098).—*C. truttae* sp. n.; LÉGER, Paris, C.-R. Acad. sci., 142, (655-656).

*Henneguya acerinae* sp. n., aus den Kiemen von *Acerina cernua*; SCHRÖDER, Arch. Protistenkunde, 7, (186-196, 1 Taf.).—*H. legeri* sp. n., from *Cobitis*; CÉRÈDE, Paris, C.-R. Ass. franç. avanc. sci., 33, (911).

(*Myxidium barbatulae* sp. n., from *Cobitis*, kidney and bladder; CÉRÈDE, Paris, C.-R. Ass. franç. avanc. sci., 33, (912).)—*M. giardi* sp. n., from *Anguilla vulgaris*; CÉRÈDE, Paris, C.-R. Soc. Biol., 60, (15-16 and 170-173, 4 figg.).—*M. rhodei* sp. n.; LÉGER, Paris, Bull. Ass. franç. avanc. sci., 1905, (330).

*Myxobolus aeglefini* sp. n., from *Gadus aeglefinus*, spores described; AUERBACH, Zool. Anz., 30, (568-570).—*M. pfeifferi*, producente la psorospermosi o mixoboliasi tuberosa dei barbi; STAZZI, Rivista mensile di Pesca, 8, (14-19, 3 fig.).—*M. pfeifferi*, sexual phenomena and development of spores; MERCIER, Paris, C.-R. Soc. Biol., 60, (427-428 and 763-764).

(*Myxocystis mrazekii* sp. n.; HESSE, Paris, C.-R. ass. franç. avanc. sci., 33, (914-916), Bull., 1904, (268).)

(*Nosema longifilum* sp. n.; HESSE, Paris, C.-R. ass. franç. avanc. sci., 33, (917-919), Bull., 1904, (268).)—*N.*, liability of mistaking yeast-bodies and other cell-parasites in *Blatta* for spores of; MERCIER, Paris, C.-R. Soc. Biol., 60, (1081-1083).

*Pleistophora macrospora* sp. n., from body-wall of *Cobitis*, sporoblasts and spores; CÉRÈDE, Paris, C.-R. Acad. sci., 142, (56-58), and C.-R. Soc. Biol., 60, (13-15).—*P. periplanetae*, structure and life-history; PERRIN, Q. J. Microsc. Sci., London, 49, 1906, (615-633, 2 pls.).—*P. vermiciformis*, sp. n.; LÉGER, Paris, Bull. ass. franç. avanc. sci., 1905, (330).

(*Thelohania cepedei* sp. n.; HESSE, Paris, C.-R. ass. franç. avanc. sci., 33, (919), Bull., 1904, (268).)—*T.* sp., from *Talitrus* (Amphipod); MERCIER, Paris, C.-R. soc. biol., 61, (90-91).

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Chicago, J. inf. diseases, **3**, (394-411, 3 pl.).—*T. inopinatum*, mode of transmission and behaviour in *Helobdella*; BRUMPT, Paris, C.-R. soc. biol., **61**, (167-169).—*T. namum*, notes on; BALFOUR, Khartoum, Rep. Wellcome Res. Lab., **2**, (113-173, pl.), and J. Trop. Medicine, **9**, (81-92, 2 pls.).—*T. pestanai*, from *Meles taxus*, described; BETTENCOURT and FRANÇA, Archives Inst. Roy. Bacter., **1**, (73-75, pl. 3, figs. 1 and 2).—*T. platessae*, (354, pl. 7, fig. 10), *T. flesi*, (355, fig. 7), *T. limanda*, (356, fig. 11), *T. laternae*, (357, fig. 6), *T. bothi*, (358, fig. 8), *T. callionymi*, (358, fig. 5), *T. cotti*, (360, fig. 4), *T. gobii*, (361, fig. 9), *T. delagei*, (362, fig. 12), *T. granulosum* var. *magna* var. n., (364, fig. 1), var. *parva* var. n., (366, fig. 2), described; LEBAILLY, Arch. Parasit., **10**.—*T. pleuronectidium* sp. n. (but antedated by Lebailly's names *T. flesi* and *T. platessae*, 1904), proposed; ROBERTSON, Glasgow, Proc. Phil. Soc., **37**, (77, pl. 1, figs. 4 and 5).—*T. pythonis* sp. n., [apparently really a Haemogregarine]; ROBERTSON, Glasgow, Proc. Phil. Soc. **37**, (74, pl. 1, figs. 1-3), also Edinburgh, Proc. R. Physic. Soc., **16**, (237, 3 figs.).—*T. rotatorium*, morphology and artificial cultivation; BOUET, Paris, Ann. Inst. Pasteur, **20**, (564-577, pl. 26).—*T. r.*, phenomena of division; FRANÇA and ATHIAS, Paris, C.-R. soc. biol., **60**, (1108-1109).—*T. somalense* sp. n., from *Bufo re'iculatus*; BRUMPT, Paris, C.-R. soc. biol., **60**, (164).—*T. suis* sp. n., from swine; OCHMANN, Berliner tierärztl. Wochenschr., **1905**, (337-338).—*T. theileri*, observed in oxen in Transcaucasia, morphology and developmental forms; LUHS, Arch. Parasit., **10**, (171-186, 2 pls.).—*T. t.*, observed in an antelope, DUTTON, TODD, and TOBEY, Liverpool, Mem. Sch. Trop. Med., **20**, (95, pl. 9).—*T. vespertilionis*, BATTAGLIA, Roma, Ricerche. Lab. anat. norm., **12**, 1906, (5-51, 2 tav.).—*T. v.*, Battaglia, description and synonymy; BETTENCOURT and FRANÇA, Archives Inst. Roy. Bacter., **1**, (187-194, pl. 3, fig. 3).

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*Hermesinum* gen. n., (*Dictyochida*), *H. adriaticum* sp. n., Mittelmeer; ZACHARIAS, Arch. Hydrobiol., **1**, (394-398, and 514).

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#### (d) Rhynchoflagellata.

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*Balantidium gigantenum* sp. n. [name preoc. Bezzemberger, 1903]; KRAUSE, D. Arch. klin. Med., 86, (442-455).

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*Cryptochilidium*, gen. n.? for *Cryptochilum cuenoti*; SCHOUTEDEN, Ann. Biol. lacustre, 1, (440).

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*Nematopoda cylindrica* cf. *Tintinnoidium*.

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*Opalina*, orientation of body; KUNSTLER & GINESTE, Paris, C.-R. soc. biol., **61**, (136).

(*Ocularia henneguyi* (183, fig. 1), *O. gracilis* (187, fig. 2), *O. fabrei* (188, fig. 3), *O. microdiscum* (190, fig. 4), spp. n.; FAURE, Arch. Anat. microsc., **7**.)

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*Ptychoecylis calyx* sp. n. Atlantic; id. T.c. (8, pl.).

*Rhabdonella* subgen. n. (*Ptychoecylis*); id. T.c. (8).

*Stentor coerulescens*, and *S. roeselii*; SCHROEDER, Arch. Protistenkunde, **8**, (1-16, 1 Taf.).

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*Tintinnidium incertum* sp. n. Toeatins-Mündung; BRANDT, Tintinnod. Plankton-Exp., (10, pl.).

*Tintinnoidium inquinatum* (= *Nematopoda cylindrica*, Sand); FAURE-FREMIET, Paris, C.-R. soc. biol., **61**, (395-397).

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#### (b) Acinetaria.

*Dendrosomides* gen. n., *D. paguri* sp. n., ectoparasitic on *Lupagurus*; COLLIN, Arch. zool., N. et R. **5**, (lxiv-lxvi, with fig.).

# III. PORIFERA OR SPONGIDA

ARRANGED BY

I. B. J. SOLLAS

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*Dendoryx inaequalis* Papeete, *simplex* Cape Town, spp. n., BAER, Arch. Natg., **72**, (21).

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*Ephydatia plumosa* Carter var. *brouni* var. n., White Nile, KIRKPATRICK, London, Proc. Zool. Soc., **1906**, (226).

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*Hesperiopsis canaliculata, ferruginea*, spp. n., N. S. Wales, WHITELEGE, T.c., (471-472, pl. 43).

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*Lotrochota arbuscula* sp. n., N. S. Wales, WHITELEGGE, Sydney, N.S.W., Mem. Austr. Mus., **4**, (482, pl. 44, fig. 18).

*Leptosia lanceifera* sp. n., Mer Rouge, TOPSEN, Bul. Muséum, Paris, **1906**, (560).

*Lissoidendryx monticularis* sp. n., Sansibar, BAER, Arch. Natg., **72**, (22).

*Mycale imperfecta* sp. n., Zanzibar, BAER, T.c. (20).

*Myxilla hastatispiculata, iophonoides* spp. n., Weisses Meer, SVARÖEVSKIJ, Kiev, Zap. Obšč. jest., **20**, (338, 360).

*Pachychalina alveolopora* sp. n., Mer Rouge, TOPSENT, Bul. Muséum, Paris, **1906**, (559).

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*Phellderma polypoides* sp. n., N. S. Wales, WHITELEGGE, Sydney, N.S.W., Mem. Austr. Mus., **4**, (474, pl. 44, fig. 12).

*Reniera decidua* sp. n., Mer Rouge, TOPSENT, Bul. Muséum, Paris, **1906**, (560).—*R. mollis* sp. n., Zanzibar, BAER,

Arch. Natg., **72**, (14).—*R. merojkowskii, pulchra, papillifera, hirsuta, firma, bullifera* spp. n., Weisses Meer, SVARÖEVSKIJ, Kiev, Zap. Obšč. jest., **20**, (328, 358).

*Raphisia ramosa* sp. n., N. S. Wales, WHITELEGGE, Sydney, N. S. W., Mem. Austr. Mus., **4**, (463, pl. 43, fig. 4).

*Spongilla cunningtoni* L. Tanganyika (221), *rousseletii* Žambesi (223), *S. (?) zambesiana* Žambesi (225) spp. n., *S. carteri* Bwk, *moorei* Evans, *tanganjikae* Evans, described and figured; KIRKPATRICK, London, Proc. Zool. Soc., **1906**, (218-227).—*S. lacustris* var. *n. bengalensis* described, ANNANDALE, Calcutta, J. As. Soc. Beng., **2**, (56-57).

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### (iii.) KERATOSA.

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# IV. COELENTERATA

ARRANGED BY

H. M. WOODCOCK, D.Sc. (LOND.) AND A. D. IMMS

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*N.B.—Titles in round brackets refer to memoirs that have been previously recorded in the Zoological Record, those in square brackets refer to memoirs recorded in antecedent volumes of the Int. Cat. Sci. Lit.*

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Contribution to Indiana paleontology, (Zoantharia); **Greene.**

Die paläozoischen Gebilde Podoliens; **Siemiradzki.**

Palaeozoic, South Africa, *Zaphrentis zebra*, n. sp.; **Schwarz.**

Carboniferous, Avon gorge (Avonian), various corals; **Vaughan, A.**

Carboniferous, Mendip area, *Campophyllum* sp. n., *Carcinophyllum* sp. n.; **Sibly.**

Carboniferous, North Shropshire, Denbighshire and Flintshire, various corals, **Hind and Stobbs.**

Carboniferous, (marine), Hungary, Anthozoa; **Frech.**

Devonian, Western New York, Coelenterates; **Slocum.**

Upper Silurian, New South Wales, *Rhizophyllum* sp. n.; **Shearsby.**

Silurian, Ingleborough, Graptolites; **Hughes.**

Silurian, (Tarannon series), lists of Graptolites and comparisons with other areas; **Wood, 2.**

Middle Silurian, Norway, account of the *Heliolitidae*; **Kiær.**

Silurian, Beechy Island, Lancaster Sound, *Boreaster lowi* n. g. n. sp., Cape Chidley, Hudson Strait, *Labyrinthites chidleyensis* n. g. n. sp.; **Lambe.**

Silurian, island of Anticosti (Gulf St. Lawrence), Anthozoa; **Schmitt.**

Silurian and Ordovician, Victoria Graptolites; **Hall.**

Ordovician and Silurian, British forms of *Climacograptus*; **Elles and Wood.**

Ordovician and Silurian, Bolivia, Graptolites; **Wood, 1.**

Ordovician, Western Caermarthenshire, Corals and Graptolites; **Evans.**

Ordovician, (Zones of Scanian and Vestrogothic *Phyllo-Tetragraptus* beds), Flagabro and Mossebo, Graptolites; **Törnquist.**

Mid-Cambrian, Shantung, China, *Lophophyllum frechii*, n. sp.; **Lorenz.**

Cambrian, China, *Coscinocyathus* n. sp.; **Walcott.**

### III.—SYSTEMATIC. 0831

#### *HYDROZOOA* (= *HYDROMEDUSAE*).

*Aglaoephenia*, sexual dimorphism, **TORREY** and **MARTIN**, Berkeley, Univ. Cal. Pub., Zool., 3, (47-52, with figg.).

*Antennularia ramosa* var. n. *plumularioides*, **BILLARD**, Bul. Muséum, 12, (333).

*Campanularia hineksii* var. n. *grandis*, **BILLARD**, Bul. Muséum, Paris, 12, (330).—*C. pelagica*, Nordsee, **BREEMEN**, Helder, Verh. Onderz. Zee, 1, (1-8, 1 Taf.).

*Corymorpha palma*, environmental effects, **TORREY**, J. Exp. Zool., 1, (395-422).

*Cunina proboscidea*, Entwicklung **STSCHELKANOWZEW**, Mitt. zool. Stat. Neapel, 17, (433-486, 2 Taf.).

*Cunoctantha foucieri*, Bay of Biscay, **BROWNE**, (177-178, pl. xiii figs. 1 and 2), London, Trans. Linn. Soc., 10.

*Eudendrium ramosum* and *hargitti*, notes on morphology and development, **CONGDON**, Biol. Bull., 11, (27-46).

*Halocordyle cooperi*, sp. n., Natal Coast, **WARREN**, Ann. Nat. Govt. Mus., 1, 1906, (73, pl. ix).

*Homoeonema platygonon*, variation, **BROWNE**, (174-175), London, Trans. Linn. Soc., 10.—*H. racovitzae* sp. n., Antarctic, **MAAS**, (10-11, pl. i, figs. 3, 4, pl. ii, fig. 13); Rés. voy. Belgica, 1906.

*Hydra*; allgemein, **ENTZ**, Termt. Közl., 38, (649-669, mit 13 Fig.); *H.*, Beobachtungen über das Leben, **OELZELT-NEWIN**, Zs. Psychol., Leipzig, Abt., 1, 41, (377-381).—*H. fusca*, **SCHULTZ**, Hungererscheinungen, Arch. Entw. Mech.,

21, (703–726, mit 1 Taf.); *H. f.*, Knospung u. Geschlechtsentwicklung, HERTWIG, Biol. Centralbl., 26, (480–508).—Auch in: Festschr. für J. Rosenthal, Tl 1. Leipzig, 1906, (11–32).

[*Hydractinia clavata* sp. n., JÄDERHOLM, Wiss. Ergebn. Schwed. SüdPol.-Expedn., 1901–1903, Stockholm, 5, viii, (5, pl. iii, figs. 6–8).]

*Isonema* nom. nov. for *Homoconema* Vauh. (4–5); *amplum*, (5–9, pl. i, figs. 1, 2, and 7, pl. ii, figs. 8–12, pl. iii, figs. 14–20); MAAS, Res. voy. Belgica, 1906.

*Limnocida tanganicæ*, reproduction, taxonomy, BROWNE, Ann. Mag. Nat. Hist., (Ser. 7), 17, (305, 306).—*L. t.*, asexual reproduction; GÜNTHER, (179), London, Proc. Zool. Soc., 1906.—*L. t.*, POTTS, Q. J. Microsc. Sci., 50, (623, pl. xxxv, fig. 12, after Moore).

*Limnocodium* compared with *Microhydræ*, BROWNE, Q. J. Microsc. Sci., 50, (638).—*L. sowerbiæ*, medusa and hydroid, POTTS, (623, pl. xxxv, figs. 1–11), after various authors, Q. J. Microsc. Sci., 50.

*Mierohydra ryderi*, general structure, (636); compared with *Limnocodium*, (638); reproduction, (641); BROWNE, Q. J. Microsc. Sci., 50, pl. xxxvii.—*M. r.*, medusa, POTTS, Q. J. Microsc. Sci., 50, (623, pl. xxxvi).

*Milleporella* gen. n. for *sardoa* sp. n. (or *ichnusae*?—vide fig. explan.) “Senonian,” Sardinia, DENINGER, N. Jahrb. Min., 1906, 7, (67, pl. vii, fig. 8).

*Muggiaeæ atlantica*, migrations and distribution in British coasts; GOUGH, Cons. Permanent Internat. Explor. de la mer. Publ. de Circonference, No. 29, (13).

*Perigonimus sulfureus* Chun, as a pelagic Hydroid colony, STECCHI, Zool. Anz., 31, (31–32).

*Plumularia attenuata* var. nov. *media*, *P. bonnevie* nom. nov. (pro. *P. rubra* Bonnevie, preocc.), BILLARD, Bul. Muséum, Paris, 12, (332).

*Polyorchis penicillata*, galvanotropic reactions, BANOROFF, Berkeley, Univ. Cal. Pub., Physiol., 2, (43–46), and J. Exp. Zool., Baltimore, Md., 1, (73–94).

(*Rhegmatodes tenuis*, notes on variations in, HARGITT, Biol. Bull., 9, (368–377).)

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*Schizocladium ramosum*, asexual reproduction; medusæ belong to *Obelia*, BROWNE, Q. J. Microsc. Sci., 50, (645).

[*Sertularia bifurcata* sp. n., (28, pl. xi, figs. 1–3).—*S. cumberlandica*, (27, pl. x, figs. 8–11), spp. n., Antarctic; JÄDERHOLM, Wiss. Ergebn. Schwed. SüdPol.-Expedn., 1901–1903, 5, viii.]—*S. gayi* var. n. *elongata*, BILLARD, Bul. Muséum, Paris, 12, (331).

*Siphonophora*, account of, VANJÖFFEN, Nordisches Plankton, Lfg 5, 1906, (xi–xii 39).

*Solmaris insculpta* sp. n. Hawaiian Is., MAYER, Washington, D.C., Bull. U.S. Fish. Com., 23, (1140, pl. iii, figs. 8, 9).

*Solmundella mediterranea*, MAAS, (12–13, Taf. i, fig. 5, taf. iii, figs. 23, 24), Res. voy. Belgica, 1906.

*Tiarella* gen. n., (*Tiaridae*) *parthenope* sp. n. Golfo di Napoli, TRINCI, Mon. zool. Ital., 17, (208–213).

*Trichorhiza* gen. n. (*Pennariidae*) for *T. brunnea* sp. n. Firth of Clyde; hydroid, medusoid, RUSSELL, London, Proc. Zool. Soc., 1906, (99, pl. v).

*Tubularia*, regeneration and polarity, MORGAN, J. Exp. Zool., 1, (587–591), also MORGAN and STEVENS, J. Exp. Zool., 1, (559–585).—*T. solitaria* sp. n. Natal coast, WARREN, Natal Govt. Mus. Ann., 1, (83–96, pls. x, xi).—*T. crocea*, reactions, PEARSE, Cambridge, Mass., Cont. Mus. Comp. Zool., Harvard Coll., No. 178 in Amer. Nat., Boston, Mass., 40, (401–407, with text fig.).

†*STROMATOPORIDÆ*. (Allied to Hydrozoa.)

†*Actinostroma astroites*, SIEMIRADZKI, Wien, Beitr. Pal. Geol. OestUng., 19.

†*Labechia conferta* E. H., SIEMIRADZKI, T.c.

†*Stromatopora tornquisti* sp. n. Bathonian, Sardinia, DENINGER, N. Jahrb. Min., 1906, i, (66, pl. vii, fig. 7).—*S. typica* v. Rosen, SIEMIRADZKI, Wien, Beitr. Pal. Geol. OestUng., 19.

*Stromatorhiza* gen. n. *granulosa* sp. n. Swiss Jura, BAKALOW, N. Jahrb. Min., 1906, i, (13–15, 1 Taf.).

†*GRAPTOLITHIDA.*

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†*Anthograptus* gen. n. for *A. nidus* sp. n. Scanian and Vestrogothian beds, TÖRNQUIST, Lund, Univ. Arsskr., 40, No. 2, (22, pl. iv, figs. 4, 5).

†*Bryograptus simplex* sp. n. Scanian and Vestrogothian beds, TÖRNQUIST, Lund, T.C. (3, pl. i, figs. 1–4).

†*Climacograptus*, monograph of British forms; ELLES and WOOD, (181–216, pls. xxvi and xxvii), London, Monogr. Palaeont. Soc., 1906.—*C. baragwanathi* sp. n. Ordovician Victoria, HALL, Rec. Geol. Surv., Victoria, 1, (277, fig. 6).—*C. mensoris* sp. n. Ordovician Victoria, HALL, T.C. (274, fig. 5).—*C. sp. n.* (?). "Grès Vosgien" (galets), NOËL, Nancy, Bul. Soc. Sci., Ser. 3, 6, (54, pl. ii, fig. 1).

†*Clonograptus subtilis* sp. n. Scanian and Vestrogothian, TÖRNQUIST, Lund, Univ. Arsskr., 40, No. 2, (20, pl. ii, figs. 20, 21).

†*Dichograptus regularis* sp. n. Scanian and Vestrogothian, TÖRNQUIST, T.C. (20, pl. ii, fig. 19).

†*Dicranograptus ramosus* var. *semi-spinifer* var. nov. Ordovician, Victoria, HALL, Rec. Geol. Surv., Victoria, 1, (275, fig. 4).

†*Didymograptus patulus* Hall, *D. constrictus* Hall, synonymy, TÖRNQUIST, Lund, Univ. Arsskr., 40, No. 2, (509–512).

†*Diplograptus ingens* sp. n. Ordovician, Victoria, HALL, Rec. Geol. Surv. Victoria, 1, (276, fig. 7).—*D. sinuatus*, (56, pl. i, fig. 6), "Grès Vosgien" (galets), NOËL, Nancy, Bul. Soc. sci., ser. 3, 6.

†*Isograptus gibberulus* Nich., synonymy, TÖRNQUIST, Stockholm, Geol. För. Förh., 1906, (507).

†*Monograptus jaculum* (60, pl. i, fig. 1), *mirus* (61, pl. i, fig. 7), *lobiferus* (62, pl. i, fig. 2), *clingani* (64, pl. i, fig. 4), *vomerinus* (65, pl. i, fig. 3), "Grès Vosgien," (galets), NOËL, Nancy, Bul. Soc. sci., ser. 3, 6.

*Rastrites linnæi* . . . SIEMIRADSKI, Wien, Beitr. Pal. Geol. OestUng., 19.

†*Reticulites* cf. *obesus* "Grès Vosgien," (galets), NOËL, Nancy, Bul. Soc. sci., ser. 3, 6, (66, pl. ii, fig. 2).

†*Schizograptus rotans* (24, pl. iv, figs. 1–3), *ambiguus* (25, pl. iii, fig. 8), spp. n. Scanian and Vestrogothian, TÖRNQUIST, Lund, Univ. Arsskr., 40, No. 2.

†*Tetragraptus pendens*, var. *praesagus* var. n. (5, pl. i, figs. 8–10), *T. vestrogothicus* sp. n. (7, pl. i, figs. 13, 14), TÖRNQUIST, T.C.

## SCYPHOZOA (=SCYPHIOMEDUSAE).

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*Charybdea moseri* sp. n., Hawaiian Is., MAYER, Washington, D.C., Bull. U. S. Fish. Com., 23, (1135–36, pl. i, figs. 2–2c).

†*Paraphyllites* gen. n., *distinctus* sp. n., lithographischen Schiefer, MAAS, N. Jahr. Min., 1906, II, (90–99).

*Pelagia perla*, notes on rearing, DELAP, Fisheries, Ireland, Sci. Invest., 1905, v (25, pls. i and ii).

*Phialidium iridescent*, sp. n. Antarctic, MAAS, (13, Taf. i, fig. 6), Res. voy. Belgica, 1906.

*Rhizostoma pulmo*, regeneration, HARGITT, J. Exp. Zool., Baltimore, Md., 1, (73–94).

*Stomophorus chunii*, Golfo di Paria, Sudamerica, TRINCI, Napoli, Annuario Museo Zoolog., N. S., 2, 1906, (1–4).

## ANTHOZOA.

## ALCYONARIA.

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Anthozoa, of the Salem limestone, BEDE, Indiana, Rep. Dept. Geol. Nat. Res., **30**, (1201–1218, with pl.).

Aleyonacea, KÜKENTHAL, Wissenschaftliche Ergebnisse d. D. Tiefsee-Expedition, **13**, Lfg 1, (1–111, 12 Taf.), also, Verh. D. Zool. Ges., **16**, (138–149).

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*Acamplogorgia gracilis* Ceylon, (177, figs. 12 and 13), *A. rubra* Ceylon, (178, figs. 5–8), **spp. n.**, THOMSON, London, R. Soc. Rep. Pearl Oyster, 4.

*Aleyonium brionense* **sp. n.** Mittelmeer, KÜKENTHAL, Jenaische Zs. Natw., **42**, (61–72, 1 Taf.).—*A. digitatum*, maturation and fertilization, HILL, (493–505), Q. J. Microsc. Sci., London, **49**; *A. d.*, histology, spicule formation and structure, WOODLAND, Q. J. Microsc. Sci., London, **49**, (283–304, pls. xvi and xvii).—*A. gracillimum* **sp. n.** Japan, KÜKENTHAL, Zool. Anz., **30**, (284), also in Beiträge Naturgesch. Ostasiens, **1906**, (34, pl. ii, fig. 13).—*A. pachyclados* Klunzinger, THOMSON and HENDERSON, (416), London, Proc. Zool. Soc., **1906**.—*A. purpureum* **sp. n.** Cape of Good Hope, HICKSON, (215–217, pl. v, fig. 1, and pl. ix, fig. 18), Cape Town, Marin. Invest., **3**.—*A. valdiviae* Agulhasbank (42, pl. iii, fig. 11, pl. viii, fig. 39), *novarae* Kap (48, 1 pl.), *contortum* (50, pl. vii, figs. 34–36, pl. viii, figs. 37–38), *membranaceum* (52, pl. i, fig. 3, pl. ix, figs. 42–44), Francis-Bay, *reptans* Antarctic (53, pl. ii, fig. 9, pl. ix, figs. 45–49), **spp. n.**, KÜKENTHAL, Wiss. Ergebn. D. Tiefsee-Exp., **13**, i.

*Anthelia japonica* **sp. n.** Japan, KÜKENTHAL, Zool. Anz., **30**, (281), and in Beiträge Naturgesch. Ostasiens, **1906**, (13, pl. v, fig. 28).

*Anthomastus elegans* Agulhasbank (64, pl. ii, figs. 6 and 7, pl. xi, figs. 63–66).—*A. antarcticus* **sp. n.**, (62, pl. ii, fig. 8, pl. xi, figs. 57–62), KÜKENTHAL, Wiss. Ergebn. D. Tiefsee-Exp., **13**, i.—*A. grandiflorus* Verill, HICKSON, Cape Town, Marin. Invest., **3**, (219, pl. vii, fig. 2).

*Anthoptilum grandiflorum* Verill, HICKSON, T.c., (233–235, pl. viii, fig. 14).

*Bathyalecyon* **gen. n.**, *robustum* **sp. n.** Ceram-See, VERSLUYS, Zool. Anz., **30**, (549–553).

*Bebryce indica* **sp. n.** Ceylon; spicules, THOMSON, London, R. Soc. Rep. Pearl Oyster, **4**, (175, fig. 3).

*tBoreaster* **gen. n.** allied to *Favosites*, *loui* **sp. n.** Silurian, Canada, LAMBE, "Cruise of the 'Neptune,'" **1906**, (323).

*Caligorgia affinis* (76–77), *joubini* (67–69), *minuta* (78), *pennacea* (66), *robusta* (72–73), *similis* (79), *tuberculata* (80–81), *weltneri* (73–74), **spp. n.** Ost. Indischen Archipel., VERSLUYS, Rés. Explor. Siboga, Livr. 27, Monogr. **13a**, (10 pls.)—*C. versluysi* Ceylon **sp. n.** THOMSON, (172, figs. 6 and 15); compared with other **spp.**, VERSLUYS, (173–175), London, R. Soc. Rep. Pearl Oyster, **4**.

*Calyptophora mariae* (107), *kerberti* (105), **spp. n.** Malayischer Archipel und Japan, VERSLUYS, *Primnoidae*, Rés. explor. Siboga, Livr. 27, Monogr. **13a**, (10 pls.).

*Ceratoisis ramosa* **sp. n.** Cape of Good Hope, HICKSON, Cape Town, Marin. Invest., **3**, (224–225, pl. vii, figs. 2 and 3, pl. viii, fig. 12).

*Cespitularia coerulea* May, variation, THOMSON and HENDERSON, London, Proc. Zool. Soc., **1906**, (414–415).

*Chironephthya indica* **sp. n.** Ceylon, THOMSON, London, R. Soc. Rep. Pearl Oyster, **4**, (170, figs. 1 and 14),

*Clavularia*, specific differences (399–401), table of species, polyps and spicules (408); *garciæ* Hickson and var. *inermis* nov. (401); *flava* May (non Hickson) pl. xxx, fig. 4; *gracilis* May (402); *reptans* Hickson, *strumosa* Ehrenberg, calcareous bodies (403); *margaritiferae* Thompson and Henderson, *crosslandi* (404, pl. xxx, fig. 6), *pulchra*, *zanzibarensis* (405), *mollis* Zanzibar, *parvula* Cape Verde Is. (406), *pregnans* Zanzibar (407, pl. xxx, fig. 3), **spp. n.**, THOMSON and HENDERSON, London, Proc. Zool. Soc., **1906**.—*C. chuni* **sp. n.** Indian Ocean, KÜKENTHAL, Wiss. Ergebn. D. Tiefsee-Exp., **13**, i, (16, pl. i, figs. 1, 2, pl. iv, figs. 16–21)—*C. eburnea* (14, pl. i, fig. 1), *peterseni* (16, pl. i, fig. 2), *dispersa* (18, pl. i, fig. 3) **spp. n.** Japan, KÜKENTHAL, Beiträge Naturgesch. Ostasiens, **1906**, also in Zool. Anz., **30**, (281–282).

*Coelogorgia palmosa* Wright and Studer, var. (435), *repens* sp. n. Brit. East Africa (436, pl. xxxi, fig. 1), THOMSON and HENDERSON, London, Proc. Zool. Soc., 1906.

*Corallium*, economic notes, etc. HICKSON, Manchester, Trans. Microsc. Soc., 1905, (29-38).

*Dasytenelella* subgen. n. of *Stenella*, für *St. acanthina*, VERSLUYS, *Prinnoïdæ*, Rés. explor. Siboga, Livr. 27, Monogr. 13a, (39 and 48).

*Dendronephthya acaulis* (40, pl. iv, fig. 24), *fligrana* (44, pl. iv, fig. 22), *maxima* (46, fig. 27), *punctata* (42, fig. 23), *queriformis* (50, fig. 26), *densa* (52) spp. n. Japan, KÜKENTHAL, Beiträge Naturgesch. Ostasiens, 1906, and in Zool. Anz., 30, (284-287).

*Eugorgia gilchristi* sp. n. Cape of Good Hope, HICKSON, Cape Town Marin. Invest., 3, (230-231, pl. ix, figs. 15 and 19).

*Eunephthya antarctica* sp. n., KÜKENTHAL, Wiss. Ergebni. D. Tiefsee Exped., 13, i, (75, pl. iii, figs. 14 and 15, pl. xii, figs. 69-78).—*E. clavata* var. n. *pellucida* (23, pl. i, fig. 2), *rosea* var. n. *umbellata* (26, pl. i, figs. 3 and 6), "Olga" Exped., KÜKENTHAL, Wiss. Meeresunters, 8.—*E. japonica* (65, pl. iii, fig. 16), *spiculosa* (67, fig. 17) spp. n. Japan, KÜKENTHAL, Beiträge Naturgesch. Ostasiens, 1906, and in Zool. Anz., 30, (287-288).

*Eunicella papillosa*, suggested transference to *Gorgoniidae*, HICKSON, Cape-Town Marin. Invest., 3, (228).

†*Favosites agaricus*, *decorum*, *fustus* spp. n., GREENE, Contribution to Indiana Palaeontology, 2, pt. 3.—*F. aspera*, *bouerbanki*, *forbesi*, *gollandica*, *hisingeri*, SIEMIRADZKI, Wien, Beitr. Pal. Geol., OestUng., 19, (213-286).

*Fusticularia herdmani* Simpson, THOMSON, London, R. Soc. Rep. Pearl Oyster, 4, (182).

*Gersemia marenzelleri* sp. n. Japan, KÜKENTHAL, Zool. Anz., 30, (287), also in Beiträge Naturgesch. Ostasiens, 1906, (64, pl. iii, fig. 15).

*Gorgia albicans* Köll., coenenchym, HICKSON, Cape Town Marin. Invest., 3, (228-229).

†*Helolites decipiens*, *dubius*, *instinctus*, *megastoma*, *porosa*, SIEMIRADZKI, Wien, Beitr. Pal. Geol. OestUng., 19, (213-286).

†*Helolitidae*, Mid-Silurian, general account of the family and classificatory revision, KLER, Kristiania, Skr. Vid. Selsk., 1903, No. 10, (1-58).

*Heterozenia elizabethae* Kölliker, variation, THOMSON and HENDERSON, London, Proc. Zool. Soc., 1906, (413).

*Isis*, remarks on genus, (421-425), literature, (433), SIMPSON, London, J. Linn. Soc. Zool., 29.—*I. hippocampus*, general structure, (425-432, pl. xlili), id., T.c.

*Juncella spiralis* Cape of Good Hope sp. n., (231-233, pl. viii, figs. 6-9); *J. elongata* var. *capensis* nov. (233), HICKSON, Cape Town Marin. Invest., 3.

*Kophobelemon bathyptiloides* sp. n. Atlantic Ocean, ROULE, Bul. Muséum, Paris, 11, (455).

†*Labyrinthites* gen. n. allied to *Illy-sites*, for *L. chidleansis* sp. n. Silurian, Canada, LAMBE, in "Cruise of the 'Neptune,'" 1906, (327).

*Leptogorgia ochracea* sp. n. Cape Verde Is., THOMSON and HENDERSON, London, Proc. Zool. Soc., 1906, (431, pl. xxix, fig. 1).

*Lithophyllum elegans* (Kükenthal) (= *Amwothea elegans* May), *L. viride* (Kük.) (= *A. viridis* May), *L. brassicum* (Kük.) (= *A. brassica* May) (426), *L. thyrsoides* (Kük.) (= *A. thyrsoides* Ehrenberg), var. *durum*, nov., *flavum* May (427), THOMSON and HENDERSON, London, Proc. Zool. Soc., 1906.

*Lophogorgia crista* Möbius var., comparison with *lütkeni* Wright and Studer (432, pl. xxix, figs. 5-7), *lütkeni* Wright and Studer (433), THOMSON and HENDERSON, T.c.

*Malacogorgia* fam. n., defined (226), *Malacogorgia* gen. n. (227), *capensis* Cape of good Hope sp. n., (226-227, pl. vii, fig. 5, and pl. viii, figs. 10 and 11), HICKSON, Cape Town Marin. Invest., 3.

†*Michelinia favosa*, Carboniferous Hungary, FRÉGNI, Földt. Közl., 36, (8 and 110, pl. vii, fig. 1, pl. viii, fig. 1).

†*Monotrypa sardoa* (62, pl. v, fig. 1), *pontica* (63, fig. 2), *multitubulata* (63, fig. 3), *limitata* (64, pl. vi, fig. 4), *favrei* (64, fig. 5) spp. n., Sardinia, DENINGER, N. Jahrb. Min., **1906**, i.

†*Monticulipora fletscheri*, *papillata*, *pulchella*, SIEMIRADZKI, Wien, Beitr. Pal. Geol., OestUng., **19**.

*Muricella complanata* Wright and Studer var (178); *rubra* Ceylon sp. n. (179; figs. 2 and 7), THOMSON, London, R. Soc. Rep. Pearl Oyster, **4**.

*Narella divaricata* Studer gehört zu *Primnoella*, VERSLUYS, *Primnoidae*, Rés. explor. Siboga, Livr. **27**, Monogr. **13a**, (38, 49).

*Nephthya zanzibarensis* sp. n. Brit. East Africa, (421, pl. xxvii, fig. 3), var. *mollis* nov. fig. 5, *cirrata* sp. n., Brit. East Africa, (422); THOMSON and HENDERSON, London, Proc. Zool. Soc., **1906**.

*Nidalia grandiflora* (24, pl. i, figg. 6 and 7), *unicolor* (26, fig. 4); *dolleini* (27, pl. ii, fig. 8 and 9); *macrospina* (30, figg. 11 and 12); *pellucida* (27, fig. 10), spp. n., Japan, KÜKENTHAL, Beiträge Naturgeschichte Ostasiens, **1906**, also in Zool. Anz., **30**, (232–283), and in Wiss. Ergebni. D. Tiefsee-Expt., **13**, i, (34 and 35).

*Nidaliinae* subsam. n., KÜKENTHAL, Wiss. Ergebni. D. Tiefsee-Expedn., **13**, i, (27).

*Nidaliopsis* gen. n., (27, 37), *pygmaea* sp. n., Kongobecken (38, pl. ii, fig. 10, pl. x, figs. 50–56), KÜKENTHAL, Wiss. Ergebni. D. Tiefsee-Expt., **13**, i.

†*Parachaetetes* gen. n., *tornquisti* sp. n., Bathonian, Sardinia, DENINGER, N. Jahrb. Min., **1906**, i, (65, pl. vi, fig. 6).

*Paraspongodes striata* Thom. and Hend., THOMSON and HENDERSON, London, Proc. Zool. Soc., **1906**, (1), (428).

*Parastenella* subgen. n., für *Stenella doederleinii*, *spinosa* und *ramosa*, VERSLUYS, *Primnoidae*, Rés. explor. Siboga, Livr. **27**, Monogr. **13a**, (39, 45–47).

*Plumarella flabellata* sp. n., (*Primnoidae*), Japan, VERSLUYS, Rés. explor. Siboga, Livr. **27**, Monogr. **13a**, (16–18).—*P. grimaldii* Studer ist eine *Caligorgia*, VERSLUYS, *Primnoidae*, Rés. explor. Siboga, Livr. **27**, Monogr. **13a**, (57).

(N-9720 i)

*Primnoa ellisii* von Koch synonym mit *Caligorgia verticillata* Pallas, VERSLUYS, T.c. (60).

*Primnoidae* der Siboga-Expedition, VERSLUYS, Rés. explor. zool., aux Indes Néerl. Or. 1899–1900, à bord du Siboga, Livr. **27**, Monogr. **13a**, (187 pp., 10 pl.).

*Pteroides echinatum* sp. n. Atlantic, ROULE, Bul. Muséum, Paris, **11**, (457).—*P. brachycaulon* Kölliker, (pl. xxvi, fig. 3); *rigidum* sp. n., Brit. East Africa, (438, figs. 1 and 2); *pulchellum* sp. n., Brit. East Africa, (439, pl. xxvii, figs. 1 and 2), THOMSON and HENDERSON, London, Proc. Zool. Soc., **1906**.

*Pterostenella* subgen. n. für *Stenella plumatilis* (M. Edwards), VERSLUYS, *Primnoidae*, Rés. explor. Siboga, Livr. **27**, Monogr. **13a**, (39–42).

*Sarcophyllum bollousi* sp. n. New Zealand, BENHAM, Zool. Anz., **31**, (66).

*Sclerophyllum polydactylum* Dana, spicules, (418, pl. xxxi, fig. 2); *querciforme* Pratt; *nareuzellieri* Pratt; *hirtum* Pratt, (419); *viride* sp. n., Zanzibar, (420, pl. xxix, figs. 2 and 3), THOMSON and HENDERSON, London, Proc. Zool. Soc., **1906**.

*Scyatllopsis* gen. n. near *Scytlalium*, *Virgulariidae*, GRAVIER, Paris, C.-R. Acad. sci., **142**, (1290–1291); *S. djiboutiensis* sp. n., GRAVIER, Bul. Muséum, Paris, **12**, (291–293).

*Sinularia brassica* May (416); *funoides* Brit. East Africa sp. n., (417, text-fig. 85); THOMSON and HENDERSON, London, Proc. Zool. Soc., **1906**.

*Siphonogorgia dolleini* (78, pl. iii, figg. 20 and 21), *splendens*, (80, fig. 18), spp. n., Japan, KÜKENTHAL, Beiträge Naturgesch. Ostasiens, **1906**, also in Zool. Anz., **30**, (288–289).—*S. intermedia* sp. n., Zanzibar, THOMSON and HENDERSON, London, Proc. Zool. Soc., **1906**, (428, pl. xxx, figs. 1 and 2).

*Spongodes* (= *Dendronephthya*), Kenntnis der Gattung, HARMS, Zool. Anz., **30**, (539–548).—*S. cervicornis* Wright and Studer; *involuta* Kükenthal, *putteri* Kükenthal, polyparium (168); *microscopicula* Putter, spicules (169), var. *ceylonica* nov. (170), THOMSON, London, R. Soc. Rep. Pearl Oyster, **4**.—*S. hemprichii* Klunzinger var., *S. crosslandi* (423, pl. xxviii, fig. 2), *zanzibaricus*, fig. 1, *kükenthali* (424, pl. xxxi,

b 6—2

fig. 5), spp. n., Brit. E. Africa, THOMSON and HENDERSON, London, Proc. Zool. Soc., 1906.

*Stachyodes clavata* (98–101), *dichotoma* (88–98), *horrida* (101–103), *obscura* (90–91), *orientalis* (91–92), *parva* (96–98), Ost-Indischen Archipel. spp. n.; *studeri* nom. nov., VERSLUYS, Rés. Explor. Siboga, Livr. 27, Monogr. 13a.

*Stenella* sensu strict. sub-gen. n., *Stenella* Gray, fur *St. imbricata*, *johsoni* und *gigantea*, VERSLUYS, *Primnoidae*, Rés. explor. Siboga, Livr. 27, Monogr. 13a, (42–44).

*Stephanoptilidae* fam. nov. of Penatulids, type g. *Stephanoptilum*, ROULE, Bul. Muséum, Paris, 12, (120).

*Stephanoptilum* gen. n. *intermedium* sp. n. Atlantic Ocean, ROULE, op. cit. 11, (455).

*Stereonephthya zanzibarensis* sp. n., Zanzibar, THOMSON and HENDERSON, London, Proc. Zool. Soc., 1906, (425, pl. xxxi, figs. 3 and 4).

*Suberogorgia källikeri* Wright and Studer, var. *zanzibarensis* nov., THOMSON and HENDERSON, T.C., (429, pl. xxix, fig. 4).—*S. k.* Wright and Studer, var. *ceylonensis* nov. (171); *S. rubra* Ceylon sp. n. (172, fig. 4), THOMSON, London, R. Soc. Rep. Pearl Oyster, 4.

*Sympodium punctatum* May, (pl. xxix, fig. 9), variation; *coeruleum* Ehrenberg; *fuscum* sp. n. Zanzibar and Brit. East Africa (408, pl. xxx, fig. 5); *splendens* Zanzibar sp. n., (409, pl. xxix, fig. 8), THOMSON and HENDERSON, London, Proc. Zool. Soc., 1906, 1.

†*Syringopora monroeense* sp. n., BEEDE, Indiana, Rep. Dept. Geol. Nat. Res., 30, (1201–1218, 1 pl.).—*S. ramulosa*, Carboniferous, Hungary, FRECH, Földt. Közl., 36, (6 and 108, pl. viii, fig. 4).—*S. cf. reticulata*, VAUGHAN, London, Q. J. Geol. Soc., 62, (313, pl. xxix, fig. 1).

*Telesto rupicola* Müller, variation; *arborea* Wright and Studer, variation; THOMSON and HENDERSON, London, Proc. Zool. Soc., 1906, (434).

*Thouarella tydemani*, *laxa* spp. n. Malayischer Archipel, VERSLUYS, Rés. expl. Siboga, Livr. 27, Monogr. 13a, (32–35).

*Trichogorgia* gen. n. *Dasygorgidae*, *flexilis* sp. n. Cape of Good Hope, HICKSON, Cape Town, Marin. Invest., 3, (222–223, pl. viii, fig. 13, and pl. ix, figs. 16 and 17).

*Umbellula crassiflora* sp. n., Atlantic Ocean, ROULE, Bul. Museum, Paris, 11, (456).

*Virgularia loveni* KÖLLIKER (179); *elegans* Gray; *calycina* (180, figs. 8–11), *indica* (181), spp. n., Ceylon, THOMSON, London, R. Soc. Rep. Pearl Oyster, 4.—*V. mirabilis* Lamouroux, var. *pedunculata* KÖLLIKER; *multicalycina* sp. n. Zanzibar, THOMSON and HENDERSON, London, Proc. Zool. Soc., 1906, (437, pl. xxvi, figs. 4 and 5).

*Wrightella erythraea* Gray (= *Mopsea erythraea* Klunz.), (430, pl. xxviii, fig. 10), *variabilis*, Brit. East Africa, sp. n., (431, pl. xxviii, figs. 3–9), THOMSON and HENDERSON, London, Proc. Zool. Soc., 1906.

*Xenia antarctica* (19, pl. i, fig. 4, pl. v, figs. 22–24), *uniserta* (22, pl. i, fig. 5, pl. vi, figs. 25–29) spp. n., KÜKENTHAL, Wiss. Ergebni. D. Tiefsee-Expediti., 13, i.—X., note on species (410); *umbellata* Savigny, variation (411); *quinquecincta* May (= *umbellata* Savig. var. ?); *membranacea* Schenk; *coerulea* Ehrenberg; *ternatana* Schenk, var. *elongata*, nov. (412); *rigida* sp. n., Brit. East Africa (413), THOMSON and HENDERSON, London, Proc. Zool. Soc., 1906.

#### ZOANTHARIA.

Zoantharia, GREENE, Contribution to Indiana palaeontology, Parts 1–3, Volume 2, New Albany, Ind., 1906, (1–38, pls.).

(Hexactinida, embryogénie, rapports morphologiques avec les Octanthides, le Scyphistome des Méduses, et le Tetra-corallia, FAUROT, Paris, C.-R. Acad. Sci., 141, (778, 779).)

†Studies on early stages in Paleozoic corals, GORDON, Amer. J. Sci., New Haven, Conn., 21, (109–127).

†Corals, Bathonian, St. Gaultier, KOBY, Abh. Schweiz. Pal. Ges., 38, No. 4, (61, 4 pls.).

Madreporaria, VAUGHAN, (Rep. Res. Exped. Eastern Tropical Pacific, 6);

Cambridge, Mass., Bull. Mus. Comp. Zool. Harvard Coll., **50**, (59–72, 10 pls.).

*Acropora mangarevensis*, (68, pl. vi, fig. 2, pl. viii, fig. 1), *diomedae*, sp. n., (69, pl. 7, fig. 1, pl. 8, figs. 2, 3). VAUGHAN, Cambridge, Mass., Bull. Mus. Comp. Zool. Harvard Coll., **50**.—*A. massavensis, eminens*, spp. n., Red Sea, names only, n. MARENZELLER, Wien, Anz. Ak. Wiss., **1906**, (85).

†*Actinacis cymatoclysta* sp. n., Kreideformation Ost-Galiziens; FELIX, Berlin, Zs. D. geol. Ges., **58**, (43, pl. iii, fig. 4).

*Actinia mesambyanthemum*, movement; MÜLLECKER, Bl. Aquarienkunde, Magdeburg, **17**, (76–77).—†*A. bermudensis* var. *prunicolor* n. var., VERRILL, New Haven, Conn., Trans. Acad. Arts. Sci., **12**, (141–300).

*Actinoloba dianthus*, courbures dues à la lumiere, BOINN, Paris, C.-R. soc. biol., **61**, (420–422).

*Aiptasia tagetes* var. *bicolor* var. n., VERRILL, New Haven, Conn. Trans. Acad. Arts. Sci., **12**, (141–300).

' *Amplexi - Zaphrentis* subgen. n.; VAUGHAN, London, Q. J. Geol. Soc., **62**, (315, pl. xxix, fig. 7).

†*Amplexus borussicus, euryalyx*, SIEMIRADZKI, Wien, Beitr. Pal. Geol. OestUng., **19**, (213–286).

†*Aphyllostylus* gen. n., near *Pycnosyphalus*, perhaps in fam. *Zaphrentidae*, for *A. gracilis* sp. n. Silurian, Manitoba, WHIT-EAVES, Ottawa, Geol. Surv., Can., Pal. Fossils, **3** (279, pl. xxiv, fig. 1).

†*Astracomorpha zlatarskii* sp. n. Kotel, Bulgaria, BAKALOW, Centralbl. Min., **1905**, (482).

†*Astracopora octophylla*, (44, pl. iii, fig. 6), *hexaphylla* (45, pl. iii, fig. 7), Kreideformation Ost-Galiziens, spp. n., FELIX, Berlin, Zs. D. geol. Ges., **58**.

*Astrangia brasiliensis* (848–849, pl. lxxvii, figs. 3–6), *rathbuni* (849–850, pl. lxxviii); spp. n., Brazil, VAUGHAN, Washington, D.C., U. S. Nation. Mus. Proc., **30**.

†*Astrocoenia hexaphylloides* sp. n. Kreideformation OstGaliziens, FELIX, Berlin, Zs. D. geol. Ges., **58** (50, pl. iii, fig. 1).

*Balanophyllia galapagensis* sp. n. VAUGHAN, Cambridge, Mass., Bull. Mus. Comp. Zool. Harvard Coll., **50** (67, pl. iv fig. 2).

*Bathyactis marenzelleri* sp. n. VAUGHAN T.c. (66, pl. iv, fig. 1).

†*Blothrophylum cinctosum* sp. n. GREENE, Contribution to Indiana Palaeontology, 2 pt. 3.

*Bunodactis xanthogrammica*, Californian shore anemone, description and synonymy, TORREY, Berkeley, Univ. Cal. Pub. Zool., **3**, (41–46, 1 pl.).—†*B. stelloides* var. n. *californica* and *carneola*, VERRILL, New Haven, Conn., Trans. Acad. Arts Sci., **12**, (141–300).

†*Calamophyllia alternicosta* sp. n. Bathonian, St. Gaultier, Koby, Abh. Schweiz. Pal. Ges., **33**, No. 4, (29, pl. iv, figs. 4–7).

†*Campophyllum caninoides* sp. n. Mendip Area, (368, pl. xxxi, figs. 2a and 2b), *C. sp.?* (369, fig. 3), SIBLY, London, Q. J. Geol. Soc., **62**.

†*Carcinophyllum mendipense* sp. n. Mendip Area, SIBLY, T.c. (369, pl. xxxi, fig. 4).

*Caryophyllia capensis*, (113, pl. v, figs. 4 a-d), S. Africa; *epithecate*, (114, pl. i, figs. 3 a-c); anatomy of soft parts, (125), spp. n.; *C. ephyala* (Alcock), variation, (117); *smithi*, soft parts, (126); GARDINER, Cape Town, Marin. Invest., **3**.—*C. pianilamellata* sp. n., DENNANT, Adelaide, S. Austral., Trans. R. Soc., **30**, (157, pl. vi, fig. 4).

*Ceratotrochus johnsoni* Duncan, GARDINER, Cape Town, Marin. Invest., **3**, (118, pl. v, figs. 5 a-c, and pl. ii, fig. M).—*C. recidirus* sp. n., DENNANT, Adelaide, S. Austral., Trans. R. Soc., **30**, (159, pl. vi, figs. 1, 2).

†*Clesiophyllum curkeenense* sp. n. Co. Dublin, VAUGHAN, London, Q. J. Geol. Soc., **62**, (320, pl. xxx, figs. 2 and 2a).—*C. sp.* (Cyathophylloid forms), SIBLY, London, Q. J. Geol. Soc., **62**, (370, pl. xxxi, figs. 5a and 5b).

†*Coenites linearis, intertextus, juniperinus, podolica* sp. n., SIEMIRADZKI, Wien, Beitr. Pal. Geol. OestUng., **19**, (213–286).

*Coenocyathus bouersi* sp. n. California, VAUGHAN, Washington, D.C., U. S. Naticu. Mus. Proc., **30**, (847, 77, figs. 1–3).

*Corallinae*, classification of the genera, with enumeration and synonymy of species; YENDO, Tokyo, J. Coll. Sci., 20, No. 12, (46).

†*Coscinocyathus elvira* sp. n. Cambrian of China, WALCOTT, Washington, D.C., U. S. Nation. Mus. Proc., 30, (566-567).

*Cryptocanaria delaunayi* sp. n. Bathonian, St. Gaultier, KOBY, Abh. Schweiz. Pal. Ges., 33, No. 4, (7, pl. ii, figg. 8, 9).

*Cyathaxonaria cynodon*, septal development; DUERDEN, Ann. Mag. Nat. Hist., London, 18, (234).—*C. rushiana*, (316, pl. xxix, figs. 3, 3a, and 3b), *contorta*, (317, figs. 4 and 4a), spp. nn. Co. Dublin, VAUGHAN, London, Q. J. Geol. Soc., 62.

*Cyathoceras cornu* (Moseley), GARDINER, Cape Town, Marin. Invest., 3, (121).

†*Cyathophora dollfussi* sp. n. Bathonian, St. Gaultier, KOBY, Abh. Schweiz. Pal. Ges., 33, No. 4, (8, pl. iv, fig. 24).

†*Cyathophyllum angustum*, *articulatum*, *caespitosum*, *pedolicatum*, *remiculare*, SIEMIRADZKI, Wien, Beitr. Pal. Geol. Oest-Ung., 19, (213-280).—*C.* (caninoid forms), SIBLY, London, Q. J. Geol. Soc., 62, (367, pl. xxxi, fig. i).—*C. pannonicum* sp. n. Lower Carboniferous, Hungary, FRECH, Földt. Közl., 36, (27 and 130, pl. viii, fig. 2).

*Cycloletes polymorpha*, Cretaceous, S.E. France, REPELIN, Marseille, Ann. Mus., 10, (12, pl. i, figs. 8-11).—*C. p.*, Cretaceous, Tripoli, KRUMBÖCK, Palaeontographica, 53, (84, pl. vii, fig. 2).

†*Cycloseris kiddagi* sp. n., SMITH, Philippine J. Sci., 1, (627, pl. iv, fig. 1).

†*Cystelasma tabulatum* sp. n., BEEDE, Indiana, Rep. Dept. Geol. Nat. Res., 30, (1201-1218, 1 pl.).—*C. rugosum* and *C. quinquesplatum*, a correction [to Cummings, E. R. and others, Fauna of the Salen limestone], BEEDE, Science, 24, (594).

*Cystiphyllum decurrentis* sp. n., GREENE, Cont. Indiana Palaeont., 2, pt. 1.

*Dasmosmilia valida* sp. n. Red Sea, (named only) v. MARENZELLER, Wien, Anz. Ak. Wiss., 1906, (55).

*Dendrophyllea atrata* sp. n., DENNANT, Adelaide, S. Austr., Trans. R. Soc., 30, (163, pl. vi, fig. 5).

*Densiphyllum* sp. (Zaphrentoid subdiv.), VAUGHAN, London, Q. J. Geol. Soc., 62, (318, pl. xxix, fig. 6).

†*Dermosmilia bathonica* sp. n. Bathonian, St. Gaultier, KOBY, Abh. Schweiz. Pal. Ges., 33, No. 4, (30, pl. iv, figs. 2, 3).

*Desmophyllum capense* sp. n. S. Africa, GARDINER, Cape Town, Marin. Invest., 3, (96).—*D. galapagense* sp. n., VAUGHAN, Cambridge, Mass., Bull. Mus. Comp. Zool. Harvard Coll., 50, (63, pl. i, fig. 1).

†*Dimorpharea lentiformis* (19, pl. iii, figs. 15-21), *cossmanni* (50, figs. 22-25), spp. n., Bathonian, St. Gaultier, KOBY, Abh. Schweiz. Pal. Ges., 33, No. 4.

†*Dimorphaстраea delaunayi* (36, pl. iii, fig. 1), *radiata* (37, fig. 2), *irregularis* (38, figs. 3 and 4), spp. nn., Bathonian, St. Gaultier, KOBY, T.c.

†*Diphyphyllum robustum*, *collecti* spp. n., GREENE, Cont. Indiana Palaeont., 2, pt. 1.

†*Diplocoenia oolitica* (5, pl. ii, figs. 5-7), *dendroidea* (6, figs. 1-4), spp. nn., Bathonian, St. Gaultier, KOBY, Abh. Schweiz. Pal. Ges., 33, No. 4.

*Duncanella borealis*, septal development, DUERDEN, Ann. Mag. Nat. Hist., London, 18, (238).

*Duncania capensis* sp. n. S. Africa, GARDINER, (120, pl. i, figs. 6 a-e); soft parts, (127); Cape Town, Marin. Invest., 3.

†*Epiegytis crucifera* subsp. n. *formosa*, VERRILLI, New Haven, Conn. Trans. Acad. Arts Sci., 12, (141-300).

*Favia*, feeding experiments, mucus, DUERDEN, Q. J. Microsc. Sci., London, 49, (602-608).—†*F. humei* sp. n. Miocene, Egypt; GREGORY, Geol. Mag., London, 3, (52, pl. vi, fig. 2).

*Flabellum sibogae* nom. nov. for *Desmophyllum alabastrum* Alcock. GARDINER, Cape Town, Marin. Invest., 3, (98).—*F. rugulosum* Tenison-Woods, note on, SUTER, Wellington, Trans. Proc. N. Zealand Inst., 38, (334).

*Fungia*, feeding experiments, mucus, (592–598); stomodaeal currents, (598–602); DÜERDEN, Q. J. Microsc. Sci., London, **49**.—*F. döderleini* sp. n., name only, Red Sea, v. MARENZELLER, Wien, Anz. Ak. Wiss., **1906**, (85).—†*F. japonica*, Tertiary, Japan, (827–828, pl. lxvii); *samboagensis*, Philippine Is., (829–30, pls. lxviii, lixix, fig. i and lxxiv, fig. i); *madagascarensis*, Madagascar, recent, (831–32, pls. lxxii, lxxiii and lxxiv, fig. 3), spp. nn., VAUGHAN, Washington, D.C., U. S. Nat. Mus. Proc., **30**.

*Goniopora*, supplementary catalogue; BERNARD, London, **1906**, (146–164).

†*Heliophyllum connatum*, *inconditum hamiltonensis*, *inflatum*, *minutum*, spp. n.; *corniculum* var. *diaphragma* var. n., GREENE, Cont. Indiana Palaeont., **2**, pt. I.—II. *superlatum*, *subangulatum*, *tripartitum*, *intersculptum*, *intertextum*, *papulosum*, *expansum*, *dianthum*, spp. n., GREENE, T.C. pt. 3.

†*Heterastraea cvijici* sp. n. “Priabona-Schichten,” Macedonia, OPPENHEIM, Zs. D. geol. Ges., **58**, (151).

*Heterocyathus aequicostatus*, symbiosis with *Jousseaumia* (Eulamellibranch), BOURNE, London, R. Soc. Rep. Pearl Oyster, **5**, (243).—*H. ae.*, GARDINER, (105–112, pl. iii., figs. 1–4); anatomy of soft parts, (125); Cape Town Marlin. Invest., **3**.

*Heteropsammia michelini*, symbiosis with *Jousseaumia* (Eulamellibranch), BOURNE, London, R. Soc. Rep. Pearl Oyster, **5**, (243).

*Homophyllia incrustans* sp. n., DENNANT, Adelaide, St. Austr., Trans. R. Soc., **30**, (16, pl. vi, fig. 3).

†*Hydnophyllia zuberi* sp. n., Kreideformation, Ost-Galiziens, FELIX, Berlin, Zs. D. geol. Ges., **58**, (48, pl. iii, fig. 5).

†*Isastraea irregularis* sp. n., Bathonian, St. Gaultier, KÖBY, Abh. Schweiz Pal. Ges., **33**, No. 4, (26, pl. ii, figg. 19, 20).—*I. grandiflora* sp. n., Kotel, Bulgaria, BAKALOW, Centralbl. Min., **1905**, (482).

*Kionotrochus* gen. n. (allied to *Deltocyathus* and *Turbinolia*), *suteri* sp. n., New Zealand, DENNANT, Adelaide, S. Austr., Trans. R. Soc., **30**, (154, pl. v, fig. 5).

†*Latimacandra meyeri* (32, pl. iii, fig. 6), *polymorpha* (33, figg. 7–14), *benoisti* (35, fig. 5), spp. n., Bathonian, St. Gaultier, KÖBY, Abh. Schweiz Pal. Ges., **33**, No. 4.

†*Leptastraea barroni* sp. n., Miocene, Egypt; GREGORY, Geol. Mag., London, **3**, (56, pl. vi, fig. 8).

*Litharaea distans* sp. n., Cretaceous, East Galicia, FELIX, Zs. D. Geol. Ges., **58**, (43, fig. 3, pl. iii).

*Lithostrotion cyathophylloides* sp. n., Co. Dublin, VAUGHAN, London, Q. J. Geol. Soc., **62**, (319, pl. xxx, figs. 1, 1a and 1b).

*Lophophyllum proliferum*, septal development; DÜERDEN, Ann. Mag. Nat. Hist., London, **18**, (299); *L. frechi*, sp. n., Mid-Cambrian, Shantung, China, LORENZ, Berlin, Zs. D. Geol. Ges., **58**, (91, pl. 6, fig. 7).

*Madracis interjecta* sp. n., Red Sea, (name only), v. MARENZELLER, Wien, Anz. Ak. Wiss., **1906**, (55).

*Madrepora galapagensis* sp. n., VAUGHAN, Cambridge, Mass., Bull. Mus. Comp. Zool. Harvard Coll., **50**, (63, pl. i, fig. 2, pl. ii., fig. 1).

*Metridium marginatum*, reproduction by fragmental fission, HAMMATT, Amer. Nat., **40**, (583–591, pl.); *M. m.* dimorphism and regeneration, HANN, J. Exp. Zool., **2**, (225–235).

†*Michelinia indianensis* sp. n., BEEDE, Indiana, Rep. Dept. Geol. Nat. Res., **30**, (1201–1218, 1 pl.).—*M. geometrica* E. H., SIEMIRADZKI, Wien, Beitr. Pal. Geol. OestUng, **19**, (213–286).

†*Microsolenia contorta* sp. n., Bathonian, St. Gaultier, KÖBY, Abh. Schweiz Pal. Ges., **33**, No. 4, (54, pl. ii, figs. 17–18).

*Montipora erythraea* sp. n. (named only), Red Sea, v. MARENZELLER, Wien, Anz. Ak. Wiss., **1906**, (85).

*Montlivaultia coessmanni* sp. n., Bathonian, St. Gaultier, KÖBY, Abh. Schweiz Pal. Ges., **33**, No. 4, (21, pl. iv, figs. 21, 22).

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# V. ECHINODERMA

ARRANGED BY

A. D. IMMS and others.

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P. 7.—(9) ANDERSSON, K. A. Date of publication should be 1905.

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P. 9.—(8) Airaghi, Carlo. Atti Mus Milano, xlvi, is an error in author's reprint for xliv.

P. 62.—*Cidaridae*. The genera mentioned do not belong to this family.

P. 69.—*Lamprechinus* n. g. of Temnopleuridae, not of Cidaridae.

P. 71.—*Orechinus* n. g. of Temnopleuridae.

P. 74.—*Pygmaeocidaris* n. g. of Arbaciidae.

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## II.—SUBJECT INDEX.

N.B.—For full Reference, go to Titles.

### COMPREHENSIVE AND GENERAL

1003

#### 1. Historical and Folklore.

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History of name *Calveria*; **Bather**, **1**.

*Sphaerechinus granularis* "dit l'oursin rascasse des pêcheurs provençaux"; **Briot**, **3**.

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#### 2. General Treatises, Textbooks, &c.

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### 3. Bibliography.

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Works on development of *Ast. ovum*; **Tennent** and **Hogue**.

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Staining *Ech. ova intra vitam*; **Fischel**, **2**, (535).

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## b. Holothurioidea.

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Inner anatomy *Synapta minuta* adult and young; Becher, (507).

*Pelagothuria*; Herouard, 3.

## 2 and 3. Vacant.

## 4. Skeletal tissue.

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Spicules *Synapta minuta*, *Labidoplax*; Becher, (506).

## 5 and 6. Vacant.

## 7. Other body-cavities and their contents.

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Brown bodies of *Hol.*, contents, pigment; Briot, 1.

## 8. Vacant.

## 9. Nervous system and sense-organs.

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Cutaneous nerves and sense-cells of *Holothuria*; Polara, 2.

Russo's corpuscles and podia modified as sense-organs, *Holothuria*; Polara, 3.

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(N-9720 m)

## 10. Mesodermal tissues exc. skeletal.

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## 11 and 12. Vacant.

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## 7. Other body-cavities and their contents.

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## 8. Digestive system and its appendages.

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## 9. Nervous system and sense-organs.

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## 11. Dorsal organ.

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## 10. Mesodermal tissues exc. skeletal.

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## 12. Generative organs and gonads.

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*Antedon rosacea* (= *bifida*); **MacBride**, 2 (581-589, figs.).

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## 5. Excretion and Secretion.

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All four kinds of pedicellariae poisonous; effect on various animals, none on *Hol.*, *Ast.*, or frogs; Henri & Kayalof.

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*Cystobia chiridotae*, gregarine in body-cavity and blood-vessels of *Chiridota pellucida*; Dogiel.

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Young in body-cavity of *Synapta minutula*; **Becher**, (508).

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#### 10. Sexual Dimorphism. Vacant.

#### 11. Relation to Other Animals, as Food, &c.

As food of fish—of *Pleuronectes platessa*, *Echinocymus*; of *P. limanda*, *Ophioglypha*, *Ophiuira*; **Johnstone**, (243–246).

*Oph.* as food of young *Luidia*; **Delap**, 2, (15).

Pearl oyster attacked by *Ast.* (vide 4); **Herdman**, 2 & 3.

#### 12. In Geological aspect.

Effect of ashes from Vesuvius; kill *Sphaerechinus*, *Arbacia*, *Strongylocentrotus*, *Dorocidaris* by clogging madreporite, not *Echinocymus* and others; kill *Luidia*, not other *Ast.* or *Oph.*; kill *Holothuria*, not *Phyllophorus* or *Synapta*; kill *Antedon*; **Lo Bianco**.

Geological history of Echinoderms esp. in N. America, (see ref. under 1027, B); **Weller**.

*Crin.* fragments, stereom replaced by magnetite, Lower Devonian; **Cayeux**.

Calcarei ad echini, Langhian, Mt. Carpegna, N. Italy; **Chelussi**.

Echinoderm fragments as components of Turonian chalk; **Hill** in **Burnet**, (213, pl. 18).

Echinoderm breccia in Bajocian, Kientaleralps; **Gerber**, (71).

Cystid Limest, *Sphaeronis*, *Echinospaera*; **Hedström & Wiman**, (104, 109).

See also **Nichols**.

#### 13. Phaenology.

Vacant; but see references to Plankton larvae, 1015, 10, and 527, A.

#### VARIATION AND AETIOLOGY.

1023

#### 1. In form and surface-characters.

Form and tuberculation, *Sphaerechinus granularis*, *Strongylocentrotus lividus*; **Checchia**, 2, (92).

Absence of lateral fasciole from some specimens of *Linthia oblonga*; **Gregory**, (249).

Variations in spp. Hawaiian *Ast.*, for list of genera see 1027, A, iv; **Fisher**, 3.

#### 2. In colour.

Colour in life of spp. Hawaiian *Ast.*, for list of genera see 1027, A, iv; **Fisher**, 3.

#### 3. Meristic: numerical.

Variation in numbers of primibrachs, *Forbesiocr.*, *Taxoer.*; **Springer**, (489).

4-rayed and 6-rayed *Pentremites godoni*, 4-rayed *Taxoer.*; **Springer**, (489).

In *Crinoidea*, general account; **Hamann**, (1549).

#### 4. Meristic: homoeotic.

Vacant.

#### 5. Teratological.

Abnormal formation of dorsal organ in *Phormosoma indicum*; **Schurig**, (334).

Two gonopores on madreporite, *Centrostephanus longispinus*; **Checchia**, 2, (88).

In radial of *Symbathoer*; **Beede**, (1202).

In *Crinoidea*, general account **Hamann**, (1549).

#### 6. Bionomic.

Variation in occurrence of pedicellariae in same species of Echinoid, different locc.; **Doederlein**, 2, (93, 94).

Variation of gonads of *Ech.* according to loc.; **Fischel**, 1, (501).

Ambulacrals pores of *Echinocorys* reduced in forms immersed in ooze; **Fourtau**, (152).

Variability in occurrence of Stewart's organs in *Echinolthuridae*; **Schurig**, (294).

Dwarfing of *Pentremites* in a certain area, biometrically studied, causes discussed; **Smith**, (1237).

7. **Mutational.**

Mutation of *Discoidea cylindrica*; **Bosworth.**

Mutational varr. *Echinocorys scutatus*; **White & Treacher.**

Developmental and specific variation in *Pentremites conoideus* biometrically studied and contrasted; **Smith.**

8. **Evolution, general principles.**

Convergence in external characters between spp. of *Anasterias* and *Diplasterias*; **Koehler, 4 & 5.**

Principles governing evolution of Echinoderms, esp. in N. America (see ref. under 1027B); **Weiller.**

Evolution of anal structures, of brachials, and of perisomic plates in *Crinoidea Flexibilia*, relative value of different characters; **Springer, (494).**

9. **Evolution: relations to other Phyla.**

Relations of *Echinodermata* to hypothetical *Protocoelomata* and to *Hemichordata*, and origin of Classes; **MacBride, 2, (616-623).**

10. **Evolution: phylogeny of smaller groups.**

Phylogeny of Holothurians; **MacBride, 2, (578).**

Suggested origin of *Pelagothuria*; **Kemna.**

Relationships of main Echinoid groups, *Cidaridae*, *Echinothuriidae*, *Diadematina*, *Saleniidae* & *Arbaciidae*, *Echinina*, *Irregularia*, (81), phylogenetic relations genera of *Echinidae*, (203); **Doederlein, 2.**

*Echinothuriidae* allied to *Diadematidae* rather than to *Cidaridae*; **Schurig, (342).**

Evolution and classification of Cretaceo-Tertiary Spatangids; **Lambert, 8, (108).**

Evolution of *Schizaster*, *Brissus* and allies; **Fourtau, (143); Lambert, 8, (123).**

Phylogeny and classification of *Crinoidea Flexibilia*; **Springer, (493).**

Descent of *Pentremites* from *Codaster*; **Smith, (1235).**

DISTRIBUTION 1027

## A. GEOGRAPHICAL.

## i. General.

Bipolarity objected to; **Vaney, 3; Koehler, 2.**

Geogr. Distrib. *Echinodermata*, general and bathymetric; **Trouessart, (236).**

Bathymetric, of *Pelagothuria*; **Herouard, 3.**

*Ech.* of Valdivia Exped. from Atlantic, Cape Colony, Antarctic and Subantarctic, Sumatra, Nicobars and Maldives, E. Africa, with spp. nn. under *Linthia*, *Schizaster*, *Maretia*, *Prionechinus*, *Stereocidaris*, and numerous varr. nn., genn. nn. *Protocentrolus*, *Meijereea*; **Doederlein, 2, (271-277, et passim).**

## ii. Atlantic Ocean and adjacent seas.

North Sea, southern part, *Echinodermata* collected by the "Wodan." **Tesch.**

N. Sea, Danish Seas, Plankton, larvae; **Conseil internat, 1, (190).**

Skagerak, Plankton, *Luidia* larva (36), Danish seas, *Ophiopluteus* and *Spatangus* larva (40), Belgian seas, *Oph.* larvae (48); **Conseil internat, 2.**

Skagerak, *Ech.* larva (63), N. Sea, various larvae (69, 82, 88), English Channel, *Oph.* larva (76); **Conseil internat, 3.**

Helgoland, *Synapta minuta* sp. n.; **Becher.**

N. Atlantic, *Pelagothuria* sp. n.; **Herouard, 3.**

Luce Bay, Wigtonshire, *Solaster*, *Ophiura*, *Astropecten*, *Asterias*, *Echinus*, *Echinocytamus*, *Thyon*, *Cucumaria*; Fishguard Bay, Milford Haven, *Ophiura*, *Asterias*, *Echinus*; **Johnstone.**

Irish coast, plankton, various larvae and young *Oph*; **Gough, (12, 22, 34, 36, 50, 52).**

Ireland, Valencia, *Bipinnaria* of *Ast.* and *Pluteus*; **Delap, 1, (5): Luidia larva; Delap, 2, (15).**

Mediterranean, Sicily littoral, list of *Ech.*, esp. spp. of *Centrostephanus*,

*Psammechinus*, *Arbacia*, *Sphaerechinus*, *Strongylocentrotus* [*Paracentrotus*], *Briissopsis*, *Echinocardium*; *Checcchia*, 2.

W. Africa, Mauritania coast, *Echinometra subangularis* and spp. n. of *Patiria*, *Holothuria*; Koehler & Vaney, 3.

Madeira, 1968 m., *Gephyrocr*; Albert.

Azores, probably 2,000–3,000 m., *Stellosphaera* gen. n. Ast.; Koehler & Vaney, 1 & 2.

### iii. Indian Ocean and adjacent seas.

Red Sea, Arabia, *Echinus*, *Clypeaster*, *Echinanthus*, *Echinodiscus*, and *Tenmopleurus* sp. n., *Stellaster*, *Asterina*, *Linckia*, and *Astropecten* sp. n., *Amphiura*, *Ophionereis*, *Ophiothrix*, *Ophiopsammium*, *Ophiothela*; Koehler, 3.

Ceylon, Echinoderm fauna compared with Maldives and others; Herdman, 3, (438, 442, 446).

### iv. Pacific Ocean and adjacent seas.

Japan, various Echinoderms (157, 189–191, 203, 251); Doflein, 2: list of *Ech.* and spp. of *Solaster* and *Asterias*; Doflein, 1.

Japan, Suruga B., *Enypniastes*; Mitsukuri.

Japan, coasts, spp. of *Strongylocentrotus* 1 sp. n. 1 var. n., *Pseudocentrotus*, *Glyptocidaris*, *Anthocidaris*; Doederlein, 1.

Hawaiian Is., from shore to 1000 fm., monograph of Ast.; spp. n. of *Astropecten*, *Ctenophoraster* n., *Tritonaster* n., *Psilaster*, *Psilasteropsis* n., *Dipsacaster*, *Patagiaster* n., *Luidia*, *Pseudarchaster*, *Cheiraster*, *Mediaster*, *Nericidaster*, *Pentagonaster*, *Tosia*, *Astroceramus* n., *Calididerma*, *Calliaster*, *Gilbertaster* n., *Evolposoma* n., *Antheniaster*, *Pentaceros*, *Asterodiscus*, *Ophidiaster*, *Leiaster*, *Anseropoda*, *Henricia*, *Asthenactis* n., *Pteraster*, *Hymenaster*, *Benthaster*, *Zoroaster*, *Coscinasterias*, *Hydrasterias*, *Odinia*, *Brisinga*; also *Goniodiscides* nom. nov., *Archaster*, *Linckia*, *Echinaster*, *Valvaster*, *Mithrodia*; discussion of faunistic relations; Fisher, 3.

California, Monterey B., spp. n. of *Astropecten* & *Alexandriaster*; Fisher, 2.

California, spp. n. of *Astropecten*, *Luidia*, *Henricia*, *Crossaster*, and *Rathbunaster* gen. n.; Fisher, 4.

Oregon, sp. n. of *Henricia*; Fisher, 4.

### v. Arctic Ocean and adjacent seas.

White Sea, Solowetzk Id., *Hol.*, *Ech.*, *Ast.*, *Oph.*, bathymetric note on *Ophioglypha*, *Asteracanthion*; Stieren, (271, 292).

Murman coast, Ekaterin harbour Echinoderm fauna, list of various references; Derjugin, (90, 94, 97, 105, 148).

Bering Sea, spp. n. of *Leptychaster*, *Crossaster*; Fisher, 4.

### vi. Antarctic Ocean and adjacent seas.

Charcot Exped., Echinoderms, popular; Turquet.

Charcot Exped.; Koehler, 2: spp. n. of *Anasterias*, *Diplasterias*, *Granaster*, *Odontaster*, and gen. nn. *Ripaster*, *Cystaster*, also spp. of *Labidaster*, *Porania*, *Ophionotus*, *Echinus*, *Arbacia*; Koehler, 4: the same with *Ophionotus* sp. n.; Koehler, 5.

South Orkneys. Scotia B., *Thyon* spp. n.; Vaney, 1.

Charcot Exped., Carthage B., Biscoe B., and Wandel Id. spp. n. of *Synallactes*, *Cucumaria*, *Psolus*; Vaney, 2 and 3.

General discussion, Antarctic *Hol.* fauna, no bipolar spp.; Vaney, 3, (25).

Belgica coll. spp. of *Mesothuria*, *Rhipidolihuria*, *Peniagone*, *Cucumaria*, *Pselidium*, *Psolus*, *Trochostoma*, *Sigmodonta*, and *Elasipod* larvae; Herouard, 2.

## B. GEOLOGICAL.

### i. General.

Geol. Distrib. of *Echinoderm* Trouessart, (178).

General palaeontology of *Crin*; Hamann, (1551).

Geology of France, Lists of fossils (passim), figs. of *Clypeaster*, *Diademopsis*, *Toxaster*, *Clypeus*, *Encrinus*; Fritel.

Caucasus, summary of stratigraphy with lists of fossils, many *Ech.* and *Crin.*; Oswald.

Madagascar, lists of *Ech.* and *Crin.* from Cretaceous and Tertiary, *Aerosalenia*, *Cardiaster*, *Cidaris*, *Conoclypeus*, *Cyphosoma*, *Echinanthus*, *Epiaster*, *Euspatangus*, *Fibularia*, *Fibulina*, *Guetaria*, *Hemaster*, *Infulaster*, *Isaster*, *Isopneustes*, *Lampadaster*, *Menuthiaster*, *Micraster*, *Noetlingia*, *Peltastes*, *Schizaster*, *Apioer*, *Echininus*, *Pentacrin.*; Lemoine.

## ii. Cainozoic.

### a. General.

Tertiary, Piedmont, lists of *Ech.* and *Crin.* in Bartonian (896), Helvetician (905), Plaisancian (911); Sacco.

Sinai and Egypt, spp. of *Echinolampas* (1 sp. n.), *Phylloanthus*, *Echinus*, *Toxopneustes*, *Echinometra*, *Heterocentrotus*, *Fibularia*, *Laganum*, *Echinodiscus*, *Clypeaster*, *Briissus*, ? *Schizaster*, *Lovenia*; Gregory.

Tertiary, N. Madagascar, *Ech.* (vide 1027, B, i); Lemoine.

Spicules of *Hol.* figd., = crystalloids of Jukes-Browne & Harrison, from Barbados, London, Q. J. Geol. Soc., 48, 1892, (178); also of Sorby from W. Java; and of Ehrenberg from Egypt and Lebanon; Haupt.

California, lists of fossils including *Echinoidea*; Arnold, (12, 19, 22, 23, 24, 27, 28, 30, 33).

### b. Pleistocene.

Salustro, Catania, *Amphiura*, radiole of *Cidaris*; Scalia.

Nantucket, *Strongylocentrotus*; Wilson.

Near Tokyo, *Tenmopleurus*, *Laganum*, *Echinorachnius*, *Fibularia*; Tokunaga.

### c. Pliocene.

Barcelona, *Briissopsis* sp. n., spp. of *Cidaris*, *Clypeaster*, *Schizaster*; Anvers, Italy, Algeria, *Schizaster* spp. n.; Italy, *Briissopsis* sp. n.; W. Africa, *Hemihelioptis* gen. et sp. n.; Lambert, 8.

Tuxtepec division, Sta. Maria Tatela, Mexico, *Encope tatellaensis* sp. n.; Boese, 1 (71) and 2 (5).

### d. Miocene.

Sardinia, *Clypeaster* sp. n.; Lambert, 2.

Calabria, *Clypeaster*, *Echinolampas*, *Schizaster*; Lojacono.

Barcelona and Minorca, spp. n. of *Dorocidaris*, *Schizechinus*, *Scutella*, *Tripeustes*, *Clypeaster*, *Echinolampas*, *Opissaster*, *Schizaster*, spp. of *Cidaris*, *Psammechinus*, *Amphiope*, *Milletia*, *Pericosmus*, *Briissopsis*, *Trachyspatagus*, *Prospatagus*; also various locc. spp. of *Leiocidaris*, *Psammechinus*, *Echinolampas*, *Schizaster*; Lambert, 8.

Upper,— Gourbesville (Manche), *Echinocyamus*; Dollfus.

Upper Mediterranean beds, Budapest, *Goniaster*, *Cidaris*, *Echinus*, *Psammechinus*, *Clypeaster*, *Echinolampas*, *Spatangus*, *Echinocardium*, *Hemaster*, *Schizaster* varr. nn.; Vadász.

Middle,— near Turin, *Cidaris*, *Diadema*, *Arbacia*, *Hipponeoë*, *Echinocymus*, *Clypeaster*, *Briissopsis*, *Schizaster*, *Pericosmus*, *Spatangus*, *Heterobrissus*, *Pentacrinus*, *Antedon*, *Conocrinus*, *Actinometra*; Bellini.

Helvetician, of Mt. Titano, Repubblica di S. Marino, *Cidaris*, *Psammechinus*, *Clypeaster*, *Scutella*, *Echinolampas*, *Pliolampas*, *Linhia*, *Pericosmus*, *Spatangus*, *Hypsopatagus*, *Eupatagus*; Nelli.

Burdigalian, Molasse, Vence, spp. of *Leiocidaris*, *Scutella*, *Clypeaster*, *Echinolampas*, *Tristomanthus*, *Opissaster*, *Pericosmus*, *Schizaster*, *Moira*, *Briissoides*, *Maretia*, *Prospatagus*, *Echinocardium*, several new; see also *Gregoryaster* gen. n., *Hypsoclypus*, *Heteroclypeus*; Lambert, 1.

Burdigalian, Andalusia, Spain, *Clypeaster*; Douvillé, R. (105-133).

Langhian, Mt. Carpegna, N. Italy, *Cidaris* (274), Mozzano, *Toxopatagus* (296); Chelussi.

Miocene and Oligocene (?) Cserhát, Bakony, *Clypeaster*, *Conoclypeus*, *Scutella*, *Echinolampas*, *Hemipatagus*; Noszky.

**e. Oligocene.**

Upper,— Entrerian of Patagonia, *Mono-phora*; *Ameghino* (255–258).

Middle,— Schönebeck, Hinterpommern *Psammechinus*: *Picard*.

**f. Eocene.**

Apennine Flysch, *Hol.* imprints, *Lo-renzinia*; *Simonelli*.

Tropical E. Africa, distrib. of *Ech.*; *Chautard*.

Lutetian, Senegal, *Plagiopygus*; *Meu-nier*, 2.

Upper Lutetian, near Vich, Catalonia, Spain, list of *Ech.*; *Almera*, 1 and 2.

Lower Lutetian, N.-France, *Mareta*; *Leriche* (402).

Patagonian, discussion of age on basis of *Ech.* fauna, *Isechinus*, *Schizaster*, *Platyppygus*, *Iheringina*, *Hypechinus*, *Linthia*, *Psammechinus*, *Monophora*, *Cidaris*, *Goniocidaris*, *Echinopedia*, also *Antedon*; *Ameghino* (168).

**iii. Mesozoic.****a. General.**

L'Yonne, spp. of *Acrosalenia*, *Plesiosalenia*, *Perisalenia*, *Polygoniopygus*, *Diademiopsis*, *Hemipeda*, *Phalacropedina*, *Codiopsis*, *Diplopodia*, *Pseudoplopodia*; *Valette*, 2.

Kientalerpalps, fragmentary Echinoderms, *Cidaris*, *Pentaer.*; *Gerber* (passim).

Aralo-Caspian region, Great and Little Balkhan and Krasnovodsk peninsula, *Ech.* (60, 129), *Toxaster* (82), *Cidaris* (127), *Metaporphinus* (131), *Millerier* (131–134), *Holaster* (137); *Andrusov*.

**b. Cretaceous.**

Jerusalem, *Holectypus*, *Codiopsis* (37), *Echinobrissus*, *Cyphosoma* (38); *Blanckenhorn*.

N. Madagascar, *Ech.* (vide 1027 B, i); *Lemoine*.

**1. Upper Cretaceous.**

White Chalk, England, range of spp. of *Echinocorys*, *Conulus*, *Discoidea*, *Ha-*

*genovia*, *Hemiaster*, *Holaster*, *Cardiaster*, *Offaster*, *Micraster*, *Epiaster*, *Insulaster*; *Sherborn*.

Devonshire, *Crin.* and *Ech.*, *Micraster*, *Holaster*; *Clayden* (48, 49).

Near Brunswick, *Holaster*, *Pseudodiodae*, *Discoidea*; *Wollemann*.

Moravia, *Cidaris*, *Echinocorys*, *Pentaer.*; *Remeš*, 1.

Andalusia, Spain, *Echinocorys*, *Discoidea*, *Echinoconus* (fig.), *Hypsaster*, *Pedinopsis*, *Enallaster*, *Hemiaster*, *Holaster*; *Douville*, R, (76–78; 173).

Egypt, *Orthopsis*, *Rhabdocidaris*, and spp. n. of *Pliotoxaster* gen. n., *Echinobrissus*, *Echinocorys*, *Linthia*; *Fourtau*.

Tropical E. Africa, distrib. of *Ech.*; *Chautard*.

Echinoderms esp. N. America; *Chamberlin* & *Salisbury*, (iii, 186, fig.).

Cerro de Muleros, Chihuahua, Mexico, locc. and horizons of *Ech.*; *Boese*, 3, (5, 7, 8, 17, 18, 19, 24).

Upper Danian, Aquitaine, *Cidaris*, *Echinocorys*, *Balanocr.*, *Bourgueticier*; *Douville*.

Danian, Djebel Tar, Tripoli, *Hemi-aster chargensis*, and spp. n. of *Discoidea*, *Catopygus*, *Pygorhynchus*; *Krumbeck*.

Upper Senonian or ?Maestrichtian, E. Madagascar, *Epiaster*, *Hemiaster*, *Noetlingia boulei* sp. n.; *Lambert* in *Boule* & *Thévenin*.

Senonian, Norfolk, *Epiaster*, *Micraster*, *Echinoconus*, *Echinocorys*, *Cardiaster*, *Stegaster*, *Cidaris*, *Cyphosoma*, *Goniaster*, *Pentaer.*; *Brydone*.

Senonian, Carnaby, Yorksh., *Cardiaster*, *Echinocorys*; *Sheppard*.

Senonian, London Basin, range and locc. of spp. of *Cidaris*, *Cyphosoma*, *Echinocorys*, *Conulus*, *Epiaster*, *Helicodiadema*, *Hagenovia*, *Micraster*, *Offaster*, *Calliderma*, *Metopaster*, *Pentaceros*, *Pentagonaster*, *Ophiura*, *Bourgueticier*, *Marsupites*, *Pentaer.*, *Uintaer.*; *Treacher* & *White*.

Senonian, Berkshire, phosphatic chalk, spp. of *Cidaris*, *Helicodiadema*, *Echinocorys*, *Micraster*, *Offaster*, *Metopaster*, *Marsupites*, *Uintaer.*, *Bourgueticier*, *Pentaer.*; *White* & *Treacher*.

Upper Senonian, Grimme bei Löcknitz, *Caratodus avellana*, *Echinoconus roemerii*, and common Echinoids; Schumann & Leonhard.

? Senonian, Eure-et-Loire, France, *Pentacer* sp. n.; Meunier, 1.

Senonian, Venetia, *Paronaster* gen. n., *Lampadocrys*; Airaghi.

Upper Senonian, Roca, Rio Negro, *Hemaster*; Burckhardt.

Senonian, Pondoland, S. Africa, *Cidaris*, *Hemaster*, and spp. n. of *Pseudodiadema*, *Cardiaster*, *Cassidulus*; Woods.

Upper Turonian, Lincolnshire, *Holaster*, *Echinocrys*, *Micraster*, *Cidaris*, *Infularaster*, *Cyphosoma*, *Galerites*, *Goniaster*; Burnet.

Turonian, Tarahuna, Tripoli, *Salenia*, *Orthopsis*; Parona.

Turonian, Algeria and Charentes, *Linthia* spp. n.; Fourtau.

Cenomanian and Turonian, Sinai and Abu Roash, spp. n. of *Heterodiadema*, *Acanthechinopsis* n., *Micropedina*, *Cyphosoma*, *Thylechinus*, *Coptosoma*, also spp. of *Holctypus*, *Galerites*, *Nucleolites*, *Hemaster*, *Linthia*; Gregory.

Cenomanian, England, zones characterised by *Holaster subglobosus*, *H. trecensis*; horizons of spp. of *Cidaris*, *Echinocyphus*, *Discoidea*; Bosworth. See also Jukes-Browne.

Cenomanian, Cap de la Hève, *Pentacer*, *Cidaris*, *Salenia*, *Galerites*; Combes.

Cenomanian, S. Tunis, *Heterodiadema*; Pervinquière.

Albian, "Gault," Luitere Zug, Switzerland, *Epiaster*, *Holaster*, *Catopyrus*, *Discoidea*, *Peltastes*, *Diplopodia*; at Lochwald, *Hemaster*; Jacob and Tobler.

## 2. Lower Cretaceous.

Echinoderms, esp. N. America; Chamberlin & Salisbury (iii, 135, fig.).

Barremian, Alpes-Maritimes, *Plegiocidaris* sp. n.; Savin & Lambert.

Lower Valanginian, Germany, various locc., *Pentacer* columnals; Harbort.

## V. *Echinoderma.*

### c. Jurassic.

Jurassic, Black Hills, Wyoming and Dakota, *Pentaer.*, and spp. n. of *Ophiaster* n. and *Cidaris*; Whitfield & Hovey.

### 1. Upper Jurassic.

Gap, France, *Cidaris*; Haug & Kilian.

Tithonian, Stramberg, list of *Crin.* and *Ech.*; Remeš, 2.

Lower Tithonian, Mürtirol, Engadine, *Pentaer.*, *Phylloer.* cf *oosteri*; Zoepritz, (190).

Weisser Jura, distrib. of *Sphaerites*; Schoendorff, 2 (298).

Sequannian, zone of *Oppelia temulo-bata*, Bavaria, *Stomechinus*, *Holctypus*, *Cidaris*, *Rhabdocidaris*, *Collyrites*; Wanderer (512, 514, 516, 518).

Sequannian of Tatahouine, S. Tunis, *Pygurus*, *Acropeltis*, *Monodiadema*; Pervinquière.

Kimmeridgian or Rauracian, Safi, Morocco, *Cidaris*, *Acropeltis*; Gentil & Lemoine.

### 2. Middle Jurassic.

Gap, France, *Cidaris*; Haug & Kilian.

Callovian of Baune-les-Dames (Doubs), *Collyrites*, *Echinobrissus*, *Holctypus*, *Pygurus*, *Rhabdocidaris*, *Stomechinus*, Millerier.; Petitclerc.

### 3. Lower Jurassic.

Bathonian, Belfort, Franche-Comté, *Pseudodiadema*, *Stomechinus*, *Hemipedina*; Maire.

Lower Bathonian, Alpes Maritimes, *Aerosalenia* sp. n.; Lambert & Savin.

### d. Lias (including Rhaetic).

Dorset, lists of *Echinoidea*; Woodward & Ussher.

Ubaye, Aveyron, *Pentaer.*; Haug & Kilian.

Toarcian near Mâcon, *Pentaer.*, *Cidaris*; Lissajous.

Lower Lias, S.E. Rheinpfalz, *Pentaer.*; Renz.

Sinemurian, Engadine, *Millerier*, *Pentacer*. in Steinsberger Kalk (191) in Fleckenmergel (193, 196); **Zoepritz**.

Rhaetic, Kössener Schichten, Engadine, *Crin*, *Ech*; **Zoepritz**, (189).

#### e. Trias.

Echinoderms esp. N. America; Chamberlin & **Salisbury**, (iii, 57).

Silesia, *Encr*, *Entrochus*, *Dadoxer*, *Aspidura*, *Cidaris*, *Radiolus*; **Ahlburg**.

Raiolian, incl. Pachycardientuff and other beds of S. Tirol, *Cidaris*, *Encrinus*; **Koken**.

### IV. Palaeozoic.

#### a. General.

Europe, America, Australia, *Botryoer*, *Baryer*, *Cosmoer*; **Bather**, 3.

#### b. Permian.

Vacant.

#### c. Permocarboniferous.

Near Forni Avoltri, Carinthia, *Gyathoer*, *Poteriocr*; **Gortani**, 1.

Gerringong, N.S.W., *Tribrachioer*, *Phialoer*; **Dun**.

#### d. Upper Carboniferous.

Echinoderms, esp. N. America; Chamberlin & **Salisbury**, (ii, 617, fig.).

Middle Ouralian ?, Forca Pizzul, Carnic Alps, *Archaeocidaris* sp. n.; *Vinassa de Regny* & **Gortani**, Gortani, 2.

Upper Coal Measures, S.E. Kansas, *Ceriocr*, *Erisoer*, *Hydreonocr*, *Phialoer*, *Archaeocidaris*; **Beede** & Rogers.

Upper Red Wall Limest., White River canyon, S.W. of Fort Apache, Gila Co., Arizona, *Cerioerinus*, *Archaeocidaris*; **Reagan**, 1 (230, pl.).

Red Wall Limest., Rocky Mts., *Archaeocidaris*; **Reagan**, 2.

#### e. Lower Carboniferous.

Echinoderms, esp. N. America, Chamberlin & **Salisbury**, (ii, 519, fig., 522, fig., 526, 530, fig.).

Upper Carboniferous Limest., Rouken Glen, Glasgow, *Poteriocrinus*, *Pisoerinus* [sic], *Archaeocidaris*; **Macnair**, (373, 375, 393).

Lower Carboniferous Limest., Cannock Chase, Staffordsh., *Archaeocidaris*, *Crin*; **Cockin**.

Carboniferous Limestone, Westleigh, Devon, *Crin*; **Clayden** (48).

*Zaphrentis* zone, Bristol, *Ascoer*; **Bather** in **Hind**, (173): co. Dublin, *Actinoer*, *Platyer*; **Bather** in **Matley** (296).

Altenberg and Katzenlöcher, Hungary, large *Crin*. columnals (29), Bosnia, *Poteriocr*. (43); **Frech**.

Nebraska, List of *Ech*. and *Crin*, *Archaeocidaris*; **Barbour** (127).

Bangor Limest., Cole City, Georgia, *Pentremites* sp. n.; **Schuchert**.

Warsaw group, Salem Lst., Indiana, *Batoer*, *Dizygocr*, *Platyer*, *Poteriocr*, *Ichthyocr*, *Dichoer*. with *D. blatchleyi* sp. n., *Talaroer*, *Symbathoer*, *Pentremites*, *Metablastus*, *Tricoelocer*, *Archaeocidaris*, *Hol*. spicules; **Beede**.

Kinderhook, Glen Park Limest., Jefferson Co., Mo., *Actinoer*, *Agaricoer*; **Weller**.

Glenwilliam Carboniferous series, N. of Clarence Town, N.S.W., *Metablastus* ?, *Actinoer*; **Taylor**.

#### f. Devonian.

Echinoderms, esp. N. America; Chamberlin & **Salisbury**, (ii, 456, fig., 459, 464, fig., 470, fig.).

Middle Devonian, Oberste Lenne-schiefer, Westphalia, spp. n. of *Rhipidocr*. & *Rhenoer*, also *Cupressoer*; **Schmidt**.

Taunusian, Cornwall, large *Crin*. columnars and *Lodanella*; **Green** & **Sherborn**.

Upper Devonian, Cashaqua horizon, Interlaken, N.Y., *Helianthaster*; **Clarke**, 2 (37).

Portage beds, Naples fauna, Ontario Co., N.Y., *Meloer*, *Seytalocr*, *Taxoer*; **Clarke**, 1 (346, 348, 364).

Hamilton group, New York, *Hypsoer*. gen. n.; **Springer** & **Slocum**.

Lower Devonian, E. New York, locc. and horizons of spp. of *Melocr.*, *Aspidocr.*, *Homoer.*, *Mariacr.*, *Platycr.*, *Brachioer.*, *Coronoer.*, *Dictyocr.*, *Lepidocr.*; **Grabau** (135, 155, 320-323).

Falkland Is., Port Louis South. Crinoid stems like those from Bokkeveld beds figd. Sharpe 1856, pl. xxv, f. 24, also *Crin.* stems from W. Falkland, Hope Point; **Newton** (256).

#### g. Silurian.

Echinoderms, esp. N. America; **Chamberlin & Salisbury**, (ii, 400, fig.).

*Podolia*, *Glyptocr.*, *Cyathocr.*, *Phacites*, *Entrochus*, *Crotalocr.*, *Cupressocr.*; **Siemiradzki**.

Upper Burma, *Crin.* fragments; **Reed** (93).

Ekwat R. (248), Fawn R. (277), Keewatin, Canada, *Crin.* fragments; **Whiteaves**, 1.

Upper,—S. E. New York, Manlius Lst., *Homoer.*, *Camarocr.*; **Grabau** (319).

#### h. Ordovician.

Echinoderms, esp. N. America; **Chamberlin & Salisbury** (ii, 357, fig.).

Bala Limest., Caermarthen, *Echinospaerites*, *Glyptocr.* (634), Redhill beds, *Hemicosmites*; **Evans** (639).

Russia, distrib. of spp. and mutations of *Glyptocystis*, *Asteroblastus*, *Mesites*, *Echinocr.*, *Asterocr.*, *Haploer.*?, *Pentacr.*?, *Cyathocr.*?, *Cheiroer.*, *Bolboporites*; **Lamansky** (79, 171, 178).

Oland, *Sphaeronitis*, *Glyptocystis*, *Echinospaera*; **Hedström & Wiman** (104, 106, 108).

Upper,—Nyaungbaw beds, Yemeyé Upper Burma, *Scyphocr.*, *Camarocr.* sp. n.; **Reed** (86, 88); **Holland**.

Lower,—Naungkangyi beds, Upper Burma, spp. nn. of *Aristocystis*, *Helioer.*, *Caryocr.*, *Protoer.*; **Bather**, 4: discussion of age (84), spp. indet. of *Echinocr.*, *Cheiroer.*, *Caryocr.*, *Helioer.*, *Echinospaerites*; **Reed**: *Aristocystis*; **Holland**.

Chazy Formation, New York and Canada, lists of *Cystidea*, *Bolboporites*, *Blastoidoerinus*; **Raymond** (passim).

#### k. Cambrian.

Cystids, *Eocystis*, esp. N. America; **Chamberlin & Salisbury** (ii, 286, fig.).

Middle,—Nevada, *Eocystis*; **Pack**.

### III. TAXONOMY AND SYSTEMATIC INDEX.

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#### A. ECHINODERMA, GENERAL.<sup>†</sup>

Physiol. criteria of spp., vide sub *Holothuria*; **BRIOT**, 2.

*Pelmatozoa* in 5 Classes: *Crinoidea*, *Thecoidea*, *Carpoidea*, *Cystoidea*, *Blastoidea*; **MAOBRIDE**, 2.

#### B. HOLOTHURIOIDEA.

Holothurian spicules?; **BEEDE** (1270 pl. xix).

*Allantis*, maintained; **HEROUARD** 2 (6).

*Chiridota laevis*; **DERJUGIN** (90, 149). — *C. pellucida*, parasitic gregarine; **DOGIEL**.

*Cucumaria* sp., Port Charcot, descr.; **VANEY**, 3 (19). — *C. antarctica* sp. n. various locc. shore to 110 m., Charcot expd.; **VANEY**, 2, Bul. Muséum Paris, 1906 (404): descr., one young; **VANEY**, 3 (6, pl.). — *C. attenuata* sp. n. 20-40 m., Carthage B.; **VANEY**, 2, Bul. Muséum Paris, 1906 (404); described, and young; **VANEY**, 3 (10, pl.). — *C. brunnea*; **WOODLAND** (535). — *C. calcigera*; **DERJUGIN** (148). — *C. communis*; **ÖSTERGREN**.

<sup>†</sup> A dagger prefixed to the trivial name of a species indicates that it is fossil; prefixed to the name of the author, it denotes that the reference is to the species in a fossil state; prefixed to the name of a genus, it indicates that all species of the genus here recorded are fossil, and the † is therefore not repeated before each name. The abbreviations *l. c.* and *op. cit.* refer only to the place or work quoted immediately before.

When a name and reference are quoted without further statement [*e.g.* *Ankyroderma danielsseni*; **HEROUARD** (127)], further information can usually be gleaned from the cross-references under TITLES.

—*C. frondosa*; DERJUGIN (pl. ii, 90, 91, 148).—*C. grandis* sp. n. Wandel Id. shore; VANEXY, 2, Bul. Muséum Paris, 1906, (405): descr.; VANEXY, 3 (12).—*C. irregularis* sp. n., 40 m., Carlhage B.; VANEXY, 2, Bul. Muséum Paris, 1906 (405): descr.; VANEXY, 3 (14, pl.).—*C. lactea*; RETZIUS (fig.).—*C. laevigata*, juv., descr.; HEROUARD, 2 (12, pls.).—*C. lateralis* sp. n., various locc., shore to 110 m., Charcot Exped.; VANEXY, 2, Bul. Muséum Paris, 1906 (405): descr., VANEXY, 3 (15, pl.).—*C. leonina*, descr., ontogeny; HEROUARD, 2 (11, pls.).—*C. planci*; JOHNSTONE (239).—*C. turqueti* sp. n., Biscoe B., 40 m.; VANEXY, 2, Bul. Muséum Paris, 1906 (406): descr.; VANEXY, 3 (18, pl.).

*Enypniastes eximia*, plate reproduced by three-colour process after a water-colour sketch from life; MITSUKURI.

*Eupygus scaber*; DERJUGIN (149).

*Holothuria arguinensis* sp. n., Mauritania coast; KOEILER & VANEXY, 3, Bordeaux, Actes soc. linn., 60 (62, pls.).—*H. atra*; HERDMAN, 3 (447).—*H. elliotti*, POLARA, 2. —*H. forskali*; DUBOIS; POLARA, 2.—*H. impatiens*; BRIOT, 2.—*H. neillii*; ÖSTERGREN.—*H. nigra*, anat.; MACBRIDE, 2 (561).—*H. poli*; POLARA, 2 and 3: BRIOT, 3: physiol. distinction fr. *H. tubulosa*; BRIOT, 2.—*H. stellata*; LO BIANCO (94, 98).—*H. tubulosa*; BRIOT, 2 and 3: POLARA, 2 and 3: LO BIANCO (94, 98).

*Labidoplax* discussed; BECHER (506).

†*Lorenzinia apenninica* Gabelli; similar imprints descr., probably *Hol.* aff. *Pelagothuria*; SIMONELLI, (fig.).

*Mesothuria*, discussed (5), diagnosed (6): *M. bifurcata*, descr. (4, pl.); HEROUARD, 1. —*M. intestinalis*; RETZIUS, (fig.).—*M. murrayi*; HEROUARD, 2, (6).

*Myriotrochus rinki*; DERJUGIN (149).

*Pelagothuria*, general discussion; KEMNA: affinities, distrib.: *P. bouvieri* sp. n. N. Atlantic, 31° N. 42° W., surface, descr., anat.; HEROUARD, 3, Bull. Mus. Monaco, 60: BOUVIER, 2, (p. 496, fig. 15).

*Peniagone vignoni*, descr.; HEROUARD, 2, (8, pls.).

*Phyllophorus communis*, synonymy: *P. drummondi*: *P. pellucidus*, synonymy; ÖSTERGREN.—*P. urna*; LO BIANCO (98). (N-9720 m)

*Pseudocucumis crenoti*, syn. of *P. mixta*: *P. mixta*, synonymy; ÖSTERGREN.

*Psolidium convergens* (Her. sub *Cucumaria*), descr., relations to *Semiperia*; HEROUARD, 2, (13, pls.).

*Psolus antarcticus*, measured; VANEXY, 3, (21).—*P. belgicae*, descr.; HEROUARD, 2, (14, pls.).—*P. charcoti* sp. n. 110 m., Biscoe B.; VANEXY, 2, Bul. Muséum, Paris, 1906, (406): descr.; VANEXY, 3, (21, pl.).—*P. fabricii*; DERJUGIN, (94, 149).—*P. granulosus* sp. n., Wandel Id., shore; VANEXY, 2, Bul. Muséum, Paris, 1906, (407): descr.; VANEXY, 3, (23, pls.).—*P. phantapus*; DERJUGIN, (149).—*P. segregatus* sp. n. for *P. squamatus* var. *segregatus* R. PERR.; VANEXY, 3, Expéd. antarct. franç. sci. nat. Documents sci. (Paris), 1906, (27 pl.).

*Rhabdomolgus ruber*; BECHER, (509).

*Rhipidothuria racovitzai*, descr.; HEROUARD, 2, (7, pl.).

*Sigmodota studeri*, fragments, HEROUARD, 2, (15).

*Synallactes* sp., Biscoe B., descr.; VANEXY, 3, (5).—*S. carthagei* sp. n., 40 m., Carthage B.; VANEXY, 2, Bul. Muséum, Paris, 1906 (403): descr.; VANEXY, 3, (3, pl.).

*Synallactinae*, tentacular ampullae; HEROUARD, 2, (7).

*Synapta* sp.; BOCHENEK.—*S. buski*; RETZIUS, (fig.).—*S. digitata*; BECHER, (508).—*S. inhaerens*; BECHER, (509): WOODLAND, (556): in plankton. LO BIANCO, (85).—*S. minuta* sp. n. Helgoland; BECHER, Zool. Anz., Leipzig, 30, (505).

*Thyonne fusus*; WOODLAND, (550).—*T. portlocki*; ÖSTEROREN.—*T. scotiae* sp. n. (400, figs.), *T. turricata* sp. n. (401, fig.), S. Orkneys, shore; VANEXY, 1, Bul. Muséum, Paris, 1906.

*Thyonidium commune*, *T. dubeni*; ÖSTEROREN.

*Trochostoma antarcticum*, descr.; HEROUARD, 2, (15).

*Zygothuria*, rejected; HEROUARD, 2, (5).

#### C. ECHINOIDEA.

Taxonomic value of pedicellariae, views of Mortensen discussed; proposed classification of recent *Ech.*: Subclass I.

*Cidariformia*; II. *Diadematiformia*, Ord. i. *Regularia*, sub-ord. 1. *Diadematina*, 2. *Saleniina*, 3. *Arbaciina*, 4. *Echinina*; Ord. ii. *Irregularia*, sub-ord. 1. *Clypeastroidea*, 2. *Spatangoidea*; DOEDERLEIN, 2, (65-87).

*Echinoidea* in 3 orders: *Eudocyclida* *Clypeastroidea*, *Spatangoidea*; MAO-BRIDE 2 (529).

*Abatus* maintained; LAMBERT 8 (101).

†*Acanthechinopsis* gen. n. of *Diplopodiidae* with genotype *A. humei* sp. n., Cenomanian, Sinai (wrongly called *A. barroni* p. 227); GREGORY, Geol. Mag. London, n. ser., dec. V, 3 (219, pl.)

*Acanthocidaris*, discussed (96), diagnosed (102); DOEDERLEIN, 2.

†*Acropeltis aequituberculata*; PERVINQUIÈRE: GENTIL & LEMOINE (332, 338, pl.).

†*Acrosalenia*, restricted with *A. spinosa* as type (275): *A. angularis* discussed (296); *A. boloniensis*, referred to *Plesiosalenia* (275), restricted to Cotteau, pl. 253, ff. 1, 2, [not the type]; VALETTE, 2. — *A. quebhardi* sp. n. Bathonian, St. Cézaire, Alpes Marit.; LAMBERT & SAVIN, Nice, Ann. Soc. let. sci. 20 (67, pl.). — *A. incerta* discussed (279): *A. koenigi* (Ag. & Des.) restricted (277); *A. lamarcki* referred to *Perisalenia* (279): *A. pseudodecorata*, ambulacrals (296): *A. spinosa*, ambulacrals (296): *A. wiltoni* maintained (279); VALETTE 2.

*Acrosaleniidae* gen. nn. vide *Thylosalenia*, *Plesiosalenia*, *Perisalenia*.

*Anapesus* maintained, with genotype *A. carolinus* a syn. of *Psammechinus blainvilliei*; LAMBERT 8 (67).

*Anthocidaris purpurea* (v. Martens sub *Toxocidaris*), descr.; DOEDERLEIN, 1 (520).

†*Aplolampas* gen. n. with genotype *A. mouvetiaensis* (Schrauth sub *Echinolampas*); LAMBERT 1, Nice, Ann. Soc. let. sci. 20 (32).

*Aplospatangus* sub. gen. nov. of *Schizaster*, with type *S. eurynotus* Ag.; LAMBERT 7, Paris, Mem. Soc. Geol., Paleont. 14 (113, 114).

*Araeosoma*; SONURIG (294): diagnosed (121): *A. coriaceum*, descr. (122, fig. pls.); DOEDERLEIN, 2.—*A. fenestratum*; BATHIER, 1.

*Arbacia aequituberculata*; HENRI & KAYALOF.—*A. dufresnii*; KOEHLER, 4 and 5 (29). — *A. punctulata*; MATHEWS, 2.—*A. pustulosa*; ARIOLA: CHECCHIA, 2 (89): FISCHEL 1 and 2: LO BIANCO (92).

*Arbaciina*, sub-ord. of *Regularia*, with 1 Fam. *Arbaciidae*; DOEDERLEIN, 2 (86).

*Arbaciina*, — †*A. monilis* (pl. iv): pallaryi, descr., measured; CHECCHIA, 2 (90, pl. iv). — †*A. parva*; BELLINI (641).

†*Archaeocidaris*, — *A. sp.* interambulacral plate; SCHURIG (341, pl.) — *A. agassizii*; BARBOUR (pl. ii): REAGAN 2.— *A. norwoodi*, var. plates, radioles, teeth; BEDEE (1268, pls. xiv, xvii A). — *A. pizzulana* sp. n. Upper Carboniferous, Carnic Alps; GORTANI in VINASSA DE REGNY & GORTANI, Roma, Boll. Soc. geol. Ital., 24, (586, pl.): radioles GORTANI 2 (19, fig.). — *A. spinoclavata*, *A. triserrata*; BEDEE and ROGERS (385). — *A. tudifer* [sic]; REAGAN 2.—*A. urei*; COCKIN (526): MACNAIR (375).

*Aspidodiadema*, discussed (157), *A. nicobaricum*, descr. (163, pls.), var. n. *meijerei* Banda Sea (165); DOEDERLEIN 2, Wiss. Ergeb. D. Tiefsee-Exped., Bd. 5, Isg. 2.

*Astheuosoma*, discussed; SONURIG (294). — *A. fenestratum*, *A. hystrix*; BATHIER, 1.—*A. urens* (293), *A. varium* (293-296); SONURIG.

*Astropyga radiata*; DOFLEIN (190).

*Bolbaster*, as s.g. of *Hemaster*; LAMBERT 8 (101).

†*Bothriolampas*, simple syn. of *Gitolampas*; LAMBERT 8 (96).

*Brachybrissus* as subgenus of *Schizaster*; LAMBERT 7 (113).

*Brisaster* as subgenus of *Schizaster*; LAMBERT 7 (112, 114).

*Brisoides* Klein, maintained; LAMBERT, 5.—†*B. oppenheimi*; LAMBERT 1 (47).

*Brissoma* as subgenus of *Brissopsis*; LAMBERT 8 (106).

*Brissopsis*, discussed (104) diagnosed (106); LAMBERT 8.—†*B. borsoni*, *genei*, *intermedius*; BELLINI (641).—†*B. (Zeugaster) lusitanicus* discussed; LAMBERT 8 (109).—*B. luzonica*, descr.; DOEDERLEIN, 2 (258, pls.).—*B. lyrifera*, distrib., descr.; DOEDERLEIN, 2 (256, pls.): incl. *Schizaster incertus* Aradas; CHECCHIA,

**2** (93).—†*B. papiolensis* sp. n., Plaisancian, Barcelona (121, pl.): †*B. pliocenicus* sp. n. for *Briissopsis geneti* Sism. var. *pliocenica* Botto-Micca 1896 (121); LAMBERT 8, Paris, Mem. Soc. Geol. Paleont., 14.

*Briissus*, diagnosed with genotype *B. ovalis* (Breyne); LAMBERT 8 (105).—*B. carinatus*, distrib.; DOEDERLEIN, 2 (256): †GREGORY (255)—*B. unicolor*; CHECCHELLA, 2 (93).

†*Bunactis*, s.g. of *Clypeaster*, discussed; LAMBERT 1 (23).

*Calveria fenestrata*; BATHER, 1.—*C. hystrix*; BATHER, 1 (249, 432): SCHURIG (293).

†*Caratomus avellana*; SCHUMANN & LEONHARD.

†*Cardiaster*,—*C. africanus* sp. n. Senonian, Pondoland; Woods, Cape Town, Ann. S African Mus., 4 (279, pl.).—*C. ananchylis*; SCHUMANN & LEONHARD; SHEPPARD (241): range, *C. colteanarus*, *C. erctaceus*, and *C. pygmaeus*, range; SHERRBORN (33).

†*Cassidulus umbonatus* sp. n., Senonian, Pondoland; Woods, Cape Town, Ann. S. African Mus., 4 (277, pl.).

†*Catopygus*,—*C. cylindricus*; JACOB & TOBLER (20).—*C. rohlfsi* sp. n., Upper Cretaceous, Djebel Tar, Tripoli; KRUMBECK (87, pl.).

*Centrocidaris*, rejected; DOEDERLEIN, 2 (96).

*Centrostephanus longispinus*, descr., first figd.; CHECCHELLA, 2 (87, pl. iv):

*Chondrocidaris*, discussed (96), diagnosed (102); DOEDERLEIN, 2.

*Cidaridae*, general discussion of genera; DOEDERLEIN, 2 (88).

*Cidariformia* sub-class. nov., 1 Fam. *Cidaridae*; DOEDERLEIN 2 (85).

*Cidaris* Lesko em. Mortensen, discussed (94), name discussed (100), diagnosed (101); DOEDERLEIN, 2: Vide etiam *Cidarites*.—†*C.* sp.; AHLBURG (55, 83).—†*C. cf. acicularis*; LEMOINE (253).—†*C. alpina* Cott.; GERBER (64).—*C. annulifera*; DOEDERLEIN, 2 (94).—†*C. antarctica*; AMEGHINO (172).—†*C. avenionensis*; BELLINI (641, 649): NELLI: radioles, sp. discussed, synonymy; LAMBERT 8 (62).—*C. baculosa*; DOEDERLEIN, 2 (93, 95).—†*C. beaugeyi*; DOUVILLE. —†*C. belgica*; BELLINI (641).—†*C. belle-* (n-9720 m)

*fourchensis* sp. n., radiole, Jurassic, Black Hills, Wyo.; WHITFIELD & HOVEY, Bull. Amer. Mus. Nat. Hist., 22 (391, pl.).—†*C. bowerbanki*; BOSWORTH (414, 416, 575).—*C. canaliculata*; DOEDERLEIN, 2 (96).—†*C. cervicornis*; LEMOINE (256).—*C. cidaris*; DOEDERLEIN, 2 (96).

†*Cidaris* [continued].—*C. clavigera*; REMES 1.—*C. coronata*; WANDERER (512, 514, 516).—*C. dissimilis*; BOSWORTH (416).—*C. florescens*; BELLINI (641).—*C. cf. florigemma* GENTIL & LEMOINE (332, 338).—*C. fragilis*; BELLINI (641).—*C. glandifera* radioles; HAUG & KILLIAN (10).—*C. grandaeva*; AHLBURG (50, 52).—*C. cf. halaeensis*; LEMOINE (255, 256, 257).—*C. hirudo*; BOSWORTH (414).—*C. hirudo*, radioles, Pondoland; Woods (276).—*C. julianensis*; AMEGHINO (172).—*C. koechlini*; HAUG and KILLIAN (12).—*C. cf. koechlini*; LEMOINE (127).—*C. melitensis*; BELLINI (641): Auctt. non Forbes; NELLI. —*C. moorei*?, interambulacral doser, English and French forms distinguished; LISSAJOUS (11): is *Plegiocidaris*; LAMBERT 6. —*C. oxyrine*; BELLINI (641).

*Cidaris* [contd.].—*C. papillata*, distrib.; DOEDERLEIN, 2 (103).—†*C. perorata*; BURNET. —*C. pistillaris*; DOEDERLEIN, 2 (95).

†*Cidaris* [contd.].—*C. rosaria*; BELLINI (641, 649): CHECCHELLA 2 (pl. iv).—*C. sceptrifera*; BURNET: REMES 1.—*C. soldanii*; CHELUSSI (274).—*C. cf. spinigera* (256), *C. striatogranothus*, (253); LEMOINE.—*C. transversa*; AHLBURG (46, 50, 52).—*C. verticillata*; LEMOINE (256).—*C. vesiculosae*; COMBES (464, fig.): SCHUMANN & LEONHARD.—*C. zemaias*; BELLINI (641, 649).

*Cidarites* name discussed (100), diagnosed (101), *C. affinis* and *C. metularia*, distrib. (104); DOEDERLEIN, 2 *C. variolaris*; COMBES (464, fig.)

†*Clypeaster*, general discussion of spp.; LAMBERT 1 (7).—*C. acclivis*; DOUVILLE, R. (105, 133): redefined; LAMBERT 1 (26).—*C. almerai*; sp. n., Tortonian, Barcelona; LAMBERT 8, Paris, Mem. Soc. Geol. Paleont., 14, (89, pl.).—*C. alticostatum*; LAMBERT 8 (88).—*C. altus*; BELLINI (641): FRITEL (384, fig.): (Klein-Leske), distinguished, synonymy; LAMBERT 1 (15, 16).—*C. barcinensis* sp. n., Tortonian, Barcelona; LAMBERT 8, Paris, Mem. Soc. Geol. Paleont., 14, (84, pl.).—*C. beaumonti*

*Sismus*, non Michelin, perhaps incl. *C. regulus* Laube (12) : *C. bunopetalus* made var. of *C. scillae* (25); LAMBERT 1. —*C. calabrus* sp. n., for *C. intermedius* Seg. non Desm., var. *calalra* Seg.; LAMBERT 1, Nice, Ann. Soc. let. sci. 20, (14) : probably syn. of *C. petalisserus*; LAMBERT 8 (87). —*C. campanulatus* (Schloth.), Burdigalian, revived, synonymy; LAMBERT 1 (14). —*C. crassicostatus*; BELLINI (641) : NELLI : LAMBERT 1 (24). —*C. crassus*, discussed, descr. (23, 26, 27, pl.) : *C. gibbosus* M. de Serres, distinguished and revived (17); *C. grandiflorus* Bronn, discussed and defined with var. *rhabdopetala* (23); LAMBERT 1.

*Clypeaster* [continued]. —*C. humilis*; HERDAN 3 (447) : †GREGORY (254).

†*Clypeaster* [contd.], —*C. intermedius*; LOJACONO (6, 19) : Desmoulin, distinguished (13), from Vence (52); LAMBERT 1: synonymy; LAMBERT 8 (85, pl.): var. n. *druensis*. Burdigalian, Drôme; LAMBERT 1, Nice, Ann. Soc. let. sci. 20 (14). —*C. laganooides* Ag., em. Michelin, non Airaghi (11), descr. (22, pl.), radiogram (57, pl. x): *C. latirostris*, discussed, synonymy (10); var. n. *inflata*, Burdigalian, Vence (21, pl.): var. n. *italica*, based on Scilla's figure X, 2 (10, 19): var. n. *pedemontana*, Helvetician, based on Airaghi's figure (11): var. n. *subovalis*, Burdigalian, Vence (20, pl.): var. n. *tourrettensis*, Burdigalian, Tourrettes, Vence (20, pl.): var. *ventieensis* (18, pl.): var. n. *vin-dobonensis*, Miocene, Gauderndorf, Wien (10, 19); LAMBERT, 1, Nice, Ann. Soc. let. sci. 20. —*C. leskei*; DOUILLÉ, R. (105). —*C. malladai* sp. n., Helvetician, Minorca; LAMBERT 8, Paris, Mem. Soc. Geol. Paleont. 14 (88, pl.): —*C. mariae* sp. n. for *C. lorisatoi* Cott. non Seg., Miocene, Sardinia; LAMBERT, 2, Rev. Paleozool., Paris, 10 (127). —*C. marginatus*; LAMBERT 8 (83) : incl. *C. tarbellianus*, distinct from *C. tenuipetalus*; LAMBERT 1 (13). —*C. martini* Desmoulin, distinct from *C. martini* Michelin (11), synonymy, descr. (21); LAMBERT 1. —*C. michelotti* Ag., em. Michelin; LAMBERT 1 (12), and 8 (86). —*C. oppenheimi* sp. n., Burdigalian, Vence; LAMBERT 1, Nice, Ann. Soc. let. sci. 20 (27, pl.). —*C. partschi*; VADASZ (331). —*C. parviturberculatus*; DOUILLÉ, R. (105, 133). —*C.*

*pentadactylus* Gauth., probably var. of *C. grandiflorus* (26) : *C. placenta* (23, 28); LAMBERT 1. —*C. portentosus*; LOJACONO (6, 19). —*C. pyramidalis*; op. cit. (6, 18); NOSZKY (466). —*C. redii*; NOSZKY (468). —*C. rhabdopetalus* maintained (25) but see *C. grandiflorus*; LAMBERT 1. —*C. scillae* discussed; LAMBERT 8 (121) : (23), defined, with varr. *crassitesta* nov., *bunopetala* (25), *tauricensis* nov. (26); LAMBERT 1, Nice, Ann. Soc. let. sci. 20. —*C. scutellatus*, discussed, descr. from Barcelona; LAMBERT 8 (81, pl.): —*C. scutiforme*; GREGORY (254). —*C. tenuipetalus* Seg., revived; LAMBERT 1 (13).

*Clypeastroidea*, sub-ord. of *Irregularia*, with Famm. 1. *Fibulariidae*, 2. *Clypeastridae*, 3. *Laganidae*, 4. *Scutellidae*; DOEDERLEIN, 2 (87).

†*Clypeus ploti* (= *C. sinuatus*); FRITEL (127, fig.).

†*Codiopsis*, restricted with genotype *C. doma* (289) : *C. alpina* distinguished from *C. lorini* and made type of *Pseudocodiopsis* (290): *C. arnaudi* referred to *Pseudocodiopsis* (291): *C. jaccardi* (301): *C. lorini*, ambulacrals (303); VALETTE 2.

*Coelopleurus floridanus*, Agulhas bank, pediculariae, spicules (181, pls.): *C. maillardii*, pediculariae, spicules (182, pls.); DOEDERLEIN, 2.

†*Collyrites elliptica*, distinguished from *C. dorsalis*; PETITCLERC (66).

†*Conoclypeus plagiosomus*?; NOSZKY (466).

†*Conulus*, vide etiam *Echinoconus* et *Galerites*, —*C. albogalerus*; TREACHER & WHITE: range, synonymy; SHERBORN, —*C. castaneus*, *globulus*, *orbignyanus*, et *subrotundus*: range and synonymy; SHERBORN.

†*Coptosoma abbatei* (223): *C. gunnensis* sp. n. Cenomanian?, Sinai (224, pl.); GREGORY, Geol. Mag. London, n. ser., dec. v, 3.

*Cyanosoma urens*; SCHURIG (293).

†*Cypholampas sectio* n. of *Echinolampas*, with type *E. stelliferus*; LAMBERT 1 Nice Ann. Soc. let. sci. 20 (33).

†*Cyphopygus* Pomel as subgenus of *Goniopygus*, made gen. n., with *C. major* and *C. coquandi*; VALETTE 2, Auxerre, Bul. soc. sci. hist. nat. Yonne 59 (280).

*Cyphosoma abbatei*, refd. to *Coptosoma* (223) : *C. beadnelli*, sp. n. Conomanian or Turonian, Abu Roash, Egypt (221 pl.) ; GREGORY, Geol. Mag. London, n. ser., dec. v, 3.

*Cystechinus*? sp., pedicellariae ; DOEDERLEIN, 2 (242, fig.)

*Dermatodiadema* (158) : *D. antillarum*, S. of Canaries (158) : *D. indicum*, descr. (158, pls.) : *D. molle*, descr. (160, pls.) ; DOEDERLEIN, 2.

*Diadema*, —†*D. desori* ; BELLINI (641). —*D. saxatile* ; DOEDERLEIN, 2 (166, fig.). —*D. setosum* ; DOFLEIN (190).

*Diadematidae*, gen. n. vide *Pseudocodiopsis* ; VALETTE 2.

*Diadematiformia* sub-class nov., Ord. i. *Regularia*, ii. *Irregularia* ; DOEDERLEIN, 2 (85).

*Diadematina*, sub-ord. of *Regularia*, with Tribus 1. *Streptosomata*, 2. *Stereosomata* ; DOEDERLEIN, 2 (86).

†*Diademopsis* discussed (282, 301, 311), defined with list of spp. (286) : *D. aequistuberculata* (300) ; VALETTE 2. —*D. serialis* ; loc. cit. : FRITEL (239, fig.).

*Diplodetus* as section of *Brissopsis* ; LAMBERT 8 (106).

†*Diplopodia* restricted with type *D. subangularis* (292) : *D. arovensis* distinguished from *D. subangularis* (307) : *D. bipunctata* distinguished (306) ; VALETTE 2. —*D. bronniarti* ; JACOB & TOBLER (20). —*D. cotteau* sp. n. for *D. bipunctata* from Laignes, Cotteau, Pal. franc. pl. 340 (307) : *D. courtauti* (308) : *D. drogiaca* (307) : *D. pentagona*, confused by Cotteau with *Pseudodiadema depressum* (305) : *D. picteti* (308) : *D. raulini*, ambulacrals (308) ; VALETTE 2, Auxerre, Bul. soc. sci. Yonne, 59. —*D. semamensis*, refd. to *Acanthechinopsis* ; GREGORY (220). —*D. variolaris* ; VALETTE 2 (309).

*Diplopodiidae*, genn. nn. vide *Acanthechinopsis*, *Pseudoplopodia*.

*Dipneustes*, diagnosed ; LAMBERT 7 (113).

*Discocidaridae* discussed (97), diagnosed (102) ; DOEDERLEIN, 2.

†*Discoidea* (vel *Discoides*) : —*D. cylindrica* ; JUKES-BROWNE (511) : WOLLEMANN : et var. ; BOSWORTHI (414, 416, 575). —*D. decoratus* ; JACOB & TOBLER (20). —*D. dixoni* ; range ; SHERBORN (32).

—*D. nachtigali* sp. n., Upper Cretaceous, Djebel Tar, Tripoli ; KRUMBECK, Palaeontographica, Stuttgart, 53 (86, pl.). —*D. peroni* ; DOUVILLE, R. (77). —*D. subucus* ; BOSWORTH (575).

*Ditremaster*, syn. of *Opissaster* ; LAMBERT 8 (102).

*Dorocidaris* discussed ; VALETTE 2 (283) : A. Ag. em. Mortensen, discussed (92), name discussed (100), diagnosed (101) ; DOEDERLEIN, 2. —†*D. balearis* sp. n., Helvetician, Minorca ; LAMBERT 8, Paris, Mem. Soc. Geol. Palaeont., 14, (65, pl.). —*D. papillata* ; CHECCHIA, 2 (87, & pl. iv) : LO BIANCO (92). —*D. tiara* ; DOEDERLEIN, 2 (94).

†*Echinanthropsis* discussed ; LAMBERT 8 (98).

*Echinanththus* discussed ; loc. cit. —†*E. corsicus* ; LAMBERT 8 (99) : of Cotteau is *Tristomanthus* ; LAMBERT 1 (42).

†*Echinarachnius mirabilis* ; TOKUNAGA.

*Echinidae*, discussed (202), key to genera (203) ; DOEDERLEIN, 2 : trib. nov. *Noetlinginae* ; LAMBERT in BOULE & THÉVENIN (13) : gen. n. vide *Protocentrotus*.

*Echinina*, sub-ord. of *Regularia*, with Famm. 1. *Stomopneustidae*, 2. *Trempleuridae*, 3. *Echinidae*, 4. *Echinometridae*, 5. *Toxopneustidae* ; DOEDERLEIN, 2 (86).

*Echininae* discussed ; DOEDERLEIN, 2 (202).

†*Echinobrissus*, vide etiam *Nucleolites*, —*E. clunicularis*, distrib. ; PETITCLERC (67) : Callovian, Doubs apud Petitclerc = *Nucleolites latiporus* ; LAMBERT 3. —*E. humei* sp. n. cum varr. *alta* et *subrotunda*, Turonian, E. Sinai ; FOURTAU, Cairo, Bull. Inst. Egypt. (ser. 4), 6 (148, pl.).

*Echinocardium* discussed (110) and defined with genotype *E. atropos* (113) synn. *Moera*, *Moira* ; LAMBERT 7. —*E. cordatum* ; CHECCHIA, 2 (93). —†*E. depressum*, discussed ; LAMBERT 1 (54). —*E. slavescens*, distrib. ; DOEDERLEIN, 2 (268). —†*E. aff. intermedium* ; VADASZ (333). —*E. mediterraneum*, descr., measured, first figd. ; CHECCHIA, 2 (94, pl. iv) —†*E. oppenheimi* sp. n. for *E. gibbosum* Oppen. non Gray [? Ag.], Burdigalian, Schio ; LAMBERT 1, Nice, Ann. Soc. lct. sci. 20, (55).

†*Echinoconus*, vide etiam *Conulus* et *Galerites*.—*E. cairoli*; DOUVILLE, R. (77, 210, pl.).—*E. orbignyanus*; BRYDONE (75, 127).—*E. roemerii*; SCHUMANN & LEONHARD. — *E. vulgaris*; BRYDONE, (129). .

*Echinocorythidae*, gen. nondeser.; DE MEIJERE: gen. n. vide *Meijerea*.

*Echinocorythinae*, vide *Paronaster*.

†*Echinocorys*.—*E. concava*; AIRAGHI (110).—*E. fakhryi* sp. n., Danian, Egypt; FOURTAU, Cairo, Bull. Inst. Egypt, ser. 4, 6 (150, pl.).—*E. granulosus*?; REMES 1.—*E. scutatus*; BURNET: et varr.; TREACHER & WHITE, WHITE & TREACHER: range, synonymy; SHERBORN (31).—*E. tenuituberculatus*; DOUVILLE, R. (76, 170).—*E. vulgaris*, BRYDONE (129); DOUVILLE, R. (173); SHERPARD.

*Echinocrepis?* sp., descr., pedicellariae; DOEDERLEIN, 2 (269, pls.).

*Echinocyamus pusillus*; CHECCIA, 2 (93); JOHNSTONE (239); LO BIANCO (97, 98); †DOULFCS (370): distrib.; DOEDERLEIN, 2 (234).—*E. scaber*, distrib., notes; op. cit. (235, pl.).—†*E. studeri*; BELINI (641).

†*Echinocyphus difficilis*; BOSWORTH (414, 575).

*Echinodiscus* Breyen. 1732, genotype *E. orbicularis*, discussed, limited; LAMBERT 8 (124).

*Echinolampas*, discussed; DOEDERLEIN, 2 (240): discussed (28), defined with sections *Apolampas*, *Miolampas*, *Merolampas*, *Cypholampas*, *Macrolampas*, *Scutolampas*, *Isolampas*, *Palaeolampas* (33); LAMBERT 1.

†*Echinolampas*.—*E. africanus*, measured; GREGORY (251).—*E. angulatus*; LAMBERT 8 (94); NELLI: Alessandri non Merian, discussed; Merian's sp. is *Progonolampas*; LAMBERT 1 (35).—*E. atrophus*, sp. n., Helvetician, Minorca; LAMBERT 8, Paris, Mem. Soc. Geol., Paleont., 14, (94, pl.)—*E. barcinensis* sp. n., Burdigalian, Portugal, based on *E. hemisphaericus* var. *maxima* De Lor.; LAMBERT 1, Nice, Ann. Soc. let. sci. 20, (40): Barcelona, is here distinguished from de Lorio's var. *maxima*; LAMBERT 8 (91, fig.).—*E. blainvillei* (35): *E. cotteauii* sp. n. for *E. heberti* Cott., Eocene St. Palais (40); LAMBERT 1, Nice, Ann. Soc. let. sci. 20.—

*E. feiranensis* sp. n., Miocene ?, Sinai (252, pl.): *E. fraasi*, measured; GREGORY Geol. Mag., London, n. ser., dec. V, 3 (252).—*E. franeei* Desm. non Desor, nec Sism., descr.; LAMBERT 1 (38, pl.).—*E. globulus*, measurements; GREGORY (251).—*E. quebhardi* sp. n., Burdigalian, Vence; LAMBERT 1, Nice, Ann. Soc. let. sci. 20, (36, pl.).—*E. heberti* (Cott. sub *Pygaulus*) restored for *E. franeei* Desm non Desmoulin; op. cit. (40).—*E. hemisphaericus* discussed; LAMBERT 1 (39) and 8 (91, fig.): var. *linkii*, incl. var. *rhomensis*, measured; VADASZ (331).—*E. aff. insignis*; GREGORY (253).—*E. italicus* sp. n. for *E. hemisphericus* Manzoni non Lam.; LAMBERT 8, Paris, Mem. Soc. Geol., Paleont., 14, (93).

*Echinolampas* [continued].—*E. koenigi*, synonymy; LAMBERT 1 (28).—†*E. laurillardii*, mere var. of *E. hemisphericus*; LAMBERT 8 (92).—*E. ovata*, measured; DOEDERLEIN 2 (240).—†*E. plagiostomus*; NELLI: discussed; LAMBERT 1 (38, pl.).—*E. richardi*; †LAMBERT 8 (92): distinguished and measured; DOEDERLEIN 2 (240).—†*E. savini* sp. n., Burdigalian of Provence, also young; LAMBERT 1, Nice, Ann. Soc. let. sci. 20, (34, pl.).—†*E. scutiformis*; LOIACONO (6, 19): discussed; LAMBERT 1 (37).

*Echinometra lueunter*; †GREGORY (253): DOEDERLEIN, 2 (233).—*E. mathaei*; loc. cit.

†*Echinopedina ameghinoi*; AMEGHINO (172).

*Echinothrix*, radiolae discussed (166, fig.): *E. calamaris* and *E. diadema*, pedicellaria (168, fig.); DOEDERLEIN, 2.

†*Echinothuria floris*; SOHRIG (293).

*Echinothuridae*; DOEDERLEIN, 2 (120).

*Echinotrochus* Pomel non Van Phelsum, syn. of *Rotula*; LAMBERT 8 (126).

*Echinus*, discussed (203, 210); DOEDERLEIN, 2.—*E. acutus*; CUENOT: CHECCIA, 2 (89): distrib.; DOEDERLEIN, 2 (212).—*E. aafinus*, distrib.; loc. cit.—†*E. batheri* sp. n., Pleistocene, Ficarazzi, Sicily; CHECCIA 2 (pl. iv).—*E. brevispinosus*; FISCHEL 1 and 2. — *E. cidaris*; DOEDERLEIN, 2 (99).—*E. diadema*, discussed; KOEHLER 5 (38).—†*E. duciei* is *Schizechinus*; LAMBERT 8 (74).—*E. elegans*, distrib.; DOEDERLEIN, 2 (211).—*E. esculentus*; JOHNSTONE (241): anat.; MACBRIDE 2 (504).—*E. gilchristi*,

distrib. (213, pls.), descr. (215), var. *hirnsuta* Agulhas current, descr. (olim *E. hirsutus* Doed.) (213); DOEDERLEIN, 2.—†*E. hungaricus*; VADASZ (329)—*E. magellanicus*; KOEHLER 4: (30), discussed (35); KOEHLER 5: vide etiam *Notechinus*.—*E. margaritaceus*; KOEHLER 4: Lam., as interpreted by A. AGASSIZ, redescri. from Booth-Wandel Id., Mortensen's views discussed; KOEHLER 5 (30, pls.): vide etiam *Sterechinus*.—*E. melo*; CHECCIA, 2 (89).—*E. microtuberatus*; DRAGO: DRIESCH 2; HERBST 1: LO BIANO (92); PETER: vide etiam sub *Parechinus* et *Psammechinus*.—*E. militaris*; JOHNSTONE (230, 241).—*E. variegatus* Lam., the type is a *Tripeustes*; LAMBERT 8 (66).—†*E. verruculatus* (?); GREGORY (253).

†*Encope tetetlaensis* sp. n. Pliocene, Tuxtepec division, Sta. Maria Tetetla, Mexico; BOESE 1, Mexico, Bol. Inst. geol., 22, 1906, (71, pls. vi, vii), and 2 (5).

†*Epiaster*, —*E. gibbus*; BRYDONE (127): range; SHERBORN (32).—*E. nutrix*; LAMBERT in BOULE & THÉVENIN (10, pl. ii).—*E. ricordeani*; JACOB & TOBLER (19).

*Eupatagus* Ag., not to be corrected to *Euspatangus*; LAMBERT 5.

†*Euspatangus croizieri*; LEMOINE (256).

*Faorina* discussed; LAMBERT 8 (101).

†*Fibularia acuta*; TOKUNAGA.—†*F. volva*; GREGORY (254).

†*Galerites*, — vide etiam *Conulus* et *Echinoconus*, —*G. globulus*; BURNET.—*G. subnculus*; COMBES (464).—*G. thomasi*; GREGORY (226).

†*Galerolampas* discussed; LAMBERT 8 (95).

*Genocidaris* (189): *G. maculata* descr. (198, pls.); DOEDERLEIN, 2.

†*Giropygus* Gauthier, rejected; LAMBERT in MEUNIER 2 (235).

†*Gitolampas* discussed; LAMBERT 8 (95).—*G. tunetana* (Gauthier sub *Pliolampas*); LAMBERT in MEUNIER 2 (234).

*Glyphocyphinae*, vide *Temnechininae*.

*Glyptocidaris crenularis* (A. Ag. sub *Phymosoma*), descr.; DOEDERLEIN, 1 (520).

*Goniocidaris* discussed (97), diagnosed (102); DOEDERLEIN, 2.—*G. jorgensis*; AMEGHINO (172).

†*Goniopygus*, restricted with *G. mediterraneus* as type (280): *G. intricatus* discussed and referred to *Polygoniopygus* (281); *G. peltatus* (299); VALETTE 2.

†*Gregoryaster* gen. n. of *Spatangiidae*, for *Schizaster grateloupi* Sison., *Pericosmus coranguinum* Greg., and *P. arpadis* Pavay; LAMBERT 1. Nice, Ann. Soc. l. sci. 20 (45).

†*Guettaria rocardi*; LEMOINE (224, 225, 227).

*Gymnocidaris* (100), diagnosed (101); DOEDERLEIN, 2.

*Gymnopatagus*, diagnosed (266): *G. valdiviae*, descr. (266, pls.); DOEDERLEIN, 2.

†*Hagenowia rostrata*, range; SHERBORN (33).

*Heliophora* Ag., limited, and distinguished from *Rothloidea*; LAMBERT, 8 (126).

†*Hemaster* discussed; LAMBERT 8 (101).—†*H. sp.*; LAMBERT in BOULE & THÉVENIN (11, pl. ii).—†*H. africanus*, *battrensis* [sic], et *blanckenhorni*; GREGORY (248).—*H. cavernosus*, incl. *H. gallegosensis* and *Tripylus excavatus*, pediculariae; DOEDERLEIN, 2 (248, pl.).

†*Hemaster* [continued].—*H. chargensis*, Tripoli; KRUMBECK (90, pl.).—*H. chauveneti*; GREGORY (248).—*H. aff. cristatus*; BURCKHARDT (211, pl.).—*H. dalli*, referred to *Opissaster*; FOURTAU, (143).—*H. forbesi* Baily, descr.; WOODS (280, pl.).—*H. fourneli* (247).—*H. jullieni* (248); GREGORY.—*H. kalksburgensis*; VADASZ (333, pl.).—*H. minimus*; JACOB & TOBLER (22): range; SHERBORN (33).—*H. nicesei*; GREGORY (248).—*H. numidicus*; DOUVILLE, R. (77).—*H. phrynus*; LEMOINE (206).—*H. pseudo-fourneli*, measured; GREGORY (247).—*H. pullus*; BURCKHARDT (211, pl.).—*H. saadensis*; GREGORY (248).—*H. sudanensis*, age discussed; KRUMBECK (91, 134).

*Hemicaster* [contd.].—*H. zonatus*? Rockall, pediculariae; DOEDERLEIN, 2 (247, pl.).

*Hemicidaridae*, genn. nn. vide *Polygoniopygus*, *Cyphopygus*; VALETTE 2.

†*Hemicidaris crenularis*, incl. *Hemicidaris tuberculosa*, as young; SÉGUIN 1 (figs.), and 2.

†*Hemicodiopsis* rejected; VALETTE 2 (291).

$\dagger$ *Hemiheliopsis* gen. n. of *Scutellidae Rotuliniae* (127) with genotype *H. fonti* sp. n. Pleiocene, El Rostel, Rio d'Oro, W. Africa. (128, pl.); LAMBERT 8, Paris, Mem. Soc. Geol., Paleont., 14.

$\dagger$ *Hemipatagus* maintained; LAMBERT 1 (48).—*H.* cf. *hofmanni*; NOSZKY (468).

*Hemipedina* discussed (282, 301, 311), defined with list of spp. (287):  $\dagger$ *H. giganteensis*, ambulacrals (302);  $\dagger$ *H. iauensis*, ambulacrals (301);  $\dagger$ *H. letteroni* (302); VALETTE 2.— $\dagger$ *H. mairei*; Maire. —*H. mirabilis*, descr., incl. *H. indica* Meij.; DOEDERLEIN, 2 (174, pls.).

$\dagger$ *Hemipygus tuberculosus* is young of *Hemicidaris crenularis*; SÉQUIN (figs. 1 and 2).

$\dagger$ *Heterobrissus formae*; BELLINI (649).

$\dagger$ *Heterocentrotus mammillatus*; GREGORY (253).

$\dagger$ *Heteroclypeus* is syn. of *Hypsoclypus* (32): *H. hemisphaericus* Greg. is an *Echinolampas*, probably the same as *Hypsoclypus doma* or *H. oranensis* (31, 38); *H. subpentagonalis* Greg. is a *Hypsoclypus* (31); LAMBERT 1.

$\dagger$ *Heterodiadema bigranulatum* sp. n., Cenomanian, Sinai; GREGORY, Geol. Mag. London, n. ser., dec. V, 3, (218, pl.). — $\dagger$ *H. libicum*, PERVERNIQUIÈRE.

$\dagger$ *Hipponeö parkinsoni*; BELLINI (641).

*Histocidaris* discussed (99), diagnosed (103): *H. elegans*, descr. (117, pls.); DOEDERLEIN, 2.

$\dagger$ *Holaster*.—*H. curinatus*, *H. laevis*; WOLLEMANN.—*H. perezi*; JACOB & TOBLER (20).—*H. placenta*; BURNET: range; SHERBORN (33).—*H. planus*; PURNET: CLAYDEN (142, pl.): large, 90 × 61 × 53 mm.; PÉROT: range; SHERBORN (33).—*H. subglobosus*; BOSWORTH (413); JUKES-BROWNE (509); WOLLEMANN.—*H. sylvaticus*; DOUVILLE, R. (78).—*H. trecensis*; BOSWORTH (416); JUKES-BROWNE (509).

*Holcopneustes*, syn. of *Hemiaster* s. str.; LAMBERT (102).

$\dagger$ *Holocryptus*, — *H. cenomanensis*, measured; GREGORY (225). *H. coralinus*; WANDERER (512, 514, 518).—*H. depressus*; PETITCLERC (68).—*H. jullieni*, measured (225); *H. larietii* (226); *H.*

*turonensis*, perhaps young of *H. crassus* (225); GREGORY.

*Hygrosoma* discussed; SCHURIG (294): diagnosed (136) spp. discussed (137), comparative measurements of spp. (144); DOEDERLEIN, 2.—*H. aethiopicum*, diagnosed, descr.; op. cit. (141, pls.): diagnosed (296), described (299); SCHURIG.—*H. hoplacanthum*, diagnosed, descr. (138, pls.): *H. luculentum* (121), diagnosed, descr. (143, pls.); DOEDERLEIN, 2.

$\dagger$ *Hypechinus patagonensis*; AMEGHINO (137, 169).

$\dagger$ *Hypsaster* aff. *convexus*; DOUVILLE, R. (77).

*Hypsiechinus* discussed; DOEDERLEIN, 2 (187–188).

$\dagger$ *Hypsoclypus* discussed; LAMBERT 1 (30).

*Hypsopatagus* not to be corrected to *Hypsopatangus*; LAMBERT 5.

$\dagger$ *Hypsopatangus peroni*; NELLI.

$\dagger$ *Iheringina patagonensis*; AMEGHINO (137–169).

$\dagger$ *Insulauster boulei*; LEMOINE (227).— $\dagger$ *I. excentricus*; BURNET: range; SHERBORN (32).

*Irregularia*, order of *Diadematiformia*, with sub-ordd. *Clypeastroidea*, *Spatangoidea*; DOEDERLEIN, 2 (87).

$\dagger$ *Isechinus praecursor*; AMEGHINO (137, 169).

$\dagger$ *Ieolampas* Lambert, section of *Echinolampas*, with type *E. goujoni*; LAMBERT 1 (33).

*Kleinia* as subgenus of *Brissopsis*; LAMBERT 8 (107).

$\dagger$ *Koilospatangus* gen. n. of *Spatangidae* for *Perispatangus* Fourtau 1905, non *Peripatagrus* Koehler 1895; LAMBERT 5 Rev. paleozool., Paris, 10, (185).

*Laganum*, —  $\dagger$ *L. decagonalis*; TOKUNAGA.—*L. depressuns*; HERDMAN 3 (448):  $\dagger$ GREGORY (254).

$\dagger$ *Lampadaster grandidieri*; LEMOINE (225, 227).

$\dagger$ *Lampadocorys dallagoi* (Airaghi sub *Stegaster*); AIRAGHI (110, pl. iv).

*Lamprechinus*, diagnosed (189): *L. nitidus*, descr. (190, pls.); DOEDERLEIN, 2.

*Leiocidaris*, syn. of *Phyllacanthus*; DOEDERLEIN, 2 (100).—†*L. sismondai*, radioles, distinction from *Cidaris avenio-nensis*; LAMBERT 1 (3), and 8 (65).

†*Leptechinus* Törnquist [i.e. Törnquist] is syn. of *Perischodomus*; THIÉRY 1: is *Tornquistellus*; THIÉRY 2 and BATIER 2.

*Leucaster*, syn. of *Hemaster* s. str.; LAMBERT 8 (102).

*Linthia*, no constant difference from *Hemaster*; GREGORY (249).

†*Linthia*.—*L. conica* mut. n. *engolismensis*, Turonian of Charentes, olim *L. oblonga* Auctt. (170, pl.); *L. duncani* sp. n. Cenomanian? Wady Budra, Sinai, ?= *L. oblonga* d'Orb. pars. (162, pl.); FOURTAU, Cairo, Bull. Inst. Egypt (ser. 4), 6. —*L. gaudryi*; AMEGHINO (137, 169).—*L. insolita* sp. n., Lower Turonian, Batna, Algeria; FOURTAU, Cairo, Bull. Inst. Egypt, ser. 4, 6 (168, pl.).—*L. joannis böhmi*; AMEGHINO (51).—*L. locardi*: *L. cf. lorioli*; NELLI.—*L. oblonga*, variations discussed, compared with *Hemaster*; GREGORY (249); d'Orb., cotypes descr., species imaginary; FOURTAU (158).—*L. roachensis*?; GREGORY (248).

*Linthia* [contd.].—*L. rotundata* sp. n. Chatham Id., 20 M.; DOEDERLEIN, 2, Wiss. Ergeb. D. Tiefsee-Exped. Bd. 5, Lfg. 2 Jena (249, pls.).—†*L. verneilli* var. n. *batnensis*, Turonian, Algeria, olim *L. oblonga* Auctt.; FOURTAU, Cairo, Bull. Inst. Egypt, ser. 4, 6 (165, pl.).

*Lovenia elongata*; †GREGORY (255): pedicellariae; DOEDERLEIN, 2 (265, pl.).

*Loxechinus gibbosus*, is *Toxocidaris*; DOEDERLEIN, 2 (202).

†*Lysechinus*, discussed; DOEDERLEIN, 2 (183).

*Lytechinus* syn. of *Anapesus*; LAMBERT 8 (68).

†*Macrolampas* sectio n. of *Echinolampas*, with type *E. hemisphaerius*; LAMBERT 1, Nice, Ann. Soc. lèt. sci. 20 (33).

*Marcia elevata* sp. n., Wituland, E. Africa, 693 M.; DOEDERLEIN, 2, Wiss. Ergeb. D. Tiefsee-Exped. I'd. 5, Lfg. 2, Jena (263, pls.).—†*M. guebhardi*: †*M. ocellata*, discussed, is *Hemipatagus*; LAMBERT 1 (47).—†*M. omaliusi* Galeotti = *M. grignonensis* (Desmar.) Cott.; LERICHE (402).

*Meijereea* gen. n. of *Ananchytidae* [*Echinocorytidae*] (242) with genotype *M. humilis* (Meij. sub *Phriessocystis*) descr. (243, pls.); DOEDERLEIN, 2.

†*Menuthiaster* *cotteaui*; LEMOINE (227).

*Meoma* diagnosed; LAMBERT 8 (106).

†*Merolampas* Pomel, defined as section of *Echinolampas*; LAMBERT 1 (33).

*Metalia* diagnosed; LAMBERT 8 (106).

†*Micraster*,—*M. coranguinum*; BRYDOME (127, 129): range; SHERBORN (32).—*M. corbovis*; BURNET: range; SHERBORN (32).—*M. cortestudinarium*; BURNET: CLAYDEN (142, pl.): range; SHERBORN (32).—*M. leskei*; BURNET: range; SHERBORN (32).—*M. meunieri*; LEMOINE (227).—*M. praecursor*, range; SHERBORN (32).

†*Micropedina bipatellis* sp. n., Cenomanian, Sinai; GREGORY, Geol. Mag. London, n. ser., dec. v, 3 (220, pl.).

*Micropyga tuberculata*, descr.; DOEDERLEIN, 2 (169, pls.).

†*Milletia ficheuri* (Pomel sub *Plesiolampas*) descr. from Barcelona; LAMBERT 8 (95, pl.).

†*Milnia* Haime et *Milnia* Pomel rejected; VALETTE 2 (296).

†*Miolampas* Pomel, defined as section of *Echinolampas*; LAMBERT 1 (33).

*Miotoxaster* discussed; FOURTAU (141).

†*Moira guebhardi* sp. n., Burdigalian, Vence; LAMBERT 1, Nice, Ann. Soc. lèt. sci. 20, (53, fig.).

*Moiropsis* diagnosed; LAMBERT 7 (113)

†*Monodiadema* *cotteaui*; PERVINQUIÈRE.

†*Monophora darwini*; AMEGHINO (169, 255, 265, 266).

*Mortensenia oblonga*, distrib., relations to *Echinometra maihaei*, seu *lucunter*; DOEDERLEIN, 2 (233, pl.).

*Neolampas rostellata*, distrib., pedicellariae; DOEDERLEIN, 2 (241, pl.).

†*Noelingia* discussed (13): *N. boulei* sp. n. Upper Scenonian, E. Madagascar (11, pl. ii); LAMBERT in BOULE & THÉVENIN, Ann. Paléont., Paris, 1.—*N. monteili*, age discussed; KRUMBECK (134).

*Noetlinginae*, trib. nov. of *Echinidae*; LAMBERT in BOULE & THÉVENIN (13).

*Notechinus*, diagnosed (226), *N. magellanicus* (217), descr. (227, pls.) var. n. *hassleri* (229), var. n. *novae-americaniae* (229); DOEDERLEIN, 2.

†*Nucleolites* [vide etiam *Echinobrissus*].—*N. daglensis*, measured (246); *N. gibbosa* (246); *N. meslei*, measured (247); *N. waltheri* (246); GREGORY.

†*Ofaster pilula*, range; SHERBORN (33).

*Oligophyma* syn. of *Anapesus*; LAMBERT 8 (67).

*Opechinus*; DOEDERLEIN, 2 (189).

†*Opissaster* discussed; LAMBERT 8 (102).—*O. almerai* sp. n., Burdigalian, Vence; LAMBERT 1, Nice, Ann. Soc. let. sci. 20, (43): descr. fr. Barcelona and Sardinia; LAMBERT 8 (100, pls.).—*O. morgani* is a *Heliaster*; op. cit. (103).

*Orechinus* (189), diagnosed (196), *O. monolini*, descr. (196, pls.); DOEDERLEIN, 2.

†*Orthopsis* discussed; VALETTE 2 (288).—*O. cf. miliaris*; PARONA.—*O. ruppelii*, incl. *O. zumoffeni*, apical system; FOURTAU, (154, pl.).

†*Ova canalifera* Gray, vide *Schizaster bononiensis*.

*Palaeolampas*, discussed (236); DOEDERLEIN, 2: Bell, defined as section of *Echinolampas*, with type *E. hoffmanni*; LAMBERT 1 (33).—*P. chuni*, descr. (239, pl.) measured (241); *P. crassa*, descr. (236, pl.) measured (241); *P. sumatrana*, descr. (238, pl.) measured (241); DOEDERLEIN, 2.

*Palaeopneustes miasicus*, descr.; DOEDERLEIN, 2 (245, pls.).

*Paracentrotus*, diagnosed (207); *P. agulhensis*, descr. (207, pls.); *P. gaimardi* (209); DOEDERLEIN, 2.—*P. lividus*; CUENOT: DELAGE, 2: DOEDERLEIN, 2 (209).—*KIERNIK*: polarity of ovum; GARBOWSKI: vide etiam sub *Strongylocentrotus*.

*Paraster* as subgenus of *Schizaster*; LAMBERT 8 (112).

*Parechininae*, discussed; DOEDERLEIN, 2 (202).

*Parechinus* is syn. of *Psammechinus* (q. v.); LAMBERT 8 (67).—*P. angulosus*, is *Protocentrotus*; DOEDERLEIN, 2 (202).—*P. microtuberculatus*; CUENOT: KIERNIK: vide etiam sub *Echinus* et *Psammechinus*.

†*Paronaster* gen. n. (107) with genotype *P. cupuliformis* sp. n. (108, pl. iv), Senonian of Novale, Venetia; AIRAGHI, Milano, Atti Soc. Ital. sc. nat. 45.

†*Peltastes studeri*; JACOB & TOBLER (20).

†*Pericosmus*,—*P. cf. callosus*; NELLI: *P. edwardsii*; BELLINI (641): *P. latus*; LAMBERT 8 (104): Ag., descr., distinguished from *Schizaster grataleoupi*; LAMBERT 1 (43, pl.).—*P. orbignyi*; BELLINI (641).—*P. pedemontanus*; op. cit. (649): NELLI.—*P. cf. spatangoides*; NELLI.

†*Perisalenia* gen. n. of *Aerosalenidae*, for *Aerosalenia gaithieri*, lowei, lamareki, lamberti, pulchella, bradfordensis, libyca (276); *P. cotteaui* sp. n. for *Aerosalenia boloniensis* Cotteau, pl. 253, ff. 3, 4 (278): *P. lamberti*, ambulacrals (297); VALETTE 2, Auxerre, Bul. soc. sci. Yonne, 59.

†*Perischodomus* vide *Tornquistellus*.

*Perispatangus* vide *Koilospatangus*.

*Peroniaster* maintained; LAMBERT 8 (102).

*Petalocidaris*, discussed; DOEDERLEIN, 2 (97).

†*Phalacropedina guerangeri*, ambulacrals; VALETTE 2 (302).

*Phromosoma* (293) discussed; SCHURIG: diagnosed, spp. discussed; (125): *P. adenicum*, diagnosed (128), descr. (134) measured (135, pls.): *P. bursarium*, diagnosed (128) measured (136); DOEDERLEIN, 2.—*P. hoplactis*, movements; DOFLEIN (269 fig.).—*P. indicum*, diagnosed (296), described (297, fig.); SCHURIG: diagnosed (128) descr. (130, pls.) measured (136) var. (133, pls.); DOEDERLEIN, 2.—*P. placenta*, diagnosed, descr. (128) measured (135): *P. sigsbei*, diagnosed (128) measured (135); DOEDERLEIN, 2.

*Phrissoecystis humili*, vide *Meijerea*.

*Phyllacanthus* discussed (98), name (100), diagnosed (103); DOEDERLEIN, 2.—*P. imperialis* discussed, pedicillariae figd.; op. cit. (98): †LEMOINE (253, 256, 262): †GREGORY (253).

*Phymosoma crenulare*, vide *Glyptocidaris*.

†*Piliscus* rejected; VALETTE, 2 (291).

*Plagiopneustes* criticised; LAMBERT 5.

†*Plagiopygus* discussed (234), *P. daradensis* (233, fig.); LAMBERT in MEUNIER 2.

†*Platypygus posthumus*; AMEGHINO (137, 169).

†*Plegiocidaris gourdonensis* sp. n., Barremian of Gourdon, Alpes-Marit., radioles; SAVIN & LAMBERT, Nice, Ann. Soc. let. sci. 20, (96, fig.).

*Plesiaster* as section of *Briassopsis*; LAMBERT 8 (106).

*Plesiodiadema* rejected; DOEDERLEIN, 2 (157).

†*Plesiolampas saharae*; KRUMBECK (135).

†*Plesiosalenia* gen. n. of *Acrosalenia*, for *Acrosalenia pentagona*, *berthelini*, *boloniensis*, *lycetti* (275): *P. lycetti*, juv. (297); VALETTE 2 Auxerre, Bul. soc. sci. Yonne, 59.

*Plesiospatangidae* rejected; LAMBERT 5.

†*Pliolampas* discussed; LAMBERT 8 (95).—*P. silvestrii*; NELLI.

†*Pliotoxaster* gen. n. of *Spatangidae* (140) with genotype *P. lyonsi* sp. n., Cenomanian, Isthmus of Suez; FOURTAU, Cairo, Bull. Inst. Egypt, ser. 4, 6, (145, pl.).

†*Polygonyiopygus* gen. n. of *Hemicidaridae*; with genotype *Goniopygus pilleti* Cott., and comprising *intricatus*, *minor*, and *heteropygus* (281): *P. intricatus* distinguished from *Goniopygus peltatus* (298); VALETTE, 2, Auxerre, Bull. soc. sci. Yonne, 59.

*Porocidaris* discussed (99), diagnosed (103): *P. gracilis*, is *Goniocidaris*, (97): *P. purpurata* (99), from Nicobars (117, pls.); DOEDERLEIN, 2.

*Pourtalesia jeffreysi*, pediculariae; DOEDERLEIN, 2 (260).—*P. laguncula*; DOFLEIN (253, fig., 269).—*P. miranda*; BATHER, 1.

*Prionechinus* (189, 191), discussed (187): *P. agassizi*, diagnosed (192), descr. (194, pls.): *P. chuni* sp. n., Maldives, descr. (192, pls.): *P. sagittiger*, diagnosed (192), descr. (195, pls.); DOEDERLEIN, 2, Wiss. Ergeb. D. Tiefsee-Exped. 5, Lfg. 2.

†*Proraster*, discussed; FOURTAU, (145): maintained, with *Schizaster atavus* Arnaud as genotype; LAMBERT 8 (103).

†*Prospatangus*, ambulacra discussed (48): *P. corsicus*, periplastronal zones (50): *P. delphinus*, periplastronal zones (49, pl.): *P. pusulosus* (Wr.) descr. from Burdigalian of Vence (51, pl.): *P. simplex* (50, pl.); LAMBERT 1.

*Protocentrotus*, gen. n. of *Echinidae*, with genotype *Echinus angulosus* Leske, descr.; DOEDERLEIN, 2, Wiss. Ergeb. D. Tiefsee-Exped. 5, Lfg. 2, (201, pls.).

*Psammechinus*, discussed, its type is *P. miliaris* not *E. variegatus* or *E. blainvilliei* (66): *P. blainvilliei* is *Anaptesus* (q. v.) (67): †*P. delphinus* sp. n. ex Debrance MS. Burdigalian of Barcelona (71, pl.); LAMBERT 8, Paris, Mem. Soc. geol. paleont. 14.—|*P. dubius*; CHECCHIA 2 (pl. iv): synonymy, var. n. *formosa* from Helvetician, Barcelona (69, pl.): †*P. eravensis* sp. n., Tortonian, l'Hérault, = *Echinus milarius* de Serres non Lam. (70): †*P. gauthieri* (70); LAMBERT 8, Paris, Mem. Soc. geol. paleont. 14.—†*P. iheringi* (137, 168): †*P. lahillei* (168); AMEGHINO.—†*P. michelotti*, descr.; VADASZ (329, pl.): *P. microtuberculatus*, var. nov. *alta*; CHECCHIA, 2, Palaeontographia Ital., Pisa, 12, (90, pl. iv): vide etiam sub *Echinus* et *Parechinus*.—†*P. pusillus* Münster; PICARD (761).—†*P. serresii* Desmoulins is Maestrichtian (72): Desor non Desm., is a large *P. dubius* (70); LAMBERT 8.—†*P. tournoueri*; AMEGHINO (137, 168).—*P. variegatus* Ag. non Lam., syn. of *P. blainvilliei* (Desm.); LAMBERT 8 (66).

*Pseudechinus*, diagnosed, *P. albocinctus*, descr. (231, pls.); DOEDERLEIN, 2.

*Pseudocentrotus depressus*, descr.; DOEDERLEIN, 1 (519).

†*Pseudocodiopsis* gen. n. of *Diadematidae* with genotype *Codiopsis alpina*, and comprising *C. arnaudi*; VALETTE 2, Auxerre, Bul. soc. sci. Yonne, 59, (290).

†*Pseudodiadema*,—*P. griesbachii* sp. n., Senonian, Pondoland; Woods, Cape Town, Ann. S. African Mus., 4; (276, pl.);—*P. morieri*; MAIRE.—*P. variolare*; WOLLEMAN.

†*Pseudoplopodia* [sic] gen. n. of *Diplopodiidae* for *Diplopodia* with only 3 porepairs to each major, no genotype, *P. callioniensis* (d'Orb. sub *Diadema*) first sp. mentioned (294): *P. austro-dorensis*, ambulacrals (309): *P. peroni*

**sp. n.** for *Pseudodiadema aequalis* Pal. franc. pl. 342 non. 341 (294); VALETTE 2, Auxerre, Bul. soc. sci. Yonne., 59.

*Psilechinus* syn. of *Anapesus*; LAMBERT 8 (68).

†*Pygaulus heberti*, vide *Echinolampas*.

*Pygmaeocidaris*, diagnosed, compared with *Tiarechinus* (182): *P. prionigera*, descr. (185, pls.); DOEDERLEIN, 2.

†*Pygorynchus* discussed; LAMBERT in MEUNIER 2 (234).—*P. pratti* Wr. is a *Tristomanthus*; LAMBERT 1 (42).—*P. tripolitanus* sp. n., Upper Cretaceous. Djebel Tar, Tripoli; KRUMBECK, Palaeontographica, Stuttgart, 53 (89, pl.).—*P. vassalli* Wr. is *Milletia*; LAMBERT 1 (42): discussed; LAMBERT 8 (97).

†*Pygurus*,—*P. depressus*; PETITCLERC (68).—*P. meslei*, *P. perreti*; PERVINSKIÈRE.

†*Radiolarus waechteri*; AHLBURG (46, 50, 52, 129).

*Regularia*, order of *Diadematiformia*, with sub.-ordd. *Diadematina*, *Saleniina*, *Arbaciina*, *Echinina*; DOEDERLEIN, 2 (85).

†*Rhabdocidaris*,—*R. copeoides*; PETITCLERC (69).—(*R. Leiocidaris*) *crameri*, descr.; FOURTAU (156, pl.).—*R. maxima*; WANDERER (512).

*Rhynobrissus* [sic] diagnosed; LAMBERT 8 (106).

*Rotula* discussed; LAMBERT 8 (125).

*Rotuloidea* Eth., limited; LAMBERT 8 (127).

*Salenia hastigera*, descr., incl. *S. pacifica* Doed.; DOEDERLEIN, 2 (177, pls.).—†*S. cf. lusitanica*; PARONA.—*S. patersoni*, Agulhas Bank, descr.; DOEDERLEIN, 2 (179, pls.).—†*S. scutigera*; COMBES (464, fig.); SCHUMANN & LEONHARD.—*S. rarispinosa*, pedicellariae; DOEDERLEIN, 2 (180).

*Saleniina*, sub-ord. of *Regularia*, with 1 Fam., *Saleniidae*; DOEDERLEIN, 2 (86).

*Salmacis*, relations to *Temnopleurus*. views of Mortensen; KOEHLER 3 (461).

*Schizaster* discussed and defined with genotype *S. studeri*; LAMBERT 8 (110).—†*S. ameghinoi*; AMEGHINO (137, 169).—*S. antarcticus* sp. n., Bouvet Id., 457 M. (252, pls.), measured (256); DOEDERLEIN, 2 Wiss. Ergeb. D. Tiefsee-Exped. Bd. 5 I.fg. 2—†*S. astensis* sp. n., Astian,

Italy = *S. scillae* Airaghi 1901, pl. vii [i.e. xxv] f. 3 (116, 122): †*S. barcinensis* sp. n., Burdigalian, Barcelona (118, pl.): †*S. bononiensis* sp. n., for Klein 1734, pl. xxvii, f. A, type of *Ova canalifera* Gray (116): †*S. (Aplospatangus) calceolus* sp. n. Langhian, Sardinia (118); LAMBERT 8, Paris, Mem. Soc. Geol., Paleont., 14.—*S. canaliferus*; CHECCIA, 2, (95): *pedicellariae*; DOEDERLEIN, 2 (255).—*S. capensis*, descr. (250, pls.), measured (256); op. cit.—†*S. curtus*; LAMBERT 8 (114).—†*S. deletus*; AMEGHINO (57).—†*S. desori* (113): †*S. dilatatus* sp. n., for *S. saheliensis* var. *dilatata* Pomel, Echin. Algérie, pl. x, ff. 4, 5 (123): †*S. (Aplospatangus) eurynotus*, synonymy, descr. (117); LAMBERT 8 Paris, Mem. Soc. geol. paleont. 14.—†*S. eurynotus*, discussed; LAMBERT 1 (46).—*S. fragilis*, *pedicellariae* (253, pl.). measured (256); DOEDERLEIN, 2.—*S. gibberulus*?; GREGORY (255).—†*S. gymnesiae* sp. n., Helvetician, Minorca; LAMBERT 8, Paris, Mem. Soc. Geol., Paleont. 14 (119, pl.).—*S. incertus* vide *Brissopsis lyra*-*fera*; CHECCIA, 2.—*S. japonicus*, *pedicellariae*; DOEDERLEIN, 2 (254).—†*S. karreri* var. n. *hungaricus* (333, pl.): and †*S. lovistatoi* var. n. *rakosiensis* (335, pl.): Miocene, Budapest, VADASZ, Földt. Közl. Budapest, 36.—†*S. (Brisaster) major*, descr., Barcelona (122, pl.), *S. morgadesi* sp. n., Helvetician, Barcelona (119, pl.); LAMBERT 8, Paris, Mem. Soc. Geol., Paleont., 14.—†*S. patagonensis*; AMEGHINO (169).—*S. philippii*, *pedicellariae* (252, pl.) measured (256); DOEDERLEIN, 2.—†*S. rutoti* sp. n., Pliocene, Anvers = *S. scillae* Cotteau 1880, pl. vi, f. 3; LAMBERT 7, Paris, Mem. Soc. Geol. Paleont., 14 (116).—†*S. scillae*; BELLINI (641): LOJACONO (6, 19).—†*S. ventiensis* sp. n., Burdigalian, Vence; LAMBERT 1, Nice, Ann. Soc. lét. sci. 20 (45, pl.).—*S. ventricosus*, *pedicellariae*; DOEDERLEIN, 2 (255).

*Schizechinus* maintained with genotype *S. serialis*, as s.g. of *Toxomeutes* (68): †*S. mortenseni* sp. n., Helvetician, Barcelona; LAMBERT 8, Paris, Mem. Soc. Geol. Paleont., 14, (73, pl.).

*Schizobrissus* diagnosed; LAMBERT 8 (106).

*Schizocidaris*, discussed; DOEDERLEIN, 2 (94).

†*Scutella*,—*S. almerai* sp. n., Toronian, Barcelona (78, pl.): *S. bofilli* sp. n., Helvetician, Barcelona (77, pl.); LAMBERT 8, Paris, Mem. Soc. Geol., Paleont., 14.—*S. faujasi* (5): *S. leognanensis* (5, pl.): *S. lorioli* sp. n., Miocene of Bollène, Vaucluse (5, pl.): *S. michaleti* sp. n., Miocene of Carri, Bouches-du-Rhône (6): *S. paulensis*, discussed and limited (4, pl.): *S. subtrotundaeformis*, discussed (6, pl.); LAMBERT 1, Nice, Ann. Soc. l. sci. 20.—*S. terraconensis* sp. n., Burdigalian, Barcelona; LAMBERT 8, Paris, Mem. Soc. Geol., Paleont., 14 (79, pl.).—*S. vindobonensis*; NOSZKY (468).

*Scutellidae*, subdivisions; LAMBERT 8 (124).

†*Scutolampas sectio* n. of *Echinolampas*, with type *E. plagiostomus*; LAMBERT 1, Nice, Ann. Soc. l. sci. 20 (33).

*Spatangiidae* genn. nn., vide *Gregoryaster*, *Koilospatanus*, *Pliotoxaster*.

*Spatangoidea*, sub.-ord. of *Irregularia*, with Famin 1. *Echinoneidae*. 2. *Cassidulidae*, 3. *Ananchytidae*, 4. *Spatangiidae*, 5. *Palaeostomatidae*, 6. *Pourtalesidae*; DOEDERLEIN, 2 (87).

*Spatangus* discussed and defined with genotype *S. canaliciferus* = *Schizaster* Auct.; LAMBERT 8 (110).—†*S. bottonicai*; BELLINI (641, 649).—*S. capensis*, descr. (261, pls.): *S. luetkeni*, measured (263); DOEDERLEIN, 2.—†*S. manzoni*; NELLI.—*S. purpureus*; CHECCHIA, 2 (95): CUENOT: HENRI: HENRI & KAYALOF: distrib. (260, pls.) pedicellaria (262), measured (263); DOEDERLEIN, 2.—*S. raschi*, measured; l.c.

*Sperosoma*, diagnosed, spp. discussed (145), comparative measurements of spp. (157); DOEDERLEIN, 2.—*S. biseratum* (295, 296), descr. (299); SCHURIG: diagnosed, descr.; DOEDERLEIN, 2 (150, pls.).—*S. durum*, diagnosed, descr.; op. cit. (153, pls.).—*S. grimaldii*; SCHURIG (294): diagnosed, descr., also young; DOEDERLEIN, 2 (147, pls.).

*Sphaerechinus granularis*; BRIOT, 3: CERNOVODEANU & HENRI: FISCHEL 1 and 2: HENRI & KAYALOF: HERBST 1 and 2: LO BIANCO (91): variations;

CHECCHIA, 2 (92, & † pl. iv).—†*S. scillae* sp. n., Pleistocene, Ficarazzi, Sicily; op. cit. (pl. iv).

†*Stegaster*; BRYDONE (14).—*S. dallagoi* referred to *Lampadocorys*; AIRAGHI (110).

*Stephanocidaris*, discussed (92) diagnosed (101): *S. bispinosa* (93): *S. bracteata* (94); DOEDERLEIN 2.

*Sterechinus* discussed; KOEHLER 5 (36): diagnosed and discussed (217): *S. antarcticus*, diagnosed (219): *S. diamena*, diagnosed (219), descr. (225, pls.): *S. horridus*, diagnosed (219), descr. (220, pls.), juv. (222), measured (226): *S. margaritaceus*, discussed (218), descr. (224, pls.), measured (226): *S. nemayeri*, diagnosed (219); DOEDERLEIN, 2.

*Stereocidaris*, discussed (96), diagnosed (102), comparative measurements of all recent spp. (116): *S. canaliculata* (96): *S. capensis* sp. n., olim *S. indica* var. *capensis*, redescr. (110, pls.): *S. indica*, distrib. (104, 109, pls.), with var. nn. *africana*, Somali coast (107, pls.), *carinata*, Somali coast (108, pls.), *integra*, Somali coast (105, pls.), & *sumatrana*, N. Sumatra (109, pls.): *S. ingolstiana* (110): *S. nutrix* (96): *S. tricarinata* sp. n., olim *S. indica* var. *tricarinata* (112, pls.), var. nn. *teretispina*, Siberut Id. (115, pls.); DOEDERLEIN, 2. Wiss Ergeb. D. Tiefsee-Exped., Bd. 5, Lfg. 2, Jena.

*Stereosomata*, Tribus of *Diadematina*, with Families 1. *Aspidodiematidae*, 2. *Diadematidae*, 3. *Micropygidae*, 4. *Pedinidae*; DOEDERLEIN, 2 (86).

†*Stomechinus*,—*S. heberti*; PETIT-OLERC (70).—*S. perlatus*; WANDERER (512).—*S. polyporus*, *S. serratus*; MAIRE.

*Streptosomata*, Tribus of *Diadematina*, with 1 Fam. *Echinothuridae*; DOEDERLEIN, 2 (86).

*Strongylocentrotus droebachiensis*; DERJUGIN (149): †WILSON (725): var. n. *sachalinica*, coast of Sachalin; DOEDERLEIN, 1 (517).—*S. franziscanus*; KUPELWIESER.—*S. hokkaidensis* sp. n., N. Japan and Vladivostok (518): *S. intermedius*, descr. (517); DOEDERLEIN, 1.—*S. lividus*; BRIOT, 3; DRAGO: FISCHEL.

**1** and **2**: HENRI & KAYALOF: HERBST  
**1** and **2**: LO BIANCO (92, 93); MARCUS:  
 PRIBRAM: variations; CHECCHIA, 2 (92,  
 & † pl. iv.); vide etiam sub *Paracentrotus*.  
 —*S. pulcherrimus*, descr.; DOEDERLEIN,  
**1** (516).—*S. purpuratus*; KUPELWIESER:  
 LOEB **2**, **3**, **5**, **6**.—*S. tuberculatus*;  
 DOEDERLEIN **1** (519, 521).

*Temnechininae*, discussed, key to genera;  
 DOEDERLEIN, **2** (188).

*Tenmopleuridae*, discussed; DOEDER-  
 LEIN, **2** (187).

*Tenmopleurinae*; DOEDERLEIN, **2** (188).

*Tenmopleurus*, discussed (461): *T.  
 perezi* sp. n., Red Sea (460, fig.);  
 KOEHLER, **3**, Bul. Muséum, Paris, **1905**.—  
*T. reevesi*, descr., variations; DOEDER-  
 LEIN, **2** (200, pls.).—†*T. torenumaticus*;  
 TOKUNAGA.

*Thylechinus quincuncialis* sp. n. (222,  
 pl.) and *T. trigranulatus* sp. n. (223, pl.):  
 Cenomanian, Sinai; GREGORY, Geol.  
 Mag., London, n. ser., dec. v, 3.

†*Thylosalenia* Poinel as subgenus of  
*Aerosalenia*, made gen. n. with genotype  
*T. patella*; VALETTE **2**, Auxerre, Bul. soc.  
 sci. Yonne, **59** (276).

†*Tiarechinus*, discussed; DOEDERLEIN,  
**2** (183).

†*Tornquistellus* Berg (= *Leptechinus*  
*Tornquisti*) is syn. of *Perischodomus*;  
 LAMBERT **7**: vide etiam sub *Leptechinus*.

†*Toxaster*,—*T. collegnoi*, referred to  
*Pliotoxaster* (q. v.); FOURTAU (140).—  
*T. complanatus*; ANDRUSOV (82): Fritel  
 (147, fig.).—*T. dieneri*, referred to  
*Miotoxaster* (142): *T. radula*, referred to  
*Pliotoxaster* (q. v.) (140): “*T.  
 radula*” Cenomanian of Beharieh oasis  
 is a Hemiasterid (147); FOURTAU.

*Toxobrissus*, syn. of *Briassopsis*;  
 LAMBERT, **8** (105).

*Toxocidaris crassispina*, *T. globulosa*,  
*T. nuda* (518): *T. purpurea* (520);  
 DOEDERLEIN **1**.

†*Toxopatagus italicus*; CHELUSSI  
 (296).

*Toxopneustes* incl. *Boletia*; LAMBERT  
**8** (69).—†*T. pileolus*; GREGORY (253).

*Trachyaster* syn. of *Hemiaster* s.str.;  
 LAMBERT **8** (101).

†*Trachyspatagus tuberculatus*, dis-  
 cussed; LAMBERT **8** (120).

*Tretocidaris*, discussed (92), diagnosed  
 (101); DOEDERLEIN, **2**.

*Trigonocidaris*; DOEDERLEIN, **2** (189).

†*Tripneustes gahardensis* sp. n. for  
*Hipponeoe parkinsoni* var. *gahardensis*  
 Seunes, Miocene, Bretagne; descr. from  
 Helvetician, Barcelona; LAMBERT **8**, Paris,  
 Mem. Soc. Geol., Paleont., **14**, (75, pl.).

*Tripylus* discussed; LAMBERT **8**  
 (101).—*T. excavatus*, vide *Hemiaster  
 cavernosus*.

†*Tristomanthus*, discussed; LAMBERT  
**1** (41) and **8** (95).—*T. lorioli* sp. n.,  
 Burdigalian, Vence; LAMBERT **1**, Nice,  
 Ann. Soc. let. sci. **20**, (41, pl.).

†*Verbechia* Fritsch, provisionally  
 accepted; LAMBERT **8** (107).

*Zeugaster sectio* n. of *Briassopsis*, with  
 type *B. lamberti* Gauth.; LAMBERT **8**,  
 Paris, Mem. Soc. Geol., Paleont., **14**  
 (106).

#### D. ASTEROIDEA.

*Asteroidea*, classification of Orders  
 and families; FISHER **3** (990).—Perrier's  
 Orders accepted because corresponding  
 with habits; MACBRIDE **2** (461).

*Alexandraster inflatus* sp. n. ca. 140  
 m. Monterey B., Calif.; FISHER **2**, Zool.  
 Anz., Leipzig, **30**, (300).

*Anasterias tenera* sp. n., Antarctic;  
 KOEHLER **4**, Bul. Muséum, Paris, **1905**,  
 (464); descr., also young; KOEHLER **5**  
 (12, pls.).

*Anseropoda*, name discussed; *A.  
 insignis* sp. n., 143 fm., Hawaiian Is.;  
 FISHER, **3**, Washington, Bull. U. S. Fish  
 Comm., **23**, (1088, pl.).

*Anseropodidae* fam. n. of *Spinulosa*,  
 = *Palmipedinae* (1087), transferred to  
*Cryptozonia* (990); FISHER, **3** Washing-  
 ton, Bull. U. S. Fish Comm., **23**.

*Antheniaster epixanthus* sp. n., 178  
 fm., Hawaiian Is.; FISHER, **3** Wash-  
 ington, Bull. U. S. Fish Comm., **23** (1067,  
 pls.).

*Archaster typicus*; FISHER, 3 (1045).

*Asteracanthion helianthus*; BOUVIER, 1.—*A. rubens*; STIEREN (271).

*Asterias*,—†*A. annulosa*; SCHOENDORF 2 (255).—*A. forbesii*; KING: MATHEWS 1 and 2; TENNETT & HOGUE. —*A. glacialis*; DRAGO. —*A. linckii*; DERJUGIN (94, 149).—*A. papposa* LINNAEUS Syst. Nat. xi; BELL.—†*A. pustulata*, (257), see also *Sphaerites*; SCHOENDORF 2.—*A. tenuispina*, genotype of *Stolasterias*; FISHER, 1.—*A. rubens*; BOHN: JOHNSTONE (239, 241): Japan; DOFLEIN: anat.; MACBRIDE 2 (432): nerve-system, &c.; MEYER.—*A. rubens violacea*; DERJUGIN (149).—†*A. scutata* (252, 254); †*A. stellifera*, probably marginals of *Sphaerites scutatus* (252, 255, 257, 265, fig.); †*A. tabulata* (251, 255); SCHOENDORF 2.

*Asterinidae*, transferred to *Cryptozonia*; FISHER, 3 (990).

*Asterodiscus tuberculosus* sp. n., 59 fm., Hawaiian Is.; FISHER, 3 Washington, Bull. U. S. Fish Comm., 23 (1075, pls.).

*Asthenactis* gen. n. of *Myxasteridae* (1096) with genotype *A. papryraceus* sp. n. 762 fm., Hawaiian Is.; op. cit. (1097, pl.).

*Astroceramus* gen. n. of *Goniasteridae*, with genotype *A. callimorphus* sp. n., 127 fm., Hawaiian Is.; op. cit. (1056, pls.).

*Astrogonium* M. & T., name discarded; FISHER, 3 (1036).—*A. astrologorum*, madreporeite; SCHOENDORF (292, fig.).

*Astropecten bonnieri* sp. n., Red Sea; KOEHLER 3, Bul. Muséum Paris, 1905, (462, fig.).—*A. californicus* sp. n. under 140 m., Monterey B., Calif.; FISHER, 2, Zool. Anz. Leipzig, 30 (299).—*A. callistus* sp. n., 143 fm., (1012, pls.); *A. etenophorus* sp. n., 130 fm. (1006, pls.); Hawaiian Is.; FISHER, 3 Washington, Bull. U. S. Fish Comm., 23.—*A. erinaceus*; FISHER, 4 (118).—*A. hemprichi*; HERDMAN 3 (447).—*A. monacanthus*, size, paxillae; KOEHLER 3 (459).—*A. ornatissimus* sp. n., 150 fm., California; FISHER 4 Washington, Proc. Acad. Sci., 8 (119).—*A. polyacanthus*, descr. (1004, pls.); *A. productus* sp. n., 122 fm. (1010,

pls.): *A. pusillus* sp. n., 241 fm. (1008, pls.): Hawaiian Is.; FISHER, 3 Washington, Bull. U. S. Fish. Comm., 23.—*A. velutaris*, descr.; op. cit. (1005, pls.).—†*A. wilckensis*; AMEGHINO (57).

*Astropectinidae*, gen. nn. vide *Ctenophoraster*, *Tritonaster*, *Psilasteropsis*, *Patagiaster*.

*Benthaster critimus* sp. n., 222 fm., Hawaiian Is.; FISHER, 3 Washington, Bull. U. S. Fish Comm., 23 (1101, pl.).

*Brisinga alberti* sp. n., 451 fm., (1111, pls.); *B. evermanni* sp. n., 450 fm., (1113, pls.); *B. fragilis* sp. n., 222 fm., (1115, pls.); *B. panopla* sp. n., 451 fm., (1109, pls.): Hawaiian Is.; FISHER, 3 Washington, Bull. U. S. Fish Comm., 23.

*Calliaster pedicellaris* sp. n., 130 fm., Hawaiian Is.; op. cit. (1061, pls.).

*Calliderma spectabilis* sp. n., 148 fm., Hawaiian Is.; op. cit. (1058, pls.).

*Calveria hystrix*; BATHER, 1.

*Calveriaster*, rejected; BATHER, 1.

*Ceramaster*, vide sub *Tosia*.

*Cheiraster horridus* sp. n., 143 fm. (1042, pls.); *C. inops* sp. n., 256 fm. (1043, pls.); *C. snyderi* sp. n., 418 fm., (1040, pls.): Hawaiian Is.; FISHER, 3 Washington, Bull. U. S. Fish Comm., 23.

*Coscinasterias* Verrill, reinstated with s. gg. *Stolasterias*, *Marthasterias*, *Distolasterias*: FISHER 1 and 3 (1104).—*C. (Distolasterias) euplecta* sp. n., 136 fm., Hawaiian Is.; FISHER, 3 Washington, Bull. U. S. Fish Comm., 23 (1105, pls.).

*Cribrella*, syn. of *Linckia*; FISHER, 3 (1090) and 4 (127).—*C. oculata*; BARTHELS.—*C. sanguinolenta*; DERJUGIN (149).

*Crossaster alternatus* sp. n., 414 fm., California, also young (131).—*C. borealis* sp. n., 230 fm., Kadiak Id. (134); FISHER, 4 Washington, Proc. Acad. Sci., 8.—*C. papposus*; DERJUGIN (149).

*Cryaster* gen. n., of *Cryasteridae*, with genotype *C. antarcticus* sp. n., Antarctic; KOEHLER 4, Bul. muséum, Paris, 1905 (469); descr.; KOEHLER 5 (24, pls.).

"Cryasteridées nov. fam." of *Cryptozonia* allied to *Echinasteridae*; loc. cit.

*Ctenodiscus crispatus*, *brevimana*; DERJUGIN (149).

*Ctenophoraster* gen. n. of *Astropectinidae* (1014) with genotype *C. hawaiiensis* sp. n., 57 fm., Hawaiian Is. (1015, pls.); FISHER, 3 Washington, Bull. U. S. Fish Comm., 23.

*Culcita discoidea*; SCHOENDORF 2 (300, fig.).

*Diplasterias papillosa* sp. n., Antarctic; KOEHLER 4, Bul. muséum, Paris, 1905 (466): descr., young; KOEHLER 5 (21, pls.)—*D. turqueti* sp. n., Antarctic; KOEHLER 4, Bul. muséum, Paris, 1905, (465): descr.; KOEHLER 5 (19, pls.).

*Dipsacaster nesiotes* sp. n. 299 fm., Hawaiian Is.; FISHER, 3 Washington, Bull. U. S. Fish Comm., 23 (1026, pls.).

*Distolasterias*, is s.g. of *Coscinasterias*; FISHER 1 and 3 (1105).

*Echinaster* sp. juv. et aff. *sladeni*; FISHER, 3 Washington, Bull. U. S. Comm., 23 (1092).—*E. callosus*, *E. sepositus*; BARTHELS.

*Evoplosoma* gen. n. of *Goniasteridae* with genotype *E. forcipifera* sp. n. 682 fm., Hawaiian Is.; FISHER, 3 Washington, Bull. U. S. Fish Comm., 23 (1063, pls.).

*Gilbertaster* gen. n. of *Goniasteridae* with genotype *G. anacanthus* sp. n. 382 fm., Hawaii; op. cit. (1063, pl.).

*Goniasteridae*, gen. nn. vide *Astroceramus*, *Gilbertaster*, *Evoplosoma*, *Goniodesides*.

*Goniodesides* gen. n. of *Goniasteridae*, = *Goniodesmus*, with genotype *G. sebae*; FISHER, 3 Washington, Bull. U. S. Fish Comm., 23 (1070, pl.).

*Granaster biseriatus*, sp. n., Antarctic; KOEHLER, 4, Bul. Muséum, Paris, 1905 (466): descr.; KOEHLER 5 (11, pls.).

†*Helianthaster* sp. nondesc., Upper Devonian, N.Y.; CLARKE, 2 (37, pl.).

*Heliaster multiradiata*, probably not Hawaiian; FISHER, 3 (1104).

*Henricia*, name discussed (1089); FISHER, 3 and FISHER, 4 (127).—*H. aspera* sp. n., 48 fm., Oregon; FISHER 4, Washington, Proc. Acad. Sci., 8 (127).—*H. pauperrima* sp. n., Hawaiian Is.; FISHER, 3 Washington, Bull. U. S. Fish Comm., 23 (1091, pls.).—*H. polyacantha* sp. n., 359 fm., California; FISHER 4 Washington, Proc. Acad. Sci., 8 (129).—*H. robusta* sp. n., 195 fm., Hawaiian Is.; FISHER, 3 Washington, Bull. U. S. Fish Comm., 23 (1090, pls.).

*Hydrasterias verrilli* sp. n., 284 fm., Hawaiian Is.; op. cit. (1106).

*Hymenaster pentagonalis* sp. n., 304 fm., Hawaiian Is.; op. cit. (1099, pls.).

*Korethraster hispidus*; BATHER, 1.

*Labidiaster radiosus*; KOEHLER 4: large; KOEHLER 5 (24).

*Lahillea*; BATHER, 2: vide *Ortmannia*.

*Lahillia*; BATHER, 2.

*Leiaster callipeplus* sp. n., 33 fm., Hawaiian Is.; FISHER, 3, Washington, Bull. U. S. Fish Comm., 23 (1083, pls.).

*Leptoptychaster*, rejected for original spelling *Leptychaster* (q. v.); FISHER, 4 (112).

*Leptychaster anomalus* sp. n., 58 fm., Bering Sea (115); *L. pacificus* sp. n., 238 fm., Vancouver Id., compared with *L. arcticus* (112); FISHER, 4 Washington, Proc. Acad. Sci., 8.

*Linckia*, name discussed (1090); *L. diplax* descr. (1015, pls.); *L. multifora* (1085); FISHER, 3.

*Linckiidae*, transferred to *Phanerazonia*; FISHER, 3 (990).

*Luidia asthenosoma* sp. n., 47 fm., California; FISHER, 4 Washington Proc. Acad. Sci., 8 (124).—*L. ciliaris*; LO BIANCO (94).—*Luidia*, aff. *forcipifer*, juv.; FISHER, 3 (1036).—*Luidia foliolata*; FISHER 4 (121).—*L. hystrix*, sp. n., 28 fm., Hawaiian Is.; FISHER, 3 Washington Bull. U. S. Fish Comm. 23 (1032, pls.).—*L. ludwigi* sp. n., 29 fm., California; FISHER 4 Washington, Proc. Acad. Sci., 8 (122).—*L. maculata*; HERDMAN 2 (121) and 3 (447).—*L. magnifica* sp. n., 73 fm., Hawaiian Is.; FISHER, 3, Washington, Bull. U. S. Fish Comm., 23 (1033, pls.).—*L. scarsii*, larva; DELAP 2 (15).

*Marthasterias*, is s.g. of *Coscinasterias*; FISHER, 1 and 3 (1105).

*Mediaster ornatus* sp. n., 399 fm., Hawaiian Is.; FISHER, 3 Washington, Bull. U. S. Fish Comm., 23 (1046, pls.).

*Metopaster*, distinguished from *Goniodiscides*; FISHER, 3 (1070).

*Mithrodia* sp. (1096, pls.): *M. bradleyi*, descr. (1094, pls.); FISHER, 3.

*Myxasteridae*, gen. n. vide *Asthenactis*.

*Nereidaster* discussed (1018): *N. bouersi* sp. n., 324 fm., Hawaiian Is. (1049, pls.); FISHER, 3 Washington, Bull. U. S. Fish Comm., 23.

*Nymphaster florifer*, probably *Mediaster*; op. cit. (1048).

*Odinia pacifica* sp. n., 319 fm. Hawaiian Is.; op. cit. (1108, pls.).

*Odontaster tenuis* sp. n., Antarctic; KOEHLER 4, Bul. Muséum, Paris, 1905, (468); *O. tenuis* descr.; KOEHLER 5 (8, pl.).—*O. validus*, sp. n., Antarctic; KOEHLER 4, Bul. Muséum, Paris, 1905 (467): descr.; KOEHLER 5 (6, pl.).

*Ophidiaster lorioli* sp. n., reefs, (1077, pls.); *O. rhabdotus* sp. n., 233 fm., (1082, pls.); *O. sclerodermus* sp. n., 99 fm., (1081, pls.); *O. squameus* sp. n., 130 fm., (1079, pls.); *O. tenellus* sp. n., 130 fm., (1082, pl.); *O. triseriatus* sp. n., 69 fm. (1080, pls.); Hawaiian Is.; FISHER, 3 Washington, Bull. U. S. Fish Comm., 23.

*Ortmannia* nom. nov. pro *Lahillia* [sic, olim *Lahillea*] Lor. non Cossm. [preocc. Rathbun, 1901]; LORIOL, Rev. paleozool. Paris, 10, (78): BATHER, 2 (131).

*Palmipes* Ag., syn. of *Anseropoda*; FISHER, 3 (1088).

*Parastropeecten inermis*, perhaps a *Leptychaster*; FISHER, 4 (117).

*Patagiaster* gen. n. of *Astropectinidae* with genotype *P. multingi*, sp. n., 202 fm., Hawaiian Is.; FISHER, 3 Washington, Bull. U. S. Fish Comm., 23 (1029, pls.).

*Patiria pulla* sp. n., Mauritania coast (60, pl.); *P. rosea* sp. n., Mauritania coast (58, pl.); KOEHLER & VANNEY, 3, Bordeaux, Actes Soc. linn., 60.

(N-9720 m)

*Pentaceros*,—†*P. dilatatus* sp. n. in Chalk flint, Fontaine St. Simon (Eure-et-Loir); MEUNIER 1 Naturaliste, Paris, sér. 2, 20 (117-118, fig.).—*P. hawaiiensis* sp. n., 43 fm., Hawaiian Is.; FISHER, 3 Washington, Bull. U. S. Fish Comm., 23 (1072, pls.).—*P. lincki*; HERDMAN, 2 (121, 125, fig.) and 3 (447, pl.).—*P. nodosus*; HERDMAN, 2 (121).

*Pentagonaster omnophilus* sp. n., 257 fm., Hawaiian Is.; FISHER, 3 Washington, Bull. U. S. Fish Comm., 23 (1051, pls.).

*Plinthaster*, vide sub *Tosia*.

*Polyasterias* is syn. of *Stolasterias*; FISHER 1 and 3 (1105).

*Pontaster* discussed; FISHER, 3 (1040).

*Pontasterinae*, transferred to *Benthopeltinidae*; FISHER, 3 (990).

*Porania antarctica*; KOEHLER 4: incl. all Antarctic spp.; KOEHLER 5 (10).

*Pseudarchaster jordani* sp. n., 375 fm. (1038, pls.). *P. myobrachius* sp. n., 427 fm. (1037, pls.); Hawaiian Is.; FISHER, 3 Washington, Bull. U. S. Fish Comm., 23.

*Psilaster attenuatus* sp. n., 290 fm., Hawaiian Is.; op. cit. (1019, pls.).

*Psilasteropsis* gen. n. of *Astropectinidae* with genotype *P. ciugulata* sp. n., 418 fm. Hawaiian Is.; FISHER, 3 Washington, Bull. U. S. Fish Comm., 23 (1023, pls.).

*Pteraster militaris*, *P. pulvillus*; DERJUGIN (149).—*P. reticulatus* sp. n., 284 fm., Hawaiian Is.; FISHER, 3 Washington, Bull. U. S. Fish Comm., 23 (1098, pls.).

*Pycnopodiidae* Stimpson, restr. to *Pycnopodia*, *Rathbunaster* gen. n., and possibly *Anasterias*; FISHER, 4 (136).

*Rathbunaster* gen. n. of *Pycnopodiidae* with genotype *R. californicus* sp. n. 339 fm., California; FISHER, 4 Washington, Proc. Acad. Sci. 8 (137).

*Rhegaster tumidus*; DERJUGIN (97, 149).

*Ripaster* gen. n. of *Archasteridae*, with genotype *R. charcoti* sp. n. Antarctic; KOEHLER 4 Bull. Muséum, Paris,

**1905** (467): diagnosed and descr. fr. Booth-Wandel Id.; KOEHLER 5 (4, pl.).

*Solaster endeca*; DERJUGIN (149): Japan; DOYLEIN.—*S. papposus*; JOHNSTONE (238): Japan; DOYLEIN: synn. on p. 89 Bell's Cat. Brit. Echinod. corrected; BELL.

†*Sphaeraster* (255, 303); SCHOENDORF 2: discussed: *S. punctatus*, structure (figs.); SCHOENDORF 1.

†*Sphaerasteridae*, fam. nov. of *Phanerozonaria*; SCHOENDORF 1, Wiesbaden, Jahrb. Ver. Natk., 59, (256) and 2 (303).

†*Sphaerites*, name (252), structure, based on various spp. (271–297), habits (299), diagnosis (302): *S. annulosus*, descr. (264, fig.): *S. digitatus* (253), dorsal plates of a Pentacerote (270): *S. fossulatus* (253), var. of *S. tabulatus* (264): *S. juvenis* (252) descr. (260, fig., pl. 279, 296): *S. punctatus* (253), descr. (257, pl.) structure (271 et seq., figs.): *S. pustulatus* (253), descr. (264, fig., pl., 282, 294): *S. regularis* (253): *S. scutatus* (252), descr. (266, figs., pl., 281, 285, 288, 294): *S. tabulatus* (252), descr. (263, figs., 280); SCHOENDORF 2.

*Stegnaster inflatus*; SCHOENDORF 2 (256, 299, fig.).

*Stellospheara* gen. n. of *Forcipulata* with genotype *S. mirabilis* sp. n. larva only, 2000–3000 m., Azores; KOEHLER & VANNEY, 1. Bull. Mus. Monaco, No. 64, (figs.) and 2.

*Stichaster albulus*; DERJUGIN (105).

*Stolasterias*, is s.g. of *Coseinasterias* (q.v.); FISHER, 1.

*Tosia (Ceramaster) micropelta* sp. n., (1054, pls.): *T. (Plinthaster) ceramoidea* sp. n., 277 fm. (1052, pls.): Hawaiian Is.; FISHER, 3 Washington, Bull. U. S. Fish Comm. 23.

*Tritonaster* gen. n. of *Astropectinidae* with genotype *T. craspedotus* sp. n., 294 fm., Honolulu; op. cit. (1017, pls.).

*Valraster striatus*, descr.; op. cit. (1093, pl.).

*Zoroaster spinulosus* sp. n., 328 fm., Hawaiian Is.; op. cit. (1102, pls.).

#### E. OPHIUROIDEA.

Bell's orders accepted, because of physiological importance; MACBRIDE 2 (491).

*Amphiura squamata*; HEROUARD 4: †SOALIA.

†*Aspidura* cf. *squamosa*; AHLBURG (55).

*Gorgonocephalus agassizi*, *G. eucnemis*; DERJUGIN (150).—*G. sagaminus*; DOYLEIN (201, fig.).

*Ophiacantha bidentata*; DERJUGIN (149).

†*Ophioaster* gen. n. with genotype *Ophiocten* (?) *bellefourchensis* sp. n., Jurassic, Black Hills, Wyo.; WHITFIELD & HOVEY, New York, N.Y., Bull. Amer. Mus. Nat. Hist., 22 (391, pl.).

*Ophiolepta innoxia* sp. n., Antarctic; KOEHLER 5, Exped. antarct. franc. Documents scient. Paris, (27, pl.).—*O. nodosa*; STIEREN (271).

*Ophionotus victoriae*; KOEHLER 4 (470), and 5 (29).

*Ophiodolos aculeata*; DERJUGIN (90, 149).

*Ophiodolos rugosum*, colour and other notes; KOEHLER 3 (459).

*Ophioscolex glacialis*; DERJUGIN (97, 150).

*Ophiothela danae*; KOEHLER 3 (459).

*Ophiothrix exigua*, colour; KOEHLER 3 (458).—*O. fragilis*; MACBRIDE 1: anat.; MACBRIDE 2 (478).

*Ophiuira albida*; JOHNSTONE (244).—*O. sarsi*; DERJUGIN (149).

#### F. CRINOIDEA.

Historical discussion of Classification; HAMANN (1554).—Bather's division into *Monocyclica* & *Diecyclica*, and Jaekel's division into *Cladoerinoidea* & *Pentacrinoidea*, criticised; Wachsmuth & Springer's Orders, *Inadunata*, *Articulata*, *Camerata* accepted because physiological; MACBRIDE 2 (594).

†*Actinoerinus*? sp. indet.; WELLER (439, pl.).—*A. polydactylus*; BATHER in MATLEY (296).

†*Actinometra formae*; BELLINI (641).

†*Agarioecrinus* sp. indet.; WELLER (440, pl.)

†*Amphicrinus* gen. n. of *Sagenocrinidae*; SPRINGER, J. Geol. Chicago, **14** (518).

†*Anisoecrinus* (475, 479): *A. angelini*, (480, pl.); *A. grecuei* (480, pl.); *A. interradiatus*, (479, pl.); *A. osweegoensis* (480, pl.); SPRINGER.

*Autedon anceps* Carp. in Ceylon Pearl Fishery Rep., corrected to *A. bengalensis* Hartlaub; HERDMAN, 3 (449).—†*A. angulensis*; BELLINI (641).—*A. bifida*, anat.; MACBRIDE, 2 (581): ovary and oocyte; CHUBB, 2.—†*A. depereti*; BELLINI (641).—*A. eschrichtii*; DERJUGIN (150).—†*A. fontanesi*; BELLINI (641).—†*A. iheringi*; AMEGHINO (172).—†*A. michelotti* (641), *nicolasi* (650), *oblitus* (641), *paronai* (641), *pellati* (641); BELLINI.—*A. phalangium*; LO BIANCO (94) *A. rosacea*; op. cit.: PRZIBRAM: pentacrinoïd compared with early *Flexilibilia*; SPRINGER (503, pl.).—†*A. stellatus* and *taurimensis*; BELLINI (641).

†*Ascoecrinus* near Bristol; BATHER in HIND (173).

†*Aspidocrinus scutelliformis*; GRAU (155).

†*Asteroecrinus* (?) *münsteri*; LAMANSKY (79, 171).

†*Barycrinus* discussed; BATHER, 3 (104).

†*Batoecrinus*,—*B. calyculus* (1247, pl. xiv); *B. crassilectus* (1249, pl. xv); *B. davisi* (1248, pl. xv); *B. davisi lanest-villensis*; (1249, pl. xv); *B. davisi*, *sculptus* (1250, pl. xv); *B. icosidactylus* (1243, pl. xii); *B. irregularis* (1244, pl. xii); *B. magnirostris* (1244, pl. xv); *B. saeculus* (1246, pl. xii); *B. salemensis* (1245, pl. xii); BEEDE.

†*Botryoecrinus*, discussed (104), *americanus* (103), *erassus* (101), *cucurbitaceus* (94), *decadactylus* (95), *longibrachiatus* (97), *nucleus* (98), *pinnulatus* (96) *polyxeo* (99), *quinquelobus* (96), *ramosus* (95), *ramosissimus* (94), all re-diagnosed; BATHER, 3.

†*Caleidoecrinus*; SPRINGER (485, 519).

†*Calpicoecrinus* (480, 517), *C. simbriatus* (483, pl.), *heterodactylus*, *ovatus*, (pl.); SPRINGER.

†*Camarocrinus asiaticus* sp. n., Nyaungbaw beds, Yemeyé, Upper Burma; REED, Palaeont. Indica, Calcutta, n. ser., 2 (88, pl.).—†*C. quadriblobatus* sp. n. Upper Ordovician Nyaungbaw beds, Burma, based on *Echinospherites kingi* [same as preceding]; HOLLAND, Rec. Geol. Surv. India, **33** (75).—†*C. stellatus*; GRABAU (319).

†*Ceriocrinus*,—*C. hemisphaericus* (387); †*C. missouriensis* (381, 383); BEEDE & ROGERS.

†*Cheiroecrinus* sp. roots; LAMANSKY (80, 172, 178).

†*Choloecrinus* gen. n. of *Sagenocrinidae* with genotype *Lithoecr. obesus*; SPRINGER, J. Geol. Chicago, **14**, (515, 517).

†*Cleioecrinus*; SPRINGER (519).

†*Clidochirus* (475, 479, pl.): *C. pyrum* (479, pl.); SPRINGER.

†*Conocrinus sequenzai* (641, 650), *C. michelotti* (650); BELLINI.

†*Cosmoecrinus* discussed; *C. dilatatus*; *C. holzapfeli*, genolectotype; *C. ornatisimus*; BATHER, 3 (104).

†*Crotaloecrinus rugosus*; SIEMIRADZKI (177, 188, 195, 211, 278, pl. xxi).

†*Cupressocrinus* sp.; SIEMIRADZKI (278, pl. xxi).

†*Cyathocrinus*,—*C. sp.*; SIEMIRADZKI (177, 190, 211, 277, pl. xxi).—*C. ? exilis*; LAMANSKY (80, 172).—*C. cf. goliathus*, columnals; GORTANI, 1 (14).—*C. ornatissimus*, vide sub *Seylalocr. et Cosmoecr.*

†*Dadoecrinus gracilis* (43, 44, 48, 52): *D. kunischii* (55); AHLBURG.

†*Dichocrinus*,—*D. blatchleyi* sp. n. Salem Lst., Warsaw group, Paynters Hill, Ind. (1259, pl. xvii); *D. oblongus* (1260, pl. xiii); *D. striatus*, Salem Lst., perhaps young (1258, pl. xiii); BEEDE, Indiana, Rep. Dept. Geol. **30**.

†*Dizygocrinus*,—*D. ? sp.* (1254, pl. xvii); *D. decoris* [sic] (1253, pls. xii, xvi); *D. euconus* (1252, pl. xii, xvi); *D. unionensis* (1253, pl. xvi); *D. whitei*, young, (1251, pl. xii); BEEDE.

†*Enerinus*, — *E.* cf. *granulosus*; AHLBURG (83, pl. iii).—*E. liliiformis*; FRITEL (106, fig.); reconstruction; FRAS (18, fig.).—*E.* cf. *liliiformis* (48, 50, 52, 55, 83); *E. silesiacus* (51); AHLBURG.

†*Entrochus asteriscus*; SIEMIRADZKI (188, 199, 211, 277, pl. xxi).—†*E. dubius*; AHLBURG (48, 50, 52, 55, 83).

†*Erisoerinus typus*; BEEDE & ROGERS (381, 382, 383).

†*Euryocrinus*; SPRINGER (484).

†*Eutaxocrinus* gen. n. of *Taxocrinidae*, with genotype *Taxocr. affinis*; SPRINGER, J. Geol. Chicago, 14, (493, 519).

*Flexibilita* full discussion; famm. *Ichthyo-*, *Sageuo-*, *Taxo-criniidae* (q.v.); SPRINGER.

†*Forbesioerinus*, — *F. agassizi* (489); *F. multibrachiatus* (489); *F. parvus* (500); *F. washingtonensis* (pl.); *F. whitfieldi* (500); SPRINGER.

*Gephyroerinus grimaldii*; ALBERT.

†*Glyptocrinus*, — *G.* sp.; SIEMIRADZKI (211, 277, pl. xix).—*G. basalis*; EVANS, (634).

†*Gnorimoerinus*, — *G. excavatus* is a *Dactylocr.* (515); *G. expansus* (492, pl.); *G. loveni* (492), type of *Meristocrinus* (q.v.) (515); *G. tubuliferus* (492); SPRINGER.

†*Haploerinus* (?) *monile*; LAMANSKY (79, 171).

†*Homalocrinus* (475, 482, 517); *H. dudleyensis* sp. n., Wenlock Limest., Dudley (482, pl.); *H. parabasalis* (482, pl.); SPRINGER, J. Geol. Chicago, 14.

†*Homoerinus scoparius*; GRABAU (319, 320).

†*Hydreionocrinus discus*; BEEDE & ROGERS (381).

†*Hypsoerinus* gen. n. of *Pisoeriniidae* with genotype *H. fieldi* sp. n., Devonian, Hamilton shales, Bethany, N.Y.; SPRINGER & SLOCUM, Chicago, Ill., Pub. Field Columb. Mus., Geol. Ser., 2, (pl.).

†*Ichthyoerinidae*, defined, include *Clidochirus*, *Ichthyoer.*, *Lecanoer.* (syn.

*Cyrtidoer.*), *Mespiloer.*, and *Metichthyoer.* gen. n.; SPRINGER, J. Geol. Chicago, 14, (516).

†*Ichthyoerinus*, radianal, (475); *I. burlingtonensis* (477, pl.); SPRINGER.—*I. clarkeus*; BEEDE (1257, pl. xiv).—*I. conoides* (476); *I. corbis* (477); *I. gotlaudicus* (pl.); *I. greenei* (478, 490); *I. intermedius* (pl.); *I. laevis* (476, 477, pl.); *I. pyriformis* (477, pl.); *I. simplex* (476); *I. subangularis* (476, 477, pl.); *I. tiaraeformis* (477); SPRINGER.

†*Lecanocrinus* (475, 491); *L. greenei* is *Auisocrinus* (480, pl.); *L. macropetalus* (501, pl.); *L. oswegeensis* is *Auisocrinus* (480, pl.); *L. roemeri* (491); SPRINGER.

†*Leiocrinus* syn. of *Homalocrinus*; SPRINGER (482).

†*Lithocrinus obesus*, type of *Cholocr.* (q.v.); *L. robustus*, syn. of *L. divaricatus*; SPRINGER (515).

†*Marsupites testudinarius*; TREACHER & WHITE; WHITE & TREACHER.

†*Melocrinus*, — *M. clarkei*, now first figd.; CLARKE, 1 (346, pl. D, E).—*M. pachydaetylus*; GRABAU (135, fig.).

†*Meristocrinus* gen. n. of *Taxocrinidae*, with genotype *Taxocr. loveni*; SPRINGER, J. Geol. Chicago, 14 (515, 519).

†*Mespilocrinus* (517), *M. forbesianus* (pl.); SPRINGER.

*Metacrinus r[ot]undus*; †NICHOLS (49): length of stem, movements; DOFLEIN (252 fig., 268).

†*Metichthyoerinus* gen. n. of *Ichthyoerinidae* for Carboniferous *Ichthyoerini* (479, 517), *M. burlingtonensis* (pl.); SPRINGER, J. Geol. Chicago, 14.

†*Millericrinus horridus*; ANDRUSOV (131, 134).

†*Nipteroerinus* (519), *N. wachsmuthi* (pl.); SPRINGER.

†*Oligoerinus* (519), *O. asteriaeformis* (pl.); SPRINGER.

†*Onychocrinus*, — *O. exsculptus*, tegmen (474); *O. ulrichi*, tegmen (469), I Br (491); SPRINGER (pl.).

†*Parichthycrinus* (519), *P. nobilis* (pl.); SPRINGER.

*Peutacrinus* [incl. *Isoer.*] — †*P. agassizi*; BRYDONE (15, 129). — †*P. (?) antiquus*; LAMANSKY (80, 172). — †*P. asteriensis* [sic], descr.; WHITFIELD & HOVEY (330, pl.). — †*P. brouni*; BRYDONE (15, 129). — *P. decorus*; REICHENSPERGER. — †*P. gastaldii*; BELLINI (641, 650). — †*P. jurensis*; †*P. mieryensis*; LISSAJOUS (10). — †*P. moniliferus*; RENZ. — †*P. neocoeniensis*; HARBORT. — †*P. oceanii* (10); †*P. rollieri* (11); LISSAJOUS. — †*P. scalaris*; RENZ. — †*P. tuberculatus*; GERBER (67); HAUG & KILIAN (13) : RENZ.

†*Phacites gotlandicus*; SIEMIRADZKI (195, 211, 277, pl. xxi).

†*Phialocrinus*, — *P. stephensi*; DUN (107). — *P. stillatius*; BEEDE & ROGERS (383).

†*Phimocrinus jouberti*; SPRINGER & SLOCUM.

†*Phyllocrinus* cf. *oosteri*; ZOEPPRITZ (199).

†*Pisocrinidae*, gen. n. vide *Hypsocrinus*.

†*Pisocrinus globularis*; MACNAIR (375).

†*Platycrinus*, — *P. bonocensis* (1255, pl. xiii); *P. boonvillensis* (1256, pl. xiv); BEEDE. — *P. cf. expansus* juv.: BATHER in MATLEY (296).

†*Poterocrinus*, — *P. coryphaeus*; BEEDE (p. 1256, pl. xiii). — *P. crassus*; MACNAIR (373, 375). — *P. cf. sigillatus*; GORTANI, 1 (15).

†*Protaxocrinus* gen. n. of *Taxocrinidae*, with genotype *Taxocr. ovalis*; SPRINGER, J. Geol. Chicago, 14, (519).

†*Pycnosaccus*; SPRINGER (475, 484, 491).

†*Rhenocrinus*, gen. n. of *Dendrocrinoidea*, with genotype *R. ramosissimus*, Lower Devon., Hundrückschiefer, Münden; JAEKEL in SCHMIDT (544). *R. minae* sp. n., Mid. Devon., Trochiten-schiefer, near Letmathe, Westphalia (546, fig., pl.); *R. winterfeldi* sp. n., Mid. Devon., Tonschiefer, Breun (544, fig.); SCHMIDT, Berlin, Zs. D. geol. Ges., 57,

†*Rhipidocrinus perloricatus* sp. n. Mid. Devon., near Letmathe, Westphalia; op. cit. (543, pl.).

†*Rhopalocrinus*; SPRINGER (484, 519).

†*Sagenocrinidae* fam. n. of *Flexibilida*, for *Anisoer.*, *Homaloer.*, *Calpiocer.*, *Pyenosaccus*, *Choloer.* gen. n., *Sagenocr.*, *Temnoer.*, *Dactyloer.*, *Amphier.* gen. n., *Euryocer.*, *Lithoer.*, *Forbesioer.*, *Wachsmuthier.*, *Nipteroer.*; SPRINGER, J. Geol. Chicago 14, (517).

†*Sagenocrinus* (498): *S. expansus* (pl.); SPRINGER.

†*Scyphocrinus* sp., Nyaungbaw beds, Yemeyé, Upper Burma; REED (86, p. viii).

†*Seytalocrinus ornatissimus* (Hall), alleged type-specimen figd.; CLARKE, 1, (348, pl. F).

†*Symbathocrinus swallowi*; BEEDE (1262, pl. xiii, xiv).

†*Talarocrinus* cf. *tripodus*, young (1260, pl. xiii); *T. simplex* (1261, pl. xiii); BEEDE.

†*Taxocrinidae*, defined, include *Protaxocr.* gen. n., *Onorimocr.*, *Meristocr.* gen. n., *Entaxocr.* gen. n., *Taxocr.*, *Parichthycocr.*, *Syneroer.*, *Oligocr.*, *Onychoer.*; SPRINGER (519).

†*Taxocrinus*, — *T. afinis*, (488): *T. elegans*; (487, 502); *T. intermedius* (490); *T. laevis* (487, 502); *T. macrodaetylus* (492); *T. nobilis* (490, 492); *T. oblongatus* (487), probably *Entaxocr.* (493); *T. orbignyi* (492); *T. rigens* (487), probably *Eutaxocr.* (493); *T. shumardianus* (pl.); *T. splendens* (488); *T. wetherbyi* (500); SPRINGER.

†*Temnoocrinus tuberculatus* (492, pl.); SPRINGER.

*Thaumatocrinus*; SPRINGER (497, pl.).

†*Tribrachiocrinus corrugatus*; DUN (107).

†*Uintocrinus* sp.; TREACHER & WHITE.

†*Wachsmuthicrinus* (519), *W. thiemei* (pl.); SPRINGER.

## G. † CYSTIDEA AND EDPIOASTEROIDEA.

*Amphoridea* rediagnosed; BATHER 4 (7).

*Arachnocystis*, discussed; BATHER 4 (15).

*Aristocystidae* diagnosed (7), discussed (12); BATHER 4.

*Aristocystis* rediagnosed (8); *A. dagon* sp. n., Naungkangyi beds, Sedaw (8, pl. 1); BATHER 4.

*Astrocytites ottawaensis*, vide *Stegano-blastus*; WHITEAVES 2.

*Caryocrinidae* diagnosed and discussed; BATHER 4 (27).

*Caryocrinus*, diagnosed and spp. discussed (28) distrib. (29); BATHER 4.—*C. sp.*; REED (33).—*C. aurora* sp. n. Naungkangyi beds, Sedaw (29, pl. ii); *C. avellana* sp. n. Naungkangyi beds, Sedaw (32, pl. ii); *C. bulbulus*, *gorbyi*, *hammelli*, *indianensis*, *milligaeae*, *misisouriensis*, *ornatus*, *roemerii*, *sphaerodalis*, *tumidus* (28) *C. turbo* sp. n., Naungkangyi beds, Sedaw (30, pl. ii); BATHER 4. Palaeont. Indica, Calcutta, (n. ser.) 2, Mem. 3.

*Caryocystis*, name discussed (15); *C. angelini*, synonymy (16); *C. testudinaria*, synonymy (15); BATHER 4.

*Cheirocrinus* sp.; REED (26, pl. ii).

*Codiacystis*; BATHER 4 (12).

*Craterina* Barr.; BATHER 4 (12).

*Dactylocystidae*; BATHER 4 (35).

*Diploporita* rediagnosed and discussed; BATHER 4 (33).

*Echinoenerinites* [vel *Echinoenerinus*] *angulosus*; LAMANSKY (79, 171, 178).—*E. cf. angulosus*; REED (25, pl. ii).—*E. laevigatus* (79, 171, 178); *E. reticulatus* (79, 171, 178); *E. senckenbergi* et var *interlaevigata* (79, 171, 178); LAMANSKY.—*E. aff. senckenbergi*; REED (26, pl. ii).

*Echinospaeridae*, diagnosed and discussed; BATHER 4 (14).

*Echinospaerites* *balticus*; EVANS (634).—*E. kingi*; REED (1, 6.): see *Camaroer*; HOLLAND.

*Eocystites*? ? *longidactylus*; PACK 292, pl. i.

*Fungocystis*, discussed; BATHER 4 (36).

*Glyptocystis giganteus*; LAMANSKY (79, 171).—*G. leuchtenbergi*? HEDSTRÖM & WIMAN (104).

*Helioerinus*, synonymy (15) diagnosis and discussion (17); BATHER 4.—*H. sp.*; REED (24).—*H. aranea* (17); *H. balticus* (17); *H. burdigalensis* (18); *H. confortatus* (18); *H. fiscella* sp. n. Naungkangyi beds, Sedaw. (21, pl. i); *H. granatum* (17); *H. helmhackeri* (18); *H. orum* (17); *H. qualis* sp. n. Naungkangyi beds, Sedaw (22, pl. i); *H. rouvillei*; (17); *H. rugatus* sp. n. Naungkangyi beds, Sedaw (19, pl. i); BATHER 4. Palaeont. Indica, Calcutta, (n. ser.) 2, Mem. 3.

*Hemicosmites oblongus*, *H. rugatus*; EVANS.

*Lepadoerinus gebhardi*; GRABAU (137, fig.).

*Mesites* [i.e. *Mesocystis*] *pusyreffskii*; LAMANSKY (79, 171).

*Protoerinidae* diagnosed and discussed; BATHER 4 (35).

*Protoerinus* diagnosed and discussed (36); *P. sparsiporus* sp. n., Naungkangyi beds, Sedaw and Machinu (36, pl. ii); BATHER 4. Palaeont. Indica, Calcutta, (n. ser.), 2 Mem. 3.

*Pyrocystites pirum*; BATHER 4 (12).

*Rhombifera* diagnosed; BATHER 4 (13).

*Sphaeronis pomum*; HEDSTRÖM & WIMAN (104).—*S. testudinarius*, synonymy; BATHER 4 (15).

*Steganoblastus ottawaensis*, descriptions of Whiteaves and Bather reprinted; WHITEAVES 2 (316, figs.).

*Stribalocystis*; BATHER 4 (28).

*Trematocystis*; BATHER 4 (13).

## II. † BLASTOIDEA.

*Asteroblastus sublaevis*; LAMANSKY (79, 171).

*Blastoidocrinus expansus* (Hall, sub *Streptelasma*) Chazy Linest.; RAYMOND (541).

*Metablastus?* sp., Lower Carboniferous, N.S.W., descr.; TAYLOR (figs.)—*M. wortheni*; BEEDE (1266, pl. xiv).

*Pentremites conoideus*; SMITH; *P. conoideus* (1263, pl. xxvi); *P. conoidens amplius* (1263, pl. vii); *P. conoides perlanguus* (1263, pl. vii); BEEDE.—*P. godoni*, 4 and 6 rays; SPRINGER (489).—*P. maccalliei* sp. n. Carboniferous, Georgia; SCHUCHERT. Washington, D.C., Smithsonian Inst., Nation. Mus. Proc., 30, (759, figs.).—*P. vernenili* Roemer non Beadle; THEVENIN in BOULE, Ann. Paleont. Paris, 1 (196).

*Saccoblastus* rejected; BEEDE (1264).

*Tricoelocrinus* discussed (1264), stem (1267): *T. meekianus* (1266, pl. xiv); *T. woodmani* (1267, fig.); BEEDE.

*Troostocrinus* discussed; BEEDE (1264).

#### K. INCERTAE SEDIS.

† *Bolboporites* sp. nondescr. (80, 178): *B. semiglobosa* (80, 172): *B. triangularis*, et var. *uncinata* (80, 172) LAMANSKY.

† *Lodanella mira*, Cornwall; GREEN & SHÉRBORN.



# VI. VERMIDEA

ARRANGED BY

F. A. POTTS

The groups included under Vermidea are—

- (1) PLATYHELMINTHES, NEMERTINEA, MESOZOA; (2) NEMATHELMINTHES; (3) CHAETOGNATHA, ROTIFERA, GASTROTRICHA; (4) ARCHIANNELIDA, POLYCHAETA, OLIGOCHAETA, GEPHYREA, PHORONIS, HIRUDINEA.

For ENTEROPNEUSTA *vide* PROCHORDATA

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## TITLES for Vermidea in General.

N.B.—*Titles in round brackets have already appeared in the Zoological Record; titles in square brackets are to be found in antecedent issues of the International Catalogue.*

**Alessandrini, Giulio.** 1. Su di una specie del gen. *Ascoctyle* Lss. rinvenuta parassita nel cane. Roma, Boll. Soc. zool. ital., Ser. 2, 6, 1906, (221-224).

**Alessandrini, G.** 2. Nuovo caso di *Filaria conjunctivae* parassita dell'uomo. Roma, Boll. Soc. zool. ital., Ser. 2, 6, 1906, (233-234).

**Alessandrini, G.** 3. Il *Bothrioccephalus latus* Bremser nella provincia di Roma. Roma, Boll. Soc. zool. ital., Ser. 2, 6, 1906, (231-232).

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*Geoplana rosenbergi* sp. n. Peru, MEIXNER Zool. Anz. **29** (665).

*Plagocata gracilis*, regeneration of grafted pieces. MORGAN J. Exp. Zool. **3** (269–294).

*Planaria alpina* Aussterben im Hunsrück u. Hohen Venn. VOIGT, Bonn, Verh. nathist. Ver., **62** (179–218); im Eiszeit, Lebensgeschichte. THIENEMANN, Zool. Anz., **30**, (499–504); *P. gonocephala*, *torva* excretory organs. WILHELMI Zs. wiss. Zool. **80**, (544–575) T. xxix–xxx; *P. polychroa*, *lactae* Nervensystem u. Excretionsystem. NICOLETSKY, Zool. Anz. **30**, (702–710); *P. gonocephala* Geographisches und Biologisches. STEINMANN, Arch. Hydrobiol., **2**, (186–217) Taf. ii.—*P. gonocephala* Chromosomen im Ei. SCHLEIP, Zool. Jahrb., Abt. f. Anat., **23**, (357–380) T. xxiii–xxiv.—*P. maculata* regeneration of grafted pieces. MORGAN J. Exp. Zool. **3** (269–294); and spp. n. California, relation between regulation and fission. CHILD Biol. Bull. **11** (113–123).—*P. morgani* sp. n. Pennsylvania. STEVENS and BORING, Bryn Mawr Coll. Monogr., **6**, (7–9) pl.; spp. n. Pennsylvania. STEVENS and BORING, Philadelphia Proc. Acad. **58**, (7–9) pl. 1.—*P. simplicissima* Regeneration. MORGAN, J. Exp. Zool., **1**, (385–393).

*Polyclelia cornuta* von Gelrigsbach. Verbreitung. STEINMANN Arch. Hydrobiol. **2** (186–217) Taf. ii.—*P. cornuta*, *nigra* Nervensystem u. Excretionsystem. NICOLETSKY, Zool. Anz. **30**, (702–710).—*P. nigra* excretory organs. WILHELMI Zs. wiss. Zool., **80**, (544–575) T. xxix–xxx.

*Procecodes jaqueti* sp. n. Schwarzes Meer, BÖHMIG, Zs. wiss. Zool., **81**, (350) T. xvi fig. 2 xix fig. 8.—*P. wandeli* (395), *marginata* (397) spp. n. Antarctique, HALLEZ Bul. Muséum **12**.

*Rhodoplana* gen. n. *wandeli* sp. n. Wandel I. VAYSSIÈRE Bul. Museum **12** (149).

*Saboussoria* gen. n. für *Planaria dioica* Clap. 1863 BÖHMIG Zs. wiss. Zool. **81**, (359) T. xii–xix.

(*Stylochus albifrons* sp. n. Antarctique, HALLEZ Paris Bul. soc. zool., **30**)

(*Stylostomum antarcticum punctatum* spp. n. Antarctique HALLEZ T.c. **30**).

#### POLYCLADIDA.

*Dictoces* gen. n., *pacificus* sp. n. New Caledonia. JACUBOWA, Jenaische Zs. Natw., **41**, (144–148) Taf. x, figg. 2–5 xi, fig. 5.

*Latocestus plejni* sp. n. C. Verde Is. LAIDLAW London Proc. Zool. Soc. 1906 (711-712).

*Leptocera* gen. n., *delicata* sp. n. New Britain. JACUBOWA, Jenaische Zs. Natw. 41 (135-139) taf. viii, fig. 10-11, ix, fig. 1, xi, fig. 7-8.

*Leptoplaena*, form regulation. CUILD J. Exp. Zool. 1 (95-133, 463-557), 2, 253-285.—*L. graffii* sp. n. C. Verde Is. LAIDLAW London Proc. Zool. Soc. 1906 (708-700).—*L. suteri* sp. n. New Zealand. JACUBOWA, Jenaische Zs. Natw. 41 (150) Taf. x, figg. 7-9, xi, fig. 6.—(*L. littoralis* regeneration in absence of brain. MORGAN, Biol. Bull. 9 (187-193).)

*Mesocoela* gen. n., *caledonica* sp. n. New Caledonia. JACUBOWA, Jenaische Zs. Natw. 41 (141-144) Taf. ix fig. 8 x fig. 1-6.

*Notoplana willeyi* sp. n. New Britain. JACUBOWA, T.c. (131-135) Taf. viii figg. 8-9 xi fig. 9.

*Paraplanocera laidlari* sp. n. New Britain. JACUBOWA, Jenaische Zs. Natw., 41, (115-121), taf. vii, fig. 1-9).

*Prostheccraeus vittatus* spermatozoa. RETZIUS Retzius Biol. Untersuchungen. 13 (43) Taf. xiv, figg. 2-3.

*Traunfelsia*, affinities of genus. *T. elongata* sp. n. C. Verde Is. LAIDLAW. London Proc. Zool. Soc. 1906, (714-718) pl. lii, figg. 4-5.

*Zygentroplana* gen. n. *verrilli* sp. n. C. Verde Is. Structure. LAIDLAW, T.c. (709-711) pl. lii figs. 1, 2.

### (b) Trematoda.

*Acanthochasmus*, Artübersicht, STROSSICH, Triest, Boll. Soc. Adriat. Sci. Nat. 22 (211-227).—*A. inermis* sp. n., Golf von Triest, STROSSICH, T.c. (211-227).

*Acanthocolpus* gen. n. *Acanthocolpinac* sub. fam. n. *liodorus* sp. n. (100 pl. 1, figg. 7-8); from Ceylon fishes. LÜHE London, R. Soc. Rep. Pearl Oyster, 5.

*Acanthocotyle branchialis* sp. n. in ray. WILLEM, Bruxelles, Bul. Acad. roy. 1906, (522, 599-607) pl. i. figg. 1-10.

*Allocreadium*, Uebersicht über marine Arten, STROSSICH, Triest, Boll. Soc. Adriat. 22 (211-227).—*A. alaere* nom. n.

für *Distomum alaere* Looss, *A. characis* nom. n. für *D. characis* Stoss., *A. mormyri* nom. n. für *D. mormyri* Stoss., *A. umbrinae* nom. n. für *D. umbrinae* Stoss. STROSSICH, T.c. (211-227).—*A. dubium* sp. n., Golf von Triest, STROSSICH, T.c. (211-227).

*Anaporrhatum laratum* sp. n. from Rhinoptera javarica Ceylon. LÜHE, London, R. Soc. Rep. Pearl Oyster, 5, (104-6), pl. ii, fig. 17.

*Aporechis* gen. n. für *Echinostomum croaticum* Stoss., STROSSICH, Triest, Boll. Soc. Adriat. Sci. Nat. 22 (211-227).

*Ascozotyle italicica* sp. n. nel cane. ALESSANDRINI, Roma, Boll. Soc. zool. ital., 6, (221-224).

*Bilharzia*; disease caused by: eosinophilia. BALFOUR, Rep. Wellcome Res. Lab. 1 (58-60).—*B. haematobia* infection of female genitalia. GOEBEL, Zentralbl. Gynek., 29, (1379-1382).

*Bucephalus haimeanus* sporocysts infected by Haplosporidiah CAULLERY et CHAPPELLIER, Paris, C.-R. soc. biol., 60, (325-328).

*Cercaria armata*, aus *Limnacus stagnalis*, *echinata* aus *Paludina rivipara* anatomy and development of redia-stage. ROSSBACH, Zs. wiss. Zool. 84 (361-445) Taf. xvi-xix.—*C. helicis*. Histogenesis. ROEWER, Diss. Jena. 1906.—*C. lutea* sporocysts infected by Haplosporidiah CAULLERY et CHAPPELLIER, Paris, C.-R. soc. biol. 60, (325-328).

*Chiorchis dilatatus*, (551), *papillatus* aus *Colosoma brachypoma*, Paraguay, (554), spp. n., DADAY, Math. Term. Ért., 24.

*Clinostomum africanum* sp. n., darm eines Fisches GALLI-VALERIO, Centralbl. Bak., Abt. 1, 42, Orig. (49).

*Cotylogaster Michaelis*. MONTIELLI, Napoli, Annuar. del Mus. zool. Univ., 2, (1-6).

*Cyclococelinae*, subfam. n. *Monostomidarum*, STROSSICH, Triest, Boll. Soc. Adriat. 21 (1-40).

*Cyclocodium arcuatum*, *mutable*, Beschreibung und Abbildung, STROSSICH, Triest, Boll. Soc. Adriat. Sci. Nat., 21, (1-40, 9 Taf.) [Trematoda].—*C. adolphi* Sibirien, *brasiliatum*, Brazil, *exile*, *ovopunctatum*, Italien, Deutschland, *problematicum*, Aegypten, *C. robustum* spp. n. STROSSICH, T.c. (1-40).

*Diplodiscus marenzelleri* sp. n., In *Myletes*, aus Süd-Amerika, (508), DADAY, Math. Terint. Ért., 24.

*Diphtherostomum* gen. n. *brusinai* and *luteum*, STROSSICH, Triest, Boll. Soc. Adriat. Sci. Nat. 21 (193-201). [Trematoda.]

Distomi dei Pesci di Roma. LOTTI, Roma Boll. Soc. zool. Ital. 6 (227-8).

*Distomum veliporum*, *betencourtii*, Beschreibung, STROSSICH, Triest Boll. Soc. Adriat. 21 (193-201). [Trematoda].—*D. caudatum*, histology of cercaria form ROEWER, Jenaische Zs. Natw., 41, (185-228) xiv-xv.—*D. felineum*, *Idus idus* source of infection. ASKANAZY, Königsberg, Schr. physik. Ges., 46 (127-131).—*D. hepaticum* mode de formation de l'œuf ectocélithe. HENNEGUY, Arch. anat. microsc., Paris, 9, (47-88) pl.; geographischen Verbreitung. SAITO, Centralbl. Bakt., Abt. 1, 41, Orig. (822).—*D. leptostomum* Olss. (= *caudatum* Linst.) ROEWER, Beiträge zur Histogenese von Cercariaeum helicis, Jena, (iii + 43).—*D. pancreaticum* sp. n., in Pankreas der Rinder. KATSURADA und SAITO, Beitr. path. Anat., 39, (501-505).—*D. quadrangulatum* sp. n., In *Myletes bidens*, Süd Amerika, (504), DADAY, Math. Termt. Ért., 24.—*D. rinjeri* INOUYE, Zs. klin. Med., 50, (120-135).—*D. spathulatum* Eiinhalt. SAITO, Centralbl. Bakt., Abt. 1, 42, Orig. (133-138); LASPEYRES, Diss. Kiel 1904.—*D. turgidum* from *Rana esculenta*, Belgium. WILLEM, Bruxelles, Bull. Acad. Roy. 1906, (223, 607-610) pl. i; figg. 11-13).—*D. gulosum*. Mackerel. JOHNSTONE, Liverpool, Proc. Trans. Biol. Soc. 20 (319-321).

*Echinostomum secundum* sp. n. from *Larus ridibundus*. NICOLL Ann. Mag. Nat. Hist. 17 (515-518) pl. xii figg. 1-3.—*E. imbutiforme* on *Labrax lupus*. JOHNSTONE, Liverpool Proc. Trans. Biol. Soc. 20, (321-323).

*Epibdella* (*Benedenia*) *macrocolpa* sp. n. (97, pl. i figg. 1-3.) *Rhinoptera javanica*. Ceylon LÜHE London, R. Soc. Rep. Pearl Oyster 5.

*Gastris* gen. n. *consors* sp. n. (103) pl. ii figg. 13-16 from *Tetradon stellatus* Ceylon. LÜHE, London, R. Soc. Rep. Pearl Oyster 5.

*Gastrodiscus hominis* Anatomy. STEPHENS Liverpool Thompson Yates Lab. Rep. 7, (9-12).

*Haematotrephus* gen. n. *fasciatus*, *phaneropsolus*, Japan, *similis*, Aegypten, spp. nn., STROSSICH, Triest, Boll. Soc. Adriat. 21 (1-40).

*Hemistomum attenuatum* sp. n. aus *Buteo vulgaris*. LINSTOW, Zool. Jahrb. Syst. 24 (11), T. i. fig. 13.

*Lepocreadium* gen. n. for *Distomum pegorichi*, *album* STROSSICH. Triest, Boll. Soc. Adriat. 21 (193-201).

*Lencithodendrium* (*Brachyvelium*) somateriae. Cercaria form in *Mytilus edulis* Lebour Durham, Univ. Philos. Soc. Proc. 2, (231-238).—*L.* in cockle and mussel. NICOLL. Ann. Mag. Nat. Hist. 17 (148-155) pl. iv.

*Lyperosomum squamatum* sp. n. from *Dissura episcopus* LINSTOW. Spolia Zeylan. 3, (174) pl. i, fig. 18.

*Mierorchis* gen. n. Verwandt mit *Diplodiscus* und *Pseudocladorchis*, *megacotyle* (Dies.), *ferrum equinum* (Dies.), Beschreibung, (515), DADAY, Math. Termt. Ért., 24.

*Monostomum*, formae dubiae, STROSSICH, Triest, Boll. Soc. Adriat. 21 (1-40).—*M. filicole* Rudolphi verschieden von *Distoma okeni* Kölliker. ARIOLA, Zool. Anz., 30, (185-186).

*Ophthalmophagus* gen. n. *singularis* sp. n., Oesterreich, STROSSICH, Triest, Boll. Soc. Adriat. 21, (1-40).

*Paramphistomidae*, Anatomie und Histologie, DADAY, Math. Termt. Ért., 24, (560-618).

*Pneumonoeces complexus* sp. n. from *Rana pipiens*. SEELY, Biol. Bull., 10, (249-252).

*Pseudocladorchis* gen. n. Verwandt mit *Cladorchis* und *Mierorchis cylindrus* (Dies.), (529), *nephrodorchis*, (535), *macrostomus*, (540), spp. n., aus *Myletes*, Sud Amerika. DADAY, Math. Termt. Ért., 24.

*Psilostomum redactum* sp. n. from *Gasterosteus aculeatus*. NICOLL. Ann. Mag. Nat. Hist. 17, (525-527) pl. xiii fig. 9.

*Renifer elongatus*. SEELY, Biol. Bull., 10, (253).

*Schistosoma* gen. n. (*Acanthocolpinae* sub. fam. n.) *carnens* sp. n. (101), pl. i, ii figg. 9-12. LÜHE London R. Soc. Rep. Pearl Oyster 5.

*Schistosoma japonicum* vel *cattoi* in the Philippine islands. WOOLLEY, Philippine J. Sci., 1, (83-90).

*Stephanochasmus ceylonicus* sp. n. (99) pl. i. figg. 4-6, from *Narcine timlei*. Ceylon. LÜHE London, R. Soc. Rep. Pearl Oyster 5.

*Tetracotyle pereae-fluriatilis*. Pescipersici del lago di Pusiano . . . MAZZARELLI. Rivista mensile di Pesce Milano 8 1906 (142-144).

*Trochopus*: revisione di genere *onchacanthus*, sp. n.. Ospite sconosciuto: Trieste (65-66). MASSA, Napoli, Arch. zool. ital. 3, (43-71).

*Tristomum megaeoptyle* sp. n. from *Histiophorus*, Ceylon LINSTOW, Spolia Zeylan. 3, (176) pl. i, figs. 19-20.

*Typhlocoelum* gen. n. for *cucumerinum* Rud. and *flavum* Melchis, STROSSICH, Triest, Boll. Soc. Adriat. 21 (1-40).—*T. formae dubiae*, STROSSICH, L.c.

*Zengorhynchis* gen. n. *acanthus* sp. n. from *Larus argentatus*, resembles *Distomum pilosum*. NICOLI Ann. Mag. Nat. Hist. 17, (519-522) pl. xii figg. 4-5, pl. xiii figg. 6-7.

### (c) Cestoda.

Cestode parasites of man. (Illustrated key). STILES, Washington, Treas. Dept., Pub. Hlth. U.S., Hyg. Lab., Bull., No. 25, (104).

*Amoebotaenia subterranea* sp. n. *Sorex* sp. CHODOKOWSKY, Arch. parasit. 10 (344).

*Angularia* gen. n., *beema* sp. n., dans hirondelles. Oural. CLERC, Centralbl. Bakt. Abt. 1 42 Orig. (728).

*Anomotaenia trapezoides* sp. n. from *Urubatinga zonura* FUHRMANN, Centralbl. Bakt. 41 Orig. (212).

*Anonchotaenia oriolina* sp. n. d' *Oriolus galbula* CHODOKOWSKY, Arch. parasit. 10 (332).

*Anthemobothrium* gen. n. *pulchrum* sp. n. (73, pl. v figg. 78-79) from *Trygon stepheni*, Ceylon. SHIPLEY and HORNELL London R. Soc. Rep. Pearl Oyster 5.

*Anthobothrium crispum* (57, pl. iii figg. 45, 46) *rugosum* (78, pl. v fig. 92) spp. n. in Ceylon fishes. SHIPLEY and HORNELL T.c. — *A. auriculatum*. Anatomy. JOHNSTONE, Liverpool Proc. Trans. Biol. Soc. 20 (314-316), pl. xvi figg. 1, 2.

*Apghanobothrium* gen. n. *catenatum* sp. n. from *Phoenicopterus roseus*, Ceylon. LINSTOW Spolia Zeylan. 3, (186) pl. ii-iii.

*Bertia rigida* sp. n. Neu-Guinea, aus *Phalangista* sp., JANICKI, Nova Guinea, 5, Livr. 1, (181-200).

*Bolborhynchus* gen. n. (= echinorrhynchi dei cetacei) *Capitatus* (v. Linst.) Anatomie. PORTA, Zool. Anz., 30, (235-271).

*Bothriocephaliden* Abnormitäten in Proglottiden. GROHMANN, Diss. Giessen 1906, (45).

*Bothriocephalus latus* Roma. ALESSANDRINI, Roma, Boll. Soc. zool. ital. 6, (231-232).—*B. (=Dibothrium) punctatus*. Varieties on turbot and brill. JOHNSTONE, Liverpool Proc. Trans. Biol. Soc. 20 (296).

*Brochocephalus* gen. n. *paradoxus* sp. n. from *Aegialitis mongolica*, Ceylon. LINSTOW Spolia Zeylan. 3, (183) pl. ii-iii.

*Carpobothrium* gen. n. *chiloscylli* sp. n. (54) pl. iii figg. 38, 39, from *Chiloscyllium indicum*, Ceylon. SHIPLEY and HORNELL London R. Soc. Rep. Pearl Oyster 5.

*Cephalobothrium* gen. n. *actobatidis* sp. n. from *Aetobatis narinari*, Ceylon. SHIPLEY and HORNELL T.c. (44-45) pl. i figg. 1-4.

*Chlamydocephalus* gen. n., *namquensis* sp. n. in *Xenopus laevis*. COHN, Centralbl. Bakt., Jena, Abt. 1, 40, Originale, (362-367).

*Choanotaenia arquata* sp. n. dans *Numerius arquatus* CLERC, Centralbl. Bakt. Abt. 1 42 Orig. (720).

*Cittotaenia bursaria* sp. n. from *Lepus nigricollis*, Ceylon. LINSTOW Spolia Zeylan. 3 (184) pl. ii figg. 39-40.—*C. zschokkei* sp. n. Neu-Guinea, aus *Macropus* sp., JANICKI, Nova Guinea, 5, Livr. 1, (181-200).

*Crossobothrium laciniatum* from *Raiabatis*. JOHNSTONE Liverpool Proc. Trans. Biol. Soc. 20 (306-308).

*Culcitella* gen. n., *rapacicola* (83) *crassa* (85) spp. n., from birds of prey. FUHRMANN, Centralbl. Bakt. 41 Orig.

*Cyclinstera fuhrmanni* sp. n. dans *Bos taurus stellaris*. CLERO, Centralbl. Bakt. Abt. 1 42 Orig. (726).

*Cysticercus cellulose* beim Reh. BORCHMANN, Berliner tierärztl. Wochenschr., 1906, (637-638); am lebenden Schweine. KUKULJEVIĆ, Berliner tierärztl. Wochenschr. 1906, (626-630).

*Davainea compacta* sp. n., dans *Oriolus galbula*, CLERO, Centralbl. Bakt., Abt. 7 42 Orig. (725).—*D. polycalcaria* sp. n. from *Corvus macrorhynchos*, Ceylon. LINSTOW, Spolia Zeylan. 3 (180) pl. ii figg. 28-29.—*D. lateralis* sp. n. aus *Galeopithecus volans*, BOURQUIN, Centralbl. Bakt., Abt. 1, 41 Orig. (222).—*D. (Chapmania longicirrhosa* sp. n. FUHRMANN, Centralbl. Bakt. 41 Orig. (81).—*D. parva* (?) = *Taenia voluta* v. LINSTOW (540); trapezoides (568), gracilis (570), spp. n. aus Säugetiere. JANICKI Žs. wiss. Zool. 81.—*D.* species parasitic in poultry. (Japanese). YOSHIDA, Dobuts. Z., Tokyo, 18, (173-185, 203-206) pl.

*Diagonobothrium* gen. n. *asymmetrum* sp. n. from *Myliobatis maculata*, Ceylon. SHIPLEY and HORNELL London R. Soc. Rep. Pearl Oyster 5 (58) pl. iii, fig. 47.

*Dilepis recepta* sp. n., Oural. CLERO, Centralbl. Bakt. Abt. 1 42 Orig. (715).—*D. brachyarthra* sp. n. oiseaux. CHODODKOWSKY, Arch. parasit. 10 (337).—*D. oligorchidum* sp. n. from *Busarellus nigricollis* FUHRMANN, Centralbl. Bakt. 41 Orig. (215).—*Diorchis occulta* sp. n. from *Phoenicopterus roseus* Ceylon LINSTOW, Spolia Zeylan. 3, (179) pl. ii, figg. 26-27.

*Diplochetus volvulus* sp. n. from *Sarcophorus malabaricus*, Ceylon. LINSTOW. T.c. (181, pl. ii) figg. 30-31.

*Dipylidium avicola* sp. n. from Gyps Kolbi. FUHRMANN, Centralbl. Bakt. 41 Orig. (219).

*Drepanidotaenia caprimulgorum* sp. n., FUHRMANN, Centralbl. Bakt Jena Abt. 1, 41 Orig. (441).—*D. undulata* from *Turdus musicus*. Anatomy and development. ROSSETER London J. Quak. Microsc. Cl. 9 (269-274) pl. xix.

*Echinocotyle tenuis* sp. n., CLERO, Centralbl. Bakt. Abt. 1 42 Orig. (536).

*Echeneibothrium javanicum* (61, pl. iv. figg. 51-56), *simplex* (80, pl. vi. figg. 95-97), *trifidum* (80, pl. vi. figg. 98-99), *trygonis* (81, pl. vi. fig. 100) *walga* (81, pl. vi. fig. 101) spp. n. Ceylon fishes. SHIPLEY and HORNELL, London R. Soc. Rep. Pearl Oyster 5.—*B. variabile* varieties, JOHNSTONE Liverpool Proc. Trans. Biol. Soc. 20, (309-313).

*Echinobothrium rhinoptera* sp. n. (62) pl. iv. figg. 57-59 from *Rhinoptera javanica*, Ceylon. SHIPLEY and HORNELL, London R. Soc. Rep. Pearl Oyster 5.

*Euiochobothrium* gen. n. *gracile* sp. n. (63-65) pl. iv. figg. 60-62 from *Rhinoptera javanica*, Ceylon. SHIPLEY and HORNELL, T.c.

*Horuellobothrium* gen. n. *cobraformis* sp. n. from *Aetobatis narinari*, Ceylon. SHIPLEY and HORNELL T.c. (45) pl. i figg. 5-10.

*Hymenolepis rugosus* (433) dans *Columba interruptus* (435) dans *Muscicapa atricapilla*, *intermedius* (436) dans *Cuculus dentatus* (532), *ambiguus* (533) dans *Otis* spp. n., CLERO, Centralbl. Bakt. Abt. 1 42.—*H. longicirrosa* (751), *longivaginata* (752), *simplex* (753), *brevis* (753), *orthacantha* (754) spp. n. aus Vogeln. FUHRMANN, Centralbl. Bakt., Jena, Abt. 1, 42, Orig., 1906.—*H. septaria* (177) pl. i fig. 21, *clausa* (177, pl. ii figg. 22-23) *spinosa* (178) figg. 24-25 spp. n. Ceylon, LINSTOW Spolia Zeylan. 3.—*H. tetrica* (338) *Otis tetraz*, *spinulosa* (342), *diaphana* (343), *Sorex vulgaris*, spp. n. CHODODKOWSKY Arch. parasit. 10.—*H. lobata* (352), *armata* (353), *styloides* (354), *capillaroides* (355), *flagellata* (356), *papillata* (357), *pellucida* (440), *uncinata* (441), *Hymenolepis teresoides* (443), *bisaccata* (444), *brevianulata* (445), *brasiliense* (446), *rectacantha* (446), *panciovata* (447), *serrata* (448), *elongata* (450), *ardeae* (451), spp. n. in birds. FUHRMANN, Centralbl. Bakt., Jena, Abt. 1, 41, Originale.—*H. steudeneri* (537), *chryschlorides* (545), *capensis* (547), *criceti* (556), *asymmetrica* (562), *procera* (565), *muris variegati* (567), *crassa* (571), *contracta* (574) spp. n., Aus Säugetiere. JANICKI, Žs. wiss. Zool. 81, (537-574).—*H. nana*: RONCHETTI, Torino, Giorn. Acc. med., 69, (93-95).—KOWALEWSKI, Kraków, Rozpr. Akad. 45 B, (222-238).

*Icthyotaenia cryptobothrium* sp. n. from *Chrysopela ornata* Ceylon, LINSTOW. Spolia Zeylan. **3**, (185) pl. iii, figg. 41–42.

*Idiogenes grandiporus* sp. n. *Otis tetraz*. CHOLODKOWSKY, Arch. parasit. **10** (339).—*I. tapika* sp. n. Oural. CLERC, Centralbl. Bakt. Abt. 1 **42** Orig. (722).—*I. sp. n.* aus *Otis tetraz* KOWALEWSKI, Zool. Anz., **29**, (683–686).

*Kystocephalus* gen. n. *translucens* sp. n. from *Aetobatis marinari*, Ceylon. SHIPLEY and HORNELL London R. Soc. Rep. Pearl Oyster; **5** (46, pl. 1 figs. 11–12).

*Laterotaenia* gen. n., *natteri* sp. n. (87) from *Cathartes pupa*, FUHRMANN, Centralbl. Bakt. **41** Orig.

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## ETHOLOGY. 1819

## HABITS.

Similarity between tubes of worms and ammonites of Senonian; **Boule** and **Therenen**, Paris, Ann. Paléont. 2 (53).

*Taenurus* probable burrow of polychaetous annelid; **Sarle**, 2.

*Arthropycus* and *Daedalus* of burrow origin; **Sarle**, 1.

Relations of boring Polychaets and oysters; **Guerin**.

Oekologie des *Tubifex* und *Lumbriculus*; **Wagner**.

Habits of tube-building worms; **Watson**, Nature 74 (562).

Schlammkulturen und eigentümliche Schlammgebilde durch *Lumbriculus*; **Klunzinger**.

## PARASITISM.

Ueber lebende Hirudineen im Bindegewebe des menschlichen Auges; **Kuwahara**.

Sangsues parasites des Palmipèdes; **Mégnin**.

Zwei Fälle von Blutegeln in der Trachea; **Tsakyrogloss**.

*Ichthyotomus sanguinarius*, eine auf Aalen schmarotzende Annelide; Parasitism in the Polychaeta; **Eisig**.

(*Myzostoma*, parasite of starfish; **Wheeler**.)

Mode de transmission des Trypanosomes par les Hirudinées; **Brumpt**, 1, 2, 3.

*Myxocystis* parasite de *Pheretima*; **Hesse**.

Sporozoaire parasite des *Scoloplos armiger*; **Brasil**, 2.

Grégaries parasitic in *Lumbricus herculeus*; **Brasil**, 1.

Polychaeta, protozoan parasites; **St. Joseph**.

*Travisia* parasitised by *Haplozoon*; **Dogiel**.

Copépode ectoparasite de *Nereis Dumerilii*; **Malaquin**, 1.

## DISTRIBUTION. 1827

## 1. Terrestrial.

## Europe.

Lumbriciden - Fauna Ostpreussen; **Collin**, 2.

Naididen Kurischen Nehrung; **Thienemann**, J., 1.

Lumbricidi dell' Europe orientale; **Cognetti de Martiis** 3.

Montenegro Hirudinea; **Blanchard**.

Bologoje Süsswasser - Oligochéten - Fauna; **Plotnikov** 1.

Ligurian Lumbricidae; **Cognetti de Martiis**, 10.

I. Elba Enchitreidi; **Issel**, 2.

## Asia.

India, *Chaetogaster* sp. n.; **Annandale**.

## North America.

Cedar Point, Ohio, *Naididae*, 7 spp. n.; **Walton**.

Great lakes region. Hirudinea and Oligochaeta; **Moore**, 3.

## Africa.

Tanganyika, Oligochaeta, 4 spp. n.; **Beddard**.

Lumbrichi di Madagascar e dell' isola Riunione; 2 spp. n., **Cognetti de Martiis**, 6.

Megascolecidi africani dal Ruwenzori; **Cognetti de Martiis**, 5.

Oligocheti della Regione Neotropicale; **Cognetti de Martiis**, 9.

## Australasia and Antarctic.

Notes on New Zealand Earthworms; **Benham**, 1.

Earthworms from Little Barrier Island, New Zealand; **Benham**, 2.

Antarctic Oligochaeta, 2 spp. n.; **Michaelsen**.

Antarctic oligochaets; **Richters**.

**Atlantic.**

Canary Islands Oligochaeta Drilo-fauna; *Cognetti de Martiis*, 1.

**2. Marine.**

Distribution des Sipunculides; *Hérubel*, 5.

Polychètes de France (Océan et côtes de Provence); *Saint-Joseph*, de.

Priapulides des côtes occidentales de la Scandinavie; *Hézubel*, 6.

Arctic Priapulids and Echiurids; *Théel*.

Norwegian fjords, Actinotrocha; *Schepotieff*, 2.

Sargasses, Annélides de la mer des; Prince Albert de Monaco, C.-R. Acad. Sci., 143 (622).

Geographical distribution of *Rhabdopleura*; *Schepotieff*, 1.

West Indian Islands; *Augener*; Polychaeta dredged by the "Blake," 20 spp. n. 3 var. n.; St. Vincent *Myzostoma*, 1 sp. n.; *Reichensperger*.

**Indo-Pacific.**

Mer Rouge affinités de la faune annélidienne; *Gravier*, 2.

Mer Rouge les Annélides polychètes (Sabellidae); *Gravier*, 1.

Faune annélidienne de la mer Rouge et ses affinités; *Gravier*, 1.

La mer Rouge Annélides Polychètes; *Gravier*, 5.

Indian Ocean. *Owenia fusiformis* et sa distribution géographique; *Gravier*, 4.

Polychaeta of the Maldives and Laccadives; *Gardiner*, Fauna Maldives and Laccadives, 2, supp. ii, 1906, (1048).

Hawaiian islands. Albatross collections Polychaeta 26 spp. n.; *Treadwell*.

Japan. Myzostomes of "Albatross" expedition, 8 spp. n., 1 var. n.; *McClendon*.

(North Pacific. New species *Ampharetidae* and *Terebellidae*; *Moore*, 4.)

Alaska. 2 spp. n.; *Moore*, 2.

Monterey bay, California; (*Actinotrocha*); *Spaulding*.

North Pacific. New species of *Polychaeta*; *Moore*, 1.

**Antarctic.**

Sipunculides de l'Expédition Charcot; *Hérubel*, 2.

Antarctique. L'Expédition française; *Gravier*, 3.

**3. Geological.**

Silurian of Ludlow. Worm fauna; *Elles* and *Slater*.

Vermes of the Salem limestone; *Beede*.

List of Vermes from Devonian of Western New York; *Slocom*.

*Serpulites* from Carboniferous of Ronken Glen, Glasgow; *Macnair*.

*Serpula* in Neocomian of Schaumburg-Lippe; *Harbert*.

*Serpula* in Tertiary sands of Cserhát; *Noszky*.

*Serpula* in Tertiary of Budapest Ráko; *Vadász*.

Polychaeta from Miocene of Turin; *Bellini*.

Fossil Polychaeta from Post-pliocene of Salustro; *Scalia*.

†Patagonia. Annelida from sedimentary deposits; *Ameghino*, Buenos Aires, An. Mus., Ser. 3a, 8, 1906, (57).

Annelid (? Polychaet) from Pleistocene terraces and strandlines of Norway; *Rekstad*.

**SYSTEMATIC.****(1) Archiannelida.**

*Dinophilus* sp. Oogenesis and sex determination CONKLIN Science 24 (294); *D. taeniatus*, Structure of nephridia presence of solenocytes. SHEarer, Q. J. Microsc. Sci., London, 49, 1906, (517-545) pl. xxix-xxx. *D. apatris* Geschlechtsbestimmende Einflusse, Eibildung. MALSEN, Arch. mikr. Anat., 69, (63-99), 1 Taf.

*Polygordius* Cell communications between blastomeres. SHEARER London Proc. R. Soc. ser. B, **77** (498–505), pl. xviii fig. 8.—*P. lacteus* (531) T. XXV–XXIX *triestinus* sp. n. Triest, morphologie (605) T. XXIX figg. 57–58 HEMPELMANN, Zs. wiss. Zool. **84**.—*P. neapolitanus* structure of foregut. SALENSKY Biol. Centralbl. **26** (199–204).

*Protodrilus flavocapitatus* Naples. Development. PIERANTONI Mitt. zool. Stat. Neapel **17** (515).

*Saccocirrus* development. PIERANTONI T.c. (519); Eibildung, Eireifung u. Bevruchtung. HEMPELMANN, Zool. Anz., **30**, (775–784).—*Saccocirrus papillocerus* sviluppo embrionale e larvale. PIERANTONI, Mitt. zool. Stat. Neapel, (46–72), Taf. iii–iv; structure of foregut. SALENSKY Biol. Centralbl. **26** (199–204).

## (2) Polychaeta.

Polychaeta of the Red Sea. GRAVIER Nouv. Arch. Muséum, **8** (123–272) pl. i–vii. [Full descriptions of new species already notified in Bull. Mus. Paris, 1905, are given here]; affinités, Bul. Museum, Paris, **12**, (149–154); GRAVIER (Sabellides) de la mer Rouge, T.c. (33–34, 110–115).

Polychètes recueillies par l'Expédition antarctique française (Syllidiens, Hésioniens, Phyllodociens, Néréidiens, Euniciens), GRAVIER T.c. (283–290, 386–391).

Polychètes des côtes de France. SAINT-JOSEPH, de. Ann. sci. nat., zool., **3**, (145–260) pl. i–v.

Westindische polychaeten. AUGENER. Cambridge, Mass., Bull. Mus. Comp. Zool. Harvard Coll., **43**, (91–196) 8 pls.

Polychètes. Organes segmentaires FAGE, Ann. sci. nat., **3**, (261–410) pls. vi–vii.

*Mitraria* sviluppo CIALONA, Roma, Ric. Lab. anat. norm., **10**, (257–261), 10 fig.

## NEREIDIFORMIA.

Aphroditiden. Homologie von Cirrus und Elytron DUNCKER, Zs. wiss. Zool., **81**, (191–343), T. xi.

*Arabella iridescent* (1171), *A. attenuata* (1172), spp. n., Hawaiian Is., TREADWELL, Washington, Bull. U. S. Fish Com., **23**.

*Autolytus charcoti* sp. n. GRAVIER, Bull. Mus. Paris **12**, (283).

*Castalia hesionoides* sp. n. West Indies. AUGENER, Cambridge, Mass., Bull. Mus. Comp. Zool. Harvard Coll., **43**, (155) pl. vi figg. 106–109.—*C. oculata* sp. n., Hawaiian Is., TREADWELL, Washington, Bull. U. S. Fish. Com. **23** (1148).

*Ceratonereis punctata* sp. n. Cannes, description. ST. JOSEPH Ann. sci. nat. **3**, (219–221) pls. iv–v, figg. 90–95.

*Chlocia flava*. Colombo. WILLEY. Spolia. Zeylan, **3**, (222–224).

*Diopatra spiribranchis* sp. n. West Indies. AUGENER. Cambridge, Mass., Bull. Mus. Comp. Zool. Harvard, **43** (145) pl. v figg. 88–96.

*Eteone reyi* sp. n. Antarctique. GRAVIER, Bul. Mus., Paris, **12** (389).

*Eulalia quadrioculata* (220, pl. x figg. 4–6), *longicornuta* (222, pl. x figg. 7–8) spp. n. from North Pacific. MOORE, Philadelphia, Proc. Acad. **68**.

*Eunice collini* sp. n. West Indies. AUGENER, Cambridge, Bull. Mus. Harvard, **43** (133) pl. iv figg. 66–73.—*E. hawaiiensis* (1166), *interrupta* (1167), *bilobata* (1168), *necidioformis* (1169) spp. nn., Hawaiian Is., TREADWELL, Washington, Bull. U. S. Fish Com., **23**.

*Eupanthalis oahuensis* sp. n., Hawaiian Is., TREADWELL, Washington T.c. (1155).

*Exogone turqueti* sp. n. Antarctique. GRAVIER, Bul. Mus., Paris, **12** (285).

*Glycera edwardsi* sp. n. Mer Rouge. GRAVIER, Nouv. arch. Muséum **8**.)

(*Glycinde bonhorei*, Mer Rouge *maskallensis*, spp. n. GRAVIER T.c. **8**.)

*Goniada brunnea* sp. n., Hawaiian Is., TREADWELL, Washington, Bull. U. S. Fish Com., **23**, (1174).—*G. emerita*. St. Jean de Luz, description. ST. JOSEPH Ann. Sci. nat. **3**, (162–164) pl. ii figg. 34–36.—*G. var. quinquelabiata* var. n. West Indies. AUGENER, Cambridge, Bull. Mus. Harvard **43** (158).

*Harmothoe synaptae* sp. n. St. Jean de Luz. ST. JOSEPH Ann. Sci. nat. **3**, (147) pl. i figg. 1–6.—*H. tuberculata* sp. n., Hawaiian Is., TREADWELL, Washington Bull. U. S. Fish Com., **23**, (1154).

*Hermodice pennata* sp. n., Hawaiian Is., TREADWELL, T.c. (1165).

*Ichthyotomus sanguinarius* parasite of *Myrus vulgaris*, full account of anatomy. EISIG, Fauna u Flora des Golfes v. Neapel Monogr. 28, 1906.

†*Laetmatonice nuchipapillata* sp. n. St. Vincent. AUGENER, Cambridge Bull. Mus. Harvard 43 (101) pl. i figg. 2-7.

*Lagisca floccosa* var. *unidentata* var. n. AUGENER, T.c. (125).

*Lepidonotus citrifrons* sp. n. West Indies. AUGENER, T.c. (113) pl. ii figg. 31-38 iii figg. 39-40.

*Laumbriconereis grandis* (1170), *minuta* (1171), spp. n., Hawaiian Is., TREADWELL, Washington Bull. U. S. Fish Com. 23.

*Nemidia antillicola* sp. n. West Indies. AUGENER, Cambridge Bull. Mus. Harvard 43 (126) pl. iii figg. 53-59.

(*Nephthys palati* sp. n. Mer Rouge. GRAVIER, Nouv. arch. Muséum 8.)

*Nereis biceruciata* sp. n. West Indies. AUGENER, Cambridge Bull. Mus. Harvard 43 (151) pl. v figg. 102-104, vi fig. 105.—*N. dumerilii* regeneration. BYRNES, Arch. Entw-Mech., 21, (126-129).—*N. fucata* forme hétéronéridienne. Feuille jeunes natural, Paris, 36, (11-12).—(*N. kobiensis* heteronereis stage. TREADWELL, Biol. Bull. 9 (226-231).); heteronereid phase. TREADWELL, Washington Bull. U. S. Fish. Com. 23, (1161).—*N. pelagica*, female heteronereid. MCINTOSH, Ann. Mag. Nat. Hist. 17 (72-73).—*N. rubicunda* Cannes, ST. JOSEPH, Ann. sci. nat. 3 (216) pl. iv, figg. 83-89).

*Onuphis rubrescens* sp. n. West Indies. AUGENER, Cambridge, Bull. Mus. Harvard 43 (139) pl. iv, figg. 76-83.

*Ophryotrocha puerilis* Reifung der Geschlechtszellen. SCHREINER, Anat. Anz., 29, (405-479).

*Orseis mathai* sp. n. Antarctique. GRAVIER, Bul. Mus. Paris, 12 (386).

*Phyllodoce nana* sp. n. Cannes. ST. JOSEPH, Ann. sci. nat. 3, (223) pl. v, figg. 96-98.

*Pionosyllis comosa* sp. n. Antarctique. GRAVIER, Bul. Mus. Paris, 12 (288).—*P. magnifica* sp. n. MOORE, Philadelphia Proc. Acad. 58 (223) pl. x, figg. 9-11.—*P. pulligera*: gestazione externa. PIERANTONI, Napoli, Annuario Mus. zool. Univ., 2 (1-2) I tav.

*Polynoe alba* (1149), *lucida* (1150), *spicula* (1151), *mutilata*. (1152), spp. n., Hawaiian Is., TREADWELL, Washington, Bull. U. S. Fish. Com. 23.

*Polynoella pachylepis* sp. n. West Indies. AUGENER, Cambridge, Bull. Mus. Harvard 43 (120) pl. iii, figg. 48-52.

*Pontogenia maggiae* sp. n. Montserrat. AUGENER, T.c. (103) pl. i, figg. 8-15.—*P. chrysocoma*. Cannes, description. ST. JOSEPH, Ann. sci. nat. 3 (189-193), pl. iii, figg. 58-68.

*Psammolyce arenosa*. St. Jean de Luz, description, DE SAINT JOSEPH, T.c. (150-159) pl. i-ii, figg. 7-31).—*P. floccifera* sp. n. West Indies. AUGENER, Cambridge Bull. Mus. Harvard 43 (109) pl. ii, fig. 24-30.

*Scoloplos armiger* sporozoan parasite. BRASIL, Arch. zool., 4, notes et Revue. (xvii-xxii).

*Sphaerosyllis antarctica* sp. n. GRAVIER, Bul. Mus. Paris 12 (286).

*Stauronereis annulatus* sp. n. N. Pacific. MOORE, Philadelponia Proc. Acad. 58 (225) pl. x, figg. 12-13, figg. 18-22.

*Sthenelais gracilior* sp. n. Off Barbados. AUGENER, Cambridge Bull. Mus. Harvard 43 (107) pl. i, fig. 18, ii, figg. 19-23.

*Syllis quaternaris* sp. n. Alaska, MOORE, Philadelphia Proc Acad. 58 (352).

*Trypanosyllis misakiensis* sp. n. IZUKA, Annot. Zool. Jap., 5, (283-287); collateral budding. Dobuts. Z., Tokyo, 18, (1-5).

*Vanadis minuta* (1158) *fusca*, *punctata* (1159) spp. n., Hawaiian Is., TREADWELL, Washington Bull. U. S. Fish Com. (23).

#### SPIONIFORMIA.

*Chétoptériens*. GRAVIER, Organe nuchal Paris Bull. franç. avanc. sci., 1904, (260-261), Paris, C.-R. ass. franç. avanc. sci., 33, (784-785).—Organe externe annexe des néphridies. GRAVIER, Paris, C.-R. ass. franç. avanc. sci., 33, (785-787), et Bull. ass. franç. avanc. sci., 1904, (261).

*Chaetopterus*. Scissiparité génitale des Annélides. JOURDAIN, Paris, Bull. ass. franç. avanc. sci., 1905, (333).—C,

*pergamentaceus* embryonic development.  
LILLE, J. Exp. Zool., 3, (153-268) 1 pl.—  
(*C. variopedatus* Renier var. *djiboutiensis*  
var. n. Mer Rouge. GRAVIER, Nouv.  
Arch. Muséum, 8.)

(*Magelona obockensis* sp. n. GRAVIER,  
T.c.)

*Nerine cirratulus* regeneration.  
IVANORO. Zs. wiss. Zool. 85, (1-47) Taf.  
i-iii.—(*N. lefeuvrei* sp. n. GRAVIER,  
Nouv. arch. Muséum, 8.)

*Oxenia fusiformis* Madagascar distribution  
géographique. GRAVIER, Bul.  
Muséum, Paris, 12, (294-296).

(*Telepsavus bonhourei* sp. n. Mer  
Rouge. GRAVIER, Nouv. arch. Muséum,  
8.)

#### TEREBELLIFORMIA.

(*Amphicteis alaskensis*, *glabra* sp. n.  
N. Pacific. MOORE, Philadelphia Proc.  
Acad. 57, (846-851).)—*A. scapho-*  
*branchiata* sp. n. N. Pacific. MOORE,  
Philadelphia, Pa., Proc. Acad. Nat. Sci.,  
58, (255, pl. xii figg. 54-61).

(*Amphitrite palmata* sp. n. N. Pacific.  
MOORE, T.c. (858).)

*Anisocirrus* gen. n. Djibouti. GRAVIER,  
prétendu cas de bourgeonnement. Paris,  
Bull. ass. franç. avanc. sci., 1905, (333),  
Bul. soc. philom., 8, (10-23).—(*A.*  
*decipiens* sp. n. Mer Rouge. GRAVIER,  
Nouv. arch. Muséum, 8).

*Aponobranchus* gen. n. *perrieri* sp. n.  
Mer Rouge. GRAVIER, T.c. (232) pl. v.  
figg. 239-242.

*Amphitrite* sp. parthenogenetic developement.  
SCOTT, J. Exp. Zool., 3, (49-98) pl. i-iv.

(*Armandia melanura* sp. n. Mer Rouge.  
GRAVIER, Nouv. arch. Muséum 8).

(*Artacama conifera* sp. n. N. Pacific.  
MOORE, Philadelphia Proc. Acad. 57,  
(853).)

(*Audouinia saxatilis* sp. n. Mer Rouge.  
GRAVIER, Nouv. arch. Muséum (42).)

(*Cirratulus africanus* sp. n. Djibouti.  
GRAVIER, T.c.)

(*Dodecaceria joubini* sp. n. Mer Rouge.  
GRAVIER, T.c.)

(*Laena nuda* sp. n. N. Pacific. MOORE,  
Philadelphia Proc. Acad. 57.)

*Lanice expansa* sp. n., Hawaiian Is.,  
TREADWELL, Washington Bull. U. S. Fish  
Com., 23, (1176).

*Melimna monocera* (177) pl. vi figg.  
121-125; *profunda* (181) pl. vi and vii  
figg. 126-128, spp. n. West Indies.  
AUGENER, Cambridge Bull. Mus. Harvard,  
43.—(*M. denticulata* sp. n. N.  
Pacific. MOORE, Philadelphia Proc. Acad.  
57.)

*Terebella parvabranchiata* sp. n.  
Hawaiian Is., TREADWELL, Washington  
Bull. U. S. Fish Com., 23, (1175).

*Terebellides tentacula* sp. n., Hawaiian  
Is., TREADWELL, Washington, Bull. U. S.  
Fish Com., 23 (1177).

*Thelpus branchiatus* sp. n. Hawaiian  
Is., TREADWELL, T.c. (1176).—(*T. hamatus*  
sp. n. MOORE Philadelphia Proc.  
Acad. 57).—*T. vaughani* sp. n. Mer  
Rouge GRAVIER, Nouv. arch. Muséum 8  
(221) pl. iv figg. 230-233.

#### SCOECIFORMIA.

*Ammotrypane brevis* sp. n. Alaska  
MOORE, Philadelphia Proc. Acad. 58  
(354).

(*Axiothea obockensis* sp. n. Mer  
Rouge, GRAVIER, Nouv. arch. Muséum  
8.)

*Brada pilosa* sp. n. N. Pacific.  
MOORE, Philadelphia Proc. Acad. 58,  
pl. x. figs. 14-17.

(*Clymene watsoni*, Mer Rouge, *africana*,  
spp. n. GRAVIER Nouv. arch.  
Muséum 8.)

*Clymenella tentaculata* sp. n. N. Pacific  
MOORE, Philadelphia Proc. Acad. 58,  
(239) pl. xi, figg. 33-38.

*Lumbriclymene pacifica* sp. n. N.  
Pacific. MOORE, T.c. (246) pl. xii figg.  
40-42.

*Maldane collariceps* sp. n. West  
Indies. AUGENER, Cambridge Bull. Mus.  
Harvard 43 (163) pl. vi figg. 114-120.—  
*M. similis* sp. n. MOORE, Philadelphia  
Proc. Acad. 58 (233) pl. xi figg. 26-30.

*Maldanella robusta* sp. n. N. Pacific.  
MOORE, T.c. (236) pl. xi figg. 31-32.

*Nicomache carinata* sp. n. MOORE,  
T.c. (242) pl. xi figg. 36-39, xii, figg.  
43-44.

*Notophyllum imbricatum* sp. n. N. Pacific. MOORE, T.c. (217) pl. x, figg. 1-3.

*Oncoscolex (Eumenia) heterochaetus* sp. n. off St. Vincent. AUGENER, Cambridge Bull. Mus. Harvard 43 (159) pl. vi figg. 110-112.

*Travisia pupa* sp. n. N. Pacific. MOORE, Philadelphia Proc. Acad. 58, (228) pl. xi, fig. 23.

#### CAPITELLIFORMIA.

*Notomastus exsertilis* sp. n. St. Jean de Luz, description St. JOSEPH. Ann. Sci. Nat. 3, (169-173) pl. ii figg. 44-47).—*N. giganteus* sp. n. N. Pacific. MOORE, Philadelphia Proc. Acad. 58 (227) pl. x figg. 24-28.

#### SABELLIFORMIA.

*Amphiglaena mediterranea* regeneration. DRIESCH Arch. Entw. Mech. 21, (754-755).

*Branchiomma claparedei* (39), *mu-* *shaensis* (40), spp. n. Mer. Rouge. GRAVIER Bul. Museum 12.

*Chone gracilis* sp. n. N. Pacific. MOORE, Philadelphia Proc. Acad. 58 (257) pl. xii, figg. 62-66.

*Eupomatus*. Cell communications between blastomeres. SHEARER London Proc. R. Soc., B. 77 (498-505) pl. xviii figg. 1-7.

*Eurato sancti-josephi* sp. n. Mer Rouge. GRAVIER, Bul. Mus. Paris 12 (42).

*Hydroides dianthus* modifiability of behavior. YERKES J. Comp. Neur. Psych. 16, (441-449); behaviour in response to stimuli. HARGITT. J. Exp. Zool. 3, (297-310).

*Hypsicomus marenzelleri* (34) *pigmennatus* (36) spp. n. Mer Rouge. GRAVIER. Bul. Mus. Paris 12.

*Laonome elegans* sp. n. Mer Rouge. GRAVIER, T.c. (41).—*L. punctata* sp. n., Hawaiian Is., TREADWELL, Washington, Bull. U. S. Fish Com. 23 (1179).

†*Ortonia blatchleyi* sp. n. Salem limestone BEEDE, Indiana Rep. Dept. Geol. Nat. Res. 30.

*Pomatoceropsis joussaumei* sp. n. Mer Rouge. GRAVIER, Bul. Mus. Paris 12, (114).

*Potamilla* Tenby. Regeneration WATSON London Proc. R. Soc., B. 77, (332-336).—*P. elongata*, *californica* spp. n., Hawaiian Is., TREADWELL, Washington Bull. U. S. Fish Com. 23, (1178).—*P. ehlersi* sp. n. Mer Rouge. GRAVIER; Bul. Mus. Paris 12 (37).—*P. incerta* une forme jeune de *torelli* Otocysts de ces Polychètes. FAUVEL, Paris, C.-R. ass. franç. avanc. sci., 34, (550-553); Paris, Bull. ass. franç. avanc. sci., 1905, (334).

*Protula intestinum* behaviour in response to stimuli HARGITT J. Exp. Zool. 3, (310-311).—*P. submedia* sp. n. West Indies AUGENER, Cambridge Bull. Mus. Harvard, 43, (180), pl vii figg. 145-147 pl viii figg. 148-152.

*Sabella Lamyi* sp. n. near *zebuensis* Mer Rouge GRAVIER. Bul. Mus. Paris, 12, (33).—(*S. microphthalmia*, hermaphrodite organ. GREGORY. Biol. Bull. 9, (287-291).)

*Samytha bioculata* sp. n. N. Pacific. MOORE, Philadelphia Proc. Acad. 58, (253) pl. xii, figg. 52-53.

†*Serpula (Hydroïdes) monoceros* sp. n. Mer Rouge. GRAVIER, Bul. Mus. Paris 12, (110).—*S. crater* cytology of fecondation and maturation SOULIER, Arch. zool., 5, (403-480).

*Spirographis Spallanzani*: Rigeneration. ORLANDI, S. Arch. zool. ital., Napoli, 3, (1-41) 1 tav.; Regeneration; IWANOW, St. Peterburg Trav. Soc. nat. 37, (166-175).

*Vermilia annulituba* sp. n. off Martinique. AUGENER, Cambridge Bull. Mus. Harvard 43, (185) pl. viii figg. 153-161.

*Vermiliopsis glandigerus* sp. n. Mer Rouge. GRAVIER, Bul. Mus. Paris 12, (112).

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# VII. BRACHIOPODA AND BRYOZOA

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S. PACE AND R. M. PACE

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## (a) BRACHIOPODA

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## II.—SUBJECT INDEX.

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### GENERAL. 2003

#### Bibliography.

Publications during 1905; Mayer; Sykes & Smith.

N. American palaeontological publications, 1901-5; Weeks.

Bibliography, 1900-2; Meissner.

#### Museums.

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Catalogue of Natal Government Museum collection; Warren.

D'Orbigny's "Prodr. Paléont. Strat. Univ." types reviewed and figured; Boule & Thevenin.

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Shell of Diphyoid Terebratulids; Buckman, **1**.

Shell, suggested explanation of lamination in Diphyoids; Bather in Buckman, **1**.

<b>Želizko, J. V.</b> 1. Nové příspěvky k poznání fauny pásmu D-dlγ středočeského siluru. [Further contribution to a knowledge of the Fauna of stages D-dlγ of the Silurian of Central Bohemia.] Prag, Sitz.-Ber. Böhm. Ges. Wiss., <b>1905</b> , No. 11, (1-7).	PHYSIOLOGY. 2011
	Senescence; Shimer, <b>2</b> .

### DEVELOPMENT. 2015

Ontogeny of Devonian spp. from Lake Canandaigua, N. York; Raymond, **1**.

### ETHOLOGY. 2019

Association of *Sabellaria alcocki* with *Kingena alcocki*; Gravier.

### VARIATION AND AETIOLOGY. 2023

Phylogeny; Scupin.

Devonian spp. from Lake Canandaigua, N. York; Raymond, **1**.

Diphyoid Terebratulacea, homœomorphy; Buckman, **1**.

### DISTRIBUTION. 2027

#### (a) RECENT.

#### General.

Collections of the "Valdivia" and "Gauss" expeditions; *Chlidonophora*, *Liothyridina*, *Macandrevia*, *Magellania*, *Terebratella*, spp. n.; Blochmann.

### Europe. d

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Mediterranean, French spp.; Granger.

### N. America. g

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### Australasia. i

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New South Wales, *Campages* gen. et sp. n., *Hemithyridis* sp. n.; Hedley, **1**.

New South Wales, occurrence of *Liothyridina uva*, Brod. at Twofold Bay; Gehlert.

N. Hebrides, occurrence of *Thecididea maxilla*, Hedley; Hedley, **1**.

## Atlantic.

Occurrence of *Liothyridina uva*, Brod. off Buenos Ayres; **Ehlert**.

## Indian Ocean.

*Kingena*, sp. n.; **Joubin**.

## Antarctic.

Heard I., occurrence of *Liothyridina uva*, Brod.; **Ehlert**.

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England, few fossils from Cornwall; **Green & Sherborn**.

England, lists of fossils from Cheshire; **Pocock**.

Austria, fossils from Salzburg; **Fugger**, 2.

Amboyna, late Paleozoic or early Mesozoic fossils; *Atlyris*, *Diclasma*, *Rhynchopora*, *Spiriferina*, *Waldheimia*, spp. n.; **Boehm** in **Verbeek**.

Madagascar, fossils; **Lemoine**.

Madagascar, fossils; **Thevenin**, 1, 2.

Canada, fossils from Beechley I., Lancaster Sd., and Cape Chidley; **Low**.

United States, fossils from Bighorn Mts., Wyoming; **Darton**.

## Cainozoic.

Japan, Post-Pliocene (or Pliocene) fauna of Tokyo, *Waldheimia*, sp. n.; **Tokunaga**.

## Post-Tertiary.

Norway, fossils from E. Nedene; **Danielsen**.

## Tertiary.

France, Miocene spp. from Gourbesville, Manche; **Dollfus**.

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## VII. Brachiopoda.

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San Marino, fossils; **Nelli**.

Galicia, Sarmatian fauna of Tarnobrzeg; **Friedberg**.

Carinthia, Eocene fossils; **Redlich**.

Patagonia, fauna; **Ameghino**.

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Diphyoid group of Terebratulæ; **Buckman**, 1.

England, Liassic and Cretaceous fossils from the neighbourhood of Sidmouth and Lyme Regis; **Woodward & Ussher**.

Italy, fossils from Lake Garda, Lombardy; **Prinz**.

Switzerland, fossils from the Oberengadin; **Zoepritz**.

Hungary, palæontology of the Gerecse-Gebirge; **Staff**.

Transylvania, lists of fossils; **Koch**.

Montenegro, few fossils; **Martelli**, 1.

S. America, fossils from the Peruvian Andes; **Burckhardt**.

## Cretaceous.

Germany, fauna of Schaumburg-Lippe; **Harbort**.

Germany, fossils from Münster; **Wegner**.

Germany, fossils from near Brunswick; **Wollemann**.

England, few fossils from Norfolk; **Brydone**.

England, Upper Cretaceous fossils from the London Basin; **Treacher & White**.

England, fossils from the Phosphatic Chalk of Berkshire; **White & Treacher**.

France, Lower Campanian fauna of S.E. district; **Repinin**.

Switzerland, Gault fossils from the Engelberg valley; **Jacob & Tobler**.

Austria, fossils from Golling; **Fugger**, 1.

Hungary, fauna of the Peterwardein Mts.; **Pethö**.

Silesia, fauna of the Grodischter Schichten; *Rhynchonella*, sp. n.; **Archer**.

Galicia, fossils from the 'Spasser Schiefer'; **Wisniowski**.

Bohemia, fossils from the Iser district; **Zahálka**.

Carinthia, fossils; **Redlich**.

Africa, fauna of Tripoli; *Crania* sp. n.; **Krumbeck**.

Patagonia, Upper Cretaceous fauna; **Ameghino**.

### Jurassic.

Terebratulacea of the *Virgatites virgatus* and *Oxynoticeras catenulatus* beds; *Zeilleria*, spp. n.; **Lehmann**.

Germany, fossils from the Bayerische Wald; **Wanderer**.

Bavaria, fossils from the Oberpfalz; **Reuter**.

Bavaria, Liassic fossils; **Renz**.

England, Upper Liassic fossils from Stroud, Gloucestershire; **Upton**.

France, Toarcian fossils from Macon; *Lissajous*, 1.

France, Bajocian and Bathonian fossils from Mâcon; *Lissajous*, 2.

Italy, Lower Lias, Spezia, occurrence of *Pygope aspasia*; *Fucini*.

Italy, Lower Liassic fossils from Perugia; *Merciai*.

Italy, Liassic fauna of Sospirolo; *Rhynchonella*, *Spiriferina*, *Terebratula*, *Waldheimia*, spp. n.; other spp. figd.; **Piaz**.

Moravia, Portlandian fossils from boulders of the "Stramberger Kalkstein" at Rychaltitz; *Remeš*, 1, 2.

Roumania, fauna of Hársova; *Macovei*.

E. Morocco, fauna; *Gentil & Lemoine*

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Montenegro, fauna of the Upper Muschelkalk; *Rhynchonella*, sp. n.; *Martelli*, 2.

### Palæozoic.

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Fossils associated with *Reticularia lœvis*, **Kindle**, 1.

Comparison of Russian, Indian and American Permian and Carboniferous faunas; **Schuchert**.

Sweden, few fossils from Falköping; **Munthe**, 1.

Sweden, fossils from Tidaholm; **Munthe**, 2.

Russia, fossils from Podolia, some new names without description; **Siemiradzki**, 1.

Russia, fauna of Podelia; **Siemiradzky**, 2.

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Italy, fauna of the Col Mezzodi, Carnian Alps; *Notothyris*, *Rhynchonella*, *Terebratula*, spp. n.; **Gortani**.

China, fossils from Shantung; **Lorenz**.

S. Africa, fossils; *Reusselaria*, *Trigervia*, spp. n.; **Schwarz**, 2.

Canada, fossils from James Bay region, Ontario; **Wilson**.

United States, upper Silurian and lower Devonian faunas, Orange County, N. York; *Coelospira*, sp. n.; **Shimer**, 1.

United States, fossils from Eastern New York; **Hartnagel**.

United States, lists of spp. from the Schoharie Valley, N. York; **Grabau**.

S. America, Silurian and Devonian fossils from the lower Amazon region; **Schuchert**, 2.

Australia, fossils from Fossil Head, Northern Territory, S. Austr., *Orthoceras*, sp. n.; **Etheridge**.

### Permian.

Italy, fauna of the Bellerophonkalk of Cadore; *Ombonia*, gen. n.; **Caneva**.

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## Carboniferous.

Belgium, fossils from Baudour ; **Cornet**, 2.

Belgium, fossils from Mons ; **Cornet**, 1.

Belgium, fossils from Petit-Modave ; **Destinez**, 2.

British Is., lists of fossils from North Shropshire, Denbighshire and Flintshire ; **Hind & Stobbs**.

England, fossils from Craven district ; **Wilmore**.

England, fauna of the Cheadle coal-field ; **Ward**.

England, Lower Carboniferous fossils from Cannock-Chase ; **Cockin**.

England, Avonian fauna of the Avon Gorge ; notes on Carboniferous genera ; **Vaughan**, 2.

England, Avonian fauna of the Mendip area ; **Sibley**, 2.

England, few fossils from Ingleton, Yorks ; **Vaughan in Johns**.

England, fossils from Pateley Bridge ; **Vaughan**, 3.

England, fauna of Burrington Combe, Somerset ; **Sibley**, 1.

Wales, fossils from South-west Gower ; **Vaughan**, 1.

Scotland, fossils from near Glasgow ; **Macnair**.

Ireland, fossils from Rush, co. Dublin ; **Matley & Vaughan in Matley**.

Fauna of the Carnian Alps ; *Meeckella*, *Orthothetes*, spp. n. ; *Vinassa de Regni & Gortani*.

Hungary, fauna ; **Frech**.

China, Upper Carboniferous fauna of southern Tian-Shan ; *Enteletes*, sp. n. ; **Keidel**.

United States, fauna of the Kinderhook group ; *Productella*, *Spirifer*, spp. n. ; **Weller**, 1.

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Belgium, Famenian fauna of Condroz ; **Destinez**, 1.

England, fossils from St. Minver, Cornwall ; **Fox**.

Occurrence of *Rhynchonella ascendens* near Čelechovice ; **Smyčka**.

Africa, fossils from the Sahara ; *Spirifer*, sp. n. ; **Haug**.

S. Africa, fossils ; **Schwarz**, 1.

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United States, list of fossils from New York ; **Slocom**.

United States, fauna of Percé, New York ; many nomina nuda ; **Clarke**, 3.

United States, fauna of the Moscow Shales at Lake Canandaigua, N. York ; **Raymond**, 1.

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Falkland Is., fossils ; **Newton**.

## Silurian.

Russia, fauna ; *Orthis*, *Plectella* (gen. n.) spp. n. ; **Lamansky**.

England, fossils from the Ludlow district ; **Elles & Slater**.

Bohemia, fossils ; **Želizko**, 1.

Bohemia, fossils from near Rosenthal ; **Želizko**, 2.

Canada, Upper Silurian fauna, Ekwan River and Sutton Mill Lakes, Keewatin, Ottawa ; *Classia*, *Camarotoechia*; *Reticularia*, *Meristina*, spp. n. ; **Whiteaves**, 1.

Canada, fauna of Guelph formation of Ontario ; **Whiteaves**, 3.

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Canada, fauna of Anticosti I. ; **Schmitt**.

United States, fauna of Guelph formation, New York ; *Monomerella* sp. n. ; **Clarke & Ruedemann**.

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## Ordovician.

Wales, fossils from Western Caermarthenshire; **Evans**.

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United States, fauna of St. Albans, Vermont; **Edson**.

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†*Antinomia*, developmental stages (437); *A. planulata*, pl. 41 fig. 1; *sima* fig. 2; *diphora* (441) fig. 3; sp.  $\alpha$

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†*Argiope podolica* Palaeozoic, Podolia sp. n., SIEMIRADZKI, Wien, Beitr. Pal. Geol. OestUng. 19 (247).

†*Athyris amboensis* Palaeo- or Mesozoic, Amboyna sp. n. BOEHME in VERBEEK, Jaarb. Mijnw. Ned. Ind., Batavia, 1905 (91-2).—*A. rossyi* Davids, type of *Cleiothyridina* (q.v.).

†*Atrypa cuboides*, genotype of *Hypothyridina* (q.v.).—*A. paradoxa*, Devonian, Eastern Alps, sp. n., SCUPIN, Berlin, Zs. D. geol. Ges. 58 (274-6).

†*Brachyprion majus* (54-6), *schuchertanum* (56-7), Oriskany formation, New York, spp. n., CLARKE, Albany Univ., N.Y., Mem. St. Mus., 3, No. 3.

†*Camarotoechia coalesceens* (272-3), *winiskensis* (272) Silurian, Manitoba, spp. n., WHITEAVES, Ottawa Geol. Surv. Canada Pal. Fossils 3.—*C. exuvaneus* Up. Silurian Ottawa sp. n. WHITEAVES Rep. Geol. Surv. Can. Ottawa 14 1904 (42 F).

*Campages*, gen. n., type *C. furcifera* sp. n. New South Wales, HEDLEY, Sydney Rec. Austr. Mus. 6 (43).

*Chlidonophora chuni* Malediven sp. n. BLOCHMANN Zool. Anz. 30 (695).

*Chonetes* subgen. n. *Eodevonaria* (q.v.)—*C. glenparkensis* Kinderhook formation St. Louis sp. n., WELLER St. Louis Mo. Trans. Acad. Sci. 16 (441-2).—*C. hudsonica* Oriskany formation New York sp. n. CLARKE Albany Univ. Mem. St. Mus. 3 No. 3 (49-50).—*C. subgibbosa* Devonian Eastern Alps sp. n. SCUPIN Berlin Zs. D. geol. Ges. 58 (213-4).

†*Cleiothyridina* nom. n. (= *Cleiothyris*, auctt.) genotype *Athyris rossyi* Davids., BUCKMAN Ann. Mag. Nat. Hist. 18 (324).

†*Cleiothyris*, Phillips 1841 (= *Terebratula concentrica* series), BUCKMAN Ann. Mag. Nat. Hist. 18 (320-4).

*Calospira grabau* sp. n. Palaeozoic New York, SHIMER Albany Bull. St. Mus. 80 1905 (253-4).

†*Composita*, Brown 1845 (= *Seminula*, auctt. nec McCoy), type *Spirifer ambiguus* Sby., BUCKMAN Ann. Mag. Nat. Hist. 18 (324-6).

†*Crania barthi* Cretaceous, Tripoli sp. n. KRUMBECK Palaeontographica Stuttgart, **53** (92).—*C. prona* Chazy formation sp. n., RAYMOND Pittsburgh, Ann. Carnegie Mus. **3** (574–5).

†*Cryptonella* (?) *fausta*, Oriskany formation New York sp. n., CLARKE Albany Univ. Mem. St. Mus. **3** No. 3 (38–9).

†*Cyelothyris*, M'Coy 1844 (= *Terebratula latissima* series), BUCKMAN Ann. Mag. Nat. Hist. **18** (326).

†*Cyrtina varia* Oriskany formation New York sp. n., CLARKE Albany Univ. Mem. St. Mus. **3** No. 3 (49).

†*Dalmanella fritschi* sp. n., Devonian, Eastern Alps SOUPIN Berlin Zs. D. geol. Ges. **58** (223).

†*Delthyris missouriensis*, *suborbicularis*, Kinderhook formation St. Louis spp. n., WELLER St. Louis Trans. Acad. Sci. **16** (445–7).

†*Dielaasma ambonense* Palaeo- or Mesozoic Amboyna sp. n. BOEHME in VERBEEK Jaarb. Mijnw. Ned. Ind. **1905** (92).—*D. barroisi* (265), *cuneata* (263–4), *pumilio* (265–6), Devonian, Eastern Alps, spp. n., SOUPIN Berlin Zs. D. geol. Ges. **58**.

†*Discinopsis sulcatus* Upper Cambrian China sp. n., WALCOTT Washington U. S. Nation. Mus. Proc. **30** (568–9).

†*Enteletes meyerbacheri* sp. n., Ober-carbonischen, südlichen Tian-Schan, KEIDEL, N. Jahrb. Min., Beilagebd. **22** (376–7).

†*Eoderonaria* subgen. n. of *Chonetes* BREGER, Amer. J. Sci. **22** (534–536).

†*Epithyris*, Phillips 1841 (= *Terebratula maxillata* series) type, *E. bathonica* nom. n., BUCKMAN, Ann. Mag. Nat. Hist. **18** (320–2).

†*Eunella compressa* Kinderhook formation, St. Louis sp. n., WELLER St. Louis Trans. Acad. Sci. **16** (442–3).

†*Glossia variabilis* Upper Silurian Ottawa, sp. n., WHITEAVES Rep. Geol. Surv. Can. **14** (42F–43F).

*Hemipythrina* vide *Terebratula*.

*Hemithyris columnus* sp. n. Cape Byron, HEDLEY Sydney Rec. Austr. Mus. **6** (44) figg.

†*Hypothrysis*, Phillips 1841, preoccupied = *Hypothyridina* nom. n.; BUCKMAN, Ann. Mag. Nat. Hist. **18** (320–4).

†*Hypothyridina* nom. n. (= *Hypothrysis*, auctt.); genotype *Atrypa cuboides* Sby 324, BUCKMAN Ann. Mag. Nat. Hist. **18**.

†*Karpinskia* Tsch., resemblance to Rhynchonellidae due to convergence (266–8); *K. tschernyschewi* Devonian, Eastern Alps sp. n. (270–1), SOUPIN Berlin Zs. D. geol. Ges. **58**.

*Kingena aleocki* sp. n. off Travancore JOUBIN Bul. Muséum Paris **1906** (529–32).—*K. aleocki*, association with *Sabellaria aleocki*, GRAVIER Bul. Museum Paris **1906** (540–3).

†*Leptodus* Kayser, 1883 preccdes *Lyttonia*; genoholotype *L. richthofeni* Kayser, BUCKMAN Ann. Mag. Nat. Hist. **18** (326).

†*Leptostrophia oriskanica* Oriskany formation New York sp. n., CLARKE Albany Univ. Mem. St. Mus. **3**, No. 3 (53–4).

†*Lingula limitaris* Chazy formation Vermont U.S.A. sp. n. SEELEY Rep. Vermont, State Geol. **1905–6** (183–4).—*L. mytiloides* Sby., dwarf form figd., WARD, Stafford, Rep. N. Staff. F. Cl. **40** (124).

†*Lingulella gencii* Cambrian Nevada sp. n. PACK J. Geol., Chicago **14**.

†*Liohyrina audarctica* Antarktis (692), *winteri* (693), St. Paul Ins. spp. n. BLOCHMANN Zool. Anz. **30**.—*L. uva* Brod. OEHLMER Bul. Muséum Paris, **1906** (555–7).

†*Lyttonia*, Waagen 1883, syn. of *Leptodus*; BUCKMAN Ann. Mag. Nat. Hist. **18**, (326).

*Macandrevia vanhoeffeni* sp. n. Antarktis, BLOCHMANN Zool. Anz. **30** (696).

*Magellania joubini* Antarktis sp. n. BLOCHMANN, T.c. (697).

†*Meekella rinassai* Carboniferous, Carnian Alps sp. n. GORTANI, in VINASSA DI REGNY & GORTANI, Bul. Soc. geol. Ital. **24** (536–7).

†*Meristella lentiformis* (445), (?) *vascularia* (45–6), Oriskany formation New York, spp. n., CLARKE Albany Univ. Mem. St. Mus. **3**, No. 3.

†*Meristina* (?) *expansa* Upper Silurian Ottawa sp. n., WHITEAVES Rep. Geol. Surv. Can. Ottawa **14** (45 F–6 F).

†*Monomerella novaboracum*. Lower Shelby Dolomite, New York sp. n. CLARKE & RUEDEMANN Albany Univ. Mem. St. Mus. **5** (39–41).

†*Notothyris* (?) *gibba* Permocarboniferous, Carnian Alps sp. n. GORTANI Paleontogr. Ital. **12** (48).

†*Nucleospira* *frechi* Devonian, Eastern Alps sp. n. SCUPIN Berlin Zs. D. geol. Ges. **58** (283-4),—*N. minima* Kinderhook formation St. Louis sp. n. WELLER St. Louis Trans. Acad. Sci. **16** (447).

†*Ombonia* gen. n. of Orthothetinae, Belerophonkalk CANEVA N. Jahrb. Min. Stuttgart **1906**, I, Abhandl. (54).

†*Oriskauia sinuata* Oriskany formation New York sp. n. CLARKE Albany Univ. Mem. St. Mus. **3** No. 3, (38).

†*Orthis incurvata* (13), *bocki* (17-8), *parvula* (18), *bröggeri* (18-20, spp. n., Silurian, Russia, LAMANSKY St. Petersburg Mém. Com. géolog. n. s. **20**.—*O. (Platystrophia) podolica* Palaeozoic, Podolia sp. n. SIEMIRADZKY Wien Beitr. Pal. geol. Oest. Ung. **19** (247).—*O. (Plectorthis) agreste, kichouensis*, Middle Cambrian, China spp. n., WALCOTT Washington U. S. Nation. Mus. Proc. **30** (570-1).

†*Ortholetes perfidia-badensis* sp. n. [nom. nud.] Permo-Carboniferous Northern Territory, South Australia, ETHERIDGE Rept. Explor. Govt. Geologist North Territ. S. Austral. **1905** (41-2).

†*Orthothetes beerafcensis* Oriskany formation New York sp. n. CLARKE Albany Univ. Mem. St. Mus. **3** No. 3 (51-2).—*O. (?) expansus* Carboniferous Carnian Alps sp. n. GORTANI in VINASSA DI REGNY & GORTANI Boll. Soc. Geol. Ital. **24** (534).

†*Platystrophia* vide *Orthis*.

†*Plectambonites uncinata* Pand., type of *Plectella* (q.v.).

*Plectella*, gen. n., type *Plectambonites uncinata* Pand.; *gracilis*, *semiovata*, *media*, *eminens*, *extensa*, *obtusa* spp. n., Silurian, Russia, LAMANSKY St. Petersburg Mém. Com. géolog. n.s. **20** (20-7).

†*Plectorthis* vide *Orthis*.

†*Productella sublavis* Kinderhook formation Illinois sp. n. [nom. nud.] WELLER J. Geol., Chicago **13** (620).

†*Productus purdoni*, Dav., Permian Cashmere; KOKEN Centralbl. Min. Stuttgart **1906** (129-31).

†*Ptychospira variegata* Devonian Bokkeveld Beds sp. n. REED Geol. Mag. London **3** (309) pl. xvi. fig. 7.

†*Pugnax* vide *Rhynchonella*.

†*Pygites* gen. nov. (de Haan MS.) (449); developmental stages (437); *diphyoides* (449) pl. xli fig. 19; BUCKMAN, London Q. J. Geol. Soc. **62**.

†*Pygope*; developmental stages (437); *janitor* pl. xli fig. 12; *deltaidea* (445) fig. 13; *duvali* (446) fig. 14; *P. (?) solidescens* nom. n. (447) fig. 15; *P. (?) euganeensis* (448) fig. 16; BUCKMAN London Q. J. Geol. Soc. **62**.

†*Rasinesquina distans* Chazy formation sp. n. RAYMOND Pittsburgh Ann. Carnegie Mus. **3** (575).

†*Renssellacria hottentot.* (365), *relicta* (364), Palaeozoic S. Africa spp. n.. SCHWARZ Grahamstown Rec. Albany Mus. **1**.

†*Reticularia levis*, range and distribution, KINDEL, J. Geol., Chicago, **14** (188-93).—*R. septentrionalis* Upper Silurian, Ottawa sp. n., WHITEAVES Rep. Geol. Surv. Can. **14** (44 F).

†*Retzia canalicula* Devonian Eastern Alps sp. n., SCUPIN Berlin Zs. D. geol. Ges. **58** (285).

†*Rhynchonella acutiplacata* (Brown) (= *R. angulata* Auctt) synonymy, BUCKMAN P. Cotteswold Club **15** (209-13).—*R. silesica*, Cretaceous, Siberia, sp. n. ASCHER, Wien, Beitr. Pal. Geol. Oest. Ung., **19**, (167).—*R. pseudopalmetta* (29-31), *fabianii* (34-6), *de-lottoi* (36-8), *cavera* (38-9), Lias, Sospirolo, Italy, spp. n., PIAZ Abh. Schweiz. Pal. Ges. **33** pt. 3.—*R. fornensis* (37), (*Terebratuloides*) *carnica* (38-9), Permo-carboniferous, Carnian Alps spp. n., GORTANI Paleontogr. Italic **12**.—*R. plicatilis* var. n., *syrmenensis*, PETRÖ Palaeontographica **52** (318-21).—*R. plurigibba* Muschelkalk Montenegro sp. n., MARTELLI Paleontogr. Italica **12** (20-1).—*R. (?) pentagonalis* (228-9), *spitzi* (234-5), (*Pugnax*) *postmodica* (240-3), *pseudopugnus* (243-4), (*Uncinulus*) *carnica* (246-8), Devonian Eastern Alps, spp. n., SCUPIN Berlin Zs. D. geol. Ges. **58**.

†*Rhyncopora ambonensis*, *malayana*, Palaeo- or Mesozoic Amboyna, spp. n., BOELME in VERBEEK Jaarb. Mijnw. Ned. Ind., **1905** (92).

†*Rhynchospira lowi* Silurian Manitoba sp. n., WHITEAVES Ottawa Geol. Surv. Canada Pal. Fossils **3** (277-8).

†*Scaphiocelia* (?) *africana* Devonian Bokkeveld Beds, sp. n., REED Geol. Mag. London **3** (306-8).

†*Schizambon duplicitumratus* Chazy Limestone Lake Champlain sp. n., HUDSON Albany Univ. Bull. St. Mus. **80**, (284).

†*Seminula* M'Coy 1844, genotype *Terebratula pentaëdra* Phillips, BUCKMAN Ann. Mag. Nat. Hist. **18** (324-6).—vide *Composita*.

†*Spirifer ambiguus* Shy., the type of *Composita* Brown (q.v.).—*S. flamandii* Devonian, Sahara sp. n. (name only), HAUQ Paris C.-R. Acad. sci. **142** (732-4).—*S. geyeri* (287-9), *pseudoriator* (289-90), *stachei* (290-1), *volaicus* (293-4), *koegeleri* (294-5), *subtiro* (297-8), Devonian, Eastern Alps, spp. n., SOUPIN Berlin Zs. D. geol. Ges. **58**.—*S. jeffersonensis* Kinderhook formation St. Louis sp. n., WELLER St. Louis Trans. Acad. Sci. **16** (444-5).—*S. maplensis* Kinderhook formation Iowa sp. n., [nom. nud.], WELLER J. Geol. Chicago **13** (628).

†*Spiriferina ambonensis* (90-91), *malayana* (91), *molluccana* (91), Palaeo- or Mesozoic, Amboyna spp. n., BOEHME in VERBEEK Jaarb. Mijnw. Ned. Ind. **1905**.—*S. di-stefanoi*, Lias, Sospirolo, Italy sp. n., PIAZ Abh. Schweiz. Pal. Ges. **33** pt. 3 (20-2).

†*Strophomena frechi* Devonian Eastern Alps sp. n. SOUPIN Berlin Zs. D. geol. Ges. **58** (217-8).—*S. podolica* Palaeozoic Podolia sp. n., SIEMIRADZKI Wien, Beitr. Pal. Geol. OestUng. **19** (248).

†*Syntropbia multicosta* Chazy Lime-stone Lake Champlain sp. n., HUDSON Albany Univ. Bull. St. Mus. **80**

(285-6).—*S. orthia* Upper Cambrian China sp. n., WALCOTT Washington Nation. Mus. Proc. **29** (11-2).

*Terebratella enzenspergeri* Kerguelen sp. n., BLOCHMANN Zool. Anz. **30** (697).

†*Terebratula concentrica* vide *Cleiothyris*.—*T. gottschee* Steimn, Beschreibung, PRINZ, Math. Termt. Lit. **24** (418-32) Taf.—*T. pentaëdra* Phillips, genotype of *Seminula* (q.v.).—*T. synophrys* Uhl. var. n. *polyptycta*, Lias, Sospirolo, Italy, PIAZ, Abh. Schweiz. Pal. Ges. **33**, pt. 3, (42-3).—*T. (Hemipychina) schellwieni* (43-4), *tridentata* (44-5), Permo-carboniferous Carnian Alps, spp. n., GORTANI Paleontogr Italica **12**.

†*Terebratuloides* vide *Rhynchonella*.

*Thecidia maxilla* Hedl., occurrence in New Hebrides, HEDLEY Sydney Rec. Austr. Mus. **6** (41-54).

†*Trigeria simplex* Palaeozoic S. Africa sp. n., SCHWARZ Grahamstown Rec. Albany Mus. **1** (366).

†*Uncinulus* vide *Rhynchonella*.

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## (b) BRYOZOA OR POLYZOA

ARRANGEMENT COMMENCED BY

A. D. IMMS,

COMPLETED BY

S. PACE AND R. M. PACE

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## II.—SUBJECT INDEX.

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## GENERAL. 2003

### Bibliography.

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N. American palaeontological publications, 1901-5; **Weeks**.

References to Bryozoa in early authors; **Neviani**, 2.

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General, *Hislopia*; **Annandale**.

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General, larval *Pedicellina*, *Aleyonidium*, etc.; **Seeliger**.

General, *Plumatella javanica*; **Kraepelin**.

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Polyspermie, *Membranipora*; **Bonnevie**.

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*Membranipora membranacea*, influence of brackish water; **Loppens**.

*Plumatella repens*, appearance in a heated aquarium; **Köhler**.

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British Is., distribution of "Cyphonautes" larva during 1904; **Gough**.

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Kolguev I., *Alcyonidium*, sp. n.; **Calvet**, 1.

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Italy, Pliocene fossils; **Toldo**.

S. Tunis, fauna *Cribriocella* (gen. n.) *Membranipora*, *Phylactella*, *Poricella* (gen. n.) spp. n.; **Canu**.

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England, occurrence of *Siphoniotypis tenuis*, Hag. in the Trimmingham Chalk; few fossils from between Cromer and Weybourne; **Brydone**, 1.

England, *Semimultelea* sp. n. Surrey; **Lang**, 1.

England, Upper Cretaceous fossils from the London Basin; **Treacher & White**.

Bohemia, fossils from the Iser district; **Zahálka**.

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Patagonia, Upper Cretaceous fauna; **Ameghino**.

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Italy, Lower Lias fossils from Perugia; **Merciai**.

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United States, James' types of Ordovician and Silurian fossils from Cincinnati, Ohio, re-described; **Bassler**, 1.

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†*Ceramoporella irregularis* Rochester Shale, Lockport, N.Y. sp. n. BASSLER T.c. (21).

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†*Coeloclema cavernosa* Silurian Lockport, N.Y. and Osgood, Ind. sp. n., BASSLER Washington U.S. Dept. Int. Bull. Geol. Surv. No. 292 (21).

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# VIII. MOLLUSCA

ARRANGEMENT COMMENCED BY

E. R. SYKES

COMPLETED BY

S. PACE AND R. M. PACE

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- Belgrandia lafayi* sp. n.; Caziot in Lafay.
- Brittany, notes on fauna; Germain, 6, 7.
- Pas-de-Calais, acclimatisation of *Helix acuta*; Giard, 1.
- Pas-de-Calais and Nord, note on introduced *Helix*; Giard, 3.
- S. France, notes on landshells; Caziot, 2, 3.
- S. France, occurrence of Asiatic forms; Caziot, 1.
- Nice, fauna; Caziot, 4.
- Nîmes, freshwater shells; Bérenguier.
- Basses Pyrénees, fauna of the Grotte de Camon; Jeannel.
- Iberian Peninsula. dg
- Aragon, few shells; *Pupa* sp. n.; Navas.
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- Aragon, shells from near Zaragoza; Marcket.
- Italy and Sardinia. dh
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- Zospeum* sp. n.; Pollonera, 2.
- Genoa, *Aeme layoni* sp. n.; Pollonera, 1.
- Elba and Pianosa, fauna; *Clausilia*, *Ferussacia*, *Xerophila* spp. n.; Pollonera, 1.
- Sardinia, note on slugs; Simroth, 2.
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- Lake Zurich, *Paludina*; Roth, 2, 3, 4.
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- Tyrol, fauna of St. Jodok a. Brenner; Blume, 2.
- Hungary, *Neritina*; Soós, 1.
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- Carinthia, Basommatophora; Gallenstein.
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Indo-China and Yunnan, fauna; *Ampullaria*, *Buliminus*, *Camæna*, *Clausilia*, *Cyclophorus*, *Diplommatina*, *Ennea*, *Helix*, *Macrochlamys*, *Margarya*, *Melania*, *Opisthostoma*, *Paludina*, *Pupina*, *Rhiostoma*, *Satsuma*, *Unio*, *Xestina* spp. and varr. n.; *Dautzenberg* & *Fischer*, 1.

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- Uganda, *Limicolaria*, *Martensia* spp. n., etc.; **Preston**, 3.
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- Canada, distribution of *Helix hortensis*; **Johnson**, 2, 3.
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- United States, Alabama, *Amphigryra* (gen. n.), *Neoplanorbis* (gen. n.) spp. n.; **Pilsbry**, 11.
- United States, California, *Cochliopis rowelli*; **Rowell**.
- United States, Colorado, *Sphaerium* sp. n.; **Sterki**, 6.
- United States, Connecticut, *Paludestrina salsa*, at Branford; **Winkley**.
- United States, Florida, species of *Drymaeus*; **Simpson**.
- United States, Florida, collecting in the Everglades; **Reynolds**.
- United States, Nebraska, list of shells; **Walker**, 4.
- United States, New Mexico, shells of Grant, Valencia Co.; **Pilsbry**, 5.
- United States, New York, shells of Richfield Springs; **Smith**, M.
- United States, Ohio, fauna; **Sterki**, 9, 10.
- United States, Oklahoma, fauna; **Ferriss**.
- United States, Idaho, *Lymnaea* sp. n.; **Baker**, 4.
- United States, Illinois, fauna; **Baker**, 2.
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- United States, Indiana, notes on Unionidæ; **Headlee**.
- United States, Indiana, *Lymnaea* sp. n.; **Baker**, 5.
- United States, Kansas, Unionidæ; **Scammon**.
- United States, Michigan, Molluscs of Porcupine Mountains; **Walker** & **Rutherford**.
- United States, Michigan, fauna; **Walker**, 5, 6.
- United States, Michigan, shells from Alpena; *Lymnaea* sp. n.; **Baker**, 3.
- United States, Mississippi and Alabama, shells from; **Hinkley**.
- United States, Wisconsin; fauna; **Chadwick**, 1, 2.
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- (?) Cuba, *Pleurodonte manifesta* sp. n.; **Fulton**, 4.
- S. America, fauna of Lakes Titicaca and Poopo; *Bavay* in *Neveu-Lemaire* and others (142-7).
- Colombia, *Drymaeus* spp. n.; **Da Costa**, 1.

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**Antarctic.**

Kerguelen, occurrence of *Patula Hookeri*; **Richters** in *Drygalski*. Deutsche Südpolar-Exped., 10, Zool., Berlin (G. Reimer) 1906, (298).

(b) FOSSILS.

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Types of D'Orbigny's "Prodr. Paléont. strat. univ." reviewed and figured; **Boule & Thévenin**.

Summary of geological range of Mollusca; **Plant**.

England, fossils of Macclesfield, &c.; **Pocock**.

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France, fauna of environs of Nîmes; **Roman**.

Italy, Triassic and Permian fossils from Caffaro; **Mariani**.

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United States, fossils from the Big-horn Basin, Wyoming; **Fisher**.

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- Iceland, *Purpura lapillus* in raised beaches; **Bárðarson**.
- Russia, fauna of Gera; **Weiss**, 2.
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- N. France, fauna of Saint-Achicol; *Bythiospeum* sp. n., *Helix* var. n.; **Babor**, 1.
- France, Alpes Maritimes, fauna; *Helix*, *Hyaliaria*, *Testacella* spp. n.; **Maury & Caziot**, 2.
- France, Alpes Maritimes, *Caziotia* gen. and sp. n.; **Pollonera**, 1.
- France, Alpes Maritimes, shells from St. Jean; **Maury & Caziot**, 1.
- France, fauna of Nice; **Caziot**, 4.
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- Japan, fauna; *Arca*, *Astarte*, *Cardita*, *Cardium*, *Cerithium*, *Cylindra*, *Dentalium*, *Eulima*, *Lasaea*, *Lima*, *Lutraria*, *Mysia*, *Odostomia*, *Ostrea*, *Pecten*, *Pleurotoma*, *Rissoa*, *Tellina*, *Trochus*, *Turbanilla* spp. n.; **Tokunaga**.
- Japan, Diluvial shells; **K.**
- S. Africa, raised beach fauna near Klein Brak River; **Rogers**.
- N. America, Loess, *Helicina occulta*; **Shimek**.
- Canada, marine and fresh-water fauna Anticosti I.; **Schmitt**.
- United States, Colorado, fauna of Florissant; *Lymnaea*, *Omphalina*, *Sphaerium* spp. n.; **Cockerell**, 1.
- United States, Maryland, fauna; **Clark**.
- United States, New Mexico, *Oreohelix yavapai*; **Cockerell**, 2.
- United States, deposit of *Venus* shells in New York city; **Wilson**, 2.
- United States, fauna of Sankaty Head, Nantucket; **Wilson**, 1.
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- Europe, Upper Tertiary fauna of Mediterranean region; **Hoernes**, 1.
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- Russia, Miocene fossils from Novocherkassk; *Pholas*, *Tapes*, *Turritella* spp. n.; **Bogatchew**.
- Germany, list of shells from Kassel; **Hornstein**.
- Germany, few Miocene fossils from near Domitz; **Metzmacher**.
- Germany, Miocene fauna of Lüneburg; *Astarte* sp. n.; **Wollemann**, 3.

Germany, Middle Oligocene fossils from Kreuznach; **Delkeskamp**.

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England, shells from Woolwich and Reading Beds, New Cross, London; **Robarts**.

France, lists of fossils from the Paris Basin with critical notes; *Planorbis, Limnea*, sp. n.; **Dollfus**, 2 (23-4).

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France, Middle Miocene Pelecypoda from the Loire Basin; **Dollfus & Dautzenberg**.

France, Redonian fauna of Gourbesville; **Dollfus**, 1.

Spain, Oligocene fossils of Cataluna; **Vidal & Depéret**.

Italy, Middle Miocene fauna near Turin; **Bellini**.

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Italy, Eocene fossils from Monte Postale; *Vicetia* gen. n.; **Fabiani**.

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San Marino, fauna; **Trabucco**.

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United States, Texas, few Miocene shells; **Dumble**.

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Germany, fossils from near Freiburg; **Seidlitz**.

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Silesia, Neocomian "Rhyncholithes," spp. n.; **Till**.

England, monograph of Pelecypoda, *Anthonya*, *Astarte*, *Cardita*, *Crassatellites*, *Opis* spp. n.; **Woods**, 1.

England, Neocomian Belemnites from Speeton Clays; **Sheppard**, 1.

England, occurrence of *Actinocamax grossouvrei* in the Yorkshire Chalk; **Crick**, 2.

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England, *Exogyra sinuata* in the Lower Greensand, Oxford; **Dawkins**.

France, *Nerita* sp. n., Campanian, *Gensac*; **Pethö**.

Italy, Upper Cretaceous fossils of the Apennines; **Parona**, 1.

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N. Alps, Inoceramidae of the Gosau beds; **Petascheck**, 2.

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*Bursa (Lampas) ranelloides* Rve. var. n. *tenuisculpta*, Azores and Madeira, DAUTZENBERG & FISCHER, Monaco, Res. Camp. sci. **32** (36–7).

*Bythinia* v. *Bithinia*.

†*Bythinia* (?) *cholnokyi* sp. n. China, ob. Tertiär (391), SCHLOSSER, Ann. Hist.-Nat. Mus. Nat. Hung., **4**.

†*Bythiospeum obermaieri* sp. n. Post-Tertiary, France, BABOR, Amiens, Bull. Soc. linn. **18** (32).

*Bythoceras iridescentes* Moore (182), *minor* Moore (182) L. Tanganyika, figd., SMITH, London, Proc. Zool. Soc. **1906**.

*Calliostoma admirandum* sp. n. Bay of Bengal, SMITH, Ann. Mag. Nat. Hist. **18** (240).—*C. bisculptum* sp. n. South Africa SMITH, Ann. Natal Govt. Mus. **1** (54).—*C. grimaldii* Dautz. & Fisch. is var. of *C. triporcatum* L. Fisch., DAUTZENBERG & FISCHER, Monaco, Res. Camp. sci. **32** (59–60).—*C. (Leiotrochus) marionae* sp. n. Florida, DALL, Nautilus **19** (131–2).—*C. conuloides* Lamarck var. n. *cinerascens*, *subconcolor*, *violaceascens*, DAUTZENBERG & DUROUCHOUX, Feuille Jeunes Natural. **36**.

†*Calliostoma novatum* Desh., Eocene, Monte Postale, figd., FABIANI, Padova, Atti. Oc. Ven. Trent. **2** (147).

†*Callithea* v. *Turricula*.

*Callogaza* v. *Gaza*.

†*Campanile* v. *Cerithium*.

*Cancellaria scobina* sp. n. off Sydney 300 fath., HEDLEY & PETERD, Sydney, N.S.W., Rec. Austr. Mus. 6 (222).—*C. (Svetia) lyrata* Brochi, occurrence of a recent specimen near Maio I., C. Verd Is., figd., DAUTZENBERG & FISCHER, Monaco, Res. Camp. sci. 32 (17-8).

†*Cancellaria meridionalis* sp. n. Cretaceous, Pondoland, Woods, Cape Town, Ann. S. Afric. Mus. 4, (326).—*C. (Bonellitia) aegyptiaca* sp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica 30 (331).—*C. succiniformis* sp. n., *ampullacea* Brocc., *brandenburgi* Bttgr., *calcarata* Brocc., *gestini* (Bast) var. *compressohirta* Sacco., *hoernesii* Kittl., *lyrata* Brocc., *subcancellata* d'Orb., *varicosa* Brocc., Miocän, Ungarn., BOETTGER, Verh. siebenb. Ver. Naturw. 54 (49-51).

†*Cancilla v. Mitra*.

†*Cantharus* (? *Pollia*) *hantkeni* sp. n. Cretaceous, Hungary, PETIÖ, Palaeontographica 52 (174-5).

*Capulus lissus* Smith, and allies, notes on, MELVILLI, London Proc. Malac. Soc. 7 (81).

*Cassidaria rugosa*, anatomy, REYNELL, London Proc. Malac. Soc. 7 (67).

†*Cassis aegyptiaca* sp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica 30 (307-8).—*C. postalensis* Oppen., Eocene, Monte Postale, figd., FABIANI, Padova, Atti. Ac. Ven. Trent. 2 (156).

†*Caziotia* gen. n. for *C. singularis* sp. n. Post Tertiary, Alpes Maritimes, POLLONERA, Torino. Boll. Musei Zool. anal. 20 No. 517 (2).

*Ceratia v. Risoia*.

*Cerithidea sacra* var. n. *hyporhyssa* California, BERRY, Nautilus 19 (133).

*Cerithiopsis cacuminatus* sp. n. off Sydney 300 f., HEDLEY & PETERD, Sydney, N.S.W., Rec. Austr. Mus. 6 (218).—*C. cessiculus* sp. n. (= *Bittium minimum* Ten.) Woods not *Cerithiopsis minima* Brusina, HEDLEY, Sydney, N.S.W. Proc. Linn. Soc. 30 (529).—*C. chapmaniiana*, *insignis* spp. n. South Africa, SMITH, Ann. Natal Govt. Mus. 1 (45).—*Cerithiopsis mathildaeformis* sp. n. Gulf of Oran, MELVILL, London, Proc. Malac. Soc. 7 (71).

*Cerithium charcoti*, sp. n. Antarctic, LAMY, Bul. Museum, Paris 11 (477).—*Cerithium voyi*, *nesioticum* spp. n. Pacific

Isles, PILSBRY & VANATTA, Philadelphia, Pa., Proc. Acad. Nat. Sci. 57 (787).

†*Cerithium*, ASCHIER, Wien., Beitr. Pal. Geol. OestUng. 19 (135).—*C. liberorum* (156-7), *trilinum* (158-9), *detectatum* (159-60), (*Campanile*) *regens* spp. n. Cretaceous, Hungary, PETIÖ, Palaeontographica 52.—*C. nipporiensis* (24), *tabatensis* (25) spp. n. Post Tertiary, Japan, TOKUNAGA, Tokyo, J. Coll. Sci. 21.—*C. praecursor* (25-6), *steinmanni* (27), *stoliskai* (27), (*Pyrenella*) *sanctaebalmae* (26) spp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. 10.—*C. subcarnaticum*, *potosianum*, *aguilarae*, *cuauhtemoci* spp. n. Senonian, Cardenas, Mexico, BÖSE, Mexico, Bol. Inst. geol. 24 (67-73).—*C. (Potamides) uadiplum* (282), *fajumensis* (283), *susanna* (283-4), *apisidis* (285), (*Bittium*) *niloticum* (285-6), (*Sandbergeria*) *saharae* (286-7) spp. n. Tertiary, Egypt, OPPENHEIM, Palaeontographica 30.—*C. del-lagoi* Oppen. Eocene, Monte Postale, figd., FABIANI, Padova, Atti Ac. Ven. Trent 2 (149).

*Chemnitzia v. Turbonilla*.

†*Chemnitzia eucosmeta*, *orthopticha*, ASCHIER, Wien., Beitr. Pal. Geol. OestUng. 19 (135-72).

†*Chenopus* (*Aporrhais*) *praeceptor* sp. n. Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. 54 (37-8).

*Chrysallida v. Odostomia*.

*Chrysodomus arnoldi*, *merriami*, spp. n., RIVERS, Los Angeles, Bull. So. Cal. Acad. Sci. 3 (63-72).—*C. hoernesii* (Bell.), Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. 54 (30).

*Cingulina v. Pyramidella*.—*C. dia-phana* sp. n. South Australia, VERCO, Adelaide, S. Aust., Trans. R. Soc. 30 (143).

†*Cirsochilus v. Collonia*.

*Cirsonella granum* sp. n. N. Zealand, MURDOCH & SUTER, Wellington, Trans. N. Zeal. Inst. 38 (300).

*Cirsotrema v. Scalaria*.

†*Clathroscala lanceolata* (Brocc.), *prolanceolata* Sacco, Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. 57 (98).

*Clathrella marshalli* (186) sp. n. European seas, *pseudohystrix* (187) n. n.

for *C. hystrix* Auct. non Jan., SYKES, London, Proc. Malac. Soc. 7.

†*Clathurella casilarica, densestriata, postuma* spp. n. Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. 54 (68).

†*Claratula emmae* Hö. Au., *juliae* Hö. Au., *rosaliae* Hö. Au., *sabinae* Hö. Au., *semimarginata* (Imk.), *veronicae* Hö. Au., Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. 54 (62–3).

†*Clavella v. Fusus.*

*Cleopatra multilirata* Madagascar, *smithi* British Central Africa, spp. n. ANOEY, Nautilus 20 (45).

*Clionella v. Pleurotoma*.—*C. confusa* spp. n. South Africa, SMITH, Ann. Natal Govt. Mus. 1 (23).

*Cochliopa riograndensis* sp. n. S.W. United States, PILSBRY & FERRISS, Philadelphia, Pa., Proc. Acad. Nat. Sci. 58.

†*Collonia v. Turbo*.—*C. (Cirsochilus?) grandis* sp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica 30 (218).

*Columbella daemona* (308), *compta* (308) spp. n. New Zealand, WEBSTER, Wellington, Trans. New Zeal. Inst. 38.—*C. (Anachis) richardi* sp. n. off N.W. Africa, DAUTZENBERG & FISCHER, Monaco, Res. Camp. sci. 32 (28).—*C. (Seminella) comitea* sp. n. Gulf of Oman, MELVILLE, London, Proc. Malac. Soc. 7 (75).—*C. inconstans* (= *Surecula varians* Suter), *pseutes* (= *Pyramidelia rosea*) spp. n., SUTER, Wellington, Trans. N. Zeal. Inst. 38 (329).—*C. suavis* sp. n. Bay of Bengal, SMITH, Ann. Mag. Nat. Hist. 18 (171).

†*Columbella ickei* (317–8), (*Conidea*) *pamolaniensis* (318–9) spp. n. Java, MARTIN, Leiden, Samml. Geol. Reichsmus. (2) 1.—*C. iniquidens* (17–8), *kostekiana* (16), *perminuta* (16–7), *subcorru-gata* (18–9) spp. n. Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. 54.

†*Cominella plicatilis* sp. n. Tertiary, Mexico, BÖSE, Mexico, Bol. Inst. Geol. 22 (39).

†*Conidea v. Columbella.*

*Conus*, BüLOW, Frankfurt a. M., Nachr. Bl. D. malakozool. Ges. 38.—*C. queketti*, sp. n. South Africa, SMITH, Ann. Natal Govt. Mus. 1 (22).—*C. betulinus* L. var. *immaculata*, DAUTZENBERG, J. conchy-

liol. 54 (27).—*C. mediterraneus* Hwass. varr. n. *alticonica, vayssierei*, PALLARY, J. conchyliol. 54 (78).—*C. waterhouseae* Brazier, var. n. KENYON, London, Proc. Malac. Soc. 7 (506).—*C. spinosus* Lin. the type of *Volutospina* (q.v.) gen. n. of Volutidae.

†*Conus testudinarius*, DAUTZENBERG, J. Conchyliol. 54 (30).

†*Conus burekhardi* (50), *scaliae* (51) spp. n. Tertiary, Mexico, BÖSE, Mexico, Bol. Inst. Geol. 22.—*C. sindangbaranensis* (287–8), *pamotanensis* (288), *madurensis* (288–9), *tjilonganensis* (289), *ickei* (289–90), *rembangensis* (290), *hulshofi* (290–1), *sedanensis* (291–2), *simoensis* (292) spp. n. Java, MARTIN, Leiden, Samml. Geol. Reichsmus. (2) 1.—*C. (Liloconus) aegyptiacus* sp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica 30 (336).

†*Coralliphila biconica* (35–6), *gracilis-pira* (35) spp. n. Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. 54.

*Coulovia v. Fossarus.*

*Crepidula*, development, DAHLGREN.

*Crosseia eryma* sp. n. Gulf of Oman, MELVILLE, London, Proc. Malac. Soc. 7 (70).

†*Cryptorhynchis rigida* Bail. redescribed and figured, Woods, Cape Town, Ann. S. Afric. Mus. 4 (321).

*Cryptospira v. Marginella*.—*C. (Gibberula) fuscata* sp. n. New Zealand, MURDOCH & SUTER, Wellington, Trans. N. Zeal. Inst. 38 (291).

*Cyathopoma taiwanicum* sp. n. Formosa, PILSBRY, Philadelphia, Pa., Proc. Acad. Nat. Sci. 57 (724).

*Cyclophorus courbeti* Ancey var. n. *leucostoma*, DAUTZENBERG & FISCHER, J. conchyliol. 53 (432).—*C. eximius* var. n. *rouyeri* Sumatra, BULLEN, London, Proc. Malac. Soc. 7 (12).

*Cyclostoma elegans*, nervous system, AEBERHARDT, Bern, Mitt. Naturf. Ges. 1905 (115–7).

*Cyclostrema* subgen. n. *Lydiphnis* (25) type *C. euchilopleron* Melv. & St.; *C. novemcarinatum* (22), *quinquecarinatum*, *charmophron* (24) spp. n. Persian Gulf and North Arabian Sea, MELVILLE, London, Proc. Malac. Soc. 7.—*C. bastowi* sp. n. Victoria, GATLIFF, Melbourne,

Proc. R. Soc. Vict. **19** (3).—*C. (Delphinoidea) prestoni* sp. n. Ceylon, MELVILL, London, Proc. Malac. Soc. **7** (29).

*Cyclotus xullaensis* sp. n. Xulla Is., SCHEPMAN, Leiden, Notes Mus. **28** (120-8).—*C. taivanus* subsp. n. *adamsi*, *swinhonis* subsp. n. *depressus*, *minutus* subsp. n. *concentratus*, PILSBRY, Philadelphia, Pa., Proc. Acad. Nat. Sci. **57** (723).

*Cymatium kampylum* Watson, transferred from *Nassaria* and = *Lampusia nodocostata* Tate & May, HEDLEY & PETERD, Sydney N.S.W., Rec. Austr. Mus. **6** (219).—*C. (Simpulum) problematicum* sp. n. Santa Luzia, C. Verd Is., DAUTZENBERG & FISCHER, Monaco, Res. Camp. sci. **32** (33-4).

*Cypraea cruenta* var. n. *tortirostris* South Africa, SOWERBY, London Proc. Malac. Soc. **7** (39).—*C. punctata* L. var. n. *berinii*, DAUTZENBERG, J. Conchyliol. **54** (28).—*C. (Laponia) spurca* Lin. var. n. *elongata* Cape Verd Is., DAUTZENBERG & FISCHER, Monaco, Res. camp. sci. **32** (40).

†*Cypraea fourtau* (300), *bullina* (302-3), (*Eocypraea*) *mohattamensis* (300-1), (*Bernaya*) *libyea* (301-2), *aegyptiaca* (302) spp. n. Tertiary, Egypt, OPPENHEIM, Palaeontographica **30**.—*C. tarensis* sp. n. Cretaceous, Tripoli, KRUMBECK, Palaeontographica **53** (121-2).—*C. zsigmondyana* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52** (167-8).—*C. lanciae* Brus., Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54** (3).

†*Cyprædia degrangei* sp. n. Tertiary, Biarritz, OPPENHEIM, Zs. D. Geol. Ges. **58** (87).

†*Dalium [Dolium] dalli* sp. n. Tertiary, Mexico, BÖSE, Mexico, Bol. Inst. Geol. **22** (58).

*Daphnella aculeata* sp. n. New Zealand, WEBSTER, Wellington, Trans. N. Zeal. Inst. **38** (306).—*D. excavata* sp. n. Victoria, GATLIFF, Melbourne, Proc. R. Soc. Vict. **19** (1).—*D. sabrina* (77), (*Pleurotomella*) *alcestis*, *itama* (78) spp. n. Gulf of Oman, MELVILL, London, Proc. Malac. Soc. **7**.

†*Daphnella jicketii* sp. n. Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54** (81-2).

†*Dejanira Stoliczka*, probably related to the Auriculidae rather than to the Neritidae, PETHÖ, Paleontographica **52**

(122-6).—*D. stoliczkae* sp. n. Lower Campanian, S.-E. France, REPELIN, Marseille, Ann. Mus. **10** (40).

*Delphinoidae* v. *Cyclostrema*.

*Diala subcarinata* sp. n. New Zealand, MURDOCH & SUTER, Wellington, Trans. N. Zeal. Inst. **38** (292).—*D. translucida* sp. n. Sydney N.S.W., HEDLEY, Sydney N.S.W. Proc. Linn. Soc. **30** (522).—*D. trilirata* sp. n. Gulf of Oman, MELVILL, London, Proc. Malac. Soc. **7** (71).

†*Diastoma biarritzense* sp. n. Tertiary, Biarritz, OPPENHEIM, Berlin, Zs. D. Geol. Ges. **58** (82).

†*Diceroloma (Perissoptera)* sp., Woods, Cape Town, Ann. S. Afric. Mus. **4** (319).

†*Dihelice* gen. n. of Scalariidae; *D. dathei* sp. n. Devonian, Germany, SCHMIDT, Berlin, Zs. D. Geol. Ges. **57** (560).

*Diplommatina lavillei* sp. n. Indo-China, DAUTZENBERG & FISCHER, J. Conchyliol. **53** (442).—*D. (Palaina) marchei* sp. n. Mariannes, BAVAY, J. Conchyliol. **53** (253); is synonym of *Palaina hyalina* **54** (10).—*D. taiwanica*, *camara*, *prava* spp. n. Formosa, PILSBRY, Philadelphia, Pa., Proc. Acad. Nat. Sci. **57** (726).

†*Discochelix libycus* sp. n. Paleocene, Egypt, OPPENHEIM, Palaeontographica **30** (231).

†*Dolicholathyrus* v. *Fusus*.

*Dolium* v. *Dalium*.—*D. fimbriatum* Sowerby var. n. *natalensis* South Africa, SMITH, Ann. Natal Govt. Mus. **1** (41).—*D. (Eudolium) crosseanum* Monteros. var. n. *solidior* Azores, DAUTZENBERG & FISCHER, Monaco, Res. camp. sci. **32** (38).

†*Dorsanum cerithiiforme* Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54** (30).

*Drillia* v. *Pleurotoma*.—*D. albotessellata* sp. n. South Africa, SMITH, Ann. Natal Govt. Mus. **1** (26).—*D. multiplex* sp. n. New Zealand, WEBSTER, Wellington, Trans. N. Zeal. Inst. **38** (306).—*D. opitabilis* sp. n. New Zealand, MURDOCH & SUTER, Wellington, Trans. N. Zeal. Inst. **38** (283).—*Drillia* (?) *thisbe* sp. n. Gulf of Oman, MELVILL, London, Proc. Malac. Soc. **7** (77).

†*Drillia dorae*, *vasta* spp. n., *adelae* (Hö. Au.), *allionii* Bell., *crispata* (Ian.), *granaria* (Duj.), *incrassata* (Duj.), *obtu-*

*sangula* (Brocc.), *pustulata* (Brocc.), *spinescus* (Ptsch.), *terebra* (Bast.), Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. 54 (55–7).—*D. (?)* (*Pleurotoma*) *weberi* sp. n. Tertiary, Philippines, SMITH, Philippine J. Sci. 1 (628).

*Dunkeria candida* A. Ad. = *Turbanilla* (*Pyrgisculus*) *candidissima* (q.v.).

†*Eastonia* subgen. n. of *Faunus* (q.v.); IOKE & MARTIN, Leiden, Samml. Geol. Reichsmus. 8 (107–16).

†*Eccyliopterus kalmi*, *proclivis* spp. n., RAYMOND, Pittsburgh, Pa., Ann. Carnegie Mus. 3.

*Edgaria nassa* (Woodw.) Lake Tanganyika, figd., SMITH, London, Proc. Zool. Soc. 1906 (182).

*Egilina* subgen. n. of *Odostomia* (q.v.), DALL & BARTSCH, Washington, D.C., Smithsonian Inst., U. S. Nation., Mus. Proc. 30.

*Emarginula*, notes on, MARTEL, Feuille jeunes natural. 36 (105–8); Rennes, Bul. soc. sci. méd. 14, (326–32). *Emarginula superba* sp. n. off Sydney. 300 f., HEDLEY & PETERD, Sydney N.S.W., Rec. Austr. Mus. 6 (216).

*Enteroxenus ostergreni*, Keimzellen, BONNEVIE, Arch. Math. Naturv., Kristiania 27 No. 12; Jenaische Zs. Natw. 41 (229–428).

†*Eocypraea* v. *Cypraea*.

†*Eopsephaea* v. *Voluta*.

†*Eotomaria robertsi* sp. n. Palaeozoic, Haverfordwest, REED, London, Geol. Mag. 3 (359).

*Euchelus natalensis* sp. n. South Africa, SMITH, Ann. Natal Govt. Mus. 1 (55).

*Eudolium* v. *Dolium*.

*Eulima*, notes on spp., MARTEL.—*E. nisonida* (71), *rhaeba* (72) spp. n. Gulf of Oman, MELVILL, London, Proc. Malac. Soc. 7.—*E. regrandis* (297), *infrapatula* (297), (*Mucronalia*) *bubula* (298) spp. n. New Zealand, MURDOCH & SUTER, Wellington, Trans. N. Zeal. Inst. 38.

†*Eulima levigata*, *ovalis* spp. n. Post Tertiary, Japan, TOKUNAGA, Tokyo, J. Coll. Sci. 21 (21).—*E. raymondi* sp. n. California, RIVERS, Los Angeles, Bull. So. Cal. Acad. Sci. 3.

*Eulimella anabathron* sp. n. Sydney, HEDLEY, Sydney N.S.W. Proc. Linn. Soc. 30 (524).—*E. levilirata* sp. n. New Zealand, MURDOCH & SUTER, Wellington, Trans. N. Zeal. Inst. 38 (206).

†*Euomphalus* (*Straparollus*) cf. *grandis* Kon., *eupentangulatus* Sow., FRECH, Földt. Közl. 36.

†*Euphemus sudeticus* (123), *kukenthalii* (124) spp. n. Carboniferous, Hungary, FRECH, Földt. Közl., Budapest 36.

*Eupomatias* v. *Pomatias*.

†*Euspira* v. *Natica*.

*Euthria adeles* (23), *pulicaria* (24) spp. n. Cape Verd Is.; *E. saharica* (21–2) is a synonym of *Latirus maximus* G. B. Shy., DAUTZENBERG & FISCHER, Monaco, Res. camp. sci. 32.

†*Euthria adunca* (Brown), *fuscocingulata* (M. Hö). Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. 54 (33).

†*Extritonioides biarritzense* sp. n. Tertiary, Biarritz, OPPENHEIM, Berlin, Zs. D. Geol. Ges. 58 (84).—*E. affine* (Desh.), *apenninicum* (Sassi), *deshayesi* (Michti.), *karreri* (Hö. Au.), *parvulum* (Michti.), *speciosum* (Bell.), *tarbellianum* (Grat.), *tortuosum* (Brocc.) Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. 54 (38–39).

†*Eutrochus* v. *Trochus*.

*Eualea* v. *Odostomia*.

*Fasciolaria*, development, GLASER, Biol. Bull. 10 (139–64).—*F. tulipa*, Kannibalismus, GORKA, Termt. Közl. 38 (230).

†*Fasciolaria fimbriata* Brocc., Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. 54 (48).

†*Faunus* subgen. n. *Eastonia*; *F. (E.) horsti* sp. n. Cretaceous, Borneo, IOKE & MARTIN, Leiden, Samml. Geol. Reichsmus. 8 (107–16).

†*Ficula rai* (308–9), *thebaica* (309) spp. n. Tertiary, Egypt, OPPENHEIM, Palaeontographica 30.—*F. cingulata* Brönn, *geometra* Borson, Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. 54 (46–7).

*Fissurella*, anatomy, HALLER.—*F. huttoni* (*F. squamosa* Hutton) sp. n., SUTER, Wellington, Trans. N. Zeal. Inst. 38 (322).—*F. verna* Gld. var. n. *gouldi* Cape Verd Is., DAUTZENBERG & FISCHER, Monaco, Res. Camp. sci. 32 (61).

$\dagger$ *Fissurella nuda* sp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica **30** (216-7).

*Fossarus (Couthouyia) eudmetus* sp. n. Gulf of Oman, MELVILL, London, Proc. Malac. Soc. **7** (71).

*Fulgoraria (Alcithoe) hedleyi* sp. n. New Zealand, MURDOCH & SUTER, Wellington, Trans. N. Zeal. Inst. **38** (288).

*Fusus*, notes on name, DALL, Leeds, J. Conch. **11** (289-97).—*F. incertus* sp. n. Bay of Bengal, SMITH, Ann. Mag. Nat. Hist. **18** (167).—*F. corpulentus* Smith, figd., Bülow, Frankfurt a. M., NachrBl. D. malakozool. Ges. **38** (196-200).

$\dagger$ *Fusus baryi* sp. n. Cretaceous, Tripoli, KRUMBECK, Palaeontographica **53** (119-20).—*F. legrei* (20-1), *parvulus* (21), *supracretaceus* (21), *globulus* (22), *oliva* (22) spp. n. Lower Campanian, S.E. France, REPETIN, Marseille, Ann. Mus. **10**.—*F. grodischtianus*, *oxyptychus*, *rothpletzi*, *zonatus* spp. n., ASCHER, Wien, Beitr. Pal. Geol. OestUng. **19** (135-72).—*F. schlosseri* (171), *delicatus* (172), *conjecturalis* (173) spp. n. Cretaceous, Hungary, PETRÖ, Palaeontographica **52**.—*F. sublammellosus* sp. n. Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54** (47-8).—*F. (Clavella) sangiranensis* (307), *fennemai* (307-8) spp. n. Java, MARTIN, Leiden, Samml. Geol. Reichsmus. (2) **1**.—*F. (Dolicholathyrus) mokattamensis* sp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica **30**.

*Gaza (Callogaza?) frederici* sp. n. Bay of Bengal, SMITH, Ann. Mag. Nat. Hist. **18** (246).

*Genota v. Pleurotoma*.

$\dagger$ *Genota ramosa* (Bast.), *valerae* (Hö. Au.), Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54** (55).

*Gibberula v. Cryptospira*.

*Gibbula v. Trochus*.—*G. corallinoides* Locard, *gorgonarum* P. Fisch., figd., DAUTZENBERG & FISCHER, Monaco, Res. Camp. sci. **32** (57).

$\dagger$ *Gibbula lucida* sp. n. Tertiary, Biarritz, OPPENHEIM, Berlin, Zs. D. geol. Ges. **58** (81).

*Giraudia horei* Smith (183) *praeclara* Bourg. (183), Lake Tanganyika, figd., SMITH, London, Proc. Zool. Soc. **1906**.

$\dagger$ *Glauconia* synonymy (31), *coquandi* d'Orb. (33-7) varr. n., REPELIN, Marseille, Ann. Mus. **10** (33-7).

*Glyphis fuscocrenulata* sp. n. South Africa, SMITH, Ann. Natal Govt. Mus. **1** (56).

$\dagger$ *Goneoptyxis kurkurensis* sp. n. Paleocene, Egypt, OPPENHEIM, Palaeontographica **30** (313).

*Goniobasis comalensis* form. n. *fontinalis* S.W. United States, PILSBURY & FERRISS, Philadelphia, Pa., Proc. Acad. Nat. Sci. **58**.

$\dagger$ *Gyrodes v. Natica*.—*G.* sp. Woods, Cape Town, Ann. S. Afric. Mus. **4** (317).

$\dagger$ *Cyromena?* *rotalinea* sp. n., RAYMOND, Pittsburgh, Pa., Ann. Carnegie Mus. **3** (57).—*G. speciosum*, *doublingi* (50F), *brevispira* (51F) spp. n. Silurian, N. Canada, WHITTEAVES, Rep. Geol. Surv. Can. **14**.

$\dagger$ *Haedropleura avenacea* (60), *corae* (58), *crystallina* (59-60), *recticosta* (60-1) spp. n. Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54**.

*Halopea [Holopea]? iowensis* sp. n. Hackberry group, Iowa, WEBSTER, Iowa Nat. **2** (2-4).

*Harpulina* nom. n. for *Harpula* auct. non Swainson, type *Voluta arausaica* Solander, DALL, Nautilus **19** (143).

*Helcioniscus illibrata* sp. n. S. Australia, VERCO, Adelaide S. Austr., Trans. R. Soc. **30** (205).—*v. Heliconiscus*.

$\dagger$ *Helcioniscus luciferus* sp. n. Patagonian, Patagonia, HERRING, Revist. Mus. La Plata **11** (237-8).

*Helicina semisculpta* (125), *vagans* (126) spp. n. Tenimber, ANOEY, J. Conchyliol. **54**.

*Heliconiscus mestayerae* sp. n. Stewart I., SUTER, Wellington, Trans. N. Zeal. Inst. **38** (322).

$\dagger$ *Heligmotoma libicum* sp. n. Paleocene, Egypt, OPPENHEIM, Palaeontographica **30** (321-2).

*Hemipleurotoma v. Pleurotoma*.

*Hima v. Nassa*.

*Hindsia grimaldii* belongs to *Anura*, Bellardi, DAUTZENBERG & FISCHER, Monaco, Res. camp. sci. **32** (25-6).

$\dagger$ *Hindsia gendinganensis* (313-4), *tambacana* (314-5), *samarangana* (315),

*javana* (315–6), *tjemoorensis* (316–7)  
spp. n. Java, MARTIN, Leiden, Samml.  
Geol. Reichsmus. (2) 1.

†*Hippocrene v. Rostellaria*.

†*Hipponyx mokattamensis* sp. n. Lutetian,  
Egypt, OPPENHEIM, Palaeontographica  
30 (261–2).

*Holcopoma v. Auritus*.

*Holopea?* *plauta* sp. n. RAYMOND,  
Pittsburgh, Pa., Ann. Carnegie Mus. 3.  
—v. *Holopea*.

†*Holopella acicularis* Roem., figd.  
SIEIRADZKI, Wien, Beitr. Pal. Geol.  
OestUng. 19 (230).

*Hydrocena v. Realia*.

†*Janiopsis maxillosa* (Bon.), *ranelliformis* (Hö. Au.), Miocän, Ungarn,  
BOETTGER, Verh. siebenb. Ver. Naturw.  
54 (32–3).

*Iphiana v. Pyramidella*.

†*Itieria katzeri* sp. n. Cretaceous,  
Balkans, OPPENHEIM, Berlin, Zs. D. geol.  
Ges. 58 (132).

*Japonia zebra* (722), *formosana* (723),  
spp. n. Formosa, PILSBRY, Philadelphia,  
Pa., Proc. Acad. Nat. Sci. 57.

*Lacuna wandelensis* sp. n. Antarctic,  
LAMY Bul. Muséum, Paris 11 (478).—  
*L. pallidula* da Costa var. n. *aurea*  
DAUTZENBERG & DUROUCHOUX, Feuille  
jeunes natural. 36.

*Lamellarria ampla*, *fuegoensis*, *elata*,  
*magellanica* spp. n. Magalhaen, STREBEL,  
Zool. Jahrb., Syst. 24 (145–7).

*Lamellariopsis* gen. n. of Marseniadæ  
for *L. turquati* sp. n. Antarctic,  
VAYSSIÈRE, Bul. Mus., Paris 12 (148).

*Lampas v. Bursa*.

†*Lamprodoma v. Oliva*.

*Lancella v. Turbonilla*.

*Lanistes gribinginensis* sp. n. Central  
Africa, GERMAIN, Bul. Muséum, Paris 11  
(487).

*Lanzaia* gen. n. of Rissoïdæ for  
*Turbo elephantotus* Megerle 1824  
BRUSINA, Frankfurt a. M., NachrBl. D.  
malakozool. Ges. 38 (154–62).

†*Lathyrus bellardii* (M. Hö.), *bilineatus*  
(Ptch.), *moravicus* (Hö. Au.), *pleuroto-*  
*moides* (Hö. Au.), Miocän, Ungarn,  
BOETTGER, Verh. siebenb. Ver. Naturw.  
54 (48–9).

*Latirus maximus* G. B. Sby., figd.,  
DAUTZENBERG & FISCHER, Monaco, Res.  
camp. sci. 32 (21–2).

†*Latirus tjilonganensis* sp. n. Java,  
MARTIN, Leiden, Samml. Geol. Reichs-  
mus. (2) 1 (308–9).

†*Latrunculus stromeri* sp. n. Upper  
Lutetian, Egypt, OPPENHEIM, Palaeonto-  
graphica 30.

*Lavigeria grandis* Bourg. Lake Tan-  
ganyika, figd., SMITH, London, Proc.  
Zool. Soc. 1906 (182).

†*Laxispira distincta* sp. n. Cretaceous,  
Hungary, PETHÖ, Palaeontographica,  
52 (144–5).

*Leiostraca inusta* sp. n. Sydney,  
HEDLEY, Sydney, N.S.W. Proc. Linn.  
Soc. 30 (525).

*Leiotrochus v. Callistoma*.

†*Leptoconchus rollei* sp. n. Miocän,  
Ungarn, BOETTGER, Verh. siebenb. Ver.  
Naturw. 54 (36–7).

*Leplopoma bicolor* var. n. *mutica*,  
KOBELT in MARTINI & CHEMNITZ, Syst.  
Conch. Cab.

†*Leptothyra gibbula* sp. n. Lutetian,  
Egypt, OPPENHEIM, Palaeontographica 30  
(225).

*Lepyrium shawalteri* subsp. n. *cahaw-*  
*bensis*, PILSBRY, Nautilus 20 (51).

*Leucosyrinx v. Pleurotoma*.

†*Liotia* (*Liotina*) *fabrei* sp. n.  
Lutetian, Egypt, OPPENHEIM, Palaeonto-  
graphica 30 (219).

*Lippistes meridionalis* sp. n. S. Aus-  
tralia, VERCQ, Adelaide, S. Aust., Trans.  
R. Soc. 30 (221).

*Liratina* subgen. n. of *Valvatæ* (q. v.),  
LINDHOLM, Frankfurt a. M., NachrBl. D.  
malakozool. Ges. 38 (190).

*Lissochilus* subgen. n. of *Nerita* (q. v.)  
PETHÖ, Palaeontographica 52 (112–3).

†*Lithoconus v. Conus*.

*Littorina rufa*, Trematode parasites ;  
*Cercaria emasculans* sp. n. (166), *C.*  
*brevicauda* sp. n. (167), PELSENEER, 3.

†*Littorina dictyophora* sp. n. ASCHER,  
Wien, Beitr. Pal. Geol. OestUng. 19  
(135–72).

†*Lophospira excavata* (558), *tri-*  
*spiralis* (559), *instabilis* (560), *sedg-*  
*wickei*, *ferruginea* (562), *bellicerimata*  
(565), *subglobosa* (569) spp. n. Primary,

British Isles, DONALD, Quart. J. Geol. Soc. London **62**.

†*Loxonema pectatifforme* sp. n. Permo-Carboniferous, Italy, GORTANI, Palaeontogr. Ital. **12** (67).

†*Lunatia v. Natica*.

*Laponia v. Cypraea*.

*Lydipnus* subgen. n. of *Cyclostrema* (q. v.), MELVILL, London, Proc. malac. Soc. **7** (25).

†*Lyria ickei* sp. n. Java, MARTIN, Leiden, Samml. Geol. Reichsmus (2) **1** (302-3).

†*Macroeheilus meridianus* sp. n. Permo-Carboniferous, Italy, GORTANI, Palaeontogr. Ital. **12** (65).—*M. stines-villensis* sp. n. CUMINGS, Indiana, Rep. Dept. Geol. Nat. Res. **30**.

†*Malaptera v. Aporrhais*.

*Malluvium* subgen. n. of *Amalthea* type *Capulus lissus* Smith, MELVILL, London, Proc. Malac. Soc. **7** (82); is unnecessary, SMITH, London, Proc. Malac. Soc. **7** (122).

*Manaria* gen. n. of Fusidae for *M. thurstoni* sp. n. Bay of Bengal, SMITH, Ann. Mag. Nat. Hist. **18** (167).

*Mangilia beekeri* sp. n. South Africa, SOWERBY, London, Proc. Malac. Soc. **7** (38).—*M. biplicata* sp. n. Gulf of Oman, MELVILL, London, Proc. Malac. Soc. **7** (77).—*M. murrhea* (305), *infanda* (305), spp. n. New Zealand, WEBSTER, Wellington, Trans. N. Zeal. Inst. **38**.

†*Mangilia porellanea* (80), *subeosata* (77-8), *subturgida* (80-1) spp. n. Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54**.

*Margarita antarctica* sp. n. Antarctic, LAMY, Bul. Muséum, Paris **11** (481).

*Margaritopsis* gen. n. for *Margarita* frielei Krause, THIELE, Frankfurt a. M., NachrBl. D. malakozool. Ges. **38**.

*Margarya melanoides* Nevill var. n., DAUTZENBERG & FISCHER, J. Conchyliol. **53** (424).

*Marginella eburnea*, *subflava* spp. n. Ceylon (?), PRESTON, London, Proc. Malac. Soc. **7** (35).—*M. fusula* (289), *hebesens* (290) spp. n. New Zealand, MURDOCH & SUTER, Wellington, Trans. N. Zeal. Inst. **38**.—*M. sheppstoneensis* (31) sp. n. South Africa; *M. biplicata* (29) Krauss, discussed,

SMITH, Ann. Natal Govt. Mus. **1**.—*M. (Volvaria) amydrozona*, *eumorpha* spp. n. Gulf of Oman, MELVILL, London, Proc. Malac. Soc. **7** (76).—*M. (V.) joubini* sp. n. off N. W. Africa, DAUTZENBERG & FISCHER, Monaco, Res. Camp. sci. **32** (18-9).—*M. (V.) perrieri* sp. n. Falkland Is., BAVAY, J. Conchyliol. **53** (268).

†*Marginella dalli* (43), *cordiformis* (44), *latior* (45) spp. n. Tertiary, Mexico, BÖSE, Mexico, Biol. Inst. Geol. **22**.—*M. rembangensis* (299-300), *beberkiriana* (300), (*Cryptospira*) *pamotanensis*, (300-1), *sangiranensis* (301) spp. n. Java, MARTIN, Leiden, Samml. Geol. Reichsmus. (2) **1**.—*M. (Volvarina) brevispira* (324-5), (*Stazzania*) *sanurensis* (325) spp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica **30**.—*M. eratoformis* Hō. Au., *minuta* Pfr., Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54** (5).—*M. gibberosa* (87), *portus* (88) Tertiary, Biarritz, OPPENHEIM, Berlin, Zs. D. geol. Ges. **58**.

†*Mayeria v. Semifusus*.

†*Megalomphala robusta* sp. n. Silurian, N. Canada, WHITEAVES, Rep. Geol. Surv. Can. **14** (48 F).

*Megalovalvata* subgen. n. of *Valvata* (q. v.), LINDBOLM, Frankfurt a. M., NachrBl. D. malakozool. Ges. **38** (190).

*Melania solidula* sp. n. Mariannes, BAVAY, J. Conchyliol. **53** (254).—*M. sykesi* sp. n. Sumatra, BULLEN, London, Proc. Malac. Soc. **7** (15).—*M. curvieosta* var. n. *prestoniana* Sumatra, BULLEN, London, Proc. Malac. Soc. **7** (15).

†*Melania jacqueti* sp. n. Indo China, DAUTZENBERG & FISCHER, J. Conchyliol. **53** (413).—*M. krausei* sp. n. Upper Cretaceous, Borneo, IOKE & MARTIN, Leiden, Samml. Geol. Reichsmus., **8** (109-10).—*M. (Aerostoma) sindangbaranensis* sp. n. Java, MARTIN, Leiden, Samml. Geol. Reichsmus. (2) **1** (321).—*M. (Pachylilus) bombachensis* sp. n. Tertiary, Panama, JOUKOWSKY, Genéve, Mém. Soc. Phys. **35** (174-5).

†*Melongena ickei* sp. n. Java, MARTIN, Leiden, Samml. Geol. Reichsmus. (2) **1** (309).—*M. leschmanni* form. n., HOERNES, Wien, SitzBer. Ak. Wiss. **115** (1521-47).

*Menestho v. Odostomia*.

†*Mesalia farafrensis* (251-2), *sanuensis* (253), *pedinogryra* (253-4), *blanckenhorni*, (254), *analoga* (254-5) spp. n. Tertiary, Egypt, OPPENHEIM, Palaeontographica 30.

†*Mesorhytis* v. *Turridula*.

*Metula andamanica* sp. n. Andaman Is., SMITH, Ann. Mag. Nat. Hist. 18 (165).

†*Metula boettgeri* sp. n. Java, MARTIN, Leiden, Samml. geol. Reichsmus. (2) 1 (310-1).—*M. biarritzensis* sp. n. Tertiary, Biarritz, OPPENHEIM, Zs. D. geol. Ges. 58 (86).

†*Micraelis* gen. n. aff. *Turbanilla* RISSE, Typ *M. mira* sp. n. Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. 54 (99).

*Minolia textilis* (298), *plicatula* (299), spp. n. New Zealand, MURDOCH & SUTER, Wellington, Trans. N. Zeal. Inst. 38.

*Miralda* v. *Odostomia*.

*Mitra*, notes on spp.; *M. brettinghami* sp. n. Hab. incert, SMITH, London, Proc. Malac. Soc. 7 (124-5).—*M. brettinghami* Sm., *zonata* Marr. figd., BüLOW, Frankfurt a. M., NachrBl. D. malakozool. (1os. 38) (196-200).—*M. idae* Molv., (195-6), *fultoni* Sm. (197), *lowei* Dall (197), *orientalis* Gray, W. America, figd., WILLIAMSON, Washington, D.C., Proc. Biol. Soc. 19.—*M. punctostriata* Adams, figured, SMITH, Ann. Natal Govt. Mus. 1 (32).—*M. picta* RVE., note, ROUS, Nautilus 20 (57).—*M. (Turridula) sanguisuga* L. subsp. n. *condoriana*, DAUTZENBERG & FISCHER, J. Conchyliol. 53 (387).

†*Mitra aptycha* (12-3), *boehmi* (11-2), *paraptycha* (13-4), *pilsbryi* (6-7), *pseudorecticosta* (10), *sibylloides* (5) spp. n. Miocän, Ungarn; *M. avellana* var. n. *avellanella* (9), *pseudavellana* (9-10), *M. ebenus* Lmk. var. n. *paraleucozona* (8), *pseudopyramidella* (9), Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. 54.—*M. degrangei vasconum* spp. n. Tertiary, Biarritz, OPPENHEIM, Berlin, Zs. D. geol. Ges. 58 (89).—*M. mokattamensis* sp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica, 30 (325-6).—*M. (Nebularia) sedanensis* (303), (*Cancilla*) *suecumbiana* (303-4), *rembangensis* (304) spp. n. Java, MARTIN, Leiden, Samml. Geol. Reichsmus. (2) 1.

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*Mitromorpha pallidula* sp. n. Sydney, HEDLEY, Sydney, N.S.W. Proc. Linn. Soc. 30 (534).

†*Mohrensternia* (?) *pseudovalvania* sp. n. Maötisches Becken, ANDRUSSOW, St. Peterburg, Verh. Russ. mineral. Ges. 43 (289-451).

*Monilea oleacea* sp. n. off Sydney 300 f., HEDLEY & PETTERD, Sydney, N.S.W., Rec. Austr. Mus. 6 (215).

†*Monodonta* v. *Trochus*.

*Morio alecocki* sp. n. Bay of Bengal, SMITH, Ann. Mag. Nat. Hist. 18 (170).

*Mormula* v. *Turbanilla*.

*Mucronalia* v. *Eulima*.—*M. bizonula* (72), *leptida* (73) spp. n. Gulf of Oman, MELVILLE, London, Proc. Malac. Soc. 7.

*Mumiola epibathra* sp. n. Gulf of Oman, MELVILLE, London, Proc. Malac. Soc. 7 (72).

†*Murchisonia kokeni* (*M. angulata* KOKEN) sp. n., FRECH, Földt. Közl., 36 (126).—*M. paronai* (574), *tomasii* (575) spp. n. Carboniferous, Carnian Alps, GORTANI, Boll. Soc. Geol. Ital. 24. —*M. mazzarotti* sp. n., Permian, Carnia, GORTANI Rev. Ital. Pal. 12 (123).—*M. aff. demidoffi* Puhoozoic, Podolia sp. n., SIEMIRADZKI, Wien, Beitr. Pal. Geol. OestUng. 19 (233).

*Murex licinus* sp. n. off Sydney 300 fath., HEDLEY & PETTERD, Sydney, N.S.W., Rec. Austr. Mus. 6 (219).—*M. spp.* (33-8); *M. gallinago* Sby. (196-200) figd., BüLOW, Frankfurt a. M., NachrBl. D. malakozool. Ges. 38

†*Murex altonans* (43-4), *collega* (42-3), *hamulifer* (41-2), *murex-ferreus* (45) spp. n. Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. 54.

*Nacella*, anatomy, HALLER.—*N. compressa* (208), *stowae* (209) spp. n. S. Australia, VERCO, Adelaide, S. Aust., Trans. R. Soc. 30.

*Nassa nevilliana* sp. n. Ceylon (?), PRESTON, London, Proc. Malac. Soc. 7 (34).—*N. subsimilis* sp. n. Bay of Bengal, SMITH, Ann. Mag. Nat. Hist. 18 (165).—*N. (Alectryon) jactibunda* sp. n. Persian Gulf, MELVILLE, London, Proc. Malac. Soc. 7 (76).—*N. (Hima) tindalli* sp. n. Ceylon, MELVILLE, London, Proc. Malac. Soc. 7 (29).—*N. mutabilis* L. var. n., *procera*, *N. ferrusaci* PAYR.

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**varr. n.** *claudoni*, *pallaryi*, PALLARY, J. Conchyliol. **54** (84-5).

†*Nassa crux* (26), *explorata* (23), *hypertropha* (24), *striatocosta* (27), *subasperata* (29) spp. n.; *N. daciae* Hló. Au. var. n. *rejecta* (28-9); Miocene, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54**.—*N. prisca* sp. n. Tertiary, Biarritz, OPPENHEIM, Zs. D. geol. Ges. **58** (83).—*N. reticulata* sp. n. Maotisches Becken, ANDRUSSOW, St. Peterburg, Verh. Russ. mineral. Ges. **43** (289-451).—*N. (Uzita) beberkiriana* sp. n. Java, MARTIN, Leiden, Samml. Geol. Reichsmus. (2) **1** (317).

*Natica anderssoni* sp. n. MAGALHAES, STREIBEL, Zool. Jahrb., Syst. **24** (142).—*N. diuidiata* (172), *similans*, *incerta* (173), *apertissima*, *innobilis* (174) spp. n. Bay of Bengal and Arabian Sea, SMITH, Ann. Mag. Nat. Hist. **18**.—*N. alderi*, trematode parasites; *Cercaria parivernalis* sp. n. (165-6), *C. obtusicaudata* sp. n. (167-8), *C. crispata* sp. n. (171-2), *C. appendiculata* sp. n. (174-5), PELSENER, **3**.

†*Natica arsenae* sp. n., Miocene, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **57** (90).—*N. mokattamensis* (276), *admiranda* (271), *cepaciformis* (272) (*Euspira*) *lyonsi* (264-5), (*Neverita*) *cleopatrae* [Mayer-Eymar MS.] (272-3), (*Naticina*) *aegyptiaca* (274-5), *phasianella* (275-6) spp. n. Tertiary, Egypt, OPPENHEIM, Palaeontographica **30**.—*N. plesio-lyrata* (147-8), *provideata* (148-9), *uberiformis* (150-1), (*Amanropsis*) *fruscagorensis* (145-7), (*Gyrodes*) *kochii* spp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52**.—*N. uhligi* sp. n., ASCHER, Wien, Beitr. Pal. Geol. OestUng. **19** (135-72).—*N. (Ampullina) atlirata* sp. n. Senonian, Cardenas, Mexico, BÖSE, Mexico, Bol. Inst. geol. **24** (61).—*N. (Lanaria) multi-striata* Bail. re-described and figured, Woods, Cape Town, Ann. S. Afric. Mus. **4** (316).

†*Naticina* v. *Natica*.

†*Naticopsis haeckberryensis* sp. n., *gigantea* var. n. *depressa* Hackberry group, Iowa, WEBSTER, Iowa Nat. **2** (2-4).—*N. pauciovolutus* sp. n. Glen Park Limestone, WELLER, St. Louis Mo., Trans. Acad. Sci. **16** (435-71).

†*Nebularia* v. *Mitra*.

*Neocyelotus depresso* (9), *peruvianus* (98) spp. n. Peru, DA COSTA, London, Proc. Malac. Soc. **7**.

*Neptunea antiqua*, teratology, SMITH, London, Proc. Malac. Soc. **7** (67).

†*Nerinea*, ASCHER, Wien, Beitr. Pal. Geol. OestUng. **19** (135-72).—subgen. n. *Plesiptygmatis* type *N. (P.) burckhardti* sp. n. Senonian, Cardenas, Mexico, BÖSE, Mexico, Bol. Inst. Geol. **24** (65-7).—*N. katzeri* sp. n. Cretaceous, Balkans, OPPENHEIM, Berlin, Zs. D. geol. Ges. **58** (131).

*Nerita* subgen. n. *Lissochilus*, type *N. sigaretinus* Buyignier, PETHÖ, Palaeontographica **52** (112-3).

†*Nerita gemmata* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52** (126-7).—*N. kaffraria*, *umzambiensis* spp. n. Cretaceous, Pondoland, Woods, Cape Town, Ann. S. Afric. Mus. **4** (311).—*N. punctata* sp. n. Tertiary, Philippines, SMITH, Philippine J. Sci. **1** (628).—*N. (Ostostoma) gensaciensis* sp. n. Campanian, Gensac, PETHÖ, Palaeontographica **52** (117-8).—*N. (Peloronta) saurensis* (226-7), *fajumensis* (227-8), (*Lissochilus*) *eucleista* (288) spp. n. Tertiary, Egypt, OPPENHEIM, Palaeontographica **30**.

*Neritina*, Hungarian spp., SOÓS, Budapest, Ann. Hist. Nat. Mus. Nat. Hung. **4** (450-62).—*N. fluviatilis* subsp. n. *zernovnicensis*, KORMOS, Frankfurt a. M., NachrBl. D. malakozool. Ges. **38**.—*N. liturata* Aralsee, OSTROUMOFF, Taškent, Izv. Turk. Otd. Russ. Geogr. Obsč. **4** (20-6).

†*Neritina*, notes on Diluvial species, KORMOS, Foldt. Kozl., Budapest **36** (295-6).—*N. haugi* sp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. **10** (39-40).—*N. jungluhni* sp. n. Java, MARTIN, Leiden, Samml. Geol. Reichsmus. (2) **1** (323).—*N. lozýana* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52** (131-2).

†*Neritoma* (?) (*Oncochilus*) *occidentalis* sp. n. Jurassic, N. America, WHITFIELD & HOVEY, New York, Bull. Amer. Mus. Nat. Hist. **22**.

†*Neritopsis parisiensis* Desh. Eocene, Monte Postale, figd., FABIANI, Padova, Atti. Ac. Ven.-Trent. **2** (148).

†*Neverita* v. *Natica*.

*Neutoniella stiria* sp. n. New Zealand, WEBSTER, Wellington, Trans. N. Zeal. Inst. **38** (307).

*Nisiturris* subgen. n. of *Turbanilla* (q.v.), DALL & BARTSCH, Washington, D.C., Smithsonian Inst., U.S. Nation. Mus. Proc. **30**.

†*Niso kimberi* sp. n. Eocene, S. Australia, PRITCHARD, Vict. Nat., Melbourne **23** (119).

*Obeliscus* v. *Pyramidella*.—*O. agassizii*, *pattulus*, *clavus*, *hendersoni*, *simpsoni* spp. n., *homalogryra* var. n. *zaza*, *salleanus* var. n. *disparilis*, PILSBRY, Man. Conch. **18**.

*Ocinebra erronea* Monterosato var. n. *major*, *minor*, PALLARY, J. Conchyiol. **54** (92).

*Ocinebrina hybrida* Aradas & Schoil var. n. *scalata*, PALLARY, J. Conchyiol. **54** (93).

*Odetta* v. *Odostomia*.

*Odostomia* subgen. n. *Egilina*; *O. desemana* (*O. lactea* Dunker), (*Menestho*) *exaratisima* (*Menestho exarata* A. Adams), (*Amaura*) *martensi* (*O. curta* Clessin), (*Parthenina*) *meta*, (*Chrysallida*) *dux*, (*Pyrgulina*) *lecta*, (*Odetta*) *lectissima*, *felix*, (*Bealea*) *culta*, *mauritiana*, *limpida* spp. n., (*Pyrgulina*) *densecostata* subsp. n. *upoluensis*, DALL & BARTSCH, Washington, D.C., Smithsonian Inst., U.S. Nation. Mus. Proc. **30**.—*O. lutea* Garrett, and synonyms, MELVILL & STANDEN, Leeds, J. Conch. **11** (362).—*O. marginata* sp. n., New Zealand, MURDOCH & SUTER, Wellington, Trans. N. Zeal. Inst. **38** (296).—*O. opaca* sp. n. Sydney, HEDLEY, Sydney N.S.W. Proc. Linn. Soc. **30** (524).—*O. (Pyrgulina) hervierioides*, *tenerima* (74), *thelxinoa*, (*Miralda*) *una* (75) spp. n. Gulf of Oman, MELVILL, London, Proc. Malac. Soc. **7**.

†*Odostomia takinogawensis* Post Tertiary, Japan, TOKUNAGA, Tokyo, J. Coll. Sci. **26** (23).

*Oliva smithi* (17) sp. n. locality unknown; *O. ispidula* var. n. *longispira*, BRIDGMAN, London, Proc. Malac. Soc. **7** (195).

†*Oliva ickei* (296-7), (*Olivancillaria pamotanensis* (297), *rembangensis* (297-8) spp. n. Java, MARTIN, Leiden, Samml. Geol. Reichsmus. (2).—*O. subuplicata*

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sp. n. Tertiary, Mexico, BÖSE, Mexico, Bol. Inst. Geol. **22** (59).—*O. (Lampridoma) aegyptiaca* sp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica **30** (330).—*O. flammulata* Lmk., Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54** (3).

†*Olivancillaria* v. *Oliva*.

*Omalaxis amœna* sp. n. New Zealand, MURDOCH & SUTER, Wellington, Trans. N. Zeal. Inst. **38** (293).

*Omphalotropis* v. *Realia*.—*O. annatonensis* Pfeiffer var. n. *santoensis* New Hebrides, ANCEY, J. Conchyiol. **53** (300).—*O. elongata*, *quadrasi* synonymy, BAVAY, J. Conchyiol. **54** (10).

†*Omospira orientalis* sp. n. Palaeozoic, British Isles, DONALD, Quart. J. Geol. Soc. London **62** (553).

†*Oncochilus* v. *Neritoma*.

*Oocorys* var. n. *sulcata* Bay of Bengal, SMITH, Ann. Mag. Nat. Hist. **18** (170).

†*Oonia* v. *Pseudomelania*.

*Opisthostoma tonkimandus* sp. n. Indo China, DAUTZENBERG & FISCHER, J. Conchyiol. **53** (444).

†*Orthonychia jeffersonensis*, *ungula* spp. n. Glen Park Limestone, WELLER, St. Louis, Mo., Trans. Acad. Sci. **16** (435-71).—*O. obtusa* sp. n. Silurian, N. Canada, WHITEAVES, Rep. Geol. Surv. Com. **14** (51 F).

†*Otostoma* v. *Nerita*.

*Ovula haukeni* Heb. & Mun.-Ch., the type of *Vicevia* (q.v.) gen. n.

†*Pachychilus* v. *Melania*.

*Palaina* v. *Diplommatina*.—*P. formosana* sp. n. Formosa, PILSBRY, Philadelphia, Pa., Proc. Acad. Sci. **57** (728).

*Paludestrina diaboli* sp. n. S.W. United States, PILSBRY & FERRISS, Philadelphia, Pa., Proc. Acad. Nat. Sci. **58**.

• *Paludina* v. *Vivipara*.—Fauna of W. Europe, KOEBELT, Wochenschr. Aquarienkunde, Braunschweig, **3**, (428-31, 551-3); ROTH, Bl. Aquarienkunde **17** (431-2, 438-40).—Of Lake Zurich, ROTH, Bl. Aquarienk. **17** (180-2).—*P. sp.*, ZIEGELER, Wochenschr. Aquarienkunde **3** (95-7).—*P. fasciata* var. n. *diluvianiformis*, HILBERT, Königsberg, Schr. physik. Ges. **46** (44-9).—*P. lecythoides* Benson var. n. *latissima*, *zattei* Crosse & Fischer var. n.

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*elongata*, *quadrata* Bens. varr. n., DAUTZENBERG & FISCHER, J. Conchyliol. **53**, (418-9).—*P. pyramidalis*, ZIEGELER, Wochenschr. Aquarienkunde **3** (221).—*P. pyramidalis* Jan, occurrence in Lake Zurich, Rotn, Natur u. Illus **14** (151-7); Bl. Aquarienkunde **17** (175-6, 271).

—*P. vivipara* Lake Zurich, BOETTGER, Wochenschr. Aquarien. **3** (175).—*P. vivipara*, nervous system, AEDERHARDT, Bern, Mitt. Naturf. Ges. **1905**, (120-1).—*P. vivipara*, embryology, OTTO & TÖNNIGES, Zs. wiss. Zool. **80** (411-514).

†*Paludinopsis* gen. n. of Melaniidae aff. Faunus subgen. Eastonia; *P. siliensis*, *ngeriensis* spp. n. Cretaceous, Borneo, ICKE & MARTIN, Leiden, Samml. Geol. Reichsmus. **8** (116-9).

*Paramelania crassigranulata* Smith (182), *damoni* Smith (182) L. Tanganyika, figd., SMITH, London, Proc. Zool. Soc. **1906**.

*Parastrophia filum* sp. n. Gulf of Oman, MELVILLE, London, Proc. Malac. Soc. **7** (80).

*Parthenina* v. *Odostomia*.—*P. evlata* A. Ad. the type of *Babella* (q.v.) subgen. n.

†*Parvifusus gibber* sp. n. Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54** (34).

†*Parviscala* v. *Scalaria*.

*Patella intermedia* Jeffreys varr. n. *marteli splendida*, *depressa*, *ochracea*, DAUTZENBERG & DUROUCHOUX, Fenille jeunes natural Paris **36**.

†*Peloronta* v. *Nerita*.

†*Peratotoma adelgundae* (74), *præhisida* (71), *prætexta* (73-4), *seaberrima* (71-2), *theodoræ* (75-6), *ulvicae* (70) spp. n. Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54**.

†*Pereiraea* (?) *schweinfurthii* sp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica **30** (296-7).

†*Perissoptera* v. *Dieroloma*.

*Pharcidella* v. *Pyramidella*.

†*Phasianella sericata* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica, **52** (99-100).

*Philbertia pruinosa* sp. n. Gulf of Gabes, PALLARY, J. Conchyliol. **54** (80).—*P. papillosa* Pallary varr. n. *arnoldi*, *edei*, PALLARY, J. Conchyliol. **54** (80).

†*Phos acuminatus* sp. n. Java, MARTIN, Leiden, Samml. Geol. Reichsmus. (2) **1** (311-2).—*P. mexicanus* sp. n. Tertiary, Mexico, BÖSE, Mexico, Bol. Inst. Geol. **22** (38).—*P. hoernesii* O. Semp. Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54** (23).

*Photinula*, notes on, THIELE, Frankfurt a. M., NachrBl. D. malakozool. Ges. **38** (12-5).

†*Pirifusus bailyi* sp. n. Cretaceous, Pondoland, Woods, Cape Town, Ann. S. Afric. Mus. **4** (324).

†*Platyceras chronus*, *clytia*, *pagoda* spp. n. Cambrian, China, WALCOTT, Washington, Nation. Mus. Proc. **29** (14-5).—*P. compactum* sp. n. Silurian, N. Canada, WHITEAVES, Rep. Geol. Surv. Can. **14** (52 F).—*P. erectoides*, *evolutus*, *glenparkensis* spp. n. Glen Park Limestone, WELLER, St. Louis, Mo., Trans. Acad. Sci. **16** (435-71).—*P. podalicum* (230) sp. n. Palaeozoic, Poland; *P. cornutum* His., *disjunctum* Gieb., figd., SIEMIRADZKI, Beitr. Pal. Geol. Oest. Ung., **19**.—*P. subsymmetrica* sp. n. Devonian, Germany, SCHMIDT, Berlin, Zs. D. geol. Ges. **57** (501).—*P. willisi* sp. n. Cambrian, China, WALCOTT, Washington, D.C., Smithsonian Inst., U.S. Nation. Mus. Proc. **30** (563).—*P. insolita*, *modesta* spp. n. Blackberry Group, Iowa, WEBSTER, Iowa Nat. **2** (2-4).

†*Plesioptygnatis* subgen. n. of *Nerinea* (q.v.), BÖSE, Mexico, Bol. Inst. geol. **24** (65-7).

†*Plesiotriton cossmanni* sp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica **30** (311-2).

*Pleurotoma* spp., BÜLOW, Frankfurt a. M., NachrBl. D. malakozool. Ges. **38**.—W. American spp. of *Genota*, RAYMOND, Nautilus **20** (37-9).—*P. catearia* sp. n. off Sydney, 300 fms. HEDLEY & PETTERSON, Sydney, N.S.W., Rec. Austr. Mus. **6** (220).—*P. joubini* (11-2), (*Clio-nella*?) *richardi* (13-4), (*Pleurotomella*) *alberti* (16-7) spp. n. off N.W. Africa, DAUTZENBERG & FISCHER, Monaco, Res. Camp. sci. **32** (11-2).—*P. (Hemipleurotoma) alticincta*, *nodilirata* (*P. tuberculata* Kirk), (285), (*Leucosyrinx*) *augusta* (286), *eremita* (287) spp. n. New Zealand, MURDOCH & SUTER, Wellington, Trans. N. Zeal. Inst. **38**.—*P. (Surcula) nereis* (161), *thiisbe*, *agalmia* (162), (*Bathytoma*)

*urania* (163) spp. n. Bay of Bengal, SMITH, Ann. Mag. Nat. Hist. **18**.

†*Pleurotoma fajumensis* sp. n. Lutetian, Egypt. OPPENHEIM, Palaeontographica **30** (334).—*P. ickei* (293-4), (*Surecula*) *pamotauensis* (292-3), *rembanganensis* (293), (*Drillia*) *palabuanensis* (294), *tjemoroensis* (295), *sangiranensis* (295), *madiunensis* (296) spp. n. Java, MARTIN, Leiden, Samml. Geol. Reichsmus. (2) **1**.—*P. inaudita* (48), *veracruzana*, *angermanni* (60), *zapoteca*, *scaliæ* (61) spp. n. Tertiary, Mexico, Böse, Mexico, Bol. Inst. Geol. **22**.—*P. vasecum* sp. n. Tertiary, Biarritz, OPPENHEIM, Berlin, Zs. D. geol. Ges. **58** (90).—*P. (Drillia) tabatensis*, *ojensis* (15), *sagamicensis*, *parva* (16) spp. n. Tertiary, Japan TOKUNAGA, Tokyo, J. Coll. Sci. **21**.—*P. (Surecula) hyperseronica*, (180-1), *deperdita* (181-2), (?) *Clathurella* *orba* spp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52**.—*P. annac* Hö. Au., *badiensis* M. Hö., *coronata* Mstr., *eugeniae* Hö. Au., *irenae* Hö. Au., *neugeboreni* Hö. Au., *rotata* Broc., *sub-coronata* Bell., *trifasciata* M. Hö., *vermicularis* Grat., Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54** (52-3).

†*Pleurotomaria lindhorstiensis* sp. n. Cretaceous, Germany, HARBOR, Berlin, Abh. Geol. Landesanst. **45** (86).—*P. (?) verticillata* sp. n. Hackberry Group, Iowa, WEBSTER, Iowa Nat. **2** (2-4).—*P. alata*, *bicincta* figd., SIEMIRADZKI, Wien, Beitr. Pal. Geol. OestUng. **19** (232).

*Pleurotomella* v. *Daphnella*, *Pleurotoma*.—*P. (?) bullionoides* (178), *gregaria* (180), *lusitanica* (181) spp. n. European seas, SYKES, London, Proc. Malac. Soc. **7**.

†*Pliscicula amandae* (96), *infans* (96-7), *microscopica* (97) spp. n. Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54**.

†*Pollia* v. *Cantharus*.

†*Pollia perpusilla* (31-2), *trigonostoma* (31) spp. n. Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54**.

†*Polytremaria* (?) *solitaria* sp. n., CUMINGS, Indiana, Rep. Dept. Geol. Nat. Res. **30**.

*Pomatias septemspiralis*, nervous system, AEBERHARDT, Bern, Mitt. naturf. Ges. **1905** (119-20).—*P. (Eupomatias*

*mostarensis* sp. n. Bosnien; *P. (E.) elegans* subsp. n. *imosciensis*, WAGNER, Frankfurt a. M., NachrBl. D. malakozool. Ges. **38**.

*Pontiothauma minus*, *pacei* spp. n. Bay of Bengal, SMITH, Ann. Mag. Nat. Hist. **18** (159).

†*Potamides*, v. *Cerithium*.—Revision of *P. tricarinatus* group, BOUSQO, Paris, Bul. Soc. Geol. **5** (669-78).—*P. cheribonensis* sp. n. Java, MARTIN, Leiden, Samml. geol. Reichsmus. (2) **1** 320-1).—*P. (Tympatomotus) sensseyi* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52** (162-3).—*P. corrugatus* (Brong.). Eccene, Monte Postale, figd., FABIANI, Padova, Atti Ac. Ven. Trent. **2** (149).

†*Pseudochemnitzia acicula* (Dub.) Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54** (98).

†*Pseudoliva zitteli* (169-70), *praecursor* (170-1) spp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52**.

†*Pseudomelania sutherlandi* Bail. (312) re-described and figured; *P. (Onia) sp.* (313), Woods, Cape Town, Ann. S. Afric. Mus. **4**.

*Pseudopomatias cos* sp. n. Formosa, PILSBURY, Philadelphia, Pa., Proc. Acad. Nat. Sci. **57** (728).

†*Pseudotoma multisulcata* (65), *tornatella* (64), *xeniae* (63-4) spp. n. Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54**.

*Pterocyclus aspersus* sp. n. Sumatra, BULLEN, London, Proc. Malac. Soc. **7** (129).

†*Ptychomphalus missouriensis* sp. n. Glen Park Limestone, WELLER, St. Louis, Mo., Trans. Acad. Sci. **16** (435-71).

†*Pugnellus auriculatus* sp. n. Cretaceous, Pondoland, Woods, Cape Town, Ann. S. Afric. Mus. **4** (319).

*Pupina clara* (244), *subpolita* (245) spp. n. Australia; *P. pincticola* var. n. Queensland, FULTON, Ann. Mag. Nat. Hist. **17** (244).—*P. douvillei*, *verneau* spp. n. DAUTZENBERG & FISCHER, J. Conchyliol. **53** (440).

*Pupinella densecostata*, *simplex* spp. n. Queensland, FULTON, Ann. Mag. Nat. Hist. **17** (245).

*Purpura striata* subsp. n. *bollensi* Kermadec Is. (331), SUTER, Wellington, Trans. N. Zeal. Inst. **38**.—*P. succincta* Martyn, oviposition, HEDLEY, Sydney, N.S.W. Proc. Linn. Soc. **30** (533).

†*Purpura exilis* Ptsch. Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54** (34).

*Pusia* v. *Vulpecula*.

*Pyramidella* (*Tiberia*) *japonica*, (*Aetaeopyramis*) *digitalis*, (*Iphiaria*) *lischkei*, (*Pharcidella*) *moffati* (*Obeliscus*) *clavulus* A. Adams, *dunkeri* (*Odostomia*) *fasciata* Dunker) spp. n.; *P. pusilla* subsp. n. *jacksonensis*, *P. (Cingulina) cingulata* subsp. n. *laticingula*, DALL & BARTSCH, Washington, D.C., Smithsonian Inst., U. S. Nation. Mus. Proc. **30**.—*P. (Syronula) tenuiplicata* sp. n. New Zealand, MURDOCH & SUTER, Wellington, Trans. N. Zeal. Inst. **38** (296).—*P. rosea* v. *Columbella pseutes*.

†*Pyramidella junghuhni* sp. n. Java, MARTIN, Leiden, Sauml. Geol. Reichsmus. (2) **1** (321-2).—*P. (Obeliscus) insolitus* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52** (153).

*Pyrazus herculeus* Martyn, radula, geographical distribution, HEDLEY, Sydney N.S.W., Proc. Linn. Soc. **30** (529-33).

†*Pyrenella* v. *Cerithium*.

*Pyrgisculus* v. *Turbanilla*.

*Pyrostylis* v. *Turbanilla*.

†*Pyrgula brusinai*, *margaritiformis* spp. n. Märitisches Becken, ANDRUSSOW, St. Petersburg, Verh. Russ. mineral. Ges. **43** (289-451).

*Pyrgulina* v. *Odostomia*.

†*Pyropsis africana* sp. n. Cretaceous, Pondoland, Woods, Cape Town, Ann. S. Afric. Mus. **4** (322).

†*Ranella emmae* Bittgr., *gigantea* Lmk.: *papillosa* Pusch; *poppelacki* M. Hö., Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54** (39-40).

†*Raphistomina undulatum* sp. n. RAYMOND, Pittsburgh, Pa., Ann. Carnegie Mus. **3**.

*Realia* (*Omphalotropis*) *aurora* (249), *macromphala* (250), (*Hydrocena*) *callosa* (252) spp. n. Mariannes, BAVAY, J. Conchyliol. **53**.—*R. aurora*, *macromphala* are synonyms of *Omphalotropis*

*elongata*, *quadrasi*, BAVAY, J. Conchyliol. **54** (10).

†*Renauxia* is a synonym of *Glaucomia* Gieb., REPELIN (31).

†*Rhiphitoma bujiturana* (88), *clavulina* (86-7), *gertrudae* (83-4), *polyacantha* (82-3), *subfusiformis* (85-6), *tumida* (87-8) spp. n. Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54**.

*Rhiostoma morleti* sp. n. Indo-China, DAUTZENBERG & FISCHER, J. Conchyliol. **53** (429).

†*Ricinula inconstans* (Michti.), Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54** (34).

†*Rimella* v. *Rostellaria*.

*Rissoia*, note, KESTEVEN, Zool. Anz., **30** (823).—*R. emblematica*, *pulvillus* spp. n. Sydney, HEDLEY, Sydney, N.S.W. Proc. Linn. Soc. **30** (526).—*R. filocineta*, sp. n. off Sydney, 300 f., HEDLEY & PETTERD, Sydney, N.S.W., Rec. Austr. Mus. **6** (217).—*R. monterosatoi* sp. n. Gulf of Gabes, PALLARY, J. Conchyliol. **54** (98).—*R. pingue* sp. n. New Zealand, WEBSTER, Wellington, Trans. N. Zeal. Inst. **38** (307).—*R. (Ceratia) turquati* sp. n. Antarctic, LAMY, Bul. Muséum, Paris **11** (479).—*R. paradoxa* Monterosato varr. n. *seminodosa*, *pallaryi*, PALLARY, J. Conchyliol. **54** (96).

†*Rissoia septentrionalis* (26), *meridionalis*, *subcylindrica* (27) spp. n. Post Tertiary, Japan, TOKUNAGA, Tokyo, J. Coll. Sci. **21**.

*Rissoina durbanensis* (47), *shepstoneensis* (48) spp. n. South Africa, SMITH, Ann. Natal Govt. Mus. **1**.

†*Rissoina biploca*, *hoheneggeri*, ASCHER, Wien, Beitr. Pal. Geol. OestUng. **19** (135-72).

†*Rostellaria*? *pachundakii* (289-90), (*Rimella*) *aegyptiaca* (294-5), *libyea* (295) spp. n. Tertiary, Egypt, OPPENHEIM, Palaeontographica **30**.—*R. patagonensis*, *rothi* spp. n. Patagonia, IIHERING, Revist. Mus. La Plata **11** (238-40).—*R. (Hippocrene) subtilis* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52** (166).—*R. dentata* GRAT., Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54** (37).

†*Rostellites capensis* sp. n. Cretaceous, Pondoland, Woods, Cape Town, Ann. S. Afric. Mus. **4** (327).

†*Rouaultia lapugensis* (Ch. May.), Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54** (65).

†*Salpingostoma boreale* sp. n. Silurian, N. Canada, WHITEAVES, Rep. Geol. Surv. Can. **14** (49F).

†*Sandbergeria v. Cerithium*.

*Scala durbanensis* sp. n. South Africa, SMITH, Ann. Natal Govt. Mus. **1** (49).—*S. levifoliata* sp. n. New Zealand, MURDOCH & SUTER, Wellington, Trans. N. Zeal. Inst. **38** (295).—*S. lovei* sp. n. California, DALI, Nautilus **20** (44).—*S. nepeanensis* (1), *translucida* (2) spp. n. Victoria, GATLIFFE, Melbourne, Proc. R. Soc. Vict. **19**.—*S. platypleura*, *acanthopleura* (145), *valida* (147), *invalida* (148) spp. n. South Australia, VERCÖ, Adelaide, S. Aust., Trans. R. Soc. **30**.

†*Scala herthae* (92-3), *brandenburgi* (94-5), *xeniae* (93-4) spp. n. Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54**.—*S. ornata* Bail. Redescribed and figured, Woods, Cape Town, Ann. S. Afric. Mus. **4** (314).

*Scalaria canephora*, (*Cirsotrema*) *bona* spp. n. Gulf of Oman, MELVILL, London, Proc. Malac. Soc. **7** (70).

†*Scalaria* (*Cirsotrema*) *quaasi* (232-3), *mokattamensis* (233), *beyrichi* [Mayer-Eymar, MS] (233), (*Parviscala*) *cossmanni* (234), (*Aerilla*) *aegyptiaca* (236), *nilotica* (236) spp. n. Tertiary, Egypt, OPPENHEIM, Palaeontographica **30**.

*Scaphella* auctt. non Swains. v. *Adelomelon* gen. n.

*Scutellina calva*, *alboradiata* spp. n. S. Australia, VERCÖ, Adelaide, S. Aust., Trans. R. Soc. **30** (217).

*Sequenzia polita* sp. n. S. Australia, VERCÖ, Adelaide, S. Aust., Trans. R. Soc. **30** (222).

†*Semifusus*? (*Mayeria*?) sp., Woods, Cape Town, Ann. S. Afric. Mus. **4** (324).

*Seminella v. Columbella*.

†*Sigaretus blanckenhornii* sp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica **30** (263).—*S. mexicanus* sp. n. Tertiary, Mexico, BÖSE, Mexico, Bol. Inst. Geol. **22** (57).—*S. striatus* De Serres., Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54** (91).

*Simpulum v. Cymatium*.

*Sipho torrus* Locard, figd., DAUTZENBERG & FISCHER, Monaco, Res. Camp. sci. **32** (22).

*Sistrum undatum* Chemnitz var. n. *kieneri*, DAUTZENBERG & FISCHER, J. Conchyliol. **53** (395).

*Solariella valida* sp. n. Maio, Cape Verd Is.; *S. cancellata* Jeaffr., figd., DAUTZENBERG & FISCHER, Monaco, Res. Camp. sci. **32** (57-8).

†*Solariella aafinis* (220-1), *fourtau* (221-2), *humilis* (222), *pratzi* (222-3) spp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica **30**.

†*Solarium cyclospirum* sp. n. Cretaceous, Hungary, PETNÖ, Palaeontographica **52** (132-3).—*S. subpatulum* (229-30) sp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica **30**.—*S. villarcello* sp. n. Tertiary, Mexico, BÖSE Bol. Inst. Geol. **22** (30).—*S. bailyi* Gabb. re-described and figured, Woods, Cape Town, Ann. S. Afric. Mus. **4** (315).

†*Soleniscus glaber* sp. n., CUMINGS, Indiana, Rep. Dept. Geol. Nat. Res. **30**.

*Somatogyrus biangulatus*, *excavatus* spp. n. WALKER, Nautilus **19**.—*S. substriatus*, *humerosus*, *quadratus*, *strenigi*, spp. n., PILSBRY & WALKER, Nautilus **19**.—*S. tennesseensis*, *aldrichi* spp. n. United States, WALKER, Nautilus **19** (114-117).

†*Sparella v. Ancilla*.

*Spirotropis clytotropis*, (?) *megalacme*, (?) *melvilli* spp. n. European seas, SYKES, London, Proc. Malac. Soc. **7** (183).

†*Stazzania v. Marginella*.

†*Straparollina circé* sp. n. Cambrian, China, WALCOTT, Washington, U.S. Nat. Mus. Proc. **29** (13).—*S. harpa*, colour markings, RAYMOND, Nautilus **19** (101-2).

†*Straparollus v. Euomphalus*.—*S. (?) exornatus* sp. n. Permo-Carboniferous, Italy, GORTANI, Paleontogr. Italica, **12** (60).

†*Streptochetus pulveris* sp. n. Tertiary, Biarritz, OPPENHEIM, Berlin, Zs. D. Geol. Ges., **58** (85).

*Strombus campbelli* v. *Alaba*.

†*Strombus glaber* (319), *sondeianus* (319-20) spp. n. Java, MARTIN, Leiden

Sammel. Geol. Reichsmus. (2) 1.—*S. parvulus* sp. n. Cretaceous, Tripoli, KRUMBECK, Palaeontographica 53 (118–9).—*S. javanus* var. n. *seperi* Tertiary, Philippines, SMITH, Philippine J. Sci. 1 (629).—*S. bonelli* Brogn., Miocene, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. 54 (37).

†*Strophostylus amplius, inflatus* (53F), *filicinetus* (54F) spp. n. Silurian, N. Canada, WHITEAVES, Rep. Geol. Surv. Can. 14.

†*Subulites harrodsburgensis* sp. n. CUMINGS, Indiana, Rep. Dept. Geol. Nat. Res. 30.

*Sureula* v. *Pleurotoma*.—*S. varians* Suter v. *Columbellula inconstans* (q.v.).

†*Sureula alterego* (54–5), *subserrata* (54) spp. n. Miocene, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. 54.

*Svelta* v. *Cancellaria*.

*Sycotypus*, mechanism of odontophore, HERRICK.

†*Sycom tourouperi* sp. n. Tertiary, Biarritz, OPPENHEIM, Berlin, Zs. D. Geol. Ges. 58 (86).

*Syrnola* v. *Pyramidelia*.—*S. aperanta, clavellosa* spp. n. Gulf of Oman, MELVILLE, London, Proc. Malac. Soc. 7 (73).

†*Syrnola biarritzensis* sp. n. Tertiary, Biarritz, OPPENHEIM, Berlin, Zs. D. Geol. Ges. 58 (81).

†*Tectus* v. *Trochus*.

†*Terebellum schreinfurthi* sp. n. Paleocene, Egypt, OPPENHEIM, Palaeontographica 30 (298).

*Terebra* (?) *dyscritos* sp. n. South Australia, VERO, Adelaide, S. Aust., Trans. R. Soc. 30 (143).—*T. filmerae* sp. n. South Africa, SOWERBY, London, Proc. Malac. Soc. 7 (37).

†*Terebra subatorquata* sp. n. Miocene, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. 54 (22).—*T. tjlónganeensis* (283), *butaciana* (284), *pamotanensis* (284–5), *ickei* (285), *jungluhni* (285–6), *talahabensis* (286), *sindangbaraneensis* (286–7), *simplicissima* (287), *ejecta* (287) spp. n. Java, MARTIN, Leiden, Samml. geol. Reichsmus. (2) 1.

†*Thersitea* (?) *cossmanni* sp. n. Paleocene, Egypt, OPPENHEIM, Palaeontographica 30 (317–8).

*Tiberia* v. *Pyramidelia*.

*Titanopoma* v. *Auritus*.

†*Torecula* v. *Turritella*.

*Trifora cerea, shepstoneensis* spp. n. South Africa, SMITH, Ann. Natal Govt. Mus. 1 (43).

*Trifora grimaldii* sp. n. Teneriffe I. and Bôa Vista I. (C. Verd Is.), DAUTZENBERG & FISCHER, Monaco, Res. Camp. sci. 32 (41–2).

*Triphora infelix* sp. n. New Zealand, WEBSTER, Wellington, Trans. N. Zeal. Inst. 38 (307).

*Tritonidea agalma* sp. n. Bay of Bengal, SMITH, Ann. Mag. Nat. Hist. 18 (164).

†*Tritonidea everxijni* sp. n. Java, MARTIN, Leiden, Samml. Geol. Reichsmus. (2) 1 (309–10).

†*Tritonium subgosaicum, albini* spp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. 10 (22–3).

*Trivia acutidentata*, note on, BUTTON, Nautilus 19 (132).

*Trochus camelophorus* Cape Maria van Diemen, N.Z. (309), (*Clanculus*) *takapunaensis* Takapuna N.Z. (310) spp. n., WEBSTER, Wellington, Trans. N. Zeal. Inst. 38.—*T. ciuerarius*, Trematode parasites; *Cerararia pachyzera*, Lepesp (168–9), *C. vaillegeardi*, sp. n. (175–6), PELSENEER, 3.

†*Trochus reussi* sp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. 10 (41).—*T. maeoticus* sp. n. Mäotisches Becken, ANDRUSSOW, St. Peterburg, Verh. Russ. mineral. Ges. 43 (289–451).—*T. metrius* sp. n., ASCHER, Wien, Beitr. Pal. Geol. OestUng. 19 (135–72).—*T. quadricoronatus* sp. n. Cretaceous, Germany, HARBORT, Berlin, Abh. Geol. Landesanst. 45 (87).—*T. shinagawensis* (29), *angulatus* (30) spp. n. Post Tertiary, Japan, TOKUNAGA, Tokyo, J. Coll. Sci. 21.—*T. (Basilissa) libycus* (224), (?*Gibbula*) *biochei* (224–5) spp. n. Tertiary, Egypt, OPPENHEIM, Palaeontographica 30.—*T. (Monodonta) junghuhni* sp. n. Java, MARTIN, Leiden, Samml. Geol. Reichsmus. (2) 1 (323–4).—*T. (Tectus) szerénensis* (105–6), (*Ziziphinus*) *schaßhäutli* (106–7), (*Eutrochus*) *neumayri* (107–8), (*Gibbula*) *pilari* (108–9) spp. n. Cretaceous Hungary, PRETHÖ, Palaeontographica 52.

*Trophon waipipicola* sp. n. Waipipi, N.Z., WEBSTER, Wellington, Trans. N. Zealand Inst. **38** (310).—*T. (Boreotrophon) planispina* sp. n. Bay of Bengal, SMITH, Ann. Mag. Nat. Hist. **18** (163).

†*Trophon* (?) *isthmicus* sp. n. Tertiary, Mexico, BÖSE, Mexico, Bol. Inst. Geol. **22** (59).—*T. capito* (Phil.), Miocene, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54** (46).

†*Turbo bitropistus* sp. n. ASCHER, Wien, Beitr. Pal. Geol. OestUng. **19** (135–72).—*T. granqeensis* n. n. for *T. hamiltonensis* Pritchard non Harris, PRITCHARD, Vict. Nat., Melbourne **23** (117).—*T. (? Collonia) lenzi* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52** (100–1).

*Turbanilla* subgenn. n. *Babella* for *Parthenia caelata* A. Ad., *Nisiturris* for *T. crystallina* sp. n.; *T. approximata*, *infantula*, *actopora*, *acosmia*, *garrettiana* (*Odostomia sulcata* Garrett), (*Chemnitzia*) *absidea*, (*Nisiturris*) *crystallina*, (*Pyrgisculus*) *candidissima* (*Dunkeria candida* A. Adams), (*Mormula*) *aulica* (*varieosa* Dunker), (*Lancella*) *bella*, *peasei* (*Lancea elongata* Pease), (*Babella*) *caelatior* (*Parthenia caelata* A. Adams) spp. n. DALL & BARTSCH, Washington, D.C., Smithsonian Inst., U.S. Nation. Mus. Proc. **30**.—*T. madrinensis* sp. n. Antarctic, LAMY, Bul. Muséum, Paris **11** (481).—*T. (Pyrgostylis) delia* (73), *hermia* (74) spp. n. Gulf of Oman, MELVILL, London, Proc. Malac. Soc. **7**.

†*Turbanilla junghuhni*, *sindang-baranensis* spp. n. Java, MARTIN, Leiden, Samml. geol. Reichsmus. (2) **1** (322).—*T. paucicostulata* Post Tertiary, Japan, TOKUNAGA, Tokyo, J. Coll. Sci. **21** (22).

*Turricula* v. *Mitra*.

†*Turricula* (*Vulpecula*) *ickei* (305), (*Callitheca*) *tjilonganensis* (305), *dijiki* (306), (?) *ginganganensis* (306) spp. n. Java, MARTIN, Leiden, Samml. geol. Reichsmus. (2) **1**.—*T. (Mesorhytis) monilifera* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52** (179–80).

†*Turris* (?) *kaffraria* (Griesbach) re-described and figured, Woods, Cape Town, Ann. S. Afric. Mus. **4** (325).

*Turrispira* sect. n. of *Turritella* (q.v.), PETHÖ, Paleontographica **52** (142–3).

†*Turritella*, ASONER, Wien, Beitr. Pal. Geol. OestUng. **19** (135–72).—Sect. n.

*Turrispira* (142–3) type *T. fallax* sp. n. Cretaceous, Hungary; *T. telegdiana* (137–8), *szérémeusis* (138–9), *T. interposita* (140), (*Torecula*) *bicorrolata* (134–5), *sulcate-carinata* (136) spp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52**.—*T. atamanica* sp. n. Miocene, Novotcherkassk, BOGATCHEW, St. Peterburg, Bull. Com. géol. **24** (159–88).—*T. cardenasensis*, *potosiana*, *waitzi* spp. n. Senonian, Cardenas, Mexico, BÖSE, Mexico, Bol. Inst. geol. **24** (62–5).—*T. cureti* (30), *tricincta* (30–1), *zekelii* (31) spp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. **10**.—*T. pseudimbricataria* (241–2), *crocodili* (244–5), *fraudatrix* (246), *nilotica* (246–7) spp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica **30**.—*T. septemcostata* (116), *turbo* (117) spp. n. Cretaceous, Tripoli, KRUMBECK, Palaeontographica **53**.—*T. tuxtepecensis* (31), *aguilarae* (32) spp. n. Tertiary, Mexico, BÖSE, Mexico, Bol. Inst. Geol. **22**.—*T. (Zaria) bonei* Bail. remarks on, fig., Woods, Cape Town, Ann. S. Afric. Mus. **4** (317).

†*Turritoma* (?) *teuiflora* sp. n. Palaeozoic, England, DONALD, Quart. J. Geol. Soc. **82** (570).

†*Tylostoma* *intermedium* sp. n. Mesozoic, Portugal, CHOFFAT, J. Conchyliol. **54** (39).

†*Typhis fistulosus* Broc., *tetrapterus* Bronn, *weinzelidesi* M. Hö, Miocene, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. **54** (46).

†*Typanotomus* v. *Potamides*.

*Uromitra eburne* Lamarck varr. n. *debilis*, *striolata*, PALLARY, J. Conchyliol. **54** (83).

†*Uzita* v. *Nassa*.

*Valvata* subgenn. n. *Atropidina*, type *V. pulchella* Stud., *Liratina*, type *V. baicalensis* Dyb., *Megalovalvata*, type *V. grubei* Dyb., LINDBOLM, Frankfurt a. M., NachrBl. D. malakozool. Ges. **38** (190).—*V. micra* sp. n. PILSBRY & FERRISS, Philadelphia, Pa., Proc. Acad. Nat. Sci. **58**.—*V. sincera* var. n. *danielsi*, *bicarinata* var. n. *perdepressa*, *connectans*, United States, WALKER, Nautilus **20** (25–32).

†*Valvata cholnokyi* sp. n. *piscinalis* Müll., figd., Tertiary, China, SCHLOSSER, Budapest, Ann. Mus. Nat. Hung. **4** (390–1).

†*Vermetus pulcher* sp. n. Tertiary, Mexico, BÖSE, Mexico, Bol. Inst. Geol. 22 (32).—*V. (? Vermiculus) tricarinatus* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica 52 (144).

†*Vermiculus v. Vermetus.*

†*Vespertilio v. Voluta.*

†*Vicarya callosa* var. n. *semperi* Tertiary, Philippines, SMITH, Philippine J. Sci., 1 (628).

*Vicetia* gen. n. type *Ovula hautkeni* Heb. & Mun.-Ch., figd., FABIANI, Padova, Atti Ac. Ven.-Trent. 2 (150).

*Vivipara chinensis* var. n. *patris*, KOEBELT in MARTINI & CHEMNITZ, Syst. Conch. Cab.—*V. costulata* Martens varr. n. *globosa*, *alta*, GERMAIN, Bul. Mus., Paris 12 (299).—*V. verus* occurrence near Hamburg, FRANCK, Bl. Aquarienkunde 17 (298-9).

†*Vivipara eastoni* gehört zu *Faunus (Estonia)* subgen. n., IKKE & MARTIN, Leiden, Samml. Geol. Reichsmus. 8 (106-44).—*V. (Paludina) angularis* Müll., ob. Tertiär, China, SCHLOSSER, Ann. Hist.-Nat. Mus. Ilung. 4 (394).

*Voluta martensi* sp. n. Magalhaen, STREBEL, Zool. Jahrb., Syst. 24 (124).—*V. papillosa* Swainson, var. KENYON, London, Proc. malac. Soc. 7 (6).—*V. arausaica* Soland., the type of *Harpu-lina* (q.v.) gen. n.

†*Voluta crassicosta* sp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. 10 (19-20).—*V. radix*, (*Lopsephaea*) *sanurensis* spp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica 30 (328).—*V. (Volutilithes) occulte-plicata* (176), (*Volutoorbis*) *exor-nata* (178-9) spp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica 52.—*V. (Vespertilio) tjilonganensis* sp. n. Java, MARTIN, Leiden, Samml. geol. Reichsmus. (2) 1 (302).—*V. taurinia* Bon., Miocän, Ungarn, BOETTGER, Verh. siebenb. Ver. Naturw. 57 (5).

Volutilithes v. *Voluta*.—Notes on, NEWTON, London, Proc. Malac. Soc. 7 (100).—*V. petrosus*, phylogeny, SMITH, Philadelphia, Pa., Proc. Acad. Nat. Sci. 58 (52-76).

†*Volutilithes fanivelonensis* sp. n. BOULE & THÉVENIN, Ann. Paléont. 1.—*V. inornatus* sp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica 30 (329).—*V.*

sp., Woods, Cape Town, Ann. S. Afric. Mus. 4 (325). .

†*Volutillithopsis* PETHÖ MS. a synonym of *Volutoorbis* DALL, PETHÖ, Palaeontographica 52 (175-9).

†*Volutoorbis v. Voluta, Volutilithopsis.*

*Volutospina* gen. n. of Volutidae type *Conus spinosus* L., NEWTON, London, Proc. Malac. Soc. 7 (103).

*Volvaria v. Marginella.*

†*Volvarina v. Marginella.*

*Volvula compacta* sp. n. Gulf of Oman, MELVILLE, London Proc. Malac. Soc. 7 (79).

*Vulpacula v. Turricula*.—*V. (Pusia) biconica* sp. n. New Zealand, MURDOCH & SUTER, Wellington, Trans. N. Zeal. Inst. 38 (389).

†*Xenophora aegyptiaca* sp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica 30 (258-9).

†*Zaria v. Turritella.*

†*Ziziphinus v. Trochus.*

#### (b) *Heteropoda.*

Review of species hitherto described, TESCH, 1, 2.

Collections of "Siboga" described; notes on anatomy, TESCH, 1.

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*Atlanta affinis* (53), *oligogyra* (54-5) spp. n. Malay Archipelago; notes on anatomy and figures of other species, TESCH, Rés. explor. Siboga 51.

*Cardiapoda trachydermon* (77-8), *sublaevis* (78), *acuta* (79) spp. n. Malay Archipelago; anatomical notes, TESCH, Rés. explor. Siboga 51.

*Carinaria* notes on anatomy and figures of species; *C. macrorhynchus* (72-4) spp. n. Malay Archipelago, TESCH, Rés. explor. Siboga 51.

*Euryops* subgen. n. of *Pterotrachea* q.v., TESCH, Rés. explor. Siboga 51 (81-9).

*Oxygurus rangi* (Soul.) figured; notes on anatomy, TESCH.

*Pterotrachea challengerii* (84-5), *intermedia* (86), *microptera* (87), (*Euryops* subgen. n.) *mutabilis* (88), *xenoptera* (88-9), *orthopthalmus* (89) spp. n. Malay

Archipelago; anatomical notes, TESCH, Rés. Explor. Siboga 51,

(c) *Opisthobranchiata*.

Fauna of Monterey Bay, California MACFARLAND, Washington, D.C., Dept. Comm. Lab., Bull. Bur. Fish. 25.

Nudibranchiata, notes on anatomy, &c., BERGHI, Zool. Jahrb., Jena, Syst. 23 (739-42).—Anatomy, ELIOT, 2.—British species, ELIOT, 5.—of S. India and Ceylon, ELIOT, London, Proc. Zool. Soc. 1906 (636-91, 999-1008).

Tritoniidae, genn. n. v. *Charcotia*, *Tritoniopsis*.

*Syllacidae*, notes on family, ELIOT, London, Proc. Zool. Soc. 1906 (674-6).

Phyllirhoeidae, gen. n. v. *Ctilopsis*.

Doridopsidae, note on family, ELIOT, 3, (660-1).

Phyllidiidae, note on family, ELIOT, London, Proc. Zool. Soc. 1906 (673-4).

Aeolididae, genn. n. v. *Guy-valvoria*, *Notaeolidia*.

Pleurophyllidiidae, notes on family, ELIOT, London, Proc. Zool. Soc. 1906 (676-85).

Elysiidae, notes on, ELIOT, London, Proc. Zool. Soc. 1906 (688-90).

†*Acera* v. *Bulla*.

†*Acrocolpus* v. *Bulla*.

*Actaeon eraticulatus* sp. n. New Zealand MURDOCH & SUTER, Wellington, Trans. N. Zeal. Inst. 38 (281)—*A. roseus* sp. n. Sydney, HEDLEY, Sydney, N.S.W. Proc. Linn. Soc. 30 (535).

†*Actaeon*, ASCHER, Wien, Beitr. Pal. Geol. OestUng. 19 (135-72).—*A. multicostatus* sp. n. Cretaceous, Germany, HARBORT, Berlin, Abh. Geol. Landesanst. 45 (93).—*A.* sp., Woods, Cape Town, Ann. S. Afric. Mus. 4 (328).

†*Actaeonella* D'Orb., notes on the genus; *A. coniformis*, *acutissima*, *occidentalis*, *inconstans*, *irregularis*, *brevis*, *planilateris*, *petosiana*, *variabilis* spp. n. Senonian, Cardenas, Mexico, Böse, Mexico, Bol. Inst. geol. 24 (74-91).—*A. parvisima* sp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. 10 (17-8).—*A. (Volvulina) inflata* sp. n. Cretaceous, Hungary, PETHÖ, Palaeonto-

graphica 52 (183-4).—*A. (Trochactaeon)* sp., Woods, Cape Town, Ann. S. Afric. Mus. 4 (328).

†*Actaeonina hauigi* sp. n., ASCHER, Wien, Beitr. Pal. Geol. OestUng. 19 (135-72).

*Aeolis* v. *Eolis*.

*Amphorina pallida* sp. n. Cape Verd Is., ELIOT, London, Proc. Malac. Soc., 7 (155).

*Aplysia*, digestion, ARIOLA, Genova, Atti Soc. ligustica sci. nat. geogr. 17 (110).—*A. punctata*, circulatory system, BLATIN & VLES, Arch. zool., Paris 5 notes (xc-cii).

†*Atys beberkiriana* sp. n. Java, MARTIN, Leiden, Samml. geol. Reichsmus. ser. 2, 1 (283).

†*Bulla desertorum* (339-40), (*Hamina*) *plicatularum* (338), (*Cyllichnina*) *nilotica* (339), (*Acrocolpus?*) *oasisidis* (339), (*?Acera*) *eoelestini* (340), (*Acera*) *striatella*, (340 1), *stromeri* (341), (*Seaphander*) *cossmanni* spp. n. Tertiary, Egypt, OPPENHEIM, Palaeontographica 30.

*Caliphylla mediterranea* Costa, alimentary and reproductive organs, morphology and physiology, BRÜEL.

*Casella*, note on genus, ELIOT, London, Proc. Zool. Soc. 1906 (644).

*Charcotia* gen. n. of Tritoniidae for *C. granulosa* sp. n. Antarctic, VAYSSIÈRE, Bul. Mus., Paris 12 (148).

*Chromodoris* A. & H., note on genus; *C. amabilis* (Kelaart), *diardii* (Kelaart), *fidelis* (Kelaart), *gleniei* (Kelaart), *preciosa* (Kelaart), *tennentiana* (Kelaart), figd.; *C. semperi* Bergh = *C. diardii* (Kelaart), ELIOT, London, Proc. Zool. Soc. 1906 (640-4).

†*Cimulida incisa* sp. n. Cretaceous, Germany, HARBORT, Berlin, Abh. Geol. Landesanst. 45 (93).

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(317).

*Bostrichocentrum v. Holospira*.

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J. Conchyliol. 53 (262).—*B. rhombostomus*  
PFEIFFER var. n. *pupoidea* DAUTZENBERG &  
FISCHER, J. Conchyliol. 53 (367).—*B.* (*Chondrus*) *scapus* PARR. var. n. *cylind-*  
*drata*, (*Zebrina*) *funkii* BTGR. var. n.  
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*Epirobia* subgen. n. *Propilsbrya*; *E. coahuilensis*, (*Propilsbrya*) *nelsoni* spp. n. N. America, BARTSCH, Washington, D.C., Smithsonian Inst., U. S. Nation. Mus. Proc. **31**.

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*Eulota* v. *Helix*.—*E. (Plectotropis) impeza*, *irrinensis*, *hebes*, *perplexa* spp. n. Formosa, *E. (P.) fulvicans* subsp. n. *browni*, *E. lautsi* subsp. n. *miera*, PILSBRY, Philadelphia, Pa., Proc. Acad. Nat. Sci. **57**, (730-2).

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*Helicodiscus eigenmanni* subsp. n. *arizoneusis*, S.W. United States, PILSBRY & FERRISS, Philadelphia, Pa., Proc. Acad. Nat. Sci. **58**.

*Heliceogena* v. *Helix*.

*Helix*, the section *Elisma*, CAZIOT & FAGOT, Feuille jeunes natural. (121-5).—Notes on spp. of Mabille & Ferussac, ANCEY, J. Conchyliol., Paris **53** (310-27).—Notes on spp., GERMAIN, Nantes, Bul. soc. sci. nat. (sér. 2) (1-68); JACKSON.—Function of salivary glands, PACAUT & VIGIER, Paris, C.-R. soc. biol., **60** (232-4).—Salivary glands, PACAUT & VIGIER, Paris, C.-R. soc. biol. **60** (419-21).—Glands of *Nalepa*, PACAUT & VIGIER, Paris, C.-R. soc. biol. **60** (230-2).—Function of glands of *Nalepa*, PACAUT & VIGIER, Paris, C.-R. soc. biol. **60** (545-6).—Centrosomes of nerve-cells, LEGENDRE, Paris, C.-R. soc. biol. **60** (490-1).—Seminal apparatus, POPOVIC-BAZNOSANU, Paris, C.-R. Acad. sci. **143** (70-2).—*H. eotiellae*, *rodana* spp. n. Aragon, FAGOT, Zaragoza, Bol. Soc. Arag. **5** (172).—*H. (Helicogena) thracica* (269), *sturanyi* (278) Balkan, *despotina* (279) Balkan, *stolacensis* (284) Bosnien, Serbien, *pivensis*, var. n. *lubnicensis* (285) Balkan, KOBELT in MARTINI & CHEMNITZ, Conchylien-Cabinet **1**.—*H. guebhardi* Frankreich, *sauviesii* (56), Alpes marit. spp. n.; *H. rumelica* var. n. *magnifica*, *gussoniana* var. n. *miletii*, *enixionuera* var. n. *presbensis*, *lucorum* var. n. *byzantina*, *figulina* var. n. *eumolpia*, *viciensis* var. n. *tacheiformis*, *pomatia* var. n. *tenensis*, *costellata*, *transsylvania*, *elandieensis*, KOBELT in ROSSMÄSSLER, Iconographie **12**.—*H. pomatia* var. n. *kapellae*, *serbica*, *expandilabris*, *elsae*, *dobrudschae*, *rhodopensis*? *dusckeensis*, *krüperi*, *pedemontana*, *H. secernenda*, *kormosi* var. n. *njegeensis*, *subligata*, *subalbescens*, *dimidiata*, *subobtusa*, *H. albescens* var. n. *bulgarica*, *H. castanea* var. n. *nigerrima*, *H. ligata* var. n. *meyeri*, *lobiancoi*, *lindeni*, *golae*, *virgininalis*, *H. campana* var. n. *cucuminis*, *H. lueorum* var. n. *byzantina*, *H. gussoniana* var. n. *miletii*, *H. buchii* var. n. *adsharica*, *H. kolasiensis*? var. n.

*bosnica*, *H. cincta* var. n. *elegans* Kormos, *H. pelasgica* var. n.? *cossensis* KOEBELT in MARTINI & CHEMNITZ. Syst. Conch. Cab.—*H. (Eulota) jourdji* Morlet, var. n. *minor*, DAUTZENBERG & FISCHER, J. Conchyliol. 53 (362).—*H. (Isaurica) praecellens* NÄGEL, var. n. *amanica* Asia Minor, NÄGELE, Frankfurt a. M., NachrBl. D. malakozool. Ges. 38.—*H. jejuna* Say, transferred to *Praticoella*, PILSBRY, Nautilus 20 (32-3).—*H. acuta* in France, GIARD, Feuille jeunes natural., Paris 36 (13); BOULY DE LESDAIN, GODON, LOBEAU, *Ibid.* (31).—*H. candidissima*, distribution, NAVAS.—*H. hortensis* in N. America, JOHNSON, Nautilus 20 (73-80, 95-6).—*H. hortensis* in Newfoundland, COCKERELL, Nautilus 20 (94).—*H. limbata*, note on dispersal, GIARD, Feuille jeunes natural., Paris 36 (45); DOLLFUS, *ibid.*, (45).—*H. (Campylaea) foetens*, ROSSI, introduced near Douanastauft, CLESSIN, Regensburg, Ber. naturw. Ver. 10 (46).—*H. (Vallonia) excentrica*, distribution, WÜST, Frankfurt a. M., NachrBl. malakozool. Ges. 38 (218-9).—*H. (V.) saxoniana*, note, WÜST, Frankfurt a. M., NachrBl. D. malakozool. Ges. 38 (206).—*H. muralis*, note on, CAZIOT, Paris, Bul. soc. zool. 30.—*H. pomatia*, notes on sinistral, JACKSON.—*H. pomatia*, salivary glands, PACAUT & VIGIER, Arch. Anat. microsc., Paris 8 (425-659); Paris, C.-R. Acad. sci. 142 (412-4); C.-R. Assoc. Anat. 1905 (175-6).—*H. pomatia*, nervous system, AEBERHARDT, Bern, Mitt. naturf. Ges. 1905 (123-5); VENEZIANI, Anat. Anz., Jena 29 (241); LEGENDRE, Paris, C.-R. Soc. biol. 61 (19); C.-R. Ass. Anat. 1906 (85).—*H. pomatia*, nerve cells, LEGENDRE, Paris, C.-R. soc. biol. 60 (388-9, 455-90).—*H. pomatia*, biology, SCHMITZ, Natur. u. Offenb., Münster 52 (241-3).—*H. pomatia*, reproduction and oviposition, MEISENHEIMER, Verh. D. zool. Ges. 16 (51-61).—*H. serpentaria*, CAZIOT & FAGOT, Paris, Bul. soc. zool 30 (12-5).—*H. vermiculata*, CAZIOT & FAGOT, Paris, Bul. soc. zool. 29 (19-23); CAZIOT, Paris, Bul. soc. zool. 30 (11).

†*Helix ropuebruneensis*, vorsti spp. n. Post-Tertiary, Alpes Maritimes, MAURY & CAZIOT, Paris, Bul. soc. geol. 5 (601).—*H. (Epiphragmophora?) dubiosa* sp. n. John Day beds, Oregon, STEARNS, Berkeley, Univ. Cal. Pub., Bull. Dept. Geol. 5.—*H. terrena* var. n. *conumonti*, Post-Tertiary, France, BABOR, Amiens, Bull. (n-9720 r)

Soc. linn. 18 (29).—*H.* spp., Tertiary, China, figd., SCHLOSSER, Budapest, Anu. Mus. Nat. Hung. 4 (389-90).

*Hemiplecta xullaensis* sp. n. XULLA Is., SCHEPMAN, Leiden, Notes Mus. 28 (120-8).

*Holospira* subgen. n. *Liostemma*, type *H. (Haplostemma) hamiltoni* Dall, *Stalactella*, *Tristemma*; *H. mexicana*, *palmeri*, *infanta*, *painteri*, *oaxacana*, (*Bostriochocentrum*) *goldmani*, *hidalgoensis*, *tamaulipebensis*, (*Liostemma*) *duran-goeensis*, *yucatanensis*, (*Haplocoelium*) *toussentii*, *lichenophora*, *tantalus*, (*Coelostemma*) *herrerae*, (*Stalactella*) *rosae* spp. n. *H. goldfussi* subsp. n. *anacachensis*, N. America, BARTSCH, Washington, D.C., Smithsonian Inst., U. S. Nation. Mus. Proc. 31.

†*Hyalinia subolivetorum* sp. n. Post Tertiary, Alpes-Maritimes, MAURY & CAZIOT, Paris, Bull. soc. geol. 5 (599).

*Hygromia rufescens*, sinistral, SHAW, Leeds, J. Conch. 11 (281).

*Iberus spinac, trecchinensis* spp. n., ROSSMÄSSLER, Iconographie 12.

*Isaurica v. Helix.*

*Isidora tabulata* Gld., *hochstetteri* Dkr., *novae-zelandiae* Sby., *antipoda* Sby., *lirata* Ten.-Wds., figd., SUTER, Wellington, Trans. Proc. N. Zealand Inst. 38 (333).

*Jaminia biplicata* Studer, occurrence at Brandon, Suffolk, CHASTER, Leeds, J. Conch. 11 (319-20).

*Kaliella costata*, *longa*, *venusta* spp. n. Formosa, *K. crenulata* subsp. n. *holawana*, PILSBRY, Philadelphia, Pa., Proc. Acad. Nat. Sci. 57 (743-4).—*K. microbembix* sp. n. Hupe, FULTON, Ann. Mag. Nat. Hist., London 17 (248).

*Laminella v. Amastra*.—*L. semivenulata* sp. n. Hawaiian Is., BORCHERDING, Zoologica 48.

*Lartetia* and *Vitrella*, BOETTGER, Frankfurt a. M., NachrBl. D. malakozool. Ges. 38 (30-2).

*Levantina chanzirensis* sp. n. S. Europe, KOEBELT, Frankfurt a. M., NachrBl. D. malakozool. Ges. 38 (15-6).

*Limax eecconii* sp. n. Palästina, SIMROTH, Frankfurt a. M., NachrBl. D.

malakozool. Ges. **38** (84).—*L. agrestis*, SCHOEPF, Forstwiss. Centralbl., **28** (609-610).—*L. maximus*, eyes, SMITH, Bull. Mus. Comp. Zool. Harvard **48** (231).

*Limicolaria ponsonbyi, smithi* spp. n. Uganda, PRESTON, London, Proc. Malac. Soc. **7** (89).—*L. turriformis* Martens var. n. *obesa* (170), *turris* Pfeiffer var. n. *duperthuysi*, GERMAIN, Bul. Mus., Paris **12**.

*Limnaea bongsonensis* sp. n. Sumatra, BULLEN, London, Proc. Malac. Soc. **7**, (14).—*L. crassiuscula* sp. n. Mariannes BAVAY, J. Conchyliol., Paris **53** (255).—*L. tchadiensis* sp. n. Central Africa, GERMAIN, Bul. Museum, Paris **11** (485).—*L. (Bulinus) egregia* sp. n. Northwest Australia, PRESTON, London, Proc. Malac. Soc. **7** (36).—*L. (Limnus) lagorii* sp. n. Crimea, DYBOWSKI, St. Peterburg, Bull. Ac. Sc., **18** (113-6).—*L. (Gutnaria) ovata* Drap. var. n. *köhleri*, HONIGMANN, Frankfurt a. M., NachrBl. D. malakozool. Ges. **38** (45-6).—*L. peregra*, sinistral, TAYLOR, Naturalist, London **1906** (114); TRECHMANN, Naturalist London **1906** (113).—v. *Limnaea*.

†*Limnaea depereti* sp. n. Tertiary, France, CAZIOT, Béziers, Bul. Soc. etud. sci. nat. **27** (20).—*L. durandi* n. n. Paris Basin, DOLLIUS, Bull. carte géol. France **16** (24).—*L. maxima* sp. n. John Day Beds, Oregon, STEARNS, Berkeley, Univ. Cal. Pub., Bull. Dept. Geol. **5**.—*L. merzbacheri*, etc. spp. n. Tertiary, Karkará, SCHLOSSER, Budapest, Ann. Mus. Nat. Hung. **4** (375-6).

#### *Limnus* v. *Limnaea*.

*Liostemma* subgen. n. of *Holospira*, type II. (*Haplostemma*) *hamiltoni* Dall, BARTSCH, Washington, D.C., Smithsonian Inst., U. S. Nation. Mus. Proc. **31** (141-3).

*Limnaea* v. *Limnus*.—*L. danielsi* sp. n. Indiana, BAKER, Nautilus **20**, (55-6).—*L. hinkleyi* sp. n. Idaho, BAKER, Nautilus **19** (142-3).—*L. nasoni* sp. n. Michigan, BAKER, St. Louis, Mo., Trans. Acad. Sci. **16** (1).—*L. bulimoidea* subsp. n. cockerelli S. W. United States, PILSBRY & FERRISS, Philadelphia, Pa., Proc. Acad. Nat. Sci. **58**.—*L. elodes*, habits, WALTER, Brooklyn, N.Y., Inst. Arts. Sci., Cold Spring Harbor Monog. **6** (1-35).—*L. megasoma*, note,

#### VIII. Mollusca.

IATCHFORD, Nautilus **20** (83).—*L. staginalis*, nervous system, AEBERHARDT, Bern. Mitt. Naturf. Ges. **1905** (121-3).

†*Lynnaea sieverti, scudderii* spp. n. Colorado, COCKERELL, New York, N.Y., Bull. Amer. Mus. Nat. Hist. **22**.

*Macrochlamys douvillei* sp. n. Indo China, DAUTZENBERG & FISCHER, J. conchyliol. **53** (351).—*M. nitidus* sp. n. Formosa, PILSBRY, Philadelphia, Pa., Proc. Acad. Nat. Sci. **57** (741).—*M. hendersoni* n.n. for *M. dohertyi* Henderson, ANCEY, J. Conchyliol. **53** (320).

*Macrodontes königswaldi, simplex* spp. n. Brasil, THIELE, Frankfurt a. M., NachrBl. D. malakozool. Ges. **38** (69-71).

*Martensia bowkerae* sp. n. Uganda, PRESTON, London, Proc. Malac. Soc. **7** (88).

#### *Medora* v. *Pupa*.

*Microcystina lamprobasis, lissobasis, radiata* spp. n. Formosa, PILSBRY, Philadelphia, Pa., Proc. Acad. Nat. Sci. **57** (742).

*Microstoma* a synonym of *Brachypodella* (q.v.).

#### *Mirus* v. *Bulimulus*.

*Murella rovelliensis, sybaritica* spp. n. Italy, KOEHL, Frankfurt a. M., NachrBl. D. malakozool. Ges. **38** (204-5).

*Myosotella* gen. n. for *Alexia myosotis*, &c., MONTEROSATO, Naturalista sicil., Palermo **18** (126).

*Nanina hageni* sp. n. Banka I., WEBER, Frankfurt a. M., NachrBl. D. malakozool. Ges. **38** (164-5).—*N. Rothschildi* sp. n. Abyssinia, NEUVILLE & ANTHONY, Bul. Mus., Paris **12** (414).

*Neoplanorbis* gen. n. for *N. tantillus* sp. n. United States, PILSBRY, Nautilus **20** (50-1).

*Neurocobia carinella* sp. n. Hawaiian Is., BALDWIN, Nautilus **19** (135-9).

#### *Odontartenon* subgen. n. v. *Perrotetia*.

†*Omphalina* (?) *laminarum* sp. n. Colorado, COCKERELL, New York, Bull. Amer. Mus. Nat. Hist. **22**.

*Opeas opella* sp. n. Hawaiian Is., PILSBRY & VANATTA, Philadelphia, Pa., Proc. Acad. Nat. Sci. **57** (783-6).—

*O. bawriense* (= *Stenogyra lucida* Gibbons), *sykesi*, *hendei*, *satsumense*, *kusaiense*, *argulum*, *yucatanense*, *adamsi* spp. n.; *O. octogyrum* var. n. *amazonicum*, *gracile* var. n. *neocaledonicum*, *johanninum* var. n. *mayottense*, PILSBRY, Man. Conch. 18.

*Oreula* v. *Pupa*.

†*Oreohelix yavapai* subsp. n. *compactula*, COOKERELLI, Nautilus 19 (46–7).

*Paropeas* subgen. n. of *Prosopoeas*. PILSBRY, Man. Conch. 18.

*Partulina flemingi*, *lemonni*, *earni-color*, *kaeana*, *cooperi*, *fulvicans* spp. n. Hawaiian Is., BALDWIN, Nautilus 19 (111–3, 135–9).

*Paryphanta atramentaria*, anatomy, MURDOCH, Wellington, Trans. N. Zeal. Inst. 38 (313–6).

*Patula hookeri*, occurrence in Ker-guelen, RICHTERS in DRYGALSKI, Deutsche Südpolar Exped. 10 Zool. 4 (298).

*Perrottetia* subgen. n. of *Odontartemon* KOEBELT in MARTINI & CHEMNITZ, Conchylien-Cabinet, 1 (108).

*Phrixgnathus serratocostata* sp. n. Waiuku, N.Z., WEBSTER, Wellington, Trans. N. Zeal. Inst. 38 (311).

*Physa tchadiensis* (485), *dautzenbergi* (486) spp. n. Central Africa; *P. dunkeri* (486) n. n. for *P. scalaris* Dunker, GERMAIN, Bul. Muséum, Paris 11.

†*Physa miqueli* sp. n. Tertiary, France, CAZIOT, Béziers, Bull. Soc. étud. sci. nat. 27 (20).

*Planispira cingaratus* sp. n. Halimhera, FULTON, Ann. Mag. Nat. Hist., London 17 (247).

*Planorbis*, notes on spp., ANCEY, J. Conchyliol. 53 (320–1).—*P. carus filocinctus* spp. n. S.W. United States, PILSBRY & FERRISS, Philadelphia, Pa., Proc. Acad. Nat. Sci. 58.—*P. sagoensis* sp. n. Sumatra, BULLEN, London, Proc. Malac. Soc. 7 (129).—*P. cornutus*, breeding, SOFFEL, Zool. Beob. 47 (84–5); ZIEGELER, Wochenschr. Aquarienkunde (296–7).—*P. cornutus*, supposed albinism, ZIEGELER, Bl. Aquarienkunde 17 (70); KÖLLER, Bl. Aquarienkunde 17 (216–7, 230–1); ROTH, Bl. Aquarienkunde 17 (n–9720 r)

(358–60, 367–70).—*P. cornutus*, an amphibian, HOLZFUSS, Natur u. Haus, 14 (234–6).

†*Planorbis florissantensis* sp. n. Tertiary, Colorado, COCKERELLI, Nautilus 19 (100–1, 120).—*P. landonensis* n. n. Paris Basin, DOILLFUS, Bull. Carte géol. France 16 (23).—*P. (Gyraulus) keideli* (381), *karkaraensis* (383), spp. n. Tertiary, Central Asia and China, SCHLOSSER, Budapest, Ann. Mus. Nat. Hung. 4.

*Plectotropis* v. *Eulota*.

*Pleurodonte* (*Caracolus*) *manifesta* sp. n. (?) Cuba, FULTON, Ann. Mag. Nat. Hist., London 17 (247).

†*Poecilozonites nelsoni* var. n. *eonoides*, *reiniurus* var. n. *antiquus* Ber-mudas, VERRILL, New Haven, Conn., Trans. Acad. Arts Sci. 12.

*Polygyra multilineata* subsp. n. *algonquinensis*, NASON, Nautilus 19 (141–2).—*P. texicana* subsp. n. *hyperolia* S.W. United States, PILSBRY & FERRISS, Philadelphia, Pa., Proc. Acad. Nat. Sci. 58.

*Pomatia cincta* subsp. n. *elegans*, *secernenda* subsp. n. *dimidiata*, *kormosi*, *subalbescens*, KORMOS, Frankfurt a. M., NachrBl. D. malakozool. Ges. 38.

*Praticolella jejuna* (Say), systemati-position, PILSBRY, Nautilus 20 (32–3); habits, JOHNSON, Nautilus 20 (46).

*Propilsbrya* subgen. n. of *Epirobia* (q.v.), BARTSCHI, Washington, D.C., Smithsonian Inst., U.S. Nation. Mus. Proc. 31.

*Prosopoeas* subgen. n. *Paropeas*; *P. holosericum* Boettger, *anceyi* (= *P. macilentum* Ancey preoc.) spp. n. *acutissimum* var. n. *hastatum* Boettger, PILSBRY, Man. Conch. 18.

*Pseudopartula*, referred to Zonitidae, PILSBRY, Nautilus 20 (47).

*Ptychodontia* subgen. n. of *Coelocentrum* BARTSCHI, Washington, D.C., Smithsonian Inst., U.S. Nation. Mus. Proc. 31.

†*Ptychopyga* gen. n. for *P. eanalisera* sp. n. Cretaceous, Germany, HARBORT, Berlin, Abh. Geol. Landesanst. 45.

*Pnuctum taiwanicum* sp. n. Formosa, PILSBRY, Philadelphia, Pa., Proc. Acad. Nat. Sci. 57 (746).

*Pupa longina* sp. n. Aragon, FAGOT in NAVAS, Zaragoza, Bol. Soc. Arag. 5 (201).—*P. (Medora) vultur* sp. n. Herzegovina, BRANOSIK, Trenčsén, m. termt. társ. évk. 1906 (190).—*P. (Orcula) robusta* sp. n. Asia Minor, NÄGELE, Frankfurt a. M., NachrBl. D. malakozool. Ges. 38.—*P. (O.) doliolum* Brug. var. n. *incrassata* Asia Minor, NÄGELE, Frankfurt a. M., NachrBl. D. malakozool. Ges. 38.—*P. anglica*, note, MARGIER, Feuille jeunes natural. 35 (68–70).

†*Pupa lomnickii* sp. n. Sarmatian, Galicia, FRIEDBERG, Wien, SitzBer. Ak. Wiss. 114 (312).—*P.* sp. China, Ob. Tertiär, SCHLOSSER, Ann. Hist.-Nat. Mus. Nat. Hung., 4 (300).

*Pyramidula cronkhitei anthonyi* Pils. nom. n., PILSBRY & FERRISS, Philadelphia, Pa., Proc. Acad. Nat. Sci. 58.

†*Pyramidula lecontei* sp. n. John Day Beds, Oregon, STEARNS, Berkeley, Univ. Cal. Pub., Bull. Dept. Geol. 5.

*Radiodiscus* Pils. gen. n. of Endodontidae for *R. millecostatus* sp. n. S.W. United States, PILSBRY & FERRISS, Philadelphia, Pa., Proc. Acad. Nat. Sci. 58.

*Satsuma lantenoisi* sp. n. Indo China, DAUTZENBERG & FISCHER, J. conchyliol. 53 (360).

*Segmentina kennardi* sp. n. Sumatra, BULLEN, London, Proc. Malac. Soc. 7 (130).

· *Serrulina* v. *Clausilia*.

*Siphonaria cyaneomaculata* sp. n. South Africa, SOWERBY, London, Proc. Malac. Soc. 7 (37).—*S. storaæ* sp. n. S. Australia, VENCO, Adelaide, Trans. R. Soc. 30 (223).

*Sitala hangchouensis* sp. n. China, PILSBRY, Nautilus 20 (5).—*S. hirasei*, *angulifera* spp. n., *circumcincta* subsp. n. *taiwanica* Formosa, PILSBRY, Philadelphia, Pa., Proc. Acad. Nat. Sci. 57 (744–5).

*Sphyradium sharpi*, *alexanderi* spp. n. Hawaiian Is., PILSBRY & COOKE, Philadelphia, Pa., Proc. Acad. Nat. Sci. 58 (215–6).

*Stalactella* subgen. n. of *Holospira*, BARTSON, Washington, D.C., Smithsonian Inst., U. S. Nation. Mus. Proc. 31,

*Stenogrya lucida* Gibbons = *Opeas bawriense*, PILSBRY, Man. Conch. 18.

*Streptaxis sinensis* Gld., the type of *Haploptychius* (q.v.).

*Strobilops labyrinthica* subsp. n. *texaniana* S.W. United States, PILSBRY & FERRISS, Philadelphia, Pa., Proc. Acad. Nat. Sci. 58.

†*Strophocheilus clubutensis*, *lauthali* spp. n. Patagonia, HERRING, Revista Mus. La Plata 11 (240–1).

*Subulina totistriata*, *parana* spp. n., PILSBRY, Man. Conch. 18.

*Subzebrinus* v. *Buliminus*.

*Succinea retusa* var. *magister* figd., PILSBRY, Nautilus 19 (109).

†*Succinea somersensis* sp. n. Bermuda, VERRILL, New Haven, Conn., Trans. Acad. Arts Sci. 12.

*Synapterpes amabilis* sp. n.; *S. auratus* var. n. *aratus*, PILSBRY, Man. Conch. 18.

*Tapada* v. *Cantareus*.

*Testacella esserana* sp. n. Aragon, FAGOT, Zaragoza, Bol. Soc. Arag. 5 (171).

†*Testacella martiniana* sp. n. Post Tertiary, Alpes Maritimes, MAURY & CAZIOT, Paris, Bul. Soc. geol. 5 (598).

*Theba* v. *Fruticicola*.

*Tortaxis* gen. n. PILSBRY, Man. Conch. 18.

*Tristemma* subgen. n. of *Holospira*, BARTSON, Washington, D.C., Smithsonian Inst., U. S. Nation. Mus. Proc. 31.

*Trochomorpha nouhuysi* sp. n. Xulla Is., SCHEPMAN, Leiden, Notes Mus. 28 (120–8).—*T. pellucida* sp. n., *cultivata* subsp. n. *formosana*, Formosa, PILSBRY, Pa., Proc. Acad. Nat. Sci. 57 (739).

*Trochonanina crenulata* sp. n. Central Africa, GERMAIN, Bul. Muséum, Paris 11 (484).

*Vallonia* v. *Helix*.—*V. costata*, note, ADAMS, Leeds, J. Conch. 11 (364).—*V. excentrica*, note on, STERKI, Frankfurt a. M., NachrBl. D. malakozool. Ges. 38 (166).

†*Vertigo parcedentata*, in Holocene of England, KENNARD & WOODWARD, London, Proc. Malac. Soc. 7 (119).

*Vitrea dalliana* subsp. n. *roemerii*, *milium* subsp. n. *meridionalis*, S.W. United States, PILSBRY & FERRISS, Philadelphia, Pa., Proc. Acad. Nat. Sci. **58**.—*V. rhoadsi*, figd., PILSBRY, Nautilus **19** (109).—*V. approxima*, vanattai, note, PILSBRY & WALKER, Nautilus **20** (57-8).

*Vitrella*, of Würtemburg, GEYER, Stuttgart, Jahreshete Ver. Natk. **62** (189-200); BOETTGER, Frankfurt a. M., NachrBl. D. malakozool. Ges. **38** (30-2).

*Vitrina diaphana*, nervous system, AEBERHARDT, Bern. Mitt. Naturf. Ges. **1905** (125-6).—*V. pfeifferi*, note, DALL, Nautilus **19** (107-8).

*Xerophila aethalia* (5), *tyrrrena* (6), *turbinula* (7) spp. n. Elba, POLLONERA, Torino, Boll. Musei Zool. Anat. **20** No. 517.—*X. vegliana* sp. n. KORMOS, Frankfurt a. M., NachrBl. D. malakozool. Ges. **38** (81).—*X. virgata* subsp. n. *croatiae*, KORMOS, Frankfurt a. M., NachrBl. D. malakozool. Ges. **38**.

*Xesta cornicen* sp. n. Sumatra, BULLEN, London, Proc. Malac. Soc. **7** (13).—*X. halmaherica* Kobelt var. n. *talia-buensis* Xulla Is., SCHEPMAN, Leiden, Notes Mus. **28** (120-8).

*Xestina tenera* Möllendorf var. n. *clata*, DAUTZENBERG & FISCHER, J. Conchylol. **53** (350).

*Zospeum venetum*, note on, POLLONERA, Frankfurt a. M., NachrBl. D. malakozool. Ges. **38** (16).

#### SCAPHOPODA.

Collections of the "Siboga" expedition described and fauna of the Indo-Pacific region reviewed, BOISSEVAIN.

Dentaliidae, Liassic, RICHARDSON.

*Antalis* v. *Dentalium*.

*Bathoxiphus* v. *Dentalium*.

*Cadulus campylus* sp. n., Gulf of Oman, MELVILLE, London, Proc. Malac. Soc. **7** (80).—*C. (Dischides) ovalis* (66), (*Polyschides*) *hexaschistus* (67-8), *magnus* (68), *longilobatus* (68-9), (*Gadila*) *virginalis* (72-3), *pseudololvi* (73), *zonatus* (74), *pulcherrimus* (74-5), *abrupto-inflatus* (75) spp. n. Indo-Pacific, BOISSEVAIN, Res. explor. Siboga **54**.

*Dentalium minus* (14), *intercostatum* (14), *tubiforme* (19-20), *oryx* (20), *leucoryx* (20-1), *macandrevi* (25-7), *sinuosum* (28), *paucicontortum* (28-9), *pluricostatum* (30), *transversostriatum* (32), *malayanum* (32-3), *sedecimcostatum* (33), *compressiusculum* (33-4), *martensi* (34), (*Fissidentalium*) *sibogae* (39), (*Tesseracme*) *tetrapleurum* (41-2), (*Episiphon*) *carneum* (48), (*Bathoxiphus*) *tricarinatum* (48-9), (*Gadilina*) *stapes* (50-1), *pachypleurum* (51), *truncatum* (51), (*Laevidentalium*) *banale* (55), (*Plagioglypta*) *semitracheatum* (56), *tracheatum* (56-7) spp. n. Indo-Pacific; *D. aprinum* Lin. var. n. *incolor* (10), (*Antalis*) *entalis*, Lin. var. n. *indicum* (44); *D. michelottii*, Hoernes, supposed recent specimens from the Malay Archipelago (16), BOISSEVAIN, Res. explor. Siboga **54**.—*D. serrulatum*, *cornubovis* (248), *subcurvatum* (251) spp. n. Bay of Bengal, SMITH, Ann. Mag. Nat. Hist., London **18**.—*D. tarentinum*, Trematode parasites; *Cercaria dentalii*, sp. n. (170), PELSENEER, **3**.

†*Dentalium acutum* (574), *hexagonale* (581), *oblongum*, *parvulum* (585), *subovatum* (587), *subquadratum* (588), *subtrigonale*, *terquemi* (589) spp. n. Lias, British Isles, RICHARDSON, Quart. J. Geol. Soc. **62**.—*D. duodecim-plicatum* sp. n. Senonian, S.E. France, REPELIN, Marseille, Ann. Mus. **10** (16).—*D. edoensis* sp. n. Post Tertiary, Japan, TOKUNAGA, J. Coll. Sci. **21** (34).—*D. rimosum* sp. n. Tertiary, Mexico, BÖSE, Mexico, Bol. Inst. Geol. **22** (55).—*D. (Fustiaria) stromeri* sp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica **30** (215).

*Dischides* v. *Cadulus*.

*Entalina quadrangularis* (62-3), *mediocarinata* (63), *cornucopiae* (63-4) spp. n. Malay Archipelago, BOISSEVAIN, Res. explor. Siboga **54**.

*Siphonodentalium australasiae* sp. n. Banda Sea, BOISSEVAIN, Res. explor. Siboga **54**.

*Episiphon* v. *Dentalium*.

*Fissidentalium* v. *Dentalium*.

†*Fustiaria* v. *Dentalium*.

*Gadila* v. *Cadulus*.

*Gadilina* v. *Dentalium*.

- Laevidentalium* v. *Dentalium*.  
*Plagioglypta* v. *Dentalium*.  
*Polyschides* v. *Cadulus*.  
*Tesseracme* v. *Dentalium*.

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 BIGOT.

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Pectinidae, gen. n. v. *Inaequipecten*.—  
 Cainozoic fauna of California, ARNOLD.—Palaeopectens of New South  
 Wales, ETHRIDGE & DUN.—Nomenclature of genera; PETHÖ, Palaeonto-  
 graphica **52** (213-22).

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 FRIERSON, Nautilus **20** (68-9).—“*Clochidium*” larva, ROTII, Bl. Aquarienkunde,  
 Magdeburg **17** (108-11, 117-9, 123-7).—Effect of environment, SELI, Frankfurt a. M., Nachr. D. malakozool. Ges.  
**38** (38-44, 64-8).—Of N. America,  
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 Kansas, SCAMMON, Lawrence, Kan. Univ.  
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 BRUSINA, J. Conchyliol. **53** (272-97).

Veneridae, gen. n. v. *Granicorium*.

*Abra truncata* sp. n. Mast Head  
 Reef, Q., HEDLEY, Sydney, N.S.W., Proc.  
 Linn. Soc. **31** (478).—v. *Syndesmya*.

*Acanthocardia* v. *Cardium*.

*Acar* v. *Barbatia*.

*Aeila* v. *Nucula*.

*Adaena*, Unterscheidung der Arten;  
*A. minima* sp. n. Aralsee, OSTROUMOFF,  
 Taškent, Izv. Turk. Otd. Russ. Geogr.  
 Obsč. **4** (20-6).

*Aequipecten* v. *Peeten*.

†*Aequipecten giavenensis* (164), *mar-  
 tellii* (178), Tertiary, Sardinia, UGOLINI,  
 Paleontogr. Italica, Pisa **12**.

*Aetheria*, hinge, WAAGEN, Wien,  
 Sitzber. Ak. Wiss. **14** (153).—subgen. n.  
 v. *Clessinella*.

†*Alectryonia* v. *Ostrea*.

†*Alectryonia tripolitana* sp. n. Cret-  
 aceous, Tripoli, KRUMBEOK, Palaeonto-  
 graphica **53** (97-8).

†*Ambonychia septentrionalis* sp. n.  
 Silurian, N. Canada, WHITEAVES, Rep.  
 Geol. Surv. Can. **14** (46F).

*Amusium* v. *Peeten*.—*A. formosum*  
 sp. n. Persian Gulf and G. of Oman,  
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*manaricum* (256) spp. n. Bay of Bengal,  
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*Anaitis punctigera* sp. n. Sta. Luzia,  
 C. Verd Is., DAUTZENBERG & FISCHER,  
 Monaco, Res. Camp. sci. **32** (86-7).

†*Anatina*, notes on the subgenus *Cer-  
 comya*, AGASSIZ; *A. (C.) cymbula* sp. n.  
 Cretaceous, Hungary, PETHÖ, Palaeonto-  
 graphica **52** (313-5).—*A. boonei* sp. n.  
 Jurassic, France, COSSMANN, Paris, C.-R.  
 ass. franç. avanc. sci. **34** (287).

*Anodonta*, histology of visceral gan-  
 glion, FREIDENFELT.—Central nervous  
 system, BOCHENEK, Kraków, Rozpr.  
 Akad. **45** B (262-77).—*A. mutabilis*,  
 histology of heart, ŁOZIŃSKI, Kraków,

Rozpr. Akad. **46** B (55-64).—*A. mutabilis*, reproduction, WICHAND, Bl. Aquarienkunde, Magdeburg **17** (348-9, 356-7).

†*Anomia aupsensis* sp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. **10** (47).

†*Anthonya cantiana* sp. n. Cretaceous, England, Woods, London, Monogr. Paleont. Soc. **2** (130).

†*Anthracosia fritschi* sp. n. Permian, Bohemia, SCHMIDT, N. Jahrb. Min. **1905** 1 (47).

*Area*, anatomy, &c., of heart, THEILER, Jenaische Zs. natw. **42** (115).—Notes on spp. described by Lamarck, LAMY, J. Conchyiol., Paris **53** (302-9).—*A. requiesces* (793), (*Bathyarea*) *anaelima* (794), (*Scapharea*) *birleyana* (794-5), *cibotina* (795) spp. n. Persian Gulf and Arabian Sea, MELVILL & STANDEN, London, Proc. Zool. Soc. **1906**.—*A. (Barbatia) innocens* sp. n. Bay of Bengal, SMITH, Ann. Mag. Nat. Hist., London **18** (253).

†*Area aviculoides* sp. n. Mesozoic, Galicie, WISNIEWSKI, Krakow, Bull. Intern. Acad. **1906** (249).—*A. cureti* sp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. **10** (54).—*A. jekaterinoslavica* sp. n. Tertiary, Russia, SOKOLOW, St. Peterburg, Mem. Com. geol., n. s. **18** (22).—*A. maliochini* sp. n. Jurassic, Russia, BORISSJAK, St. Peterburg, Mem. Com. geol., n. s. **19** (36).—*A. tenuis* (58), *kagoshimensis* (59), *rectangularis* (61) spp. n. Post Tertiary, Japan, TOKUNAGA, J. Coll. Sci. **21**.—*A. (Barbatia) syrmica* sp. n. Cretaceous, Hungary, PETRÖ, Palaeontographica **52** (240-1).—*A. (Parallelipipedum) fajumensis* sp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica **30** (212-4).—*A. nodosa* var. *batanensis* Tertiary, Philippines, SMITH, Philippine J. Sci. **1** (630).—*A. decipiens* figd. SIEMIRADZKI, Wien, Beitr. Pal. Geol. OestUng. **19** (238).—*A. laevis*, Matheron is a *Cypricardia*, q.v., REPELIN.—*A. richardi* sp. n. Santa Luzia, C. Verd Is., DAUTZENBERG & FISCHER, Monaco, Res. Camp. sci. **32** (92-3).

*Arcopagia* v. *Tellina*.

†*Arcopagia matheroni* sp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. **10** (71).

†*Aspergillum miocaenicum* sp. n. VADÁSZ, Földt. Közl. **36** (270).

†*Astarte*, notes on the genus, structure of hinge; *A. (Eriphylla) subplanissima* sp. n. Cretaceous, Hungary, PETRÖ, Palaeontographica **52** (254-61).—*A. cretacea* sp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. **10** (57).—*A. dacotensis* sp. n. Jurassic, N. America, WHITFIELD & HOVEY, New York, Bull. Amer. Mus. Nat. Hist. **22**.—*A. glenei* sp. n. Miocene, Lüneburg, WOLLEMAN, Zs. D. geol. Ges. **58** Mittb. (21).—*A. griesbachii* sp. n. Cretaceous, Pondoland, Woods, Cape Town, Ann. S. Afric. Mus. **4** (300).—*A. japonica* sp. n. Post Tertiary, Japan, TOKUNAGA, J. Coll. Sci. **21** (54).—*A. paularense* sp. n. Carboniferous, Carnian Alps, GORTANI, Boll. Soc. Geol. Ital. **24** (564).—*A. scribuari*, *guthriensis* spp. n. Mesozoic, Singapore, NEWTON, London, Geol. Mag. **3** (492).—*A. upucarensis* (105), *sceneta* (106), *cantabrigiensis* (107), *claxbiensis* (108), *omaliooides* (111) spp. n. Cretaceous, England, Woods, London, Monogr. Paleont. Soc. **2**.—*A. (Eriphylla) lenticularis* Goldf. figured, Woods, Cape Town, Ann. S. Afric. Mus. **4** (301).

†*Avicula salvani* (102), *vinassai* (103), *silverii* (104), spp. n. Permian, Carnia, GORTANI, Riv. Ital. Pal. **12**.—*A. vulgaris* sp. n. Cretaceous, Germany, HARBORT, Berlin, Abh. Geol. Landesanst. **45** (34).

†*Aviculopecten*, hinge, HIND, London, Geol. Mag. **3** (59).—*A. carnicus* sp. n. Perno-Carboniferous, Italy, GORTANI Paleontogr. Italica, Pisa **12** (50).—*A. incarajanus* sp. n. Carboniferous, Carnian Alps, GORTANI, Boll. Soc. Geol. Ital. **24** (560).—*A. pondicosus* (10), *mittchelli* (11), *englehardtii* (17) spp. n. Carboniferous, N.S. Wales, ETHERIDGE & DUN, Mem. Geol. Surv. N.S. Wales, Pal. **5**.—*A. pusillus*, *tener* spp. n. Devonian, Germany, SCHMIDT, Berlin, Zs. D. Geol. Ges. **57** (554).—*A. sp. ex aff. granosus* Phill, *hoeernesianus* Kon., FRECH, Földt. Közl., **36**.

†*Avimactra* subgen. n. of *Mactra*, *aviculoides* sp. n. Maötisches Bocken, ANDRUSSOW, St. Peterburg, Verh. Russ. mineral. Ges. **43** (289-451).

*Barbatia* (*Aear*) *avellanaria*, *margarethae* spp. n. Persian Gulf and Arabian

Sea, MELVILLE & STANDEN, London, Proc. Zool. Soc. **1906** (797).—v. *Area.*

†*Barbatia meridiana* sp. n. Cretaceous Pondoland, Woods, Cape Town, Ann. S. Afric. Mus. **4** (287).

†*Baroda v. Tapes.*

*Bathyarca cybaea* sp. n. New Zealand HEDLEY, Wellington, Trans. Proc. N. Zealand Inst. **38** (71).—v. *Area.*

†*Biradiolites aguilerae, cardenasensis, potosianus* spp. n. Senonian, Cardenas, Mexico, BÖSE, Mexico, Bol. Inst. Geol. **24** (58-61).

*Bornia lepida* sp. n. Sydnay, HEDLEY, Sydney, N.S.W., Proc. Linn. Soc. **30** (543).

*Brachyodontes (Hormomya) karachien-sis* sp. n. India, Karachi, MELVILLE & STANDEN, London, Proc. Zool. Soc. **1906** (800-1).—v. *Modiola.*

†*Buchiola subpalmata* sp. n. Devonian, S. Africa, REED, London, Geol. Mag. **3** (302).

*Cameronia v. Pliodon.*

†*Camponectes v. Camptonectes.*

†*Camptonectes v. Pecten.*

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*Cardita echinaria* sp. n. Persian Gulf, MELVILLE & STANDEN, London, Proc. Zool. Soc. **1906** (813).

†*Cardita rotunda* sp. n. Post Tertiary, Japan, TOKUNAGA, J. Coll. Sci. **21** (55).—*C. upparensis* sp. n. Cretaceous, England, Woods, London, Monogr. Paleont. Soc. **2** (123).

*Cardium edule*, Bau der Schale, OSTROUMOFF, Taškent, Izv. Turk. Otd. Russ. Geogr. Obšč. **4** (20-6).—*C. edule*, Trematode parasites; *Bucephalus haim-anus*, Lac. Duth., PELSENEER, **3** (176-7).—*C. edule*, parasite, NICOLL, Ann. Mag. Nat. Hist., London **17** (148).—*C. skeeti* sp. n. Mast Head Reef Q., HEDLEY, Sydney, N.S.W., Proc. Linn. Soc. **31** (476).—*C. (Acanthocardia) exochum* (838), *omanense* (838-9), (? *Fragum*) *centumliratum* (839-40) spp. n. Persian Gulf, G. of Oman, MELVILLE & STANDEN, London, Proc. Zool.

Soc. **1906**.—*C. edule* L. var. n. *globulosa*, PALLARY, J. Conchyliol. **54**.

†*Cardium aupsense, laticostulatum* spp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. **10** (63).—*C. braunei, tokyoensis* spp. n. Post Tertiary, Japan, TOKUNAGA, J. Coll. Sci. **21** (51).—*C. derbeuticum, karajma-nicum* spp. n. Märitisches Becken, ANDRUSOW, St. Peterburg, Verh. Russ. mineral. Ges. **43** (289-451).—*C. gries-bachi* (307) [=] *C. denticulatum* GRIESB. sp. n. Cretaceous, Pondoland; *C. denticu-latum* Bail. (306) redescribed and figd., Woods, Cape Town, Ann. S. Afric. Mus. **4**.—*C. quadricristatum* (290-1), *pseudo-productum* (292-5), *ære vicinum* (295-6) spp. n. Cretaceous, Hungary, PETIÖ, Palaeontographica **52**.—*C. (Trachycardium) mayer-eymari* sp. n. Paleocene, Egypt, OPPENHEIM, Palaeontographica **30** (211-2).

†*Cassianella stachei* sp. n. Permian, Carnia, GORTANI, Riv. Ital. Pal. **12** (101).

†*Ceratomya calliglypta* sp. n. Jurassic, France, COSSMANN, Paris, C.-R. ass. franc. avanc. sci. **34** (294).—*C. (Trachycardium) mayer-eymari* sp. n. Paleocene, Egypt, OPPENHEIM, Palaeontographica **30** (211-2).

†*Cerconya*, Agass., v. *Anatina.*

†*Chama töröki* sp. n. Cretaceous, Hungary, PETIÖ, Palaeontographica **52** (269-70).

†*Chione roberti* n. n. for *C. hallii*, Tate non Pritchard, PRITCHARD, Vict. Nat., Melbourne **23** (117).

*Chlamys natalensis* sp. n. South Africa, SMITH, Ann. Natal Govt. Mus. **1** (60).—v. *Pecten.*

†*Chlamys filubiensis* sp. n. Tertiary, Sardinia, UGOLINI, Paleontogr. Italica, Pisa **12** (160).

†*Circe carpathica* sp. n. Mesozoic Galicia, WISNIOWSKI, Bull. Intern. Acad. **1906** (247).

*Clessinella* subgen. n. of *Aetheria* for *C. sturanyi* sp. n. Congo, WAAGEN, Wien, SitzBer. Ak. Wiss. **114** (!53).

*Condylocardia ovata* sp. n. Sydney, HEDLEY, Sydney, N.S.W., Proc. Linn. Soc. **30** (533).—*C. porrecta, trifoliata*

**spp. n.** Mast Head Reef, Q., HEDLEY, Sydney, N.S.W., Proc. Linn. Soc. **31** (475).

†*Conocardium taramelli* sp. n. Carboniferous, Carnian Alps, GORTANI, Boll. Soc. Geol. Ital. **24** (565).

†*Coralliochama g.-boehmi* sp. n. Senonian, Cardenas, Mexico, Böse, Mexico, Bol. Inst. Geol. **24** (54).

*Corbicula*, notes on, GERMAIN, Bul. Museum, Paris **12** (577).—*C. cunningtoni* sp. n. Victoria Nyanza, SMITH, London, Proc. Zool. Soc. **1906** (186).—*C. lacovini* sp. n. Central Africa, GERMAIN, Bul. Museum, Paris **11** (488).

†*Corbieula erassicostata* sp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. **10** (64).

†*Corbis wanneri* sp. n. Cretaceous, Tripoli, KRUMBECK, Palaeontographica **53** (109-10).

*Corbula persica* (262), Persian Gulf, *andamanica* (263) Bay of Bengal spp. n., SMITH, Ann. Mag. Nat. Hist., London **18**.—*C. subquadrata* sp. n. Persian Gulf, G. of Oman, MELVILL & STANDEN, London, Proc. Zool. Soc. **1906** (843).

†*Corbula exigua, equivalvis* spp. n. Lower Campanian, S.E. France, REPELIN Marseille, Ann. Mus. **10** (74-5).—*C. harpaformis* (193-4), *mokaltamensis* (195), *vetula* [Mayer-Eymar MS] (195-6), *lyonsi* (196-7), *pyramidarum* (197-8), *duglensis* (198), *chmeiteensis* (198-9) spp. n. Tertiary, Egypt, OPPENHEIM, Palaeontographica **30**.—*C. (s. str.) silatiensis* sp. n. Upper Cretaceous, Borneo, ICKE & MARTIN, Leiden, Samml. Geol. Reichshaus. **8** (121-3).—*C. (Cuneocorbula) alabamensis* Lea, Tertiary, Panama, figd., JOUKOWSKY, Genève, Mem. Soc. Phys. **35** (173-4).

†*Crassatella quaasi* sp. n. Cretaceous, Tripoli, KRUMBECK, Palaeontographica **53** (106-7).—*C. slavonica* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52** (267-9).—*C. macrodonta*, Sow. var. n. *obtusa*, Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. **10** (58).

*Crassatellites omanensis* sp. n. Gulf of Oman, SMITH, Ann. Mag. Nat. Hist., London **18** (258).

*Crassatellites janus* sp. n. Mast Head Reef, Q., HEDLEY, Sydney, N.S.W. Proc.

Linn. Soc. **31** (474).—*C. trailli*, Hutton, is a *Macropsis*, HUTTON, Wellington, Trans. Proc. N. Zealand Inst. **38** (65-6).

†*Crassatellites afriicanus* sp. n. Cretaceous, Pondoland, Woods, Cape Town, Ann. S. Afric. Mus. **4** (303).—*C. divisensis* sp. n. Cretaceous, England, Woods, London, Monogr. Paleont. Soc. **2** (128).

*Crenella adamsiana* nom. n. for *C. decussata*, A. Ad. non Montagu; *C. praecellens* sp. n. Persian Gulf and Arabian Sea, MELVILL & STANDEN, London, Proc. Zool. Soc. **1906** (801).—*C. persiea* sp. n. Persian Gulf, SMITH, Ann. Mag. Nat. Hist. **18** (255).

*Cryptodon omanensis* sp. n. Gulf of Oman, SMITH, Ann. Mag. Nat. Hist., London **18** (257).

*Ctenodonta?* *bidorsata* sp. n., RAYMOND, Pittsburgh, Pa., Ann. Carnegie Mus. **3**.—*C. subovata* sp. n. Silurian, N. Canada, WHITEAVES, Rep. Geol. Surv. Can. **14** (47F).

†*Ctenostreon*, ASCHER, Wien, Beitr. Pal. Geol. OestUng. **19** (135-72).

†*Cucullaea concentrica* sp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. **10** (55).—*C. elatimensis* (23), *subcancellata* (25) spp. n. Jura, Russia, BORISSJAK, St. Peterburg, Mem. Com. Geol., n.s. **19**.—*C. serivenori* sp. n. Mesozoic, Singapore, NEWTON, London, Geol. Mag. **3** (489).—*C. (Trigonaarea) szabói* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52** (242-5).—*C. dalli* Ihering, *multicostata* Ihering, Patagonia figd., IHERING, Revist. Mus. La Plata **11** (235).

†*Cucullella, cultrata, ovata, tenuiflora*, figd., SIEMIRADZKI, Wien, Beitr. Pal. Geol. OestUng. **19** (239).

*Cuna flava* sp. n. Mast Head Reef, Q., HEDLEY, Sydney, N.S.W., Linn. Soc. **31** (474).

†*Cuneocorbula v. Corbula*.

*Cuneopsis v. Unio*.

*Cuspidaria acutearinata* sp. n. Cape Verd Is., DAUTZENBERG & FISCHER, Monaco, Res. Camp. sci. **32** (95).—*C. trailli*, New Zealand, figd., HEDLEY, Wellington, Trans. Proc. N. Zealand Inst. **38** (73).

$\dagger$ *Cuspidaria brevirostrata* sp. n. Jurassic, France, COSSMANN, Paris, C.-R. Ass. franc. avanc. sci. **34** (289).

*Cyamioactra communis* sp. n. Sydney, HEDLEY, Sydney, N.S.W., Linn. Soc. **30** (540).

$\dagger$ *Cypriocardella pandora* sp. n. Devonian, Germany, SCHMIDT, Berlin, Zs. D. Geol. Ges. **57** (556).

$\dagger$ *Cypriocardia laevis* (Matheron) refigured, REPELIN, Marseille, Ann. Mus. **10** (66).

$\dagger$ *Cypriocardinia subcuneata* sp. n. Glen Park Limestone, WELLER, St. Louis, Mo., Trans. Acad. Sci. **16** (435-71).

$\dagger$ *Cyprimeria haueri* (303-4), *elliptica* (304-5) spp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52**.

$\dagger$ *Cyprina* (*Venilicardia*) *arcuata* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52** (297-9).

$\dagger$ *Cyrena*, ASCHER, Wien, Beitr. Pal. Geol. OestUng. **19** (135-72).—*C. subglobosa* sp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. **10** (64).

$\dagger$ *Cyrtodonta scala* sp. n., RAYMOND, Pittsburgh, Pa., Ann. Carnegie Mus. **3**.

$\dagger$ *Cytherea aegyptiaca* (169-70), *connexa* (170-1), *productula* (171) spp. n. [Mayer-Eymar MS] Tertiary, Egypt, OPPENHEIM, Palaeontographica **30**.—*C. fonscolombii* sp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. **10** (70).—*C. kochi* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52** (302-3).—*C. vaseonium* sp. n. Tertiary, Biarritz, OPPENHEIM, Berlin, Zs. D. geol. Ges. **58** (80).

*Dacrydium pelseneeri* sp. n. New Zealand, HEDLEY, Wellington, Trans Proc. N. Zealand Inst. **38** (72).

$\dagger$ *Dalliconcha*, White, note on the section, PETHÖ, Palaeontographica **52** (230).—v. *Gervillea*.

$\dagger$ *Daonella*, Greek species, RENZ, N. Jahrb. Min. **1906**, I (27-40).

$\dagger$ *Deltopecten farleyensis* (29), *wingeensis* (31), *obliquatus* (32) spp. n. Carboniferous, New South Wales, ETHERIDGE

& DUN, Mem. Geol. Surv. N. S. Wales, Pal. 5.

$\dagger$ *Dicranodonta muienvikensis* sp. n. Jurassic, Russia, BORISSJAK, St. Petersburg, Mem. Com. geol., n.s. **19** (32).

*Diplodon huapensis* sp. n. America. BARTSCH, Washington, D.C., Smithsonian Inst., U. S. Nation. Mus. Proc. **30**.

$\dagger$ *D. rothi* sp. n. Patagonia, IHERING, Revist. Mus. La Plata **11** (236-7).

$\dagger$ *Diplodonta balconensis* n. n. for *D. subquadrata*, Tate non Carpenter. PRITCHARD, Vict. Nat., Melbourne **23** (117).

*Donax trunculus*, Trematode parasites; *Cercaria pectinata* Iluet, (163-4), *Buccophalus himaneus* Lac.-Duth. (176-7), PELSENEER, **3**.—*D. trunculus* L., parasites, CAULLERY & CHAPPELLIER, Paris, C.-R. soc. biol. **60** (325-8).

$\dagger$ *Dosinia maeotica* sp. n. Mäotischer Becken, ANDRUSSOW, St. Peterburg, Verh. Russ. mineral. Ges. **43** (289-451).

$\dagger$ *Dreissensia dalli* sp. n. Tertiary, Panama, JOUKOWSKY, Genève, Mém. soc. Phys. **35** (171).

$\dagger$ *Edmondia podolica* sp. n. Palaeozoic. Podolia, SIEMIRADZKI, Wien, Beitr. Pal. Geol. OestUng. **19** (236).—*E. cf. anomanda* Kon., FRECH, Földt. Közl. **36**.

*Ensis maeca* Mol., anatomy, BLOOMER, London, Proc. Malac. Soc. **7** (18).

$\dagger$ *Eriphylla* Gabb, notes on the section, PETHÖ, Palaeontographica **52** (257-8).—v. *Astarte*.

*Erilia scaliola* Issel, discussed and figured, SMITH, Ann. Natal Govt. Mus. **1** (66).

$\dagger$ *Exogyra*, ASCHER, Wien, Beitr. Pal. Geol. OestUng. **19** (135-72).—*E. peroni* sp. n. Cretaceous, Tripoli, KRAMBECK, Palaeontographica **53** (101-2).

$\dagger$ *Fimbria scalaris* sp. n. Lower Campanian, S.E. France, REPELIN. Marseille, Ann. Mus. **10** (61).

$\dagger$ *Fistulana degyptiaca* [Mayer-Eymar MS] sp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica **30** (204-5).

$\dagger$ *Flexopecten sardous* sp. n. Tertiary, Sardinia, UGOLINI, Paleontogr. Italica, Pisa **12** (180).

*Fragum* v. *Cardium*.

*Gaparium navigatum* sp. n. Mast Head Reef, Q. HEDLEY, Sydney, N.S.W., Proc. Linn. Soc. **31** (476).

†*Gari precursor* (308-9), *diversisigata* (309-10) spp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52**.

†*Gastrochaena zitteli* [Mayer-Eymar MS] sp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica **30** (204).

†*Gervilleia douvillei* sp. n. Mesozoic, Portugal, CHOFFAT, J. Conchyliol. **54** (40).—*G. hanitschi* sp. n. Mesozoic, Singapore, NEWTON, London, Geol. Mag. **3** (470).—*G. incarsiana* sp. n. Permian, Carnia, GORTANI, Riv. Ital. Pal. **12** (112).—*G. (Dalliconcha) orientalis* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52** (230-1).

†*Gervillia v. Gervilleia*.

†*Gigantopecten variradiatus* sp. n. Tertiary, Sardinia, UGOLINI, Paleontogr. Italia, Pisa **12** (190).

*Glabaris*, notes, DALL, Nautilus **20** (39-40).

*Glycymeris capricornea, queenslandica* spp. n., Mast Head Reef Qld., HEDLEY, Sydney, N.S.W., Proc. Linn. Soc. **31** (468-9).—*G.-insignis* sp. n. Australia, PILSBRY, Philadelphia, Pa., Proc. Acad. Nat. Sci. **58** (213).

†*Goniomya scrivenori, singaporesis*, Mesozoic, Singapore, NEWTON, London, Geol. Mag. **3** (493).—*G. sp.*, Woods, Cape Town, Ann. S. Afric. Mus. **4** (310).

†*Grammysia denckmanni* sp. n. Devonian, Germany, SCHMIDT, Berlin, Zs. D. geol. Ges. **57** (558).—*G. podolica* sp. n. Palaeozoic, Podolia; *G. complanata* Sw., *cingulata* His., *rotundata* Sw. figd., SIEMIRADZKI, Wieu, Beitr. Pal. Geol. OestUng. **19** (237).

*Grandidieria v. Unio*.

*Granicorium* gen. n. of Veneridae, type *G. indutum* sp. n. HEDLEY, Sydney, N.S.W., Proc. Linn. Soc. **31** (477).

†*Gryphaea cereviciiana* (192-3), *semi-coronata* (193-4) spp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52**.

†*Halobia*, Greek species, RENZ, N. Jahrb. Min. **1906 I** (27-40).

*Heteromactra* subgen. n. of *Mactra* for *M. laminifera* sp. n. (q. v.), LAMY, Bul. Muséum, Paris **12** (45).

†*Hippurites* Lam., notes on the subgenus *Pironaca*, Meneghini, PETHÖ, Palaeontographica **52** (270-5).

†*Hoernesia piroudi* sp. n. Permian, Carnia, GORTANI, Riv. Ital. Pal. **12** (112).

*Hormomya v. Brachyodontes*.

†*Illionia* (?) *parvula* sp. n. Paleozoic, Canada, WHITEAVES, Ottawa, Geol. Surv. Canada **3** (288).

†*Inacquipecten* (192) gen. n. for *Pecten tournali* Serr., &c.; *I. lovisaloi* (197), *arboreanensis* (198) spp. n. Tertiary, Sardinia, UGOLINI, Paleontogr. Italica **12**.

†*Inoceramus felixi* nom. n. for *I. la-mareki* Park. (pro parte), PETRASCHECK, Wien, Jahrb. Geol. Rchsanst. **54**.—*I. müllerii* sp. n., PETRASCHECK, Wien, Jahrb. Geol. Rchsanst. **56** (155-68).—*I. robustus, cracoviensis* spp. n. Senonian, Bonarka, SMOLENSKI, Krakow, Bull. Intern. Acad. **1906** (717).—*I. zitteli* sp. n., PETRASCHECK, Wien, Jahrb. Geol. Rchsanst. **56**.—*I. expansus* Bail. re-described, Woods, Cape Town, Ann. S. Afric. Mus. **4** (299).

†*Jouannetia semicaudata* Desm., Beschreibung, VADÁSZ, Földt. Közl. **36**.

*Isocardia*, BÜLOW, Frankfurt a. M., NachrBl. D. malakozool. Ges. **38**.

†*Isocardia rotunda* sp. n. Lower Campanian, S. E. France, REPELIN, Marseille, Ann. Mus. **10** (65).—*I. cliffwoodensis* sp. n. Cretaceous, New Jersey, WELLER, Chicago, J. Geol. **13** (326).

†*Jouannetia v. Jouannetia*.

*Joufia*, notes on, SNETHAGE.

*Jousseaumeia* gen. n.; *J. heterocyathis, heteropsammiae* spp. n. Ceylon, commensal with *Heterocyathus* and *Heteropsammia*, BOURNE, Ceylon Pearl Oyster Fish. Rep. **5** (245).

†*Jurassicardium* subgen. n. of *Cardium* for *C. axonense* sp. n., COSSMANN, Paris, C.R. ass. franc. avanc. Sci. **34** (294).

*Kellia leucedra, revimentalis* spp. n. Persian Gulf and Arabian Sea, MELVILL & STANDEN, London, Proc. Zool. Soc. **1906** (817).

*Kellyia australis* sp. n. S. Orkneys, LAMY, Bul. Mus., Paris **12** (124).

†*Lasaea striata* sp. n. Post Tertiary, Japan, TOKUNAGA, J. Coll. Sci. **21** (53).

*Leda fastidiosa*, New Zealand, figd. HEDLEY, Wellington, Trans. Proc. N. Zealand Inst. **38** (70-1).

†*Leda*, ASCHER, Wien, Beitr. Pal. Geol. OestUng. **19** (135-72).—*L. clementiae* sp. n. Lower Campanian, S. E. France, REPELIN, Marseille, Ann. Mus. **10** (56).—*L. navicula* sp. n. Cretaceous, Germany, HARBORT, Berlin, Abh. Geol. Landesanst. **45** (55).

†*Leptodesma transversa* sp. n. Devonian, Germany, SCHMIDT, Berlin, Zs. D. geol. Ges. **57** (553).

†*Leptodomus podolicus* sp. n. Palaeozoic, Podolia, SIEMIRADZKI, Wien, Beitr. Pal. Geol. OestUng. **19** (236).

†*Liebea dieneri* sp. n. Permian, Carnia, GORTANI, Riv. Ital. Pal. **12** (113).

*Lima*; mouth normally duplicated, PELSENNEER, **2**.—*L. murrayi*, Smith = *Limea acclinis* Hedley, HEDLEY & PETTERD, Sydney, N.S.W., Rec. Austr. Mus. **6** (223).

†*Lima cardenasensis*, *azteca* spp. n. Senonian, Cardenas, Mexico, BÖSE, Mexico, Bol. Inst. Geol. **24** (35-6).—*L. costicillata* sp. n. Cretaceous, Bohemia, PETRASCHEK Wien, Jahrb. geol. Rchsanst. **55** (433).—*L. cureti* (48), *crassicosta* (48-9) spp. n. Lower Campanian, S. E. France, REPELIN, Marseille, Ann. Mus. **10**.—*L. hakodetensis* sp. n. Post Tertiary, Japan, TOKUNAGA, Tokyo, J. Coll. Sci. **21** (64).—*L. planicosta* sp. n. Cretaceous, Germany, HARBORT, Berlin, Abh. Geol. Landesanst. **45** (42).—*L. (Radula) szilyana* (200-1), *selectissima* (201-2), *brusinai* (202) spp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52**.

*Limea juglandula* sp. n. Persian Gulf and Arabian Sea, MELVILL & STANDEN, London, Proc. Zool. Soc. **1906** (812).—v. *Limea*.

*Limatula hyperborea* sp. n. E. Greenland, Spitzbergen and Kara Sea, JENSEN, Kjöbenhavn, Medd. Grönl. **29** (329-30).

*Limea murrayi*, Smith transferred from *Lima* and = *Limea acclinis*

HEDLEY, HEDLEY & PETTERD, Sydney, N.S.W., Rec. Austr. Mus. **6** (223).—v. *Limea*.

*Limopsis erectus* sp. n. off Sydney, 300 fath., HEDLEY & PETTERD, Sydney, N.S.W., Rec. Austr. Mus. **6** (224).

†*Limopsis aquilari* sp. n. Tertiary, Mexico, BÖSE, Mexico, Bol. Inst. Geol. **22** (53).—*L. nummiformis* (248-9), *vilmae* (249-50) spp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52**.

†*Liopista (Psilomya) corrugata* sp. n. Cretaceous, Pondoland, Woods, Cape Town, Ann. S. Afric. Mus. **4**, (309).

†*Lithiotis* belongs to Ostraeidae, BOEHM, Centralbl. Min., Stuttgart **1906** (161, 458); REIS, T.c. (209).

*Lithodomus townsendi* sp. n. Persian Gulf and G. of Oman, MELVILL & STANDEN, London, Proc. Zool. Soc. **1906** (802).

†*Lithodomus donezianus*, *mixtus* spp. n. Jura, Russlands, BORISSJAK, Mém. Com. géol. **29** (1-22, 23-35).—*L. spp.*, VADÁSZ, Földt. Közl. **36**.

*Lucina pamela* sp. n. Persian Gulf and Arabian Sea, MELVILL & STANDEN, London, Proc. Zool. Soc. **1906** (815).

†*Lucina*, ASCHER, Wien, Beitr. Pal. Geol. OestUng. **19** (135-72).—*L. fimbriata* sp. n. Lower Campanian, S. E. France, REPELIN, Marseille, Ann. Mus. **10** (61).—*L. pironai* sp. n. Cretaceous, Balkans, OPPENHEIM, Berlin, Zs. D. geol. Ges. **58** (127).—*L. proboscidea* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52** (289).

*Lucinoma* v. *Phacoides*.

†*Lutraria ovalis* sp. n. Post Tertiary, Japan, TOKUNAGA, Tokyo, J. Coll. Sci. **21** (41).

†*Machomyia applanata* sp. n. Jurassic, France, COSSMANN, Paris, C.-R. ass. franc. avanc. sci. **34** (286).

†*Lyropecten* v. *Pecten*.

*Macoma* v. *Tellina*.—*M. blairensis* sp. n. Bay of Bengal, SMITH, Ann. Mag. Nat. Hist., London **18** (259).—*M. sydneyoidea* sp. n. Persian Gulf and G. of Oman, MELVILL & STANDEN, London, Proc. Zool. Soc. **1906** (824).

†*Macoma rosariana* sp. n. Tertiary, Philippines, SMITH, Philippine J. Sci. 1 (630).

*Macrocallista roseotincta* SMITH (new to Australia) Mast Head Reef, Q., HEDLEY, Sydney, N.S.W., Proc. Linn. Soc. 31 (478).

†*Macrodon sulcatus* sp. n. Glen Park Limestone, WELLER, St. Louis, Mo., Trans. Acad. Sci. 16 (435-71).—*M. vereskinense* (1), *lutugini* (5), *jakovlevi*, *michalakii* (9), *leskevitschi* (11), *elatmense* (12), *korallevkense* (14) spp. n. Jurassic, Russia, BORISSJAK, St. Peterburg, Mem. Com. geol., N.S. 19.

*Mactra* subgen. n. v. *Avimactra*.—*M. solida*, *subtruncata*, Trematode parasites, *Bucephalus haimeanus* Lac.-Duth. (116-7), PELSENEER, 3.

†*Mactra gabrieli* sp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. 10 (74).—*M. imago*, *schirvanica* spp. n. Mäotisches Becken, ANDRUSSOW, St. Peterburg, Verh. Russ. mineral. Ges. 43 (289-451).—*M. (Heteromactra)* subgen. n. *laminifera* sp. n. Antarctic, LAMY, Bul. Mus. Paris, 12 (45).

*Mactropsis trailli* (Hutt.), characters, HUTTON, Wellington, Trans. N. Zealand Inst. 38 (65-6).

*Malletia brevis* sp. n. Bay of Bengal, SMITH, Ann. Mag. Nat. Hist., London 18 (252).

*Margaritifera*, Cestode parasite, SEURAT, Paris, C.-R. Acad. Sci. (801-803)—*M. panasesae*, life-history, ALLEN.

*Meleagrina*, Tuamotu and Gambier Is., growth and pearl production, SEURAT, 1, 2, 3.

†*Meretrix umzambiensis*, *euglypha* spp. n. Cretaceous, Pondoland, Woods, Cape Town, Ann. S. Afric. Mus. 4 (304-5).

*Mesodesma (Paphia) bahreiniense* sp. n. Persian Gulf, MELVILL & STANDEN, London, Proc. Zool. Soc. 1906 (827).

†*Modiola internata*, *tschernyschevi*, *triangularis* spp. n. Jura Russlands, BORISSJAK, St. Peterburg, Mém. Com. géol. 29 (1-22, 23-35).—*M. jurassica* sp. n. Jurassic, North America, WHITFIELD & HOVEY, New York, Bull. Amer. Mus.

Nat. Hist. 22.—*M. kaffaria* sp. n. Cretaceous, Pondoland, Woods, Cape Town, Ann. S. Afric. Mus. 4 (294).—*M. missouriensis* sp. n. Glen Park Limestone, WELLER, St. Louis, Mo., Trans. Acad. Sci. 16 (435-71).—*M. rionegrensis* sp. n. Upper Cretaceous, Patagonia, HERING, Revist. Mus. La Plata 11 (235).—*M. (Brachydontes) striatissima* sp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. 10 (53).

†*Modiolarca jurassica* sp. n. Jurassic, N. America, WHITFIELD & HOVEY, New York, Bull. Amer. Mus. Nat. Hist. 22.

*Modiolaria calceata* sp. n. Persian Gulf, MELVILL & STANDEN, London, Proc. Zool. Soc. 1906 (801-2).—*M. perstriata* sp. n. Masthead Reef, Q., HEDLEY, Sydney, N.S.W., Proc. Linn. Soc. 31 (472).

†*Modiolopsis podolia* sp. n. Palæozoic, Poland, SIEMIRADZKI, Wien, Beitr. Pal. Geol. OestUng. 19 (241).

†*Modiomorpha lamelloosa* sp. n. Glen Park Limestone, WELLER, St. Louis, Mo., Trans. Acad. Sci. 16 (455-71).—*M. pallida* sp. n. Devonian, Germany, SCHMIDT, Berlin, Zs. D. Geol. Ges. 57 (556).

*Mora* v. *Tellina*.

*Montacuta obliquans* sp. n. Persian Gulf and G. of Oman, MELVILL & STANDEN, London, Proc. Zool. Soc. 1906 (817).

*Montaguia charcoti* (46), *turqueti* (47) spp. n. Antarctic, LAMY, Bul. Mus. Paris, 12.

*Mutela angustata* Sow. var. n. *ponderosa*, GERMAIN, Bul. Mus. Paris, 12 (56).

†*Myalina letmathensis* sp. n. Devonian, Germany, SCHMIDT, Berlin, Zs. D. Geol. Ges. 57 (555).—*M. ampliata* Ryckt. var. n., *pannonica*, FRECH, Földt. Közl., 36.

†*Myoconcha* ASCHER, Wien, Beitr. Pal. Geol. OestUng. 19 (135-72).

*Myodora pulcinei* sp. n. Mast Head Reef, Q., HEDLEY, Sydney, N.S.W., Proc. Linn. Soc. 31 (473).

†*Myophoria carnica* sp. n. Permian, Carnia, GORTANI, Riv. Ital. Pal. 12 (116).

†*Myophoriopsis* (?) *carbonifera* sp. n.  
Carboniferous, Carnian Alps, GORTANI,  
Boll. Soc. Geol. Ital. **24** (563).

†*Mysia pacifica* sp. n. Post Tertiary,  
Japan, TOKUNAGA, J. Coll. Sci. **21** (53).

†*Mytilarea pernoides* sp. n. Silurian,  
N. Canada, WHITEAVES, Rep. Geol. Surv.  
Can. **14** (47 F).

*Mytilus*, *spermatozoa*, KUPELWIESER.—  
Parasitic *Nematopsis*, LÉGER, Paris, Bull.  
ass. franç. avanc. sci. **1905** (331).—*M.*  
*edulis*, parasite, NICOLL, Ann. Mag.  
Nat. Hist. London **17** (148).—*M. edulis*,  
L., Vorkommen in grossen Tiefen des  
Weissen Meeres, KNIPOWITSCH, St. Peter-  
burg, Verh. Russ. mineral. Ges. **43**  
(271-7).

†*Nearea grauum* (Matheron MS.) sp. n.  
Lower Campanian, S.E. France, REPELIN,  
Marseille, Ann. Mus. **10** (75).—*N. osiridis*  
sp. n. Lutetian, Egypt, OPPENHEIM,  
Palaeontographica **30** (199).

†*Neitheia* Drouet, notes on the genus  
(213-22); *N. bökki* (244-7), *almusana*  
(227-8) spp. n. Cretaceous, Hungary,  
PETHŐ, Palaeontographica **52**.—v. *Pecten*.

†*Nemodon natalensis*, Bail. re-  
described and figured, Woods, Cape  
Town, Ann. S. Afric. Mus. **4** (289).

*Neolepton antipodum*, New Zealand,  
figd., HEDLEY, Wellington, Trans. Proc.  
N. Zealand Inst. **38** (74).

*Nephronias flucki* sp. n. America,  
BARTON, Washington, D.C., Smithsonian  
Inst., U. S. Nation. Mus. Proc. **30**  
(393-5).

*Nodularia douglasiae* subsp. n.  
*taiwanica*, Formosa, PILSBRY, Philadel-  
phia, Pa., Proc. Acad. Nat. Sci. **57** (750).

•*Nucula consentanea* sp. n. Persian  
Gulf and Arabian Sea, MELVILL &  
STANDES, London, Proc. Zool. Soc. **1906**  
(791).—*N. (Acila) granulata* sp. n. Bay  
of Bengal, SMITH, Ann. Mag. Nat. Hist.,  
London **18** (251).

†*Nucula*, ASCHER, Wien, Beitr. Pal.  
Geol. OestUng. **19** (135-72).—*N.*  
*glenparkensis*, *diversoides* spp. n. Glen  
Park Limestone, WELLER, St. Louis,  
Mo., Trans. Acad. Sci. **16** (435-71).—  
*N. michalskii* sp. n. Tertiary, Russia,  
SOKOLOW, St. Peterburg, Mem. Com.  
geol., n. s. **18** (5).—*N. subcancellata*

sp. n. Cretaceous, Germany, HARBORT,  
Berlin, Abh. Geol. Landesanst. **45** (54).

†*Nuculana* sp., Woods, Cape Town,  
Ann. S. Afric. Mus. **4** (287).

†*Nuculites barretti* sp. n. Palaeozoic,  
New York, SHIMER, Albany, N.Y., St.  
Educ. Dept., Mus. Bull. **80** (173-269).—  
*N. lunulata* sp. n. Paleozoic, South  
Africa, SCHWARTZ, Grahamstown, Rec.  
Albany Mus. **1** (379).

†*Opis haldonensis* sp. n. Cretaceous,  
England, Woods, London, Monogr.  
Paleont. Soc. **2** (119).

†*Orthonota impressa*, *solenoides*, figd.,  
SIEMIRADZKI, Wien, Beitr. Pal. Geol.  
OestUng. **19**.

*Ostrea*, oyster beds invaded by an  
Algal, FABRE-DOMERGUE, Paris, C.-R.  
Acad. sci. **142** (1223-5).—Sur le gise-  
ment huîtrier naturel de la Macta  
(Algérie) et le régime d'écoulement de  
cette rivière, BOUINHOL, Paris, C.-R.  
Acad. sci. **142** (593-5).

†*Ostrea lingula*, *provincialis* spp. n.  
Lower Campanian, S.E. France, REPELIN,  
Marseille, Ann. Mus. **10** (46-7).—*O.*  
*irregularis* sp. n. Post Tertiary, Japan,  
TOKUNAGA, Tokyo, J. Coll. Sci. **21** (68).—  
*O. haitensis* Sow., Tertiary, Panama,  
figd., JOUKOWSKY, Genève, Mém. Soc.  
Phys. **35** (170).—*O.* (*Alectryonia*) *semi-*  
*armata*, *aguilerae* spp. n. Senonian,  
Cardenas, Mexico, BÖSE, Mexico, Bol.  
Inst. geol. **24** (44-9).—*O.* (*A.*) *subar-*  
*cotensis* sp. n. Cretaceous, Hungary,  
PETHŐ, Palaeontographica **52** (186-8).

†*Oxytoma*, ASCHER, Wien, Beitr. Pal.  
Geol. OestUng. **19** (135-72).

†*Palaeodonta ernaee* (52), *sophiae*  
(53), *faba* (54) spp. n. Permian,  
Bohemia, SCHMIDT, N. Jahrb. Min. **1905**, I.

†*Palaeoneilo boyesi* (377), *arcuata*  
(378) spp. n. Paleozoic, South Africa,  
SCHWARTZ, Grahamstown, Rec. Albany  
Mus. **1**.

†*Panopaea mermora* sp. n. Cretaceous,  
Hungary, PETHŐ, Palaeontographica **52**  
(310-1).

*Paphia* v. *Mesodesma*.

†*Parallelipedum* v. *Area*.

†*Patinopecten* v. *Pecten*.

*Pecten*, locomotion and mode of life, ANTHONY.—Swimming mechanism, VLÈS, Paris, C.-R. Acad. sci. **143** (611-3).—*P. jacobaeus*, histology of heart, KOZINSKI, Kraków, Rozpr. Akad. **46** B (55-64).—*P. eous* (808), *thyridaeus* (809), (*Vola*) *dorotheae* (810) spp. n. Persian Gulf and Arabian Sea, MELVILL & STANDEN, London, Proc. Zool. Soc. **1906**.—*P. (Chlamys) taunsi* (243) Venezuela, (*C. nymphula*) (246) Caribbean Sea? spp. n., BAVAY, J. Conchyliol., Paris **53**.—*P. (C.) hastatus* var. n. *albidus*, (*Pseudamussium*) *randolphi* var. n. *tillamookensis*, California, ARNOLD, Washington D.C., U. S. Geol. Surv. Prof. Pap. **47**.—*P. opercularis*, note with varr. n., MONTEROSATO, Naturalista Sicil., Palermo **18** (145).—*P. opercularis* var. n. *perdix*, BAVAY, J. Conchyliol., Paris **53** (245).—*P. tchuelchus* d'Orbigny varr. n., BAVAY, J. Conchyliol. **54** (9).—*P. jacobaeus* Lin., var. *keppeliana* Sby., figd., DAUTZENBERG & FISCHER, Monaco, Res. camp. sci. **32** (72).

†*Pecten*, ASCHER, Wien, Beitr. Pal. Geol. OestUng. **19** (135-72).—*P. belleronensis* (108), *pseudocaenoides* (109), *salinicheti* (110) spp. n. Permian, Carnia, GORTANI, Riv. Ital. Pal. **12**.—*P. krenneri* (206-7), *vertebratus* (207-8), (*Chlamys*) *széremensis* (208-10) spp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52**.—*P. radtkevici* sp. n. Tertiary, Russia, SOKOLOW, St. Petersburg, Mem. Com. geol., n. s. **18** (41).—*P. santarosanus* (23), *aztecus* (72) spp. n. Tertiary, Mexico, BÖSE, Mexico, Bol. Inst. Geol. **22**.—*P. tokyoensis* (65), *pulellensis* (67) spp. n. Post Tertiary, Japan, TOKUNAGA, Tokyo, J. Coll. Sci. **21**.—*P. (Chlamys) ealkinsi*, *landesi*, *proavus* spp. n. Eocene, California; *P. sanctae-cruzensis*, (*Chlamys*) *branneri*, (*Propeamussium*) *elallameensis*, *waylandi* spp. n. Oligocene, California; *P. carrienoensis*, *keepi*, (*Patinopecten*) *oweni*, (*Chlamys*) *hamlini*, *nutteri*, *sespensis*, (*Lyropecten*) *boicersi*, *miguelensis*, *perrini*, *vanghani*, (*Plagiopecten*) *andersoni*, *eldridgei*, *nealensis*, (*Pseudamussium*) *lompocensis*, (*Propeamussium*) *stanfordensis*, (*Amussium*) *lompocensis* spp. n. Miocene, California; *P. auburyi*, *coalingensis*, *lecontei*, *merriami*, *vogdesi*, (*Patinopecten*) *healeyi*, *purisimaensis*, *turneri*, (*Chlamys*) *bartschi*, *bellalamellatus*, *lawsoni*, *rashburnei*, *watssi*, (*Lyropecten*) *ashleyi*, (*Plagioctenium*) *cooperi*, (*Pro-*

*peamussium*) *riversi* spp. n. Pliocene, California; and varr. n., ARNOLD, Washington D.C., U. S. Geol. Surv. Prof. Papr. **47**.—*P.* sp., Tertiary, Panama, figd., JOUKOWSKY, Genève, Mém. Soc. Phys. **35** (172-3).—*P.* spp., Obermediterran, VÁDÁSZ, Földt. Közl., **36**.—*P. (Aequipeeten) deecmeostatus* Münst., *pexus* Woods, figd., PETRASCHEK, Wien, Jahrb. geol. Rchs. Anst. **55** (429-31).—*P. (Camptonectes) kalkovskij* sp. n. Cretaceous, Bohemia, PETRASCHEK, Wien, Jahrb. geol. Rchs. Anst. **55** (431).—*P. (Chlamys) capensis*, (*Aequipeeten*) *kossmati* spp. n. (296-7) Cretaceous, Pondoland; *P. (Chlamys) amapondensis* Griesb. re-described and figured (295); *P. (Camponectes)* sp. (297).—*P. (Neithaea) quinquecostatus* Sowerb. (298), Woods, Cape Town, Ann. S. Afric. Mus. **4**.

*Pectunculus*, mode of locomotion, VLÈS, Paris, Bull. Soc. Zool. **28** (114-7).—*P. heroicus* sp. n. Persian Gulf, MELVILL & STANDEN, London, Proc. Zool. Soc. **1906** (798).—*P. formosus*, Rve. var. n. *tumida*, Fogo, Capo Verd Is., DAUTZENBERG & FISCHER, Res. Camp. sci. **32** (77-8).

†*Pectunculus hungaricus* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52** (245-6).—*P. williamsi* sp. n. Tertiary, Russia, SOKOLOW, St. Petersburg, Mem. Com. geol., n. s. **18** (13).—*P. afriicanus* Griesb. re-described and figured, Woods, Cape Town, Ann. S. Afric. Mus. **4** (291).

†*Perna Čerevičiana* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52** (234-5).

*Petricola pholadiiformis* at Duinkerque, LESDAIN.

†*Petricola hippuritatum* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52** (229).

*Phaeoides (Lucinoma) vestita* sp. n. MAIO, Cape Verd Is., DAUTZENBERG & FISCHER, Res. Camp. sci. **32** (90-1).

†*Phaeoides pennsylvanicus* var. n. *somersensis*, Bermudas, VERRILL, New Haven, Conn., Trans. Acad. Arts Sci. **12**.

*Philobrya uandelensis* sp. n. Antarctic, LAMY, Bul. Mus., Paris **12** (50).—*P.*

*parallelogramma* sp. n. Sydney, HEDLEY, Sydney, N.S.W., Proc. Linn. Soc. **30** (544).—*P. scabra, recapitula* spp. n. Mast Head Reef, Q., HEDLEY, Sydney, N.S.W., Proc. Linn. Soc. **31** (470-1).

†*Pholadomya aegyptiaca* (185), *tricostata* (186), (?) *scutilis* [Mayer-Eymar MS.] (185-6) spp. n. Tertiary, Egypt, OPPENHEIM, Palaeontographica **30**.—*P. obscura* sp. n. Jurassic, N. America, WHITFIELD & HOVEY, New York, Bull. Amer. Mus. Nat. Hist. **22**.

.*Pholas candida*, Trematode parasites, *Cercaria pectinata* Huet (163-4), PELSENER, **3**.

†*Pholas nanus* sp. n., ASCHER, Wien, Beitr. Pal. Geol. OestUng. **19** (135-72).—*P. pseudoujtensis, serinum* spp. n. Miocene, Novotcherkassk, BOGATCHEW, St. Peterburg, Bull. Com. géol. **24** (159).

*Pinna natalensis* sp. n. S. Africa SMITH, Ann. Natal Govt. Mus. **1** (60).

†*Pinna jurassica* sp. n. Jurassic, N. America, WHITFIELD & HOVEY, New York, Bull. Amer. Mus. Nat. Hist. **22**.—*P. raricosta* sp. n. Cretaceous, Germany, HARBORT, Berlin, Abh. Geol. Landesanst. **45** (45).

†*Pironaea* Meneghini v. *Hippurites*.

*Pisidium minusculum, fragillum, levissimum, subrotundum, friersoni* spp. n. United States, STERKI, Nautilus **20** (17-20).—*P. neglectum* sp. n., STERKI, Nautilus **20** (87-9).—*P. planatum* sp. n. Madagascar, ANCEY, Nautilus **20** (46).—*P. proximum* sp. n. United States, STERKI, Nautilus **20** (5-6).—*P. abditum* subsp. n. *huachueanum* S. W. United States, PILSBRY & FERRISS, Philadelphia, Pa., Proc. Acad. Nat. Sci. **58**.—*P. variabile* varr. n. *brevius, hybricum*; *P. noveboracense* varr. n. *expansum, elevatum, quadratum, lineatum, fraternum, alabamense*, STERKI, Nautilus **19** (118-20).

*Placuna*, adductor muscle, etc., ANTHONY, Paris, Bull. Ass. franç. avanc. sci. **1905** (334).—*P. placenta*, pearl fishery, HORNELL, Repts. Ceylon Mar. Biol. Lab. **1** (41-54).

†*Plagioctenium* v. *Pecten*.

†*Pleuromya?* *concentrica* sp. n. Jurassic, N. America, WHITFIELD & HOVEY, New York, Bull. Amer. Mus. Nat. Hist. **22**,

*Pliodon (Cameronia) hardeleti* (57), *tchadiensis* (60) spp. n. Lake Tchad, GERMAIN, Bul. Mus. Paris, **11**.

*Poroleda lanceolata*, New Zealand, figd., HEDLEY, Wellington Trans. Proc. N. Zealand Inst. **38** (71).

*Poromya undosa* sp. n. off Sydney, 300 fath., HEDLEY & PETTERD, Sydney, N.S.W., Rec. Austr. Mus. **6** (224).

†*Praeconia*, note on, COLLOT, Feuille jeunes natural., Paris **36** (25).

†*Propeamussium* v. *Pecten*.

†*Protocardia hillana* Sow. var., Woods, Cape Town, Ann. S. Afric. Mus. **4** (307).

†*Psammobia producta* sp. n. [Mayer-Eymar, MS.] Tertiary, Egypt, OPPENHEIM, Palaeontographica **30** (181-2).

*Pseudamussium* v. *Pecten*.

†*Pseudomonotis forojuiliensis* (104), *irregularis* (105) spp. n. Permian, Carnia, GORTANI, Riv. Ital. Pal. **12**.

†*Psilomya* v. *Liopistha*.

†*Pterinea occidentalis* sp. n. Palaeozoic, Canada, WHITEAVES, Ottawa, Geol. Surv. Canada **3** (287).—*P. opportuna* Barr. (241), *ventricosa* Gdf. (240) figd., SIEMIRADZKI, Wien, Beitr. Pal. Geol. Oest-Ung. **19**.

†*Pteropsis?* *bullata* sp. n. Tertiary, Philippines, SMITH, Philippine J. Sci. **1** (629).

†*Ptychomya elegans* sp. n. Cretaceous, Germany, HARBORT, Berlin, Abh. Geol. Landesanst. **45** (76).

†*Quenstedtia planulata* sp. n. Jurassic, N. America, WHITFIELD & HOVEY, New York, Bull. Amer. Mus. Nat. Hist. **22**.

†*Radiolites*, classification, TOUCAS, Paris, Bul. Soc. geol. **5** (523).

†*Radula* v. *Lima*.

†*Sanguinolites niger* (304), *acer* (305) spp. n. Devonian, S. Africa, REED, London, Geol. Mag. **3**.

*Scapharea* v. *Area*.

*Scintilla pulchra* sp. n. Persian Gulf and G. of Oman, MELVILL & STANDEN, London, Proc. Zool. Soc. **1906** (818).

†*Semele?* *dalli* sp. n. Tertiary, Philippines, SMITH, Philippine J. Sci. **1**, (630).

†*Sepiifer sturgisensis* sp. n. Jurassic, N. America, WHITFIELD & HOVEY, New York, Bull. Amer. Mus. Nat. Hist. **22**.—*S. variabilis* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52** (238–40).

†*Siliqua aequilatera* sp. n. Cretaceous, Germany, HARBORT, Berlin, Abh. Geol. Landesanst. **45** (73).

†*Solecurtus longovatus* sp. n. Cretaceous, Germany, HARBORT, Berlin, Abh. Geol. Landesanst. **45** (71).—S. sp. Woens, Cape Town, Ann. S. Afric. Mus. **4** (303).

*Solen jonesii* Dkr., *viridis* Say, anatomy, BLOOMER, London, Proc. Malac. Soc. **7** (18).

†*Solen matheroni* sp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. **10** (72).

*Sphaerium hendersoni* sp. n. Colorado, STERKI, Nautilus **20** (69).—*S. victoriae* sp. n. Victoria Nyanza, SMITH, London, Proc. Zool. Soc. **1906** (186).—*S. solidulum*, pathology, STERKI, Nautilus **20** (11).—*S. stamineum* var. n. *forbesi*, Illinois, BAKER, Nautilus **20** (21–2).

†*Sphaerium florissantense* sp. n. Colorado, COOKERELL, New York, Bull. Amer. Mus. Nat. Hist. **22**.

†*Sphaerulites*, notes on the genus; *S. solitus* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52** (276–89).

†*Sphenia?* *pholadum* sp. n. Paleocene, Egypt, OPPENHEIM, Palaeontographica **30** (192).

†*Sphenotus longissimus* sp. n. Devonian, Germany, SCHMIDT, Berlin, Zs. D. Geol. Ges. **57** (557).

*Spondylus glorianus* sp. n. Persian Gulf, MELVILL & STANDEN, London, Proc. Zool. Soc. **1906** (811).

†*Stirpulina bacillum* Brocchi, Beschreibung, VADÁSZ, Földt. Közl. **36**.

†*Strigilla v. Tellina*.

*Syndesmya cistula* sp. n. Persian Gulf and Gulf of Oman, MELVILL & STANDEN, London, Proc. Zool. Soc. **1906** (825).—*S. grimaldii*, *demosia* spp. n. Cape Verd Is., DAUTZENBERG & FISCHER, Monaco, Res. Camp. sci. **32** (93–4).—*S. alba*, Trematode parasites; *Cercaria myoceroides* sp. n. (162–3), *C. setifera* Müll. (n–9720 r).

(164–5), *C. nigrotincta* sp. n. (166), *C. syndosmyiae* sp. n. (172–3), *Bucephalus haimeanus* Lac.-Duth. (176–7), PELSENEER, **3**.—*S. (Abra) seurati* sp. n. Gambiers, LAMY, Bull. Mus. Paris **12** (210).

†*Taneredia transversa* sp. n. Jurassic, N. America, WHITFIELD & HOVEY, New York, Bull. Amer. Mus. Nat. Hist. **22**.

*Tapes aureus* and its allies, notes, JUKES-BROWNE, Leeds, J. Conch. **11** (275).—*T. decussatus*, Trematode parasites; *Cercaria pectinata* Huet (163–4), PELSENEER, **3**.—*T. pullaster*, Trematode parasites; *Cercaria pectinata* Huet (163–4), *Bucephalus haimeanus* Lac.-Duth. (166–7), PELSENEER, **3**.

†*Tapes meridionalis* (67), *subfragilis*, (68) spp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. **10**.—*T. transerta* (300–1), (*Baroda*) *flagellifera* (301–2) spp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52**.—*T. secundus* sp. n. Miocene, Novotcherkassk, BOGATCHEW, St. Peterburg, Bull. Com. géol. **24** (159–88).—*T. (?) lobooensis* sp. n. Tertiary, Philippines, SMITH, Philippine J. Sci. **1** (629).

*Tellina (Arcopagia) altissima* sp. n. Bay of Bengal, SMITH, Ann. Mag. Nat. Hist., London **18** (250).—*T. (? Tellinella) asmena* (818–9), (*Moera*) *miracylum* (820), *rosamunda* (820–1), (*Tellinula*) *claudia* (823) spp. n. Persian Gulf and Arabian Sea, MELVILL & STANDEN, London, Proc. Zool. Soc. **1906**.—*T. fabre-faeta* Pilsbry (new to Australia) Masthead Reef, Q., HEDLEY, Sydney, N.S.W., Proc. Linn. Soc. **31** (478).—*T. (Macoma) ecallearia* Chemn. (342–3), *torelli* Steenstr. (343–5), *meesta* Desh. (345–8), *loveni* Steenstr. (348–50) figd., JENSEN, Copenhagen, Meddel. Grönland **29**.—*T. solidula*, Trematode parasites; *Cercaria dichotoma* Müller (173–4), PELSENEER, **3**.

†*Tellina ovalis* sp. n. Cretaceous, Germany, HARBORT, Berlin, Abh. Geol. Landesanst. **45** (64).—*T. sericeostata* (43), *ojiensis*, *nipponica* (44) spp. n. Tertiary, Japan, TOKUNAGA, Tokyo, J. Coll. Sci. **21**.—*T. (Moera ?) fajimensis* (178), *sutensis* (178–9), (*Strigilla*) *formosissima* (180) spp. n. Tertiary, Egypt OPPENHEIM, Palaeontographica **30**.

*Tellinella v. Tellina*.

*Tellinula v. Tellina*.

†*Teredo libyca* [Mayer-Eymar MS], sp. n., Paleocene, Egypt, OPPENHEIM, Palaeontographica 30 (206-7).—*T. sp.*, Woods, Cape Town, Ann. S. Afric. Mus. 4 (309).

†*Thetis schaumburgensis* sp. n. Cretaceous, Germany, HARBORT, Berlin, Abh. Geol. Landesanst. 45 (62).

†*Thracia aegyptiaca* (187-8) sp. n. Lutetian, Egypt, OPPENHEIM, Palaeontographica 30.—*T. colloti* sp. n. Lower Campanian, S.E. France, REPELIN, Marseille, Ann. Mus. 10 (73).

†*Trachycardium v. Cardium*.

†*Trigonia*, ASCHER, Wien, Beitr. Pal. Geol. OestUng. 19 (135-72).—*T. beyrichii* sp. n. Cretaceous, Tripoli, KRUMBÖCK, Palaeontographica 53 (104-5).—*T. spinuloso-costata* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica 52 (251-4).—*T. sturgisensis*, poststriata spp. n. Jurassic, N. America, WHITFIELD & HOVEY, New York, Bull. Amer. Mus. Nat. Hist. 22.—*T. elegans* Bail. (293), sheepstonei Griesb. (292) re-described and figured, Woods, Cape Town, Ann. S. Afric. Mus. 4.

†*Trigonoarca v. Cucullaea*.—*T. capensis* Griesb. re-described and figured, Woods, Cape Town, Ann. S. Afric. Mus. 4 (288).

†*Tugonia lorioli* (200-1), *zitteli* (201), Lutetian, Egypt, OPPENHEIM, Palaeontographica 30.

†*Unicardium hemirhytidum* sp. n. Jurassic, France, COSSMANN, Paris, C.-R. ass. franc. avanc. sci. 34 (290).

*Unio pajakomboensis* sp. n. Sumatra, BULLEN, London, Proc. Malac. Soc. 7 (15).—*U. (Cuneopsis) tauriformis* sp. n. Yunnan, FULTON, Ann. Mag. Nat. Hist., London 17 (246).—*U. (Grandidieria) rothschildi*, *chefneuxi* spp. n. Lake Rudolphi, NEUVILLE & ANTHONY, Bul. Mus., Paris 12 (409).—*U. jourdyi* var. n. *ponderosa* (453); *U. dephinopterus* n. n. for *U. bialatus* Simpson non Desh. (456), DAUTZENBERG & FISCHER, J. Conchyiol. 53.—*U. monceei* Bourguignat var. n. *rubra*, GERMAIN, Bul. Mus., Paris 12 (306).—*U. pictorum*, histology of heart, ŁOŻIŃSKI, Kraków, Rozpr. Akad. 46 B (55-64).

*Venericardia lutea*, New Zealand, figd.; HEDLEY, Wellington, Trans. Proc. N. Zealand Inst. 38 (73).

†*Venilicardia v. Cyprina*.

*Ventricola v. Venus*.

*Venus* (*Ventricola*) *verdensis* (83-4), *peregrina* (85-6) spp. n.; *V. (V.) casina* Lin. var. n. *albina* (83); Cape Verd Is. and Madeira, DAUTZENBERG & FISCHER, Monaco, Res. Camp. sci. 32.

†*Venus ebergennii* sp. n. Tertiary, Mexico, BÖSE, Mexico, Bol. Inst. Geol. 22 (28).—*V. mercenaria* var. *antiqua*, deposit in New York city, WILSON, Science 23 (821-2).

*Verticordia rhomboidea* sp. n. New Zealand, HEDLEY, Wellington, Trans. Proc. N. Zealand Inst. 38 (72-3).—*V. torrida* sp. n. Mast Head Reef, Q., HEDLEY, Sydney, N.S.W., Proc. Linn. Soc. 31 (473).

*Vesicomya cretacea*, *brevis* spp. n. Bay of Bengal, SMITH, Ann. Mag. Nat. Hist., London 18 (261).

*Volva v. Pecten*.

*Whiteavisia*? *expansa*, *undatum* spp. n., RAYMOND, Pittsburg, Pa., Ann. Carnegie Mus. 3 (578).

*Yoldia inaequisculpta* (125), *vallettei* (126) spp. n. S. Orkneys, LAMY, Bul. Mus. Paris 12.—*Y. vicina* sp. n. Persian Gulf, SMITH, Ann. Mag. Nat. Hist., London 18 (252).—*Y. artica* Vorkommen im Weissen Meere, KNIPOWITSCH, St. Petersburg, Verh. Russ. mineral. Ges. 43 (271-7).

#### CEPHALOPODA.

The structure of some primitive cephalopods, RUEDEMANN, 1.

Structure of muscles of mantle, MARCEAU, Arcachon, Trav. Soc. sci. station biol. 8 (48-65).

Genitalia, CHUN, Zool. Anz., Leipzig 29 (743-53).

Comparative morphology of male reproductive organs, MARCHAND, Zool. Anz., 29 (753-8).

Oogenesis, LOYEZ.

Supposed coccidian parasites, MOROFF Paris, C.-R. Acad. sci. 142 (652-4).

Biscayan plankton Cephalopoda, HOYLE, London, Trans. Linn. Soc. **10** (159-62).

Collections of "Travailleur" and "Talisman" expeditions, FISCHER & JOUBIN, Bul. Mus. Paris **1906** (202-5).

Fossils described by Hyatt and Cragin, PRITCHET.

Devonian fauna of Cornwall, CRICK, Penzance, Trans. R. Geol. Soc. Cornwall, **13** (63-71).

*Nautiloidea* gen. n. v. *Nautilites*.

Eudoceratidae, siphuncle, WHITEAVES, **6**.

Ammonoidea, genn. n. v. *Acanthodiscus*, *Berriasella*, *Blanfordia*, *Martolites*.—New but unnamed genus, Lias, Europe, STOLLEY, Braunschweig, Jahressber. Ver. Natw. **14** (53-7).—Convergence, DIENER, Wien, SitzBer. Ak. Wiss. **114** (663).—From Kimmeridge, Speeton, Yorks, DANFORD, Yorks. Proc. Geol. Polyt. Soc. **16** (101-14).—Antarctic, KILIAN, Paris, C.-R. Acad. sci. **142** (306-8).

Ceratitidae of the Muschelkalk, DIEDERER, **3**.

Phylloceratidae, notes, PRINZ, Centralbl. Min. Stuttgart **1906** (237); UHLIG, T.c. (417).

Dibranchiata, genn. n. v. *Bathothauma*, *Corynomima*, *Crystalloteuthis*, *Sandalops*, *Tozeuma*.

Cranchiidae, taxonomy, CHUN, Zool. Anz., Leipzig **31** (82-6).

Sepiolidae, luminous organs, MEYER, Zool. Anz., Leipzig **30** (388-92).

*Abraoliopsis* sp., pelagic eggs and embryos, NISHIKAWA, **2**.

†*Acanthodiscus* gen. n. for *A. subradiatus* sp. n., etc., UHLIG, Wien, SitzBer. Ak. Wiss. **114** (609).

†*Acrochordiceras portisi* sp. n. Trias, Montenegro, MARTELLI, Paleontogr. Italica, Pisa **12** (132).

†*Actinocamax plenus* Bl. mut. n. *caucasicus*, Cretaceous, Caucasus, BOGDANOVIC, St. Peterburg, Mem. Com. Geol. **26** (103-6).

†*Actinoceras keewatinense* sp. n. Silurian, N. Canada, WHITEAVES, Rep. Geol. Surv. Can. **14** (548).

†*Aganides kochi* sp. n. Jura, Ungarn, PRINZ, Ann. Hist.-Nat. Mus. Nat. Hung., **4** (230).

†*Ammonites (Oegoceras) subtumidum* sp. n. Jurassic, N. America, WHITFIELD & HOVEY, New York, N.Y., Bull. Amer. Mus. Nat. Hist. **22**.

†*Anarectes podolicus* sp. n., Palaeozoic, Podolia, SIEMIRADZKI, Wien, Beitr. Pal. Geol. OestUng. **19** (229).

†*Anisoceras v. Hamites*.

†*Arniotites schmerbitzei* (279), *stantei* (280) spp. n. Trias, Germany, FRITSCH, Halle, Abh. natf. Ges. **24**.

†*Arpadites arpadis* var. n., MARTELLI, Paleontogr. Italica, Pisa **12** (127).

†*Baculites bailyi, capensis* spp. n. Cretaceous, Pondoland; *B. sulcatus*, Bail noticed and figured, Woods, Cape Town, Ann. S. Afric. Mus. **4** (341-2).

†*Balatonites macer* sp. n. Trias, Germany, FRITSCH, Halle, Abh. Natf. Ges. **24** (274).

†*Baltoceras (?) pusillum* sp. n. RUEDEMANN, Albany, N.Y., St. Educ. Dept., Mus. Bull. **90**.

†*Barrandoceras*, notes on species, WHITEAVES, Ottawa, Geol. Surv. Canada **3** (299).

*Bathothauma* gen. n.; *B. lyromma* sp. n., Atlantic, CHUN, Zool. Anz. **31** (86).

†*Belemnites*, notes on, DANFORD, Tr. Hull Geol. Soc. **6** (1-14).—*B. obtusus* sp. n. Jurassic, N. America, WHITFIELD & HOVEY, New York, N.Y., Bull. Amer. Mus. Nat. Hist. **22**.

†*Beneckeia denticulata* sp. n. Trias, Germany, FRITSCH, Halle, Abh. Natf. Ges. **24** (264).

†*Berriasella* gen. n. for *Hoplites privasensis* Pictet, etc., UHLIG, Wien, SitzBer. Ak. Wiss. **114** (601).

†*Blanfordia* [nom preocc.] gen. n. for *Ammonites wallichii* Gray, UHLIG, Wien, SitzBer. Ak. Wiss. **114** (602).

†*Camerooceras curvatum* sp. n. Chazy formation, America, RUEDEMANN, Albany, N.Y., St. Educ. Dept., Mus. Bull. **90**.

†*Ceratites*, division of, DIENER, Wien, SitzBer. Ak. Wiss. **114** (765).—Subgen. n. v. *Philippites*.—*C. bassanii* sp. n. Trias, Montenegro, MARTELLI, Paleontogr. Italica, Pisa **12** (125).

*Cheiroteuthis macrosoma* Goodrich, (Japanese), NISHIKAWA, Dobuts. Z., Tokyo **18** (109-3).

*Chiroteuthopsis talismani* sp. n. S. Azores, FISCHER & JOUBIN, Bul. Muséum, Paris **12** (205).

†*Clinoceras ellipticum, podolicum* spp. n. Palaeozoic, Podolia, SIEMIRADZKI, Wien, Beitr. Geol. Pal. OestUng. **19** (226).

†*Coeloceras taramelli* sp. n. Lias, Italy, PARISCH & VIALE, Riv. Ital. Pal. **12** (100).—Notes on species, JOLY, Nancy, Bul. soc. sci. **6** (1-11).

†*Collina aculeata* (165), *linea* (166), spp. n. Lias, Italy, PARISCH & VIALE, Riv. Ital. Pal. **12**.

"*Conehorynchus*," TILL, Wien, Jahrb. Geol. RchbsAnst. **56** (89-154).

*Corynomma* gen. n.; *C. speculator* sp. n., Atlantic, Indian Ocean, CHUN, Zool. Anz. **31** (85).

†*Crioceras serta* sp. n. Senonian, Germany, MÜLLER & WOLLEMANN, Berlin, Abh. geol. Landesanst. **47** (20).

*Crystalloteuthis* gen. n.; *C. glacialis* sp. n., Antarctic (85), CHUN, Zool. Anz. **31**.

*Ctenopteryx*, notes on, ASHWORTH & HOYLE.

†*Cyrtactinoceras champlainense* sp. n., RUEDEMANN, Albany, N.Y., St. Educ. Dept., Mus. Bull. **90**.

†*Cyrtendoceras* (?) *priscum* sp. n., RUEDEMANN, Albany, N.Y., St. Educ. Dept., Mus. Bull. **90**.

†*Cyrtoceras cambria* sp. n. Cambrian, China, WALCOTT, Washington, Nation. Mus. Proc. **29** (22).—*C. (?) cuneatum* sp. n. Paleozoic, Canada, WHITEAVES, Ottawa, Geol. Surv. Canada **3** (282).—*C. breve, podolicum* spp. n. Palaeozoic, Podolia, SIEMIRADZKI, Wien, Beitr. Pal. Geol. OestUng. **19** (228).—*C. anomale*. Barr., *formidandum* Barr., *intermedium* Blake, *sinon* Barr, *vivax* Barr., figd., SIEMIRADZKI, Wien, Beitr. Pal. Geol. Oest-Ung. **19** (227-8).—*C. cuneatum*, notes, WHITEAVES, Ottawa Natural. **20** (133).

†*Deltoceras vaningeni* sp. n., RUDEMANN, Albany, N.Y., St. Educ. Dept. Mus. Bull. **90**.

†*Dumorteria dumortieri* Thioli var. n. *striata*, PRINZ, Földt. Közl., Budapest **36** (57-8, 161-2).

*Eledone*; Innervation der Chromato-phoren, SAINT-HILAIRE, Jurjev, Sitzb. Naturf. Ges. **15** (51-9, 60-6).

†*Endoceras, siphuncle*, WHITEAVES, Amer. Geol., Minneapolis **35** (23).—*E. (?) champlainense, hudsoni, magister* spp. n., RUDEMANN, Albany, N.Y., St. Educ. Dept., Mus. Bull. **90**.

†*Eudophoceras natalense* Hyatt, figured, Woods, Cape Town, Ann. S. Afric. Mus. **4** (337).

†*Eurystromites accelerans, amplexens* spp. n., RUDEMANN, Albany, N.Y., St. Educ. Dept., Mus. Bull. **90**.

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†*Glossoceras carinatum* Alth. figd., SIEMIRADZKI, Wien, Beitr. Pal. Geol. OestUng. **19** (227).

*Comphoceras ellipticum* McCoy., *pyriforme* Sow., figd., SIEMIRADZKI, Wien, Beitr. Geol. Pal. OestUng. **19** (226-7).

†*Gonioceras chaziense* sp. n., RUDEMANN, Albany, N.Y., St. Educ. Dept., Mus. Bull. **90**.

†*Grammoceras* v. *Harpoceras*.

†*Halorites trotteri* (5), *alternans* (6), spp. n. Trias, India, DIENER, Rec. Geol. Surv. India **34**.

†*Hamites* (*Anisoceras*) *iudicus* Forb. (340), *subcompressus* Forb. (339) figd., Woods, Cape Town, Ann. S. Afric. Mus. **4** (340).

†*Hammatoceras bonarelli* sp. n. Lias, Italy, PARISCH & VIALE, Riv. Ital. Pal. **12** (159).

†*Haploceras* (*Lissoceras*) *psilodiscus* Jurassic, S. Carpathians, figd., SIMIONESCU, Publ. Adamachi Ac. Romana **13** (29-30).

†*Harpoceras buranense* sp. n. Lias, Italy, PARISCH & VIALE, Riv. Ital. Pal. 12 (148).—II. (*Grammoceras*) *steinmanni* Haug., Beschreibung, PRINZ, Math. Term. Ért. 24.

†*Naueericeras gardeni* Bail. noticed, Woods, Cape Town, Ann. S. Afric. Mus. 4 (333).

†*Hecticoceras retrocostatum* (24), *inflexum* (25), Jurassic, S. Carpathians, figd., SIMIONESCU, Publ. Adamachi Ac. Romana 13.

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†*Holecodiscus*, sp. figd., Woods, Cape Town, Ann. S. Afric. Mus. 4 (336).

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†*Indoceras baluchistanense*, development, NOETLING, Geol. u. paläont. Abh., Jena 12 1906 (1–96); N. Jahrb. Min., 1, 1905 (1).

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†*Lytoceras italiae* sp. n. Lias, Italy, PARISCH & VIALE, Riv. Ital. Pal. 12 (144).—*L. fasciculatum* sp. n. Jurassic, S. Carpathians (23); *L. adeloides*, *tripartitum*, figd. (22), SIMIONESCU, Publ. Adamachi Ac. Romana 13.

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†*Martolites* gen. n. for *M. krafftii* sp. n. Trias, India, DIENER, Rec. Geol. Surv. India 34 (6).

†*Monophyllites taramellii* sp. n. Trias, Montenegro, MARTELLI, Paleontogr. Italica, Pisa 12 (135).

†*Mortoniceras michelii*, note, FUCINI, Pisa, Proc. verb. soc. tosc. sci. nat. 15 (54).—*M. soutoni* Bail. (337), *strangeri* Bail. (338), noticed and figured, Woods, Cape Town, Ann. S. Afric. Mus. 4.

†*Nanno noveboracum* sp. n. RUEDEMANN, Albany, N.Y., St. Educ. Dept., Mus. Bull. 90.—*N. primaevisus* (26), *kingstonensis* (27) spp. n. Cambro-Silurian, Canada, WHITEAVES, Amer. Geol., Minneapolis 35.

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†*Nautilites* gen. n. for *Nautilus excavatus*, Shy, etc., PRINZ, Ann. Mus. Nat. Hist. Hung., Budapest 4 (232).

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†*Oekotraustes binodosus* Jurassic, S. Carpathians, figd., SIMIONESCU, Publ. Adamachi Ac. Romana 13 (26–7).

†*Oncoceras pristinum* sp. n., RUEDEMANN, Albany, N.Y., St. Educ. Dept., Mus. Bull. 90.

†*Ooceras seelyi*, (?) *lativentrum*, (?) *perkinsi* spp. n., RUEDEMANN, Albany, N.Y., St. Educ. Dept., Mus. Bull. 90.

*Opisthotheuthis depressa*, anatomy, MEYER, Zs. wiss. Zool. 85 (183–269).—*O. depressa*, male reproductive organs, MEYER, Zool. Anz. 29 (758–60).

†*Oppelia fusca* Jurassic, S. Carpathians, figd., SIMIONESCU, Publ. Adamachi Ac. Romana **13** (27).

†*Orthoceras ekwanense* sp. n. Silurian, N. Canada, WHITEAVES, Rep. Geol. Surv. Can. **14** (56 F).—*O. lenticula, progressum, (?) vagum, modestum* spp. n., RUEDEMANN, Albany, N.Y., St. Educ. Dept., Mus. Bull. **90**.—*O. rex* sp. n. Paleozoic, South Africa, SCHWARTZ Grahamstown, Rec. Albany Mus. **1** (381).—*O. hisingeri* Boll., kendalense Blake, cf. *longulum* Barr., *podolicum* Alth., *pseudolumbricatum* Barr., Roemer Alth., figd., SIEMIRADZKI, Wien, Beitr. Geol. Pal. OestUng. **19** (223-5).

†*Orygoceras* gen. n., RUEDEMANN, Albany, N.Y., St. Educ. Dept., Mus. Bull. **90**.

†*Pachydiscens supremus* sp. n. Cretaceous, Hungary, PETHÖ, Palaeontographica **52** (88-94).

†*Palaeoteuthis* TILL, Wien, Jahrb. Geol. RhchAnst. **56** (89-154).

†*Peltoceras*, notes on spp., SALFELD, N. Jahrb. Min. **1906** **1** (80).

†*Perisphinctes subtiliformis* (40), *supplanus* (38), *trauslyraucus* (38) spp. n. Jurassic, S. Carpathians; *P. aurigerus* (34), *moorei* (34), *orion* (36), *procerus* (37) figd., SIMIONESCU, Publ. Adamachi Ac. Romana **13**.

†*Philippites* subgen. n. of *Ceratites* for *C. erasmi*, DIENER, Wien, SitzBer. Ak. Wiss. **114** (723).

†*Phragmoceras lincolatum* sp. n. Silurian, N. Canada, WHITEAVES, Rep. Geol. Surv. Can. **14** (57F).

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†*Pleuronautilus stautei* sp. n. Trias, Germany, FRITSCH, Halle, Abh. Natf. Ges. **24** (246).

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†*Protocyloceras whitfieldi* sp. n., RUEDEMANN, Albany, N.Y., St. Educ. Dept., Mus. Bull. **90**.

†*Pseudophyllites indra* Forb. noticed, Woods, Cape Town, Ann. S. Afric. Mus. **4** (334).

†*Psiloceras planorbe*, note, NICKLÈS.

†*Ptychites subdiscoidalis* (141), *canavaris* (143), *princeps* (147), *distefanoi* (149) spp. n. Trias, Montenegro, MARTELLI, Paleontogr. Italica, Pisa **12**.

†*Reineckia angustilobata*, note, COLLOT, Feuille jeunes natural., Paris **36** (25).

†*Rhabdoceras*, development, JANENSCHE, Centralbl. Min. Stuttgart **1906** (710).

†*Rhacophyllites vredenburgi* sp. n. Trias, Baluchistan, DIENER, Rec. Geol. Surv. India **34** (18).

"*Rhyncholites*" of the Neocomian of Silesia; *R. bohemica*, *cassianus*, *cordiformis*, *hoheneggeri*, *neocomiensis*, *obtusus*, *oxfordiensis*, *silesiacus*, *striatus*, *sulcatus*, *uhligi* spp. n., TILL, Wien, Jahrb. Geol. RhchAnst. **56** (89-154).

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†*Sarasinella* subgen. n. of *Hoplites* for *H. varians* sp. n., &c., UHLIG, Wien, SitzBer. Ak. Wiss. **114** (618).

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†*Schloenbachia kittli*, Neocomian, Austria, RICHARZ, Wien, Jahrb. Geol. RhchAnst. **54** (344).—*S. umbulazi* Bail. noticed, Woods, Cape Town, Ann. S. Afric. Mus. **4** (336).

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†*Schluteria bodei* sp. n. Senonian,  
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*leopoldina* D'Orb., etc., UHLIG, Wien,  
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†*Sphaeroceras microstomum*, Jurassic,  
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†*Tarphyoceras clarkei*, *multicameratum*  
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†*Tetragonites* sp. aff. *cala* Forb. figd.,  
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# IX. ARTHROPODA

ARRANGED BY

D. SHARP

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# X. CRUSTACEA

ARRANGED BY

R. SHELFORD.

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- Malay Archipelago, *Ostracoda* 18 spp. n.; Müller, 4.—*Schizopoda* 1 gen. n. 1 sp. n.; Illig, 1.—*Isopoda*, *Isopyridae* 1 gen. n., 2 spp. n.; Nobili, 5.
- Malay Peninsula and adjacent islands, *Potamonidae* spp. n.; Rathbun, 6.—*Decapoda* 1 sp. n.; Lanchester.
- Sumatra, *Ostracoda* spp. n.; Vávra, 4.—*Copepoda* spp. n.; Daday, 4, 5.
- Java, *Ostracoda* spp. n.; Müller, 1, Vávra, 4.
- Indo-Malayan Is., *Copepoda* 2 spp. n.; Daday, 4, 5.
- Malayan Seas, Moluccas, *Penella* sp. (*Copepoda*); Horst.
- Philippines, *Potamonidae* spp. n.; Rathbun, 6.
- Persian Gulf, *Decapoda* and *Stomatopoda* 2 spp. n., 2 varr. n.; Nobili, 1.
- Africa and Madagascar.** f
- (N. Africa, *Atyaëphyra desmaresti*; Bouvier, 15.)
- Suez Canal, *Rhizocephala* 1 gen. n., 1 sp. n.; Smith, Geoffrey.
- Erythræa, *Isopoda*, 3 spp. n.; Nobili, 8.

- West Africa, *Potamonidae* spp. n.; Rathbun, 6.—*Decapoda* 1 sp. n.; Bouvier, 7.
- West coast of Africa, *Cirripedia*; Gruvel, 2.
- Cameroons, *Crustacea*; Sjöstedt.
- Spanish Guinea, *Decapoda*; Nobili, 9.
- San Thomé Id., *Decapoda* and *Stomatopoda* 1 sp. n.; Bouvier, 8.
- Ogowe basin, French Congo, *Alpheidae* sp. n.; Coutière, 2.
- East Africa, *Potamonidae* spp. n.; Rathbun, 6.
- German East Africa, *Cladocera* 4 spp. n., 1 var. n.; Weltner.—*Ostracoda* 1 gen. n., 10 spp. n.; Vávra, 1.—*Copepoda* 3 spp. n.; Mrázek.—*Isopoda* 10 spp. n.; Budde-Lund, 1.—*Decapoda* 9 spp. n., 2 varr. n.; Hilgendorf.
- Mozambique coast, *Acanthophrys* 1 var. n.; Bouvier, 6.
- Mt. Ruwenzori, *Decapoda* and *Isopoda* 2 spp. n.; Nobili, 6.
- African lakes, *Macrura* 2 genn. n. 10 spp. n.; Calman, 3.
- South Africa, *Isopoda* 2 spp. n.; Budde-Lund, 2, and Richardson, 3.—*Potamonidae* spp. n.; Rathbun, 6.
- Capo Colony, *Entomostraca* 2 spp. n.; Sars, 1.
- Natal, *Copepoda* 1 gen. and sp. n.; Cooper.
- S. African seas, *Copepoda* 6 spp. n.; Cleve.
- Madagascar, *Potamonidae* spp. n.; Rathbun, 6, and Nobili, 7.
- Madagascar, *Amphipoda* gen. and sp. n.; Coutière, 5.
- Red Sea, *Oxyrhyncha* and *Oxystomata* 1 gen. n., 7 spp. n., 2 varr. n.; Klunzinger, 1, 2.—*Decapoda* and *Stomatopoda* 1 var. n.; Nobili, 2.—*Bopyridae* *Isopoda* genn. n., spp. n.; Nobili, 5.
- (Red Sea, *Caligus* sp. n.; Brian, 2.)
- North America. *g*
- (North American *Branchinecta* and their habitats; Shantz.)
- Gulf of S. Lawrence, Anticosti Is., *Crustacea*; Schmitt.
- United States of America, *Copepoda* 6 spp. n.; Pearse, 1, 2.—Distribution of *Cambarus*; Ortmann, 4.
- New England, *Decapoda*; Cushman, 2.—*Crustacea*; Rathbun, 2.
- Rhode Island, N. America, *Copepoda* 3 spp. n.; Williams.
- Vineyard Sound, *Ostracoda* 1 gen. n., 10 spp. n.; Cushman, 1.
- Pennsylvania, *Cambarus*; Ortmann, 2.
- (Western Pennsylvania, *Cambarus* spp.; Ortmann, 5.)
- Ohio, *Isopoda*; Lindahl.—*Cladocera*; Gammon.
- Nebraska, *Cladocera* 1 sp. n., 1 var. n.; Fordyce, 1, 2.
- Colorado, *Copepoda* 1 sp. n.; Marsh.—*Cladocera* 1 sp. n.; Birge.
- California, *Phyllopoda* 1 sp. n.; Kellogg.—*Isopoda*; Richardson, 3.
- Californian coast, *Ostracoda* 19 spp. n.; Esterly, 2, and Juday.—*Copepoda* 4 spp. n.; Esterly, 1.
- Central and South America and West Indies. *h*
- Central America, *Potamonidae* spp. n.; Rathbun, 6.
- Costa Rica, *Brachyura* 3 spp. n.; Rathbun, 4.—*Amphipoda* 1 sp. n.; Stebbing, 1.
- Mexico, *Cambarus* 1 subg. n., 1 sp. n.; Ortmann, 4.
- British Honduras, *Cambarus* 1 sp. n.; Ortmann, 4.
- Panama, *Isopoda* 1 sp. n.; Richardson, 2.
- (West Indies, *Penaeidea* and *Stenopidea* spp. n.; Bouvier, 13.)
- Dominica, W. Indies, *Brachyura* 1 sp. n.; Rathbun, 3.
- South America, *Isopoda* 5 spp. n.; Richardson, 3.
- S. America, *Penaeidea* and *Stenopidea* spp. n.; Bouvier, 13.
- South American lakes, *Amphipoda*; Chevreux, 2.
- (Lake Titicaca, *Amphipoda* 1 sp. n.; Chevreux, 5.)

- Venezuela, *Potamonidae* spp. n.; Rathbun, 6.  
 Paraguay, *Cladocera* 1 sp. n.; Stingelin, 1.  
 Colombia, *Potamonidae* spp. n.; Rathbun, 6.  
 Brazil, *Scyllarides* sp. n.; Rathbun, 5.—*Potamonidae* spp. n.; Rathbun, 6.  
 Argentine, *Potamonidae* sp. n.; Rathbun, 6.

**Australasia.**

- Australia, *Crustacea*; McCulloch, 1.—*Isopoda*; Richardson, 3.  
 Queensland, *Brachyura* and *Auomura* 5 spp. n.; Grant and McCulloch.  
 Victoria, *Crustacea*; Kershaw.—*Decapoda* 2 spp. n.; Fulton and Grant, 1, 2.  
 South Australia, *Brachyura* 4 spp. n., 1 var. n.; Baker.  
 (Port Jackson, *Decapoda* spp. n.; Grant.)

West Australia, *Potamouidae* spp. n.; Rathbun, 6.

New Zealand: *Crustacea*; Chilton, 3, 4, 5.—*Entomostraca* 1 gen. n. 3 spp. n.; Brady, 1.—*Ostracoda* 1 sp. n.; Chapman, 1.—*Isopoda*; Chilton, 1, 2.

Auckland Is., *Isopoda*; Budde-Lund, 2.

**Arctic and Antarctic.**

- Kara Sea, *Amphipoda Gammaridea* 1 sp. n.; Stebbing, 2.  
 Arctic Ocean, *Copepoda*; Sars, 3.  
 Greenland, *Rhizocephala* gen. n., sp. n.; Smith, Geoffrey.

Antarctic, *Cladocera* and *Copepoda* 1 gen. n., 5 spp. n., 1 var. n.; Ekman.—*Ostracoda* 2 spp. n.; Müller, 2.—*Copepoda* 5 spp. n.; Quidor, 1, 2.—*Cirripedia* 2 spp. n.; Gruvel, 3.—*Schizopoda* 5 spp. n.; Holt and Tattersall, 1.—*Amphipoda* 3 genn. n., 7 spp. n.; Chevreux, 1.—4 genn. n., 19 spp. n.; Walker.—*Seba* sp. n. (*Amphipoda*); Walker *vide* Chilton, 6.—*Isopoda* 4 genn.

n., 6 spp. n.; Richardson, 4.—*Anomura* and *Brachyura*; Lagerberg.

Sub-Antarctic islands, *Schizopoda* spp. n.; Illig, 1.

Kerguelen, *Ostracoda* 1 sp. n.; Müller, 3.—*Schizopoda* spp. n.; Illig, 1.

**Atlantic Ocean.**

*Ostracoda* genn. and spp. n.; Müller, 3; Vávra, 3.—*Copepoda* 2 genn. n., 10 spp. n.; Wolfenden.—*Schizopoda* spp. n.; Ortmann, 1; Illig, 1.

(Atlantic, *Cirolana* spp. n.; Dollfus, 1.—*Lysianasidae* spp. n.; Chevreux.)—*Lysmata seticaudata*; Pérez, 8.—*Gennadas* 4 spp. n.; Bouvier, 1.—*Haliporus* 4 spp. n.; Bouvier, 4, 5.—*Eurydice* sp. n.; *Isopoda*; Norman, 2.

North Atlantic, *Crustacea*; Rathbun, 2.

S. Atlantic, *Amphipoda* 1 sp. n.; Woltereck, 2.—*Copepoda* spp. n.; Cleve.

St. Paul and Crozet Is., *Isopoda* 2 spp. n.; Budde-Lund, 2.—*Schizopoda* sp. n.; Illig, 1.

**Indian Ocean.**

*Cirripedia* 9 spp. n., 1 subsp. n., 2 varr. n.; Annandale, 3, 4.—*Copepoda* 2 genn. n., 4 spp. n. Wilson, Cleve.—*Leptostraca*, *Schizopoda*, *Stomatopoda* 2 spp. n.; Tattersall, 2.—*Schizopoda* genn. and spp. n.; Illig, 1, 2.—*Amphipoda* 1 sp. n.; Woltereck, 2.—*Peneidae* 2 varr. n.; Alcock.—*Anomura* 2 spp. n.; Southwell.—*Brachyura* 3 genn. n., 14 spp. n., 10 varr. n.; Laurie.—*Bopyridae* (*Isopoda*) genn. n., spp. n.; Nobili, 5.

Christmas Island, *Ptychoognathus* and *Palaemon*; de Man, 1.

Andaman Is., *Cryptochirus dimorphus* sp. n.; Henderson.

**Pacific.**

*Ostracoda* genn. and spp. n.; Müller, 3, Judy, Esterly, 1, 2.—*Schizopoda* 1 sp. n.; Ortmann, 1.

Tuamotu Is., *Decapoda* and *Isopoda*  
5 genn. n., 34 spp. n., 3 varr. n.;  
Nobili, 3, 4.

Eastern Pacific, *Isopoda* 1 gen. and  
1 sp. n.; Richardson, 1.

Hawaiian islands, *Brachyura* and  
*Macrura* genn., spp. and subspp. n.;  
Rathbun, 1.—*Copepoda* 1 sp. n.; Daday,  
4, 5.

Marcus island, *Crustacea*; Bryan.

Gambier Is., *Alpheidae* 1 sp. n.;  
Coutière, 1.

#### Fossil Forms.

Palaeozoic, Bohemia, *Ostracoda*;  
Siemiradski.

Cambrian, China, *Ostracoda* spp. nn.;  
Walcott.

Silurian, Ludlow, *Crustacea*; Elles  
and Slater.

Silurian, Holland, *Entomostraca*;  
Jonker.

Silurian, Canada, *Crustacea*; Whit-  
eaves.

Silurian, New York, *Crustacea*; Clarke  
and Ruedemann.

Ordovician, Canada, *Ostracoda*;  
Ami.

Carboniferous, N. Staffordshire,  
*Crustacea*; Ward.

Carboniferous, Chester, *Crustacea*;  
Pocock.

Carboniferous, Scotland, *Crustacea*;  
Peach.

Carboniferous, Scotland, *Ostracoda*;  
Macnair.

Carboniferous, Kansas, U. S. America,  
*Ostracoda*; Ulrich and Bassler.

Trias, Britain, *Esterheria*; Lomas.

Jurassic, France, *Crustacea*; Méchin.

Purbeck, Dorset, *Ostracoda*; Chap-  
man, 2.

Cretaceous, Norfolk, *Cirripedia* 1  
sp. n. 1 var. n.; Woodward.

Lower Cretaceous, Germany, *Crus-  
tacea* 5 spp. n.; Harbort.

Lower Cretaceous, Crimea, *Crustacea*  
1 sp. n.; Borissiak.

Tertiary, New Jersey, *Brachyura* gen.  
and sp. n.; Weller.

Tertiary, Belgium, *Crustacea*; Des-  
tinez.

Tertiary, Italy, *Ostracoda*; Cappelli.

Tertiary, Italy, *Cirripedia* 5 spp. n.  
1 var. n.; Alessandri.

Tertiary, Italy, *Brachyura*; Airaghi.

Tertiary, Hungary, *Decapoda* 1 gen.  
and sp. n.; Lörenthey.

Eocene, Spain, *Crustacea*; Almera.

Eocene, Sicily, *Brachyura* 1 gen. n.  
3 spp. n.; Checchia-Rispoli.

Pliocene, Maryland, U. S. America,  
*Crustacea*; Clark.

Pleistocene, Nantucket, U. S. America,  
*Crustacea*, Wilson; Maryland, U. S.  
America, *Crustacea*; Clark.

Drift, Cheshire, *Cirripedia*; Newton.

#### III.—SYSTEMATIC. 2631

##### DECAPODA.

Decapoda of Norway and North Sea,  
APPELÖF, Meeresfauna von Bergen,  
1906, (113–238, with 2 pls. and 3 maps).

##### Brachyura.

##### OXYRHYNCHA.

*Oxyrhyncha* structure, KLUNZINGER,  
Spitzkrabben des Roten Meeres. (vii +  
91, with 2 pls.).

*Acanthophrys* characters of genus,  
list of species (486, 487), *harmandi*  
Japanese Sens (484), *germaini* Cochin  
China (486–487) spp. n., *longispinus* de  
Haan *spinosisima* var. n. Mozambique  
(487, 488), BOUVIER, Bul. Muséum,  
Paris, 12.—*A. harmandi* sp. n. Seas of  
Japan. BOUVIER, T.c. (484).

*Achaeus dubia* sp. n. Ceylon.  
LAURIE, Rep. Pearl Oyster Fish., 5,  
(367).

*Camposcia retusa* Latr. Red Sea,  
KLUNZINGER, Spitzkrabben des Roten  
Meeres, (15, pl. 1, fig. 1).

*Chlorinooides goldsboroughi* sp. n.  
Hawaiian islands, RATHBUN, Washing-  
ton, D.C., Bull. U. S. Com. Fish., 1903,  
23, (881, pl. xiv, fig. 7).

*Cryptopodia pan* sp. n. Ceylon.  
LAURIE, Rep. Pearl Oyster Fish., 5, (392, pl. 1, fig. 6).

*Cyclax suborbicularis* Stimpson. Red Sea. KLUNZINGER, Spitzkrabben des Roten Meeres, (34, pl. 1, fig. 6).

*Cyphocarcinus minutus* A.M.-Edw., description, synonymy, NOBILI, Bul. sci. France Belgique, 40, (109).

*Cyrtomaia smithi* Rathb., described (877, pl. vi, fig. 34, 35), *lamellata* sp. n. Hawaiian islands, (879, fig. 36). RATHBUN, Washington, D.C., Bul. U. S. Com. Fish., 1903, 23.

*Doelea alcocki* sp. n. Ceylon, LAURIE, Rep. Pearl Oyster Fish., 5, (381, pl. i, fig. 5, pl. ii, fig. 2).

*Eury nome granulosa* sp. n. S. Australian coast, BAKER, Adelaide, S. Aust., Trans. R. Soc., 30, (108, pl. i, fig. 3).

*Halimus convexus* Miers *hendersoni* var. n. (377), *peldevi* (378, pl. i, fig. 3, 3a), *iranii* (379, pl. i, fig. 4, 4a) spp. n. Ceylon, LAURIE, Rep. Pearl Oyster Fish., 5.

*Harruvia trinacra* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (886, pl. xiv, fig. 8).

*Herbstia corniculata* (27, pl. i, fig. 4), *contiguicornis* (28, pl. i, fig. 5) spp. n. Red Sea, KLUNZINGER, Spitzkrabben des Roten Meeres.

*Heterocrypta petrosa* sp. n. Red Sea, KLUNZINGER, op. cit. (53, pl. ii, fig. 9).

(*Hyastenus fultoni* sp. n. Off Port Jackson, GRANT, Sydney, N.S.W., Proc. Linn. Soc., 30, (313, pl. xi, fig. 1).)

*Inachus scorpio*, sexual characters affected by *Sacculina* parasite, SMITH, Fauna Neapel, Berlin, 29, (66-76).

*Lambrus*, *Oncodolambrus*, subgen. n., *praedator* sp. n. Japan, DE MAN, Ann. Mag. Nat. Hist., London, ser. 7, 17, (400). — *L. leprosus* Nob. (179, pl. ix, fig. 7), *montiger* Nob. (185, pl. xi, fig. 3). Red Sea, NOBILI, Ann. sci. nat. zool., Paris, 4. — *L. validus* de Haan, new to Australia, McCULLOCH, Sydney, N.S.W., Rec. Austr. Mus., 6, (231).

*Liomedon* gen. n., (*Parthenopidae*) *pentagonus* sp. n., Red Sea, KLUNZINGER, Spitzkrabben des Roten Meeres, (56-57, pl. ii, fig. 11).

*Macrocheira kaempferi*, Sea of Japan, CARRUCIO, Roma, Boll. Soc. zool. ital., 6, (85-95, with 1 plate).

*Micippa phlygra* Herbst, *thalia* Herbst diimorphic, Ceylon, LAURIE, Rep. Pearl Oyster Fish., 5, (384, 385). — *M. platipes* Rüpp., Red Sea, KLUNZINGER, Spitzkrabben des Roten Meeres, (37, pl. i, f. 8).

*Oncodolambrus* subgen. n., v. *Lambrus*.

*Parahoplophys nodulosa* Nob., description, NOBILI, Bul. sci. France, Belgique, 40, (106, text fig. 2).

*Paramithrax (Chlorinoides) longispinus* de Haan *bispinosus* var. n. Ceylon, LAURIE, Rep. Pearl Oyster Fish., 5, (383).

*Parathoe rotundata* Miers. Red Sea, KLUNZINGER, Spitzkrabben des Roten Meeres, (45, pl. i, f. 7).

*Paratymolus latipes* Hasw. *quadridentata* var. n. S. Australian coast, BAKER, Adelaide, S. Aust., Trans. R. Soc., 30, (107, pl. i, f. 2).

*Parthenope acuta* sp. n. Red Sea, KLUNZINGER, Spitzkrabben des Roten Meeres, (55, pl. ii, f. 10). — *P. nummifera*, (883, pl. xiv, f. 4), *stellata* (884, pl. xv, ff. 1, 2, 7), spp. n. Hawaiian islands, *lamelligera* White, (885, pl. xvii, f. 1), *whitei* A. M.-Edw. (885, pl. xv, f. 5), *calapoides*, Adams and White, (886, pl. xv, f. 6), described, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23.

*Schizophrys hilensis* sp. n. Hawaiian islands, RATHBUN, T.c. (882, text fig. 38).

*Simocarcinus camelus* sp. n., *brevirostris*, *pinnirostris* var. n. Red Sea, KLUNZINGER, Spitzkrabben des Roten Meeres, (17, 18, pl. i, f. 2). — *S. simplex* Dana *pyramidalatus* var. n. Ceylon, LAURIE, Rep. Pearl Oyster Fish., 5, (373).

*Sphenocarcinus carbunculus* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (879, pl. xiv, f. 6).

*Stenorhynchus ramusculus* sp. n. S. Australian coast, BAKER, Adelaide, S. Aust., Trans. R. Soc., 30, (104, pl. i, f. 1).

*Trigonothir pyramidatus* Hell. Red Sea. KUNZINGER, Spitzkrabben des Roten Meeres, (19, pl. i, f. 3).

*Xenocarcinus tuberculatus* White *alcocki* var. n. Ceylon, LAURIE, Rep. Pearl Oyster Fish., 5, (371).

#### CYLOMETOPA.

*Actaea*, synopsis of species (247); *kraussi*, Hell (248, pl. x, f. 4); *sabaca* Nob. (254, pl. x, f. 3); *nudulosa*, White (257, pl. x, f. 2); *pisigera* Nob. (259, pl. x, f. 1), descriptions; NOBILI, Ann. sci. nat. zool., Paris, 4.—*A. alcocki* sp. n. Ceylon, LAURIE, Rep. Pearl Oyster Fish., 5, (403).—*A. garretti*, (852, pl. ix, f. 8); *hawaiensis*, (853, pl. ix, f. 9) spp. n., Hawaiian islands, *nudulosa*, White, described, (853, pl. ix, f. 4); RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (854, pl. ix, f. 15).

*Actumnus bonnieri*, description, NOBILI, T.c. (132, pl. vi, f. 32).

*Archias sexdentatus*, Pauls. description, NOBILI, Ann. sci. nat. zool., Paris, 4, (198).

*Banarea villosa* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (854, pl. ix, f. 15).

† *Callinectes sapidus* Rathb., description, CLARK, Maryland, Geol. Surv., Pliocene and Pleistocene, Baltimore, 1906, (172, pl. xli).

*Calmania* gen. n. (*Xanthidae*) *prima* sp. n. Ceylon, LAURIE, Rep. Pearl Oyster Fish., 5, (406, 407, pl. i, ff. 12a-o).

*Carcinus moenas* albinism, NINNI, Boll. Naturalista, Siena, 26, (76).

*Carpilodes*, synopsis of species (214), *diodorensis* Nob. Red Sea, NOBILI, Ann. sci. nat. zool., Paris, 4, (216, pl. x, f. 9).—*C. coccineus* (843, pl. viii, f. 4), *virgatus* (843, pl. viii, f. 3), *supernodosus* (844, pl. viii, f. 5), spp. n., Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23.

*Charybdis* (*Goniosoma*), synopsis of species (194), *heterodon* Nob. Red Sea, NOBILI, Ann. sci. nat. zool., Paris, (196, pl. viii, f. 4).—*C. (Goniosoma) giardi*

Nob., description, NOBILI, Bul. sci. France Belgique, 40, (115, pl. v, f. 23, pl. vii, f. 3).—*C. japonica* A. M. Edw. (pl. xiii, f. 2), *erythroductyla* (pl. iv), *orientalis* Dana (pl. xiii, f. 1), figured; RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23.

*Chlorodius lippus* Nob. Red Sea, NOBILI, Ann. sci. nat. zool., Paris, 4, (263, pl. x, f. 8).

*Chlorodopsis aberrans* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (859, text fig. 20).

† *Cymocarcinus angustifrons* Bittner, Eocene, Italy, CHECCHINA-RISPOLI, Palermo, Giorn. sc. nat. econ., 25, (314, pl. i, ff. 5-8).

*Cycloanthops angustus* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (849, f. 6).

*Dacryopilumnus* gen. n., *cremita* sp. n. Tuamoto Is., Polynesia, NOBILI, Bul. Muséum, Paris, 12, (263-264).

*Deckenia mitis* sp. n. German E. Africa, HILGENDORF, Deutsch Ost-Afrika Dekapoden, (24, f. 8).

*Demania* gen. n., near *Zozymus*, *splendida* sp. n. Ceylon, LAURIE, Rep. Pearl Oyster Fish., 5, (396-397, pl. i, f. 8, and pl. ii, f. 1).

*Eriphia spinifrons* with two parasites, an Isopod and a *Sacculina*, SMITH, Fauna Neapel, Berlin, 29, (76-80).

*Elitisus splendidus* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (850, plates iii and x).

*Eurycarcinus orientalis* A. M. Edw. (289, pl. xi, f. 5), *integrifrons* de Man (290, pl. xi, f. 2), descriptions, NOBILI, Ann. sci. nat. zool., Paris, 4.

*Eurianthus herdmani* sp. n. Ceylon, LAURIE, Rep. Pearl Oyster Fish., 5, (400, pl. i, ff. 9, 9a).

† *Gemmellarocarcinus* gen. n. (*Canceridae*), *lörentheyi* sp. n. Eocene, Italy, CHECCHINA-RISPOLI, Palermo, Giorn. sc. nat. econ., 25, (315, 316, pl. i, ff. 1-2).

*Gomeza bicornis* Gray, variation, Ceylon, LAURIE, Rep. Pearl Oyster Fish., 5, (421).

*Goniocaphyra inaequalis* sp. n.  
Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (870, pl. xii, f. 9).

*Halimede hendersoni* Nob., description, NOBILI, Bul. sci. France Belgique, 40, (123, pl. vi, f. 31).

*Heteropanope pharaonica* Nob., Red Sea, NOBILI, Ann. sci. nat. zool., Paris, 4, (286, pl. xi, f. 1).

*Leptodius*, synopsis of species, NOBILI, T.c. (239).—*L. molokaiensis*, (847, pl. ix, f. 1), *waialuanus*, (848, pl. viii, f. 9), spp. n. *nudipes* Dana, *gracilis* Dana figured, (848, pl. ix, ff. 2, 3), Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23.

*Liomeria*, synopsis of Red Sea species, NOBILI, Ann. sci. nat. zool., Paris, 4, (221).—*L. praetexta* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (844, f. 7).

*Lioxantho hasurelli* nom. n. for *Cycloxyanthus?* *punctatus* Hasw., FULTON and GRANT, Melbourne, Proc. R. Soc. Vict., 19, (7).

*Lophactaea*, synopsis of Red Sea species, NOBILI, Ann. sci. nat. zool., Paris, 4, (230).

*Lophozozymus intonsus* described, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (846, pl. viii, f. 8).

*Lupa aburatsubo* sp. n. Japan, DOFLEIN, Verh. D. zool. Ges., Leipzig, 16, (71).

*Lupoeclylus quinquedentatus* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (869, pl. xii, f. 7).

*Lybia*, synopsis of Indio-Pacific species, *denticulata* Nob., Red Sea, NOBILI, Ann. sci. nat. zool., Paris, 4, (294, pl. viii, f. 6).

*Melia tessellata* Latr. bearing Actinians in its claws, Hawaiian Islands and Ceylon, DURDEN, London, Proc. Zool. Soc., 1905, (497–506); RICHTERS, Zool. Beob., Frankfurt a. M., 47, (225–228); WILLEY, Spolia Zeylan., 3, (224–226).

*Menippe convexa* Rathb. described, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (861, pl. xi, f. 4).

† *Microcorystes* gen. n. (near *Corystes*), *latifrons* sp. n. Eocene, Hungary, LÖRENTHEY, Math. Term. Ért., Budapest, 22, 1904, (161).

*Micropanope sexlobata* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (856, pl. ix, f. 13).

*Neptunus*, synopsis of species, NOBILI, Ann. sci. nat. zool., Paris, 4, (189).—*N. (Hellenus) arabicus* Nob. description, NOBILI, Bul. sci. France Belgique 40, (115, pl. v, f. 22).—*N. euglyphus* sp. n. (413), *hastatoides* Fab. *unidens* var. n. (414), *longispinosus* Dana, *bidenta* var. n. (415), *dubia* sp. n. (416), Ceylon, LAURIE, Rep. Pearl Oyster Fish., 5.

*Parapleurophrycoides* gen. n. *roseus* sp. n. Tuamotu Is., Polynesia, NOBILI, Bul. Muséum, Paris, 12, (264).

(*Parathelphusa paviei* sp. n. Laos, MAN, Mission Pavie, 3, (320, pl. xvii, f. 4.)

*Parathranites hexagonum* (867, pl. xii, f. 3), *latibrachium* (868, text-fig. 26), spp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23.

† *Phlyctenodes depressus* Edw. figured, AIRAGHI, Milano, Atti. Soc. Ital. sc. nat., 44, (205, pl. iv, f. 3).—*P. krenneri* Lörenthay, Eocene, Italy, CHESCHIA-RISPOLI, Palermo, Giorn. sc. nat. econ., 25, (310, pl. i, f. 10).

*Phymodius laysani* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (858, pl. xii, f. 8).

*Pilodius armiger* Nob., Red Sea, NOBILI, Ann. sci. nat. zool., Paris, 4, (267, pl. viii, f. 5).—*P. flavus* Rathb. described, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (860, fig. 21).

*Pilumnus forskalii* Edw. (275, pl. x, f. 5), *propinquus* Nob. (277, pl. ix, f. 7), *spongiosus* Nob. (280, pl. x, f. 6), *schrenkii* Pauls. (283), descriptions, NOBILI, Ann. sci. nat. zool., Paris, 4.—*P. nuttingi* (862, pl. xi, f. 8), *acutifrons* (863), *taeniola* (864, pl. xi, f. 3), spp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23.—*P. parvulus*, *merodontatus* spp. n. Tuamotu Is., Polynesia, NOBILI, Bul. Muséum, Paris, 12, (263).—*P. pilosus* sp. n.

Victoria, FULTON and GRANT, Melbourne, Proc. R. Soc. Vict., **19**, (7, pl. iv, ff. 1-4).—*P. spinicarpus* sp. n. Masthead Reef, Queensland, GRANT and McCULLOCH, Sydney, N.S.W., Proc. Linn. Soc., **31**, (15, pl. i, f. 2).—*P. trichophoroides* de Man (134), *longicornis* Hilg. (135), *savignyi* Hell. (138), *propinquus* Nob. (140), descriptions, NOBILI, Bul. sci. France Belgique, **40**.

*Platepistoma* gen. n. (*Portunidae*) *macropthalmum* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**, (876, fig. 33).

*Platyozius perpusillus* sp. n. Tuamotu Is., Polynesia, NOBILI, Bul. Muséum, Paris, **12**, (264).

*Polydectus cupulifera* Latr. bearing Actinians in its claws, Hawaiian islands, DUERDEN, London, Proc. Zool. Soc., **1905**, (506); RICHTERS, Zool. Beob., Frankfurt a. M., **47**, (225-228).

*Portunus pubescens* Dana (pl. xiv, f. 1), *granulatus* A. M. Edw. (pl. xii, f. 2), *orbicularis* Richt. (pl. xii, f. 4), *longispinosus* Dana (pl. xii, f. 6), figured, *macrophthalmus* (871, pl. xii, f. 5), sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**.—*P. depurator* Leach with Gregarina parasites, LÉGER and DUNOSCO, Paris, C.R. soc. biol., **60**, (1001-1003).

*Potamocarcinus chaffanjoni* Orinoco (311, pl. xvi, f. 2), *guatemalensis*, Guatemala (313, pl. xvi, f. 7), spp. n. RATHBUN, Nouv. Arch. Muséum, Paris, **7**.

*Potamonidae*, classification and descriptions of species, RATHBUN, op. cit. sér. 4, **6**, 1904, (225-312, pls. ix-xviii); **7**, (159-321, pls. xiii-xxii); **8**, (33-122); catalogue, Bul. Muséum, Paris, 1906, (369-376). New species only recorded.

*Potamon* spp. characters, DE MAN, Zool. Jahrb., Syst., **23**, (743-760).—*P. setiger* Syria (258, pl. ix, f. 2), *shensiensis* China (262, pl. ix, f. 8), *davidi* China (264, pl. ix, f. 3), *mindanaensis* Philippines (268, pl. x, f. 5), *kinabaluensis* Borneo (269, pl. x, f. 2), *kooloensis* N. India (270, pl. x, f. 1), *paludosus* Siam (272, pl. x, f. 4), *brousinichei* Cochin-China (272, pl. x, f. 6), *palustris* Laos (273, pl. x, f. 3), *manii* Siam (274, pl. xi, f. 6), *tannanti* (279, pl. xi, (n-9720 l)

f. 8), *rangoonensis* Burma (279, pl. xi, f. 2), *mooloyitensis* Tenasserim (283), *luangprabangensis* (281, pl. xi, f. 9), *orleansi* (282, pl. xi, f. 7), *laosensis* (285, pl. xi, f. 3), *lacunifer* (286, pl. xi, f. 1), Indo-China and Siam, *vagrakarouensis* Mysore (292, pl. xii, f. 4), *bouvieri* India (293, pl. xii, f. 5), *nigrensis* W. Africa (295, pl. xii, f. 8), *humbloti* (297, pl. xii, f. 10), *grandidieri* (298, pl. xii, f. 11), *bombebekensis* (298, pl. xii, f. 6), Madagascar, *antipoloensis* (301, pl. xiii, f. 4), *mistio* (302, pl. xiii, f. 3), Philippines, *koatenensis* China (308, pl. xiii, f. 8), *montanoanus* Philippines (309, pl. xiii, f. 7), *thagatensis*, Tenasserim (296), *inornatus* Siam (311, pl. xiv, f. 1), spp. n. RATHBUN, Nouv. Arch. Muséum, Paris, **6**.—(*Potamon*) *cochinchinense* sp. n. Cochinchina, DE MAN, Mission Pavie, **3**, (323, pl. xviii, f. 5).—*P. (Potamonautes) sidneyi* Natal, **7**, (165), **6**, (pl. xiv, f. 5), *lueboensis* Congo, **7**, (166), **6**, (pl. xiv, f. 2), *regnieri* W. Africa, **7**, (168), **6**, (pl. xiv, f. 3), *lirrangensis*, French Congo, **7**, (169), **6**, (pl. xiv, f. 8), *didieri*, E. Africa, **7**, (170), **6**, (pl. xiv, f. 9), *freycineti*, W. Australia, **7**, (175), **6**, (pl. xv, f. 5), *renonensis*, Malay Peninsula, **7**, (176), *dybouskii*, W. Africa, **7**, (177), **6**, (pl. xv, f. 3), *tambelanensis*, Tambelan Is., **7**, (182), **6**, (pl. xv, f. 4), *pobeguini*, Congo, **7**, (195), **6**, (pl. xvi, f. 8), spp. n.; *ambiguus*, **7**, (171), *biballensis* (176), *capelloanus* (179), *jacquemonti* (185), nomm. n. RATHBUN, Nouv. Arch. Muséum, Paris.—*P. (Potamonautes) aloysii-sabaudiae* sp. n. Mt. Ruwenzori, NOBILI, Torino, Boll. Musei Zool. Anat., **21**, No. 544 (1).—*P. (Paratelphusa) improvisum* Lanch. (f. 1), *sex-punctatum* sp. n. (f. 2), Malay Peninsula, LANCHESTER, Fasc. Malay. Zool., **3**, (129).—*P. (Paratelphusa) endymion* sp. n. China, DE MAN, Zool. Ausz., **30**, (35-36).—*P. (Paratelphusa) faxoni*, Siam (251, pl. xiv, f. 8), *leguenensis*, Burma (260, pl. xiv, f. 3), *antonigenensis*, Madagascar (265, pl. xii, f. 5), spp. n.; *woodmasoni* nom. n. for *edwardsi* Wood-Mason; RATHBUN, Nouv. Arch. Muséum, Paris, **7**.—*P. (Geothelphusa) sakamotoanus* Liu-Chiu Is., **7**, (206), **6**, (pl. xviii, f. 6), *agassizii* N. E. Australia, **7**, (211), **6**, (pl. xviii, f. 2), *araneus* Indo-China, **7**, (214), *sikkimensis* Sikkim, **7**, (219), **6**, (pl. xviii, f. 7), *perrieri* Congo, **7**, (222), **6**, (pl. xviii, f. 11), spp. n. RATHBUN, Nouv. Arch. Muséum, Paris.—(*Geo-*

*thelphusa) ankaraharae*, sp. n. Madagascar, NOBILI, Torino, Boll. Musei zool. anat., 21, No. 532, (1-4, fig.).

*Pseudothelphusa propinqua* (280, pl. xv, f. 11), *proxima* Guatemala, (281, pl. xv, f. 10), *venezuelensis* Venezuela, (281, pl. xv, f. 6), *digueti* Mexico, (284, pl. xvii, f. 8), *simoni* Venezuela, (291), *wymani* Surinam, (291), *nelsoni* Mexico, (293), *similaris*, (295, pl. xvii, f. 4), *cobanensis*, (296, pl. xvii, f. 5), *grallator*, (297, pl. xvii, f. 6), *complanata*, (303, pl. xv, f. 3), Guatemala, *angusta* Brazil, (306, pl. xv, f. 7), *buenaventurensis* Colombia, (307), spp. n. RATHBUN, Nouv. Arch. Muséum, Paris, 7.

*Telphusa*, key to E. African spp., (7), *suprasulcata*, (8, f. 5), *mrogorensis*, (10), *infravallata*, (12, f. 2), *reichardi*, (13), *bipartita*, (15), *neumannii*, (18, f. 6), *pilosa*, (19), spp. n. German E. Africa; *hilgendorfi* Pfeff., (9, f. 3), *platycentron* Hilg., (11, f. 4), HILGENDORF, Deutsch Ost-Afrika Dekapoden.

*Thalamita*, synopsis of species, NOBILI, Ann. sci. nat. zool., Paris, 4, (201).—*T. auanensis* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (874, pl. xii, f. 1).—*T. bouvieri*, *seurati*, *minuscula* spp. n., *pileumoides* *gatavakensis* var. n., Tuamotu Is., Polynesia, NOBILI, Bul. Muséum, Paris, 12, (262).—*T. prymna* Herbst *annectans* var. n. Ceylon, LAURIE, Rep. Pearl Oyster Fish., 5, (418).

*Trichodactylus edwardsi* nom. n. for *dentatus* Edw., 8, (40); sub-genus *Valdivia*, *thayeri* Brazil, 8, (45), 7, (pl. xviii, f. 11), *tifucanus* Brazil, 8, (46), 7, (pl. xix, f. 3), *venezuelensis* Venezuela, 8, (47), 7, (pl. xix, f. 10), *faxonii*, 8, (49), 7, (pl. xviii, f. 10), *hartii*, 8, (55), 7, (pl. xix, f. 9), *bourgeti*, 8, (56), 7, (pl. xviii, f. 4), Brazil, spp. n. RATHBUN, Nouv. Arch. Muséum, Paris.—*T. (Dilocarcinus) argentinianus* Argentine, 8, (60), 7, (pl. xx, ff. 5, 6), *gurupensis* Brazil, 8, (64), 7, (pl. xx, f. 7), spp. n. RATHBUN, op. cit.

*Xanthias flavescentis*, (855, pl. ix, f. 11), *canaliculatus*, (856, pl. ix, f. 12), spp. n. Hawaiian islands, *minutus* Rathb. described, (855, pl. ix, f. 14), RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23.

*Xantho lacunosus* sp. n. Hawaiian islands, RATHBUN, T.c., (847, pl. viii, f. 6).

*Xanthodius biunguis* sp. n. Hawaiian islands, RATHBUN, T.c., (849, pl. viii, f. 10).

† *Xanthopsis kressenbergenensis* figured, AIRAGHI, Milano, Atti soc. ital. sc. nat., 44, (206, pl. iv, ff. 4, 5).

*Zozymus gemmula* Dana *ceylonica* var. n. Ceylon, LAURIE, Rep. Pearl Oyster Fish., 5, (395, pl. i, f. 7).

#### CATOMETOPA.

*Cardisoma armatum* Herkl. characters. BOUVIER, Bul. Muséum, Paris, 12, (497).

*Cyclograpns lophopus* Nob. Red Sea, NOBILI, Ann. sci. nat. zool., Paris, 4, (321, pl. xi, f. 4).

*Elamena truncata*, South Australian coast, BAKER, Adelaide, S. Aust., Trans. R. Soc., 30, (112, pl. ii, f. 2).

*Eurytinum tristani* sp. n. Costa Rica, RATHBUN, Washington, D.C., Proc. Biol., 19, (100).

† *Galenopsis schopeni* sp. n. Eocene, Italy, CHECCHIA-RISPOLI, Palermo, Giorn. sc. nat. econ., 25, (320, pl. i, ff. 3, 4).

*Gecarcinidae*, habits, GRAVIER, Bul. Muséum, Paris, 12, (498).

*Gelasimus tangeri* autotomy and regeneration of chela, BAUDOUIN, Rev. sci., Paris, ser. 5, 6, (293-300); and Ann. sci. nat. zool., sér. 9, 3, (1-33).

*Grapsus strigosus longitarsis* Dana described, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (838, pl. viii, f. 1).

*Hymenosoma rostratum* S. Australian coast, BAKER, Adelaide, S. Aust., Trans. R. Soc., 30, (114, pl. iii, f. 2).

*Litocheira glabra* sp. n. S. Australian coast, BAKER, T.c., (110, pl. ii, f. 1, pl. iii, f. 3).

*Macrophthalmus consobrinus* sp. n. Tuamotu Is., Polynesia, NOBILI, Bul. Muséum, Paris, 12, (265).—*M. latreillei* variation, Ceylon, LAURIE, Rep. Pearl Oyster Fish., 5, (427, pl. ii, f. 3).

*Manella* gen. n. (*Palicidae*) *spinipes* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (837, pl. vii, f. 6).

*Mertonia gen. n.* (*Rhizopinae*) *lanka* sp. n. Ceylon, LAURIE, T.c., (423, pl. i, ff. 11a, b).

*Metaplaax hirsutimana* sp. n. Queensland, GRANT and McCULLOCH, Sydney, N.S.W., Proc. Linn. Soc., **31**, (21, pl. i, f. 3).

*Ocyopoda rotundata arabica* var. n. Persian Gulf, NOBILI, Bul. sci., France Belgique, **40**, (152, pl. v, f. 26).

*Ostracocetes* synopsis of species, NOBILI, Ann. sci. nat. zool., **4**, (299).—*O. spondyli* description, NOBILI, Bul. sci. France Belgique, **40**, (149, pl. v, f. 24, pl. vi, f. 33).

*Pachygrapsus marmoratus* with two parasites, an Isopod and a *Sacculina*, SMITH, Fauna Neapel, Berlin, **29**, (80, 81).

*Palicus fisheri* (835), *ouahuensis* (836), spp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**, (pl. vii, ff. 4, 5).—*P. jukesii* Ceylon, LAURIE, Rep. Pearl Oyster Fish., **5**, (430, pl. i, f. 12).

*Paranotonyx curtipes* Red Sea, NOBILI, Ann. sci. nat. zool., **4**, (298, pl. viii, f. 7).

*Pilumnoplax cooki* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**, (335, pl. vii, f. 3).

*Pinnotheres*; synopsis of species (302), *borradalei* nom. n. for *tenuipes* Borradale (306), *maindroni*, (306, pl. viii, f. 8), NOBILI, Ann. sci. nat. zool., **4**.—*P. margaritiferae* sp. n. Ceylon, LAURIE, Rep. Pearl Oyster Fish., **5**, (424).—*P. perezi* description, NOBILI, Bul. sci. France Belgique, **40**, (147, pl. v, f. 25).

*Plagusia depressa*, key to varieties, LAURIE, Rep. Pearl Oyster Fish., **5**, (420).

*Ptychognathus*; revision of the genus (541–544), *pusillus* Heller (537–541, pl. xvii, ff. 1–5), Christmas Island, DE MAN, London, Proc. Zool. Soc., **1905**.

*Pseudorhombila octodentata* sp. n. Dominica, W. Indies, RATHBUN, Washington, D.C., Proc. Biol. Soc., **19**, (91).

*Sarmatiom saxonii* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**, (841, pl. vii, f. 1).

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*Sesarma elegans* Herkl. Spanish Guinea, NOBILI, Madrid, Mem. soc. esp. hist. nat., **1**, (314, pl. viii, f. 2).—*S. jousseaumei* Nob. Red Sea, NOBILI, Ann. sci. nat. zool., **4**, (323, pl. viii, f. 9).—*S. rhizophorae* (99), *bolleyi* (100), spp. n. Costa Rica, RATHBUN, Washington, D.C., Proc. Biol. Soc., **19**.

*Trichia australis* sp. n. S. Australian coast, BAKER, Adelaide, S. Aust., Trans R. Soc., **30**, (115, pl. iii, f. 1).

#### OXYSTOMATA.

Structure of *Oxystomata*; KLUNZINGER, Spitzkrabben des Roten Meeres, (vii+91, with 2 pls.).

*Calappa gallus*, Red Sea, KLUNZINGER, T.c. (61, pl. ii, f. 14); dimorphism, LAURIE, Rep. Pearl Oyster Fish., **5**, (354).

*Cryptocnemus crenulatus* sp. n., Queensland, GRANT and McCULLOCH, Sydney, N.S.W., Proc. Linn. Soc., **31**, (25, pl. ii, f. 2).—*C. tuberosus* sp. n., Red Sea, KLUNZINGER, Spitzkrabben des Roten Meeres, (79, pl. ii, f. 13).

(*Cymonomops similis* sp. n. off Port Jackson, GRANT, Sydney, N.S.W., Proc. Linn. Soc., **30**, (315, pl. x, f. 1).)

*Ebalia*; synopsis of species (155), *granulata* Rupp. (155, pl. ix, f. 1); *abdominalis* Nob. (157, pl. ix, f. 2); *lacertosa* (159, pl. ix, f. 3), NOBILI, Ann. sci. nat. zool., **4**.—*E. jordani* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**, (889, pl. xv, f. 3).

*Ethusa mascarone hawaiiensis* subsp. n. Hawaiian islands, RATHBUN, T.c. (891, pl. xv, f. 4).

*Hepaticus distefanoi* sp. n. Eocene, Italy, CHECCIA-RISPOLI Palermo, Giorn. sc. nat. econ., **25**, (323, pl. i, ff. 9–13).

*Heteronucia venusta* sp. n. Tuamotu Is. Polynesia, NOBILI, Bul. Muséum, Paris, **12**, (260).

*Leucosia* synopsis of species, NOBILI, Ann. sci. nat. zool., **4**, (165).—*L. longifrons* (97), *margaritata* (99). *hilaris* (100, pl. vi, f. 29), descriptions, NOBILI, Bul. sci. France Belgique, **40**.

*Lithadia sculpta* Haswell *aglypha* var. n. Ceylon, LAURIE, Rep. Pearl Oyster Fish., **5**, (358).

*Matuta banksii* Red Sea, KUNZINGER, Spitzkrabben des Roten Meeres, (65, pl. ii, f. 12).

*Mursia hawaiiensis* described (887, pl. xviii, ff. 32-4), *spinimanus* sp. n. Hawaiian islands, (888, pl. xvi, f. 1), RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**.

*Myra*; synopsis of species, NOBILI, Ann. sci. nat. zool., **4**, (164).—*M. affinis* description, NOBILI, Bul. sci. France Belgique, **40**, (95).

*Nucia*; synopsis of species *tuberculosa* description, NOBILI, Ann. sci. nat. zool., **4**, (161, pl. ix, f. 6).—*N. rosea* sp. n. Tuamotu Is. Polynesia, NOBILI, Bul. Museum, Paris, **12**, (261).

*Nursia jousseaumei*, Red Sea, NOBILI, Ann. sci. nat. zool., **4**, (151, pl. ix, f. 4).—*N. mimetica* sp. n. Tuamotu Is. Polynesia, NOBILI, Bul. Muséum, Paris, **12**, (261).

*Paramithrax sternocostulatus* (28, pl. iii, f. 2); *coppingeri* (29, pl. ii, f. 3); synonymy, GRANT and McCULLOCH, Sydney, N.S.W., Proc. Linn. Soc., **31**.

*Philyra* synopsis of species, NOBILI, Ann. sci. nat. zool., **4**, (168).—*P. adamsi*, Ceylon, LAURIE, Rep. Pearl Oyster Fish., **5**, (364, pl. i, f. 1).—*P. granigera* description, NOBILI, Bul. sci. France Belgique, **40**, (102, pl. vi, f. 30).

*Randallia distincta* described (890, pl. xvi, ff. 2, 3, *gilberti* sp. n. Hawaiian islands (890, pl. xvi, f. 4), RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**.

†*Ranina reussi, bittneri*, figured and compared, AIRAGHI, Milan., Atti soc. Ital. sc. nat., **44**, (203, pl. iv, ff. 1, 2).

*Tlos angulatus* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**, (889, pl. xvi, f. 5).—*T. havelocki* sp. n. Ceylon, LAURIE, Rep. Pearl Oyster Fish., **5**, (357, pl. i, f. 2).

#### DROMIACEA.

*Conchacetus andamanicus*. Ceylon, characters, LAURIE, Rep. Pearl Oyster Fish., **5**, (353).

*Cryptodromia granulata* description, NOBILI, Ann. sci. nat. zool., **4**, (147, pl. ix, f. 3).

*Dicranodromia*; characters of species, BOUVIER, Bul. Muséum, Paris, **12**, (481, 482).

*Dromia intermedia* sp. n. Ceylon, LAURIE, Rep. Pearl Oyster Fish., **5**, (351).

(*Latreillopsis petterdi* sp. n. off Port Jackson, GRANT, Sydney, N.S.W., Proc. Linn. Soc., **30**, (317, pl. x, f. 2).)

#### INCERTAE SEDIS.

*Cryptochirus dimorphus* sp. n. (*Haplocarcinidae*) Andaman Is., HENDERSON, Ann. Mag. Nat. Hist., London, **18**, (214 pl. viii).

†*Tetracarcinus* gen. n. Systematic position not indicated by describer, *subquadratus* sp. n. Cliffwood clay, New Jersey, WELLER, J. Geol., Chicago, Ill., **13**, (328).

#### Anomura.

##### GALATHEIDEA.

*Ethusa japonica* sp. n. Japan, DOFLEIN, Verh. D. Zool. Ges. Leipzig, **16**, (71).

*Galatheidae*; habits, GALLOWAY and FLEURE, Rep. Brit. Ass., **1906**, (608-610).

*Galathea*; key to Australian, GRANT and McCULLOCH, Sydney, N.S.W., Proc. Linn. Soc., **31**, (43-52, pl. iv); synopsis of species.—*G. humilis* (124), *aegyptiaca* (126, pl. vii, f. 3), *brevimana, longimana* (128), descriptions, NOBILI, Ann. sci. nat. zool., **4**.—*G. intermedia* synonymy, NORMAN and SCOTT, Crustacea of Devon and Cornwall (11).—*G. megalochira* sp. n. Tuamotu Is. Polynesia, NOBILI, Bul. Muséum, Paris, **12**, (260).—*G. strigosa* structure of hepato-pancreas, GUIEVILLE, Paris, Bul. soc. philon., **8**, (97-102).—*G. whiteleggi* sp. n., Port Jackson, Australia, GRANT and McCULLOCH, Sydney, N.S.W., Proc. Linn. Soc., **31**, (45, pl. iv, f. 2).

*Munida gregaria* compared with *subrugosa*, LAGERBERG, Schwed. Südpolar-Exped., **5**, Lief. 7, (7-10, pl. i, 4-7).—*M. japonica* (221), *alecocki* sp. n. (222). Ceylon, SOUTHWELL, Rep. Pearl Oyster Fish., **5**.

*Pachycheles ornatus* sp. n. San Thomé Id., BOUVIER, Bul. Muséum, Paris, **12**, (494).—*P. sculptus* description,

NOBILI, Bul. sci., France, Belgique, **40**, (67).

*Petrolisthes*; synopsis of species, NOBILI, Ann. sci. nat. zool., **4**, (129).—*P. patagonicus* commensal with *Asteracanthion helianthus*, at Valparaiso, BOUVIER, Paris, Bul. soc. ent. 1906, (28, 29).

*Porcellana hornelli* sp. n. (*Porcellanidae*). Ceylon, SOUTHWELL, Rep. Pearl Oyster Fish., **5**, (218, f. 1).—*P. inaequalis* description, NOBILI, Bul. sci. France Belgique, **40**, (74, pl. v, f. 18).

*Polyonyx*; synopsis of species (136), *pedalis* Nob. (137, pl. viii, f. 3); *denticulatus*, Pauls. (138) descriptions; NOBILI, Ann. sci. nat. zool., **4**.—*P. paucidentis* (70, pl. v, f. 16); *pugilator* (71, pl. v, f. 17, pl. vi, f. 28), descriptions, NOBILI, Bul. sci. France Belgique, **40**.

#### PAGURIDEA.

*Anapagurus polynesiensis* sp. n. Tuamotu Is., NOBILI, Bul. Muséum, Paris, **12**, (260).—*A. bonnieri* description, NOBILI, Bul. sci. France Belgique, **40**, (89, pl. v, f. 19).

*Caleimus rosaceus* description, NOBILI, T.c. (84, pl. v, f. 21.)

*Clibanarius*; synopsis of Red Sea species, NOBILI, Ann. sci. nat. zool., **4**, (115).

*Caenobita rufescens* habits, GRAVIER, Bul. Muséum, Paris, **12**, (499); compared with *C. rugosa*, BOUVIER, T.c. (493).

*Diogenes*; synopsis of species, NOBILI, Ann. sci. nat. zool., **4**, (118).—*D. capricorneus* sp. n. Queensland, GRANT and McCULLOCH, Sydney, N.S.W., Proc. Linn. Soc., **31**, (35, pl. iii, f. 3).—*D. pugilator* synonymy, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (9).

*Eupagurus cavicarpus* Pauls. description, NOBILI, Ann. sci. nat. zool., **4**, (123).—*E. forceps* claws figured, LAGERBERG Schwed. Südpolar Exped., **5**, Lief. 7, (2-4, pl. i, ff. 1-33).—*E. hedleyi* nom. n. = *E. kirki*, Miers, GRANT and McCULLOCH, Sydney, N.S.W., Proc. Linn. Soc., **31**, (37).—*E. maurus* sp. n. Tuamotu Is., Polynesia, NOBILI Bul. Muséum, Paris, **12**, (259).

(*Paguristes aciculus* sp. n. off Port Jackson, GRANT, Sydney, N.S.W., Proc.

Linn. Soc., **30**, (319, pl. xi, f. 3).)—*P. jousseaumei perspicax* var. n. Persian gulf, NOBILI, Bul. sci., France, Belgique, **40**, (87).—*P. mauritanica* sp. n. Coast of N. W. Africa, BOUVIER, Bul. Muséum, Paris, **12**, (186, f. 1).

*Pagurus*; synopsis of species, NOBILI, Ann. sci. nat. zool., **4**, (120).

*Paralomis granulosa* description, LAGERBERG, Schwed. Südpolar-Exped., **5**, Lief. 7, (14-17, pl. i, f. 10).

*Troglopagurus*; synopsis of species (80), *persicus* description (78), NOBILI, Bul. sci. France Belgique, **40**.

#### Macrura.

Larvae of *Macrura*; COUTIÈRE, Paris, C.R. Acad. sci., **142**, (847-849); NOBILI, Bul. sci. France, Belgique, **40**, (35).

#### NEPHROPSIDEA.

*Astacus*; extermination by disease, restocking rivers, DROUIN DE BOUVILLE, Nancy, Bul. soc. sci., **7**, (28-132).—*A. fluviatilis* incrusted with a Polyzoan, ŁOMNICKI, Kosmos, Lwów, **31**, (249-256); growth, DRÖSCHER, Fischereiztg., Neudamm, **9**, (113-117, 133-137).—(*A. fluviatilis* var. *torrentium* colour variety, BOUVIER, Paris, Bul. soc. ent., **1904**, (250-255).)—†*A. antiquus* sp. n. Upper Wealden Germany; HARBORT, Berlin, Abh. geol. Landesanst., **45**, (20, pl. i, f. 1 and pl. xi, f. 3).

*Cambarus*; anatomy of annulus ventralis, ANDREWS, Wood's Holl, Mass. Mar. Biol. Lab. Bull., **10**, (122-137); and Boston, Mass., Proc. Soc. Nat. Hist., **32**, (427-480, 1 pl.).—*C. spp.*, descriptions, local distribution in Pennsylvania, ORTMANN, Pittsburgh Pa. Mem. Carnegie Mus., **2**, (343-524, pls. A, B, 39-43).—*C. affinis*, egg-laying habits, ANDREWS, Amer. Nat. Boston, Mass., **40**, (343-356).—*C. (Procambarus) pilosimanus* sp. n. British Honduras (6), *cubensis* Sauss., male genitalia (11), ORTMANN, Washington, D.C., Proc. Acad. Sci., **8**.—*C. wiegmanni* description, ORTMANN, T.c. (15).

(*Cambarus monongalensis* sp. n. Pennsylvania, ORTMANN, (395-398), Pittsburgh, Pa., Ann. Carnegie Mus., **3**, 1905.)

*Enoplometopus occidentalis* described, RATHBUN, Washington, D.C., Bull. U.S. Com. Fish, 1903, **23**, (900, pl. xvii, f. 2).

†*Eryma sulcata* sp. n. Lower Cretaceous Germany, HARBORT, Berlin, Abh. geol. Landesanst. **45**, (15, pl. i, f. 11, pl. xi, f. 4).

†*Hoploparia aspera* sp. n. Upper Wealden Germany, HARBORT, T.c. (17, pl. ii, ff. 5, 6).—†*H. triboleti* sp. n. Lower Cretaceous Crimea, BORISSIAK, St. Petersburg, Bull. Com. géol., **23**, (412, 420, pl. xiii, f. 1).—*H. granulosa* in the Ardennes; COLLET, Reims, Bul. soc. sci. nat., **12**, (32–33, pl.).

*Homarus americanus*; rate of growth, HADLEY, 2, Wood's Holl, Mass., Mar. Biol. Lab. Bull., **10**, (233–241).—*H. gammarus*, with symmetrical chelae, CALMAN, London, Proc. Zool. Soc., **1906**, (633, f. 110).

*Nephrops norvegicus* abnormal claw, PATTERSON, Norwich, Trans. Nat. Soc., **8**, (319, pl.).

†*Palaeno dentatus* described; BORISSIAK, St. Petersburg, Bull. Com. géol., **23**, (416, 422, pl. xiii, f. 2).

*Paracambarus* subg. n. (1), *paradoxus* sp. n. Mexico (3), ORTMANN, Washington, D.C., Proc. Acad. Sci., **8**.

†*Pseudoglyphaea etalloni* description, MÉCHIN, Nancy, Bul. soc. sci., **6**, (29–31, pl. i).

*Thaumastocheles zaleucus*, male described, DÖFLEIN, Zool. Anz., **30**, (521–525).

#### ERYONIDEA.

*Eryoneicus indicus hawaiiensis* subsp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**, (900).

*Polycheles snyderi* (898, pl. xxiv, f. 9), *asper* (899, pl. xxiv, f. 11), spp. n. Hawaiian islands, RATHBUN, T.c.

#### LORIOATA.

†*Meyeria ornata* described, (10, pl. i, f. 2), *rapax* sp. n. (11, pl. i, f. 12, pl. ii, ff. 1–4, pl. iii, ff. 1, 2, pl. xi, ff. 1, 2). Lower Cretaceous, Germany, HARBORT, Berlin, Abh. geol. Landesanst. **45**.

*Panulirus japonicus*, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**, (897, pl. v).—*P. regius*, Spanish Guinea, NOBILI, Madrid, Mem. Soc. esp. hist. nat., **1**, (300, pl. viii, f. 1).

*Parribacus papyraceus* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**, (897, pl. xviii, f. 5).

*Seyllarides brasiliensis* sp. n. Brazil, RATHBUN, Washington, D.C., Proc. Biol. Soc., **19**, (113).

*Seyllarus nobilis*, description, NOBILI, Bul. sci. France Belgique, **40**, (56, pl. iv, f. 15, pl. vi, f. 27).—*S. sieboldi*, new to South Pacific, McCULLOCH, Sydney, N.S.W., Rec. Austr. Mus., **6**, (231).

#### THALASSINIDEA.

*Axiopsis* synopsis of species (91), *aethiopica* Red Sea, NOBILI, Ann. sci. nat. zool., **4**, (93, pl. vi, f. 1).

*Axius pailoloensis* (893, fig. 49), *spinissimus* (894, fig. 50), *rudis* (894, fig. 51) spp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**.

*Callianassa*, synopsis of species (100), *jousseaumei* (101, pl. vi, f. 2), *calmani* (104, pl. v, f. 2), *bouvieri* (105, pl. vi, f. 3), *gravieri* (107, pl. vi, f. 4), *rosae* (108, pl. vii, f. 2), *contierei* (110, pl. vii, f. 1), Red Sea, NOBILI, Ann. Sci. nat. zool., **4**.—*C. articulata* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**, (892, fig. 47).—*C. ceramica* sp. n. Victoria, FULTON and GRANT, Melbourne, Proc. R. Soc. Vic., **19**, (12–14, pl. v).

*Eiconaxius asper* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**, (895, f. 52).

*Jaxea nocturna* synonymy, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (12).

*Paraxius tridens* sp. n. Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**, (895, fig. 53).

*Upogebia*, synopsis of species, NOBILI, Ann. sci. nat. zool., **4**, (97).—*U. hirtifrons* (61, pl. iv, f. 13), *osiridis* (62, pl. iv, f. 14), descriptions, NOBILI, Bul. sci. France Belgique, **40**.

## CARIDEA.

*Acanthephyra*; table of species, *purpurea*, *debilis*, synonymy, characters, KEMP, Fish. Ireland Sci. Invest., 1905, 1, (1-28, pls. i, ii).—*A. purpurea* A. M. Edw. = *A. parva* Cout, stages of growth, COUTIÈRE, Bul. Mus., Monaco, No. 70 (12-20); description (254, pl. iv, ff. 12-15, pl. v, f. 1), *rectirostris* sp. n., Straits of Messina (260, pl. v, ff. 1-17), RIGGIO, Natural. Sicil., 17.

*Ageon brendani* sp. n. Irish coast, KEMP, Ann. Mag. Nat. Hist., London, 17, (299).

*Alpheopsis haugi* sp. n. Ogowe district, COUTIÈRE, Bul. Muséum, Paris, 12, (378-380, ff. 1-2).

*Alpheus aculeipes triphoporus* var. n.; *euchiroides*, *hoplites* spp. n. Tuamotu Is., Polynesia, NOBILI, T.c. (257).—*A. buccophaloides* (29), *alecyone* (32), *persicus* (33), descriptions, NOBILI, Bul. sci., France Belgique, 40.—*A. macrocheles* synonymy, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (16).

*Amphipalaemon scurati* sp. n. Tuamotu Is., Polynesia, NOBILI, Bul. Muséum, Paris, 12, (259).

*Anchistia elegans* (52), *edwardsi* (53), descriptions, NOBILI, Ann. sci. nat. zool., 4.

*Anchistiooides compressus*, description, NOBILI, T.c. (54).

*Anchistus* Borr. = *Tridacnacaris* Nob., *miersi* description, NOBILI, Bul. sci. France Belgique, 40, (48).

*Ancylocardia aberrans* description, NOBILI, T.c. (52, pl. iv, f. 9).

*Angasia armata* (42), *erythraea* (44), descriptions, NOBILI, Ann. sci. nat. zool., 4.

†*Anthrapalæmon grossartii*, Carboniferous, Staffordshire, WARD, Stone, Rep. N. Staff. F. Cl., 40, (110).

*Arete maruteensis* sp. n. Gambier Is., Polynesia, COUTIÈRE, Bul. Muséum, Paris, 11, (18).

*Athanas nitescens* Leach, postembryonal development, SARS, Arch. Math. Naturv., Kristiania, 27, No. 10, (1-29, pl. i-iv).

*Atyaëphyra desmarestii*, variation statistically examined, BROŽEK, Prag,

SitzBer. Böhm. Ges. Wiss., 1905, No. 1, (1-69).; (in N. Africa, BOUVIER, Paris, Bul. soc. ent., 1903, (245).)

*Atyella* gen. n. (*Atyidae*) (201), *brevirostris* (201, pl. xiv, ff. 57-64) sp. n. Lake Tanganyika, CALMAN, London, Proc. Zool. Soc., 1906.

*Bithynis grandimanus* description, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (923, pl. xx, f. 5).

*Brachycarpus*; synopsis of species, *advena*, Red Sea, NOBILI, Ann. Sci. Nat. zool., 4, (75-77, pl. iv, f. 1).

*Caridella* gen. n. (*Atyidae*) (198), *cunningtoni* (199, pl. xiii, ff. 45-52), *minuta* (200, pl. xiii, ff. 53-56), spp. n. Lake Tanganyika, CALMAN, London, Proc. Zool. Soc., 1906.

*Caridina harmandi* sp. n. Seas of Japan, BOUVIER, Bul. Muséum, Paris, 12, (483).—*C. kilimae* sp. n. (35), *togoensis* stuhlmanni var. n. (35), *wychii* var. *gracilipes* (36), figured, HILGENDORF, Deutsch Ost-Afrika Dekapoden.—*C. nilotica* var. *gracilipes*, synonymy; Lakes Nyasa and Victoria Nyanza, CALMAN, London, Proc. Zool. Soc., 1906, (189).

*Chlorotocus crassicornis*, synonymy, description, RIGGIO, Naturalista Sicil., 18, 1906, (151-160).

*Conchodytes*; synopsis of species (66), *meleagrinae* (66, pl. iii, f. 5), *biunguiculata*, descriptions, NOBILI, Ann. sci. nat. zool., 4.

*Coralliocaris*, synopsis of species (55), *C. hecate* (58, pl. iii, f. 2), *analitica* (60, pl. iii, f. 3), *rhodope* (61, pl. ii, f. 8), Red Sea, NOBILI, T.c. —*C. quadridentata* (920, pl. xxiv, f. 1), *truncata* (920, pl. xxiv, f. 2), spp. n., Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23.

*Coralliocarpon perrieri*, Red Sea, NOBILI, Ann. sci. nat. zool., 4, (82, pl. iv, f. 2).

*Crangon consobrinus* (401), *cassiope* (402), spp. n., Japan, DE MAN, Ann. Mag. Nat. Hist., London, 17. —*C. vulgaris*, albinism, NINNI, Boll. Naturalista, Siena, 26, (77).

*Egeon orientalis*, description, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (911, pl. xxiii, f. 3).

*Gnathophyllum tridens* sp. n., Tuamotu Is., Polynesia, NOBILI, Bul. Muséum, Paris, **12**, (259).

*Harpilius*; key to species (47), *gerlachei* (45, pl. iv, f. 10), description, NOBILI, Bul. sci. France Belgique, **40**.

*Heterocarpus ensifer*, described (917, pl. xxi, f. 7), *signatus* sp. n., Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**.

*Hippolytsma acicula* (912, pl. xxiv, f. 6), *paucidens* (913, pl. xxiv, f. 4), spp. n., Hawaiian islands, RATHBUN, T.c. *H. vittata* (46, pl. 2, f. 4), *multicincta* (47, pl. ii, f. 5), Red Sea, NOBILI, Ann. sci. nat. zool., 4.

*Hippolyte magellanicus*, to *Nauticaris*, CALMAN, Ann. Mag. Nat. Hist., **17**, (31). — *H. prideauxiana*, synonymy, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (17).

*Latreutes*, synonymy, CALMAN, Ann. Mag. Nat. Hist., **17**, (33). — *L. mucronatus multidens* var. n., Red Sea, NOBILI, Ann. sci. nat. zool., **4**, (41, pl. ii, p. 3). — *L. pygmaeus* (37, pl. iii, f. 4), *gravieri* (39, pl. iii, f. 5), *phycologus* (40, pl. ii, f. 6), descriptions, NOBILI, Bul. sci. France Belgique, **40**.

*Leontocaris lar* sp. n., Irish coast, KEMP, Ann. Mag. Nat. Hist., **17**, (299).

*Leptochela aculeoaudata*, description, NOBILI, Ann. sci. nat. zool., **4**, (28).

*Linnocaridina reticulatus* (192, pl. xi, ff. 2-8), *parvula* (193, pl. xi, ff. 9-14), *similis* (195, pl. xii, ff. 15-22), *latipes* (196, pl. xii, ff. 23-29), *socius* (196, pl. xii, ff. 30-37), *spinipes* (197, pl. xiii, ff. 38-44), spp. n., Lake Tanganyika, CALMAN, London, Proc. zool. Soc., **1906**.

*Lysmata seticaudata* RISSE, new to Atlantic Ocean, PÉREZ, Bordeaux, Actes soc. linn., **60**, (Proc.-verb., xli-xlii).

*Merhippolyte australis* vide *Nauticaris marionis*.

*Nauticaris marionis* = (*Merhippolyte australis* Hodgson), CALMAN, Ann. Mag. Nat. Hist., **17**, (31).

*Nematocarcinus tenuirostris*, description, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**, (926, pl. xxiii, f. 6).

*Nikoides danae*, description, NOBILI, Ann. sci. nat. zool., **4**, (79, pl. v, f. 1).

*Ophelophorus foliaceus* sp. n., Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**, (922, pl. xx, f. 8).

*Pandalus borealis*, statistics of capture in Kristiania fiord, WOLLEBOEK, Bergen, Norsk Fisket., **25**, (471-480, map). — *P. martius* (277, pl. ii, ff. 8-11), *heterocarpus* (280), descriptions, RICCI, Natural. sicil., **17**. — *P. ocellus subtilirostris* var. n., Mediterranean, RICCI, op. cit. **18**, (169).

*Palaemon*; key to E. African spp. (27), *idae idella* var. n. (29), German E. Africa, HILGENDORF, Deutsch Ost-Afrika Dekapoden. — *P. (Parapalaemon) aemulus* sp. n., Tuamotu Is., Polynesia, NOBILI, Bul. Muséum, Paris, **12**, (258). — *T. debilis* (924, pl. xxii, f. 1), *pacificus* (924, pl. xxii, f. 3), descriptions; *pandaloides* sp. n., Hawaiian islands (924, pl. xxiv, f. 4), RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**. — *P. (Parapalaemon?) hendersoni* sp. n., Darjeeling, DE MAN, Ann. Mag. Nat. Hist., **17**, (405). — *P. lar* var. ? Christmas Island, DE MAN, London, Proc. Zool. Soc., **1905**, (544-550, pl. xviii, ff. 7-19). — *P. moorei*, Lake Tanganyika, CALMAN, op. cit. **1906**, (188, pl. xi, ff. 1, 1a). — *P. (Eupalaemon) neglectus* nom. n., for *P. acutirostris* de Man and *P. equidens* de Man, DE MAN, Leiden, Notes Mus. Jentink, **26**, (201-206, 1 pl.). — *P. (Eupalaemon) reunionensis* Hoffmann, a variety of *P. lar* Fabr., DE MAN, L.C. — *P. xiphias*, structure of hepato-pancreas, GUIEYSSÉ, Paris, Bul. soc. philom., **8**, (97-102).

*Palaemonella biunguiculata* (71, pl. iii, f. 6), *gracilis* (73), descriptions, NOBILI, Ann. sci. nat. zool., **4**. — *P. laevidens*, description, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**, (925, pl. xxii, f. 2).

*Palaemonetes eigenmani*, anatomy of degenerate eyes, PIKE, Wood's Holl, Mass., Mar. Biol. Bull., **11**, (267-276).

*Pandalus sindoi* (915, pl. xxi, f. 4), *brevis* (916, pl. xxi, f. 3), *exiguus* (916, pl. xxi, f. 2), *spinidorsalis* (917, pl. xxi, f. 5), spp. n., Hawaiian islands; ? *ocellus* Bate description, (915, pl. xxi, f. 1), RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, **23**.

*Paschocaris paschalis*, description, NOBILI, Ann. sci. nat. zool., **4**, (38).

*Pasiphaea kaiuciensis* (927, pl. xxiii, f. 4), *truncata* (928, pl. xxiii, f. 5), *flagellata* (928, pl. xxiii, f. 2), *spp. n.*, Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23.

*Periclimenes brevinaris* nom. n. for *borradalei* Nob. (42, pl. iii, f. 7), *potina* (44, pl. iii, f. 8), descriptions, NOBILI, Bul. Sci. France, Belgique, 40.—*P. petithouarsi denticulata* var. n., Tuamotu Is., Polynesia, NOBILI, Bul. Muséum, Paris, 12, (257).—*P. pusillus* sp. n., Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (921, pl. xxiv, f. 7).—*P. soror*, Red Sea, NOBILI, Ann. sci. nat. zool., 4, (50, pl. ii, f. 6).

*Platybema*, synonymy, CALMAN, Ann. Mag. Nat. Hist., 17, (33).

*Pontonia pinnae*, description, NOBILI, Bul. sci. France Belgique, 40, (49, pl. iv, f. 11).

*Pontophilus modumanuensis* sp. n., Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (910, f. 63).

*Processa coutierei* (78, pl. 4, f. 3), *aequimana* (79), descriptions, NOBILI, Ann. sci. nat. zool., 4, (78, pl. iv, f. 3).

*Psathyrocaris hawaiiensis* sp. n., Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (928, fig. 79).

*Retrocaris serrata* sp. n., Persian Gulf, NOBILI, Bul. sci. France Belgique, 40, (54, pl. iv, f. 12).

*Saron gibberosus*, synonymy, description, NOBILI, T.c. (35).

*Sclerocrangon*, larval forms, WOLLEBOEK, Bergens Mus. Aarb., 1906, No. 11, (1-9, 2 pls.).

*Spirontocaris*, synonymy, &c., CALMAN, Ann. Mag. Nat. Hist., 17, (32).—*S. kauaiensis* (913, pl. xxiv, f. 5), *profunda* (914, pl. xxiv, f. 10), *spp. n.*, Hawaiian islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23.—*S. rectirostris*, male (403), *propugnatrix*, *alcimedea* spp. n., (404), Japan, de MAN, Ann. Mag. Nat. Hist., 17.

*Stegopontonia* gen. n., (*Pontoniidae*) *commensalis* sp. n., Tuamotu Is., Polynesia, NOBILI, Bul. Muséum, Paris, 12, (258).

*Styloactylus discissipes*, description, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (927, pl. xxiii, f. 1).

*Synalpheus brachyceros* sp. n., Tuamotu Is., Polynesia, NOBILI, Bul. Muséum, Paris, 12, (256).—*S. triungulatus* (25), *tumidomanus* (27), descriptions, *paulsoni* sp. n., Persian Gulf (28), NOBILI, Bul. sci. France Belgique, 40.

*Systellaspis debilis* = *bouvieri* Cout., stages of growth, COUTIÈRE, Bul. Mus., Monaco, No. 70, (1-12).

*Trachycaris* gen. n. (*Hippolytidae*) for *Platybema rugosus* Bate, CALMAN, Ann. Mag. Nat. Hist., 17, (33).

*Typton bouvieri*, Red Sea, NOBILI, Ann. sci. nat. zool., 4, (67, pl. iii, f. 4).

*Virbius?* *orientalis* (33), *jactans* (37, pl. ii, f. 2), Red Sea, NOBILI, T.c.

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*Acetes erythraeus*, Red Sea, NOBILI, Ann. sci. nat. zool., 4, (23, pl. i, f. 5).

*Amalopenaeus elegans*, description, RIGGIO, Natural. Sicil., 17, (134, pl. ii, ff. 13-20).

*Aphareus inermis*, description, NOBILI, Ann. sci. nat. zool., 4, (22).

(*Archipenaeopsis* gen. n. for *Penaeopsis vestitus*, BOUVIER, Paris, C.-R. Acad. sci., 141, (747).)

*Atypopeneus compressipes*, Indian Seas, ALDOOK, Cat. Ind. Decapod. Crust., Part 3, fasc. 1, (45, pl. ix, ff. 29, 29a).

*Benthescymus*, compared with *Gennadas*, BOUVIER, Bul. Mus. Monaco, No. 80, (1-9); Paris, C.-R. Acad. sci., 142, (749).—*B. laciniatus* sp. n., Hawaiian Islands, RATHBUN, Washington, D.C., Bull. U. S. Com. Fish., 1903, 23, (906, pl. xix, f. 3).

*Gennadas*, vertical distribution, BOUVIER, Paris, C.-R. Acad. sci., 142, (686-690). T.c. (746-749).—*G. alicei*, Tropical and sub-tropical Atlantic, *scutatus*, West Atlantic (9, ff. 5, 8, 10, 13), *talismani*, Cape Verde Islands, *tinayrei*, Sargasso Sea, Azores, and Cape Spartel (10, ff. 14, 15) spp. n., BOUVIER, Bul. Mus., Monaco, No. 80; Paris, C.-R. Acad. sci., 142, (748, 749).—(*G. brevirostris* sp. n.), Santa Lucia, BOUVIER, op. cit

**141.**, (748).—*G. parvus* Sp. Bate = *Ama-*  
*lopenaeus elegans* Sm., KEMP, Fish.  
Ireland, Sci. Invest., 1905, 5, (7).—  
*G. propinquus* sp. n., Hawaiian Islands,  
RATHBUN, Washington, D.C., Bull. U. S.  
Com. Fish., 1903, 23, (907).

*Haliaporus*, characters, distribution,  
*affinis* (4 and 8), *carinatus* (4 and 10),  
*tropicalis* (4 and 10) spp. n., Atlantic,  
BOUVIER, Bul. Mus. Monaco, No. 81.—  
*H. androgynus* sp. n., Coast of  
W. Africa, BOUVIER, Bul. Muséum,  
Paris, 12, (253–256); Bul. Mus., Monaco,  
No. 81, (3, 8).

*Lucifer hansenii*, Red Sea, NOBILI,  
Ann. sci. nat. zool., 4, (25, pl. ii, f. 1).

*Metapenaeus cognatus* (14, pl. i, f. 1),  
*stebbingi* (15, pl. i, f. 2), *consobrinus* (17,  
pl. i, f. 3), *vallanti* (18, pl. i, f. 4), Red  
Sea, NOBILI, T.c.—*M. monoceros* (18,  
pl. iii, ff. 7–7c), *affinis* (20, pl. iii,  
ff. 8–8b), *dolsoni* (21, pl. iii, ff. 9–9d),  
*brevicornis* (22, pl. iv, ff. 10–10b), *lysia-*  
*nassa* (23, pl. iv, ff. 11–11c), *coniger*  
(pl. iv, ff. 12–12b), var. *andamanensis*  
(27, pl. iv, f. 13), *stridulans* (27, pl. v,  
ff. 14–14d), *mogiensis* (29, pl. v,  
ff. 15–15b), Indian Seas, ALOOKEE, Cat.  
Ind. Decapod Crust., Part 3, fasc. 1.—  
*M. perlarum*, description, NOBILI, Bul.  
sci. France Belgique, 40, (17–21, pl. ii,  
f. 1).—*M. velutinus* (903, pl. xx, f. 5),  
*mogiensis* (904, pl. xx, f. 3), *rathbuni*  
(904, pl. xx, f. 2), described, *evermanni*  
sp. n., Hawaiian Islands, (904, pl. xx,  
f. 1), RATHBUN, Washington, D.C., Bull.  
U. S. Com. Fish., 1903, 23.

(*Neopenaeopsis* gen. n. for *Penaeopsis*  
*paradoxus*, BOUVIER, Paris, C.-R. Acad.  
sci., 141, (747).)

*Parapeneope stylifera* (36, pl. vii,  
f. 21), *cormandelica* var. n. (37, pl. vii,  
ff. 20–20c), *sculptilis* (37, pl. vii, 22–22d),  
var. *hardwickii* (39), *cultivirostris* var. n.  
(39, pl. vii, f. 23), *uncta* (39, pl. viii,  
ff. 25–25a), *maxillipedo* (40, pl. viii,  
ff. 24–24b), *nana* (41, pl. viii, ff. 26–26b),  
*acclivirostris* (pl. viii, ff. 27–27a), Indian  
Seas, ALOOKEE, Cat. Ind. Decapod Crust.,  
Part 3, fasc. 1.—(*P. rathbuni* sp. n.,  
Antilles, BOUVIER, Paris, C.-R. Acad.  
sci., 141, (748).)

*Parapeneus fissurus* (31, pl. v, ff. 16–  
16b), *investigatoris* (32, pl. vi, ff. 17–17c),  
*longipes* (pl. vi, ff. 18–18b), *rectacutus*  
(33, pl. vi, ff. 19–19b), Indian Seas,  
ALOKEE, Cat. Ind. Decapod Crust. Part  
3, fasc. 1.

(*Parartemesia* gen. n. for *Artemesia*  
*carinata* and *tropicalis*, BOUVIER, Paris,  
C.-R. Acad. sci., 141, (747–748).)

*Peneus*, characters (4), *monodon* (8,  
pl. i, ff. 1–1b), *semisulcatus* (10, pl. i,  
f. 2), *indicus* (12, pl. i, ff. 3–3a), var.  
*merguensis* (13, pl. ii, f. 4), var.  
*penicillatus* (13 pl. ii, f. 5), *canaliculatus*  
(14, pl. ii, ff. 6a–c), Indian Seas, ALOOKEE,  
Cat. Ind. Decapod Crust. Part 3, fasc. 1.—  
—*P.*, synopsis of species (6), *longipes*,  
description (20), NOBILI, Ann. sci. nat.  
zool., 4.—*P. marginatus*, description,  
RATHBUN, Washington, D.C., Bull. U. S.  
Com. Fish., 1903, 23, (902, pl. xix,  
f. 2).

*Sergestes arachnipodus* (183, pl. iv,  
ff. 1–7), *robustus* (215, pl. ii, ff. 8–12),  
descriptions; RICCI, Natural. sicil. 17.—  
—*S. prehensilis* description, NOBILI,  
Bul. sci. France Belgique, 40, (22, pl.  
ii, ff. 2, 3).

*Sicyonia levis*, figured, (908, pl. xx,  
f. 7), *longicauda* sp. n., Hawaiian  
Islands (908, pl. xx, f. 6), RATHBUN,  
Washington, D.C., Bull. U. S. Com.  
Fish., 1903, 23.—(*S. stimpsoni* sp. n.,  
Antilles, BOUVIER, Paris, C.-R. Acad.  
sci., 141, (748).)

*Trachypeneus asper*, Indian Seas,  
ALOKEE, Cat. Ind. Decapod. Crust.,  
Part 3, fasc. 1 (43, pl. ix, ff. 28–28b).

#### STENOPIDEA.

(*Richardina inermis* sp. n., Santa  
Lucia, BOUVIER, Paris, C.-R. Acad. sci.,  
141, (749).)

*Spongicola henshawi* sp. n., Hawaiian  
Islands, RATHBUN, Washington, D.C.,  
Bull. U. S. Com. Fish., 1903, 23, (901, pl.  
xxiv, f. 8).

#### INCERTAE SEDIS.

*Amphiplectus*, position doubtful, not  
*Hippolytidae*, CALMAN, Ann. Mag. Nat.  
Hist., 17, (33).

#### SCHIZOPODA.

*Amblyops sarsi* Ohlin to *Dactylam-*  
*blyops*, HOLT and TATTERSALL, Ann.  
Mag. Nat. Hist., 17, (9). ▲

*Boreomysis rostrata* sp. n., Atlantic,  
ILLIG, Zool. Anz., 30, (190).

*Chalcophthalmus* gen. n., (*Mysidae*) *latisquamosus* sp. n., Sumatra, ILLIG, Zool. Anz., **30**, (200).

*Chlamydoleon inerme* sp. n., Indian Ocean, ILLIG, T.c. (209).

*Dactylamblyops* gen. n., (*Mysidae*) (8), *hodgsoni* sp. n., Antarctic (9), HOLT and TATTERSALL, Ann. Mag. Nat. Hist., **17**.

*Dactylerythrops arcuata* sp. n., S. Indian and S. Atlantic Oceans, ILLIG, Zool. Anz., **30**, (199).

*Erythrops brevisquamosa* sp. n., Aden, ILLIG, T.c. (197).

*Euchaetomera glyphidophthalmica*, *limbata* spp. n., Atlantic, ILLIG, T.c. (201–203).

*Euphausia*, description, *E. mülleri*, description, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (22).—*E. superba*, Dana synonymy, characters (2 and 3), *crystallorophias* (3), *triangularis* (4) spp. n., Antarctic, HOLT and TATTERSALL, Ann. Mag. Nat. Hist., **17**.—*E. mülleri*, Claus synonymy, HOLT and TATTERSALL, Fish. Ireland Sci. Invest., 1904, **5**, (6).—*E. intermedia*, description, RICCI, Natural. sicil., **17**, (118, pl. ii, ff. 3–6).—*E. latifrons*, description, TATTERSALL, Rep. Pearl Oyster Fish., **5**, (161, pl. i, ff. 1, 2).

*Gnathophausia*, key to species (27), *zoëa*, larva (48), *scapularis* sp. n. (50, pl. ii, f. 3), Californian Coast, ORTMANN, Washington, D.C., Smithsonian Inst., U. S. Nation. Mus. Proc., **31**.—*G. doryphora* (227), *bidentata* (229), Indian Ocean, *crisata* (319), Mentawei Basin, spp. n., ILLIG, Zool. Anz., **30**.

*Hansenomyysis antarctica* sp. n., Antarctic, HOLT and TATTERSALL, Ann. Mag. Nat. Hist., **17**, (6).

*Haplostylus erythraeus*, Ceylon, TATTERSALL, Rep. Pearl Oyster Fish., **5**, (165).

*Katerythrops dactylops* sp. n., Atlantic, etc., ILLIG, Zool. Anz., **30**, (198).

*Leptomysis capensis* sp. n., Agulhasbank, ILLIG, T.c. (206).

*Longithorax* gen. n., (*Mysidae*), *similerythrops* sp. n., Amirante Is., ILLIG, T.c. (200).

*Lophogaster spinosus* sp. n., West Indies, ORTMANN, Washington, D.C., Smithsonian Inst., U. S. Nation. Mus. Proc., **31**, (26, pl. i, f. 1).

*Mastigophthalmus* gen. n., (*Mysidae*) *zurstrasseni* sp. n., S. Atlantic and Indian Ocean, ILLIG, Zool. Anz., **30**, (203).

*Meganyctiphanes norvegica* in Tuscan Archipelago, MASI, Genova, Ann. Mus. Civ., **42**, (149–156).

*Mesomysis volgensis* sp. n., Upper Volga R., TRETIAKOW, St. Peterburg, Trav. Soc. nat., **37**, (128–131).

*Melamysidella* gen. n., (*Mysidae*) *kerqueulensis* sp. n., Kerguelen, ILLIG, Zool. Anz., **30**, (210).

*Mysideis microps* sp. n., Mouth of the Congo, ILLIG, T.c. (205).

*Mysidetis* gen. n., *Mysidetinae* sub-fam. n., *farrani* sp. n., N.E. coast of Ireland, HOLT and TATTERSALL, Fish. Ireland Sci. Invest., 1904, **5**, (39–44, pl. v).—*M.*, characters, *postpon* sp. n., Antarctic, HOLT and TATTERSALL, Ann. Mag. Nat. Hist., **17**, (10).

*Mysis mixta*, life history, APSTEIN, Wiss., Meeresunters., Abt. Kiel, N.F., **9**, (239–260).—*M. relicta*, distribution in fresh-water lakes, SAMTER, Berlin, Abh. Ak. Wiss., **1905**, Abh. V, (1–34).—*M. maxima* Hansen, MS., Antarctic, HOLT and TATTERSALL, Ann. Mag. Nat. Hist., **17**, (11).—*M. quadrispinosa* sp. n., Chagos Is., ILLIG, Zool. Anz., **30**, (207).

*Nyctiphantes couchi* and *australis* differences, HOLT and TATTERSALL, Fish. Ireland Sci. Invest., 1904, **5**, (49).

*Parerythrops acanthura* sp. n., Cape Guardafui, ILLIG, Zool. Anz., **30**, (197).

*Petalophthalmidae* fam. n. for *Petalophthalmus*, *Ceratomysis*, *Scolopthalmus*, *Hansenomyysis*, HOLT and TATTERSALL, Fish. Ireland Sci. Invst., 1904, **5**, (21).

*Petalophthalmus oculatus* sp. n., Aden, ILLIG, Zool. Anz., **30**, (194).

*Podopsis slabberi* in pools, Italy, MASI, Roma, Boll. Soc. zool. Ital., **6**, (11–20).

*Pseudomma belgicae* Hansen, MS., Antarctic, HOLT and TATTERSALL, Ann. Mag. Nat. Hist., **17**, (8).—*P. affine* Sars = *roseum* H. and T., (27–30, pl. iii, ff. 1–6), *calloplura* (30–33, pl. iv, ff. 1–5), *kempi* (33–35, pl. iv, ff. 6–10), characters, *nanum* sp. n., (35–38, pl. iii, ff. 7–10),

North-east coast of Ireland, HOLT and TATTERSALL, Fish. Ireland Sci. Invest., 1904, 5.

*Rhopalophtalmus* gen. n., (*Mysidae*), *flagellipes* sp. n., Mouth of the Congo, ILIQA, Zool. Ann., 30, (207).

*Siriella paulsoni*, Ceylon, TATTERSALL, Rep. Pearl Oyster Fish., 5, (163, pl. 1, ff. 3-7).

*Thysanessa macrura*, description, HOLT and TATTERSALL, Ann. Mag. Nat. Hist., 17, (5).

*Thysanopoda acutifrons, distinguenda* characters, HOLT and TATTERSALL, Fish. Ireland Sci. Invest., 1904, 5, (8-12, pls. i and ii).

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*Alima*, larvae, description, TATTERSALL, Rep. Pearl Oyster Fish., 5, (175-178, pl. ii, ff. 20-29).

*Alimerichthus*, larvae, description, TATTERSALL, T.c. (175-178, pl. ii, ff. 20-29).

*Gonodactylus herdmanni*, (169, pl. i, ff. 8-10), *acanthurus*, (171, pl. i, ff. 11-15), Ceylon, spp. n., TATTERSALL, T.c.—*G. brevisquamatus*, description, (331), *glaber*, synonymy, (333), NOBILI, Ann. sci. nat. zool., 4.—*G. de mani*, description, NOBILI, Bul. sci. France Belgique, 40, (158).—*G.* larvae (*Gonerichthus*), Ceylon, TATTERSALL, Rep. Pearl Oyster Fish., 5, (183-185, pl. iii, ff. 42-47).

*Lysiosquilla*, larvae (*Lysioericichthus*), Ceylon, TATTERSALL, T.c. (179-183, pl. ii, ff. 30-34, pl. iii, ff. 35-40).

*Odontodactylus brevirostris*, Ceylon, TATTERSALL, T.c. (172, pl. ii, ff. 16-18).

*Protosquilla spinosissima*, Ceylon, TATTERSALL, T.c. (173, pl. ii, f. 19).

*Squilla*, larvae (*Alima* and *Alimerichthus*), description, TATTERSALL, T.c. (175-178, pl. ii, ff. 20-29).

#### CUMACEA.

*Campylaspis vitrea, spinosa*, spp. n., Mediterranean, CALMAN, Mitt. zool. Stat., Neapel, 17, (425-426, pl. xxviii, ff. 28-43).

*Cumellopsis puritani* sp. n., Mediterranean, CALMAN, T.c. (418, pl. xxvii, ff. 10-12).

*Diastylis laevis*, synonymy, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (31).—*D. capreensis* sp. n., Mediterranean, CALMAN, Mitt. zool. Stat., Neapel, 17, (429, pl. xxviii, ff. 44, 45).

*Leucon longirostris, siphonatus*, characters, CALMAN, T.c. (414-417, pl. xxvii, ff. 1-29).

*Procampylaspis armata*, (419, pl. xxvii, ff. 13-20), description, *bonnieri*, (422, pl. xxvii, ff. 21-27), Mediterranean, sp. n., CALMAN, T.c.

*Pseudocuma longicornis* BATE = *cervaria* VAN BENEDEN, *similis*, North Sea, stages of growth, GILSON, Mem. soc. ent., Belg., 12, (78-98).

#### TANAIDACEA.

*Apscudes rikiteanus, seurati* spp. n., Tuamotu Is., Polynesia, NOBILI, Bul. Muséum, Paris, 12, (265, 266).

*Heterotanais örstedii*, Scandinavia, NORMAN, Ann. Mag. Nat. Hist., 17, (169, pl. vi, ff. 2, 3).—*H. gurneyi* sp. n., England, NORMAN, T.c. (168, pl. v, ff. 1-7, pl. vi, f. 1).

*Leptognathia longiremis varia* var. n., North Berwick, Scotland, SCOTT, Edinb. Proc. R. Phys. Soc., 16, (132).

*Notatanais* gen. n. for *Paratanais antarcticus* Hodgs. and *P. dimorphus* Bedd., Antarctic, RICHARDSON, Bul. Muséum, Paris, 12, (187), Paris, C.-R. Acad. sci., 142, (850).)

*Tanais seurati* sp. n., Tuamotu Is., Polynesia, NOBILI, Bul. Muséum, Paris, 12, (266).

*Tanaissus* gen. n. for *Leptognathia lilljeborgii*, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (34, pl. i).

#### ISOPODA.

(Terrestrial *Isopoda* of Europe and the Mediterranean basin, DOLLFUS, Feuille Jeunes natural., 35, (163).)

#### ASELLOTA.

*Antias* gen. n., (*Munnidae*), *charcoti* sp. n., Antarctic, RICHARDSON, Bul.

Muséum, Paris, **12**, (188) and Paris, C.-R. Acad. sci., **142**, (851).

*Austrimunna* gen. n., (*Munnidae*) *antartica* sp. n., Antarctic, RICHARDSON, T.T.C.

*Bagatus* gen. n., (*Parasellidae*), *stylo-dactylus*, *platydactylus* spp. n., Tuamotu Is., Polynesia, NOBILI, Bul. Muséum, Paris, **12**, (267, 268).

*Ectias* gen. n., (*Janiridae*), *turqueta* sp. n., Antarctic, RICHARDSON, T.C. (188), and Paris, C.-R. Acad. sci., **142**, (850).

*Jaera kroyeri*, living on *Sphaeroma serratum*, Cagliari, Rossi, Zool. Anz., **30**, (107–109).

*Stenotrium hansenii*, *euchirum* spp. n., Tuamotu Is., Polynesia, NOBILI, Bul. Muséum, Paris, **12**, (266, 267).

#### PHREATOICOIDEA.

*Phreatoicus kirkii* sp. n., *dunedinen-sis* var. n., New Zealand, CHILTON, Wellington, Trans. and Proc. N. Zeal. Inst., **38**, (274–276).

#### FLABELLIFERA.

*Aega australis* sp. n., Antarctic, RICHARDSON, Bul. Muséum, Paris, **12**, (187), and Paris, C.-R. Acad. sci., **142**, (850); *A. strömii*, figured, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (38, pl. viii, ff. 9, 10).

*Caecosphaeroma* sp. habits, GAL, Nimes, Bul. soc. sci. nat., **31**, (48–51).

*Cassidias* gen. n., (*Sphaeromidae*), *argentinea* sp. n., S. Atlantic, RICHARDSON, Washington, D.C., Smithsonian Inst., U. S. Nation. Mus. Proc., **31**, (20, 21).

*Cirolana borealis*, (pl. iv, f. 1), *crauchi*, (pl. iv, f. 2), figured, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (40).—(*C. caeca* (6), *grimaldii* (8) spp. n., Atlantic and Mediterranean, DOLLFUS, Paris, Bul. soc. zool., **28**.)

*Cymodoec trunctata*, characters, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (44, pl. iv, ff. 3–14).—*C. eupygia* (1), *richardsoniae* (3), *erythraea* (4), spp. n., Erythraea, NOBILI, Napoli, Ann. Mus. zool., **2**, No. 16.—*C. ornata* (6), hab., ? *japonica* (7), Japan, *australis* (8), *meridionalis* (9), *brasiliensis* (10), S. Atlantic, *aefinis*

(11), Japan, spp. n., RICHARDSON, Washington, D.C., Smithsonian Inst., U. S. Nation. Mus. Proc., **31**.

*Dynamenella codii*, *platyura* spp. n., Tuamotu Is., Polynesia, NOBILI, Bul. Muséum, Paris, **12**, (269).—*D. australis* sp. n., Cape Town, RICHARDSON, Washington, D.C., Smithsonian Inst., U. S. Nation. Mus. Proc., **31**, (15).

*Eurydice rotundicauda* sp. n., N. Atlantic, NORMAN, Ann. Mag. Nat. Hist., **17**, (169, pl. vi, ff. 4–7).—*E. pulchra* (pl. iii, f. 11), *truncata* (pl. iii, f. 14), *spinigera* (pl. iii, f. 12), *inermis* (pl. iii, ff. 13, 13<sup>th</sup>), figured, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (42, 43).

*Gnathia maxillaris* (36, pl. ii, ff. 1–8), *oxyuraea* (37, pl. ii, ff. 9, 10, pl. iii, ff. 1–5), descriptions, NORMAN and SCOTT, T.C. —*G. antarctica* Studer = *G. polaris* Hodgs., RICHARDSON, Bul. Muséum, Paris, **12**, (187), and Paris, C.-R. Acad. sci., **142**, (850).

*Isocladus magellanicus* sp. n., Straits of Magellan, RICHARDSON, Washington, D.C., Smithsonian Inst., U. S. Nation. Mus. Proc., **31**, (14).

*Livoneea eonexa* sp. n., Panama coast, RICHARDSON, Op. cit. **29**, (445, 446).

*Paracassidinopsis* gen. n., (*Sphaeromidae*), *sculpta* sp. n., Tuamotu Is., Polynesia, NOBILI, Bul. Muséum, Paris, **12**, (268).

*Rocinela danmoniensis*, (38, pl. iii, ff. 6–8); *dumerilii*, (39, pl. iii, ff. 9, 10), descriptions, NORMAN and SCOTT, Crustacea of Devon and Cornwall.

*Serolis bouvieri* sp. n., Antarctic, RICHARDSON, Bul. Muséum, Paris, **12**, (187), and Paris, C.-R. Acad. sci., **142**, (850).

*Sphaeroma serratum* with *Jaera kroyeri* as commensal at Cagliari, Rossi, Zool. Anz., **30**, (107–109).

#### VALVIFERA.

*Chiridotea entomon*, biology, variation, etc., SKORIKOV, St. Peterburg, Bull. Ac. Sc., **24**, (53–64).

*Glyptonotus acutus* sp. n., Antarctic, RICHARDSON, Bul. Muséum, Paris, **12**, (187), and Paris, C.-R. Acad. sci., **142**, (850).

*Idotea heetica* structure of digestive system, GUIEYSSÉ, Paris, Bul. soc. philom., **8**, (103-109).

*Synidotea pacifica* sp. n., Tuamotu Is., Polynesia, NOBILI, Bul. Muséum, Paris, **12**, (268).

#### EPICARIDEA.

*Aporobopyrioides* gen. n., (*Bopyridae*), *upogebiae* sp. n. on *Upogebia savignyi*, Massowa, NOBILI, Torino, Atti Acc. Sc., **41**, (1108, f. 6).

*Aporobopyrus* gen. n., (*Bopyridae*), *aduliticus* sp. n. on *Petalisthes rufescens*, Massowa, NOBILI, T.c. (11C6, f. 4).

*Cardiocepion* gen. n., (*Bopyridae*), *pteroides* sp. n. on *Cardiosoma carnifex* Ternate, NOBILI, T.c. (1104, f. 3).

*Epipenaeon* gen. n., (*Bopyridae*), *ingens* sp. n. on *Penaeus ashiaka*, Red Sea, NOBILI, T.c. (1098, f. 1).

*Gigantione giardi* sp. n., Tuamotu Is., Polynesia, NOBILI, Bul. Muséum, Paris, **12**, (270).

*Grapsicepon typus* parasitic on *Grapsus strigosus*, GIARD, Paris, C.-R. soc. biol., **61**, (704-706).

*Grapsion eavelinii* parasitic in *Pachygrapsus marmoratus*, together with *Sacculina benedeni*, SMITH, Fauna Neapel, Berlin, **29**, (80-81).

*Gyge branchialis* in the Channel, GIARD, Feuille jeunes natural., Paris, **36**, (12).

*Orbione bonnieri* sp. n. on *Metapenaeus monoceros*, Singapore, NOBILI, Torino, Atti Acc. Sc., **41**, (1102, f. 2).

*Upogebiophilus* gen. n., (*Bopyridae*), *rhadames* sp. n. on *Upogebia rhadames*, Djibouti, NOBILI, T.c. (1110, f. 5).

#### ONISCOIDEA.

*Armadillidium nasatum*, (102, pl. xxii); *vulgare*, (103, pl. xxiii); *pulchellum*, (104, pl. xxiv); *depressum*, (106, pl. xxv), Britain, WEBB and SILLEM, Essex Nat., **14**.

*Armadillo glomus* sp. n., German E. Africa, BUDDE-LUND, Deutsch Ost-Afrika Isopoden, (8, f. 13).

*Cyclisticus convexus*, Britain, WEBB and SILLEM, Essex Nat., **14**, (101, pl. xxxi).

*Doto armata*, St. Paul Is., (84, pl. iv, ff. 26-36); *magnifica*, (86); *robusta*, (87, pl. iv, ff. 42-44), Auckland Is., spp. n.; *echinata*, (85, pl. iv, ff. 37, 38); *marina*, (85, pl. iv, ff. 39, 41), descriptions, BUDDE-LUND, Isopoda, Deutsche Südpolar Exped.

*Eubelum pila, hilgendorfi* spp. n., German E. Africa, BUDDE-LUND, Deutsch Ost-Afrika Isopoden (4, ff. 1, 2).

*Hemilepistus elegans*, structure and habits, FAUSSEK, St. Peterburg, Zap. Russ. Geogr. Obsč., **27**, (178-182, f. 63).

*Ligia exotica*, meristic variation, GOTO, Ann. Zool. Jap., Tokyo, **5**, (267-281).

*Metoponorthus pruinosis*, (99, pl. xix); *cingendus*, (100, pl. xx), Britain, WEBB and SILLEM, Essex Nat., **14**.—*M. pruinosis* in Scotland, EVANS, Ann. Scot. Nat. Hist., **1906**, (187); in New Zealand, CHILTON, Wellington, Trans. and Proc. N. Zeal. Inst., **38**, (64, 65).

*Periscyphis anomalus*, description, (5, ff. 3, 4); *armadilloides*, (5); *nanus*, (5, f. 6); *obtusicauda*, (6, ff. 7, 8); *villosus*, (6, f. 9); *pygmaeus*, (6, ff. 10, 11); *pulcher*, (7, f. 12), spp. n., German E. Africa, BUDDE-LUND, Deutsch Ost-Afrika Isopoden.

*Philoscia mendica* sp. n., German E. Africa, BUDDE-LUND, T.c. (9, ff. 14, 15).—*P. hirsuta* sp. n., Cape Colony, BUDDE-LUND, Isopoda Deutsch Südpolar Exped., (89, pl. iii, ff. 42-52).

*Platyanthrurushoffmannseggii* in ants' nests, ROUBAI, Prag, SitzBer. Böhm. Ges. Wiss., 1905, No. 15, (6).

*Porcellio laevis*, (97, pl. xvii); *ratzeburgii*, (98, pl. xviii), Britain, WEBB and SILLEM, Essex Nat., **14**.

*Oniscus murarius*, regeneration of antenna, Ost. Zool. Anz., **29**, (687-694); l.e. **30**, (130-131); Arch. EntwMech., Leipzig, **22**, (289-324, pls. x-xii).

*Synarmadilloides* gen. n., *rocatii* sp. n., Mt. Ruwenzori, NOBILI, Torino, Boll. Museo zool. anat., **21**, No. 544, (2).

*Trichonisicus pygmaeus* new to Britain, BAGNALL, Ann. Mag. Nat. Hist., **18**, (474).—*T. verrucosus*, Crozet Is., (79, pl. iv, ff. 1-16); *microps*, Italy, (83, pl. iv, ff. 18-20), spp. n.; *flavus* nom. n. for *viridus* B.-J., (neq. Koch), BUNDE-

LUND, Isopoda Deutsche Südpolar Ex-ped.

*Tylos nudulus*, Christmas island, (76 pl. iii, ff. 27–30); *incurvus*, Natal, (79, pl. iii, f. 41), *spp. n.*; *capensis*, (74, pl. iii, ff. 14–18); *latreillei*, (74; pl. iii, ff. 1–13); *ponticus*, (75, pl. iii, ff. 19, 20); *granulatus*, (75, pl. iii, ff. 21–24); *minor*, (76, pl. iii, ff. 25–26); *niveus*, (76, pl. iii, ff. 31–33); *opercularis*, (77, pl. iii, ff. 34–36); *albidus*, (77, pl. iii, ff. 37–40), descriptions, BUDDE-LUND, T.c.

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*Colypurus* gen. n. *agassizi* sp. n., Eastern Pacific, RICHARDSON, Cambridge, Mass., Bull. Mus. Comp. Zool., **46**, (105, 106, pl.).

*Rhabdochiridae* fam. n. for *Rhabdochirus incertus* Giard and Bonn. RICHARDSON, L.c.

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Faunistic notes, distribution in North Sea, REIBISCH, Wiss. Meeresunters., Kiel, Abt. Kiel, **9**, (185–237, 2 Taf.).

*Amphipoda*, *Gammaridea*, descriptions of all the known species, STEBBING, Das Tierreich, **21**, 1906.

(*Amphipoda* of Lake Titicaca, CHEVREUX, Paris, Bul. soc. zool., **29**, (131–134).)

*Actinacanthus* nom. n. for *Acanthechinus* preoccupied, STEBBING, T.c. (326).

*Aeginina* nom. n. for *Aegina* Kröyer, NORMAN, Museum Normanianum (46).

*Amphithoe buczinskii* sp. n. Gulf of Odessa; KALIŠEVSKIJ, Odessa, Mém. soc. nat., **29**, (1–34, with plates i, ii).

*Andaniexis* nom. n. for *Andania* preoccupied, STEBBING, Das Tierreich, **21**, (94).

*Aora gracilis*, description, REIBISCH, Wiss. Meeresunters. Kiel, Abt. Kiel, **9**, (198, pl. viii, ff. 8–11, pl. ix, f. 1).

*Apherusa clevei*, description, REIBISCH, T.c. (191, pl. viii, ff. 1–4).—*A. ovalipes* sp. n., coast of Devon, Scilly Is., NORMAN and SCOTT, Crustacea of Devon and Cornwall, (75, pl. viii, ff. 1–8).

*Aristias antarcticus* sp. n. Antarctic, WALKER, Ann. Mag. Nat. Hist., **17**, (454).

*Arrhis* nom. n. for *Aceros*, STEBBING, Das Tierreich, **21**, (248).

*Atyloides brevicornis* sp. n. Antarctic, CHEVREUX, Paris, Bul. soc. zool., **31**, (84, f. 5).

*Atylus andrusovi odessanus* var. n. Gulf of Odessa, KALIŠEVSKIJ, Odessa, Mém. Soc. nat., **29**, (1–34, with plates i, ii).—*A. walkeri* nom. n. for *antarcticus* (Walk.), STEBBING, Das Tierreich, **21**, (728).

*Bathyporeia lindströmi* sp. n. Naples, STEBBING, T.c. (122).

*Cerapus crassicornis*, description, REIBISCH, Wiss. Meeresunters., Kiel, Abt. Kiel, **9**, (210, pl. ix, f. 11).

*Coremapus*; characters, *versicoloratus* Bate figured, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (85, pl. ix, ff. 8–10).

*Corophium volutator* Pallas = *C. grossipes* Linn., SCOTT, Edinb. Proc. R. Physic. Soc., **16**, (379).

*Crybelocephalus* gen. n. *megalurus* sp. n., West Coast of Ireland, TATTER-SALL, Fish. Ireland Sci. Invest., 1905, 4, (32–36, pl. iii, f. 1, pl. v, ff. 1–14).

*Epimeria macrodonta* sp. n., Antarctic, WALKER, Ann. Mag. Nat. Hist., **18**, (16).

*Epimericella* gen. n. *macronyx* sp. n., Antarctic, WALKER, T.c. (17).

*Erichthonius hunteri*, description, REIBISCH, Wiss. Meeresunters. Kiel, Abt. Kiel, **9**, (207, pl. ix, ff. 5–10).

*Eusirus microps* sp. n., Antarctic, WALKER, Ann. Mag. Nat. Hist., **18** (152).

*Gammaropsis longicornis* sp. n., Antarctic, WALKER, T.c. (153).

*Gammarus argaeus* sp. n., Asia Minor, VÁVRA, Wien, Ann. Nat. Hist. Hofmus., **20**, (109, pl. iii, ff. 10–13).—*G. pulex*, peripheral nervous system, WREDEN, St. Peterburg, Ber. Süsswasserst. Naturf. Ges., **2**, (152–157); dentishes Résumé, (158–160, pl. iii).—*G. deminutus* nom. n. for *minutus* (Sars), STEBBING, Das Tierreich, **21**, (466).

*Grandidierella* gen. n., *Corophiidae*, *mahafalensis* sp. n. in salt lake, Madagascar, COUTIÈRE, Paris, Bul. soc. philom., **6**, (166–174).)

*Haploops dellavallei* sp. n., Naples, STEBBING, T.c. (116).

(*Hippomedon bidentatus* sp. n., Mediterranean, CHEVREUX, Paris, Bul. soc. zool., 28, (87).)

(*Hyalella neveu-lemairei* sp. n., Lake Titicaca, CHEVREUX, op. cit. 29, (132).—*H. richardi* sp. n., Alboran Is., Mediterranean, CHEVREUX, op. cit. 27, (223-227).)

*Hyperia macronyx* sp. n., Antarctic, WALKER, Ann. Mag. Nat. Hist., 17, (452).

*Hyperiopsis australis* sp. n., Antarctic, WALKER, T.c. (451).

*Hyperoche lütkenides* sp. n., Antarctic, WALKER, T.c. (453).

*Iphimedia echinata* (150), *longipes* (151), *hodgsoni* (152), spp. n., Antarctic, WALKER, T.c.

*Leptocheirus guttatus* (85, pl. ix, ff. 4-7), *pectinatus* (87, pl. ix, ff. 1-3), *fasciatus* (88, pl. v, ff. 11, 12), descriptions, NORMAN and SOOTTI, Crustacea of Devon and Cornwall.

*Liljeborgia dellavallei* sp. n., Naples, STEBBING, Das Tierreich, 21, (234).

*Lysianella dellavallei* nom. n. for *Anonyx petalocera*, Della Valle, STEBBING, T.c. (32).

*Macrohectopus* nom. n. for *Constantia*, STEBBING, T.c. (394).

*Metacyphocaris* gen. n., *helgae* sp. n., West Coast of Ireland, TATTERSALL, Fish, Ireland Sci. Invest., 1905, 4, (29-32, pl. iii, f. 1, pl. iv, ff. 1-14).

*Metopoides walkeri* sp. n., Antarctic, CHEVREUX, Paris, Bul. soc. zool., 31, (37, f. 1).

*Mieromimonectes* gen. n., (*Hyperina*) for *irene*, *typus*, *physosoma*, *steenstrupi*, WOLTERECK, Zool. Anz., 30, (187-194).

*Nannonyx thomsoni* nom. n. for *Lysianassa kröyeri* (Thoms.), STEBBING, Das Tierreich, 21, (36).

*Neopleustes* gen. n. type *Amphitoe pulchella* Kröyer, STEBBING, T.c. (311).

*Niphargus ciliatus* sp. n. in cave, Basses-Alpes, CHEVREUX, cf. PEYERIMHOFF, Paris, Ann. soc. ent., 75, (217).

*Niphargus* sp. habits, GAL, Nîmes, Bul. soc. sci. nat., 31, (48-51).

*Normanion sarsi* nom. n. for *Normania quadrimana* (Boeck), STEBBING,

Das Tierreich, 21, (42).—(*N. abyssi* sp. n., Mediterranean, CHEVREUX, Paris, Bul. soc. zool., 28, (82).)

*Oediceroides calmani* sp. n., Antarctic, WALKER, Ann. Mag. Nat. Hist., 18, (15).

*Orchestia costaricensis* sp. n., Costa Rica, STEBBING, Washington, D.C., U.S. Nation. Mus. Proc., 31, (501, pl. 11).

*Orehomene goniops* sp. n., Antarctic, WALKER, Ann. Mag. Nat. Hist., 17, (455).

*Orehomenella chelipes* sp. n., Antarctic, WALKER, T.c. (456).—(*O. dilatata* sp. n., Mediterranean, CHEVREUX, Paris, Bul. soc. zool., 28, (90).)

*Orehomenopsis chevreuxi* nom. n. for *excavata* Chevreux, STEBBING, Das Tierreich, 21, (721).

(*O. proxima* (93) *excavata* (94) spp. n., Atlantic, CHEVREUX, Paris, Bul. soc. zool., 28.)

*Pallasimella quadrispinosa*, distribution in fresh-water lakes, SAMTER, Berlin, Abh. Ak. Wiss., 1905, Abh. V, (1-34, 6 maps).

(*Paracallisoma* gen. n. (*Lysianassidae*) *alberti* sp. n., Azores, CHEVREUX, Paris, Bul. soc. zool., 28, (84, 86).)

*Paradexamine fissicauda* sp. n., Antarctic, CHEVREUX, op. cit. 31, (82, ff. 1, 2).

*Parapherusa* nom. n. for *Ilarmonia*, STEBBING, Das Tierreich, 21, (383).

*Paratylus swammerdami* (192, pl. viii, ff. 6, 7) *falcatus* (193), descriptions, REIBISCH, Wiss. Meeresunters., Kiel, Abt. Kiel, 9.

*Pardalisella axeli* sp. n., North Sea, STEBBING, Das Tierreich, 21, (228).

*Parhalimedon* gen. n. (*Oediceridae*), *turqueti* sp. n., Antarctic, CHEVREUX, Paris, Bul. soc. zool., 31, (76, f. 1).

*Pariphimedia* gen. n. (*Iphimedidae*), *integricauda* sp. n., Antarctic, CHEVREUX, T.c. (39, f. 2).

*Paroedicerus intermedius* sp. n., Kara Sea, STEBBING, Das Tierreich, 21, (245).

*Photis reinhardi* (202, pl. ix, ff. 2, 3), *longicaudata* (203, pl. ix, f. 4), descriptions, REIBISCH, Wiss. Meeresunters., Kiel, Abt. Kiel, 9.

*Podopriionides* gen. n., *incerta* sp. n., Antarctic, WALKER, Ann. Mag. Nat. Hist., 17, (457).

*Pontocrates arenarius* (68, pl. vi, ff. 1-4). *norvegicus* (68, pl. vi, ff. 5-8), *albarmarinus* (69, pl. vii, ff. 1-4), *arcticus* (70, pl. vii, ff. 5, 6), descriptions, NORMAN and SCOTT, Crustacea of Devon and Cornwall.

*Pontogeneia antarctica* sp. n., Antarctic, CHEVREUX, Paris, Bul. soc. zool., **31**, (79, f. 2).

*Pontoporeia affinis*, distribution in fresh-water lakes, SAMTER, Berlin, Abh. Ak. Wiss., 1905, Abh. V, (1-34, 6 maps).

*Proboliella* gen. n. (13), *typica* sp. n., Antarctic (14), WALKER, Ann. Mag. Nat. Hist., **18**.

*Proboloides antarcticus* sp. n., Antarctic, WALKER, T.c. (13).

*Scina vosseleri* (7-9, pl. i, ff. 1-8), *submarginata* (12-14, pl. ii, ff. 1-8), spp. n., West Coast of Ireland, TATTERSALL, Fish. Ireland Sci. Investig., 1905, 4.

*Seba antarctica* sp. n., Antarctic, WALKER, Ann. Mag. Nat. Hist., **17**, (570) and **18**, (154).—*S. typica*, description, CHILTON, op. cit. **17**, (572).

*Sphaeromimocetes scinoides* (867, f. 3), South Indian Ocean, *cultricornis* (868, f. 5), South Atlantic, spp. n., WOTTERECK, Zool. Anz., **30**.

*Stenothoe cattai* sp. n., Mediterranean, STEBBING, Das Tierreich, **21**, (195).

*Synchelidium maculatum* sp. n., Mediterranean, STEBBING, T.c. (242).—*S. haplocheles*, synonymy, figure, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (67, pl. vii, ff. 7-9).

*Talitroides bonnieri* sp. n., Hab. ?, STEBBING, Das Tierreich, **21**, (527).

*Thaumatelson* gen. n., *herdmani* sp. n., Antarctic, WALKER, Ann. Mag. Nat. Hist., **18**, (15).

*Wandelia* gen. n. (*Philiadidae*) *crassipes* sp. n., Antarctic, CHEVREUX, Paris, Bul. soc. zool., **31**, (87, ff. 1, 2).

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*Nebalia*, embryonic development, ROBINSON, Q. J. Microsc. Sci., London, **50**, (383-433, pls. xvi-xxi).—*N. bipes* characters, TATTERSALL, Rep. Pearl Oyster Fish., **5**, (159).

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#### BRANCHIOPODA.

##### PHYLLOPODA.

*Anomalocaris canadensis*, description, WHITEAVES, Palaeoz. Fossils, **3**, pt. 4, (313).

*Apus*; hermaphroditism, ZOGRAF, Zool. Anz., **30**, (563-567).—*A. caneriformis* at Magdeburg, KÖHLER, Bl. Aquarienkunde, Magdeburg, **17**, (294).—*A. productus*, bionomics, FRITZE, Hannover, Jahrb. ProvMus., **1905-1906**, (43-46); in Poland, WOJSKI, Bl. Aquarienkunde, Magdeburg, **17**, (478).

*Artemia*; histology of ova, ARTOM, Biologica, Torino, **1**, fasc. 1, (1-10).—*A. salina*, parthenogenesis, environmental effects, ARTOM, Biol. Centralbl., **26**, (26-32); *l.c.* (204-208); variation in chemical solutions, ARTOM, Torino, Atti Acc. Sc., **41**, (971, 972); anatomy of median eye and frontal organ, NOWIKOFF, Zs. wiss. Zool., **81**, (691-698, pl. i); (cervical plate of nauplius, ZOGRAFF, Paris, C.-R. Acad. sci., **141**, (903-905).—*A. franciscana* sp. n., San Francisco, KELLOGG, Science, New York, **24**, (596).

(*Branchinecta*, habitats of N. American species, SHANTZ, Biol. Bull., Wood's Holl, Mass., **9**, (249-264, pl.).)

*Branchiopus serox*, large variety, ENTZ, Allatt, Közlem., **5**, (147-148).—*B. grubei*, bionomics, FRITZE, Hannover, Jahrb. ProvMus., **1905-1906**, (43-46).

*Estheria*; distribution in the Trias of Britain, LOMAS, London, Rep. Brit. Ass., **1905**, (166-168).—*E. indica* sp. n., S. India, GURNEY, Calcutta, J. Proc. As. Soc. Beng., **2**, (273, pl. iv, pl. v, ff. 9-10).—*E. elizabethae* sp. n., Cape Colony, SARS, Arch. Math. Naturv., Kristiania, **27**, No. 4, (10-15, pl. ii).

*Streptocephalus spinifer* sp. n., Ceylon, GURNEY, Spolia Zeylan., **4**, (127, pl. i).—*S. dichotomus simplex* var. n. Cutch, GURNEY, Calcutta, J. Proc. As. Soc. Beng., **2**, (276, pl. v, f. 11).—*S. papillatus* sp. n., Cape Colony, SARS, Arch. Math. Naturv., Kristiania, **27**, No. 4, (1-10, pl. i).

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*Cladocera* of Switzerland, STINGELIN, Genève, Rev. Suisse Zool., **14**, (317-387, pls. xiii-xv); of Dauphiné-Alps, KEILHACK, Zool. Anz., **29**, (694-701)

of Irish lakes, WEST and WEST, Dublin, Trans. R. Irish Acad., **33** (B), (96); of Paraguay, STINGELIN, Ann. biol. lacustre, **1**, (181-192).

*Alona bukobensis* sp. n., German E. Africa, WELTNER, Deutsch Ost-Afrika, Cladoceren, (9, ff. 16-18, 20, 32).—*A. bukobensis subantarctica* var. n., S. Georgia, EKMAN, Cladocera and Copepoda, Swedish Antarctic expedition, (8).—*A. falcata* figured, LARGAIOLLI, Padova, Atti Ac. Ven.-Trent., **3**, (39).

*Bosmina acrocoregoni burckhardti* var. n., Alpine lakes, BREHM, Wien, Verh. ZoolBot. Ges., **56**, (40).—*B. coregoni amethystina* var. n., Garda Lake, Italy, BREHM, Arch. Hydrobiol., **1**, (497).—*B. stuhmanni* sp. n., German E. Africa, WELTNER, Deutsch Ost-Afrika, Cladoceren, (6, ff. 15, 30).

*Bosminopsis zernowi*, Linko, Central Russia; distribution of the genus; ZYKOFF, Zool. Anz., **30**, (22-24).

*Ceriodaphnia quadrangula hamata* var. n., Alpine lakes, BREHM, Wien, Verh. ZoolBot. Ges., **56**, (37, 38).—*C. bicuspidata* sp. n., German E. Africa, WELTNER, Deutsch Ost-Afrika, Cladoceren, (5, ff. 10, 11, 14).—*C. globosa* sp. n., New Zealand, BRADY, London, Proc. Zool. Soc., **1906**, (695, pl. xlvi, ff. 1-3).

*Chirocephalus appendicularis* sp. n., Asia Minor, VÁVRA, Wien, Ann. Nat. Hist. Hof. Mus., **20**, (107, pl. iii, ff. 1-9).

*Chydorus sphaericus*, figured, EKMAN, Cladocera and Copepoda, Swedish Antarctic expedition, (9, pl. i, f. 2).

*Daphniidae*, sex production, cycles of generation, ISSAKOWITSCH, Arch. mikr. Anat., Bonn, **69**, (223-244).

*Daphnia longispina*, variation, WOLTEROK, Biol. Centralbl., **26**, (471, ff. 1-4); var. *zsachkei*, form. n. *lemani*, Switzerland, STINGELIN, Genève, Rev. Suisse, Zool., **14**, (338, pl. xiv, f. 20).—*D. fusca* sp. n., Chitral, GURNEY, Calcutta, J. Proc. As. Soc. Beng., **2**, (276, pl. v, ff. 12-14).—*D. kirimensis* sp. n., (2, ff. 1-3, *jardinei barbata* var. n., (3, ff. 4-9, 21-29), German E. Africa, WELTNER, Deutsch Ost-Afrika, Cladoceren.—*D. magna americana* var. n., Nebraska, FORDYCE, Trans. Amer. Microsc. Soc., **25**, (47, pl. vi, f. 1).

*Diaphanosoma brachyurum* var. n., *tridentinum*, Italian lakes, LARGAIOLLI, Zool. Anz., **29**, (701), and Arch. Hydrobiol., **1**, 1906, (428-432) and Padova, Atti Ac. Ven.-Trent., **3**, (37).

*Ilyocryptus brevidentatus* sp. n., S. Georgia, Falkland Is., EKMAN, Cladocera and Copepoda, Swedish Antarctic expedition, (5, pl. i, f. 1).

*Leydigia trichura* sp. n., Nebraska, FORDYCE, Trans. Amer. Microsc. Soc., **25**, (49, pl. vi, ff. 2, 3).

*Macrothrix chevreuxi*, described, WELTNER, Deutsch Ost-Afrika, Cladoceren, (7, ff. 12, 13, 19, 31).—*M. montana* sp. n., Colorado lakes, BIRGE, Trans. Amer. Microsc. Soc., **25**, (150, pl. xxv, ff. 2, 3).

*Polyphemus pediculus*, cycles of generation, KEILHAUCK, Zool. Anz., **30**, (911-912); biology and ecology, ZACHARIAS, T.c. (455-459).

*Scapholeberis kingi*, Calcutta, GURNEY, Calcutta, J. Proc. As. Soc., Beng., **2**, (277, pl. v, f. 15).

*Simocephalus serrulatus*, Kew Gardens, new to Britain, SCOURFIELD, Kew Bulletin, Add. Ser., **5**, (16).—*S. latirostris* sp. n., Paraguay, STINGELIN, Ann. biol. lacustre, **1**, (187, f. 5).

*Syda crystallina*, figured, LARGAIOLLI, Padova, Atti Ac. Ven.-Trent., **3**, (37).

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*Copepoda*, development, McCLENDON, Wood's Holl, Mass., Mar. Biol. Lab. Bull., **12**, (37-52, pl. i); metamorphoses, OBERG, Wiss. Meeresunters., Kiel. Abt. Kiel, N.F., **9**, (37-103, with 7 pls.); Kiel, Schr. natur. Ver., **13**, (247-253).—List of marine species of Ireland, PEARSON, Fish. Ireland Sci. Invest., 1905, **6**, (1-37).—Of Irish lakes, WEST and WEST, Dublin, Trans. R. Irish Acad., **33** (B), (96).—Key to genera of *Gymnoplea* and *Podoplea*, ESTERLY, Berkeley Univ. Cal. Pub. Zool., **2**, (118-121, 205-207).

*Copepoda*, allied to *Lamippe*, in Gorgonian polyps, VERSLUYS, Gorgoniden der Siboga-Expedition, (6).

*Acartia bifilosa*, *longiremis*, larval forms, OBERG, Wiss. Meeresunters., Kiel, Abt. Kiel, **9**, (44, pl. iv).

*Adiaphonus* gen. n., *natalensis* sp. n., Natal, COOPER, Ann. Natal Govt. Mus., **1**, (98, pl. xii, ff. 1-14).

*Ameira simplex*, description, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (150, pl. x, ff. 7-9, xii, f. 4, xiii, f. 3, xiv, f. 5, xvii, f. 3, xxi, f. 7).

*Amenophia peltata*, British Isles and Norway, (136, pls. lxxxiii, lxxxiv), *pulchella* sp. n., Norway, (138, pl. lxxxiv, f. 2), SARS, Crustacea of Norway, **5**.

*Amphiascus*, synonymy, (148), *cinctus*, (149, pls. xci, xcii), *obscurus* sp. n., Norway, (150, pl. xciii), *similis*, (151, pl. xciv), *nasutus* nom. n., for *Dactylolopus strömi* var. *arctica* (153, pl. xciv), *minutus*, synonymy, (154, pl. xvi), *imus*, (156, pl. xvii), *giesbrechti* sp. n., Kiel, (157, pl. xviii), *propinquus* sp. n., Norway, (158, pl. xcix), *longirostris*, (159, pl. c, ci), *tenuiremis*, (161, pl. cii), *parvus* sp. n., Norway, (162, pl. ci), *debilis*, (162, pl. civ), *pallidus* sp. n., Norway, (164, pl. cv), *abyssi*, (165, pl. cvi), *hispidus*, (166, pls. cvii, cviii), *affinis* sp. n., Norway, (168, pl. cix), *intermedius*, (169, pl. cx); *typhlops*, (170, pl. cx), *attenuatus*, (171, pl. cxii), *phyllopus*, (172, pl. cxiii), *nanus*, (173, pl. cxiv, f. 1), *exiguus*, (174, pl. cxiv, f. 2), *productus*, (175, pl. cxv), *tenellus*, (176, pl. cxvi), *linearis*, (177, pl. cxvii), *sinuatus*, (178, pl. cxviii), spp. nn., Norway; SARS, Crustacea of Norway, **5**.

*Anchorella scomberi*, *paradoxa*, Irish Sea, SCOTT, Liverpool, Proc. Trans. Biol. Soc. **20**, (197, pls. vii, viii).—*A. intermedia* sp. n., Antarctic, in buccal cavity of *Nothostenia*, QUIDOR, Bul. Muséum, Paris, 1906, (29), and Paris, C.-R. Acad. sci., **142**, (55, 56).

*Arietellus setosus*, description, ESTERLY, Berkeley Univ. Cal. Pub. Zool., **2**, (189).—*A. major* sp. n., Californian coast, ESTERLY, op. cit. **3**, (74, pl. ix, f. 17, xi, ff. 43, 44, xii, f. 56, xiii, f. 80).

*Attheyella grandidieri*, Java, Siam, Cochin China, (185, pl. xiv, ff. 7-17), *decorata*, Sumatra, Java, (188, pl. xiv, ff. 18-21, xv, ff. 1-13), descriptions, DADAY, Zool. Jahrb., Syst. **24**.

*Augaptilus rostratus* sp. n., Californian coast, ESTERLY, Berkeley Univ. Cal. Pub. Zool., **3**, (73, pl. ix, f. 19, xi, f. 42, xii, ff. 57, 63, xiii, f. 75).—

*A. longicandatus*, description, ESTERLY, loc. 2, (188).

*Autanepsius* gen. n., *major*, (39, pl. xiii, f. 1), *minor*, (41, pl. xiii, ff. 2-5), Atlantic Ocean, spp. n., WOLFENDEN, Plankton Studies, **3**.

*Bathycalanus richardi*, Sars.=*Megacalanus princeps* Wolf., WOLFENDEN, T.c. (25).

*Boeckella entzi*, description, (15, pl. i, f. 6), *vxillifera* sp. n., Falkland Is., (16, pl. i, ff. 7-12), EKMAN, Cladocera and Copepoda, Swedish Antarctic Expedition.

*Brachiella antarctica* sp. n., Antarctic, parasitic on *Dissostichus eleginoides*, QUIDOR, Bul. Muséum, Paris, **12**, (30).

*Bradya minor*, salt-water pond, Northumberland, BRADY, Newcastle, Trans. Nat. Hist. Soc., **1**, (332, pl. ix, ff. 1-3).

*Caetrodes* gen. n., (*Dichelestiidiae*) *pholas* sp. n., on *Tetradon stellatus*, Ceylon, WILSON, Rep. Pearl Oyster Fish., **5**, (203-205, pl. iv, ff. 48-57).

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*Caligus zei* sp. n. on *Zeus faber*, Cornwall, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (206, pl. xxii, ff. 1-8).—*C. rapax* on *Orthagoriscus mola*, North Berwick, EVANS, Ann. Scot. Nat. Hist. No. 57, (57).—*C. scomberi*, Irish Sea, SCOTT, Liverpool, Proc. Trans. Biol. Soc., **20**, (196, pl. vi).—*C. dentatus* sp. n. on *Cyprinus carpio*, Caspian Sea, GADD, Ark. Zool. Stockholm, **3**, No. 15, (1-9).

(*Caligus remorae* sp. n., Red Sea, BRIAN, Arch. parasit. Paris, **9**, (564, 9 ff.).

*Candacia*; descriptions, figures and key to Californian species, ESTERLY, Berkeley Univ. Cal. Pub. Zool., **2**, (192-

198).—*C. cheirura*, (198, pl. i, pl. ii, ff. 7–10), *inermis*, (200, pl. ii, ff. 11–13, pl. iii, ff. 14–16), spp. n. S. African seas, CLEVE, Cape Town Marin. Invest., 3.

*Canthocampus*, description, SARS, Crustacea of Norway, 5, (191–195); key to N. American species (154), *staphylinoides* (151, pl. xv, ff. 14–21), *hemicalis* (153, pl. xvi, ff. 28, 29, xvii, ff. 31–42), spp. n., Nebraska, PEARSE, Trans. Amer. Microsc. Soc., 26.—*C. bidens*, Kew Gardens, new to Britain, SCOURFIELD, Kew Bulletin, Add., Ser. 5, (20).—*C. northumbricus coronatus* var. n. Mongolia, DADAY, Math. Termt. Ért., 24, (58).—*C. crassus*, description, (29, pl. iii, ff. 25–28), *trigonurus* sp. n. (30, pl. iii, ff. 29–34), Falkland Is., EKMAN, Cladocera and Copepoda, Swedish Antarctic Expedition.

*Centropages bradyi*, description, ESTERLY, Berkeley Univ. Cal. Pub. Zool., 2, (172).—*C. hamatus*, larval forms, OBERG, Wiss. Meeresunters. Kiel, Abt. Kiel, 9, (42, pl. ii).

*Clausocalanus arcuicornis*, description, ESTERLY, Berkeley Univ. Cal. Pub. Zool., 2, (142).

*Clytemnestra rostrata*, description, ESTERLY, T.C. (214).

*Corycaeus* sp., in Adriatic, BREHM, Arch. Hydrobiol., Stuttgart, 1, (392–393).—*C. venustus*, (225), *carinatus*, (226), descriptions, ESTERLY, Berkeley Univ. Cal. Pub. Zool., 2.

*Cyclopina gracilis*, mandible figured, BRADY, Newcastle Trans. Nat. Hist. Soc., 1, (332, pl. x, f. 13).

*Cyclops albidus*, (48, pl. ii, ff. 1–3, iii, f. 1), *serrulatus*, (49, pl. i, ff. 5–6, ii, f. 9, iii, ff. 6, 7), *finbriatus*, (55, pl. iii, f. 2), *leuckarti*, (56, pl. i, ff. 1, 3), *strenuus*, (58, pl. iii, f. 4), *viridis*, (59, pl. i, f. 4, ii, ff. 4–6, iii, f. 5), *vernalis*, (61, pl. iii, f. 3), *bicolor*, pl. i, f. 2, ii, ff. 7, 8), descriptions, LAROCHE, Copepoden der Umgebung von Bern.—*C. venustus* sp. n., Devonshire, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (189, pl. xvi, f. 11, xviii, f. 9, xx, ff. 1–3).—*C. signatus* var. *coronatus*, development, BYRNES, Wood's Holl, Mass., Mar. Biol. Lab. Bull., 10, (193–196, pl. vii, viii).—*C. aspericornis* sp. n., Sumatra, DADAY, Math. Termt. Ért., 24, (269). also Zool. Jahrb. Syst., 24, (181, pl. xiv, ff. 1–6).—*C. stuhlmanni*, (1, pl. i, ff. 1–7,

10, 11), *emini*, (4, pl. ii, ff. 1–3, 5–6, 8), spp. n., German E. Africa, *oithonoides*, (3, pl. i, ff. 8, 9, 12, 13), *leuckarti*, (5, pl. ii, ff. 4, 7, 9), descriptions, MRÁZEK, Deutsch Ost-Afrika, Copepoden.—*C. lobulosus* sp. n., Falkland Is., EKMAN, Cladocera and Copepoda, Swedish Antarctic Expedition, (27, pl. iii, ff. 22–24).

*Dactylopodella* gen. n. for *D. flava* Claus, SARS, Crustacea of Norway, 5, (131–133, pl. lxxxii).

*Dactylopus jugurtha*, Siam, DADAY, Zool. Jahrb. Syst., 24, (195, pl. xvi, ff. 6–8).

*Dactylopusia valida*, description, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (171, pl. x, f. 16, xii, f. 9, xiii, f. 12, xvii, f. 8, xx, f. 6).

*D'Arcythompsonia* gen. n. for *Cylindropsyllus fairliensis*, SCOTT, Ann. Mag. Nat. Hist., 17, (463, pl. xi, ff. 1–6).

*Diaptomus gracilis* (63, pl. iv, ff. 1–3), *vulgaris*, (64, pl. iv, ff. 4, 5), descriptions, LAROCHE, Copepoden der Umgebung von Bern. — *D. graciloides kubinskaja* var. n., North Russian coast, ZYKOFF, Zool. Anz., 30, (167, f. 4).—*D. visnu* sp. n., Singapore, DADAY, Math. Termt. Ért., 24, (279), and Zool. Jahrb. Syst., 24, (20, pl. xvi, ff. 17–20).—*D. greeni* sp. n., Ceylon, GURNEY, Spolia Zeylan., 4, (129, pl. ii).—*D. galbei*, (6, pl. iii, ff. 4, 5, 8, 9), *stuhlmanni* sp. n. (7, pl. iii, ff. 1–3, 6, 7), German E. Africa, MRÁZEK, Deutsch Ost-Afrika, Copepoden.—*D. clavipes*, (147, pl. xiii f. 6), *saltilinus*, (148, pl. xiv, ff. 9, 10), figured, *wardi* sp. n. United States, (148, pl. xiii, ff. 1–4), PEARSE, Trans. Amer. Microsc. Soc., 26.—*D. pygmaeus* (244, ff. 1–3), *spatulocrenatus* (246, ff. 6–9), spp. n., United States, PEARSE, Amer. Nat., Boston, 40.—*D. shoshone* figured, *nudus* sp. n., lakes in Colorado, MARSH, Trans. Amer. Microsc. Soc., 25, (147, pls. xxx, xxxi).

*Diosaccus tenuicornis*, SARS, Crustacea of Norway, 5, (146, plates lxxxix, xc).

*Disseta grandis* sp. n., Californian coast, ESTERLY, Berkeley Univ. Cal. Pub. Zool., 3, (72, pl. ix, f. 21, xi, ff. 45, 46, xiii, f. 69, xiv, ff. 88, 94).

*Dissonus* gen. n., (*Caligidae*), *spinifer* sp. n., Ceylon, WILSON, Rep. Pearl

Oyster Fish., 5, (198-202, pl. iii, fl. 34-17).

*Ectinosoma brunnea* sp. n., salt-water pond, Northumberland, BRADY, Newcastle, Trans. Nat. Hist. Soc., 1, (333, pl. ix, fl. 4-11).

*Echthrogaleus* (?) *littkeni*, description, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (213, pl. xxii, fl. 1-9).

*Epischura massachusettsensis* sp. n., United States, PEARSE, Amer. Nat., Boston, Mass., 40, (242, fl. 4, 5).

*Eucalanus*; descriptions, figures, and key to Californian species, ESTERLY, Berkeley Univ. Cal. Pub. Zool., 2, (130-135).

*Eucandonia tuberculata* (62), *elpatieskyi* (64), spp. n., Mongolia, DADAY, Math. Term. Ért., Budapest, 24, 1906.

*Euchaelia affinis* sp. n., S. African seas, CLEVE, Cape Town Marin. Invest., S. Africa, 3, (201, pl. iii, fl. 17-19).—*E. californica* (60, pl. ix, f. 11, x, fl. 26, 34), *propinqua* (61, pl. ix, f. 9, x, fl. 30, 33), *temis* (61, pl. ix, f. 12, x, fl. 29, 31), *spinifera* (62, pl. ix, f. 8, xi, f. 35, xiv, fl. 82, 83), *dubia* (63, pl. ix, f. 7, xi, f. 36, xiii, f. 66, xiv, fl. 84, 85), spp. n., Californian coast; *tonsa* GIESB. (64, pl. ix, f. 10, x, f. 32), description, ESTERLY, Berkeley Univ. Cal. Pub. Zool., 3.

*Euchirella*, descriptions, figures, and key to Californian species, ESTERLY, l.c. 2, (150-162).

*Eurytemora americana* sp. n., Rhode Island, WILLIAMS, Amer. Nat., Boston, Mass., 40, (645, fl. 8-11).

*Enterpe acutifrons*, description, ESTERLY, Berkeley Univ. Cal. Pub. Zool., 2, (212).

*Evansia* gen. n. for *Tetragoniceps incertus* and *T. pygmaeus* SCOTT, SCOTT, Ann. Mag. Nat. Hist., 17, (460).

*Evansula* nom. n. for *Evansia*, SCOTT, Edinb. Proc. R. Phys. Soc., 16, (342).

*Gaetanus brevicornis* (56, pl. ix, f. 4, pl. xii, f. 55), *unicornis* (57, pl. ix, f. 3, pl. xii, f. 54, pl. xiii, f. 76), *clarus* (57, pl. ix, f. 5, pl. xiv, f. 90), spp. n., Californian coast, ESTERLY, Berkeley Univ. Cal. Pub. Zool., 3.

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*Gaidins maximus* sp. n., Atlantic, WOLFENDEN, Plankton Studies, 3, (35, pl. xi, fl. 1, 2).

*Giardella thompsoni* sp. n., Irish Sea, SCOTT, Liverpool, Proc. Trans. Biol. Soc., 20, (195, pl. iv).

*Gigantella* gen. n. for *Limnocalanus sarsi*, EKMAN, Cladocera and Copepoda, Swedish Antarctic Expedition, (20, pl. ii).

*Haloptilus longimanus* sp. n., Atlantic, WOLFENDEN, Plankton Studies, 3, (29, pl. ix, fl. 1-6).

*Harrietella* gen. n. for *Laophonte simulans* SCOTT, Ann. Mag. Nat. Hist., 17, (464, pl. xi, fl. 9, 10).

*Harpacticus ehalifer* (177, pl. xii, f. 11, xviii, f. 9), *uniremis* (178, pl. xii, f. 12, xviii, f. 8), descriptions, NORMAN and SCOTT, Crustacea of Devon and Cornwall.

*Hatschekia* ? sp. n., on *Carcharias mulieri*, Ceylon, WILSON, Rep. Pearl Oyster Fish., 5, (205, pl. v, fl. 58-60).

*Hersilioides pelsneri* commensal with *Leiochone clypeata*, PÉREZ, Bordeaux, Actes soc. linn., 60, (Proc.-verb., xxxi-xxxiii).

*Hermannella parva*, description, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (199, pl. xiii, f. 15, xv, ff. 4-10, xvi, f. 12, xix, f. 5).

*Heterocalanus* gen. n., *medius* sp. n. (no locality), WOLFENDEN, Plankton Studies, 3, (27, pl. viii, fl. 1-5).

*Heterorhabdus*; descriptions, figures, and key to Californian species, ESTERLY, Berkeley Univ. Cal. Pub. Zool., 2, (182-187).—*H. longicornis* figured, id. l.c., 3, (77, pl. xiv, f. 93).

*Idomene forficata*, described SARS, Crustacea of Norway, 5, (134, pl. lxxii).

*Isocalanus* gen. n., *minor*, (36, pl. xii, fl. 1-5), *major*, (37, pl. xii, fl. 6-11), spp. n., Atlantic, WOLFENDEN, Plankton studies, 3.

*Labidocera trispinosa* sp. n., Californian coast, ESTERLY, Berkeley Univ. Cal. Pub. Zool., 2, (200).—*L. jollae* sp. n., Californian coast, id. l.c., 3, (74, pl. ix, fl. 22, 23, xii, fl. 50-53, xiv, fl. 89, 91).

*Laemargus muricatus* on *Orthagoris-*  
*cus mola*, North Berwick, EVANS, Ann.  
Scot. Nat. Hist., No. 57, (57).

*Laophonte serrata* (157, pl. xiii, f. 6, xvi, f. 6, xvii, f. 5), *inornata* (157, pl. xii, f. 5, xiii, ff. 5-14, xiv, f. 7, xvi, f. 5, xviii, ff. 3, 4, xxi, f. 3), *herdmani* (159, pl. xi, ff. 5-7, xii, f. 6, xiii, f. 7, xiv, f. 8, xvii, f. 6), descriptions, NORMAN and SCOTT, Crustacea of Devon and Cornwall.—*L. mohammed*, Siam, DADAY, Zool. Jahrb. Syst., 24, (190, pl. xvi, ff. 9-16).—(*L. mohammed* distribution, ZYKOFF, Zool. Anz., 29, (347).)

*Laophontina dubia*, description, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (165, pl. x, ff. 12-15, xi, f. 8, xii, ff. 7, 8, xv, f. 11, xvi, f. 7, xvii, f. 7, xviii, f. 5).

*Lepeophtheirus thompsoni* parasitic on *Rhombus maximus*, description, BRIAN, Riv. Ital. sc. nat., 26, (125-127).—*L. brachyurus* on *Tetronodon stellatus*, (190, pl. i, ff. 1-10), *aesopus* sp. n. (192, pl. i, ff. 11, 12), Ceylon, WILSON, Rep. Pearl Oyster Fish., 5.

*Leposphilus labrei*, description of male, larval forms of female, QUIDOR, Paris, C.-R. Acad. sci., 142, (231, 232).

*Leptastacus* gen. n. for *Tetragoniceps macronyx*, SCOTT, Ann. Mag. Nat. Hist., 17, (461).

*Lernanthropus*; list of species (135-140), *foliaceus* (140, pl. ii, f. 1), *vorax* (142, pl. ii, ff. 2, 3), *gisléri* (145, pl. ii, f. 2), *brevis* (147, pl. ii, ff. 8, 9), descriptions; *lichiae* (144, pl. ii, f. 4) sp. n. on gills of *Lichia vadigo*, Mediterranean, GOGGIO, Pisa, Atti Soc. tosc. sc. nat. Mem., 22.—*L. spp.*, synonymy, GOGGIO, Mon. zool. Ital., 17, (352-353).—*L. tetradactylus* Bassett Smith nom. nud., POCHÉ, Zool. Anz., 29, 1906, (671-672).

*Lernaeenicus sardinae* parasitic on sardine, BAUDOUIN, Rev. sci., Paris, 3, (715-722).

*Lucicutia aurita* (202), *bradyana*, (204, pl. vi, ff. 33, 34) spp. n., S. African seas, ČLEVE, Cape Town, Marin. Invest. S. Africa, 3.—*L. flavigornis*, description, ESTERLY, Berkeley Univ. Cal. Pub. Zool., 2, (180).—*L. ovalis* sp. n., no locality, WOLFENDEN, Plankton Studies, 3, (28, pl. ix, ff. 7-10).

*Lükkenia asterodermi*, description, NORMAN and SCOTT, Crustacea of Devon

and Cornwall, (210, pl. xxii, ff. 9, 10, xxiv, ff. 1-8).

*Mecynocera clausi*, description, ESTERLY, Berkely Univ. Cal. Pub. Zool., 2, (137).

*Megacalanus* Wolf = *Macrocalanus* Sars, *longicornis* Sars = *bradyi* Wolf. WOLFENDEN, Plankton Studies, 3, (25).

*Megarthurum* gen. n. for *Dactylopusia purpurocineta* Norman and Scott, NORMAN AND SCOTT, Crustacea of Devon and Cornwall, (175, pl. x, f. 17, xii, f. 10, xiii, f. 10, xiv, f. 9, xviii, f. 6, xix, f. 1, xxii, ff. 4, 5).

*Mesoglicola* gen. n., *delagei* sp. n., parasitic on *Corynactis viridis*, QUIDOR, Paris, C.-R. Acad. sci., 143, (613-615).

*Mesoheres* (193), *anglicus* (194, pl. x, f. 18, xi, f. 10, xii, f. 13, xiii, f. 13, xiv, f. 14, xix, f. 6, xx, f. 8), descriptions, NORMAN AND SCOTT Crustacea of Devon and Cornwall.

*Metridia lucens* (177), *boeckii* (178), descriptions, ESTERLY, Berkeley Univ. Cal. Pub. Zool., 2.—*M. atra* (70, pl. ix, ff. 15, 16, pl. xi, ff. 39, 40, pl. xiii, f. 78, pl. xiv, f. 95), *ignota* (71, pl. ix f. 20), spp. n. Californian coast, ESTERLY, l.c., 3.

*Microsetetta rosea*, description, ESTERLY, T.c. 3, (211).

*Monstrilla anglica*, Irish Sea, SCOTT, Liverpool, Proc. Trans. Biol. Soc., 20, (195, pl. v).

*Nicothoa astaci*, description of male, QUIDOR, Paris, C.-R. Acad. sci., 142, (465-468).

*Nitoera platypus* sp. n., Siam, DADAY, Math. Termt. Ért., 24, (273) and Zool. Jahrb. Syst., 24, (192, pl. xv, ff. 10, 14-26, xvi, ff. 1-5).

*Oithona plumifera* (207), *nana* (209), descriptions, ESTERLY, Berkeley Univ. Cal. Pub. Zool., 2.—*O. plumifera* Baird in the North Sea, BREEMEN, Helder, Verh. Onderz. Zee, 1, (1-8, 1 pl.).—*O. similis* larval forms, OBERG, Wiss. Meeresunters. Kiel, Abt. Kiel, 9, (45, pl. v.).

*Oneaea conifera* (216), *minuta* (217), descriptions, ESTERLY, Berkeley Univ. Cal. Pub. zool., 2.

*Ophiocampus mongolicus* sp. n. Mongolia, DADAY, Math. Termt. Ért., 24, (34-77).

*Orthagoriscola* Poche for *Laemargus muricatus* Kröyer, SCOTT, Edimb. Proc. R. Phys. Soc., **16**, (369).

*Paracalanus parvus*, description, ESTERLY, Berkeley Univ. Cal. Pub. Zool., **2**, (140); larval forms, OBERG, Wiss. Meeresunters., Kiel, Abt. Kiel, **9**, (40, pl. i); *perplexus* var. n. Plymouth, NORMAN and SCOTT, Crustacea of Devon and Cornwall (127, pl. xii, ff. 1–2, xiii, f. 1, xiv f. 1).

*Parastenohelia anglica*, description, NORMAN and SCOTT, op. cit. (148, pl. x, ff. 10, 11, xiii, ff. 4, 9, xiv, f. 6, xvi, f. 4, xvii, f. 4, xxi, f. 2).

*Peltidium conspicuum*, description, NORMAN and SCOTT, T.C. (180, pl. xi, f. 9, xiv, f. 11, xv, f. 6, xix, f. 4).

*Penella* sp., Moluccas, HORST, Leiden, Notes Mus. Jentink, **26**, (229–234).

*Penella filosa*, post-larval stages. THOMPSON, Biol. Bull., Wood's Holl., Mass., **8**, (296–307.)

*Peniculus furcatus* on *Tetronodon*, Ceylon, WILSON, Rep. Pearl Oyster Fish., **5**, (206–208, pl. v, ff. 61–66).

*Philichthyidae*, characters, QUIDOR, Paris, C.-R. Acad. sci., **142**, (231).

*Philichthys amphiorae* sp. n., parasitic in *Amphiora squammata*, HÉROUARD, T.C. (1288).

*Phyllopodopsyllus* gen. n. for *Tetragoniceps bradyi*, SCOTT, Ann. Mag. Nat. Hist., **17**, (458).

*Phyllopus bidentatus*, description, ESTERLY, Berkeley, Univ. Cal. Pub. Zool., **2**, (191).—*P. turqueti* sp. n., Antarctic, QUIDOR, Bul. Muséum, Paris, **12**, (27), and Paris, C.-R. Acad. sci., **142**, (54, 55).

*Phyllothyreus cornutus*, description, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (212, pl. xxiv, ff. 9–17).

*Pleuromamma*, Californian species figured and described, ESTERLY, Berkeley Univ. Cal. Pub. Zool., **2**, (174–177).

*Pontella lobiancoi*, Irish Sea, SCOTT, Liverpool, Proc. Trans. Biol. Soc., **20**, (194, plates ii, iii).

*Pontellopsis occidentalis* sp. n. Californian coast, ESTERLY, Berkeley Univ. Cal. Pub. Zool., **3**, (76, pl. xi, ff. 47, 48,

49, xii, f. 59, xiii, f. 68, xiv, ff. 92, 96).

*Porellidium chareoti*, *afinis*, spp. n., Antarctic, QUIDOR, Bul. Muséum, Paris, **12**, (28), and Paris, C.-R. Acad. sci., **142**, (54, 55).—*P. lecanoides*, description, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (182, pl. xiv, f. 12, xv, f. 5, xix, f. 3, xx, f. 7).

*Pseudoboeckella anderssonorum* sp. n. Subantarctic sens., EKMAN, Cladocera and Copepoda, Swedish Antarctic expedition, (10, pl. i, ff. 3–5).

*Pseudocalanus elongatus* larval forms, OBERG, Wiss. Meeresunters. Kiel Abt. Kiel, **9**, (40, pl. i).

*Pseudodiaptomus coronatus* sp. n., Rhode Island, WILLIAMS, Amer. Nat., Boston, **40**, (641, ff. 1–7).

*Pseudodosaccus* gen. n. for *Diosaccus propinquus*, SCOTT, Ann. Mag. Nat. Hist., **17**, (465).

*Pteropssyllus* gen. n. for *Tetragoniceps consimilis*, SCOTT, T.C., (159).

*Robertsonia tenuis* description, NORMAN and SCOTT, Crustacea of Devon and Cornwall, (140, pl. xx, ff. 9–11, xvi, f. 6).

*Sabelliphilus (?) bispirae* sp. n. parasitic on Polychaete *Bispira*, S. African seas, MCINTOSH, Cape Town Marin. Invest., S. Africa, **3**, (86–91, pl. ix).

*Sapphirina*, figures and descriptions of Californian species, (219–223), *lomae* sp. n., (223), Californian coast, ESTERLY, Berkeley, Univ. Cal. Pub. Zool., **2**.

*Scolecithricella neptuni* sp. n., S. African seas, CLEVE, Cape Town Marin. Invest., S. Africa, **3**, (206, pl. iv, v, vi, ff. 30, 31).

*Scolecithrix*; key to species (163), *danae* (164), *bradyi* (165); *perseaeans* (166), *similis* (170), descriptions; *subdentata* (167), *pacifica* (168), spp. n., Californian coast, ESTERLY, Berkeley Univ. Cal. Pub. Zool., **2**; *inornata* (67, pl. ix, f. 18, xi, f. 27, xiii, ff. 65, 73), sp. n., Californian coast; *frontalis* (65, pl. ix, f. 14, xiii, f. 70), *magna* (66, pl. ix, f. 13, xi, f. 38, xii, ff. 52, 64, xiii, f. 72), descriptions; ESTERLY, l.c. **3**.

*Spinocalanus magnus* described, (41, pl. xiv, ff. 1–5), *antarcticus* sp. n., Antarctic, (43, pl. xiv, ff. 6–9), WOLFENDEN, Plankton Studies, **3**.—*S. major* sp. n., Californian coast, ESTERLY, Berkeley Univ. Cal. Pub. Zool., **3**, (55).

*Stenohelia*, description, synonymy, (180), *gibba* description (181, pl. cxix, cxx, f. 1), *proxima* sp. n., Norway (183, pl. cxx, f. 2), *aenula* (184, pl. cxxi), *palustris* (185, pl. cxxii), *reflexa* (186, pl. cxxiii), *giesbrechii* (188, pl. cxxiv, f. 1), *normani* (189, pl. cxxv, f. 2), *longicaudata* (190, pl. cxxv, f. 1), descriptions, SARS, Crustacea of Norway, 5.—*S. pygmaea* (142, pl. x, ff. 1-3, xi, ff. 1-2, xv, f. 1, xvi, f. 1, xviii, f. 1), *sinuolans* (143, pl. x, f. 6, xiii, f. 8, xiv, f. 4, xvii, f. 1, xxi, f. 1), *neglecta* (144, pl. x, f. 4, xi, f. 3, xiii, f. 2, xiv, f. 2, v, ff. 2, 12, xviii, f. 2, xxi, f. 8), *varians* (146, pl. x, f. 5, xiv, f. 13, xv, ff. 4, 1-1, xvi, f. 3, xvii, f. 2), *longirostris* (147, pl. xi, f. 4, xii, f. 3, xiv, f. 3, xv, ff. 3, 13, xvi, f. 2), descriptions, NORMAN and SCOTT, Crustacea of Devon and Cornwall.

*Stenoheliopsis* gen. n., *divaricata* sp. n., Norway, SARS, Crustacea of Norway, 5, (191-193, pl. cxxv, f. 2).

*Tenora longioris*, larval forms, OBERG, Wiss. Meeresunters. Kiel, Abt. Kiel, 9, (43, pl. iii).

*Tortanus setaeaudatus* sp. n. Rhode Island, WILLIAMS, Amer. Nat. Boston, 40, (619, ff. 12-15).

*Trebius exilis* sp. n. on *Rhinoptera javanica*, Ceylon, WILSON, Rep. Pearl Oyster Fish., 5, (194, pl. ii, ff. 20-33).

*Undochaeta*; characters (147), *major* (148), *minor* (149), descriptions, ESTERLY, Berkeley Univ. Cal. Pub. Zool., 2.

*Vallentinia* gen. n. for *Dactylopusia ornata*, NORMAN and SCOTT, Crustacea of Devon and Cornwall (173, pl. xiii, f. 11, xiv, f. 10, xvi, ff. 8-10, xviii, f. 7, xix, f. 2, xxi, ff. 4, 5).

*Westwoodia nobilis* description (140, pl. lxxxv, lxxxvi), *assimilis* sp. n., Norway (141, pl. lxxxvii), *minuta* (142, pl. lxxxviii, f. 1), *pygmaea* (143, lxxxviii, f. 2), descriptions, SARS, Crustacea of Norway, 5.

*Xanthocalanus fragilis* description, CLEVE, Cape Town Marin. Invest. S. Africa, 3, (209, pl. vi, f. 32).—*X. similis* sp. n., Californian coast, ESTERLY, Berkeley Univ. Cal. Pub. Zool., 3, (68, pl. ix, f. 1, x, f. 24, xii, ff. 60, 61, xiii, ff. 71, 77).—*X. simplex* (30, pl. x, ff. 1-3), S.W. coast of Ireland, *suberistatus* (31, pl. x, ff. 4-6), Atlantic, *magnus* (32, pl. x, ff. 7-9), *calaminus* (34, pl. xi, ff. 3-5), Bay of Biscay spp. n., WOLFENDEN, Plankton Studies, 3.

## BRANCHIURA.

*Argulus*; affecting salmon-breeding, LÉGER, Ann. Univ. Grenoble, Paris, 18, (49-55).—*A. purpureus* description, RICCI, Naturalista sicil., 17, (94, pl. ii, ff. 1-2).

## OSTRACODA.

*Ostracoda* of Valdivia-expedition, MÜLLER, Wiss. Ergebn. D. Tiefsee-Exped., 8, (27-154, 31 pls.); of Malay Seas, MÜLLER, Ostracoden der Siboga - Expedition; of Brunswick, LIENENKLAUS, Bonn. Verh. math. Ver., 62, (167-172).

†Tertiary *Ostracoda* from Italy, figured; CAPPELLI, Boll. soc. geol. ital., 24, (303-312, pl. ix, x).

*Archiconchoecia crenulata* (44), *striata*, *ventricosa* sp. n. (45), MÜLLER, Wiss., Ergebn. D. Tiefsee-Exp., 8, (pl. vii).—*A. striata* description, JUDAY, Berkeley Univ. Cal. Pub. Zool., 3, (16, pl. iii, ff. 1-3).

†*Bairdia beedei* sp. n., *abrupta* var. n., Upper Carboniferous, Kansas, ULRICH and BASSLER, Washington, D.C., U. S. Nation. Mus. Proc., 30, (161, 162, pl. xi, ff. 19-22).

†*Beyrichchia?* *radiata*, described, *emaciata* sp. n., Upper Carboniferous, Kansas, ULRICH and BASSLER, T.C. (156, pl. xi, ff. 5, 6).

†*Beyrichiella gregaria* (157, pl. xi, f. 18), *bollaformis* (158, pl. xi, 7, 8) spp. n., *tumida* var. n. (158, pl. xi, ff. 9-11), Upper Carboniferous, Kansas, ULRICH and BASSLER, T.C.

†*Bradoria bergeroni*, *enyo* (99), *eris*, *fragilis* (100), *sterope* (101), *woodi* (102), spp. n., Mid Cambrian, China, WALCOTT, Washington, D.C., Nation. Mus. Proc., 29.

*Candonella albida* sp. n., German E. Africa, VÁVRA, Deutsch Ost-Afrika, Ostracoden (12, f. 3).

*Codonocera weberi* (24, pl. viii, ff. 7-9, ix, ff. 1-6), *penicillum* (25, pl. ix, ff. 15-19), *polygonia* (25, pl. ix, ff. 9-14), *pusilla* (27, pl. vii, ff. 14-20), *goniacantha* (28, pl. vii, ff. 10-13, 21, and 22), spp. n., Malay seas, MÜLLER, Ostracoden der Siboga-Expedition.

*Conchoecia*; Müller describes and figures numerous known species, and the following new: *aequiseta* (59, pl. xi, ff. 1–6 and 11–14), *allotherium* (59, pl. xi, ff. 15–19), *acuticosta* (87, pl. xxx, ff. 18–21), *acanthophora* (108, pl. xxxv, ff. 2–5 and 13), *amblyposta* (108, pl. xxiv, ff. 17–22), *ametra* (117, pl. xxvii, ff. 11–12, 14, and 17–19), *antipoda* (110, pl. xxvi, ff. 5–16), *alata* (121, pl. xxix, ff. 1–10), *brachyaskos* (70, pl. xiv, ff. 1 and 2, and 7–14), *cellularis* (113, pl. xviii, ff. 7, 18–28), *chuni* (124, pl. xxxi, ff. 16–28), *cophopyga* (74, pl. xiv, ff. 15–17, 24–26), *ctenophora* (96, pl. xxii, ff. 16–20 and 29), *decipiens* (72, pl. xiii, ff. 27–36), *dentata* (73, pl. xiv, ff. 18–23), *dorsotuberculata* (63, pl. x, ff. 1–3 and 8–13), *dasyopthalma* (66, pl. xi, ff. 20–23 and 26–30), *disco-phora* (67, pl. xiii, ff. 1–9 and 12–18), *distans* (111, pl. xxv, ff. 24–26, and pl. xxvi, ff. 1–4), *dichotoma* (111, pl. xxiv, ff. 23–29, and pl. xxv, f. 1), *edentata* (76, pl. xv, ff. 24–29), *elongata* (125, pl. xxxii, ff. 1–7), *echinata* (61, pl. x, ff. 14–24), *glandulosa* (81, pl. xxx, ff. 29–35), *hettacea* (121, pl. xxix, ff. 11–19), *hirsuta* (60, pl. xi, ff. 1–3 and 6–10), *incisa* (94, pl. xix, ff. 1–11), *isocheira* (84, pl. xiv, ff. 28–31, and pl. xv., ff. 30–33), *kampta* (108, pl. xxiv, ff. 11–12 and 14–16), *kytrophora* (82, pl. xvii, ff. 1–10), *lophura* (99, pl. xx, ff. 1–10), *leptothrix* (122, pl. xxix, ff. 20–26), *macromma* (79, pl. xvii, ff. 11–22), *macrocheira* (101, pl. xxi, ff. 1–9), *mamillata* (60, pl. xvi, ff. 1–9, and pl. xxxv, f. 8), *mollis* (106, pl. xxiv, ff. 1–10 and 13), *nasotuberculata* (83, pl. xviii, ff. 25–30), *orthotrichota* (93, pl. xix, ff. 12–16), *parvidentata* (100, pl. xx, ff. 11–18), *parthenoda* (78, pl. xvi, ff. 24–29), *plactolykos* (114, pl. xxxv, ff. 14–20), *plinthina* (116, pl. xxvii, ff. 1–6, 9–10 and 20), *pusilla* (80, pl. xvi, ff. 30–31, 34–37), *prosadene* (120, pl. xxxii, ff. 1–7, 9), *reticulata* (64, pl. xii, ff. 10–17), *rhyynchena* (113, pl. xxvi, ff. 17–25), *squamosa* (119, pl. xxviii, ff. 8–17, and pl. xxxv, ff. 6 and 7), *stigmatica* (88, pl. xxx, ff. 22–28), *symmetrica* (117, pl. xxvii, ff. 7, 8, 13, 15 and 16), *tyloda* (109, pl. xxxv, ff. 2–13), *valdiviae* (123, pl. v, f. 3, pl. xxxii, ff. 8 and 10–19), spp. n.; Wiss. Ergebni. D. Tiefsee-Exp. 8.—*C. daphnoidea* Cl. *minor* (126, pl. xxxi, ff. 1–3, 9, 15), *loricata* Cl. *minor* (96, pl. xxii, ff. 10–15), *magna* Cl. *rhombica* (104, pl. xxi, ff. 21–25), *plactolykos* Müll. *major* (115, pl. xxv, ff. 21–23), *pusilla* Müll. *major* (80, pl. xvii, f. 35), *minor* (80, pl. xvii, f. 36), *obtusata* Sars *antarctica* (77, pl. xvi, ff. 10–23), varr. n., id. T.c.—*C. giesbrechti* for *oblonga* Müll. *praeocc.* (75), *striola* for *striata* Müll. *praeocc.* (91), nomm. n., MÜLLER, T.c.—*C. spinirostris* Cl. (18, pl. iii, ff. 4–7), *magna* Cl. (19, pl. iii, ff. 8–11, pl. xiv, ff. 1, 2), *hyalophyllum* Cl. (20, pl. iv, ff. 3, 4), *clavigera* Sars (23, pl. v, ff. 3, 4), *daphnoidea* Cl. (26, pl. vii, f. 3), descriptions; *pacifica* for *oblonga* Müll. (21), *mulleri* for *striata* Mull. (24), nomm. n.; *ritteri* sp. n., Californian coast (25, pl. vi, ff. 6–8, pl. vii, ff. 1–2), JUDAY, Berkeley Univ. Cal. Pub. Zool. 3.—*C. spinirostris* (31, pl. i, f. 7), *subarculata* (33, pl. i, ff. 8–12), *obtusata* (36, pl. i, ff. 13–19), *oblonga* (38, pl. ii, ff. 21–28), *spinifera* (40, pl. ii, ff. 29–36), *elegans* (41, pl. ii, ff. 37–40, pl. iii, ff. 41–43), *acuminata* (43, pl. iii, ff. 44–48), *daphnoidea* (45, pl. iii, ff. 49–55), *borealis* (48, pl. iii, ff. 56–63, pl. iv, f. 64), *hadroni* (49, pl. iv, ff. 65–75), *agassizii* (50, pl. iv, ff. 76–84, pl. v, ff. 85–91), described, *hamata* (52, pl. v, ff. 92–99); *insignis* (56, pl. v, ff. 105–107, pl. vi, ff. 108–113), *notocera* (58, pl. vi, ff. 114–120), *secernenda* (59, pl. vi, ff. 121–127), spp. n., Atlantic, VÁVRA, Ergebn. Plankton-Exp. 2.—*C. belgicae* sp. n., Antarctic, MÜLLER, Belgica Ostracoda (4, ff. 1–11).—*C. sibogae* (8, pl. i, ff. 10–20), *concentrica* (10, pl. i, ff. 1–9), spp. n., Malay Seas, MÜLLER, Ostracoden der Siboga-Expedition.

*Crossophorus africanus* description, MÜLLER, Wiss. Ergebni. D. Tiefsee-Exp. 8, (134, pl. xxxiv, ff. 1–9).—*C. gibber* sp. n., Malay Seas, MÜLLER, Ostracoden der Siboga-Expedition (28, pl. iv, ff. 1–9).

*Cylindroleberis hilgendorfi* (33, pl. v; ff. 1–5), *inermis* sp. n. (34, pl. v, ff. 6–13), Malay Seas; MÜLLER, T.c..

*Cypria javana* sp. n., Java, MÜLLER, Hamburg Mitt. naturhist. Mus., 23, Beiheft 2, (14, ff. 1–5).

†*Cypridea punctata*, *posticalis*, *venusta*, forming limestone in Dorset, CHAPMAN, London, Proc. Geol. Ass., 19, (284).

*Cypridella remota* sp. n., Sumatra VÁVRA, Zool. Jahrb. Syst. 23 (430, pl. xxv, ff. 34–36).

*Cypridina hirsuta* sp. n. (131, pl. xxxiii ff. 1–10); *castanea* Brady (130, pl. v

f. 1, 2, pl. xxxiii, ff. 11–16, pl. xxxiv, ff. 10–13) description; MÜLLER, Wiss. Ergebni. D. Tiefsee-Exp., 8.—*C. obesa* sp. n., Atlantic, VÁVRA, Ergebni. Plankton-Exp., 2 (67, pl. vii, ff. 132b–142).—*C. asymmetrica* (14, pl. vi, ff. 1–12), *hesperiida* (15, pl. iii, ff. 21–28), Malay Seas, spp. n.; *flareola* description (16, pl. iii, f. 28); MÜLLER, Ostracoden der Siboga-Expedition.—†*C. subovata* sp. n., Upper Carboniferous Kansas; ULRICH and BASSLER, Washington, D.C., U. S. Nation. Mus. Proc. 30 (162, pl. xi, ff. 23–26).

*Cyprinopsis costata* sp. n., German E. Africa, VÁVRA, Deutsch Ost-Afrika Ostracoden (11, f. 2).

*Cyprinotus kaufmanni* sp. n., Japan, VÁVRA, Zool. Jahrb. Syst. 23 (424, pl. xxiv, ff. 15–20).—*C. elatior* (18, f. 6), *congener* (20, f. 7), *fossulatus* (21, f. 8), spp. n., German E. Africa, VÁVRA, Deutsch Ost-Afrika Ostracoden.—*C. sarsi* sp. n., New Zealand, BRADY, London, Proc. Zool. Soc., 1906, (700, pl. li, ff. 1–11).

*Cypris purpurascens*, VÁVRA, Zool. Jahrb. Syst. 23 (422, pl. xxiv, f. 14).—*C. venusta* (23, f. 9), *flabellata* (25, f. 10), *puberoides* (27, f. 11), spp. n., German E. Africa, VÁVRA, Deutsch Ost-Afrika Ostracoden.—*C. kraepelini* sp. n., Java, MÜLLER, Hamburg, Mitt. Naturhist. Mus., 23, Beihet 2, (139, ff. 1–7).

†*Cythere?* *havorthii* sp. n., Upper Carboniferous, Kansas, ULRICH and BASSLER, Washington, D.C., Smithsonian Inst., U. S. Nation. Mus. Proc., 30, (160, pl. xi, f. 12).

*Cythereis phalaropi*, (378, pl. xxxv, ff. 86–94, pl. xxxvi, ff. 95, 96), *arenicola*, (379, pl. xxxvi, ff. 97–107), *vineyardensis*, (380, pl. xxxvii, ff. 110–114), spp. n., North America, CUSHMAN, Boston, Mass., Proc. Soc. Nat. Hist., 32.

*Cytheridea seminuda*, (374, pl. xxxiii, ff. 62–64, pl. xxxiv, ff. 76, 77), *americana*, (375, pl. xxxiii, f. 67, pl. xxxiv, ff. 68–75), spp. n., North America, CUSHMAN, T.c.

*Cytherideis hedleyi* sp. n., off Great Barrier Is., N. Zealand, CHAPMAN, Wellington, Trans. and Proc., N. Zeal. Inst., 38, (110, pl. iii, f. 8).

*Cytherois zostericola* sp. n., North America, CUSHMAN, Boston, Mass., Proc.

Soc. Nat. Hist., 32, (369, pl. xxxi, ff. 35–41).

*Euconchoecia chierchiae*, (128, pl. xxxii, ff. 8–17), *aculeata elongata* var. n., (129, pl. xxxii, ff. 18–26), MÜLLER, Wiss. Ergebni. D. Tiefsee-Exp., 8.—*E. chierchiae* Atlantic, VÁVRA, Ergebni. Plankton-Exp., 2, (29, pl. i, ff. 1–6).

*Euryceyparis subglobosa*, Java, VÁVRA, Zool. Jahrb. Syst., 23, (420–422, pl. xxiv, ff. 9–13).

*Halocypris taurina* sp. n., Atlantic, VÁVRA, Ergebni. Plankton-Exp., 2, (66, pl. vii, ff. 128–132a).—*H. striata*, (47, pl. viii, ff. 20–23), *cornuta*, (48, pl. v, ff. 8, 9, pl. viii, ff. 1–3, 5–7), spp. n., *dispar* var. n., (48, pl. viii, f. 4), *bicornis* sp. n., (49, pl. viii, ff. 8–12, 17), Atlantic and Indian Oceans, MÜLLER, Wiss. Ergebni. D. Tiefsee-Exp., 8.—*H. pelagica* description, JUDAY, Berkeley, Univ. Cal. Pub. Zool., 3, (27, pl. vii, ff. 4–7).

*Hungarocypris* gen. n., (Cypriidae), *gavemüllerii* sp. n., Siam, VÁVRA, Zool. Jahrb. Syst., 23, (416–419, pl. xxiv, ff. 1–8).

*Ilyocyprinace* and *Ilyocypris*, characters, descriptions of known species, (133–256), *bradyi compressa* var. n. for *bradyi* Kaufmann, (256), MASI, Boll. Soc. Zool. Ital., 6.

*Ilyocypris* gen. n., for *Ilyocypris tuberculata* Kertés, MASI, T.c., (261).

*Ilyodromus kerguelensis* sp. n., Kerguelen, MÜLLER, Wiss. Ergebni. D. Tiefsee-Exp., 8, (136, pl. xxxv, ff. 8–12, 14–19).

†*Kirkbya*, (*Kirkbyidae fam. n.*), *pinguis*, (159, pl. xi, ff. 13–15), *centronota*, (159, pl. xi, ff. 16, 17), spp. n., Upper Carboniferous, Kansas, ULRICH and BASSLER, Washington, D.C., U. S. Nation. Mus. Proc., 30.

†*Leperditellidae fam. n.* for *Leperditia*, ULRICH and BASSLER, T.c., (149).

†*Leperditia balthica* Hisinger var. *guelphica* description, CLARKE and RUEDEMANN, Albany Univ., N.Y., Mem. St. Mus. Mem., 5, (106, pl. xxi, 9–11).

*Limnicythere notodonta* sp. n., Java, VÁVRA, Zool. Jahrb. Syst., 23, (431, pl. xxv, ff. 37–43).

*Newhamia fenestrata* New Zealand, BRADY, London, Proc. Zool. Soc., 1906, (698, pl. xlvi, ff. 6–9, pl. li, ff. 1–13).

*Paradoxostoma magellanica* sp. n.,  
Magellan Straits, MÜLLER, Belgica  
Ostracoda, (7, ff. 12–15).

†*Paraparchites* gen. n., *numerous*  
sp. n., Upper Carboniferous, Kansas,  
ULRICH and BASSLER, Washington, D.C.,  
Smithsonian Inst., U. S. Nation. Mus.  
Proc., 30, (151, pl. xi, ff. 1–4).

*Physocypris* gen. n., *bullata* sp. n.,  
German E. Africa, VÁVRA, Deutsch Ost-  
Afrika Ostracoden, (7, f. 1).

*Pontocypris edwardsi* sp. n., North  
America, CUSHMAN, Boston, Mass., Proc.  
Soc. Nat. Hist., 32, (368, pl. xxx, ff. 26–  
34).

†*Primitia* sp. n., Ordovician Ottawa,  
AMI, Rep. Geol. Surv., Can., 14, (85 J.).

*Proteocypris* gen. n., *salina* sp. n.  
salt-water pond, Northumberland,  
BRADY, Newcastle, Trans. Nat. Hist.  
Soc., 1, (334, pl. x, ff. 1–12).

*Pseudocytheretta* gen. n., (*Cytheridae*)  
*edwardsi* sp. n., North America, CUSH-  
MAN, Boston, Mass. Proc. Soc. Nat. Hist.,  
32, (382, pl. xxxvii, 119–132).

*Pyrocypris acuminata* (18, pl. ii, ff. 1–  
5), *sinuosa* (19, pl. ii, ff. 11–16), *inermis*  
(19, pl. ii, ff. 6–10), *dentata* (20, pl. ii,  
ff. 17–21), *serrata* (20, pl. iii, ff. 1–7),  
*amphiacantha* (21, pl. iii, ff. 8–12),  
*lepidophora* (21, pl. iii, ff. 13–23), spp. n.,  
Malay seas, MÜLLER, Ostracoden der  
Siboga-Expedition.

*Sarsiella americana* (363, pl. xxvii,  
ff. 1–6), *zostericola* (364, pl. xxviii, ff. 7–  
18), spp. n., North America, CUSHMAN,  
Boston, Mass., Proc. Soc. Nat. Hist., 32.

*Stenocypris bimueronata*, Siam (428,  
pl. xxv, ff. 25–33), *derupta*, Java (426,  
pl. xxiv, ff. 21–24), spp. n., VÁVRA, Zool.  
Jahrb. Syst. 23.—*S. malcolmsoni*, de-  
scription (14, f. 4), *excavata*, sp. n.,  
German E. Africa, (16, f. 5), VÁVRA,  
Deutsch Ost-Afrika Ostracoden.

*Thaumatoxypris* gen. n., *Halocypridae*  
(41, pl. vi), *echinata* sp. n. (42), MÜLLER,  
Wiss. Ergebni. D. Tiefsee-Exp., 8.

(*Cirripedia*, structure, classification,  
GRUVEL, Nouv. Arch. Muséum, Paris,  
6, (51–224, av. pl.); Monographie des  
Cirrhipèdes ou Thécostraces (xiii + 476,  
av. fig.).)

Larval forms, TESSMANN. Beiträge  
zur Entwicklungsgeschichte der Cirri-  
pedien, [1904], (38), 2 Tfn.

†Fossil *Cirripedia*; descriptions and  
figures of Italian Tertiary species;  
ALESSANDRI, Palaeontogr. Ital., 12, (207–  
324, pl. xiii–xviii). Only the new  
species are recorded below.

*Acasta funicularum* sp. n., Ceylon,  
ANNANDALE, Rep. Pearl Oyster Fish., 5,  
(145, ff. 5–9).

(*Acrothoracica* nom. n. for *Abdomina-*  
*lia* Darwin, GRUVEL, Monogr. Cir-  
rihpèdes.)

*Alepas xenophorae*, sp. n., Indian  
Ocean, ANNANDALE, Ann. Mag. Nat. Hist.,  
17, (399).

†*Archaeolepas decora* sp. n., Lower  
Cretaceous, Germany, HARBORT, Berlin,  
Abh. geol. Landesanst. 45, (22, pl. i,  
ff. 3–10).

(*Balanus psittacus* description,  
VAYSSIÈRE, Ann. Fac. Sci., Marseille, 15,  
(161–170, fig.)).

†*Brachylepas cretacea*, H. Woodward  
recorded from France and Germany,  
BÖHM, Centralbl. Min., Stuttgart, 1906,  
(449–450).—*B. cretacea*, Woodward (337),  
*fallax* Darwin (340). sp. ? (353) Norfolk,  
WOODWARD, Geol. Mag., 3.

*Conchoderma virgatum* var. *hunteri* on  
*Hydrus platurus* Ceylon, ANNANDALE,  
Calcutta, J. Proc. As. Soc., 2, (207).

*Dichelaspis equina* (130), *pellucida*  
(140, ff. 1–2), Ceylon, ANNANDALE, (5),  
Rep. Pearl Oyster Fish., 5.—*D. tenuivalvata* sp. n., Ceylon on *Hydrus*  
*platurus*, ANNANDALE, Spolia Zeylan. 3,  
(193).—*D. transversa* (44, ff. 1 and 1a),  
Persian Gulf, *bathynomi* (45, f. 2), Indian  
Ocean spp. n., ANNANDALE, Ann.  
Mag. Nat. Hist., 18.

*Duplorbis* gen. n. (*Rhizocephala*), *cal-*  
*thurae* sp. n. on *Calathura brachiatia*  
Greenland, SMITH, Fauna Neapel, 29,  
(118, pl. viii, ff. 9–19).

*Heterosaccus* gen. n. (*Rhizocephala*),  
*hians* sp. n. on *Charybdis ornata*, Suez  
Canal, SMITH, T.C. (113).

## CIRRIPEDIA.

*Cirripedia*, figured and described,  
SCHMALZ, C. Cirripedia (=Martini u.  
Chemnitz, Systematisches Cochylien-  
Cabinet, Lfg 509–510=Bd 11, H. 27–28  
=Sect. 170), (1–82), Tfn. 14).

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†*Scillaepas paronae* sp. n., Miocene, Italy, ALESSANDRI, T.c. (265, pl. xiv, ff. 1–8).

(*Thecostraca* nom. n. for *Cirripedia*. GRUVEL, Monogr. Cirripèdes.)

*Triangulus* gen. n. (*Rhizocephala*) *munidae* sp. n. on *Munida* spp., Norway, SMITH, Fauna Neapel, **29**, (115).

†*Verruca miocrebicosta* (275 pl. xiv, ff. 18–23), *gruveli* (278, pl. xv, ff. 1–6), Miocene, Italy, ALESSANDRI, Palaeontogr. Ital., **12**.

# XI. ARACHNIDA

TO WHICH ARE ADDED

GIGANTOSTRACA (XIPHIOSURA, TRILOBITA, EURYPTERIDA),  
PANTOPODA, TARDIGRADA, PENTASTOMIDA, MYRIOPODA  
and PROTOTRACHEATA

ARRANGED BY

R. SHELFORD

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## II.—SUBJECT-INDEX.

### PHYSIOLOGY=2811.

Reactions of *Limulus* in early stages; **Pearl**.

Physiology of the heart in *Limulus*; **Carlson**, **1**, **2**, **3**, **Newman**.

### DISTRIBUTION=2827.

(Geological and Geographical.)

China, fossil localities; **Ogawa**.

### Cambrian.

Great Britain, *Trilobita* 2 spp. n.; **Lake**, **1**.

China, *Trilobita* 3 genn. n., 10 spp. n., 2 varr. n.; **Lorenz**.

China, *Trilobita* genn. n., spp. n., varr. n.; **Walcott**.

Coulouma, *Trilobita* 5 spp. n.; **Miquel**.

Nevada, *Trilobita* 2 spp. n.; **Pack**.

### Ordovician.

British Isles, *Trilobita* spp. n., varr. n.; **Reed**.

Bohemia, *Trilobita* and *Eurypterida*; **Siemiradski**.

Bohemia, *Eurypterida* 1 sp. n.; **Seemann**.

Canada, *Trilobita* 1 sp. n.; **Narraway** and **Raymond**.

United States, *Trilobita*; **Hudson**.

(New York, Chazy limestone, *Trilobita*; **Raymond**.)

### Silurian.

Sweden, *Trilobita* 18 spp. n.; **Olin**, **Persson**, **Post**, **Törnquist**, **Wiman**.

Eastern shores of Baltic, *Trilobita* 2 spp. n., 4 varr. n.; **Schmidt**, **2**.

Russia, *Trilobita* 6 spp. n., 2 var. n.; **Lamanskij**.

British Isles, *Trilobita* spp. n., varr. n.; **Reed**.

Bohemia, *Trilobita* 2 spp. n.; **Želizko**, **1**, **2**.

Canada, *Trilobita* 2 spp. n.; **Whiteaves**, **1**, **2**.

New York, *Trilobita*; **Clarke** and **Ruedmann**, **2**.

Bolivia, *Trilobita* 2 spp. n.; **Lake**, **2**.

### Devonian.

British Isles, Cornwall, [*Trilobita*; **Woodward**, **1**].

South Africa, *Trilobita*, 8 spp. n.; **Schwarz**.

Columbia County, New York, *Trilobita* 5 spp. n., 1 var. n.; **Clarke**, **1**.

Western New York, *Trilobita*; **Slocum**.

Eastern New York, *Trilobita*; **Grabau**.

Indiana, *Trilobita*; **Cumings**.

Lower Amazons, *Trilobita*; **Schuchert**.

### Carboniferous.

Yorkshire, British Isles, *Trilobita*; **Woodward**, **2**.

Italy, *Trilobita*; **Gortani** **1**.

Hungary, *Trilobita*; Frech.

Permo-Carboniferous; Italy, *Trilobita*  
var. n.; Gortani, 2.

### Jurassic.

Sweden, *Limulus* 1 sp. n.; Jackson.

### III.—SYSTEMATIC=2831.

#### † TRILOBITA.

*Trilobita* from Cambrian, Great Britain, LAKE London, Monogr. Palaeont. Soc. 60 Part I (1-28) pls. i and ii.

*Trilobita* from Cambrian of Black Mountain, Coulouma, MIQUEL Paris Bul. soc. géol. (4) 5 (465-483).

*Trilobita* from Palaeozoic, Ayrshire, Scotland REED London, Monogr. Palaeont. Soc. 60 (97-186) pls. xiv-xx.

*Acidaspis törnquisti* sp. n. Silurian, Sweden OLIN Lund, Univ. Årssk. N. F. 2 ii 3 (49) pl. i ff. 18, 19.—*A. perarmata* description WHITEAVES Palaeoz. Fossils 3 pt. 4 (289) pl. xlvi f. 3.

*Agnostus securiger* (20) pl. ii f. 11, *calvus* (23) pl. ii f. 18, Cambrian, England, spp. n., LAKE London, Monogr. Palaeont. Soc. 60 Part I.—*A. trinodus* (72) pl. iv ff. 15, 16; *cingulatus* (72) pl. iv f. 17 Silurian, Sweden sp. n., OLIN Lund Univ. Årssk. N. F. 2 ii 3.—*A. fallax*, *laevicrensis* (82) pl. iv ff. 7, 8, v ff. 8 and 9, *parvifrons*, *latelimbatus* (84) pl. iv f. 9, v ff. 10, 11, varr. n., Mid Cambrian, China, LORENZ Berlin Zs. D. geol. Ges. 58.—*A. knanensis* sp. n. Mid Cambrian, Shantung, WALCOTT Washington D.C., Nation. Mus. Proc. 29 (22).

*Agraulos abaris* (42), *abrota*, *acalle*, (43), *agenor*, *diree*, (44), *divi*, *dolon*, (45), *dryas* (46), spp. n., Mid Cambrian, Shantung, WALCOTT T.c.—*A. armatus*, *nitida*, (576), *obscura* (577), *regularis* (578), *uta*, *vicina* (579), (?) *capaz* (580), *melie* (581), spp. n., Mid. Cambrian, China WALCOTT op. cit. 30.

*Alokistocare* gen. n. for *Ptychoparia subcoronata* LORENZ Berlin Zs. D. geol. Ges. 58 (62).

*Amphoton* gen. n., *steinmanni* sp. n. Mid Cambrian, China, LORENZ, Berlin Zs. D. geol. Ges. 58 (66, 75) pl. iv ff. 15-17.

*Ampyx incurvus* sp. n. Ordovician, Scotland, REED London, Monogr. Palaeont. Soc. 60 (161) pl. xx ff. 6-8.—*A. portlocki* (69) pl. iv ff. 5-8, *rostratus* (70) ff. 9 and 10, *tenuellus* (71) ff. 11, 12; *globifrons* (71) f. 13 sp. n. Silurian Sweden; OLIN Lund Univ. Årssk. N.F. 2 ii 3.

*Anomocarella alcinoe*, *bergioni*, (47), *bianos* (48), *biston*, ? *butes*, (49), ? *daulis* (50), *daunus* (51), *decclus* (52), *tatian*, *temenus*, (53), spp. n., Mid Cambrian Shantung, WALCOTT Washington, D.C. Nation. Mus. Proc. 29.—*A. bigsbyi* (581), *eriopia* (582), *flava* (583), spp. n., Mid Cambrian, China WALCOTT op. cit. 30.—*A. commune*, (63, 77) pl. iv ff. 10, 11, 13, 14, *ovatum*, (77) f. 12, *speciosum* (77) pl. v ff. 6, 7, spp. n., Mid Cambrian China, LORENZ Berlin Zs. D. Geol. Ges. 58.

*Anomocarella* gen. n., *albion* (54), *baucis* (55), ? *bura*, *carme*, (56), *chinensis* (57), spp. n., Mid Cambrian Shantung WALCOTT Washington D.C. Nation. Mus. Proc. 29.—*A. contigua*, *irma*, spp. n., Mid. Cambrian, China WALCOTT op. cit. 30 (584).

*Areia succica* sp. n. Silurian, Sweden, OLIN Lund Univ. Årssk N.F. 2 ii 3 (46) pl. i ff. 10-12.

*Arionellus agonus*, *ajax*, (58), *alala* (59), spp. n. Mid Cambrian Shantung, WALCOTT Washington D.C. Nation. Mus. Proc. 29.

Asaphus boehmi sp. n. Mid Cambrian China LORENZ Berlin Zs. D. geol. Ges. 58 (84) pl. vi, ff. 4 and 5.—*A. priscus* sp. n. (62, 173), *eichwaldi expansoides*, *lepiduroides*, varr. n. (63, 173) Silurian, Russia LAMANSKIJ St. Petersburg, Mém. com. géol. N. ser. 20.

*Bathyurellus brevispinus* (337) pl. x ff. 13-15; *minor* (338) pl. x f. 16, spp. n. Chazy limestone, New York RAYMOND, Ann. Carnegie Mus., 3.)

*Bathyuriscus asiaticus* sp. n. Mid Cambrian, China LORENZ Berlin Zs. D. geol. Ges. 58 (66, 73) pl. v ff. 1-5.—*B. howelli* (296) pl. ii ff. 2 and 2a, *productus* (297) ff. 3 and 3a, Cambrian, Nevada PACK J. Geol. Chicago Ill. 14.

*Blackwelderia* gen. n., for *Olenoides*? *ciliæ* Walc. WALCOTT Washington, D.C., U.S. Nation. Mus. Proc., 30 (573-575).

*Bronteus ekwanensis*, *aquilonaris* spp. n. Upper Silurian Canada WHIT-EAVES Rep. Geol. Surv. Can. Ottawa **14** (58 F).—*B. ekwanensis* (266) pl. xlvi f. 1, *aquilonaris* (207) f. 2, descriptions, WHIT-EAVES Palaeoz. Fossils **3** pt. 4.

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## I.—TITLES.

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# ARACHNIDA I. SP.

(INCL. TARDIGRADA, PENTASTOMIDA)

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## II.—SUBJECT-INDEX.

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- Persia: *Scorpiones* 1 sp. n., 2 subspp. n.; Birula, 3; *Solifugae* 6 spp. n.: Birula, 1.
- Asia Minor:—*Opiliones*, *Pseudoscorpiones*, *Araneae* gen. pp. and varr. n.;

Nosek; *Scorpiones* and *Solifuga* spp. n.; Werner; *Hydrachnida* 2 spp. n.; Thon, 2.

Palestine, *Scorpiones* 1 subsp. n.; Birula, 3.

Aral Sea and Balchash lake, *Scorpiones* and *Solifugae*; Birula, 5.

Mongolia, *Hydrachnida* 2 spp. n.; Daday, 3; *Tardigrada*; Daday, 3.

Japan, *Araneae* genn., spp. and subsp. n.; Bösenberg and Strand.

Loochoo Is. and Formosa, *Scorpiones*; Iwakawa.

Formosa, *Pedipalpi* 1 subsp. n.; Schwangart, 2.

(Indo-China, *Arachnida*; Simon, 9.)

Indo-China, *Araneae* 1 gen. and sp. n.; Simon, 4.

Siam, *Hydrachnida* 1 gen. n., 5 spp. n.; Piersig: *Pseudoscorpiones* 6 spp. n.; With.

Nicobars, *Pseudoscorpiones* 1 gen. n., 8 spp. n.; With.

India, *Pseudoscorpiones* spp. n.; With; *Ixodidae* 2 spp. n.; Neumann, 1.

S. India, *Phrynidius*; Rivington.

S. India, *Arachnida* spp. n.; Simon, 3, 7.

Ganges, *Porocephalus* sp. n.; Linstow.

Sikkim, *Oribatidae* 1 gen. n., 8 spp. n.; Pearce.

Ceylon, *Araneae* spp. n.; Simon, 2, 3, 7.

Ceylon, *Ixodidae* 2 spp. n.; Neumann, 1.

Burma, *Pseudoscorpiones* spp. n.; With.

Malay Peninsula, *Opiliones* 1 sp. n.; Loman, 2; *Pseudoscorpiones* 6 spp. n.; With.

Indo-Malayan islands, *Araneae* sp. n.; Simon, 2; *Hydrachnida* 20 spp. n., 1 var. n.; Piersig.

Sumatra, *Araneae* 5 spp. n., 1 var. n., Strand, 4, 6.

Java: *Hydrachnida* 9 spp. n.; Koenike, 2; *Carpoglyphus* sp. n. (*Acaris*); Haan.

Celebes, *Pseudoscorpiones* 1 sp. n.; With

Africa, Madagascar, Seychelles, Mediterranean States. f

Algeria and Tunis, *Araneae* genn. and spp. n.; Strand, 3.

Egyptian Sudan and N. Uganda, *Araneae* 11 spp. n., 2 subsp. n.; Simon, 1.

Abyssinia and Somaliland, *Araneae*, genn. and spp. n.; Strand, 3.

West Africa:—*Araneae* 25 spp. n. and 2 vari. n.; Strand, 8: *Ixodidae*; Ziermann: *Ixodidae* 2 spp. n.; Neumann, 1: *Pseudoscorpiones* 1 fam. n., 1 gen. n., 7 spp. n., 2 varr. n.; Ellingsen.

Senegambia, *Mygalomorphae* sp. n.; Simon, 5.

Cameroons, *Arachnida*; Sjöstedt; *Araneae* 5 spp. n.; Strand, 4, 5.

(Juan-Fernandez, *Araneae* 2 spp. n.; Simon, 8.)

San Thomé Isd., *Araneae* 1 sp. n.; Strand, 3.

East Africa: *Araneae* 6 spp. n.; Strand, 8: *Ixodidae* 2 spp. n.; Neumann, 1.

German E. Africa: *Araneae* genn. and spp. n.; Strand, 3: *Hydrachnida* 5 spp. n.; Koenike, 1: *Scorpiones*; Kraepelin.

Lake Nyasa, *Hydrachnida*; Halbert, 1.

South Africa:—*Araneae* spp. n.; Strand, 4: Simon, 2: *Ixodidae*; Lounsbury.

Kalahari desert, *Rhipicephalus* sp. n.: Donitz, 1.

Cape of Good Hope, *Gamasus* 1 sp. n.; Berlese.

Natal and Zululand, *Acaris* genn. and spp. n.; Trägårdh.

German South-west Africa, *Araneae* 2 spp. n.; Strand, 8.

Madagascar, *Araneae* spp. n.; Simon, 2.

Seychelles, *Acaris* 3 spp. n.; Thon, 4.

## North America. g

Canada, *Oribatidae* 1 sp. n.; Banks, 3.

Gulf of S. Lawrence, Anticosti Isd., *Arachnida*; Schmitt.

United States, *Araneae* 2 spp. n.; Crosby; *Tyroglyphidae* 17 spp. n.;

Banks, 2: *Oribatidae* 24 spp. n.; Banks, 3.

Washington, *Arachnida*; Bergroth.

Michigan, *Araneae*; Ruthven.

Kansas, *Araneae*; Scheffer, 2.

#### Polar regions.

*k, o*

*Araneae* 1 gen. n., 2 spp. n.; Strand, 1, 2.

Spitzbergen, *Tardigrada* 2 spp. n.; Richters, 1.

#### Mexico and Centr. and S. America. *h*

Mexico: *Araneae* 1 sp. n.; Strand, 4: *Ixodidae* 1 sp. n.; Neumann, 1.

Guatemala, *Atemnus elongatus*; Berger.

Bahamas, *Arachnida* 3 spp. n.; Banks, 1.

Tropical S. America, *Araneae* spp. n.; Simon, 2.

Pernambuco, *Spelacorhynchus praecursor*; Neumann, 2.

Bolivia, *Ixodidae* spp. n.; Neumann, 1.

Brazil, *Pergamasus*; Heim and Oudemans, 2; *Ixodidae* spp. n.; Neumann, 1.

Paraguay, *Gamasus* sp. n.; Berlese.

(Tucuman, *Scorpiones*; Simon, 10.)

Galapagos Is., *Amblyomma* sp. n.; Neumann, 1.

Tristan d'Acunha, *Ixodes* sp. n.; Neumann, 1.

#### Australasia (incl. New Guinea). *i*

New Guinea: *Araneae* sp. n.; Simon, 2; *Araneae* 1 var. n.; Strand, 6: *Opiiones* 1 gen. n., 3 spp. n.; Loman, 1: *Acaris*; Oudemans, 12: *Trombidinum* 2 spp. n.; Oudemans, 1.

(New Guinea, *Acaris* spp. n.; Oudemans, 18.)

Fiji Is., *Acaris* 2 spp. n.; Nalepa.

(Australia, *Araneae* 1 sp. n.; Rainbow, 2.)

Australia:—*Araneae* spp. n.; Simon, 2: *Lycosidae* 10 spp. n.; Hogg: *Acaris* 5 spp. n.; Rainbow.

New South Wales, *Argas* sp. n.; Froggatt.

Tasmania, *Araneae* spp. n.; Simon, 2.

New Caledonia, *Araneae* spp. n.; Simon, 2.

#### III.—SYSTEMATIC=3031.

#### SCORPIONES.

*Scorpionida* of Crete PENTHER Wien, Verh. Zool. Bot. Ges. 56 (60–64).—of the Loochoo Islands and Formosa (Japanese). IWAKAWA, Dobuts. Z., Tokyo, 18, (5–12) pl.

*Butheolus conchini* Simon, synonymy BIRULA St. Peterburg, Ann. Mus. zool. Ac. Sc. 10 (126).—*B. melanurus* Kessl. defensive attitude, FAUSSEK St. Peterburg, Zap. Russ. Geogr. Obšč., 27, (146)

*Buthus acutecarinatus* E. Simon, synopsis of subspp. BIRULA, St. Peterburg, Bull. Ac. Sc., 23, (139–140); *matthiesseni* Persia (142) *judaicus* (139, 140) Palestine and Arabia, subsp. n. BIRULA St. Peterburg, Bull. Ac. Sc. 23.—*B. cognatus*, L. Koch synonymy (122) *caucasius fischeri* subsp. n. Caucasus (121); BIRULA, St. Peterburg, Ann. Mus. zool. Ac. Sc., 10.—*B. eupeus* (C. Koch), synopsis of subspecies. BIRULA, St. Peterburg, Bull. Ac. Sc., 23, (122–134); *philippovitschi* subsp. n. Persia; BIRULA, T.c. (127, 128).—*B. eupeus thersites*, life-history; BIRULA Taškent, Izv. Turk. Otd. Russ. Geogr. Obšč. 4, (42–48) pl. v.—*B. europaeus* egg-laying MINGAUD Nîmes, Bul. soc. étud. sci. nat. 33 (168–170).—*B. schach* sp. n. Persia; BIRULA, St. Peterburg, Bull. Ac. Sc., 23, (134).—*B. zarudnyianus* nom n. for *Hemibuthus zarudnyi* BIRULA T.c. (144).

*Euscorpius slavicaudis* in Paris DELVAL Paris, Bul. soc. ent., 1904, (178).

#### PEDIPALPI.

*Phrymichus cunatus* Poc. in S. India RIVINGTON Bombay, J. Nat. Hist. Soc. 17, (523).

*Thelyphonus*, development, phylogeny etc. SCHIMKEWITSCH, St. Peterburg, Trav. Soc. Nat. 35, 1906 (1–15) with 6 text-figures; Zs. wiss. Zool. 81 (1–95), pls. i–viii.

*Typopeltis crucifer* Poc. *kochi* subsp. n. Formosa SÖHWANGART, Zool. Anz., 30, (331-337).

## PALPIGRADI.

*Kaenenia draco* sp. n. Majorca in caves PEYERIMHOFF Paris, Bul. soc. ent. 1906 (300, 301).

## ARANAEAE.

*Araneae*, classification, form of body DAHL, Zool. Anz., 31, (60-64).

Anatomy and histology of sexual organs STRAND Zs. wiss. Zool. 80, (515-543) pl. xxviii.—Physiological effects of their venom MITCHELL Knowledge and Sci. News, London 3 (317-318).

*Araneae* of France, PLANET, Araignées, Histoire naturelle de la France, 14<sup>e</sup>, partie. Paris, (1-341, a.), fig. et 18 pl.

## AVIOLARIIDAE.

*Acanthopelma maculata* sp. n. Bahamas, BANKS, New York, N.Y., Bull. Amer. Mus. Nat. Hist. 22 (185)

*Aneylotrypa atra* sp. n. Somaliland, STRAND, Zool. Anz. 30 (605).—*A. bicornuta* sp. n., South Africa, STRAND, Wiesbaden, Jahrb. Ver. Natk. 59 (3).

*Avicularia subvulpina* sp. n. South Africa STRAND. T.c. (22).

*Ceratogyrus sanderi* sp. n., Southwest Africa STRAND Stuttgart, Jahreshefte Ver. Natk. 62, (23).

*Cyphonisia kaesseri*, sp. n., East Africa STRAND T.c. (14).—*C. maculipes* sp. n. Cameroons; STRAND Wiesbaden, Jahrb. Ver. Natk. 59 (287).

*Cryptopholis bartholomaei* Latr. characters STRAND T.c. (4).

*Eurypelma hageni* sp. n. Mexico STRAND T.c. (19).

*Heligmomerus longipes* sp. n. Somaliland STRAND Zool. Anz. 30 (605).

*Hysteroocrates spellenbergi* (25), *vosseleri* (27), *haasi* (31), spp. n. Cameroons; STRAND Stuttgart, Jahreshefte Ver. Natk. 62.—*H. ueilieri*. (10), *maximus*, (14), spp. n. Cameroons STRAND Wiesbaden, Jahrb. Ver. Natk. 59.

*Ischnocolus fasciculatus* sp. n. Somaliland STRAND Zool. Anz. 30 (606).

*Loxoptygella* gen. n. *erlangeri* sp. n. Somaliland STRAND T.c. (607).

*Macrothele vidua* sp. n. Himalayas SIMON Paris, Ann. soc. ent. 75 (306).

*Phoneyusa chevalieri* sp. n. Fontain, West Africa SIMON Bul. Muséum Paris 1906 (189).

*Phormictopus cancerides* Latr. *tenuispina* var. n. no locality given STRAND Wiesbaden, Jahrb. Ver. Natk. 59 (17).

*Phormingochilus fuchsi* sp. n., Sumatra, STRAND T.c. (3).

*Pisener pustulatus* sp. n. Somaliland STRAND Zool. Anz. 30 (606).

*Pterinochilus raptor* sp. n. Somaliland STRAND T.c. (606).—*P. widenmanni* (17), *mamillatus* (21), spp. n. East Africa STRAND Stuttgart, Jahreshefte Ver. Natk., 62.

## ULOBORIDAE.

*Dinopsis seriata*, *biaculeata*, *fastigata* (284), *pardalis* (285), spp. n. Brazil SIMON Ann. soc. ent. Belg. 50.

*Hyptiotes affinis* sp. n. Japan BÖSENBERG and STRAND, Abh. Senckenberg Ges. 30 (108), pl. xv f. 393.

*Lathys ocellata* (109) pl. xvi f. 465, *orientalis* (110) pl. xvi f. 475, *annulata* (110) pl. vi f. 468, *novembris* (375) pl. iii f. 4 spp. n. Japan BÖSENBERG and STRAND, T.c.

*Miagrammopes orientalis* sp. n. Japan BÖSENBERG and STRAND, T.c. (109) pl. xv f. 422.—*M. sexpunctatus* sp. n. Himalayas SIMON Paris, Ann. soc. ent. 75 (306).

*Uloborus furunculus* (285) *hilaris* (286) spp. n. India SIMON Ann. Soc. ent. Belg. 50.—*U. varians* (102) pl. iii f. 1, pl. xv f. 429, *defectus* (103) pl. xv f. 427, *sylboides* (104) pl. xv. ff. 428, 431, *dubius* (105) pl. xv f. 430, *prominens* (106) pl. xv f. 410, *incognitus* (374) pl. iii f. 17 spp. n. Japan BÖSENBERG and STRAND Abh. Senckenb. Ges. 30.

(*Uloborus bigibbosus* sp. n. Pondichery SIMON Paris, Ann. Soc. ent. 74 (163).)

## PSECHRIDAE.

*Fecenia maforensis* sp. n. New Guinea SIMON Ann. Soc. ent. Belg. 50 (287).

*Psechrus himalayanus* sp. n. India SIMON T.c. (287).

*Themacrys* gen. n. (287) *irrorata* Natal, *stolidia* Zululand (288) spp. n. SIMON T.c.

#### ZOROPSIDAE.

*Acanthoctenus obauratus* Brazil *dumicola* Venezuela (289) *gaujoni* Ecuador (290) *plebejus* Venezuela, Trinidad *andicola* Bolivia (291) spp. n. SIMON Ann. Soc. ent. Belg. 50.

*Uduba madagascariensis* Vinson, *funerea* (293) *inhonesta* (294) spp. n. Madagascar SIMON T.c.

#### DIOTYNIDAE.

*Amaurobius* revision of European species, *dubius* nom. n. for *Coelotes roscidus* L. Koch (432) *pastor*, Sim. *tirolensis* subsp. n. Alps (458) ff. 11, 13, 51, 64 *karlinskii* sp. n. Herzegovina, Bosnia (469) f. 3 KULCZYŃSKI Krakow, Bull. Intern. Acad. 1906 (417-476) pl. xiv, xv.—*A. (Tulanocca) incerta* sp. n. Asia Minor NOSEK Wien, Ann. Nat. Hist. Hofmus. 20 (120)—*A. promontorii* Cape of Good Hope (294) *gausapatus* Australia *praecalvus* Tasmania (295) spp. n. SIMON Ann. Soc. ent. Belg. 50.—(*A. socialis* sp. n. Australia RAINBOW Rec. Austr. Mus. 6 (9) fig. 1 pl. iii).

*Alphycoschaema guttipes* Tasmania (297) *sedula* Australia (298) *misella* (298) *pullata*, *nexibilis* New Caledonia (299) spp. n. SIMON Ann. Soc. ent. Belg. 50.

*Auximus rhombifer* (300) *fulvipes*, *quitensis*, *harpagulus* (301) *procerulus* (302) spp. n. Ecuador SIMON T.c.

*Badumna varia* (296) *cinctipes* (297) spp. n. Australia SIMON T.c.

*Callocephhalinus* gen. n. for *Lathys alba* Keys. and *L. maculata* Keys. SIMON T.c. (303).

*Ciniilo annulatus* sp. n. Dalmatia, KULCZYŃSKI, Ann. Hist.-Nat. Mus. Nat. Hung., 4, (157).

*Derxema* gen. n. *arguta* sp. n. Australia SIMON Ann. Soc. ent. Belg. 50 (303).

*Dictyna abyssinica* sp. n. Somaliland, STRAND Zool. Anz. 30 (667).—*D. colona* New Caledonia (303) *bispinosa* Burma *kandiana* Ceylon *velifera* Sikkim (304)

*estebanensis* Venezuela (305) spp. n. SIMON Ann. soc. ent. Belg. 50.—*D. felis* (111) pl. xvi f. 476, *foliicola* (112) pl. vi f. 67, pl. xvi ff. 470, 471, *procerula* (112) pl. xvi, f. 462 spp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., 30.—*D. grossa* sp. n. Himalayas SIMON Paris, Ann. soc. ent. 75 (306).

(*Dictyna turbida* Nilghiris *nigricauda*, *smaragdula* Ceylon spp. n. SIMON Paris, Ann. soc. ent. 74 (165, 166).)

*Episinus lugubris*, Simon, Dorsetshire CAMBRIDGE O. P. Proc. Dorset Nat. Hist. F. Cl. 27 (74-83, pl. A f. 2).

*Heterodictyna* Dahl. = *Dictynina* Banks DAHL Zool. Anz. 31 (63).

*Megadictyna* gen. n. *thilenii* sp. n. New Zealand DAHL T.c. (62, 63).

#### ERESIDAE.

*Dresserus inconspicuus* sp. n. Somaliland STRAND Zool. Anz. 30 (668).

*Scythra perclegans*, *semicoccinea* spp. n. South Africa SIMON Ann. soc. ent. Belg. 50 (307).

*Stegodyphus corallipes* (305) *simplicifrons* (306) Madagascar, *luctuosus* Mashonaland (306) spp. n. SIMON T.c.—*S. 2½-vittatus* Somaliland (667) *tibifer* German E. Africa (687) spp. n. STRAND Zool. Anz. 30.

#### FILISTATIDAE.

*Filistata hasselti* sp. n. Malayan Islands SIMON Ann. soc. ent. Belg. 50 (308).

#### OONOPIDAE.

*Gamasomorpha karschi* sp. n. Japan BÖSENBERG and STRAND Abh. Senckenb. Ges., 30, (117) pl. xvi f. 455.

*Oonops corticalis* sp. n. Japan BÖSENBERG and STRAND, T.c. (116) pl. vi f. 60.

*Xestaspis recurva* sp. n. Shoa, Abyssinia STRAND Zool. Anz. 30 (680).

#### SICARIIDAE.

*Loxosceles bergeri* sp. n. German South-West Africa STRAND Wiesbaden, Jahrb. Ver. Naturk., 59 (26).—*L. rufescens* characters BÖSENBERG and STRAND Abh. Senckenb. Ges., 30 (113) pl. vi f. 69 pl. xvi f. 450.

*Loxoscella* gen. n. *pallidecolorata* sp. n. Somaliland STRAND Zool. Anz. 30 (668).

*Seytodes nigrolineata* characters BÖSENBERG and STRAND Abh. Senckenb. Ges. 30 (114) pl. vi ff. 62, 71 pl. xii 267 pl. xv f. 441.—*S. subthoracica* (40) *camerunensis* (42) Cameroons, *suffusa* (43) East-Africa spp. n. STRAND Stuttgart, Jahreshefte Ver. Natk. 62.

#### DYSDERIDAE.

*Ariadna lateralis* Karsch (118) pl. vi f. 63 pl. xv ff. 433, 434, *orientalis* (119, 376) pl. vi f. 59 spp. n., Japan BÖSENBERG and STRAND Abh. Senckenb. Ges. 30.—*A. taprobanica* Ceylon *nebulosa* Madura *oreades* Ceylon spp. n., SIMON Paris, Ann. soc. ent. 75 (280).—*A. viridis* sp. n. South-west Africa STRAND, Stuttgart, Jahreshefte Ver. Natk., 62 (45).

*Dysdera argaeica* (120) pl. iv f. 2 *asiatica* (121) pl. iv f. 3 *montana* (122) *longimandibularis* (123) pl. iv f. 4 spp. n. Asia Minor NOSEK Wien, Ann. Nat. Hist. Hofmus. 20.—*D. römeri* sp. n. Somaliland, STRAND Zool. Anz. 30 (668).

*Harpactes chyzeri* sp. n. Dalmatia, KULCZYŃSKI Ann. Hist.-Nat. Mus. Nat. Hung., 4 (159).—*H. sturanyi* (124) pl. iv f. 5 *babori* (125) pl. iv f. 6 spp. n. Asia Minor NOSEK Wien, Ann. Nat. Hist. Hofmus. 20.

*Segestria inda* sp. n. India SIMON Paris, Ann. soc. ent. 75 (279).

#### DRASSIDAE.

*Allodrassus* gen. n. *trideutatus* sp. n. Somaliland STRAND Zool. Anz. 30 (610).

*Callilepis asiatica* (124) pl. xvi f. 488, *saga* (377) pl. vii f. 80, spp. n. Japan BÖSENBERG and STRAND Abh. Senckenb. Ges. 30.

*Cithaeron delinubatus* sp. n. Somaliland STRAND Zool. Anz. 30 (614).

*Drassodes oculinotatus* (119) pl. xvi f. 480, *pater* (119) pl. xvi f. 483, *rotundifoveatus* (120) pl. xvi f. 484, *unci-insignitus* (120) pl. xvi f. 500, *depilosus* (376) pl. vii f. 83, *nox* (376) pl. vii f. 82, spp. n., Japan BÖSENBERG and STRAND Abh. Senckenb. Ges. 30.—*D. similis* sp. n. Asia Minor NOSEK Wien, Ann. Nat. Hist. Hofmus. 20 (125).—*D. subviduatus*, (608), *vorax*, *carinatus*, *prosthesimifor-*

*mis*, (609), *sternatus*, *adisensis* (681), spp. n. Abyssinia and Somaliland STRAND Zool. Anz. 30.

(*Drassodes heteropthalmus* sp. n. Coromandel SIMON Paris, Ann. soc. ent. 74 (168))

*Echemella* gen. n. *quinquedentata* sp. n. Somaliland STRAND Zool. Anz. 30 (610).

*Gnaphosa compirensis* sp. n. Japan BÖSENBERG and STRAND Abh. Senckenb. Ges. 30 (123) pl. vi f. 481.—*G. lueifuga minor* var. n. Asia Minor NOSEK Wien, Ann. Nat. Hist. Hofmus. 20 (128).

*Maniana* gen. n. *defecta* sp. n. Somaliland STRAND Zool. Anz. 30 (614).

(*Mulicymnis lubrica* sp. n. Pondichery SIMON Paris, Ann. soc. ent. 74 (169).)

*Platyoides bidentatus* sp. n. Somaliland STRAND Zool. Anz. 30 (607).

*Prosthesima abbajensis*, *multideutata* (611), *albobivittata*, *dorsisectata* Somaliland (612), *quadridentata* Tunis (613), *neumannii* (681), *dalotensis*, E. Africa, *schoenensis*, Abyssinia (682), spp. n. STRAND T.C.—*P. asiatica* (121) pl. vi f. 78 pl. xvi f. 487, *x-notata* (122) pl. xvi f. 489, *pallidipatellis* (123) pl. xvi f. 490, spp. n., Japan BÖSENBERG and STRAND Abh. Senckenb. Ges. 30.—*P. strandi* sp. n. Prinkipo Is. in Marmora Sea NOSEK Wien, Ann. Nat. Hist. Hofmus. 20 (126) pl. iv f. 7.

*Pterotricha lentiginosoides* (127) pl. iv f. 8 *pulchra* (127) pl. iv f. 9 spp. n. Asia Minor NOSEK Wien, Ann. Nat. Hist. Hofmus. 20.

*Pythonissa chordivulvata* sp. n. Somaliland, STRAND Zool. Anz. 30 (613).

*Scotophaeus lamperti* sp. n. German S.W. Africa, STRAND Wiesbaden, Jahrb. Ver. Natk., 59 (28).—*S. parvoculuis* sp. n. Somaliland, STRAND Zool. Anz. 30 (611).

(*Scotophilus* gen. n. *maindroni* sp. n. Coromandel SIMON Paris, Ann. Soc. ent. 74 (169).)

*Talanites dorsilineatus* sp. n. Japan BÖSENBERG and STRAND Abh. Senckenb. Ges. 30 (121, 377) pl. vii f. 84.

*Theumella* gen. n. *typica*, *penicillata* spp. n. Somaliland STRAND Zool. Anz. 30 (607, 608).

## ZODARIIDAE.

(*Capheris nitidiceps*, *stillata* spp. n. S. India SIMON Paris, Ann. Soc. ent. **74** (171).)

(*Hermippus eruciatus* sp. n. Coromandel SIMON Paris, Ann. Soc. ent. **74** (172).)

*Hermippus affinis* sp. n. Somaliland, STRAND Zool. Anz. **30** (668).—*H. japonicus* sp. n. Japan BÖSENBERG and STRAND Abh. Senckenb. Ges. **30** (125) pl. vi f. 73 pl. xv f. 439.

*Laeches vittatus* sp. n. Tunis, STRAND Zool. Anz. **30** (669).

*Mallinella* gen. n. *maculata*, *scutata* spp. n. Somaliland STRAND T.c. (670).

*Mallinus* (?) *defectus* sp. n. Tunis STRAND, T.c. (670).

*Storena nilgherina* sp. n. Nilgiris SIMON Paris, Ann. Soc. ent. **75** (281).

(*Storena redimita* sp. n. Pondichery SIMON Paris, Ann. Soc. ent. **74** (173).)

(*Sufficia cingulata* sp. n. Pondichery SIMON Paris, Ann. Soc. ent. **74** (174).)

*Zodarium dubium*, *tunetiaeum* spp. n., Tunis, STRAND Zool. Anz. **30** (669).—*Z. thoni* sp. n. Asia Minor NOSEK Wien, Ann. Nat. Hist. Hofmus. **20** (128) pl. iv f. 10.

## UROCTEIDAE.

*Uroctea compactilis* Karsch, Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., **30**, (126) pl. vi f. 70 pl. xv f. 44.

## PHOLCIDAE.

*Pholeus crypticola* sp. n., Japan BÖSENBERG and STRAND Abh. Senckenb. Ges. **30** (127) pl. vi f. 72 pl. xv f. 440.

*Smireringopus affinitatus*, *zonatus* Somaliland (671), spp. n., STRAND Zool. Anz. **30**.

*S. peregrinus* sp. n., East Africa STRAND Stuttgart, Jahreshefte Ver. Natk. **62** (47).

## THERIDIIDAE.

*Achaea asiatica* sp. n. Japan BÖSENBERG and STRAND Abh. Senckenb. Ges. **30** (148) pl. xii f. 278.

*Argyrodes atriapicatus* sp. n. Somaliland STRAND Zool. Anz., **30** (682).—*A. bona dea* (129) pl. v f. 52 pl. xii f. 264

*fissifrons* (130) pl. v f. 48 pl. xi ff. 235, 240 *miniaeetus* (132) pl. xv ff. 399, 403 characters, *fur* (133) pl. xi f. 226 *erueinotum* (134) pl. x f. 188 spp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges. **30**.

*Ariamnes cylindrogaster* Sim. (128) pl. v f. 53 pl. x f. 195, *saganus* (129, 378) pl. v f. 46 spp. n. Japan BÖSENBERG and STRAND T.c.

*Asagena japonica* sp. n. Japan BÖSENBERG and STRAND T.c. (156, 380) pl. v f. 44. —*A. phalerata seraiensis* var. n. Asia Minor NOSEK Wien, Ann. Nat. Hist. Hofmus. **20** (131).—*A. violacea* sp. n. Somaliland STRAND Zool. Anz., **30** (615).

*Bathyphantes spretus* sp. n. Norfolk, CAMBRIDGE O. P. Proc. Dorset Nat. Hist. F. Cl. **27** (76, 85) pl. A ff. 4-7.

*Dipoena castrata* (149) pl. v f. 50 pl. xii ff. 246, 247, *eannotala* (150) pl. xii f. 266, *multilata* (150) pl. xii f. 275, *uniforma* (151) pl. xii f. 285, *flavomarginata* (151) pl. xii f. 279, *longisterna* (152) pl. xii f. 189 spp. n. Japan BÖSENBERG and STRAND Abh. Senckenb. Ges. **30**.

*Enoplognatha dorsinotata* (156) pl. x f. 194, *japonica* (156) pl. v f. 47 pl. xii f. 250, *erassipes* (157) pl. xii f. 271, *foliicola* (381) pl. iv f. 36 spp. n. Japan BÖSENBERG and STRAND T.c.—*E. thoracaeoides* sp. n. Asia Minor NOSEK Wien, Ann. Nat. Hist. Hofmus. **20** (129).

*Episinus affinis* (136) pl. v f. 55 pl. xii f. 251, *caudifer* (137, 379) pl. iv f. 39 spp. n. Japan BÖSENBERG and STRAND Abh. Senckenb. Ges. **30**.

*Euryopis mustelina* characters BÖSENBERG and STRAND T.c. (137) pl. iii f. 2 pl. xii f. 276.

*Histagonia marxi* sp. n. Tennessee and District of Columbia CROSBY Canad. Entomol. **38** (309).

*Hyptimorpha* gen. n. *mirabilis* sp. n. Japan BÖSENBERG and STRAND Abh. Senckenb. Ges., **30**, (135-136) pl. xi f. 227.

*Lasecola dissimilis* Cambr., Dorsetshire CAMBRIDGE O. P. Proc. Dorset Nat. Hist. F. Cl. **27** (75, 84 pl. A f. 1).

*Lithyphantes cavernicola* (154) pl. v f. 57, (?) *dubius* (380) pl. iv f. 34 (?) *minus* (380) pl. iii f. 10 spp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., **30**.—*L. dahli* sp. n. Asia Minor NOSEK

Wien, Ann. Nat. Hist. Hofmus. **20** (130) pl. iv f. 11.

*Maro* gen. n. *minutus* sp. n. Huddersfield CAMBRIDGE O. P. Proc. Dorset Nat. Hist. F. Cl. **27** (77, 86-88) pl. A ff. 12-18.

(*Moneta grandis* sp. n. Nilghiris SIMON Paris Ann. soc. ent. **74** (176).)

*Stearodes abrupta* characters BÖSENBERG and STRAND Abh. Senckenb. Ges. **30** (152) pl. xii f. 253.

*Tarsiphantes* gen. n., *latithorax* sp. n. Arctic, STRAND Arctic Araneae, "Fram" expedition (30).

*Teutana grossa* C. K. habits TULLgren Entomol. Tidskr. **27** (182-190).—*T. transversifoveata* sp. n. Japan BÖSENBERG and STRAND Abh. Senckenb. Ges. **30** (153) pl. xii f. 288.

*Theonoe stridula* sp. n. Missouri CROSBY Canad. Entomol. **38** (308).

*Theridium darolense, lamperti*, spp. n. Somaliland STRAND Zool. Anz., **30** (615).—*T. octomaeculatum* (138) pl. iii f. 14 pl. xii f. 281 *subpallens* (139) pl. xii f. 29 *ferrum-equinum* (139) pl. xii f. 261 *japonicum* (140) pl. xii f. 283 *indicus* (141) pl. xii f. 280 *kompirens* (141) pl. v. f. 41 pl. xii f. 284 *mneon* (142) pl. xii f. 286 *culicivorum* (143) pl. xii f. 287 *sterninotatum* (143) pl. xii ff. 289, 290 *angulithorax* (144) pl. xii f. 292 *yunohamense* (145) pl. x f. 185 *sudabides* (145) pl. x f. 186 *argyrodiiforme* (147) pl. x f. 190 *subadultum* (147) pl. v. f. 42 pl. x f. 191 *higense* (379) pl. v f. 45 spp. n. Japan BÖSENBERG and STRAND Abh. Senckenb. Ges. **30**.—*T. tepidariorum* oviposition, cocoon, hatching (1-10) dimorphism of eggs (115-118) MONTGOMERY Woods Holl, Mass., Mar. Biol. Lab. Bull. **12**.

(*Theridium leucophaeum, nilgherinum, maänderoni* spp. n. S. India SIMON Paris, Ann. soc. ent. **74** (178, 179).)

*Tmeticus affinis* Bl. = *Anglia hancockii* SMITH J. Quek. Microsc. Cl. ser. 2 **9** (319).—? *T. fortunatus* sp. n. Leeds CAMBRIDGE O.P. Proc. Dorset Nat. Hist. F. Cl. **27** (76, 85) pl. A ff 8-11.

(*Ulesanis maindroni* sp. n. Nilghiris SIMON Paris, Ann. soc. ent. **74** (177).)

### Argiopidae.

*Aranea*; Bösenberg and Strand figure and describe several known Japanese species and the following new species:—

*ejusmodi* (229) pl. xi f. 215 *herbeoides* (227) pl. iv f. 30, pl. xi f. 241 *dönitzella* (383) pl. iv f. 40, *komosanensis* (234) pl. xi f. 224, *dosleini* (235) *koratensis* (384) pl. iv f. 25, *mangarevooides* (228) pl. iv f. 21, pl. xi f. 213 *lynchiiformis* (237) pl. xv f. 421, *pseudocentrodes* (232) pl. xv f. 415, *sagana* (233) pl. xi f. 212, *subpallata* (234) pl. xi ff. 232, 233 *sagieola* (383) pl. iii f. 3, *sia* (237) pl. iv f. 24, *scyloides* (217) pl. iv f. 26, pl. xi f. 209, *theridiiformis* (236) pl. iv f. 3, pl. xv f. 500 spp. n. *adianta japonica* (219) pl. iv. f. 27 subsp. n. Japan BÖSENBERG and STRAND Abh. Senckenb. Ges. **30**.—*A. confusionis*, (619), *braueri*, *danensis* (620) *submodesta*, *akakensis*, *albiaculeis* (621), *aballensis*, *ladischicola* (622), *darolicola*, *manicola* (623), *paracymbifer* Abyssinia and Somaliland (624), *ursimorpha* E. Africa (683), *liberiae* Liberia (687), *bagamoyensis* German E. Africa (688), spp. n., *submodesta neumannii* subsp. n. STRAND Zool Anz., **30**.—*A. dumetorum islandicola* Iceland STRAND var. n. Wiesbaden, Jahrb. Ver. Naturk., **59** (282).—*A. leimenstolli* (57), *nigmanni* (59) *palli* (61) *camerunensis* (62) spp. n. West Africa; STRAND Stuttgart, Jahreshefte Ver. Naturk., **62**.—*A. odites* (308) *achine*, *pavidus* (309) spp. n. Himalayas SIMON Paris, Ann. soc. ent. **75**.—*A. similis* sp. n. Asia Minor NOSEK Wien, Ann. Nat. Hist. Hofmus **20** (131).

*Argiope minuta* (194) pl. i f. 16, pl. xi ff. 218, 222 *brünnichii* (196) pl. iv f. 23 pl. xii ff. 297, 300 *aetherea* (198) pl. xii f. 296 *amoena* (199) pl. iv. f. 19, pl. xii f. 295 characters; *maja* sp. n. (201) Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., **30**.—*A. obscuripes* sp. n. Soudan, *brünnichii africana* subsp. n. Algiers STRAND Zool Anz., **30** (618).—*A. pechueli preussi* subsp. n. West Africa STRAND Stuttgart, Jahreshefte Ver. Naturk., **62**, (53).—*A. trifasciata deserticola* subsp. n. Egyptian Sudan SIMON Wien, SitzBer. Ak. Wiss. **115** (1162).

*Caerostris mimicus* Somaliland (624), *albopubescent* German E. Africa (688), spp. n., STRAND Zool. Anz., **30**.—*C. subsimata* sp. n.. West Africa STRAND Stuttgart, Jahreshefte Ver. Naturk., **62**, (64).

*Carácladus pauperulus* sp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Berg Ges., **30**, (161) pl. xii f. 257.

*Ceratinella subulata* sp. n., Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., **30**, (158) pl. xii f. 269.

*Cnephilacotes elegans* Cambr. type of genus SMITH J. Quek. Microsc. Cl. ser. 2, **9** (313).

*Cyclosa argenteo-alba* (202) pl. iv f. 38, pl. xv f. 419 *atra* (204) pl. iv 28, pl. xv f. 417 *laticanda* (209) pl. xv f. 414 *confusa* (209) pl. xv f. 418 *monticola* (210) pl. xv f. 413 *japonica* (211) spp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., **30**.—*C. tuberculascens* sp. n. Himalayas SIMON Paris, Ann. Soc. ent. **75** (310).—*C. vallata* (203) pl. xv f. 411 *insulana* (205) pl. iv f. 22, pl. xi ff. 243–244 *sedeculata* (207) pl. xv f. 416 *octotuberculata* (208) pl. xv f. 412, characters BÖSENBERG and STRAND Abh. Senckenb. Ges. **30**.

*Cyrtophora citricola* Forsk. *abessinensis* var. n. Abyssinia STRAND Zool. Anz. **30** (618).

*Diplocephalus bicurvatus* (160) pl. xii f. 272, *saganus* (160) pl. xii f. 254, spp. n., Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., **30**.—*D. castaneipes* in North Wales CAMBRIDGE O. P. Proc. Dorset Nat. Hist. F. Cl. **27** (91).—*D. coniceps* sp. n. Somaliland STRAND Zool. Anz., **30** (616).

*Dyschiriognatha tenera*, characters (174) pl. xv. f. 432, *quadrimaculata* (175) pl. iii f. 9 spp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges. **30**.

*Entelecara erythropus* Westr. type of genus SMITH J. Quek. Microsc. Cl. ser. 2, **9** (302).

*Erigone arctica* characters STRAND Fauna Arctica **4** (477).—*E. prominens* (168) pl. xii f. 270, *sagicola* (381) pl. iv f. 37, *hua* (381) pl. x f. 183, *tila* (382) pl. x f. 181, spp. n. Japan, BÖSENBERG and STRAND, Abh. Senckenb. Ges., **30**.

*Erigonella groenlandica* sp. n. Arctic, STRAND Arctic Araneeae, "Fram" expedition (30).

*Eusticthrix obscurus* Bl. type of genus SMITH J. Quek. Microsc. Cl. ser. 2 **9** (314).

*Gasteracantha doriae* characters (265) *marsdeni* Sim. *punctisternis* var. n. (264) *kulczynskii* sp. n. Sumatra, (266) STRAND Wiesbaden, Jahrb. Ver. Natk., **59**.—*G. leucomelas* (239) pl. xv f. 426, *sagaënsis* (239) pl. iii f. 18, pl. xv f. 395, spp. n. (n-9720 n)

Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., **30**.—*G. sanguinipes* sp. n., Somaliland, STRAND Zool. Anz., **30** (625).

*Gea nilotica* sp. n. Egyptian Sudan SIMON Wien, SitzBer. Ak. Wiss. **115** (1162).

*Hypselistes asiaticus* sp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., **30**, (169) pl. xii f. 259.

*Labulla contortipes* characters BÖSENBERG and STRAND T.c. (170) pl. v f. 49, pl. xi ff. 234, 237.

*Larinia acuticauda* sp. n. Egyptian Sudan SIMON Wien, SitzBer. Ak. Wiss. **115** (1164).—*L. argiopiformis, punctifera*, spp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., **30**, (212) pl. xv f. 423, pl. xi f. 203, pl. iv f. 32.

*Leucauge blanda* characters (182) pl. iii f. 8, pl. xv f. 394 *subblanda* (184) pl. xv f. 406, *subgemmea* (185) pl. xv f. 398, pl. xvi f. 451, *subadulta* (186), spp. n. Japan BÖSENBERG and STRAND, T.c.—*L. profundil-foveata* sp. n. German E. Africa, STRAND, Zool. Anz., **30**, (683).—*L. rubrotirritivittata, sexpustulata* spp. n. Himalayas SIMON Paris, Ann. Soc. ent. **75** (307).

*Linyphia albolumbata*, characters (171) pl. v f. 51 *yunohamensis* (173) pl. v ff. 43, 54, pl. xii f. 200, *sagana* (382) pl. iii f. 13, *limbatinella* (174) pl. xii f. 248, spp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges. **30**.

*Lophocarenum punctiseriatum*, (159) pl. xii f. 274, *stylatum* (159) pl. x f. 196, spp. n. Japan BÖSENBERG and STRAND, T.c.

*Mangora (?) aethiopica* sp. n. Abyssinia STRAND Zool. Anz., **30** (618).

*Mata doenitzi* (180) pl. xi ff. 238, 239, *yunohamensis* (180) pl. xi ff. 225, 229, *kompirensis* (181) pl. xi f. 242, *vena* (382) pl. iii f. 6, spp. n., Japan, BÖSENBERG and STRAND, Abh. Senckenb. Ges. **30**.

*Metimorpha* gen. n., *tullia* sp. n. Japan BÖSENBERG and STRAND, T.c. (188–189) pl. xi f. 200.

*Microneta mascula* characters BÖSENBERG and STRAND T.c. (170) pl. xii f. 263. —*M. nicholsonii* sp. n. Kew Gardens CAMBRIDGE O.P. Kew Bulletin, Add. Ser. 5 (58).—*M. passiva* (77, 89) pl. A ff. 22–23.

26, *territa* (77, 88) pl. A ff. 19–21, *beata* (77, 90) pl. A ff. 27–31 spp. n., Yorkshire, Epping Forest CAMBRIDGE O. P. Proc. Dorset Nat. Hist. F. Cl. 27.

*Monocephalus* gen. n. for *Walekenaera fuscipes*, Bl. Britain and France SMITH J. Quek. Microsc. Cl. ser. 2, 9 (300):

*Nemoscolus caudifer* sp. n., West Africa STRAND Stuttgart, Jahreshfte Ver. Natk., 62, (55). ·

*Neplila clarata* (190) pl. iii f. 11 pl. xi f. 217 *malabarensis* (192) pl. xi ff. 216, 231, *clrysogaster* (193) pl. xi f. 208 characters BÖSENBERG and STRAND, Abh. Senckenb. Ges. 30.—*N. maculata* F. *novae-guineae* var. n. New Guinea STRAND Wiesbaden, Jahrb. Ver. Natk. 59 (261). —*N. obnubila* sp. n. Himalayas SIMON Ann. soc. ent. 75 (308). —*N. senegalensis* Walek. *winalukensis* subsp. n. West Africa STRAND Stuttgart, Jahreshfte Ver. Natk., 62, (52). —*F. submaculata* sp. n. Cameroons, STRAND, Wiesbaden, Jahrb. Ver. Natk., 59 (30).

*Oedothorax dentatus* characters (165) pl. xii f. 273 *bipunctis* (162) pl. xii f. 258, *femineus* (163) pl. xii f. 255, *insecticeps* (163) pl. xii f. 256 *exsiccatus* (166) pl. xii f. 265 spp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges. 30.

*Ogulnias pullus* sp. n. Japan BÖSENBERG and STRAND, T.c. (244), pl. xii f. 282.

*Pachygnatha africana* sp. n. Somaliland STRAND Zool. Anz., 30 (616).

*Parameta defecta* sp. n. Somaliland STRAND T.c. (617).

*Paraplectana japonica* sp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges. 30 (242) pl. xv f. 424.

*Pelecopsis elongatum* Wid. type of genus SMITH J. Quek. Microsc. Cl. ser. 2 9 (315).

*Poecilopachys bufo* sp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges. 30 (241) pl. iii f. 12, pl. xi f. 219.

*Prasonica affinis*, Algiers *olivacea* Somaliland spp. n. STRAND Zool. Anz., 30 (619).

*Styloctetor broccha* L. Koch type of genus, incorrectly recorded from Ireland SMITH J. Quek. Microsc. Cl. ser. 2, 9 (310).

*Tetragnatha celebesiana* Blackwall = *Epeira nigrotrivittata* Dolesch. and T.

*celebesiana* Thor. = *T. decorata* Blackwall. SIMON Paris, Ann. soc. ent. 75 (282). *T. cephalothoracis* (616), *lamperti* (617), spp. n., Somaliland STRAND Zool. Anz., 30.—*T. squamata* (176) pl. iii f. 5, pl. xv f. 405 *praedonia* (177) pl. iii f. 7, pl. xv f. 404 characters *japonica* (177) pl. xv f. 409, *lea* (178) pl. xv f. 407, spp. n. *nigrita* *nicicensis* subsp. n. (179) Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges. 30.

*Theridiosoma epeirodes* sp. n. Japan BÖSENBERG and STRAND, T.c. (243) pl. xii f. 291.

*Tigellinus saxiculus* Cambr. to *Trichoncus* SMITH J. Quek. Microsc. Cl. ser. 2, 9 (319).

*Tylorida striata* characters (187) pl. xv f. 420 *magniventer* (187) pl. xv. f. 397, sp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges. 30.

#### MIMETIDAE.

*Ero japonica* sp. n. Japan BÖSENBERG and STRAND, T.c. (245), pl. v. f. 56, pl. xii f. 252.

*Melaenosa* gen. n. *pustulifera* sp. n. India SIMON Paris, Ann. Soc. ent. 75 (285).

*Mimetus indicus* sp. n. Nilghiris, India SIMON T.c. (284).

#### THOMISIDAE.

*Cupa* gen. n. *typica* sp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., 30, (265–266) pl. xvi. f. 454.

*Diaeia subadulta* sp. n. Japan BÖSENBERG and STRAND, T.c. (258) pl. xiii f. 302.

*Dieta chorion* sp. n. Nilgiris, India SIMON Paris, Ann. Soc. ent. 75 (286). — *D. japonica* sp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., 30, (246) pl. x f. 158.

*Firmicus wernerii* sp. n. Egyptian Sudan SIMON Wien, SitzBer. Ak. Wiss. 115 (1165).

*Gephyra pudica* Himalayas *virescens* Ceylon spp. n. SIMON Paris, Ann. Soc. ent. 75 (311).

*Heriaeus difficilis* sp. n. Algeria STRAND Zool. Anz., 30 (626). — *H. melilotaei* characters BÖSENBERG and STRAND Abh. Senckenb. Ges., 30 (257) pl. x

f. 163.—*H. pilosus* sp. n. Asia Minor NOSEK Wien, Ann. Nat. Hist. Hofmus. 20 (135).

*Misumena braminica* sp. n. India SIMON Paris, Ann. Soc. ent. 75 (288).—*M. tricuspidata* (254) pl. x ff. 169, 170 *calycina* (255) pl. x f. 164 characters, *japonica* (256) pl. x f. 172, *munitissima* (284) pl. vii f. 90 *yuhuanensis* (257) pl. x f. 179 spp. n., Japan, BÖSENBERG and STRAND, Abh. Senckenb. Ges., 30.

*Monaeses paradoxus albidus* subsp. n. Egyptian Sudan SIMON Wien. SitzBer. Ak. Wiss. 115 (1165).

*Oxyptila aculeipes*, S. Tunis (626), *metschensis* German E. Africa (683), spp. n. STRAND Zool. Anz., 30.—*O. decorata* characters (258) pl. x ff. 173, 177, 178 *truciformis* (259) pl. x. f. 154 sp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., 30.

*Oxypate casteti* sp. n. Himalayas SIMON Paris, Ann. soc. ent. 75 (310).—*O. setosa* characters BÖSENBERG and STRAND Abh. Senckenb. Ges. 30 (247) pl. vii f. 94, pl. x f. 175.

*Philodromus problematicus*, *quadri-vulva*, Somaliland (627), *maculato-vittatus* German E. Africa (684) spp. n. STRAND Zool. Anz., 30.—*P. spinitarsis* (267) pl. vii f. 96, pl. x f. 157, *auricomus* (269) pl. x f. 171, *levipes* var. *tigrinus* (269) pl. xiii f. 316 characters; *nigro-striatipes*, *subaureolus* (270) pl. vii f. 91, pl. x f. 174, pl. xiii f. 307 spp. n. *aureolus japonicola* (268) pl. vii f. 93, pl. x f. 160 subsp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges. 30.

*Pistius undulatus* (253) pl. xiii f. 308 *truncatus* (253) pl. x f. 168, pl. xiii f. 309 characters BÖSENBERG and STRAND T.c.

*Runcinia albostriata* sp. n. Japan BÖSENBERG and STRAND, T.c. (252) pl. x f. 162.—*R. depressa* sp. n. Mongalla, N. Uganda, SIMON Wien, SitzBer. Ak. Wiss. 115 (1166).—*R. (Machomenus) longipes* sp. n. Somaliland, STRAND Zool. Anz., 30 (625).

*Synoema japonica* characters BÖSENBERG and STRAND Abh. Senckenb. Ges. 30 (265) pl. x f. 165.

*Thanatus pagenstecheri* sp. n. German S.W. Africa STRAND Wiesbaden, Jahrb. Ver. Natk., 59 (33).—*T. paucipunctatus*, (N-9720 n)

*multipunctatus* spp. n. Somaliland STRAND Zool. Anz., 30 (628).

*Thomisus labefactus* Karsch (249) pl. x f. 167 *bimaculatus* var. n. (250) pl. xiii f. 303 *onustoides* (251) pl. x f. 166 sp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., 30.—*T. leucaspis* (289) *granulifrons* (290) *rigoratus* (291) spp. n. India; *calidius* Thor. = *javanus* Sim. (nec. Thor) description (291) SIMON Paris, Ann. soc. ent. 75.

*Tibellus* compared with *Thanatus*, *vitalis* sp. n. India and Ceylon SIMON T.c. (293, 294).—*T. punctifasciatus*, Somaliland (628), *vosseleri* Algeria (629), spp. n. STRAND Zool. Anz., 30.—*T. tenellus* characters BÖSENBERG and STRAND Abh. Senckenb. Ges. 30 (271) pl. viii f. 112, pl. x f. 156.

*Tmarus solicinus*, *fasciolatus* spp. n. Nilghiris SIMON Paris, Ann. soc. ent. 75 (287).

*Xysticus asiaticus* (132 pl. iv f. 12) *orientalis* (133 pl. iv f. 13) *montanus* (134 pl. iv f. 14) *spinifer* (134) spp. n. Asia Minor NOSEK Wien, Ann. Nat. Hist. Hofmus. 20.—*X. ephippiatus* Sim. (261) pl. x ff. 150, 161 *lateralis* Hahn *atrimaculatus* subsp. n. (264) pl. xiii f. 306 *insulicola* (260) pl. xiii f. 304 *saganus* (261) pl. x f. 155 *tunicatus* (263) pl. x f. 176 *transversomaculatus* (263) pl. xiii f. 305 *cetrariae* (385) pl. vii f. 92 spp. n. Japan BÖSENBERG and STRAND Abh. Senckenb. Ges. 30.—*X. subjugalis* sp. n. Somaliland STRAND Zool. Anz., 30 (626).

#### CLUBIONIDAE.

*Agreeca praticola* sp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., 30, (291) pl. xvi f. 464.

*Anahita fauna* characters BÖSENBERG and STRAND T.c. (290) pl. vii f. 86 pl. xiii ff. 313, 314.

*Anyphaena pugil* characters BÖSENBERG and STRAND T.c. (289) pl. xiii f. 301.

*Castaneira recurvata* sp. n. Somaliland STRAND Zool. Anz., 30 (636).

*Chiracanthium abyssinicum*, *agnoscum*, *pallicolor* (633), *pauiciaculeis*, (634), spp. n., Somaliland STRAND Zool. Anz., 30.—*C. camerunense* sp. n.

Cameroons STRAND Stuttgart, Jahreshfte Ver. Natk., **62**, (75). — *C. conflexum, trivittatum* spp. n. India SIMON Paris, Ann. soc. ent. **75** (297). — *C. lascivum*, characters (287) pl. xvi f. 502 *unicum* (287) pl. xvi f. 501, *japonicum* (288) pl. xvi f. 503, *digitivorum* (387) pl. vii f. 85, *entitha* (289) pl. xvi f. 496, *kompircola* (387) pl. vii f. 87 spp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges. **30**.

*Clubiona acanthoemesis, nilgherina* spp. n. India SIMON Paris, Ann. soc. ent. **75** (298). — *C. jucunda* (279) pl. vii f. 88, pl. xvi f. 495, *vigil* (280) pl. vii f. 89, pl. xvi f. 499, *lutescens* (283) pl. xvi f. 485, characters; *japonicola* (281) pl. xvi f. 498, *sulla* (282) pl. xvi f. 486, *corrugata* (283) pl. xvi f. 482, *neglectoides* (284) pl. xvi f. 505, *lena* (285) pl. xvi f. 493, *mantis* (286) pl. xvi f. 492, *mutilata* (285) pl. xvi f. 491, *kurilensis* (286) pl. xiii f. 315, *zilla* (386) pl. vii f. 81, spp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges. **30**. — *C. pogonias* sp. n. Himalayas SIMON Paris, Ann. soc. ent. **75** (312). — *C. subtrivialis, abbajensis* spp. n. *maxima* subsp. n. Somaliland STRAND Zool. Anz., **30** (632).

*Corinna longitarsis*, S. Thomé Is., olivacea, (630), *mandibulata, sanguinea* spp. n. *inquirenda* var. n. Somaliland STRAND T.c. (637).

*Ctenus clariceutris* Abyssinia, *nigrotriangulatus*, (634), *biprocessis* Somaliland (635), spp. n. STRAND T.c. — *C. cribensis* (77) Cameroons, *beericaldi* (78) East Africa, *renivulvatus* (80) *aureopubescens* (82) *scheidei* (84) West Africa, spp. n. STRAND, Stuttgart, Jahreshfte Ver. Natk., **62**. — *C. scopulatus* characters (291), *dreyeri* sp. n. Cameroons (292) STRAND Wiesbaden, Jahrb. Ver. Natk., **59**. — *C. palembangensis* sp. n. Sumatra STRAND T.c. (272).

*Eusparassus chiracanthiformis, fulvoclypeus*, (630), *cornipalpis, nigrichelis, subadultus*, Somaliland and Abyssinia (631), *ubac* German E. Africa (684), spp. n., *argelasius maximus* subsp. n. Algeria STRAND Zool. Anz., **30**. — *E. 5-dentatus* (71) *6-dentatus* (73) spp. n., West-Africa STRAND Stuttgart, Jahreshfte Ver. Natk., **62**. — *E. sanguinifrons* spp. n. Himalayas SIMON Paris, Ann. soc. ent. **75** (312).

*Heteropoda blaesei* characters STRAND Wiesbaden, Jahrb. Ver. Natk. **59** (290).

— *H. malitiosa* sp. n. India SIMON Paris, Ann. soc. ent. **75** (294). — *H. panaretiformis* sp. n. Sumatra STRAND Wiesbaden, Jahrb. Ver. Natk., **59** (269). — *H. renatoria* (273) pl. vi f. 64, pl. xvi f. 453 *invicta* Koch = *peditata* Karsch (275) pl. xv f. 437, pl. xvi f. 448 *forcipata* (276) pl. xv f. 438 characters BÖSENBERG and STRAND Abh. Senckenb. Ges. **30**.

*Micaria unifascigera* (293) pl. xvi f. 497, *claripes* (388) pl. vi f. 68, spp. n., Japan BÖSENBERG and STRAND T.c.

*Nisueta affinis* sp. n. Algeria STRAND Zool. Anz., **30** (630).

*Orthobula crucifera* sp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., **30**, (292) pl. vi f. 74 pl. xvi f. 469, 473.

(*Oxysoma delphini* sp. n. Juan-Fernandez SIMON Paris, Bul. soc. ent., **1905** (71.).)

*Palystes rubrioculatus* sp. n. Kilimanjaro STRAND Zool. Anz., **30** (689)—*P. modicus* sp. n. South Africa STRAND Wiesbaden, Jahrb. Ver. Natk., **59** (37).

*Panaretidius* gen. n. *boutani* sp. n. Tonkin SIMON Paris Bul. soc. ent. **1906** (27).

*Rhytimna wernerii* sp. n. Egyptian Sudan SIMON Wien, SitzBer. Ak. Wiss. **115** (1167).

*Sagella* gen. n. *octomunita* sp. n. Japan, BÖSENBERG and STRAND, Abh. Senckenb. Ges., **30**, (279, 385), pl. vi f. 75.

*Selenops bursarius* characters BÖSENBERG and STRAND T.c. (272) pl. xvi f. 452.—*S. subradiatus* sp. n. Somaliland STRAND Zool. Anz., **30** (629). — *S. wernerii* sp. n. Egyptian Sudan SIMON Wien, SitzBer. Ak. Wiss. **115** (1167).

*Simatio percomis, castaneiceps* (299) India *lucorum, phacocephalus* (300) Ceylon spp. n. SIMON Paris, Ann. soc. ent. **75**.

*Sphingius caniceps, bilineatus* spp. n. India SIMON T.c. (301).

*Stasina japonica* (278) pl. xiii f. 310 *maculifera* (386) pl. vi f. 77, spp. n. Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges. **30**.

*Syrisea arabs* sp. n. Egyptian Sudan SIMON Wien SitzBer. Ak. Wiss. **115** (1168). — *S. drassiformis* sp. n. Somaliland STRAND Zool. Anz., **30** (635).

*Thelecticopis maindroni* sp. n. India  
SIMON Paris, Ann. soc. ent. **75** (295).

*Torania manni* sp. n., Lagos STRAND,  
Stuttgart, Jahreshefte Ver. Natk., **62**,  
(68).

*Trachelas japonicus* sp. n. Japan  
BÖSENBERG and STRAND, Abh. Senckenb.  
Ges., **30** (294) pl. xvi f. 504.—*T.  
quisquiliarum* (302) *oreophila* (303)  
*fronto* (304) spp. n. India and Ceylon  
SIMON Paris, Ann. soc. ent. **75**.

*Wulfila ventralis* sp. n. Bahamas,  
BANKS New York, Bull. Amer. Mus. **22**  
(186).

#### AGELENIDAE.

*Agelena limbata* Thor. (296) pl. viii  
f. 104 pl. xvi f. 461 *opulenta* Koch (298)  
pl. xvi f. 467 characters; *tubicola* (297)  
pl. xvi f. 472, *ignota* (299) pl. xvi f. 466  
spp. n. Japan BÖSENBERG and STRAND  
Abh. Senckenb. Ges., **30**.—*A. maculic-  
notum* sp. n. Somaliland STRAND Zool.  
Anz., **30** (656).

*Argyroneta aquatica* structure of nest  
UTTENBOOGAART, Ber. Ned. Ent. Ver. **2**  
(2-4).

*Coelestes moellendorffii* characters  
BÖSENBERG and STRAND Abh. Senckenb.  
Ges. **30** (303) pl. xvi ff. 463, 494.

*Coras insidiosus, luctuosus* characters  
BÖSENBERG and STRAND T.c. (300) pl. xvi  
ff. 458, 459.

*Cybaeus mellottaei* characters (295)  
pl. xvi f. 457 *striatipes* (295) sp. n.,  
Japan BÖSENBERG and STRAND, T.c.

*Hahnia corticicola, martialis*, spp. n.  
Japan BÖSENBERG and STRAND, T.c. (305)  
pl. vi f. 66, pl. xvi f. 477.—*H. maindroni*  
sp. n. India SIMON Paris, Ann. soc. ent.  
**75** (305).

*Malthonica psechrina* sp. n. Himalayas  
SIMON T.c. (313).

*Tegenaria argaeica* sp. n. Asia Minor  
NOSEER Wien, Ann. Nat. Hist. Hofmus.  
**20** (136) pl. iv f. 15.—*T. corasides* (301)  
pl. xvi f. 460, *muscicapae* (302) pl. xvi  
f. 479, *T. curta* (303) pl. xvi f. 478, *T.  
dia* (388) pl. vi f. 68 spp. n. Japan  
BÖSENBERG and STRAND, Abh. Senckenb.  
Ges., **30**.—*T. dalmatica* sp. n.  
Dalmatia, KULOZYSZKI Ann. Hist.-Nat.  
Mus. Nat. Hung., **4**, (162).—*T. domestica*,  
autotomy and regeneration of legs  
FRIEDRICH, Arch. EntwMech., **20**, (469-  
506) pl. xvii, xviii.

*Textrix nigromarginata* sp. n. Somalil-  
and STRAND Zool. Anz., **30** (655).

#### PISAURIDAE.

*Caripeta japonica*, sp. n., Japan BÖSEN-  
BERG and STRAND, Abh. Senckenb.  
Ges., **30** (307) pl. xiii f. 343.

*Dolomedes fimbriatoides* (308) pl. xiii  
f. 341, *raptor* (309) pl. viii f. 119  
pl. xiii f. 342, *hercules* (310) pl. xiii  
f. 361, *saganus* (312) pl. viii f. 115,  
*japonicus* (313) pl. xiii f. 312, *oviger*  
(389) pl. viii f. 113, *pallitarsis*, (388)  
pl. viii f. 114 spp. n., Japan BÖSENBERG  
and STRAND, Abh. Senckenb. Ges., **30**.  
—*D. habilis* sp. n. South Australia,  
Hogg London Proc. Zool. Soc. **1905**  
(588) f. 89.—*D. lomensis* sp. n., West-  
Africa STRAND Stuttgart, Jahreshefte  
Ver. Natk., **62**, (90).—*D. macrops* sp. n.  
Mongalla, N. Uganda SIMON Wien, Sitz-  
Ber. Ak. Wiss. **115** (1170).—*D. sumatra-  
tranus* sp. n. Sumatra STRAND Wiesbaden,  
Jahrb. Ver. Natk., **59** (275).

*Phalea aculeata* sp. n., Cameroons  
STRAND Stuttgart, Jahreshefte Ver. Natk.,  
**62**, (86).

*Psisaura lama* (306) pl. xiii f. 340,  
*P. clarivittata*, (389) pl. vi f. 76, spp. n.,  
Japan BÖSENBERG and STRAND, Abh.  
Senckenb. Ges., **30**.

*Tetragonophthalma brevipes* sp. n.  
German E. Africa STRAND Zool. Anz., **30**  
(685).—*T. fascigera* sp. n. Japan BÖSEN-  
BERG and STRAND, Abh. Senckenb. Ges.,  
**30** (306) pl. xiii f. 329.

*Thalassius radiato-lineatus* sp. n.  
Somaliland STRAND Zool. Anz., **30** (671).

#### LYCOSIDAE.

*Evippa africana*, Somaliland (679),  
*brevipes* Tunis (680), spp. n., STRAND  
Zool. Anz., **30**.

*Evippella* gen. n. *typica* sp. n. Algeria  
STRAND T.c. (680).

*Lycosa astrigera* (322) pl. vii f. 98,  
pl. xiii ff. 322, 327, *laura* (323) pl. viii  
f. 111, pl. xiii f. 317, 333 characters;  
*t.-insignata* (324) pl. viii f. 109, pl. xiii  
f. 337, 344, *doenitzi* (325) pl. xiii f. 345  
*lyrivalva* (326) *cinerofusca* (393) pl. vii  
f. 99, *innominabilis* (392) pl. vii f. 100,  
*subtarentula* (393) pl. vii f. 101, spp. n.,  
Japan BÖSENBERG and STRAND, Abh.  
Senckenb. Ges., **30**.—*L. aurantipes*,  
*novitatis*, *sordide-colorata* (677), *darolii*,

*proximella*, *verticillifer* (678), *subproximella*, (679), spp. n., Abyssinia and Somaliland STRAND Zool. Anz., 30.—*L. cursor insignis* var. n. (138) *lineatipes* sp. n. (139) Asia Minor NOSEK Wien, Ann. Nat. Hist. Hofmus. 20.—*L. furva* Thor. characters STRAND Wiesbaden, Jahrb. Ver. Natk. 59 (295).—*L. tasmanica* (571 f. 80) Tasmania *phyllis* (573 f. 81) *molyneuxi* (575 f. 82) *castanea* (577 f. 83) *errans* (579 f. 84) *bicolor* (580 f. 85) *gilberta* (582 f. 86) *stirlingae* (584 f. 87) *arenaris* (586 f. 88) spp. n. South Australia; HOGG London, Proc. Zool. Soc. 1905.

*Pardosa incerta* (139) pl. v f. 17 *consimilis* (140) pl. v f. 18 *pentheri* (141) pl. v ff. 21, 24 *ilgünenensis* (142) pl. v ff. 20, 22 spp. n. *proxima* C. L. Koch (140) pl. v f. 19 Asia Minor NOSEK Wien, Ann. Nat. Hist. Hofmus 20.

*Pirata piraticus*, habits TRANI, Napoli, Boll. Soc. nat., 19, (128-131).

*Tarentula depectinata* (314) pl. vii f. 97, pl. xiii f. 332 *procuva* (315) pl. xiii f. 321 *clereki* (316) pl. viii f. 107, pl. xiii f. 320 *spiratica* (317) pl. xiii f. 339 *piratooides* (318) pl. xiii f. 336 *pseudoannulata* (319) pl. viii f. 106, pl. xiii ff. 323, 326, 334, 338 *pia* (320) pl. xiii f. 324 *subamylacea* (322) pl. xiii f. 318 *phila* (389) pl. viii f. 105 *palus* (391) pl. vii f. 95 *sepia* (391) pl. viii f. 108 *minae* (392) pl. vii f. 102 spp. n. Japan; *japonica* Sim. (318) pl. viii ff. 103, 110, pl. xiii ff. 319, 335, 346 *cælestis* Koch (321) pl. xiii f. 325 characters, BÖSENBERG and STRAND Abh. Senckenb. Ges. 30.—*T. lamperti*, (92) *schweinfurthi* (90) spp. n. West Africa STRAND Stuttgart, Jahreshefte Ver. Natk., 62.—*T. scopolitibiis*, Abyssinia and Somaliland, *interstitialis*, Oran, *manicola* (672), *atri-annulipes*, *hibernalis*, *illegalis* (673), *pardosella*, *picturella* (674) *aequiooculata*, *mirabilis* Abyssinia and Somaliland, *rubicundi-colorata* Algeria, *trochosiformis* (675), *aballicola*, *parviguttata*, *septembbris* (676) Abyssinia and Somaliland *molicola*, (685) *subannulipes* (686), spp. n. *urbana molensis*, *gofensis* subspp. n. German E. Africa STRAND Zool. Anz. 30.

*Trabaea bidentigera* sp. n. German E. Africa STRAND T.c. (686).

#### OXYOPIDAE.

*Oxyopes africanus*, *erlangeri* (657), *luteo-aculeatus* Somaliland *oranicola*

(658) Oran, *akakensis*, *inconspicuus*, *notivittatus* (659), *lineatifemur*, *pallidecoloratus* (660), *abcbae*, *infidelis*, *variabilis* (661), *hostides*, (662), Abyssinia and Somaliland, *ubensis* (686), German E. Africa spp. n., STRAND Zool. Anz., 30.—*O. sertatus* characters (327) pl. viii f. 117 pl. xv f. 435 *saganus*, spp. n. (327) pl. xiii f. 331, Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., 30.

*Peucetia lampei* sp. n. German S.W. Africa STRAND Wiesbaden, Jahrb. Ver. Natk., 59 (42).—*P. rubrosignata* (656), *minima* (657), spp. n. Somaliland STRAND Zool. Anz., 30.

#### SALTICIDAE.

*Aelurillus* (?) *dimorphus* sp. n., Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., 30, (398) pl. ix ff. 125, 126.

*Bianor pullus* sp. n., Japan BÖSENBERG and STRAND, T.c. (354) pl. xix f. 378.

*Breda a-signata* sp. n., Japan BÖSENBERG and STRAND, T.c. (345) pl. ix f. 136, pl. xiii f. 352.

*Carrhotus detritus*, sp. n., Japan BÖSENBERG and STRAND, T.c. (358) pl. xiv ff. 385, 391.

*Chira albiocciput* sp. n., Japan BÖSENBERG and STRAND, T.c. (366) pl. xiii f. 311.

*Cyllobelus tristellatus* sp. n. Egyptian Sudan SIMON Wien, SitzBer. Ak. Wiss. 115 (1171).

*Cyrrha bidentata* sp. n. Somaliland STRAND Zool. Anz. 0 (662).

*Dendryphantes rubrosquamulatus* sp. n., Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., 30, (397) pl. ix f. 130.

*Epocilla axilina* sp. n. Himalayas SIMON Paris, Ann. Soc. ent. 75 (314).

*Evarcha albifrons* (359) pl. xiv f. 380 *albaria* (361) pl. ix f. 140, pl. xiii ff. 350, 351 characters, *longipalpis* (361) pl. xiv f. 384, sp. n., Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., 30.

*Evophrys aninotatus* (338) pl. ix f. 143, pl. xiv f. 367) *undulato-vittata* (339) pl. xiv f. 376 (?) *breviaucleis* (340) pl. xiv f. 387 *heliophaniformis* (393) pl. ix f. 141, spp. n., Japan BÖSENBERG and STRAND, T.c.—*E. convergentis* sp. n. Tunis STRAND Zool. Anz., 30 (663).—*E.*

*pulchella* sp. n. Asia Minor NOSEK  
Wien, Ann. Nat. Hist. Hofmus. 20  
(140).

*Giuiria* gen. n., *unica* sp. n. Somaliland  
STRAND Zool. Anz., 30 (666).

*Harmochirus brachiatus* characters  
BÖSENBERG and STRAND Abh. Senckenb.  
Ges. 30 (373) pl. ix f. 147, pl. xiii  
f. 356.

*Hasarius adansonii* (367) pl. ix f. 134  
*deonitzi* (368) pl. xiii ff. 355, 362  
characters, *cruciifer* (399) pl. viii f. 122,  
sp. n., Japan BÖSENBERG and STRAND,  
T.c.

*Heliophanus flavimaxillis* sp. n.  
Japan BÖSENBERG and STRAND, T.c. (334)  
pl. ix f. 151.—*H. tessalensis* sp. n.  
Abyssinia STRAND Zool. Anz., 30 (662).

*Hyllus fusciventris*, *thyeniformis*  
(664) *erlangeri*, *rubrotinctus*, *ventrileatus*  
(665), *aethiopicus*, *fur*, *manensis*  
(666), spp. n., Abyssinia and Somaliland  
STRAND T.c. 30.—*H. lamperti* (356)  
pl. xiii f. 360, pl. xiv f. 369, *fischeri*  
(358) pl. xiv f. 383 spp. n., Japan  
BÖSENBERG and STRAND, Abh. Senckenb.  
Ges., 30.—*H. plexippoides* sp. n.  
Egyptian Sudan SIMON Wien, SitzBer.  
Ak. Wiss. 115 (1175).

*Icidella* gen. n., *interrogationis* sp. n.  
Japan BÖSENBERG and STRAND, Abh.  
Senckenb. Ges., 30, (35) pl. ix f. 148,  
pl. xiii f. 365.

*Icius magister* (353) pl. ix f. 133,  
pl. xiii f. 353 *elongatus* (353) pl. viii  
f. 124, pl. xiv f. 388 characters BÖSENBERG  
and STRAND T.c.

*Jotus linea*, characters (337) pl. xiv  
f. 375 *munitus* (334) pl. xiv ff. 374, 392,  
*abnormis* (336) pl. xiv f. 377 *dificilis*  
(336) pl. xiv. f. 379, spp. n. Japan BÖSENBERG  
and STRAND, T.c.

*Laufeia aenea* characters BÖSENBERG  
and STRAND T.c. (370) pl. ix f. 137,  
pl. xiii f. 364.

*Marpissa ? vittata* characters (346)  
pl. viii f. 118, pl. xiv. f. 368 *römeri* (346)  
spp. n. Japan BÖSENBERG and STRAND T.c.

*Menemerus pulla* (348) pl. ix f. 150,  
pl. xiii f. 150 *brachynathus* (349)  
pl. xiv ff. 381, 386 characters, *confusus*  
(350) pl. ix f. 146, pl. xiv. f. 370,  
*himeshimensis* (395) pl. viii f. 116,  
pl. xiv f. 390 spp. n. Japan BÖSENBERG  
and STRAND T.c.

*Mithion ocellatus* Th. characters  
STRAND Wiesbaden, Jahrb. Ver. Natk.  
59, (297).

*Modunda orientalis* sp. n. Japan  
BÖSENBERG and STRAND Abh. Senckenb.  
Ges. 30 (396) pl. viii f. 123.

*Myrmarchine japonica* characters  
(328) pl. ix f. 149, pl. xiv f. 372 *inner-*  
*micheleis* (329) pl. ix f. 128, pl. xiv f.  
382 spp. n. Japan BÖSENBERG and STRAND  
T.c.

*Pellenes aethiopicus*, *mimicus*, spp. n.  
Abyssinia STRAND Zool. Anz., 30 (663).

*Phlaeaeus steudeli* sp. n., West Africa  
STRAND Stuttgart, Jahrshefte Ver. Natk.,  
62, (98).

*Phintella* gen. n., *typica*, sp. n. Japan  
BÖSENBERG and STRAND, Abh. Senckenb.  
Ges., 30, (333).

*Phlegra desquamata*, (663), *abessinica*,  
(664), spp. n., *bresueri* *meridionalis*  
subsp. n. Somaliland STRAND Zool. Anz.,  
30.

*Plexippus paykulli* (362) pl. ix ff. 142,  
144, pl. xiii ff. 347, 354 *crassipes*, (363) pl.  
ix. f. 139, pl. xiii f. 366 *setipes* (364)  
pl. ix f. 131 pl. xiii f. 363 characters  
*niccensis*, (365), *incognitus*, (399)  
pl. viii f. 120 spp. n. Japan BÖSENBERG  
and STRAND, Abh. Senckenb. Ges., 30.

*Pseudicius kulezyškii* sp. n. Asia  
Minor NOSEK Wien, Ann. Nat. Hist.  
Hofmus. 20 (145) pl. v. f. 26.

*Rhene atrata* characters BÖSENBERG  
and STRAND Abh. Senckenb. Ges. 30 (355)  
pl. ix ff. 132, 145, pl. xiii f 348.

*Salicus marenzelleri* sp. n. Asia Minor  
NOSEK Wien, Ann. Nat. Hist. Hofmus.  
20 (143) pl. v f. 25.

*Siler cupreus* characters BÖSENBERG  
and STRAND Abh. Senckenb. Ges. 30  
(371) pl. xiv. f. 389.

*Silerella* gen. n., *barbata*, sp. n.,  
Japan BÖSENBERG and STRAND, T.c. (371)  
pl. xiv f. 373.

*Sitticus floricola orientalis* (343)  
subsp. n. *pallicolor* (341) pl. ix f. 152,  
*numeratus*, *patellidens* (342) pl. ix ff. 135,  
138, pl. xiii ff. 358, 359, *saganus* (394)  
pl. ix f. 127 ? *seaeetus* (395) pl. viii f. 121  
*subadultus* (395) pl. ix f. 129, spp. n.,  
Japan BÖSENBERG and STRAND, T.c.

*Stenaelurillus wernerii* sp. n. Mongalla,  
N. Uganda SIMON SitzBer. Ak. Wiss.  
115 (1174).

*Synagelides* gen. n., *agoriformis* sp. n., Japan BÖSENBERG and STRAND, Abh. Senckenb. Ges., 30, (330).

*Telamonia bifurcilinea* sp. n., Japan BÖSENBERG and STRAND, T.c. (331) pl. ix f. 153, pl. xiii f. 357.

*Theratoscirtus fuscous-rufescens* sp. n. Cameroons STRAND Stuttgart, Jahreshfte Ver. Natk., 62, (100).

### SOLIFUGAE.

*Daesia zederbaueri* sp. n. Asia Minor WERNER Wien, Ann. Nat. Hist. Hofmus. 20 (114).

*Eusimonia serrifera* sp. n. Persia BIRULA St. Peterburg, Bull. Ac. Imp. Sci. 22 (280).

*Galeodes* key to Persian species (251) *karunensis* (254) *kermanensis* (260) *unicolor* (268) spp. n. Persia, *pococki* nom. n. for *nigripalpis* Poc. (256) *cyrus* Poc. (262) characters BIRULA T.c.—*G. caspius* Coast of Aral Sea BIRULA Taškent, Izv. Turk. Otd. Russ. Geogr. Obšč. 4, (42–48) pl. v.—*G. bogotjanensis* sp. n. Central Asia; BIRULA Zool. Anz., 30, (25).

*Gylippus*, distribution in Russian Central-Asia, key to species BIRULA, Taškent, Izv. Turk. Otd. Russ. Geogr. Obšč., 4, (42–48) pl. v.—*G. lamelliger* sp. n., Central Asia BIRULA Zool. Anz. 30 (24) f. 1.—*G. monoceros* sp. n. Asia Minor WERNER Wien, Ann. Nat. Hist. Hofmus. 20 (113).—*G. pectinifer* sp. n. Buchara, Russia BIRULA, Taškent, Izv. Turk. Otd. Russ. Geogr. Obšč., 4, (42–48) pl. v.—*G. quaestunculus*, Karsch characters (283) *spinimanus* sp. n. Persia BIRULA St. Peterburg Bull. Ac. Imp. Sci. 22.

*Rhagodes* key to Persian species (270) *melanochaetus* Heyn. characters (272) *zorab* (276) sp. n. Persia BIRULA St. Peterburg, Bull. Ac. Imp. Sci. 22.

*Rhax melanopyga* defensive attitude FAUSSEK St. Peterburg, Zap. Russ. Geogr. Obšč., 27, (146, 147) f. 54.

*Rhinippus* gen. n. *pentheri* sp. n. Asia Minor WERNER Wien Ann. Nat. Hist. Hofmus. 20 (113).

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*Pseudoscorpiones* of Sweden TULLGREN Entomol. Tidskr. Stockholm 27 (195–213).

*Atemnus elongatus* Bks Guatemala BEROER, Ohio Nat., 6, (489–491) pl.

(*Blothrus peyerimhoffi* sp. n. caves of Basses-Alpes SIMON Paris, Bul. soc. ent. 1905 (282).)

*Chelifer*; characters (118–130) *nodosus* Schrank, structure of maxillae (29) pl. i ff. 8a *mortensenii* (140) pl. ii ff. 9a–9c, pl. iii ff. 1a–1i Siam, *superbus* (147) pl. iii f. 3a Celebes, on Longicorn beetle, *modestus* (165) pl. iv ff. 1a–1d Nicobars, *galatheae* (167) pl. iv ff. 2a–2c Nicobars, *concarus* (173) pl. iv f. 3a Nicobars, *monitor* (180) pl. iv ff. 5a, 5b “Sunda Is.,” *nicobarensis* (182) pl. iv ff. 6a, 6b Nicobars, *plebejus* (185) pl. iv ff. 7a, 7b Nicobars, Burma, *vermiformis* (188) pl. iv ff. 8a, 8b Nicobars, *navigator* (191) pl. iv f. 9a “India,” *indicus* (194) pl. iv ff. 10a–10d Madras, *rotundus* (196) pl. iv ff. 11a–11c Nicobars spp. n. *depressus* Koch (144) pl. ii f. 10a, pl. iii ff. 2a–2e “India,” *subruber* Sim. (155) pl. iii ff. 7a–7g Nicobars *murrayi* Poc. (159) pl. iii ff. 8a–8j Nicobars *cocophilus* Sim. (171) pl. iii ff. 9a, 9b Malay Peninsula, *birmanicus* Thor. (176) pl. iii f. 10a, pl. iv ff. 4a–4f Burma; WIRTH, Kjøbenhavn, Vid. Selsk. Skr. 7.—*C. sjöstedti*, Tullg. description *thoméensis* var. n. S. Thomé Is. (245) *guineensis* nom. n. for *pallidus*, Balzan *feae* Cape Verde (246) *pusillus* S. Thomé Is. (248) *equestroides* W. Africa (250) spp. n. *cimicoides* Fab. *basileensis* var. n. Fernando Po (251) *rubidus* (252) *angulatus* (256) *garypooides* (258) West Africa spp. n. ELLINGSEN Genova Ann. Mus. Civ. stor. nat. 42.

*Chernes cyaneus* in Notts, England KEW Trans. Nott. Nat. Soc. 1905–1906 (41–46) pl. v.

*Chernetidae*; genital tracheal system OUDEMANS Zool. Anz. 30 (135–140).

*Chernetes*; Arctic species STRAND Fauna Arctica 4 (431–478).

*Chthoniinae* characters (64–68) *Chthonius* structure of maxillae (25) pl. i ff. 1e–g, 2a *terribilis* sp. n. Siam (69) pl. i ff. 1a–1m *klassici* Dad (73)

New Guinea. WITH Kjöbenhavn, Vid. Selsk. Skr. 7.

*Feaella* gen. n. *Feaellidae* fam. n. *mirabilis* sp. n. Portuguese Guinea ELLINGSEN Genova, Ann. Mus. Civ. stor. nat. 42 (259, 260) pl. iv.

*Garypidae* characters (89–95) *Garypus* characters (101–103) *irrugatus* Sim. (28) pl. i ff. 6a–6d, (104) pl. ii ff. 1a–1d Siam, *elegans* nom. n. (107) pl. ii ff. 2a, 2b Malacca WITH, Kjöbenhavn Vid. Selsk. Skr. 7.

*Garypinus nobilis* sp. n. Siam WITH T.c. (29) pl. i ff. 7a–7c (112) pl. ii ff. 8a–8g.

*Ideoroneus* structure of maxillae (27) pl. i ff. 4c–4f, 5b *siamensis* (81) pl. i ff. 4a–4i *laminatus* (84) pl. i ff. 5a–5c spp. n. Siam WITH T.c.

*Obisiinae*; characters (75) *Obisium museorum* Leach (26) pl. i ff. 3a, 3b structure of maxillae WITH T.c.

*Opium birmanicum* sp. n. Burma WITH T.c. (109) pl. ii ff. 7a–7h.

*Pseudobisiinae* characters WITH T.c. (77–79).

*Pseudochiridium* gen. n. characters (199–200) *thorelli* sp. n. (200) pl. iv ff. 12a–12g Nicobars *clavigerum* Thor. (204) pl. iv f. 13a Burma WITH T.c.

## OPILIONES.

*Phalangida* habits, occurrence in Yorkshire FALCONER Naturalist, London 1906 (215–220) (388–390), pl. xix.

Orkney islands spp. CAMBRIDGE, O. P. Ann. Scot. Nat. Hist. Edinburgh 57 (55).—Swedish spp. TULLgren Entomol. Tidskr. Stockholm 27 (195–218).—Arctic spp. STRAND Fauna Arctica 4 (431–478).

*Dibunus* gen. n., *pseudobiantes* sp. n. New Guinea; verwandt mit *Ibalonius* Kesch. und *Dino* Loman, eine vermittelnde Stellung zwischen den *Hinzenidae* und den *Epedanidae* einnehmend, LOMAN, Nova Guinea, 5, (4–6).

*Egaenus marenzelleri* sp. n. Asia Minor NOSEK Wien Ann. Nat. Hist. Hofmus. 20 (152).

*Erginus castaneus* sp. n. Bahamas BANKS, New York, Bull. Amer. Mus. 22 (189).

*Gibocellum sudeticum*, Stecker, an imaginary animal SØRENSEN, Kjöbenhavn, Vid. Selsk. Overs., 1906, No. 4, (197–232).

*Ibalonius impudens* sp. n. New-Guinea LOMAN, Nova Guinea, 5, (3).

*Maracandus albiceps* sp. n. New-Guinea LOMAN T.c. (7).

*Marthana cornifer* sp. n. Malay Peninsula LOMAN, Hamburg, Mitt. naturhist. mus. 23 (103).

*Phalangium kuleczynskii* (148), *argaeum* (149), *strandi* (150), spp. n., Asia Minor, NOSEK Wien Ann. Nat. Hist. Hofmus. 20.

## ACARI.

New classification, new sub-classes, orders and sub-orders. OUDEMANS Ber. Ned. Ent. Ver. 2 (43–46).

Respiratory organs, mandibles OUDEMANS Ber. Ned. Ent. Ver. 2 (37–43); T.c. (47, 48); Zool. Anz. 29 (638, 639); T.c. (135–140); T.c. (633–637, 656).

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*Hydrachnida* classification THON Arch. Natw. Ld Durchf. Böhmen, Prag 12 pt. 2 (4–12); List of Belgian spp. ROUSSEAU Brussels, Mém. soc. entom. Belgique 12 (181–188); List of Scotch spp. WILLIAMSON Edinburgh, Trans. Nat. Soc. 5 (239–242); spp. in Bologoje Lake Russia SOLOVJEV, St. Peterburg, Ber. Süsswasserst. Naturf. Ges., 2, (277–280).

*Acerkus spatulifer* sp. n. Lake Nemi, Italy MARUCCI Roma, Boll. soc. zool. Ital. ser. 2, 6 (285).

*Amasis minimus* sp. n., Java PIERSIG Zool. Jahrb., Syst., 23, (351–354) pl. xv ff. 37–39.

*Arrhenurus* larvae parasitic on dragon flies SOAR J. Quak. Microsc. Cl. ser. 2 9 (362).—*A. aculeatifrons* (356–360) pl. xiii ff. 9–12, pl. xviii ff. 64–69, *gibberifrons*

(372-375) pl. xix ff. 82-85 Java, *pseudoflinnis* (360-364) pl. xviii ff. 76, 77, pl. xix ff. 78-81, pl. xx ff. 94-97 *belaniensis* (364-366) pl. xx ff. 90-94 *bicornicodus* (366-369) pl. xvii ff. 70-75, *palembangensis* (369-370) pl. xx ff. 99-103 *gracilipes* (370-372) pl. xx ff. 104-106 Sumatra spp. n. PIERSIG Zool. Jahrb. Syst. 23.—*A. coronatus*, (772), *calycularis*, (773), spp. n., Macedonia GEORGEVITCH Zool. Anz., 30; Ghlas Srpska Ak. 71 No. 28 (123-151).—*A. curtus* sp. n. (37) *caudatus mantonensis* var. n. (94) Lincolnshire GEORGE Naturalist, London, 1906.—*A. kraepelini* sp. n. Java KOENIKE Hamburg, Mitt. naturhist. mus. 23, (132) pl. ii ff. 24-27.—*A. maggii* sp. n. Pavia MAGLIO, Zool. Anz., 30, (412).—*A. octagonus* sp. n. (8), pl. ii f. 5, *leuckarti* Piers. (9) *neumanni* Piers. (9) *stecki*, Koen. (9), Ireland HALBERT Ann. Mag. Nat. Hist. London, 18. — *A. plenipalpis* Koen. Lake Nyasa HALBERT Proc. Zool. Soc. London, 1906 (535).—*A. rosulatus* sp. n. Turkestan DADAY Math. Termt. Ert. Budapest, 21 (355).

*Atax affinis* sp. n. Java PIERSIG Zool. Jahrb., Syst., 23, (324-327) pl. xiii ff. 1-5.—*A. crassipes* parasitic in *Spongilla flutatilis* SOAR J. Quek. Microsc. Cl. ser. 2, 9 (365).—*A. cumberlandensis* sp. n. Parramatta New S. Wales; RAINBOW Sydney N.S.W., Rec. Austr. Mus. 6 (160).—*A. intermedius lavaronensis*, var. n. LARGAIOLLI, Rivista mensile di Pesca, Milano, 8, (286-288).—*A. necessarius* (105) pl. i ff. 1-2 *pudendus* (108) pl. i ff. 3-5 spp. n. Java KOENIKE Hamburg, Mitt. naturhist. mus. 23.—*A. pauciporus* (14) ff. 1, 2 *lynceus* (15) ff. 3-5 spp. n. German E. Africa KOENIKE Deutsch Ost-Afrika Hydrachnidien.

(*Atractides pavesii* sp. n. Ticino; MAGLIO Milano, Rend. Ist. lomb., ser. 2, 38 (152).)

*Aturus assereculatus* sp. n., Switzerland WALTER Zool. Anz., 30, (572).

*Brachypodopsis coerulea* sp. n. Bangkok PIERSIG Zool. Jahrb. Syst., 23, (354-356) pl. xv ff 34-36.

*Curvipes discrepans* Koen = *thoracifer* Piers. KOENIKE, Zool. Anz., 30, (514-515).

*Diplodontus despiciens* O. F. Müller *monticolus* var. n. Java PIERSIG Zool. Jahrb., Syst., 23, (379) pl. xiii ff. 13-15.—*D. tenuipes* sp. n., Java KOENIKE

Hamburg, Mitt. naturhist. mus. 23 (129) pl. ii f. 23.

*Ecpolopsis* gen. n. *multiscutata* sp. n. Siam PIERSIG Zool. Jahrb., Syst. 23 (330-333) pl. xv ff. 31-33.

*Euceentridophorus spinifer*, Koen. Lake Nyasa HALBERT Proc. Zool. Soc. London, 1906 (534).

*Eulais*, anatomy, bionomics, characters of Bohemian species THON Arch. Natw. LdDurchf. Böhmien, Prag 12 pt. 2 (30-84).—*E. cavipontia*, *citellata*, (771), *bisaccata*, *dentata*, (772), spp. n., Macedonia GEORGEVITCH Zool. Anz., 30; Ghlas Srpska Ak. 71 No. 28 (123-151).—*E. elpatieviiskij* sp. n. Mongolia; DADAY Math. Termt. Ert., 24, (66).—*E. maccullochii*, sp. n., Parramatta, New S. Wales RAINBOW Rec. Austr. Mus., 6, (160).—*E. marenzelleri* sp. n. Asia Minor THON Wien, Ann. Nat. Hist. Hofmus. 20 (158) pl. vi. f. 2, pl. vii ff. 1-5. —*E. pseudorimosa* sp. n., Sumatra PIERSIG Zool. Jahrb. Syst 23, (380-382) pl. xvii ff. 62, 63.

*Eupatra rotunda* sp. n., Sumatra PIERSIG T.c. (376-379) pl. xxi ff. 107-111.

*Forelia parvata* nom. n. for *F. cassidiformis* Haller KOENIKE, Zool. Anz., 30, (513-514).

*Frontipoda stuhlmanni* sp. n. Victoria NYANZA KOENIKE Deutsch Ost-Afrika Hydrachnidien (5) ff. 12-15.

*Hydrachna* parasitic on aquatic Coleoptera and Hemiptera SOAR J. Quek. Microsc. Cl. ser. 2 9 (363).—*H. orientalis* sp. n. Asia Minor THON Wien, Ann. Nat. Hist. Hofmus. 20 (155) pl. vi f. 2, pl. vii ff. 6-9.—*H. semisculata* (382-384) pl. xix ff. 87, 88, *volzi* (384-386) pl. xix f. 89 spp. n. Bangkok PIERSIG, Zool. Jahrb. Syst. 23.

*Hydrovolzia cancellata* sp. n., Switzerland WALTER Zool. Anz. 30 (575).

*Hydryphantes* parasite of *Caenia obscura* Mg. (Diptera) SOAR J. Quek. Microsc. Cl. ser. 2 9 (364).—*H. koenikei* sp. n., Pavia, MAGLIO, Zool. Anz. 30 (410).

*Hygrobates calliger* Piers. Ireland HALBERT Ann. Mag. Nat. Hist. London, 18, (10).—*H. falcipalpis* sp. n. Java KOENIKE Hamburg, Mitt. naturhist. mus. 23 (122) pl. ii ff. 16, 17.—*H. octoporus* sp. n. Mongolia DADAY J. Math. Termt. Ert., 24, (67).

*Laminipes bullata* Thor. (10).  
*scaurus*, Koen. (11). Ireland HALBERT  
 Ann. Mag. Nat. Hist. London, **18**.

*Lebertia (Mixolebertia) helvetica* sp. n.,  
 Switzerland THOR Zool. Anz., **30**,  
 (478–484).—*L. inaequalis* Koch, charac-  
 ters, THOR, T.c. (70–78).—*L. lineata*  
 (69), *walteri* (68), spp. n. Switzerland  
 THOR, op. cit. **31**.—(*L. pavesi* characters  
 MONTI, Milano, Rend. Ist. lomb. ser. 2 **37**  
 (240).)—*L. porosa* Thor, *obsoleta* Thor,  
*insignis* Nouman, characters THOR Zool.  
 Anz. **29** (761–790) ff. 32–54.

*Limnesia armata* (7) ff. 10, 11 *cam-*  
*panulata* (9) spp. n. German E. Africa  
 KOENIKE Deutsch Ost-Afrika Hydrach-  
 nidien.—*L. gentilis* sp. n. Java KOENIKE  
 Hamburg, Mitt. naturhist. mus. **23** (124)  
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 (348–350) pl. xvii ff. 58–61 Java, *L. volzi*  
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*Limnocharidae* structure THON T.c.  
 (13–84).

*Mixolebertia* subgen. n. (*Lebertia*)  
 THOR, Zool. Anz., **29**, (770).

*Momonia* gen. n. (*Hygrobatidae*) *falcipi-*  
*palis* sp. n., Ireland HALBERT Ann. Mag.  
 Nat. Hist. London **18** (5) pl. ii, ff. 1–4.

*Neumania ambigua* (329, 330) pl. xv  
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 Jahrb. Syst. **23**.—*N. megalommata* (111)  
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*falcipes* (119) pl. ii ff. 14, 15 spp. n.  
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 mus. **23**.

*Nitocra platypus* sp. n. Siam, DADAY,  
 Zool. Jahrb. Syst., **24**, (192) pl. 15  
 ff. 10, 14–26, pl. 16 ff. 1–5.

*Panisus michaeli* Koen., Ireland HAL-  
 BERT Ann. Mag. Nat. Hist. London **18**  
 (11), pl. ii, f. 6.

*Partunia steinmanni*, Zermatt, *lata*,  
 Lugano, spp. n. WALTER Zool. Anz. **30**  
 (570–571).

*Pilolebertia*, revision of genus THOR  
 T.c. (271–275).

*Piona belaniensis* (338–340) pl. xvi  
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*uncata* (342–344) pl. xvi ff. 47–51 Java  
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*P. macedonica* sp. n., Macedonia  
 GEORGEVITCH, Zool. Anz., **30** (774);  
 Ghlas Srpska Ak. **71** No. 28 (146).—*P.*  
*stjordaliensis*, Thor. Ireland HALBERT  
 Ann. Mag. Nat. Hist. London **18** (11).

*Pionacercus*, details of anatomy of  
 female figured GEORGE Naturalist,  
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(*Polyxo* gen. n. *placophora* sp. n.  
 Italy MONTI Milano, Rend. Ist. lomb.  
 ser. 2, **38** (170, 2 plates)).

*Pseudotorrenticola* gen. n., *rhynchota*  
 sp. n. Switzerland WALTER Zool. Anz.  
**30** (573).

*Sperchon brevirostris* Koen., *longi-*  
*rostris* Koen. Ireland HALBERT Ann.  
 Mag. Nat. Hist. London **18** (10).—*S.*  
*insignis* sp. n., Switzerland WALTER  
 Zool. Anz. **30** (574).

(*S. ticeinense* sp. n. Ticino MAGLIO  
 Milano, Rend. Ist. lomb. ser. 2, **38**  
 (150)).

*Tiphys mutatus*, Piers. Ireland  
 HALBERT Ann. Mag. Nat. Hist. London  
**18** (11).—*T. zschokkei* sp. n., Switzerland  
 WALTER Zool. Anz., **30**, (322–  
 326).

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 pls. v–x.

*Amblyomma* habits of South African  
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**1905** (282, 286–288).—*A. hirtum* Galapagos  
 Is. (201) *sculpturatum* Brazil,  
 Bolivia (203) *bispinosum* Venezuela  
 (204) *pictum* Brazil (204) *incisum*  
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*prolongatum* Ceylon (208) spp. n. *cælebs*  
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**10**.—*A. scaevola* Oudms. New Guinea  
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 ff. 51–58.

*Aponomma hydrosauri* Denny = *color* Neum. NEUMANN Arch. parasit. **10** (213).

*Argas reflexus* attacking pigeons NOËL, Naturaliste, Paris, sér. 2, **28**, (132-133).—*A. reflexus* Fab. *vespertilionis* Latr. *persicus* Fisch. structure WHEELER, Cambridge, J. Agric. Sci. **1** (407, 408, 428) pl. vi ff. 6-9 pl. x f. 39.—*A. transgariepinus* White = *kochi* Neum. NEUMANN Arch. parasit. **10** (218).—*A. persicus* parasitic on birds LOUNSBURY Rep. Brit. Ass. **1905** (283, 284).—*A. lagenoplastis*, sp. n. New South Wales FROGGAT, Sydney, N.S.W., Proc. Linn. Soc., **31**, (408).

*Boophilus* habits of South African species LOUNSBURY, Rep. Brit. Ass. **1905** (291).—*B. annulatus* Say. internal anatomy ALLEN Tr. Amer. microsc. soc. **26** (245-280) pls. xxviii-xxxii; WILLIAMS Boston, Mass., Proc. Soc. Nat. Hist. **32** (313-334) pls. xviii-xxii; unusual host relations RANSOM Washington, D.C., Cir. U.S. Dept. Agric., Bur. Anim. Ind., No. **98**, (1-8).

*Ceratixodes putus* Cambr. structure WHEELER Cambridge J. Agric. Sci. **1** (415) pl. ix ff. 25, 26.

*Dermacentor reticulatus* Fab. structure WHEELER T.c. (422) pl. ix f. 28, pl. x ff. 33-35.—*D. atrosignatus* sp. n.? Australia NEUMANN Arch. parasit. **10** (210).

*Eschatocephalus vespertilionis* C. L. Koch structure WHEELER Cambridge J. Agric. Sci. **1** (417) pl. vii f. 15, pl. viii f. 19a.

*Eurhipicephalus* habits of South African species LOUNSBURY, Rep. Brit. Ass. **1905** (289-290).

*Haemaphysalis leachi* habits LOUNSBURY T.c. (288).—*H. punctata* Canest. and Fanz. structure WHEELER Cambridge J. Agric. Sci. **1** (421) pl. x ff. 30-32; anatomy of buccal apparatus NUTTALL, COOPER and SMEDLEY Rep. Brit. Ass. **1905** (439-441).—*H. spinulosa* sp. n. Uganda NEUMANN Arch. parasit. **10** (212).

*Hyalomma aegyptium* transmits parasites of Texas fever KOCH R. J. Trop. Med. London (76).—*H. aegyptium* var. *impressum* habits LOUNSBURY Rep. Brit. Ass. **1905** (288).—*H. hippopotamense*, synonymy NEUMANN Arch. parasit. **10** (216).—*H. syriacum* Koch structure WHEELER Cambridge J. Agric. Sci. **1** (419)

pl. vii 10-12; intermediary host of haematozoon in *Testudo ibera* POPOVICI-BAZNOSANU Paris, C.-R. soc. biol. **60** (173-174).

*Ixodes*, gland system NORDENSKIÖLD Zool. Anz., **30**, (484-485).—*I. bicornis* Mexico (196) *simplex* Shanghai, Gaboon (197) *ugandanus* Uganda (198) *percaratus* TRISTAN DA CUNHA (200) spp. n. NEUMANN Arch. parasit. Paris **10**.—*I. borealis* on puffins and petrels St. Kilda EVANS Ann. Scot. Nat. Hist. **1906** (85)—*I. pilosus* habits LOUNSBURY Rep. Brit. Ass. **1905** (285, 286).—*I. reduvius* anatomy and histology NORDENSKIÖLD Zool. Anz., **30**, (118-125); SUWOROW St. Peterburg, Trav. Soc. Nat. **37** Nos. 7, 8 (310-315, 366).—*I. ricinus* Latr. *hexagonus* Leach var. *longispinosus* Neum. *tenuirostris* Neum. structure WHEELER Cambridge J. Agric. Sci. **1** (411-415) pl. vi. ff. 4, 5, pl. vii ff. 11, 13, 14, pl. viii ff. 16-19, 20-22, pl. ix ff. 23, 24, pl. x ff. 36-38.—*I. ricinus* parasites of horses JUNAOKE Zs. Veterinärk., **15**, (258-259).

*Ornithodoros* habits of South African species LOUNSBURY Rep. Brit. Ass. **1905** (284).—*O. megnini* Dugés structure WHEELER, Cambridge J. Agric. Sci. **1** (409).—*O. moubata* transmits spirochaete of human tick fever CANTLIE J. Trop. Med. London, **9** (11-12); KOH R. T.c. (43-45); ROSS T.c. (65-69); habits WELLMANN T.c. (215); NEWSTEAD, Proc. Ass. Econ. Biol. **1** (74-77).—*O. savignyi* Aud. anatomy CHRISTOPHERS Sci. mem. med. Ind., Calcutta **23** (28-45) plates i-v.

*Rhipicephalus annulatus* internal anatomy CHRISTOPHERS T.c. (45-55), pl. vi.—*R. australis*, *evertsi* transmitting agents of Texas fever and coast fever parasites KOCH R. J. Trop. Med. London **9** (75, 76).—*R. cuspidatus* sp. n. Senegal NEUMANN Arch. parasit. Paris **10** (209).—*R. tricuspis* sp. n. Kalahari desert DÖNITZ Berlin, Sitzber. Ges. natf. Freunde, **1906** (146) ff. 7-9.

*Spelaeorhynchus praecursor* Neum. Pernambuco, not from Africa NEUMANN Arch. parasit. **10** (220).

#### ACARI. (*Other families*).

*Achorolophus trimaculatus* Herm. niger var. n. Netherlands OUDEMANS Ber. Ned. Ent. Ver. **2** (18).

*Aleurobius farinae* L. *africana* var. n. Germany (?) OUDEMANS, Ber. Ned. Ent. Ver. **2** (43).—*A. fanis* sp. n. Netherlands OUDEMANS T.c. (20).

*Allothrombidium fuligineum* (17) *adustum* (17) *incarnatum* (18) spp. n. Netherlands OUDEMANS T.c.—*A. muscae* sp. n. Netherlands OUDEMANS T.c.

*Amerus speciosus* sp. n. Sikkim PEARCE J. R. Microsc. Soc. **1906** (272), pl. xiii ff. 6.

*Anoetus lorentzi* Oudemans. New Guinea OUDEMANS Nova Guinea **5** (146) pl. v ff. 116–118.

*Anoetus lorentzi* sp. n. New Guinea OUDEMANS Ber. Ned. Ent. Ver., **23** (223).)

*Antennophorus* symbiosis with ants, characters of *wulmanni*, *grandis*, *pubescens*, *foreli* KARAVAJEV Kiev. Zap. Obšč. Jest. **20** (209–230).

*Archaeonothrus* gen. n. (870), *natalensis* sp. n. (871) Natal TRÄGARDH, Zool. Anz. **30**.

*Carpoglyphus alienus* sp. n. in human urine, Java HAAN Centralbl. Bakt., Abt. 1, **40**, (694).—*C. passularum* characters BANKS Washington, Tech. Ser. U. S. Dept. Agric. Div. Ent. **13** (25) pl. v ff. 40.

*Celaenopsis weberi* Oudemans. New Guinea OUDEMANS Nova Guinea **5** (121) pl. ii ff. 12–23.

*Cepheus heimi* sp. n. on fungus, France HEIM and OUDEMANS Paris, Bul. Soc. ent., **1903**, (312).—*C. lamel-latus* sp. n. Massachusetts BANKS Philadelphia Proc. Acad. Nat. Sci. **58** (497) pl. xv ff. 14.

*Chauliaca piscicauda* sp. n. on *Cyprinus*, SPEISER Königsberg, Schr. physik. Ges., **47**, (77).

*Chaunoproctus* gen. n. (Oribatidae) *cancellatus*, *asperulus* spp. n. Sikkim PEARCE, J. R. Microsc. Soc. **1906** (271) pl. xiii ff. 3, 4.

*Cheilectus eruditus* in fodder LUCKS Landw. Versuchstat. Berlin **64** (477–480).

*Cheletinae* revision of genera and species OUDEMANS Paris Mém. soc. zool. **19** (36–144).

*Cillibaena (Uropoda) aquatica* sp. n. Sumatra PIERSIG, Zool. Jahrb. Syst. **23** (386–388) pl. xxi ff. 112–118.

*Dermanyssus avium*, parasite of birds KLEE, Fühlings landw. Ztg., **55**, (98–103).—*D. gallinæ* an intermediate host of a haemogregarine of the jerboa BALFOUR Second Report of the Wellcome Research Laboratories at the Gordon Memorial College Khartoum (108).

*Dermoglyphus arami* description OUDEMANS Tijdschr. Ent. **49** (264) pl. xii ff. 44, 45.

*Epicrius mollis* (265) f. 1. *geometricus* (265) f. 2 *canistrinii* (266) f. 3 in Lincolnshire GEORGE Naturalist, London **1906**.

*Eremaeus* into 5 Genera *Liacarus*, *Xenillus*, *Eremaeus*, *Liebstadia* gen. n. and *Oribatula* OUDEMANS Ber. Ned. Ent. Ver., **2**, (100).—*Eremaeus* type *hepaticus* Koch OUDEMANS T.c. (100).

*Ereunetes lapidarius* sp. n. Netherlands OUDEMANS T.c. (40).

*Eriophyes* different species infesting identical trees COLLINGE Proc. Ass. Econ. Biol. 1 pt. i (10, 11).—*E. hibisci* sp. n. Fiji Is. NALEPA J. econ. Biol. **1** (147–150) pl. x.—*E. passerinae* attacking leaves of *Giardia hirsuta* GERBER Paris, C.R. Acad. sci. **143** (844, 845).

*Erythraeus debeauforti* description OUDEMANS Nova Guinea **5** (134) pl. iv ff. 79–87.

*Euiphus siculus* sp. n. on *Scarabaeus semi-punctatus*, Sicily OUDEMANS, Ber. Ned. Ent. Ver. **2** (7).

*Eupodes viridis* sp. n. Netherlands OUDEMANS, T.c. (40).

(*Fallopia* gen. n. type *Rhyncholophus poriferus* OUDEMANS Ber. Ned. Ent. Ver. **23** (222).)

*Gabucinia* gen. n. type *Pterolichus delibatus* OUDEMANS Ber. Ned. Ent. Ver. **23** (224).

*Galumna slossonae* (490) pl. xiv ff. 1–3 *unimaculata* (490) pl. xviii f. 33 *nitidula* (491) pl. xvii f. 27 *persimilis* (491) pl. xv ff. 13, 15 *imperfecta* (492) pl. xvi f. 21 *minuscula* (492) pl. xv f. 11 *armipes* (492) pl. xiv ff. 8, 9 *virginica* (493) pl. xvi f. 18 *turquida* (493) pl. xvii ff. 25, 26 *texana* (494) pl. xvii f. 24 spp. n. United States BANKS Philadelphia, Proc. Acad. Nat. Sci. **58**.

*Gamasus* characters, affinities, phylogeny, list of species BERLESE Redia, **3** (68–304) plates ii–xix.—*G. (Trachy-*

*gamasus* subgen. n.) (116) (*Gamasus*) *americanus* sp. n. (138) Paraguay, (*Eugamasus*) *magnus* Kram. *monticola* var. n. (179) Italy, *immanis* sp. n. (179) Norway, Iceland, (*Amblygamasus*) *septentrionalis* Oud. *germanicus* (189) Germany, *norvegicus* (190) Norway, varr. n., *Pergamasus* subgen. n., (191) *parvulus*, *dilatatellus* (205) *distinctellus* (206) varr. n. Italy, *falcifiger* sp. n. (211) Italy, *crassipes* L. *longicornis* var. n. (232) N. Europe, *decipiens*, Berl. *brevipes* (241) Italy *germanicus* (242) Germany varr. n., (*Ologamasus*) *calcarius* Koch *siculus* (248) Sicily *excisus* (249) Norway varr. n., *pollicipatus* Berl. *excipuliger* (252) *apenninorum* (253) *pseudoperforatus* (254) *peraltus* (256) *cultriger* (256) varr. n. Italy, *inornatus* sp. n. (257) Germany (? *Gamasus*) *monacanthus* (266) Cape of Good Hope, *modestus* (267) Norway, spp. n.; BERLESE Redia, 3.

*Glyciphagus domesticus* on apples LUDWIG, Zs. Pflanzenkrankh., 16, (13-15).—*G. obesus* (12) pl. 1 ff. 1-3, *robustus* (13) pl. i f. 1 spp. n. United States BANKS Washington Tech. Ser. U. S. Dept. Agric. Div. Ent. 13.—*G. pilosus* nom. n. for *G. setosus* Oudms. (non C. L. Koch) OUDEMANS, Tijdschr. Ent., 49, (LI).

*Hafentrefferia* gen. n. type *Oribates gilvipes* C. L. Koch, OUDEMANS, Ber. Ned. Ent. Ver., 2, (62).

*Halarache* sp. in nasal cavities of Weddell's seal BLANCHARD Arch. parasit. 10 (313).

*Hericia robini*, Can. in Germany LUDWIG, Zs. Pflanzenkrankh., 16, (137-139).

*Histiogaster entomophagus spermaticus* Trt. = *spermaticus* Trt. description TROUESSART Arch. parasit. 10 (314, 315).—*Histiostoma gracilipes* (10) pl. i ff. 9, 12 *brevipes* (11) pl. i ff. 10, 11, *americanus* (11) pl. i ff. 6, 7 spp. n. United States BANKS, Washington, Tech. Ser. U. S. Dept. Agric. Div. Ent. 13.

*Holothyrus* histology of repugnatorial glands THON Prag, SitzBer. Böhm. Ges. Wiss. 1905 No. 10 (1-41) plates i, ii.—*H. coecinella* (713) *longipes* (714) pl. xxix f. 16 characters, *braueri* (681) pl. xxviii, xxix ff. 11-15 *seychellensis* (718) pl. xxix ff. 18, 19 *niger* (716) pl. xxix f. 17 spp. n. Seychelles THON Zool. Jahrb. Syst. 23.

*Hoplodlerma claviger* sp. n. Sikkim PEARCE, J. R. Microsc. Soc. 1906 (273).

*Horstia* gen. n. type *Trichotarsus ornatus* Oudms.; to same genus *helenae* Oudms., *manicati* Giard, *trifilis* Can.; OUDEMANS Ber. Ned. Ent. Ver. 2 (21).

(*Ingrassia* gen. n. type *Meguininia veligera* OUDEMANS Ber. Ned. Ent. Ver. 23 (224).)

*Ingrassia veligera* description OUDEMANS Tijdschr. Ent. 49 (265) pl. xii ff. 46-51.

*Joelia* gen. n. type *Oribates florii* Coggi. OUDEMANS, Ber. Ned. Ent. Ver. 2 (61)

*Laelaps* (*Laelaspis*) *zuluensis* sp. n., Zululand TRÄGÅRDH Zool. Anz. 30 (873).

*Leptus autumnalis*, transmits the Kedani disease of Japan TANAKA Centrbl. Bakter. 42 (16-18, 104-108, 235-240, 329-334); in dogs ROTH, Wochenschr. Tierheilk., 50, (341-345, 361-365, 381-384).

*Liacarus bicornis* sp. n. England WARBURTON and PEARCE Proc. Zool. Soc. 1905 (566) pl. xix f. 4.—*L. carolinensis* (494) pl. xvi f. 17 *abdominalis* (495) pl. xviii ff. 29, 32 *frontalis* (495) pl. xiv ff. 4, 5 spp. n. United States BANKS Philadelphia Proc. Acad. Nat. Sci. 58.—*L. nigrescens* sp. n. Sikkim PEARCE, J. R. Microsc. Soc. 1906 (270) pl. xiii f. 2.—*L. palmicinctus* description RICHTERS Umschau, Frankfurter A. M., 10, (215-216).

*Liebstadia* gen. n. type *Notaspis similis* Michael, OUDEMANS, Ber. Ned. Ent. Ver., 2, (101).

(*Limnesia jamurensis* sp. n. New Guinea OUDEMANS Ber. Ned. Ent. Ver. 23 (223).)

*Liponyssus pipistrelli* sp. n. Netherlands, OUDEMANS Ber. Ned. Ent. Ver. 2 (37).—*L. cyclops* nom. n. for *L. pipistrella* Oudms., OUDEMANS T.c. (61).

*Macrocheles siculus* sp. n. on *Seara-baeus*  $\frac{1}{2}$ -punctatus Sicily OUDEMANS T.c. (7).

*Megacanestrinia* gen. n., *mucronata* sp. n. Zululand TRÄGÅRDH Zool. Anz. 30 (877).

*Megisthanus moaifensis* (124) pl. ii ff. 24-29 pl. iii ff. 30-39, *orientalis* (127) pl. iii ff. 40-50 characters OUDEMANS Nova Guinea 5.

(*Megistanus moadensis, orientalis* spp. n. New Guinea OUDEMANS Ber. Ned. Ent. Ver. 23 (222).)

*Monieziella angusta* (23) pl. ii ff. 15  
*longipes* (23) pl. ii f. 13, *brevitarsis* (24)  
pl. ii ff. 18, 19 spp. n. United States.  
BANKS Washington, U. S. Dept. Agric.  
Div. Ent. 13.

*Myrmolaelaps* gen. n., *equitanus* sp. n.  
Zululand TRÄGÅRDH Zool. Anz. 30 (874).

*Neocheilus* gen. n. *natalensis* sp. n.  
Natal TRÄGÅRDH T.c. (870).

*Neoliodes floridensis* sp. n. Florida  
BANKS Philadelphia, Proc. Acad. Nat.  
Sci. 58 (499) pl. xvi f. 19.—*N.  
ocellatus* sp. n. Sikkim PEARCE, J. R.  
Microsc. Soc. 1906 (272) pl. xiii f. 7.

*Neomegistus* gen. n. *julidicola* sp. n.  
Natal TRÄGÅRDH Zool. Anz. 30 (872).

*Notaspis castanea* (496) pl. xvi f. 16  
*carbonaria* (496) pl. xvii ff. 30, 31  
spp. n. California BANKS Philadelphia,  
Proc. Acad. Nat. Sci. 58. — *N.  
hamatus* sp. n. Sikkim PEARCE, J. R.  
Microsc. Soc. 1906 (271), pl. xiii f. 5.—  
*N. maculosa* (pl. xx f. 1) *sculptilis* (pl.  
xx f. 2) spp. n. England WARBURTON  
and PEARCE Proc. Zool. Soc. 1905  
(567).

*Nothrus crinitus* (567) pl. xx  
f. 3 *crassus* (568) pl. xx f. 5 spp. n.  
*tectorum* (568) pl. xx f. 4 *anaueuensis*  
(569) characters, England and Scotland  
WARBURTON and PEARCE T.c.—*N.  
taurinus* sp. n. Virginia, BANKS Philadelphia  
Proc. Acad. Nat. Sci. 58 (499) pl. xvii  
f. 23.

*Oppia spinipes* (496) pl. xvii f. 22  
*canadensis* (497) pl. xiv f. 7 *montana*  
(497) pl. xv f. 10 spp. n. United States  
and Canada BANKS T.c.

*Oribata fallax* sp. n. Sikkim PEARCE  
J. R. Microsc. Soc. 1906 (270) pl. xiii  
f. 1. — *O. furcata* (565) pl. xix f. 1  
*omissa* (565) pl. xix f. 2 spp. n. *rubens*  
C. L. Koch (565) England WARBURTON  
and PEARCE Proc. Zool. Soc. 1905. —  
*O. puritanica* (498) pl. xiv f. 6 *longi-  
seta* (498) pl. xv f. 12 spp. n. United  
States BANKS Philadelphia Proc. Acad.  
Nat. Sci. 58.

*Oribatula* type *Notaspis tibialis* NIC.  
OUDEMANS Ber. Ned. Ent. Ver. 2 (101).—  
*O. pallida* sp. n. New Jersey, United  
States BANKS Philadelphia Proc. Acad.  
Nat. Sci. 58 (494) pl. xviii f. 28.

*Oxypleurites bisetus* sp. n. (*Eriophyia-  
dae*) Fiji Is. NALEPA J. econ. Biol. 1  
(150).

*Paramegistus* gen. n. *confrater* sp. n.  
Natal TRÄGÅRDH Zool. Anz. 30 (873).

*Parasitus bomborum* description  
OUDEMANS Tijdschr. Ent. 49 (237) pl. ix  
ff. 1-14.—*P. vesparum* sp. n. in wasps'  
nest, Netherlands OUDEMANS Ber. Ned.  
Ent. Ver. 2 (4).

*Pediculoides pilosus* nom. n. for  
*Pygmephorus spinosus* ♀, Michael  
OUDEMANS, Tijdschr. Ent. 49 (xviii).

*Pergamasus* subgen. n. v. *Gamasus*.—  
*P. italicus* sp. n. Padua, Italy OUDEMANS  
Ber. Ned. Ent. Ver. 2 (16).—*P. primi-  
tivus* description HEIM and OUDEMANS  
Paris, Ann. soc. ent. 75 (57-62) pl. iv-  
vi.

*Phyllocoptes triceras* sp. n. on coni-  
fers, Germany BÖRNER, Berlin, Arb. biol.  
Anst., 5, (139-142).

*Plutarchia chelopus* description OUDE-  
MANS Tijdschr. Ent. 49 (250) pl. x  
ff. 30-35 pl. xi ff. 36-39.

*Protolichus eurycrenemis major, strictus,  
hemiphyllus dilatatus, velifer neglectus,  
trachiatus strangulatus, fayettei cordi-  
phora* subsp. n. *magnificus, splendens,  
distensus, attenuatus* spp. n. *attenuatus*  
*ovalifolia* subsp. n. FAVETTE and TROU-  
ESSART Paris Mém. soc. zool. 17 (120-166  
with pl.).

(*Proctophyllodes detruncatus, separati-  
folius* spp. n. Netherlands OUDEMANS  
Ber. Ned. Ent. Ver. 23 (225).)

*Proctophyllodes pinnatus* Nitzsch.  
synonymy, OUDEMANS Ber. Ned. Ent. Ver.  
2 (23).

(*Plerodectes corvincola* sp. n. Nether-  
lands OUDEMANS Ber. Ned. Ent. Ver. 23  
(225).)

(*Railletia* gen. n. for *Gamasus auris*  
TROUSSART Paris, Bul. soc. zool. 27  
(231-233).)

*Rhagidia mordax* sp. n. Netherlands,  
OUDEMANS, Ber. Ned. Ent. Ver. 2 (39).

*Rhizoglyphus phylloxerae* (20) pl. vi  
ff. 57, 60, 61 description, *tarsalis* (20)  
pl. v ff. 45, 46, *rhiophagus* (21) pl. vi  
ff. 50-52, *elongatus*, (22) pl. vi ff. 53, 54,  
*longitarsis* (22) pl. vi ff. 55, 58 spp. n.  
United States BANKS Washington Tech.  
Ser. U. S. Dept. Agric. Div. Ent. 13.

*Rhyncholophus montanus* Mt. Kościusko 600 ft. *celeripes* Sydney spp. n. RAINBOW, Rec. Austr. Mus., 6, (155-156), ff. 33, 34.

*Sammonica ovalis* (259) pl. xi ff. 40, 41 *doryphora* (261) pl. xii ff. 42, 43 descriptions OUDEMANS Tijdschr. Ent. 49.

*Sarcoborus* Oudms, cancelled for *Sarcopterus* Railliet, OUDEMANS, Ber. Ned. Ent. Ver., 22 (216).—*S. crista-galli* under epidermis of Australian Parrot, PERNET Brit. J. Dermatol. 18 (288).

*Sarcopeltis minor* var. *cuniculi* parasite of the rabbit GMEINER, Arch. Thierheilk., 32 (170-185).

*Schizocarpus mingaudi* parasite of beaver MINGAUD Nature, 33 2° sem. (118-119) f. 2.

*Scutovortex petrophagus* sp. n. in limestone, Ithaca, New York BANKS, Ent. News, 17, (194).

*Sebia palmata* description OUDEMANS Tijdschr. Ent. 49 (241) pl. ix ff. 15-20.

(*Seiulus novaeguineae* sp. n. New Guinea OUDEMANS Ber. Ned. Ent. Ver. 23 (222).)

*Seiulus novae-guineae* characters OUDEMANS Nova Guinea 5 (120) pl. ii ff. 1-11. —*S. truncatus* sp. n. Netherlands OUDEMANS, Ber. Ned. Ent. Ver. 2 (8).

*Sennertia* gen. n. type *Pediculus cerambycinus* Scop., to same genus *Trichotarsus coprothosomae* Oudms., *japonicus* Oudms., *hipposiderus* Oudms., *alfkni* Oudms., *bifilis* Can. OUDEMANS T.c. (21-22).

*Stamfordia* gen. n. (874), *carabicola* sp. n. Natal (875) TRÄGÅRDH Zool. Anz. 30.

*Suidasia pontifica* description OUDEMANS, Tijdschr. Ent. 49 (245) pl. x ff. 21-29.

*Tarotomus parictinus* Herm. = *comes* Berl., *berlesei* nom. n. for *parictinus* Berlese non Hermann, OUDEMANS, Ber. Ned. Ent. Ver. 2 (87).

*Termitacarus* gen. n. *cuneiformis* sp. n. Natal TRÄGÅRDH Zool. Anz. 30 (875).

*Tetranichus* sp. Java, parasitic on *Manihot dulcis* CRAMER Teijsmannia 17 (718-724).

*Trachygamasus* subgen. n. vide *Gamasus*.

*Trachyuropoda* (*Janetiella*) *termitoifila* sp. n. Natal TRÄGÅRDH Zool. Anz. 30 (871).

*Trombidium* habits MAXWELL-LEFROY Indian insect pests, Calcutta (219-220); economic notes CHITTENDEN Washington Bull. U. S. Dept. Agric. Div. Ent. Circ. 77 (1-6).—*T. locustarum* Riley, on locusts JARVIS Canad. Entomol. 38 (349, 350); Ann. Rep. Ent. Soc. Ontario, 37 (111).—*T. sericatum* sp. n. Victoria, New S. Wales RAINBOW Sydney, N.S.W., Rec. Austr. Mus., 6, (158).—(*T. striaticeps* (91) *poriceps* (93) spp. n. France HIRIM and OUDEMANS Paris, Bul. soc. ent., 1904.)—(*T. vandersandei* (216) *wiechmanni* (217) spp. n. New-Guinea OUDEMANS Ber. Ned. Ent. Ver. 22 (216-217); Nova Guinea 5 (131-132) pl. iv ff. 59-78).—*T. vandersandei* parasitic on man in New-Guinea, OUDEMANS Nova Guinea, 5, (148-161).

*Tyroglyphinae*; habits, MAURIZIO Centralbl. Bakt., Jena, Abt. 2, 15, (606-623, 723-736).

*Tyroglyphus dimidiatus* Herm. synonymy and description OUDEMANS Nova Guinea 5 (138) pl. v ff. 94-115.—*T. farinæ* (14) pl. ii ff. 14, 17 *lintoni* (15) pl. iii ff. 23-25 *heteromorphus* (18) pl. iv ff. 36-39 *longior* (14) pl. v f. 44 descriptions, *americanus* (16) pl. iii ff. 21-22 *cocciphilus* (16) pl. iv ff. 33-35 *breviceps* (17) pl. iv ff. 30-32 *terminalis* (17) pl. iii ff. 26-28 *armipes* (18) pl. v ff. 41-43 spp. n. United States BANKS Washington Tech. Ser. U. S. Dept. Agric. Div. Ent. 13.—*T. lepismus* sp. n. on *Timarcha tenebricosa* (Coleoptera) France BENOIT-BAZILLE Microgr. prépar. Paris 14 (11-17).—*T. longior* in houses JARVIS Canad. Entomol. 38 (239-242).

*Uropoda kempersi* sp. n. Netherlands OUDEMANS Ber. Ned. Ent. Ver. 2 (8).—*U. obnoxia* sp. n. Finland REUTER Acta Soc. Fauna et Fl. Fenn 27 (10-16 pl.).

*Veigaia* gen. n. type *Gamasus nemorensis* Koch, to same genus *cervus* Kram. *herculeana* Berl. OUDEMANS Ber. Ned. Ent. Ver. 2 (6).

*Vidia* gen. n. *undulata* sp. n. on *Prosopis conformis* Italy OUDEMANS T.c. (22).

*Xenillus* type *clypeator* Desv. = *Notaspis castaneus* Herm. OUDEMANS T.c. (100).

*Zuluacarus* gen. n. *termitephilus* sp. n. Zululand TRÄGÅRDH Zool. Anz. 30, (876).

### TARDIGRADA.

*Diphascon alpinum* sp. n. Scotland MURRAY Ann. Scot. Nat. Hist. Edinb. 1906 (29) pl. iii ff. 1-3.—*D. chilense* (695) pl. iv ff. 23a-23b *spitzbergense* (695) pl. iv ff. 24a-24b characters, *angustatum* sp. n. (695) pl. iv ff. 25a-25c Scotch lakes MURRAY Edinb. Trans. R. Soc. 41.—*D. oculatum* sp. n. Scotland MURRAY Ann. Scot. Nat. Hist. Edinb. 1906 (216) pl. v f. 1.

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